TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 180-41453-1

Job Description: Harley Davidson

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

Attention: Allan Miller

Approved for release.
Carrie L Gamber
Senior Project Manager
3/9/2015 4:34 PM

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03/09/2015

Table of Contents

Table of Contents

Table of Contents

Qualifiers

GC/MS VOA

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

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.
U	Indicates the analyte was analyzed for but not detected.

Metals

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: 180-41453-1

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

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

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

RECEIPT

The samples were received on 02/24/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.8 C.

VOLATILES

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

METALS

Sodium was detected in method blank MB 180-134168/1-A 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.

The serial dilution performed for the following sample associated with batch 134168 was outside of the control limits for manganese: HD-MW-37D-0/1-0 (180-41453-5)

GENERAL CHEMISTRY

Bicarbonate Alkalinity as CaCO3 and Total Alkalinity as CaCO3 to pH 4.5 were detected in method blank MB 180-134503/2 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.

Chloride was detected in method blank MB 180-134114/6 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.

For the MS/MSDs for chloride, the presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Client Sample ID: HD-QC1-0/1-1 — Lab Sample ID: 180-41453-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.89	J	1.0	0.30	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	0.46	J	1.0	0.17	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	0.98	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	96	E	1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	3.4		1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	35		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	61	E	1.0	0.15	ug/L	1		8260C	Total/NA
1,1-Dichloroethane - DL	0.87	J	5.0	0.58	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene - DL	88		5.0	1.2	ug/L	5		8260C	Total/NA
1,1,1-Trichloroethane - DL	2.7	J	5.0	1.4	ug/L	5		8260C	Total/NA
Trichloroethene - DL	31		5.0	0.72	ug/L	5		8260C	Total/NA
Tetrachloroethene - DL	51		5.0	0.74	ug/L	5		8260C	Total/NA
Nitrate as N	1.8		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	150	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	71000		100	2.8	ug/L	1		6020A	Total/NA
Potassium	14000		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	21000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	73000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	230	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	230	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-QC1-0/1-2 — Lab Sample ID: 180-41453-2

No Detections.

Client Sample ID: HD-MW-93D-0/1-0 — Lab Sample ID: 180-41453-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	4.2	J	5.0	1.1	ug/L	5		8260C	Total/NA
1,1-Dichloroethene	4.4	J	5.0	1.5	ug/L	5		8260C	Total/NA
1,1-Dichloroethane	3.4	J	5.0	0.58	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	130		5.0	1.2	ug/L	5		8260C	Total/NA
1,1,1-Trichloroethane	8.0		5.0	1.4	ug/L	5		8260C	Total/NA
Trichloroethene	140		5.0	0.72	ug/L	5		8260C	Total/NA
Tetrachloroethene	130		5.0	0.74	ug/L	5		8260C	Total/NA
Nitrate as N	0.59		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	100	B	1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	28		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	68000		100	2.8	ug/L	1		6020A	Total/NA
Potassium	5400		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	16000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	38000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	180	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	180	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-93S-0/1-0 — Lab Sample ID: 180-41453-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.85	J	1.0	0.30	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	0.40	J	1.0	0.17	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-MW-93S-0/1-0 (Continued)

Lab Sample ID: 180-41453-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.90	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	92	E	1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	3.2		1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	34		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	60	E	1.0	0.15	ug/L	1		8260C	Total/NA
1,1-Dichloroethane - DL	0.77	J	5.0	0.58	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene - DL	85		5.0	1.2	ug/L	5		8260C	Total/NA
1,1,1-Trichloroethane - DL	2.6	J	5.0	1.4	ug/L	5		8260C	Total/NA
Trichloroethene - DL	31		5.0	0.72	ug/L	5		8260C	Total/NA
Tetrachloroethene - DL	52		5.0	0.74	ug/L	5		8260C	Total/NA
Nitrate as N	1.8		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	150	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	70000		100	2.8	ug/L	1		6020A	Total/NA
Potassium	14000		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	21000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	73000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	210	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	210	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-MW-37D-0/1-0

Lab Sample ID: 180-41453-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	10	J	13	3.7	ug/L	12.5		8260C	Total/NA
1,1-Dichloroethane	3.8	J	13	1.5	ug/L	12.5		8260C	Total/NA
cis-1,2-Dichloroethene	73		13	3.0	ug/L	12.5		8260C	Total/NA
1,1,1-Trichloroethane	54		13	3.6	ug/L	12.5		8260C	Total/NA
Trichloroethene	300		13	1.8	ug/L	12.5		8260C	Total/NA
Tetrachloroethene	950	E	13	1.9	ug/L	12.5		8260C	Total/NA
cis-1,2-Dichloroethene - DL	68		50	12	ug/L	50		8260C	Total/NA
1,1,1-Trichloroethane - DL	52		50	14	ug/L	50		8260C	Total/NA
Trichloroethene - DL	320		50	7.2	ug/L	50		8260C	Total/NA
Tetrachloroethene - DL	1100		50	7.4	ug/L	50		8260C	Total/NA
Nitrate as N	3.5		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	140	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	87000		100	2.8	ug/L	1		6020A	Total/NA
Potassium	6900		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	22000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	63000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	210	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	210	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: HD-QC1-0/1-1
Date Collected: 02/23/15 08:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/04/15 17:45	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/04/15 17:45	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/04/15 17:45	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 17:45	1
1,1-Dichloroethene	**0.89**	**J**	1.0	0.30	ug/L			03/04/15 17:45	1
Acetone	5.0	U	5.0	2.5	ug/L			03/04/15 17:45	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/04/15 17:45	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/04/15 17:45	1
trans-1,2-Dichloroethene	**0.46**	**J**	1.0	0.17	ug/L			03/04/15 17:45	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/04/15 17:45	1
1,1-Dichloroethane	**0.98**	**J**	1.0	0.12	ug/L			03/04/15 17:45	1
cis-1,2-Dichloroethene	**96**	**E**	1.0	0.24	ug/L			03/04/15 17:45	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/04/15 17:45	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/04/15 17:45	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/04/15 17:45	1
1,1,1-Trichloroethane	**3.4**		1.0	0.29	ug/L			03/04/15 17:45	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/04/15 17:45	1
Benzene	1.0	U	1.0	0.11	ug/L			03/04/15 17:45	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 17:45	1
Trichloroethene	**35**		1.0	0.14	ug/L			03/04/15 17:45	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/04/15 17:45	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/04/15 17:45	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/04/15 17:45	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/04/15 17:45	1
Toluene	1.0	U	1.0	0.15	ug/L			03/04/15 17:45	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/04/15 17:45	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 17:45	1
Tetrachloroethene	**61**	**E**	1.0	0.15	ug/L			03/04/15 17:45	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/04/15 17:45	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/04/15 17:45	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/04/15 17:45	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/04/15 17:45	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/04/15 17:45	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/04/15 17:45	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/04/15 17:45	1
Styrene	1.0	U	1.0	0.097	ug/L			03/04/15 17:45	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/04/15 17:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 17:45	1
Acrylonitrile	20	U	20	0.55	ug/L			03/04/15 17:45	1
1,4-Dioxane	200	U	200	34	ug/L			03/04/15 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*64 - 135*		*03/04/15 17:45*	*1*
Toluene-d8 (Surr)	*103*		*71 - 118*		*03/04/15 17:45*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 118*		*03/04/15 17:45*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 128*		*03/04/15 17:45*	*1*

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

Client Sample ID: HD-QC1-0/1-2
Date Collected: 02/23/15 12:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/04/15 18:57	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/04/15 18:57	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/04/15 18:57	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 18:57	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/04/15 18:57	1
Acetone	5.0	U	5.0	2.5	ug/L			03/04/15 18:57	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/04/15 18:57	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/04/15 18:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/04/15 18:57	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/04/15 18:57	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/04/15 18:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/04/15 18:57	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/04/15 18:57	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/04/15 18:57	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/04/15 18:57	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/04/15 18:57	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/04/15 18:57	1
Benzene	1.0	U	1.0	0.11	ug/L			03/04/15 18:57	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 18:57	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/04/15 18:57	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/04/15 18:57	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/04/15 18:57	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/04/15 18:57	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/04/15 18:57	1
Toluene	1.0	U	1.0	0.15	ug/L			03/04/15 18:57	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/04/15 18:57	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 18:57	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/04/15 18:57	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/04/15 18:57	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/04/15 18:57	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/04/15 18:57	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/04/15 18:57	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/04/15 18:57	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/04/15 18:57	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/04/15 18:57	1
Styrene	1.0	U	1.0	0.097	ug/L			03/04/15 18:57	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/04/15 18:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 18:57	1
Acrylonitrile	20	U	20	0.55	ug/L			03/04/15 18:57	1
1,4-Dioxane	200	U	200	34	ug/L			03/04/15 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 135*		*03/04/15 18:57*	*1*
Toluene-d8 (Surr)	*108*		*71 - 118*		*03/04/15 18:57*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 118*		*03/04/15 18:57*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*03/04/15 18:57*	*1*

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

Client Sample ID: HD-MW-93D-0/1-0
Date Collected: 02/23/15 10:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	5.0	U	5.0	1.4	ug/L			03/04/15 18:33	5
Vinyl chloride	**4.2**	**J**	5.0	1.1	ug/L			03/04/15 18:33	5
Bromomethane	5.0	U	5.0	1.6	ug/L			03/04/15 18:33	5
Chloroethane	5.0	U	5.0	1.1	ug/L			03/04/15 18:33	5
1,1-Dichloroethene	**4.4**	**J**	5.0	1.5	ug/L			03/04/15 18:33	5
Acetone	25	U	25	13	ug/L			03/04/15 18:33	5
Carbon disulfide	5.0	U	5.0	1.1	ug/L			03/04/15 18:33	5
Methylene Chloride	5.0	U	5.0	0.63	ug/L			03/04/15 18:33	5
trans-1,2-Dichloroethene	5.0	U	5.0	0.85	ug/L			03/04/15 18:33	5
Methyl tert-butyl ether	5.0	U	5.0	0.92	ug/L			03/04/15 18:33	5
1,1-Dichloroethane	**3.4**	**J**	5.0	0.58	ug/L			03/04/15 18:33	5
cis-1,2-Dichloroethene	**130**		5.0	1.2	ug/L			03/04/15 18:33	5
Bromochloromethane	5.0	U	5.0	0.90	ug/L			03/04/15 18:33	5
2-Butanone (MEK)	25	U	25	2.7	ug/L			03/04/15 18:33	5
Chloroform	5.0	U	5.0	0.85	ug/L			03/04/15 18:33	5
1,1,1-Trichloroethane	**8.0**		5.0	1.4	ug/L			03/04/15 18:33	5
Carbon tetrachloride	5.0	U	5.0	0.68	ug/L			03/04/15 18:33	5
Benzene	5.0	U	5.0	0.53	ug/L			03/04/15 18:33	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			03/04/15 18:33	5
Trichloroethene	**140**		5.0	0.72	ug/L			03/04/15 18:33	5
1,2-Dichloropropane	5.0	U	5.0	0.47	ug/L			03/04/15 18:33	5
Bromodichloromethane	5.0	U	5.0	0.65	ug/L			03/04/15 18:33	5
cis-1,3-Dichloropropene	5.0	U	5.0	0.93	ug/L			03/04/15 18:33	5
4-Methyl-2-pentanone (MIBK)	25	U	25	2.6	ug/L			03/04/15 18:33	5
Toluene	5.0	U	5.0	0.75	ug/L			03/04/15 18:33	5
trans-1,3-Dichloropropene	5.0	U	5.0	0.74	ug/L			03/04/15 18:33	5
1,1,2-Trichloroethane	5.0	U	5.0	1.0	ug/L			03/04/15 18:33	5
Tetrachloroethene	**130**		5.0	0.74	ug/L			03/04/15 18:33	5
2-Hexanone	25	U	25	0.80	ug/L			03/04/15 18:33	5
Dibromochloromethane	5.0	U	5.0	0.68	ug/L			03/04/15 18:33	5
1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90	ug/L			03/04/15 18:33	5
Chlorobenzene	5.0	U	5.0	0.68	ug/L			03/04/15 18:33	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4	ug/L			03/04/15 18:33	5
Ethylbenzene	5.0	U	5.0	1.1	ug/L			03/04/15 18:33	5
Xylenes, Total	15	U	15	2.4	ug/L			03/04/15 18:33	5
Styrene	5.0	U	5.0	0.48	ug/L			03/04/15 18:33	5
Bromoform	5.0	U	5.0	0.96	ug/L			03/04/15 18:33	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.0	ug/L			03/04/15 18:33	5
Acrylonitrile	100	U	100	2.7	ug/L			03/04/15 18:33	5
1,4-Dioxane	1000	U	1000	170	ug/L			03/04/15 18:33	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 135*		*03/04/15 18:33*	*5*
Toluene-d8 (Surr)	*107*		*71 - 118*		*03/04/15 18:33*	*5*
4-Bromofluorobenzene (Surr)	*103*		*70 - 118*		*03/04/15 18:33*	*5*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*03/04/15 18:33*	*5*

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

Client Sample ID: HD-MW-93S-0/1-0
Date Collected: 02/23/15 11:50
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/04/15 19:22	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/04/15 19:22	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/04/15 19:22	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 19:22	1
1,1-Dichloroethene	**0.85**	**J**	1.0	0.30	ug/L			03/04/15 19:22	1
Acetone	5.0	U	5.0	2.5	ug/L			03/04/15 19:22	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/04/15 19:22	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/04/15 19:22	1
trans-1,2-Dichloroethene	**0.40**	**J**	1.0	0.17	ug/L			03/04/15 19:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/04/15 19:22	1
1,1-Dichloroethane	**0.90**	**J**	1.0	0.12	ug/L			03/04/15 19:22	1
cis-1,2-Dichloroethene	**92**	**E**	1.0	0.24	ug/L			03/04/15 19:22	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/04/15 19:22	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/04/15 19:22	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/04/15 19:22	1
1,1,1-Trichloroethane	**3.2**		1.0	0.29	ug/L			03/04/15 19:22	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/04/15 19:22	1
Benzene	1.0	U	1.0	0.11	ug/L			03/04/15 19:22	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 19:22	1
Trichloroethene	**34**		1.0	0.14	ug/L			03/04/15 19:22	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/04/15 19:22	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/04/15 19:22	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/04/15 19:22	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/04/15 19:22	1
Toluene	1.0	U	1.0	0.15	ug/L			03/04/15 19:22	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/04/15 19:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 19:22	1
Tetrachloroethene	**60**	**E**	1.0	0.15	ug/L			03/04/15 19:22	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/04/15 19:22	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/04/15 19:22	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/04/15 19:22	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/04/15 19:22	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/04/15 19:22	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/04/15 19:22	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/04/15 19:22	1
Styrene	1.0	U	1.0	0.097	ug/L			03/04/15 19:22	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/04/15 19:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 19:22	1
Acrylonitrile	20	U	20	0.55	ug/L			03/04/15 19:22	1
1,4-Dioxane	200	U	200	34	ug/L			03/04/15 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*03/04/15 19:22*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/04/15 19:22*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 118*		*03/04/15 19:22*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 128*		*03/04/15 19:22*	*1*

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

Client Sample ID: HD-MW-37D-0/1-0
Date Collected: 02/23/15 15:20
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	13	U	13	3.5	ug/L			03/04/15 20:10	12.5
Vinyl chloride	13	U	13	2.8	ug/L			03/04/15 20:10	12.5
Bromomethane	13	U	13	3.9	ug/L			03/04/15 20:10	12.5
Chloroethane	13	U	13	2.7	ug/L			03/04/15 20:10	12.5
1,1-Dichloroethene	**10**	**J**	13	3.7	ug/L			03/04/15 20:10	12.5
Acetone	63	U	63	31	ug/L			03/04/15 20:10	12.5
Carbon disulfide	13	U	13	2.7	ug/L			03/04/15 20:10	12.5
Methylene Chloride	13	U	13	1.6	ug/L			03/04/15 20:10	12.5
trans-1,2-Dichloroethene	13	U	13	2.1	ug/L			03/04/15 20:10	12.5
Methyl tert-butyl ether	13	U	13	2.3	ug/L			03/04/15 20:10	12.5
1,1-Dichloroethane	**3.8**	**J**	13	1.5	ug/L			03/04/15 20:10	12.5
cis-1,2-Dichloroethene	**73**		13	3.0	ug/L			03/04/15 20:10	12.5
Bromochloromethane	13	U	13	2.3	ug/L			03/04/15 20:10	12.5
2-Butanone (MEK)	63	U	63	6.8	ug/L			03/04/15 20:10	12.5
Chloroform	13	U	13	2.1	ug/L			03/04/15 20:10	12.5
1,1,1-Trichloroethane	**54**		13	3.6	ug/L			03/04/15 20:10	12.5
Carbon tetrachloride	13	U	13	1.7	ug/L			03/04/15 20:10	12.5
Benzene	13	U	13	1.3	ug/L			03/04/15 20:10	12.5
1,2-Dichloroethane	13	U	13	2.6	ug/L			03/04/15 20:10	12.5
Trichloroethene	**300**		13	1.8	ug/L			03/04/15 20:10	12.5
1,2-Dichloropropane	13	U	13	1.2	ug/L			03/04/15 20:10	12.5
Bromodichloromethane	13	U	13	1.6	ug/L			03/04/15 20:10	12.5
cis-1,3-Dichloropropene	13	U	13	2.3	ug/L			03/04/15 20:10	12.5
4-Methyl-2-pentanone (MIBK)	63	U	63	6.6	ug/L			03/04/15 20:10	12.5
Toluene	13	U	13	1.9	ug/L			03/04/15 20:10	12.5
trans-1,3-Dichloropropene	13	U	13	1.9	ug/L			03/04/15 20:10	12.5
1,1,2-Trichloroethane	13	U	13	2.5	ug/L			03/04/15 20:10	12.5
Tetrachloroethene	**950**	**E**	13	1.9	ug/L			03/04/15 20:10	12.5
2-Hexanone	63	U	63	2.0	ug/L			03/04/15 20:10	12.5
Dibromochloromethane	13	U	13	1.7	ug/L			03/04/15 20:10	12.5
1,2-Dibromoethane (EDB)	13	U	13	2.3	ug/L			03/04/15 20:10	12.5
Chlorobenzene	13	U	13	1.7	ug/L			03/04/15 20:10	12.5
1,1,1,2-Tetrachloroethane	13	U	13	3.5	ug/L			03/04/15 20:10	12.5
Ethylbenzene	13	U	13	2.8	ug/L			03/04/15 20:10	12.5
Xylenes, Total	38	U	38	6.1	ug/L			03/04/15 20:10	12.5
Styrene	13	U	13	1.2	ug/L			03/04/15 20:10	12.5
Bromoform	13	U	13	2.4	ug/L			03/04/15 20:10	12.5
1,1,2,2-Tetrachloroethane	13	U	13	2.5	ug/L			03/04/15 20:10	12.5
Acrylonitrile	250	U	250	6.8	ug/L			03/04/15 20:10	12.5
1,4-Dioxane	2500	U	2500	430	ug/L			03/04/15 20:10	12.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*64 - 135*		*03/04/15 20:10*	*12.5*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/04/15 20:10*	*12.5*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*		*03/04/15 20:10*	*12.5*
Dibromofluoromethane (Surr)	*101*		*70 - 128*		*03/04/15 20:10*	*12.5*

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

Client Sample ID: HD-QC1-0/1-1
Date Collected: 02/23/15 08:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	5.0	U	5.0	1.4	ug/L			03/05/15 16:24	5
Vinyl chloride	5.0	U	5.0	1.1	ug/L			03/05/15 16:24	5
Bromomethane	5.0	U	5.0	1.6	ug/L			03/05/15 16:24	5
Chloroethane	5.0	U	5.0	1.1	ug/L			03/05/15 16:24	5
1,1-Dichloroethene	5.0	U	5.0	1.5	ug/L			03/05/15 16:24	5
Acetone	25	U	25	13	ug/L			03/05/15 16:24	5
Carbon disulfide	5.0	U	5.0	1.1	ug/L			03/05/15 16:24	5
Methylene Chloride	5.0	U	5.0	0.63	ug/L			03/05/15 16:24	5
trans-1,2-Dichloroethene	5.0	U	5.0	0.85	ug/L			03/05/15 16:24	5
Methyl tert-butyl ether	5.0	U	5.0	0.92	ug/L			03/05/15 16:24	5
1,1-Dichloroethane	**0.87**	**J**	5.0	0.58	ug/L			03/05/15 16:24	5
cis-1,2-Dichloroethene	**88**		5.0	1.2	ug/L			03/05/15 16:24	5
Bromochloromethane	5.0	U	5.0	0.90	ug/L			03/05/15 16:24	5
2-Butanone (MEK)	25	U	25	2.7	ug/L			03/05/15 16:24	5
Chloroform	5.0	U	5.0	0.85	ug/L			03/05/15 16:24	5
1,1,1-Trichloroethane	**2.7**	**J**	5.0	1.4	ug/L			03/05/15 16:24	5
Carbon tetrachloride	5.0	U	5.0	0.68	ug/L			03/05/15 16:24	5
Benzene	5.0	U	5.0	0.53	ug/L			03/05/15 16:24	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			03/05/15 16:24	5
Trichloroethene	**31**		5.0	0.72	ug/L			03/05/15 16:24	5
1,2-Dichloropropane	5.0	U	5.0	0.47	ug/L			03/05/15 16:24	5
Bromodichloromethane	5.0	U	5.0	0.65	ug/L			03/05/15 16:24	5
cis-1,3-Dichloropropene	5.0	U	5.0	0.93	ug/L			03/05/15 16:24	5
4-Methyl-2-pentanone (MIBK)	25	U	25	2.6	ug/L			03/05/15 16:24	5
Toluene	5.0	U	5.0	0.75	ug/L			03/05/15 16:24	5
trans-1,3-Dichloropropene	5.0	U	5.0	0.74	ug/L			03/05/15 16:24	5
1,1,2-Trichloroethane	5.0	U	5.0	1.0	ug/L			03/05/15 16:24	5
Tetrachloroethene	**51**		5.0	0.74	ug/L			03/05/15 16:24	5
2-Hexanone	25	U	25	0.80	ug/L			03/05/15 16:24	5
Dibromochloromethane	5.0	U	5.0	0.68	ug/L			03/05/15 16:24	5
1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90	ug/L			03/05/15 16:24	5
Chlorobenzene	5.0	U	5.0	0.68	ug/L			03/05/15 16:24	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4	ug/L			03/05/15 16:24	5
Ethylbenzene	5.0	U	5.0	1.1	ug/L			03/05/15 16:24	5
Xylenes, Total	15	U	15	2.4	ug/L			03/05/15 16:24	5
Styrene	5.0	U	5.0	0.48	ug/L			03/05/15 16:24	5
Bromoform	5.0	U	5.0	0.96	ug/L			03/05/15 16:24	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.0	ug/L			03/05/15 16:24	5
Acrylonitrile	100	U	100	2.7	ug/L			03/05/15 16:24	5
1,4-Dioxane	1000	U	1000	170	ug/L			03/05/15 16:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 135*		*03/05/15 16:24*	*5*
Toluene-d8 (Surr)	*103*		*71 - 118*		*03/05/15 16:24*	*5*
4-Bromofluorobenzene (Surr)	*99*		*70 - 118*		*03/05/15 16:24*	*5*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*03/05/15 16:24*	*5*

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

Client Sample ID: HD-MW-93S-0/1-0
Date Collected: 02/23/15 11:50
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	5.0	U	5.0	1.4	ug/L			03/05/15 16:48	5
Vinyl chloride	5.0	U	5.0	1.1	ug/L			03/05/15 16:48	5
Bromomethane	5.0	U	5.0	1.6	ug/L			03/05/15 16:48	5
Chloroethane	5.0	U	5.0	1.1	ug/L			03/05/15 16:48	5
1,1-Dichloroethene	5.0	U	5.0	1.5	ug/L			03/05/15 16:48	5
Acetone	25	U	25	13	ug/L			03/05/15 16:48	5
Carbon disulfide	5.0	U	5.0	1.1	ug/L			03/05/15 16:48	5
Methylene Chloride	5.0	U	5.0	0.63	ug/L			03/05/15 16:48	5
trans-1,2-Dichloroethene	5.0	U	5.0	0.85	ug/L			03/05/15 16:48	5
Methyl tert-butyl ether	5.0	U	5.0	0.92	ug/L			03/05/15 16:48	5
1,1-Dichloroethane	**0.77**	**J**	5.0	0.58	ug/L			03/05/15 16:48	5
cis-1,2-Dichloroethene	**85**		5.0	1.2	ug/L			03/05/15 16:48	5
Bromochloromethane	5.0	U	5.0	0.90	ug/L			03/05/15 16:48	5
2-Butanone (MEK)	25	U	25	2.7	ug/L			03/05/15 16:48	5
Chloroform	5.0	U	5.0	0.85	ug/L			03/05/15 16:48	5
1,1,1-Trichloroethane	**2.6**	**J**	5.0	1.4	ug/L			03/05/15 16:48	5
Carbon tetrachloride	5.0	U	5.0	0.68	ug/L			03/05/15 16:48	5
Benzene	5.0	U	5.0	0.53	ug/L			03/05/15 16:48	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			03/05/15 16:48	5
Trichloroethene	**31**		5.0	0.72	ug/L			03/05/15 16:48	5
1,2-Dichloropropane	5.0	U	5.0	0.47	ug/L			03/05/15 16:48	5
Bromodichloromethane	5.0	U	5.0	0.65	ug/L			03/05/15 16:48	5
cis-1,3-Dichloropropene	5.0	U	5.0	0.93	ug/L			03/05/15 16:48	5
4-Methyl-2-pentanone (MIBK)	25	U	25	2.6	ug/L			03/05/15 16:48	5
Toluene	5.0	U	5.0	0.75	ug/L			03/05/15 16:48	5
trans-1,3-Dichloropropene	5.0	U	5.0	0.74	ug/L			03/05/15 16:48	5
1,1,2-Trichloroethane	5.0	U	5.0	1.0	ug/L			03/05/15 16:48	5
Tetrachloroethene	**52**		5.0	0.74	ug/L			03/05/15 16:48	5
2-Hexanone	25	U	25	0.80	ug/L			03/05/15 16:48	5
Dibromochloromethane	5.0	U	5.0	0.68	ug/L			03/05/15 16:48	5
1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90	ug/L			03/05/15 16:48	5
Chlorobenzene	5.0	U	5.0	0.68	ug/L			03/05/15 16:48	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4	ug/L			03/05/15 16:48	5
Ethylbenzene	5.0	U	5.0	1.1	ug/L			03/05/15 16:48	5
Xylenes, Total	15	U	15	2.4	ug/L			03/05/15 16:48	5
Styrene	5.0	U	5.0	0.48	ug/L			03/05/15 16:48	5
Bromoform	5.0	U	5.0	0.96	ug/L			03/05/15 16:48	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.0	ug/L			03/05/15 16:48	5
Acrylonitrile	100	U	100	2.7	ug/L			03/05/15 16:48	5
1,4-Dioxane	1000	U	1000	170	ug/L			03/05/15 16:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 135*		*03/05/15 16:48*	*5*
Toluene-d8 (Surr)	*103*		*71 - 118*		*03/05/15 16:48*	*5*
4-Bromofluorobenzene (Surr)	*97*		*70 - 118*		*03/05/15 16:48*	*5*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*03/05/15 16:48*	*5*

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

Client Sample ID: HD-MW-37D-0/1-0
Date Collected: 02/23/15 15:20
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	50	U	50	14	ug/L			03/05/15 17:12	50
Vinyl chloride	50	U	50	11	ug/L			03/05/15 17:12	50
Bromomethane	50	U	50	16	ug/L			03/05/15 17:12	50
Chloroethane	50	U	50	11	ug/L			03/05/15 17:12	50
1,1-Dichloroethene	50	U	50	15	ug/L			03/05/15 17:12	50
Acetone	250	U	250	130	ug/L			03/05/15 17:12	50
Carbon disulfide	50	U	50	11	ug/L			03/05/15 17:12	50
Methylene Chloride	50	U	50	6.3	ug/L			03/05/15 17:12	50
trans-1,2-Dichloroethene	50	U	50	8.5	ug/L			03/05/15 17:12	50
Methyl tert-butyl ether	50	U	50	9.2	ug/L			03/05/15 17:12	50
1,1-Dichloroethane	50	U	50	5.8	ug/L			03/05/15 17:12	50
cis-1,2-Dichloroethene	**68**		50	12	ug/L			03/05/15 17:12	50
Bromochloromethane	50	U	50	9.0	ug/L			03/05/15 17:12	50
2-Butanone (MEK)	250	U	250	27	ug/L			03/05/15 17:12	50
Chloroform	50	U	50	8.5	ug/L			03/05/15 17:12	50
1,1,1-Trichloroethane	**52**		50	14	ug/L			03/05/15 17:12	50
Carbon tetrachloride	50	U	50	6.8	ug/L			03/05/15 17:12	50
Benzene	50	U	50	5.3	ug/L			03/05/15 17:12	50
1,2-Dichloroethane	50	U	50	11	ug/L			03/05/15 17:12	50
Trichloroethene	**320**		50	7.2	ug/L			03/05/15 17:12	50
1,2-Dichloropropane	50	U	50	4.7	ug/L			03/05/15 17:12	50
Bromodichloromethane	50	U	50	6.5	ug/L			03/05/15 17:12	50
cis-1,3-Dichloropropene	50	U	50	9.3	ug/L			03/05/15 17:12	50
4-Methyl-2-pentanone (MIBK)	250	U	250	26	ug/L			03/05/15 17:12	50
Toluene	50	U	50	7.5	ug/L			03/05/15 17:12	50
trans-1,3-Dichloropropene	50	U	50	7.4	ug/L			03/05/15 17:12	50
1,1,2-Trichloroethane	50	U	50	10	ug/L			03/05/15 17:12	50
Tetrachloroethene	**1100**		50	7.4	ug/L			03/05/15 17:12	50
2-Hexanone	250	U	250	8.0	ug/L			03/05/15 17:12	50
Dibromochloromethane	50	U	50	6.8	ug/L			03/05/15 17:12	50
1,2-Dibromoethane (EDB)	50	U	50	9.0	ug/L			03/05/15 17:12	50
Chlorobenzene	50	U	50	6.8	ug/L			03/05/15 17:12	50
1,1,1,2-Tetrachloroethane	50	U	50	14	ug/L			03/05/15 17:12	50
Ethylbenzene	50	U	50	11	ug/L			03/05/15 17:12	50
Xylenes, Total	150	U	150	24	ug/L			03/05/15 17:12	50
Styrene	50	U	50	4.8	ug/L			03/05/15 17:12	50
Bromoform	50	U	50	9.6	ug/L			03/05/15 17:12	50
1,1,2,2-Tetrachloroethane	50	U	50	10	ug/L			03/05/15 17:12	50
Acrylonitrile	1000	U	1000	27	ug/L			03/05/15 17:12	50
1,4-Dioxane	10000	U	10000	1700	ug/L			03/05/15 17:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 135*		*03/05/15 17:12*	*50*
Toluene-d8 (Surr)	*101*		*71 - 118*		*03/05/15 17:12*	*50*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*		*03/05/15 17:12*	*50*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*03/05/15 17:12*	*50*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-QC1-0/1-1
Date Collected: 02/23/15 08:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8		0.10	0.0062	mg/L			02/24/15 18:50	1
Chloride	150	B	1.0	0.20	mg/L			02/24/15 18:50	1
Sulfate	35		1.0	0.21	mg/L			02/24/15 18:50	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-93D-0/1-0
Date Collected: 02/23/15 10:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.59		0.10	0.0062	mg/L			02/24/15 17:33	1
Chloride	100	B	1.0	0.20	mg/L			02/24/15 17:33	1
Sulfate	28		1.0	0.21	mg/L			02/24/15 17:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-93S-0/1-0
Date Collected: 02/23/15 11:50
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.8		0.10	0.0062	mg/L			02/24/15 16:32	1
Chloride	150	B	1.0	0.20	mg/L			02/24/15 16:32	1
Sulfate	35		1.0	0.21	mg/L			02/24/15 16:32	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-MW-37D-0/1-0
Date Collected: 02/23/15 15:20
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.5		0.10	0.0062	mg/L			02/24/15 19:05	1
Chloride	140	B	1.0	0.20	mg/L			02/24/15 19:05	1
Sulfate	35		1.0	0.21	mg/L			02/24/15 19:05	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-QC1-0/1-1
Date Collected: 02/23/15 08:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	71000		100	2.8	ug/L		02/25/15 08:11	03/02/15 12:04	1
Potassium	14000		100	5.8	ug/L		02/25/15 08:11	03/02/15 12:04	1
Magnesium	21000		100	1.2	ug/L		02/25/15 08:11	03/02/15 12:04	1
Sodium	73000	B	100	3.8	ug/L		02/25/15 08:11	03/02/15 12:04	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-93D-0/1-0
Date Collected: 02/23/15 10:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	68000		100	2.8	ug/L		02/25/15 08:11	03/02/15 12:08	1
Potassium	5400		100	5.8	ug/L		02/25/15 08:11	03/02/15 12:08	1
Magnesium	16000		100	1.2	ug/L		02/25/15 08:11	03/02/15 12:08	1
Sodium	38000	B	100	3.8	ug/L		02/25/15 08:11	03/02/15 12:08	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-93S-0/1-0
Date Collected: 02/23/15 11:50
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	70000		100	2.8	ug/L		02/25/15 08:11	03/02/15 12:12	1
Potassium	14000		100	5.8	ug/L		02/25/15 08:11	03/02/15 12:12	1
Magnesium	21000		100	1.2	ug/L		02/25/15 08:11	03/02/15 12:12	1
Sodium	73000	B	100	3.8	ug/L		02/25/15 08:11	03/02/15 12:12	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-MW-37D-0/1-0
Date Collected: 02/23/15 15:20
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	87000		100	2.8	ug/L		02/25/15 08:11	03/02/15 12:17	1
Potassium	6900		100	5.8	ug/L		02/25/15 08:11	03/02/15 12:17	1
Magnesium	22000		100	1.2	ug/L		02/25/15 08:11	03/02/15 12:17	1
Sodium	63000	B	100	3.8	ug/L		02/25/15 08:11	03/02/15 12:17	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

General Chemistry

Client Sample ID: HD-QC1-0/1-1
Date Collected: 02/23/15 08:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**230**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Bicarbonate Alkalinity as CaCO3	**230**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/02/15 09:03	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

General Chemistry

Client Sample ID: HD-MW-93D-0/1-0
Date Collected: 02/23/15 10:00
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**180**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Bicarbonate Alkalinity as CaCO3	**180**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/02/15 09:03	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

General Chemistry

Client Sample ID: HD-MW-93S-0/1-0
Date Collected: 02/23/15 11:50
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**210**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Bicarbonate Alkalinity as CaCO3	**210**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/02/15 09:03	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

General Chemistry

Client Sample ID: HD-MW-37D-0/1-0
Date Collected: 02/23/15 15:20
Date Received: 02/24/15 12:20

Lab Sample ID: 180-41453-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**210**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Bicarbonate Alkalinity as CaCO3	**210**	**B**	5.0	0.41	mg/L			03/02/15 09:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/02/15 09:03	1

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

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

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

Method: 300.0 - Anions, Ion Chromatography

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

Method: 6020A - Metals (ICP/MS)

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

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

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

General Chemistry

Analyte	RL	MDL	Units	Method
Bicarbonate Alkalinity as 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: 180-41453-1

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)
180-41453-1	HD-QC1-0/1-1	92	103	106	95
180-41453-1 - DL	HD-QC1-0/1-1	94	103	99	97
180-41453-2	HD-QC1-0/1-2	94	108	110	97
180-41453-3	HD-MW-93D-0/1-0	95	107	103	96
180-41453-4	HD-MW-93S-0/1-0	97	104	102	94
180-41453-4 - DL	HD-MW-93S-0/1-0	96	103	97	98
180-41453-5	HD-MW-37D-0/1-0	93	104	104	101
180-41453-5 - DL	HD-MW-37D-0/1-0	96	101	100	98
LCS 180-134740/6	Lab Control Sample	97	100	92	94
LCS 180-134814/12	Lab Control Sample	96	104	95	94
MB 180-134740/3	Method Blank	95	104	104	94
MB 180-134814/9	Method Blank	97	104	106	94

Surrogate Legend

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

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

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

Lab Sample ID: MB 180-134740/3
Matrix: Water
Analysis Batch: 134740

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/04/15 12:17	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/04/15 12:17	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/04/15 12:17	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 12:17	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/04/15 12:17	1
Acetone	5.0	U	5.0	2.5	ug/L			03/04/15 12:17	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/04/15 12:17	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/04/15 12:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/04/15 12:17	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/04/15 12:17	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/04/15 12:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/04/15 12:17	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/04/15 12:17	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/04/15 12:17	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/04/15 12:17	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/04/15 12:17	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/04/15 12:17	1
Benzene	1.0	U	1.0	0.11	ug/L			03/04/15 12:17	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/04/15 12:17	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/04/15 12:17	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/04/15 12:17	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/04/15 12:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/04/15 12:17	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/04/15 12:17	1
Toluene	1.0	U	1.0	0.15	ug/L			03/04/15 12:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/04/15 12:17	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 12:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/04/15 12:17	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/04/15 12:17	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/04/15 12:17	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/04/15 12:17	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/04/15 12:17	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/04/15 12:17	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/04/15 12:17	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/04/15 12:17	1
Styrene	1.0	U	1.0	0.097	ug/L			03/04/15 12:17	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/04/15 12:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/04/15 12:17	1
Acrylonitrile	20	U	20	0.55	ug/L			03/04/15 12:17	1
1,4-Dioxane	200	U	200	34	ug/L			03/04/15 12:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*64 - 135*		*03/04/15 12:17*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/04/15 12:17*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*		*03/04/15 12:17*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 128*		*03/04/15 12:17*	*1*

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

Lab Sample ID: LCS 180-134740/6
Matrix: Water
Analysis Batch: 134740

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	8.72		ug/L		87	50 - 139
Vinyl chloride	10.0	8.59		ug/L		86	53 - 138
Bromomethane	10.0	10.0		ug/L		100	33 - 150
Chloroethane	10.0	9.55		ug/L		96	36 - 142
1,1-Dichloroethene	10.0	8.99		ug/L		90	65 - 136
Acetone	20.0	16.5		ug/L		83	22 - 150
Carbon disulfide	10.0	7.82		ug/L		78	54 - 132
Methylene Chloride	10.0	9.18		ug/L		92	63 - 129
trans-1,2-Dichloroethene	10.0	9.41		ug/L		94	73 - 126
Methyl tert-butyl ether	10.0	8.71		ug/L		87	64 - 123
1,1-Dichloroethane	10.0	9.19		ug/L		92	73 - 126
cis-1,2-Dichloroethene	10.0	9.25		ug/L		93	70 - 120
Bromochloromethane	10.0	8.70		ug/L		87	70 - 127
2-Butanone (MEK)	20.0	18.4		ug/L		92	39 - 138
Chloroform	10.0	9.28		ug/L		93	72 - 127
1,1,1-Trichloroethane	10.0	8.32		ug/L		83	63 - 133
Carbon tetrachloride	10.0	8.41		ug/L		84	55 - 150
Benzene	10.0	9.36		ug/L		94	80 - 120
1,2-Dichloroethane	10.0	8.99		ug/L		90	68 - 132
Trichloroethene	10.0	9.49		ug/L		95	73 - 120
1,2-Dichloropropane	10.0	9.21		ug/L		92	76 - 124
Bromodichloromethane	10.0	9.03		ug/L		90	66 - 130
cis-1,3-Dichloropropene	10.0	8.43		ug/L		84	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.1		ug/L		86	45 - 145
Toluene	10.0	9.64		ug/L		96	80 - 123
trans-1,3-Dichloropropene	10.0	8.08		ug/L		81	65 - 125
1,1,2-Trichloroethane	10.0	9.38		ug/L		94	77 - 127
Tetrachloroethene	10.0	9.39		ug/L		94	70 - 135
2-Hexanone	20.0	16.3		ug/L		81	25 - 132
Dibromochloromethane	10.0	8.89		ug/L		89	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.30		ug/L		93	74 - 123
Chlorobenzene	10.0	9.41		ug/L		94	80 - 120
1,1,1,2-Tetrachloroethane	10.0	8.83		ug/L		88	63 - 140
Ethylbenzene	10.0	9.42		ug/L		94	72 - 126
Xylenes, Total	20.0	18.5		ug/L		93	76 - 128
Styrene	10.0	9.10		ug/L		91	71 - 127
Bromoform	10.0	8.61		ug/L		86	46 - 150
1,1,2,2-Tetrachloroethane	10.0	9.42		ug/L		94	62 - 125
1,4-Dioxane	200	194	J	ug/L		97	10 - 160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*
Toluene-d8 (Surr)	*100*		*71 - 118*
4-Bromofluorobenzene (Surr)	*92*		*70 - 118*
Dibromofluoromethane (Surr)	*94*		*70 - 128*

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

Lab Sample ID: MB 180-134814/9
Matrix: Water
Analysis Batch: 134814

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/05/15 13:05	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/05/15 13:05	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/05/15 13:05	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/05/15 13:05	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/05/15 13:05	1
Acetone	5.0	U	5.0	2.5	ug/L			03/05/15 13:05	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/05/15 13:05	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/05/15 13:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/05/15 13:05	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/05/15 13:05	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/05/15 13:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/05/15 13:05	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/05/15 13:05	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/05/15 13:05	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/05/15 13:05	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/05/15 13:05	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/05/15 13:05	1
Benzene	1.0	U	1.0	0.11	ug/L			03/05/15 13:05	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/05/15 13:05	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/05/15 13:05	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/05/15 13:05	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/05/15 13:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/05/15 13:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/05/15 13:05	1
Toluene	1.0	U	1.0	0.15	ug/L			03/05/15 13:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/05/15 13:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/05/15 13:05	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/05/15 13:05	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/05/15 13:05	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/05/15 13:05	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/05/15 13:05	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/05/15 13:05	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/05/15 13:05	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/05/15 13:05	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/05/15 13:05	1
Styrene	1.0	U	1.0	0.097	ug/L			03/05/15 13:05	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/05/15 13:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/05/15 13:05	1
Acrylonitrile	20	U	20	0.55	ug/L			03/05/15 13:05	1
1,4-Dioxane	200	U	200	34	ug/L			03/05/15 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*03/05/15 13:05*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/05/15 13:05*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 118*		*03/05/15 13:05*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 128*		*03/05/15 13:05*	*1*

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

Lab Sample ID: LCS 180-134814/12
Matrix: Water
Analysis Batch: 134814

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	9.78		ug/L		98	50 - 139
Vinyl chloride	10.0	9.77		ug/L		98	53 - 138
Bromomethane	10.0	11.6		ug/L		116	33 - 150
Chloroethane	10.0	11.8		ug/L		118	36 - 142
1,1-Dichloroethene	10.0	9.64		ug/L		96	65 - 136
Acetone	20.0	19.7		ug/L		99	22 - 150
Carbon disulfide	10.0	8.05		ug/L		80	54 - 132
Methylene Chloride	10.0	9.31		ug/L		93	63 - 129
trans-1,2-Dichloroethene	10.0	9.97		ug/L		100	73 - 126
Methyl tert-butyl ether	10.0	8.34		ug/L		83	64 - 123
1,1-Dichloroethane	10.0	9.56		ug/L		96	73 - 126
cis-1,2-Dichloroethene	10.0	9.79		ug/L		98	70 - 120
Bromochloromethane	10.0	9.73		ug/L		97	70 - 127
2-Butanone (MEK)	20.0	19.3		ug/L		96	39 - 138
Chloroform	10.0	9.95		ug/L		100	72 - 127
1,1,1-Trichloroethane	10.0	8.77		ug/L		88	63 - 133
Carbon tetrachloride	10.0	9.37		ug/L		94	55 - 150
Benzene	10.0	10.1		ug/L		101	80 - 120
1,2-Dichloroethane	10.0	9.46		ug/L		95	68 - 132
Trichloroethene	10.0	10.5		ug/L		105	73 - 120
1,2-Dichloropropane	10.0	9.25		ug/L		93	76 - 124
Bromodichloromethane	10.0	9.35		ug/L		93	66 - 130
cis-1,3-Dichloropropene	10.0	7.58		ug/L		76	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.7		ug/L		88	45 - 145
Toluene	10.0	10.9		ug/L		109	80 - 123
trans-1,3-Dichloropropene	10.0	7.19		ug/L		72	65 - 125
1,1,2-Trichloroethane	10.0	9.97		ug/L		100	77 - 127
Tetrachloroethene	10.0	11.5		ug/L		115	70 - 135
2-Hexanone	20.0	16.2		ug/L		81	25 - 132
Dibromochloromethane	10.0	9.49		ug/L		95	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.91		ug/L		99	74 - 123
Chlorobenzene	10.0	10.5		ug/L		105	80 - 120
1,1,1,2-Tetrachloroethane	10.0	9.28		ug/L		93	63 - 140
Ethylbenzene	10.0	10.9		ug/L		109	72 - 126
Xylenes, Total	20.0	20.9		ug/L		105	76 - 128
Styrene	10.0	10.2		ug/L		102	71 - 127
Bromoform	10.0	9.07		ug/L		91	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	62 - 125
1,4-Dioxane	200	165	J	ug/L		82	10 - 160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 135*
Toluene-d8 (Surr)	*104*		*71 - 118*
4-Bromofluorobenzene (Surr)	*95*		*70 - 118*
Dibromofluoromethane (Surr)	*94*		*70 - 128*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-134114/6
Matrix: Water
Analysis Batch: 134114

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	0.10	U	0.10	0.0062	mg/L			02/24/15 12:28	1
Chloride	0.288	J	1.0	0.20	mg/L			02/24/15 12:28	1
Sulfate	1.0	U	1.0	0.21	mg/L			02/24/15 12:28	1

Lab Sample ID: LCS 180-134114/5
Matrix: Water
Analysis Batch: 134114

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	2.70		mg/L		108	90 - 110
Chloride	50.0	50.3		mg/L		101	90 - 110
Sulfate	50.0	50.2		mg/L		100	90 - 110

Lab Sample ID: 180-41453-3 MS
Matrix: Water
Analysis Batch: 134114

Client Sample ID: HD-MW-93D-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	0.59		1.25	2.00		mg/L		113	80 - 120
Chloride	100	B	25.0	125	4	mg/L		98	80 - 120
Sulfate	28		25.0	53.1		mg/L		101	80 - 120

Lab Sample ID: 180-41453-3 MSD
Matrix: Water
Analysis Batch: 134114

Client Sample ID: HD-MW-93D-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	0.59		1.25	2.02		mg/L		114	80 - 120	1	20
Chloride	100	B	25.0	126	4	mg/L		102	80 - 120	1	20
Sulfate	28		25.0	53.5		mg/L		102	80 - 120	1	20

Lab Sample ID: 180-41453-4 MS
Matrix: Water
Analysis Batch: 134114

Client Sample ID: HD-MW-93S-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	1.8		1.25	3.17		mg/L		107	80 - 120
Chloride	150	B	25.0	174	4	mg/L		92	80 - 120
Sulfate	35		25.0	59.9		mg/L		100	80 - 120

Lab Sample ID: 180-41453-4 MSD
Matrix: Water
Analysis Batch: 134114

Client Sample ID: HD-MW-93S-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	1.8		1.25	3.15		mg/L		106	80 - 120	1	20
Chloride	150	B	25.0	174	4	mg/L		89	80 - 120	0	20
Sulfate	35		25.0	59.6		mg/L		98	80 - 120	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 180-134168/1-A
Matrix: Water
Analysis Batch: 134563

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 134168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100	U	100	2.8	ug/L		02/25/15 08:11	03/02/15 11:51	1
Potassium	100	U	100	5.8	ug/L		02/25/15 08:11	03/02/15 11:51	1
Magnesium	100	U	100	1.2	ug/L		02/25/15 08:11	03/02/15 11:51	1
Sodium	12.8	J	100	3.8	ug/L		02/25/15 08:11	03/02/15 11:51	1

Lab Sample ID: LCS 180-134168/2-A
Matrix: Water
Analysis Batch: 134563

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 134168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	46700		ug/L		93	80 - 120
Potassium	50000	46100		ug/L		92	80 - 120
Magnesium	50000	46900		ug/L		94	80 - 120
Sodium	50000	44300		ug/L		89	80 - 120

Lab Sample ID: LCSD 180-134168/3-A
Matrix: Water
Analysis Batch: 134563

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 134168

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	50000	48300		ug/L		97	80 - 120	3	20
Potassium	50000	47200		ug/L		94	80 - 120	2	20
Magnesium	50000	48100		ug/L		96	80 - 120	3	20
Sodium	50000	45300		ug/L		91	80 - 120	2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 180-134503/2
Matrix: Water
Analysis Batch: 134503

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	2.04	J	5.0	0.41	mg/L			03/02/15 09:03	1
Bicarbonate Alkalinity as CaCO3	2.04	J	5.0	0.41	mg/L			03/02/15 09:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/02/15 09:03	1

Lab Sample ID: LCS 180-134503/1
Matrix: Water
Analysis Batch: 134503

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	261		mg/L		104	80 - 120

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 180-41453-1 DU
Matrix: Water
Analysis Batch: 134503

Client Sample ID: HD-QC1-0/1-1
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	230	B		220		mg/L				3	20
Bicarbonate Alkalinity as CaCO3	230	B		220		mg/L				3	20
Carbonate Alkalinity as CaCO3	5.0	U		5.0	U	mg/L				NC	20

GC/MS VOA

Analysis Batch: 134740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-1	HD-QC1-0/1-1	Total/NA	Water	8260C	
180-41453-2	HD-QC1-0/1-2	Total/NA	Water	8260C	
180-41453-3	HD-MW-93D-0/1-0	Total/NA	Water	8260C	
180-41453-4	HD-MW-93S-0/1-0	Total/NA	Water	8260C	
180-41453-5	HD-MW-37D-0/1-0	Total/NA	Water	8260C	
LCS 180-134740/6	Lab Control Sample	Total/NA	Water	8260C	
MB 180-134740/3	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 134814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-1 - DL	HD-QC1-0/1-1	Total/NA	Water	8260C	
180-41453-4 - DL	HD-MW-93S-0/1-0	Total/NA	Water	8260C	
180-41453-5 - DL	HD-MW-37D-0/1-0	Total/NA	Water	8260C	
LCS 180-134814/12	Lab Control Sample	Total/NA	Water	8260C	
MB 180-134814/9	Method Blank	Total/NA	Water	8260C	

HPLC/IC

Analysis Batch: 134114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-1	HD-QC1-0/1-1	Total/NA	Water	300.0	
180-41453-3	HD-MW-93D-0/1-0	Total/NA	Water	300.0	
180-41453-3 MS	HD-MW-93D-0/1-0	Total/NA	Water	300.0	
180-41453-3 MSD	HD-MW-93D-0/1-0	Total/NA	Water	300.0	
180-41453-4	HD-MW-93S-0/1-0	Total/NA	Water	300.0	
180-41453-4 MS	HD-MW-93S-0/1-0	Total/NA	Water	300.0	
180-41453-4 MSD	HD-MW-93S-0/1-0	Total/NA	Water	300.0	
180-41453-5	HD-MW-37D-0/1-0	Total/NA	Water	300.0	
LCS 180-134114/5	Lab Control Sample	Total/NA	Water	300.0	
MB 180-134114/6	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 134168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-1	HD-QC1-0/1-1	Total/NA	Water	3005A	
180-41453-3	HD-MW-93D-0/1-0	Total/NA	Water	3005A	
180-41453-4	HD-MW-93S-0/1-0	Total/NA	Water	3005A	
180-41453-5	HD-MW-37D-0/1-0	Total/NA	Water	3005A	
180-41453-5 SD	HD-MW-37D-0/1-0	Total/NA	Water	3005A	
LCS 180-134168/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 180-134168/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
MB 180-134168/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 134563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-1	HD-QC1-0/1-1	Total/NA	Water	6020A	134168
180-41453-3	HD-MW-93D-0/1-0	Total/NA	Water	6020A	134168
180-41453-4	HD-MW-93S-0/1-0	Total/NA	Water	6020A	134168
180-41453-5	HD-MW-37D-0/1-0	Total/NA	Water	6020A	134168

Metals (Continued)

Analysis Batch: 134563 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-5 SD	HD-MW-37D-0/1-0	Total/NA	Water	6020A	134168
CRI 180-134563/35	DL		Water	6020A	
CRI 180-134563/7	DL		Water	6020A	
ICSA 180-134563/8	ICS		Water	6020A	
ICSAB 180-134563/9	ICS		Water	6020A	
LCS 180-134168/2-A	Lab Control Sample	Total Recoverable	Water	6020A	134168
LCSD 180-134168/3-A	Lab Control Sample Dup	Total Recoverable	Water	6020A	134168
MB 180-134168/1-A	Method Blank	Total Recoverable	Water	6020A	134168

General Chemistry

Analysis Batch: 134503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41453-1	HD-QC1-0/1-1	Total/NA	Water	SM 2320B	
180-41453-1 DU	HD-QC1-0/1-1	Total/NA	Water	SM 2320B	
180-41453-3	HD-MW-93D-0/1-0	Total/NA	Water	SM 2320B	
180-41453-4	HD-MW-93S-0/1-0	Total/NA	Water	SM 2320B	
180-41453-5	HD-MW-37D-0/1-0	Total/NA	Water	SM 2320B	
LCS 180-134503/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 180-134503/2	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

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

Lab Sample ID: 180-41453-1

Date Collected: 02/23/15 08:00

Matrix: Water

Date Received: 02/24/15 12:20

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	134740	03/04/15 17:45	KLG	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	8260C	DL	5	5 mL	5 mL	134814	03/05/15 16:24	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134114	02/24/15 18:50	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	134168	02/25/15 08:11	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	134563	03/02/15 12:04	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	134503	03/02/15 09:03	CLL	TAL PIT
	Instrument ID: NOEQUIP									

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

Lab Sample ID: 180-41453-2

Date Collected: 02/23/15 12:00

Matrix: Water

Date Received: 02/24/15 12:20

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	134740	03/04/15 18:57	KLG	TAL PIT
	Instrument ID: CHHP5									

Client Sample ID: HD-MW-93D-0/1-0

Lab Sample ID: 180-41453-3

Date Collected: 02/23/15 10:00

Matrix: Water

Date Received: 02/24/15 12:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	5 mL	5 mL	134740	03/04/15 18:33	KLG	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134114	02/24/15 17:33	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	134168	02/25/15 08:11	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	134563	03/02/15 12:08	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	134503	03/02/15 09:03	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-MW-93S-0/1-0

Lab Sample ID: 180-41453-4

Date Collected: 02/23/15 11:50

Matrix: Water

Date Received: 02/24/15 12:20

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	134740	03/04/15 19:22	KLG	TAL PIT
	Instrument ID: CHHP5									

Client Sample ID: HD-MW-93S-0/1-0

Lab Sample ID: 180-41453-4

Date Collected: 02/23/15 11:50

Matrix: Water

Date Received: 02/24/15 12:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C	DL	5	5 mL	5 mL	134814	03/05/15 16:48	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134114	02/24/15 16:32	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	134168	02/25/15 08:11	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	134563	03/02/15 12:12	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	134503	03/02/15 09:03	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-MW-37D-0/1-0

Lab Sample ID: 180-41453-5

Date Collected: 02/23/15 15:20

Matrix: Water

Date Received: 02/24/15 12:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		12.5	5 mL	5 mL	134740	03/04/15 20:10	KLG	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	8260C	DL	50	5 mL	5 mL	134814	03/05/15 17:12	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	134114	02/24/15 19:05	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	134168	02/25/15 08:11	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	134563	03/02/15 12:17	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	134503	03/02/15 09:03	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

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

Analyst References:

Lab: TAL PIT

Batch Type: Prep

AB1 = Ashwin Baikadi

Batch Type: Analysis

CLL = Cheryl Loheyde

CNF = Caitlin Ferguson

DLF = Donald Ferguson

KLG = Kathy Gordon

MJH = Matthew Hartman

Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

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

Method Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41453-1

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: 180-41453-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-41453-1	HD-QC1-0/1-1	Water	02/23/15 08:00	02/24/15 12:20
180-41453-2	HD-QC1-0/1-2	Water	02/23/15 12:00	02/24/15 12:20
180-41453-3	HD-MW-93D-0/1-0	Water	02/23/15 10:00	02/24/15 12:20
180-41453-4	HD-MW-93S-0/1-0	Water	02/23/15 11:50	02/24/15 12:20
180-41453-5	HD-MW-37D-0/1-0	Water	02/23/15 15:20	02/24/15 12:20

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 134613

Lab Sample ID: IC 180-134613/8 Client Sample ID:

Date Analyzed: 03/03/15 14:28 Lab File ID: 50303008.D GC Column: DB-624 ID: 0.18(mm)

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

Lab Sample ID: ICIS 180-134613/9 Client Sample ID:

Date Analyzed: 03/03/15 14:52 Lab File ID: 50303009.D GC Column: DB-624 ID: 0.18(mm)

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

Lab Sample ID: IC 180-134613/10 Client Sample ID:

Date Analyzed: 03/03/15 15:16 Lab File ID: 50303010.D GC Column: DB-624 ID: 0.18(mm)

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

Lab Sample ID: IC 180-134613/11 Client Sample ID:

Date Analyzed: 03/03/15 15:40 Lab File ID: 50303011.D GC Column: DB-624 ID: 0.18(mm)

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 134613

Lab Sample ID: IC 180-134613/12 Client Sample ID:

Date Analyzed: 03/03/15 16:04 Lab File ID: 50303012.D GC Column: DB-624 ID: 0.18(mm)

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

Lab Sample ID: IC 180-134613/13 Client Sample ID:

Date Analyzed: 03/03/15 16:28 Lab File ID: 50303013.D GC Column: DB-624 ID: 0.18(mm)

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

Lab Sample ID: IC 180-134613/18 Client Sample ID:

Date Analyzed: 03/03/15 18:29 Lab File ID: 50303018.D GC Column: DB-624 ID: 0.18(mm)

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 134740

Lab Sample ID: CCVIS 180-134740/2 Client Sample ID:

Date Analyzed: 03/04/15 11:38 Lab File ID: 50304002.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein	3.26	Baseline	fergusond	03/04/15 12:10

Lab Sample ID: LCS 180-134740/6 Client Sample ID:

Date Analyzed: 03/04/15 13:44 Lab File ID: 50304006.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.07	Peak Tail	fergusond	03/04/15 14:14

Lab Sample ID: 180-41453-1 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 03/04/15 17:45 Lab File ID: 50304016.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.35	Split Peak	fergusond	03/05/15 08:46

Lab Sample ID: 180-41453-2 Client Sample ID: HD-QC1-0/1-2

Date Analyzed: 03/04/15 18:57 Lab File ID: 50304019.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	7.66	Split Peak	fergusond	03/05/15 08:50

Lab Sample ID: 180-41453-4 Client Sample ID: HD-MW-93S-0/1-0

Date Analyzed: 03/04/15 19:22 Lab File ID: 50304020.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	4.58	Split Peak	fergusond	03/05/15 09:03
Chloroform	6.35	Split Peak	fergusond	03/05/15 09:03

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 134814

Lab Sample ID: CCVIS 180-134814/7 Client Sample ID:

Date Analyzed: 03/05/15 12:16 Lab File ID: 50305007.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein	3.27	Baseline	fergusond	03/05/15 12:58
1,4-Dioxane	8.06	Peak Tail	fergusond	03/05/15 12:58

Lab Sample ID: 180-41453-1 DL Client Sample ID: HD-QC1-0/1-1 DL

Date Analyzed: 03/05/15 16:24 Lab File ID: 50305016.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethene	3.38	Split Peak	fergusond	03/06/15 08:19
trans-1,2-Dichloroethene	4.58	Split Peak	fergusond	03/06/15 08:19

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01173	02/24/15	02/23/15	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_01205	02/24/15	02/23/15	DI Water, Lot NA	5 mL	ICSECONDSTD1_00004	0.6 mL	Chloride	60 ug/mL
							Nitrate as N	3 ug/mL
							Sulfate	60 ug/mL
.ICSECONDSTD1_00004	03/01/15	inorganic ventures, Lot H2-MEB512078			(Purchased Reagent)		Chloride	500 ug/mL
							Nitrate as N	25 ug/mL
							Sulfate	500 ug/mL
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_00155	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00200	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Sulfate	1 ug/mL
							Nitrite as N	0.05 ug/mL
.ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL3_00194	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00200	0.5 mL	Bromide	1 ug/mL
							Chloride	5 ug/mL
							Fluoride	0.25 ug/mL
							Nitrate as N	0.25 ug/mL
							Orthophosphate as P	0.25 ug/mL
							Sulfate	5 ug/mL
							Nitrite as N	0.25 ug/mL
.ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Orthophosphate as P	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_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							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_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL8_00101	02/19/15	02/18/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.6 mL	Bromide	30 ug/mL
							Chloride	150 ug/mL
							Fluoride	7.5 ug/mL
							Nitrate as N	7.5 ug/mL
							Orthophosphate as P	7.5 ug/mL
							Sulfate	150 ug/mL
					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_00106	02/19/15	02/18/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.8 mL	Bromide	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00073	04/19/15	02/19/15	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00005	10 mL	Calcium	50 ppm
							Magnesium	50 ppm
							Potassium	50 ppm
							Sodium	50 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MCRIX_00061	02/26/15	01/26/15	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00004	1 mL	Calcium	0.1 ppm
							Magnesium	0.1 ppm
							Potassium	0.1 ppm
							Sodium	0.1 ppm
.MMSCRI-1B_00004	10/01/15	Inorganic Ventures, Lot H2-MEB549023			(Purchased Reagent)		Calcium	25 ppm
							Magnesium	25 ppm
							Potassium	25 ppm
							Sodium	25 ppm
MICSABX_00067	03/20/15	02/20/15	2% Nitric Acid, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
					M6020ICS-0B_00006	1 mL	Ag	0.02 ppm
							As	0.02 ppm
							Cd	0.02 ppm
							Co	0.02 ppm
							Cr	0.02 ppm
							Cu	0.02 ppm
							Mn	0.0225 ppm
							Ni	0.02 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zn	0.025 ppm
					MMSICSAB-1_00007	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_00006	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_00007	05/01/15	Inorganic Ventures, Lot F2-MEB524028			(Purchased Reagent)		Ba	10 ppm
							Be	10 ppm
							Pb	10 ppm
							Sr	12.5 ppm
							Tl	10 ppm
							V	10 ppm
.MMSICSAB-2_00006	05/01/15	Inorganic Ventures, Lot G2-MEB467043			(Purchased Reagent)		B	25 ppm
							Sb	10 ppm
							Se	25 ppm
							Si	250 ppm
							Sn	50 ppm
MICSAX_00063	03/20/15	02/20/15	DI Water, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00029	02/23/15	01/23/15	2% Nitric Acid, Lot 25106	250 mg/L	MICPMSICV_00018	10 mg/L	Calcium	40 mg/L
							Magnesium	40 mg/L
							Potassium	40 mg/L
							Sodium	40 mg/L
.MICPMSICV_00018	11/30/15	SPEX CertiPrep, Lot 7-230WL			(Purchased Reagent)		Calcium	1000 ppm
							Magnesium	1000 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
MSTD2X_00042	04/19/15	02/19/15	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00005	10 mg/L	Calcium	100 ppm
							Magnesium	100 ppm
							Potassium	100 ppm
							Sodium	100 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MTAPITTICPMS_00020	07/01/15	INORGANIC VENTURES, Lot H2-MEB532047			(Purchased Reagent)		Ag	5 ug/mL
							Al	200 ug/mL
							As	4 ug/mL
							B	100 ug/mL
							Ba	200 ug/mL
							Be	5 ug/mL
							Cd	5 ug/mL
							Co	50 ug/mL
							Cr	20 ug/mL
							Cu	25 ug/mL
							Fe	100 ug/mL
							Mn	50 ug/mL
							Ni	50 ug/mL
							Pb	2 ug/mL
							Se	1 ug/mL
							Sr	100 ug/mL
							Tl	5 ug/mL
							V	50 ug/mL
							Zn	50 ug/mL
MTAPITTMSA_00023	12/01/15	INORGANIC VENTURES, Lot H2-MEB532044			(Purchased Reagent)		Calcium	5000 ug/mL
							Magnesium	5000 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
MTAPITTMSC_00029	12/01/15	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_00029	03/13/15	02/13/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00090	1 mL	1,4-Dichlorobenzene-d4	25 ug/mL
							Chlorobenzene-d5	25 ug/mL
							Fluorobenzene (IS)	25 ug/mL
							TBA-d9 (IS)	500 ug/mL
.VOA8260INTRES_00090	07/31/19	Restek, Lot A0104742			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
VOA8260SURR_00031	03/13/15	02/13/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00062	1 mL	1,2-Dichloroethane-d4 (Surr)	25 ug/mL
							4-Bromofluorobenzene (Surr)	25 ug/mL
							Dibromofluoromethane (Surr)	25 ug/mL
							Toluene-d8 (Surr)	25 ug/mL
.VOA8260SURRES_00062	01/31/19	Restek, Lot A0100424			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VOA8260VOA2ND_00104	03/04/15	02/25/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00083	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00103	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

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_00083	11/30/15		Restek, Lot A099261		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOA2ND_00103	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA2_00027	02/28/16		Restek, Lot A093733		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOA8260VOA2ND_00105	03/12/15	03/05/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00086	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00103	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS2ND_00086	11/30/15		Restek, Lot A099261		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOA2ND_00103	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA2_00027	02/28/16		Restek, Lot A093733		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOA8260VOAPRI_00102	03/04/15	02/25/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00086	0.1 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorodifluoromethane	25 ug/mL
							Dichlorofluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00101	1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
							1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloro-1,2,2-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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,3-Dichloropropene	25 ug/mL
							Cyclohexane	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Dibromomethane	25 ug/mL
							Ethyl ether	25 ug/mL
							Ethyl methacrylate	25 ug/mL
							Ethylbenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexane	25 ug/mL
							Iodomethane	25 ug/mL
							Isobutyl alcohol	625 ug/mL
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	125 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylcyclohexane	25 ug/mL
							Methylene Chloride	25 ug/mL
							n-Butylbenzene	25 ug/mL
							n-Heptane	25 ug/mL
							N-Propylbenzene	25 ug/mL
							Naphthalene	25 ug/mL
							o-Xylene	25 ug/mL
							sec-Butylbenzene	25 ug/mL
							Styrene	25 ug/mL
							tert-Butylbenzene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Tetrahydrofuran	50 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							trans-1,4-Dichloro-2-butene	25 ug/mL
							Trichloroethene	25 ug/mL
.VOA8260GAS1ST_00086	09/30/16		Restek, Lot A0105755		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00036	0.2 mL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					VOA8260MEGA1_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-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
							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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropylbenzene	200 ug/mL
							m-Xylene & p-Xylene	200 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylcyclohexane	200 ug/mL
							Methylene Chloride	200 ug/mL
							n-Butylbenzene	200 ug/mL
							n-Heptane	200 ug/mL
							N-Propylbenzene	200 ug/mL
							Naphthalene	200 ug/mL
							o-Xylene	200 ug/mL
							sec-Butylbenzene	200 ug/mL
							Styrene	200 ug/mL
							tert-Butylbenzene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Tetrahydrofuran	400 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							trans-1,4-Dichloro-2-butene	200 ug/mL
							Trichloroethene	200 ug/mL
..VOA8260KET1ST_00036	02/28/16		Restek, Lot A093365		(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							1,4-Dioxane	40000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL
							2-Methyl-2-propanol	20000 ug/mL
							3-Chloro-1-propene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Cyclohexane	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Ethyl ether	2000 ug/mL
							Ethyl methacrylate	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Hexane	2000 ug/mL
							Iodomethane	2000 ug/mL
							Isobutyl alcohol	50000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methyl acetate	10000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylcyclohexane	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							n-Heptane	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Tetrahydrofuran	4000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							trans-1,4-Dichloro-2-butene	2000 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	2000 ug/mL
VOA8260VOAPRI_00102	03/04/15	02/25/15	Methanol, Lot 85233	8 mL	VOA8260VOAPRI_00101	1 mL	Xylenes, Total	50 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00027	1 mL	Xylenes, Total	400 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		Xylenes, Total	4000 ug/mL
VOA8260VOAPRI_00104	03/12/15	03/05/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00088	0.08 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00101	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS1ST_00088	09/30/16		Restek, Lot A0108198		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

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	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

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	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOAACRPRI_00003	03/31/15	03/03/15	Methanol, Lot 85233	100 mL	VOAACRORES_00064	0.125 mL	Acrolein	25 ug/mL
.VOAACRORES_00064	03/31/15		Restek, Lot A0107338		(Purchased Reagent)		Acrolein	20000 ug/mL
VOAVAPRI_00003	03/12/15	02/12/15	Methanol, Lot 85233	20 mL	VOA8260VARES_00047	0.125 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00047	04/30/15		Restek, Lot A0106957		(Purchased Reagent)		Vinyl acetate	4000 ug/mL
voaWEEpri Res_00003	03/30/15	03/02/15	Methanol, Lot 85233	25 mL	VOARESEE1ST_00008	0.125 mL	1,2-dichloro-4-(trifluoromethyl)benzene	25 ug/mL
							2,3,6-Trichlorotoluene	25 ug/mL
							2,4,5-Trichlorotoluene	25 ug/mL
							2,4-Dichloro-1-(triflouromethyl)-benzene	25 ug/mL
							2,5-Dichlorobenzotrifluoride	25 ug/mL
							2-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorotoluene	25 ug/mL
							4-Chlorobenzotrifluoride	25 ug/mL
.VOARESEE1ST_00008	02/28/15		Restek, Lot A097285		(Purchased Reagent)		1,2-dichloro-4-(trifluoromethyl)benzene	5000 ug/mL
							2,3,6-Trichlorotoluene	5000 ug/mL
							2,4,5-Trichlorotoluene	5000 ug/mL
							2,4-Dichloro-1-(triflouromethyl)-benzene	5000 ug/mL
							2,5-Dichlorobenzotrifluoride	5000 ug/mL
							2-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorotoluene	5000 ug/mL
							4-Chlorobenzotrifluoride	5000 ug/mL
voaWket2 Rest_00001	03/08/15	02/06/15	Methanol, Lot 85233	50 mL	VOA8260KET2ND_00040	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
.VOA8260KET2ND_00040	01/31/18		Restek, Lot A0108157		(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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

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

Reagent

ICPRIMARYSTA_00006

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

ICSECONDSTD1_00004

INORGANIC VENTURES™
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CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

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** **Ion Chromatography** **Custom Second Source Solution**

Catalog No.: TA-17

Lot Number: **H2-MEB512078**

Matrix: H2O

500 mg/L ea:
Chloride, Sulfate,

100 mg/L ea:
Bromide,

25 mg/L ea:
Fluoride, Nitrate as N, o-Phosphate as P

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

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

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

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

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

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

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

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

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

4.0 **TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

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

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

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

4.1 ASSAY INFORMATION

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

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

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

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

5.0 Chromatogram - N/A

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep tightly sealed when not in use. Store and use at 20 ± 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.

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

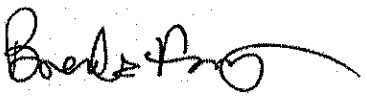
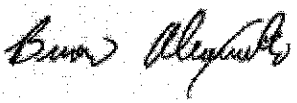
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations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

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

Certification Date: February 05, 2014

Expiration Date: EXPIRES 01 MAR 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Brenda Francis Product Documentation Technician	
Certificate Approved By:	Brian Alexander PhD., Technical Process Director	
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	

Reagent

M6020ICS-0A_00005

INORGANIC VENTURES™

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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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

Zachary Saunders

Certificate Approved By: Allyson Guilliams
Quality Control Supervisor

Allyson Guilliams

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

M6020ICS-0B_00006

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tel: 800.669.6799 · 540.585.3030
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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_00005

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Custom Solution**

Catalog No.: TAPITT-CAL-SPECA-REV

Lot Number: **H2-MEB524026**

Matrix: 3% HNO3(v/v)

2,500 µg/mL ea:
Ca, K, Mg, Na,

1,250 µg/mL ea:
Fe,

25 µg/mL ea:
Al, Mn,

5 µg/mL ea:
Ag, As, Ba, Be, Cd, Co, Cr3, Cu, Ni,
Pb, Se, Sr, Tl, V, Zn

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	24.99 ± 0.18 µg/mL	Arsenic, As	4.998 ± 0.032 µg/mL	Barium, Ba	5.000 ± 0.032 µg/mL
Beryllium, Be	5.000 ± 0.028 µg/mL	Cadmium, Cd	4.998 ± 0.032 µg/mL	Calcium, Ca	2,500 ± 11 µg/mL
Chromium+3, Cr3	5.000 ± 0.028 µg/mL	Cobalt, Co	4.999 ± 0.032 µg/mL	Copper, Cu	4.999 ± 0.032 µg/mL
Iron, Fe	1,250 ± 6 µg/mL	Lead, Pb	4.998 ± 0.025 µg/mL	Magnesium, Mg	2,500 ± 16 µg/mL
Manganese, Mn	24.99 ± 0.17 µg/mL	Nickel, Ni	5.003 ± 0.028 µg/mL	Potassium, K	2,500 ± 11 µg/mL
Selenium, Se	5.002 ± 0.028 µg/mL	Silver, Ag	5.000 ± 0.036 µg/mL	Sodium, Na	2,499 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.000 ± 0.032 µg/mL	Vanadium, V	5.000 ± 0.032 µg/mL
Zinc, Zn	5.004 ± 0.032 µg/mL				

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

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

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 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
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
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 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.

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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

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

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

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

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**
- SAI Global File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

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

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

Certification Date: April 04, 2014

Expiration Date: EXPIRES 01 MAY 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Brenda Francis
Product Documentation Technician

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

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Reagent

MICPMSICV_00018

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: ZCAL-60-250 **Lot No.** 7-230WL

Description: Custom Claritas Standard

Matrix: 5% 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.®

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Phone: 1-800-LAB-SPEX • Fax: 732-603-9647

Reagent

MMSICSAB-1_00007

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CERTIFICATE OF ANALYSIS

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

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Custom Solution**

Catalog No.: TAPITT-MSICSAB-1

Lot Number: **H2-MEB524028**

Matrix: 3% HNO3(v/v)

10 µg/mL ea:

Ba, Be, Pb, Sr, Tl, V

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

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

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

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

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

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

($\bar{x}$) = 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#
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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

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

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

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

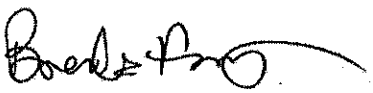
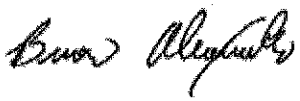
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations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

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

Certification Date: April 04, 2014

Expiration Date: EXPIRES 01 MAY 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Brenda Francis Product Documentation Technician	
Certificate Approved By:	Brian Alexander PhD., Technical Process Director	
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	

Reagent

MMSICSAB-2_00006

INORGANIC VENTURES™
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Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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

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** **Custom Solution**

Catalog No.: TAPITT-MSICSAB-2

Lot Number: **G2-MEB467043**

Matrix: 3% HNO3(v/v), tr. HF

250 µg/mL ea:
Si,

50 µg/mL ea:
Sn,

25 µg/mL ea:
B, Se,

10 µg/mL ea:
Sb

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

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

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

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

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

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 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.

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**
- SAI Global File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

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

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

Certification Date: March 08, 2013

Expiration Date: EXPIRES 01 May 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

MTAPITTICPMS_00020

1222800

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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

2.0 PRODUCT DESCRIPTION

Rec'd 6/17/14 RJR

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	200.0 ± 1.0 µg/mL	Arsenic, As	4.002 ± 0.028 µg/mL	Barium, Ba	200.0 ± 1.0 µg/mL
Beryllium, Be	5.000 ± 0.029 µg/mL	Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	5.000 ± 0.024 µg/mL
Chromium+3, 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:

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	080531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3168	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

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

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

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.

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 Requirments 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

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.

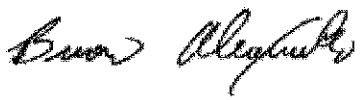
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

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
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1407257

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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
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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 $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = 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 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 01/2015

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

MTAPITTMSC_00029

1407263
1407261
1407262

INORGANIC VENTURES™

300 Technology Drive
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inorganicventures.com

CERTIFICATE OF ANALYSIS

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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

rec'd 11/3/14 SLB

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

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

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

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Tl	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 $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = 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 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 Period of Validity

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11.3 Expiration Date EXPIRES 01 DEC 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

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

Description : 8260 List 1 / Std #3 Gases

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

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

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

CERTIFIED VALUES

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

Reagent

VOA8260GAS1ST_00088

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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.:** A0108198

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

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

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

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

CERTIFIED VALUES

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

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

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

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

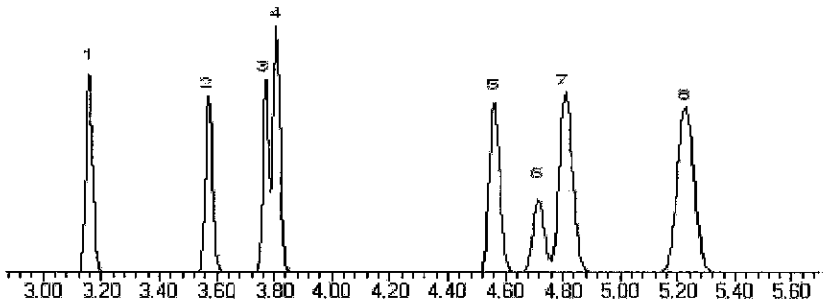
Carrier Gas:
helium-constant flow 2.0 mL/min.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Kendra Swope - Mix Technician

Date Mixed: 08-Jan-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 14-Jan-2015

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

Reagent

VOA8260GAS2ND_00083

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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. : 567645.sec **Lot No.:** A099261

Description : 8260 List 1 / Std #3 Gases

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

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

Expiration Date : November 30, 2015 **Storage:** 0°C or colder

CERTIFIED VALUES

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

Reagent

VOA8260GAS2ND_00086

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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. : 567645.sec **Lot No.:** A099261

Description : 8260 List 1 / Std #3 Gases

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

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

Expiration Date : November 30, 2015 **Storage:** 0°C or colder

CERTIFIED VALUES

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

Reagent

VOA8260INTRES_00090

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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. : 567649 **Lot No.:** A0104742

Description : 8260 Internal Standard

8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol		5,003.0	µg/mL	+/- 29.0879	µg/mL	Gravimetric
	CAS # 25725-11-5	(Lot I201P5)			+/- 106.1005	µg/mL	Unstressed
	Purity 99%				+/- 106.5713	µg/mL	Stressed
2	Fluorobenzene		250.8	µg/mL	+/- 1.4795	µg/mL	Gravimetric
	CAS # 462-06-6	(Lot 1380033)			+/- 5.3247	µg/mL	Unstressed
	Purity 99%				+/- 5.3483	µg/mL	Stressed
3	1,4-Dioxane-d8		5,009.6	µg/mL	+/- 29.1262	µg/mL	Gravimetric
	CAS # 17647-74-4	(Lot 11C-596)			+/- 106.2405	µg/mL	Unstressed
	Purity 99%				+/- 106.7119	µg/mL	Stressed
4	Chlorobenzene-d5		250.8	µg/mL	+/- 1.4795	µg/mL	Gravimetric
	CAS # 3114-55-4	(Lot PR-22736)			+/- 5.3247	µg/mL	Unstressed
	Purity 99%				+/- 5.3483	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4		250.8	µg/mL	+/- 1.4795	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)			+/- 5.3247	µg/mL	Unstressed
	Purity 99%				+/- 5.3483	µg/mL	Stressed

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

Reagent

VOA8260KET1ST_00036

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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Catalog No. : 567642 **Lot No.:** A093365

Description : 8260 List 1 / Std #2 Ketones

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

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

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

CERTIFIED VALUES

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

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

Reagent

VOA8260KET1ST_00037

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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. : 567642 **Lot No.:** A093365

Description : 8260 List 1 / Std #2 Ketones

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

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

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

CERTIFIED VALUES

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

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

Reagent

VOA8260KET2ND_00040

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
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Certificate of Analysis

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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. : 569721.SEC **Lot No.:** A0108157

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 : January 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone		12,504.0	µg/mL	+/- 73.2137	µg/mL	Gravimetric
	CAS # 67-64-1.SEC	(Lot 0902033)			+/- 665.4917	µg/mL	Unstressed
	Purity 99%				+/- 666.2255	µg/mL	Stressed
2	2-Butanone (MEK)		12,506.0	µg/mL	+/- 73.2254	µg/mL	Gravimetric
	CAS # 78-93-3.SEC	(Lot VEGGI)			+/- 665.5981	µg/mL	Unstressed
	Purity 99%				+/- 666.3320	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)		12,537.3	µg/mL	+/- 73.4088	µg/mL	Gravimetric
	CAS # 108-10-1.SEC	(Lot E29T040)			+/- 667.2658	µg/mL	Unstressed
	Purity 99%				+/- 668.0015	µg/mL	Stressed
4	2-Hexanone		12,508.7	µg/mL	+/- 73.2410	µg/mL	Gravimetric
	CAS # 591-78-6.SEC	(Lot ZSVCD-FF)			+/- 665.7401	µg/mL	Unstressed
	Purity 99%				+/- 666.4741	µg/mL	Stressed

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

Reagent

VOA8260MEGA1_00027

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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. : 567641 **Lot No.:** A093581

Description : 8260 List 1 / Std #1 MegaMix

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

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

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

CERTIFIED VALUES

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

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

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

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

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

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

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

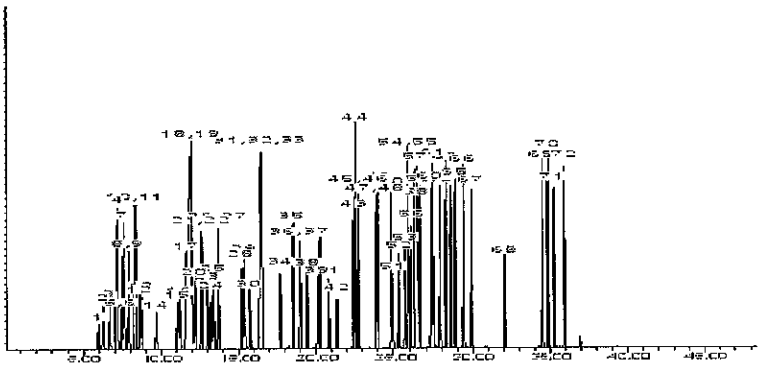
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013 **Balance:** B251644995

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

Reagent

VOA8260MEGA2_00027

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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. : 567641.sec **Lot No.:** A093733

Description : 8260 List 1 / Std #1 MegaMix

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

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

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

CERTIFIED VALUES

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

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

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

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

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

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

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

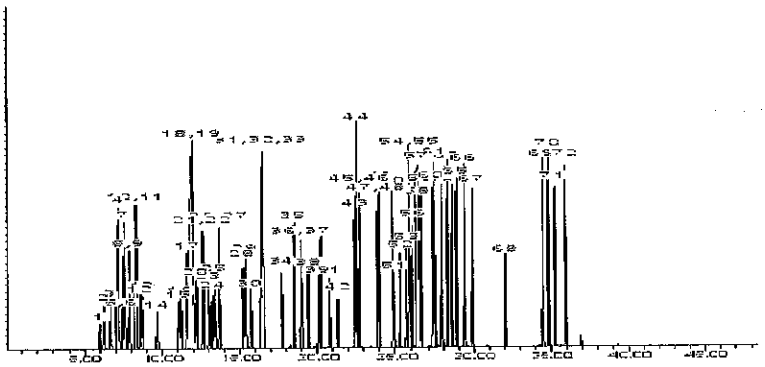
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013 **Balance:** 1127510105

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

Reagent

VOA8260SURRES_00062

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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

VOA8260VARES_00047

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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. : 567646 **Lot No.:** A0106957

Description : 8260 List 1 / Std #6 Vinyl Acetate

8260 List 1 / Std #6 Vinyl Acetate 4000 ug/ml, P&T Methanol, 1 ml/ampul

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

Expiration Date : April 30, 2015 **Storage:** 0°C or colder

CERTIFIED VALUES

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

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

Tech Tips:

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

Reagent

VOAACRORES_00064

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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. : 568720 **Lot No.:** A0107338

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750 µg/ml, Water, 1 ml/ampul

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

Expiration Date : March 31, 2015 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

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

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

Reagent

VOARESEE1ST_00008

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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. : 568363-FL **Lot No.:** A097285

Description : Custom EE Standard

Custom EE Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : February 28, 2015 **Storage:** 0°C or colder

CERTIFIED VALUES

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

9	2,5-Dichlorotoluene		5,000.0	µg/mL	+/- 29.3428	µg/mL	Gravimetric
	CAS # 19398-61-9	(Lot 10119CU)			+/- 53.0716	µg/mL	Unstressed
	Purity 99%				+/- 61.7158	µg/mL	Stressed
10	2,6-Dichlorotoluene		5,001.0	µg/mL	+/- 29.3487	µg/mL	Gravimetric
	CAS # 118-69-4	(Lot 16921JS)			+/- 53.0822	µg/mL	Unstressed
	Purity 99%				+/- 61.7282	µg/mL	Stressed
11	3,4-Dichlorotoluene		5,003.0	µg/mL	+/- 29.3604	µg/mL	Gravimetric
	CAS # 95-75-0	(Lot 09419AS)			+/- 53.1034	µg/mL	Unstressed
	Purity 99%				+/- 61.7529	µg/mL	Stressed
12	2,3-Dichlorotoluene		5,008.0	µg/mL	+/- 29.3897	µg/mL	Gravimetric
	CAS # 32768-54-0	(Lot 00317)			+/- 53.1565	µg/mL	Unstressed
	Purity 99%				+/- 61.8146	µg/mL	Stressed
13	2,4,5-Trichlorotoluene		5,001.0	µg/mL	+/- 29.3487	µg/mL	Gravimetric
	CAS # 6639-30-1	(Lot 1767300)			+/- 53.0822	µg/mL	Unstressed
	Purity 99%				+/- 61.7282	µg/mL	Stressed
14	2,3,6-Trichlorotoluene		5,001.0	µg/mL	+/- 29.3487	µg/mL	Gravimetric
	CAS # 2077-46-5	(Lot RM01250)			+/- 53.0822	µg/mL	Unstressed
	Purity 99%				+/- 61.7282	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.: 180-41453-1

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-QC1-0/1-1	180-41453-1	95	92	103	106
HD-QC1-0/1-1 DL	180-41453-1 DL	97	94	103	99
HD-QC1-0/1-2	180-41453-2	97	94	108	110
HD-MW-93D-0/1-0	180-41453-3	96	95	107	103
HD-MW-93S-0/1-0	180-41453-4	94	97	104	102
HD-MW-93S-0/1-0 DL	180-41453-4 DL	98	96	103	97
HD-MW-37D-0/1-0	180-41453-5	101	93	104	104
HD-MW-37D-0/1-0 DL	180-41453-5 DL	98	96	101	100
	MB 180-134740/3	94	95	104	104
	MB 180-134814/9	94	97	104	106
	LCS 180-134740/6	94	97	100	92
	LCS 180-134814/12	94	96	104	95

	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.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50304006.D

Lab ID: LCS 180-134740/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	8.72	87	50-139	
Vinyl chloride	10.0	8.59	86	53-138	
Bromomethane	10.0	10.0	100	33-150	
Chloroethane	10.0	9.55	96	36-142	
1,1-Dichloroethene	10.0	8.99	90	65-136	
Acetone	20.0	16.5	83	22-150	
Carbon disulfide	10.0	7.82	78	54-132	
Methylene Chloride	10.0	9.18	92	63-129	
trans-1,2-Dichloroethene	10.0	9.41	94	73-126	
Methyl tert-butyl ether	10.0	8.71	87	64-123	
1,1-Dichloroethane	10.0	9.19	92	73-126	
cis-1,2-Dichloroethene	10.0	9.25	93	70-120	
Bromochloromethane	10.0	8.70	87	70-127	
2-Butanone (MEK)	20.0	18.4	92	39-138	
Chloroform	10.0	9.28	93	72-127	
1,1,1-Trichloroethane	10.0	8.32	83	63-133	
Carbon tetrachloride	10.0	8.41	84	55-150	
Benzene	10.0	9.36	94	80-120	
1,2-Dichloroethane	10.0	8.99	90	68-132	
Trichloroethene	10.0	9.49	95	73-120	
1,2-Dichloropropane	10.0	9.21	92	76-124	
Bromodichloromethane	10.0	9.03	90	66-130	
cis-1,3-Dichloropropene	10.0	8.43	84	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.1	86	45-145	
Toluene	10.0	9.64	96	80-123	
trans-1,3-Dichloropropene	10.0	8.08	81	65-125	
1,1,2-Trichloroethane	10.0	9.38	94	77-127	
Tetrachloroethene	10.0	9.39	94	70-135	
2-Hexanone	20.0	16.3	81	25-132	
Dibromochloromethane	10.0	8.89	89	60-140	
1,2-Dibromoethane (EDB)	10.0	9.30	93	74-123	
Chlorobenzene	10.0	9.41	94	80-120	
1,1,1,2-Tetrachloroethane	10.0	8.83	88	63-140	
Ethylbenzene	10.0	9.42	94	72-126	
Xylenes, Total	20.0	18.5	93	76-128	
Styrene	10.0	9.10	91	71-127	
Bromoform	10.0	8.61	86	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.42	94	62-125	
1,4-Dioxane	200	194 J	97	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.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50305012.D

Lab ID: LCS 180-134814/12 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	9.78	98	50-139	
Vinyl chloride	10.0	9.77	98	53-138	
Bromomethane	10.0	11.6	116	33-150	
Chloroethane	10.0	11.8	118	36-142	
1,1-Dichloroethene	10.0	9.64	96	65-136	
Acetone	20.0	19.7	99	22-150	
Carbon disulfide	10.0	8.05	80	54-132	
Methylene Chloride	10.0	9.31	93	63-129	
trans-1,2-Dichloroethene	10.0	9.97	100	73-126	
Methyl tert-butyl ether	10.0	8.34	83	64-123	
1,1-Dichloroethane	10.0	9.56	96	73-126	
cis-1,2-Dichloroethene	10.0	9.79	98	70-120	
Bromochloromethane	10.0	9.73	97	70-127	
2-Butanone (MEK)	20.0	19.3	96	39-138	
Chloroform	10.0	9.95	100	72-127	
1,1,1-Trichloroethane	10.0	8.77	88	63-133	
Carbon tetrachloride	10.0	9.37	94	55-150	
Benzene	10.0	10.1	101	80-120	
1,2-Dichloroethane	10.0	9.46	95	68-132	
Trichloroethene	10.0	10.5	105	73-120	
1,2-Dichloropropane	10.0	9.25	93	76-124	
Bromodichloromethane	10.0	9.35	93	66-130	
cis-1,3-Dichloropropene	10.0	7.58	76	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.7	88	45-145	
Toluene	10.0	10.9	109	80-123	
trans-1,3-Dichloropropene	10.0	7.19	72	65-125	
1,1,2-Trichloroethane	10.0	9.97	100	77-127	
Tetrachloroethene	10.0	11.5	115	70-135	
2-Hexanone	20.0	16.2	81	25-132	
Dibromochloromethane	10.0	9.49	95	60-140	
1,2-Dibromoethane (EDB)	10.0	9.91	99	74-123	
Chlorobenzene	10.0	10.5	105	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.28	93	63-140	
Ethylbenzene	10.0	10.9	109	72-126	
Xylenes, Total	20.0	20.9	105	76-128	
Styrene	10.0	10.2	102	71-127	
Bromoform	10.0	9.07	91	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	62-125	
1,4-Dioxane	200	165 J	82	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.: 180-41453-1

SDG No.:

Lab File ID: 50304003.D Lab Sample ID: MB 180-134740/3

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP5 Date Analyzed: 03/04/2015 12:17

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 180-134740/6	50304006.D	03/04/2015 13:44
HD-QC1-0/1-1	180-41453-1	50304016.D	03/04/2015 17:45
HD-MW-93D-0/1-0	180-41453-3	50304018.D	03/04/2015 18:33
HD-QC1-0/1-2	180-41453-2	50304019.D	03/04/2015 18:57
HD-MW-93S-0/1-0	180-41453-4	50304020.D	03/04/2015 19:22
HD-MW-37D-0/1-0	180-41453-5	50304022.D	03/04/2015 20:10

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab File ID: 50305009.D Lab Sample ID: MB 180-134814/9

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP5 Date Analyzed: 03/05/2015 13:05

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 180-134814/12	50305012.D	03/05/2015 14:47
HD-QC1-0/1-1 DL	180-41453-1 DL	50305016.D	03/05/2015 16:24
HD-MW-93S-0/1-0 DL	180-41453-4 DL	50305017.D	03/05/2015 16:48
HD-MW-37D-0/1-0 DL	180-41453-5 DL	50305018.D	03/05/2015 17:12

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab File ID: 50303006.D BFB Injection Date: 03/03/2015

Instrument ID: CHHP5 BFB Injection Time: 12:21

Analysis Batch No.: 134613

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

1-Value is % mass 174 2-Value is % mass 176

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

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

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab File ID: 50304001.D BFB Injection Date: 03/04/2015

Instrument ID: CHHP5 BFB Injection Time: 11:01

Analysis Batch No.: 134740

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.7	
75	30.0 - 60.0 % of mass 95	47.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	77.6	
175	5.0 - 9.0 % of mass 174	5.9	(7.6)1
176	95.0 - 101.0 % of mass 174	74.8	(96.4)1
177	5.0 - 9.0 % of mass 176	5.5	(7.4)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 180-134740/2	50304002.D	03/04/2015	11:38
	MB 180-134740/3	50304003.D	03/04/2015	12:17
	LCS 180-134740/6	50304006.D	03/04/2015	13:44
HD-QC1-0/1-1	180-41453-1	50304016.D	03/04/2015	17:45
HD-MW-93D-0/1-0	180-41453-3	50304018.D	03/04/2015	18:33
HD-QC1-0/1-2	180-41453-2	50304019.D	03/04/2015	18:57
HD-MW-93S-0/1-0	180-41453-4	50304020.D	03/04/2015	19:22
HD-MW-37D-0/1-0	180-41453-5	50304022.D	03/04/2015	20:10

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab File ID: 50305006.D BFB Injection Date: 03/05/2015

Instrument ID: CHHP5 BFB Injection Time: 10:58

Analysis Batch No.: 134814

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.4	
75	30.0 - 60.0 % of mass 95	47.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.7	(0.8)1
174	50.0 - 120.00 % of mass 95	81.8	
175	5.0 - 9.0 % of mass 174	6.1	(7.5)1
176	95.0 - 101.0 % of mass 174	81.4	(99.6)1
177	5.0 - 9.0 % of mass 176	5.8	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-134814/7	50305007.D	03/05/2015	12:16
	MB 180-134814/9	50305009.D	03/05/2015	13:05
	LCS 180-134814/12	50305012.D	03/05/2015	14:47
HD-QC1-0/1-1 DL	180-41453-1 DL	50305016.D	03/05/2015	16:24
HD-MW-93S-0/1-0 DL	180-41453-4 DL	50305017.D	03/05/2015	16:48
HD-MW-37D-0/1-0 DL	180-41453-5 DL	50305018.D	03/05/2015	17:12

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Sample No.: CCVIS 180-134740/2 Date Analyzed: 03/04/2015 11:38

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50304002.D Heated Purge: (Y/N) N

Calibration ID: 22321

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		140255	4.32	433400	7.28	101881	10.37
UPPER LIMIT		280510	4.82	866800	7.78	203762	10.87
LOWER LIMIT		70128	3.82	216700	6.78	50941	9.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-134740/3		145696	4.30	482246	7.28	106404	10.37
LCS 180-134740/6		148016	4.32	435167	7.28	104133	10.37
180-41453-1	HD-QC1-0/1-1	81346	4.30	387626	7.28	86047	10.37
180-41453-3	HD-MW-93D-0/1-0	82484	4.29	383856	7.28	85680	10.36
180-41453-2	HD-QC1-0/1-2	88715	4.31	380556	7.28	83105	10.36
180-41453-4	HD-MW-93S-0/1-0	85929	4.30	393015	7.28	87626	10.36
180-41453-5	HD-MW-37D-0/1-0	71798	4.30	361866	7.28	82005	10.36

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.: 180-41453-1

SDG No.:

Sample No.: CCVIS 180-134740/2 Date Analyzed: 03/04/2015 11:38

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50304002.D Heated Purge: (Y/N) N

Calibration ID: 22321

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		146266	12.69				
UPPER LIMIT		292532	13.19				
LOWER LIMIT		73133	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-134740/3		165407	12.69				
LCS 180-134740/6		142992	12.69				
180-41453-1	HD-QC1-0/1-1	134561	12.69				
180-41453-3	HD-MW-93D-0/1-0	134198	12.69				
180-41453-2	HD-QC1-0/1-2	136723	12.69				
180-41453-4	HD-MW-93S-0/1-0	136929	12.69				
180-41453-5	HD-MW-37D-0/1-0	127322	12.69				

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.: 180-41453-1

SDG No.:

Sample No.: CCVIS 180-134814/7 Date Analyzed: 03/05/2015 12:16

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50305007.D Heated Purge: (Y/N) N

Calibration ID: 22321

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		110089	4.30	455418	7.27	107822	10.37
UPPER LIMIT		220178	4.80	910836	7.77	215644	10.87
LOWER LIMIT		55045	3.80	227709	6.77	53911	9.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-134814/9		109928	4.31	473345	7.27	106986	10.36
LCS 180-134814/12		103201	4.29	447357	7.27	102383	10.36
180-41453-1 DL	HD-QC1-0/1-1 DL	99846	4.30	450733	7.28	102610	10.36
180-41453-4 DL	HD-MW-93S-0/1-0 DL	96223	4.28	449268	7.28	105147	10.37
180-41453-5 DL	HD-MW-37D-0/1-0 DL	80210	4.29	437384	7.28	99111	10.36

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.: 180-41453-1

SDG No.:

Sample No.: CCVIS 180-134814/7 Date Analyzed: 03/05/2015 12:16

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50305007.D Heated Purge: (Y/N) N

Calibration ID: 22321

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		151087	12.68				
UPPER LIMIT		302174	13.18				
LOWER LIMIT		75544	12.18				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-134814/9		171961	12.68				
LCS 180-134814/12		140823	12.68				
180-41453-1 DL	HD-QC1-0/1-1 DL	157181	12.69				
180-41453-4 DL	HD-MW-93S-0/1-0 DL	154999	12.69				
180-41453-5 DL	HD-MW-37D-0/1-0 DL	151059	12.68				

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.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 | Lab Sample ID: 180-41453-1

Matrix: Water | Lab File ID: 50304016.D

Analysis Method: 8260C | Date Collected: 02/23/2015 08:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/04/2015 17:45

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.: 134740 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	0.89	J	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	0.46	J	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.98	J	1.0	0.12
156-59-2	*cis-1,2-Dichloroethene*	*96*	*E*	*1.0*	*0.24*
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	3.4		1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	35		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	*Tetrachloroethene*	*61*	*E*	*1.0*	*0.15*
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41453-1

Matrix: Water Lab File ID: 50304016.D

Analysis Method: 8260C Date Collected: 02/23/2015 08:00

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 17:45

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.: 134740 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	106		70-118
1868-53-7	Dibromofluoromethane (Surr)	95		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D
Lims ID: 180-41453-C-1 Lab Sample ID: 180-41453-1
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 04-Mar-2015 17:45:30 ALS Bottle#: 16 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41453-C-1
Misc. Info.: 180-0005893-016
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 05-Mar-2015 08:46:27 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK052

First Level Reviewer: fergusond Date: 05-Mar-2015 08:46:27

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.296	4.320	-0.024	96	81346	1000.0	
*	2 Fluorobenzene (IS)	96	7.277	7.277	0.000	99	387626	50.0	
*	3 Chlorobenzene-d5	119	10.368	10.367	0.001	99	86047	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.685	12.691	-0.006	98	134561	50.0	
$	5 Dibromofluoromethane (Surr	113	6.529	6.528	0.001	72	78452	47.3	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.900	0.006	99	94367	46.0	
$	7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	100	346347	51.6	
$	8 4-Bromofluorobenzene (Surr	95	11.536	11.535	0.001	98	131924	52.9	
	12 Chloromethane	50		1.777				ND	
	13 Vinyl chloride	62	1.893	1.905	-0.012	1	1990	0.6651	
	15 Bromomethane	94		2.252				ND	
	16 Chloroethane	64		2.373				ND	
	22 1,1-Dichloroethene	96	3.384	3.371	0.013	98	9989	4.43	
	24 Acetone	43	3.518	3.493	0.025	47	3381	4.15	
	26 Carbon disulfide	76		3.651				ND	
	31 Methylene Chloride	84		4.144				ND	
	33 Acrylonitrile	53		4.551				ND	
	34 trans-1,2-Dichloroethene	96	4.576	4.570	0.006	71	5474	2.32	
	35 Methyl tert-butyl ether	73		4.600				ND	
	37 1,1-Dichloroethane	63	5.185	5.172	0.013	98	22142	4.92	
	45 cis-1,2-Dichloroethene	96	5.945	5.938	0.007	75	1215254	481.6	E
	46 2-Butanone (MEK)	43		5.987				ND	
	49 Chlorobromomethane	128		6.230				ND	
	52 Chloroform	83	6.346	6.340	0.006	6	1709	0.4767	M
	53 1,1,1-Trichloroethane	97	6.535	6.528	0.007	72	40912	16.8	
	56 Carbon tetrachloride	117		6.717				ND	
	58 Benzene	78		6.954				ND	
	59 1,2-Dichloroethane	62		6.991				ND	
	64 Trichloroethene	130	7.673	7.666	0.007	99	397784	172.5	
	67 1,2-Dichloropropane	63		7.909				ND	
	70 1,4-Dioxane	88		8.061				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.201				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.540	9.540	0.000	99	502032	306.3	E
82 2-Hexanone	43	9.638	9.661	-0.023	1	203	0.1119	
84 Chlorodibromomethane	129		9.795				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112	10.410	10.391	0.019	26	2609	0.4587	
89 1,1,1,2-Tetrachloroethane	131		10.477				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.623				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

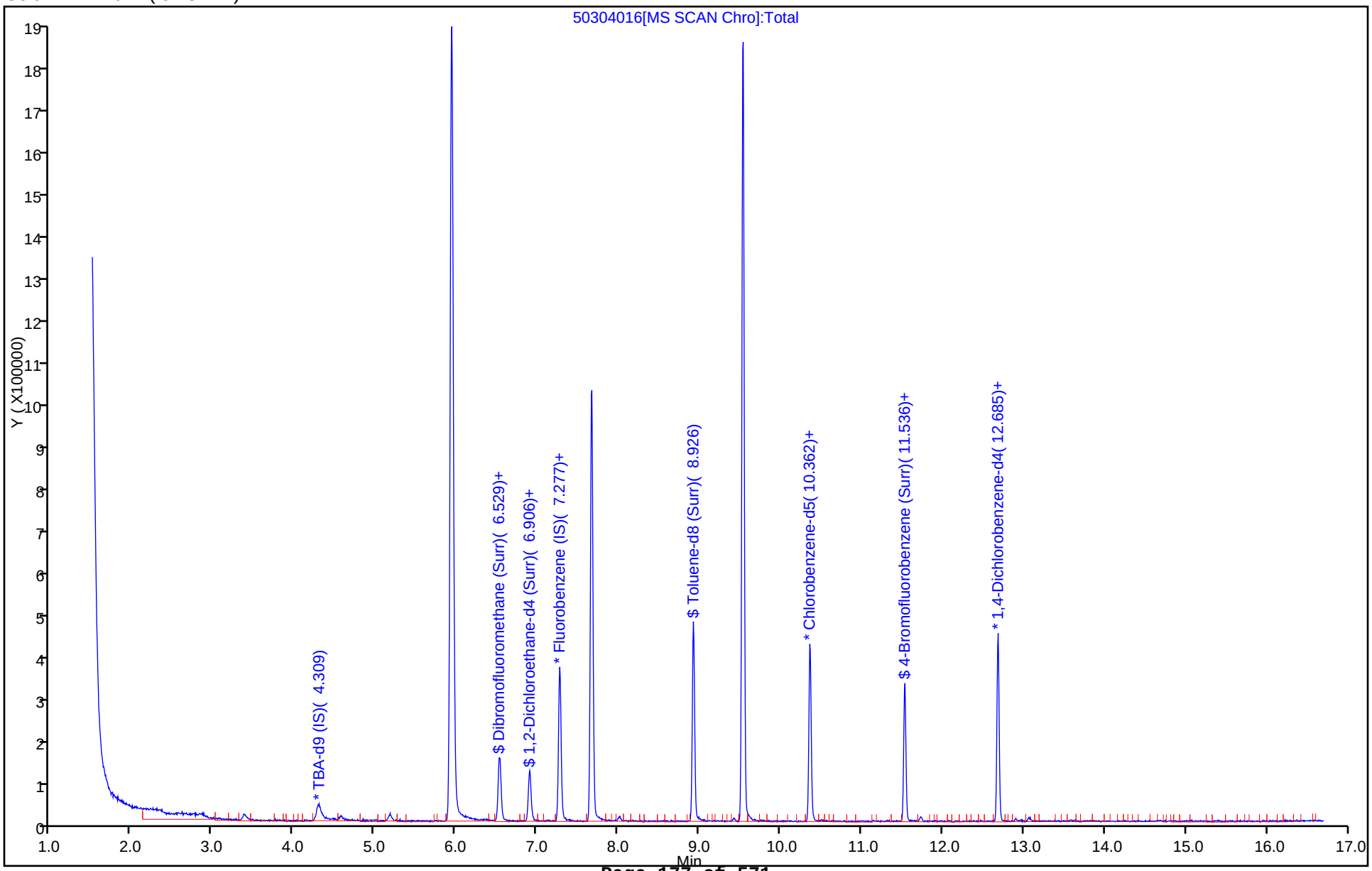
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D				
Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1	Worklist Smp#:	16
Client ID:	HD-QC1-0/1-1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D

Injection Date: 04-Mar-2015 17:45:30 Instrument ID: CHHP5

Lims ID: 180-41453-C-1 Lab Sample ID: 180-41453-1

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

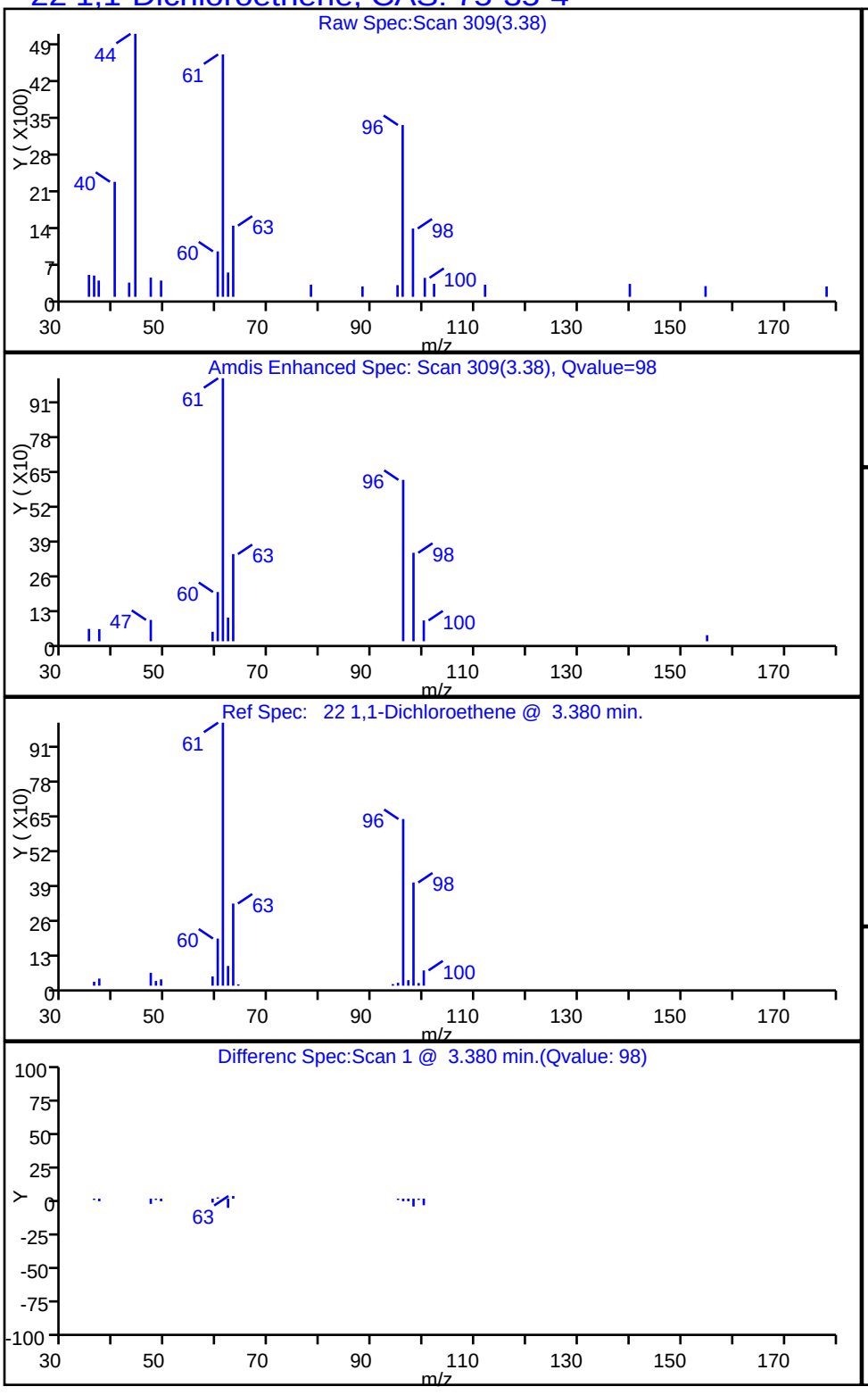
Operator ID: 001562 ALS Bottle#: 16 Worklist Smp#: 16

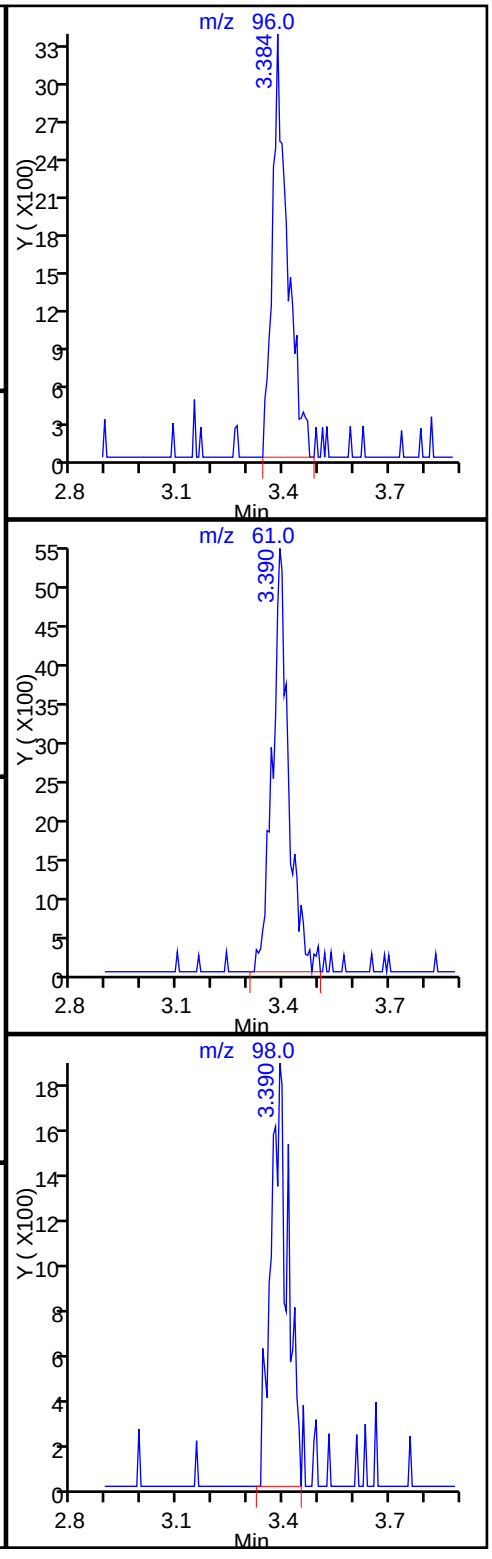
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

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



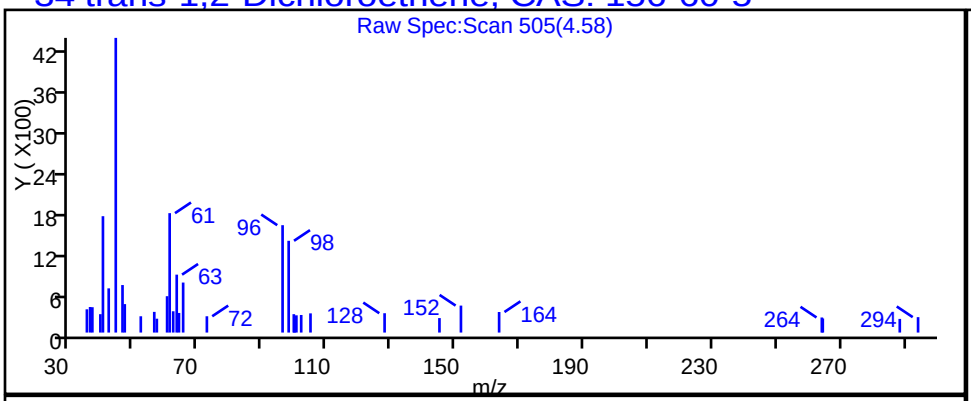


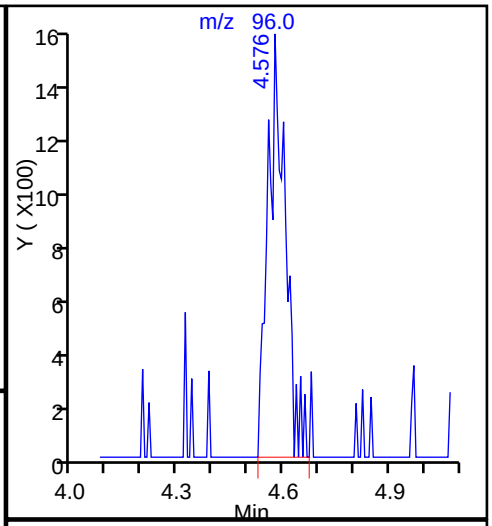
Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

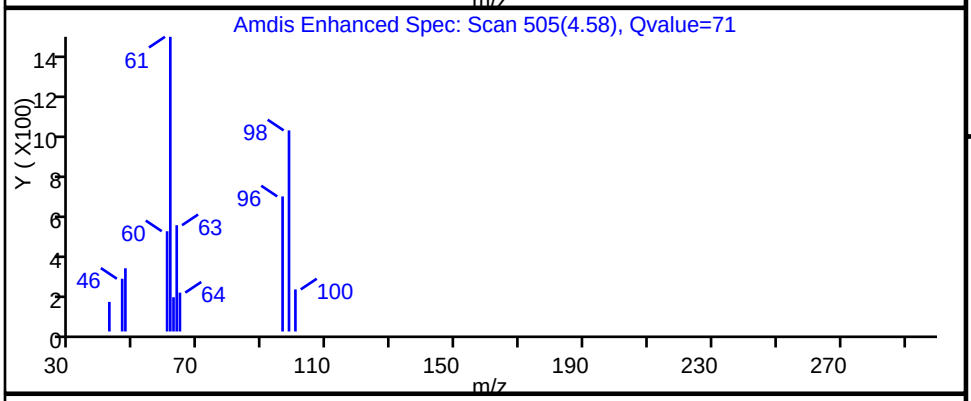
TestAmerica Pittsburgh

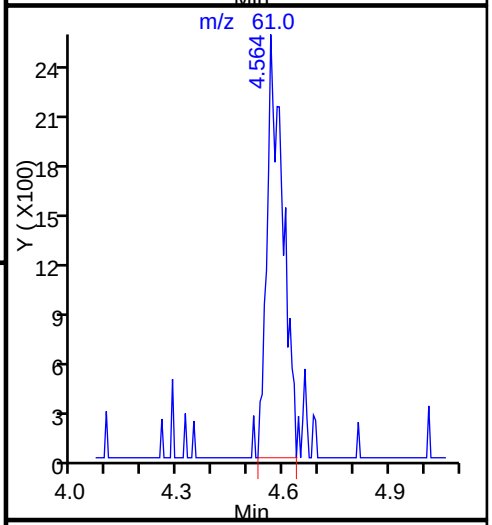
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D		
Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	16 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

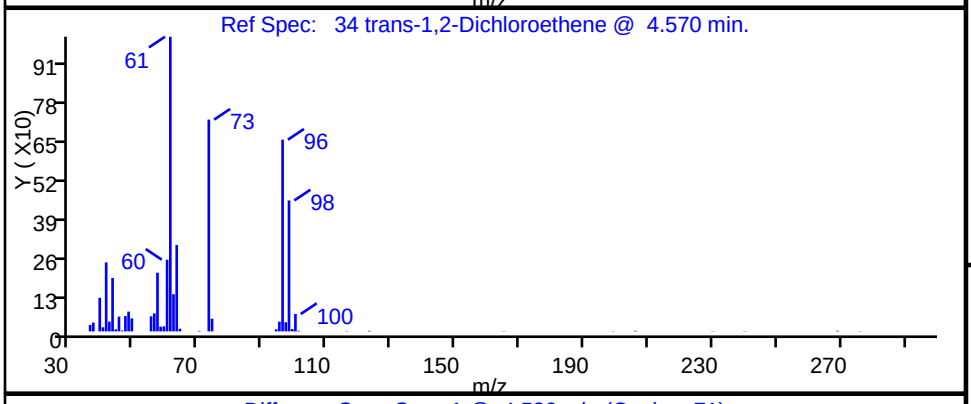
34 trans-1,2-Dichloroethene, CAS: 156-60-5

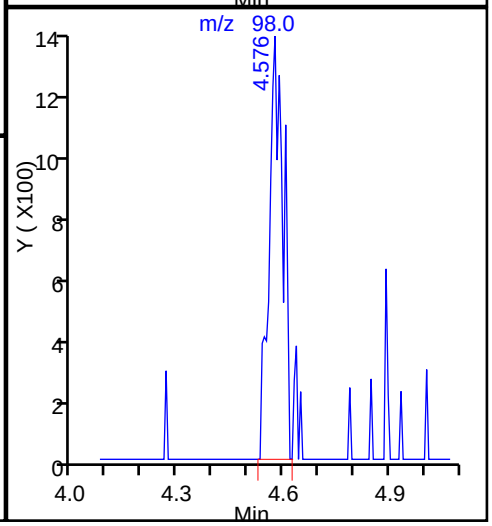


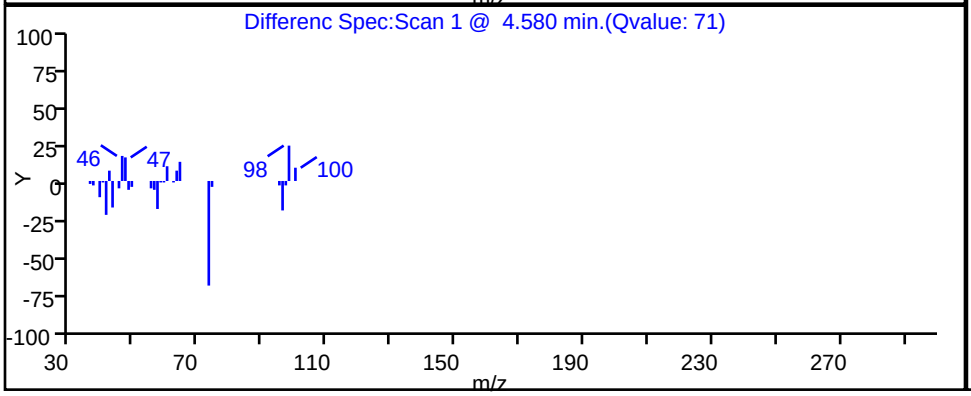












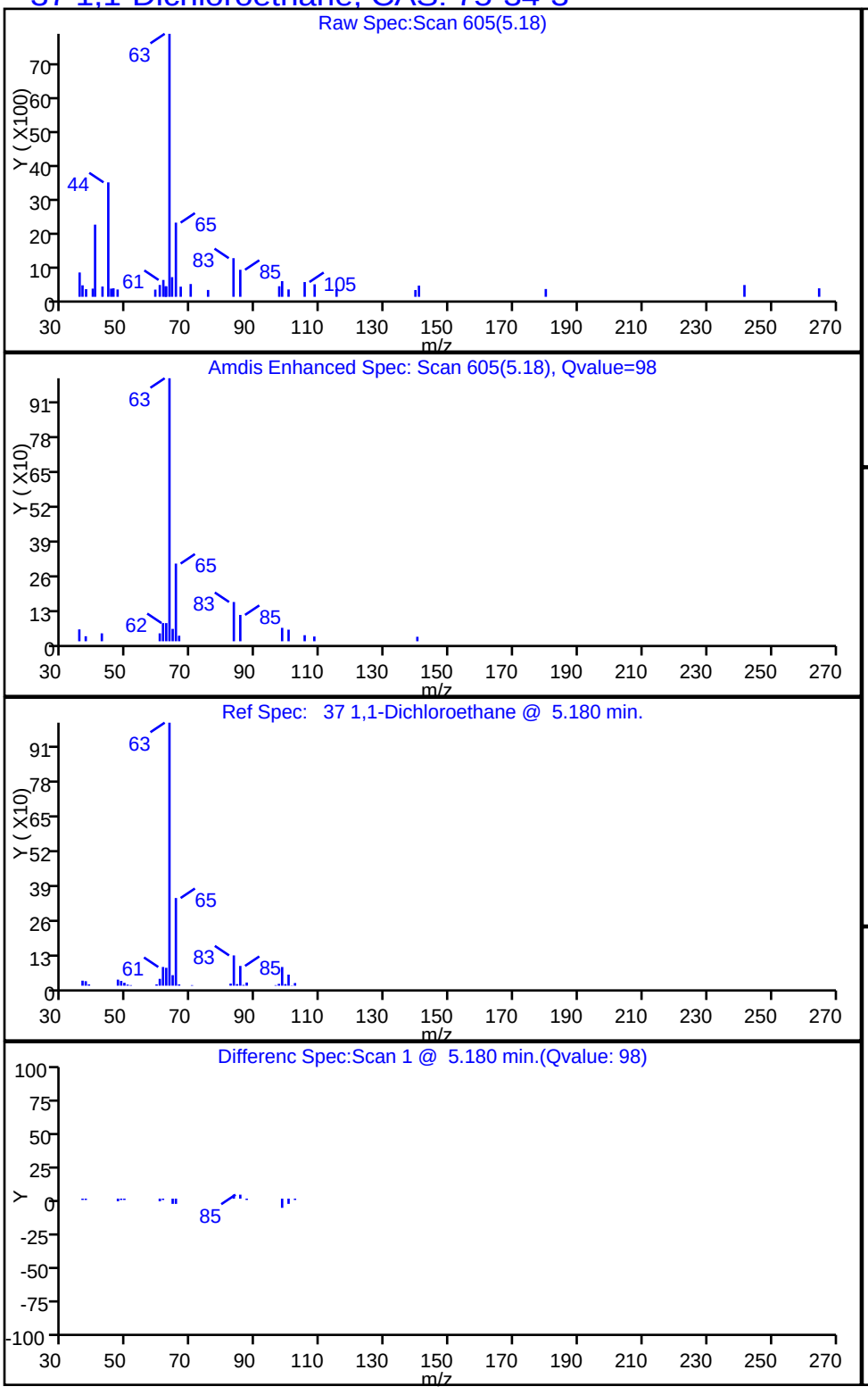
Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

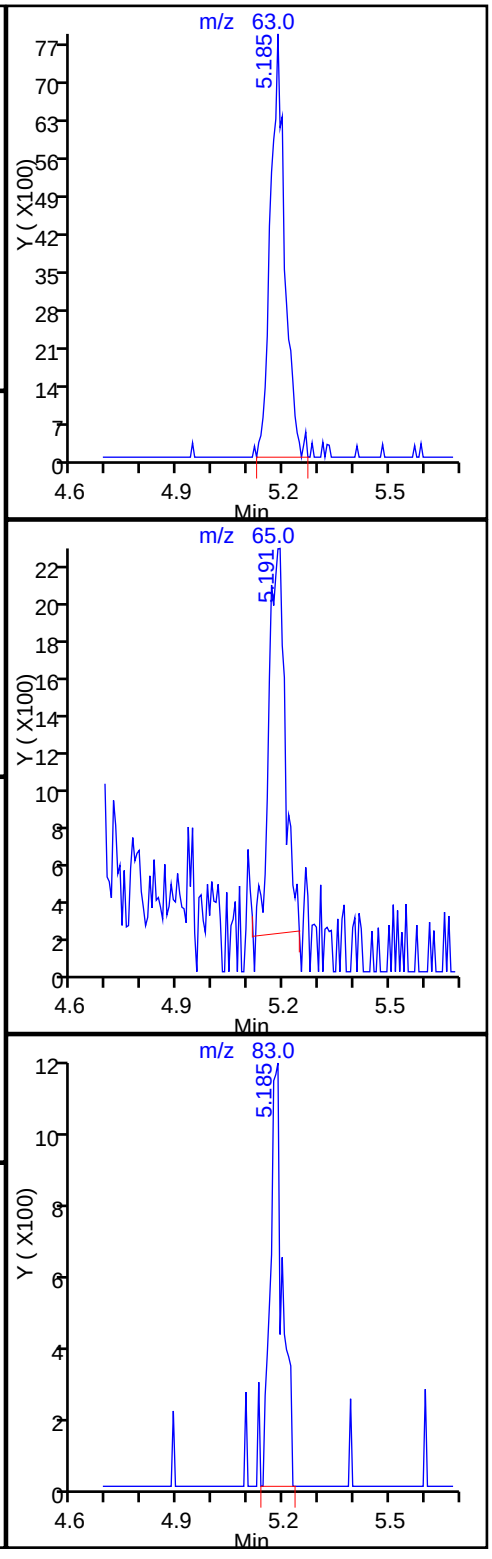
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D

Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	16 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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





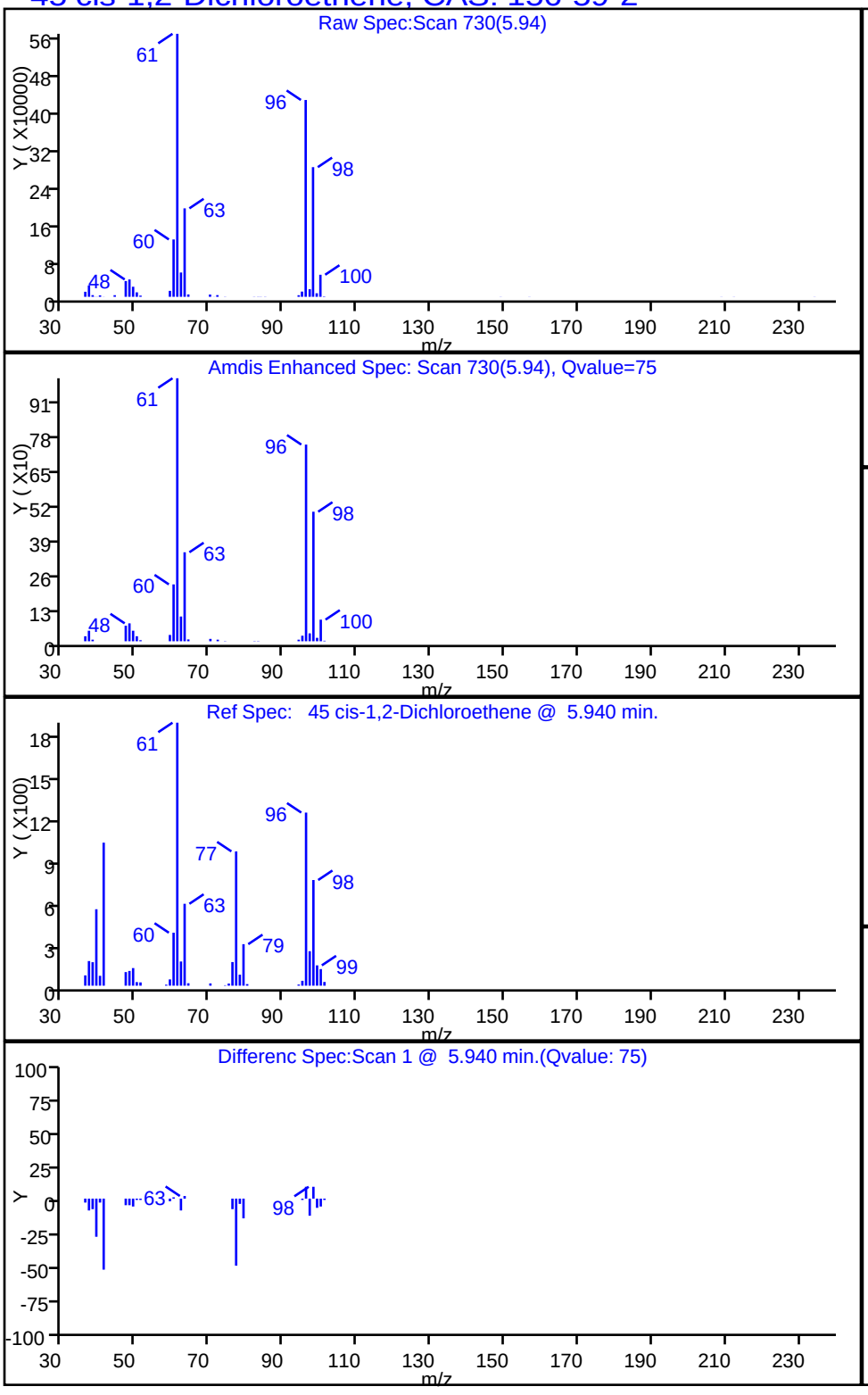
Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

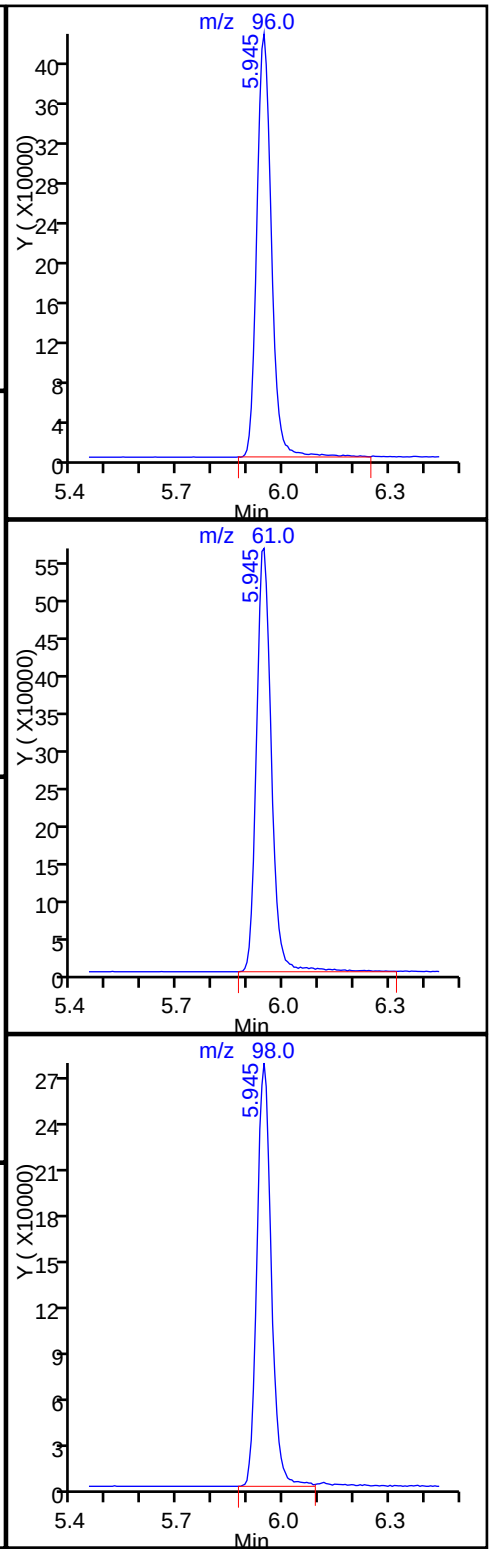
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D

Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



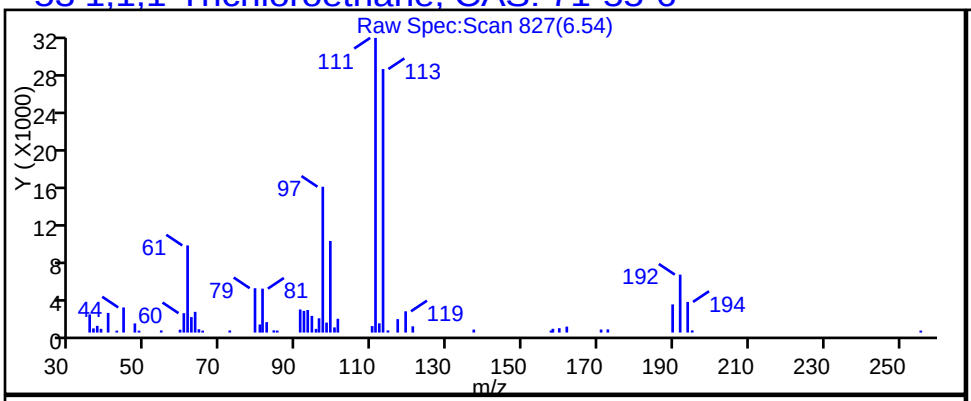


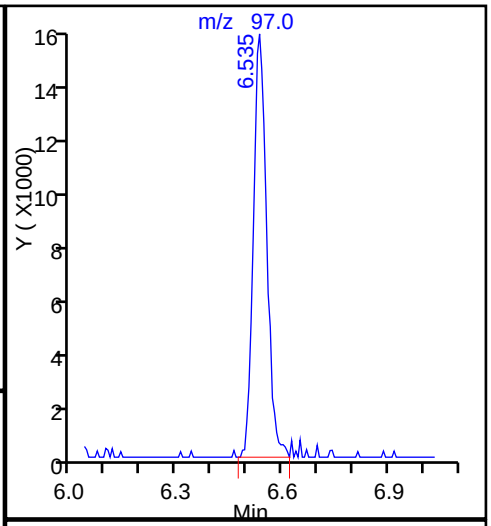
Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

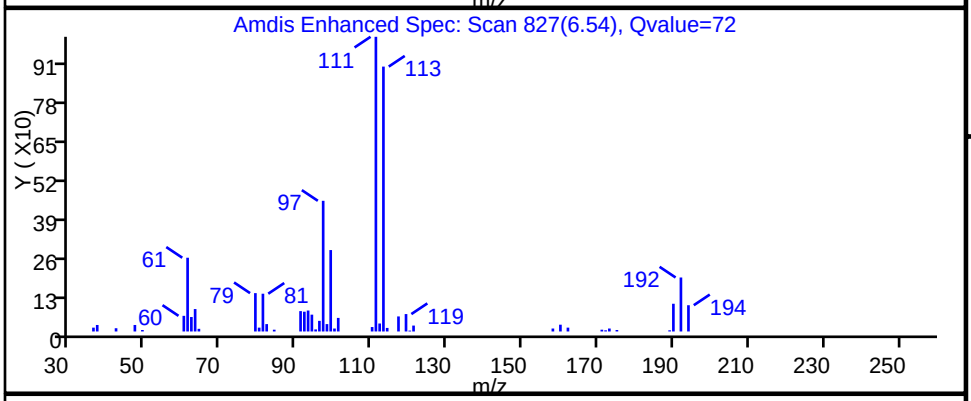
TestAmerica Pittsburgh

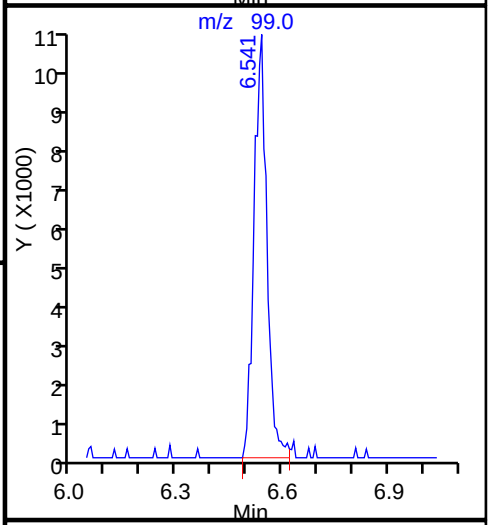
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D				
Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

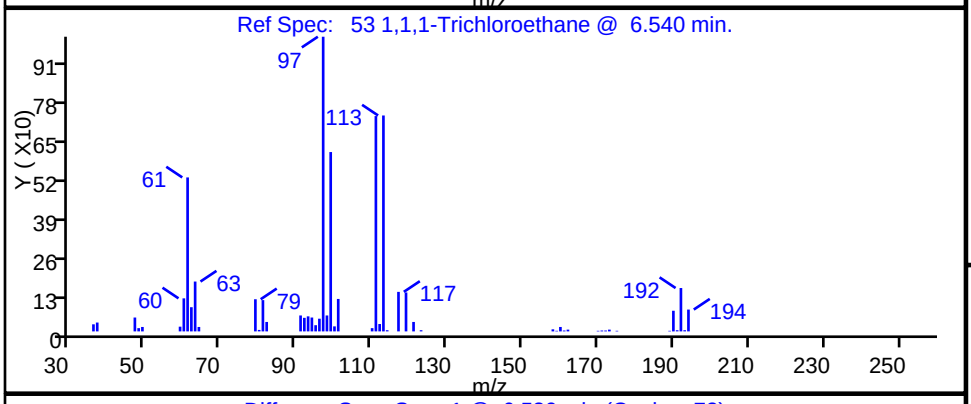
53 1,1,1-Trichloroethane, CAS: 71-55-6

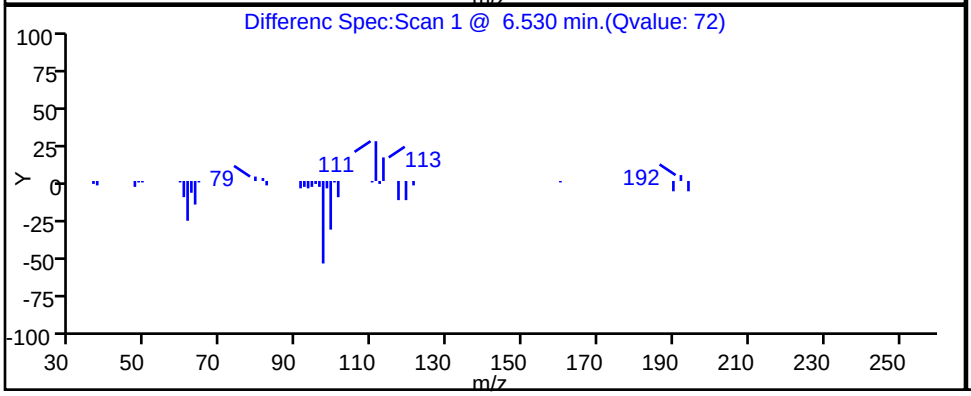


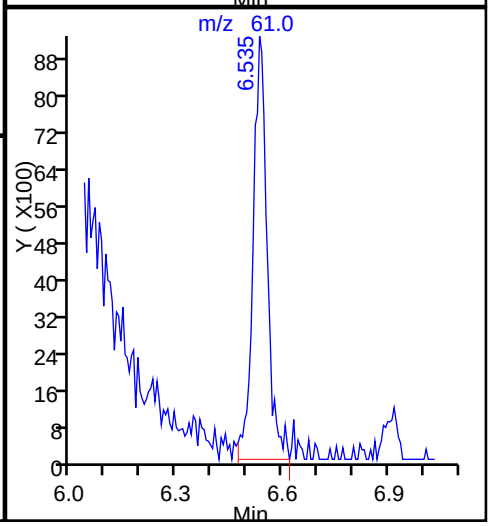












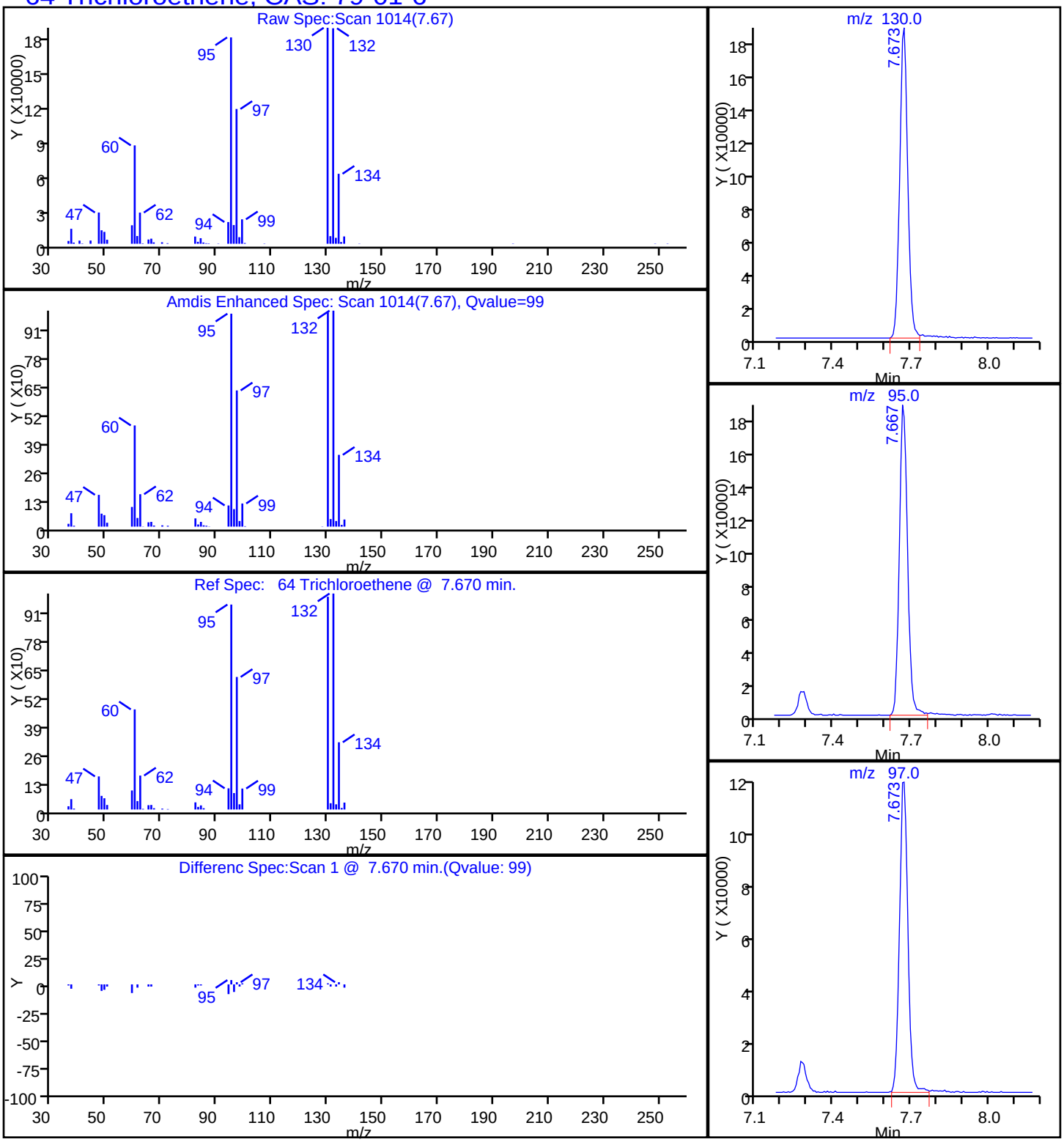
Report Date: 05-Mar-2015 08:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D

Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	16 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

64 Trichloroethene, CAS: 79-01-6



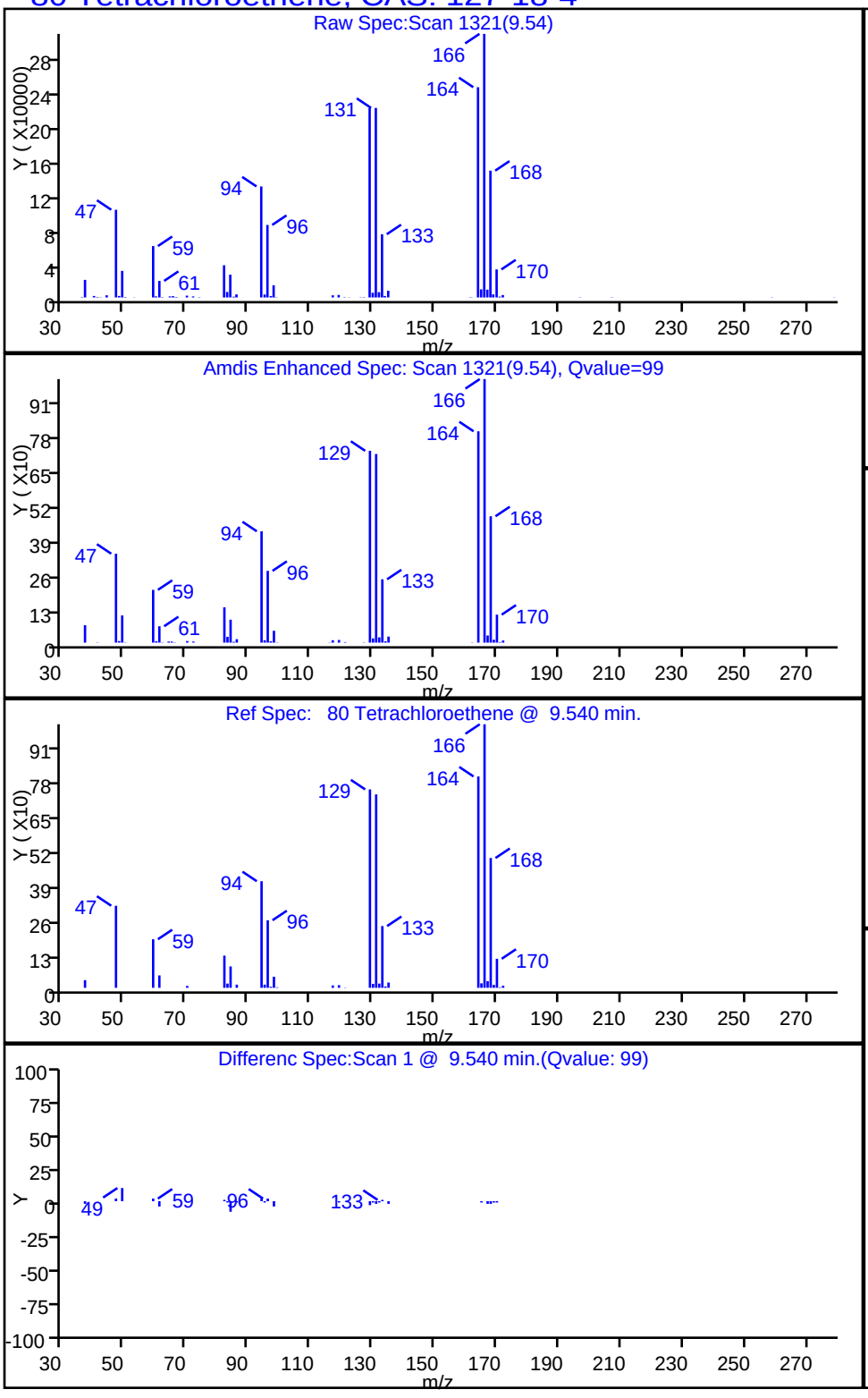
Report Date: 05-Mar-2015 08:46:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

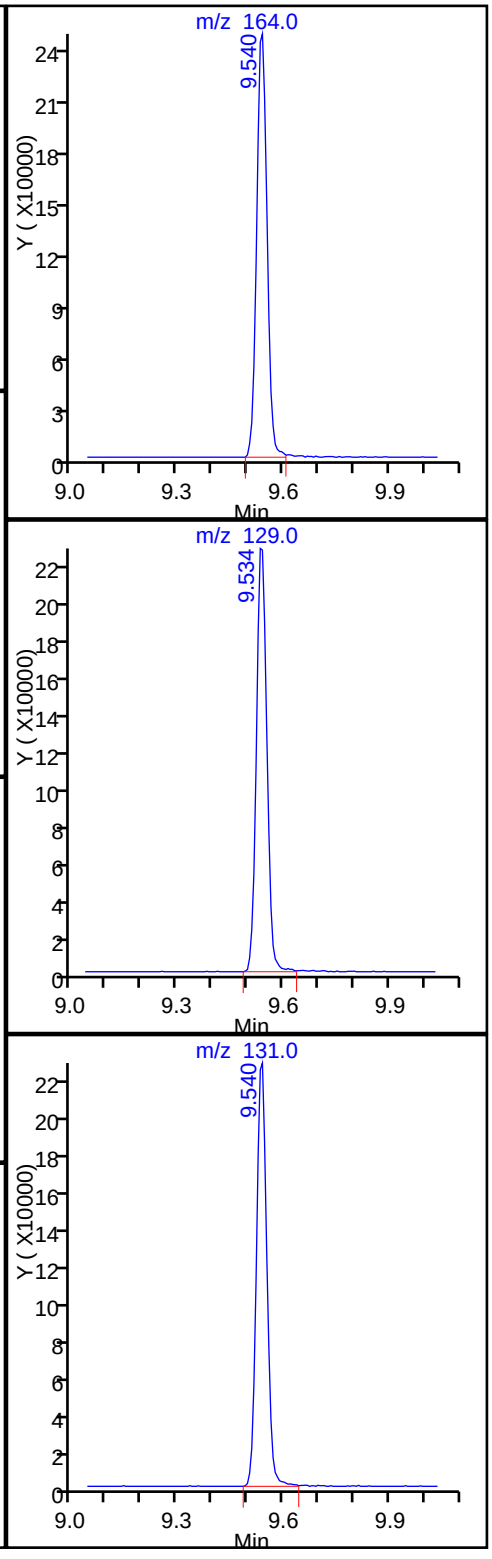
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D

Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	16 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

80 Tetrachloroethene, CAS: 127-18-4





Manual Integration/User Assign Peak Report

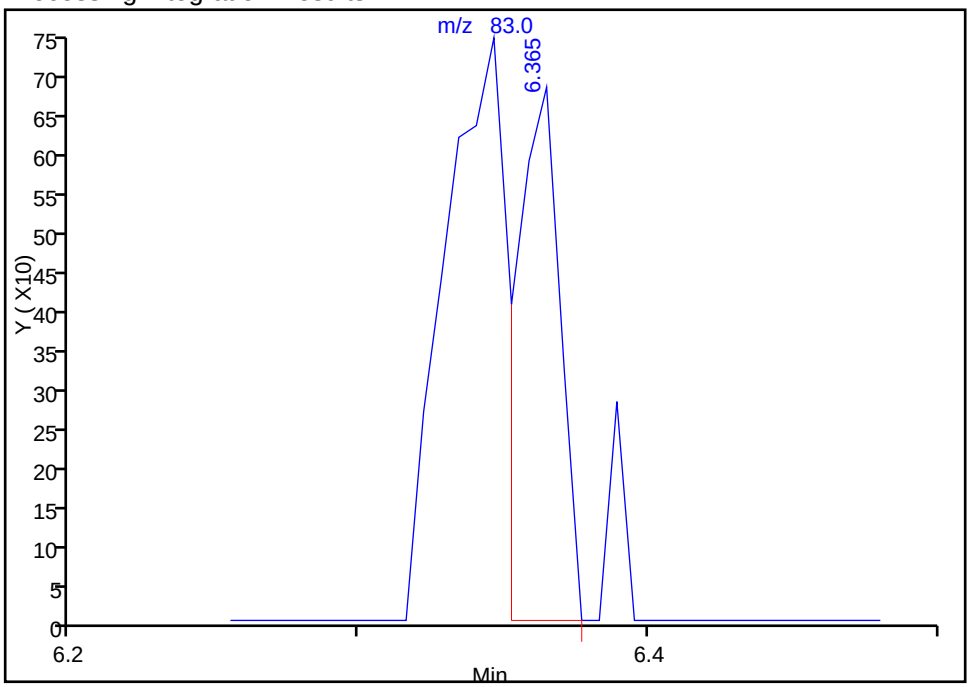
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304016.D				
Injection Date:	04-Mar-2015 17:45:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

52 Chloroform, CAS: 67-66-3

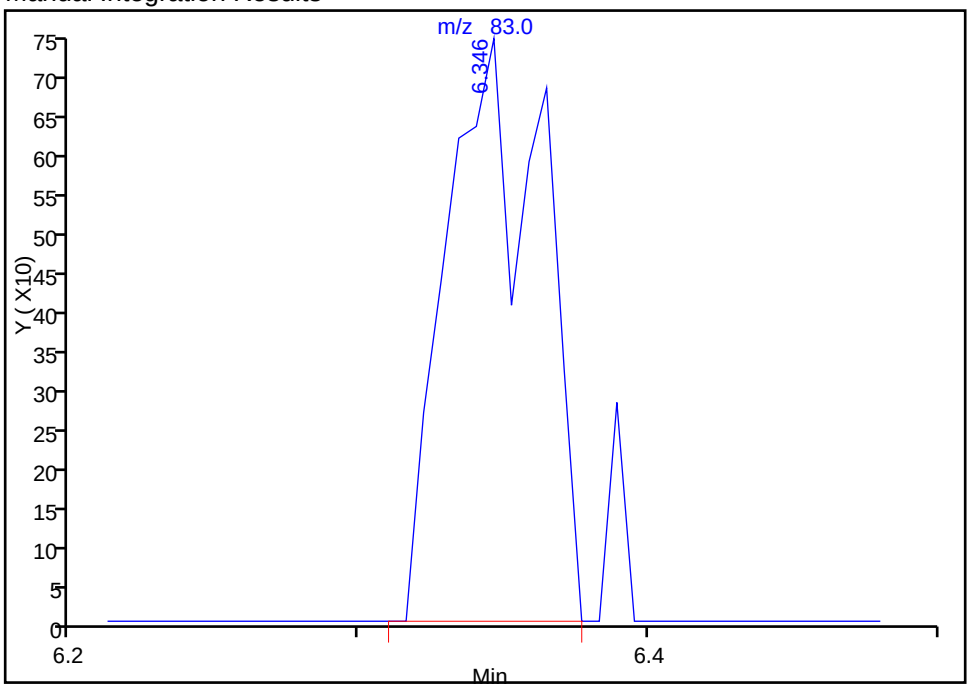
Processing Integration Results

RT: 6.36
Area: 726
Amount: 0.202522
Amount Units: ng



Manual Integration Results

RT: 6.35
Area: 1709
Amount: 0.476737
Amount Units: ng



Reviewer: fergusond, 05-Mar-2015 08:46:27
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 DL | Lab Sample ID: 180-41453-1 DL

Matrix: Water | Lab File ID: 50305016.D

Analysis Method: 8260C | Date Collected: 02/23/2015 08:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/05/2015 16:24

Soil Aliquot Vol: | Dilution Factor: 5

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

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

Analysis Batch No.: 134814 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U	5.0	1.4
75-01-4	Vinyl chloride	5.0	U	5.0	1.1
74-83-9	Bromomethane	5.0	U	5.0	1.6
75-00-3	Chloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	5.0	U	5.0	1.5
67-64-1	Acetone	25	U	25	13
75-15-0	Carbon disulfide	5.0	U	5.0	1.1
75-09-2	Methylene Chloride	5.0	U	5.0	0.63
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.85
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.92
75-34-3	1,1-Dichloroethane	0.87	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	88		5.0	1.2
74-97-5	Bromochloromethane	5.0	U	5.0	0.90
78-93-3	2-Butanone (MEK)	25	U	25	2.7
67-66-3	Chloroform	5.0	U	5.0	0.85
71-55-6	1,1,1-Trichloroethane	2.7	J	5.0	1.4
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.68
71-43-2	Benzene	5.0	U	5.0	0.53
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
79-01-6	Trichloroethene	31		5.0	0.72
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.47
75-27-4	Bromodichloromethane	5.0	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.93
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U	25	2.6
108-88-3	Toluene	5.0	U	5.0	0.75
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.74
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	1.0
127-18-4	Tetrachloroethene	51		5.0	0.74
591-78-6	2-Hexanone	25	U	25	0.80
124-48-1	Dibromochloromethane	5.0	U	5.0	0.68
106-93-4	1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90
108-90-7	Chlorobenzene	5.0	U	5.0	0.68
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4
100-41-4	Ethylbenzene	5.0	U	5.0	1.1
1330-20-7	Xylenes, Total	15	U	15	2.4
100-42-5	Styrene	5.0	U	5.0	0.48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 DL Lab Sample ID: 180-41453-1 DL

Matrix: Water Lab File ID: 50305016.D

Analysis Method: 8260C Date Collected: 02/23/2015 08:00

Sample wt/vol: 5(mL) Date Analyzed: 03/05/2015 16:24

Soil Aliquot Vol: Dilution Factor: 5

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134814 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	*Bromoform*	*5.0*	*U*	*5.0*	*0.96*
79-34-5	*1,1,2,2-Tetrachloroethane*	*5.0*	*U*	*5.0*	*1.0*
107-13-1	*Acrylonitrile*	*100*	*U*	*100*	*2.7*
123-91-1	*1,4-Dioxane*	*1000*	*U*	*1000*	*170*

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	99		70-118
1868-53-7	Dibromofluoromethane (Surr)	97		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D
Lims ID: 180-41453-E-1 Lab Sample ID: 180-41453-1
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 05-Mar-2015 16:24:30 ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-41453-E-1, 5x
Misc. Info.: 180-0005905-016
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:19:16 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 06-Mar-2015 08:19:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.299	0.003	92	99846	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	450733	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.365	-0.003	99	102610	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	99	157181	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.532	-0.004	55	93995	48.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.897	0.009	99	112287	47.1	
$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	100	412438	51.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.533	-0.004	96	146834	49.3	
12 Chloromethane	50		1.775				ND	
13 Vinyl chloride	62		1.902				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.383				ND	
22 1,1-Dichloroethene	96	3.377	3.375	0.002	16	2024	0.7713	M
24 Acetone	43	3.517	3.496	0.021	40	3745	3.96	
26 Carbon disulfide	76		3.661				ND	
31 Methylene Chloride	84	4.150	4.141	0.009	99	10726	0.2311	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96	4.576	4.561	0.015	1	1506	0.5488	M
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.184	5.169	0.015	28	4540	0.8680	
45 cis-1,2-Dichloroethene	96	5.944	5.942	0.002	75	257010	87.6	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83	6.340	6.337	0.003	1	1031	0.2473	
53 1,1,1-Trichloroethane	97	6.529	6.532	-0.004	43	7785	2.75	
56 Carbon tetrachloride	117		6.714				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.672	7.663	0.009	98	83493	31.1	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.059				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.193				ND	
74 cis-1,3-Dichloropropene	75		8.661				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.540	9.537	0.003	98	100224	51.3	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.028				ND	
94 Bromoform	173		11.216				ND	
99 1,1,2,2-Tetrachloroethane	83		11.679				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

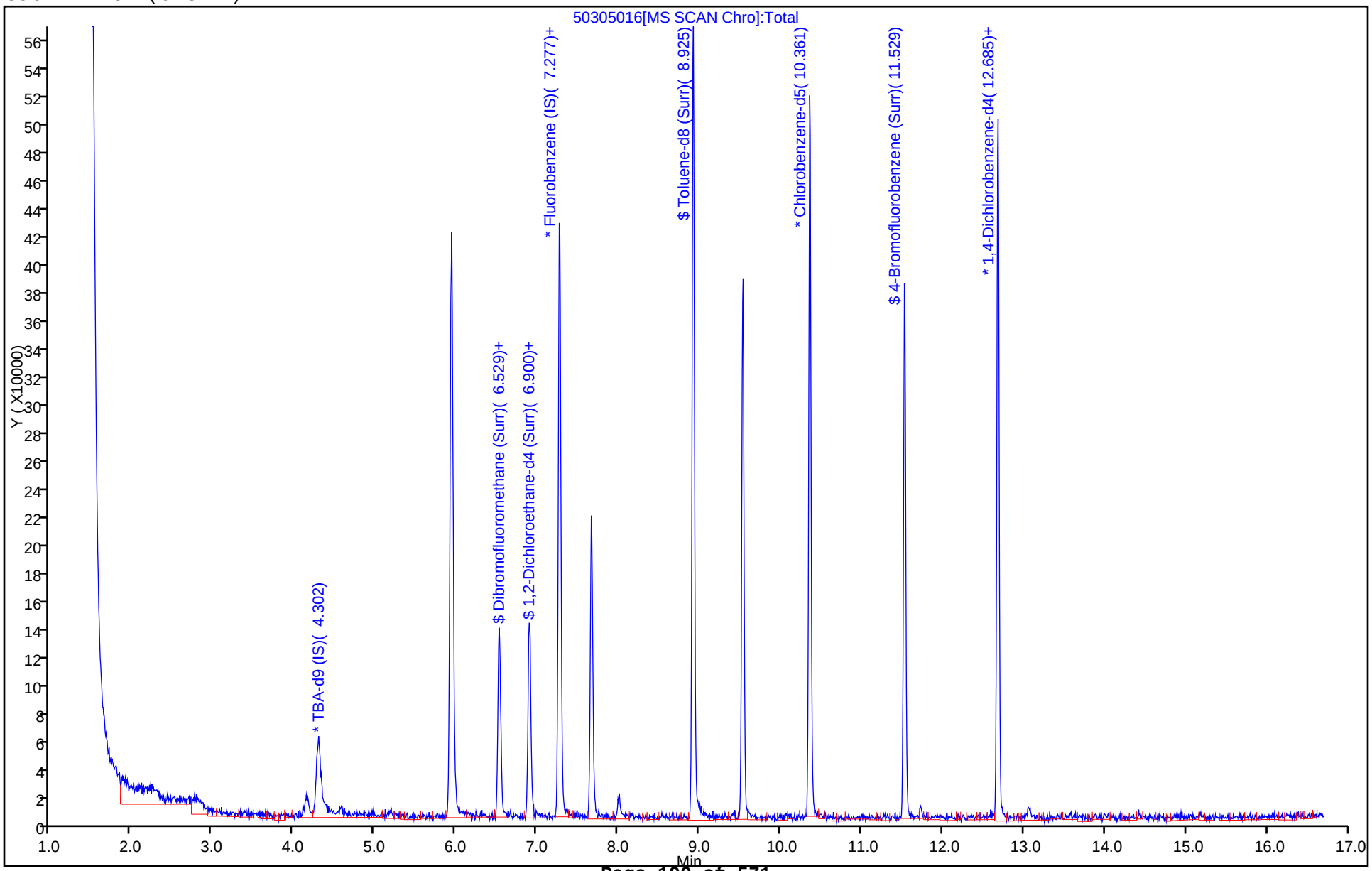
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 06-Mar-2015 08:19:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D				
Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1	Worklist Smp#:	16
Client ID:	HD-QC1-0/1-1				
Purge Vol:	5.000 mL	Dil. Factor:	5.0000	ALS Bottle#:	12
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



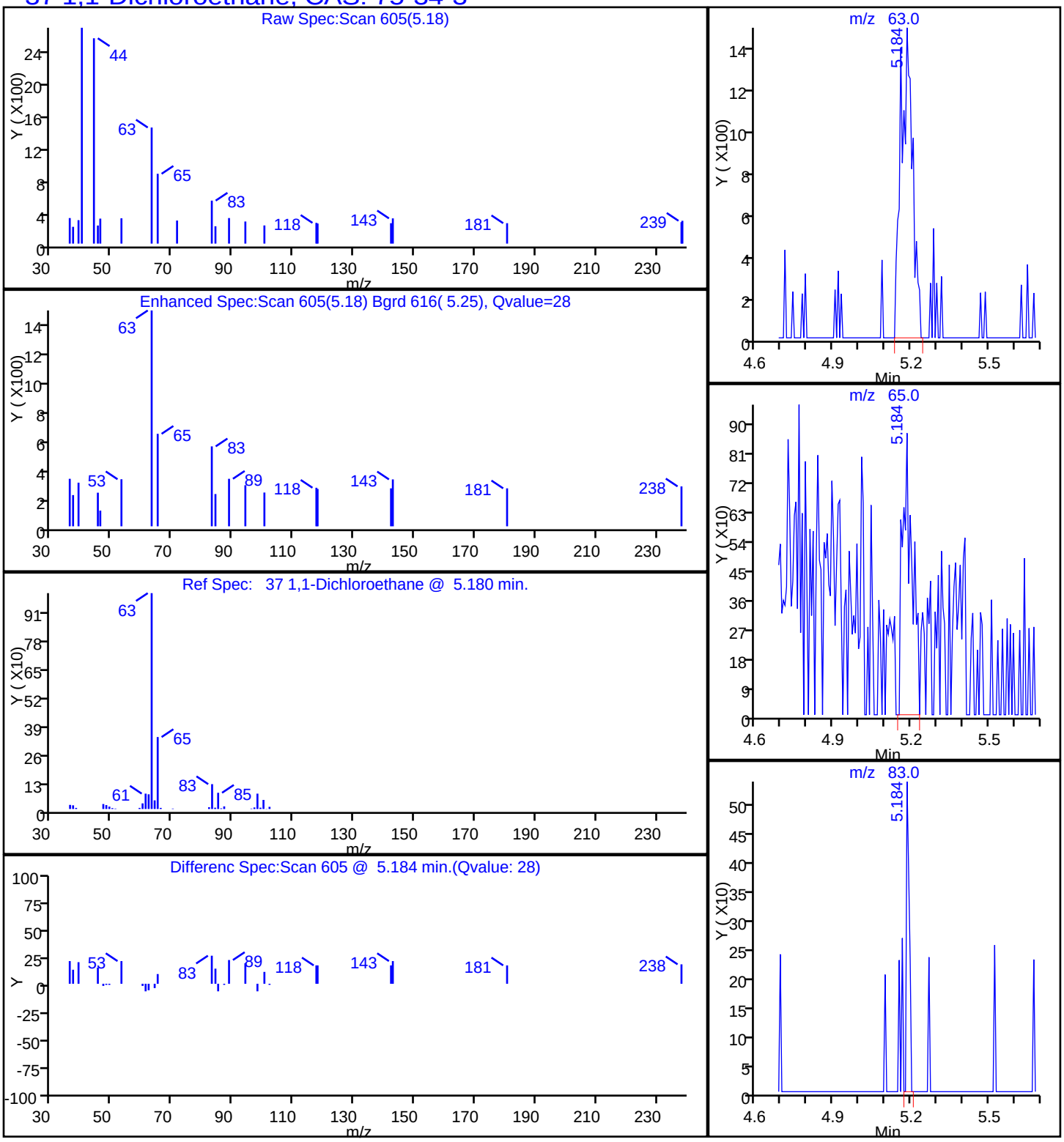
Report Date: 06-Mar-2015 08:19:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D

Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	12 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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



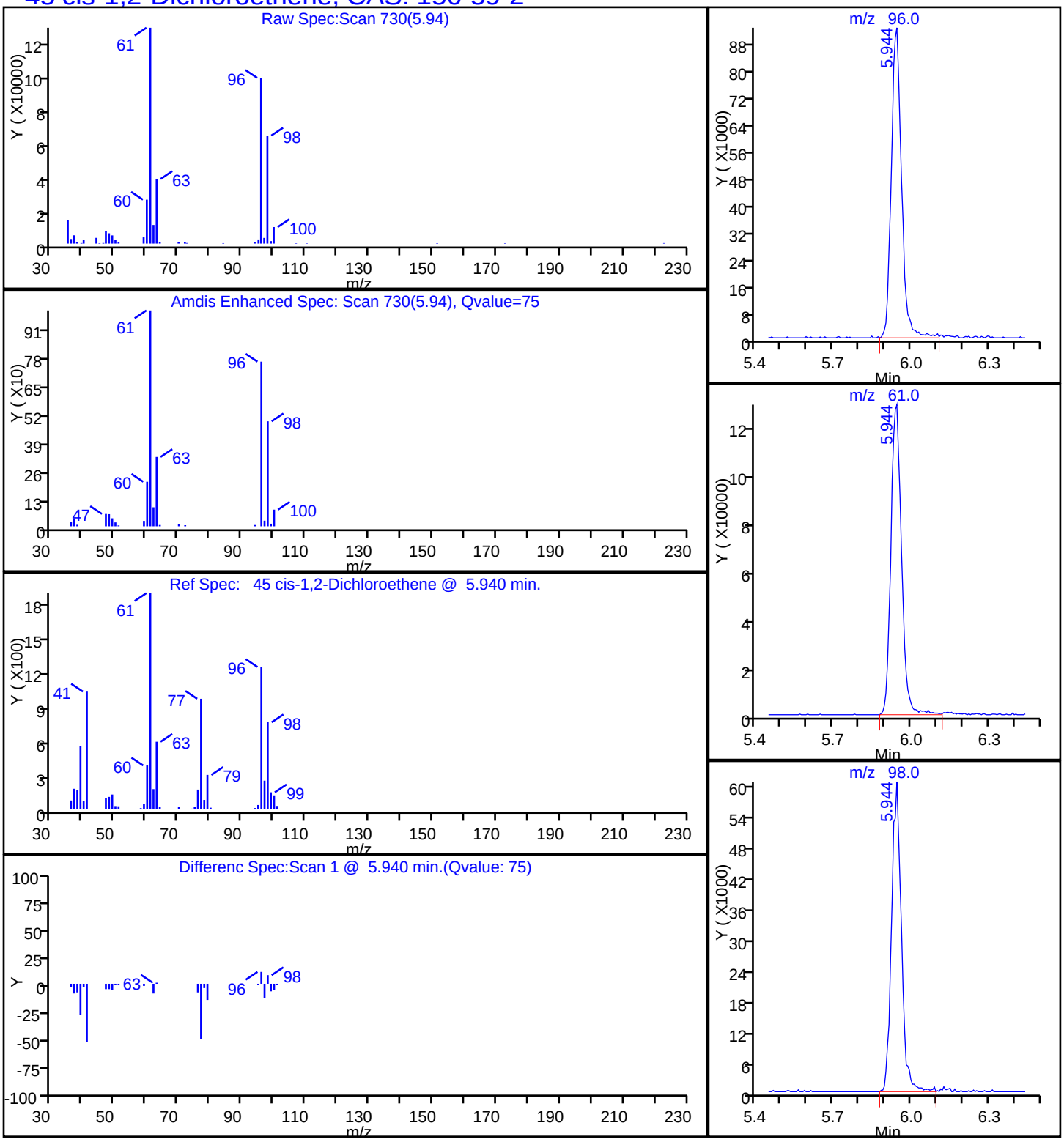
Report Date: 06-Mar-2015 08:19:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D

Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
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

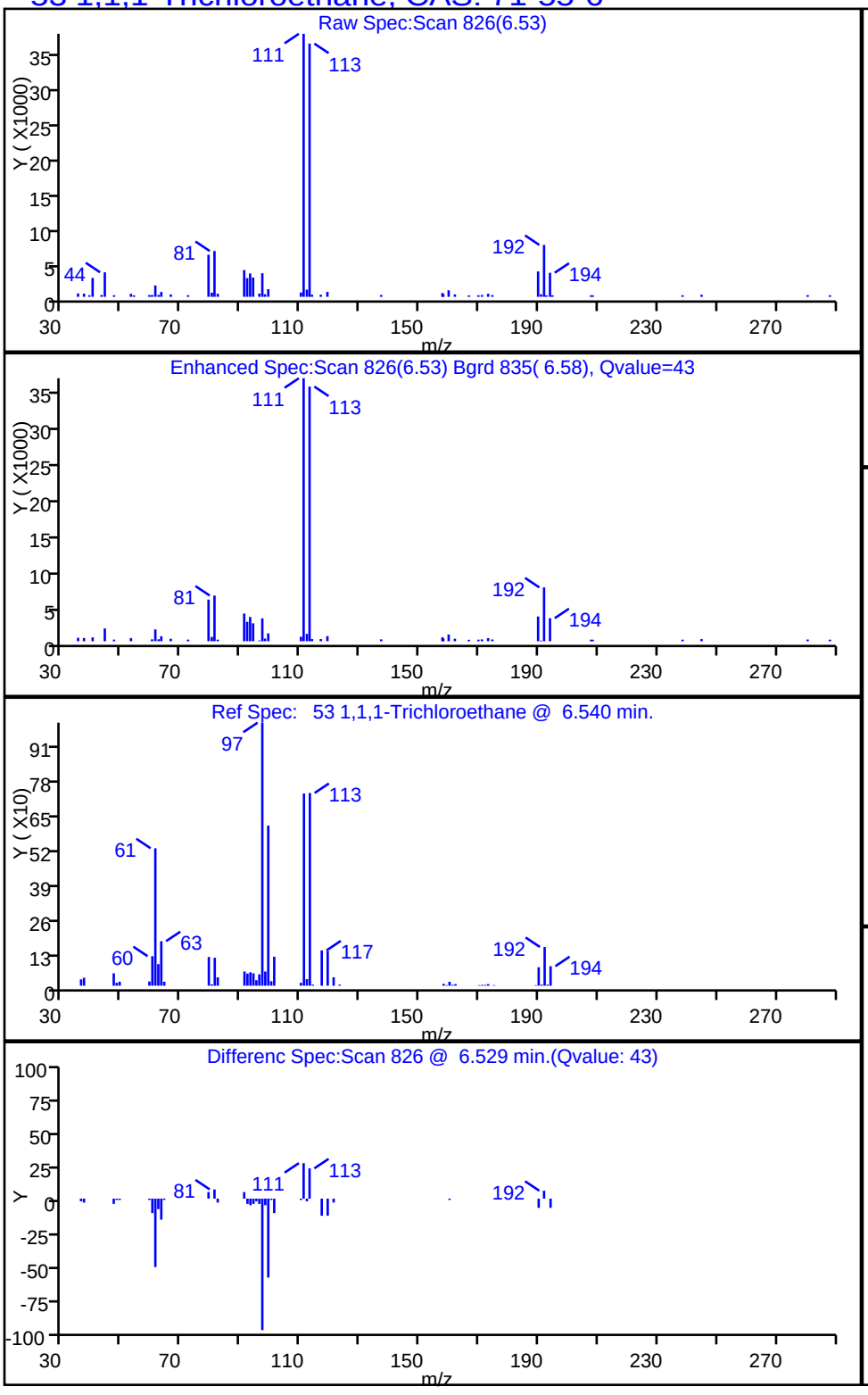


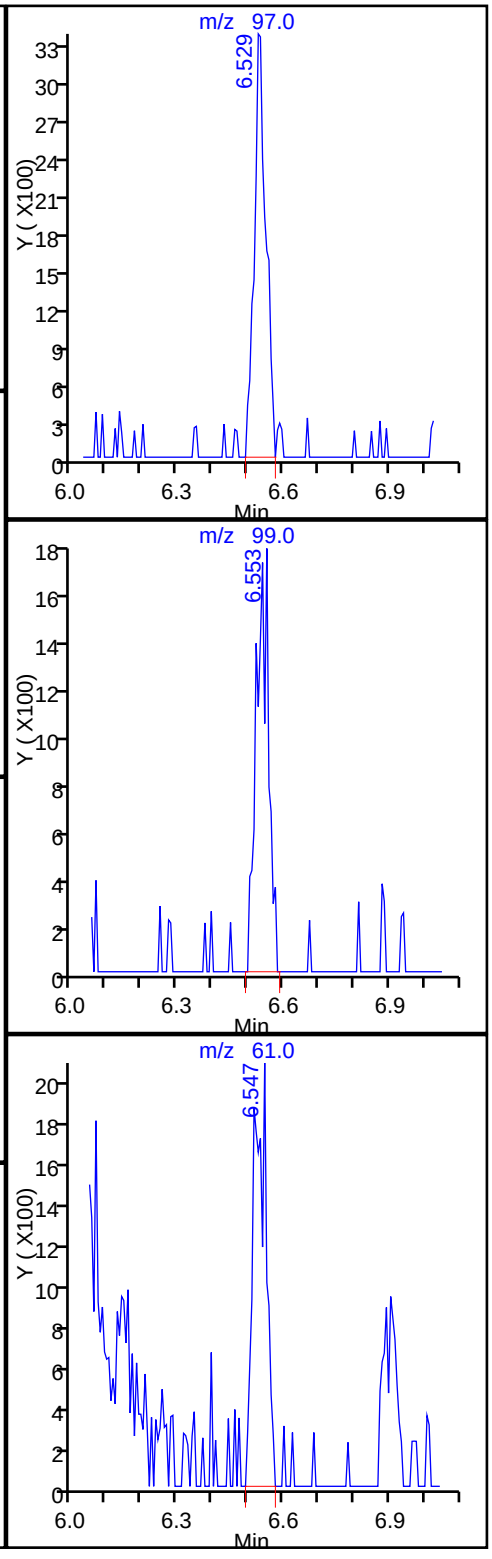
Report Date: 06-Mar-2015 08:19:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D				
Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



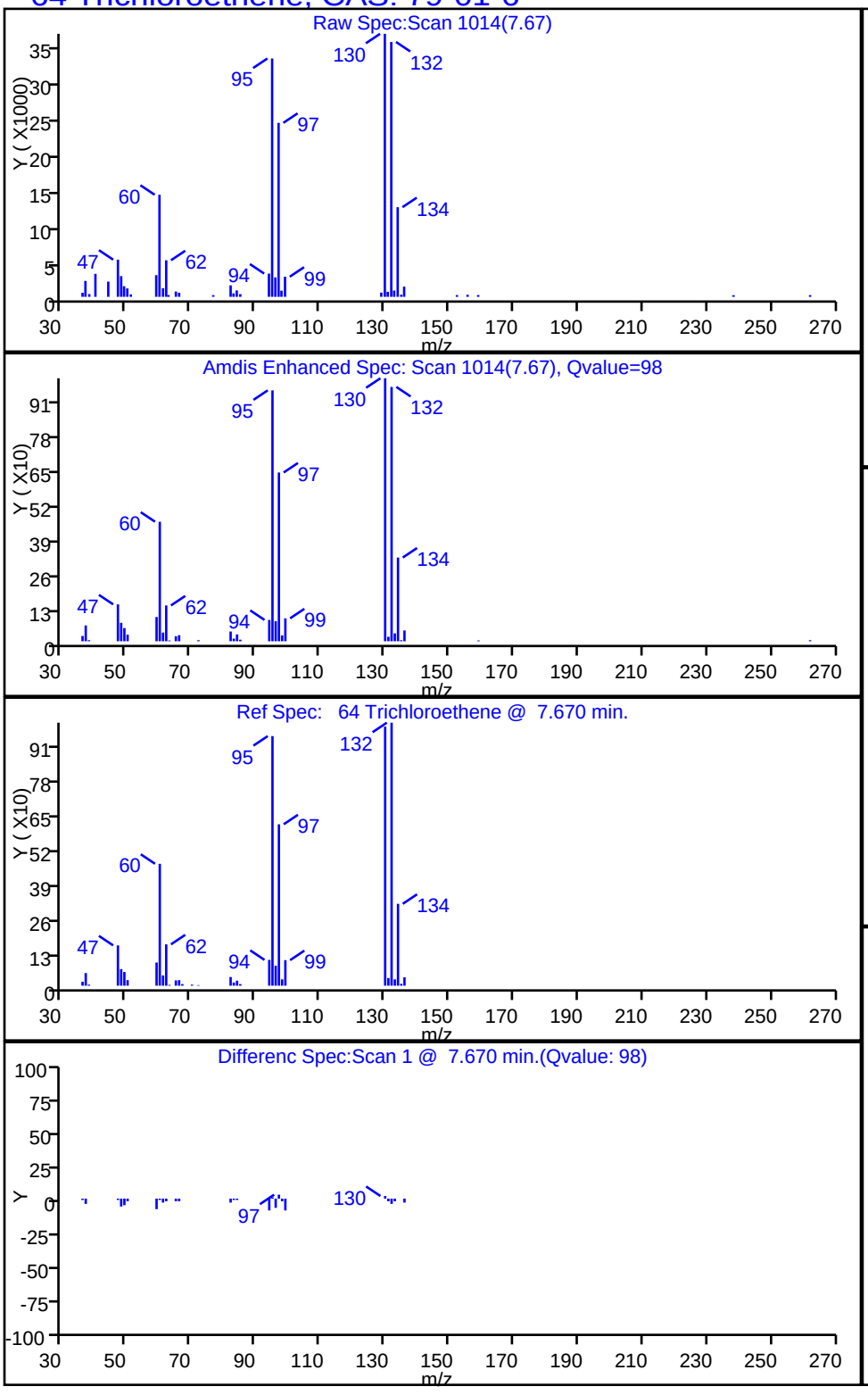


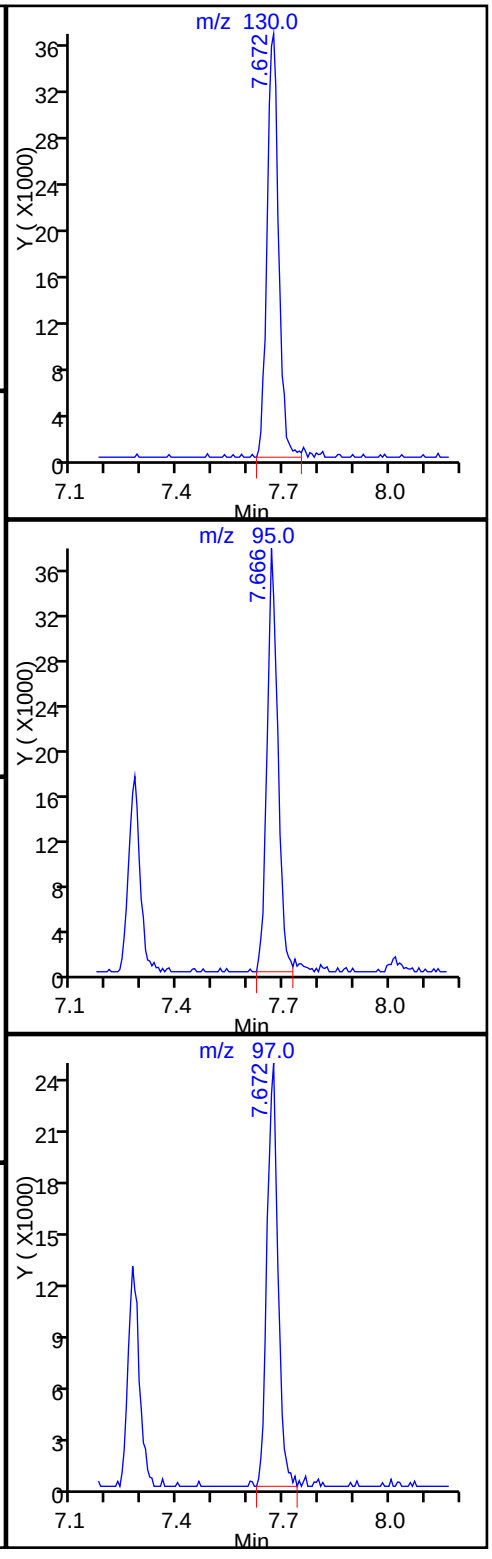
Report Date: 06-Mar-2015 08:19:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D		
Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	12 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

64 Trichloroethene, CAS: 79-01-6





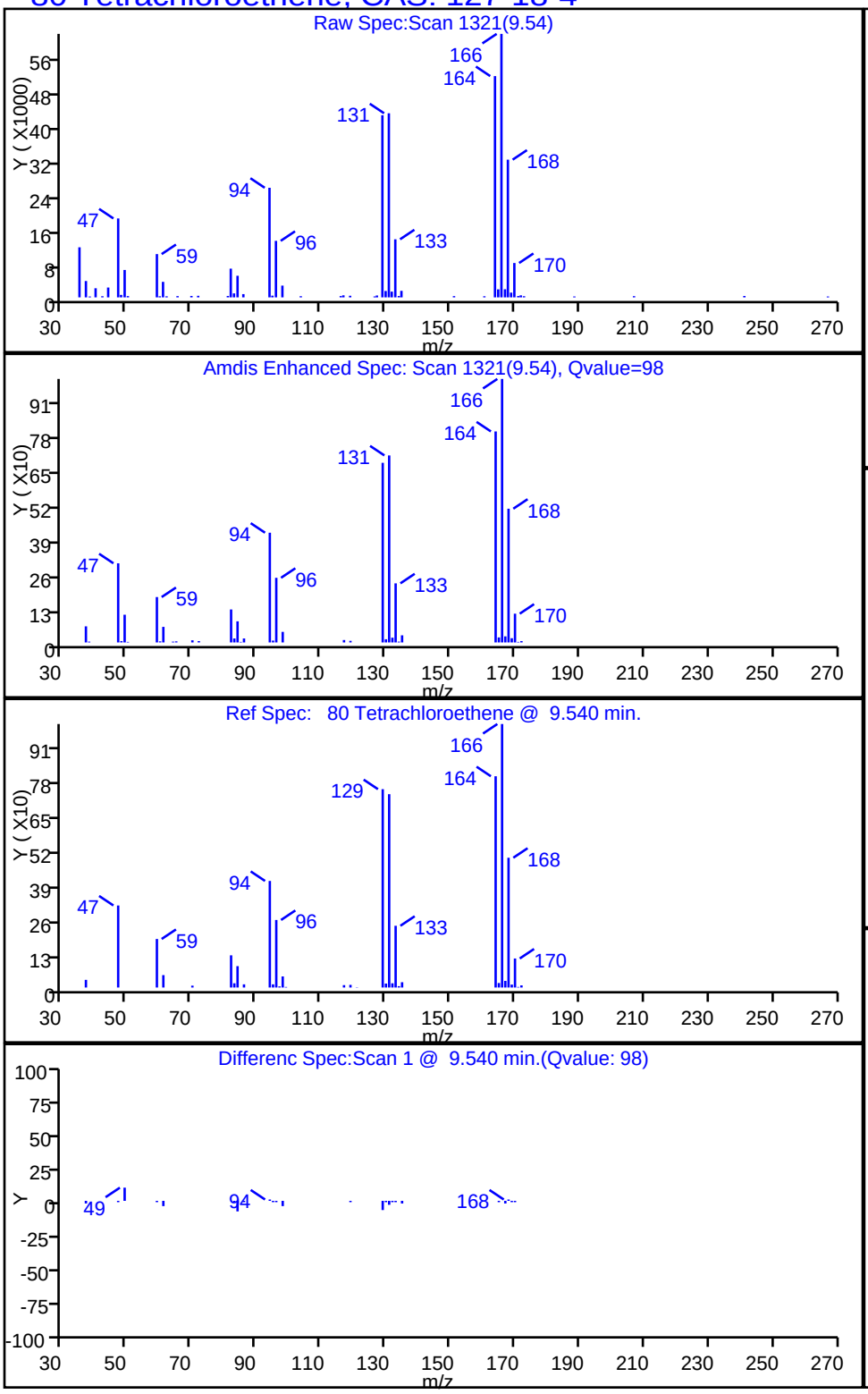
Report Date: 06-Mar-2015 08:19:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

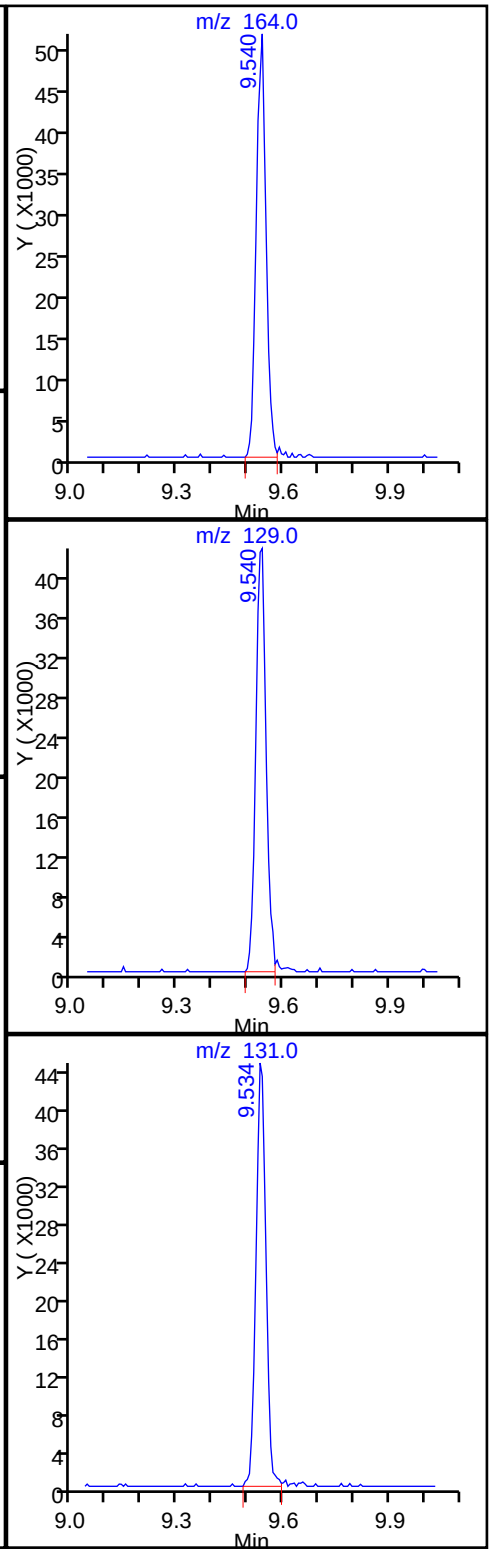
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D

Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	12 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
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

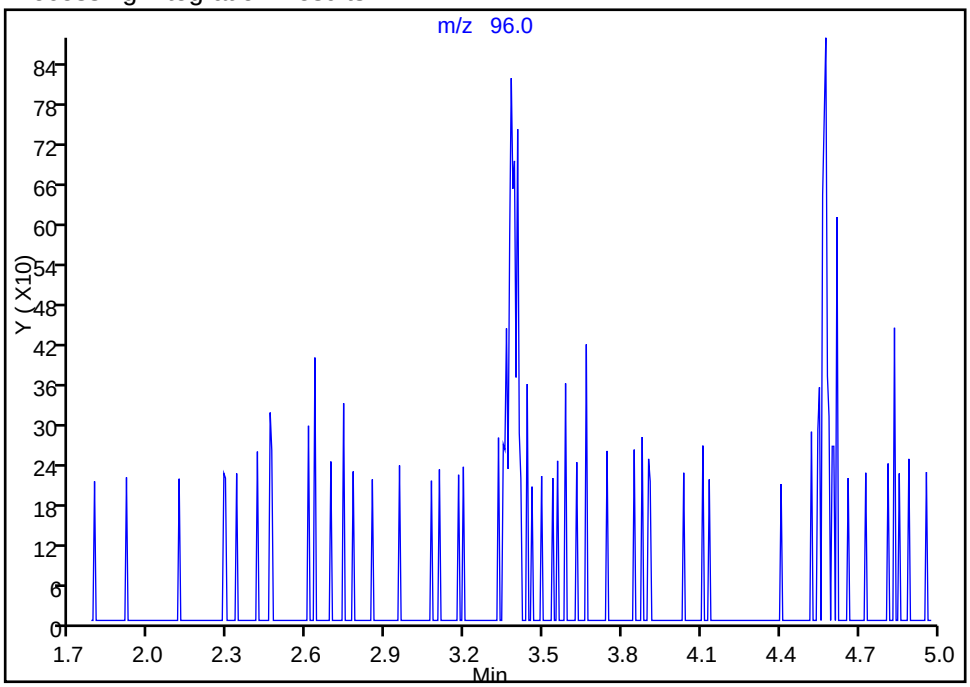
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D				
Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

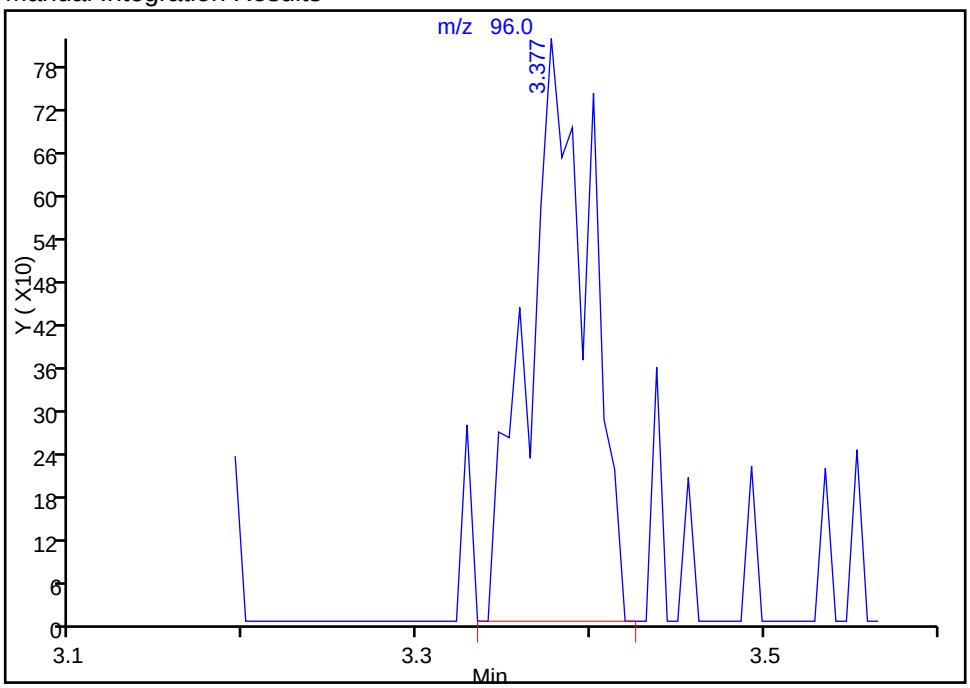
Not Detected
Expected RT: 3.37

Processing Integration Results



Manual Integration Results

RT: 3.38
Area: 2024
Amount: 0.771258
Amount Units: ng



Reviewer: fergusond, 06-Mar-2015 08:19:16
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

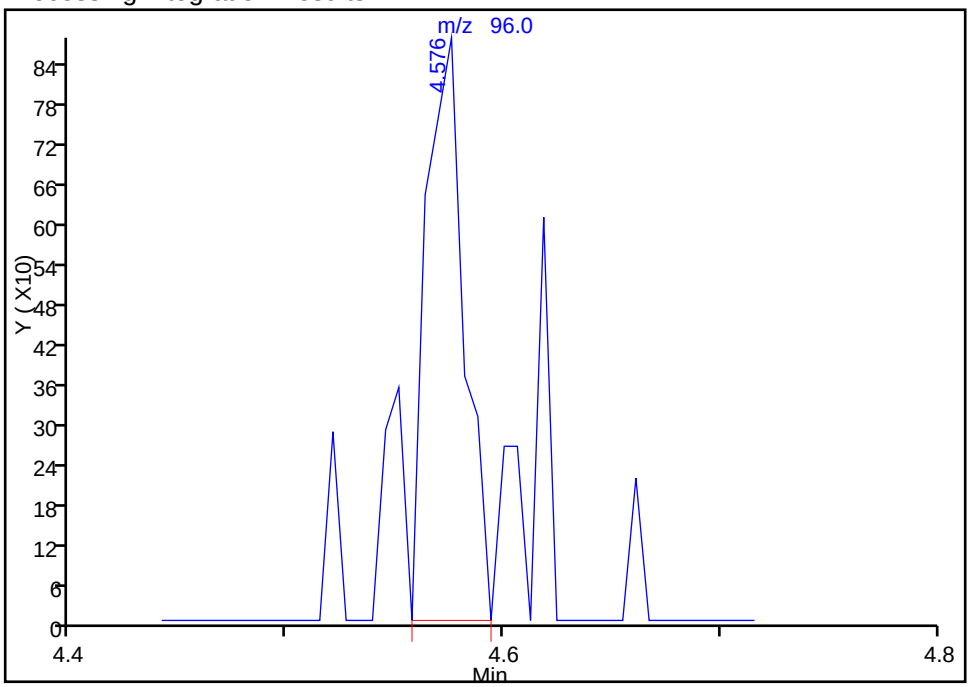
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305016.D				
Injection Date:	05-Mar-2015 16:24:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-1	Lab Sample ID:	180-41453-1		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

34 trans-1,2-Dichloroethene, CAS: 156-60-5

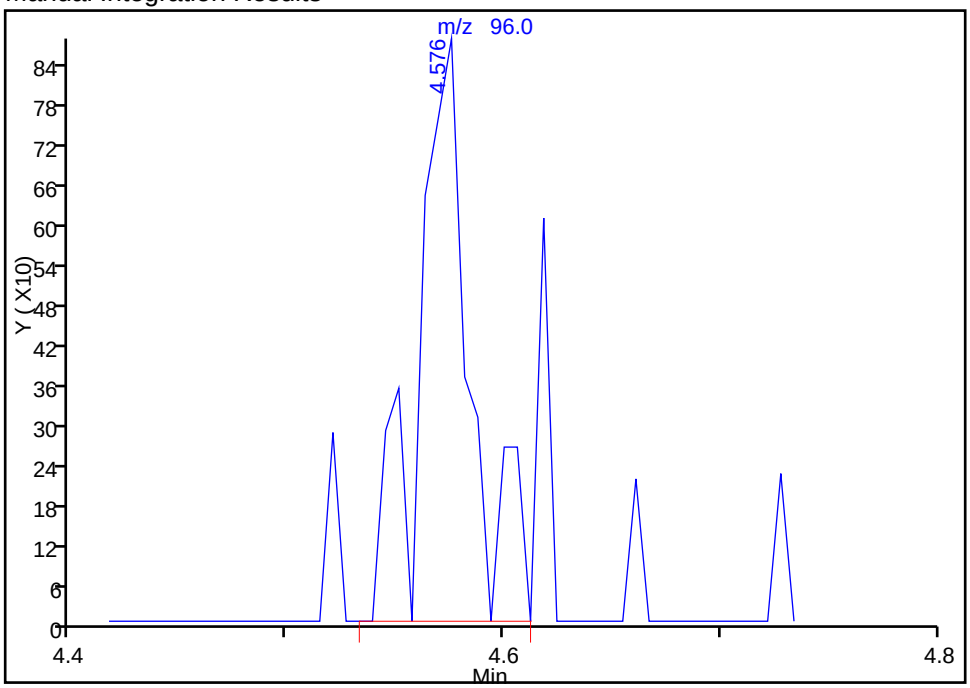
Processing Integration Results

RT: 4.58
Area: 1080
Amount: 0.393560
Amount Units: ng



Manual Integration Results

RT: 4.58
Area: 1506
Amount: 0.548797
Amount Units: ng



Reviewer: fergusond, 06-Mar-2015 08:19:16
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 | Lab Sample ID: 180-41453-2

Matrix: Water | Lab File ID: 50304019.D

Analysis Method: 8260C | Date Collected: 02/23/2015 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/04/2015 18:57

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.: 134740 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-41453-2

Matrix: Water Lab File ID: 50304019.D

Analysis Method: 8260C Date Collected: 02/23/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 18:57

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.: 134740 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		64-135
2037-26-5	Toluene-d8 (Surr)	108		71-118
460-00-4	4-Bromofluorobenzene (Surr)	110		70-118
1868-53-7	Dibromofluoromethane (Surr)	97		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304019.D
Lims ID: 180-41453-B-2 Lab Sample ID: 180-41453-2
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 04-Mar-2015 18:57:30 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41453-B-2
Misc. Info.: 180-0005893-019
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 05-Mar-2015 08:50:35 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK052

First Level Reviewer: fergusond Date: 05-Mar-2015 08:50:35

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.309	4.320	-0.011	94	88715	1000.0	
*	2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	380556	50.0	
*	3 Chlorobenzene-d5	119	10.362	10.367	-0.005	99	83105	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.686	12.691	-0.005	99	136723	50.0	
$	5 Dibromofluoromethane (Surr	113	6.529	6.528	0.001	52	79206	48.6	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.900	0.001	98	94422	46.9	
$	7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	100	349121	53.9	
$	8 4-Bromofluorobenzene (Surr	95	11.536	11.535	0.001	99	132242	54.9	
	12 Chloromethane	50		1.777				ND	
	13 Vinyl chloride	62		1.905				ND	
	15 Bromomethane	94		2.252				ND	
	16 Chloroethane	64		2.373				ND	
	22 1,1-Dichloroethene	96		3.371				ND	
	24 Acetone	43	3.482	3.493	-0.011	38	3933	4.92	
	26 Carbon disulfide	76		3.651				ND	
	31 Methylene Chloride	84		4.144				ND	
	33 Acrylonitrile	53		4.551				ND	
	34 trans-1,2-Dichloroethene	96		4.570				ND	
	35 Methyl tert-butyl ether	73		4.600				ND	
	37 1,1-Dichloroethane	63		5.172				ND	
	45 cis-1,2-Dichloroethene	96	5.945	5.938	0.007	1	784	0.3165	
	46 2-Butanone (MEK)	43		5.987				ND	
	49 Chlorobromomethane	128		6.230				ND	
	52 Chloroform	83	6.347	6.340	0.007	12	1344	0.3819	
	53 1,1,1-Trichloroethane	97		6.528				ND	
	56 Carbon tetrachloride	117		6.717				ND	
	58 Benzene	78		6.954				ND	
	59 1,2-Dichloroethane	62		6.991				ND	
	64 Trichloroethene	130	7.661	7.666	-0.005	1	1059	0.4678	M
	67 1,2-Dichloropropane	63		7.909				ND	
	70 1,4-Dioxane	88		8.061				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.201				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164		9.540				ND	
82 2-Hexanone	43		9.661				ND	
84 Chlorodibromomethane	129		9.795				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.477				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.623				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

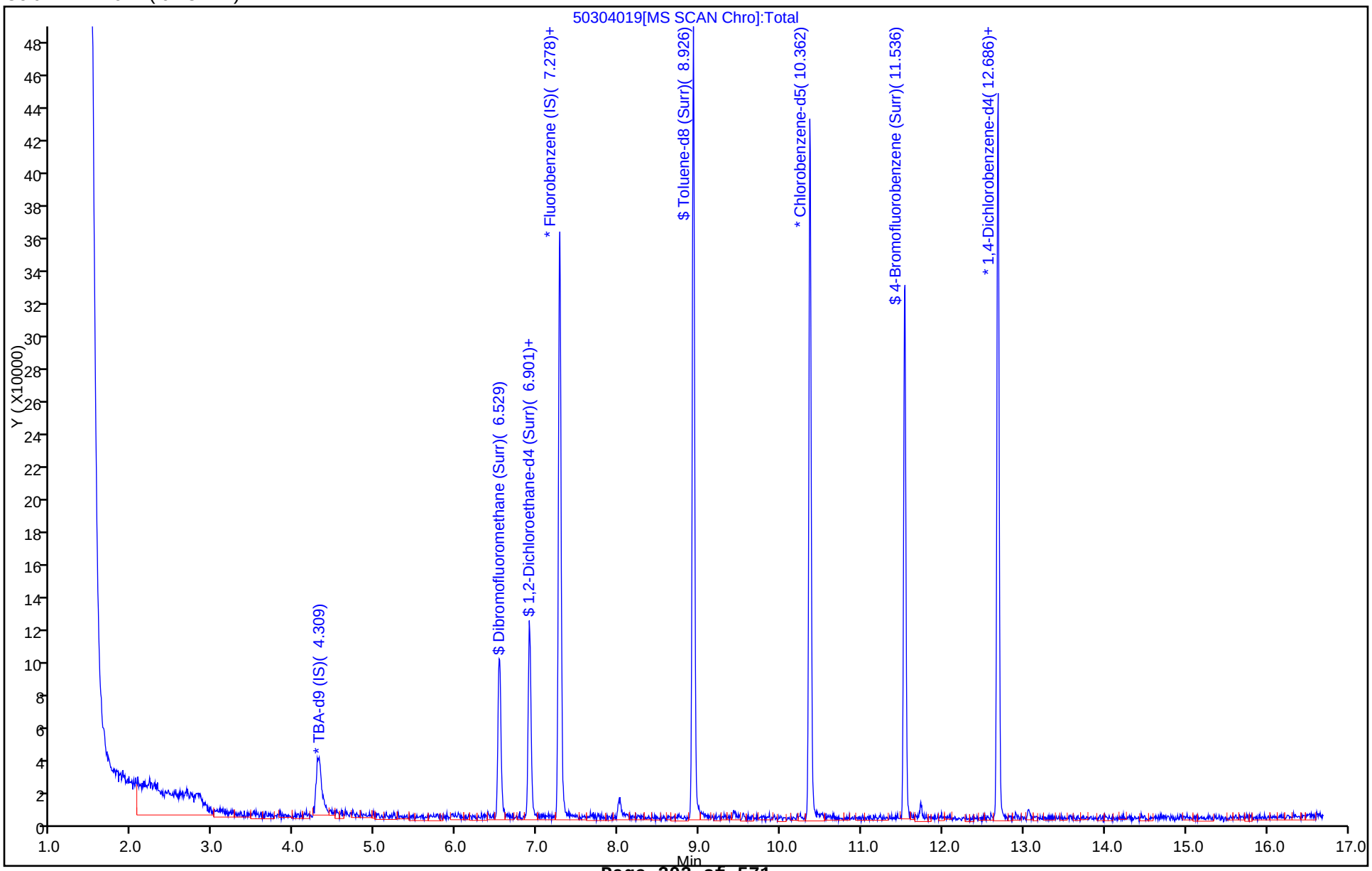
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 05-Mar-2015 08:50:35 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304019.D				
Injection Date:	04-Mar-2015 18:57:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-B-2	Lab Sample ID:	180-41453-2	Worklist Smp#:	19
Client ID:	HD-QC1-0/1-2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

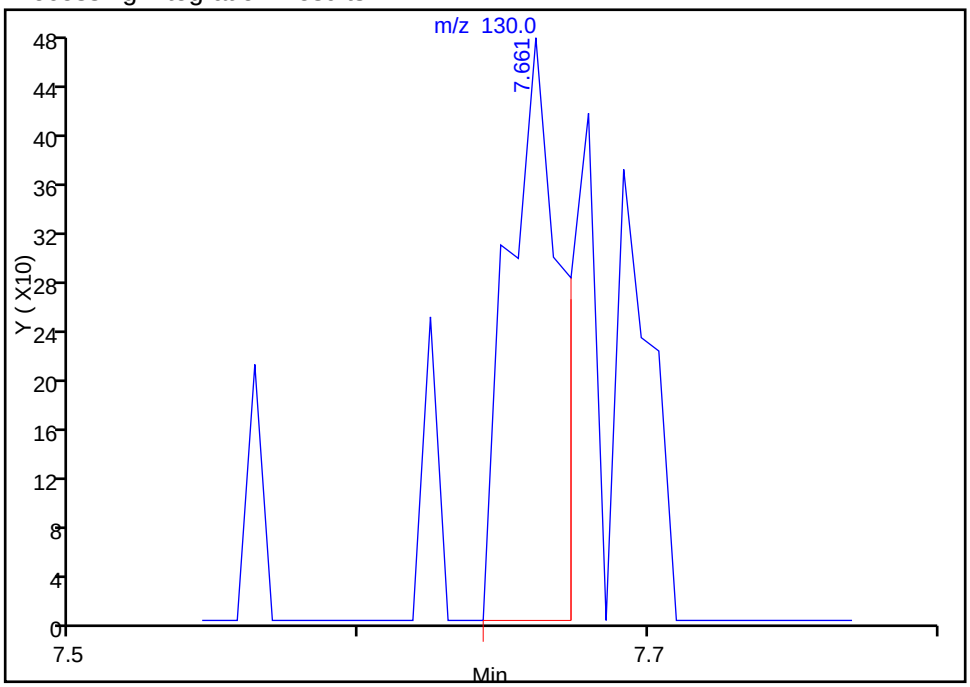
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304019.D				
Injection Date:	04-Mar-2015 18:57:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-B-2	Lab Sample ID:	180-41453-2		
Client ID:	HD-QC1-0/1-2				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
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

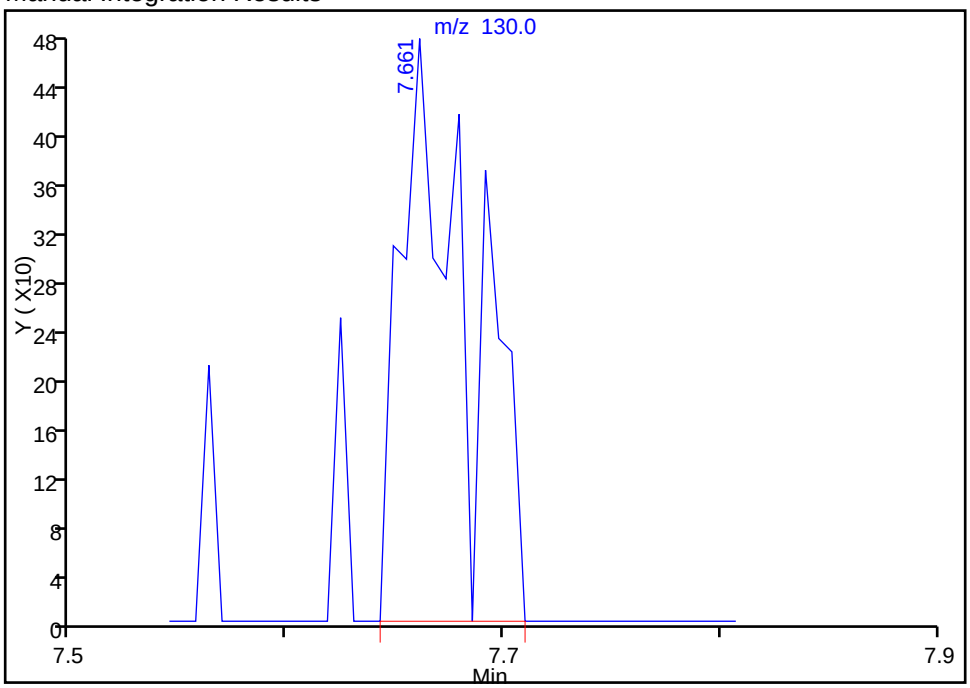
Processing Integration Results

RT: 7.66
Area: 607
Amount: 0.268125
Amount Units: ng



Manual Integration Results

RT: 7.66
Area: 1059
Amount: 0.467783
Amount Units: ng



Reviewer: fergusond, 05-Mar-2015 08:50:35
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93D-0/1-0 Lab Sample ID: 180-41453-3

Matrix: Water Lab File ID: 50304018.D

Analysis Method: 8260C Date Collected: 02/23/2015 10:00

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 18:33

Soil Aliquot Vol: Dilution Factor: 5

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134740 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U	5.0	1.4
75-01-4	Vinyl chloride	4.2	J	5.0	1.1
74-83-9	Bromomethane	5.0	U	5.0	1.6
75-00-3	Chloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	4.4	J	5.0	1.5
67-64-1	Acetone	25	U	25	13
75-15-0	Carbon disulfide	5.0	U	5.0	1.1
75-09-2	Methylene Chloride	5.0	U	5.0	0.63
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.85
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.92
75-34-3	1,1-Dichloroethane	3.4	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	130		5.0	1.2
74-97-5	Bromochloromethane	5.0	U	5.0	0.90
78-93-3	2-Butanone (MEK)	25	U	25	2.7
67-66-3	Chloroform	5.0	U	5.0	0.85
71-55-6	1,1,1-Trichloroethane	8.0		5.0	1.4
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.68
71-43-2	Benzene	5.0	U	5.0	0.53
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
79-01-6	Trichloroethene	140		5.0	0.72
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.47
75-27-4	Bromodichloromethane	5.0	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.93
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U	25	2.6
108-88-3	Toluene	5.0	U	5.0	0.75
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.74
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	1.0
127-18-4	Tetrachloroethene	130		5.0	0.74
591-78-6	2-Hexanone	25	U	25	0.80
124-48-1	Dibromochloromethane	5.0	U	5.0	0.68
106-93-4	1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90
108-90-7	Chlorobenzene	5.0	U	5.0	0.68
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4
100-41-4	Ethylbenzene	5.0	U	5.0	1.1
1330-20-7	Xylenes, Total	15	U	15	2.4
100-42-5	Styrene	5.0	U	5.0	0.48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93D-0/1-0 Lab Sample ID: 180-41453-3

Matrix: Water Lab File ID: 50304018.D

Analysis Method: 8260C Date Collected: 02/23/2015 10:00

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 18:33

Soil Aliquot Vol: Dilution Factor: 5

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134740 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	5.0	U	5.0	0.96
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.0
107-13-1	Acrylonitrile	100	U	100	2.7
123-91-1	1,4-Dioxane	1000	U	1000	170

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	107		71-118
460-00-4	4-Bromofluorobenzene (Surr)	103		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D
Lims ID: 180-41453-E-3 Lab Sample ID: 180-41453-3
Client ID: HD-MW-93D-0/1-0
Sample Type: Client
Inject. Date: 04-Mar-2015 18:33:30 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-41453-E-3, 5x
Misc. Info.: 180-0005893-018
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 05-Mar-2015 08:49:17 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK052

First Level Reviewer: fergusond Date: 05-Mar-2015 08:49:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.291	4.320	-0.029	94	82484	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	383856	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	99	85680	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.691	-0.005	99	134198	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.528	0.008	62	78925	48.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.900	0.001	99	96695	47.6	
$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	100	355999	53.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.535	0.001	98	128479	51.7	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62	1.912	1.905	0.007	96	12541	4.23	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.373				ND	
22 1,1-Dichloroethene	96	3.391	3.371	0.019	95	9739	4.36	
24 Acetone	43	3.537	3.493	0.043	63	1407	1.75	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.144				ND	
33 Acrylonitrile	53		4.551				ND	
34 trans-1,2-Dichloroethene	96	4.577	4.570	0.007	4	1331	0.5695	
35 Methyl tert-butyl ether	73		4.600				ND	
37 1,1-Dichloroethane	63	5.179	5.172	0.007	97	15032	3.37	
45 cis-1,2-Dichloroethene	96	5.939	5.938	0.001	76	326991	130.9	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97	6.536	6.528	0.008	62	19210	7.97	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.991				ND	
64 Trichloroethene	130	7.667	7.666	0.001	98	330143	144.6	
67 1,2-Dichloropropane	63		7.909				ND	
70 1,4-Dioxane	88		8.061				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.201				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.541	9.540	0.001	99	210607	129.1	
82 2-Hexanone	43		9.661				ND	
84 Chlorodibromomethane	129		9.795				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.477				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.623				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

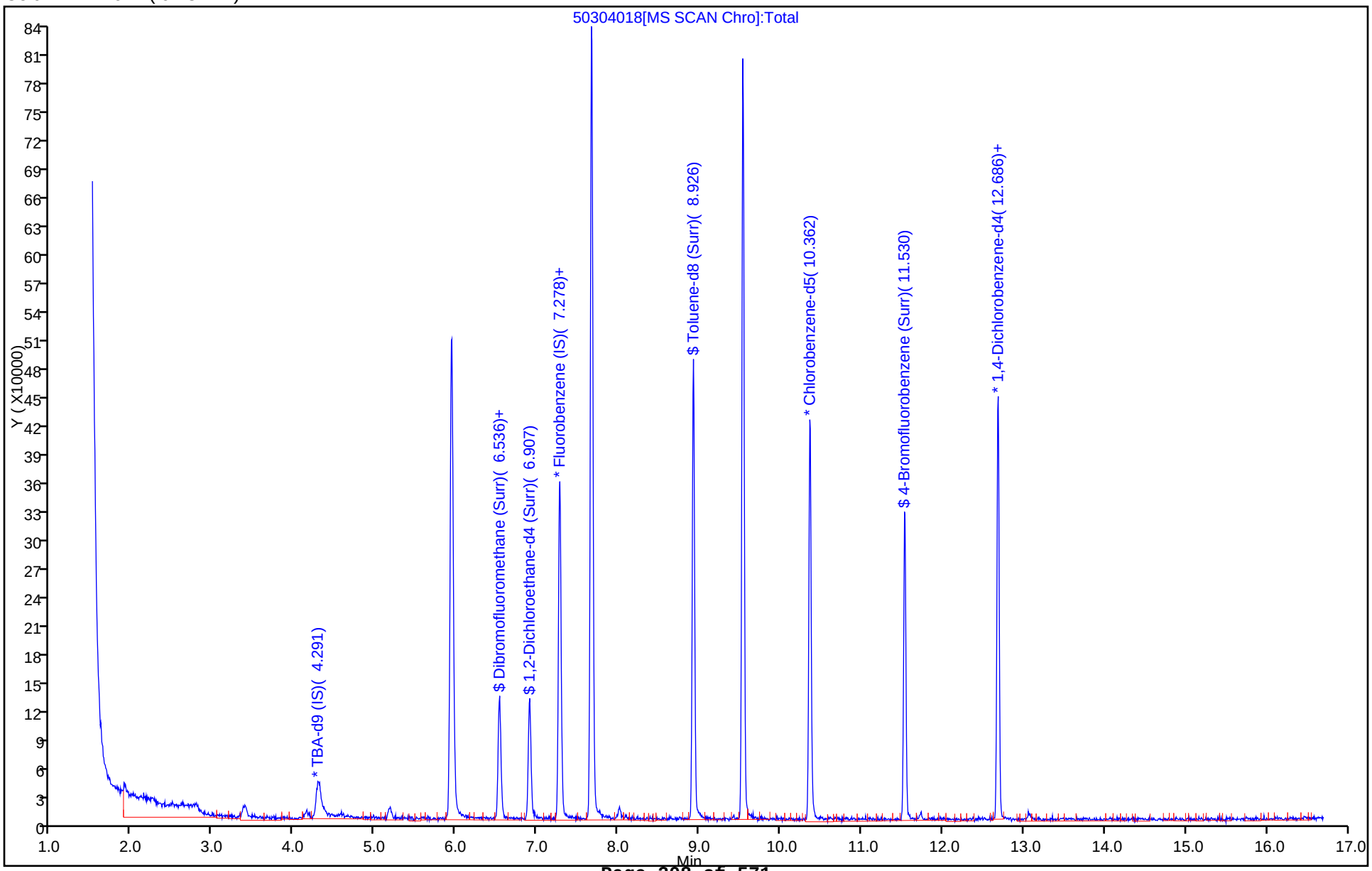
Report Date: 05-Mar-2015 08:49:17 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D

Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3	Worklist Smp#:	18
Client ID:	HD-MW-93D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	5.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

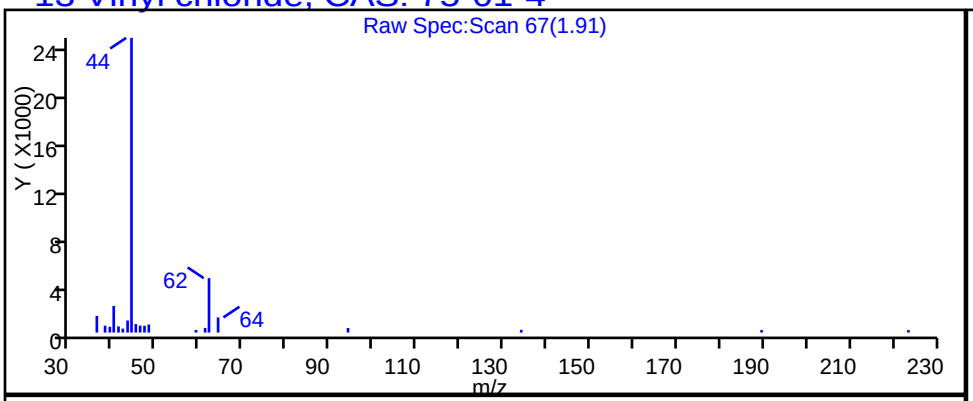


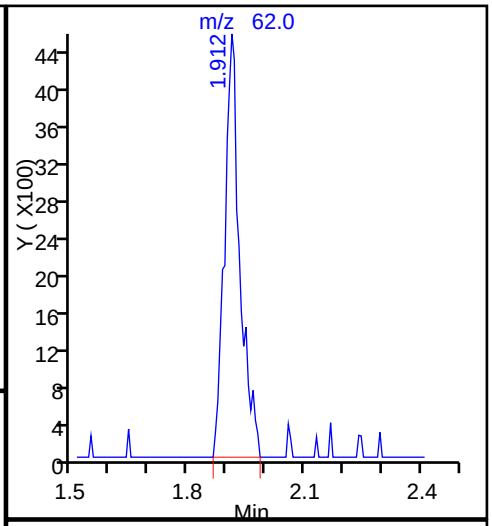
Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

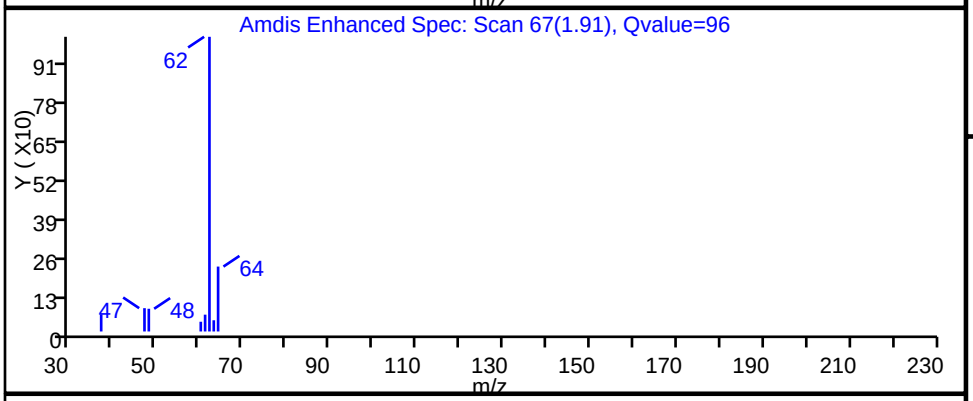
TestAmerica Pittsburgh

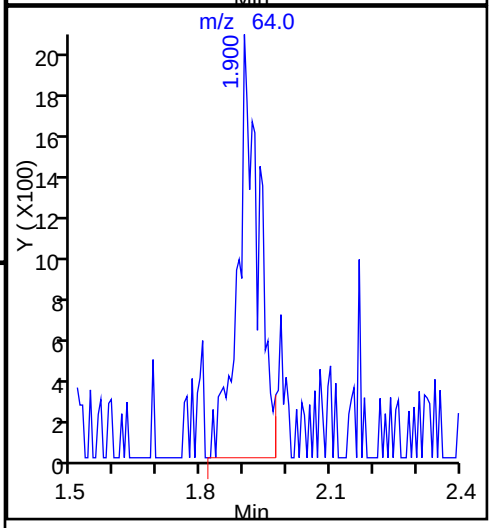
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D				
Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3		
Client ID:	HD-MW-93D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

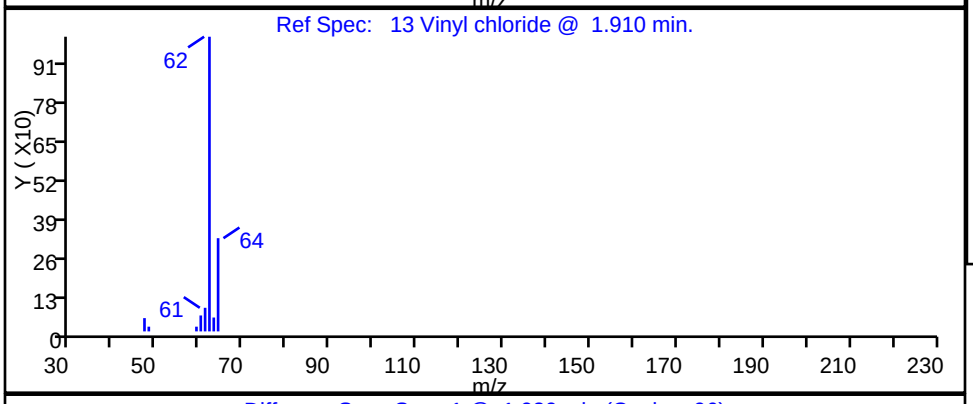
13 Vinyl chloride, CAS: 75-01-4

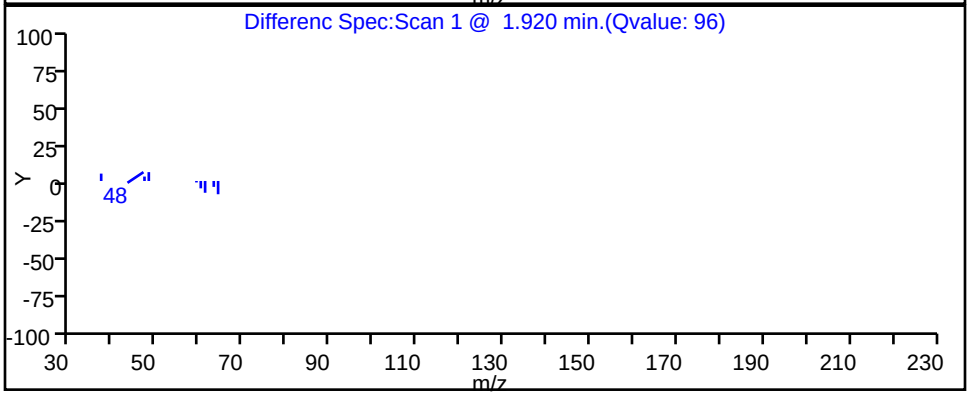










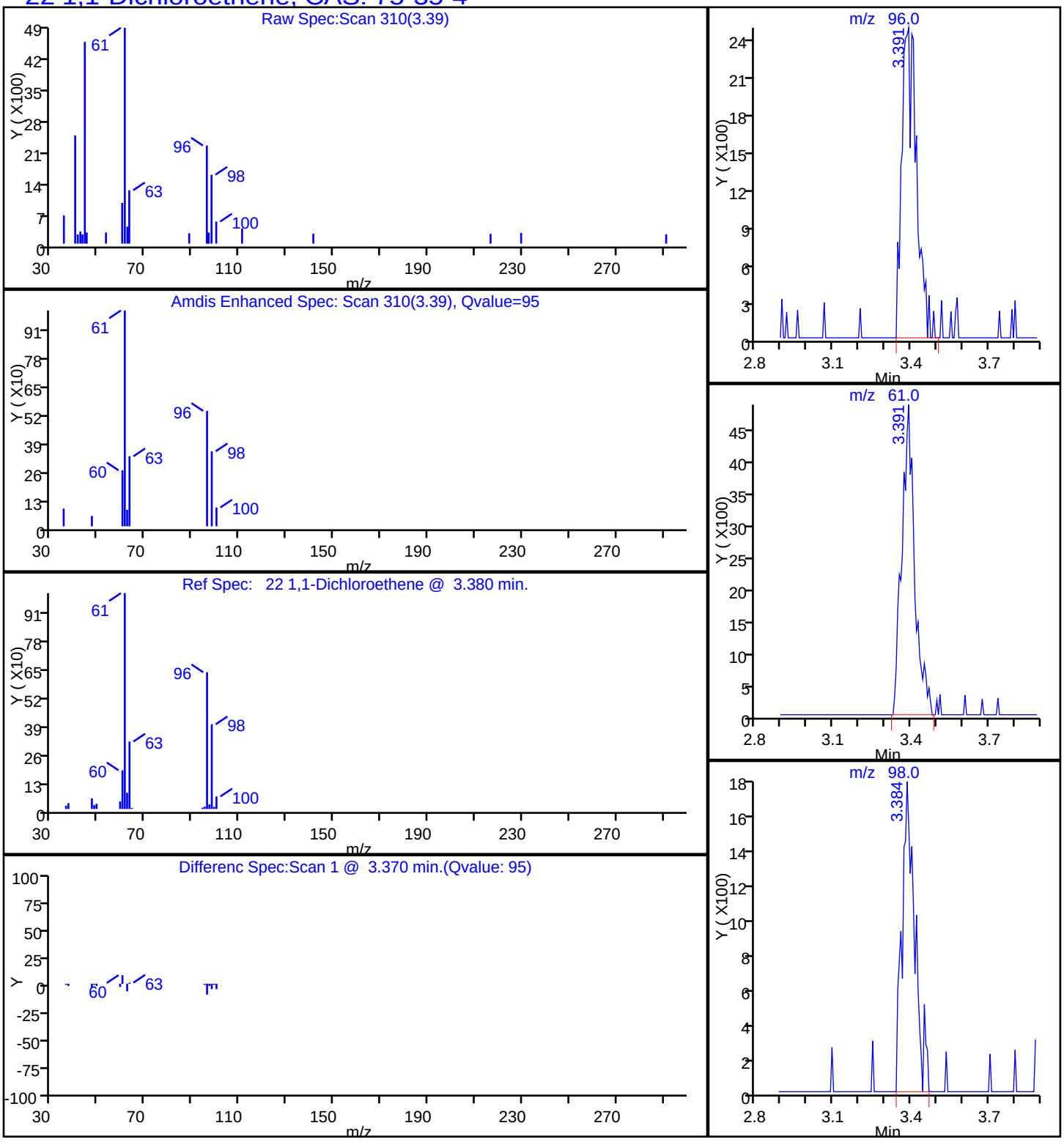


Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D				
Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3		
Client ID:	HD-MW-93D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



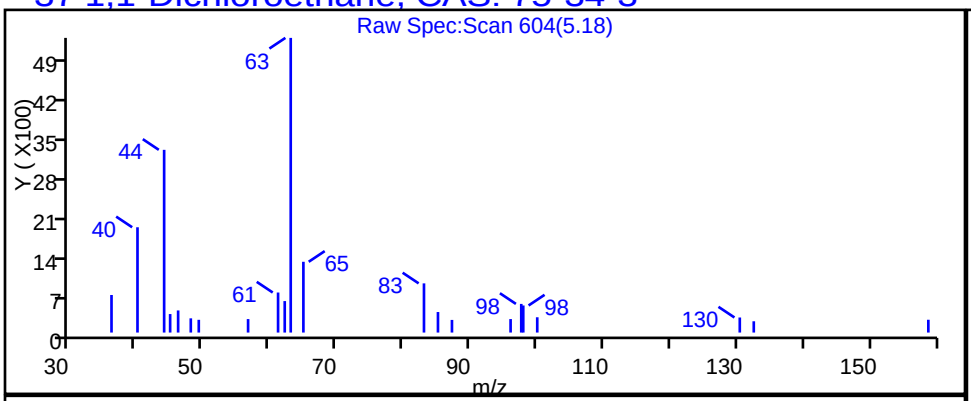
Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

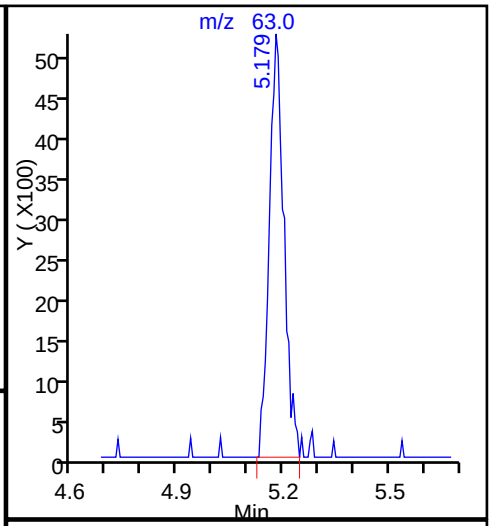
TestAmerica Pittsburgh

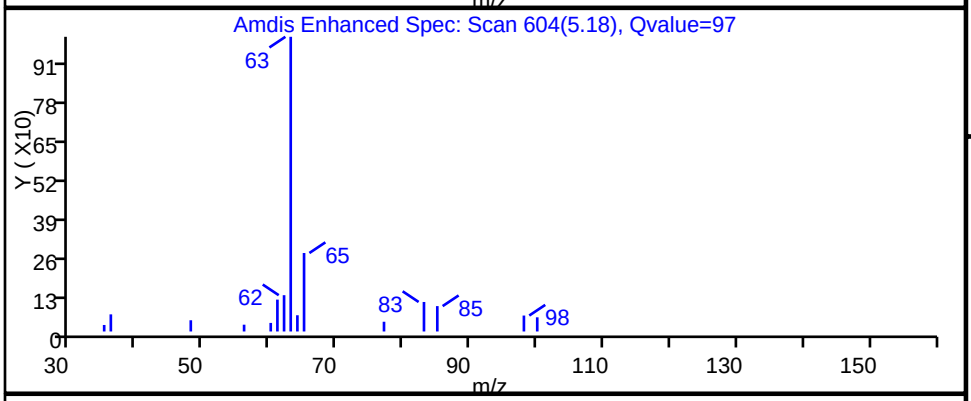
Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D

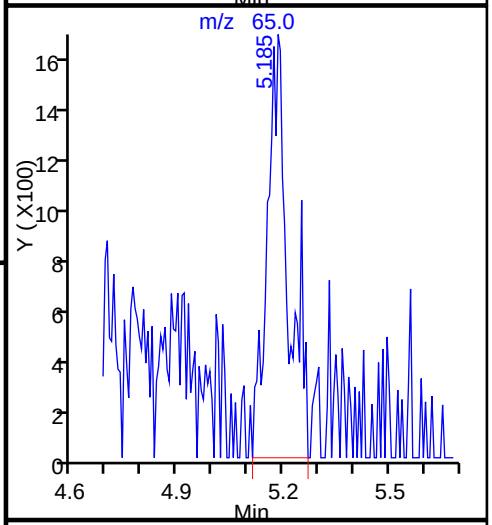
Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3
Client ID:	HD-MW-93D-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

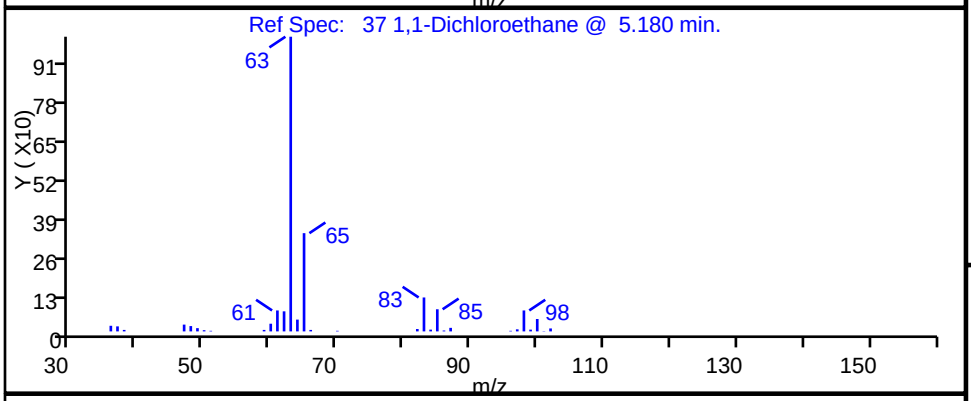
37 1,1-Dichloroethane, CAS: 75-34-3

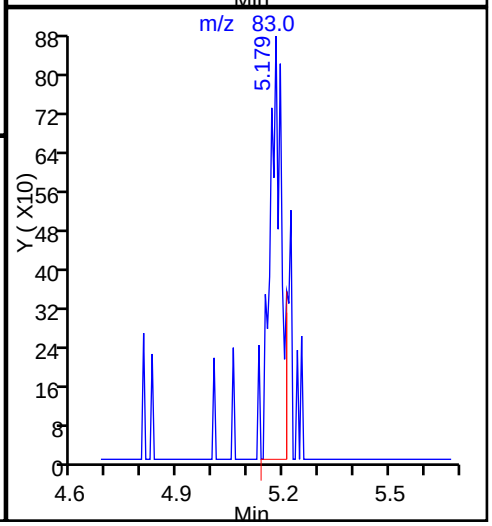


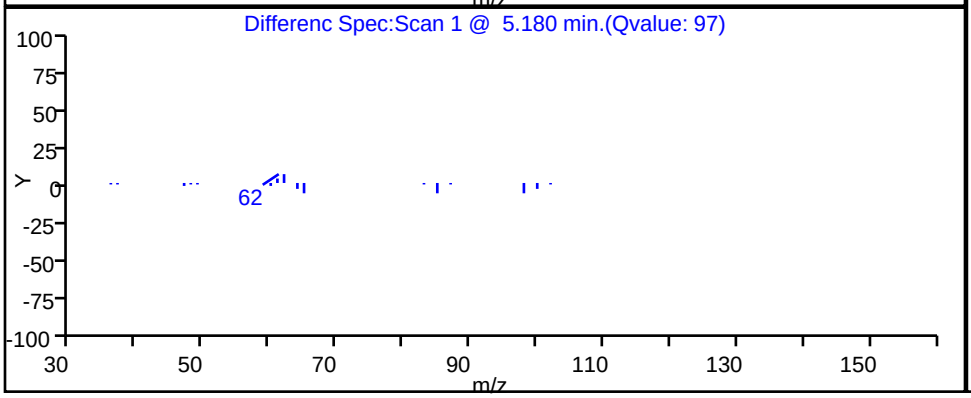










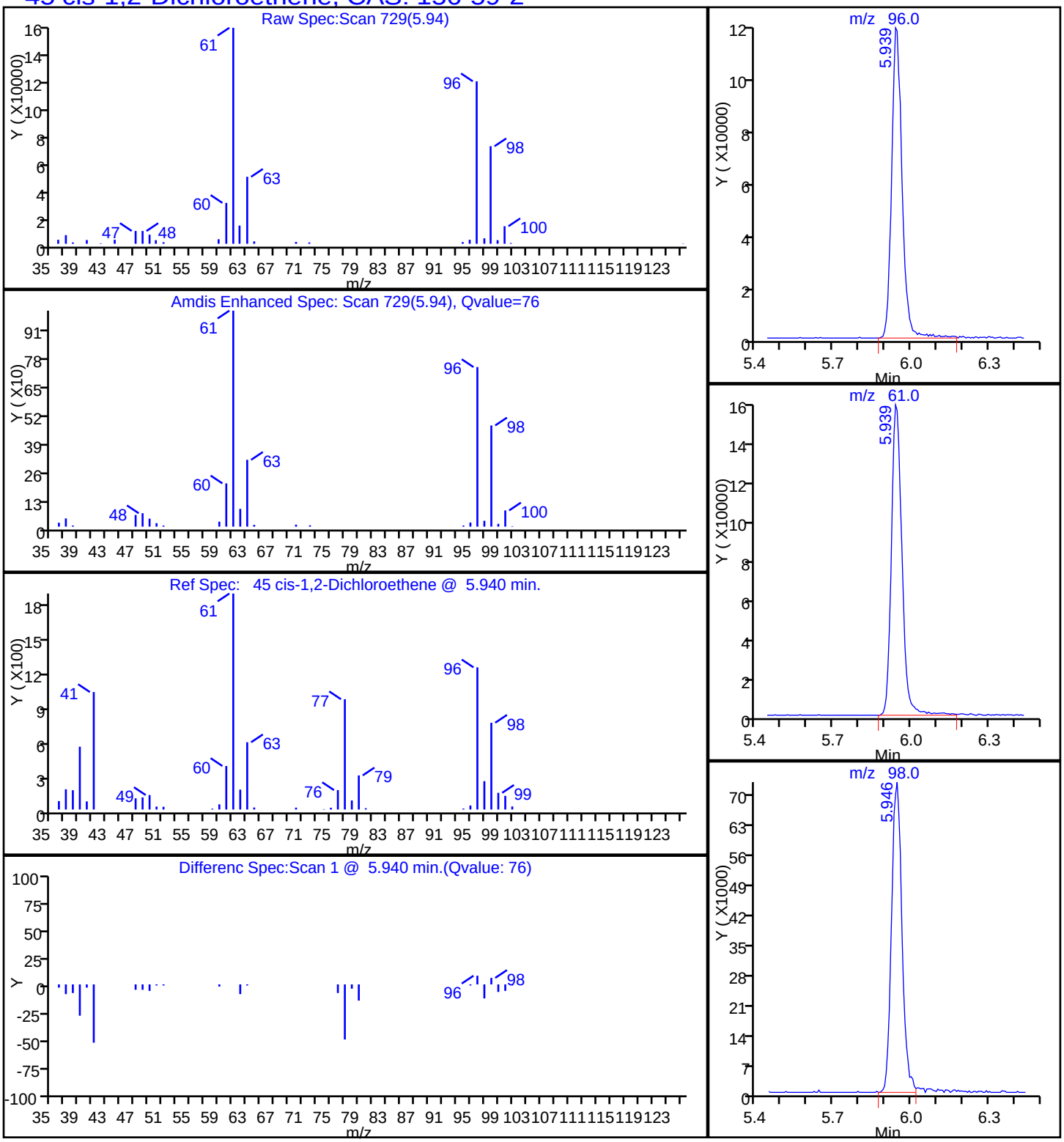


Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D				
Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3		
Client ID:	HD-MW-93D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
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

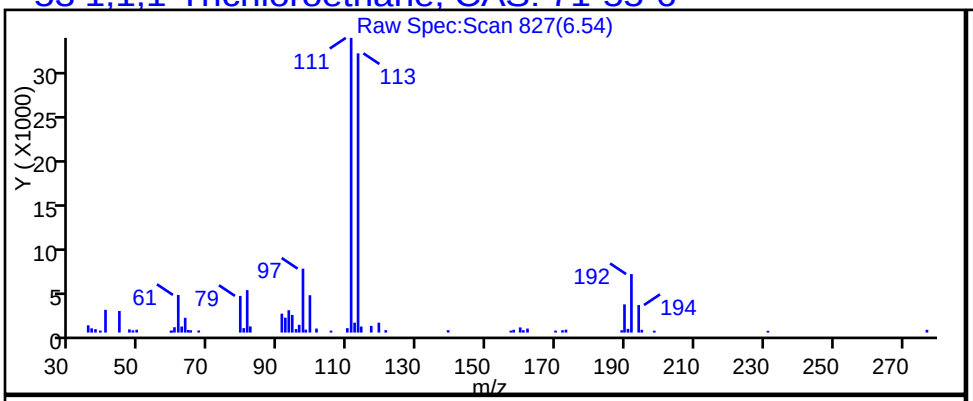


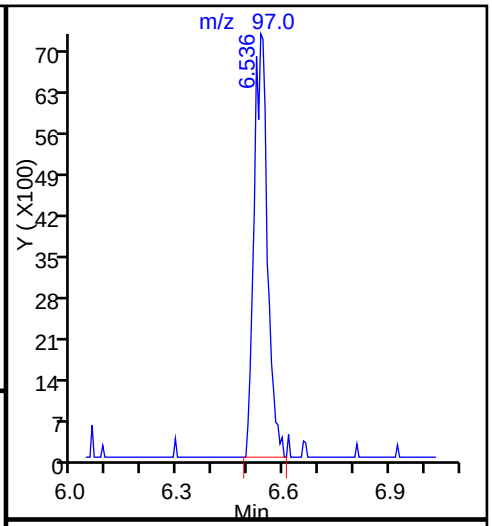
Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

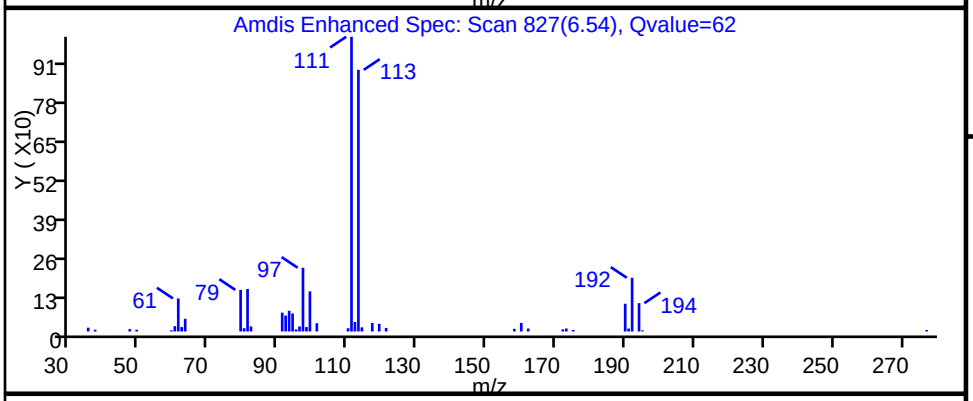
TestAmerica Pittsburgh

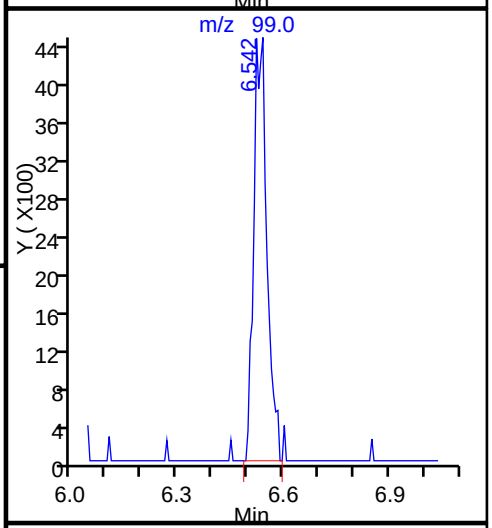
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D				
Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3		
Client ID:	HD-MW-93D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

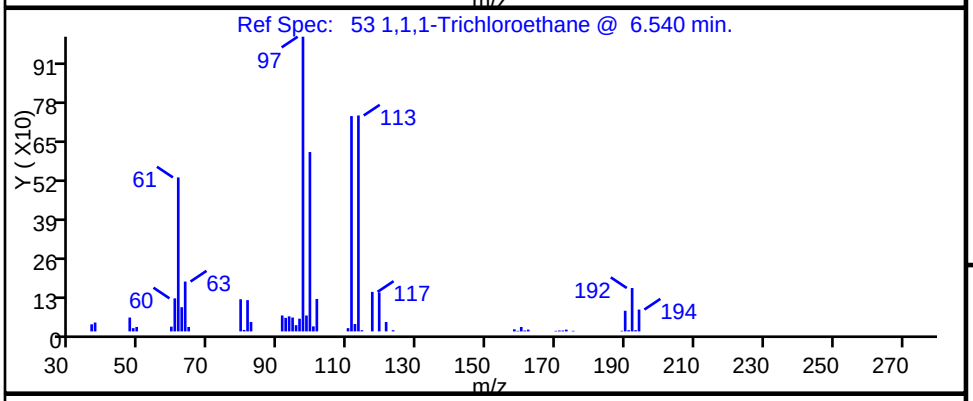
53 1,1,1-Trichloroethane, CAS: 71-55-6

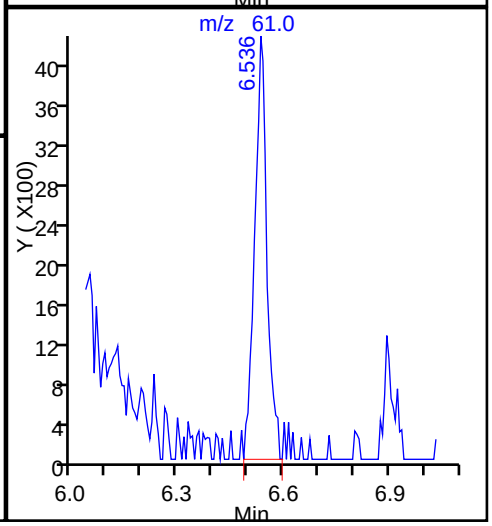


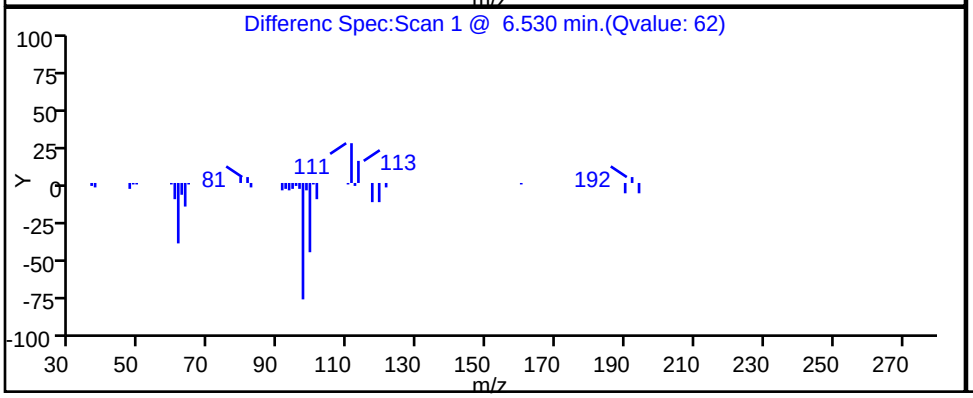










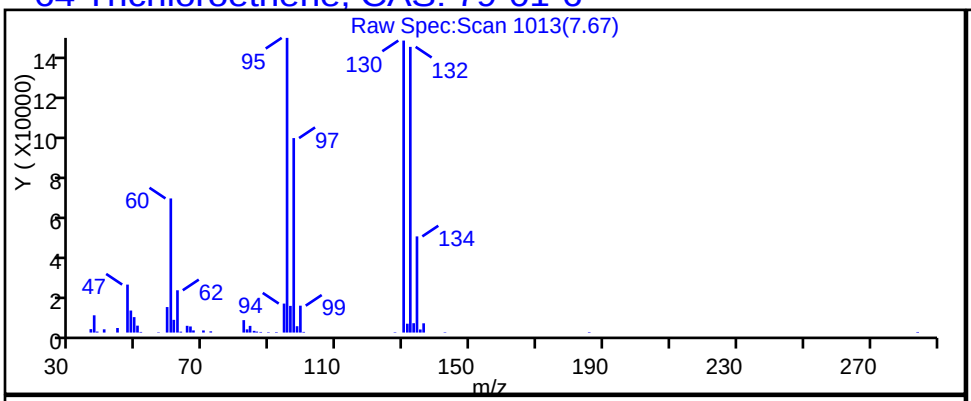


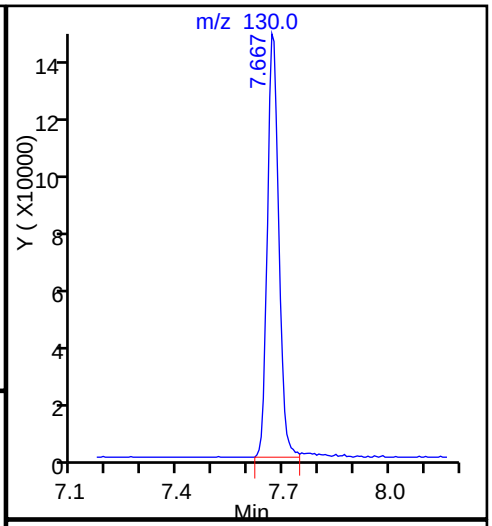
Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

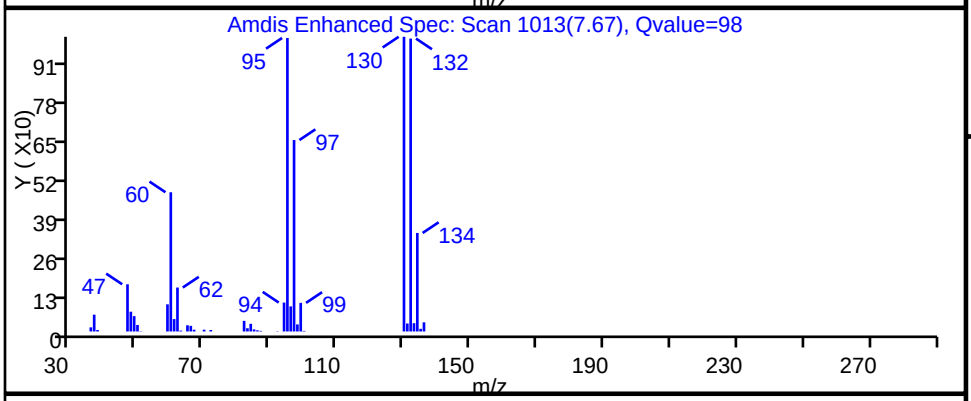
TestAmerica Pittsburgh

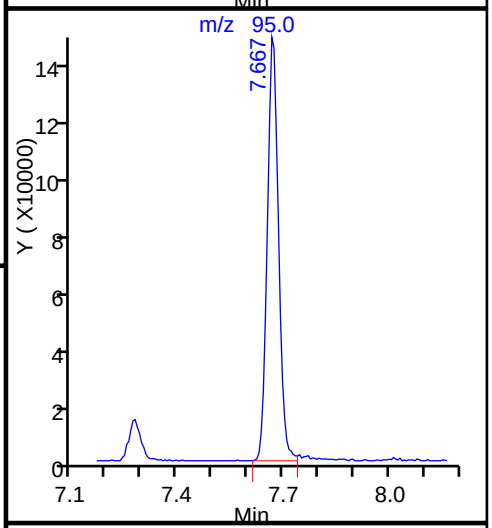
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D		
Injection Date:	04-Mar-2015 18:33:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3
Client ID:	HD-MW-93D-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

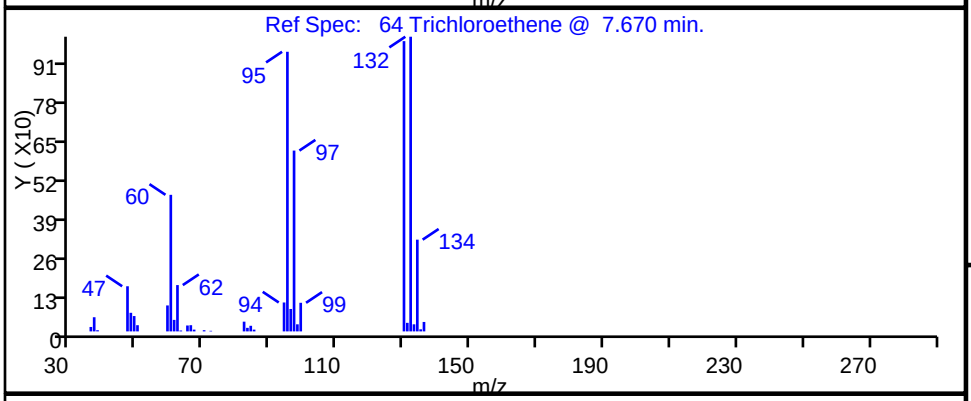
64 Trichloroethene, CAS: 79-01-6

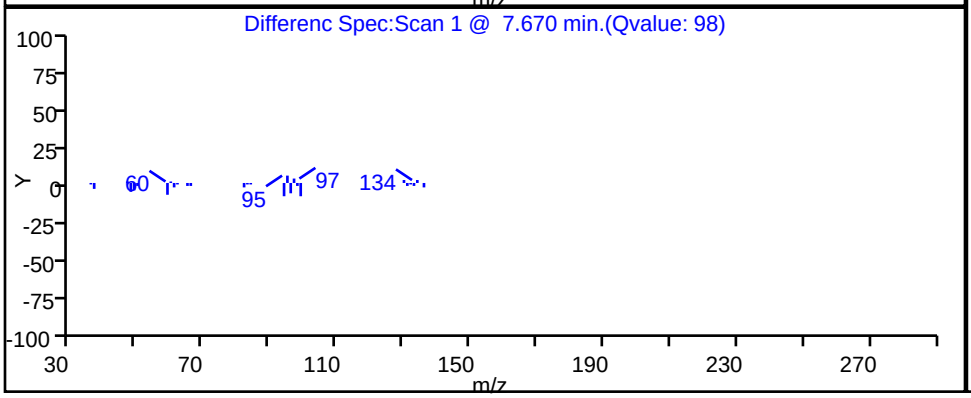


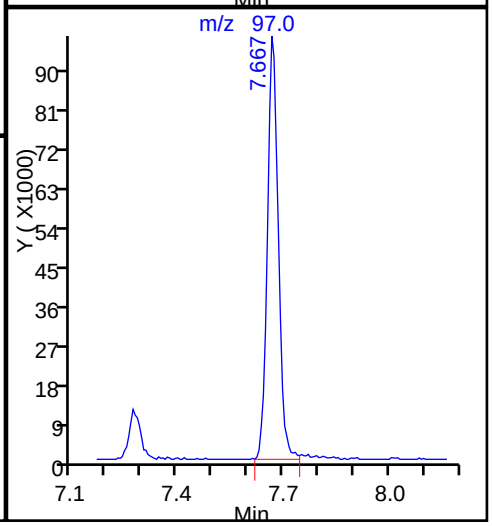












Report Date: 05-Mar-2015 08:49:18 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304018.D				
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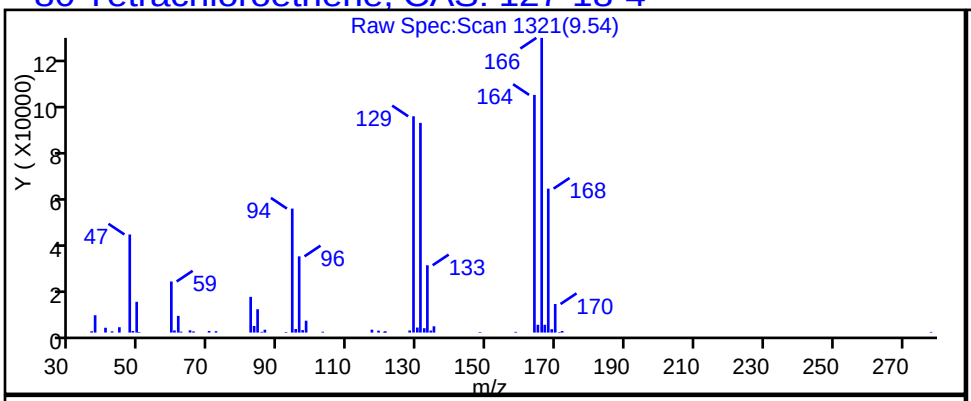
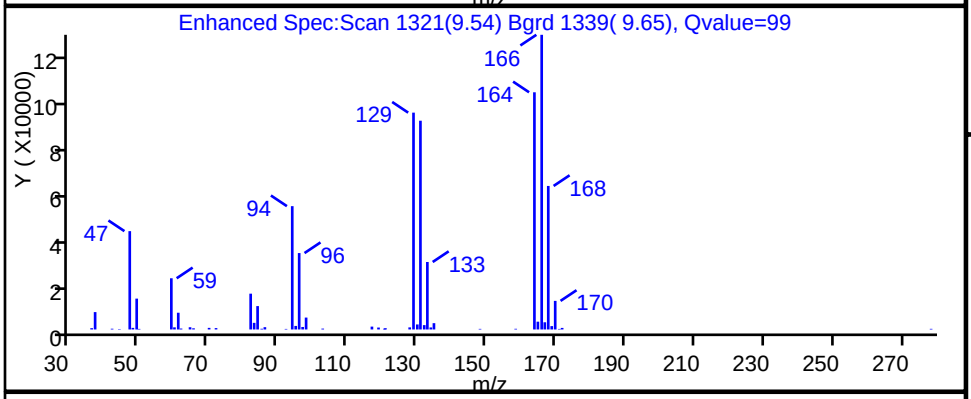
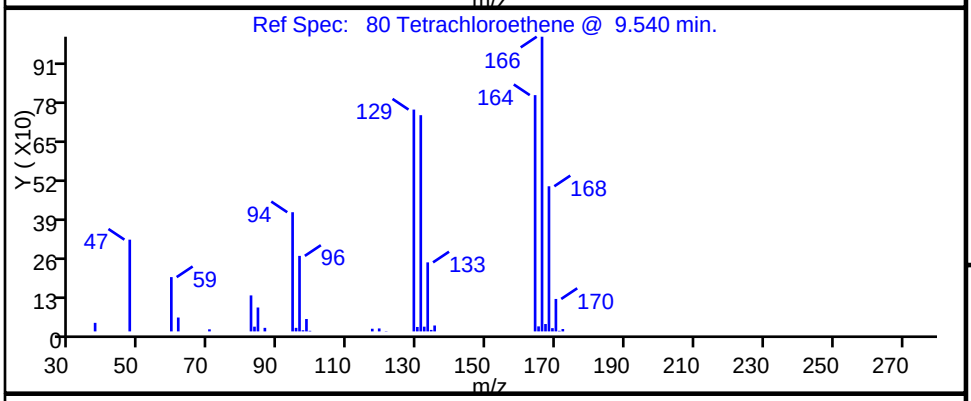
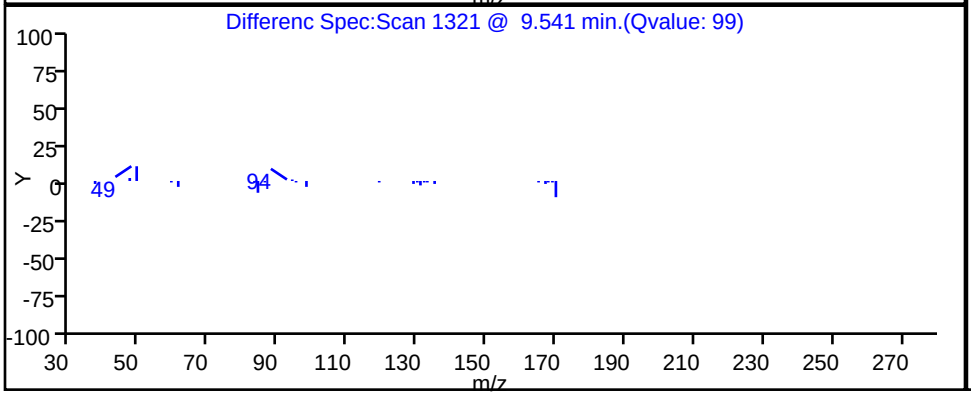
Lims ID:	180-41453-E-3	Lab Sample ID:	180-41453-3		
Client ID:	HD-MW-93D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

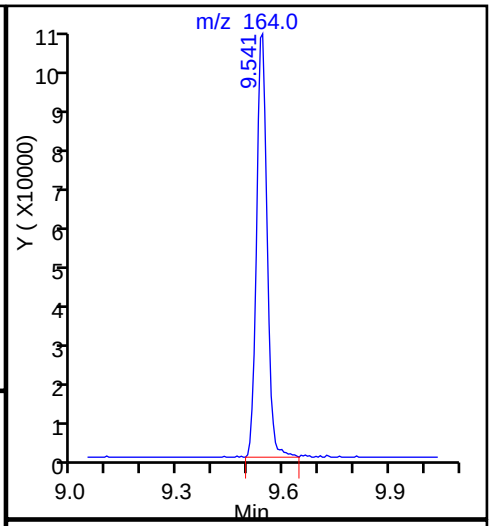
80 Tetrachloroethene, CAS: 127-18-4

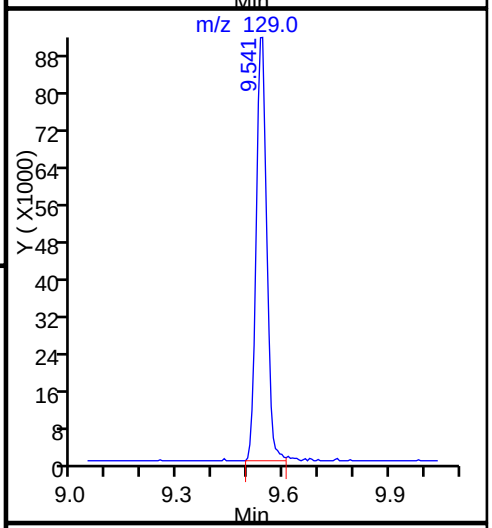


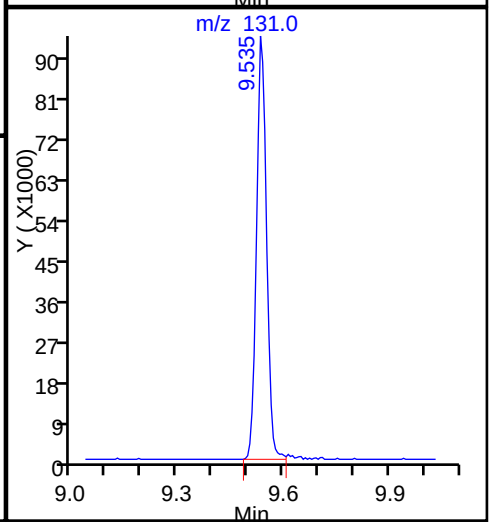












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 | Lab Sample ID: 180-41453-4

Matrix: Water | Lab File ID: 50304020.D

Analysis Method: 8260C | Date Collected: 02/23/2015 11:50

Sample wt/vol: 5(mL) | Date Analyzed: 03/04/2015 19:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 134740 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	0.85	J	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	0.40	J	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.90	J	1.0	0.12
156-59-2	*cis-1,2-Dichloroethene*	*92*	*E*	*1.0*	*0.24*
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	3.2		1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	34		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	*Tetrachloroethene*	*60*	*E*	*1.0*	*0.15*
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 Lab Sample ID: 180-41453-4

Matrix: Water Lab File ID: 50304020.D

Analysis Method: 8260C Date Collected: 02/23/2015 11:50

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 19:22

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134740 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	102		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D
Lims ID: 180-41453-E-4 Lab Sample ID: 180-41453-4
Client ID: HD-MW-93S-0/1-0
Sample Type: Client
Inject. Date: 04-Mar-2015 19:22:30 ALS Bottle#: 20 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41453-E-4
Misc. Info.: 180-0005893-020
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 05-Mar-2015 09:03:02 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK052

First Level Reviewer: fergusond Date: 05-Mar-2015 09:03:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.320	-0.024	94	85929	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.277	-0.001	99	393015	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.367	-0.006	99	87626	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.691	-0.006	98	136929	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.528	0.000	71	78852	46.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.905	6.900	0.005	98	100762	48.5	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	100	356304	52.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	98	129283	50.9	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62	1.917	1.905	0.012	1	1921	0.6333	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.373				ND	
22 1,1-Dichloroethene	96	3.383	3.371	0.012	95	9742	4.26	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.144				ND	
33 Acrylonitrile	53		4.551				ND	
34 trans-1,2-Dichloroethene	96	4.575	4.570	0.005	73	4789	2.00	M
35 Methyl tert-butyl ether	73		4.600				ND	
37 1,1-Dichloroethane	63	5.178	5.172	0.006	98	20608	4.52	
45 cis-1,2-Dichloroethene	96	5.944	5.938	0.006	76	1183302	462.5	E
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83	6.352	6.340	0.012	1	1882	0.5178	M
53 1,1,1-Trichloroethane	97	6.534	6.528	0.006	71	38910	15.8	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.991				ND	
64 Trichloroethene	130	7.672	7.666	0.006	99	398869	170.6	
67 1,2-Dichloropropane	63		7.909				ND	
70 1,4-Dioxane	88		8.061				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.201				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.539	9.540	-0.001	99	504390	302.2	E
82 2-Hexanone	43		9.661				ND	
84 Chlorodibromomethane	129		9.795				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.477				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.623				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

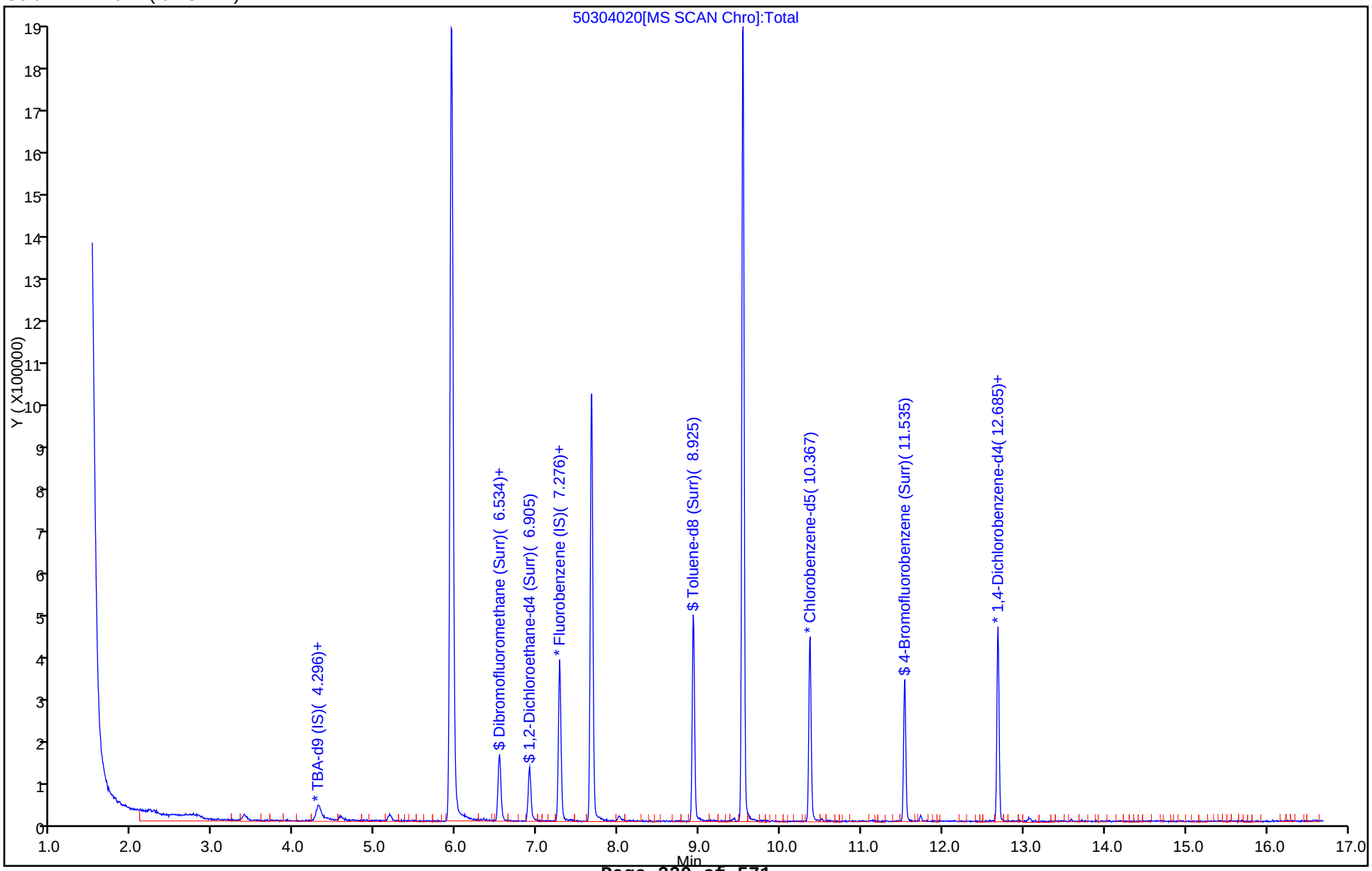
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D				
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4	Worklist Smp#:	20
Client ID:	HD-MW-93S-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

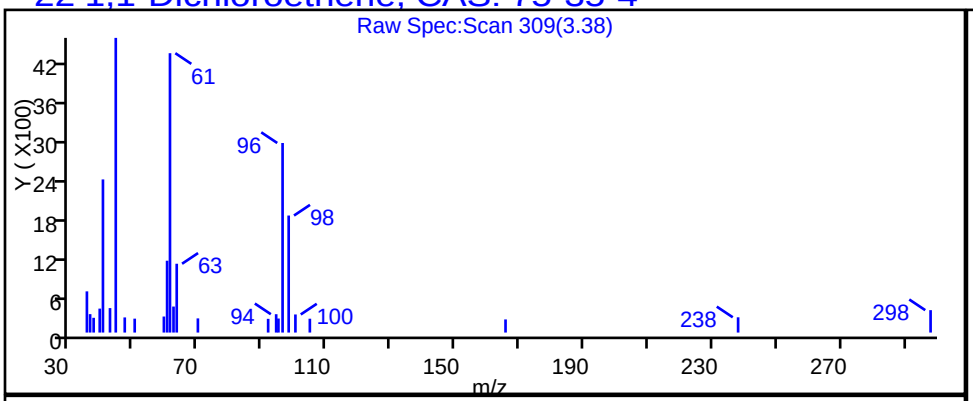


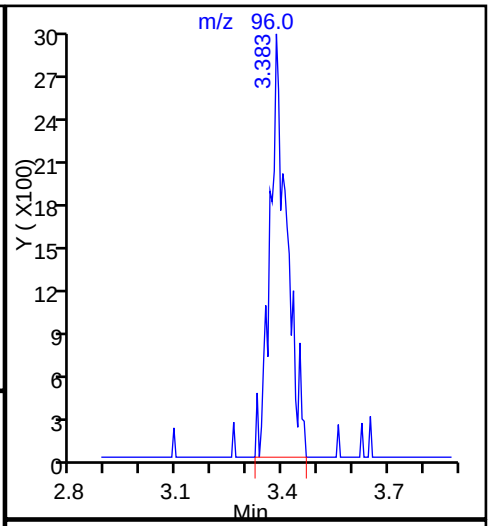
Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

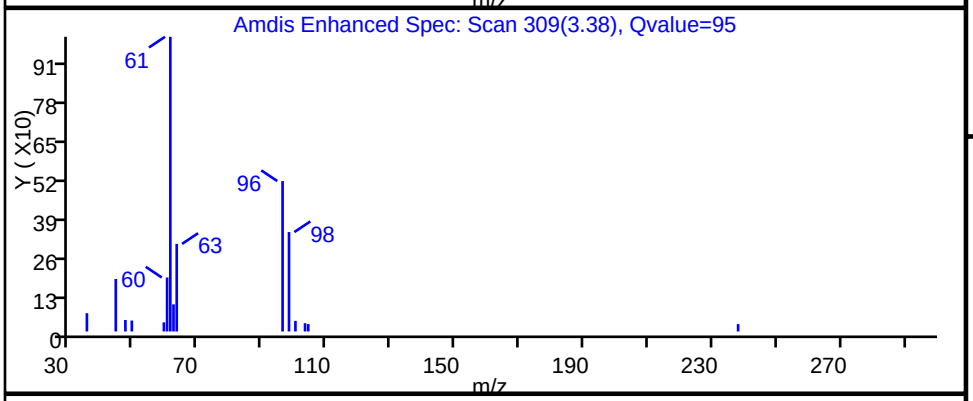
TestAmerica Pittsburgh

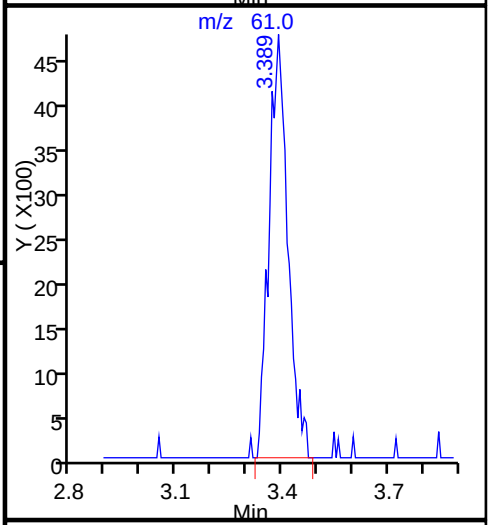
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D		
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4
Client ID:	HD-MW-93S-0/1-0		
Operator ID:	001562	ALS Bottle#:	20 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

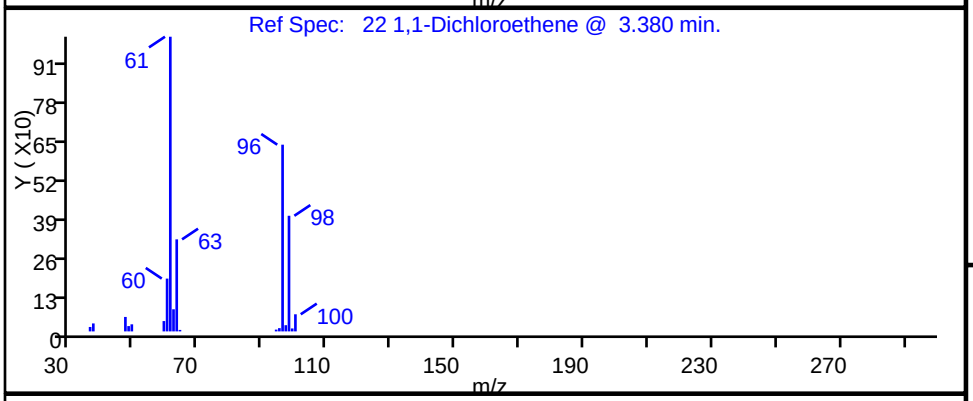
22 1,1-Dichloroethene, CAS: 75-35-4

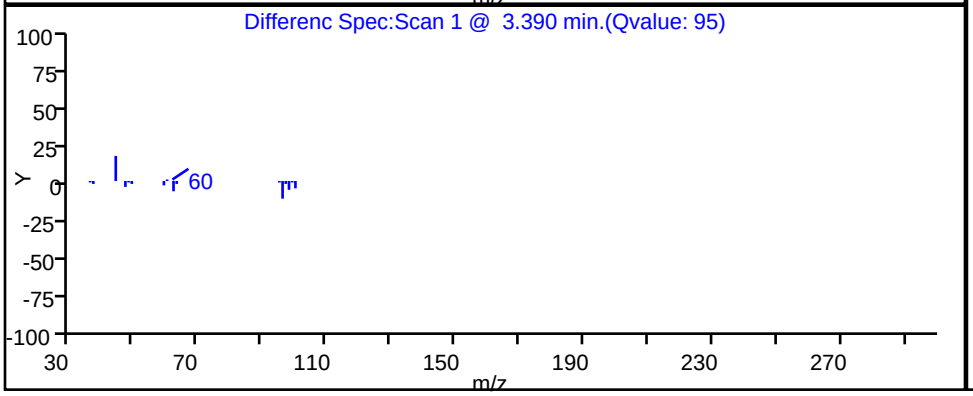


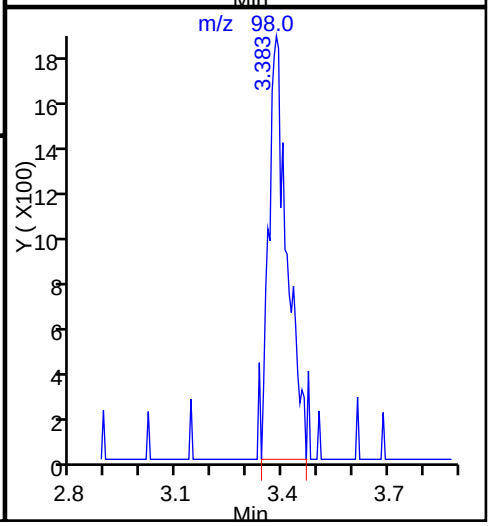










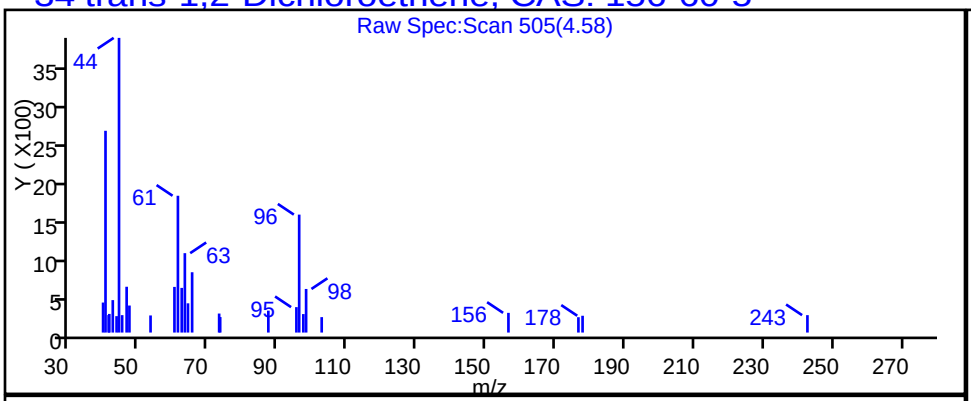


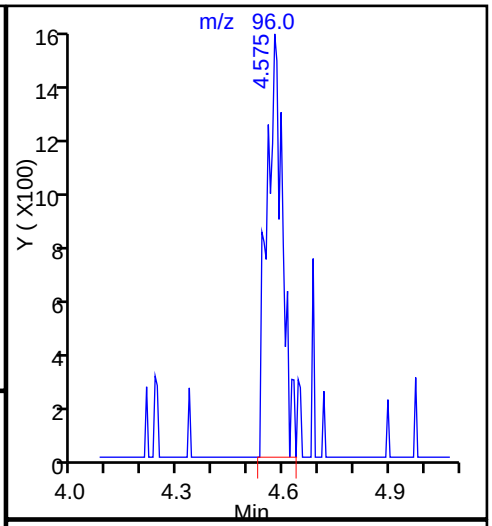
Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

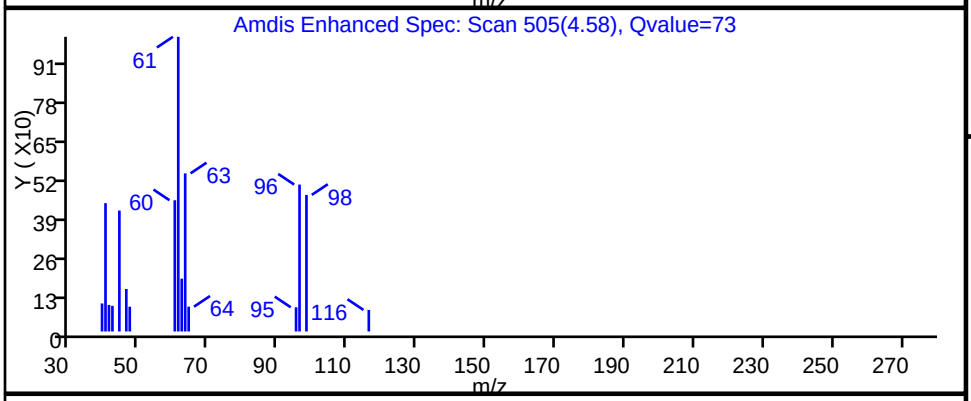
TestAmerica Pittsburgh

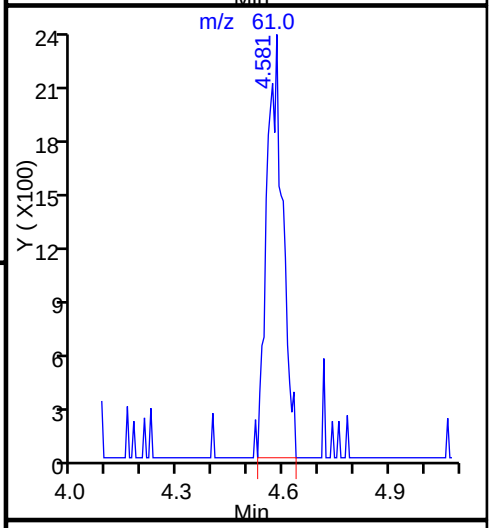
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D				
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

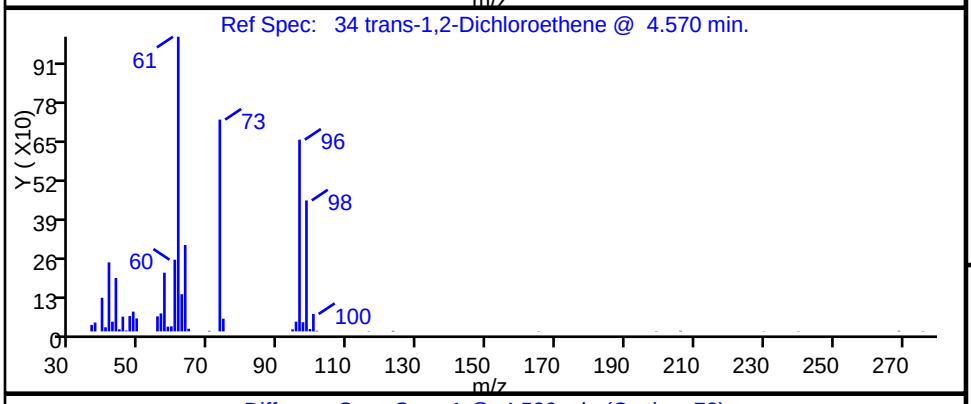
34 trans-1,2-Dichloroethene, CAS: 156-60-5

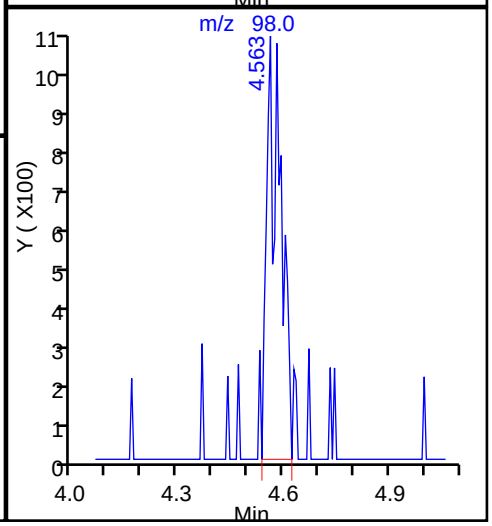


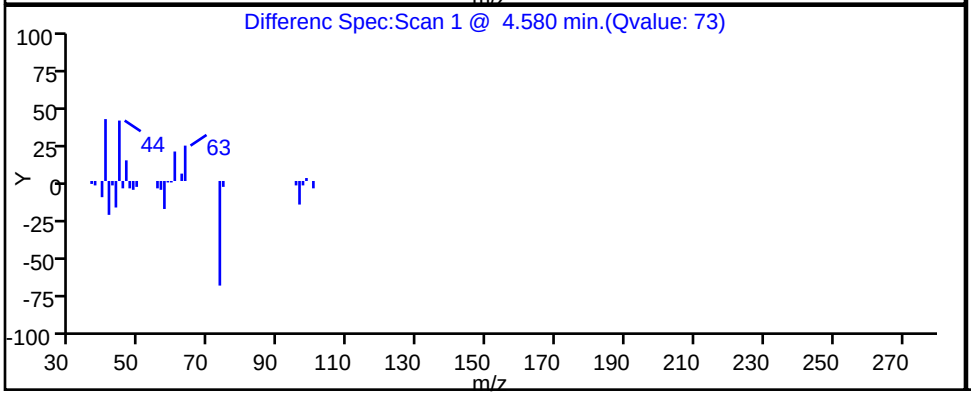










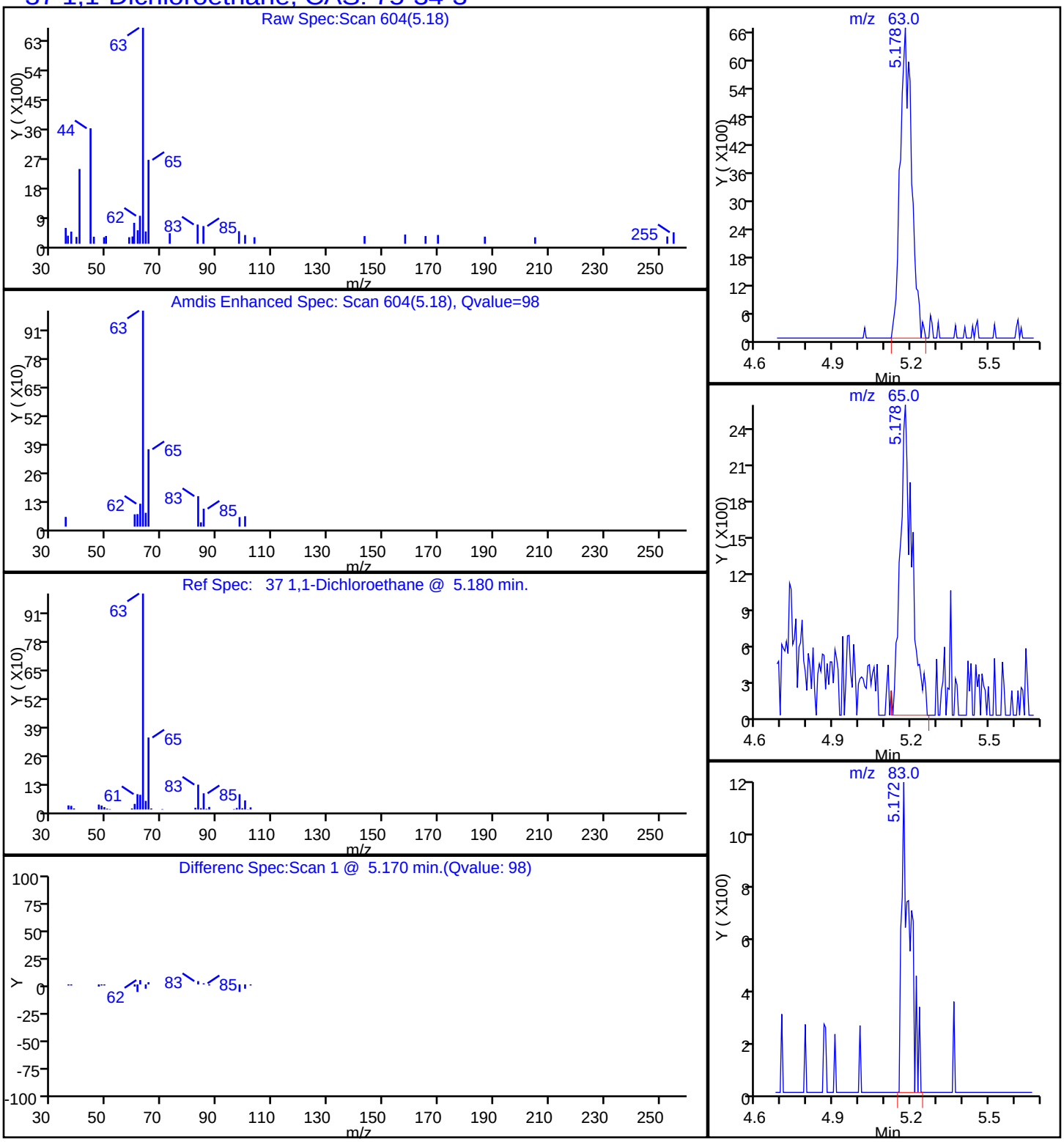


Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D				
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



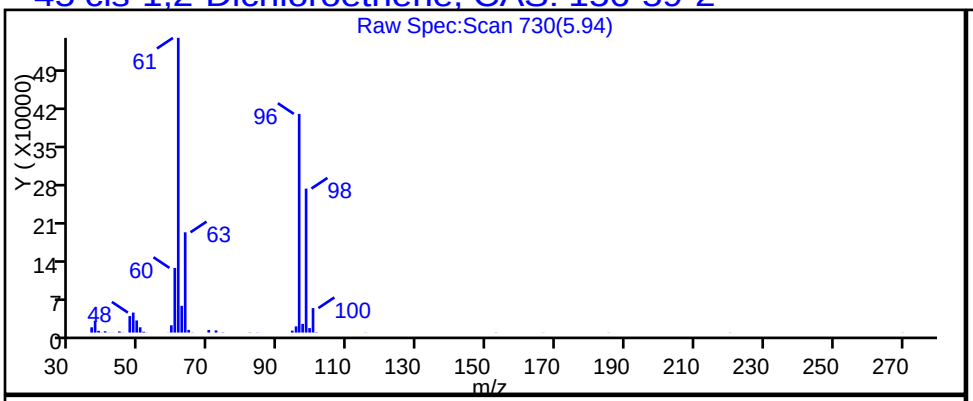
Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

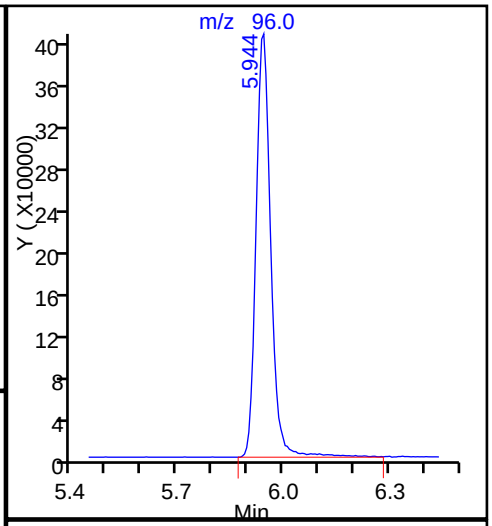
TestAmerica Pittsburgh

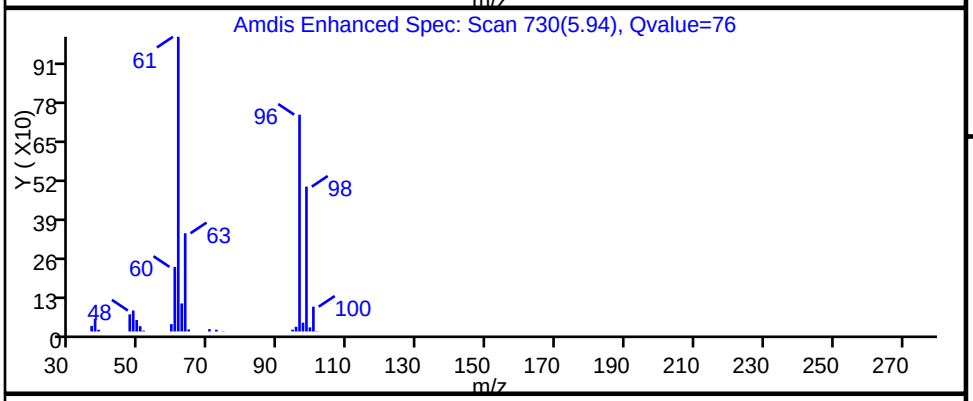
Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D

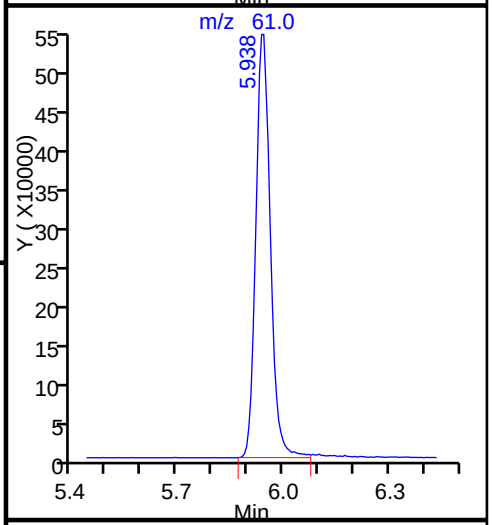
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4
Client ID:	HD-MW-93S-0/1-0		
Operator ID:	001562	ALS Bottle#:	20 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

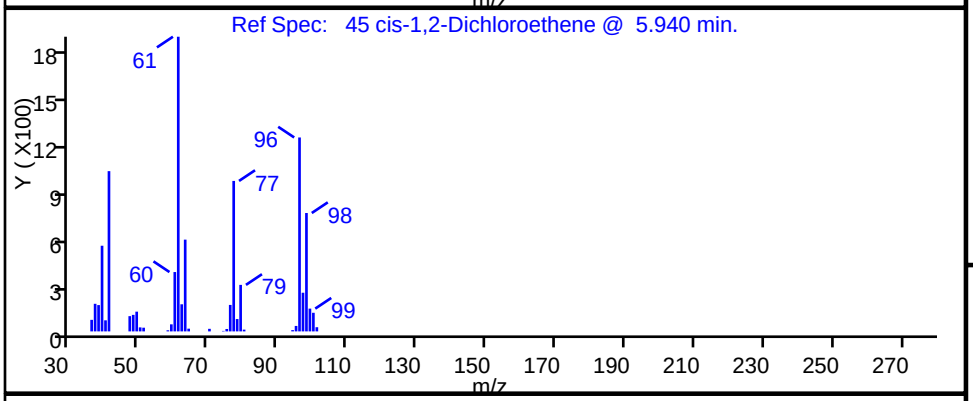
45 cis-1,2-Dichloroethene, CAS: 156-59-2

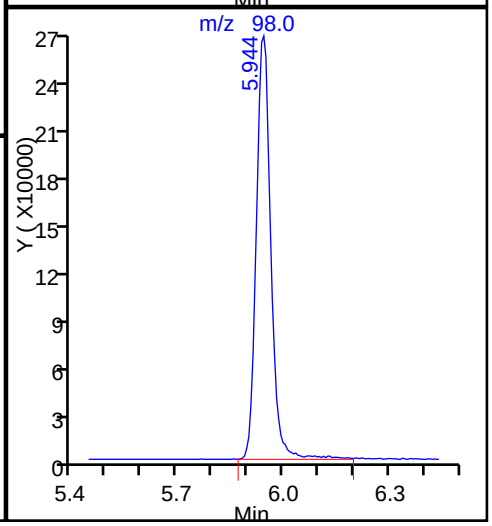


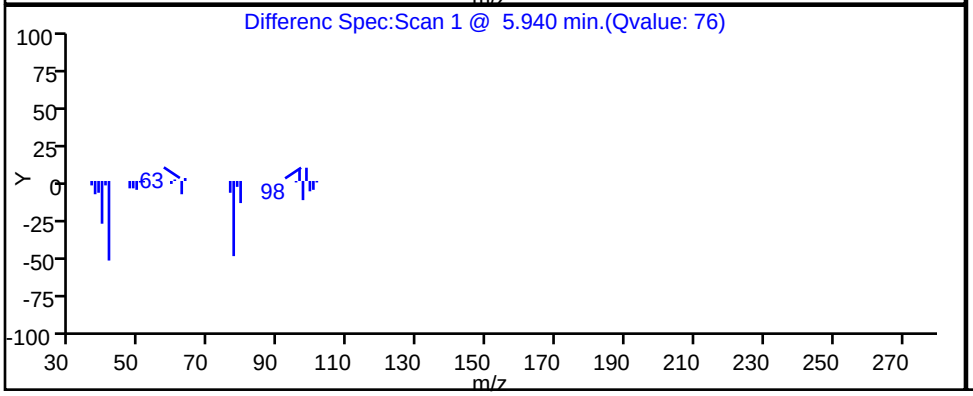










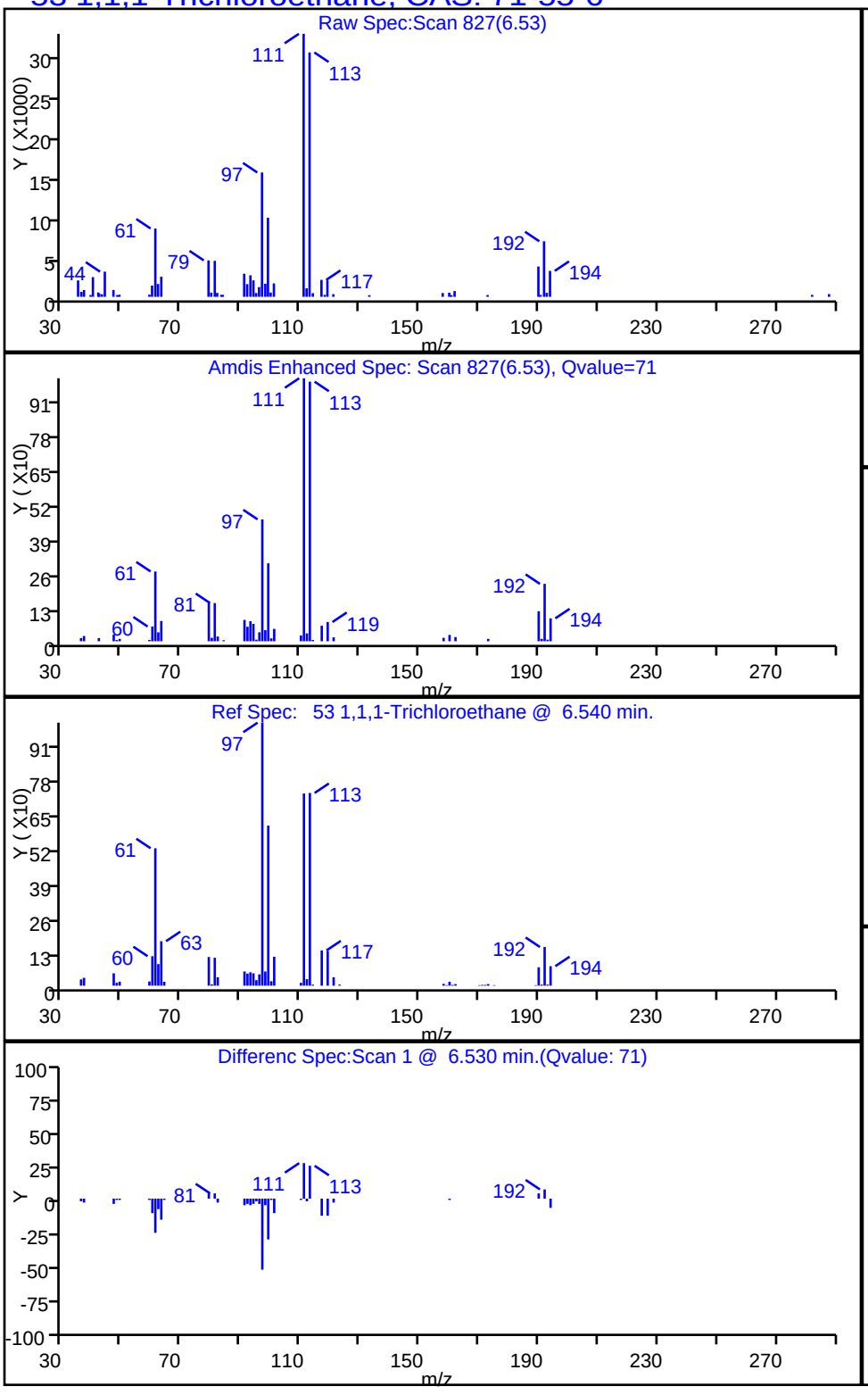


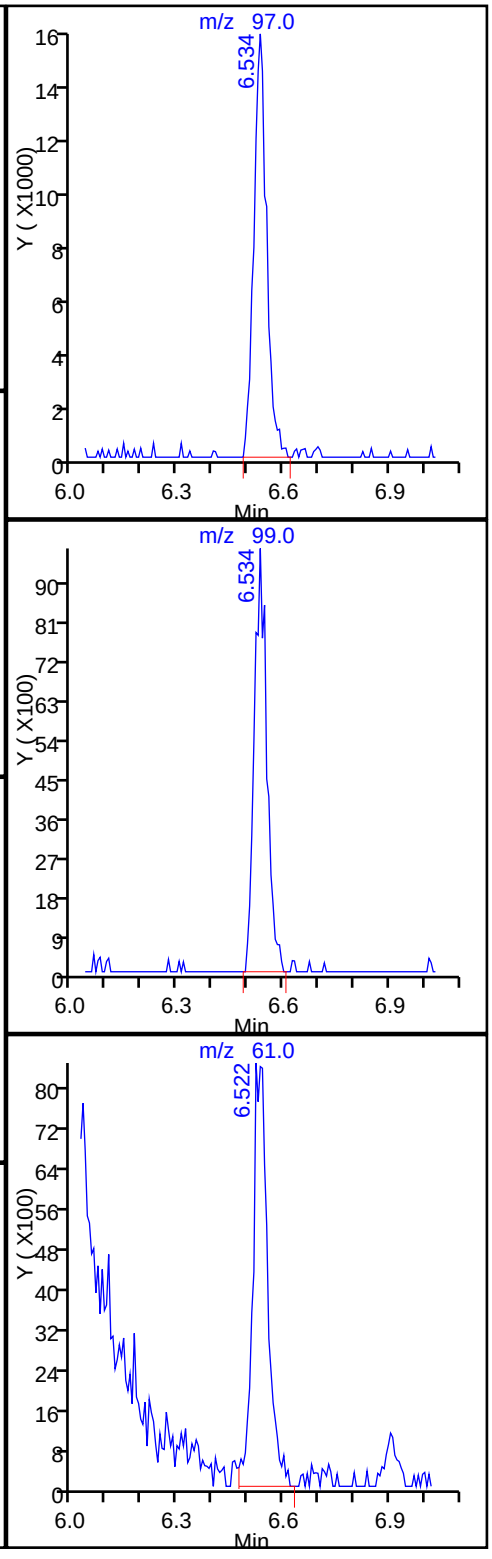
Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D				
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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





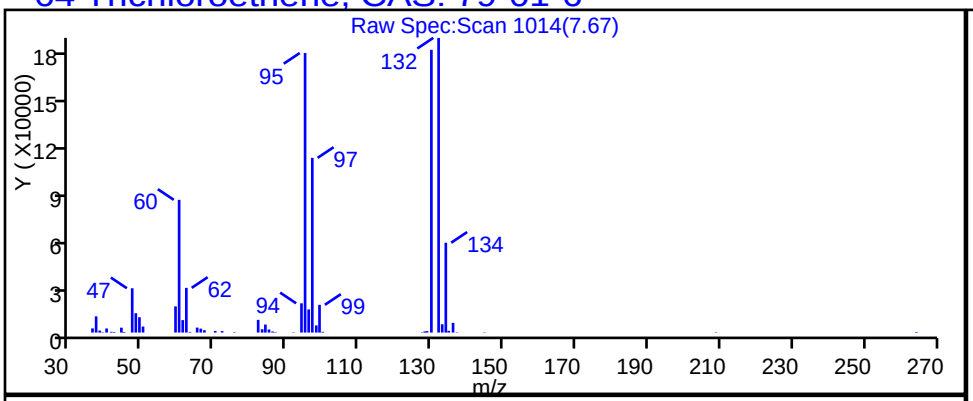
Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

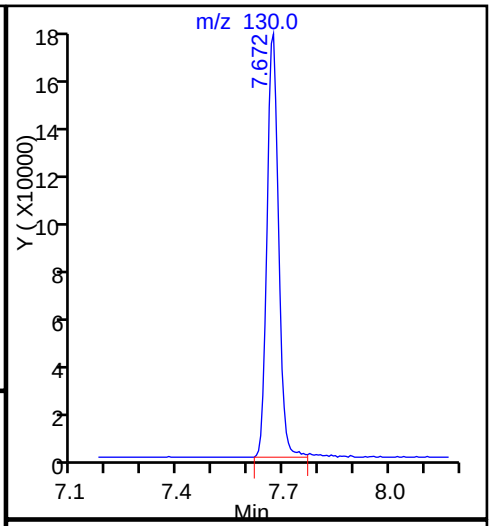
TestAmerica Pittsburgh

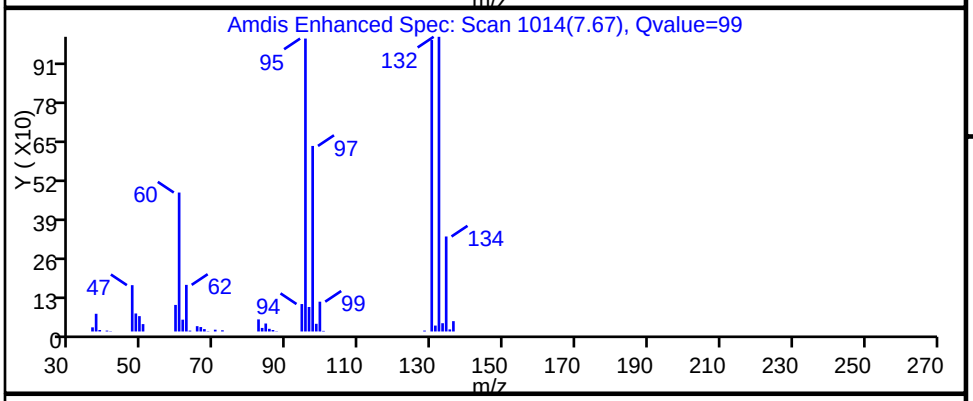
Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D

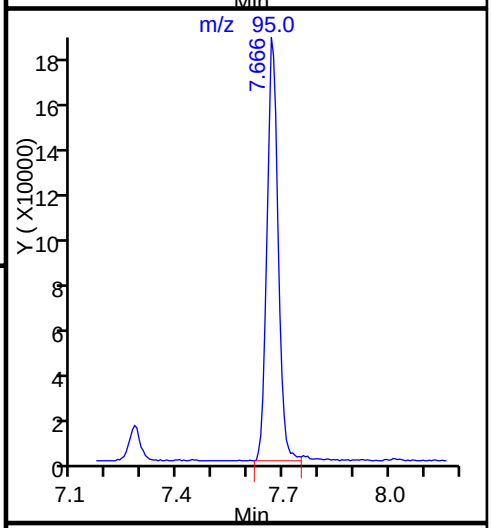
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4
Client ID:	HD-MW-93S-0/1-0		
Operator ID:	001562	ALS Bottle#:	20 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

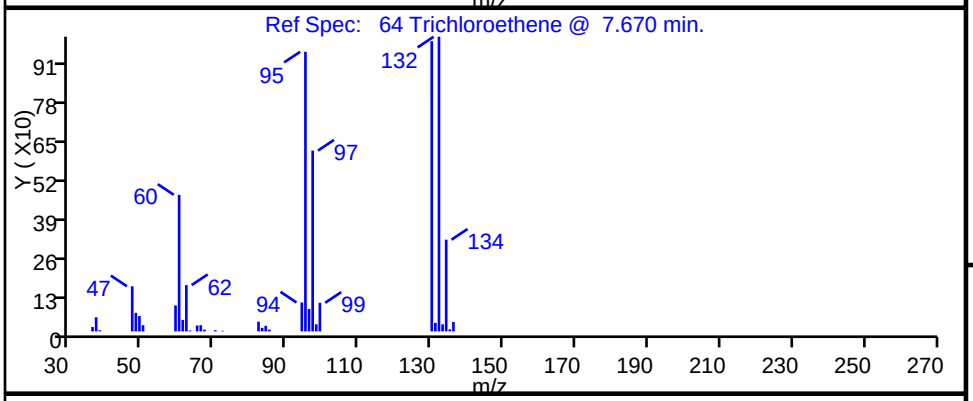
64 Trichloroethene, CAS: 79-01-6

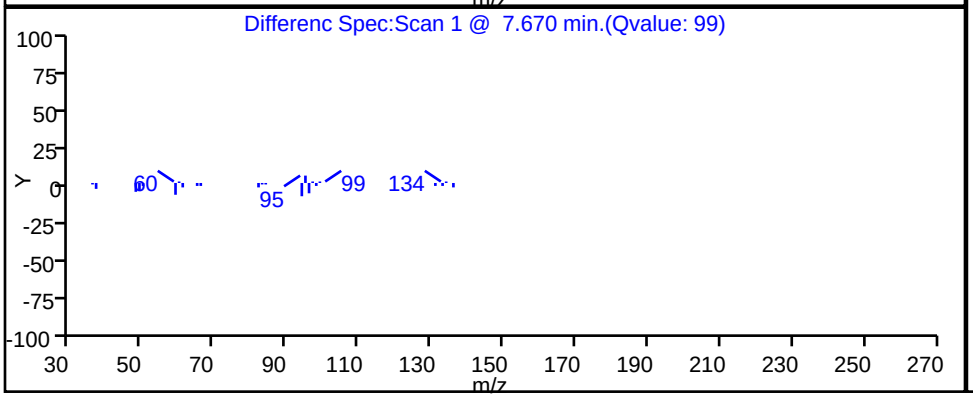


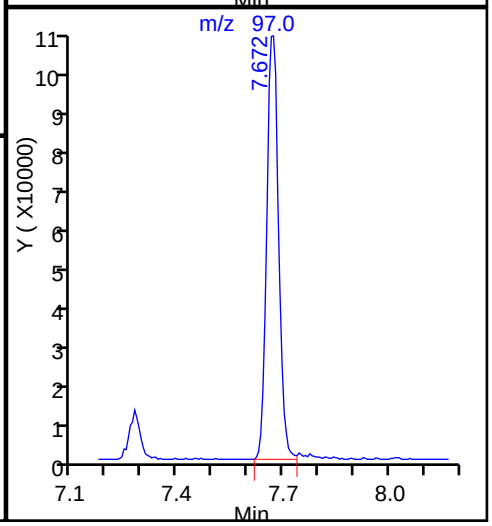










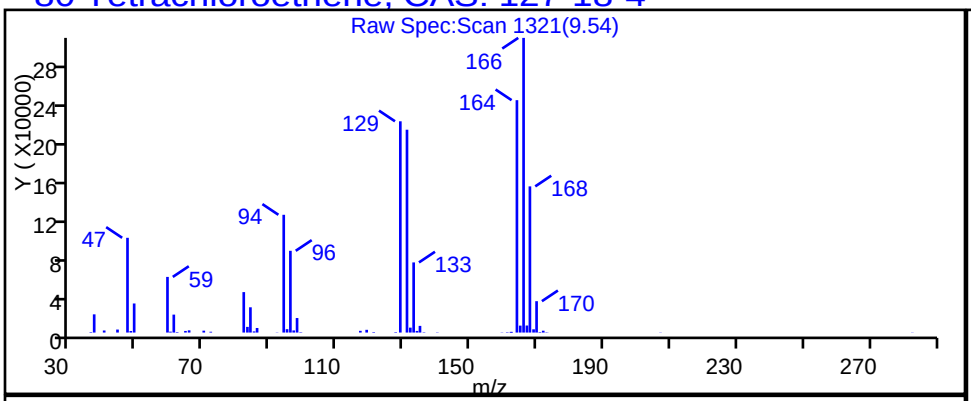


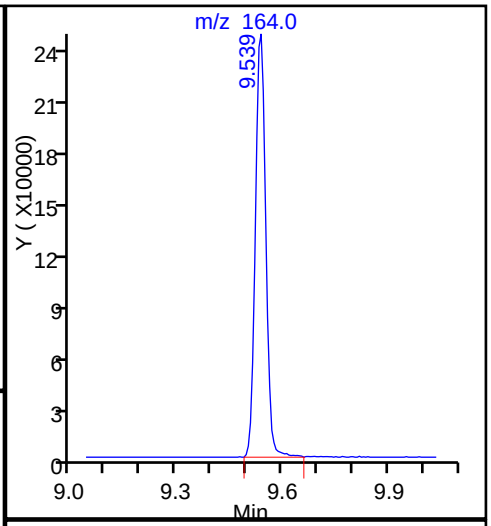
Report Date: 05-Mar-2015 09:03:02 Chrom Revision: 2.2 15-Jan-2015 13:05:58

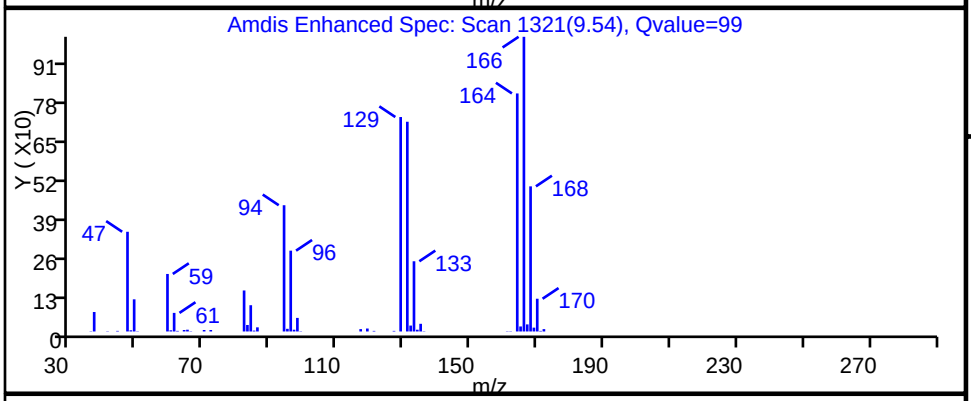
TestAmerica Pittsburgh

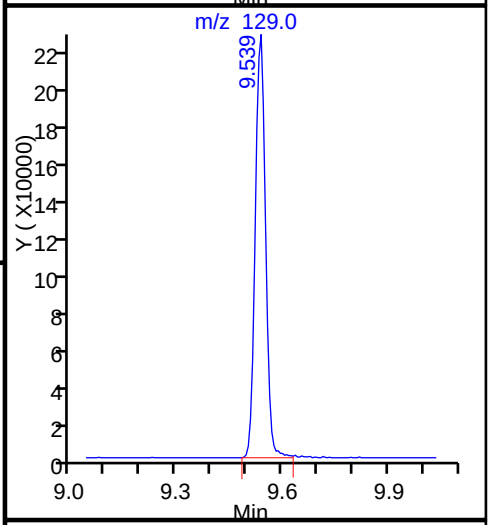
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D		
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4
Client ID:	HD-MW-93S-0/1-0		
Operator ID:	001562	ALS Bottle#:	20 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

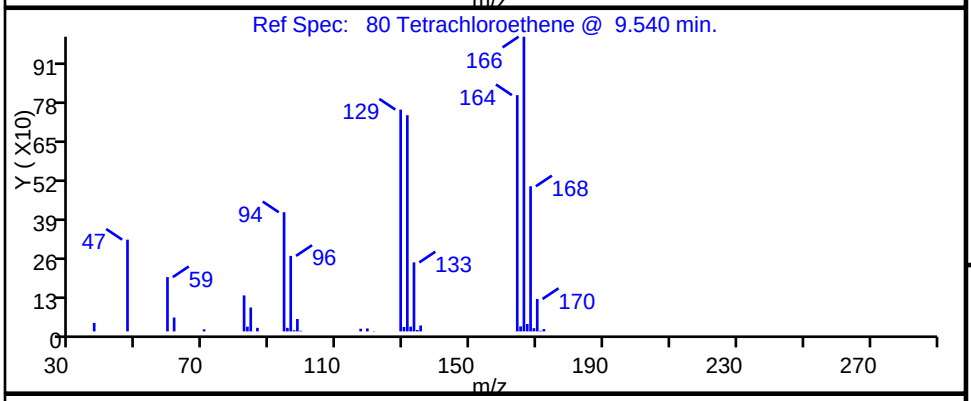
80 Tetrachloroethene, CAS: 127-18-4

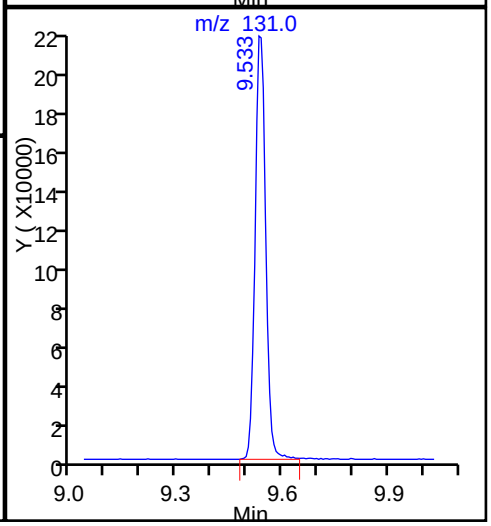


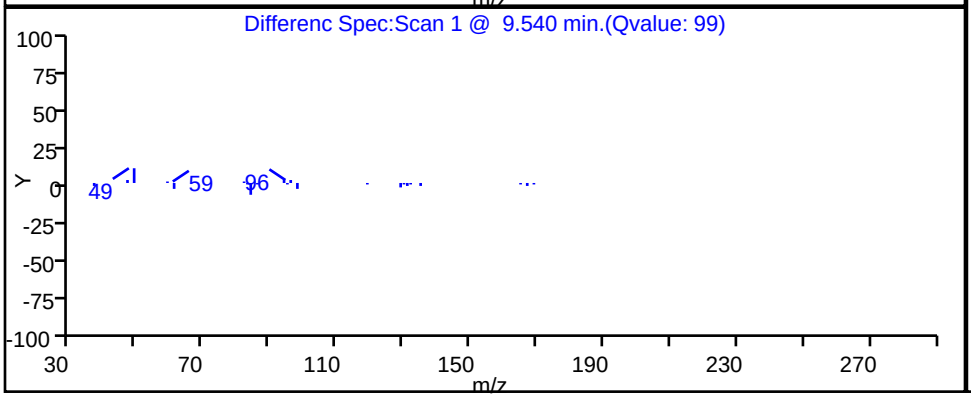












Manual Integration/User Assign Peak Report

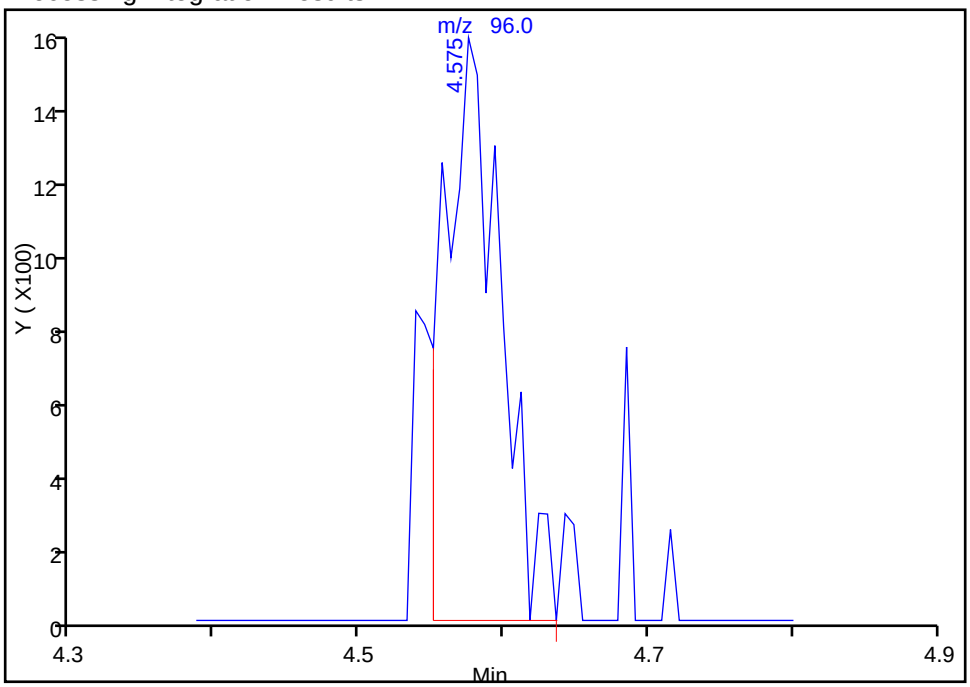
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D				
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
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		

34 trans-1,2-Dichloroethene, CAS: 156-60-5

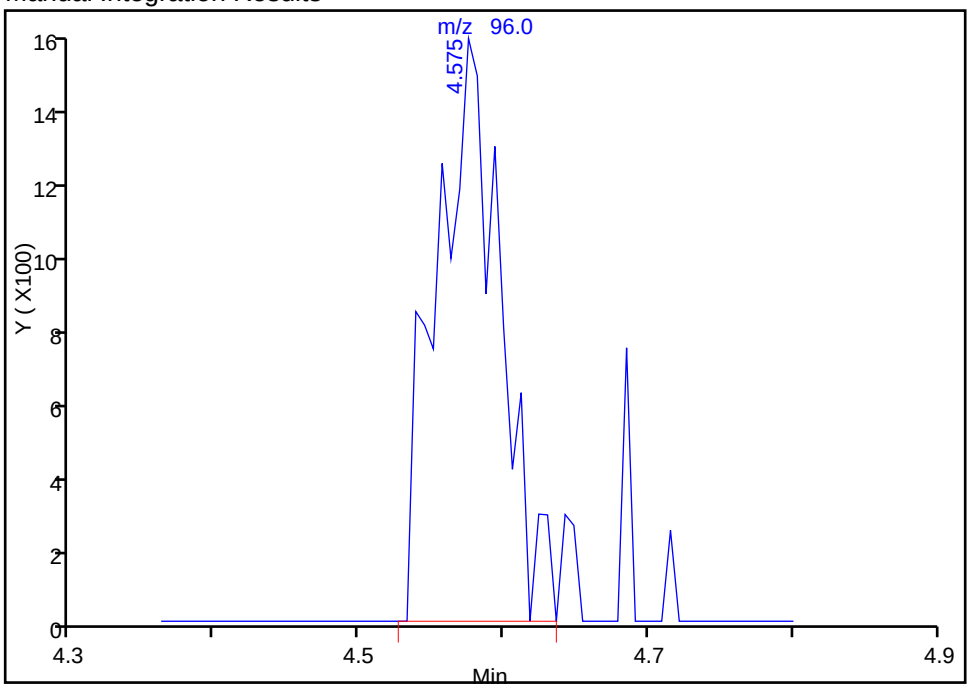
Processing Integration Results

RT: 4.58
Area: 4203
Amount: 1.756533
Amount Units: ng



Manual Integration Results

RT: 4.58
Area: 4789
Amount: 2.001436
Amount Units: ng



Reviewer: fergusond, 05-Mar-2015 09:03:02
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

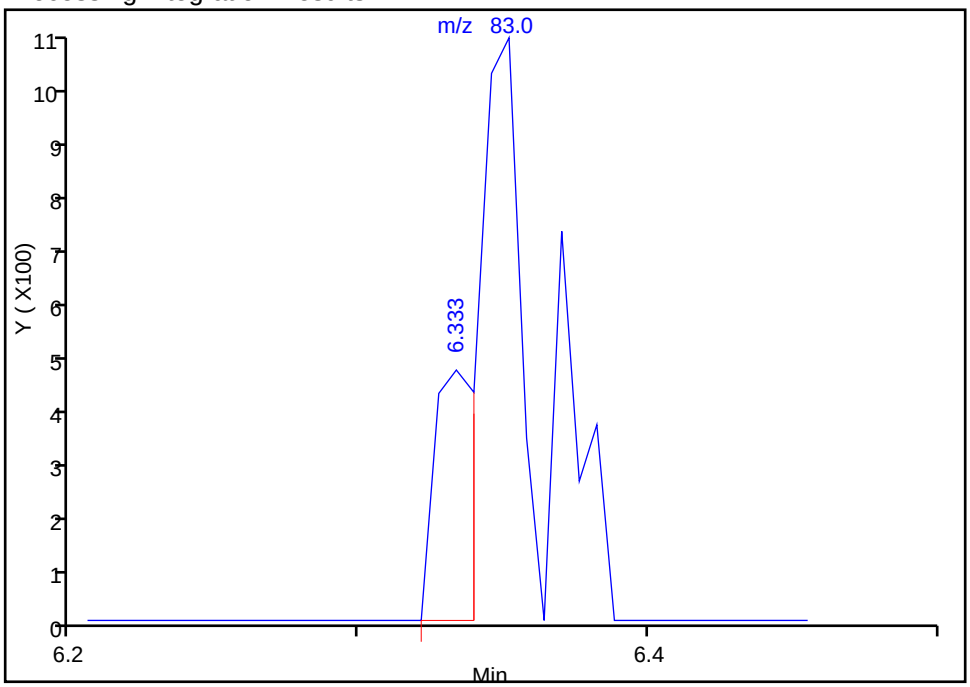
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304020.D				
Injection Date:	04-Mar-2015 19:22:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
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

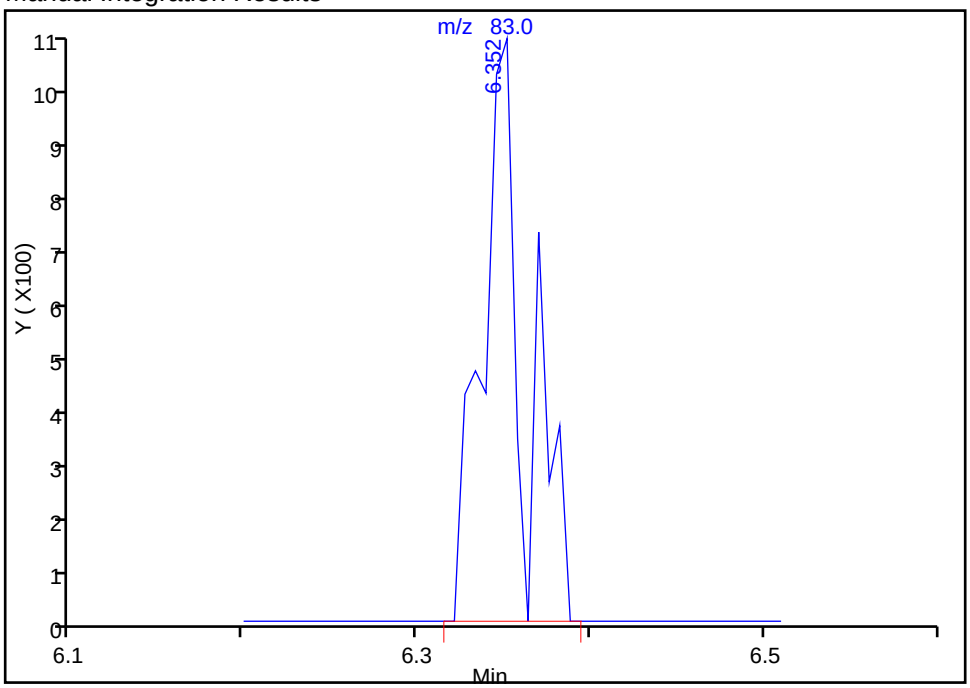
Processing Integration Results

RT: 6.33
Area: 484
Amount: 0.133164
Amount Units: ng



Manual Integration Results

RT: 6.35
Area: 1882
Amount: 0.517798
Amount Units: ng



Reviewer: fergusond, 05-Mar-2015 09:03:02
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 DL | Lab Sample ID: 180-41453-4 DL

Matrix: Water | Lab File ID: 50305017.D

Analysis Method: 8260C | Date Collected: 02/23/2015 11:50

Sample wt/vol: 5(mL) | Date Analyzed: 03/05/2015 16:48

Soil Aliquot Vol: | Dilution Factor: 5

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

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

Analysis Batch No.: 134814 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U	5.0	1.4
75-01-4	Vinyl chloride	5.0	U	5.0	1.1
74-83-9	Bromomethane	5.0	U	5.0	1.6
75-00-3	Chloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	5.0	U	5.0	1.5
67-64-1	Acetone	25	U	25	13
75-15-0	Carbon disulfide	5.0	U	5.0	1.1
75-09-2	Methylene Chloride	5.0	U	5.0	0.63
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.85
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.92
75-34-3	1,1-Dichloroethane	0.77	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	85		5.0	1.2
74-97-5	Bromochloromethane	5.0	U	5.0	0.90
78-93-3	2-Butanone (MEK)	25	U	25	2.7
67-66-3	Chloroform	5.0	U	5.0	0.85
71-55-6	1,1,1-Trichloroethane	2.6	J	5.0	1.4
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.68
71-43-2	Benzene	5.0	U	5.0	0.53
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
79-01-6	Trichloroethene	31		5.0	0.72
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.47
75-27-4	Bromodichloromethane	5.0	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.93
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U	25	2.6
108-88-3	Toluene	5.0	U	5.0	0.75
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.74
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	1.0
127-18-4	Tetrachloroethene	52		5.0	0.74
591-78-6	2-Hexanone	25	U	25	0.80
124-48-1	Dibromochloromethane	5.0	U	5.0	0.68
106-93-4	1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90
108-90-7	Chlorobenzene	5.0	U	5.0	0.68
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4
100-41-4	Ethylbenzene	5.0	U	5.0	1.1
1330-20-7	Xylenes, Total	15	U	15	2.4
100-42-5	Styrene	5.0	U	5.0	0.48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 DL Lab Sample ID: 180-41453-4 DL

Matrix: Water Lab File ID: 50305017.D

Analysis Method: 8260C Date Collected: 02/23/2015 11:50

Sample wt/vol: 5(mL) Date Analyzed: 03/05/2015 16:48

Soil Aliquot Vol: Dilution Factor: 5

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134814 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	*Bromoform*	*5.0*	*U*	*5.0*	*0.96*
79-34-5	*1,1,2,2-Tetrachloroethane*	*5.0*	*U*	*5.0*	*1.0*
107-13-1	*Acrylonitrile*	*100*	*U*	*100*	*2.7*
123-91-1	*1,4-Dioxane*	*1000*	*U*	*1000*	*170*

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	97		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D
Lims ID: 180-41453-C-4 Lab Sample ID: 180-41453-4
Client ID: HD-MW-93S-0/1-0
Sample Type: Client
Inject. Date: 05-Mar-2015 16:48:30 ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-41453-C-4, 5x
Misc. Info.: 180-0005905-017
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:20:22 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 06-Mar-2015 08:20:22

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.284	4.299	-0.015	92	96223	1000.0	
*	2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	449268	50.0	
*	3 Chlorobenzene-d5	119	10.368	10.365	0.004	99	105147	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	99	154999	50.0	
$	5 Dibromofluoromethane (Surr	113	6.529	6.532	-0.003	55	94567	49.2	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.897	0.009	98	114344	48.1	
$	7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	423891	51.7	
$	8 4-Bromofluorobenzene (Surr	95	11.530	11.533	-0.003	96	148534	48.7	
	12 Chloromethane	50		1.775				ND	
	13 Vinyl chloride	62		1.902				ND	
	15 Bromomethane	94		2.249				ND	
	16 Chloroethane	64		2.383				ND	
	22 1,1-Dichloroethene	96	3.366	3.375	-0.009	41	1775	0.6786	
	24 Acetone	43		3.496				ND	
	26 Carbon disulfide	76		3.661				ND	
	31 Methylene Chloride	84		4.141				ND	
	33 Acrylonitrile	53		4.549				ND	
	34 trans-1,2-Dichloroethene	96	4.564	4.561	0.003	1	708	0.2588	
	35 Methyl tert-butyl ether	73		4.597				ND	
	37 1,1-Dichloroethane	63	5.172	5.169	0.003	38	4027	0.7724	
	45 cis-1,2-Dichloroethene	96	5.945	5.942	0.003	75	247245	84.5	
	46 2-Butanone (MEK)	43		5.984				ND	
	49 Chlorobromomethane	128		6.222				ND	
	52 Chloroform	83		6.337				ND	
	53 1,1,1-Trichloroethane	97	6.535	6.532	0.003	55	7253	2.57	
	56 Carbon tetrachloride	117		6.714				ND	
	58 Benzene	78		6.952				ND	
	59 1,2-Dichloroethane	62		6.982				ND	
	64 Trichloroethene	130	7.667	7.663	0.004	98	83532	31.3	
	67 1,2-Dichloropropane	63		7.901				ND	
	70 1,4-Dioxane	88		8.059				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.193				ND	
74 cis-1,3-Dichloropropene	75		8.661				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.534	9.537	-0.003	97	104334	52.1	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.028				ND	
94 Bromoform	173		11.216				ND	
99 1,1,2,2-Tetrachloroethane	83		11.679				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

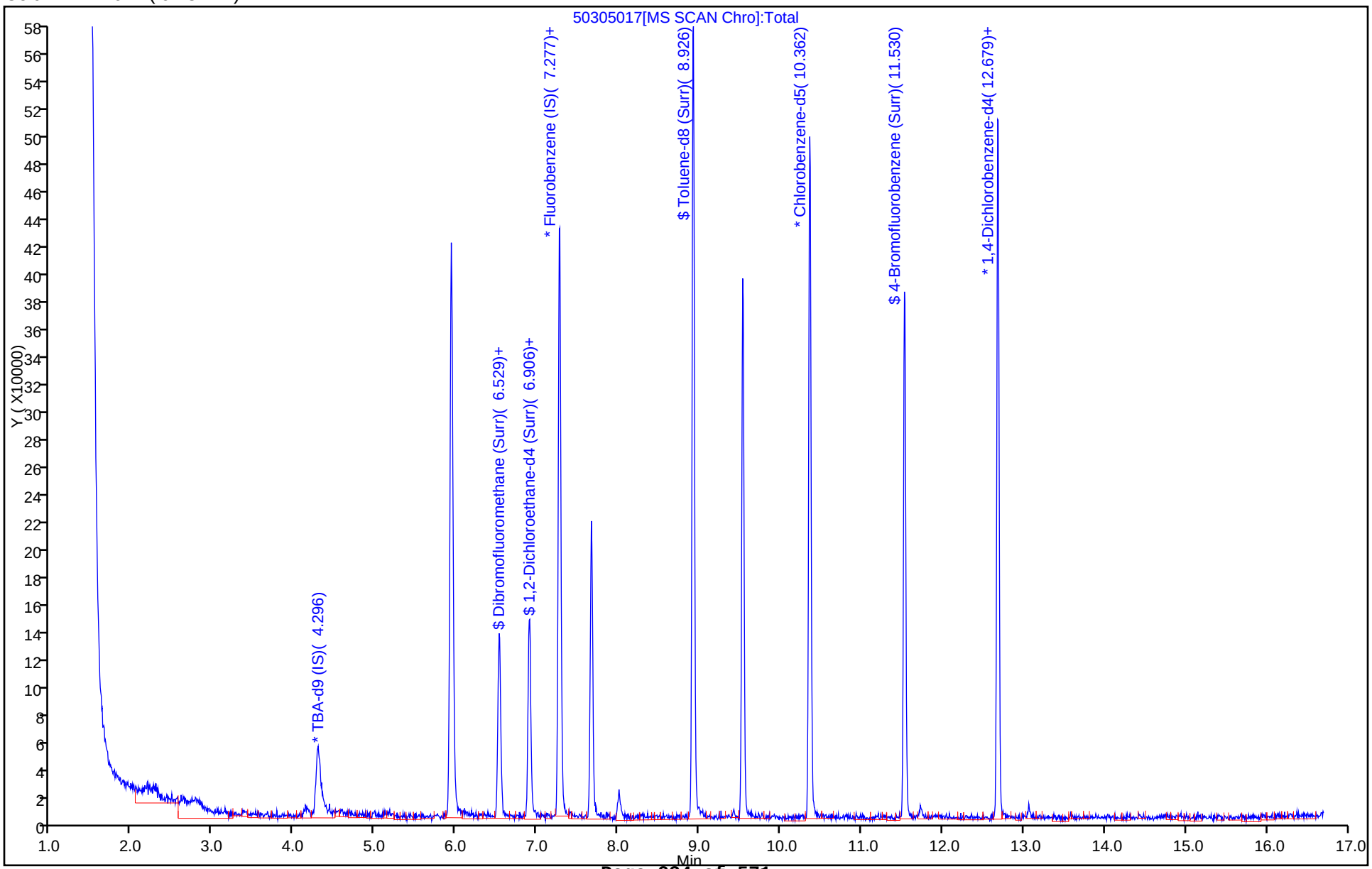
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 06-Mar-2015 08:20:22 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D				
Injection Date:	05-Mar-2015 16:48:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-C-4	Lab Sample ID:	180-41453-4	Worklist Smp#:	17
Client ID:	HD-MW-93S-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	5.0000	ALS Bottle#:	13
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



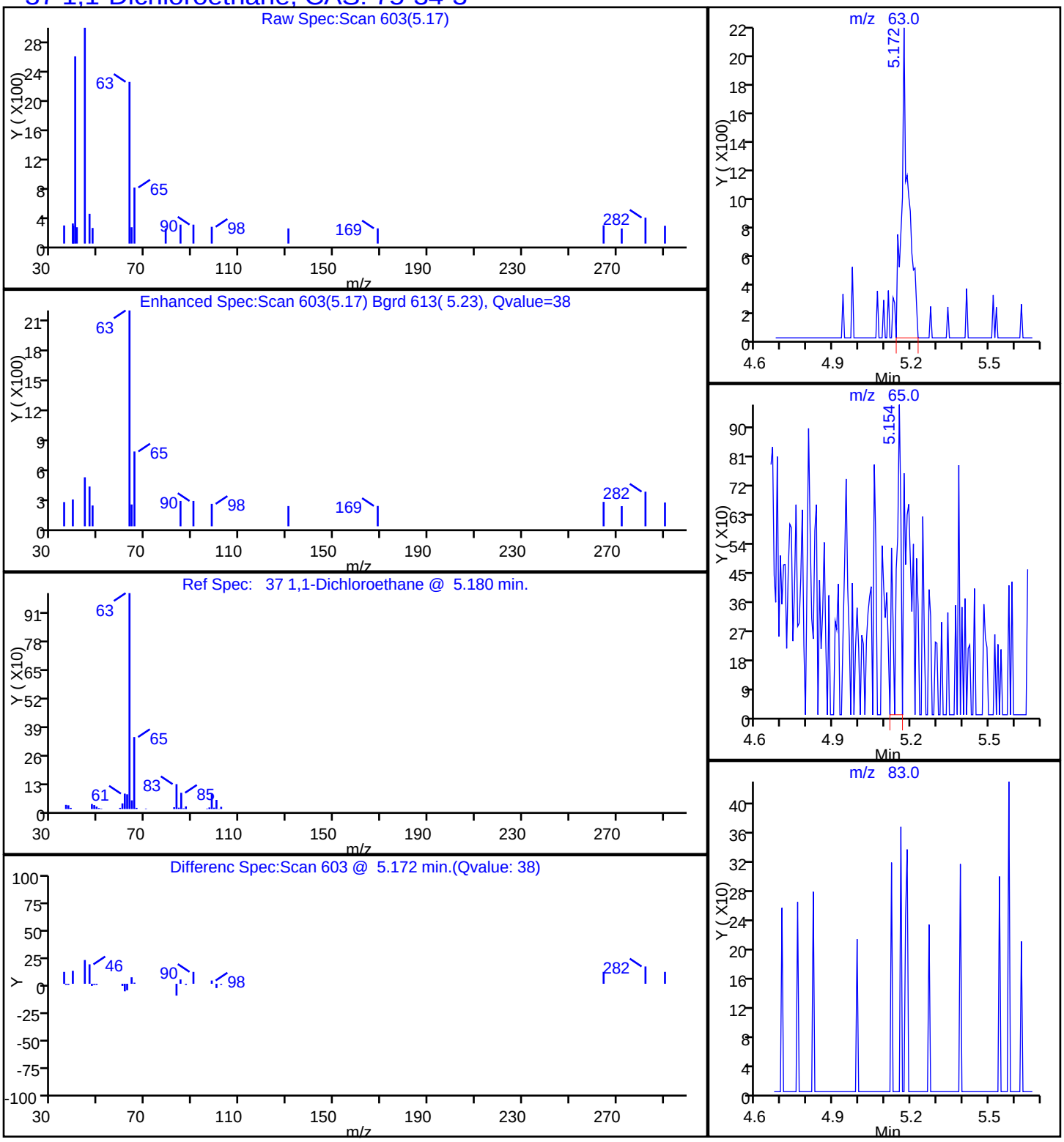
Report Date: 06-Mar-2015 08:20:22 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D

Injection Date:	05-Mar-2015 16:48:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



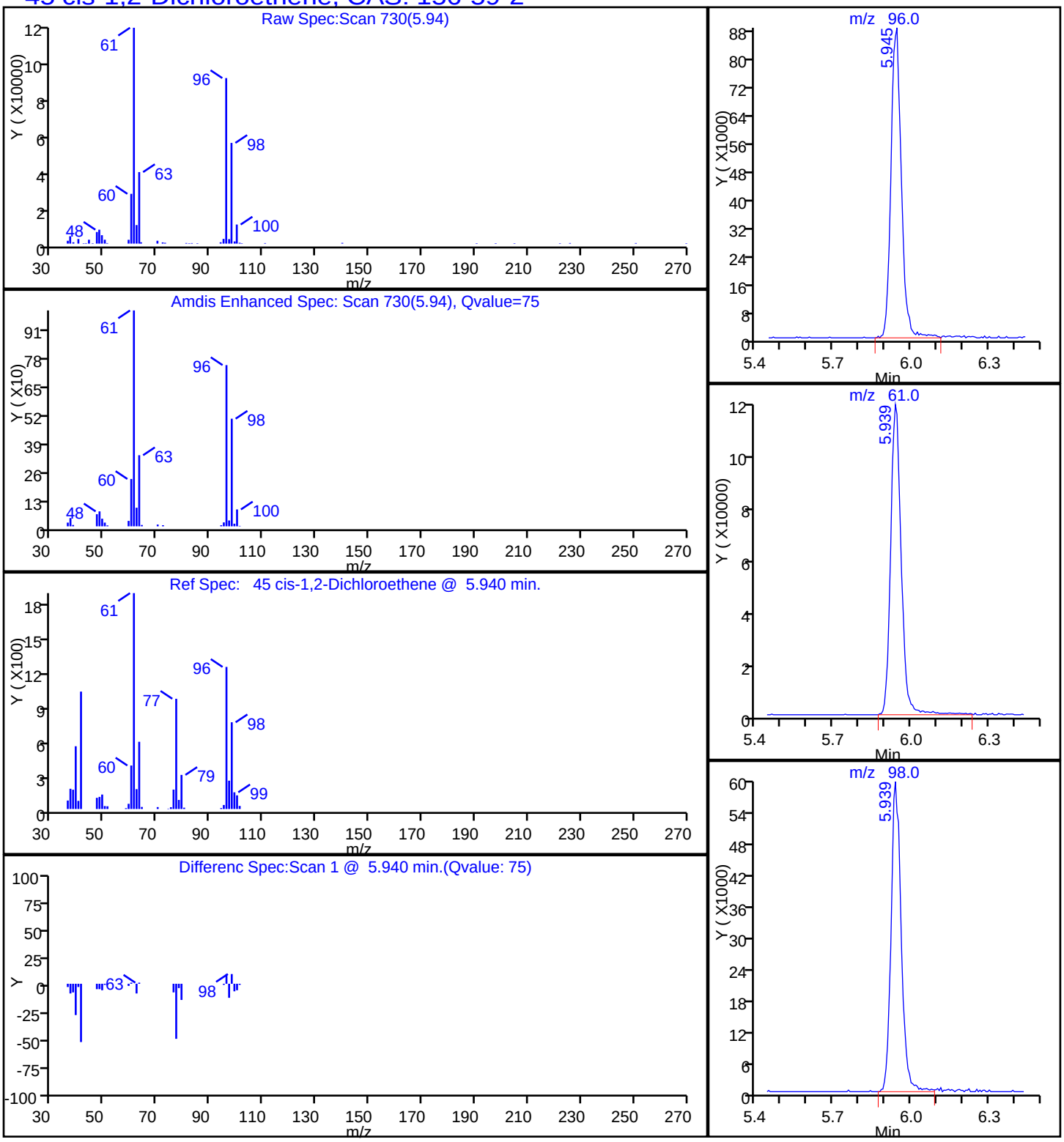
Report Date: 06-Mar-2015 08:20:22 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D

Injection Date:	05-Mar-2015 16:48:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
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

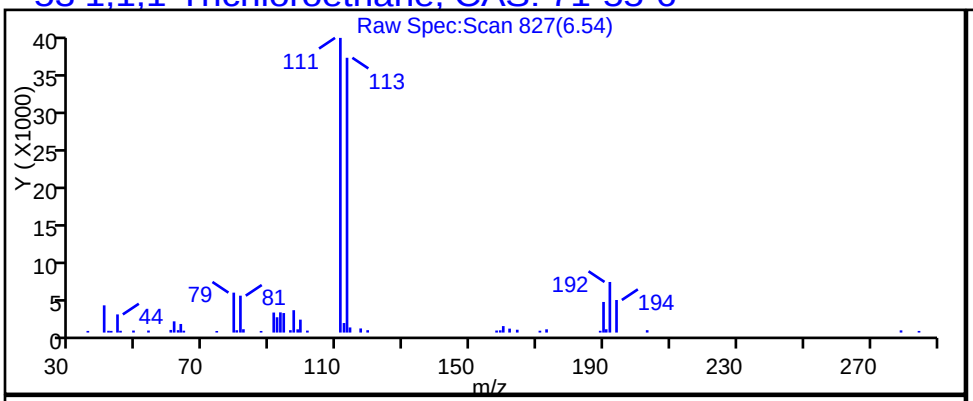


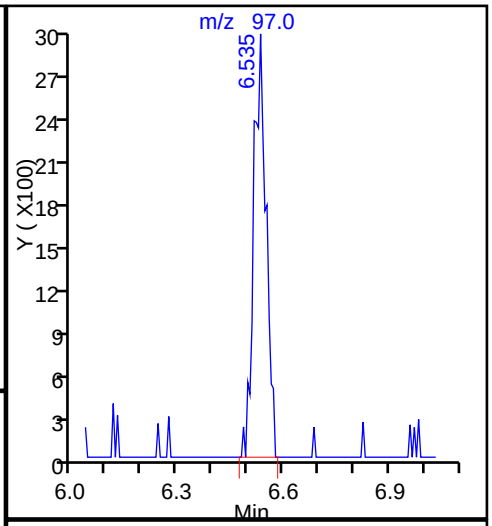
Report Date: 06-Mar-2015 08:20:22 Chrom Revision: 2.2 15-Jan-2015 13:05:58

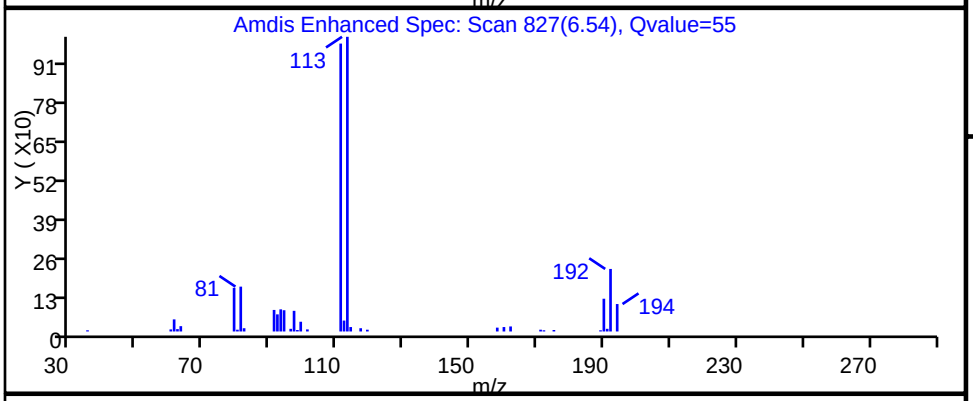
TestAmerica Pittsburgh

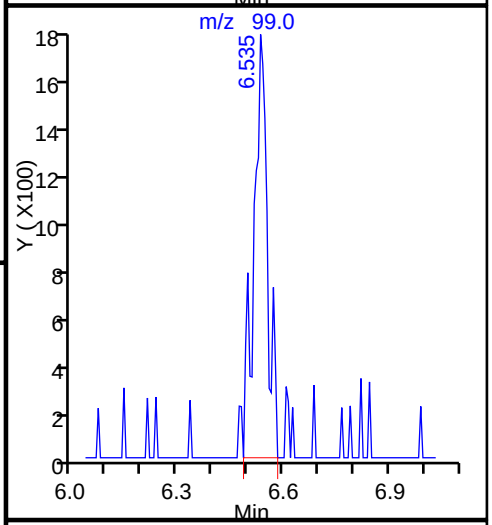
Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D				
Injection Date:	05-Mar-2015 16:48:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

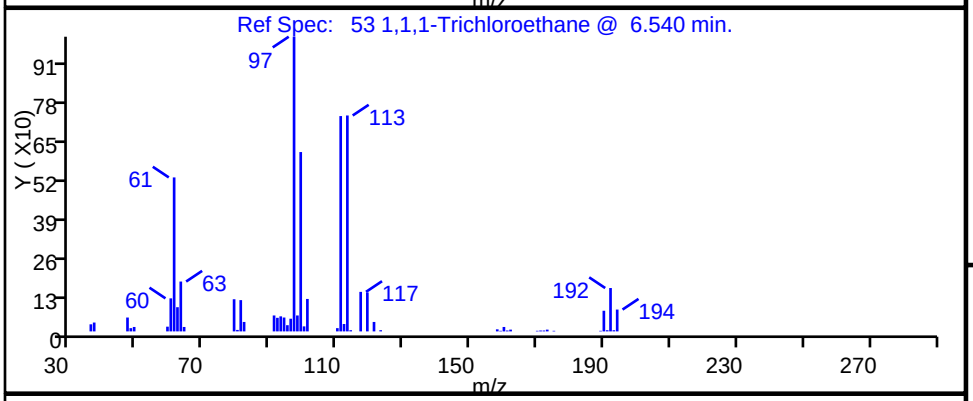
53 1,1,1-Trichloroethane, CAS: 71-55-6

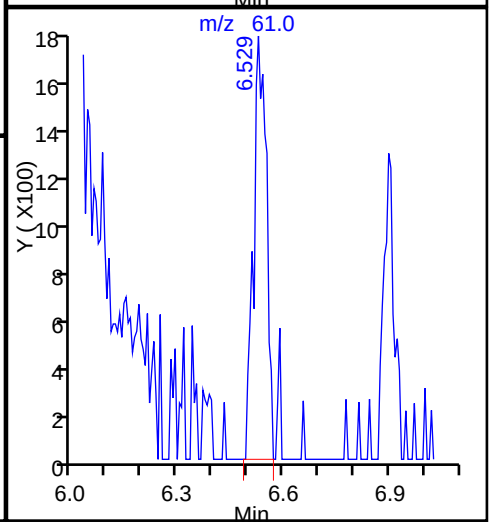


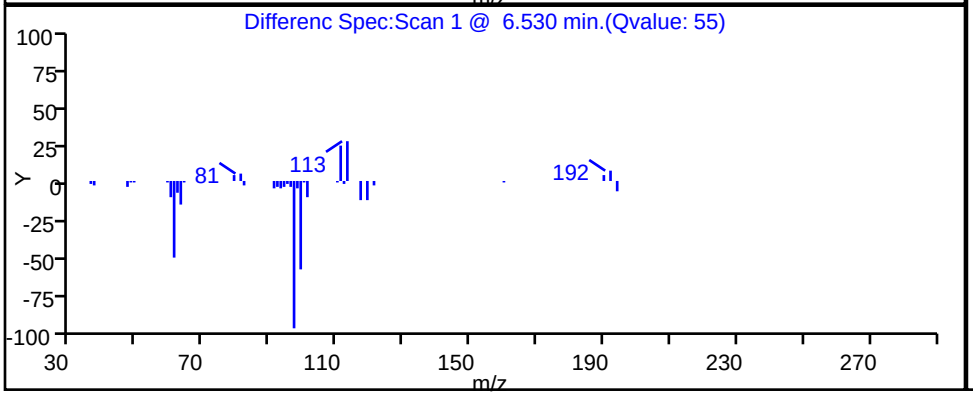










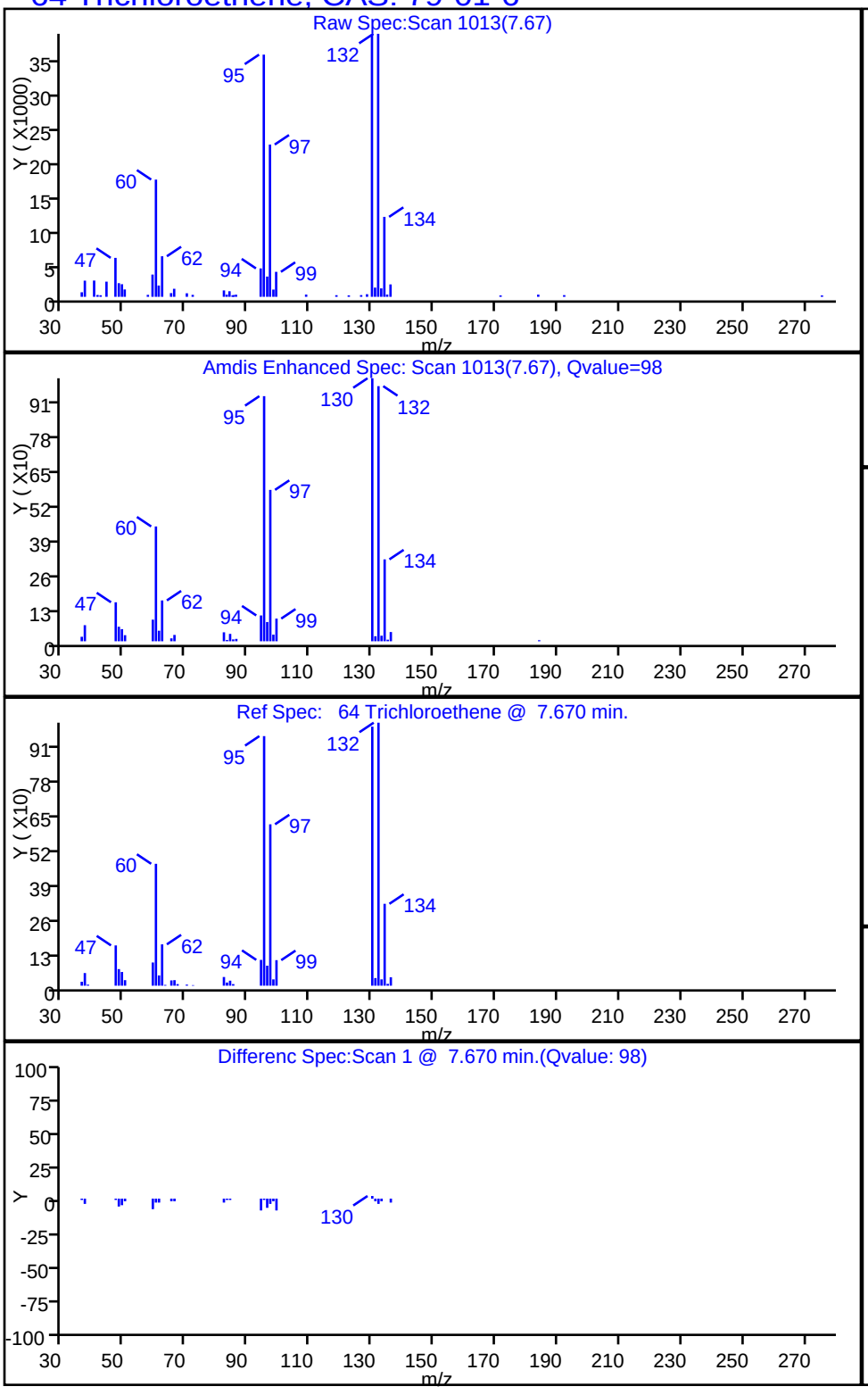


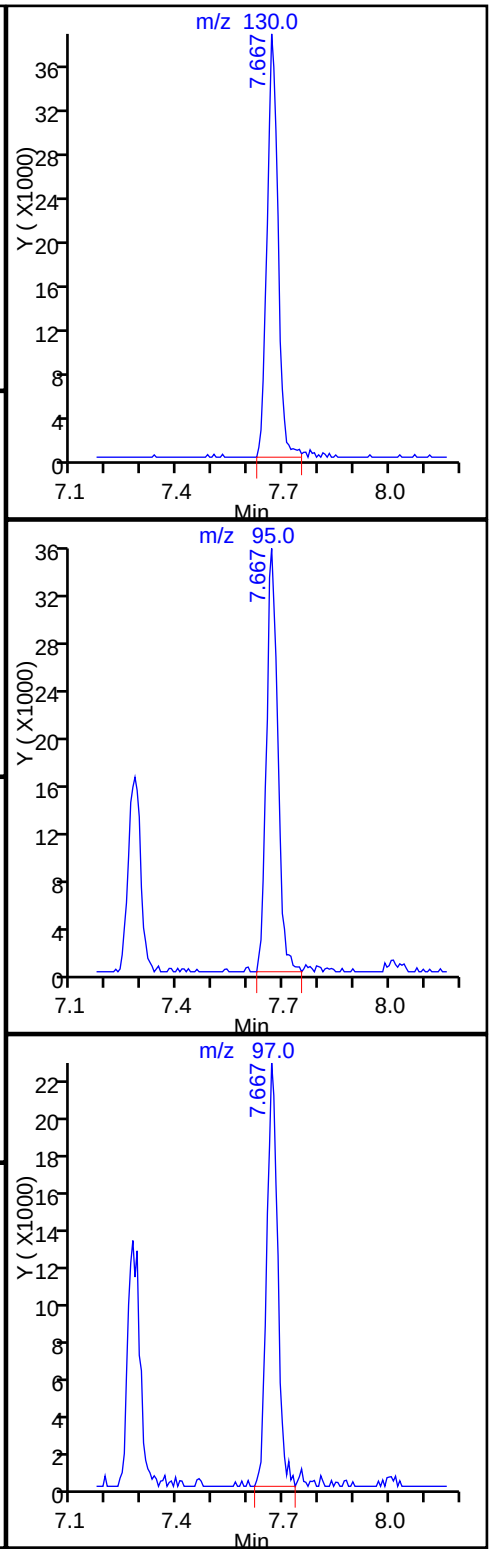
Report Date: 06-Mar-2015 08:20:22 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D				
Injection Date:	05-Mar-2015 16:48:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-4	Lab Sample ID:	180-41453-4		
Client ID:	HD-MW-93S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
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: 06-Mar-2015 08:20:22 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305017.D

Injection Date: 05-Mar-2015 16:48:30 Instrument ID: CHHP5

Lims ID: 180-41453-C-4 Lab Sample ID: 180-41453-4

Client ID: HD-MW-93S-0/1-0

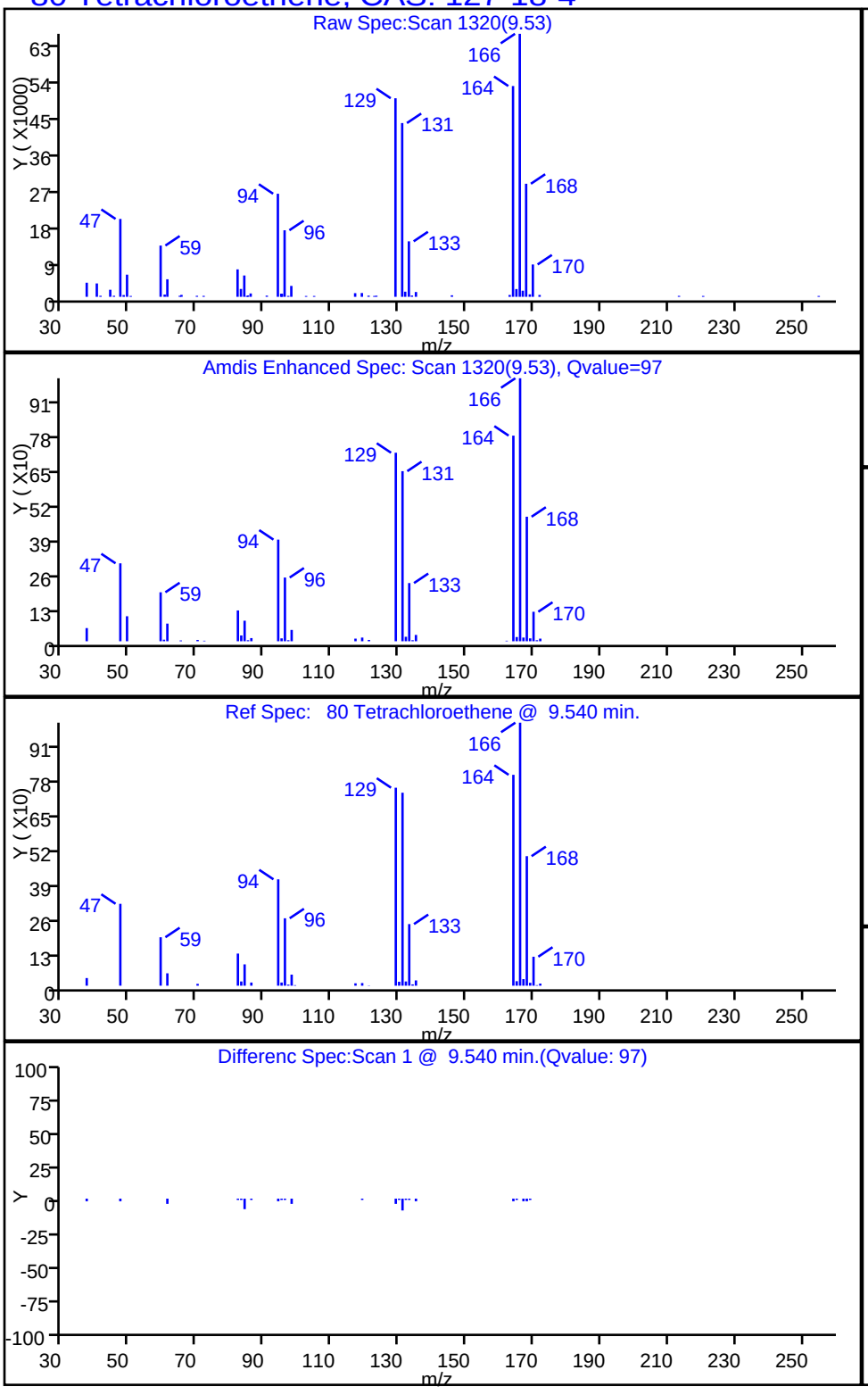
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 17

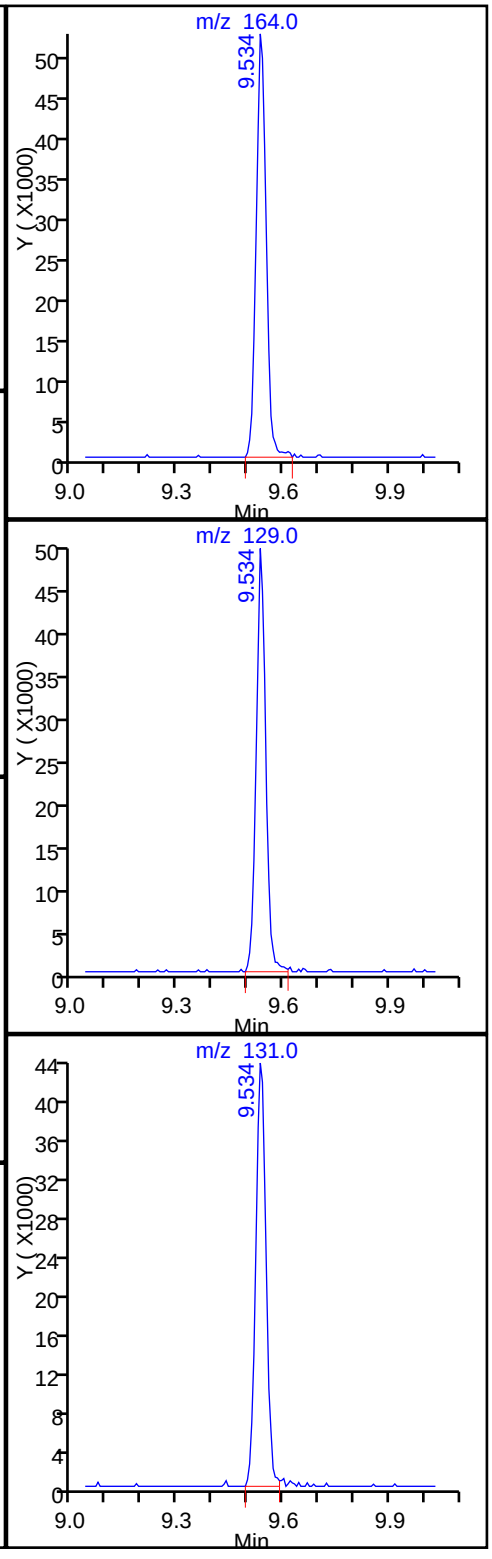
Purge Vol: 5.000 mL Dil. Factor: 5.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

80 Tetrachloroethene, CAS: 127-18-4





FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 | Lab Sample ID: 180-41453-5

Matrix: Water | Lab File ID: 50304022.D

Analysis Method: 8260C | Date Collected: 02/23/2015 15:20

Sample wt/vol: 5(mL) | Date Analyzed: 03/04/2015 20:10

Soil Aliquot Vol: | Dilution Factor: 12.5

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

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

Analysis Batch No.: 134740 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13	U	13	3.5
75-01-4	Vinyl chloride	13	U	13	2.8
74-83-9	Bromomethane	13	U	13	3.9
75-00-3	Chloroethane	13	U	13	2.7
75-35-4	1,1-Dichloroethene	10	J	13	3.7
67-64-1	Acetone	63	U	63	31
75-15-0	Carbon disulfide	13	U	13	2.7
75-09-2	Methylene Chloride	13	U	13	1.6
156-60-5	trans-1,2-Dichloroethene	13	U	13	2.1
1634-04-4	Methyl tert-butyl ether	13	U	13	2.3
75-34-3	1,1-Dichloroethane	3.8	J	13	1.5
156-59-2	cis-1,2-Dichloroethene	73		13	3.0
74-97-5	Bromochloromethane	13	U	13	2.3
78-93-3	2-Butanone (MEK)	63	U	63	6.8
67-66-3	Chloroform	13	U	13	2.1
71-55-6	1,1,1-Trichloroethane	54		13	3.6
56-23-5	Carbon tetrachloride	13	U	13	1.7
71-43-2	Benzene	13	U	13	1.3
107-06-2	1,2-Dichloroethane	13	U	13	2.6
79-01-6	Trichloroethene	300		13	1.8
78-87-5	1,2-Dichloropropane	13	U	13	1.2
75-27-4	Bromodichloromethane	13	U	13	1.6
10061-01-5	cis-1,3-Dichloropropene	13	U	13	2.3
108-10-1	4-Methyl-2-pentanone (MIBK)	63	U	63	6.6
108-88-3	Toluene	13	U	13	1.9
10061-02-6	trans-1,3-Dichloropropene	13	U	13	1.9
79-00-5	1,1,2-Trichloroethane	13	U	13	2.5
127-18-4	*Tetrachloroethene*	*950*	*E*	*13*	*1.9*
591-78-6	2-Hexanone	63	U	63	2.0
124-48-1	Dibromochloromethane	13	U	13	1.7
106-93-4	1,2-Dibromoethane (EDB)	13	U	13	2.3
108-90-7	Chlorobenzene	13	U	13	1.7
630-20-6	1,1,1,2-Tetrachloroethane	13	U	13	3.5
100-41-4	Ethylbenzene	13	U	13	2.8
1330-20-7	Xylenes, Total	38	U	38	6.1
100-42-5	Styrene	13	U	13	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-41453-5

Matrix: Water Lab File ID: 50304022.D

Analysis Method: 8260C Date Collected: 02/23/2015 15:20

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 20:10

Soil Aliquot Vol: Dilution Factor: 12.5

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134740 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	13	U	13	2.4
79-34-5	1,1,2,2-Tetrachloroethane	13	U	13	2.5
107-13-1	Acrylonitrile	250	U	250	6.8
123-91-1	1,4-Dioxane	2500	U	2500	430

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	101		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D
Lims ID: 180-41453-E-5 Lab Sample ID: 180-41453-5
Client ID: HD-MW-37D-0/1-0
Sample Type: Client
Inject. Date: 04-Mar-2015 20:10:30 ALS Bottle#: 22 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 12.5000
Sample Info: 180-41453-E-5, 12.5x
Misc. Info.: 180-0005893-022
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 05-Mar-2015 09:05:56 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK052

First Level Reviewer: fergusond Date: 05-Mar-2015 09:05:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.297	4.320	-0.023	94	71798	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	361866	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	100	82005	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.691	-0.005	98	127322	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.528	0.008	77	77979	50.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.900	0.007	99	88827	46.4	
$ 7 Toluene-d8 (Surr)	98	8.927	8.925	0.002	100	332179	52.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.535	-0.005	98	123794	52.1	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.905				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.373				ND	
22 1,1-Dichloroethene	96	3.397	3.371	0.026	89	8782	4.17	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.651				ND	
31 Methylene Chloride	84		4.144				ND	
33 Acrylonitrile	53		4.551				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73		4.600				ND	
37 1,1-Dichloroethane	63	5.173	5.172	0.001	1	6312	1.50	
45 cis-1,2-Dichloroethene	96	5.946	5.938	0.008	74	68805	29.2	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83		6.340				ND	
53 1,1,1-Trichloroethane	97	6.542	6.528	0.014	80	49074	21.6	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.991				ND	
64 Trichloroethene	130	7.667	7.666	0.001	99	258819	120.2	
67 1,2-Dichloropropane	63		7.909				ND	
70 1,4-Dioxane	88		8.061				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.201				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.535	9.540	-0.005	98	591341	378.6	E
82 2-Hexanone	43		9.661				ND	
84 Chlorodibromomethane	129		9.795				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.477				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.623				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

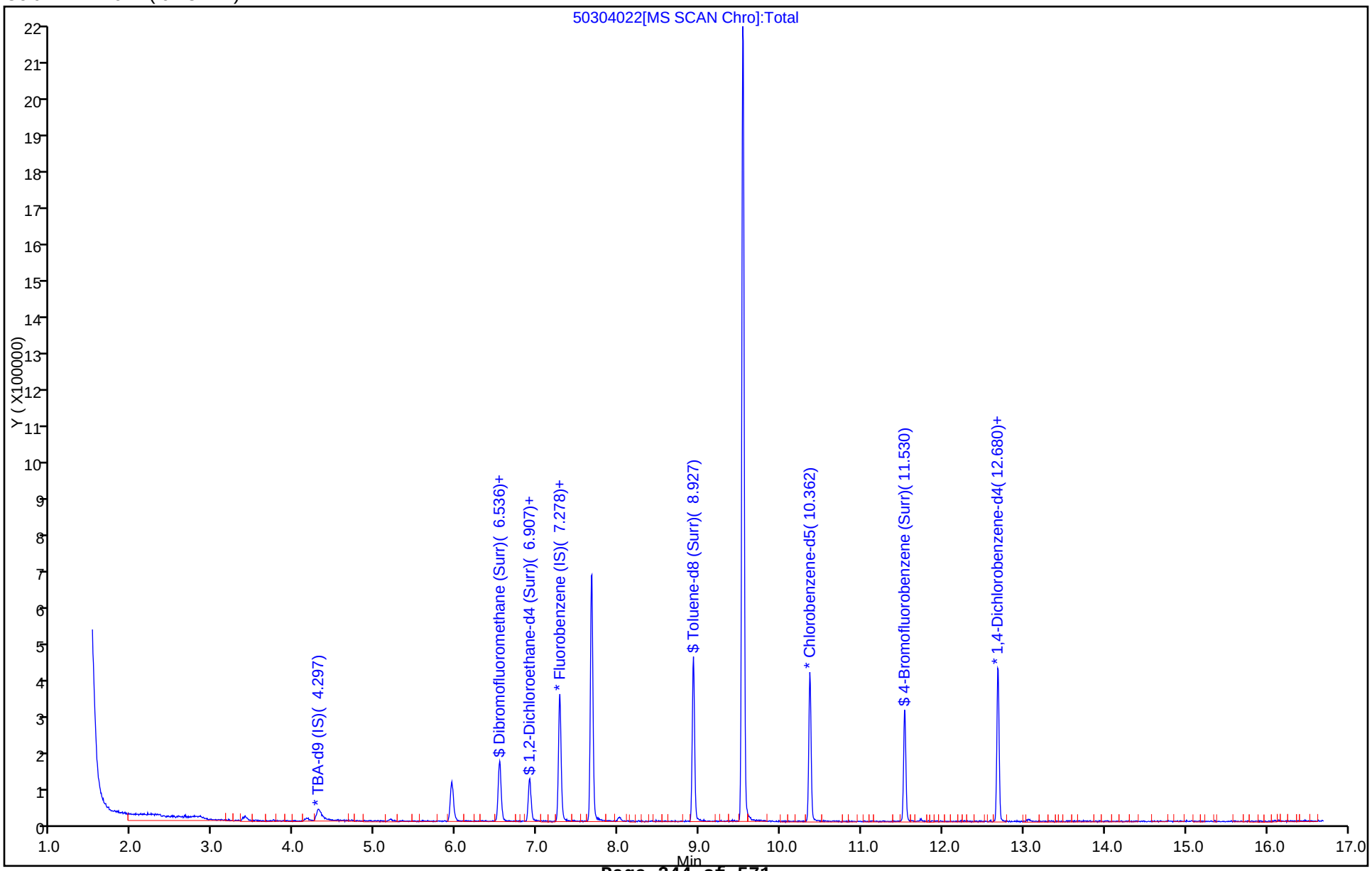
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 05-Mar-2015 09:05:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D				
Injection Date:	04-Mar-2015 20:10:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5	Worklist Smp#:	22
Client ID:	HD-MW-37D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	12.5000	ALS Bottle#:	22
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 05-Mar-2015 09:05:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D				
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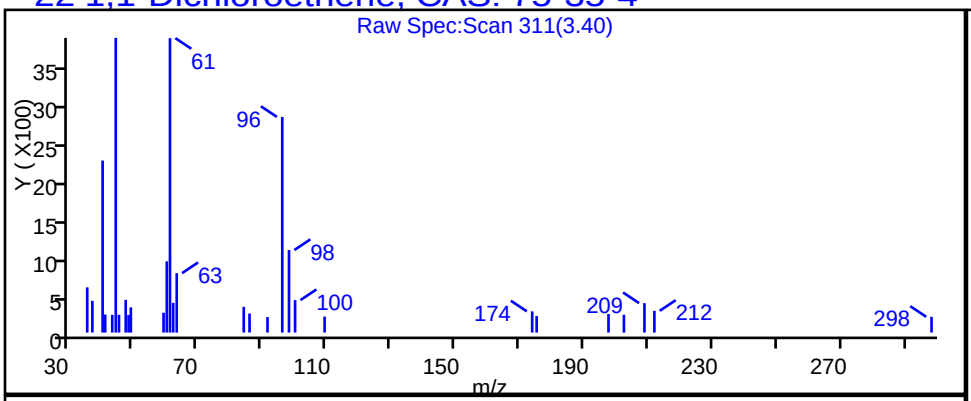
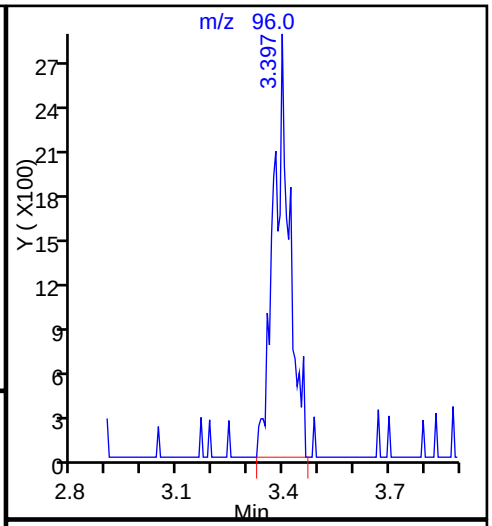
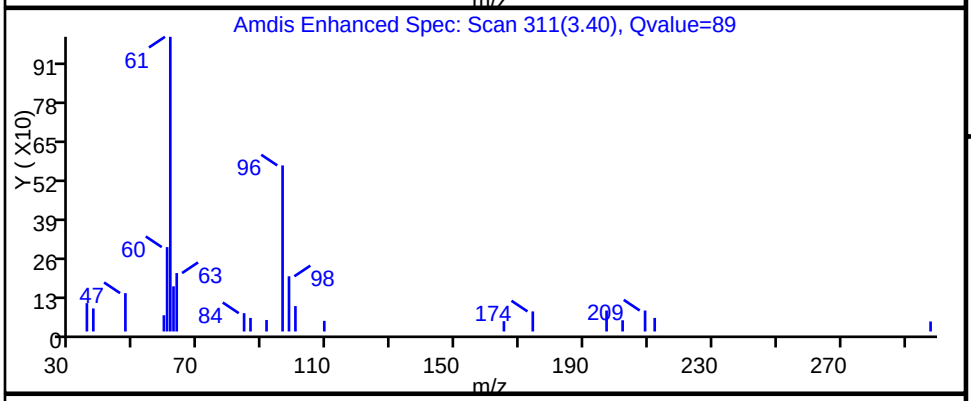
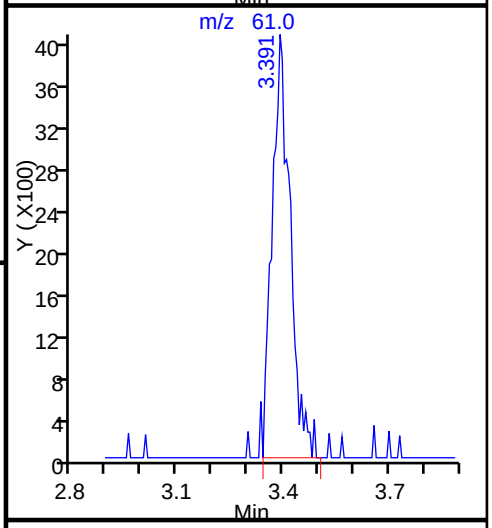
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	22	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

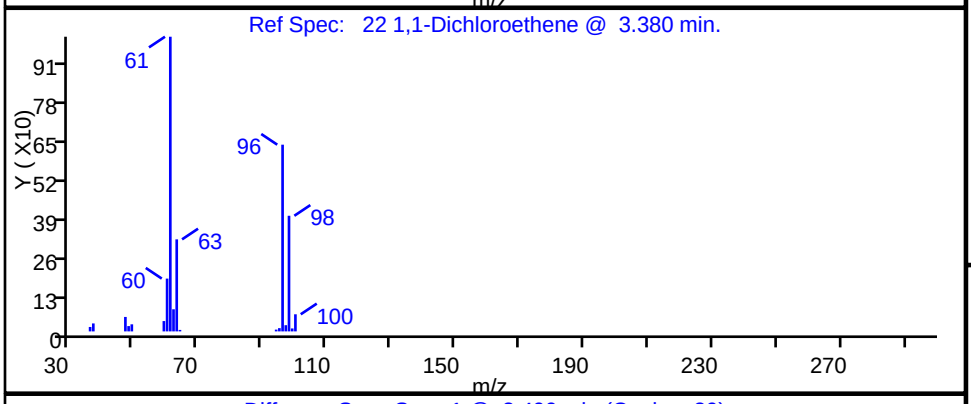
22 1,1-Dichloroethene, CAS: 75-35-4

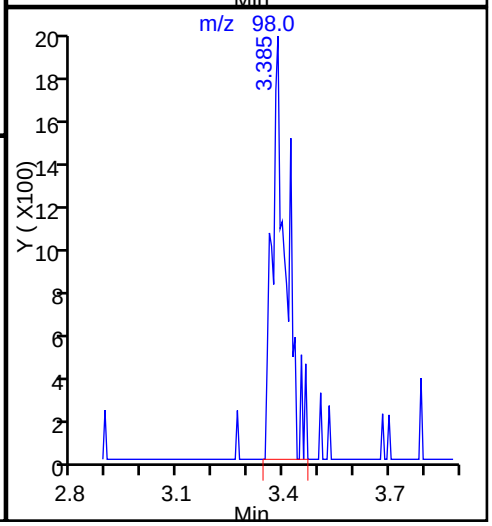


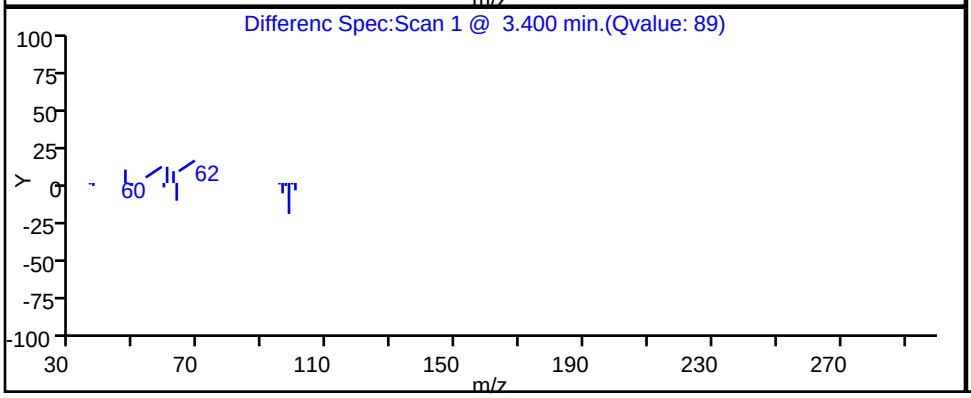












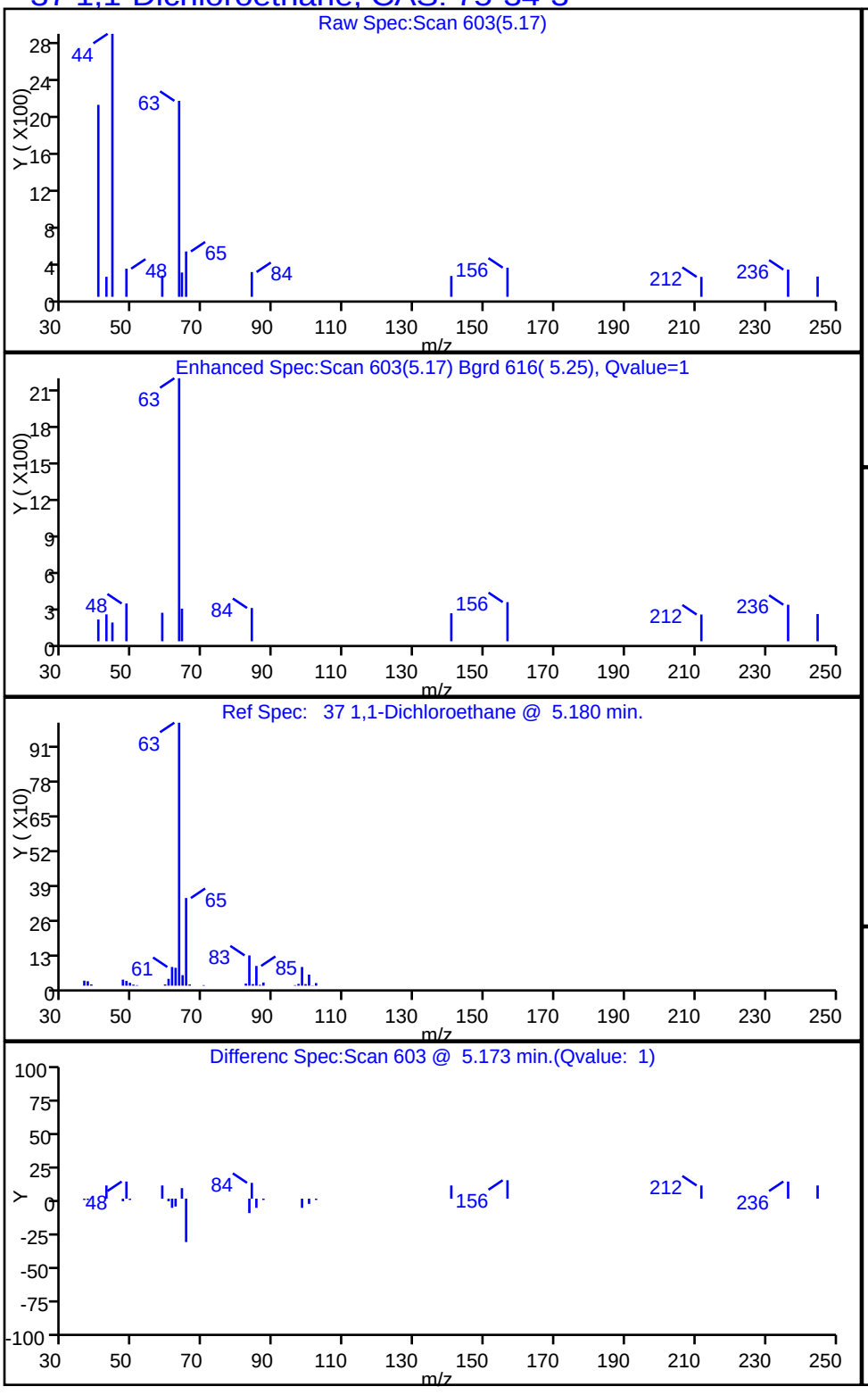
Report Date: 05-Mar-2015 09:05:57 Chrom Revision: 2.2 15-Jan-2015 13:05:58

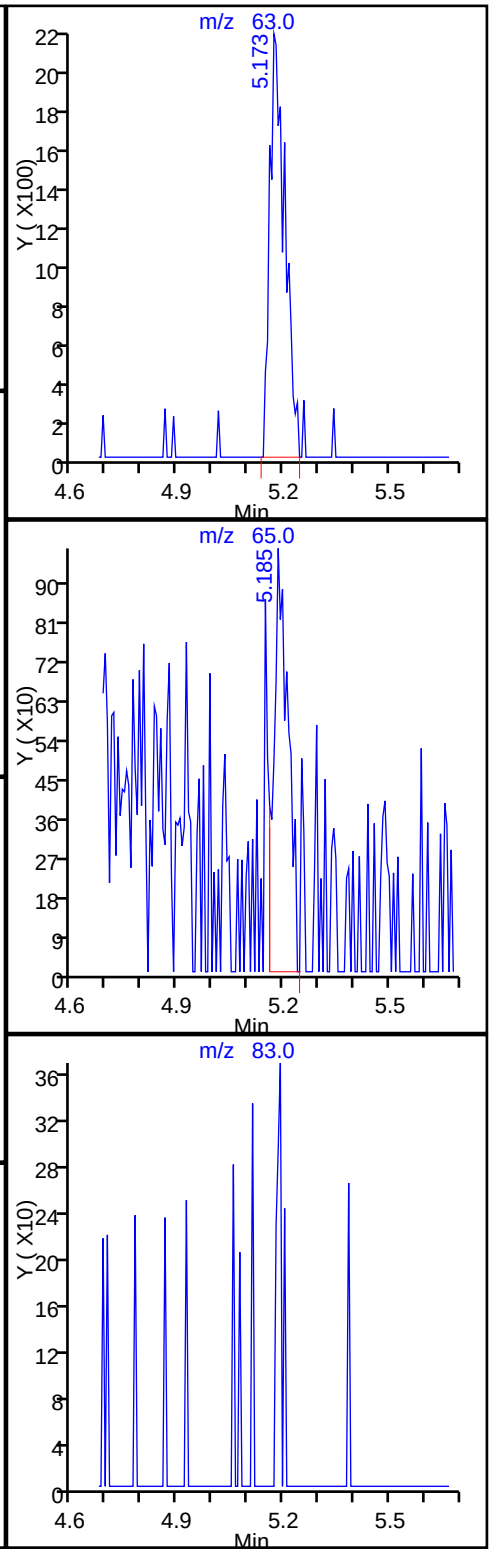
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D

Injection Date:	04-Mar-2015 20:10:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	22 Worklist Smp#: 22
Purge Vol:	5.000 mL	Dil. Factor:	12.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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





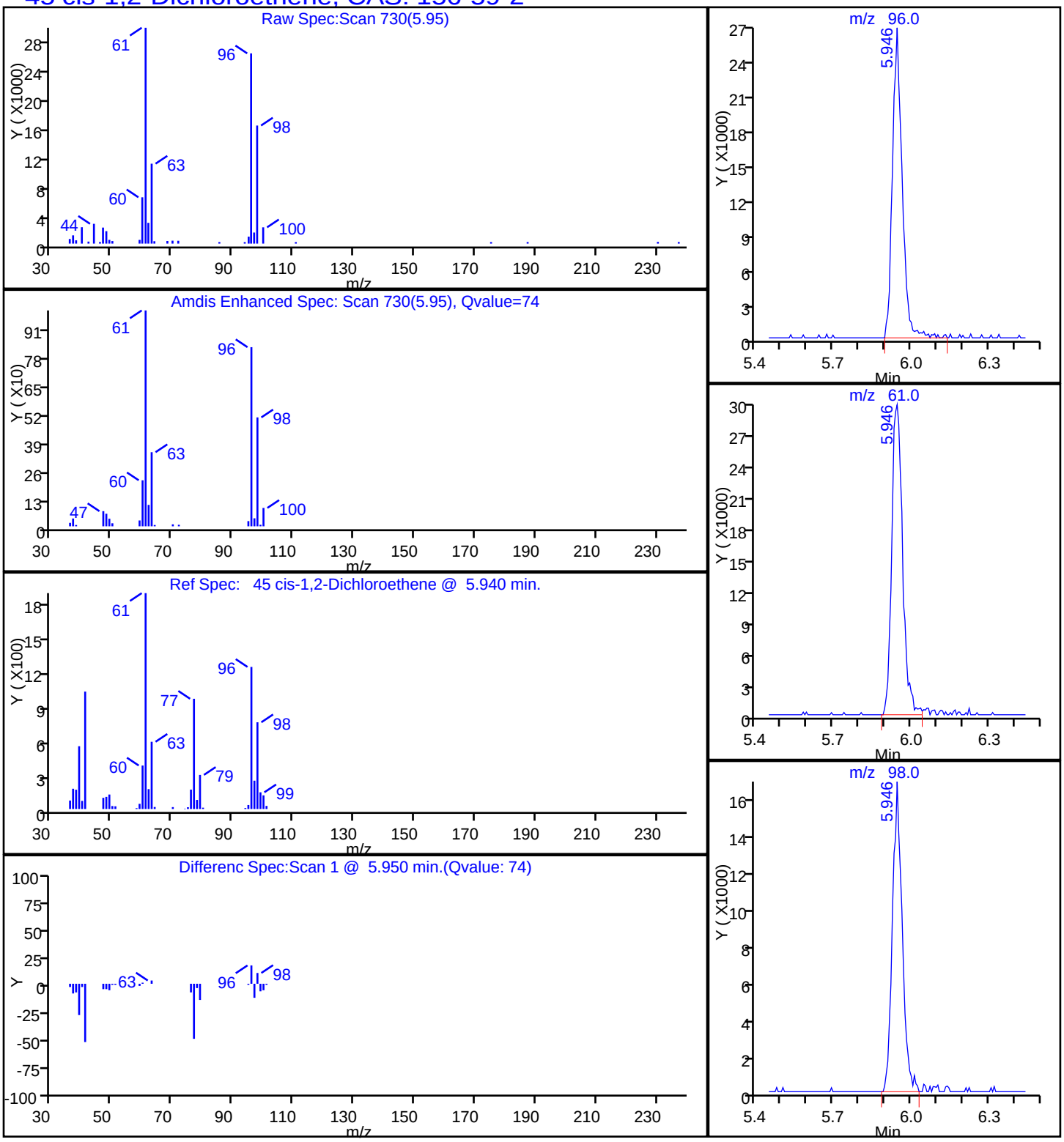
Report Date: 05-Mar-2015 09:05:57 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D

Injection Date:	04-Mar-2015 20:10:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	22	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

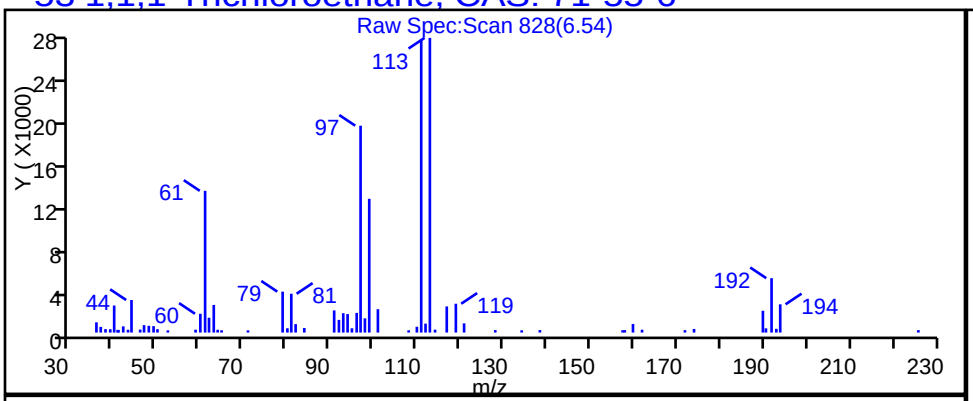


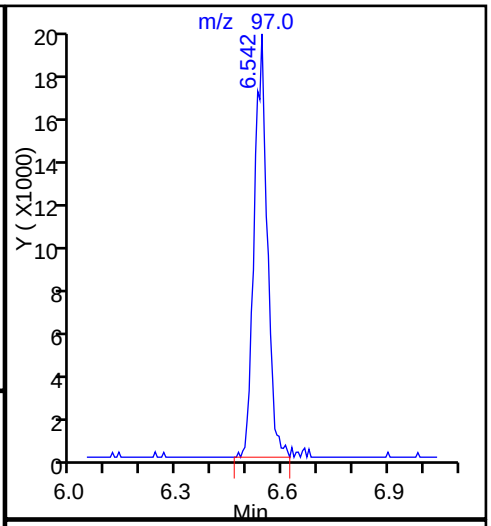
Report Date: 05-Mar-2015 09:05:57 Chrom Revision: 2.2 15-Jan-2015 13:05:58

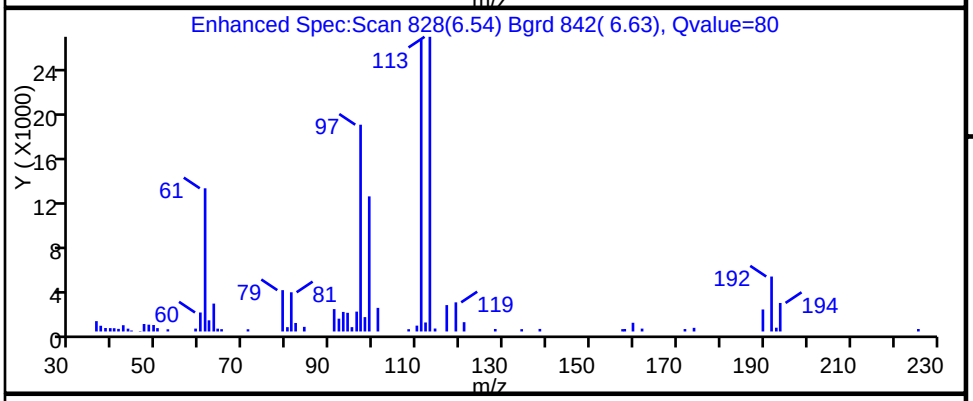
TestAmerica Pittsburgh

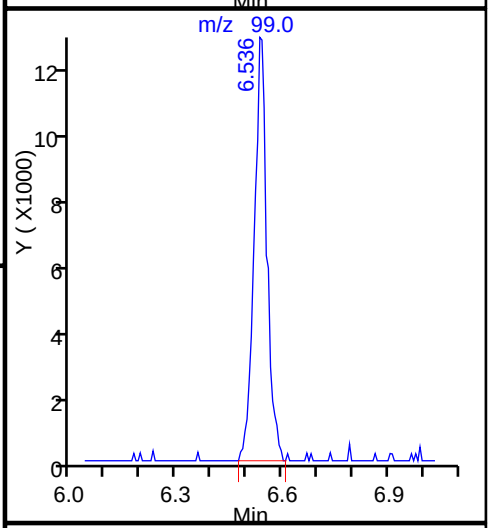
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D				
Injection Date:	04-Mar-2015 20:10:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	22	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

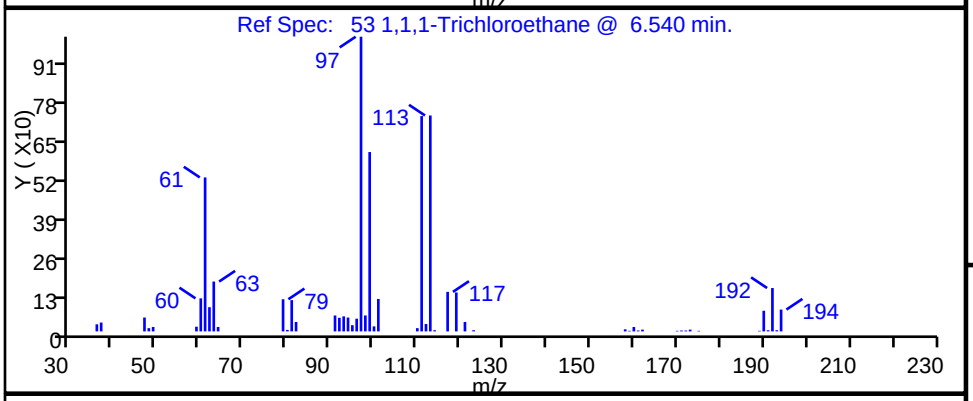
53 1,1,1-Trichloroethane, CAS: 71-55-6

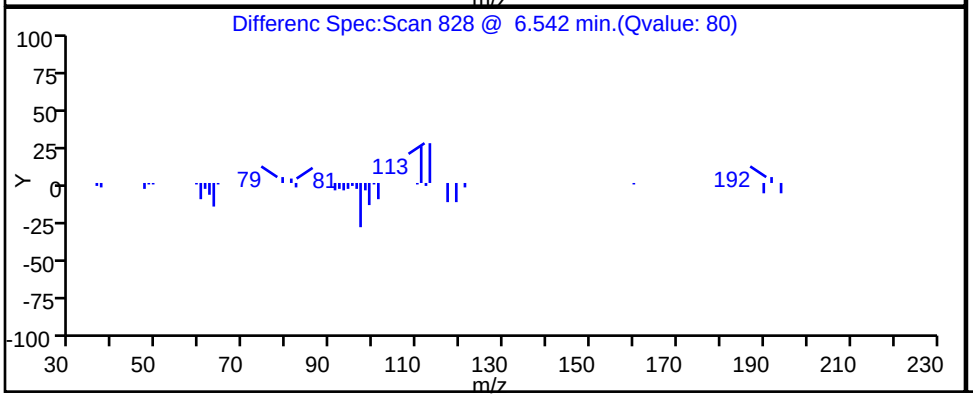


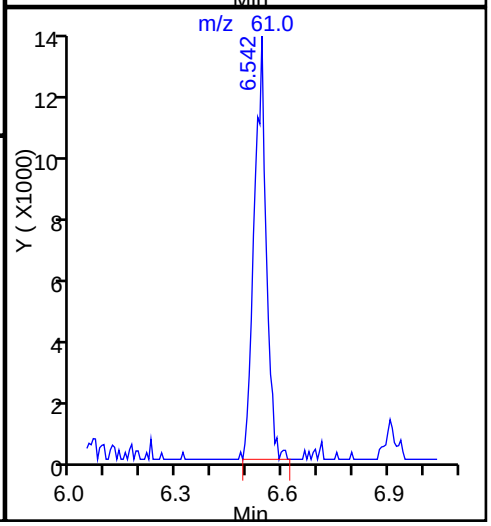










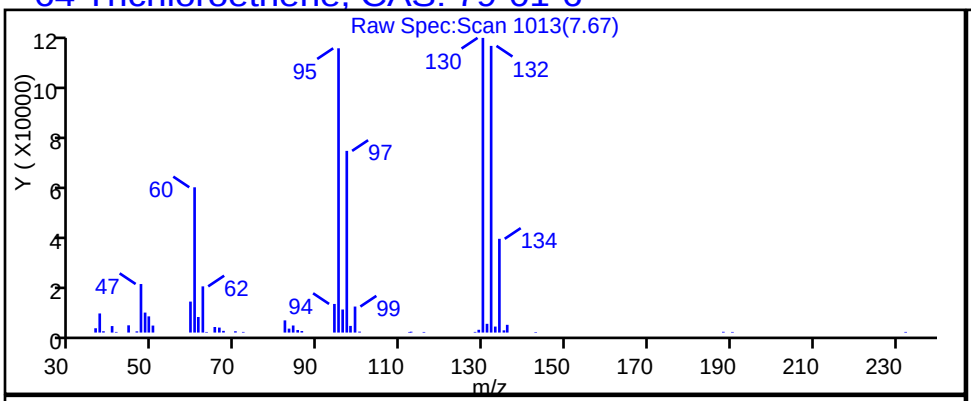


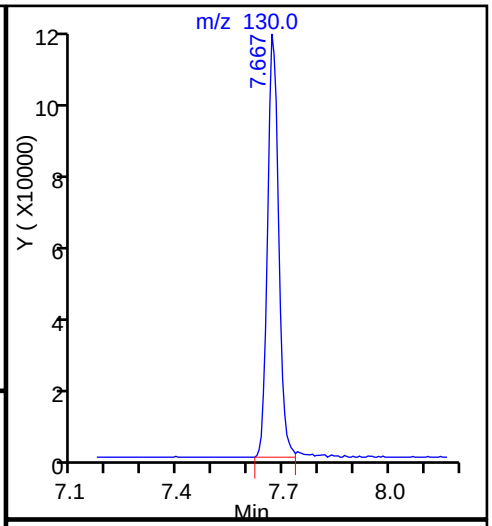
Report Date: 05-Mar-2015 09:05:57 Chrom Revision: 2.2 15-Jan-2015 13:05:58

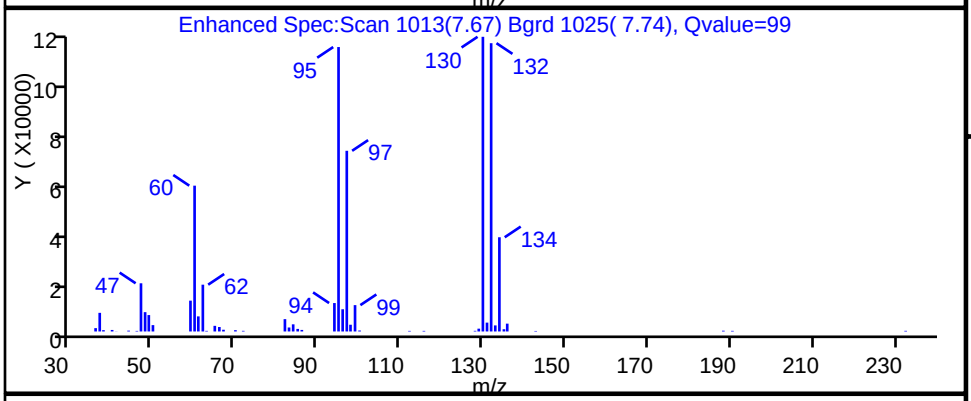
TestAmerica Pittsburgh

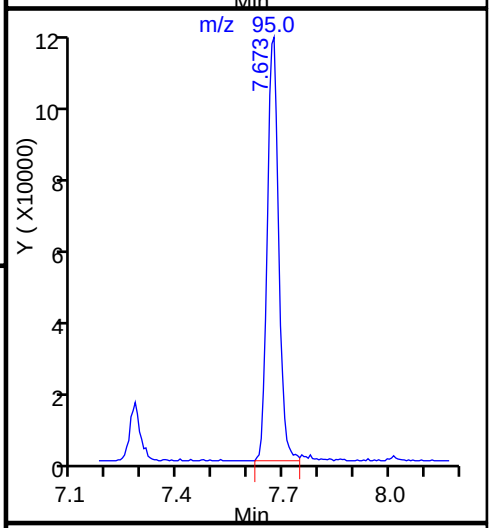
Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D				
Injection Date:	04-Mar-2015 20:10:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	22	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

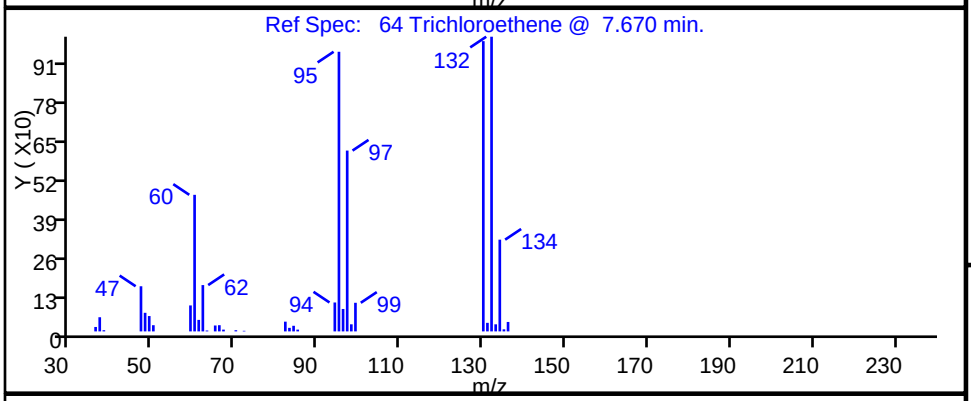
64 Trichloroethene, CAS: 79-01-6

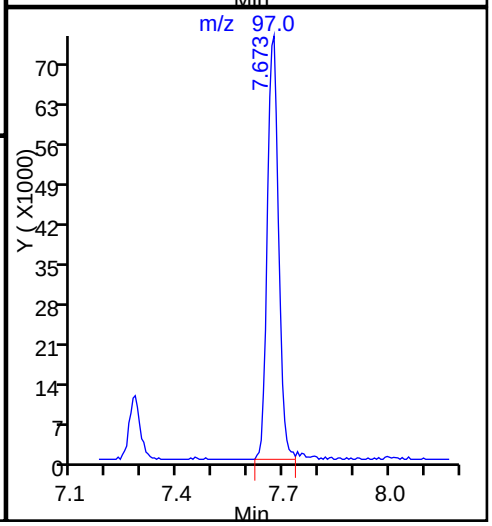


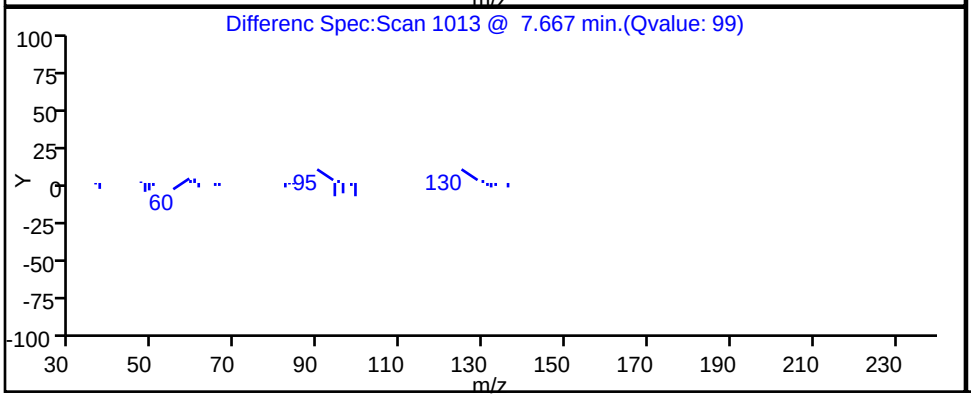












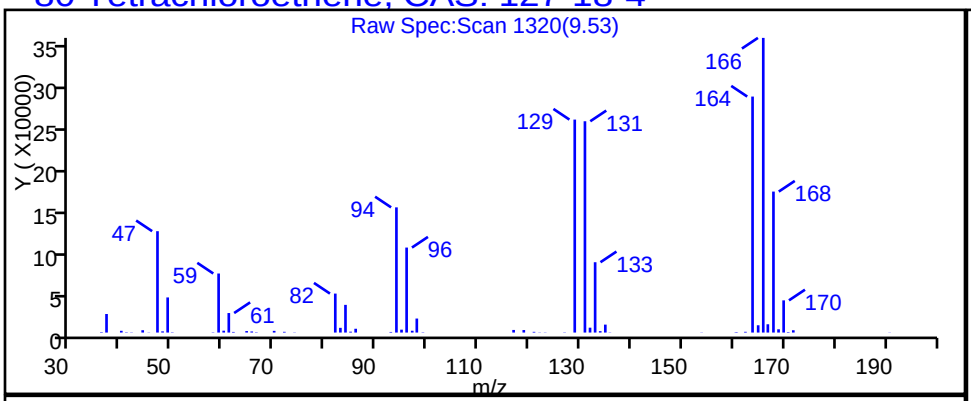
Report Date: 05-Mar-2015 09:05:57 Chrom Revision: 2.2 15-Jan-2015 13:05:58

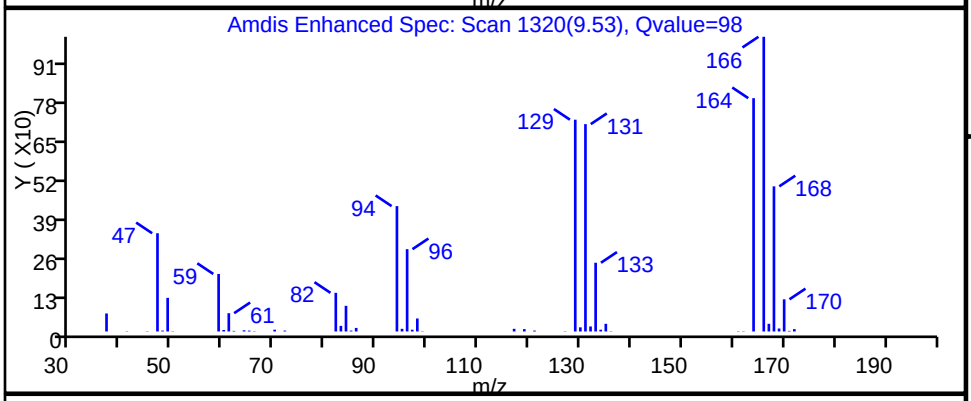
TestAmerica Pittsburgh

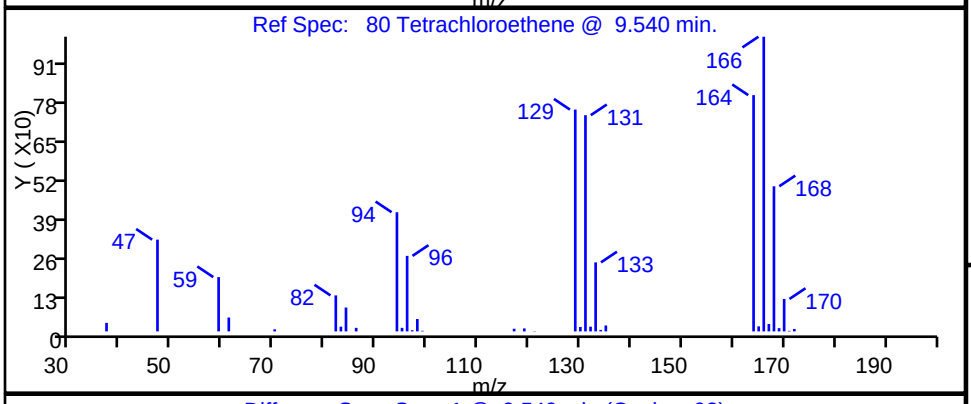
Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304022.D

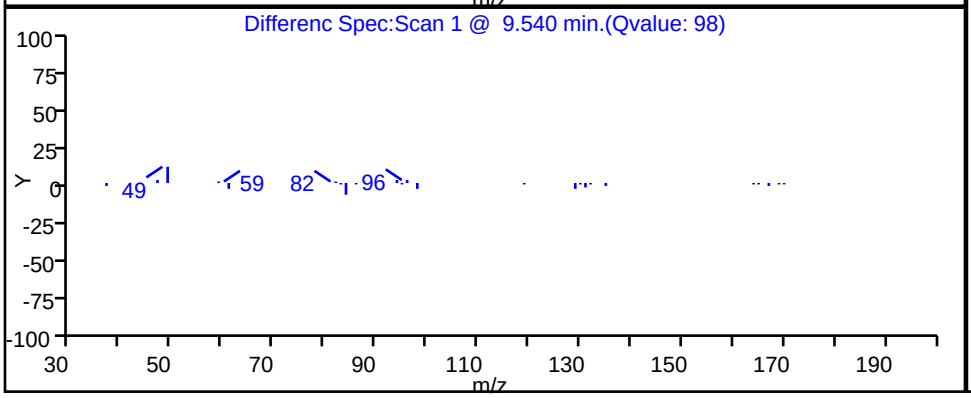
Injection Date:	04-Mar-2015 20:10:30	Instrument ID:	CHHP5
Lims ID:	180-41453-E-5	Lab Sample ID:	180-41453-5
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	22 Worklist Smp#: 22
Purge Vol:	5.000 mL	Dil. Factor:	12.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

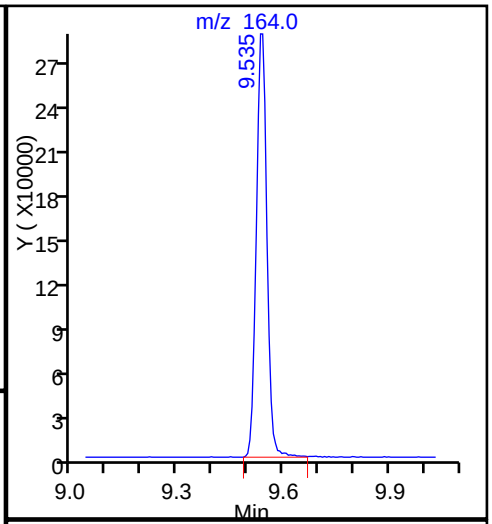
80 Tetrachloroethene, CAS: 127-18-4

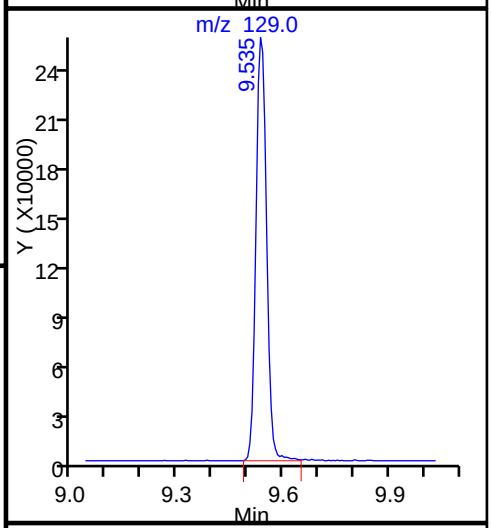


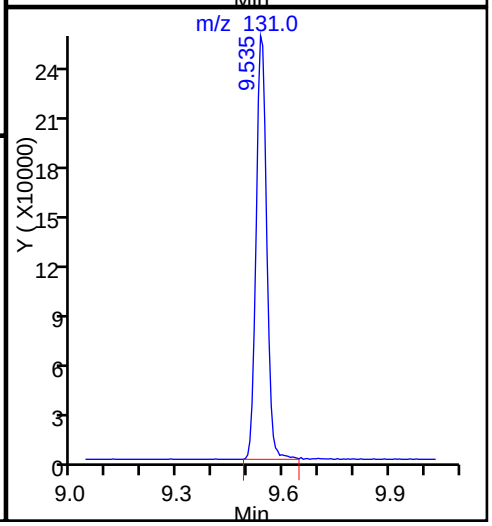












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 DL | Lab Sample ID: 180-41453-5 DL

Matrix: Water | Lab File ID: 50305018.D

Analysis Method: 8260C | Date Collected: 02/23/2015 15:20

Sample wt/vol: 5(mL) | Date Analyzed: 03/05/2015 17:12

Soil Aliquot Vol: | Dilution Factor: 50

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

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

Analysis Batch No.: 134814 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	50	U	50	14
75-01-4	Vinyl chloride	50	U	50	11
74-83-9	Bromomethane	50	U	50	16
75-00-3	Chloroethane	50	U	50	11
75-35-4	1,1-Dichloroethene	50	U	50	15
67-64-1	Acetone	250	U	250	130
75-15-0	Carbon disulfide	50	U	50	11
75-09-2	Methylene Chloride	50	U	50	6.3
156-60-5	trans-1,2-Dichloroethene	50	U	50	8.5
1634-04-4	Methyl tert-butyl ether	50	U	50	9.2
75-34-3	1,1-Dichloroethane	50	U	50	5.8
156-59-2	cis-1,2-Dichloroethene	68		50	12
74-97-5	Bromochloromethane	50	U	50	9.0
78-93-3	2-Butanone (MEK)	250	U	250	27
67-66-3	Chloroform	50	U	50	8.5
71-55-6	1,1,1-Trichloroethane	52		50	14
56-23-5	Carbon tetrachloride	50	U	50	6.8
71-43-2	Benzene	50	U	50	5.3
107-06-2	1,2-Dichloroethane	50	U	50	11
79-01-6	Trichloroethene	320		50	7.2
78-87-5	1,2-Dichloropropane	50	U	50	4.7
75-27-4	Bromodichloromethane	50	U	50	6.5
10061-01-5	cis-1,3-Dichloropropene	50	U	50	9.3
108-10-1	4-Methyl-2-pentanone (MIBK)	250	U	250	26
108-88-3	Toluene	50	U	50	7.5
10061-02-6	trans-1,3-Dichloropropene	50	U	50	7.4
79-00-5	1,1,2-Trichloroethane	50	U	50	10
127-18-4	Tetrachloroethene	1100		50	7.4
591-78-6	2-Hexanone	250	U	250	8.0
124-48-1	Dibromochloromethane	50	U	50	6.8
106-93-4	1,2-Dibromoethane (EDB)	50	U	50	9.0
108-90-7	Chlorobenzene	50	U	50	6.8
630-20-6	1,1,1,2-Tetrachloroethane	50	U	50	14
100-41-4	Ethylbenzene	50	U	50	11
1330-20-7	Xylenes, Total	150	U	150	24
100-42-5	Styrene	50	U	50	4.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 DL Lab Sample ID: 180-41453-5 DL

Matrix: Water Lab File ID: 50305018.D

Analysis Method: 8260C Date Collected: 02/23/2015 15:20

Sample wt/vol: 5(mL) Date Analyzed: 03/05/2015 17:12

Soil Aliquot Vol: Dilution Factor: 50

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 134814 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	101		71-118
460-00-4	4-Bromofluorobenzene (Surr)	100		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305018.D
Lims ID: 180-41453-C-5 Lab Sample ID: 180-41453-5
Client ID: HD-MW-37D-0/1-0
Sample Type: Client
Inject. Date: 05-Mar-2015 17:12:30 ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 50.0000
Sample Info: 180-41453-C-5, 50x
Misc. Info.: 180-0005905-018
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:21:38 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 06-Mar-2015 08:21:38

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.290	4.299	-0.009	92	80210	1000.0	
*	2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	437384	50.0	
*	3 Chlorobenzene-d5	119	10.362	10.365	-0.002	100	99111	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	99	151059	50.0	
$	5 Dibromofluoromethane (Surr	113	6.529	6.532	-0.003	58	91711	49.0	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	99	110911	47.9	
$	7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	391731	50.7	
$	8 4-Bromofluorobenzene (Surr	95	11.530	11.533	-0.003	95	143377	49.9	
	12 Chloromethane	50		1.775				ND	
	13 Vinyl chloride	62		1.902				ND	
	15 Bromomethane	94		2.249				ND	
	16 Chloroethane	64		2.383				ND	
	22 1,1-Dichloroethene	96	3.402	3.375	0.027	50	3250	1.28	
	24 Acetone	43		3.496				ND	
	26 Carbon disulfide	76		3.661				ND	
	31 Methylene Chloride	84		4.141				ND	
	33 Acrylonitrile	53		4.549				ND	
	34 trans-1,2-Dichloroethene	96		4.561				ND	
	35 Methyl tert-butyl ether	73		4.597				ND	
	37 1,1-Dichloroethane	63	5.179	5.169	0.010	6	2589	0.5101	
	45 cis-1,2-Dichloroethene	96	5.945	5.942	0.003	76	19304	6.78	
	46 2-Butanone (MEK)	43		5.984				ND	
	49 Chlorobromomethane	128		6.222				ND	
	52 Chloroform	83		6.337				ND	
	53 1,1,1-Trichloroethane	97	6.529	6.532	-0.003	58	14266	5.19	
	56 Carbon tetrachloride	117		6.714				ND	
	58 Benzene	78		6.952				ND	
	59 1,2-Dichloroethane	62		6.982				ND	
	64 Trichloroethene	130	7.667	7.663	0.004	98	82099	31.6	
	67 1,2-Dichloropropane	63		7.901				ND	
	70 1,4-Dioxane	88		8.059				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.193				ND	
74 cis-1,3-Dichloropropene	75		8.661				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.534	9.537	-0.003	98	210638	111.6	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.028				ND	
94 Bromoform	173		11.216				ND	
99 1,1,2,2-Tetrachloroethane	83		11.679				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

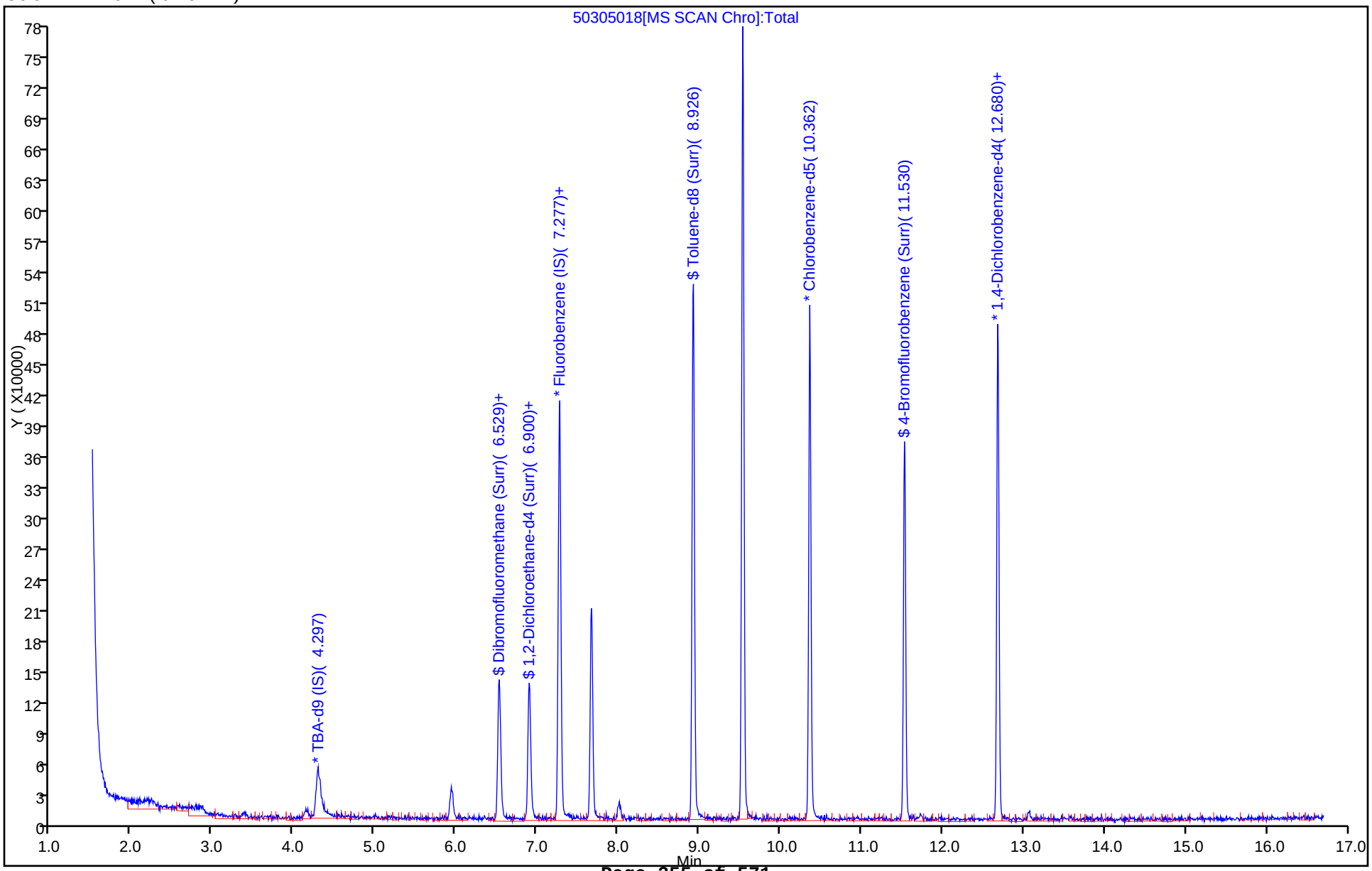
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 06-Mar-2015 08:21:38 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305018.D				
Injection Date:	05-Mar-2015 17:12:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41453-C-5	Lab Sample ID:	180-41453-5	Worklist Smp#:	18
Client ID:	HD-MW-37D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	50.0000	ALS Bottle#:	14
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



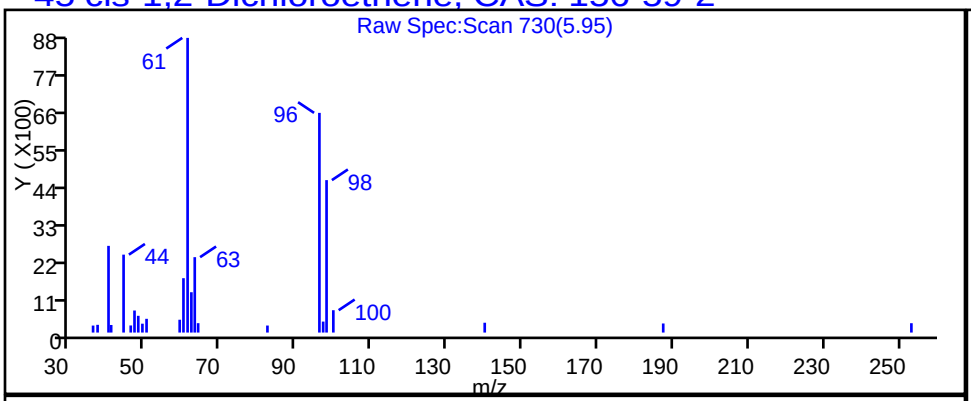
Report Date: 06-Mar-2015 08:21:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

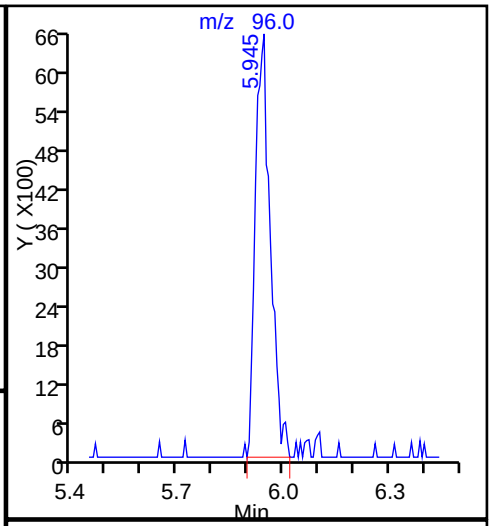
TestAmerica Pittsburgh

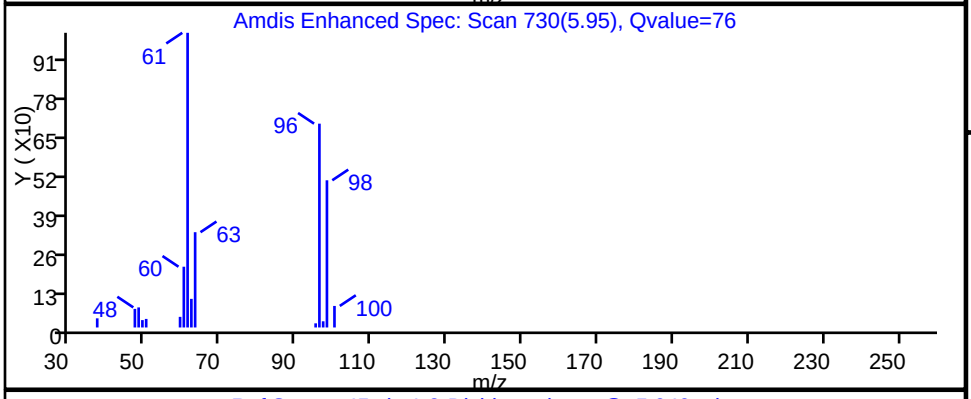
Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305018.D

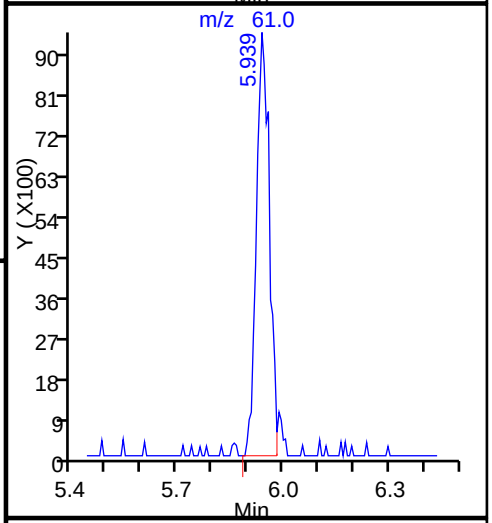
Injection Date:	05-Mar-2015 17:12:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	50.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

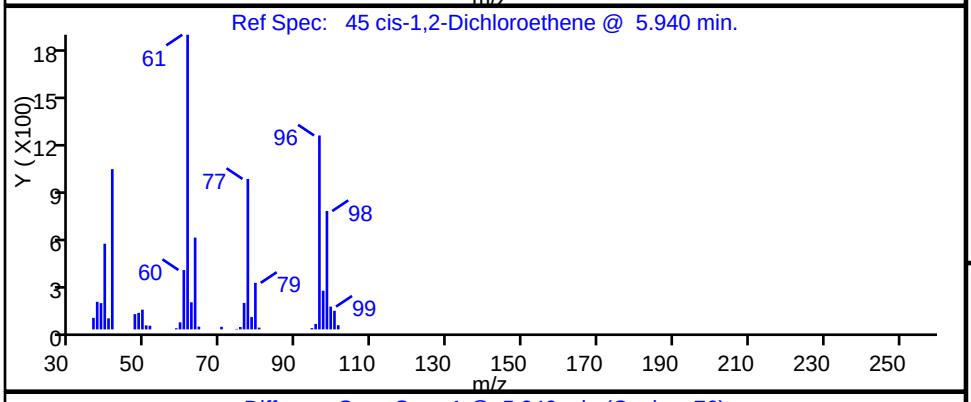
45 cis-1,2-Dichloroethene, CAS: 156-59-2

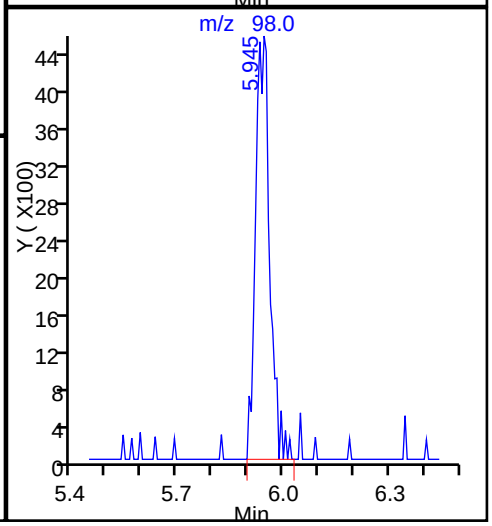


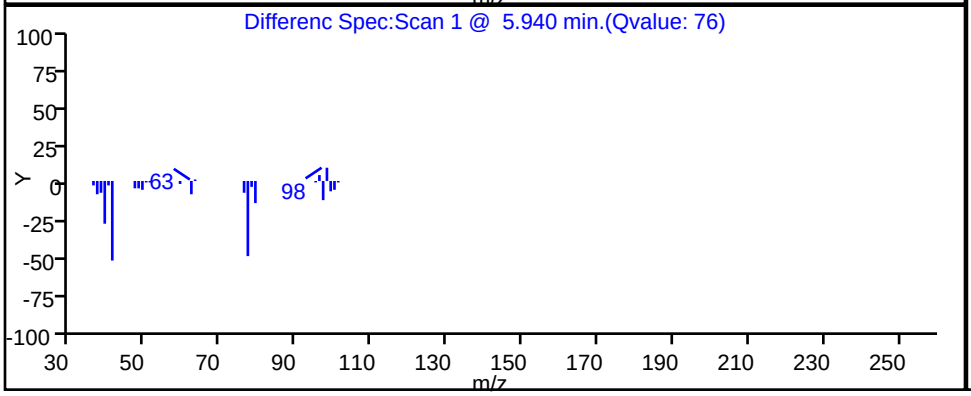












Report Date: 06-Mar-2015 08:21:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305018.D		
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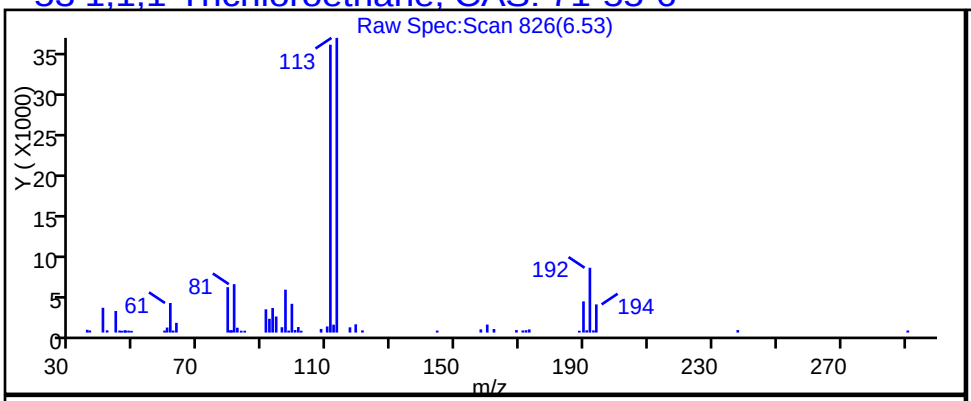
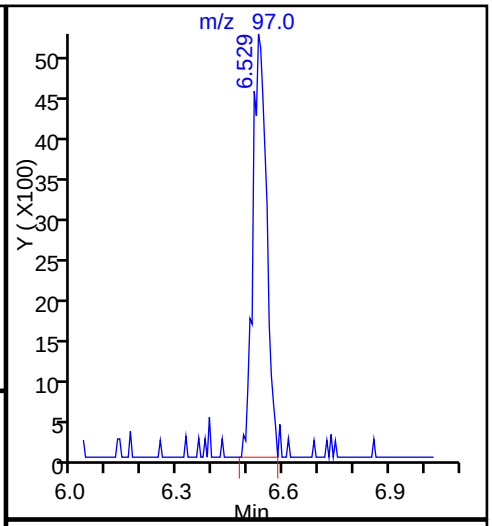
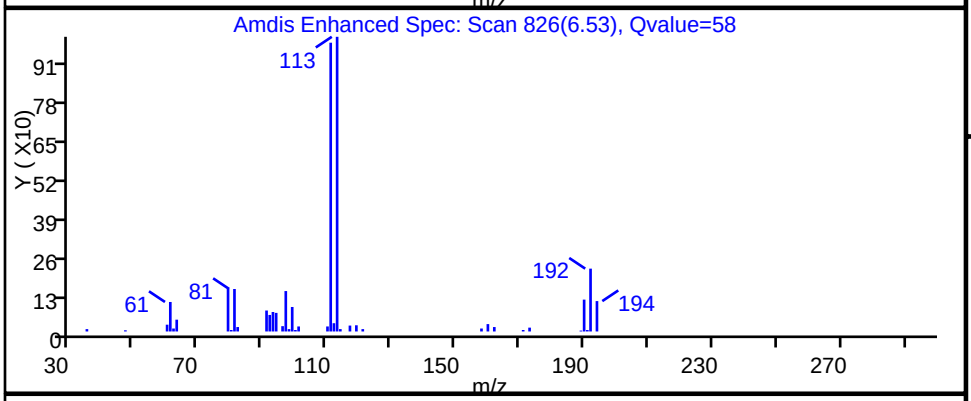
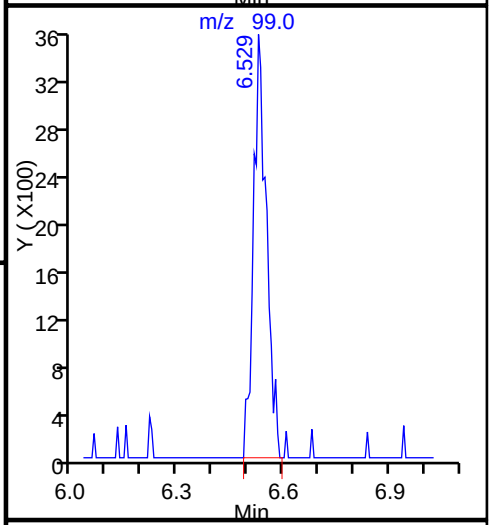
Lims ID:	180-41453-C-5	Lab Sample ID:	180-41453-5
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	14 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	50.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

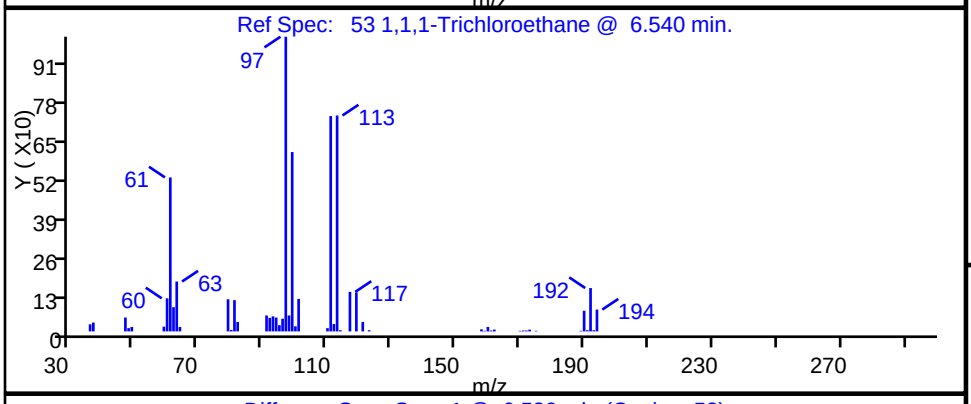
53 1,1,1-Trichloroethane, CAS: 71-55-6

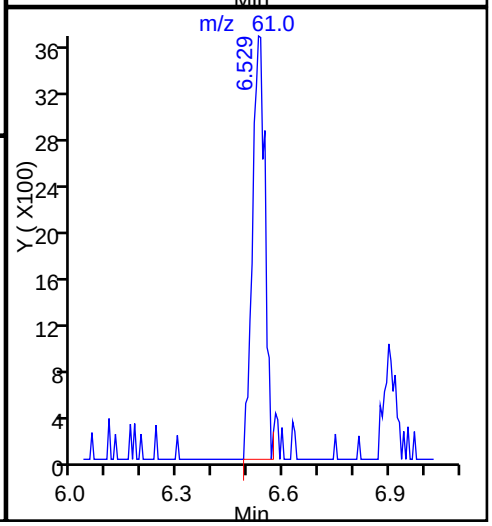


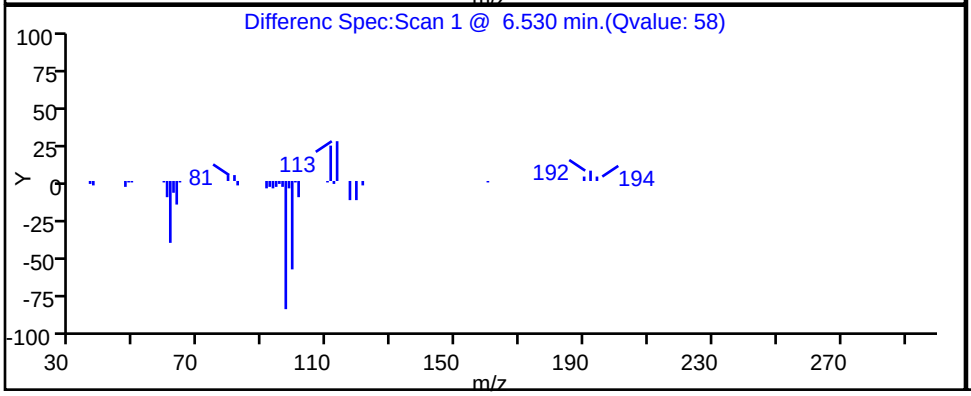










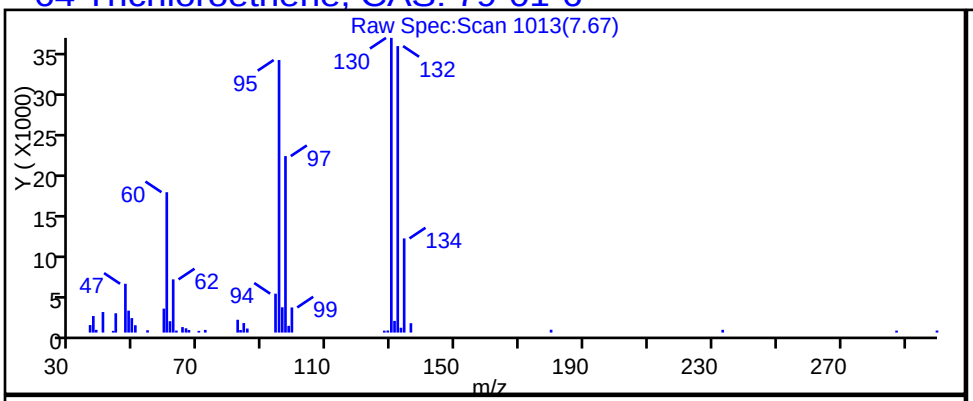


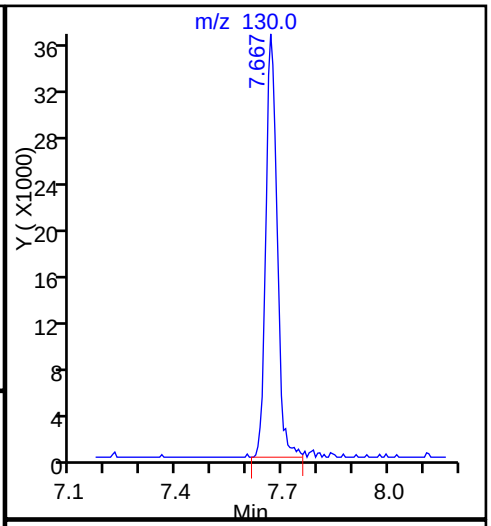
Report Date: 06-Mar-2015 08:21:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

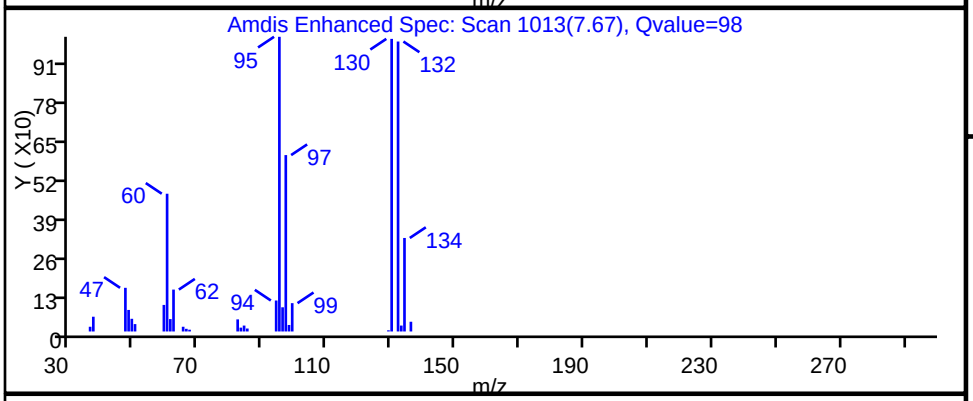
TestAmerica Pittsburgh

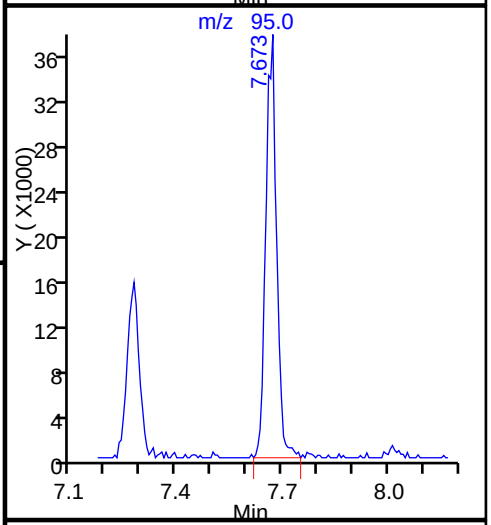
Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305018.D		
Injection Date:	05-Mar-2015 17:12:30	Instrument ID:	CHHP5
Lims ID:	180-41453-C-5	Lab Sample ID:	180-41453-5
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	14 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	50.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

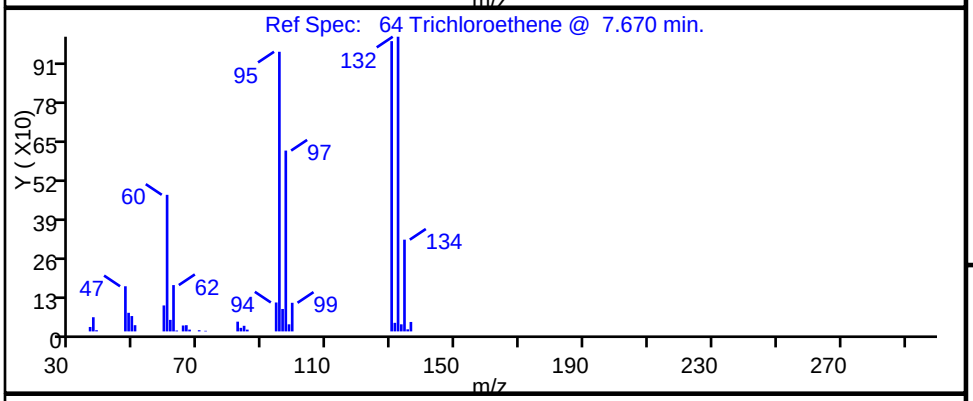
64 Trichloroethene, CAS: 79-01-6

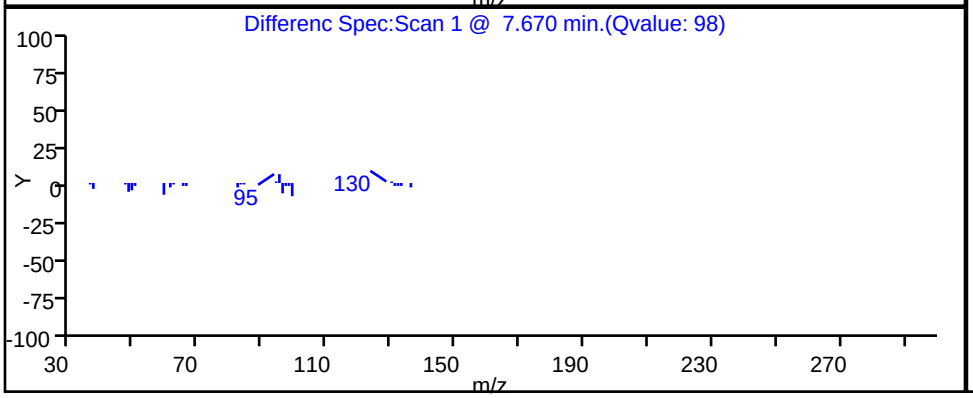


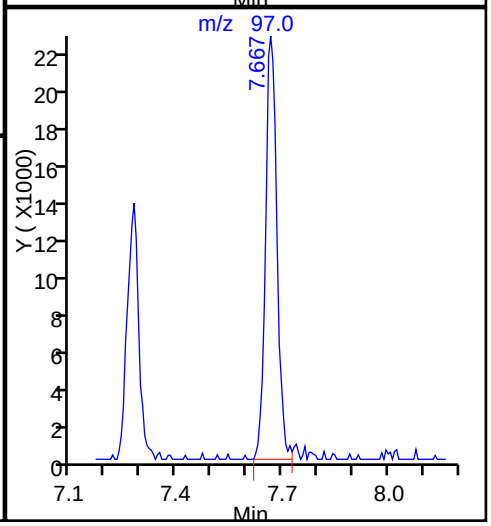












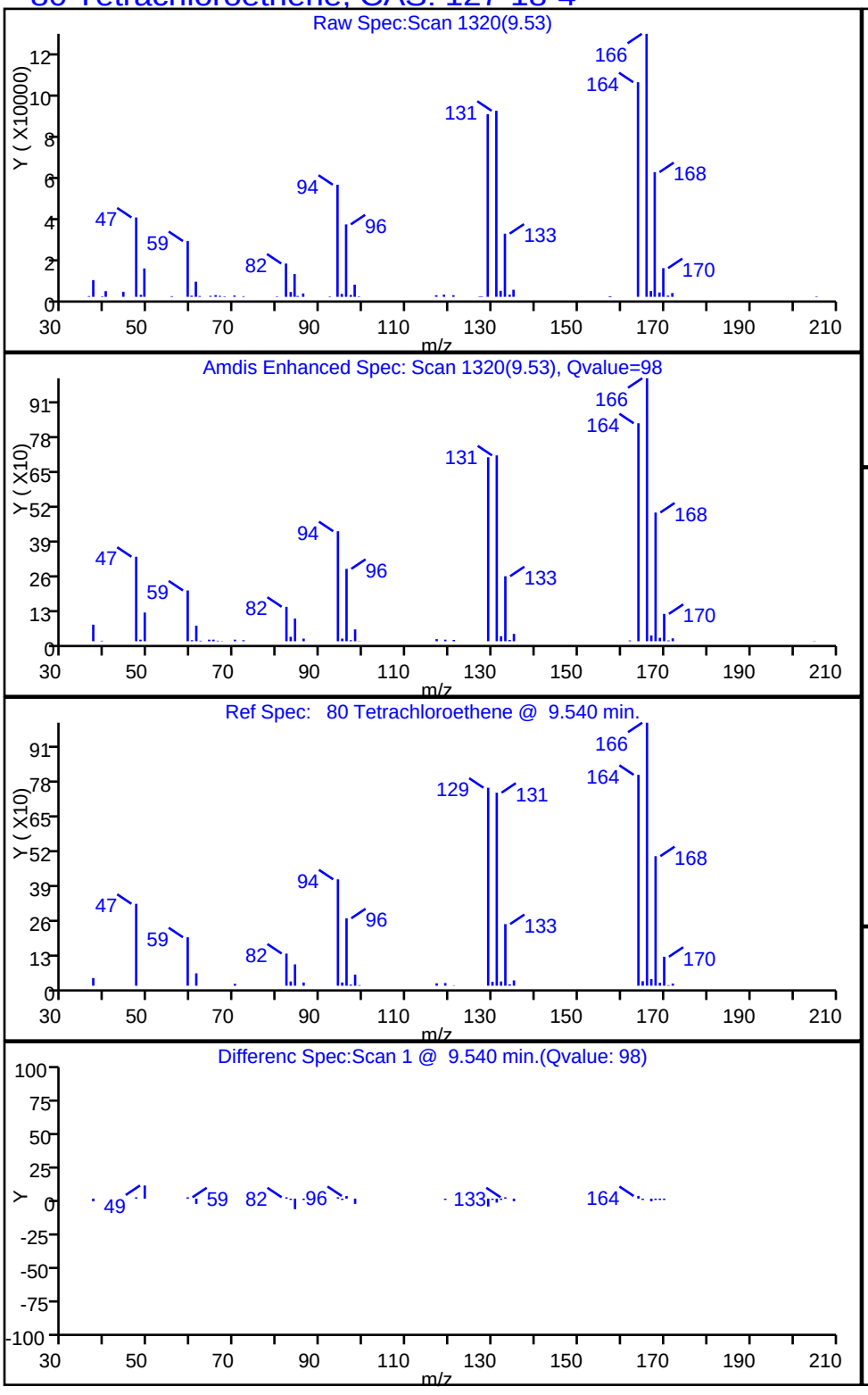
Report Date: 06-Mar-2015 08:21:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

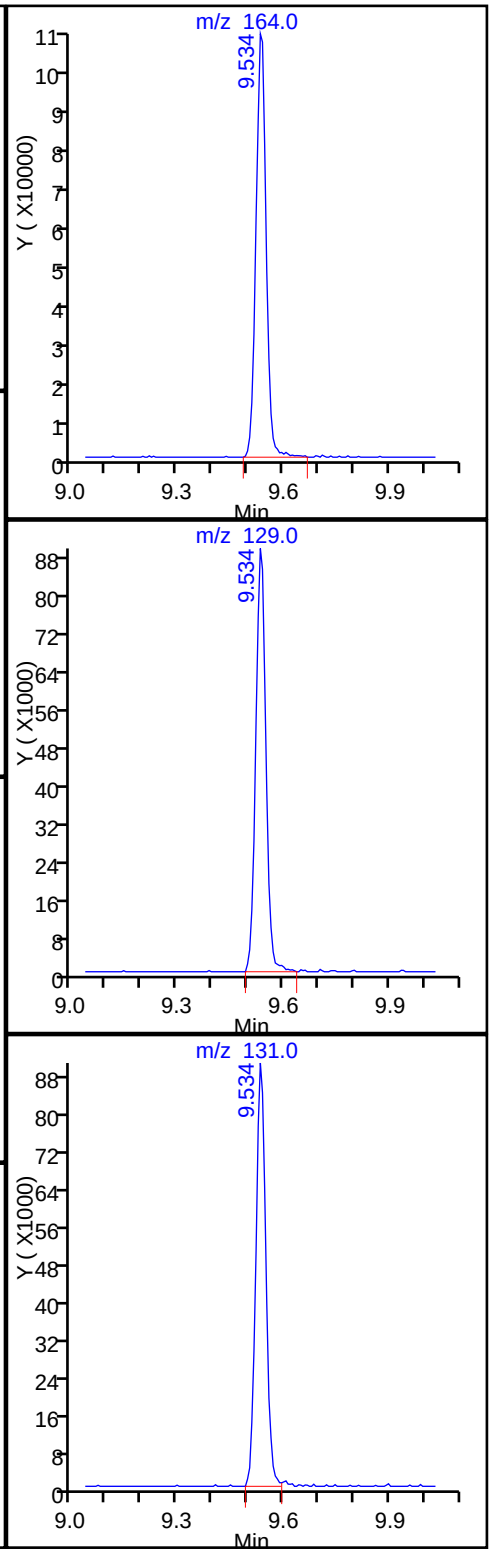
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305018.D

Injection Date:	05-Mar-2015 17:12:30	Instrument ID:	CHHP5		
Lims ID:	180-41453-C-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	14	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	50.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

80 Tetrachloroethene, CAS: 127-18-4





FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-134613/18	50303018.D
Level 2	IC 180-134613/8	50303008.D
Level 3	ICIS 180-134613/9	50303009.D
Level 4	IC 180-134613/10	50303010.D
Level 5	IC 180-134613/11	50303011.D
Level 6	IC 180-134613/12	50303012.D
Level 7	IC 180-134613/13	50303013.D
Level 8	IC 180-134613/14	50303014.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2690 0.2315	0.2475 0.2504	0.2293 0.2519	0.2623	0.2680	Ave		0.2512			0.1000	6.0		20.0			
Chloromethane	0.4680 0.3696	0.3882 0.4086	0.3655 0.4050	0.4008	0.4067	Ave		0.4015			0.1000	7.9		20.0			
Vinyl chloride	0.4208 0.3539	0.3727 0.3911	0.3674 0.3929	0.3892	0.3994	Ave		0.3859			0.1000	5.4		20.0			
1,3-Butadiene	0.5877 0.3874	0.4356 0.4336	0.4089 0.4363	0.4396	0.4507	Ave		0.4475			0.0100	13.0		20.0			
Bromomethane	0.2102 0.0967	0.1328 0.1105	0.1305 0.0997	0.1176	0.1084	Lin2	0.5322	0.1060			0.0500				0.9930		0.9900
Chloroethane	0.2042 0.1423	0.1531 0.1639	0.1454 0.1403	0.1542	0.1526	Ave		0.1570			0.0500	13.0		20.0			
Dichlorofluoromethane	0.4250 0.3125	0.3499 0.3829	0.3794 0.3280	0.3555	0.3456	Ave		0.3598			0.0100	9.8		20.0			
Trichlorofluoromethane	0.3357 0.2560	0.2761 0.3432	0.3149 0.2839	0.2982	0.2961	Ave		0.3005			0.1000	9.9		20.0			
Ethyl ether	0.3462 0.2756	0.2799 0.2862	0.2559 0.3022	0.2863	0.2877	Ave		0.2900			0.0100	9.0		20.0			
Acrolein	0.0381 0.0352	0.0397 0.0387	0.0353 0.0396	0.0401	0.0397	Ave		0.0383			0.0100	5.1		20.0			
1,1-Dichloroethene	0.3310 0.2752	0.2698 0.2934	0.2608 0.2973	0.2971	0.3045	Ave		0.2911			0.1000	7.7		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3119 0.2752	0.2867 0.3077	0.2648 0.2991	0.3034	0.3054	Ave		0.2943			0.1000	5.8		20.0			
Acetone	0.1272 0.0999	0.1070 0.0981	0.0956 0.1093	0.1023	0.1006	Ave		0.1050			0.0500	9.5		20.0			
Iodomethane	0.4701 0.3888	0.3781 0.4191	0.3659 0.4254	0.4071	0.4219	Ave		0.4096			0.0100	8.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.7278 0.6896	0.6311 0.7798	0.6350 0.7889	0.7235	0.7569	Ave		0.7166			0.1000	8.5		20.0			
Allyl chloride	0.1767 0.1804	0.1687 0.1929	0.1597 0.2039	0.1828	0.1896	Ave		0.1818			0.0100	7.7		20.0			
Methyl acetate	0.3135 0.2835	0.2688 0.2970	0.2547 0.3078	0.2918	0.2933	Ave		0.2888			0.1000	6.7		20.0			
Methylene Chloride	0.5303 0.3048	0.3340 0.3171	0.3002 0.3296	0.3199	0.3150	Lin2	1.1200	0.3021			0.1000				0.9970		0.9900
tert-Butyl alcohol	1.0728 1.1874	1.1850 1.2108	1.0775 1.3423	1.2805	1.2306	Ave		1.1984			0.0100	7.7		20.0			
Acrylonitrile	0.1522 0.1402	0.1370 0.1445	0.1317 0.1514	0.1426	0.1458	Ave		0.1432			0.0100	4.8		20.0			
trans-1,2-Dichloroethene	0.3284 0.2932	0.2930 0.3077	0.2772 0.3241	0.3005	0.3112	Ave		0.3044			0.1000	5.6		20.0			
Methyl tert-butyl ether	0.8077 0.7491	0.7066 0.7930	0.6816 0.8220	0.7507	0.7733	Ave		0.7605			0.1000	6.4		20.0			
Hexane	0.6242 0.5039	0.5149 0.5384	0.5008 0.5460	0.5396	0.5552	Ave		0.5404			0.0100	7.3		20.0			
1,1-Dichloroethane	0.6587 0.5578	0.5463 0.5868	0.5240 0.6027	0.5806	0.5849	Ave		0.5802			0.2000	7.0		20.0			
Vinyl acetate	0.1554 0.2042	0.1712 0.2248	0.1846 0.2374	0.1922	0.2159	Ave		0.1982			0.0100	14.0		20.0			
2,2-Dichloropropane	0.2089 0.2094	0.1923 0.2380	0.1918 0.2406	0.2153	0.2221	Ave		0.2148			0.0100	8.5		20.0			
cis-1,2-Dichloroethene	0.3752 0.3124	0.3118 0.3268	0.2893 0.3375	0.3247	0.3263	Ave		0.3255			0.1000	7.6		20.0			
2-Butanone (MEK)	0.1805 0.1692	0.1656 0.1804	0.1533 0.1823	0.1632	0.1743	Ave		0.1711			0.0500	5.9		20.0			
Bromochloromethane	0.1602 0.1300	0.1227 0.1367	0.1187 0.1453	0.1320	0.1397	Ave		0.1357			0.0100	9.7		20.0			
Tetrahydrofuran	0.1465 0.1140	0.1197 0.1221	0.1051 0.1283	0.1156	0.1227	Ave		0.1218			0.0100	10.0		20.0			
Chloroform	0.5305 0.4435	0.4372 0.4691	0.4040 0.4864	0.4580	0.4705	Ave		0.4624			0.2000	8.1		20.0			
1,1,1-Trichloroethane	0.3408 0.3041	0.2781 0.3311	0.2786 0.3337	0.3135	0.3326	Ave		0.3141			0.1000	8.0		20.0			
Cyclohexane	0.7553 0.6547	0.7067 0.7163	0.6518 0.7113	0.7195	0.7234	Ave		0.7049			0.1000	5.0		20.0			
Carbon tetrachloride	0.2188 0.2137	0.1783 0.2421	0.1756 0.2456	0.2093	0.2208	Ave		0.2130			0.1000	12.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4190 0.3837	0.3836 0.4120	0.3653 0.4171	0.4094	0.4159	Ave		0.4007			0.0100	5.1		20.0			
Isobutyl alcohol	0.0062 0.0076	0.0051 0.0082	0.0049 0.0094	0.0062	0.0072	Ave		0.0069		*	0.0100	23.0	*	20.0			
Benzene	1.4277 1.1958	1.2285 1.2459	1.1487 1.2779	1.2764	1.3023	Ave		1.2629			0.5000	6.6		20.0			
1,2-Dichloroethane	0.3936 0.3555	0.3377 0.3701	0.3255 0.4002	0.3674	0.3684	Ave		0.3648			0.1000	6.9		20.0			
n-Heptane	0.5428 0.4760	0.4383 0.5130	0.4485 0.5151	0.4948	0.4996	Ave		0.4910			0.0100	7.2		20.0			
Trichloroethene	0.2973 0.2860	0.2875 0.3057	0.2716 0.3157	0.3042	0.3116	Ave		0.2974			0.2000	5.0		20.0			
Methylcyclohexane	0.5952 0.5306	0.5402 0.5732	0.5146 0.5770	0.5673	0.5970	Ave		0.5619			0.1000	5.4		20.0			
1,2-Dichloropropane	0.3666 0.3252	0.3035 0.3418	0.2998 0.3537	0.3291	0.3338	Ave		0.3317			0.1000	6.9		20.0			
Dibromomethane	0.1544 0.1493	0.1379 0.1557	0.1316 0.1667	0.1493	0.1534	Ave		0.1498			0.0100	7.3		20.0			
1,4-Dioxane	0.0032 0.0032	0.0026 0.0030	0.0024 0.0034	0.0029	0.0030	Ave		0.0030		*	0.0100	11.0		20.0			
Bromodichloromethane	0.2516 0.2918	0.2511 0.3052	0.2361 0.3279	0.2772	0.2930	Ave		0.2792			0.2000	11.0		20.0			
cis-1,3-Dichloropropene	0.3080 0.3953	0.3071 0.4172	0.3282 0.4415	0.3733	0.3881	Ave		0.3698			0.2000	14.0		20.0			
4-Methyl-2-pentanone (MIBK)	1.5509 1.4938	1.5302 1.5109	1.3735 1.4677	1.5874	1.5632	Ave		1.5097			0.1000	4.4		20.0			
Toluene	6.2344 4.6779	5.4647 4.8614	4.8117 4.5935	5.3452	5.2977	Ave		5.1608			0.4000	11.0		20.0			
trans-1,3-Dichloropropene	0.9390 1.1640	0.9614 1.2251	0.9301 1.2704	1.0789	1.1369	Ave		1.0882			0.1000	12.0		20.0			
Ethyl methacrylate	1.1441 1.2928	0.9998 1.3638	1.0308 1.3853	1.2627	1.3088	Ave		1.2235			0.0100	12.0		20.0			
1,1,2-Trichloroethane	1.0940 0.8884	0.9633 0.9132	0.8597 0.9115	0.9757	0.9363	Ave		0.9428			0.1000	7.6		20.0			
Tetrachloroethene	1.1157 0.8701	0.9938 0.9281	0.8738 0.8743	0.9857	0.9770	Ave		0.9523			0.2000	8.9		20.0			
1,3-Dichloropropane	1.9802 1.6858	1.8629 1.7187	1.6343 1.6897	1.8293	1.7741	Ave		1.7719			0.0100	6.4		20.0			
2-Hexanone	1.0477 1.0339	1.0431 1.0684	0.9679 1.0449	1.1247	1.1004	Ave		1.0539			0.1000	4.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.5658 0.6599	0.5280 0.7119	0.5067 0.7217	0.6199	0.6460	Ave		0.6200			0.1000	13.0		20.0			
1,2-Dibromoethane (EDB)	0.9524 0.9044	0.8836 0.9137	0.8153 0.9237	0.9263	0.9441	Ave		0.9079			0.1000	4.8		20.0			
3-Chlorobenzotrifluoride	1.9226 1.4974	1.6501 1.5076	1.5454 1.3370	1.6222	1.5811	Ave		1.5829			0.0100	11.0		20.0			
Chlorobenzene	4.0215 3.0327	3.4837 3.1544	3.0203 3.0023	3.3643	3.3626	Ave		3.3052			0.5000	10.0		20.0			
4-Chlorobenzotrifluoride	1.7532 1.4334	1.5607 1.4283	1.5227 1.2996	1.5809	1.5247	Ave		1.5129			0.0100	8.8		20.0			
1,1,1,2-Tetrachloroethane	0.8054 0.7937	0.6270 0.8576	0.6290 0.8548	0.7520	0.7784	Ave		0.7622			0.0100	12.0		20.0			
Ethylbenzene	2.1162 1.8003	1.9583 1.8639	1.7671 1.7871	1.9934	2.0020	Ave		1.9111			0.1000	6.6		20.0			
m-Xylene & p-Xylene	2.6982 2.2243	2.3435 2.3081	2.1594 2.2145	2.4436	2.4413	Ave		2.3541			0.1000	7.4		20.0			
o-Xylene	2.6404 2.1191	2.3559 2.2160	2.1315 2.1144	2.3759	2.3231	Ave		2.2845			0.3000	7.9		20.0			
Styrene	4.3797 3.4898	3.7333 3.6111	3.4486 3.4638	3.9065	3.8442	Ave		3.7346			0.3000	8.4		20.0			
Bromoform	0.2653 0.3657	0.2684 0.4014	0.2412 0.4171	0.3168	0.3442	Ave		0.3275			0.1000	20.0		20.0			
2-Chlorobenzotrifluoride	1.8187 1.4793	1.6992 1.5053	1.5228 1.3486	1.6018	1.5787	Ave		1.5693			0.0100	9.1		20.0			
Isopropylbenzene	6.6841 5.0501	5.9488 5.3239	5.2815 4.8448	5.9350	5.7977	Ave		5.6082			0.1000	11.0		20.0			
1,1,2,2-Tetrachloroethane	1.2994 1.2807	1.3075 1.3493	1.2094 1.3104	1.3458	1.3524	Ave		1.3069			0.3000	3.6		20.0			
Bromobenzene	1.0162 0.8475	0.8667 0.8518	0.8177 0.8692	0.8652	0.8533	Ave		0.8735			0.0100	6.9		20.0			
1,2,3-Trichloropropane	0.3627 0.2773	0.2931 0.2821	0.2728 0.2922	0.2800	0.2812	Ave		0.2927			0.0100	10.0		20.0			
trans-1,4-Dichloro-2-butene	0.2945 0.2859	0.2754 0.3162	0.2472 0.3267	0.2688	0.2602	Ave		0.2844			0.0100	9.6		20.0			
N-Propylbenzene	1.2166 1.1118	1.1732 1.1670	1.1362 1.1460	1.1729	1.1590	Ave		1.1604			0.0100	2.7		20.0			
2-Chlorotoluene	1.1065 0.9256	0.9581 0.9475	0.8975 0.9360	0.9513	0.9430	Ave		0.9582			0.0100	6.6		20.0			
3-Chlorotoluene	1.1820 0.9566	0.9980 0.9593	0.9643 0.9127	0.9261	0.9364	Ave		0.9794			0.0100	8.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	3.6478 3.0305	3.2397 3.1239	3.1299 3.0311	3.2594	3.2246	Ave		3.2109			0.0100	6.2		20.0			
4-Chlorotoluene	1.1560 0.9823	0.9826 1.0361	0.9918 1.0330	1.0376	1.0526	Ave		1.0340			0.0100	5.5		20.0			
tert-Butylbenzene	3.1191 2.5612	2.8481 2.6780	2.7134 2.6395	2.8302	2.7808	Ave		2.7713			0.0100	6.2		20.0			
1,2,4-Trimethylbenzene	3.6951 3.1036	3.3863 3.2221	3.2100 3.1692	3.3631	3.3623	Ave		3.3140			0.0100	5.6		20.0			
3,4-Dichlorobenzotrifluoride	0.7760 0.7222	0.8131 0.7485	0.7548 0.6963	0.7399	0.7344	Ave		0.7482			0.0100	4.7		20.0			
sec-Butylbenzene	4.7250 3.6615	4.1212 3.7973	3.8832 3.6388	4.0747	4.0112	Ave		3.9891			0.0100	8.7		20.0			
1,3-Dichlorobenzene	2.0686 1.6213	1.7447 1.6705	1.6238 1.6741	1.6987	1.7072	Ave		1.7261			0.6000	8.4		20.0			
4-Isopropyltoluene	3.7034 3.0652	3.3375 3.2100	3.1450 3.0900	3.3337	3.2665	Ave		3.2689			0.0100	6.2		20.0			
1,4-Dichlorobenzene	2.0020 1.6465	1.7449 1.6908	1.6438 1.7119	1.7346	1.7242	Ave		1.7373			0.5000	6.5		20.0			
2,4-Dichlorobenzotrifluoride	0.7973 0.6761	0.7429 0.6931	0.7301 0.6448	0.6927	0.7117	Ave		0.7111			0.0100	6.5		20.0			
2,5-Dichlorobenzotrifluoride	0.8019 0.7607	0.8189 0.7865	0.7792 0.7420	0.7522	0.7608	Ave		0.7753			0.0100	3.4		20.0			
n-Butylbenzene	3.2542 2.7311	2.9123 2.8828	2.7781 2.8096	2.9485	2.9341	Ave		2.9063			0.0100	5.5		20.0			
1,2-Dichlorobenzene	1.8289 1.5040	1.5633 1.5462	1.4970 1.5487	1.5655	1.5779	Ave		1.5789			0.4000	6.7		20.0			
1,2-Dibromo-3-Chloropropane	0.0849 0.1157	0.0814 0.1305	0.0843 0.1353	0.0954	0.1047	Ave		0.1040			0.0500	20.0		20.0			
1,2,4-Trichlorobenzene	0.8675 0.7733	0.7499 0.7923	0.7387 0.7989	0.8082	0.7890	Ave		0.7897			0.2000	5.0		20.0			
Hexachlorobutadiene	0.3817 0.3102	0.3469 0.3430	0.3138 0.3383	0.3301	0.3340	Ave		0.3373			0.0100	6.6		20.0			
Naphthalene	2.5167 2.2552	2.2494 2.2646	2.0797 2.3040	2.3468	2.3135	Ave		2.2912			0.0100	5.3		20.0			
1,2,3-Trichlorobenzene	0.7593 0.6559	0.6685 0.6729	0.5998 0.6937	0.6946	0.6725	Ave		0.6771			0.0100	6.6		20.0			
2,4,5-Trichlorotoluene	0.4218 0.3329	0.3284 0.3441	0.3044 0.3502	0.3314	0.3274	Ave		0.3426			0.0100	10.0		20.0			
2,3,6-Trichlorotoluene	0.3897 0.3029	0.3072 0.3055	0.2791 0.3183	0.3175	0.3065	Ave		0.3158			0.0100	10.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.2143 0.2131	0.2130 0.2223	0.2086 0.2061	0.2196	0.2156	Ave		0.2141				2.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2838 0.2624	0.2484 0.2700	0.2554 0.2655	0.2610	0.2699	Ave		0.2646				4.0		20.0			
Toluene-d8 (Surr)	4.5146 3.6171	4.2502 3.7635	3.8828 3.1038	4.0750	3.9724	Ave		3.8974				11.0		20.0			
4-Bromofluorobenzene (Surr)	1.7106 1.3934	1.4785 1.4322	1.3831 1.2832	1.4890	1.4299	Ave		1.4500				8.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-134613/18	50303018.D
Level 2	IC 180-134613/8	50303008.D
Level 3	ICIS 180-134613/9	50303009.D
Level 4	IC 180-134613/10	50303010.D
Level 5	IC 180-134613/11	50303011.D
Level 6	IC 180-134613/12	50303012.D
Level 7	IC 180-134613/13	50303013.D
Level 8	IC 180-134613/14	50303014.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11738 392329	61161 459101	120251 555245	186155	248600	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	20422 626420	95934 749194	191737 892689	284435	377346	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	18364 599809	92094 717244	192697 866068	276203	370529	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	25646 656586	107650 795057	214505 961606	311986	418091	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Lin2	9174 163842	32814 202557	68450 219710	83485	100603	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	8910 241114	37829 300539	76259 309302	109418	141570	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	18545 529735	86469 702217	199002 722968	252307	320590	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	14651 433936	68228 629405	165171 625870	211640	274680	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	15110 467174	69164 524790	134232 666037	203184	266877	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	33215 76799	49025 88701	55616 95898	66477	73636	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	14445 466370	66672 537938	136777 655372	210842	282447	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	13613 466462	70857 564199	138904 659263	215323	283308	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	27756 338711	52872 359769	100332 482030	145165	186722	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	20517 658969	93450 768602	191906 937612	288929	391404	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	31759 1168823	155959 1429882	333091 1738988	513502	702207	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI

GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Allyl chloride	FB	Ave	7709 305734	41688 353770	83771 449430	129734	175910	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	68405 2402270	332118 2723193	667992 3392163	1035670	1360573	25.0 875	125 1000	250 1250	375	500
Methylene Chloride	FB	Lin2	23143 516693	82531 581573	157472 726477	227072	292219	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBA	Ave	8526 407341	47518 473360	88451 611565	166475	219266	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	66409 2376546	338546 2649598	691056 3337128	1012388	1352445	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	14331 496919	72412 564166	145422 714392	213264	288749	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	35247 1269630	174611 1454209	357516 1811989	532783	717429	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	27239 854071	127250 987257	262665 1203451	382955	515034	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	28747 945361	134994 1076133	274871 1328543	412070	542610	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	6783 346138	42316 412211	96814 523307	136421	200290	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	9115 354872	47512 436442	100580 530241	152789	206033	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	16372 529478	77048 599342	151771 743970	230462	302735	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	39378 573542	81869 661664	160864 803658	231681	323375	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	6992 220291	30321 250607	62252 320382	93661	129587	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	12789 386544	59174 447707	110296 565784	164028	227621	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	23149 751712	108043 860226	211933 1072109	325101	436474	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	14873 515456	68728 607230	146155 735465	222478	308574	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	32962 1109737	174651 1313560	341881 1567791	510634	671150	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	9550 362211	44069 443952	92122 541326	148555	204809	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	18284 650285	94793 755478	191632 919340	290552	385796	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	6766 324042	31713 374911	64264 519953	110778	166120	125 4375	625 5000	1250 6250	1875	2500

FORM VI

GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzene	FB	Ave	62303 2026853	303591 2284771	602514 2816860	905954	1208197	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	17175 602602	83451 678619	170712 882169	260776	341780	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	23686 806729	108328 940701	235230 1135342	351211	463470	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	12976 484743	71046 560499	142439 695890	215876	289114	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	25976 899256	133492 1051065	269904 1271791	402645	553839	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	15999 551216	75001 626785	157237 779651	233558	309721	5.00 175	25.0 200	50.0 250	75.0	100
Dibromomethane	FB	Ave	6736 252976	34073 285467	69033 367478	105949	142348	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	2785 107243	12787 108953	25299 148650	41693	56031	100 3500	500 4000	1000 5000	1500	2000
Bromodichloromethane	FB	Ave	10980 494496	62048 559625	123848 722661	196712	271870	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	13441 670035	75900 764955	172126 973151	264977	360087	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	75647 1293845	171096 1424348	349805 1780762	535170	716953	25.0 350	50.0 400	100 500	150	200
Toluene	CBZ	Ave	60820 2025808	305509 2291440	612731 2786685	901036	1214867	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	9160 504089	53750 577469	118446 770673	181868	260722	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBZ	Ave	11161 559868	55893 642835	131269 840399	212852	300128	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	10673 384751	53855 430453	109481 552961	164474	214719	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBZ	Ave	10884 376799	55560 437446	111273 530396	166159	224037	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBZ	Ave	19318 730064	104148 810109	208110 1025068	308357	406834	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBZ	Ave	51105 895448	116636 1007219	246507 1267784	379170	504684	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBZ	Ave	5520 285792	29519 335537	64530 437822	104491	148140	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	9291 391652	49397 430697	103819 560401	156151	216491	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	18756 648455	92250 710605	196791 811123	273444	362586	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI

GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Chlorobenzene	CBZ	Ave	39232 1313352	194761 1486822	384609 1821377	567114	771107	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	17103 620760	87255 673239	193901 788386	266494	349632	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	7857 343717	35053 404254	80096 518562	126760	178500	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBZ	Ave	20645 779624	109479 878562	225030 1084192	336025	459104	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	26322 963277	131016 1087938	274985 1343425	411920	559842	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBZ	Ave	25758 917689	131707 1044535	271432 1282744	400497	532728	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBZ	Ave	42726 1511299	208713 1702135	439152 2101328	658511	881546	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBZ	Ave	2588 158386	15007 189179	30710 253039	53409	78926	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	17742 640624	94998 709528	193920 818132	270017	362034	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBZ	Ave	65207 2186986	332572 2509471	672554 2939157	1000450	1329527	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	12676 554635	73095 635984	154009 794942	226865	310127	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCB	Ave	14051 509283	68608 564181	141042 712137	214072	285408	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCB	Ave	5015 166640	23201 186872	47052 239368	69273	94067	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	4072 171777	21797 209408	42637 267698	66494	87031	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCB	Ave	16822 668080	92868 772940	195976 938881	290195	387657	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCB	Ave	15299 556210	75841 627560	154797 766804	235369	315400	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCB	Ave	16343 574840	78996 635360	166326 747748	229133	313196	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	50437 1821042	256444 2069067	539843 2483271	806423	1078510	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCB	Ave	15984 590273	77780 686264	171070 846300	256729	352063	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCB	Ave	43127 1538995	225443 1773732	468002 2162487	700240	930079	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	51091 1864947	268049 2134132	553643 2596483	832074	1124585	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3,4-Dichlorobenzotrifluoride	DCB	Ave	10729 433987	64362 495775	130185 570450	183065	245627	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCB	Ave	65330 2200188	326221 2515133	669756 2981190	1008135	1341600	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCB	Ave	28602 974213	138101 1106407	280066 1371526	420272	570988	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCB	Ave	51205 1841892	264184 2126114	542443 2531591	824816	1092513	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCB	Ave	27681 989384	138120 1119886	283523 1402521	429154	576692	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	11024 406260	58806 459072	125921 528265	171372	238033	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	11088 457073	64824 520914	134395 607921	186097	254456	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCB	Ave	44994 1641091	230526 1909418	479164 2301855	729499	981363	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCB	Ave	25288 903766	123743 1024132	258190 1268840	387327	527759	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	1174 69537	6441 86409	14541 110818	23597	35031	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	11994 464683	59357 524775	127415 654550	199956	263899	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCB	Ave	5277 186416	27458 227215	54129 277147	81675	111717	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCB	Ave	34798 1355121	178051 1499909	358706 1887643	580632	773789	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	10498 394157	52915 445662	103456 568326	171850	224922	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	5832 200009	25992 227883	52505 286878	81997	109488	5.00 175	25.0 200	50.0 250	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	5388 182005	24319 202347	48130 260759	78544	102526	5.00 175	25.0 200	50.0 250	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	9351 361120	52645 407623	109435 454279	155860	199995	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	12383 444667	61392 495199	133978 585333	185233	250369	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	44042 1566428	237614 1773929	494434 1882951	686909	910944	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	16688 603450	82659 675059	176122 778464	251005	327893	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 134613

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2015 14:28 Calibration End Date: 03/03/2015 18:29 Calibration ID: 22321

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D
Lims ID: IC VSTD5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-Mar-2015 14:28:30 ALS Bottle#: 6 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD5
Misc. Info.: 180-0005873-008
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:04 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 03-Mar-2015 15:51:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.314	4.321	-0.007	94	160393	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.277	7.278	-0.001	98	494254	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.368	-0.001	96	111812	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.691	12.686	0.005	96	158312	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.535	-0.007	84	52645	25.0	24.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.907	-0.007	95	61392	25.0	23.5	
$ 7 Toluene-d8 (Surr)	98	8.931	8.926	0.005	94	237614	25.0	27.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.536	-0.001	88	82659	25.0	25.5	
11 Dichlorodifluoromethane	85	1.625	1.626	-0.001	98	61161	25.0	24.6	
12 Chloromethane	50	1.777	1.772	0.005	99	95934	25.0	24.2	
13 Vinyl chloride	62	1.899	1.906	-0.007	98	92094	25.0	24.1	
14 Butadiene	39	1.941	1.948	-0.007	97	107650	25.0	24.3	
15 Bromomethane	94	2.252	2.253	-0.001	92	32814	25.0	26.3	
16 Chloroethane	64	2.379	2.386	-0.007	97	37829	25.0	24.4	
17 Dichlorofluoromethane	67	2.653	2.654	-0.001	97	86469	25.0	24.3	
18 Trichlorofluoromethane	101	2.720	2.709	0.011	95	68228	25.0	23.0	
20 Ethyl ether	59	3.085	3.098	-0.013	94	69164	25.0	24.1	
21 Acrolein	56	3.261	3.263	-0.001	98	49025	125.0	129.5	
22 1,1-Dichloroethene	96	3.371	3.384	-0.013	96	66672	25.0	23.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.427	-0.007	94	70857	25.0	24.4	
24 Acetone	43	3.493	3.500	-0.007	98	52872	50.0	50.9	
25 Iodomethane	142	3.584	3.585	-0.001	98	93450	25.0	23.1	
26 Carbon disulfide	76	3.663	3.664	-0.001	99	155959	25.0	22.0	
28 3-Chloro-1-propene	76	3.943	3.950	-0.007	90	41688	25.0	23.2	
30 Methyl acetate	43	4.022	4.023	-0.001	99	332118	125.0	116.3	
31 Methylene Chloride	84	4.150	4.151	-0.001	99	82531	25.0	23.9	
32 2-Methyl-2-propanol	59	4.454	4.437	0.017	96	47518	250.0	247.2	
33 Acrylonitrile	53	4.557	4.558	-0.001	98	338546	250.0	239.2	
34 trans-1,2-Dichloroethene	96	4.569	4.577	-0.008	56	72412	25.0	24.1	
35 Methyl tert-butyl ether	73	4.600	4.601	-0.001	98	174611	25.0	23.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.990	-0.001	96	127250	25.0	23.8	
37 1,1-Dichloroethane	63	5.178	5.179	-0.001	96	134994	25.0	23.5	
38 Vinyl acetate	43	5.299	5.307	-0.008	96	42316	25.0	21.6	
44 2,2-Dichloropropane	77	5.926	5.933	-0.007	77	47512	25.0	22.4	
45 cis-1,2-Dichloroethene	96	5.938	5.939	-0.001	83	77048	25.0	23.9	
46 2-Butanone (MEK)	43	5.993	5.994	-0.001	99	81869	50.0	48.4	
49 Chlorobromomethane	128	6.230	6.231	-0.001	92	30321	25.0	22.6	
51 Tetrahydrofuran	42	6.297	6.298	-0.001	95	59174	50.0	49.2	
52 Chloroform	83	6.340	6.347	-0.007	97	108043	25.0	23.6	
53 1,1,1-Trichloroethane	97	6.534	6.541	-0.007	96	68728	25.0	22.1	
54 Cyclohexane	56	6.589	6.596	-0.007	92	174651	25.0	25.1	
56 Carbon tetrachloride	117	6.723	6.724	-0.001	58	44069	25.0	20.9	
55 1,1-Dichloropropene	75	6.729	6.730	-0.001	92	94793	25.0	23.9	
57 Isobutyl alcohol	41	6.954	6.955	-0.001	36	31713	625.0	467.5	
58 Benzene	78	6.960	6.961	-0.001	98	303591	25.0	24.3	
59 1,2-Dichloroethane	62	6.991	6.992	-0.001	95	83451	25.0	23.1	
62 n-Heptane	43	7.283	7.284	-0.001	96	108328	25.0	22.3	
64 Trichloroethene	130	7.672	7.673	-0.001	97	71046	25.0	24.2	
66 Methylcyclohexane	83	7.867	7.868	-0.001	94	133492	25.0	24.0	
67 1,2-Dichloropropane	63	7.909	7.910	-0.001	91	75001	25.0	22.9	
68 Dibromomethane	93	8.025	8.026	-0.001	95	34073	25.0	23.0	
70 1,4-Dioxane	88	8.067	8.056	0.011	89	12787	500.0	437.5	M
71 Dichlorobromomethane	83	8.201	8.202	-0.001	97	62048	25.0	22.5	
74 cis-1,3-Dichloropropene	75	8.664	8.665	-0.001	91	75900	25.0	20.8	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.829	-0.001	98	171096	50.0	50.7	
76 Toluene	91	8.992	8.993	-0.001	97	305509	25.0	26.5	
77 trans-1,3-Dichloropropene	75	9.223	9.224	-0.001	99	53750	25.0	22.1	
78 Ethyl methacrylate	69	9.321	9.322	-0.001	93	55893	25.0	20.4	
79 1,1,2-Trichloroethane	97	9.400	9.407	-0.007	91	53855	25.0	25.5	
80 Tetrachloroethene	164	9.540	9.541	-0.001	96	55560	25.0	26.1	
81 1,3-Dichloropropane	76	9.570	9.571	-0.001	98	104148	25.0	26.3	
82 2-Hexanone	43	9.661	9.662	-0.001	99	116636	50.0	49.5	
84 Chlorodibromomethane	129	9.795	9.796	-0.001	89	29519	25.0	21.3	
85 Ethylene Dibromide	107	9.905	9.906	-0.001	96	49397	25.0	24.3	
86 3-Chlorobenzotrifluoride	180	10.379	10.374	0.005	94	92250	25.0	26.1	
87 Chlorobenzene	112	10.397	10.398	-0.001	95	194761	25.0	26.4	
88 4-Chlorobenzotrifluoride	180	10.434	10.435	-0.001	94	87255	25.0	25.8	
89 1,1,1,2-Tetrachloroethane	131	10.483	10.477	0.006	86	35053	25.0	20.6	
90 Ethylbenzene	106	10.507	10.508	-0.001	98	109479	25.0	25.6	
91 m-Xylene & p-Xylene	106	10.622	10.624	-0.002	99	131016	25.0	24.9	
92 o-Xylene	106	11.018	11.013	0.005	96	131707	25.0	25.8	
93 Styrene	104	11.030	11.031	-0.001	95	208713	25.0	25.0	
94 Bromoform	173	11.219	11.214	0.005	96	15007	25.0	20.5	
96 2-Chlorobenzotrifluoride	180	11.279	11.274	0.005	97	94998	25.0	27.1	
97 Isopropylbenzene	105	11.383	11.384	-0.001	96	332572	25.0	26.5	
99 1,1,2,2-Tetrachloroethane	83	11.681	11.676	0.005	95	73095	25.0	25.0	
100 Bromobenzene	156	11.693	11.682	0.011	97	68608	25.0	24.8	
101 1,2,3-Trichloropropane	110	11.730	11.725	0.005	87	23201	25.0	25.0	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.737	-0.007	68	21797	25.0	24.2	
103 N-Propylbenzene	120	11.790	11.792	-0.002	99	92868	25.0	25.3	
104 2-Chlorotoluene	126	11.876	11.883	-0.007	96	75841	25.0	25.0	
105 3-Chlorotoluene	126	11.936	11.938	-0.002	95	78996	25.0	25.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.967	11.968	-0.001	95	256444	25.0	25.2	
107 4-Chlorotoluene	126	11.991	11.986	0.005	97	77780	25.0	23.8	
108 tert-Butylbenzene	119	12.289	12.290	-0.001	93	225443	25.0	25.7	
110 1,2,4-Trimethylbenzene	105	12.344	12.339	0.005	95	268049	25.0	25.5	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.406	-0.001	97	64362	25.0	27.2	
112 sec-Butylbenzene	105	12.514	12.509	0.005	94	326221	25.0	25.8	
113 1,3-Dichlorobenzene	146	12.624	12.625	-0.001	97	138101	25.0	25.3	
114 4-Isopropyltoluene	119	12.654	12.655	-0.001	97	264184	25.0	25.5	
115 1,4-Dichlorobenzene	146	12.715	12.710	0.005	95	138120	25.0	25.1	
116 2,4-Dichloro-1-(triflourom	214	12.764	12.765	-0.001	96	58806	25.0	26.1	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.807	0.005	97	64824	25.0	26.4	
120 n-Butylbenzene	91	13.068	13.069	-0.001	98	230526	25.0	25.1	
121 1,2-Dichlorobenzene	146	13.086	13.087	-0.001	95	123743	25.0	24.8	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.866	-0.001	63	6441	25.0	19.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.006	-0.001	98	259963	75.0	76.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.432	-0.001	99	168108	50.0	49.8	
126 1,2,4-Trichlorobenzene	180	14.698	14.693	0.005	94	59357	25.0	23.7	
127 Hexachlorobutadiene	225	14.869	14.870	-0.001	96	27458	25.0	25.7	
128 Naphthalene	128	14.948	14.943	0.005	97	178051	25.0	24.5	
129 1,2,3-Trichlorobenzene	180	15.191	15.186	0.005	95	52915	25.0	24.7	
131 2,4,5-Trichlorotoluene	159	15.970	15.971	-0.001	97	25992	25.0	24.0	
130 2,3,6-Trichlorotoluene	159	16.067	16.068	-0.001	97	24319	25.0	24.3	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		50.0	50.7	
S 134 1,2-Dichloroethene, Total	96				0		50.0	48.0	
S 135 1,3-Dichloropropene, Total	1				0		50.0	42.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added:	5.00	Units: uL	
VOA8260SURR_00031	Amount Added:	1.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	1.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	1.00	Units: uL	
VOAVAPRI_00003	Amount Added:	1.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	1.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

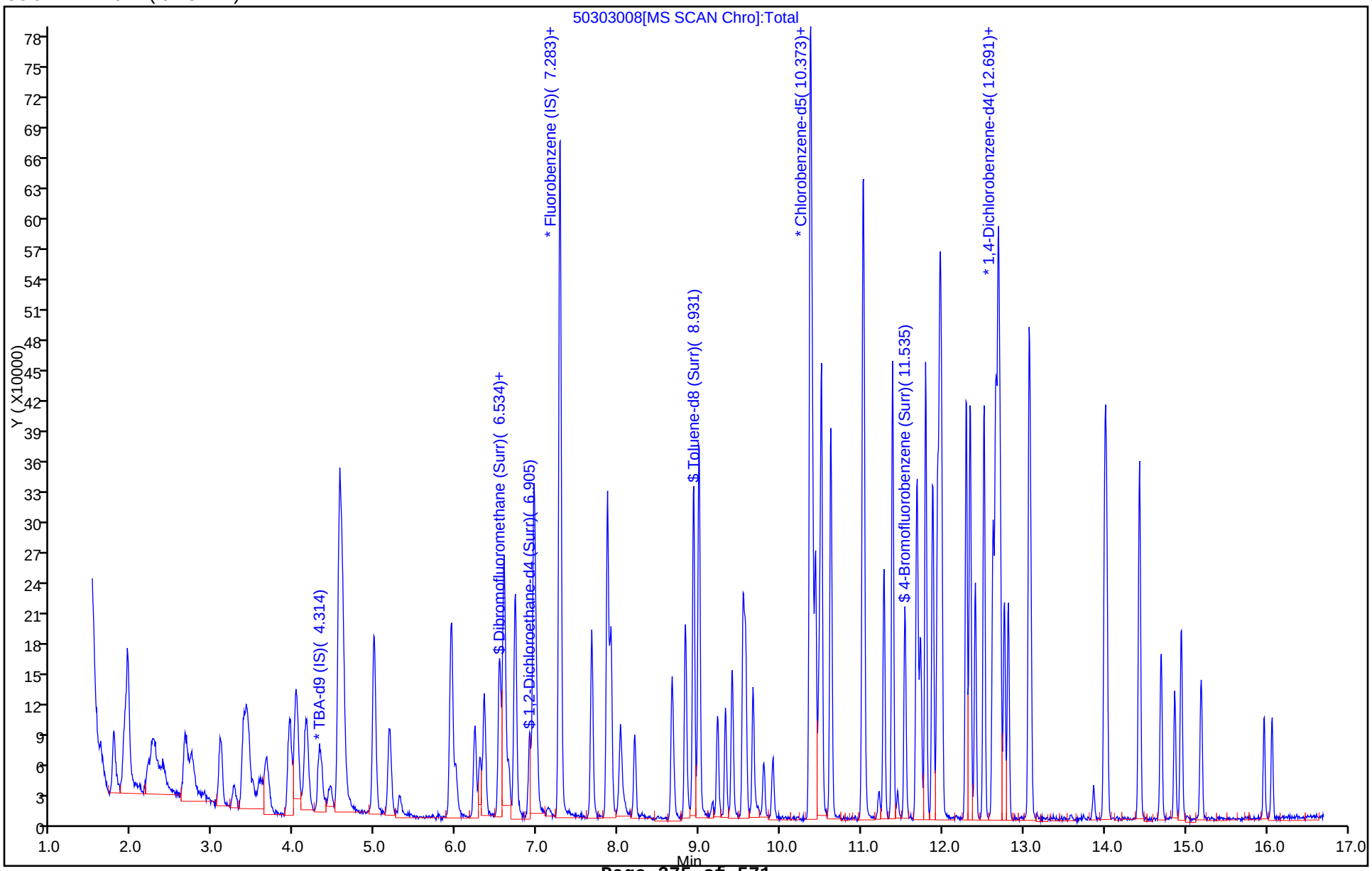
Report Date: 04-Mar-2015 10:13:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D

Injection Date:	03-Mar-2015 14:28:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD5			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

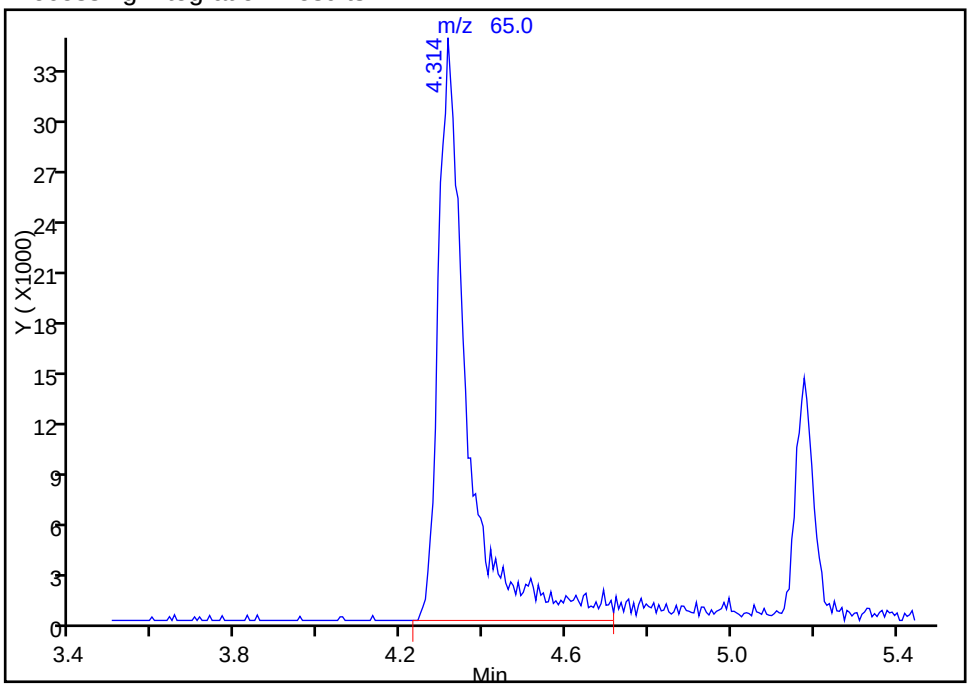
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D				
Injection Date:	03-Mar-2015 14:28:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	001562	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

* 1 TBA-d9 (IS), CAS: 25725-11-5

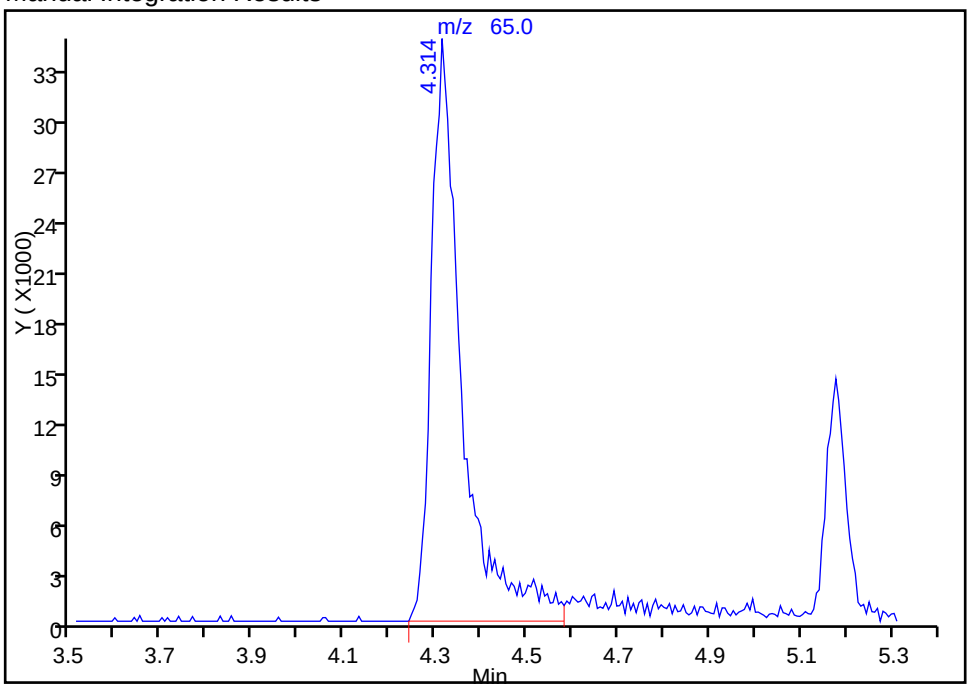
Processing Integration Results

RT: 4.31
Area: 169293
Amount: 1000.0000
Amount Units: ng



Manual Integration Results

RT: 4.31
Area: 160393
Amount: 1000.0000
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:28:28
Audit Action: Manually Integrated
Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

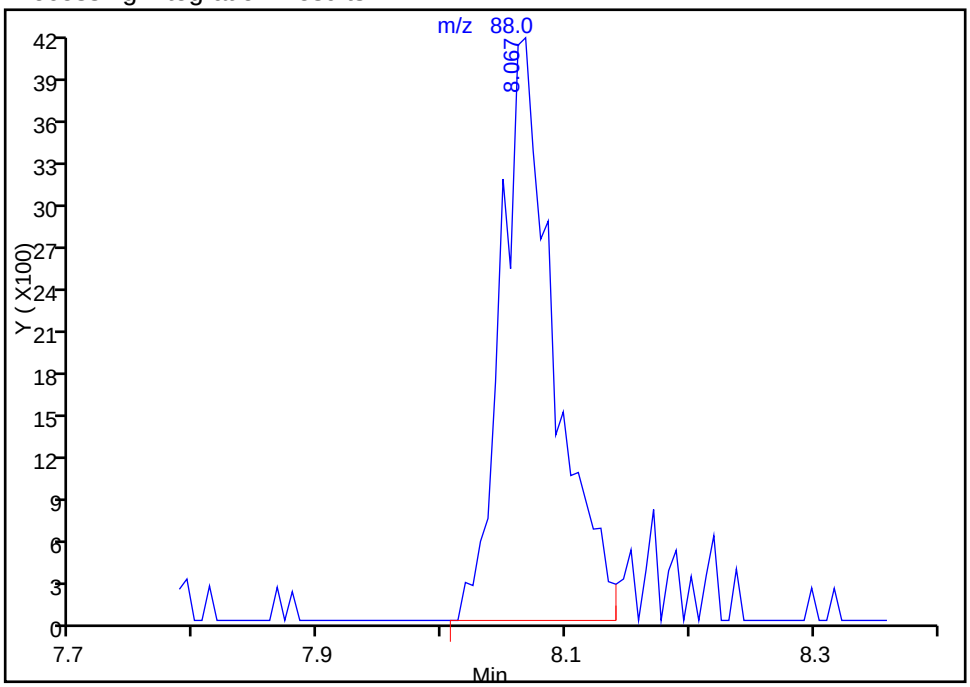
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303008.D
Injection Date: 03-Mar-2015 14:28:30 Instrument ID: CHHP5
Lims ID: IC VSTD5
Client ID:
Operator ID: 001562 ALS Bottle#: 6 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

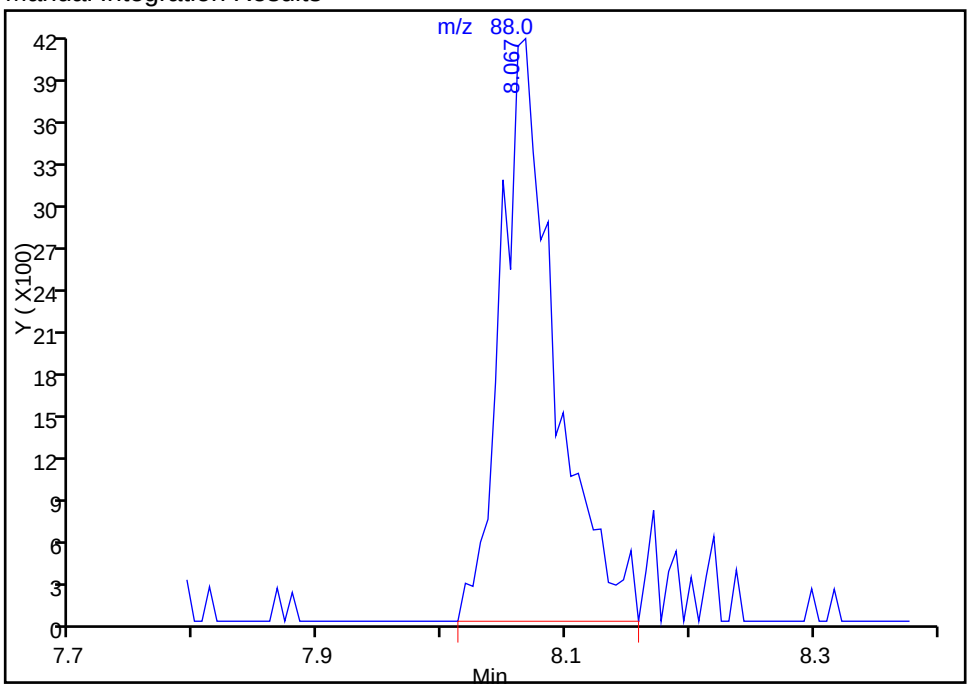
Processing Integration Results

RT: 8.07
Area: 12493
Amount: 432.4578
Amount Units: ng



Manual Integration Results

RT: 8.07
Area: 12787
Amount: 437.5160
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:20:09
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D
Lims ID: ICIS VSTD10
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 03-Mar-2015 14:52:30 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS VSTD10
Misc. Info.: 180-0005873-009
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:28:23 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 10:28:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.321	0.000	75	164184	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.278	7.278	0.000	95	524529	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	94	127341	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.686	0.000	92	172477	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	49	109435	50.0	48.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.907	0.000	67	133978	50.0	48.3	
$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	80	494434	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	89	176122	50.0	47.7	
11 Dichlorodifluoromethane	85	1.626	1.626	0.000	97	120251	50.0	45.6	
12 Chloromethane	50	1.772	1.772	0.000	87	191737	50.0	45.5	
13 Vinyl chloride	62	1.906	1.906	0.000	83	192697	50.0	47.6	
14 Butadiene	39	1.948	1.948	0.000	97	214505	50.0	45.7	
15 Bromomethane	94	2.253	2.253	0.000	89	68450	50.0	56.6	
16 Chloroethane	64	2.386	2.386	0.000	93	76259	50.0	46.3	
17 Dichlorofluoromethane	67	2.654	2.654	0.000	96	199002	50.0	52.7	
18 Trichlorofluoromethane	101	2.709	2.709	0.000	81	165171	50.0	52.4	
20 Ethyl ether	59	3.098	3.098	0.000	86	134232	50.0	44.1	
21 Acrolein	56	3.263	3.263	0.000	88	55616	150.0	138.4	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	98	136777	50.0	44.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.427	0.000	93	138904	50.0	45.0	
24 Acetone	43	3.500	3.500	0.000	96	100332	100.0	91.1	
25 Iodomethane	142	3.585	3.585	0.000	94	191906	50.0	44.7	
26 Carbon disulfide	76	3.664	3.664	0.000	99	333091	50.0	44.3	
28 3-Chloro-1-propene	76	3.950	3.950	0.000	88	83771	50.0	43.9	
30 Methyl acetate	43	4.023	4.023	0.000	99	667992	250.0	220.5	
31 Methylene Chloride	84	4.151	4.151	0.000	92	157472	50.0	46.0	
32 2-Methyl-2-propanol	59	4.437	4.437	0.000	71	88451	500.0	449.6	
33 Acrylonitrile	53	4.558	4.558	0.000	100	691056	500.0	460.1	
34 trans-1,2-Dichloroethene	96	4.577	4.577	0.000	59	145422	50.0	45.5	
35 Methyl tert-butyl ether	73	4.601	4.601	0.000	92	357516	50.0	44.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	94	262665	50.0	46.3	
37 1,1-Dichloroethane	63	5.179	5.179	0.000	85	274871	50.0	45.2	
38 Vinyl acetate	43	5.307	5.307	0.000	96	96814	50.0	46.6	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	63	100580	50.0	44.6	
45 cis-1,2-Dichloroethene	96	5.939	5.939	0.000	71	151771	50.0	44.4	
46 2-Butanone (MEK)	43	5.994	5.994	0.000	93	160864	100.0	89.6	
49 Chlorobromomethane	128	6.231	6.231	0.000	87	62252	50.0	43.7	
51 Tetrahydrofuran	42	6.298	6.298	0.000	92	110296	100.0	86.4	
52 Chloroform	83	6.347	6.347	0.000	84	211933	50.0	43.7	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	89	146155	50.0	44.4	
54 Cyclohexane	56	6.596	6.596	0.000	94	341881	50.0	46.2	
56 Carbon tetrachloride	117	6.724	6.724	0.000	61	92122	50.0	41.2	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	90	191632	50.0	45.6	
57 Isobutyl alcohol	41	6.955	6.955	0.000	39	64264	1250.0	892.6	
58 Benzene	78	6.961	6.961	0.000	97	602514	50.0	45.5	
59 1,2-Dichloroethane	62	6.992	6.992	0.000	87	170712	50.0	44.6	
62 n-Heptane	43	7.284	7.284	0.000	71	235230	50.0	45.7	
64 Trichloroethene	130	7.673	7.673	0.000	93	142439	50.0	45.6	
66 Methylcyclohexane	83	7.868	7.868	0.000	92	269904	50.0	45.8	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	90	157237	50.0	45.2	
68 Dibromomethane	93	8.026	8.026	0.000	91	69033	50.0	43.9	
70 1,4-Dioxane	88	8.056	8.056	0.000	94	25299	1000.0	815.7	M
71 Dichlorobromomethane	83	8.202	8.202	0.000	90	123848	50.0	42.3	
74 cis-1,3-Dichloropropene	75	8.665	8.665	0.000	90	172126	50.0	44.4	
75 4-Methyl-2-pentanone (MIBK	43	8.829	8.829	0.000	96	349805	100.0	91.0	
76 Toluene	91	8.993	8.993	0.000	91	612731	50.0	46.6	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	82	118446	50.0	42.7	
78 Ethyl methacrylate	69	9.322	9.322	0.000	94	131269	50.0	42.1	
79 1,1,2-Trichloroethane	97	9.407	9.407	0.000	85	109481	50.0	45.6	
80 Tetrachloroethene	164	9.541	9.541	0.000	97	111273	50.0	45.9	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	95	208110	50.0	46.1	
82 2-Hexanone	43	9.662	9.662	0.000	98	246507	100.0	91.8	
84 Chlorodibromomethane	129	9.796	9.796	0.000	88	64530	50.0	40.9	
85 Ethylene Dibromide	107	9.906	9.906	0.000	99	103819	50.0	44.9	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	74	196791	50.0	48.8	
87 Chlorobenzene	112	10.398	10.398	0.000	90	384609	50.0	45.7	
88 4-Chlorobenzotrifluoride	180	10.435	10.435	0.000	78	193901	50.0	50.3	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	79	80096	50.0	41.3	
90 Ethylbenzene	106	10.508	10.508	0.000	98	225030	50.0	46.2	
91 m-Xylene & p-Xylene	106	10.624	10.624	0.000	99	274985	50.0	45.9	
92 o-Xylene	106	11.013	11.013	0.000	92	271432	50.0	46.7	
93 Styrene	104	11.031	11.031	0.000	91	439152	50.0	46.2	
94 Bromoform	173	11.214	11.214	0.000	69	30710	50.0	36.8	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	95	193920	50.0	48.5	
97 Isopropylbenzene	105	11.384	11.384	0.000	96	672554	50.0	47.1	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.676	0.000	76	154009	50.0	46.3	
100 Bromobenzene	156	11.682	11.682	0.000	94	141042	50.0	46.8	
101 1,2,3-Trichloropropane	110	11.725	11.725	0.000	57	47052	50.0	46.6	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.737	0.000	60	42637	50.0	43.5	
103 N-Propylbenzene	120	11.792	11.792	0.000	93	195976	50.0	49.0	
104 2-Chlorotoluene	126	11.883	11.883	0.000	96	154797	50.0	46.8	
105 3-Chlorotoluene	126	11.938	11.938	0.000	55	166326	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	94	539843	50.0	48.7	
107 4-Chlorotoluene	126	11.986	11.986	0.000	98	171070	50.0	48.0	
108 tert-Butylbenzene	119	12.290	12.290	0.000	63	468002	50.0	49.0	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	98	553643	50.0	48.4	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	96	130185	50.0	50.4	
112 sec-Butylbenzene	105	12.509	12.509	0.000	94	669756	50.0	48.7	
113 1,3-Dichlorobenzene	146	12.625	12.625	0.000	82	280066	50.0	47.0	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	91	542443	50.0	48.1	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	92	283523	50.0	47.3	
116 2,4-Dichloro-1-(triflourom	214	12.765	12.765	0.000	89	125921	50.0	51.3	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	134395	50.0	50.3	
120 n-Butylbenzene	91	13.069	13.069	0.000	95	479164	50.0	47.8	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	94	258190	50.0	47.4	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	51	14541	50.0	40.5	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.006	0.000	96	553886	150.0	148.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.432	14.432	0.000	98	360944	100.0	98.1	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	91	127415	50.0	46.8	
127 Hexachlorobutadiene	225	14.870	14.870	0.000	90	54129	50.0	46.5	
128 Naphthalene	128	14.943	14.943	0.000	97	358706	50.0	45.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.186	0.000	95	103456	50.0	44.3	
131 2,4,5-Trichlorotoluene	159	15.971	15.971	0.000	93	52505	50.0	44.4	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	94	48130	50.0	44.2	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	92.5	
S 134 1,2-Dichloroethene, Total	96				0		100.0	90.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	87.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added:	6.00	Units: uL	
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	2.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL	
VOAVAPRI_00003	Amount Added:	2.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

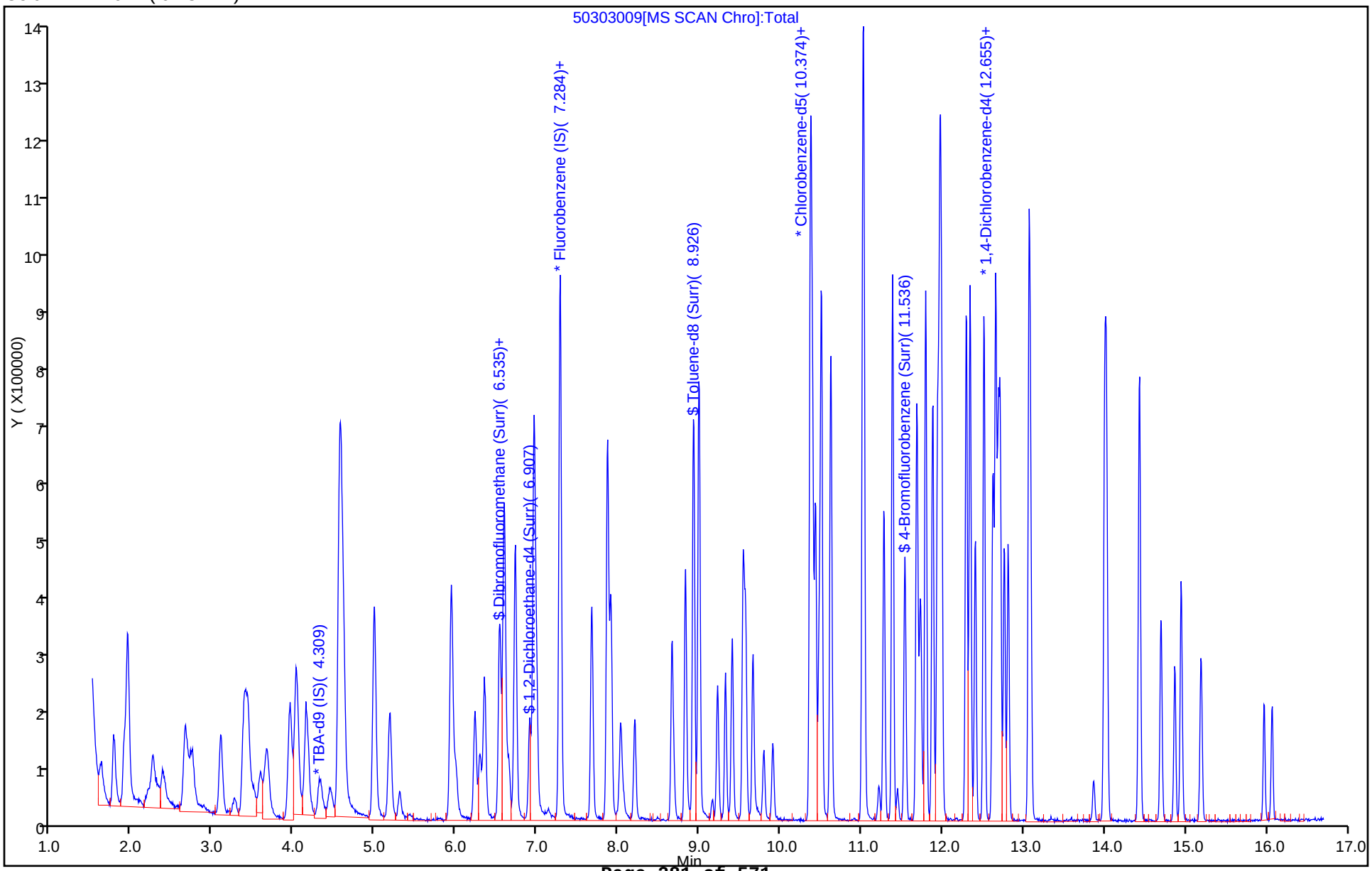
Report Date: 04-Mar-2015 10:28:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D

Injection Date:	03-Mar-2015 14:52:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	ICIS VSTD10			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

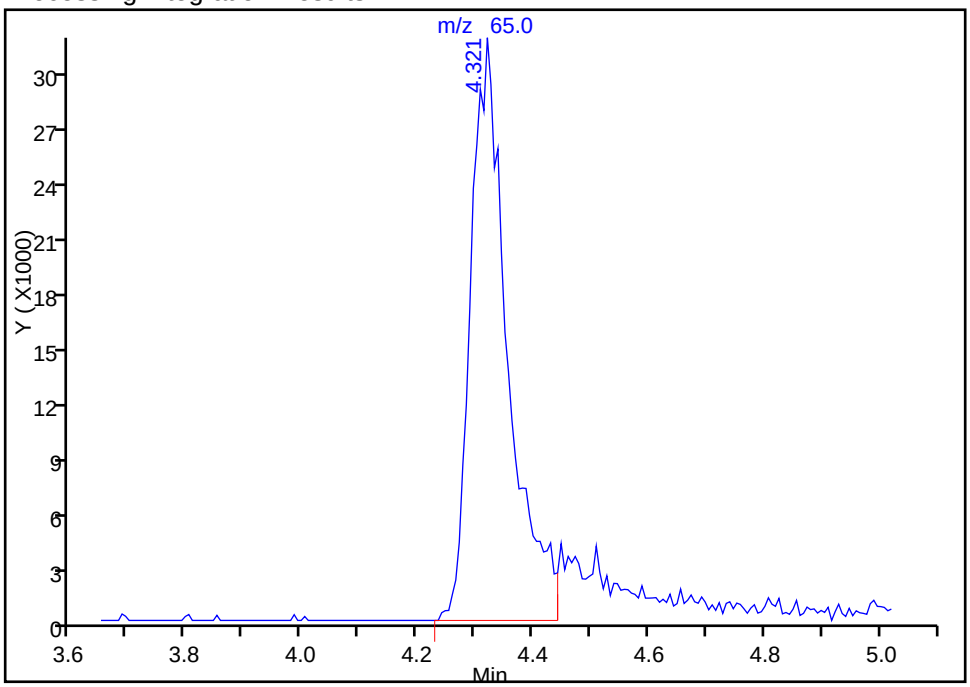
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D
Injection Date: 03-Mar-2015 14:52:30 Instrument ID: CHHP5
Lims ID: ICIS VSTD10
Client ID:
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

* 1 TBA-d9 (IS), CAS: 25725-11-5

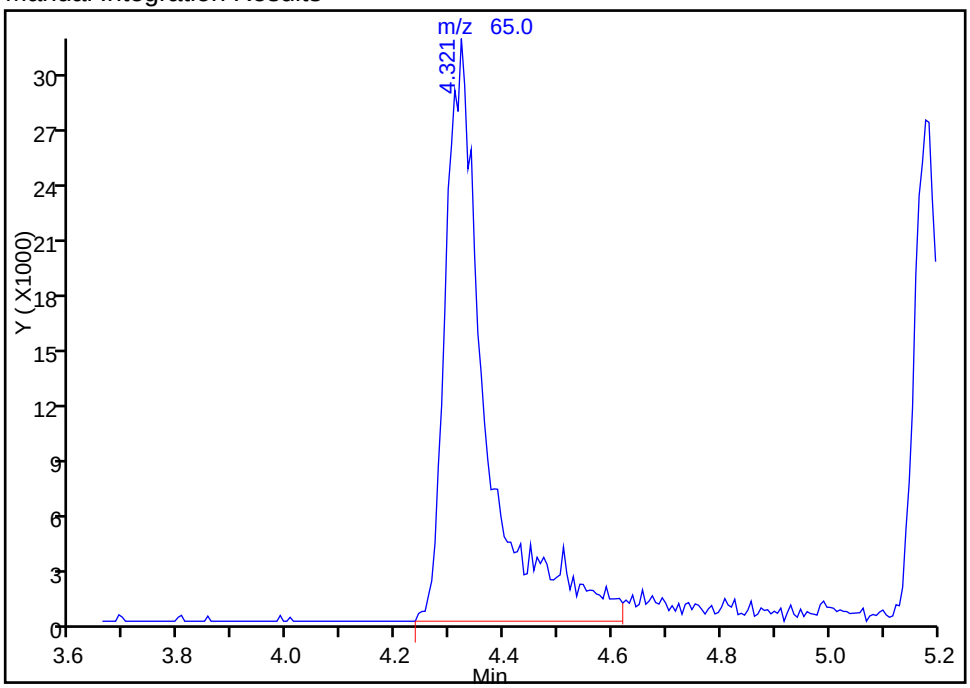
Processing Integration Results

RT: 4.32
Area: 141522
Amount: 1000.0000
Amount Units: ng



Manual Integration Results

RT: 4.32
Area: 164184
Amount: 1000.0000
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:28:59
Audit Action: Manually Integrated
Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

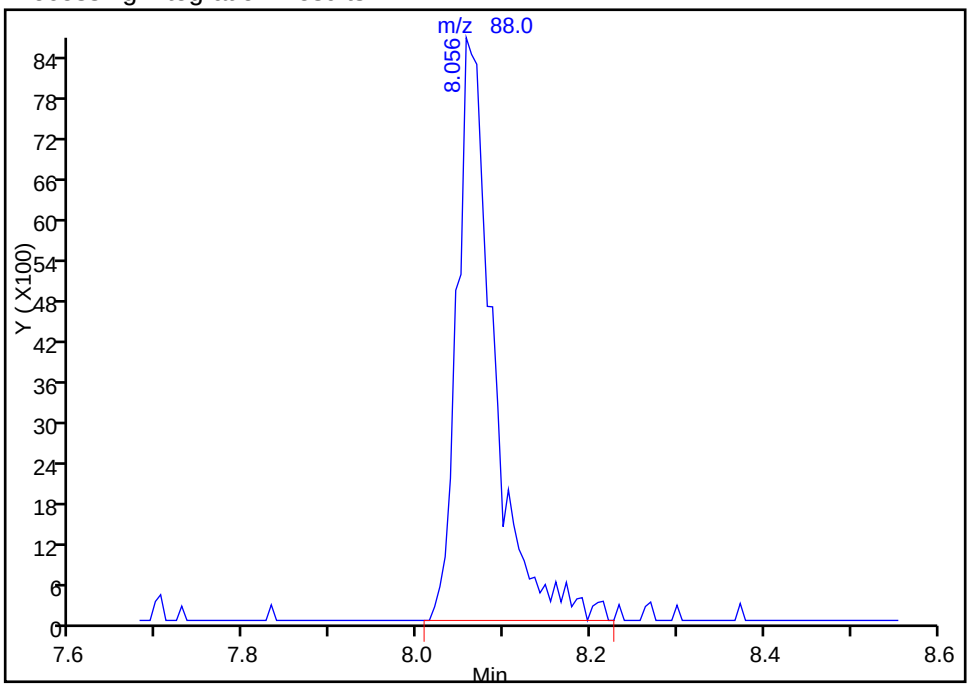
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303009.D
Injection Date: 03-Mar-2015 14:52:30 Instrument ID: CHHP5
Lims ID: ICIS VSTD10
Client ID:
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

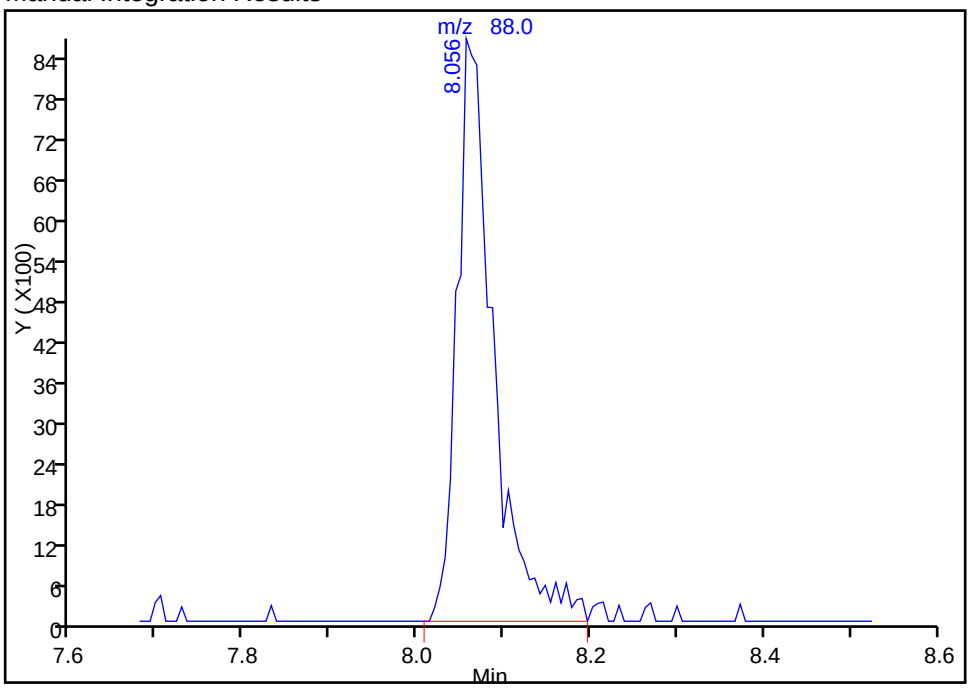
Processing Integration Results

RT: 8.06
Area: 25579
Amount: 832.2190
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 25299
Amount: 815.6604
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:25:43
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303010.D
Lims ID: IC VSTD15
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Mar-2015 15:16:30 ALS Bottle#: 8 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD15
Misc. Info.: 180-0005873-010
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:08 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 09:26:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.321	0.000	94	173343	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	96	473168	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	95	112379	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	95	164943	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	79	155860	75.0	76.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.912	6.912	0.000	96	185233	75.0	74.0	
$ 7 Toluene-d8 (Surr)	98	8.932	8.932	0.000	94	686909	75.0	78.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	86	251005	75.0	77.0	
11 Dichlorodifluoromethane	85	1.620	1.620	0.000	98	186155	75.0	78.3	
12 Chloromethane	50	1.778	1.778	0.000	99	284435	75.0	74.9	
13 Vinyl chloride	62	1.912	1.912	0.000	98	276203	75.0	75.6	
14 Butadiene	39	1.948	1.948	0.000	98	311986	75.0	73.7	
15 Bromomethane	94	2.258	2.258	0.000	89	83485	75.0	78.2	
16 Chloroethane	64	2.380	2.380	0.000	97	109418	75.0	73.7	
17 Dichlorofluoromethane	67	2.648	2.648	0.000	97	252307	75.0	74.1	
18 Trichlorofluoromethane	101	2.708	2.708	0.000	97	211640	75.0	74.4	
20 Ethyl ether	59	3.092	3.092	0.000	100	203184	75.0	74.0	
21 Acrolein	56	3.274	3.274	0.000	100	66477	175.0	183.4	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	100	210842	75.0	76.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.420	0.000	100	215323	75.0	77.3	
24 Acetone	43	3.505	3.505	0.000	100	145165	150.0	146.1	
25 Iodomethane	142	3.585	3.585	0.000	100	288929	75.0	74.5	
26 Carbon disulfide	76	3.664	3.664	0.000	100	513502	75.0	75.7	
28 3-Chloro-1-propene	76	3.956	3.956	0.000	100	129734	75.0	75.4	
30 Methyl acetate	43	4.029	4.029	0.000	100	1035670	375.0	378.9	
31 Methylene Chloride	84	4.150	4.150	0.000	100	227072	75.0	75.7	
32 2-Methyl-2-propanol	59	4.454	4.454	0.000	100	166475	750.0	801.4	
33 Acrylonitrile	53	4.564	4.564	0.000	100	1012388	750.0	747.2	
34 trans-1,2-Dichloroethene	96	4.576	4.576	0.000	100	213264	75.0	74.0	
35 Methyl tert-butyl ether	73	4.607	4.607	0.000	100	532783	75.0	74.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	100	382955	75.0	74.9	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	100	412070	75.0	75.0	
38 Vinyl acetate	43	5.306	5.306	0.000	100	136421	75.0	72.7	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	100	152789	75.0	75.2	
45 cis-1,2-Dichloroethene	96	5.945	5.945	0.000	100	230462	75.0	74.8	
46 2-Butanone (MEK)	43	6.000	6.000	0.000	100	231681	150.0	143.1	
49 Chlorobromomethane	128	6.237	6.237	0.000	100	93661	75.0	73.0	
51 Tetrahydrofuran	42	6.292	6.292	0.000	100	164028	150.0	142.4	
52 Chloroform	83	6.346	6.346	0.000	100	325101	75.0	74.3	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	100	222478	75.0	74.9	
54 Cyclohexane	56	6.590	6.590	0.000	100	510634	75.0	76.6	
56 Carbon tetrachloride	117	6.724	6.724	0.000	100	148555	75.0	73.7	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	100	290552	75.0	76.6	
57 Isobutyl alcohol	41	6.949	6.949	0.000	100	110778	1875.0	1705.7	
58 Benzene	78	6.967	6.967	0.000	100	905954	75.0	75.8	
59 1,2-Dichloroethane	62	6.991	6.991	0.000	100	260776	75.0	75.5	
62 n-Heptane	43	7.283	7.283	0.000	100	351211	75.0	75.6	
64 Trichloroethene	130	7.673	7.673	0.000	100	215876	75.0	76.7	
66 Methylcyclohexane	83	7.867	7.867	0.000	100	402645	75.0	75.7	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	100	233558	75.0	74.4	
68 Dibromomethane	93	8.025	8.025	0.000	100	105949	75.0	74.8	
70 1,4-Dioxane	88	8.068	8.068	0.000	100	41693	1500.0	1490.1	
71 Dichlorobromomethane	83	8.202	8.202	0.000	100	196712	75.0	74.4	
74 cis-1,3-Dichloropropene	75	8.664	8.664	0.000	100	264977	75.0	75.7	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	100	535170	150.0	157.7	
76 Toluene	91	8.999	8.999	0.000	100	901036	75.0	77.7	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	100	181868	75.0	74.4	
78 Ethyl methacrylate	69	9.321	9.321	0.000	100	212852	75.0	77.4	
79 1,1,2-Trichloroethane	97	9.406	9.406	0.000	100	164474	75.0	77.6	
80 Tetrachloroethene	164	9.540	9.540	0.000	100	166159	75.0	77.6	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	100	308357	75.0	77.4	
82 2-Hexanone	43	9.662	9.662	0.000	100	379170	150.0	160.1	
84 Chlorodibromomethane	129	9.796	9.796	0.000	100	104491	75.0	75.0	
85 Ethylene Dibromide	107	9.905	9.905	0.000	100	156151	75.0	76.5	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	100	273444	75.0	76.9	
87 Chlorobenzene	112	10.398	10.398	0.000	100	567114	75.0	76.3	
88 4-Chlorobenzotrifluoride	180	10.428	10.428	0.000	100	266494	75.0	78.4	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	100	126760	75.0	74.0	
90 Ethylbenzene	106	10.508	10.508	0.000	100	336025	75.0	78.2	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	100	411920	75.0	77.9	
92 o-Xylene	106	11.019	11.019	0.000	100	400497	75.0	78.0	
93 Styrene	104	11.031	11.031	0.000	100	658511	75.0	78.5	
94 Bromoform	173	11.213	11.213	0.000	100	53409	75.0	72.6	
96 2-Chlorobenzotrifluoride	180	11.280	11.280	0.000	100	270017	75.0	76.6	
97 Isopropylbenzene	105	11.384	11.384	0.000	100	1000450	75.0	79.4	
99 1,1,2,2-Tetrachloroethane	83	11.682	11.682	0.000	100	226865	75.0	77.2	
100 Bromobenzene	156	11.688	11.688	0.000	100	214072	75.0	74.3	
101 1,2,3-Trichloropropane	110	11.724	11.724	0.000	100	69273	75.0	71.7	
102 trans-1,4-Dichloro-2-buten	53	11.736	11.736	0.000	100	66494	75.0	70.9	
103 N-Propylbenzene	120	11.791	11.791	0.000	100	290195	75.0	75.8	
104 2-Chlorotoluene	126	11.882	11.882	0.000	100	235369	75.0	74.5	
105 3-Chlorotoluene	126	11.937	11.937	0.000	100	229133	75.0	70.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	100	806423	75.0	76.1	
107 4-Chlorotoluene	126	11.986	11.986	0.000	100	256729	75.0	75.3	
108 tert-Butylbenzene	119	12.296	12.296	0.000	100	700240	75.0	76.6	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	100	832074	75.0	76.1	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	100	183065	75.0	74.2	
112 sec-Butylbenzene	105	12.515	12.515	0.000	100	1008135	75.0	76.6	
113 1,3-Dichlorobenzene	146	12.625	12.625	0.000	100	420272	75.0	73.8	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	100	824816	75.0	76.5	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	100	429154	75.0	74.9	
116 2,4-Dichloro-1-(triflourom	214	12.764	12.764	0.000	100	171372	75.0	73.1	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.813	0.000	100	186097	75.0	72.8	
120 n-Butylbenzene	91	13.069	13.069	0.000	100	729499	75.0	76.1	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	100	387327	75.0	74.4	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	100	23597	75.0	68.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.012	14.012	0.000	100	813805	225.0	228.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	100	529936	150.0	150.7	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	100	199956	75.0	76.8	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	100	81675	75.0	73.4	
128 Naphthalene	128	14.942	14.942	0.000	100	580632	75.0	76.8	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	100	171850	75.0	76.9	
131 2,4,5-Trichlorotoluene	159	15.970	15.970	0.000	100	81997	75.0	72.6	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	100	78544	75.0	75.4	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		150.0	155.9	
S 134 1,2-Dichloroethene, Total	96				0		150.0	148.8	
S 135 1,3-Dichloropropene, Total	1				0		150.0	150.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWKetpri Re_00003	Amount Added:	3.00	Units: uL	
VOA8260SURR_00031	Amount Added:	3.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	3.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	3.00	Units: uL	
VOAVAPRI_00003	Amount Added:	3.00	Units: uL	
VOAACRPRI_00003	Amount Added:	7.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

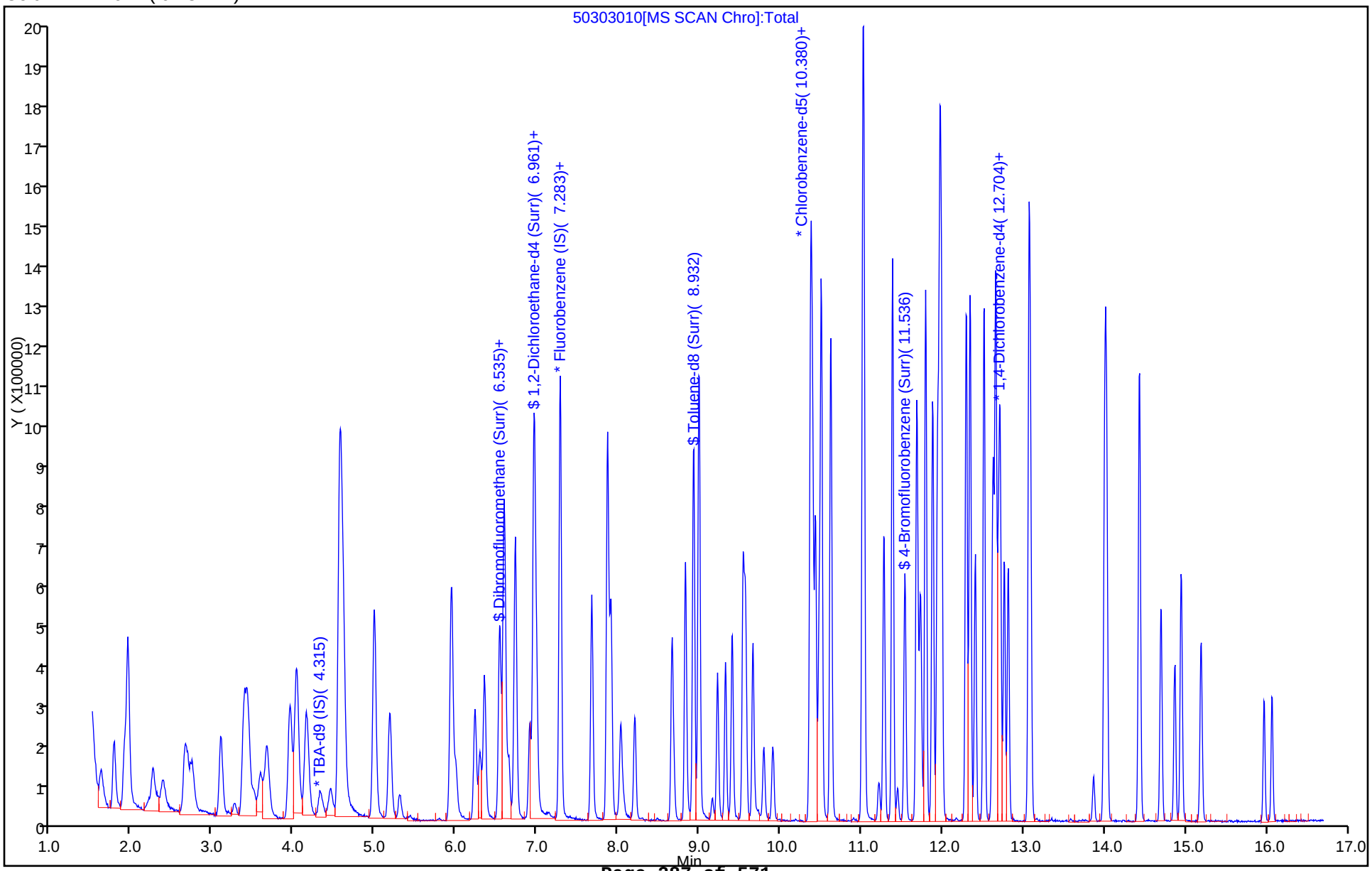
Report Date: 04-Mar-2015 10:13:08 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303010.D

Injection Date:	03-Mar-2015 15:16:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD15			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

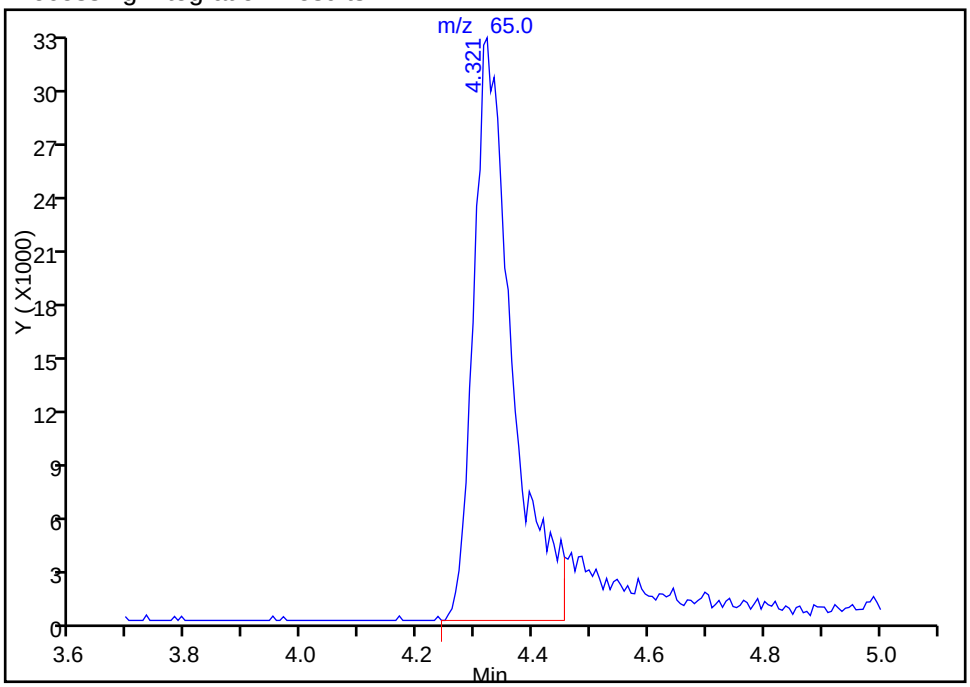
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303010.D				
Injection Date:	03-Mar-2015 15:16:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD15				
Client ID:					
Operator ID:	001562	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

* 1 TBA-d9 (IS), CAS: 25725-11-5

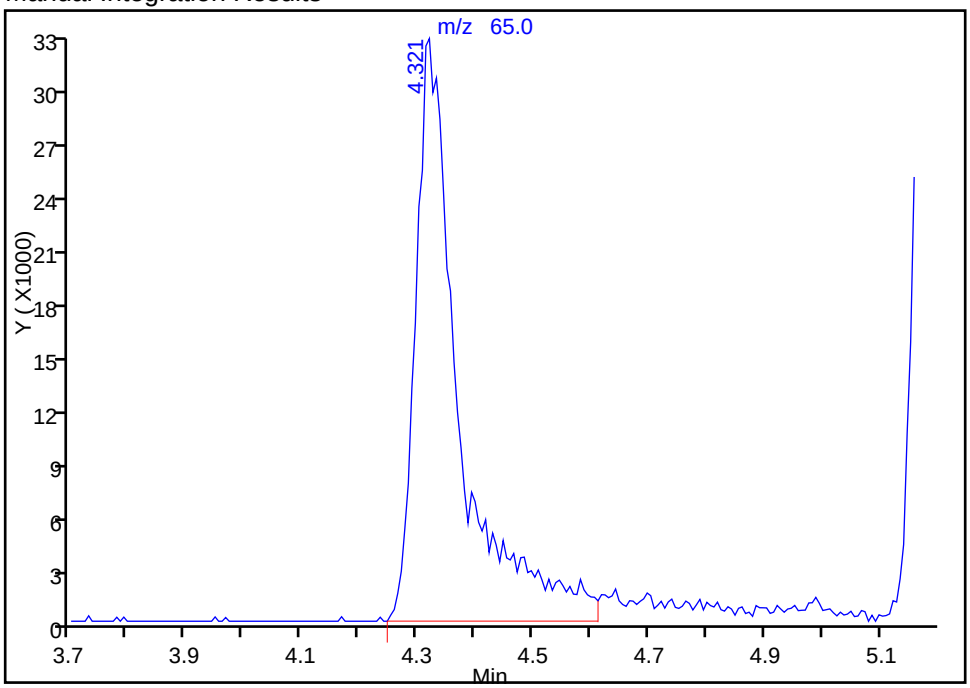
Processing Integration Results

RT: 4.32
Area: 152021
Amount: 1000.0000
Amount Units: ng



Manual Integration Results

RT: 4.32
Area: 173343
Amount: 1000.0000
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:31:26
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D
Lims ID: IC VSTD20
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Mar-2015 15:40:30 ALS Bottle#: 9 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD20
Misc. Info.: 180-0005873-011
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:10 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 09:33:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.321	0.000	95	178184	1000.0	1000.0	M
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	90	463863	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	97	114659	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	96	167232	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	98	199995	100.0	100.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.912	-0.006	99	250369	100.0	102.0	
$ 7 Toluene-d8 (Surr)	98	8.926	8.932	-0.006	100	910944	100.0	101.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	99	327893	100.0	98.6	
11 Dichlorodifluoromethane	85	1.626	1.620	0.006	71	248600	100.0	106.7	
12 Chloromethane	50	1.778	1.778	0.000	94	377346	100.0	101.3	
13 Vinyl chloride	62	1.906	1.912	-0.006	100	370529	100.0	103.5	
14 Butadiene	39	1.948	1.948	0.000	98	418091	100.0	100.7	
15 Bromomethane	94	2.252	2.258	-0.006	70	100603	100.0	97.3	
16 Chloroethane	64	2.386	2.380	0.006	78	141570	100.0	97.2	
17 Dichlorofluoromethane	67	2.654	2.648	0.006	99	320590	100.0	96.0	
18 Trichlorofluoromethane	101	2.703	2.708	-0.005	97	274680	100.0	98.5	
20 Ethyl ether	59	3.092	3.092	0.000	99	266877	100.0	99.2	
21 Acrolein	56	3.262	3.274	-0.012	84	73636	200.0	207.2	
22 1,1-Dichloroethene	96	3.378	3.384	-0.006	99	282447	100.0	104.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.420	0.007	98	283308	100.0	103.8	
24 Acetone	43	3.506	3.505	0.001	99	186722	200.0	191.7	
25 Iodomethane	142	3.573	3.585	-0.012	96	391404	100.0	103.0	
26 Carbon disulfide	76	3.658	3.664	-0.006	100	702207	100.0	105.6	
28 3-Chloro-1-propene	76	3.944	3.956	-0.012	91	175910	100.0	104.3	
30 Methyl acetate	43	4.023	4.029	-0.006	100	1360573	500.0	507.8	
31 Methylene Chloride	84	4.144	4.150	-0.006	99	292219	100.0	100.5	
32 2-Methyl-2-propanol	59	4.449	4.454	-0.005	74	219266	1000.0	1026.9	M
33 Acrylonitrile	53	4.558	4.564	-0.006	99	1352445	1000.0	1018.2	
34 trans-1,2-Dichloroethene	96	4.564	4.576	-0.012	56	288749	100.0	102.2	
35 Methyl tert-butyl ether	73	4.607	4.607	0.000	100	717429	100.0	101.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.990	-0.006	99	515034	100.0	102.7	
37 1,1-Dichloroethane	63	5.173	5.178	-0.005	100	542610	100.0	100.8	
38 Vinyl acetate	43	5.300	5.306	-0.006	95	200290	100.0	108.9	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	65	206033	100.0	103.4	
45 cis-1,2-Dichloroethene	96	5.945	5.945	0.000	92	302735	100.0	100.2	
46 2-Butanone (MEK)	43	5.994	6.000	-0.006	100	323375	200.0	203.7	
49 Chlorobromomethane	128	6.225	6.237	-0.012	79	129587	100.0	103.0	
51 Tetrahydrofuran	42	6.286	6.292	-0.006	98	227621	200.0	201.5	
52 Chloroform	83	6.347	6.346	0.001	98	436474	100.0	101.7	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	75	308574	100.0	105.9	
54 Cyclohexane	56	6.590	6.590	0.000	83	671150	100.0	102.6	
56 Carbon tetrachloride	117	6.724	6.724	0.000	68	204809	100.0	103.6	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	96	385796	100.0	103.8	
57 Isobutyl alcohol	41	6.949	6.949	0.000	41	166120	2500.0	2609.2	
58 Benzene	78	6.961	6.967	-0.006	99	1208197	100.0	103.1	
59 1,2-Dichloroethane	62	6.985	6.991	-0.006	93	341780	100.0	101.0	
62 n-Heptane	43	7.284	7.283	0.001	96	463470	100.0	101.7	
64 Trichloroethene	130	7.673	7.673	0.000	98	289114	100.0	104.8	
66 Methylcyclohexane	83	7.868	7.867	0.001	95	553839	100.0	106.2	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	99	309721	100.0	100.7	
68 Dibromomethane	93	8.026	8.025	0.001	98	142348	100.0	102.4	
70 1,4-Dioxane	88	8.062	8.068	-0.006	93	56031	2000.0	2042.7	
71 Dichlorobromomethane	83	8.202	8.202	0.000	99	271870	100.0	105.0	
74 cis-1,3-Dichloropropene	75	8.658	8.664	-0.006	99	360087	100.0	104.9	
75 4-Methyl-2-pentanone (MIBK	43	8.829	8.828	0.001	72	716953	200.0	207.1	
76 Toluene	91	8.993	8.999	-0.006	98	1214867	100.0	102.7	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	80	260722	100.0	104.5	
78 Ethyl methacrylate	69	9.321	9.321	0.000	93	300128	100.0	107.0	
79 1,1,2-Trichloroethane	97	9.407	9.406	0.001	93	214719	100.0	99.3	
80 Tetrachloroethene	164	9.540	9.540	0.000	98	224037	100.0	102.6	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	94	406834	100.0	100.1	
82 2-Hexanone	43	9.662	9.662	0.000	99	504684	200.0	208.8	
84 Chlorodibromomethane	129	9.796	9.796	0.000	93	148140	100.0	104.2	
85 Ethylene Dibromide	107	9.905	9.905	0.000	98	216491	100.0	104.0	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	99	362586	100.0	99.9	
87 Chlorobenzene	112	10.392	10.398	-0.006	89	771107	100.0	101.7	
88 4-Chlorobenzotrifluoride	180	10.435	10.428	0.007	97	349632	100.0	100.8	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	96	178500	100.0	102.1	
90 Ethylbenzene	106	10.508	10.508	0.000	100	459104	100.0	104.8	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	100	559842	100.0	103.7	
92 o-Xylene	106	11.013	11.019	-0.005	93	532728	100.0	101.7	
93 Styrene	104	11.031	11.031	0.000	96	881546	100.0	102.9	
94 Bromoform	173	11.213	11.213	0.000	90	78926	100.0	105.1	
96 2-Chlorobenzotrifluoride	180	11.280	11.280	0.000	96	362034	100.0	100.6	
97 Isopropylbenzene	105	11.384	11.384	0.000	97	1329527	100.0	103.4	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.682	-0.006	76	310127	100.0	103.5	
100 Bromobenzene	156	11.688	11.688	0.000	95	285408	100.0	97.7	
101 1,2,3-Trichloropropane	110	11.724	11.724	0.000	70	94067	100.0	96.1	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.736	0.001	79	87031	100.0	91.5	
103 N-Propylbenzene	120	11.791	11.791	0.000	98	387657	100.0	99.9	
104 2-Chlorotoluene	126	11.877	11.882	-0.005	99	315400	100.0	98.4	
105 3-Chlorotoluene	126	11.937	11.937	0.000	75	313196	100.0	95.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	99	1078510	100.0	100.4	
107 4-Chlorotoluene	126	11.986	11.986	0.000	99	352063	100.0	101.8	
108 tert-Butylbenzene	119	12.290	12.296	-0.006	66	930079	100.0	100.3	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	100	1124585	100.0	101.5	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	98	245627	100.0	98.2	
112 sec-Butylbenzene	105	12.509	12.515	-0.006	92	1341600	100.0	100.6	
113 1,3-Dichlorobenzene	146	12.625	12.625	0.000	88	570988	100.0	98.9	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	99	1092513	100.0	99.9	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	97	576692	100.0	99.2	
116 2,4-Dichloro-1-(triflourom	214	12.765	12.764	0.001	94	238033	100.0	100.1	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.813	0.000	97	254456	100.0	98.1	
120 n-Butylbenzene	91	13.069	13.069	0.000	100	981363	100.0	101.0	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	99	527759	100.0	99.9	
122 1,2-Dibromo-3-Chloropropan	75	13.860	13.866	-0.006	94	35031	100.0	100.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.012	14.012	0.000	99	1079107	300.0	299.2	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.431	-0.005	99	704089	200.0	197.4	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	98	263899	100.0	99.9	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	94	111717	100.0	99.0	
128 Naphthalene	128	14.943	14.942	0.001	100	773789	100.0	101.0	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	98	224922	100.0	99.3	
131 2,4,5-Trichlorotoluene	159	15.971	15.970	0.001	96	109488	100.0	95.6	
130 2,3,6-Trichlorotoluene	159	16.062	16.068	-0.006	97	102526	100.0	97.1	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		200.0	205.4	
S 134 1,2-Dichloroethene, Total	96				0		200.0	202.5	
S 135 1,3-Dichloropropene, Total	1				0		200.0	209.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added:	8.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	4.00	Units: uL	
VOAVAPRI_00003	Amount Added:	4.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	4.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	4.00	Units: uL	
VOA8260SURR_00031	Amount Added:	4.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

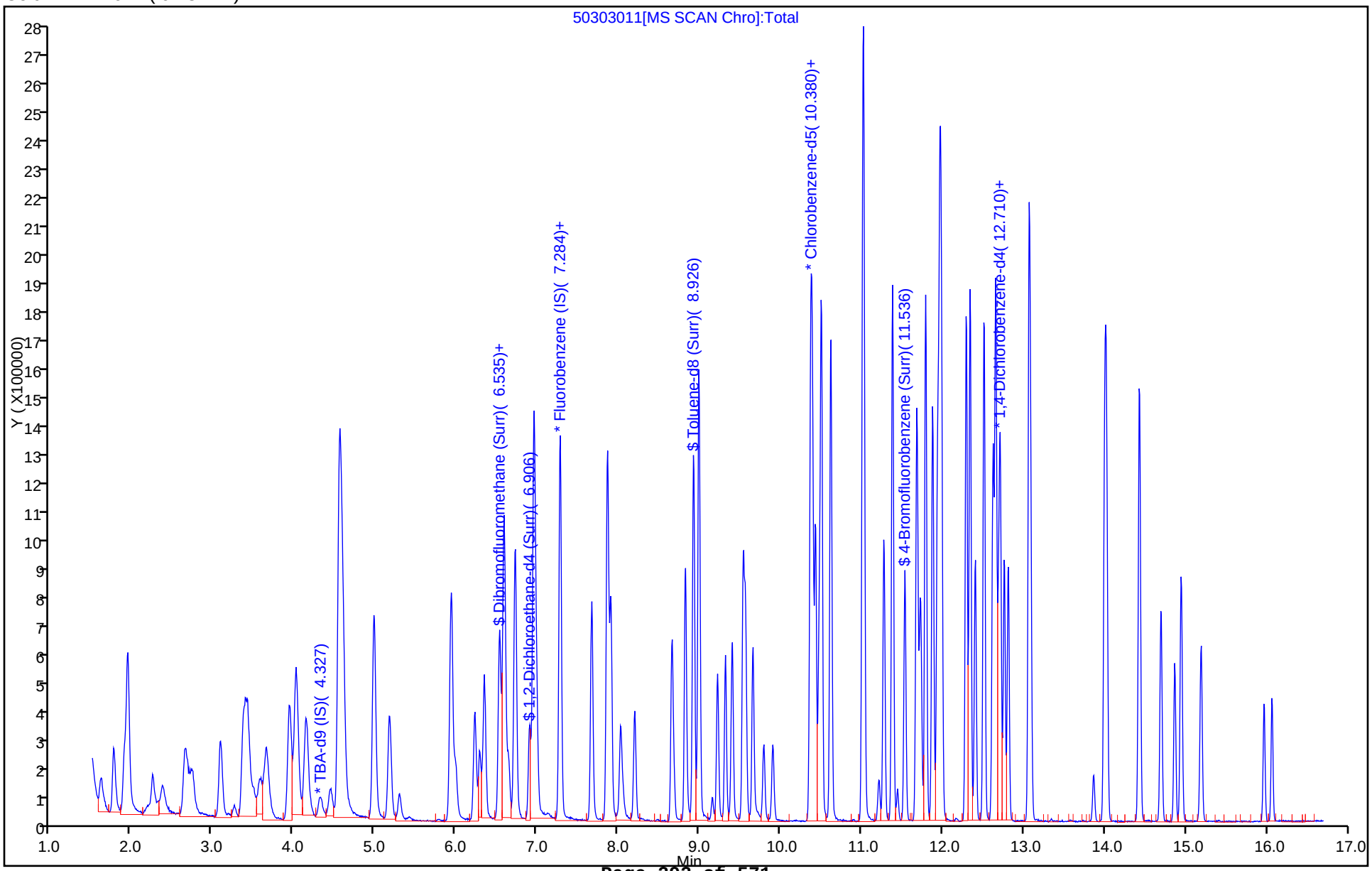
Report Date: 04-Mar-2015 10:13:10 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D

Injection Date:	03-Mar-2015 15:40:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD20			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

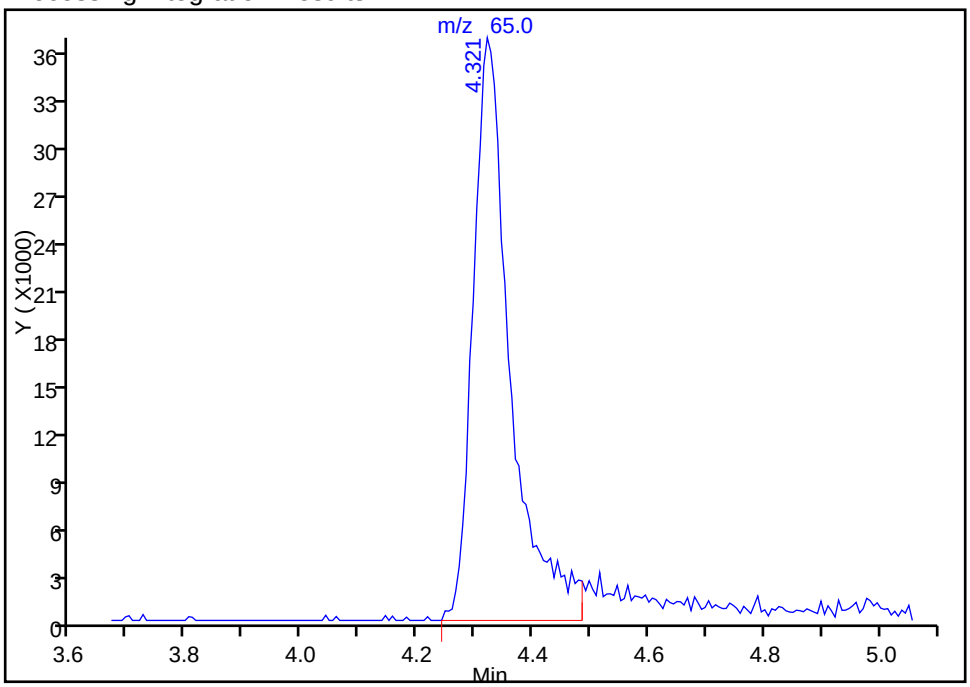
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D				
Injection Date:	03-Mar-2015 15:40:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD20				
Client ID:					
Operator ID:	001562	ALS Bottle#:	9	Worklist Smp#:	11
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

* 1 TBA-d9 (IS), CAS: 25725-11-5

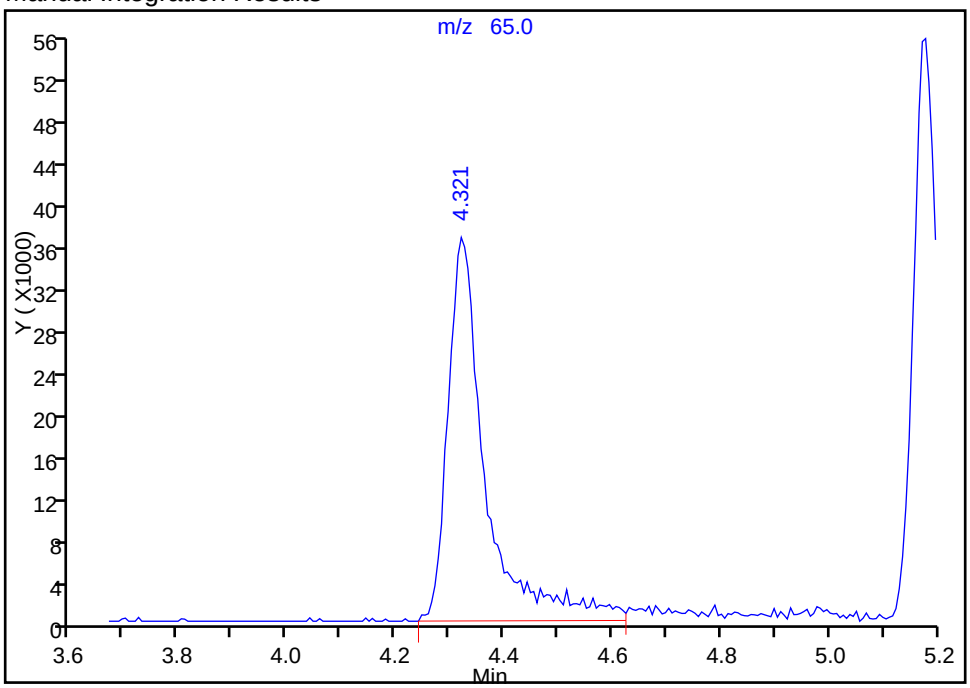
Processing Integration Results

RT: 4.32
Area: 165569
Amount: 1000.0000
Amount Units: ng



Manual Integration Results

RT: 4.32
Area: 178184
Amount: 1000.0000
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:33:10
Audit Action: Manually Integrated
Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

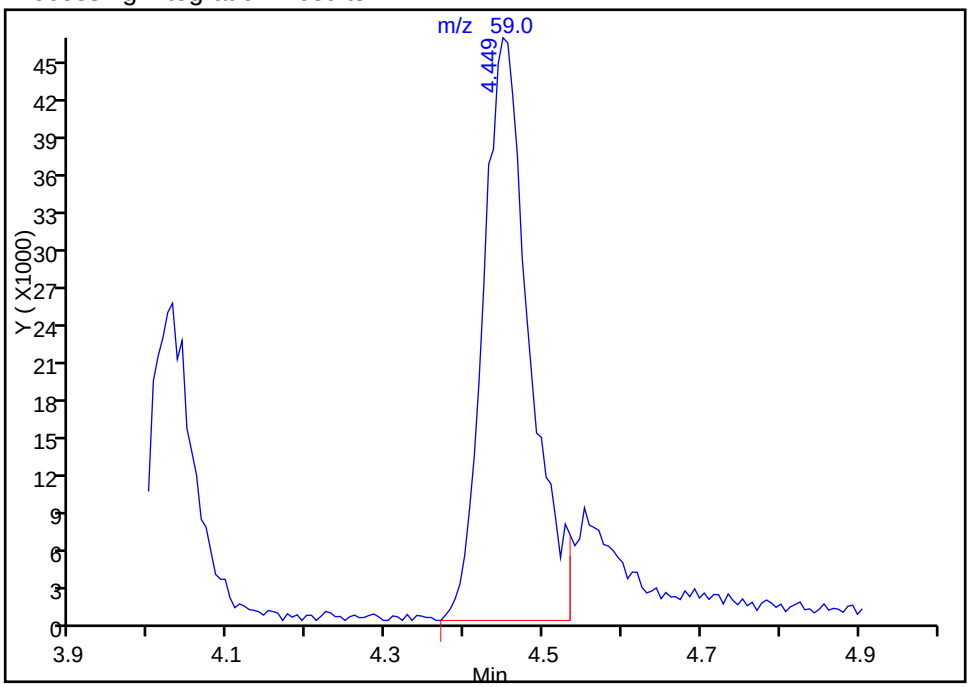
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303011.D				
Injection Date:	03-Mar-2015 15:40:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD20				
Client ID:					
Operator ID:	001562	ALS Bottle#:	9	Worklist Smp#:	11
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

32 2-Methyl-2-propanol, CAS: 75-65-0

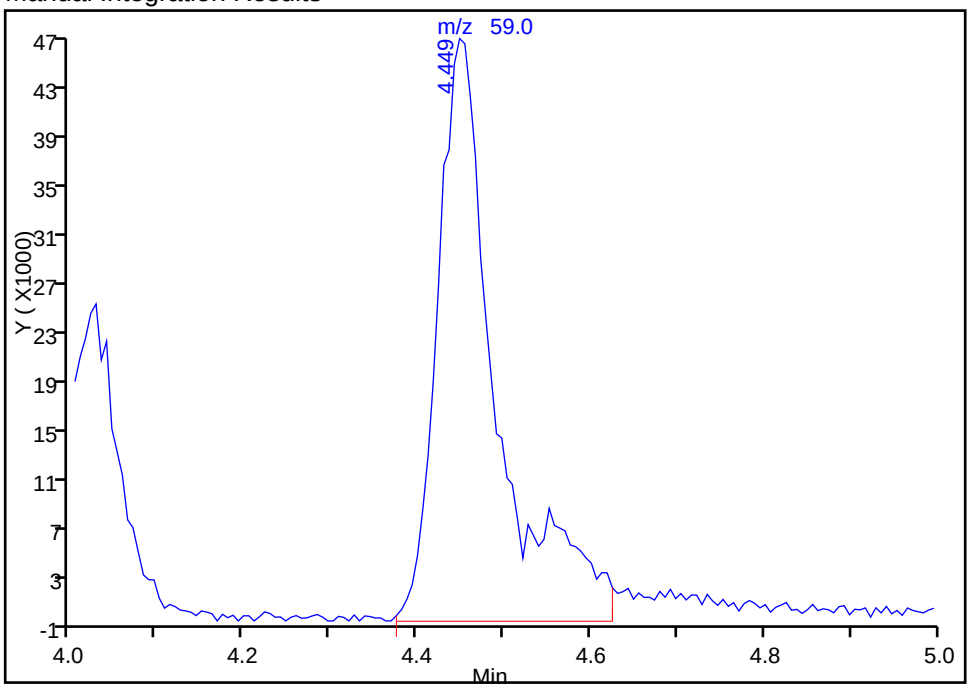
Processing Integration Results

RT: 4.45
Area: 188329
Amount: 911.3747
Amount Units: ng



Manual Integration Results

RT: 4.45
Area: 219266
Amount: 1026.8689
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:35:16
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303012.D
Lims ID: IC VSTD35
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Mar-2015 16:04:30 ALS Bottle#: 10 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD35
Misc. Info.: 180-0005873-012
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:11 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 09:37:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.323	4.321	0.002	87	196024	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.280	7.277	0.003	72	484263	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.370	10.368	0.002	80	123732	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.685	0.003	94	171685	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.535	-0.004	98	361120	175.0	174.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.912	-0.004	99	444667	175.0	173.5	
$ 7 Toluene-d8 (Surr)	98	8.928	8.932	-0.004	100	1566428	175.0	162.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.538	11.536	0.002	99	603450	175.0	168.2	
11 Dichlorodifluoromethane	85	1.622	1.620	0.002	98	392329	175.0	161.2	
12 Chloromethane	50	1.780	1.778	0.002	94	626420	175.0	161.1	
13 Vinyl chloride	62	1.908	1.912	-0.004	99	599809	175.0	160.5	
14 Butadiene	39	1.950	1.948	0.002	98	656586	175.0	151.5	
15 Bromomethane	94	2.255	2.258	-0.003	75	163842	175.0	154.6	
16 Chloroethane	64	2.376	2.380	-0.004	83	241114	175.0	158.6	
17 Dichlorofluoromethane	67	2.650	2.648	0.002	99	529735	175.0	152.0	
18 Trichlorofluoromethane	101	2.717	2.708	0.009	98	433936	175.0	149.1	
20 Ethyl ether	59	3.094	3.092	0.002	100	467174	175.0	166.3	
21 Acrolein	56	3.258	3.274	-0.016	81	76799	225.0	207.0	
22 1,1-Dichloroethene	96	3.374	3.384	-0.010	99	466370	175.0	165.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.429	3.420	0.009	98	466462	175.0	163.7	
24 Acetone	43	3.508	3.505	0.003	98	338711	350.0	333.0	
25 Iodomethane	142	3.581	3.585	-0.004	96	658969	175.0	166.1	
26 Carbon disulfide	76	3.654	3.664	-0.010	100	1168823	175.0	168.4	
28 3-Chloro-1-propene	76	3.946	3.956	-0.010	92	305734	175.0	173.6	
30 Methyl acetate	43	4.025	4.029	-0.004	100	2402270	875.0	858.8	
31 Methylene Chloride	84	4.147	4.150	-0.003	99	516693	175.0	172.9	
32 2-Methyl-2-propanol	59	4.451	4.454	-0.003	90	407341	1750.0	1734.0	M
33 Acrylonitrile	53	4.554	4.564	-0.010	98	2376546	1750.0	1713.8	
34 trans-1,2-Dichloroethene	96	4.566	4.576	-0.010	57	496919	175.0	168.5	
35 Methyl tert-butyl ether	73	4.609	4.607	0.002	100	1269630	175.0	172.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.986	4.990	-0.004	98	854071	175.0	163.2	
37 1,1-Dichloroethane	63	5.175	5.178	-0.003	100	945361	175.0	168.2	
38 Vinyl acetate	43	5.296	5.306	-0.010	98	346138	175.0	180.3	
44 2,2-Dichloropropane	77	5.929	5.933	-0.004	65	354872	175.0	170.6	
45 cis-1,2-Dichloroethene	96	5.941	5.945	-0.004	87	529478	175.0	167.9	
46 2-Butanone (MEK)	43	5.990	6.000	-0.010	100	573542	350.0	346.1	
49 Chlorobromomethane	128	6.227	6.237	-0.010	75	220291	175.0	167.7	
51 Tetrahydrofuran	42	6.288	6.292	-0.004	99	386544	350.0	327.8	
52 Chloroform	83	6.349	6.346	0.003	85	751712	175.0	167.8	
53 1,1,1-Trichloroethane	97	6.531	6.535	-0.004	98	515456	175.0	169.5	
54 Cyclohexane	56	6.592	6.590	0.002	94	1109737	175.0	162.6	
56 Carbon tetrachloride	117	6.720	6.724	-0.004	66	362211	175.0	175.6	
55 1,1-Dichloropropene	75	6.726	6.730	-0.004	96	650285	175.0	167.5	
57 Isobutyl alcohol	41	6.951	6.949	0.002	45	324042	4375.0	4875.2	
58 Benzene	78	6.963	6.967	-0.004	98	2026853	175.0	165.7	
59 1,2-Dichloroethane	62	6.994	6.991	0.003	98	602602	175.0	170.6	
62 n-Heptane	43	7.286	7.283	0.003	89	806729	175.0	169.6	
64 Trichloroethene	130	7.669	7.673	-0.004	99	484743	175.0	168.3	
66 Methylcyclohexane	83	7.864	7.867	-0.003	95	899256	175.0	165.2	
67 1,2-Dichloropropane	63	7.906	7.910	-0.004	95	551216	175.0	171.6	
68 Dibromomethane	93	8.028	8.025	0.003	98	252976	175.0	174.4	
70 1,4-Dioxane	88	8.064	8.068	-0.004	96	107243	3500.0	3745.1	
71 Dichlorobromomethane	83	8.204	8.202	0.002	100	494496	175.0	182.9	
74 cis-1,3-Dichloropropene	75	8.660	8.664	-0.004	100	670035	175.0	187.1	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.828	-0.003	98	1293845	350.0	346.3	
76 Toluene	91	8.995	8.999	-0.004	98	2025808	175.0	158.6	
77 trans-1,3-Dichloropropene	75	9.226	9.224	0.002	93	504089	175.0	187.2	
78 Ethyl methacrylate	69	9.324	9.321	0.003	99	559868	175.0	184.9	
79 1,1,2-Trichloroethane	97	9.403	9.406	-0.003	98	384751	175.0	164.9	
80 Tetrachloroethene	164	9.543	9.540	0.003	99	376799	175.0	159.9	
81 1,3-Dichloropropane	76	9.567	9.571	-0.004	98	730064	175.0	166.5	
82 2-Hexanone	43	9.658	9.662	-0.004	99	895448	350.0	343.4	
84 Chlorodibromomethane	129	9.792	9.796	-0.004	96	285792	175.0	186.3	
85 Ethylene Dibromide	107	9.901	9.905	-0.004	99	391652	175.0	174.3	
86 3-Chlorobenzotrifluoride	180	10.376	10.374	0.002	90	648455	175.0	165.5	
87 Chlorobenzene	112	10.394	10.398	-0.004	98	1313352	175.0	160.6	
88 4-Chlorobenzotrifluoride	180	10.431	10.428	0.003	97	620760	175.0	165.8	
89 1,1,1,2-Tetrachloroethane	131	10.479	10.477	0.002	93	343717	175.0	182.2	
90 Ethylbenzene	106	10.504	10.508	-0.004	99	779624	175.0	164.9	
91 m-Xylene & p-Xylene	106	10.625	10.623	0.002	99	963277	175.0	165.4	
92 o-Xylene	106	11.015	11.019	-0.003	90	917689	175.0	162.3	
93 Styrene	104	11.027	11.031	-0.004	91	1511299	175.0	163.5	
94 Bromoform	173	11.216	11.213	0.003	91	158386	175.0	195.4	
96 2-Chlorobenzotrifluoride	180	11.276	11.280	-0.004	91	640624	175.0	165.0	
97 Isopropylbenzene	105	11.380	11.384	-0.004	99	2186986	175.0	157.6	
99 1,1,2,2-Tetrachloroethane	83	11.678	11.682	-0.004	69	554635	175.0	171.5	
100 Bromobenzene	156	11.684	11.688	-0.004	89	509283	175.0	169.8	
101 1,2,3-Trichloropropane	110	11.727	11.724	0.003	69	166640	175.0	165.8	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.736	-0.003	84	171777	175.0	175.9	
103 N-Propylbenzene	120	11.793	11.791	0.002	98	668080	175.0	167.7	
104 2-Chlorotoluene	126	11.879	11.882	-0.003	98	556210	175.0	169.1	
105 3-Chlorotoluene	126	11.939	11.937	0.002	73	574840	175.0	170.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.968	-0.004	99	1821042	175.0	165.2	
107 4-Chlorotoluene	126	11.988	11.986	0.002	97	590273	175.0	166.2	
108 tert-Butylbenzene	119	12.292	12.296	-0.004	89	1538995	175.0	161.7	
110 1,2,4-Trimethylbenzene	105	12.341	12.339	0.002	98	1864947	175.0	163.9	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.406	0.002	99	433987	175.0	168.9	
112 sec-Butylbenzene	105	12.511	12.515	-0.004	93	2200188	175.0	160.6	
113 1,3-Dichlorobenzene	146	12.621	12.625	-0.004	91	974213	175.0	164.4	
114 4-Isopropyltoluene	119	12.657	12.655	0.002	98	1841892	175.0	164.1	
115 1,4-Dichlorobenzene	146	12.712	12.710	0.002	97	989384	175.0	165.9	
116 2,4-Dichloro-1-(triflourom	214	12.761	12.764	-0.003	93	406260	175.0	166.4	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.813	-0.004	95	457073	175.0	171.7	
120 n-Butylbenzene	91	13.065	13.069	-0.004	99	1641091	175.0	164.4	
121 1,2-Dichlorobenzene	146	13.083	13.087	-0.004	98	903766	175.0	166.7	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.866	-0.004	92	69537	175.0	194.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.012	-0.004	99	1903055	525.0	514.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.431	-0.003	99	1260859	350.0	344.4	
126 1,2,4-Trichlorobenzene	180	14.695	14.693	0.002	98	464683	175.0	171.4	
127 Hexachlorobutadiene	225	14.866	14.869	-0.003	94	186416	175.0	161.0	
128 Naphthalene	128	14.945	14.942	0.003	100	1355121	175.0	172.2	
129 1,2,3-Trichlorobenzene	180	15.188	15.192	-0.004	99	394157	175.0	169.5	
131 2,4,5-Trichlorotoluene	159	15.967	15.970	-0.003	98	200009	175.0	170.0	
130 2,3,6-Trichlorotoluene	159	16.064	16.068	-0.004	97	182005	175.0	167.8	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		350.0	327.7	
S 134 1,2-Dichloroethene, Total	96				0		350.0	336.5	
S 135 1,3-Dichloropropene, Total	1				0		350.0	374.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00031	Amount Added:	7.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	7.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	7.00	Units: uL	
VOAVAPRI_00003	Amount Added:	7.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	7.00	Units: uL	
VOAACRPRI_00003	Amount Added:	9.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

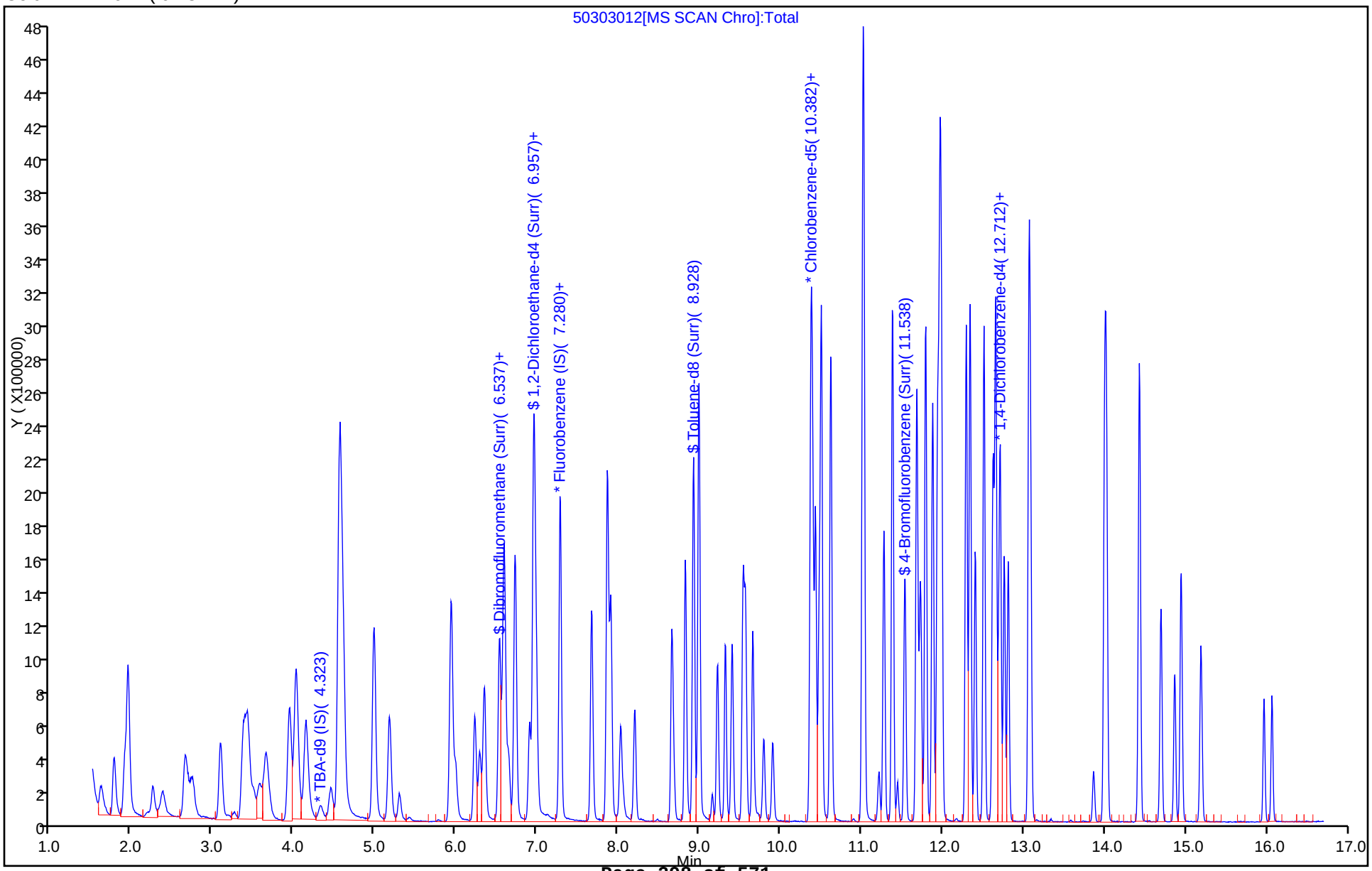
Report Date: 04-Mar-2015 10:13:12 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303012.D

Injection Date:	03-Mar-2015 16:04:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD35			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

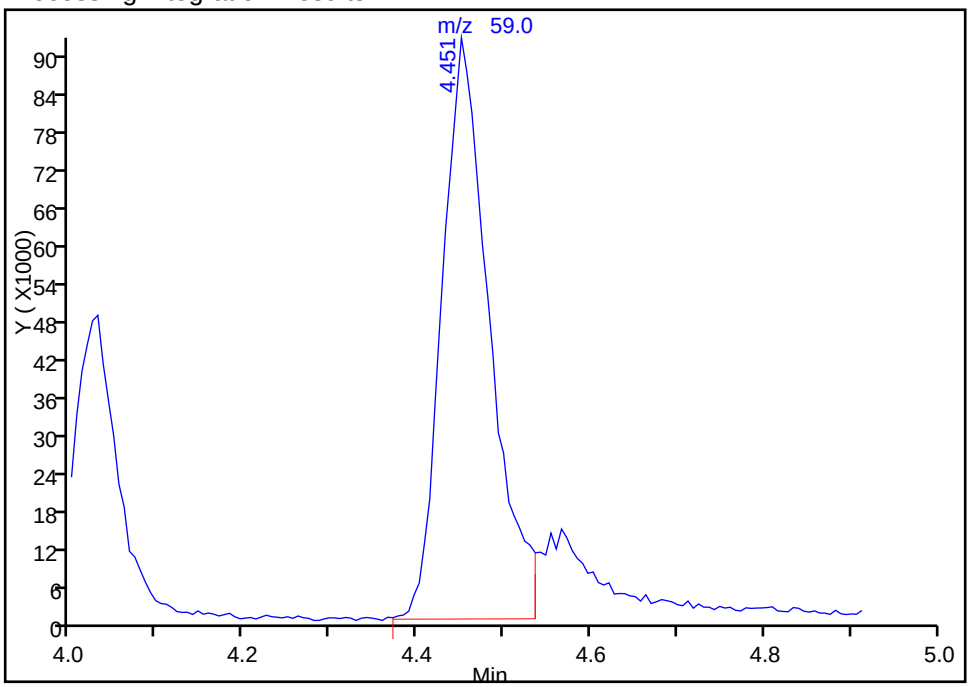
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303012.D
Injection Date: 03-Mar-2015 16:04:30 Instrument ID: CHHP5
Lims ID: IC VSTD35
Client ID:
Operator ID: 001562 ALS Bottle#: 10 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

32 2-Methyl-2-propanol, CAS: 75-65-0

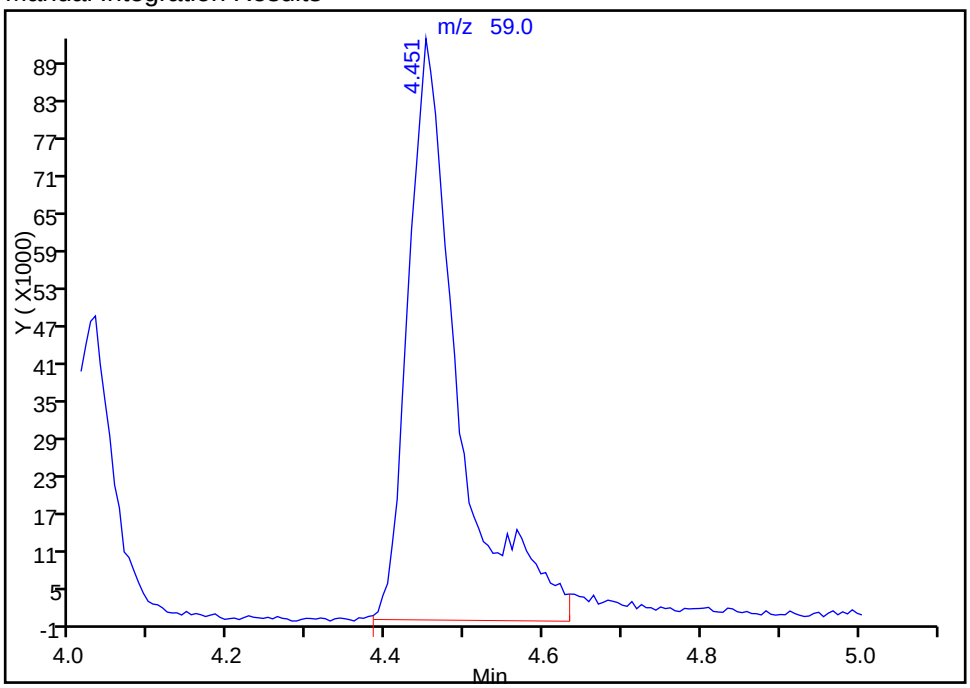
Processing Integration Results

RT: 4.45
Area: 353645
Amount: 1527.0542
Amount Units: ng



Manual Integration Results

RT: 4.45
Area: 407341
Amount: 1734.0487
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:37:20
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303013.D
Lims ID: IC VSTD40
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 03-Mar-2015 16:28:30 ALS Bottle#: 11 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD40
Misc. Info.: 180-0005873-013
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:13 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 09:39:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.329	4.321	0.007	99	195478	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.277	-0.004	99	458440	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.369	10.368	0.001	99	117839	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.685	0.002	94	165585	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.535	-0.004	99	407623	200.0	207.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.912	-0.010	99	495199	200.0	204.2	
$ 7 Toluene-d8 (Surr)	98	8.928	8.932	-0.004	100	1773929	200.0	193.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.537	11.536	0.001	99	675059	200.0	197.5	
11 Dichlorodifluoromethane	85	1.621	1.620	0.001	100	459101	200.0	199.3	
12 Chloromethane	50	1.773	1.778	-0.005	100	749194	200.0	203.5	
13 Vinyl chloride	62	1.907	1.912	-0.005	100	717244	200.0	202.7	
14 Butadiene	39	1.944	1.948	-0.004	99	795057	200.0	193.8	
15 Bromomethane	94	2.254	2.258	-0.004	92	202557	200.0	203.5	
16 Chloroethane	64	2.370	2.380	-0.010	98	300539	200.0	208.8	
17 Dichlorofluoromethane	67	2.649	2.648	0.001	99	702217	200.0	212.8	
18 Trichlorofluoromethane	101	2.698	2.708	-0.010	99	629405	200.0	228.4	
20 Ethyl ether	59	3.094	3.092	0.002	99	524790	200.0	197.4	
21 Acrolein	56	3.264	3.274	-0.010	98	88701	250.0	252.6	
22 1,1-Dichloroethene	96	3.373	3.384	-0.011	99	537938	200.0	201.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.428	3.420	0.008	100	564199	200.0	209.1	
24 Acetone	43	3.495	3.505	-0.010	100	359769	400.0	373.7	
25 Iodomethane	142	3.574	3.585	-0.011	98	768602	200.0	204.7	
26 Carbon disulfide	76	3.659	3.664	-0.005	100	1429882	200.0	217.6	
28 3-Chloro-1-propene	76	3.939	3.956	-0.017	100	353770	200.0	212.2	
30 Methyl acetate	43	4.024	4.029	-0.005	100	2723193	1000.0	1028.4	
31 Methylene Chloride	84	4.146	4.150	-0.004	99	581573	200.0	206.2	
32 2-Methyl-2-propanol	59	4.450	4.454	-0.004	99	473360	2000.0	2020.7	M
33 Acrylonitrile	53	4.554	4.564	-0.010	100	2649598	2000.0	2018.3	
34 trans-1,2-Dichloroethene	96	4.566	4.576	-0.010	94	564166	200.0	202.1	
35 Methyl tert-butyl ether	73	4.602	4.607	-0.005	100	1454209	200.0	208.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.986	4.990	-0.004	99	987257	200.0	199.3	
37 1,1-Dichloroethane	63	5.174	5.178	-0.004	100	1076133	200.0	202.3	
38 Vinyl acetate	43	5.296	5.306	-0.010	100	412211	200.0	226.8	
44 2,2-Dichloropropane	77	5.935	5.933	0.002	95	436442	200.0	221.6	
45 cis-1,2-Dichloroethene	96	5.941	5.945	-0.004	98	599342	200.0	200.8	
46 2-Butanone (MEK)	43	5.989	6.000	-0.011	100	661664	400.0	421.8	
49 Chlorobromomethane	128	6.233	6.237	-0.004	99	250607	200.0	201.5	
51 Tetrahydrofuran	42	6.287	6.292	-0.005	99	447707	400.0	401.0	
52 Chloroform	83	6.348	6.346	0.002	96	860226	200.0	202.9	
53 1,1,1-Trichloroethane	97	6.537	6.535	0.002	99	607230	200.0	210.9	
54 Cyclohexane	56	6.592	6.590	0.002	98	1313560	200.0	203.2	
56 Carbon tetrachloride	117	6.725	6.724	0.001	94	443952	200.0	227.3	
55 1,1-Dichloropropene	75	6.725	6.730	-0.005	98	755478	200.0	205.6	
57 Isobutyl alcohol	41	6.950	6.949	0.001	98	374911	5000.0	5958.2	
58 Benzene	78	6.957	6.967	-0.010	98	2284771	200.0	197.3	
59 1,2-Dichloroethane	62	6.987	6.991	-0.004	98	678619	200.0	202.9	
62 n-Heptane	43	7.285	7.283	0.002	89	940701	200.0	209.0	
64 Trichloroethene	130	7.668	7.673	-0.005	99	560499	200.0	205.5	
66 Methylcyclohexane	83	7.869	7.867	0.002	99	1051065	200.0	204.0	
67 1,2-Dichloropropane	63	7.906	7.910	-0.004	97	626785	200.0	206.1	
68 Dibromomethane	93	8.027	8.025	0.002	99	285467	200.0	207.9	
70 1,4-Dioxane	88	8.064	8.068	-0.004	96	108953	4000.0	4019.1	
71 Dichlorobromomethane	83	8.204	8.202	0.002	100	559625	200.0	218.6	
74 cis-1,3-Dichloropropene	75	8.660	8.664	-0.004	100	764955	200.0	225.6	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.828	-0.004	99	1424348	400.0	400.3	
76 Toluene	91	8.995	8.999	-0.004	99	2291440	200.0	188.4	
77 trans-1,3-Dichloropropene	75	9.220	9.224	-0.004	99	577469	200.0	225.2	
78 Ethyl methacrylate	69	9.317	9.321	-0.004	100	642835	200.0	222.9	
79 1,1,2-Trichloroethane	97	9.402	9.406	-0.004	99	430453	200.0	193.7	
80 Tetrachloroethene	164	9.536	9.540	-0.004	99	437446	200.0	194.9	
81 1,3-Dichloropropane	76	9.566	9.571	-0.005	100	810109	200.0	194.0	
82 2-Hexanone	43	9.658	9.662	-0.004	100	1007219	400.0	405.5	
84 Chlorodibromomethane	129	9.791	9.796	-0.005	99	335537	200.0	229.6	
85 Ethylene Dibromide	107	9.907	9.905	0.002	100	430697	200.0	201.3	
86 3-Chlorobenzotrifluoride	180	10.375	10.374	0.001	92	710605	200.0	190.5	
87 Chlorobenzene	112	10.394	10.398	-0.004	99	1486822	200.0	190.9	
88 4-Chlorobenzotrifluoride	180	10.430	10.428	0.002	99	673239	200.0	188.8	
89 1,1,1,2-Tetrachloroethane	131	10.479	10.477	0.002	94	404254	200.0	225.0	
90 Ethylbenzene	106	10.503	10.508	-0.005	99	878562	200.0	195.1	
91 m-Xylene & p-Xylene	106	10.619	10.623	-0.004	99	1087938	200.0	196.1	
92 o-Xylene	106	11.014	11.019	-0.004	95	1044535	200.0	194.0	
93 Styrene	104	11.026	11.031	-0.005	100	1702135	200.0	193.4	
94 Bromoform	173	11.215	11.213	0.002	99	189179	200.0	245.1	
96 2-Chlorobenzotrifluoride	180	11.276	11.280	-0.004	99	709528	200.0	191.8	
97 Isopropylbenzene	105	11.385	11.384	0.001	99	2509471	200.0	189.9	
99 1,1,2,2-Tetrachloroethane	83	11.677	11.682	-0.005	99	635984	200.0	206.5	
100 Bromobenzene	156	11.690	11.688	0.002	99	564181	200.0	195.0	
101 1,2,3-Trichloropropane	110	11.726	11.724	0.002	96	186872	200.0	192.8	
102 trans-1,4-Dichloro-2-buten	53	11.738	11.736	0.002	91	209408	200.0	222.4	
103 N-Propylbenzene	120	11.793	11.791	0.002	99	772940	200.0	201.1	
104 2-Chlorotoluene	126	11.878	11.882	-0.004	99	627560	200.0	197.8	
105 3-Chlorotoluene	126	11.939	11.937	0.002	99	635360	200.0	195.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.969	11.968	0.001	99	2069067	200.0	194.6	
107 4-Chlorotoluene	126	11.988	11.986	0.002	98	686264	200.0	200.4	
108 tert-Butylbenzene	119	12.292	12.296	-0.004	98	1773732	200.0	193.3	
110 1,2,4-Trimethylbenzene	105	12.340	12.339	0.001	98	2134132	200.0	194.5	
111 1,2-dichloro-4-(trifluorom	214	12.407	12.406	0.001	99	495775	200.0	200.1	
112 sec-Butylbenzene	105	12.511	12.515	-0.004	99	2515133	200.0	190.4	
113 1,3-Dichlorobenzene	146	12.620	12.625	-0.005	98	1106407	200.0	193.6	
114 4-Isopropyltoluene	119	12.657	12.655	0.002	98	2126114	200.0	196.4	
115 1,4-Dichlorobenzene	146	12.712	12.710	0.002	96	1119886	200.0	194.6	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.764	-0.004	95	459072	200.0	194.9	
118 2,5-Dichlorobenzotrifluori	214	12.815	12.813	0.002	98	520914	200.0	202.9	
120 n-Butylbenzene	91	13.064	13.069	-0.005	99	1909418	200.0	198.4	
121 1,2-Dichlorobenzene	146	13.083	13.087	-0.004	99	1024132	200.0	195.9	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.866	-0.005	89	86409	200.0	250.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.012	-0.005	99	2106510	600.0	589.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.431	-0.004	99	1383564	400.0	391.9	
126 1,2,4-Trichlorobenzene	180	14.695	14.693	0.002	99	524775	200.0	200.7	
127 Hexachlorobutadiene	225	14.865	14.869	-0.004	98	227215	200.0	203.4	
128 Naphthalene	128	14.944	14.942	0.002	100	1499909	200.0	197.7	
129 1,2,3-Trichlorobenzene	180	15.194	15.192	0.002	99	445662	200.0	198.7	
131 2,4,5-Trichlorotoluene	159	15.966	15.970	-0.004	98	227883	200.0	200.9	
130 2,3,6-Trichlorotoluene	159	16.064	16.068	-0.004	97	202347	200.0	193.5	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		400.0	390.1	
S 134 1,2-Dichloroethene, Total	96				0		400.0	402.9	
S 135 1,3-Dichloropropene, Total	1				0		400.0	450.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added:	10.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	8.00	Units: uL	
VOAVAPRI_00003	Amount Added:	8.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	8.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	8.00	Units: uL	
VOA8260SURR_00031	Amount Added:	8.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

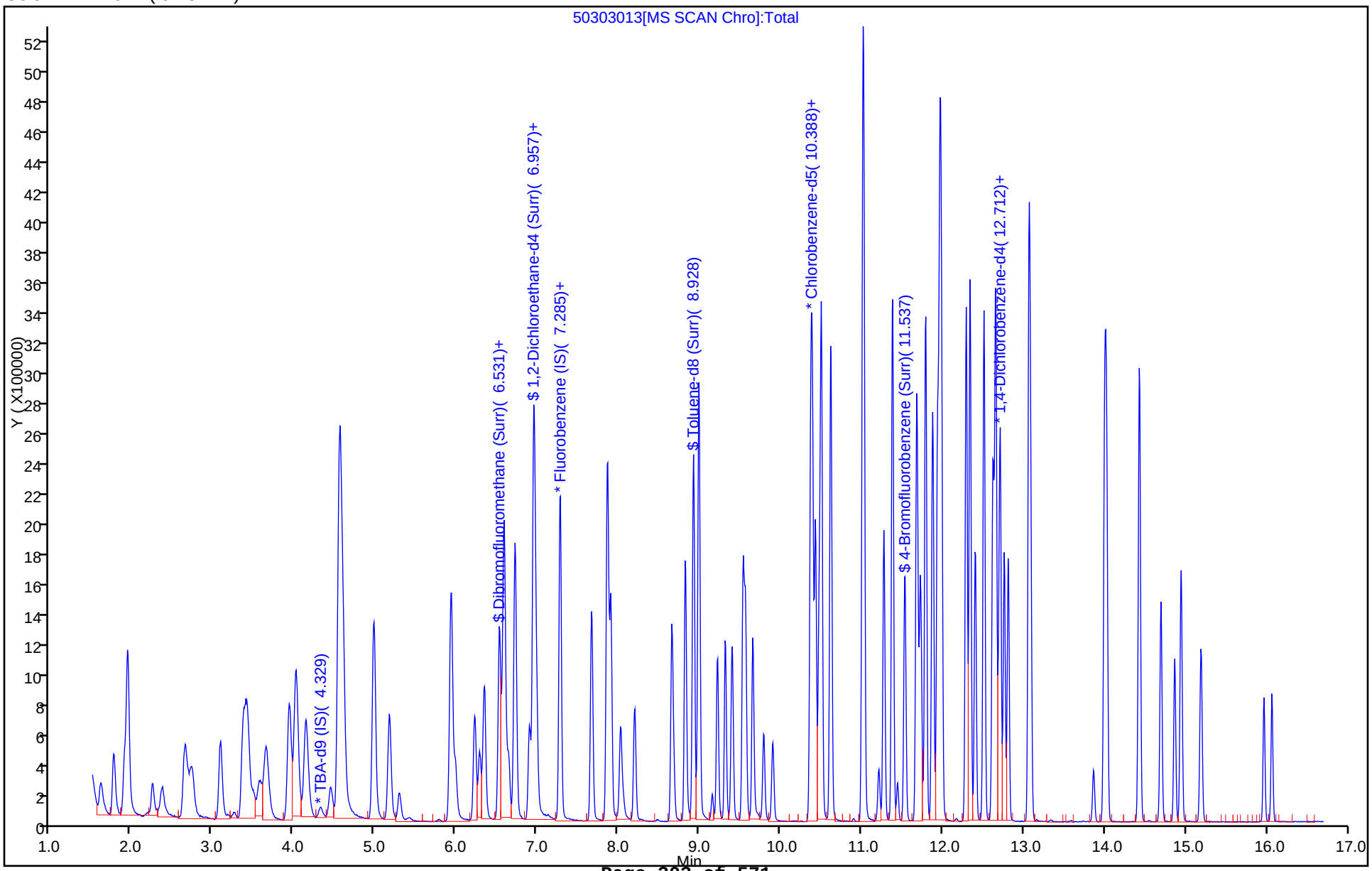
Report Date: 04-Mar-2015 10:13:13 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303013.D

Injection Date:	03-Mar-2015 16:28:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD40			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

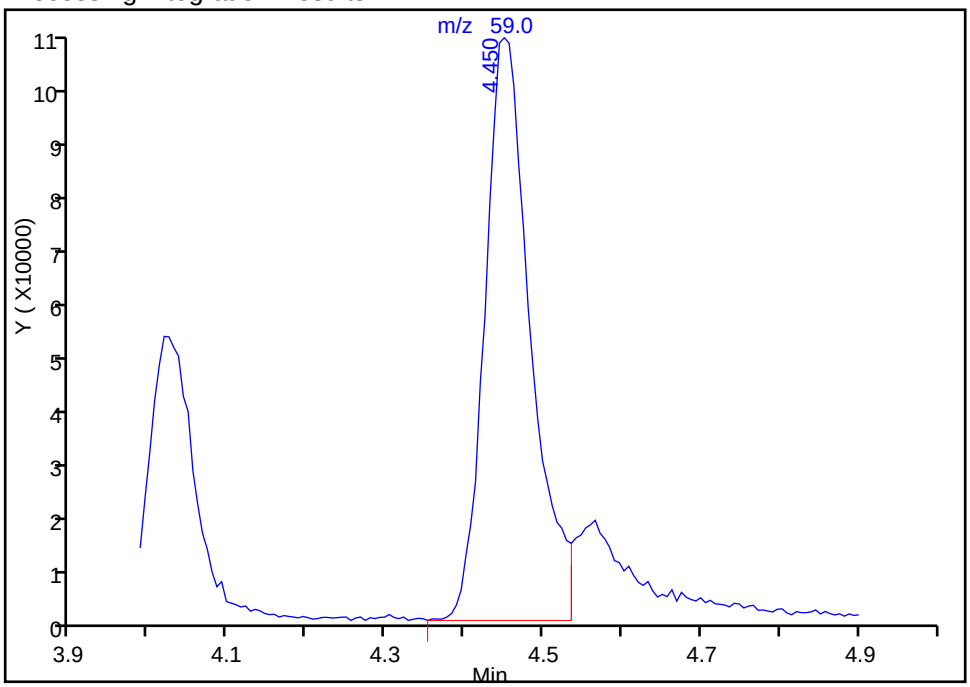
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303013.D
Injection Date: 03-Mar-2015 16:28:30 Instrument ID: CHHP5
Lims ID: IC VSTD40
Client ID:
Operator ID: 001562 ALS Bottle#: 11 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

32 2-Methyl-2-propanol, CAS: 75-65-0

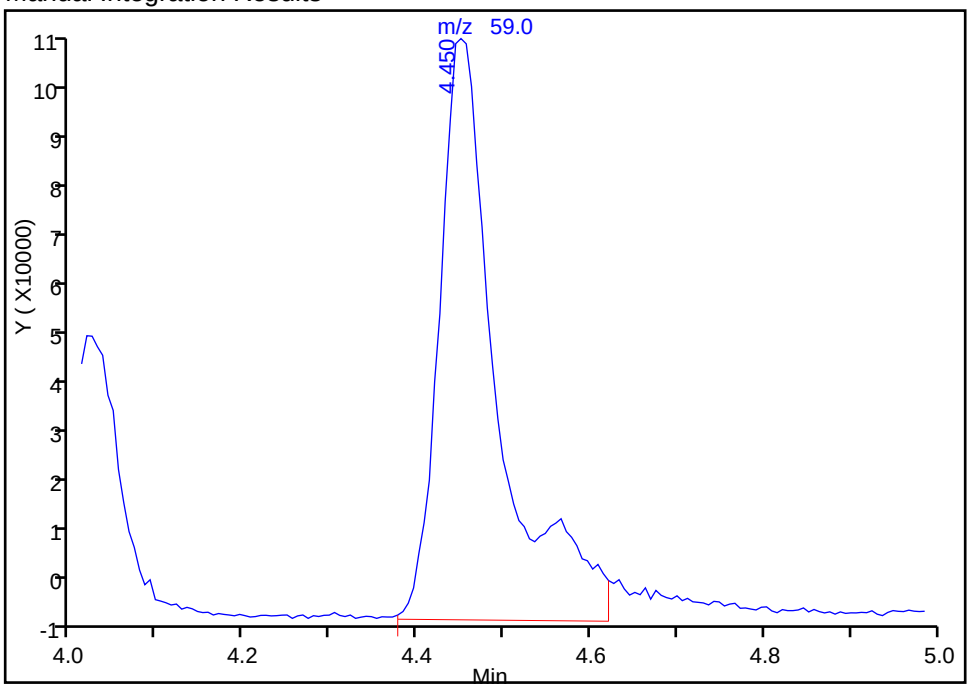
Processing Integration Results

RT: 4.45
Area: 405922
Amount: 1729.0486
Amount Units: ng



Manual Integration Results

RT: 4.45
Area: 473360
Amount: 2020.7198
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:39:19
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303014.D
Lims ID: IC VSTD50
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 03-Mar-2015 16:52:30 ALS Bottle#: 12 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD50
Misc. Info.: 180-0005873-014
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:14 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 09:40:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.327	4.321	0.006	97	182249	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	440848	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	97	121332	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	91	163855	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.535	0.000	98	454279	250.0	240.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.912	-0.006	100	585333	250.0	250.9	
$ 7 Toluene-d8 (Surr)	98	8.926	8.932	-0.006	99	1882951	250.0	199.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	99	778464	250.0	221.2	
11 Dichlorodifluoromethane	85	1.620	1.620	0.000	100	555245	250.0	250.7	
12 Chloromethane	50	1.778	1.778	0.000	100	892689	250.0	252.1	
13 Vinyl chloride	62	1.912	1.912	0.000	100	866068	250.0	254.5	
14 Butadiene	39	1.948	1.948	0.000	99	961606	250.0	243.7	
15 Bromomethane	94	2.253	2.258	-0.005	92	219710	250.0	230.1	
16 Chloroethane	64	2.374	2.380	-0.006	98	309302	250.0	223.5	
17 Dichlorofluoromethane	67	2.648	2.648	0.000	100	722968	250.0	227.9	
18 Trichlorofluoromethane	101	2.697	2.708	-0.011	99	625870	250.0	236.2	
20 Ethyl ether	59	3.092	3.092	0.000	100	666037	250.0	260.5	
21 Acrolein	56	3.262	3.274	-0.012	99	95898	275.0	284.0	
22 1,1-Dichloroethene	96	3.372	3.384	-0.012	99	655372	250.0	255.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.420	0.007	97	659263	250.0	254.1	
24 Acetone	43	3.500	3.505	-0.005	100	482030	500.0	520.6	
25 Iodomethane	142	3.573	3.585	-0.012	98	937612	250.0	259.7	
26 Carbon disulfide	76	3.658	3.664	-0.006	100	1738988	250.0	275.2	
28 3-Chloro-1-propene	76	3.944	3.956	-0.012	100	449430	250.0	280.3	
30 Methyl acetate	43	4.023	4.029	-0.006	100	3392163	1250.0	1332.2	
31 Methylene Chloride	84	4.145	4.150	-0.005	100	726477	250.0	269.0	
32 2-Methyl-2-propanol	59	4.461	4.454	0.007	99	611565	2500.0	2800.2	
33 Acrylonitrile	53	4.558	4.564	-0.006	99	3337128	2500.0	2643.5	
34 trans-1,2-Dichloroethene	96	4.570	4.576	-0.006	93	714392	250.0	266.2	
35 Methyl tert-butyl ether	73	4.601	4.607	-0.006	100	1811989	250.0	270.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.990	-0.006	100	1203451	250.0	252.6	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	100	1328543	250.0	259.7	
38 Vinyl acetate	43	5.300	5.306	-0.006	100	523307	250.0	299.4	
44 2,2-Dichloropropane	77	5.927	5.933	-0.006	97	530241	250.0	280.0	
45 cis-1,2-Dichloroethene	96	5.939	5.945	-0.006	98	743970	250.0	259.2	
46 2-Butanone (MEK)	43	5.988	6.000	-0.012	100	803658	500.0	532.7	
49 Chlorobromomethane	128	6.231	6.237	-0.006	98	320382	250.0	267.9	
51 Tetrahydrofuran	42	6.286	6.292	-0.006	99	565784	500.0	527.0	
52 Chloroform	83	6.347	6.346	0.001	96	1072109	250.0	263.0	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	98	735465	250.0	265.6	
54 Cyclohexane	56	6.590	6.590	0.000	97	1567791	250.0	252.3	
56 Carbon tetrachloride	117	6.724	6.724	0.000	96	541326	250.0	288.2	
55 1,1-Dichloropropene	75	6.724	6.730	-0.006	98	919340	250.0	260.2	
57 Isobutyl alcohol	41	6.955	6.949	0.006	98	519953	6250.0	8593.0	
58 Benzene	78	6.961	6.967	-0.006	98	2816860	250.0	253.0	
59 1,2-Dichloroethane	62	6.986	6.991	-0.005	99	882169	250.0	274.3	
62 n-Heptane	43	7.284	7.283	0.001	87	1135342	250.0	262.3	
64 Trichloroethene	130	7.673	7.673	0.000	99	695890	250.0	265.3	
66 Methylcyclohexane	83	7.868	7.867	0.001	99	1271791	250.0	256.7	
67 1,2-Dichloropropane	63	7.904	7.910	-0.006	97	779651	250.0	266.6	
68 Dibromomethane	93	8.026	8.025	0.001	99	367478	250.0	278.3	
70 1,4-Dioxane	88	8.062	8.068	-0.006	96	148650	5000.0	5702.3	
71 Dichlorobromomethane	83	8.202	8.202	0.000	100	722661	250.0	293.5	
74 cis-1,3-Dichloropropene	75	8.659	8.664	-0.005	99	973151	250.0	298.4	
75 4-Methyl-2-pentanone (MIBK	43	8.829	8.828	0.001	99	1780762	500.0	486.1	
76 Toluene	91	8.993	8.999	-0.006	99	2786685	250.0	222.5	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	100	770673	250.0	291.8	
78 Ethyl methacrylate	69	9.322	9.321	0.001	100	840399	250.0	283.1	
79 1,1,2-Trichloroethane	97	9.407	9.406	0.001	99	552961	250.0	241.7	
80 Tetrachloroethene	164	9.541	9.540	0.001	99	530396	250.0	229.5	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	99	1025068	250.0	238.4	
82 2-Hexanone	43	9.656	9.662	-0.006	100	1267784	500.0	495.7	
84 Chlorodibromomethane	129	9.796	9.796	0.000	99	437822	250.0	291.0	
85 Ethylene Dibromide	107	9.906	9.905	0.001	100	560401	250.0	254.4	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	92	811123	250.0	211.2	
87 Chlorobenzene	112	10.392	10.398	-0.006	98	1821377	250.0	227.1	
88 4-Chlorobenzotrifluoride	180	10.435	10.428	0.007	98	788386	250.0	214.7	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	94	518562	250.0	280.4	
90 Ethylbenzene	106	10.502	10.508	-0.006	98	1084192	250.0	233.8	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	98	1343425	250.0	235.2	
92 o-Xylene	106	11.013	11.019	-0.005	96	1282744	250.0	231.4	
93 Styrene	104	11.031	11.031	0.000	96	2101328	250.0	231.9	
94 Bromoform	173	11.214	11.213	0.001	98	253039	250.0	318.4	
96 2-Chlorobenzotrifluoride	180	11.274	11.280	-0.006	99	818132	250.0	214.8	
97 Isopropylbenzene	105	11.384	11.384	0.000	98	2939157	250.0	216.0	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.682	-0.006	98	794942	250.0	250.7	
100 Bromobenzene	156	11.688	11.688	0.000	99	712137	250.0	248.8	
101 1,2,3-Trichloropropane	110	11.725	11.724	0.001	97	239368	250.0	249.6	
102 trans-1,4-Dichloro-2-buten	53	11.737	11.736	0.001	92	267698	250.0	287.3	
103 N-Propylbenzene	120	11.792	11.791	0.001	98	938881	250.0	246.9	
104 2-Chlorotoluene	126	11.877	11.882	-0.005	98	766804	250.0	244.2	
105 3-Chlorotoluene	126	11.938	11.937	0.001	99	747748	250.0	233.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.968	11.968	0.000	98	2483271	250.0	236.0	
107 4-Chlorotoluene	126	11.986	11.986	0.000	98	846300	250.0	249.7	
108 tert-Butylbenzene	119	12.290	12.296	-0.006	98	2162487	250.0	238.1	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	98	2596483	250.0	239.1	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	99	570450	250.0	232.7	
112 sec-Butylbenzene	105	12.509	12.515	-0.006	98	2981190	250.0	228.0	
113 1,3-Dichlorobenzene	146	12.619	12.625	-0.006	97	1371526	250.0	242.5	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	98	2531591	250.0	236.3	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	97	1402521	250.0	246.3	
116 2,4-Dichloro-1-(triflourom	214	12.765	12.764	0.001	95	528265	250.0	226.7	
118 2,5-Dichlorobenzotrifluori	214	12.814	12.813	0.001	98	607921	250.0	239.3	
120 n-Butylbenzene	91	13.063	13.069	-0.006	98	2301855	250.0	241.7	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	98	1268840	250.0	245.2	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	88	110818	250.0	325.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.012	-0.006	99	2522600	750.0	713.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.432	14.431	0.001	99	1703909	500.0	487.7	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	98	654550	250.0	252.9	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	98	277147	250.0	250.8	
128 Naphthalene	128	14.943	14.942	0.001	99	1887643	250.0	251.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.192	-0.006	100	568326	250.0	256.1	
131 2,4,5-Trichlorotoluene	159	15.965	15.970	-0.005	98	286878	250.0	255.6	
130 2,3,6-Trichlorotoluene	159	16.062	16.068	-0.006	98	260759	250.0	251.9	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		500.0	466.6	
S 134 1,2-Dichloroethene, Total	96				0		500.0	525.4	
S 135 1,3-Dichloropropene, Total	1				0		500.0	590.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260SURR_00031	Amount Added:	10.00	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	10.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	10.00	Units: uL	
VOAVAPRI_00003	Amount Added:	10.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	10.00	Units: uL	
VOAACRPRI_00003	Amount Added:	11.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

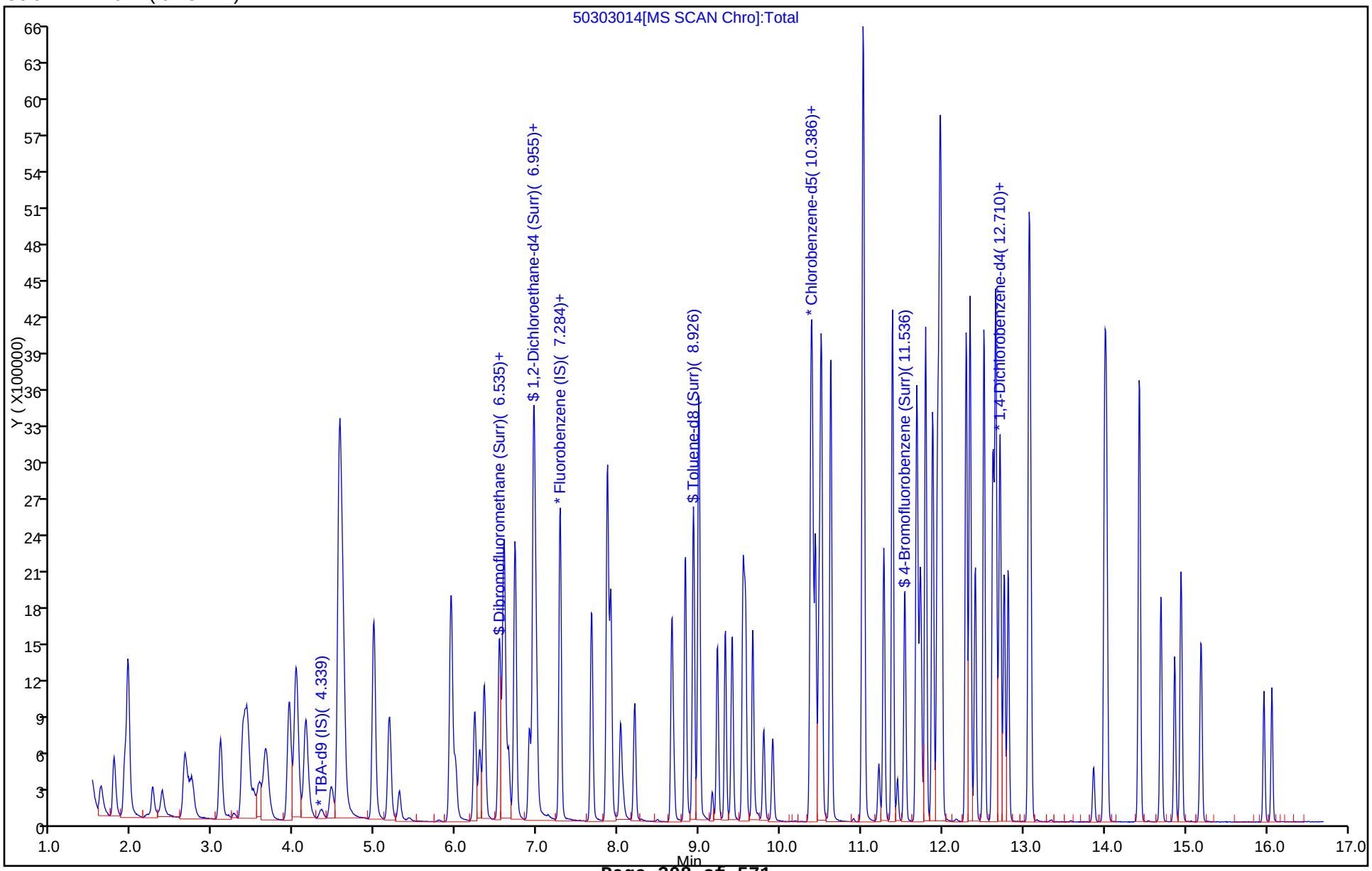
Report Date: 04-Mar-2015 10:13:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303014.D

Injection Date:	03-Mar-2015 16:52:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD50			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D
Lims ID: IC VSTD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 03-Mar-2015 18:29:30 ALS Bottle#: 16 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD1
Misc. Info.: 180-0005873-018
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 10:13:25 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 09:08:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.327	4.321	0.006	97	158942	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	99	436397	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.368	-0.006	99	97555	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	98	138266	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.535	0.001	97	9351	5.00	5.00	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.912	-0.011	98	12383	5.00	5.36	
$ 7 Toluene-d8 (Surr)	98	8.926	8.932	-0.006	99	44042	5.00	5.79	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.536	0.000	98	16688	5.00	5.90	
11 Dichlorodifluoromethane	85	1.620	1.620	0.000	1	11738	5.00	5.35	
12 Chloromethane	50	1.778	1.778	0.000	99	20422	5.00	5.83	
13 Vinyl chloride	62	1.906	1.912	-0.006	98	18364	5.00	5.45	
14 Butadiene	39	1.949	1.948	0.001	99	25646	5.00	6.57	
15 Bromomethane	94	2.253	2.258	-0.005	49	9174	5.00	4.90	
16 Chloroethane	64	2.393	2.380	0.013	46	8910	5.00	6.50	
17 Dichlorofluoromethane	67	2.654	2.648	0.006	97	18545	5.00	5.90	
18 Trichlorofluoromethane	101	2.703	2.708	-0.005	78	14651	5.00	5.59	
20 Ethyl ether	59	3.098	3.092	0.006	92	15110	5.00	5.97	
21 Acrolein	56	3.263	3.274	-0.011	95	33215	100.0	99.4	
22 1,1-Dichloroethene	96	3.390	3.384	0.006	99	14445	5.00	5.69	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.420	0.007	95	13613	5.00	5.30	
24 Acetone	43	3.518	3.505	0.013	85	27756	25.0	30.3	M
25 Iodomethane	142	3.591	3.585	0.006	94	20517	5.00	5.74	
26 Carbon disulfide	76	3.658	3.664	-0.006	96	31759	5.00	5.08	
28 3-Chloro-1-propene	76	3.944	3.956	-0.012	96	7709	5.00	4.86	
30 Methyl acetate	43	4.029	4.029	0.000	99	68405	25.0	27.1	
31 Methylene Chloride	84	4.145	4.150	-0.005	97	23143	5.00	5.07	
32 2-Methyl-2-propanol	59	4.449	4.454	-0.005	57	8526	50.0	44.8	
33 Acrylonitrile	53	4.564	4.564	0.000	98	66409	50.0	53.1	
34 trans-1,2-Dichloroethene	96	4.571	4.576	-0.005	51	14331	5.00	5.39	
35 Methyl tert-butyl ether	73	4.607	4.607	0.000	99	35247	5.00	5.31	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.984	4.990	-0.006	94	27239	5.00	5.78	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	98	28747	5.00	5.68	
38 Vinyl acetate	43	5.307	5.306	0.001	58	6783	5.00	3.92	
44 2,2-Dichloropropane	77	5.939	5.933	0.006	64	9115	5.00	4.86	
45 cis-1,2-Dichloroethene	96	5.952	5.945	0.007	96	16372	5.00	5.76	
46 2-Butanone (MEK)	43	6.000	6.000	0.000	99	39378	25.0	26.4	
49 Chlorobromomethane	128	6.237	6.237	0.000	91	6992	5.00	5.91	
51 Tetrahydrofuran	42	6.298	6.292	0.006	94	12789	10.0	12.0	
52 Chloroform	83	6.341	6.346	-0.005	96	23149	5.00	5.74	
53 1,1,1-Trichloroethane	97	6.536	6.535	0.001	97	14873	5.00	5.43	
54 Cyclohexane	56	6.590	6.590	0.000	94	32962	5.00	5.36	M
56 Carbon tetrachloride	117	6.724	6.724	0.000	67	9550	5.00	5.14	
55 1,1-Dichloropropene	75	6.736	6.730	0.006	97	18284	5.00	5.23	
57 Isobutyl alcohol	41	6.955	6.949	0.006	34	6766	125.0	113.0	
58 Benzene	78	6.955	6.967	-0.012	98	62303	5.00	5.65	
59 1,2-Dichloroethane	62	6.998	6.991	0.007	97	17175	5.00	5.39	
62 n-Heptane	43	7.278	7.283	-0.005	57	23686	5.00	5.53	
64 Trichloroethene	130	7.679	7.673	0.006	96	12976	5.00	5.00	
66 Methylcyclohexane	83	7.862	7.867	-0.005	98	25976	5.00	5.30	
67 1,2-Dichloropropane	63	7.910	7.910	0.000	93	15999	5.00	5.53	
68 Dibromomethane	93	8.026	8.025	0.001	97	6736	5.00	5.15	
70 1,4-Dioxane	88	8.081	8.068	0.013	40	2785	100.0	107.9	
71 Dichlorobromomethane	83	8.202	8.202	0.000	98	10980	5.00	4.51	
74 cis-1,3-Dichloropropene	75	8.659	8.664	-0.005	97	13441	5.00	4.16	
75 4-Methyl-2-pentanone (MIBK	43	8.829	8.828	0.001	99	75647	25.0	25.7	
76 Toluene	91	8.993	8.999	-0.006	99	60820	5.00	6.04	
77 trans-1,3-Dichloropropene	75	9.224	9.224	0.000	94	9160	5.00	4.31	
78 Ethyl methacrylate	69	9.328	9.321	0.007	95	11161	5.00	4.68	
79 1,1,2-Trichloroethane	97	9.407	9.406	0.001	93	10673	5.00	5.80	
80 Tetrachloroethene	164	9.541	9.540	0.001	96	10884	5.00	5.86	
81 1,3-Dichloropropane	76	9.571	9.571	0.000	96	19318	5.00	5.59	
82 2-Hexanone	43	9.669	9.662	0.006	99	51105	25.0	24.9	
84 Chlorodibromomethane	129	9.796	9.796	0.000	96	5520	5.00	4.56	
85 Ethylene Dibromide	107	9.912	9.905	0.007	98	9291	5.00	5.24	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	64	18756	5.00	6.07	
87 Chlorobenzene	112	10.399	10.398	0.000	98	39232	5.00	6.08	
88 4-Chlorobenzotrifluoride	180	10.435	10.428	0.007	97	17103	5.00	5.79	
89 1,1,1,2-Tetrachloroethane	131	10.484	10.477	0.007	94	7857	5.00	5.28	
90 Ethylbenzene	106	10.502	10.508	-0.006	99	20645	5.00	5.54	
91 m-Xylene & p-Xylene	106	10.624	10.623	0.001	99	26322	5.00	5.73	
92 o-Xylene	106	11.019	11.019	0.001	96	25758	5.00	5.78	
93 Styrene	104	11.031	11.031	0.000	96	42726	5.00	5.86	
94 Bromoform	173	11.220	11.213	0.007	52	2588	5.00	4.05	
96 2-Chlorobenzotrifluoride	180	11.275	11.280	-0.005	97	17742	5.00	5.79	
97 Isopropylbenzene	105	11.384	11.384	0.000	99	65207	5.00	5.96	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.682	-0.006	91	12676	5.00	4.97	
100 Bromobenzene	156	11.688	11.688	0.000	97	14051	5.00	5.82	
101 1,2,3-Trichloropropane	110	11.725	11.724	0.001	95	5015	5.00	6.20	
102 trans-1,4-Dichloro-2-buten	53	11.743	11.736	0.007	90	4072	5.00	5.18	
103 N-Propylbenzene	120	11.792	11.791	0.001	100	16822	5.00	5.24	
104 2-Chlorotoluene	126	11.877	11.882	-0.005	99	15299	5.00	5.77	
105 3-Chlorotoluene	126	11.944	11.937	0.007	98	16343	5.00	6.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.962	11.968	-0.006	100	50437	5.00	5.68	
107 4-Chlorotoluene	126	11.986	11.986	0.000	95	15984	5.00	5.59	
108 tert-Butylbenzene	119	12.290	12.296	-0.006	98	43127	5.00	5.63	
110 1,2,4-Trimethylbenzene	105	12.339	12.339	0.000	96	51091	5.00	5.58	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.406	0.000	97	10729	5.00	5.19	
112 sec-Butylbenzene	105	12.509	12.515	-0.006	99	65330	5.00	5.92	
113 1,3-Dichlorobenzene	146	12.619	12.625	-0.006	97	28602	5.00	5.99	
114 4-Isopropyltoluene	119	12.662	12.655	0.007	98	51205	5.00	5.66	
115 1,4-Dichlorobenzene	146	12.716	12.710	0.006	98	27681	5.00	5.76	
116 2,4-Dichloro-1-(triflourom	214	12.765	12.764	0.001	93	11024	5.00	5.61	
118 2,5-Dichlorobenzotrifluori	214	12.814	12.813	0.001	95	11088	5.00	5.17	
120 n-Butylbenzene	91	13.063	13.069	-0.006	99	44994	5.00	5.60	
121 1,2-Dichlorobenzene	146	13.087	13.087	0.000	97	25288	5.00	5.79	
122 1,2-Dibromo-3-Chloropropan	75	13.854	13.866	-0.012	89	1174	5.00	4.08	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.012	-0.006	99	47582	15.0	16.0	M
125 2,3- & 3,4- Dichlorotoluen	125	14.432	14.431	0.001	98	32193	10.0	10.9	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	96	11994	5.00	5.49	
127 Hexachlorobutadiene	225	14.864	14.869	-0.005	93	5277	5.00	5.66	
128 Naphthalene	128	14.943	14.942	0.001	99	34798	5.00	5.49	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	95	10498	5.00	5.61	
131 2,4,5-Trichlorotoluene	159	15.965	15.970	-0.005	93	5832	5.00	6.16	
130 2,3,6-Trichlorotoluene	159	16.068	16.068	0.000	93	5388	5.00	6.17	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		10.0	11.5	
S 134 1,2-Dichloroethene, Total	96				0		10.0	11.2	
S 135 1,3-Dichloropropene, Total	1				0		10.0	8.48	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00031	Amount Added:	0.20	Units: uL	
VOA8260VOAPRI_00102	Amount Added:	0.20	Units: uL	
voaWEEpri Res_00003	Amount Added:	0.20	Units: uL	
voaWKetpri Re_00003	Amount Added:	0.80	Units: uL	
VOAVAPRI_00003	Amount Added:	0.20	Units: uL	
VOAACRPRI_00003	Amount Added:	4.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent

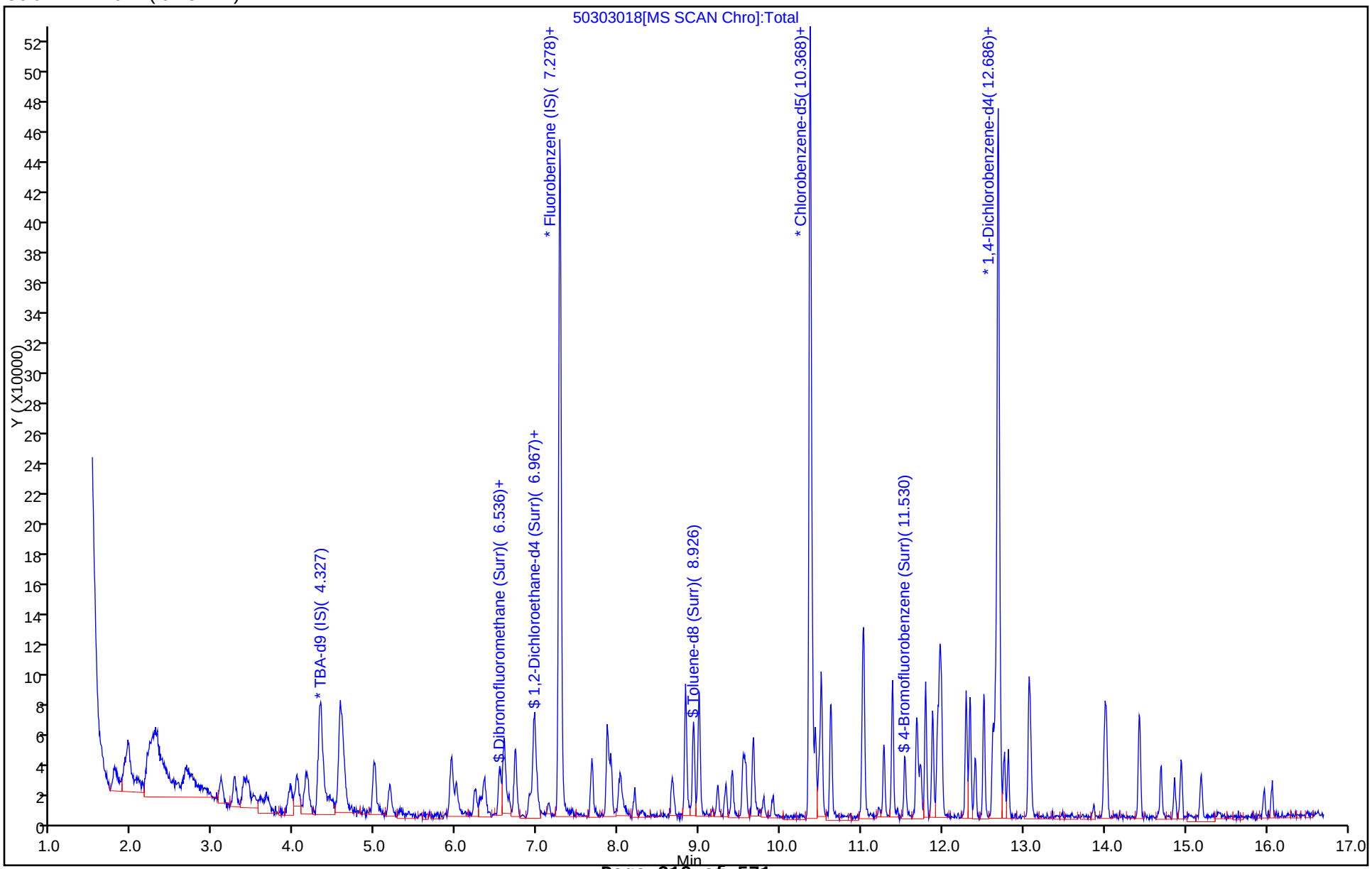
Report Date: 04-Mar-2015 10:13:25 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Injection Date:	03-Mar-2015 18:29:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD1			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

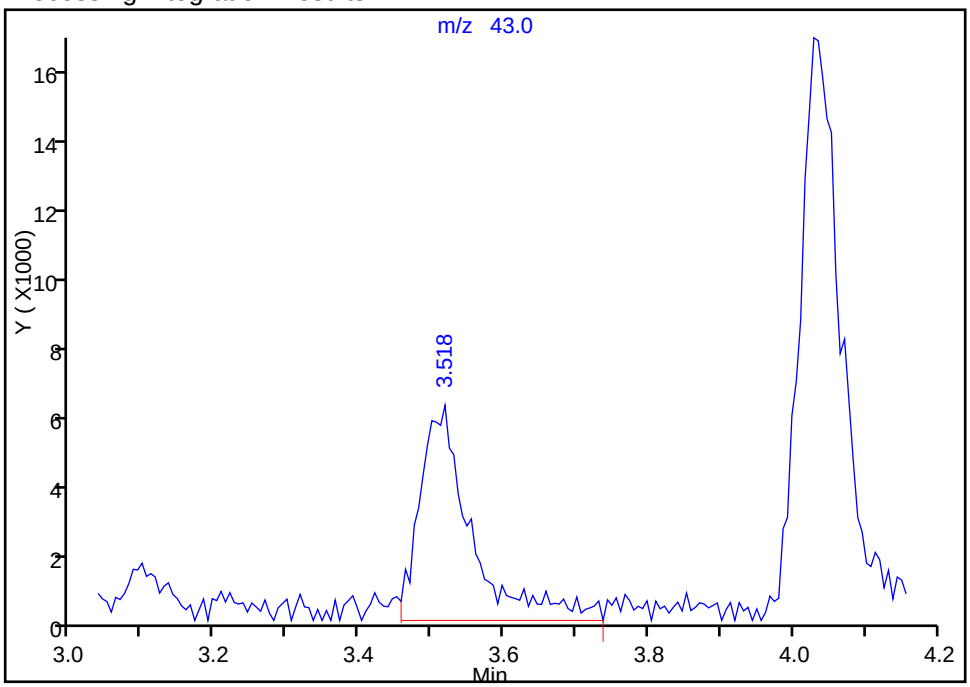
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D				
Injection Date:	03-Mar-2015 18:29:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

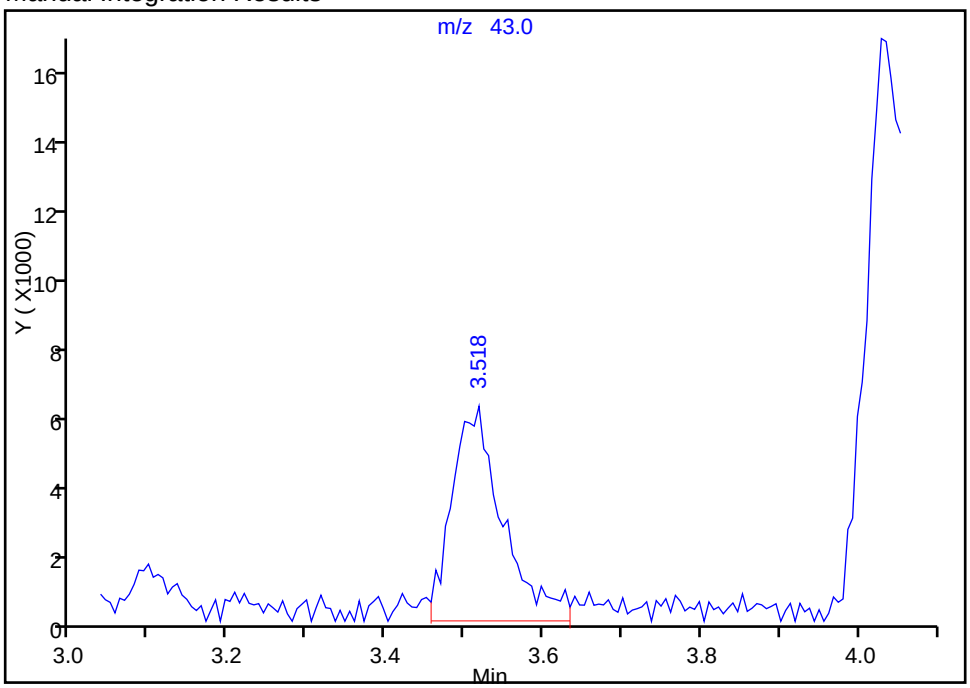
Processing Integration Results

RT: 3.52
Area: 30678
Amount: 34.064759
Amount Units: ng



Manual Integration Results

RT: 3.52
Area: 27756
Amount: 30.284284
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:45:02
Audit Action: Manually Integrated
Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

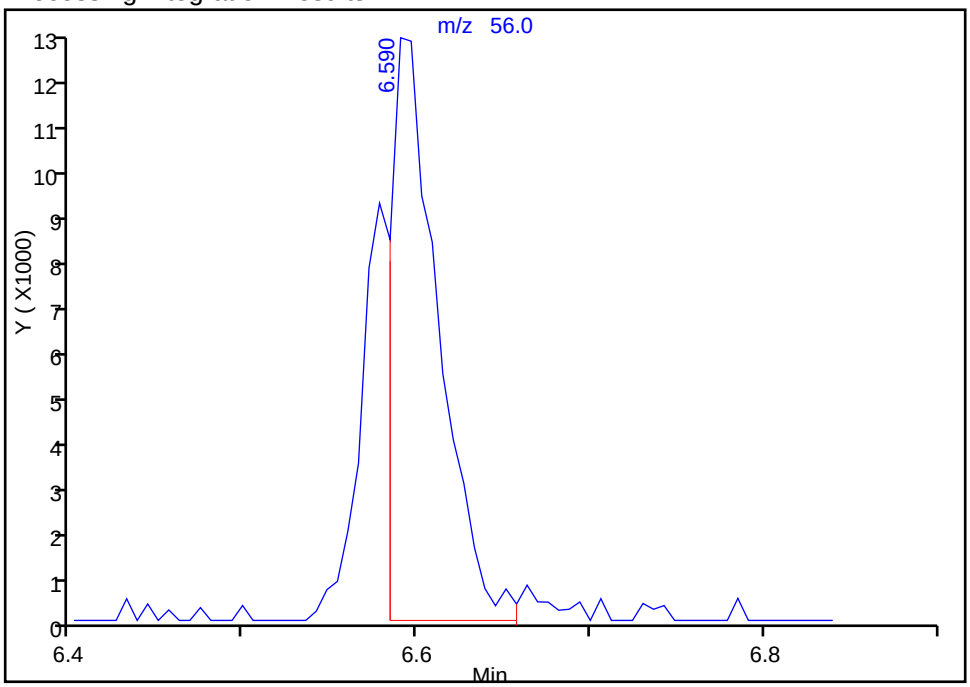
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D				
Injection Date:	03-Mar-2015 18:29:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

54 Cyclohexane, CAS: 110-82-7

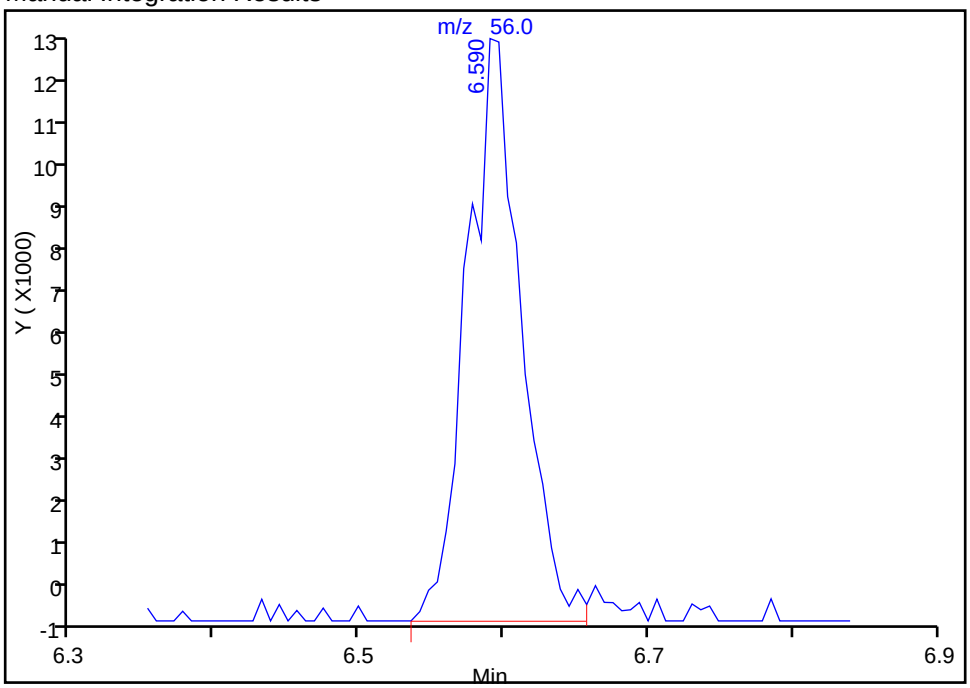
Processing Integration Results

RT: 6.59
Area: 24266
Amount: 3.949469
Amount Units: ng



Manual Integration Results

RT: 6.59
Area: 32962
Amount: 5.357794
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 09:45:02
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCVIS 180-134740/2 Calibration Date: 03/04/2015 11:38

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50304002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2512	0.2772	0.1000	11.0	10.0	10.4	20.0
Chloromethane	Ave	0.4015	0.4081	0.1000	10.2	10.0	1.6	20.0
Vinyl chloride	Ave	0.3859	0.4119	0.1000	10.7	10.0	6.7	20.0
Bromomethane	Lin2		0.1203	0.0500	10.4	10.0	3.5	20.0
Chloroethane	Ave	0.1570	0.1679	0.0500	10.7	10.0	6.9	20.0
Dichlorofluoromethane	Ave	0.3598	0.3898	0.0100	10.8	10.0	8.3	20.0
Trichlorofluoromethane	Ave	0.3005	0.3278	0.1000	10.9	10.0	9.1	20.0
Ethyl ether	Ave	0.2900	0.2908	0.0100	10.0	10.0	0.3	20.0
Acrolein	Ave	0.0383	0.0383	0.0100	30.0	30.0	0.0	20.0
1,1-Dichloroethene	Ave	0.2911	0.3143	0.1000	10.8	10.0	8.0	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2943	0.3111	0.1000	10.6	10.0	5.7	20.0
Acetone	Ave	0.1050	0.1042	0.0500	19.8	20.0	-0.8	20.0
Iodomethane	Ave	0.4096	0.4316	0.0100	10.5	10.0	5.4	20.0
Carbon disulfide	Ave	0.7166	0.7547	0.1000	10.5	10.0	5.3	20.0
Allyl chloride	Ave	0.1818	0.1817	0.0100	9.99	10.0	-0.0	20.0
Methyl acetate	Ave	0.2888	0.2829	0.1000	49.0	50.0	-2.0	20.0
Methylene Chloride	Lin2		0.3385	0.1000	10.5	10.0	4.6	20.0
tert-Butyl alcohol	Ave	1.198	1.116	0.0100	93.1	100	-6.9	20.0
Acrylonitrile	Ave	0.1432	0.1421	0.0100	99.2	100	-0.8	20.0
trans-1,2-Dichloroethene	Ave	0.3044	0.3169	0.1000	10.4	10.0	4.1	20.0
Methyl tert-butyl ether	Ave	0.7605	0.7267	0.1000	9.56	10.0	-4.4	20.0
Hexane	Ave	0.5404	0.5586	0.0100	10.3	10.0	3.4	20.0
1,1-Dichloroethane	Ave	0.5802	0.5743	0.2000	9.90	10.0	-1.0	20.0
Vinyl acetate	Ave	0.1982	0.1717	0.0100	8.66	10.0	-13.4	20.0
2,2-Dichloropropane	Ave	0.2148	0.1960	0.0100	9.13	10.0	-8.7	20.0
cis-1,2-Dichloroethene	Ave	0.3255	0.3288	0.1000	10.1	10.0	1.0	20.0
2-Butanone (MEK)	Ave	0.1711	0.1590	0.0500	18.6	20.0	-7.1	20.0
Bromochloromethane	Ave	0.1357	0.1344	0.0100	9.91	10.0	-0.9	20.0
Tetrahydrofuran	Ave	0.1218	0.1132	0.0100	18.6	20.0	-7.0	20.0
Chloroform	Ave	0.4624	0.4647	0.2000	10.0	10.0	0.5	20.0
1,1,1-Trichloroethane	Ave	0.3141	0.3201	0.1000	10.2	10.0	1.9	20.0
Cyclohexane	Ave	0.7049	0.7261	0.1000	10.3	10.0	3.0	20.0
Carbon tetrachloride	Ave	0.2130	0.2164	0.1000	10.2	10.0	1.6	20.0
1,1-Dichloropropene	Ave	0.4007	0.4081	0.0100	10.2	10.0	1.8	20.0
Isobutyl alcohol	Ave	0.0069	0.0063*	0.0100	230	250	-7.9	20.0
Benzene	Ave	1.263	1.308	0.5000	10.4	10.0	3.6	20.0
1,2-Dichloroethane	Ave	0.3648	0.3527	0.1000	9.67	10.0	-3.3	20.0
n-Heptane	Ave	0.4910	0.4953	0.0100	10.1	10.0	0.9	20.0
Trichloroethene	Ave	0.2974	0.3067	0.2000	10.3	10.0	3.1	20.0
Methylcyclohexane	Ave	0.5619	0.5822	0.1000	10.4	10.0	3.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCVIS 180-134740/2 Calibration Date: 03/04/2015 11:38

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50304002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3317	0.3302	0.1000	9.95	10.0	-0.5	20.0
Dibromomethane	Ave	0.1498	0.1484	0.0100	9.91	10.0	-0.9	20.0
1,4-Dioxane	Ave	0.0030	0.0030*	0.0100	205	200	2.6	20.0
Bromodichloromethane	Ave	0.2792	0.2815	0.2000	10.1	10.0	0.8	20.0
cis-1,3-Dichloropropene	Ave	0.3698	0.3453	0.2000	9.34	10.0	-6.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.510	1.561	0.1000	20.7	20.0	3.4	20.0
Toluene	Ave	5.161	5.455	0.4000	10.6	10.0	5.7	20.0
trans-1,3-Dichloropropene	Ave	1.088	1.005	0.1000	9.24	10.0	-7.6	20.0
Ethyl methacrylate	Ave	1.224	1.050	0.0100	8.58	10.0	-14.2	20.0
1,1,2-Trichloroethane	Ave	0.9428	0.9427	0.1000	10.0	10.0	-0.0	20.0
Tetrachloroethene	Ave	0.9523	1.031	0.2000	10.8	10.0	8.3	20.0
1,3-Dichloropropane	Ave	1.772	1.788	0.0100	10.1	10.0	0.9	20.0
2-Hexanone	Ave	1.054	1.053	0.1000	20.0	20.0	-0.1	20.0
Dibromochloromethane	Ave	0.6200	0.6334	0.1000	10.2	10.0	2.2	20.0
1,2-Dibromoethane (EDB)	Ave	0.9079	0.9153	0.1000	10.1	10.0	0.8	20.0
3-Chlorobenzotrifluoride	Ave	1.583	1.737	0.0100	11.0	10.0	9.8	20.0
Chlorobenzene	Ave	3.305	3.398	0.5000	10.3	10.0	2.8	20.0
4-Chlorobenzotrifluoride	Ave	1.513	1.658	0.0100	11.0	10.0	9.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7622	0.7964	0.0100	10.4	10.0	4.5	20.0
Ethylbenzene	Ave	1.911	2.015	0.1000	10.5	10.0	5.5	20.0
m-Xylene & p-Xylene	Ave	2.354	2.492	0.1000	10.6	10.0	5.8	20.0
o-Xylene	Ave	2.285	2.413	0.3000	10.6	10.0	5.6	20.0
Styrene	Ave	3.735	3.892	0.3000	10.4	10.0	4.2	20.0
Bromoform	Ave	0.3275	0.3561	0.1000	10.9	10.0	8.7	20.0
2-Chlorobenzotrifluoride	Ave	1.569	1.735	0.0100	11.1	10.0	10.6	20.0
Isopropylbenzene	Ave	5.608	6.215	0.1000	11.1	10.0	10.8	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.329	0.3000	10.2	10.0	1.7	20.0
Bromobenzene	Ave	0.8735	0.8832	0.0100	10.1	10.0	1.1	20.0
1,2,3-Trichloropropane	Ave	0.2927	0.2816	0.0100	9.62	10.0	-3.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2844	0.2538	0.0100	8.93	10.0	-10.7	20.0
N-Propylbenzene	Ave	1.160	1.202	0.0100	10.4	10.0	3.6	20.0
2-Chlorotoluene	Ave	0.9582	0.9690	0.0100	10.1	10.0	1.1	20.0
3-Chlorotoluene	Ave	0.9794	0.9807	0.0100	10.0	10.0	0.1	20.0
1,3,5-Trimethylbenzene	Ave	3.211	3.376	0.0100	10.5	10.0	5.1	20.0
4-Chlorotoluene	Ave	1.034	1.066	0.0100	10.3	10.0	3.1	20.0
tert-Butylbenzene	Ave	2.771	2.917	0.0100	10.5	10.0	5.3	20.0
1,2,4-Trimethylbenzene	Ave	3.314	3.381	0.0100	10.2	10.0	2.0	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.7482	0.8367	0.0100	11.2	10.0	11.8	20.0
sec-Butylbenzene	Ave	3.989	4.281	0.0100	10.7	10.0	7.3	20.0
1,3-Dichlorobenzene	Ave	1.726	1.740	0.6000	10.1	10.0	0.8	20.0
4-Isopropyltoluene	Ave	3.269	3.479	0.0100	10.6	10.0	6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCVIS 180-134740/2 Calibration Date: 03/04/2015 11:38

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50304002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.737	1.720	0.5000	9.90	10.0	-1.0	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7111	0.7838	0.0100	11.0	10.0	10.2	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.7753	0.8566	0.0100	11.0	10.0	10.5	20.0
n-Butylbenzene	Ave	2.906	3.084	0.0100	10.6	10.0	6.1	20.0
1,2-Dichlorobenzene	Ave	1.579	1.614	0.4000	10.2	10.0	2.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1040	0.0978	0.0500	9.40	10.0	-6.0	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.078	1.151	0.0100	32.0	30.0	6.8	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.066	1.108	0.0100	20.8	20.0	3.9	20.0
1,2,4-Trichlorobenzene	Ave	0.7897	0.8093	0.2000	10.2	10.0	2.5	20.0
Hexachlorobutadiene	Ave	0.3373	0.3833	0.0100	11.4	10.0	13.7	20.0
Naphthalene	Ave	2.291	2.280	0.0100	9.95	10.0	-0.5	20.0
1,2,3-Trichlorobenzene	Ave	0.6771	0.6929	0.0100	10.2	10.0	2.3	20.0
2,4,5-Trichlorotoluene	Ave	0.3426	0.3571	0.0100	10.4	10.0	4.2	20.0
2,3,6-Trichlorotoluene	Ave	0.3158	0.3277	0.0100	10.4	10.0	3.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2141	0.2191		10.2	10.0	2.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2646	0.2558		9.67	10.0	-3.3	20.0
Toluene-d8 (Surr)	Ave	3.897	4.316		11.1	10.0	10.7	20.0
4-Bromofluorobenzene (Surr)	Ave	1.450	1.480		10.2	10.0	2.1	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 04-Mar-2015 11:38:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005893-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 15:26:36 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 12:10:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.320	4.320	0.000	98	140255	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	98	433400	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	99	101881	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.691	12.691	0.000	98	146266	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.528	0.000	97	94958	50.0	51.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	100	110879	50.0	48.4	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	100	439683	50.0	55.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	97	150758	50.0	51.0	
11 Dichlorodifluoromethane	85	1.619	1.619	0.000	99	120152	50.0	55.2	
12 Chloromethane	50	1.777	1.777	0.000	99	176888	50.0	50.8	
13 Vinyl chloride	62	1.905	1.905	0.000	100	178497	50.0	53.4	
14 Butadiene	39	1.948	1.948	0.000	99	205975	50.0	53.1	
15 Bromomethane	94	2.252	2.252	0.000	94	52150	50.0	51.8	
16 Chloroethane	64	2.373	2.373	0.000	99	72765	50.0	53.5	
17 Dichlorofluoromethane	67	2.647	2.647	0.000	99	168917	50.0	54.2	
18 Trichlorofluoromethane	101	2.714	2.714	0.000	98	142082	50.0	54.5	
20 Ethyl ether	59	3.091	3.091	0.000	99	126032	50.0	50.1	
21 Acrolein	56	3.256	3.256	0.000	96	49801	150.0	150.0	M
22 1,1-Dichloroethene	96	3.371	3.371	0.000	98	136225	50.0	54.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.426	3.426	0.000	98	134829	50.0	52.9	
24 Acetone	43	3.493	3.493	0.000	99	90320	100.0	99.2	
25 Iodomethane	142	3.584	3.584	0.000	97	187044	50.0	52.7	
26 Carbon disulfide	76	3.651	3.651	0.000	100	327075	50.0	52.7	
28 3-Chloro-1-propene	76	3.931	3.931	0.000	100	78748	50.0	50.0	
30 Methyl acetate	43	4.016	4.016	0.000	100	613083	250.0	244.9	
31 Methylene Chloride	84	4.144	4.144	0.000	99	146695	50.0	52.3	
32 2-Methyl-2-propanol	59	4.442	4.442	0.000	97	78231	500.0	465.4	
33 Acrylonitrile	53	4.551	4.551	0.000	100	615859	500.0	496.2	
34 trans-1,2-Dichloroethene	96	4.570	4.570	0.000	94	137330	50.0	52.0	
35 Methyl tert-butyl ether	73	4.600	4.600	0.000	99	314962	50.0	47.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.983	4.983	0.000	99	242091	50.0	51.7	
37 1,1-Dichloroethane	63	5.172	5.172	0.000	100	248883	50.0	49.5	
38 Vinyl acetate	43	5.294	5.294	0.000	100	74415	50.0	43.3	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	65	84959	50.0	45.6	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	95	142501	50.0	50.5	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	100	137792	100.0	92.9	
49 Chlorobromomethane	128	6.230	6.230	0.000	99	58259	50.0	49.5	
51 Tetrahydrofuran	42	6.291	6.291	0.000	98	98140	100.0	93.0	
52 Chloroform	83	6.340	6.340	0.000	96	201403	50.0	50.2	
53 1,1,1-Trichloroethane	97	6.528	6.528	0.000	97	138716	50.0	51.0	
54 Cyclohexane	56	6.583	6.583	0.000	96	314684	50.0	51.5	
56 Carbon tetrachloride	117	6.717	6.717	0.000	70	93805	50.0	50.8	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	96	176888	50.0	50.9	
57 Isobutyl alcohol	41	6.942	6.942	0.000	39	68505	1250.0	1151.6	
58 Benzene	78	6.954	6.954	0.000	99	566916	50.0	51.8	
59 1,2-Dichloroethane	62	6.991	6.991	0.000	100	152849	50.0	48.3	
62 n-Heptane	43	7.277	7.277	0.000	83	214676	50.0	50.4	
64 Trichloroethene	130	7.666	7.666	0.000	99	132917	50.0	51.6	
66 Methylcyclohexane	83	7.867	7.867	0.000	99	252318	50.0	51.8	
67 1,2-Dichloropropane	63	7.909	7.909	0.000	98	143087	50.0	49.8	
68 Dibromomethane	93	8.031	8.031	0.000	99	64298	50.0	49.5	
70 1,4-Dioxane	88	8.061	8.061	0.000	96	26300	1000.0	1026.2	
71 Dichlorobromomethane	83	8.201	8.201	0.000	99	121986	50.0	50.4	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	99	149639	50.0	46.7	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.828	0.000	99	318166	100.0	103.4	
76 Toluene	91	8.992	8.992	0.000	100	555797	50.0	52.9	
77 trans-1,3-Dichloropropene	75	9.217	9.217	0.000	99	102404	50.0	46.2	
78 Ethyl methacrylate	69	9.321	9.321	0.000	98	106996	50.0	42.9	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	99	96042	50.0	50.0	
80 Tetrachloroethene	164	9.540	9.540	0.000	98	105086	50.0	54.2	
81 1,3-Dichloropropane	76	9.570	9.570	0.000	100	182115	50.0	50.4	
82 2-Hexanone	43	9.661	9.661	0.000	99	214517	100.0	99.9	
84 Chlorodibromomethane	129	9.795	9.795	0.000	98	64535	50.0	51.1	
85 Ethylene Dibromide	107	9.899	9.899	0.000	99	93253	50.0	50.4	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	90	177016	50.0	54.9	
87 Chlorobenzene	112	10.391	10.391	0.000	100	346165	50.0	51.4	
88 4-Chlorobenzotrifluoride	180	10.434	10.434	0.000	99	168906	50.0	54.8	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	98	81133	50.0	52.2	
90 Ethylbenzene	106	10.501	10.501	0.000	100	205336	50.0	52.7	
91 m-Xylene & p-Xylene	106	10.623	10.623	0.000	100	253850	50.0	52.9	
92 o-Xylene	106	11.012	11.012	0.000	96	245878	50.0	52.8	
93 Styrene	104	11.030	11.030	0.000	97	396506	50.0	52.1	
94 Bromoform	173	11.213	11.213	0.000	97	36284	50.0	54.4	
96 2-Chlorobenzotrifluoride	180	11.280	11.280	0.000	99	176764	50.0	55.3	
97 Isopropylbenzene	105	11.383	11.383	0.000	99	633141	50.0	55.4	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	98	135422	50.0	50.9	
100 Bromobenzene	156	11.687	11.687	0.000	99	129177	50.0	50.6	
101 1,2,3-Trichloropropane	110	11.724	11.724	0.000	95	41195	50.0	48.1	
102 trans-1,4-Dichloro-2-buten	53	11.736	11.736	0.000	93	37126	50.0	44.6	
103 N-Propylbenzene	120	11.791	11.791	0.000	100	175884	50.0	51.8	
104 2-Chlorotoluene	126	11.876	11.876	0.000	100	141735	50.0	50.6	
105 3-Chlorotoluene	126	11.937	11.937	0.000	99	143447	50.0	50.1	

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	11.967	11.967	0.000	100	493765	50.0	52.6	
107 4-Chlorotoluene	126	11.985	11.985	0.000	99	155860	50.0	51.5	
108 tert-Butylbenzene	119	12.289	12.289	0.000	99	426639	50.0	52.6	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	98	494467	50.0	51.0	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	99	122379	50.0	55.9	
112 sec-Butylbenzene	105	12.509	12.509	0.000	100	626228	50.0	53.7	
113 1,3-Dichlorobenzene	146	12.624	12.624	0.000	99	254528	50.0	50.4	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	100	508897	50.0	53.2	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	98	251542	50.0	49.5	
116 2,4-Dichloro-1-(triflourom	214	12.764	12.764	0.000	95	114641	50.0	55.1	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	98	125295	50.0	55.2	
120 n-Butylbenzene	91	13.062	13.062	0.000	100	451059	50.0	53.1	
121 1,2-Dichlorobenzene	146	13.080	13.080	0.000	99	236046	50.0	51.1	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.865	0.000	94	14297	50.0	47.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.011	14.011	0.000	100	505185	150.0	160.2	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	100	323996	100.0	103.9	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	99	118373	50.0	51.2	
127 Hexachlorobutadiene	225	14.863	14.863	0.000	97	56067	50.0	56.8	
128 Naphthalene	128	14.942	14.942	0.000	100	333480	50.0	49.8	
129 1,2,3-Trichlorobenzene	180	15.191	15.191	0.000	99	101351	50.0	51.2	
131 2,4,5-Trichlorotoluene	159	15.970	15.970	0.000	98	52226	50.0	52.1	
130 2,3,6-Trichlorotoluene	159	16.067	16.067	0.000	98	47924	50.0	51.9	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	105.7	
S 134 1,2-Dichloroethene, Total	96				0		100.0	102.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	92.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00102	Amount Added:	2.00	Units: uL		
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL		
VOAVAPRI_00003	Amount Added:	2.00	Units: uL		
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL		
VOAACRPRI_00003	Amount Added:	6.00	Units: uL		
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent	

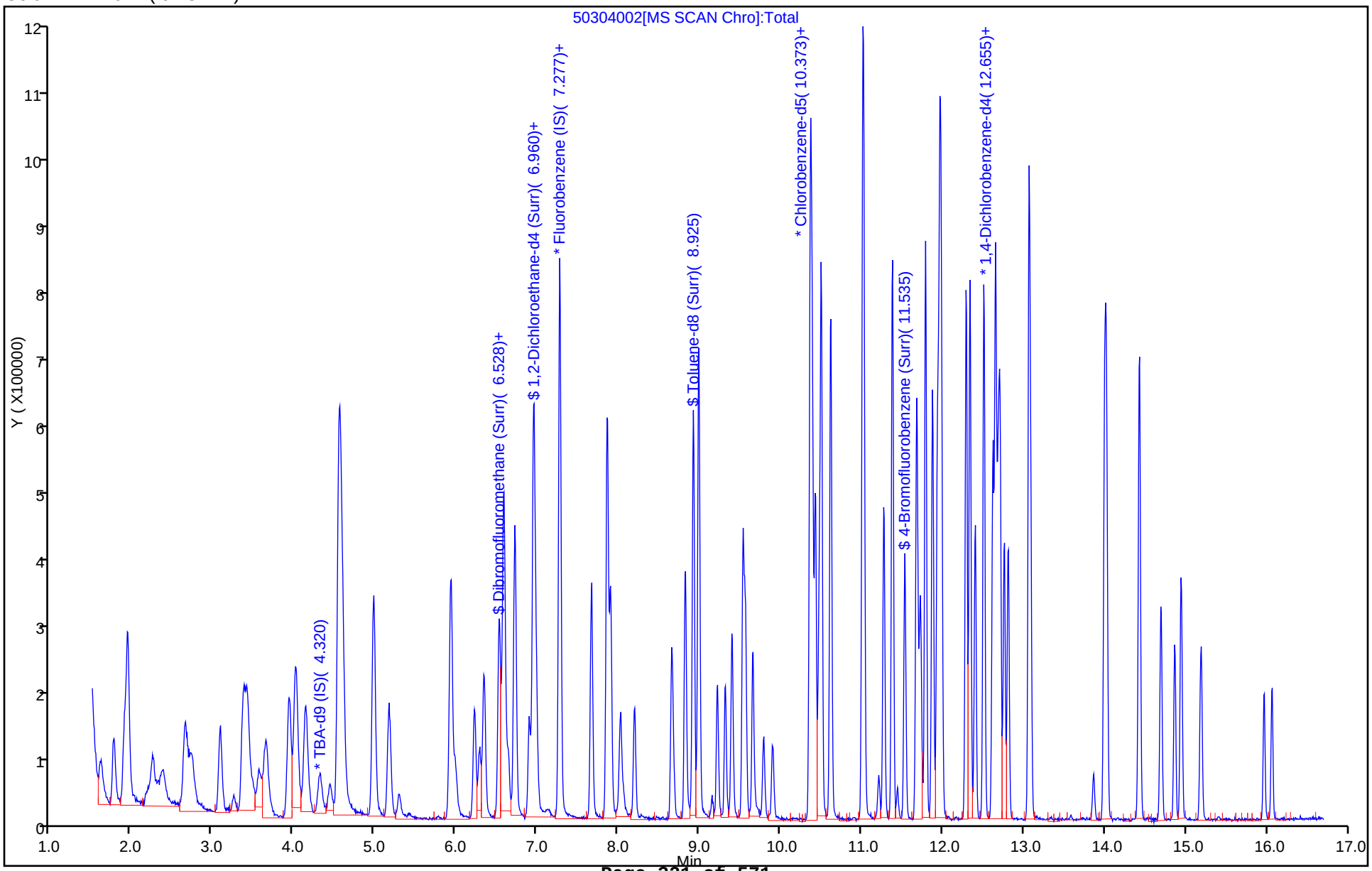
Report Date: 04-Mar-2015 15:26:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304002.D

Injection Date:	04-Mar-2015 11:38:30	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)



Manual Integration/User Assign Peak Report

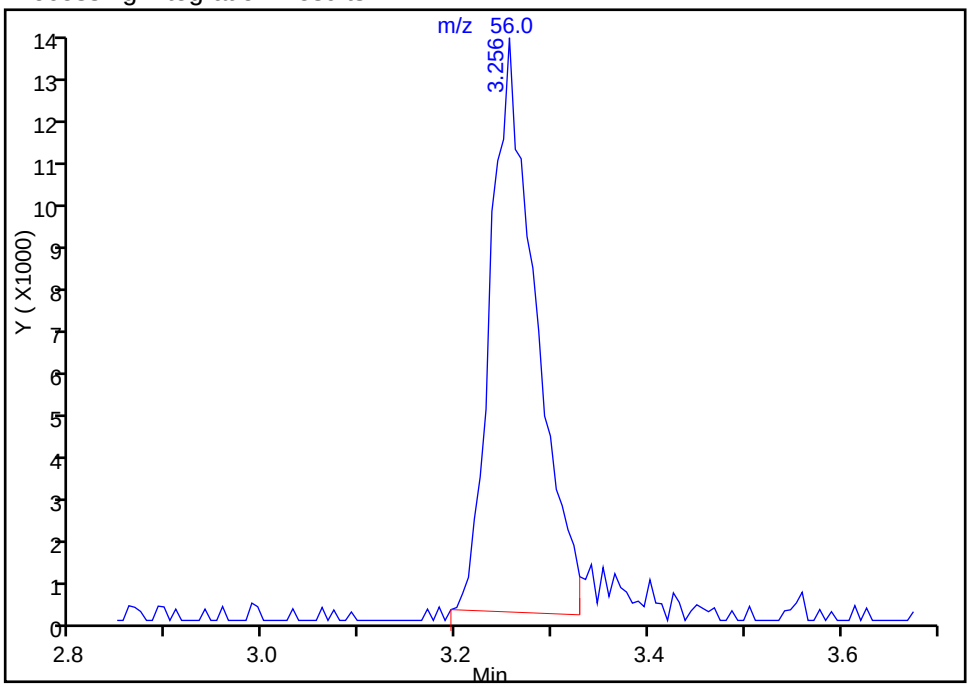
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304002.D
Injection Date: 04-Mar-2015 11:38:30 Instrument ID: CHHP5
Lims ID: CCVIS
Client ID:
Operator ID: 001562 ALS Bottle#: 2 Worklist Smp#: 2
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

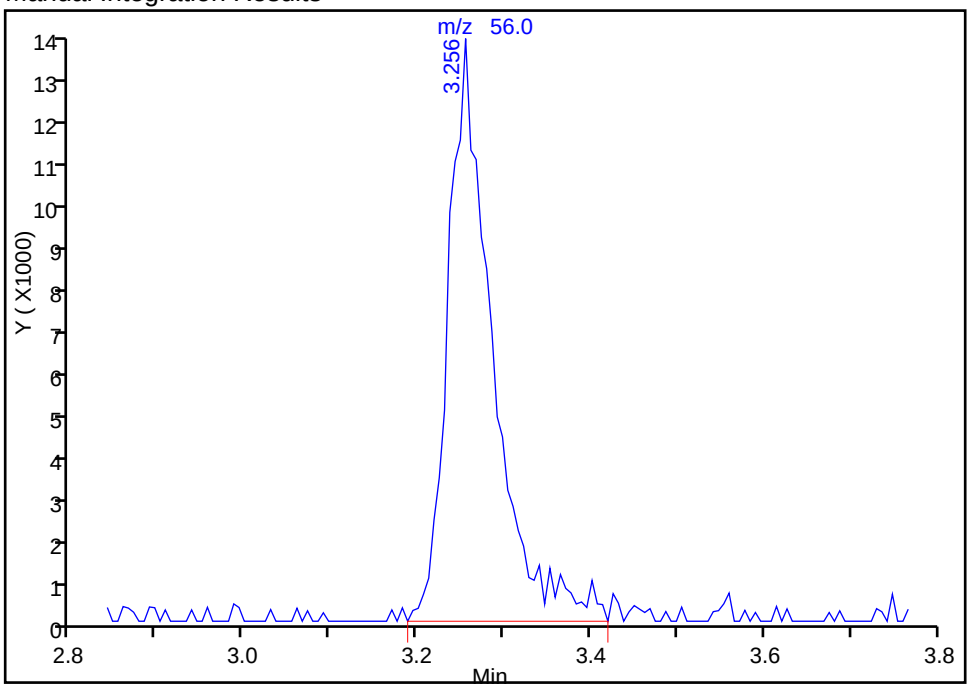
Processing Integration Results

RT: 3.26
Area: 44457
Amount: 133.9161
Amount Units: ng



Manual Integration Results

RT: 3.26
Area: 49801
Amount: 150.0137
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 12:10:57
Audit Action: Manually Integrated
Audit Reason: Baseline

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCVIS 180-134814/7 Calibration Date: 03/05/2015 12:16

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50305007.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2512	0.2787	0.1000	11.1	10.0	10.9	20.0
Chloromethane	Ave	0.4015	0.5109	0.1000	12.7	10.0	27.2*	20.0
Vinyl chloride	Ave	0.3859	0.4887	0.1000	12.7	10.0	26.6*	20.0
Bromomethane	Lin2		0.1726	0.0500	15.3	10.0	52.8*	20.0
Chloroethane	Ave	0.1570	0.2472	0.0500	15.7	10.0	57.5*	20.0
Dichlorofluoromethane	Ave	0.3598	0.5786	0.0100	16.1	10.0	60.8*	20.0
Trichlorofluoromethane	Ave	0.3005	0.5061	0.1000	16.8	10.0	68.4*	20.0
Ethyl ether	Ave	0.2900	0.2878	0.0100	9.93	10.0	-0.7	20.0
Acrolein	Ave	0.0383	0.0328	0.0100	25.7	30.0	-14.4	20.0
1,1-Dichloroethene	Ave	0.2911	0.3087	0.1000	10.6	10.0	6.0	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2943	0.3283	0.1000	11.2	10.0	11.6	20.0
Acetone	Ave	0.1050	0.1184	0.0500	22.5	20.0	12.7	20.0
Iodomethane	Ave	0.4096	0.4450	0.0100	10.9	10.0	8.6	20.0
Carbon disulfide	Ave	0.7166	0.6310	0.1000	8.81	10.0	-11.9	20.0
Allyl chloride	Ave	0.1818	0.1624	0.0100	8.93	10.0	-10.7	20.0
Methyl acetate	Ave	0.2888	0.2525	0.1000	43.7	50.0	-12.6	20.0
Methylene Chloride	Lin2		0.3421	0.1000	10.6	10.0	5.8	20.0
tert-Butyl alcohol	Ave	1.198	1.071	0.0100	89.3	100	-10.7	20.0
Acrylonitrile	Ave	0.1432	0.1392	0.0100	97.2	100	-2.8	20.0
trans-1,2-Dichloroethene	Ave	0.3044	0.3303	0.1000	10.8	10.0	8.5	20.0
Methyl tert-butyl ether	Ave	0.7605	0.7045	0.1000	9.26	10.0	-7.4	20.0
Hexane	Ave	0.5404	0.5344	0.0100	9.89	10.0	-1.1	20.0
1,1-Dichloroethane	Ave	0.5802	0.5949	0.2000	10.3	10.0	2.5	20.0
Vinyl acetate	Ave	0.1982	0.1594	0.0100	8.04	10.0	-19.6	20.0
2,2-Dichloropropane	Ave	0.2148	0.1626	0.0100	7.57	10.0	-24.3*	20.0
cis-1,2-Dichloroethene	Ave	0.3255	0.3406	0.1000	10.5	10.0	4.6	20.0
2-Butanone (MEK)	Ave	0.1711	0.1687	0.0500	19.7	20.0	-1.4	20.0
Bromochloromethane	Ave	0.1357	0.1412	0.0100	10.4	10.0	4.1	20.0
Tetrahydrofuran	Ave	0.1218	0.1066	0.0100	17.5	20.0	-12.5	20.0
Chloroform	Ave	0.4624	0.4836	0.2000	10.5	10.0	4.6	20.0
1,1,1-Trichloroethane	Ave	0.3141	0.3179	0.1000	10.1	10.0	1.2	20.0
Cyclohexane	Ave	0.7049	0.7446	0.1000	10.6	10.0	5.6	20.0
Carbon tetrachloride	Ave	0.2130	0.2085	0.1000	9.79	10.0	-2.1	20.0
1,1-Dichloropropene	Ave	0.4007	0.4126	0.0100	10.3	10.0	3.0	20.0
Isobutyl alcohol	Ave	0.0069	0.0036*	0.0100	130	250	-48.1*	20.0
Benzene	Ave	1.263	1.305	0.5000	10.3	10.0	3.3	20.0
1,2-Dichloroethane	Ave	0.3648	0.3635	0.1000	9.97	10.0	-0.3	20.0
n-Heptane	Ave	0.4910	0.4839	0.0100	9.86	10.0	-1.4	20.0
Trichloroethene	Ave	0.2974	0.3158	0.2000	10.6	10.0	6.2	20.0
Methylcyclohexane	Ave	0.5619	0.6019	0.1000	10.7	10.0	7.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCVIS 180-134814/7 Calibration Date: 03/05/2015 12:16

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50305007.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3317	0.3240	0.1000	9.77	10.0	-2.3	20.0
Dibromomethane	Ave	0.1498	0.1530	0.0100	10.2	10.0	2.1	20.0
1,4-Dioxane	Ave	0.0030	0.0021*	0.0100	144	200	-27.9*	20.0
Bromodichloromethane	Ave	0.2792	0.2559	0.2000	9.16	10.0	-8.4	20.0
cis-1,3-Dichloropropene	Ave	0.3698	0.2828	0.2000	7.65	10.0	-23.5*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.510	1.400	0.1000	18.5	20.0	-7.3	20.0
Toluene	Ave	5.161	5.459	0.4000	10.6	10.0	5.8	20.0
trans-1,3-Dichloropropene	Ave	1.088	0.7279	0.1000	6.69	10.0	-33.1*	20.0
Ethyl methacrylate	Ave	1.224	0.8327	0.0100	6.81	10.0	-31.9*	20.0
1,1,2-Trichloroethane	Ave	0.9428	0.9318	0.1000	9.88	10.0	-1.2	20.0
Tetrachloroethene	Ave	0.9523	1.054	0.2000	11.1	10.0	10.7	20.0
1,3-Dichloropropane	Ave	1.772	1.770	0.0100	9.99	10.0	-0.1	20.0
2-Hexanone	Ave	1.054	0.9741	0.1000	18.5	20.0	-7.6	20.0
Dibromochloromethane	Ave	0.6200	0.5539	0.1000	8.93	10.0	-10.7	20.0
1,2-Dibromoethane (EDB)	Ave	0.9079	0.8445	0.1000	9.30	10.0	-7.0	20.0
3-Chlorobenzotrifluoride	Ave	1.583	1.676	0.0100	10.6	10.0	5.9	20.0
Chlorobenzene	Ave	3.305	3.490	0.5000	10.6	10.0	5.6	20.0
4-Chlorobenzotrifluoride	Ave	1.513	1.571	0.0100	10.4	10.0	3.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7622	0.7388	0.0100	9.69	10.0	-3.1	20.0
Ethylbenzene	Ave	1.911	2.040	0.1000	10.7	10.0	6.7	20.0
m-Xylene & p-Xylene	Ave	2.354	2.435	0.1000	10.3	10.0	3.4	20.0
o-Xylene	Ave	2.285	2.432	0.3000	10.6	10.0	6.4	20.0
Styrene	Ave	3.735	3.938	0.3000	10.5	10.0	5.4	20.0
Bromoform	Ave	0.3275	0.2762	0.1000	8.43	10.0	-15.7	20.0
2-Chlorobenzotrifluoride	Ave	1.569	1.648	0.0100	10.5	10.0	5.0	20.0
Isopropylbenzene	Ave	5.608	6.225	0.1000	11.1	10.0	11.0	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.283	0.3000	9.82	10.0	-1.8	20.0
Bromobenzene	Ave	0.8735	0.9319	0.0100	10.7	10.0	6.7	20.0
1,2,3-Trichloropropane	Ave	0.2927	0.2956	0.0100	10.1	10.0	1.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2844	0.2172	0.0100	7.64	10.0	-23.6*	20.0
N-Propylbenzene	Ave	1.160	1.226	0.0100	10.6	10.0	5.6	20.0
2-Chlorotoluene	Ave	0.9582	1.000	0.0100	10.4	10.0	4.4	20.0
3-Chlorotoluene	Ave	0.9794	0.9874	0.0100	10.1	10.0	0.8	20.0
1,3,5-Trimethylbenzene	Ave	3.211	3.492	0.0100	10.9	10.0	8.7	20.0
4-Chlorotoluene	Ave	1.034	1.086	0.0100	10.5	10.0	5.1	20.0
tert-Butylbenzene	Ave	2.771	3.027	0.0100	10.9	10.0	9.2	20.0
1,2,4-Trimethylbenzene	Ave	3.314	3.515	0.0100	10.6	10.0	6.1	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.7482	0.8102	0.0100	10.8	10.0	8.3	20.0
sec-Butylbenzene	Ave	3.989	4.358	0.0100	10.9	10.0	9.2	20.0
1,3-Dichlorobenzene	Ave	1.726	1.820	0.6000	10.5	10.0	5.4	20.0
4-Isopropyltoluene	Ave	3.269	3.500	0.0100	10.7	10.0	7.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCVIS 180-134814/7 Calibration Date: 03/05/2015 12:16

Instrument ID: CHHP5 Calib Start Date: 03/03/2015 14:28

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2015 18:29

Lab File ID: 50305007.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.737	1.852	0.5000	10.7	10.0	6.6	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7111	0.7647	0.0100	10.8	10.0	7.5	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.7753	0.8540	0.0100	11.0	10.0	10.2	20.0
n-Butylbenzene	Ave	2.906	3.116	0.0100	10.7	10.0	7.2	20.0
1,2-Dichlorobenzene	Ave	1.579	1.693	0.4000	10.7	10.0	7.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1040	0.0676	0.0500	6.50	10.0	-35.0*	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.078	1.011	0.0100	28.1	30.0	-6.3	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.066	0.9561	0.0100	17.9	20.0	-10.3	20.0
1,2,4-Trichlorobenzene	Ave	0.7897	0.7400	0.2000	9.37	10.0	-6.3	20.0
Hexachlorobutadiene	Ave	0.3373	0.3651	0.0100	10.8	10.0	8.3	20.0
Naphthalene	Ave	2.291	1.978	0.0100	8.63	10.0	-13.7	20.0
1,2,3-Trichlorobenzene	Ave	0.6771	0.6020	0.0100	8.89	10.0	-11.1	20.0
2,4,5-Trichlorotoluene	Ave	0.3426	0.2664	0.0100	7.78	10.0	-22.2*	20.0
2,3,6-Trichlorotoluene	Ave	0.3158	0.2469	0.0100	7.82	10.0	-21.8*	20.0
Dibromofluoromethane (Surr)	Ave	0.2141	0.2184		10.2	10.0	2.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2646	0.2630		9.94	10.0	-0.6	20.0
Toluene-d8 (Surr)	Ave	3.897	4.062		10.4	10.0	4.2	20.0
4-Bromofluorobenzene (Surr)	Ave	1.450	1.427		9.84	10.0	-1.6	20.0

Report Date: 06-Mar-2015 08:06:08 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305007.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 05-Mar-2015 12:16:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005905-007
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:06:07 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 05-Mar-2015 12:58:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.299	4.299	0.000	93	110089	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	95	455418	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.365	10.365	0.000	98	107822	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	97	151087	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.532	0.000	97	99453	50.0	51.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	97	119773	50.0	49.7	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	100	438020	50.0	52.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.533	0.000	95	153812	50.0	49.2	
11 Dichlorodifluoromethane	85	1.616	1.616	0.000	99	126907	50.0	55.5	
12 Chloromethane	50	1.775	1.775	0.000	99	232691	50.0	63.6	
13 Vinyl chloride	62	1.902	1.902	0.000	100	222570	50.0	63.3	
14 Butadiene	39	1.939	1.939	0.000	99	269880	50.0	66.2	
15 Bromomethane	94	2.249	2.249	0.000	76	78586	50.0	76.4	
16 Chloroethane	64	2.383	2.383	0.000	97	112595	50.0	78.7	
17 Dichlorofluoromethane	67	2.651	2.651	0.000	98	263485	50.0	80.4	
18 Trichlorofluoromethane	101	2.705	2.705	0.000	97	230493	50.0	84.2	
20 Ethyl ether	59	3.083	3.083	0.000	98	131079	50.0	49.6	
21 Acrolein	56	3.265	3.265	0.000	85	44787	150.0	128.4	M
22 1,1-Dichloroethene	96	3.375	3.375	0.000	98	140578	50.0	53.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.423	3.423	0.000	93	149513	50.0	55.8	
24 Acetone	43	3.496	3.496	0.000	92	107831	100.0	112.7	
25 Iodomethane	142	3.581	3.581	0.000	95	202642	50.0	54.3	
26 Carbon disulfide	76	3.661	3.661	0.000	100	287387	50.0	44.0	
28 3-Chloro-1-propene	76	3.934	3.934	0.000	98	73960	50.0	44.7	
30 Methyl acetate	43	4.013	4.013	0.000	98	574941	250.0	218.6	
31 Methylene Chloride	84	4.141	4.141	0.000	96	155791	50.0	52.9	
32 2-Methyl-2-propanol	59	4.421	4.421	0.000	73	58925	500.0	446.7	
33 Acrylonitrile	53	4.549	4.549	0.000	99	634055	500.0	486.2	
34 trans-1,2-Dichloroethene	96	4.561	4.561	0.000	62	150407	50.0	54.2	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	99	320852	50.0	46.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.981	4.981	0.000	97	243365	50.0	49.4	
37 1,1-Dichloroethane	63	5.169	5.169	0.000	98	270944	50.0	51.3	
38 Vinyl acetate	43	5.297	5.297	0.000	97	72573	50.0	40.2	
44 2,2-Dichloropropane	77	5.924	5.924	0.000	63	74061	50.0	37.9	
45 cis-1,2-Dichloroethene	96	5.942	5.942	0.000	89	155105	50.0	52.3	
46 2-Butanone (MEK)	43	5.984	5.984	0.000	100	153670	100.0	98.6	
49 Chlorobromomethane	128	6.222	6.222	0.000	80	64282	50.0	52.0	
51 Tetrahydrofuran	42	6.289	6.289	0.000	98	97054	100.0	87.5	
52 Chloroform	83	6.337	6.337	0.000	85	220219	50.0	52.3	
53 1,1,1-Trichloroethane	97	6.532	6.532	0.000	97	144757	50.0	50.6	
54 Cyclohexane	56	6.587	6.587	0.000	84	339100	50.0	52.8	
56 Carbon tetrachloride	117	6.714	6.714	0.000	67	94941	50.0	48.9	
55 1,1-Dichloropropene	75	6.721	6.721	0.000	96	187915	50.0	51.5	
57 Isobutyl alcohol	41	6.940	6.940	0.000	33	40522	1250.0	648.3	
58 Benzene	78	6.952	6.952	0.000	99	594387	50.0	51.7	
59 1,2-Dichloroethane	62	6.982	6.982	0.000	97	165561	50.0	49.8	
62 n-Heptane	43	7.280	7.280	0.000	83	220383	50.0	49.3	
64 Trichloroethene	130	7.663	7.663	0.000	96	143828	50.0	53.1	
66 Methylcyclohexane	83	7.858	7.858	0.000	95	274122	50.0	53.6	
67 1,2-Dichloropropane	63	7.901	7.901	0.000	96	147553	50.0	48.8	
68 Dibromomethane	93	8.022	8.022	0.000	95	69661	50.0	51.1	
70 1,4-Dioxane	88	8.059	8.059	0.000	77	19426	1000.0	721.4	M
71 Dichlorobromomethane	83	8.193	8.193	0.000	98	116517	50.0	45.8	
74 cis-1,3-Dichloropropene	75	8.661	8.661	0.000	99	128774	50.0	38.2	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	94	301852	100.0	92.7	
76 Toluene	91	8.990	8.990	0.000	100	588547	50.0	52.9	
77 trans-1,3-Dichloropropene	75	9.221	9.221	0.000	77	78484	50.0	33.4	
78 Ethyl methacrylate	69	9.318	9.318	0.000	82	89780	50.0	34.0	
79 1,1,2-Trichloroethane	97	9.397	9.397	0.000	97	100469	50.0	49.4	
80 Tetrachloroethene	164	9.537	9.537	0.000	96	113635	50.0	55.3	
81 1,3-Dichloropropane	76	9.568	9.568	0.000	96	190807	50.0	49.9	
82 2-Hexanone	43	9.659	9.659	0.000	99	210053	100.0	92.4	
84 Chlorodibromomethane	129	9.793	9.793	0.000	96	59723	50.0	44.7	
85 Ethylene Dibromide	107	9.902	9.902	0.000	96	91059	50.0	46.5	
86 3-Chlorobenzotrifluoride	180	10.371	10.371	0.000	81	180705	50.0	52.9	
87 Chlorobenzene	112	10.395	10.395	0.000	89	376335	50.0	52.8	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	93	169411	50.0	51.9	
89 1,1,1,2-Tetrachloroethane	131	10.474	10.474	0.000	91	79661	50.0	48.5	
90 Ethylbenzene	106	10.498	10.498	0.000	100	219956	50.0	53.4	
91 m-Xylene & p-Xylene	106	10.620	10.620	0.000	99	262561	50.0	51.7	
92 o-Xylene	106	11.009	11.009	0.000	91	262191	50.0	53.2	
93 Styrene	104	11.028	11.028	0.000	97	424562	50.0	52.7	
94 Bromoform	173	11.216	11.216	0.000	74	29776	50.0	42.2	
96 2-Chlorobenzotrifluoride	180	11.271	11.271	0.000	88	177640	50.0	52.5	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	671142	50.0	55.5	
99 1,1,2,2-Tetrachloroethane	83	11.679	11.679	0.000	63	138339	50.0	49.1	
100 Bromobenzene	156	11.685	11.685	0.000	92	140791	50.0	53.3	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	65	44657	50.0	50.5	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	54	32816	50.0	38.2	
103 N-Propylbenzene	120	11.788	11.788	0.000	100	185168	50.0	52.8	
104 2-Chlorotoluene	126	11.873	11.873	0.000	99	151094	50.0	52.2	
105 3-Chlorotoluene	126	11.934	11.934	0.000	74	149180	50.0	50.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	99	527565	50.0	54.4	
107 4-Chlorotoluene	126	11.983	11.983	0.000	98	164131	50.0	52.5	
108 tert-Butylbenzene	119	12.287	12.287	0.000	67	457382	50.0	54.6	
110 1,2,4-Trimethylbenzene	105	12.336	12.336	0.000	97	531143	50.0	53.0	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	97	122410	50.0	54.1	
112 sec-Butylbenzene	105	12.506	12.506	0.000	100	658415	50.0	54.6	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	86	274956	50.0	52.7	
114 4-Isopropyltoluene	119	12.652	12.652	0.000	99	528826	50.0	53.5	
115 1,4-Dichlorobenzene	146	12.707	12.707	0.000	98	279750	50.0	53.3	
116 2,4-Dichloro-1-(triflourom	214	12.761	12.761	0.000	87	115539	50.0	53.8	
118 2,5-Dichlorobenzotrifluori	214	12.810	12.810	0.000	97	129026	50.0	55.1	
120 n-Butylbenzene	91	13.059	13.059	0.000	100	470860	50.0	53.6	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	99	255825	50.0	53.6	
122 1,2-Dibromo-3-Chloropropan	75	13.863	13.863	0.000	87	10211	50.0	32.5	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	98	458186	150.0	140.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	98	288914	100.0	89.7	
126 1,2,4-Trichlorobenzene	180	14.690	14.690	0.000	97	111811	50.0	46.9	
127 Hexachlorobutadiene	225	14.866	14.866	0.000	89	55161	50.0	54.1	
128 Naphthalene	128	14.945	14.945	0.000	100	298876	50.0	43.2	
129 1,2,3-Trichlorobenzene	180	15.189	15.189	0.000	92	90956	50.0	44.5	
131 2,4,5-Trichlorotoluene	159	15.961	15.961	0.000	92	40254	50.0	38.9	
130 2,3,6-Trichlorotoluene	159	16.065	16.065	0.000	96	37300	50.0	39.1	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	106.6	
S 133 Xylenes, Total	106				0		100.0	104.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	71.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00104	Amount Added:	2.00	Units: uL		
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL		
VOAVAPRI_00003	Amount Added:	2.00	Units: uL		
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL		
VOAACRPRI_00003	Amount Added:	6.00	Units: uL		
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent	

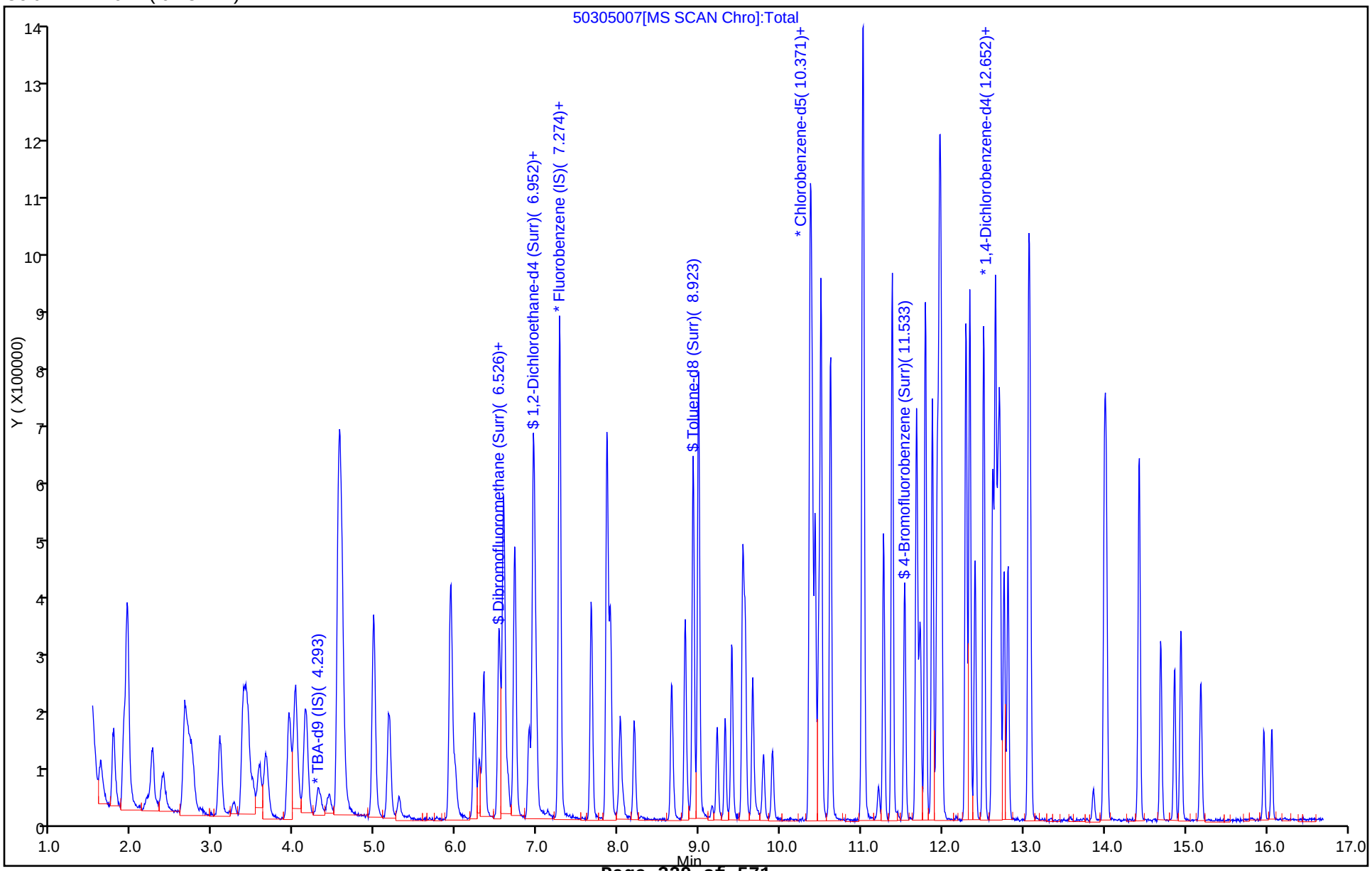
Report Date: 06-Mar-2015 08:06:09 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305007.D

Injection Date:	05-Mar-2015 12:16:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

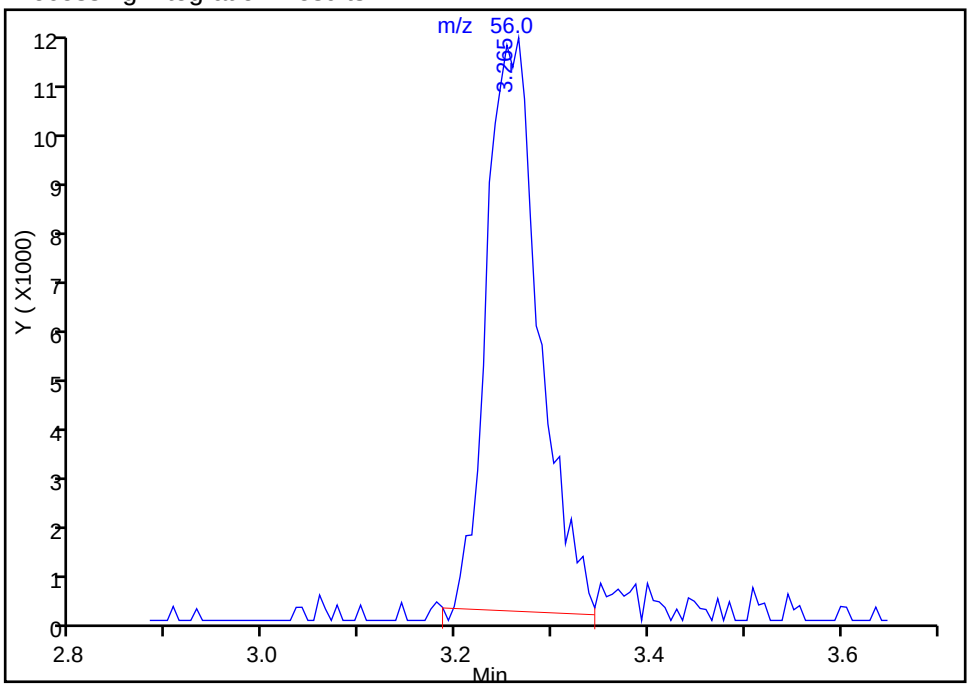
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305007.D				
Injection Date:	05-Mar-2015 12:16:30	Instrument ID:	CHHP5		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	001562	ALS Bottle#:	3	Worklist Smp#:	7
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

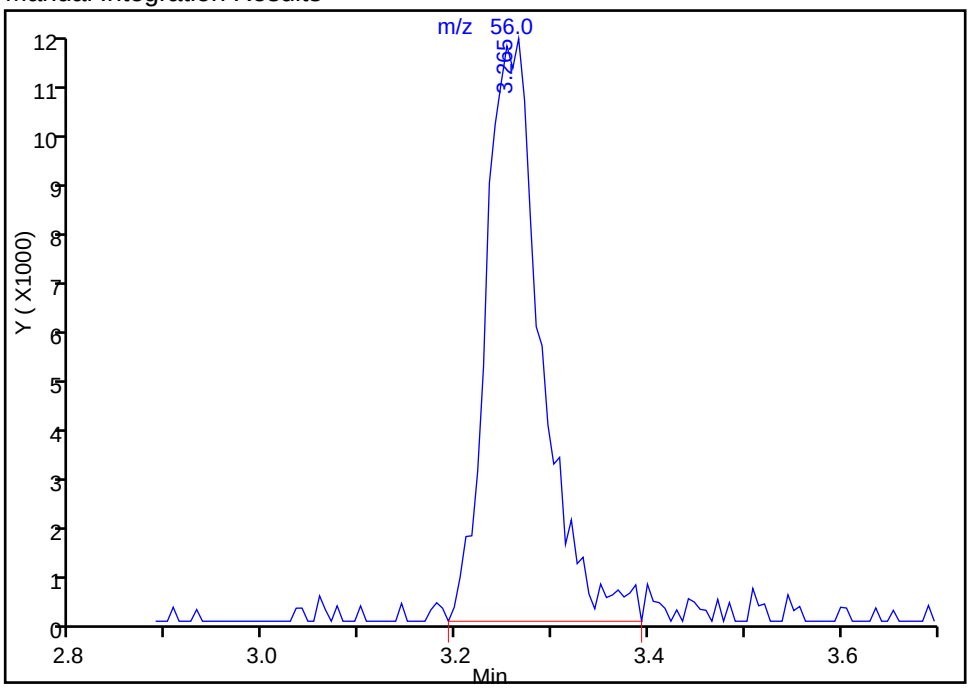
Processing Integration Results

RT: 3.27
Area: 41705
Amount: 119.5528
Amount Units: ng



Manual Integration Results

RT: 3.27
Area: 44787
Amount: 128.3877
Amount Units: ng



Reviewer: fergusond, 05-Mar-2015 12:58:14
Audit Action: Manually Integrated
Audit Reason: Baseline

Manual Integration/User Assign Peak Report

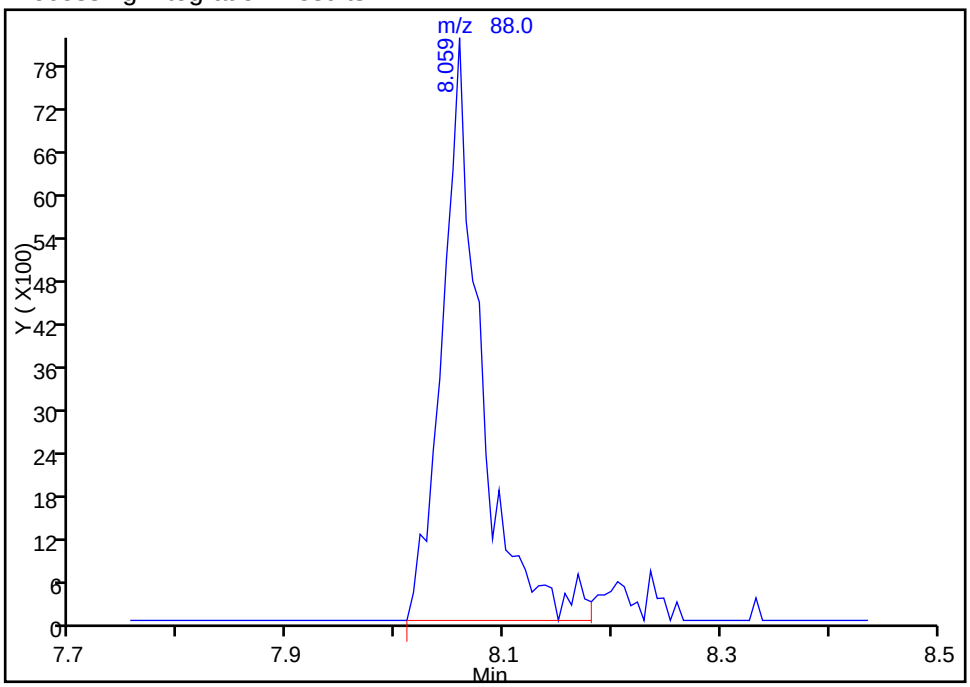
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305007.D
Injection Date: 05-Mar-2015 12:16:30 Instrument ID: CHHP5
Lims ID: CCVIS
Client ID:
Operator ID: 001562 ALS Bottle#: 3 Worklist Smp#: 7
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

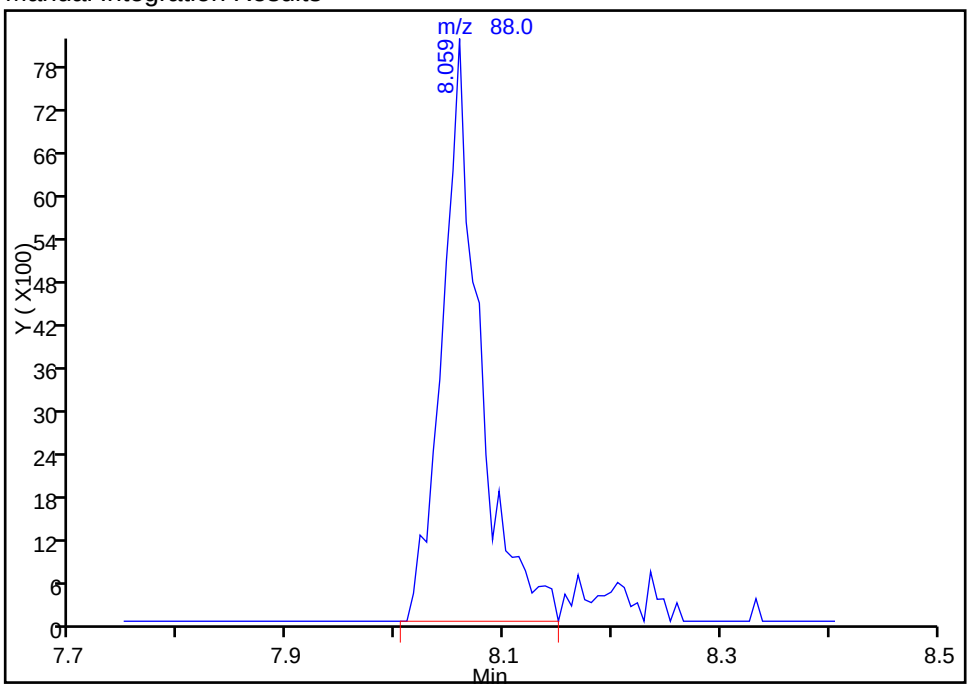
Processing Integration Results

RT: 8.06
Area: 20083
Amount: 745.7511
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 19426
Amount: 721.3544
Amount Units: ng



Reviewer: fergusond, 05-Mar-2015 12:58:14
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	03-Mar-2015 12:21:30	ALS Bottle#:	3	Worklist Smp#:	6
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Misc. Info.:	180-0005873-006				
Operator ID:	001562	Instrument ID:	CHHP5		
Method:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\MSVOA_LL_CHHP5.m				
Limit Group:	VOA 8260C ICAL				
Last Update:	04-Mar-2015 10:13:03	Calib Date:	03-Mar-2015 18:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: fergusond		Date:	03-Mar-2015 12:34:40		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.342	8.342	0.000	0	147446	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

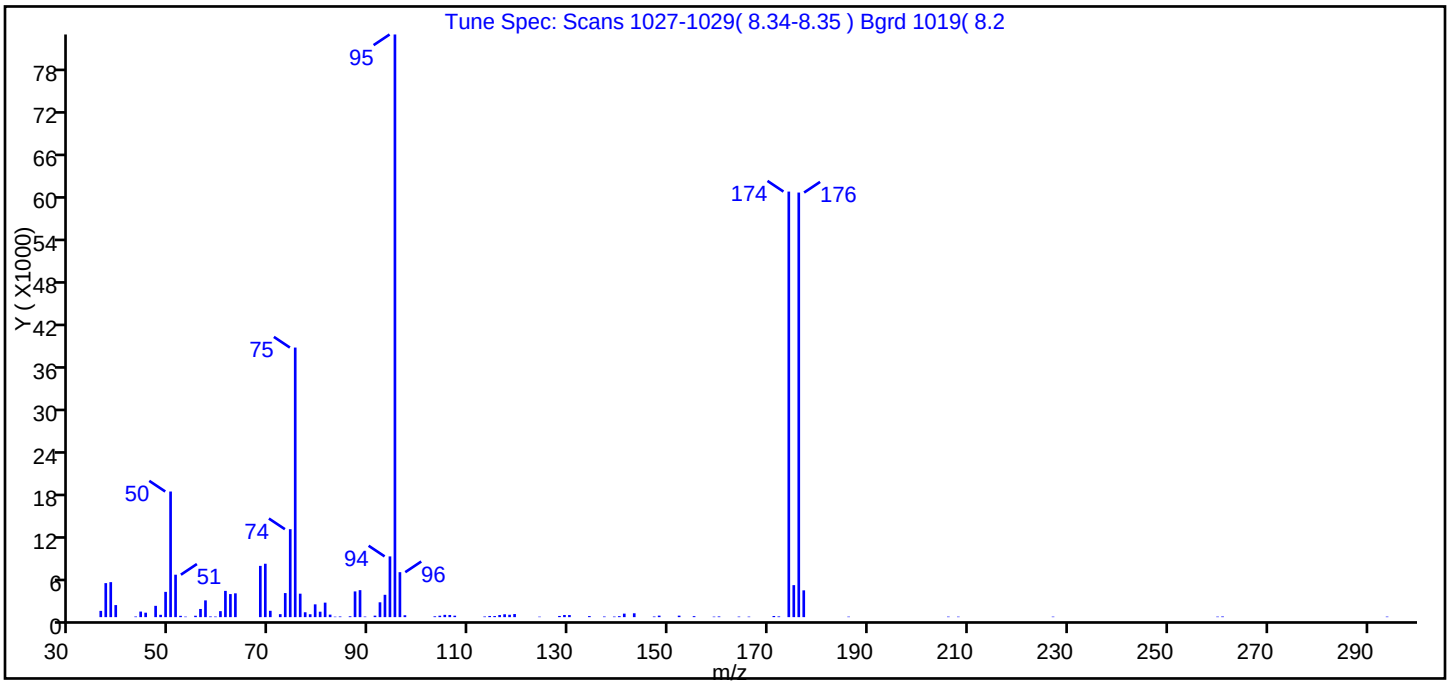
VOA BFB 25_00001 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D				
Injection Date:	03-Mar-2015 12:21:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	001562	ALS Bottle#:	3	Worklist Smp#:	6
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Tune Method:	BFB Method 8260				

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.6
75	30 to 60% of m/z 95	46.3
96	5 to 9% of m/z 95	7.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.0
175	5 to 9% of m/z 174	5.5 (7.5)
176	Greater than 95% but less than 101% of m/z 174	72.9 (99.8)
177	5 to 9% of m/z 176	4.6 (6.3)

Data File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 03-Mar-2015 12:21:30
Spectrum: Tune Spec: Scans 1027-1029(8.34-8.35) Bgrd 1019(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

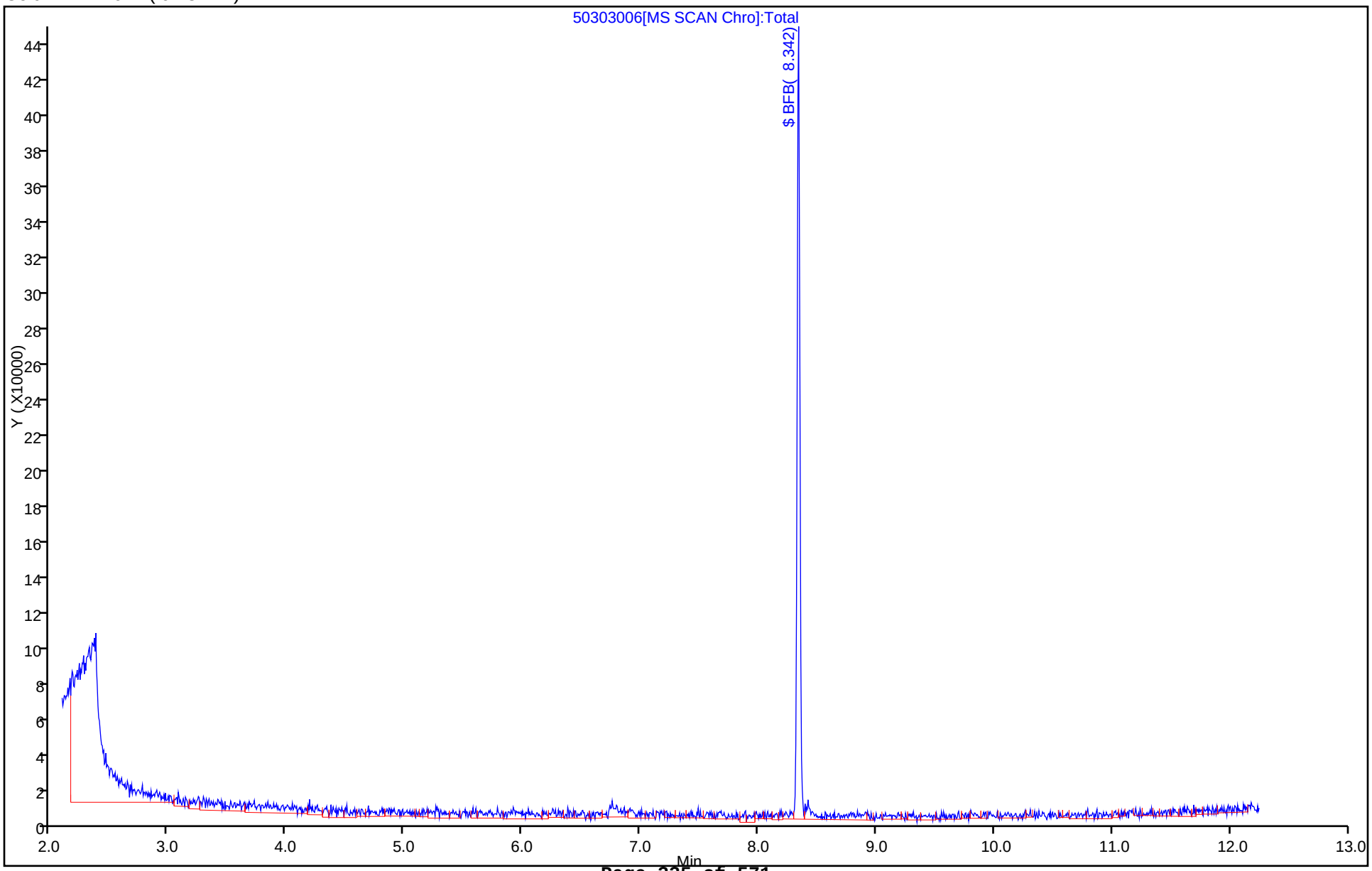
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	884	69.00	7531	96.00	6342	147.00	90
37.00	4798	70.00	895	97.00	267	148.00	212
38.00	4937	72.00	420	103.00	118	152.00	208
39.00	1701	73.00	3394	104.00	203	155.00	140
43.00	90	74.00	12405	105.00	323	159.00	71
44.00	787	75.00	38024	106.00	305	160.00	100
45.00	628	76.00	3310	107.00	205	164.00	78
47.00	1594	77.00	688	113.00	90	166.00	74
48.00	327	78.00	405	114.00	165	171.00	160
49.00	3565	79.00	1805	115.00	156	172.00	105
50.00	17720	80.00	768	116.00	297	174.00	60024
51.00	5986	81.00	2046	117.00	405	175.00	4514
52.00	186	82.00	354	118.00	334	176.00	59888
53.00	74	83.00	67	119.00	437	177.00	3780
55.00	198	84.00	93	124.00	67	186.00	69
56.00	1152	86.00	120	128.00	166	206.00	73
57.00	2364	87.00	3629	129.00	302	208.00	68
58.00	96	88.00	3807	130.00	296	227.00	70
59.00	84	89.00	81	134.00	146	260.00	73
60.00	846	91.00	210	137.00	89	261.00	93
61.00	3705	92.00	2094	139.00	81	294.00	74
62.00	3255	93.00	3151	140.00	139		
63.00	3358	94.00	8567	141.00	495		
68.00	7231	95.00	82184	143.00	545		

Report Date: 04-Mar-2015 10:13:03 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303006.D				
Injection Date:	03-Mar-2015 12:21:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 04-Mar-2015 11:01:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005893-001
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 14:08:31 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 11:16:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.341	8.341	0.000	0	106229	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

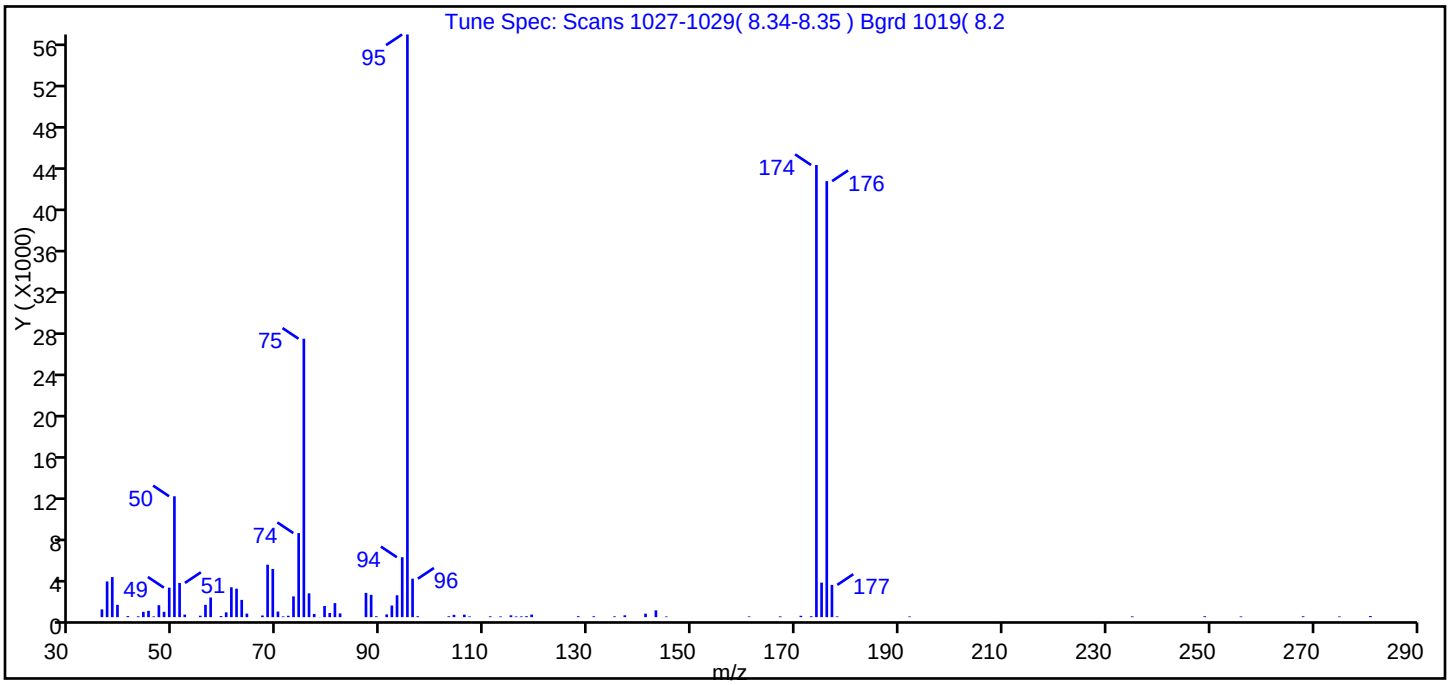
VOA BFB 25_00001 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304001.D				
Injection Date:	04-Mar-2015 11:01:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	001562	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Tune Method:	BFB Method 8260				

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.7
75	30 to 60% of m/z 95	47.8
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	77.6
175	5 to 9% of m/z 174	5.9 (7.6)
176	Greater than 95% but less than 101% of m/z 174	74.8 (96.4)
177	5 to 9% of m/z 176	5.5 (7.4)

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 04-Mar-2015 11:01:30
Spectrum: Tune Spec: Scans 1027-1029(8.34-8.35) Bgrd 1019(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 84

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	752	62.00	2759	89.00	84	135.00	78
37.00	3458	63.00	1671	91.00	262	137.00	179
38.00	3885	64.00	344	92.00	1127	141.00	337
39.00	1193	67.00	162	93.00	2120	143.00	659
41.00	102	68.00	5082	94.00	5808	145.00	68
43.00	80	69.00	4672	95.00	56488	161.00	68
44.00	514	70.00	539	96.00	3729	167.00	75
45.00	611	71.00	73	97.00	88	171.00	133
46.00	72	72.00	136	103.00	83	173.00	86
47.00	1158	73.00	2012	104.00	222	174.00	43832
48.00	517	74.00	8150	106.00	242	175.00	3346
49.00	2858	75.00	26992	107.00	69	176.00	42272
50.00	11718	76.00	2308	111.00	81	177.00	3128
51.00	3317	77.00	308	113.00	69	178.00	72
52.00	246	78.00	18	115.00	178	192.00	68
55.00	138	79.00	1080	116.00	67	235.00	76
56.00	1193	80.00	399	117.00	72	249.00	88
57.00	1906	81.00	1361	118.00	95	256.00	70
59.00	109	82.00	362	119.00	251	268.00	84
60.00	465	87.00	2352	128.00	92	275.00	69
61.00	2895	88.00	2164	131.00	85	281.00	108

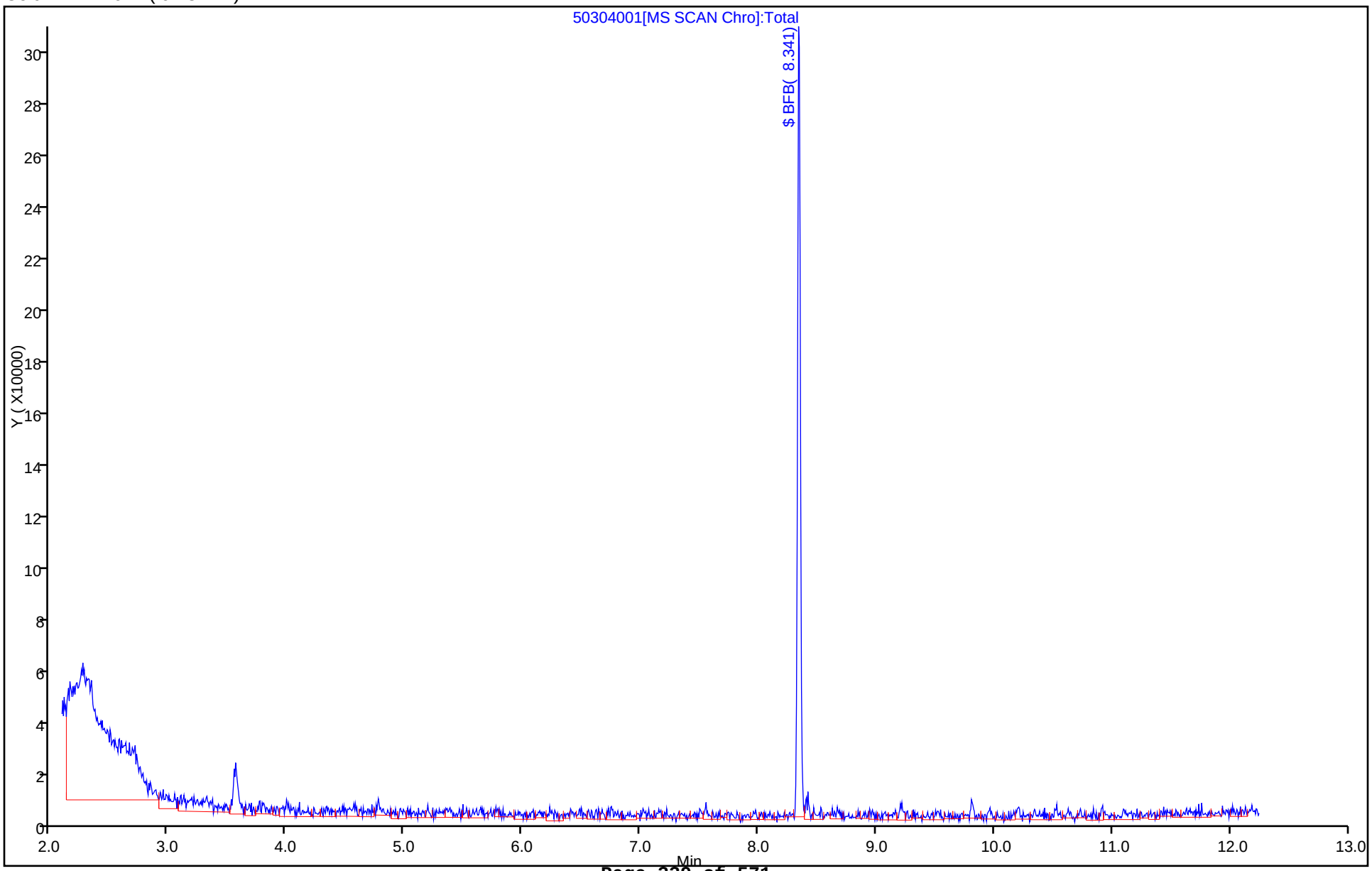
Report Date: 04-Mar-2015 14:08:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304001.D

Injection Date:	04-Mar-2015 11:01:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305006.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 05-Mar-2015 10:58:30 ALS Bottle#: 1 Worklist Smp#: 6
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005905-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:06:05 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 05-Mar-2015 11:11:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.337	8.337	0.000	0	168791	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

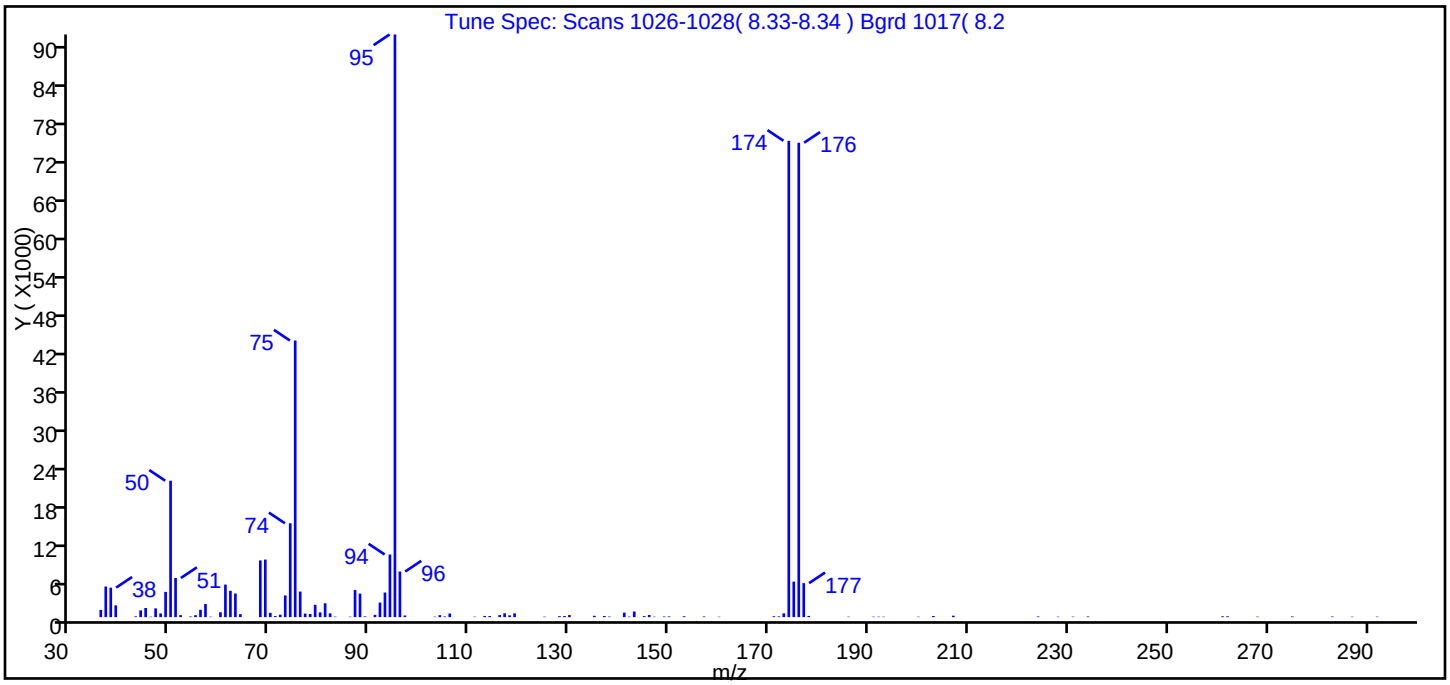
VOA BFB 25_00001 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305006.D				
Injection Date:	05-Mar-2015 10:58:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	001562	ALS Bottle#:	1	Worklist Smp#:	6
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Tune Method:	BFB Method 8260				

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.4
75	30 to 60% of m/z 95	47.5
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.7 (0.8)
174	50 to 120% of m/z 95	81.8
175	5 to 9% of m/z 174	6.1 (7.5)
176	Greater than 95% but less than 101% of m/z 174	81.4 (99.6)
177	5 to 9% of m/z 176	5.8 (7.2)

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305006.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 05-Mar-2015 10:58:30
Spectrum: Tune Spec: Scans 1026-1028(8.33-8.34) Bgrd 1017(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 106

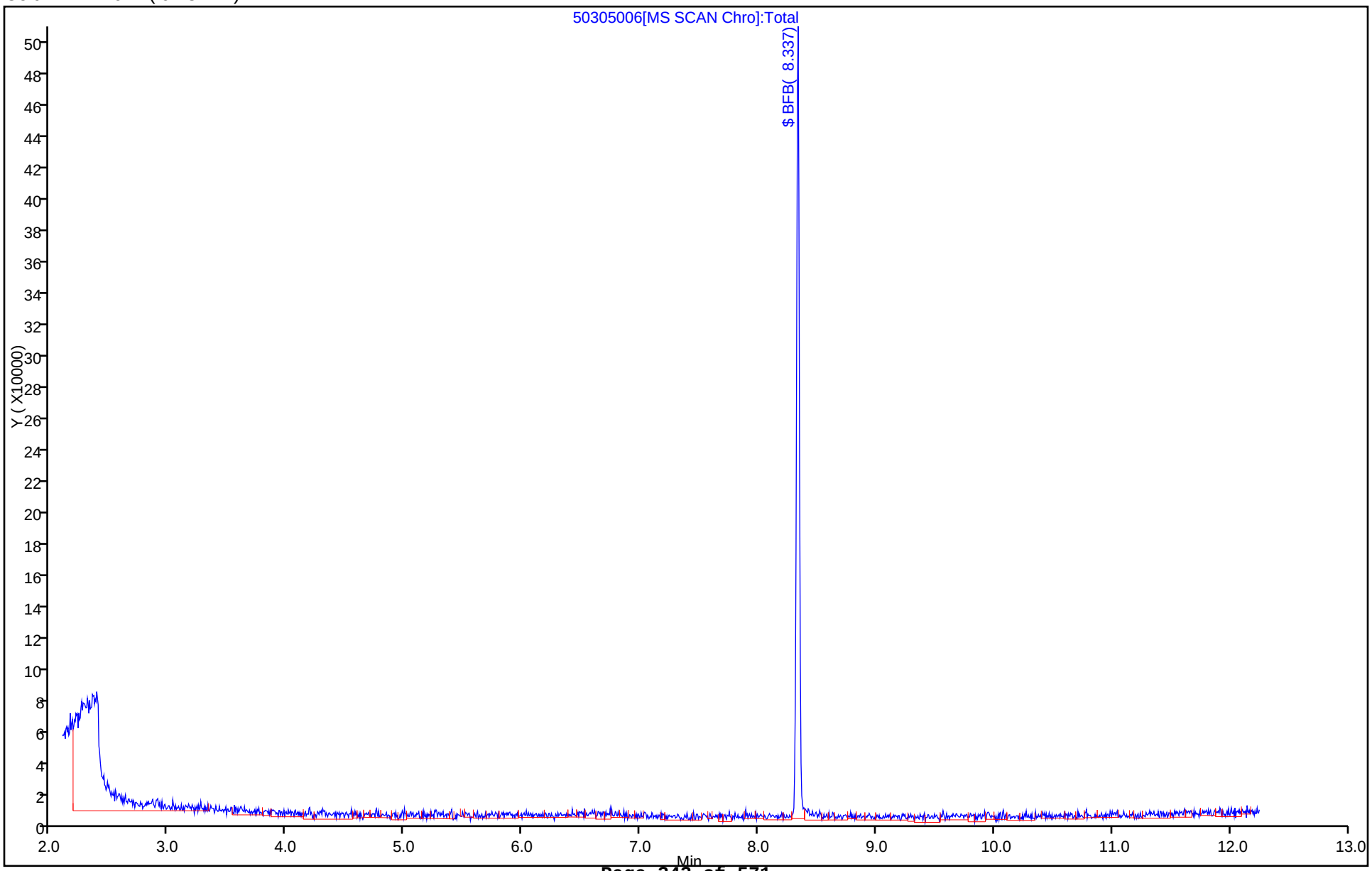
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1128	71.00	166	106.00	567	172.00	119
37.00	4789	72.00	381	111.00	72	173.00	593
38.00	4610	73.00	3391	113.00	185	174.00	74464
39.00	1845	74.00	14672	114.00	169	175.00	5554
43.00	118	75.00	43240	116.00	327	176.00	74160
44.00	1056	76.00	3997	117.00	600	177.00	5315
45.00	1433	77.00	558	118.00	278	178.00	192
46.00	73	78.00	504	119.00	587	186.00	67
47.00	1371	79.00	1932	125.00	74	191.00	67
48.00	582	80.00	742	128.00	154	192.00	67
49.00	3946	81.00	2166	129.00	169	193.00	68
50.00	21328	82.00	594	130.00	325	200.00	71
51.00	6120	83.00	77	135.00	214	203.00	171
52.00	316	86.00	74	137.00	182	207.00	228
54.00	100	87.00	4240	138.00	89	224.00	103
55.00	304	88.00	3678	141.00	711	228.00	68
56.00	1153	89.00	118	142.00	87	231.00	79
57.00	2053	91.00	352	143.00	884	234.00	107
58.00	70	92.00	2276	145.00	155	261.00	132
60.00	763	93.00	3844	146.00	336	262.00	132
61.00	5087	94.00	9795	147.00	69	268.00	77
62.00	4118	95.00	91080	149.00	97	275.00	107
63.00	3695	96.00	7133	150.00	111	283.00	92
64.00	469	97.00	259	153.00	138	287.00	70
68.00	8868	103.00	71	157.00	104	292.00	74
69.00	9001	104.00	308	160.00	67		
70.00	676	105.00	107	171.00	135		

Report Date: 06-Mar-2015 08:06:06 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305006.D				
Injection Date:	05-Mar-2015 10:58:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-134740/3

Matrix: Water Lab File ID: 50304003.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 12:17

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.: 134740 Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-134740/3

Matrix: Water Lab File ID: 50304003.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 12:17

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.: 134740 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304003.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 04-Mar-2015 12:17:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005893-003
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 14:08:31 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 14:08:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.320	-0.018	99	145696	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	99	482246	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	100	106404	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.691	-0.006	98	165407	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.528	0.007	52	97366	50.0	47.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.900	0.006	98	121061	50.0	47.4	
$ 7 Toluene-d8 (Surr)	98	8.932	8.925	0.007	100	431088	50.0	52.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	99	160261	50.0	51.9	
11 Dichlorodifluoromethane	85		1.619					ND	
12 Chloromethane	50		1.777					ND	
13 Vinyl chloride	62		1.905					ND	
14 Butadiene	39		1.948					ND	
15 Bromomethane	94		2.252					ND	
16 Chloroethane	64		2.373					ND	
17 Dichlorofluoromethane	67		2.647					ND	
18 Trichlorofluoromethane	101		2.714					ND	
19 Ethanol	45		3.012					ND	
20 Ethyl ether	59		3.091					ND	
21 Acrolein	56		3.256					ND	
22 1,1-Dichloroethene	96		3.371					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.426					ND	
24 Acetone	43		3.493					ND	
25 Iodomethane	142		3.584					ND	
26 Carbon disulfide	76		3.651					ND	
27 Isopropyl alcohol	45		3.736					ND	
28 3-Chloro-1-propene	76		3.931					ND	
29 Acetonitrile	40		3.943					ND	
30 Methyl acetate	43		4.016					ND	
31 Methylene Chloride	84		4.144					ND	M
32 2-Methyl-2-propanol	59		4.442					ND	
33 Acrylonitrile	53		4.551					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		4.570					ND	
35 Methyl tert-butyl ether	73		4.600					ND	
36 Hexane	57		4.983					ND	
37 1,1-Dichloroethane	63		5.172					ND	
38 Vinyl acetate	43		5.294					ND	
41 Isopropyl ether	45		5.300					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.926					ND	
45 cis-1,2-Dichloroethene	96		5.938					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.987					ND	
48 Ethyl acetate	43		5.993					ND	
47 Propionitrile	54		6.024					ND	
49 Chlorobromomethane	128		6.230					ND	
51 Tetrahydrofuran	42	6.316	6.291	0.025	65	2091		1.78	
52 Chloroform	83		6.340					ND	
50 Methacrylonitrile	41		6.389					ND	
53 1,1,1-Trichloroethane	97		6.528					ND	
54 Cyclohexane	56		6.583					ND	
56 Carbon tetrachloride	117		6.717					ND	
55 1,1-Dichloropropene	75		6.723					ND	
57 Isobutyl alcohol	41		6.942					ND	
58 Benzene	78		6.954					ND	
59 1,2-Dichloroethane	62		6.991					ND	
61 Tert-amyl methyl ether	73		7.143					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.277					ND	
63 n-Butanol	56		7.654					ND	
64 Trichloroethene	130		7.666					ND	
66 Methylcyclohexane	83		7.867					ND	
65 Ethyl acrylate	55		7.867					ND	
69 Methyl methacrylate	69		7.867					ND	
67 1,2-Dichloropropane	63		7.909					ND	
68 Dibromomethane	93		8.031					ND	
70 1,4-Dioxane	88		8.061					ND	
71 Dichlorobromomethane	83		8.201					ND	
72 2-Nitropropane	41		8.427					ND	
73 2-Chloroethyl vinyl ether	63		8.506					ND	
74 cis-1,3-Dichloropropene	75		8.658					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.828					ND	
76 Toluene	91		8.992					ND	
77 trans-1,3-Dichloropropene	75		9.217					ND	
78 Ethyl methacrylate	69		9.321					ND	
79 1,1,2-Trichloroethane	97		9.400					ND	
80 Tetrachloroethene	164		9.540					ND	
81 1,3-Dichloropropane	76		9.570					ND	
82 2-Hexanone	43		9.661					ND	
83 n-Butyl acetate	43		9.662					ND	
84 Chlorodibromomethane	129		9.795					ND	
85 Ethylene Dibromide	107		9.899					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.373					ND	
87 Chlorobenzene	112		10.391					ND	
88 4-Chlorobenzotrifluoride	180		10.434					ND	
89 1,1,1,2-Tetrachloroethane	131		10.477					ND	
90 Ethylbenzene	106		10.501					ND	
91 m-Xylene & p-Xylene	106		10.623					ND	
92 o-Xylene	106		11.012					ND	
93 Styrene	104		11.030					ND	
94 Bromoform	173		11.213					ND	
96 2-Chlorobenzotrifluoride	180		11.280					ND	
95 Cyclohexanol	57		11.280					ND	
97 Isopropylbenzene	105		11.383					ND	
98 Cyclohexanone	55		11.450					ND	
99 1,1,2,2-Tetrachloroethane	83		11.675					ND	
100 Bromobenzene	156		11.687					ND	
101 1,2,3-Trichloropropane	110		11.724					ND	
102 trans-1,4-Dichloro-2-buten	53		11.736					ND	
103 N-Propylbenzene	120		11.791					ND	
104 2-Chlorotoluene	126		11.876					ND	
105 3-Chlorotoluene	126		11.937					ND	
106 1,3,5-Trimethylbenzene	105		11.967					ND	
107 4-Chlorotoluene	126		11.985					ND	
108 tert-Butylbenzene	119		12.289					ND	
109 Pentachloroethane	167		12.314					ND	
110 1,2,4-Trimethylbenzene	105		12.338					ND	
111 1,2-dichloro-4-(trifluorom	214		12.405					ND	
112 sec-Butylbenzene	105		12.509					ND	
113 1,3-Dichlorobenzene	146		12.624					ND	
114 4-Isopropyltoluene	119		12.655					ND	
119 Benzyl chloride	91		12.655					ND	
115 1,4-Dichlorobenzene	146		12.709					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
116 2,4-Dichloro-1-(triflourom	214		12.764					ND	
118 2,5-Dichlorobenzotrifluori	214		12.807					ND	
120 n-Butylbenzene	91		13.062					ND	
121 1,2-Dichlorobenzene	146		13.080					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.865					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.011					ND	
124 1,3,5-Trichlorobenzene	180		14.078					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.431					ND	
126 1,2,4-Trichlorobenzene	180		14.692					ND	
127 Hexachlorobutadiene	225		14.863					ND	
128 Naphthalene	128	14.942	14.942	0.000	24	3864		0.5098	
129 1,2,3-Trichlorobenzene	180		15.191					ND	
131 2,4,5-Trichlorotoluene	159	15.964	15.970	-0.006	1	1264		1.12	
130 2,3,6-Trichlorotoluene	159	16.055	16.067	-0.012	1	1131		1.08	
132 2-Methylnaphthalene	142		16.080					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
150 2,6-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

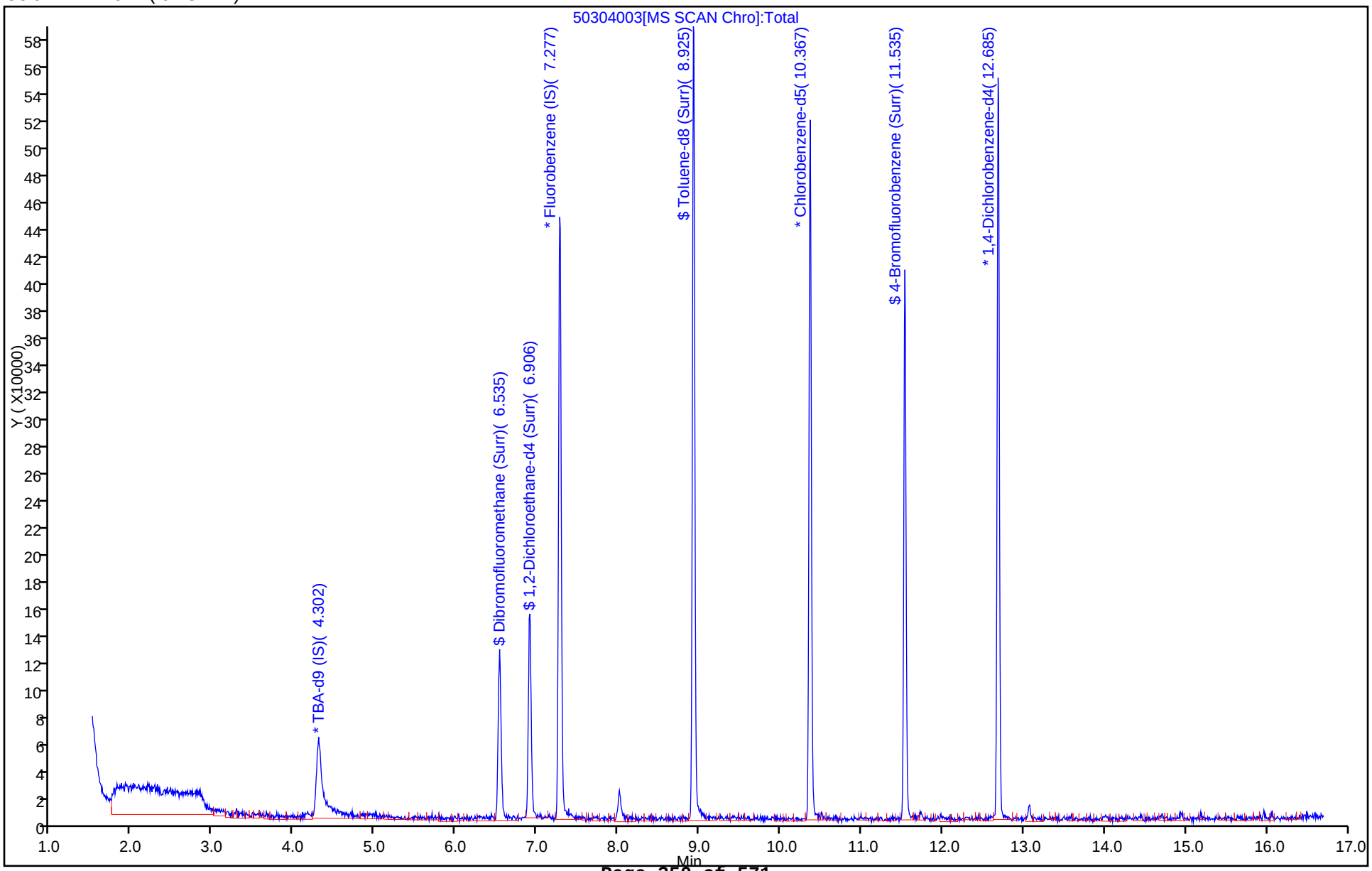
Report Date: 04-Mar-2015 14:08:51 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304003.D

Injection Date:	04-Mar-2015 12:17:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
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.: 180-41453-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-134814/9

Matrix: Water | Lab File ID: 50305009.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/05/2015 13:05

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.: 134814 | Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-134814/9

Matrix: Water Lab File ID: 50305009.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/05/2015 13:05

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.: 134814 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	104		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: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305009.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 05-Mar-2015 13:05:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005905-009
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:09:33 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 06-Mar-2015 08:09:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.299	0.006	95	109928	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	99	473345	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.365	0.000	99	106986	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	99	171961	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.532	-0.001	52	94926	50.0	46.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.897	0.006	99	120972	50.0	48.3	
$ 7 Toluene-d8 (Surr)	98	8.928	8.923	0.005	100	434922	50.0	52.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.533	-0.001	99	164279	50.0	52.9	
11 Dichlorodifluoromethane	85		1.616					ND	
12 Chloromethane	50		1.775					ND	
13 Vinyl chloride	62		1.902					ND	
14 Butadiene	39		1.939					ND	
15 Bromomethane	94		2.249					ND	
16 Chloroethane	64		2.383					ND	
17 Dichlorofluoromethane	67		2.651					ND	
18 Trichlorofluoromethane	101		2.705					ND	
19 Ethanol	45		3.012					ND	
20 Ethyl ether	59		3.083					ND	
21 Acrolein	56		3.265					ND	
22 1,1-Dichloroethene	96		3.375					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.423					ND	
24 Acetone	43		3.496					ND	
25 Iodomethane	142		3.581					ND	
26 Carbon disulfide	76		3.661					ND	
27 Isopropyl alcohol	45		3.736					ND	
28 3-Chloro-1-propene	76		3.934					ND	
29 Acetonitrile	40		3.943					ND	
30 Methyl acetate	43		4.013					ND	
31 Methylene Chloride	84		4.141					ND	
32 2-Methyl-2-propanol	59		4.421					ND	
33 Acrylonitrile	53		4.549					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.561					ND	
35 Methyl tert-butyl ether	73		4.597					ND	
36 Hexane	57		4.981					ND	
37 1,1-Dichloroethane	63		5.169					ND	
38 Vinyl acetate	43		5.297					ND	
41 Isopropyl ether	45		5.300					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.924					ND	
45 cis-1,2-Dichloroethene	96		5.942					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.984					ND	
48 Ethyl acetate	43		5.993					ND	
47 Propionitrile	54		6.024					ND	
49 Chlorobromomethane	128		6.222					ND	
51 Tetrahydrofuran	42		6.289					ND	
52 Chloroform	83		6.337					ND	
50 Methacrylonitrile	41		6.389					ND	
53 1,1,1-Trichloroethane	97		6.532					ND	
54 Cyclohexane	56		6.587					ND	
56 Carbon tetrachloride	117		6.714					ND	
55 1,1-Dichloropropene	75		6.721					ND	
57 Isobutyl alcohol	41		6.940					ND	
58 Benzene	78		6.952					ND	
59 1,2-Dichloroethane	62		6.982					ND	
61 Tert-amyl methyl ether	73		7.143					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.280					ND	
63 n-Butanol	56		7.654					ND	
64 Trichloroethene	130		7.663					ND	
66 Methylcyclohexane	83		7.858					ND	
65 Ethyl acrylate	55		7.867					ND	
69 Methyl methacrylate	69		7.867					ND	
67 1,2-Dichloropropane	63		7.901					ND	
68 Dibromomethane	93		8.022					ND	
70 1,4-Dioxane	88		8.059					ND	
71 Dichlorobromomethane	83		8.193					ND	
72 2-Nitropropane	41		8.427					ND	
73 2-Chloroethyl vinyl ether	63		8.506					ND	
74 cis-1,3-Dichloropropene	75		8.661					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825					ND	
76 Toluene	91		8.990					ND	
77 trans-1,3-Dichloropropene	75		9.221					ND	
78 Ethyl methacrylate	69		9.318					ND	
79 1,1,2-Trichloroethane	97		9.397					ND	
80 Tetrachloroethene	164		9.537					ND	
81 1,3-Dichloropropane	76		9.568					ND	
82 2-Hexanone	43		9.659					ND	
83 n-Butyl acetate	43		9.662					ND	
84 Chlorodibromomethane	129		9.793					ND	
85 Ethylene Dibromide	107		9.902					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.371					ND	
87 Chlorobenzene	112		10.395					ND	
88 4-Chlorobenzotrifluoride	180		10.431					ND	
89 1,1,1,2-Tetrachloroethane	131		10.474					ND	
90 Ethylbenzene	106		10.498					ND	
91 m-Xylene & p-Xylene	106		10.620					ND	
92 o-Xylene	106		11.009					ND	
93 Styrene	104		11.028					ND	
94 Bromoform	173		11.216					ND	
96 2-Chlorobenzotrifluoride	180		11.271					ND	
95 Cyclohexanol	57		11.280					ND	
97 Isopropylbenzene	105		11.380					ND	
98 Cyclohexanone	55		11.450					ND	
99 1,1,2,2-Tetrachloroethane	83		11.679					ND	
100 Bromobenzene	156		11.685					ND	
101 1,2,3-Trichloropropane	110		11.721					ND	
102 trans-1,4-Dichloro-2-buten	53		11.733					ND	
103 N-Propylbenzene	120		11.788					ND	
104 2-Chlorotoluene	126		11.873					ND	
105 3-Chlorotoluene	126		11.934					ND	
106 1,3,5-Trimethylbenzene	105		11.964					ND	
107 4-Chlorotoluene	126		11.983					ND	
108 tert-Butylbenzene	119		12.287					ND	
109 Pentachloroethane	167		12.314					ND	
110 1,2,4-Trimethylbenzene	105		12.336					ND	
111 1,2-dichloro-4-(trifluorom	214		12.402					ND	
112 sec-Butylbenzene	105		12.506					ND	
113 1,3-Dichlorobenzene	146		12.621					ND	
114 4-Isopropyltoluene	119		12.652					ND	
119 Benzyl chloride	91		12.655					ND	
115 1,4-Dichlorobenzene	146		12.707					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
116 2,4-Dichloro-1-(triflourom	214		12.761					ND	
118 2,5-Dichlorobenzotrifluori	214		12.810					ND	
120 n-Butylbenzene	91		13.059					ND	
121 1,2-Dichlorobenzene	146		13.084					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.863					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.008					ND	
124 1,3,5-Trichlorobenzene	180		14.078					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.428					ND	
126 1,2,4-Trichlorobenzene	180		14.690					ND	
127 Hexachlorobutadiene	225		14.866					ND	
128 Naphthalene	128	14.945	14.945	0.000	1	2438		0.3094	
129 1,2,3-Trichlorobenzene	180		15.189					ND	
131 2,4,5-Trichlorotoluene	159		15.961					ND	
130 2,3,6-Trichlorotoluene	159		16.065					ND	
132 2-Methylnaphthalene	142		16.080					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
150 2,6-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	

Reagents:

VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

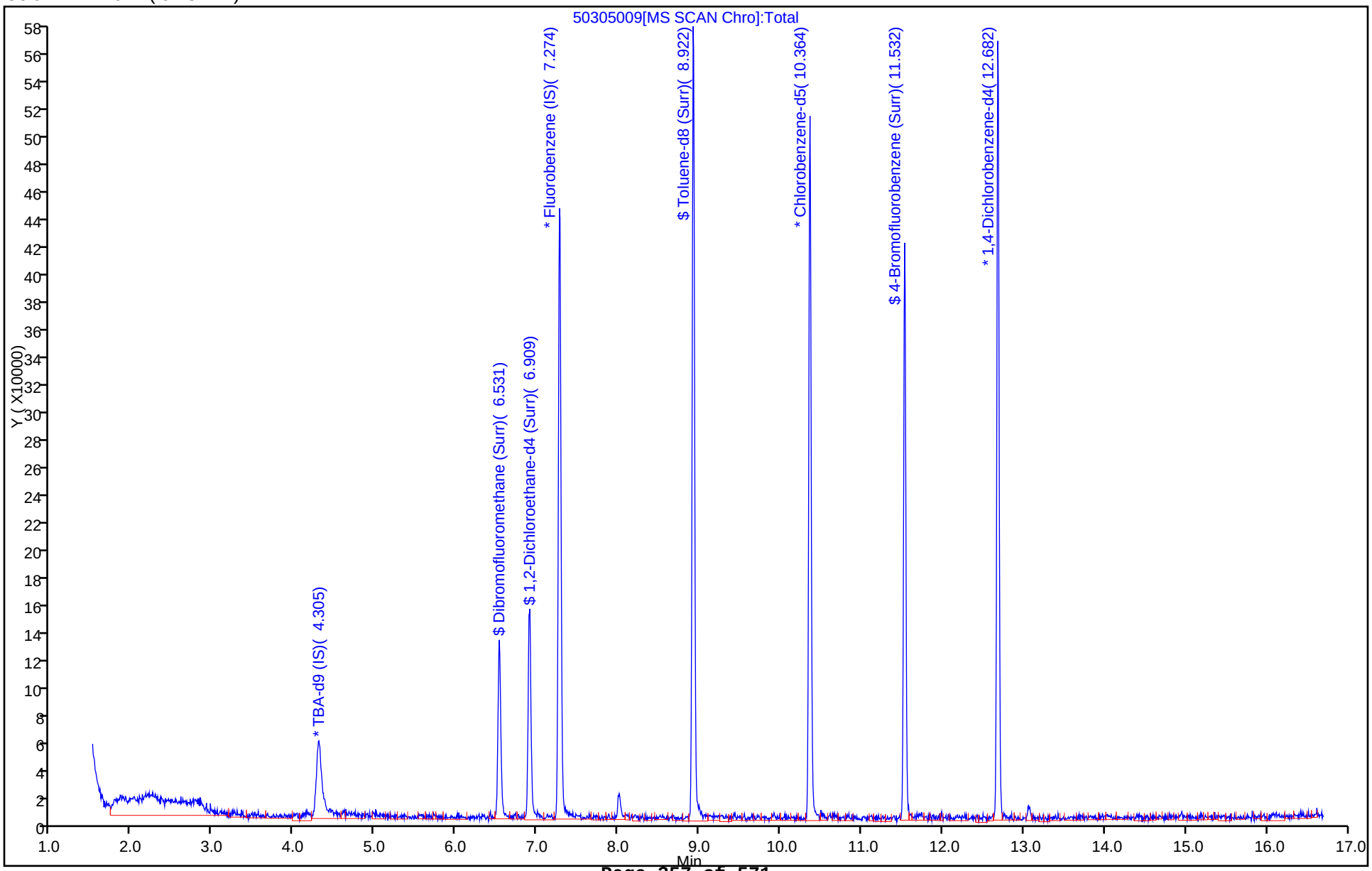
Report Date: 06-Mar-2015 08:09:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305009.D

Injection Date:	05-Mar-2015 13:05:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-134740/6

Matrix: Water | Lab File ID: 50304006.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/04/2015 13:44

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.: 134740 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	8.72		1.0	0.28
75-01-4	Vinyl chloride	8.59		1.0	0.23
74-83-9	Bromomethane	10.0		1.0	0.31
75-00-3	Chloroethane	9.55		1.0	0.21
75-35-4	1,1-Dichloroethene	8.99		1.0	0.30
67-64-1	Acetone	16.5		5.0	2.5
75-15-0	Carbon disulfide	7.82		1.0	0.21
75-09-2	Methylene Chloride	9.18		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.41		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.71		1.0	0.18
75-34-3	1,1-Dichloroethane	9.19		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.25		1.0	0.24
74-97-5	Bromochloromethane	8.70		1.0	0.18
78-93-3	2-Butanone (MEK)	18.4		5.0	0.55
67-66-3	Chloroform	9.28		1.0	0.17
71-55-6	1,1,1-Trichloroethane	8.32		1.0	0.29
56-23-5	Carbon tetrachloride	8.41		1.0	0.14
71-43-2	Benzene	9.36		1.0	0.11
107-06-2	1,2-Dichloroethane	8.99		1.0	0.21
79-01-6	Trichloroethene	9.49		1.0	0.14
78-87-5	1,2-Dichloropropane	9.21		1.0	0.095
75-27-4	Bromodichloromethane	9.03		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	8.43		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.1		5.0	0.53
108-88-3	Toluene	9.64		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	8.08		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.38		1.0	0.20
127-18-4	Tetrachloroethene	9.39		1.0	0.15
591-78-6	2-Hexanone	16.3		5.0	0.16
124-48-1	Dibromochloromethane	8.89		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.30		1.0	0.18
108-90-7	Chlorobenzene	9.41		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	8.83		1.0	0.28
100-41-4	Ethylbenzene	9.42		1.0	0.23
1330-20-7	Xylenes, Total	18.5		3.0	0.49
100-42-5	Styrene	9.10		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-134740/6

Matrix: Water Lab File ID: 50304006.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/04/2015 13:44

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.: 134740 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.61		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.42		1.0	0.20
107-13-1	Acrylonitrile	93.6		20	0.55
123-91-1	1,4-Dioxane	194	J	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)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	92		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304006.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-Mar-2015 13:44:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005893-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 04-Mar-2015 14:14:43 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: fergusond Date: 04-Mar-2015 14:14:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.316	4.320	-0.004	99	148016	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.279	7.277	0.002	99	435167	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.369	10.367	0.002	99	104133	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.691	-0.004	98	142992	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.528	0.003	94	87841	50.0	47.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	98	111416	50.0	48.4	
$ 7 Toluene-d8 (Surr)	98	8.928	8.925	0.003	100	404508	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.535	-0.004	98	139306	50.0	46.1	
11 Dichlorodifluoromethane	85	1.615	1.619	-0.004	99	80434	50.0	36.8	
12 Chloromethane	50	1.774	1.777	-0.003	100	152288	50.0	43.6	
13 Vinyl chloride	62	1.907	1.905	0.002	99	144233	50.0	42.9	
14 Butadiene	39	1.950	1.948	0.002	99	164050	50.0	42.1	
15 Bromomethane	94	2.254	2.252	0.002	94	50918	50.0	50.2	
16 Chloroethane	64	2.382	2.373	0.009	99	65243	50.0	47.8	
17 Dichlorofluoromethane	67	2.650	2.647	0.003	99	148100	50.0	47.3	
18 Trichlorofluoromethane	101	2.710	2.714	-0.004	96	119371	50.0	45.6	
20 Ethyl ether	59	3.094	3.091	0.003	98	115643	50.0	45.8	
21 Acrolein	56	3.270	3.256	0.014	99	50676	150.0	152.0	
22 1,1-Dichloroethene	96	3.386	3.371	0.015	99	113923	50.0	45.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.428	3.426	0.002	98	109776	50.0	42.9	
24 Acetone	43	3.501	3.493	0.008	100	75592	100.0	82.7	
25 Iodomethane	142	3.593	3.584	0.008	97	165656	50.0	46.5	
26 Carbon disulfide	76	3.659	3.651	0.008	100	243849	50.0	39.1	
28 3-Chloro-1-propene	76	3.939	3.931	0.008	99	62749	50.0	39.7	
30 Methyl acetate	43	4.018	4.016	0.002	100	540122	250.0	214.9	
31 Methylene Chloride	84	4.152	4.144	0.008	98	130494	50.0	45.9	
32 2-Methyl-2-propanol	59	4.456	4.442	0.014	98	64754	500.0	365.1	
33 Acrylonitrile	53	4.560	4.551	0.009	100	583101	500.0	467.9	
34 trans-1,2-Dichloroethene	96	4.572	4.570	0.002	60	124593	50.0	47.0	
35 Methyl tert-butyl ether	73	4.608	4.600	0.008	100	288208	50.0	43.5	
36 Hexane	57	4.986	4.983	0.003	98	207757	50.0	44.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.174	5.172	0.002	99	231940	50.0	45.9	
38 Vinyl acetate	43	5.302	5.294	0.008	100	90025	50.0	52.2	
44 2,2-Dichloropropane	77	5.929	5.926	0.003	90	66727	50.0	35.7	
45 cis-1,2-Dichloroethene	96	5.947	5.938	0.009	97	131045	50.0	46.3	
46 2-Butanone (MEK)	43	5.989	5.987	0.002	100	136777	100.0	91.8	
49 Chlorobromomethane	128	6.233	6.230	0.003	99	51344	50.0	43.5	
51 Tetrahydrofuran	42	6.287	6.291	-0.004	99	98333	100.0	92.8	
52 Chloroform	83	6.348	6.340	0.008	97	186808	50.0	46.4	
53 1,1,1-Trichloroethane	97	6.531	6.528	0.003	95	113773	50.0	41.6	
54 Cyclohexane	56	6.586	6.583	0.003	99	271968	50.0	44.3	
56 Carbon tetrachloride	117	6.719	6.717	0.002	64	78000	50.0	42.1	
55 1,1-Dichloropropene	75	6.732	6.723	0.009	96	169119	50.0	48.5	
57 Isobutyl alcohol	41	6.951	6.942	0.009	35	47700	1250.0	798.6	
58 Benzene	78	6.963	6.954	0.009	99	514652	50.0	46.8	
59 1,2-Dichloroethane	62	6.987	6.991	-0.004	100	142768	50.0	45.0	
62 n-Heptane	43	7.285	7.277	0.008	81	193270	50.0	45.2	
64 Trichloroethene	130	7.668	7.666	0.002	98	122833	50.0	47.4	
66 Methylcyclohexane	83	7.869	7.867	0.002	99	220475	50.0	45.1	
67 1,2-Dichloropropane	63	7.906	7.909	-0.003	99	133000	50.0	46.1	
68 Dibromomethane	93	8.027	8.031	-0.004	97	61431	50.0	47.1	
70 1,4-Dioxane	88	8.070	8.061	0.009	91	24939	1000.0	969.2	M
71 Dichlorobromomethane	83	8.198	8.201	-0.003	99	109699	50.0	45.1	
74 cis-1,3-Dichloropropene	75	8.660	8.658	0.002	100	135600	50.0	42.1	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.828	-0.004	99	269085	100.0	85.6	
76 Toluene	91	8.995	8.992	0.003	100	518161	50.0	48.2	
77 trans-1,3-Dichloropropene	75	9.226	9.217	0.009	98	91511	50.0	40.4	
78 Ethyl methacrylate	69	9.323	9.321	0.002	100	96928	50.0	38.0	
79 1,1,2-Trichloroethane	97	9.402	9.400	0.002	99	92051	50.0	46.9	
80 Tetrachloroethene	164	9.542	9.540	0.002	98	93164	50.0	47.0	
81 1,3-Dichloropropane	76	9.566	9.570	-0.004	99	170231	50.0	46.1	
82 2-Hexanone	43	9.664	9.661	0.003	99	178525	100.0	81.3	
84 Chlorodibromomethane	129	9.798	9.795	0.003	98	57417	50.0	44.5	
85 Ethylene Dibromide	107	9.907	9.899	0.008	100	87949	50.0	46.5	
86 3-Chlorobenzotrifluoride	180	10.376	10.373	0.003	94	193882	50.0	58.8	
87 Chlorobenzene	112	10.394	10.391	0.003	99	323713	50.0	47.0	
88 4-Chlorobenzotrifluoride	180	10.436	10.434	0.002	99	181403	50.0	57.6	
89 1,1,1,2-Tetrachloroethane	131	10.479	10.477	0.002	98	70059	50.0	44.1	
90 Ethylbenzene	106	10.503	10.501	0.002	100	187390	50.0	47.1	
91 m-Xylene & p-Xylene	106	10.619	10.623	-0.004	100	226205	50.0	46.1	
92 o-Xylene	106	11.014	11.012	0.002	96	220568	50.0	46.4	
93 Styrene	104	11.026	11.030	-0.004	98	353937	50.0	45.5	
94 Bromoform	173	11.215	11.213	0.002	97	29354	50.0	43.0	
96 2-Chlorobenzotrifluoride	180	11.276	11.280	-0.004	100	190033	50.0	58.1	
97 Isopropylbenzene	105	11.379	11.383	-0.004	100	568340	50.0	48.7	
99 1,1,2,2-Tetrachloroethane	83	11.677	11.675	0.002	97	128194	50.0	47.1	
100 Bromobenzene	156	11.684	11.687	-0.003	99	119741	50.0	47.9	
101 1,2,3-Trichloropropane	110	11.720	11.724	-0.004	95	38530	50.0	46.0	
102 trans-1,4-Dichloro-2-buten	53	11.732	11.736	-0.004	87	35327	50.0	43.4	
103 N-Propylbenzene	120	11.793	11.791	0.002	100	161048	50.0	48.5	
104 2-Chlorotoluene	126	11.878	11.876	0.002	100	129708	50.0	47.3	
105 3-Chlorotoluene	126	11.939	11.937	0.002	99	158299	50.0	56.5	
106 1,3,5-Trimethylbenzene	105	11.963	11.967	-0.004	99	451701	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.988	11.985	0.003	97	140215	50.0	47.4	
108 tert-Butylbenzene	119	12.292	12.289	0.003	98	385359	50.0	48.6	
110 1,2,4-Trimethylbenzene	105	12.341	12.338	0.003	100	451217	50.0	47.6	
111 1,2-dichloro-4-(trifluorom	214	12.401	12.405	-0.004	98	129958	50.0	60.7	
112 sec-Butylbenzene	105	12.511	12.509	0.003	100	569975	50.0	50.0	
113 1,3-Dichlorobenzene	146	12.620	12.624	-0.004	100	232585	50.0	47.1	
114 4-Isopropyltoluene	119	12.657	12.655	0.003	100	452454	50.0	48.4	
115 1,4-Dichlorobenzene	146	12.712	12.709	0.003	98	239381	50.0	48.2	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.764	-0.004	94	123809	50.0	60.9	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.807	0.002	98	135203	50.0	61.0	
120 n-Butylbenzene	91	13.064	13.062	0.002	100	403038	50.0	48.5	
121 1,2-Dichlorobenzene	146	13.083	13.080	0.003	99	220054	50.0	48.7	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.865	-0.004	97	12560	50.0	42.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.011	-0.004	99	562631	150.0	182.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.431	-0.004	99	371902	100.0	122.0	
126 1,2,4-Trichlorobenzene	180	14.695	14.692	0.003	99	109479	50.0	48.5	
127 Hexachlorobutadiene	225	14.865	14.863	0.002	95	48510	50.0	50.3	
128 Naphthalene	128	14.944	14.942	0.002	100	319409	50.0	48.7	
129 1,2,3-Trichlorobenzene	180	15.188	15.191	-0.003	99	92577	50.0	47.8	
131 2,4,5-Trichlorotoluene	159	15.966	15.970	-0.004	98	57809	50.0	59.0	
130 2,3,6-Trichlorotoluene	159	16.064	16.067	-0.003	98	56788	50.0	62.9	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	93.3	
S 133 Xylenes, Total	106				0		100.0	92.5	
S 135 1,3-Dichloropropene, Total	1				0		100.0	82.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOA2ND_00104	Amount Added:	2.00	Units: uL	
voaWket2 Rest_00001	Amount Added:	2.00	Units: uL	
VOAEE2ND_00001	Amount Added:	2.00	Units: uL	
VOAVA2ND_00002	Amount Added:	2.00	Units: uL	
VOAACRO2ND_00005	Amount Added:	6.00	Units: uL	
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent

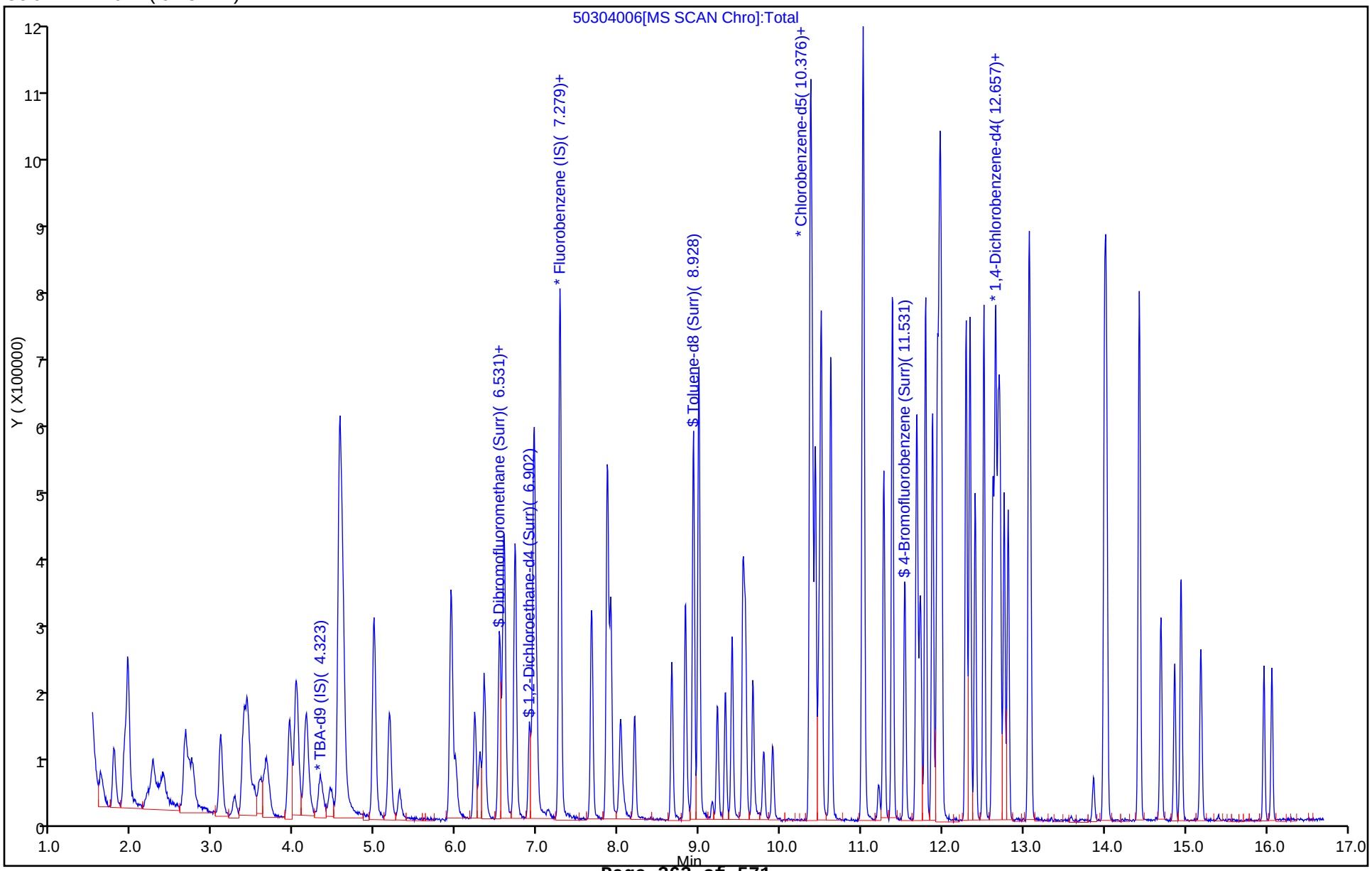
Report Date: 04-Mar-2015 14:14:43 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304006.D

Injection Date:	04-Mar-2015 13:44:30	Instrument ID:	CHHP5	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_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

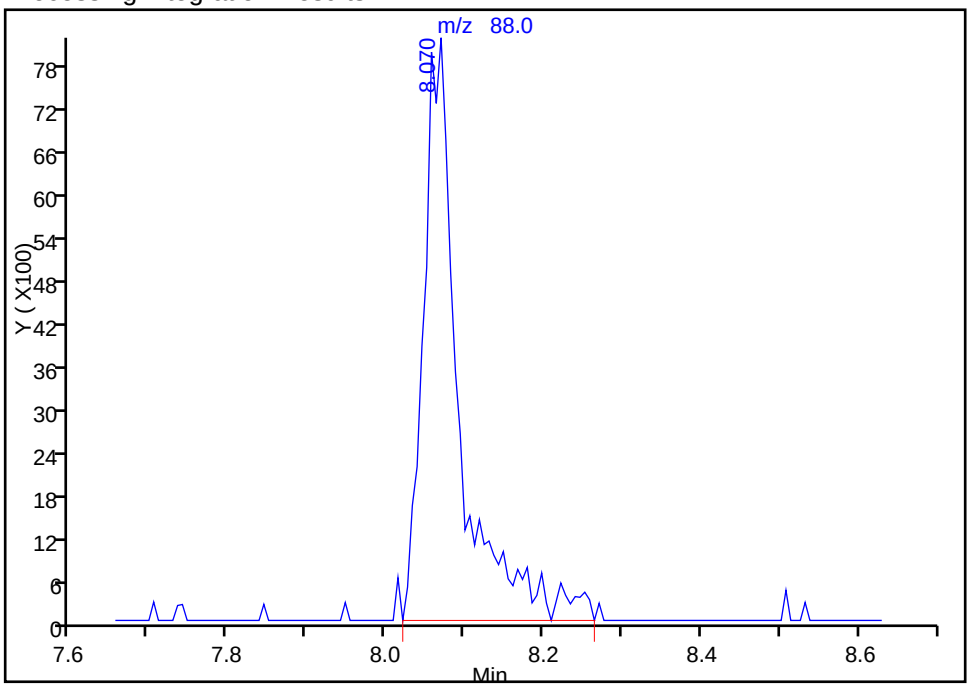
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150304-5893.b\50304006.D
Injection Date: 04-Mar-2015 13:44:30 Instrument ID: CHHP5
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_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

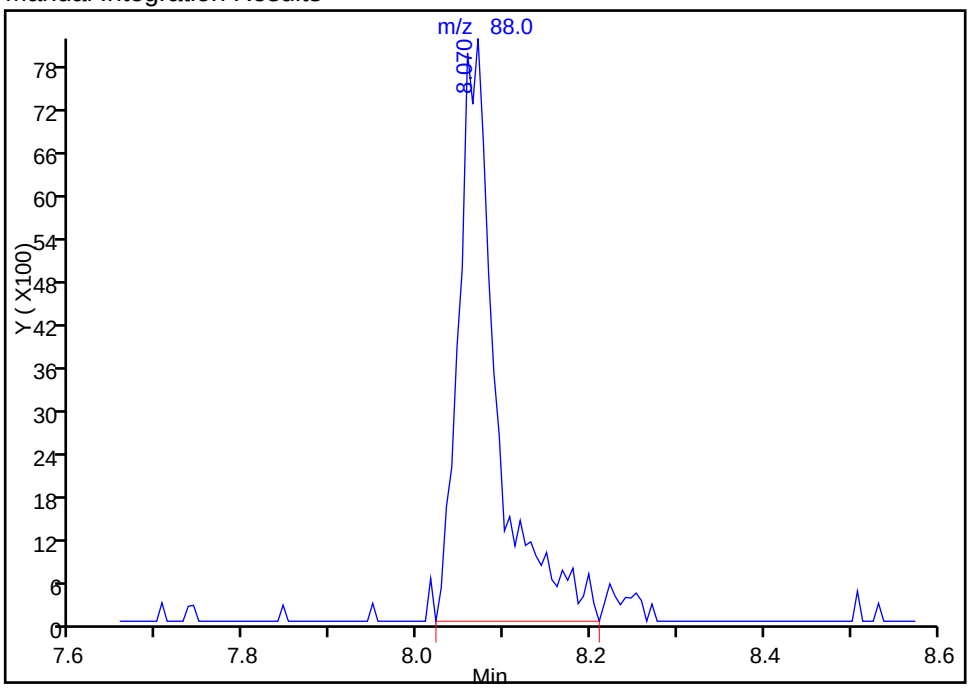
Processing Integration Results

RT: 8.07
Area: 25922
Amount: 1007.3678
Amount Units: ng



Manual Integration Results

RT: 8.07
Area: 24939
Amount: 969.1669
Amount Units: ng



Reviewer: fergusond, 04-Mar-2015 14:14:43
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41453-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-134814/12

Matrix: Water | Lab File ID: 50305012.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/05/2015 14:47

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.: 134814 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	9.78		1.0	0.28
75-01-4	Vinyl chloride	9.77		1.0	0.23
74-83-9	Bromomethane	11.6		1.0	0.31
75-00-3	Chloroethane	11.8		1.0	0.21
75-35-4	1,1-Dichloroethene	9.64		1.0	0.30
67-64-1	Acetone	19.7		5.0	2.5
75-15-0	Carbon disulfide	8.05		1.0	0.21
75-09-2	Methylene Chloride	9.31		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.97		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.34		1.0	0.18
75-34-3	1,1-Dichloroethane	9.56		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.79		1.0	0.24
74-97-5	Bromochloromethane	9.73		1.0	0.18
78-93-3	2-Butanone (MEK)	19.3		5.0	0.55
67-66-3	Chloroform	9.95		1.0	0.17
71-55-6	1,1,1-Trichloroethane	8.77		1.0	0.29
56-23-5	Carbon tetrachloride	9.37		1.0	0.14
71-43-2	Benzene	10.1		1.0	0.11
107-06-2	1,2-Dichloroethane	9.46		1.0	0.21
79-01-6	Trichloroethene	10.5		1.0	0.14
78-87-5	1,2-Dichloropropane	9.25		1.0	0.095
75-27-4	Bromodichloromethane	9.35		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	7.58		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.7		5.0	0.53
108-88-3	Toluene	10.9		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	7.19		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.97		1.0	0.20
127-18-4	Tetrachloroethene	11.5		1.0	0.15
591-78-6	2-Hexanone	16.2		5.0	0.16
124-48-1	Dibromochloromethane	9.49		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.91		1.0	0.18
108-90-7	Chlorobenzene	10.5		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.28		1.0	0.28
100-41-4	Ethylbenzene	10.9		1.0	0.23
1330-20-7	Xylenes, Total	20.9		3.0	0.49
100-42-5	Styrene	10.2		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-134814/12

Matrix: Water Lab File ID: 50305012.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/05/2015 14:47

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.: 134814 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.07		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.1		1.0	0.20
107-13-1	Acrylonitrile	95.8		20	0.55
123-91-1	1,4-Dioxane	165	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	95		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305012.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 05-Mar-2015 14:47:30 ALS Bottle#: 8 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005905-012
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 06-Mar-2015 08:12:45 Calib Date: 03-Mar-2015 18:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150303-5873.b\50303018.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: fergusond Date: 06-Mar-2015 08:13:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.292	4.299	-0.007	93	103201	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.274	-0.001	99	447357	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.365	0.000	99	102383	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.682	-0.001	97	140823	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.525	6.532	-0.007	96	90466	50.0	47.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.897	0.005	99	114000	50.0	48.2	
$ 7 Toluene-d8 (Surr)	98	8.928	8.923	0.005	100	414745	50.0	52.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.533	-0.001	98	140776	50.0	47.4	
11 Dichlorodifluoromethane	85	1.622	1.616	0.006	100	123177	50.0	54.8	
12 Chloromethane	50	1.780	1.775	0.005	99	175755	50.0	48.9	
13 Vinyl chloride	62	1.902	1.902	0.000	99	168724	50.0	48.9	
14 Butadiene	39	1.950	1.939	0.011	100	202122	50.0	50.5	
15 Bromomethane	94	2.254	2.249	0.005	91	59619	50.0	57.9	
16 Chloroethane	64	2.388	2.383	0.005	99	83041	50.0	59.1	
17 Dichlorofluoromethane	67	2.656	2.651	0.005	99	191845	50.0	59.6	
18 Trichlorofluoromethane	101	2.705	2.705	0.000	95	164463	50.0	61.2	
20 Ethyl ether	59	3.088	3.083	0.005	98	125545	50.0	48.4	
21 Acrolein	56	3.252	3.265	-0.013	98	50028	150.0	146.0	
22 1,1-Dichloroethene	96	3.380	3.375	0.005	97	125553	50.0	48.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.435	3.423	0.012	96	126054	50.0	47.9	
24 Acetone	43	3.495	3.496	-0.001	99	92714	100.0	98.7	
25 Iodomethane	142	3.568	3.581	-0.013	97	189004	50.0	51.6	
26 Carbon disulfide	76	3.654	3.661	-0.007	100	258001	50.0	40.2	
28 3-Chloro-1-propene	76	3.939	3.934	0.005	98	64701	50.0	39.8	
30 Methyl acetate	43	4.019	4.013	0.006	100	561154	250.0	217.2	
31 Methylene Chloride	84	4.146	4.141	0.005	100	135803	50.0	46.5	
32 2-Methyl-2-propanol	59	4.426	4.421	0.005	90	58935	500.0	476.5	
33 Acrylonitrile	53	4.542	4.549	-0.007	98	613889	500.0	479.2	
34 trans-1,2-Dichloroethene	96	4.566	4.561	0.005	94	135796	50.0	49.9	
35 Methyl tert-butyl ether	73	4.596	4.597	-0.001	98	283807	50.0	41.7	
36 Hexane	57	4.986	4.981	0.005	98	243388	50.0	50.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.174	5.169	0.005	100	248046	50.0	47.8	
38 Vinyl acetate	43	5.296	5.297	-0.001	100	66289	50.0	37.4	
44 2,2-Dichloropropane	77	5.929	5.924	0.005	60	57187	50.0	29.8	
45 cis-1,2-Dichloroethene	96	5.935	5.942	-0.007	92	142516	50.0	48.9	
46 2-Butanone (MEK)	43	5.984	5.984	0.000	100	147653	100.0	96.4	
49 Chlorobromomethane	128	6.227	6.222	0.005	99	59046	50.0	48.6	
51 Tetrahydrofuran	42	6.282	6.289	-0.007	99	102897	100.0	94.5	
52 Chloroform	83	6.336	6.337	-0.001	96	205914	50.0	49.8	
53 1,1,1-Trichloroethane	97	6.531	6.532	-0.001	97	123180	50.0	43.8	
54 Cyclohexane	56	6.586	6.587	-0.001	99	308752	50.0	49.0	
56 Carbon tetrachloride	117	6.714	6.714	0.000	92	89325	50.0	46.9	
55 1,1-Dichloropropene	75	6.720	6.721	0.000	97	192141	50.0	53.6	
57 Isobutyl alcohol	41	6.933	6.940	-0.007	42	48215	1250.0	785.2	
58 Benzene	78	6.957	6.952	0.005	99	569635	50.0	50.4	
59 1,2-Dichloroethane	62	6.981	6.982	-0.001	99	154453	50.0	47.3	
62 n-Heptane	43	7.279	7.280	-0.001	84	218502	50.0	49.7	
64 Trichloroethene	130	7.669	7.663	0.006	99	139718	50.0	52.5	
66 Methylcyclohexane	83	7.863	7.858	0.005	99	252237	50.0	50.2	
67 1,2-Dichloropropane	63	7.906	7.901	0.005	96	137326	50.0	46.3	
68 Dibromomethane	93	8.021	8.022	-0.001	99	66432	50.0	49.6	
70 1,4-Dioxane	88	8.058	8.059	-0.001	95	21815	1000.0	824.7	
71 Dichlorobromomethane	83	8.198	8.193	0.005	100	116790	50.0	46.7	
74 cis-1,3-Dichloropropene	75	8.654	8.661	-0.007	99	125431	50.0	37.9	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.825	-0.001	99	273371	100.0	88.4	
76 Toluene	91	8.989	8.990	-0.001	100	575386	50.0	54.4	
77 trans-1,3-Dichloropropene	75	9.220	9.221	-0.001	98	80083	50.0	35.9	
78 Ethyl methacrylate	69	9.317	9.318	-0.001	99	88364	50.0	35.3	
79 1,1,2-Trichloroethane	97	9.402	9.397	0.005	99	96283	50.0	49.9	
80 Tetrachloroethene	164	9.536	9.537	-0.001	98	112403	50.0	57.6	
81 1,3-Dichloropropane	76	9.567	9.568	-0.001	99	183366	50.0	50.5	
82 2-Hexanone	43	9.658	9.659	-0.001	100	174260	100.0	80.8	
84 Chlorodibromomethane	129	9.786	9.793	-0.007	99	60243	50.0	47.5	
85 Ethylene Dibromide	107	9.901	9.902	-0.001	100	92113	50.0	49.5	
86 3-Chlorobenzotrifluoride	180	10.370	10.371	-0.001	95	212342	50.0	65.5	
87 Chlorobenzene	112	10.394	10.395	-0.001	99	356071	50.0	52.6	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	99	202795	50.0	65.5	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.474	-0.001	94	72448	50.0	46.4	
90 Ethylbenzene	106	10.504	10.498	0.006	100	213806	50.0	54.6	
91 m-Xylene & p-Xylene	106	10.619	10.620	-0.001	100	257070	50.0	53.3	
92 o-Xylene	106	11.015	11.009	0.006	96	239699	50.0	51.2	
93 Styrene	104	11.027	11.028	-0.001	99	391006	50.0	51.1	
94 Bromoform	173	11.209	11.216	-0.007	98	30426	50.0	45.4	
96 2-Chlorobenzotrifluoride	180	11.276	11.271	0.005	99	207893	50.0	64.7	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	636733	50.0	55.4	
99 1,1,2,2-Tetrachloroethane	83	11.678	11.679	-0.001	97	134580	50.0	50.3	
100 Bromobenzene	156	11.684	11.685	-0.001	98	133071	50.0	54.1	
101 1,2,3-Trichloropropane	110	11.720	11.721	-0.001	95	41203	50.0	50.0	
102 trans-1,4-Dichloro-2-buten	53	11.732	11.733	-0.001	86	35272	50.0	44.0	
103 N-Propylbenzene	120	11.787	11.788	-0.001	100	180491	50.0	55.2	
104 2-Chlorotoluene	126	11.878	11.873	0.005	100	139907	50.0	51.8	
105 3-Chlorotoluene	126	11.933	11.934	-0.001	100	168306	50.0	61.0	
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	100	501864	50.0	55.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.982	11.983	-0.001	99	158319	50.0	54.4	
108 tert-Butylbenzene	119	12.292	12.287	0.005	99	425070	50.0	54.5	
110 1,2,4-Trimethylbenzene	105	12.335	12.336	-0.001	100	493141	50.0	52.8	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	98	143711	50.0	68.2	
112 sec-Butylbenzene	105	12.505	12.506	-0.001	100	617785	50.0	55.0	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	99	250362	50.0	51.5	
114 4-Isopropyltoluene	119	12.651	12.652	-0.001	100	490585	50.0	53.3	
115 1,4-Dichlorobenzene	146	12.706	12.707	-0.001	98	256008	50.0	52.3	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.761	-0.001	95	131834	50.0	65.8	
118 2,5-Dichlorobenzotrifluori	214	12.803	12.810	-0.007	98	143542	50.0	65.7	
120 n-Butylbenzene	91	13.065	13.059	0.006	99	427571	50.0	52.2	
121 1,2-Dichlorobenzene	146	13.083	13.084	-0.001	99	223949	50.0	50.4	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.863	0.000	95	10818	50.0	36.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	100	519613	150.0	171.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.428	-0.001	99	321766	100.0	107.2	
126 1,2,4-Trichlorobenzene	180	14.695	14.690	0.005	98	95639	50.0	43.0	
127 Hexachlorobutadiene	225	14.859	14.866	-0.007	96	47188	50.0	49.7	
128 Naphthalene	128	14.938	14.945	-0.007	100	266184	50.0	41.2	
129 1,2,3-Trichlorobenzene	180	15.188	15.189	-0.001	97	75035	50.0	39.3	
131 2,4,5-Trichlorotoluene	159	15.966	15.961	0.005	96	42439	50.0	44.0	
130 2,3,6-Trichlorotoluene	159	16.064	16.065	-0.001	97	38490	50.0	43.3	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	98.8	
S 133 Xylenes, Total	106				0		100.0	104.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	73.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00105	Amount Added:	2.00	Units: uL		
voaWket2 Rest_00001	Amount Added:	2.00	Units: uL		
VOAEE2ND_00001	Amount Added:	2.00	Units: uL		
VOAVA2ND_00002	Amount Added:	2.00	Units: uL		
VOAACRO2ND_00005	Amount Added:	6.00	Units: uL		
VOA8260INT_00029	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260SURR_00031	Amount Added:	2.00	Units: uL	Run Reagent	

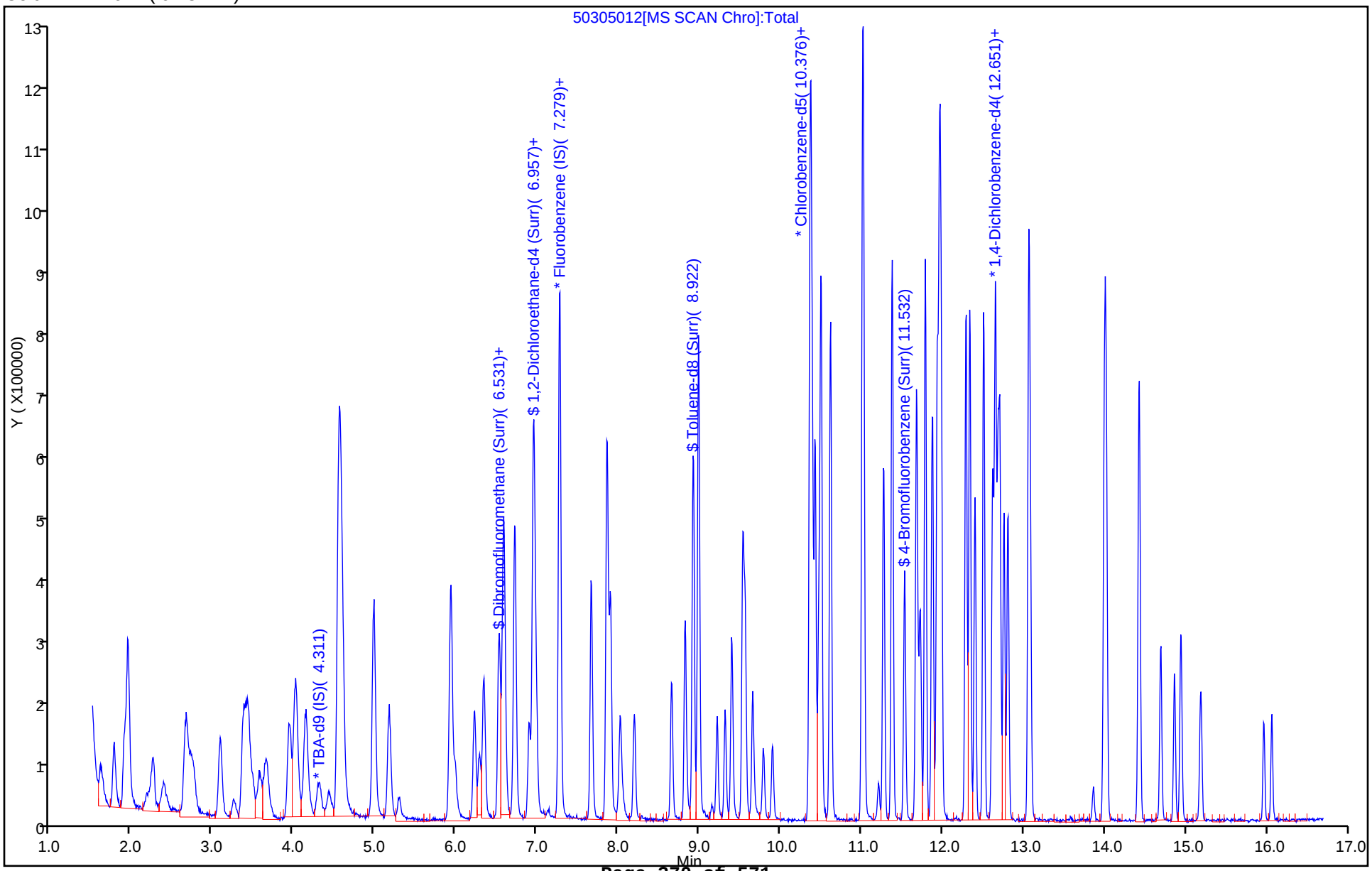
Report Date: 06-Mar-2015 08:13:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150305-5905.b\50305012.D

Injection Date:	05-Mar-2015 14:47:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCS			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Start Date: 03/03/2015 12:21

Analysis Batch Number: 134613 End Date: 03/03/2015 19:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-134613/6		03/03/2015 12:21	1	50303006.D	DB-624 0.18(mm)
IC 180-134613/8		03/03/2015 14:28	1	50303008.D	DB-624 0.18(mm)
ICIS 180-134613/9		03/03/2015 14:52	1	50303009.D	DB-624 0.18(mm)
IC 180-134613/10		03/03/2015 15:16	1	50303010.D	DB-624 0.18(mm)
IC 180-134613/11		03/03/2015 15:40	1	50303011.D	DB-624 0.18(mm)
IC 180-134613/12		03/03/2015 16:04	1	50303012.D	DB-624 0.18(mm)
IC 180-134613/13		03/03/2015 16:28	1	50303013.D	DB-624 0.18(mm)
IC 180-134613/14		03/03/2015 16:52	1	50303014.D	DB-624 0.18(mm)
IC 180-134613/18		03/03/2015 18:29	1	50303018.D	DB-624 0.18(mm)
ICV 180-134613/20		03/03/2015 19:17	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Start Date: 03/04/2015 11:01

Analysis Batch Number: 134740 End Date: 03/04/2015 22:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-134740/1		03/04/2015 11:01	1	50304001.D	DB-624 0.18(mm)
CCVIS 180-134740/2		03/04/2015 11:38	1	50304002.D	DB-624 0.18(mm)
MB 180-134740/3		03/04/2015 12:17	1	50304003.D	DB-624 0.18(mm)
ZZZZZ		03/04/2015 12:56	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 13:20	1		DB-624 0.18(mm)
LCS 180-134740/6		03/04/2015 13:44	1	50304006.D	DB-624 0.18(mm)
ZZZZZ		03/04/2015 14:08	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 14:32	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 15:20	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 15:44	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 16:08	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 16:32	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 16:56	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 17:21	1		DB-624 0.18(mm)
180-41453-1	HD-QC1-0/1-1	03/04/2015 17:45	1	50304016.D	DB-624 0.18(mm)
ZZZZZ		03/04/2015 18:09	1		DB-624 0.18(mm)
180-41453-3	HD-MW-93D-0/1-0	03/04/2015 18:33	5	50304018.D	DB-624 0.18(mm)
180-41453-2	HD-QC1-0/1-2	03/04/2015 18:57	1	50304019.D	DB-624 0.18(mm)
180-41453-4	HD-MW-93S-0/1-0	03/04/2015 19:22	1	50304020.D	DB-624 0.18(mm)
180-41453-5	HD-MW-37D-0/1-0	03/04/2015 20:10	12.5	50304022.D	DB-624 0.18(mm)
ZZZZZ		03/04/2015 21:46	1		DB-624 0.18(mm)
ZZZZZ		03/04/2015 22:10	50		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHHP5 Start Date: 03/05/2015 10:58

Analysis Batch Number: 134814 End Date: 03/05/2015 22:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-134814/6		03/05/2015 10:58	1	50305006.D	DB-624 0.18(mm)
CCVIS 180-134814/7		03/05/2015 12:16	1	50305007.D	DB-624 0.18(mm)
MB 180-134814/9		03/05/2015 13:05	1	50305009.D	DB-624 0.18(mm)
ZZZZZ		03/05/2015 13:46	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 14:10	1		DB-624 0.18(mm)
LCS 180-134814/12		03/05/2015 14:47	1	50305012.D	DB-624 0.18(mm)
ZZZZZ		03/05/2015 15:11	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 15:35	1		DB-624 0.18(mm)
180-41453-1 DL	HD-QC1-0/1-1 DL	03/05/2015 16:24	5	50305016.D	DB-624 0.18(mm)
180-41453-4 DL	HD-MW-93S-0/1-0 DL	03/05/2015 16:48	5	50305017.D	DB-624 0.18(mm)
180-41453-5 DL	HD-MW-37D-0/1-0 DL	03/05/2015 17:12	50	50305018.D	DB-624 0.18(mm)
ZZZZZ		03/05/2015 17:36	8		DB-624 0.18(mm)
ZZZZZ		03/05/2015 18:00	500		DB-624 0.18(mm)
ZZZZZ		03/05/2015 18:24	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 19:12	125		DB-624 0.18(mm)
ZZZZZ		03/05/2015 19:37	3		DB-624 0.18(mm)
ZZZZZ		03/05/2015 20:01	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 20:25	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 21:13	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 21:37	1		DB-624 0.18(mm)
ZZZZZ		03/05/2015 22:25	50		DB-624 0.18(mm)

300_ORGFMS

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 02-24-2015-5.d

Lab ID: LCS 180-134114/5 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.70	108	90-110	
Chloride	50.0	50.3	101	90-110	
Sulfate	50.0	50.2	100	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.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 02-24-2015-25.d

Lab ID: 180-41453-3 MS Client ID: HD-MW-93D-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	0.59	2.00	113	80-120	
Chloride	25.0	100	125	98	80-120	4
Sulfate	25.0	28	53.1	101	80-120	

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.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 02-24-2015-22.d

Lab ID: 180-41453-4 MS Client ID: HD-MW-93S-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	1.8	3.17	107	80-120	
Chloride	25.0	150	174	92	80-120	4
Sulfate	25.0	35	59.9	100	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.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 02-24-2015-26.d

Lab ID: 180-41453-3 MSD Client ID: HD-MW-93D-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	2.02	114	1	20	80-120	
Chloride	25.0	126	102	1	20	80-120	4
Sulfate	25.0	53.5	102	1	20	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.: 180-41453-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 02-24-2015-23.d

Lab ID: 180-41453-4 MSD Client ID: HD-MW-93S-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	3.15	106	1	20	80-120	
Chloride	25.0	174	89	0	20	80-120	4
Sulfate	25.0	59.6	98	0	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.: 180-41453-1

SDG No.:

Lab File ID: A-ICS2100 A 02-24-2015-6.d Lab Sample ID: MB 180-134114/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 02/24/2015 12:28

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-134114/4	A-ICS2100 A 02-24-2015-4.d	02/24/2015 11:57
	LCS 180-134114/5	A-ICS2100 A 02-24-2015-5.d	02/24/2015 12:13
	CCB 180-134114/16	A-ICS2100 A 02-24-2015-16.d	02/24/2015 15:16
HD-MW-93S-0/1-0	180-41453-4	A-ICS2100 A 02-24-2015-21.d	02/24/2015 16:32
HD-MW-93S-0/1-0 MS	180-41453-4 MS	A-ICS2100 A 02-24-2015-22.d	02/24/2015 17:03
HD-MW-93S-0/1-0 MSD	180-41453-4 MSD	A-ICS2100 A 02-24-2015-23.d	02/24/2015 17:18
HD-MW-93D-0/1-0	180-41453-3	A-ICS2100 A 02-24-2015-24.d	02/24/2015 17:33
HD-MW-93D-0/1-0 MS	180-41453-3 MS	A-ICS2100 A 02-24-2015-25.d	02/24/2015 17:48
HD-MW-93D-0/1-0 MSD	180-41453-3 MSD	A-ICS2100 A 02-24-2015-26.d	02/24/2015 18:04
	CCB 180-134114/28	A-ICS2100 A 02-24-2015-28.d	02/24/2015 18:34
HD-QC1-0/1-1	180-41453-1	A-ICS2100 A 02-24-2015-29.d	02/24/2015 18:50
HD-MW-37D-0/1-0	180-41453-5	A-ICS2100 A 02-24-2015-30.d	02/24/2015 19:05
	CCB 180-134114/40	A-ICS2100 A 02-24-2015-40.d	02/24/2015 21:38

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41453-1

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-29.d

Analysis Method: 300.0 Date Collected: 02/23/2015 08:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 18:50

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.8		0.10	0.0062
16887-00-6	Chloride	150	B	1.0	0.20
14808-79-8	Sulfate	35		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-29.d
Lims ID: 180-41453-A-1 Lab Sample ID: 180-41453-1
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 24-Feb-2015 18:50:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-029
Misc. Info.: 30645 180-41453-a-1
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

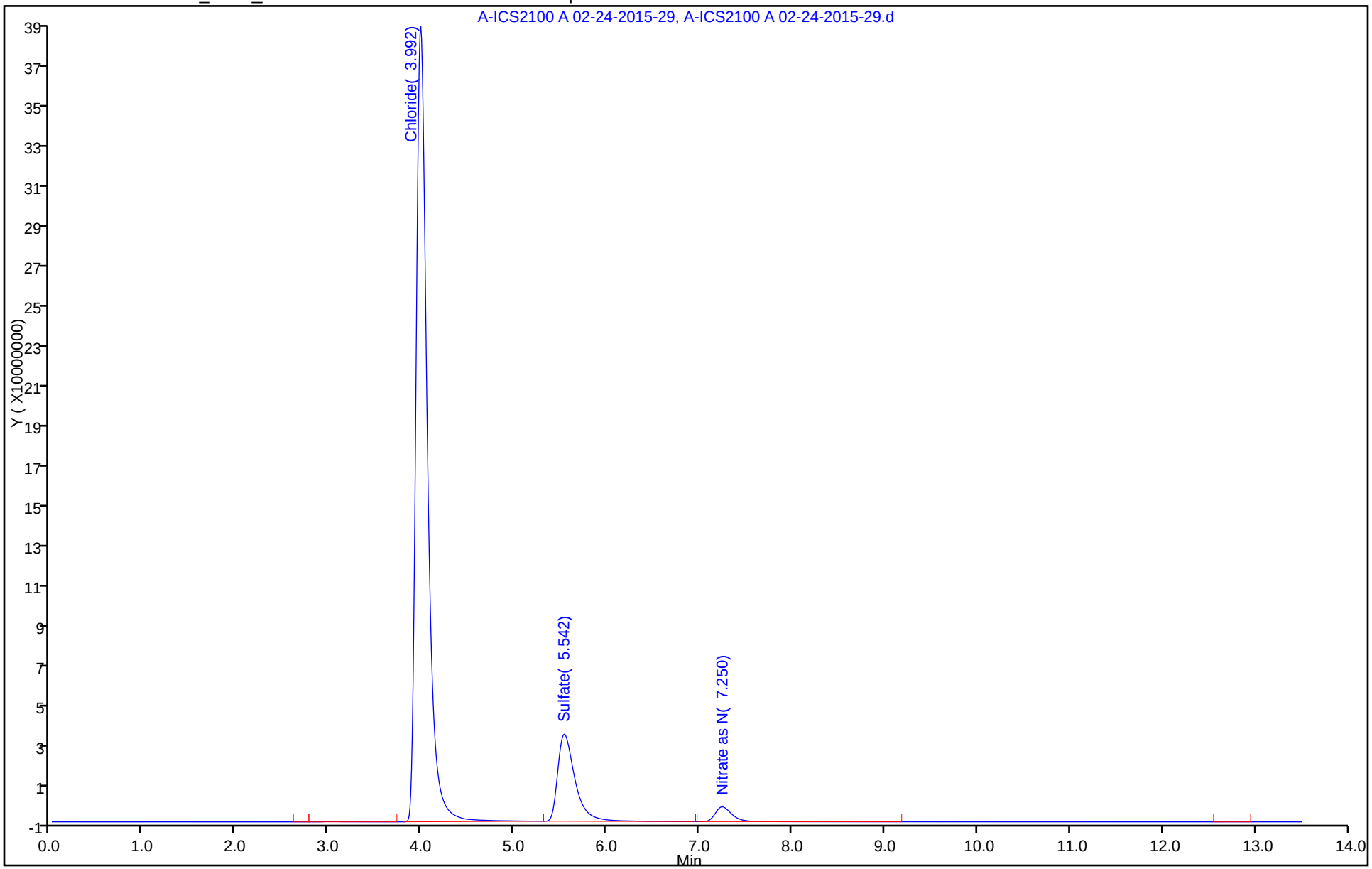
First Level Reviewer: hartmanm Date: 24-Feb-2015 19:22:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.008	-0.016	381774800	150.6	H
3 Sulfate	5.542	5.525	0.017	543835905	34.7	
5 Nitrate as N	7.250	7.242	0.008	7095110	1.82	H

Report Date: 09-Mar-2015 07:42:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-29.d				
Injection Date:	24-Feb-2015 18:50:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-1	Lab Sample ID:	180-41453-1	Worklist Smp#:	29
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 I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93D-0/1-0 Lab Sample ID: 180-41453-3

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-24.d

Analysis Method: 300.0 Date Collected: 02/23/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 17:33

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.59		0.10	0.0062
16887-00-6	Chloride	100	B	1.0	0.20
14808-79-8	Sulfate	28		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-24.d
Lims ID: 180-41453-A-3 Lab Sample ID: 180-41453-3
Client ID: HD-MW-93D-0/1-0
Sample Type: Client
Inject. Date: 24-Feb-2015 17:33:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-024
Misc. Info.: 24 180-41453-a-3
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

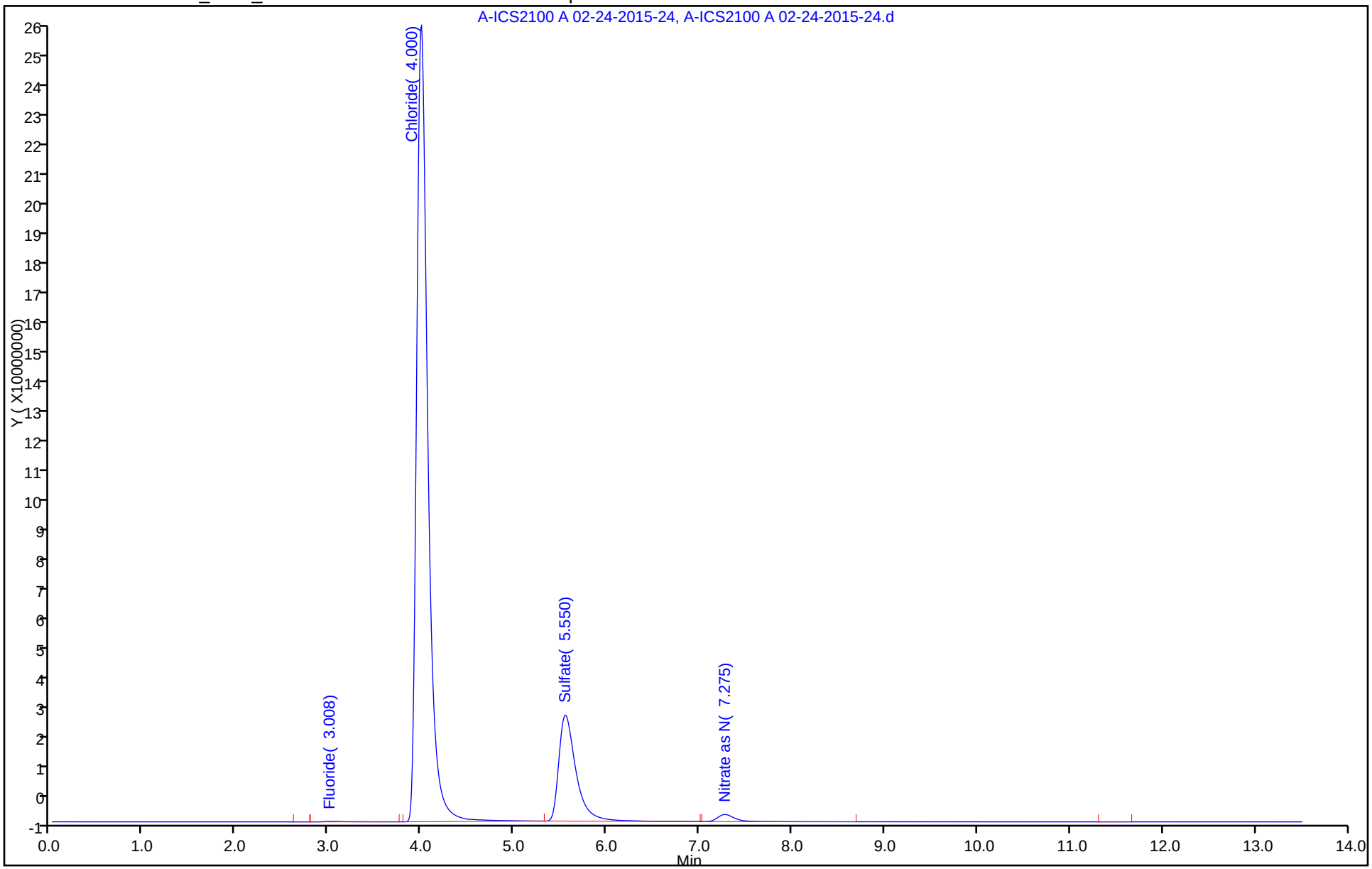
Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.008	3.000	0.008	125244	H 0.0572	
2 Chloride	4.000	4.008	-0.008	254477235	H 100.5	
7 Nitrite as N		4.708			ND	
3 Sulfate	5.550	5.525	0.025	438224905	27.9	
4 Bromide		6.258			ND	
5 Nitrate as N	7.275	7.242	0.033	2262775	H 0.5857	
6 Orthophosphate as P		10.367			ND	

Report Date: 09-Mar-2015 07:42:15 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-24.d				
Injection Date:	24-Feb-2015 17:33:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-3	Lab Sample ID:	180-41453-3	Worklist Smp#:	24
Client ID:	HD-MW-93D-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.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 Lab Sample ID: 180-41453-4

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-21.d

Analysis Method: 300.0 Date Collected: 02/23/2015 11:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 16:32

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.8		0.10	0.0062
16887-00-6	Chloride	150	B	1.0	0.20
14808-79-8	Sulfate	35		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-21.d
Lims ID: 180-41453-A-4 Lab Sample ID: 180-41453-4
Client ID: HD-MW-93S-0/1-0
Sample Type: Client
Inject. Date: 24-Feb-2015 16:32:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-021
Misc. Info.: 21 180-41453-a-4
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

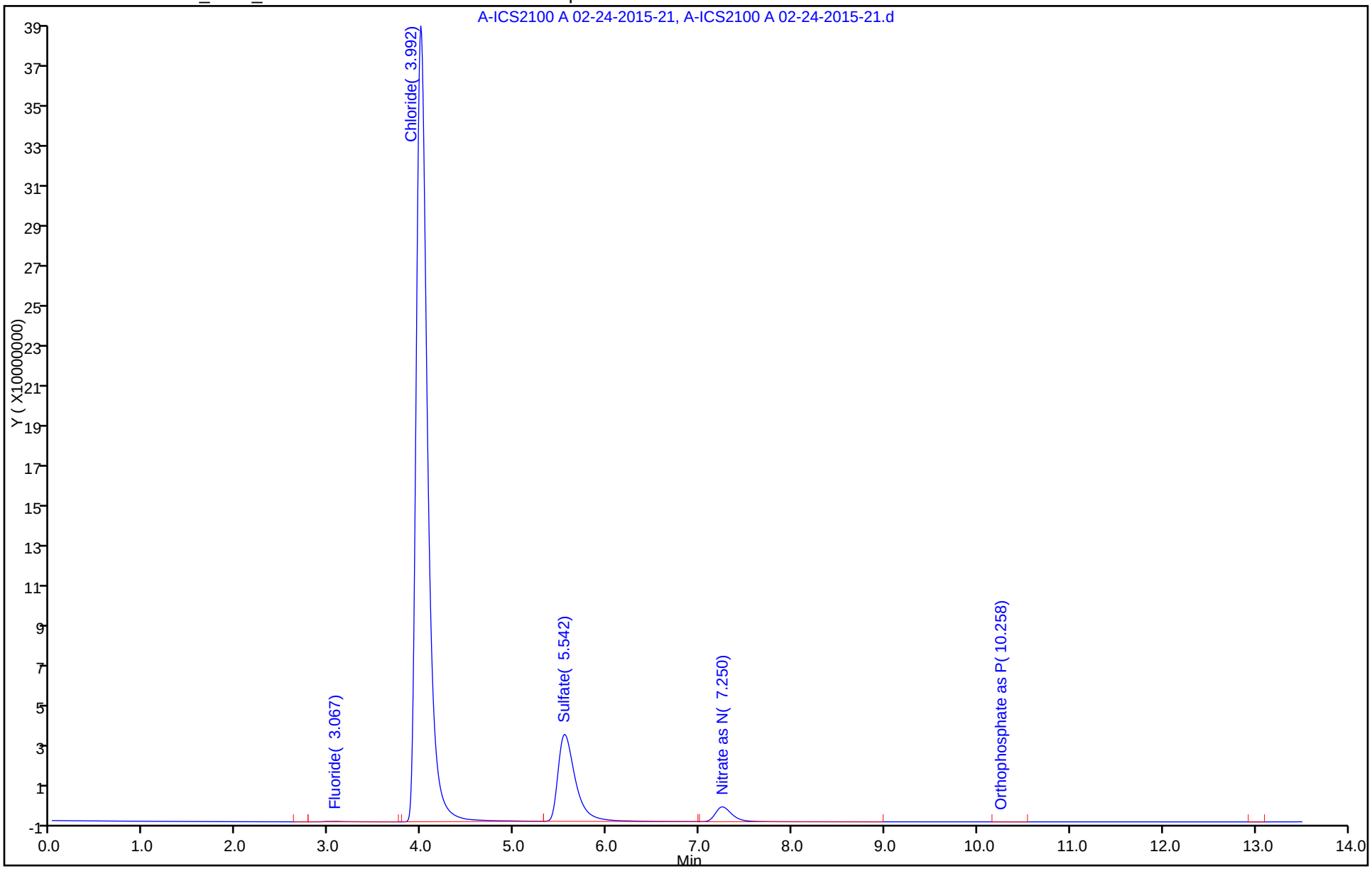
Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.067	3.000	0.067	180805	H 0.0757	
2 Chloride	3.992	4.008	-0.016	383964624	H 151.5	
7 Nitrite as N		4.708			ND	
3 Sulfate	5.542	5.525	0.017	549369164	35.0	
4 Bromide		6.258			ND	
5 Nitrate as N	7.250	7.242	0.008	7139221	H 1.83	
6 Orthophosphate as P	10.258	10.367	-0.109	40060	0.3605	

Report Date: 09-Mar-2015 07:42:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-21.d				
Injection Date:	24-Feb-2015 16:32:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-4	Lab Sample ID:	180-41453-4	Worklist Smp#:	21
Client ID:	HD-MW-93S-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.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-41453-5

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-30.d

Analysis Method: 300.0 Date Collected: 02/23/2015 15:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 19:05

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.5		0.10	0.0062
16887-00-6	Chloride	140	B	1.0	0.20
14808-79-8	Sulfate	35		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

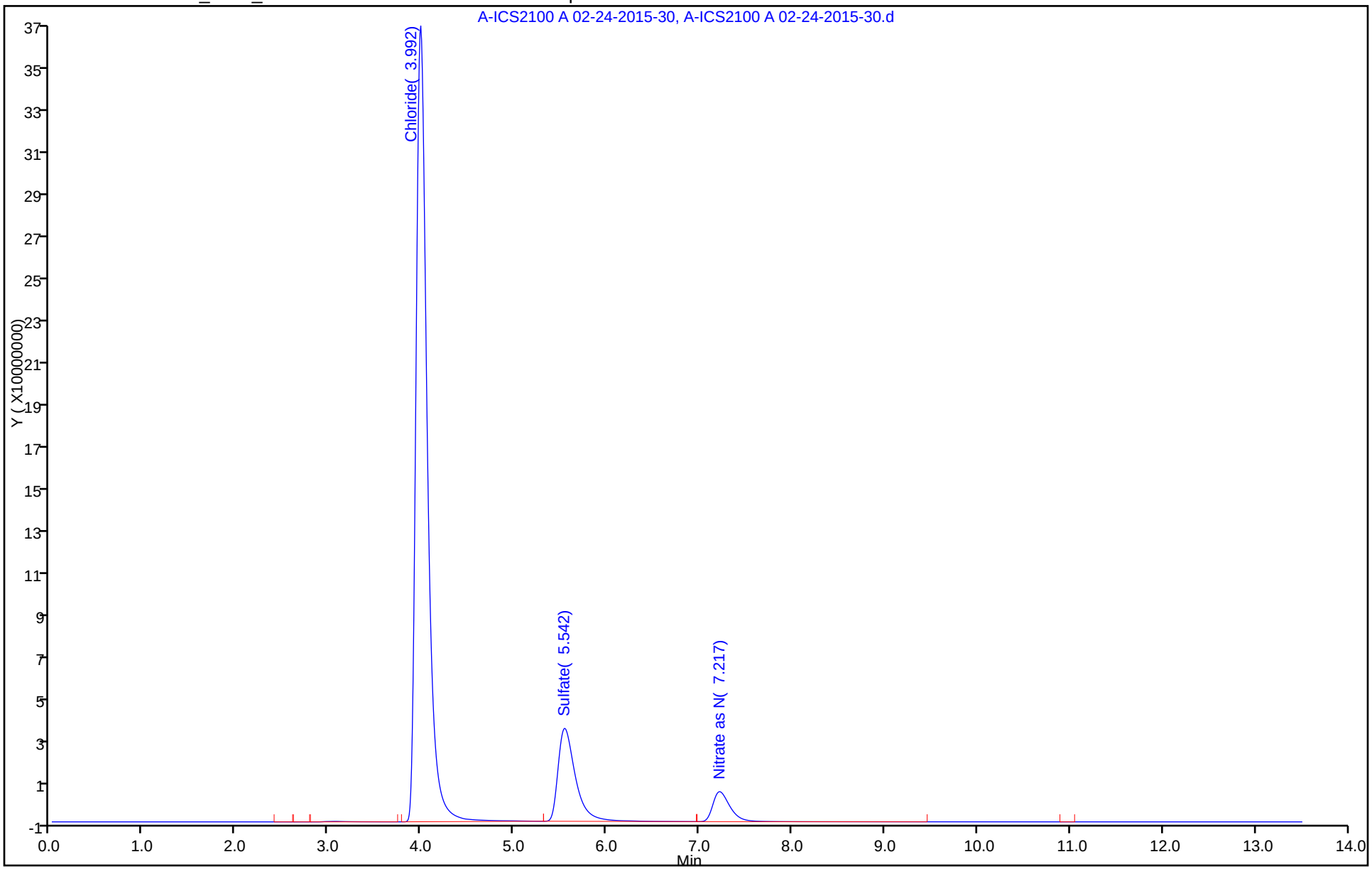
Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-30.d				
Lims ID:	180-41453-A-5	Lab Sample ID:	180-41453-5		
Client ID:	HD-MW-37D-0/1-0				
Sample Type:	Client				
Inject. Date:	24-Feb-2015 19:05:00	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005804-030				
Misc. Info.:	29772 180-41453-a-5				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	09-Mar-2015 07:42:11	Calib Date:	18-Feb-2015 18:25:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK025				
First Level Reviewer: hartmanm		Date:	24-Feb-2015 19:38:04		

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.008	-0.016	362966702	H 143.2	
3 Sulfate	5.542	5.525	0.017	555254991	35.4	
5 Nitrate as N	7.217	7.242	-0.025	13660293	H 3.49	

Report Date: 09-Mar-2015 07:42:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-30.d				
Injection Date:	24-Feb-2015 19:05:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-5	Lab Sample ID:	180-41453-5	Worklist Smp#:	30
Client ID:	HD-MW-37D-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 133779

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/18/2015 16:38 Calibration End Date: 02/18/2015 18:25 Calibration ID: 21971

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133779/2	A-ICS2100 A 02-18A-2015-2.d
Level 2	IC 180-133779/3	A-ICS2100 A 02-18A-2015-3.d
Level 3	ICRT 180-133779/4	A-ICS2100 A 02-18A-2015-4.d
Level 4	IC 180-133779/5	A-ICS2100 A 02-18A-2015-5.d
Level 5	IC 180-133779/6	A-ICS2100 A 02-18A-2015-6.d
Level 6	IC 180-133779/7	A-ICS2100 A 02-18A-2015-7.d
Level 7	IC 180-133779/8	A-ICS2100 A 02-18A-2015-8.d
Level 8	IC 180-133779/9	A-ICS2100 A 02-18A-2015-9.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Fluoride	3.008	3.000	3.000	3.000	2.992	2.992	2.992	2.983			2.650 - 3.350	2.996
Chloride	4.042	4.033	4.017	4.008	4.000	4.000	3.992	3.983			3.667 - 4.367	4.009
Nitrite as N	4.733	4.725	4.717	4.717	4.700	4.700	4.683	4.675			4.467 - 4.967	4.706
Sulfate	5.567	5.550	5.550	5.533	5.467	5.425	5.367	5.342			5.200 - 5.900	5.475
Bromide	6.325	6.317	6.300	6.292	6.283	6.258	6.225	6.217			5.950 - 6.650	6.277
Nitrate as N	7.350	7.333	7.317	7.300	7.267	7.217	7.175	7.142			7.067 - 7.567	7.263
Orthophosphate as P		+++++	10.458	10.375	10.200	10.117	10.000	9.942			10.208 - 10.708	10.182

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 133779

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/18/2015 16:38 Calibration End Date: 02/18/2015 18:25 Calibration ID: 21971

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133779/2	A-ICS2100 A 02-18A-2015-2.d
Level 2	IC 180-133779/3	A-ICS2100 A 02-18A-2015-3.d
Level 3	ICRT 180-133779/4	A-ICS2100 A 02-18A-2015-4.d
Level 4	IC 180-133779/5	A-ICS2100 A 02-18A-2015-5.d
Level 5	IC 180-133779/6	A-ICS2100 A 02-18A-2015-6.d
Level 6	IC 180-133779/7	A-ICS2100 A 02-18A-2015-7.d
Level 7	IC 180-133779/8	A-ICS2100 A 02-18A-2015-8.d
Level 8	IC 180-133779/9	A-ICS2100 A 02-18A-2015-9.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Fluoride	2163200 3165843	2445916 3212839	2684732 3169919	2963388 2965770	Lin2	-46911.187	3009662.85							0.9950		0.9900
Chloride	1881673 2567721	2349794 2575536	2454915 2548766	2585728 2421631	Lin2	-665487.98	2538987.66							0.9990		0.9900
Nitrite as N	4289940 4114648	3721616 3759856	3877108 3530822	4108169 3257069	Lin2	27970.5648	3735089.23							0.9940		0.9900
Sulfate	16949742 16074169	15515894 15891053	15500606 15836712	16166879 14968109	Lin2	1228486.84	15649189.8							0.9990		0.9900
Bromide	746315 868610	769310 868188	797174 854789	854312 810309	Lin2	-20794.475	839212.726							0.9980		0.9900
Nitrate as N	3199060 4205984	3604280 4022596	3833744 3807690	4201889 3504135	Lin2	-37245.802	3927006.52							0.9960		0.9900
Orthophosphate as P	 12849501	+++++ 16235438	5311680 16994054	10345730 16850946	Lin2	-6082562.0	16983972.7							0.9950		0.9900

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1 Analy Batch No.: 133779

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/18/2015 16:38 Calibration End Date: 02/18/2015 18:25 Calibration ID: 21971

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133779/2	A-ICS2100 A 02-18A-2015-2.d
Level 2	IC 180-133779/3	A-ICS2100 A 02-18A-2015-3.d
Level 3	ICRT 180-133779/4	A-ICS2100 A 02-18A-2015-4.d
Level 4	IC 180-133779/5	A-ICS2100 A 02-18A-2015-5.d
Level 5	IC 180-133779/6	A-ICS2100 A 02-18A-2015-6.d
Level 6	IC 180-133779/7	A-ICS2100 A 02-18A-2015-7.d
Level 7	IC 180-133779/8	A-ICS2100 A 02-18A-2015-8.d
Level 8	IC 180-133779/9	A-ICS2100 A 02-18A-2015-9.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Fluoride	Lin2	108160 16064197	611479 23774396	1342366 29657700	2963388	7914608	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Chloride	Lin2	1881673 257553603	11748971 382314941	24549148 484326140	51714566	128386026	1.00 100	5.00 150	10.0 200	20.0	50.0
Nitrite as N	Lin2	214497 18799281	930404 26481163	1938554 32570690	4108169	10286620	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Sulfate	Lin2	16949742 1589105343	77579469 2375506786	155006056 2993621710	323337576	803708435	1.00 100	5.00 150	10.0 200	20.0	50.0
Bromide	Lin2	149263 17363768	769310 25643657	1594349 32412358	3417246	8686100	0.200 20.0	1.00 30.0	2.00 40.0	4.00	10.0
Nitrate as N	Lin2	159953 20112979	901070 28557676	1916872 35041348	4201889	10514959	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Orthophosphate as P	Lin2	 81177192	+++++ 127455403	2655840 168509455	10345730	32123753	 5.00	+++++ 7.50	0.500 10.0	1.00	2.50

Curve Type Legend:
Lin2 = Linear 1/conc^2 by height

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-2.d
Lims ID: ic L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Feb-2015 16:38:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-002
Misc. Info.: 2 IC L2
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:48 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: reaglec Date: 18-Feb-2015 19:28:18

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.008	3.000	0.008	108160H	0.0500	0.0515	
2 Chloride	4.042	4.017	0.025	1881673H	1.00	1.00	
7 Nitrite as N	4.733	4.717	0.016	214497H	0.0500	0.0499	
3 Sulfate	5.567	5.550	0.017	16949742	1.00	1.00	
4 Bromide	6.325	6.300	0.025	149263H	0.2000	0.2026	
5 Nitrate as N	7.350	7.317	0.033	159953H	0.0500	0.0502	
6 Orthophosphate as P		10.458			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

Reagents:

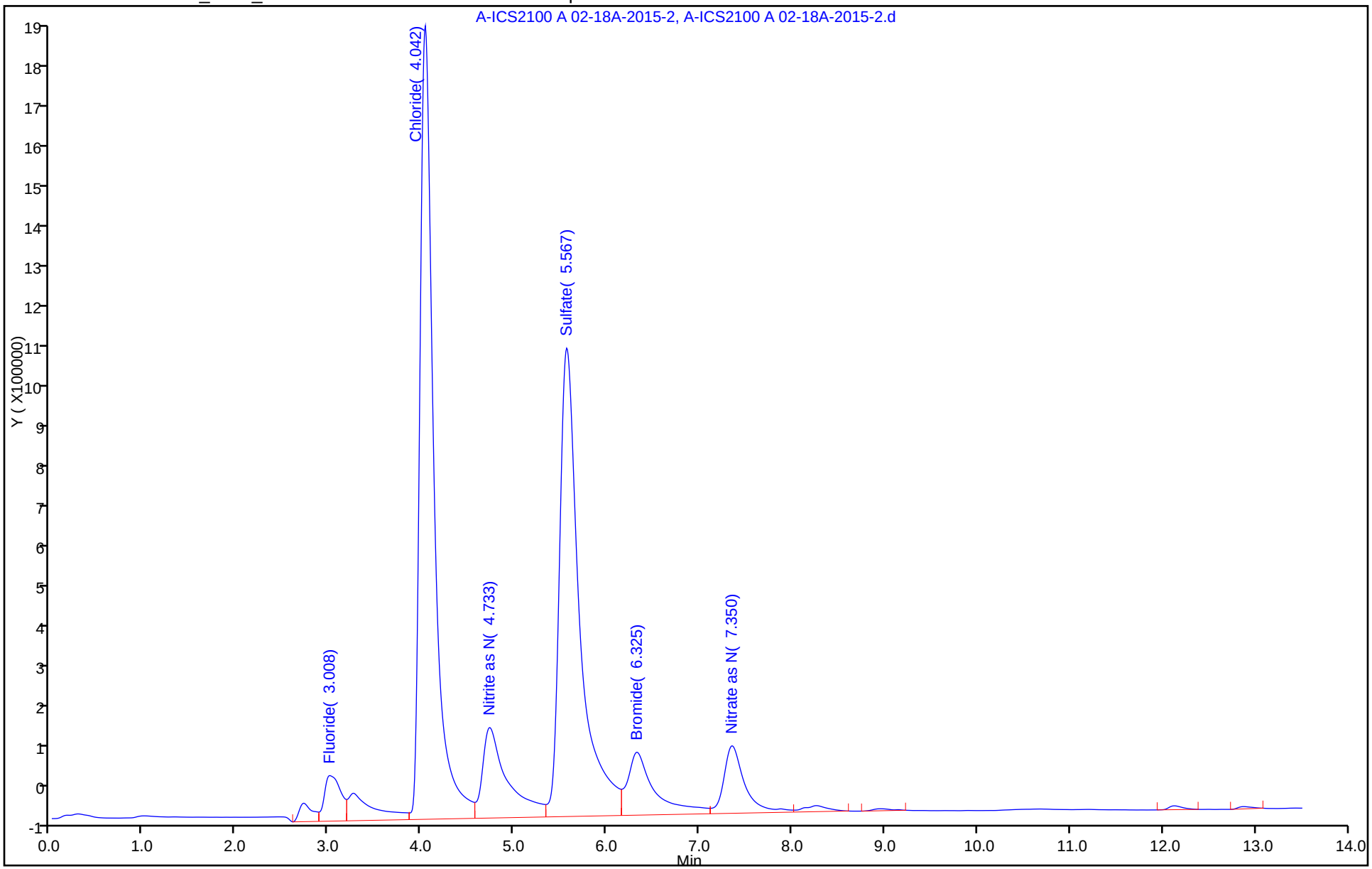
ICSTDL2_00155 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:48 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-2.d

Injection Date:	18-Feb-2015 16:38:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



Report Date: 03-Mar-2015 14:01:49 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-3.d
Lims ID: ic L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Feb-2015 16:53:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-003
Misc. Info.: 3 IC L3
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:49 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: reaglec Date: 18-Feb-2015 19:28:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	611479H	0.2500	0.2188	
2 Chloride	4.033	4.017	0.016	11748971H	5.00	4.89	
7 Nitrite as N	4.725	4.717	0.008	930404H	0.2500	0.2416	
3 Sulfate	5.550	5.550	0.000	77579469	5.00	4.88	
4 Bromide	6.317	6.300	0.017	769310H	1.00	0.9415	
5 Nitrate as N	7.333	7.317	0.016	901070H	0.2500	0.2389	
6 Orthophosphate as P	10.467	10.458	0.009	686387	0.2500	0.3985	

Reagents:

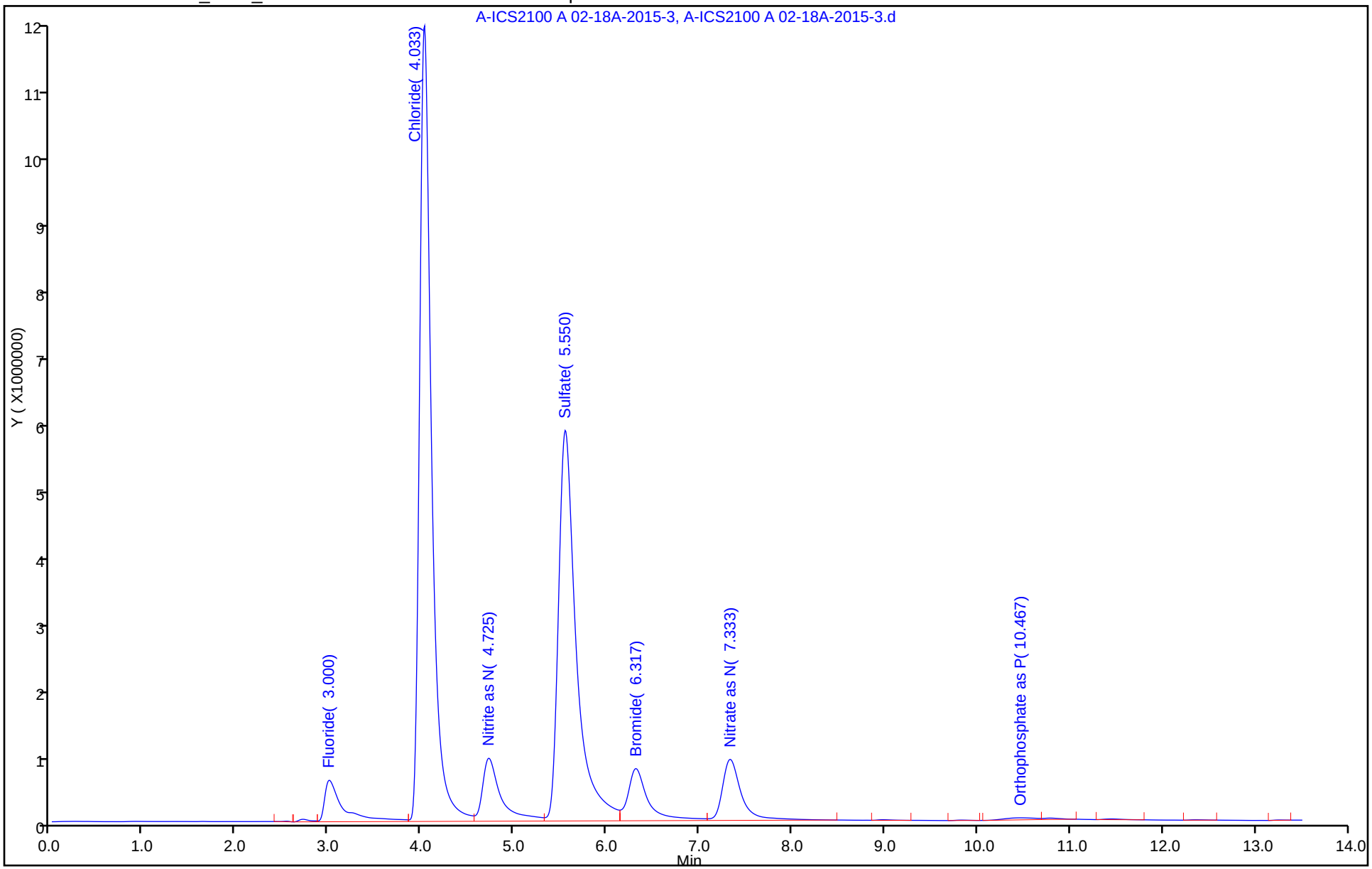
ICSTDL3_00194 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:49 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-3.d

Injection Date:	18-Feb-2015 16:53:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L3			Worklist Smp#:	3
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-4.d
Lims ID: icrt L4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 18-Feb-2015 17:08:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-004
Misc. Info.: 4 ICRT L4
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:49 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: hartmanm Date: 03-Mar-2015 13:48:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	1342366H	0.5000	0.4616	
2 Chloride	4.017	4.017	0.000	24549148H	10.0	9.93	
7 Nitrite as N	4.717	4.717	0.000	1938554H	0.5000	0.5115	
3 Sulfate	5.550	5.550	0.000	155006056	10.0	9.83	
4 Bromide	6.300	6.300	0.000	1594349H	2.00	1.92	
5 Nitrate as N	7.317	7.317	0.000	1916872H	0.5000	0.4976	
6 Orthophosphate as P	10.458	10.458	0.000	2655840	0.5000	0.5145	

Reagents:

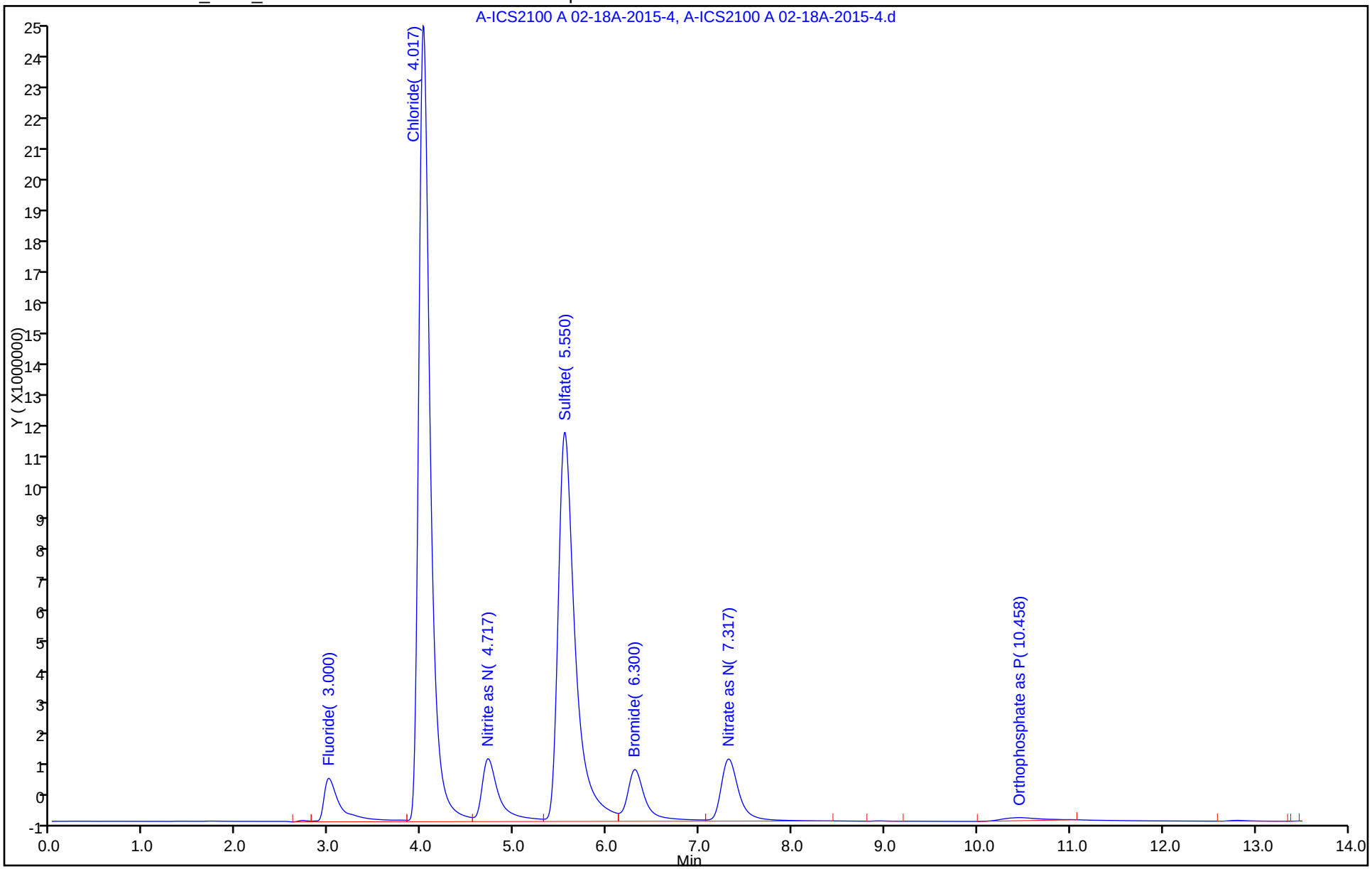
ICSTDL4_00131 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:49 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-4.d

Injection Date:	18-Feb-2015 17:08:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	icrt L4			Worklist Smp#:	4
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-5.d
Lims ID: ic L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Feb-2015 17:24:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-005
Misc. Info.: 5 IC L5
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:49 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	2963388H	1.00	1.00	
2 Chloride	4.008	4.017	-0.009	51714566H	20.0	20.6	
7 Nitrite as N	4.717	4.717	0.000	4108169H	1.00	1.09	
3 Sulfate	5.533	5.550	-0.017	323337576	20.0	20.6	
4 Bromide	6.292	6.300	-0.008	3417246H	4.00	4.10	
5 Nitrate as N	7.300	7.317	-0.017	4201889H	1.00	1.08	
6 Orthophosphate as P	10.375	10.458	-0.083	10345730	1.00	0.9673	

Reagents:

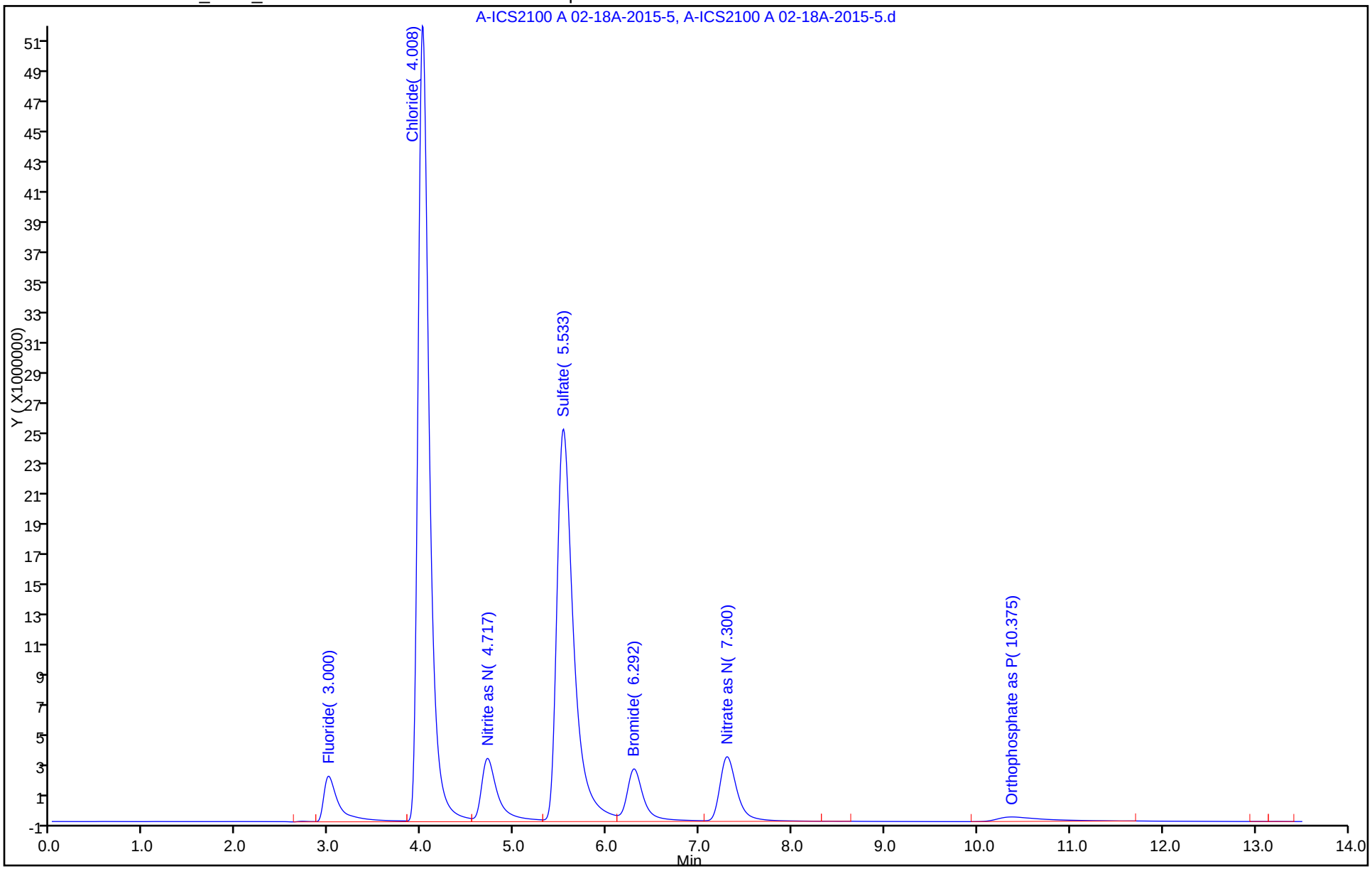
ICSTDL5_00132 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:49 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-5.d

Injection Date:	18-Feb-2015 17:24:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L5			Worklist Smp#:	5
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-6.d
Lims ID: ic L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Feb-2015 17:39:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-006
Misc. Info.: 6 IC L6
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:50 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: reaglec Date: 18-Feb-2015 19:29:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	7914608H	2.50	2.65	
2 Chloride	4.000	4.017	-0.017	128386026H	50.0	50.8	
7 Nitrite as N	4.700	4.717	-0.017	10286620H	2.50	2.75	
3 Sulfate	5.467	5.550	-0.083	803708435	50.0	51.3	
4 Bromide	6.283	6.300	-0.017	8686100H	10.0	10.4	
5 Nitrate as N	7.267	7.317	-0.050	10514959H	2.50	2.69	
6 Orthophosphate as P	10.200	10.458	-0.258	32123753	2.50	2.25	

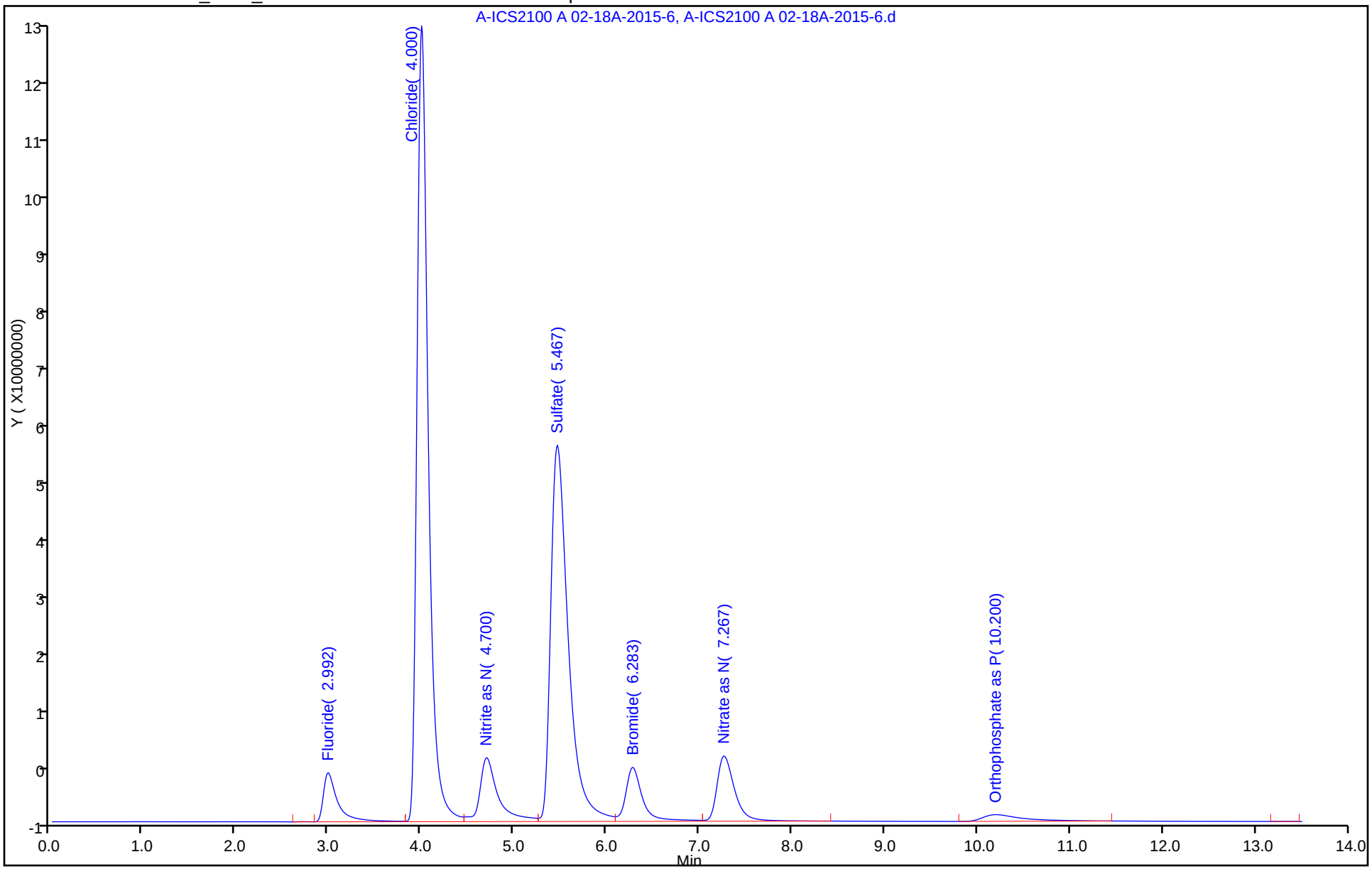
Reagents:

ICSTDL6_00200 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:50 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-6.d				
Injection Date:	18-Feb-2015 17:39:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



Report Date: 03-Mar-2015 14:01:50 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-7.d
Lims ID: ic L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-Feb-2015 17:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-007
Misc. Info.: 7 IC L7
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:50 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: reaglec Date: 18-Feb-2015 19:29:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	16064197H	5.00	5.35	
2 Chloride	4.000	4.017	-0.017	257553603H	100.0	101.7	
7 Nitrite as N	4.700	4.717	-0.017	18799281H	5.00	5.03	
3 Sulfate	5.425	5.550	-0.125	1589105343	100.0	101.5	
4 Bromide	6.258	6.300	-0.042	17363768H	20.0	20.7	
5 Nitrate as N	7.217	7.317	-0.100	20112979H	5.00	5.13	
6 Orthophosphate as P	10.117	10.458	-0.341	81177192	5.00	5.14	

Reagents:

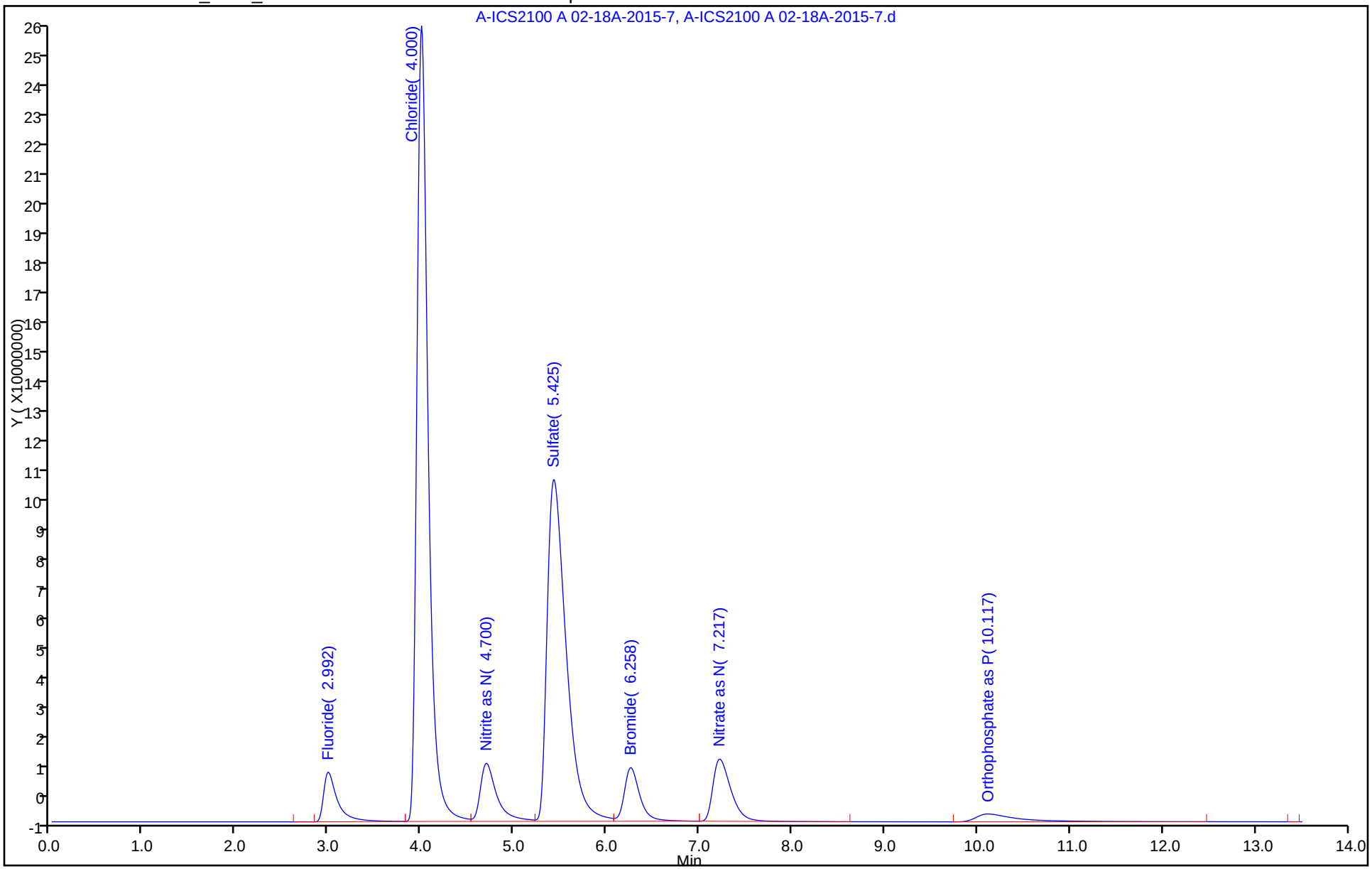
ICSTDL7_00131 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:50 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-7.d

Injection Date:	18-Feb-2015 17:54:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L7			Worklist Smp#:	7
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



Report Date: 03-Mar-2015 14:01:51 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-8.d
Lims ID: ic L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-Feb-2015 18:09:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-008
Misc. Info.: 8 IC L8
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:01:50 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: reaglec Date: 18-Feb-2015 19:29:21

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	23774396H	7.50	7.91	
2 Chloride	3.992	4.017	-0.025	382314941H	150.0	150.8	
7 Nitrite as N	4.683	4.717	-0.034	26481163H	7.50	7.08	
3 Sulfate	5.367	5.550	-0.183	2375506786	150.0	151.7	
4 Bromide	6.225	6.300	-0.075	25643657H	30.0	30.6	
5 Nitrate as N	7.175	7.317	-0.142	28557676H	7.50	7.28	
6 Orthophosphate as P	10.000	10.458	-0.458	127455403	7.50	7.86	

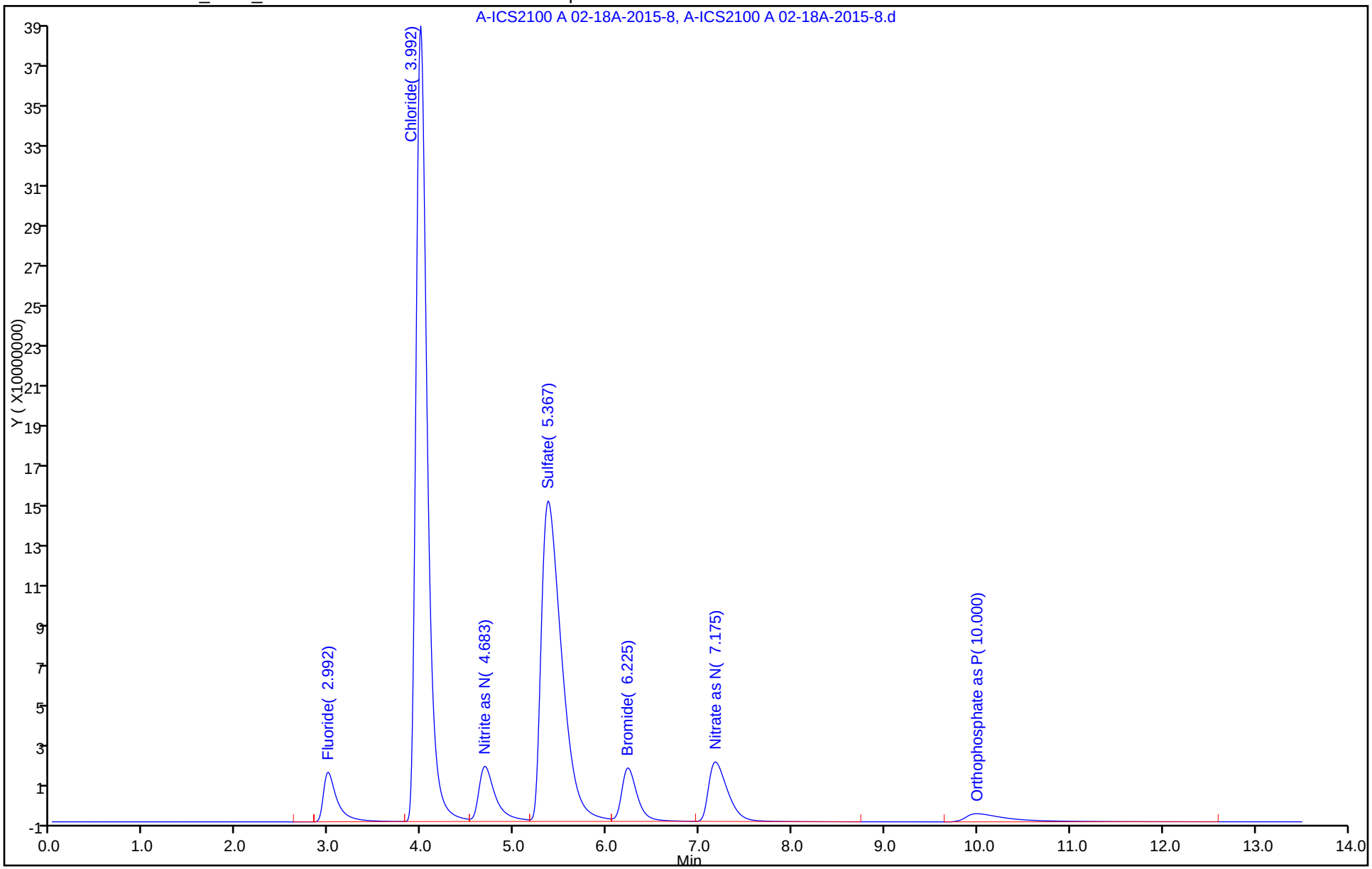
Reagents:

ICSTDL8_00101 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:01:51 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-8.d				
Injection Date:	18-Feb-2015 18:09:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L8			Worklist Smp#:	8
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



Report Date: 03-Mar-2015 14:02:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d
Lims ID: ic L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 18-Feb-2015 18:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005751-009
Misc. Info.: 9 IC L9
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 03-Mar-2015 14:02:05 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK026

First Level Reviewer: hartmanm Date: 03-Mar-2015 14:01:47

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	3.000	-0.017	29657700H	10.0	9.87	
2 Chloride	3.983	4.017	-0.034	484326140H	200.0	191.0	
7 Nitrite as N	4.675	4.717	-0.042	32570690H	10.0	8.71	
3 Sulfate	5.342	5.550	-0.208	2993621710	200.0	191.2	
4 Bromide	6.217	6.300	-0.083	32412358H	40.0	38.6	
5 Nitrate as N	7.142	7.317	-0.175	35041348H	10.0	8.93	
6 Orthophosphate as P	9.942	10.458	-0.516	168509455	10.0	10.3	

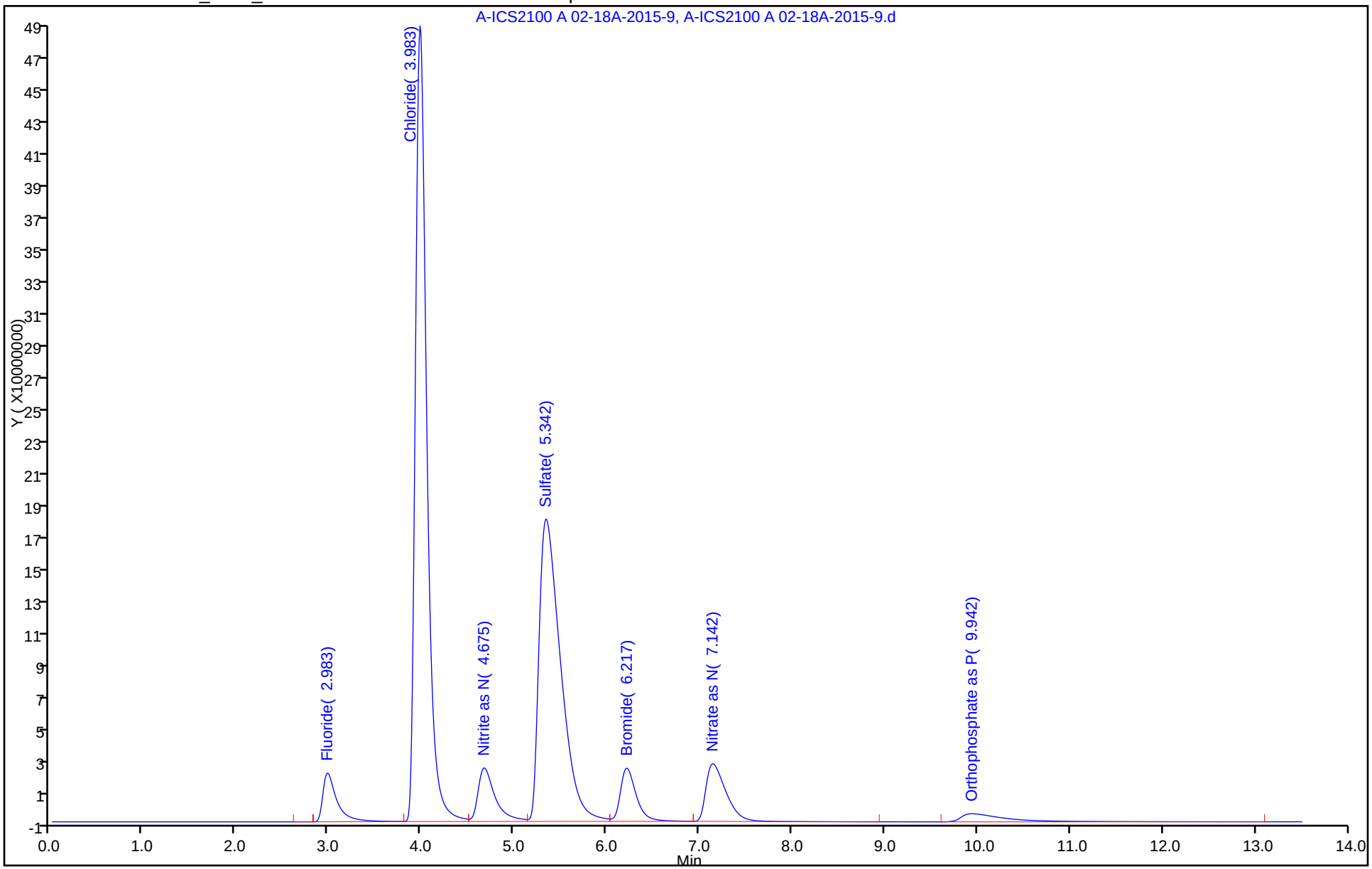
Reagents:

ICSTDL9_00106 Amount Added: 1.00 Units: mL

Report Date: 03-Mar-2015 14:02:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d				
Injection Date:	18-Feb-2015 18:25:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L9			Worklist Smp#:	9
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: ICV 180-134114/2 Calibration Date: 02/24/2015 11:27

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-2.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3087015		3.09	3.00	3.1	10.0
Chloride	Lin2		2544999		60.4	60.0	0.7	10.0
Nitrite as N	Lin2		3732240		2.99	3.00	-0.3	10.0
Sulfate	Lin2		15938755		61.0	60.0	1.7	10.0
Bromide	Lin2		882722		12.6	12.0	5.4	10.0
Nitrate as N	Lin2		4154900		3.18	3.00	6.1	10.0
Orthophosphate as P	Lin2		16114707		3.20	3.00	6.8	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: ICV 180-134114/2 Calibration Date: 02/24/2015 11:27

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-2.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.69	4.46	4.96
Sulfate	5.52	5.18	5.88
Bromide	6.25	5.91	6.61
Nitrate as N	7.23	6.98	7.48
Orthophosphate as P	10.30	10.08	10.58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-2.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 24-Feb-2015 11:27:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-002
Misc. Info.: 2 ICV
Operator ID: Instrument ID: CHIC2100A
Sublist:

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:43:41 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	9261046H	3.00	3.09	
2 Chloride	4.008	4.008	0.000	152699928H	60.0	60.4	
7 Nitrite as N	4.692	4.708	-0.016	11201200H	3.00	2.99	
3 Sulfate	5.517	5.525	-0.008	956325287	60.0	61.0	
4 Bromide	6.250	6.258	-0.008	10592661H	12.0	12.6	
5 Nitrate as N	7.225	7.233	-0.008	12464701H	3.00	3.18	
6 Orthophosphate as P	10.300	10.333	-0.033	48344121	3.00	3.20	

Reagents:

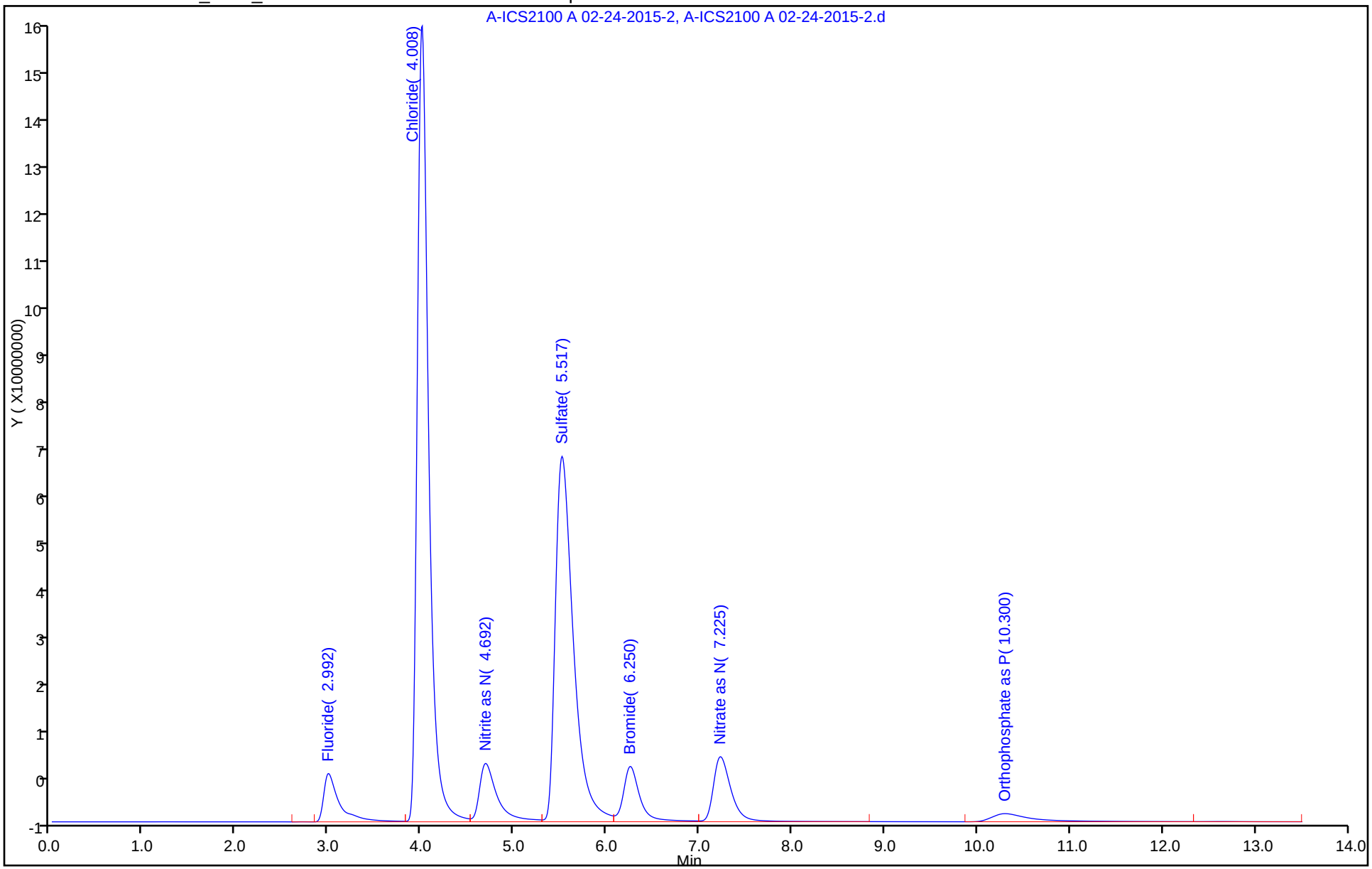
icicv_01205 Amount Added: 1.00 Units: mL

Report Date: 09-Mar-2015 07:43:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-2.d

Injection Date:	24-Feb-2015 11:27:00	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.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/3 Calibration Date: 02/24/2015 11:42

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-3.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3074142		2.57	2.50	2.8	10.0
Chloride	Lin2		2540529		50.3	50.0	0.6	10.0
Nitrite as N	Lin2		3897957		2.60	2.50	4.1	10.0
Sulfate	Lin2		15724841		50.2	50.0	0.3	10.0
Bromide	Lin2		874299		10.4	10.0	4.4	10.0
Nitrate as N	Lin2		4228631		2.70	2.50	8.1	10.0
Orthophosphate as P	Lin2		15082686		2.58	2.50	3.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/3 Calibration Date: 02/24/2015 11:42

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-3.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.71	4.46	4.96
Sulfate	5.53	5.18	5.88
Bromide	6.26	5.91	6.61
Nitrate as N	7.23	6.98	7.48
Orthophosphate as P	10.33	10.08	10.58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-3.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 24-Feb-2015 11:42:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-003
Misc. Info.: 3 CCV
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:43:41 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7685356H	2.50	2.57	
2 Chloride	4.008	4.008	0.000	127026445H	50.0	50.3	
7 Nitrite as N	4.708	4.708	0.000	9744893H	2.50	2.60	
3 Sulfate	5.525	5.525	0.000	786242044	50.0	50.2	
4 Bromide	6.258	6.258	0.000	8742990H	10.0	10.4	
5 Nitrate as N	7.233	7.233	0.000	10571578H	2.50	2.70	
6 Orthophosphate as P	10.333	10.333	0.000	37706715	2.50	2.58	

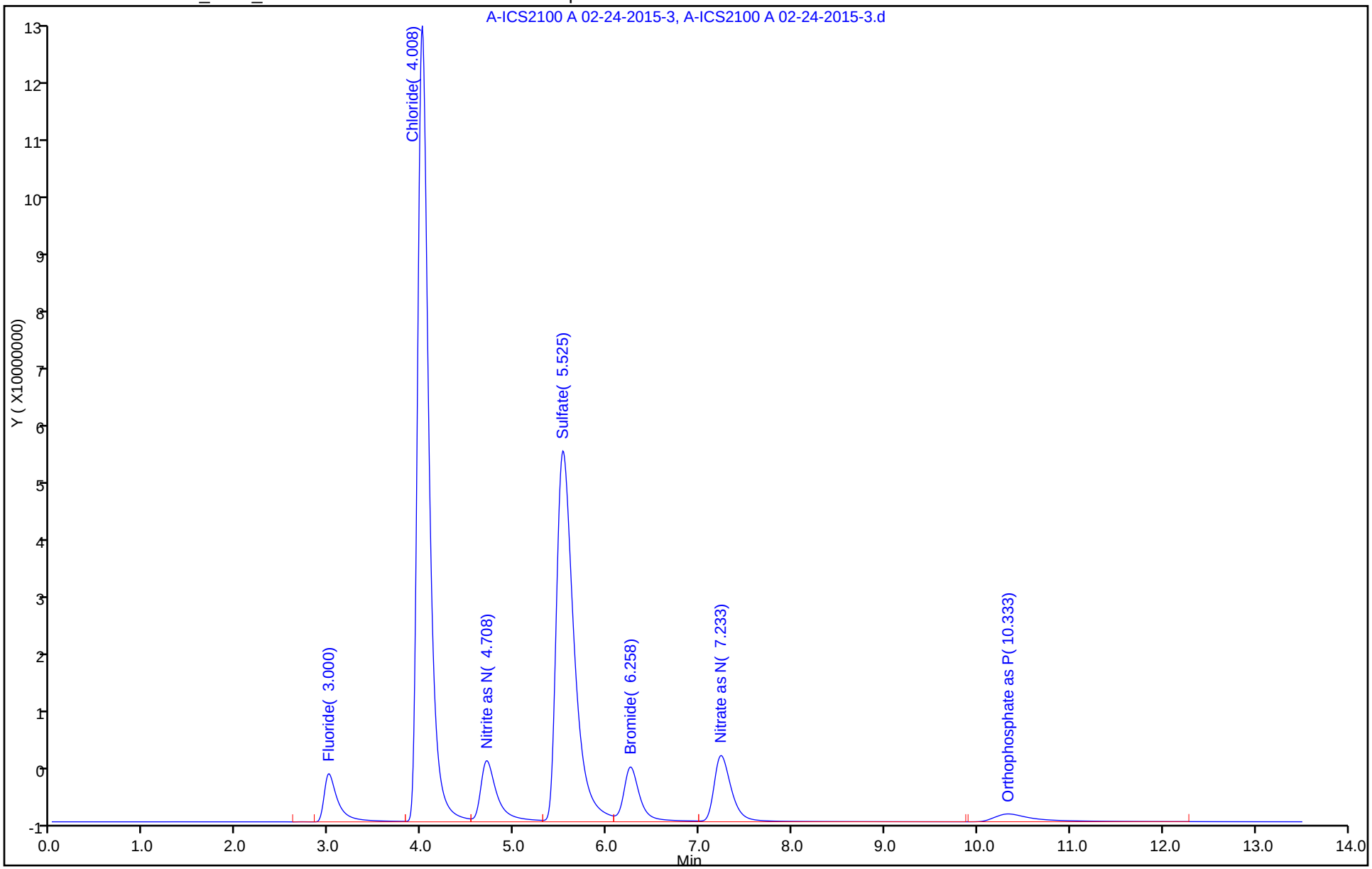
Reagents:

icccv_01173 Amount Added: 1.00 Units: mL

Report Date: 09-Mar-2015 07:43:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-3.d				
Injection Date:	24-Feb-2015 11:42:00	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.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/15 Calibration Date: 02/24/2015 15:00

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-15.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3118219		2.61	2.50	4.2	10.0
Chloride	Lin2		2554216		50.6	50.0	1.1	10.0
Nitrite as N	Lin2		3931066		2.62	2.50	4.9	10.0
Sulfate	Lin2		15775749		50.3	50.0	0.7	10.0
Bromide	Lin2		878860		10.5	10.0	5.0	10.0
Nitrate as N	Lin2		4242054		2.71	2.50	8.4	10.0
Orthophosphate as P	Lin2		14800357		2.54	2.50	1.5	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/15 Calibration Date: 02/24/2015 15:00

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-15.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.71	4.46	4.96
Sulfate	5.53	5.18	5.88
Bromide	6.26	5.91	6.61
Nitrate as N	7.24	6.99	7.49
Orthophosphate as P	10.37	10.12	10.62

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-15.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 24-Feb-2015 15:00:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-015
Misc. Info.: 15 CCV
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7795547H	2.50	2.61	
2 Chloride	4.008	4.008	0.000	127710797H	50.0	50.6	
7 Nitrite as N	4.708	4.708	0.000	9827665H	2.50	2.62	
3 Sulfate	5.525	5.525	0.000	788787448	50.0	50.3	
4 Bromide	6.258	6.258	0.000	8788597H	10.0	10.5	
5 Nitrate as N	7.242	7.242	0.000	10605134H	2.50	2.71	
6 Orthophosphate as P	10.367	10.367	0.000	37000893	2.50	2.54	

Reagents:

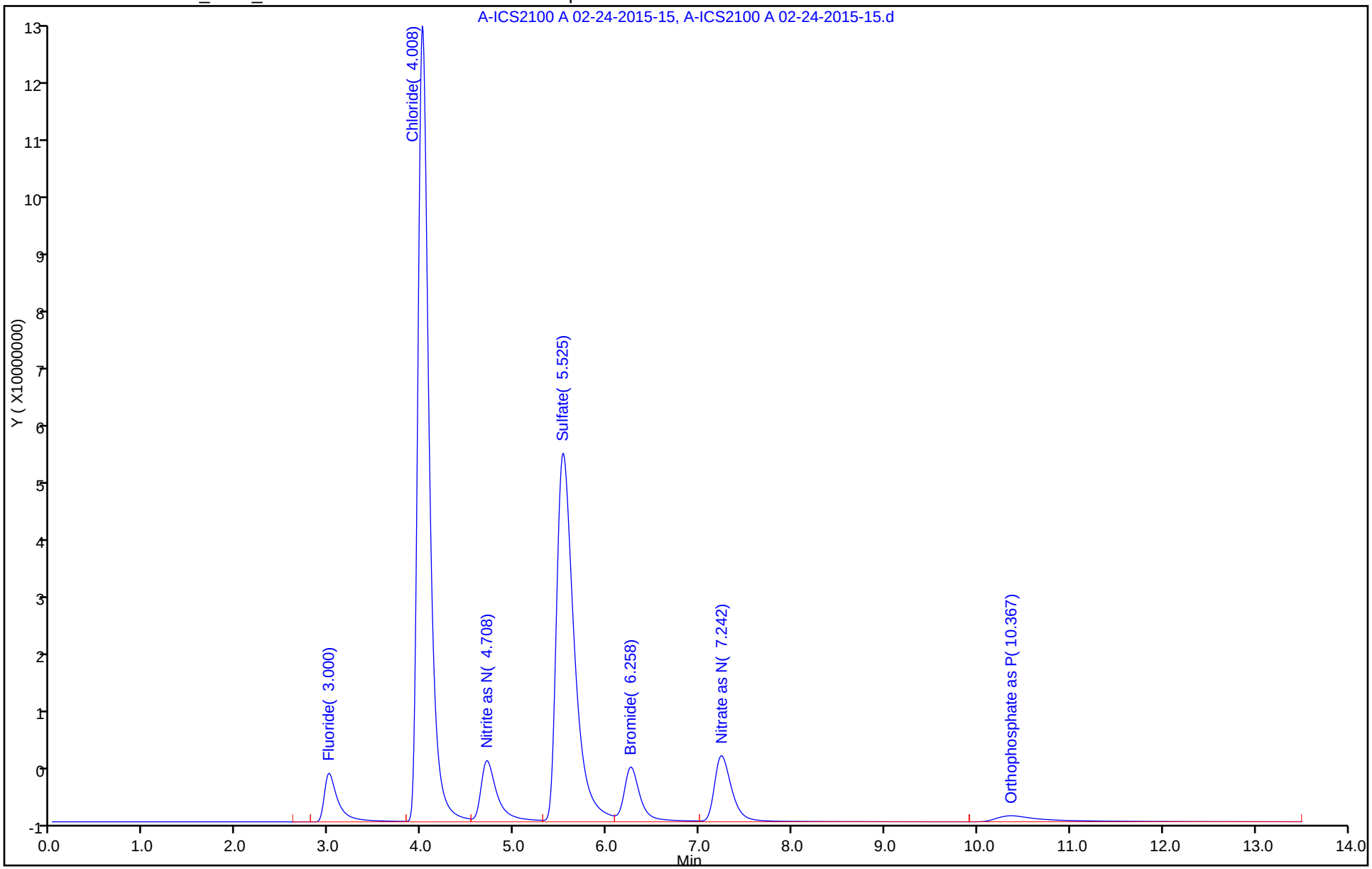
icccv_01173 Amount Added: 1.00 Units: mL

Report Date: 09-Mar-2015 07:42:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-15.d

Injection Date:	24-Feb-2015 15:00:00	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.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/27 Calibration Date: 02/24/2015 18:19

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-27.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3126296		2.61	2.50	4.5	10.0
Chloride	Lin2		2550573		50.5	50.0	1.0	10.0
Nitrite as N	Lin2		3930019		2.62	2.50	4.9	10.0
Sulfate	Lin2		15703841		50.1	50.0	0.2	10.0
Bromide	Lin2		874281		10.4	10.0	4.4	10.0
Nitrate as N	Lin2		4228708		2.70	2.50	8.1	10.0
Orthophosphate as P	Lin2		13277620		2.31	2.50	-7.5	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/27 Calibration Date: 02/24/2015 18:19

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-27.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.70	4.45	4.95
Sulfate	5.53	5.18	5.88
Bromide	6.26	5.91	6.61
Nitrate as N	7.23	6.98	7.48
Orthophosphate as P	10.44	10.19	10.69

Report Date: 09-Mar-2015 07:47:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-27.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 24-Feb-2015 18:19:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-027
Misc. Info.: 10826 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:47:40 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

First Level Reviewer: oravecj Date: 09-Mar-2015 07:25:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7815740H	2.50	2.61	
2 Chloride	4.008	4.008	0.000	127528637H	50.0	50.5	
7 Nitrite as N	4.700	4.700	0.000	9825048H	2.50	2.62	
3 Sulfate	5.533	5.533	0.000	785192044	50.0	50.1	
4 Bromide	6.258	6.258	0.000	8742812H	10.0	10.4	
5 Nitrate as N	7.233	7.233	0.000	10571770H	2.50	2.70	
6 Orthophosphate as P	10.442	10.442	0.000	33194050	2.50	2.31	

Reagents:

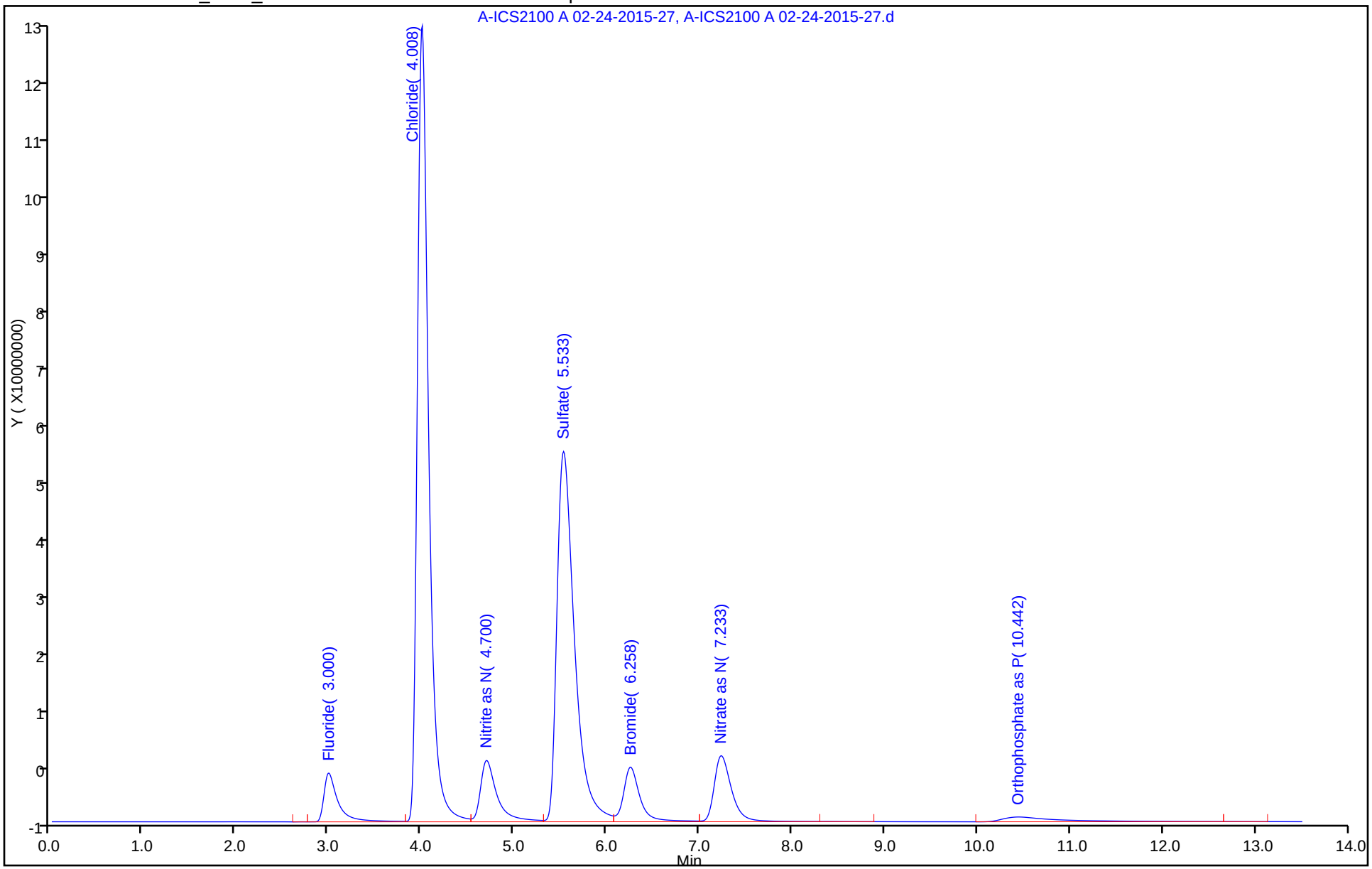
icccv_01173 Amount Added: 1.00 Units: mL

Report Date: 09-Mar-2015 07:47:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-27.d

Injection Date:	24-Feb-2015 18:19:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	27
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/39 Calibration Date: 02/24/2015 21:23

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-39.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3113594		2.60	2.50	4.1	10.0
Chloride	Lin2		2549965		50.5	50.0	1.0	10.0
Nitrite as N	Lin2		3921881		2.62	2.50	4.7	10.0
Sulfate	Lin2		15799861		50.4	50.0	0.8	10.0
Bromide	Lin2		873968		10.4	10.0	4.4	10.0
Nitrate as N	Lin2		4245676		2.71	2.50	8.5	10.0
Orthophosphate as P	Lin2		13649119		2.37	2.50	-5.3	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: CCV 180-134114/39 Calibration Date: 02/24/2015 21:23

Instrument ID: CHIC2100A Calib Start Date: 02/18/2015 16:38

GC Column: AS-18 ID: Calib End Date: 02/18/2015 18:25

Lab File ID: A-ICS2100 A 02-24-2015-39.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	3.00	2.65	3.35
Chloride	4.01	3.66	4.36
Nitrite as N	4.71	4.46	4.96
Sulfate	5.53	5.18	5.88
Bromide	6.26	5.91	6.61
Nitrate as N	7.24	6.99	7.49
Orthophosphate as P	10.39	10.14	10.64

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-39.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 24-Feb-2015 21:23:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-039
Misc. Info.: 1960 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:25:20 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7783984H	2.50	2.60	
2 Chloride	4.008	4.008	0.000	127498229H	50.0	50.5	
7 Nitrite as N	4.708	4.708	0.000	9804702H	2.50	2.62	
3 Sulfate	5.525	5.525	0.000	789993059	50.0	50.4	
4 Bromide	6.258	6.258	0.000	8739677H	10.0	10.4	
5 Nitrate as N	7.242	7.242	0.000	10614189H	2.50	2.71	
6 Orthophosphate as P	10.392	10.392	0.000	34122797	2.50	2.37	

Reagents:

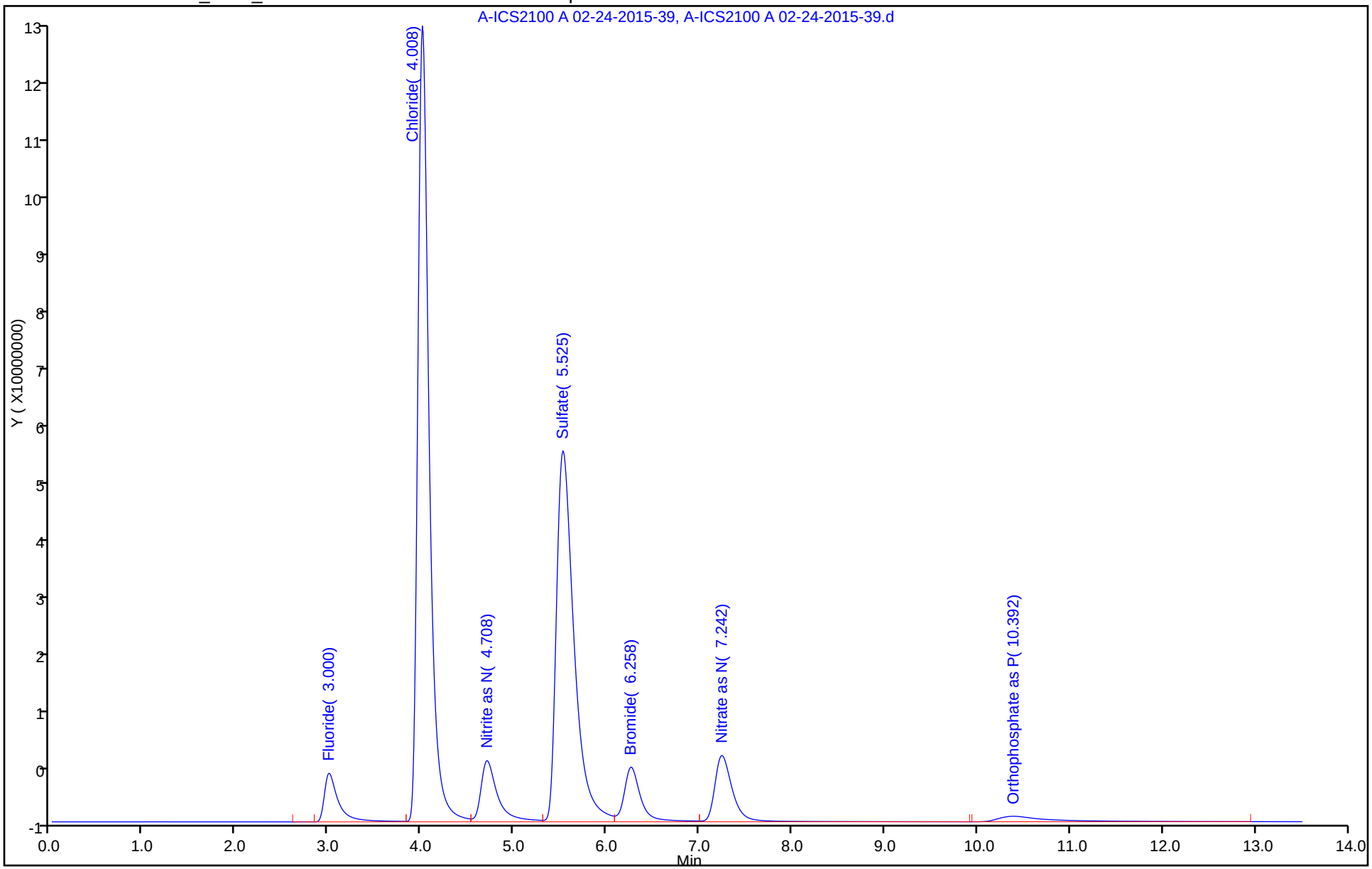
icccv_01173 Amount Added: 1.00 Units: mL

Report Date: 09-Mar-2015 07:25:20 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-39.d

Injection Date:	24-Feb-2015 21:23:00	Instrument ID:	CHIC2100A	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_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-134114/6

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-6.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 12:28

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.288	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-6.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 24-Feb-2015 12:28:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-006
Misc. Info.: 6 MB
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:43:33 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

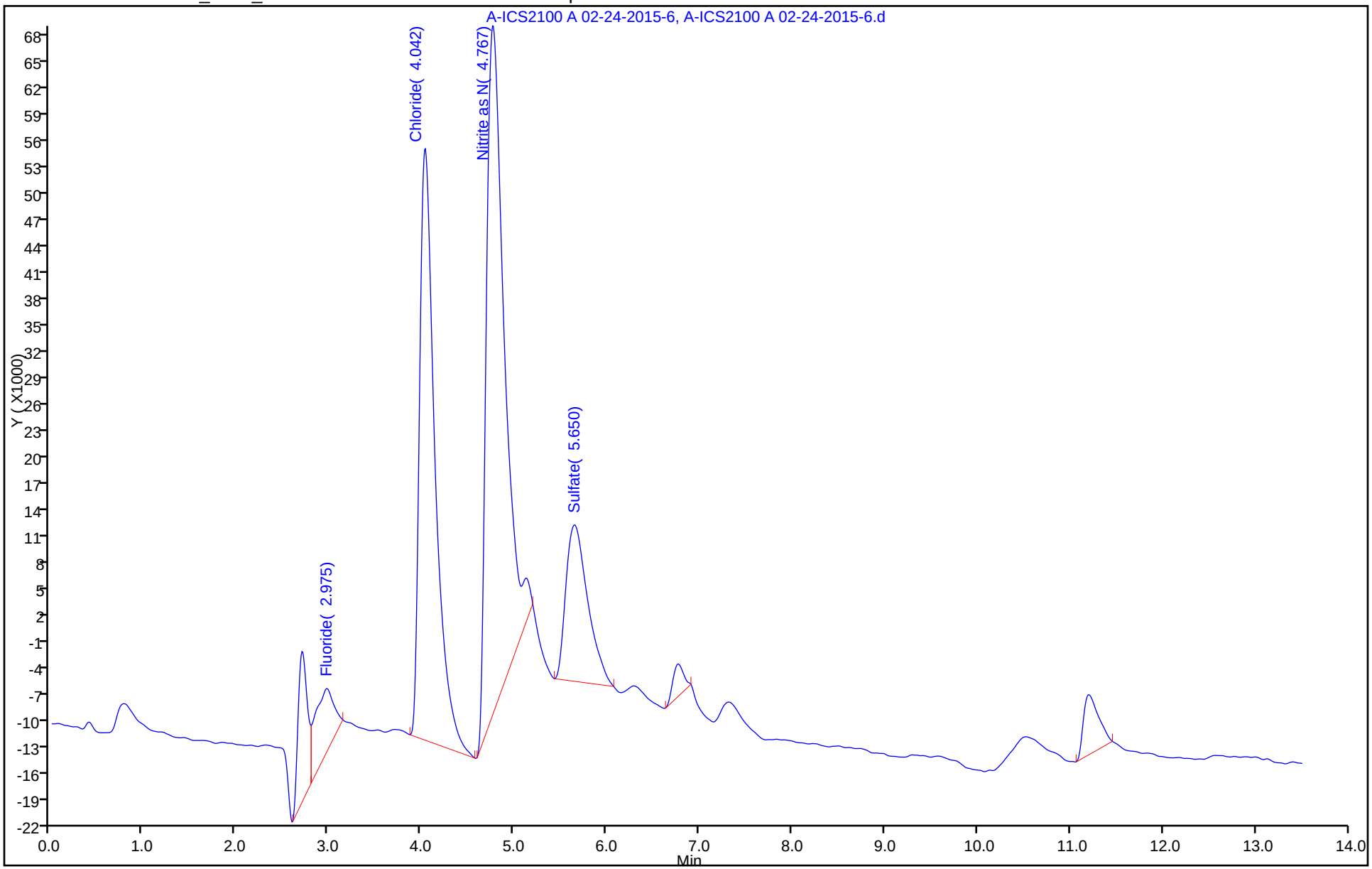
Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.975	3.000	-0.025	7188H		0.0180	
2 Chloride	4.042	4.008	0.034	66767H		0.2884	
7 Nitrite as N	4.767	4.700	0.067	77809H		0.0133	
3 Sulfate	5.650	5.533	0.117	290777		-0.0599	
4 Bromide		6.258				ND	
5 Nitrate as N		7.233				ND	
6 Orthophosphate as P		10.442				ND	

Report Date: 09-Mar-2015 07:43:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-6.d				
Injection Date:	24-Feb-2015 12:28:00	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.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-134114/4

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-4.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 11:57

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.296	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-4.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 24-Feb-2015 11:57:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-004
Misc. Info.: 4 CCB
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:43:33 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

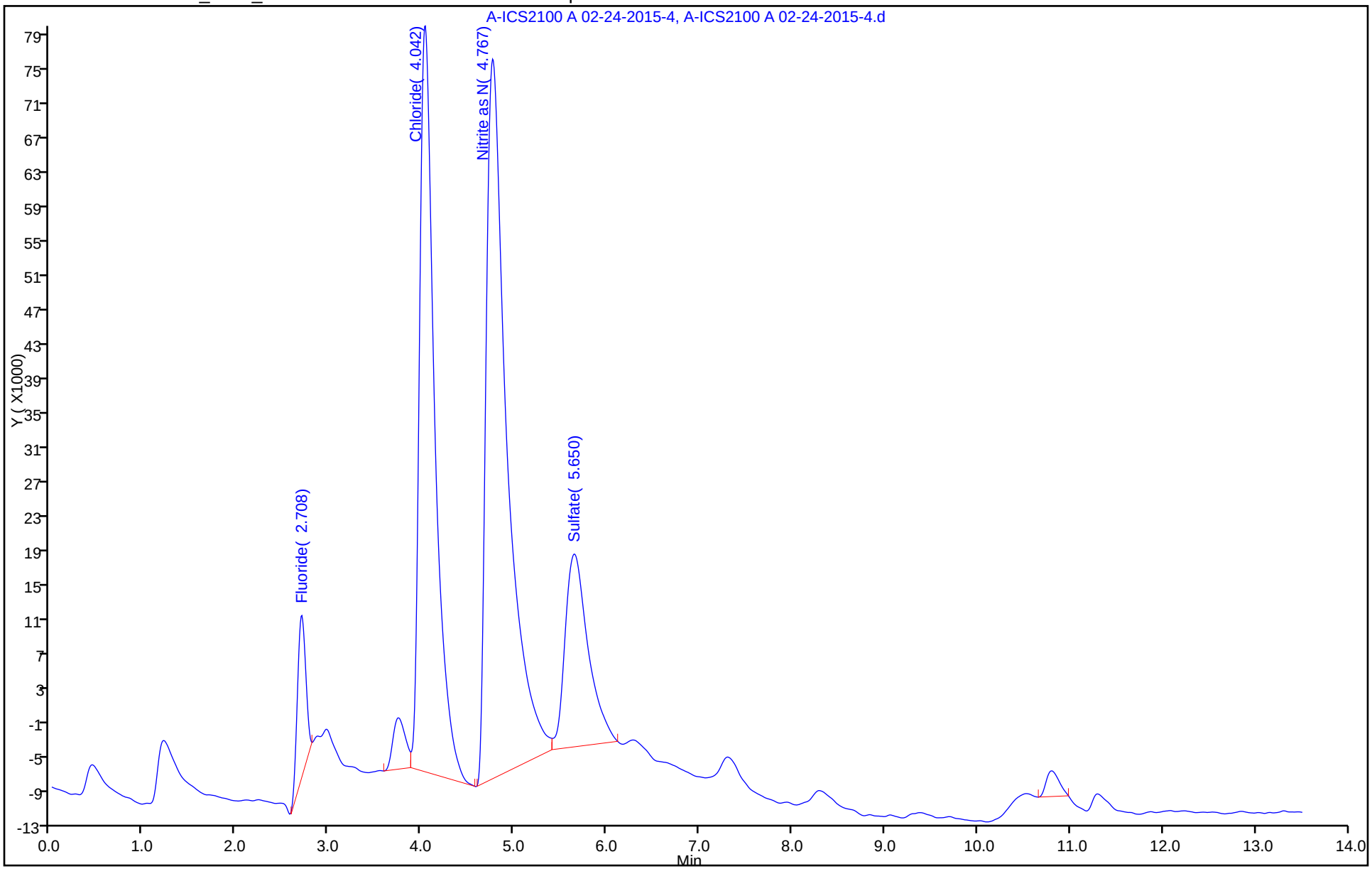
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.708	3.000	-0.292	18560H		0.0218	
2 Chloride	4.042	4.008	0.034	85747H		0.2959	
7 Nitrite as N	4.767	4.700	0.067	82720H		0.0147	
3 Sulfate	5.650	5.533	0.117	385450		-0.0539	
4 Bromide		6.258				ND	
5 Nitrate as N		7.233				ND	
6 Orthophosphate as P		10.442				ND	

Report Date: 09-Mar-2015 07:43:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-4.d

Injection Date:	24-Feb-2015 11:57:00	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.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-134114/16

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-16.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 15:16

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.316	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-16.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 24-Feb-2015 15:16:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-016
Misc. Info.: 16 CCB
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

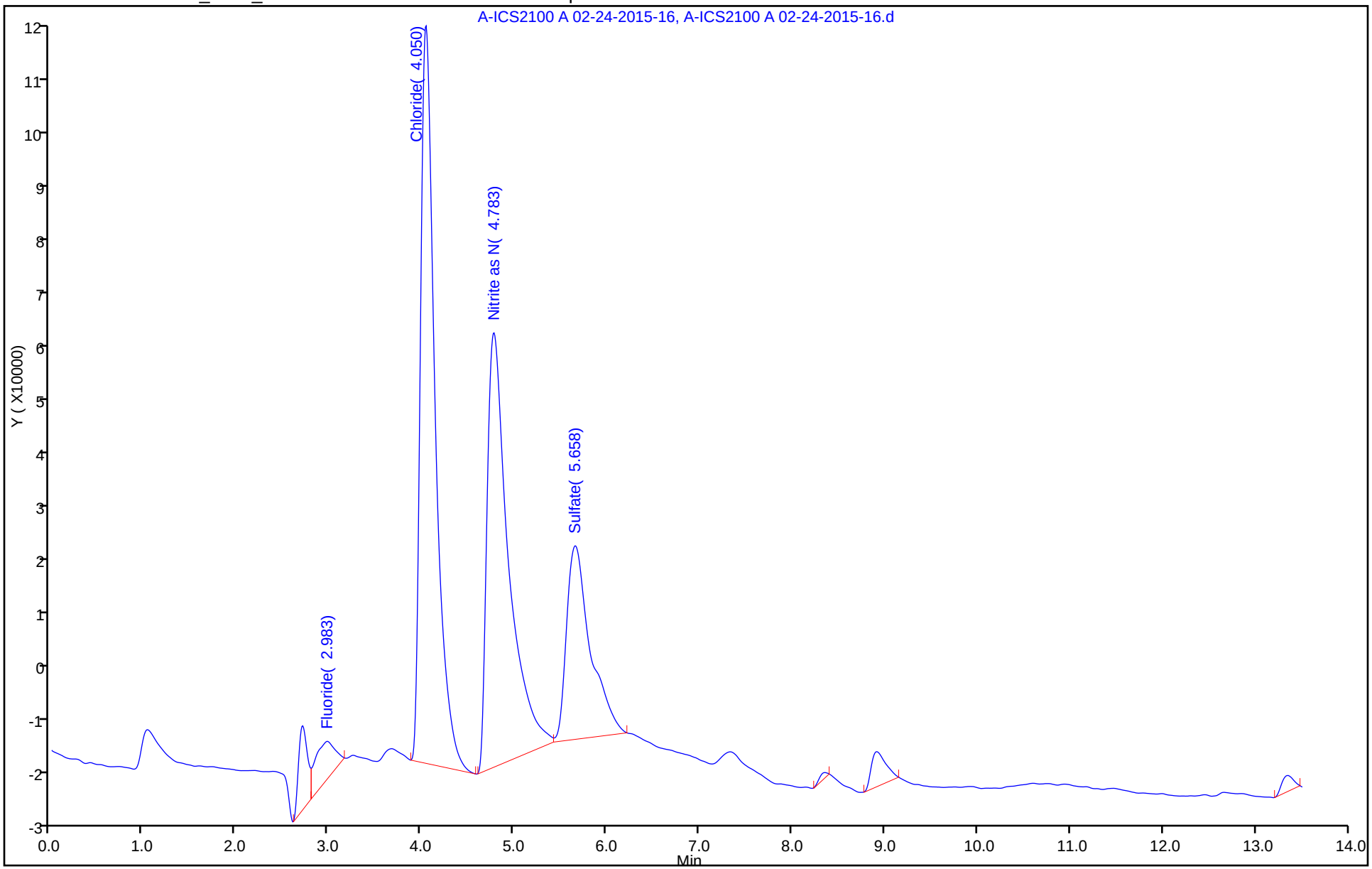
Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	3.000	-0.017	6947H		0.0179	
2 Chloride	4.050	4.008	0.042	136408H		0.3158	
7 Nitrite as N	4.783	4.708	0.075	80315H		0.0140	
3 Sulfate	5.658	5.525	0.133	641261		-0.0375	
4 Bromide		6.258				ND	
5 Nitrate as N		7.242				ND	
6 Orthophosphate as P		10.367				ND	

Report Date: 09-Mar-2015 07:42:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-16.d				
Injection Date:	24-Feb-2015 15:16:00	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.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-134114/28

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-28.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 18:34

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.310	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-28.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 24-Feb-2015 18:34:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-028
Misc. Info.: 2332 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:47:40 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

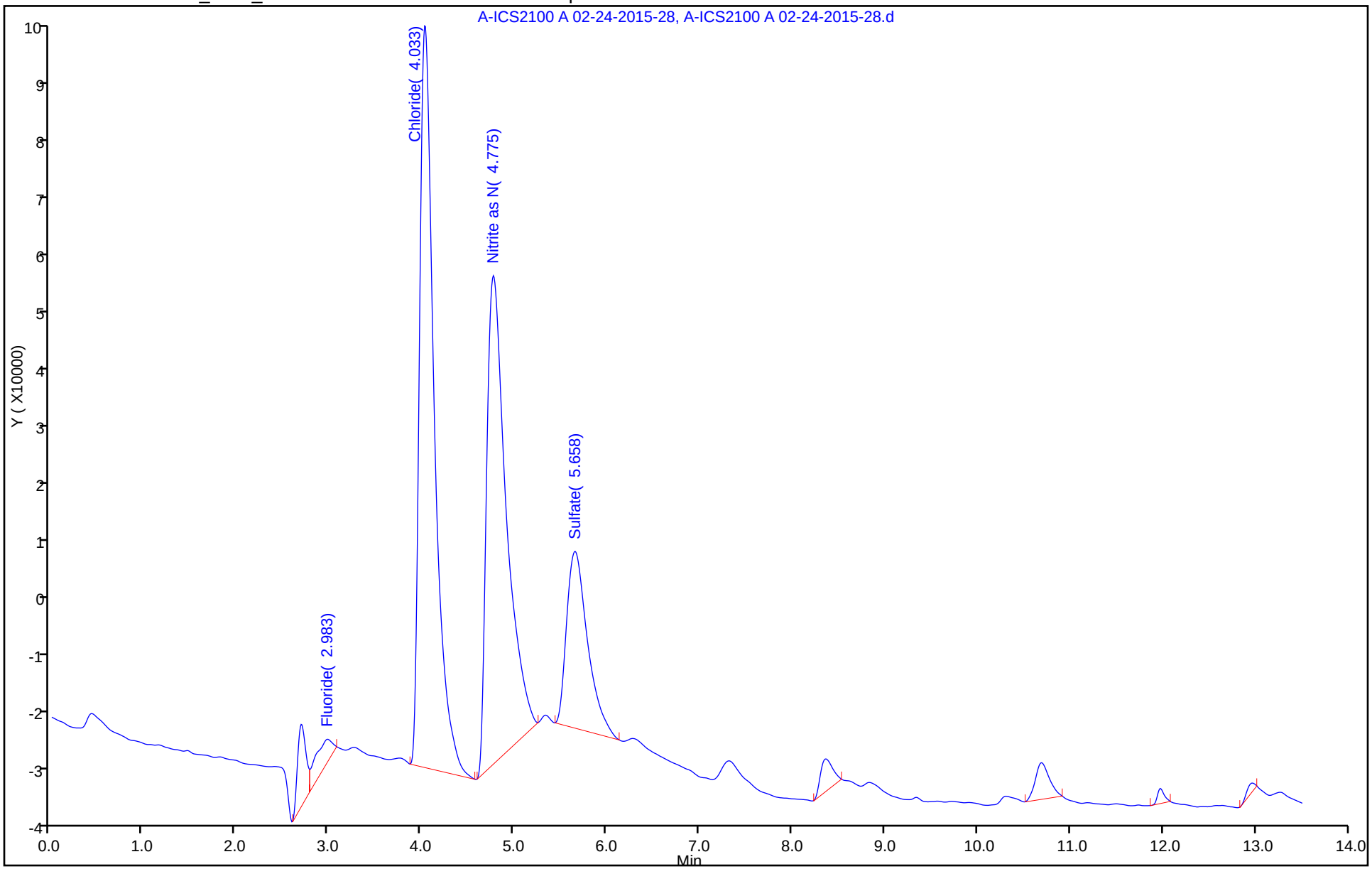
Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	3.000	-0.017	3756H		0.0168	
2 Chloride	4.033	4.008	0.025	121361H		0.3099	
7 Nitrite as N	4.775	4.700	0.075	79949H		0.0139	
3 Sulfate	5.658	5.533	0.125	457403		-0.0493	
4 Bromide		6.258				ND	
5 Nitrate as N		7.233				ND	
6 Orthophosphate as P		10.442				ND	

Report Date: 09-Mar-2015 07:47:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-28.d				
Injection Date:	24-Feb-2015 18:34:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	28
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-134114/40

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-40.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 21:38

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	0.295	J	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-40.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 24-Feb-2015 21:38:00 ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-040
Misc. Info.: 15962 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:25:20 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

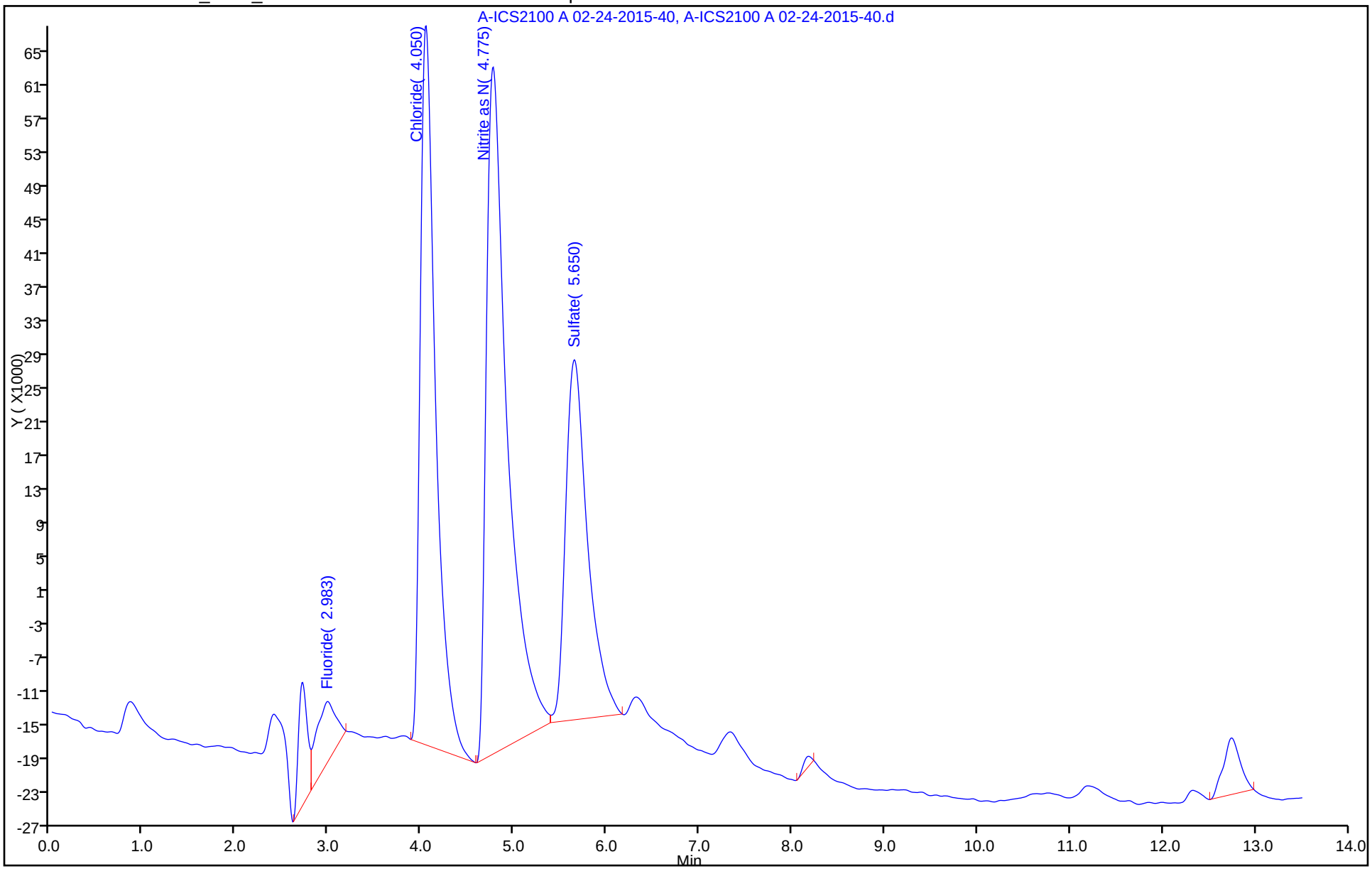
First Level Reviewer: reaglec Date: 25-Feb-2015 12:22:54

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	3.000	-0.017	7157H		0.0180	
2 Chloride	4.050	4.008	0.042	84420H		0.2954	
7 Nitrite as N	4.775	4.708	0.067	80628H		0.0141	
3 Sulfate	5.650	5.525	0.125	702120		-0.0336	
4 Bromide		6.258				ND	
5 Nitrate as N		7.242				ND	
6 Orthophosphate as P		10.392				ND	

Report Date: 09-Mar-2015 07:25:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-40.d				
Injection Date:	24-Feb-2015 21:38:00	Instrument ID:	CHIC2100A	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_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-134114/5

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-5.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 12:13

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.70		0.10	0.0062
16887-00-6	Chloride	50.3		1.0	0.20
14808-79-8	Sulfate	50.2		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-5.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 24-Feb-2015 12:13:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-005
Misc. Info.: 5 LCS
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:43:33 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	7731085H	2.50	2.58	
2 Chloride	4.008	4.008	0.000	127086869H	50.0	50.3	
7 Nitrite as N	4.708	4.700	0.008	9791835H	2.50	2.61	
3 Sulfate	5.533	5.533	0.000	786876170	50.0	50.2	
4 Bromide	6.258	6.258	0.000	8759057H	10.0	10.5	
5 Nitrate as N	7.233	7.233	0.000	10581048H	2.50	2.70	
6 Orthophosphate as P	10.333	10.442	-0.109	40055478	2.50	2.72	

Reagents:

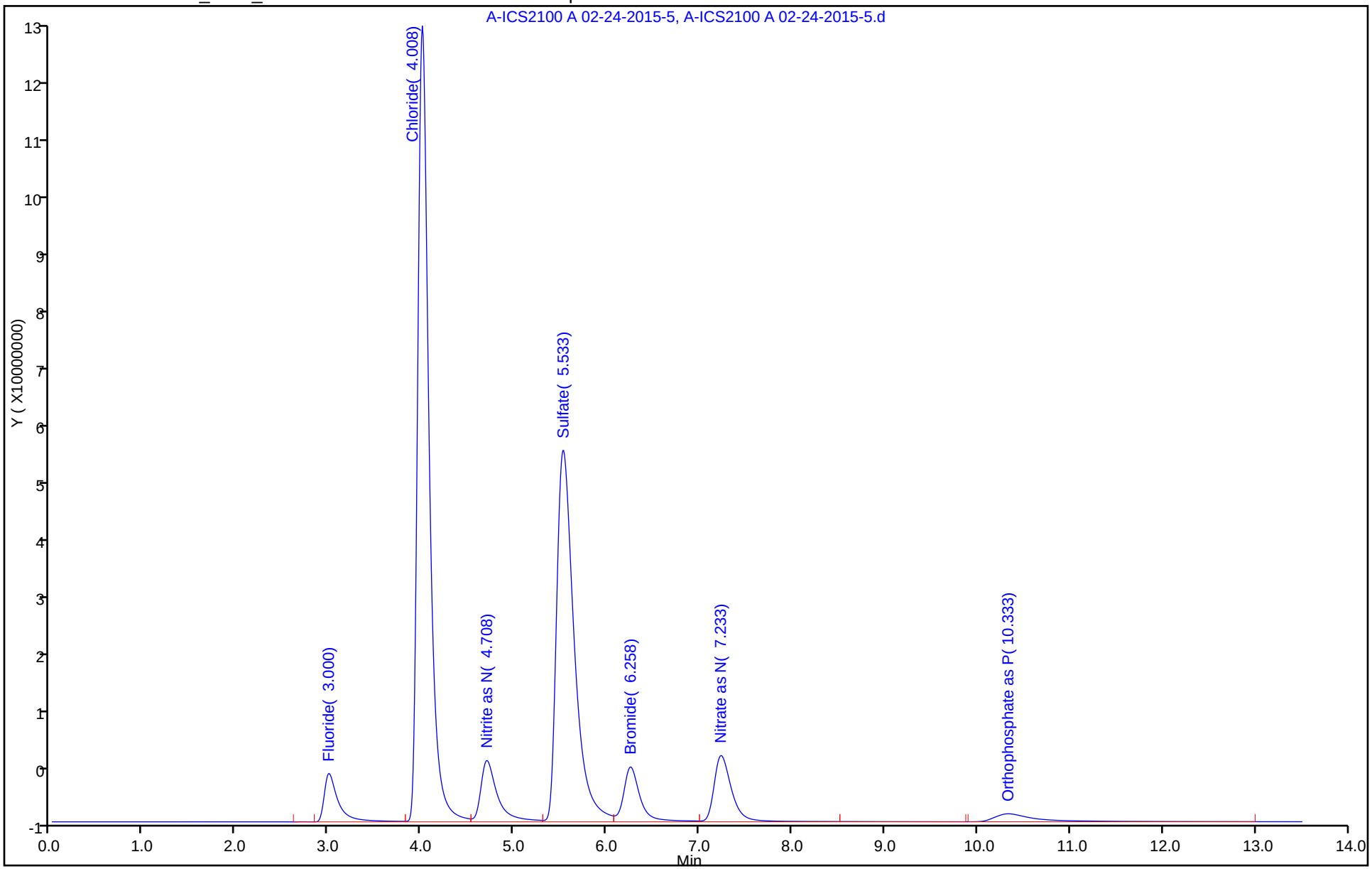
icccv_01173 Amount Added: 1.00 Units: mL

Report Date: 09-Mar-2015 07:43:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-5.d

Injection Date:	24-Feb-2015 12:13:00	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.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93D-0/1-0 MS Lab Sample ID: 180-41453-3 MS

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-25.d

Analysis Method: 300.0 Date Collected: 02/23/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 17:48

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.00		0.10	0.0062
16887-00-6	Chloride	125		1.0	0.20
14808-79-8	Sulfate	53.1		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-25.d
Lims ID: 180-41453-A-3 MS
Client ID:
Sample Type: MS
Inject. Date: 24-Feb-2015 17:48:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-025
Misc. Info.: 20557 180-41453-a-3 ms
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	3634086H	1.25	1.22	
2 Chloride	3.992	4.008	-0.016	316691626H	25.0	125.0	
7 Nitrite as N		4.708				ND	
3 Sulfate	5.517	5.525	-0.008	831447388	25.0	53.1	
4 Bromide	6.258	6.258	0.000	4452150H	5.00	5.33	
5 Nitrate as N	7.242	7.242	0.000	7797180H	1.25	2.00	
6 Orthophosphate as P	10.375	10.367	0.008	29163	1.25	0.3599	

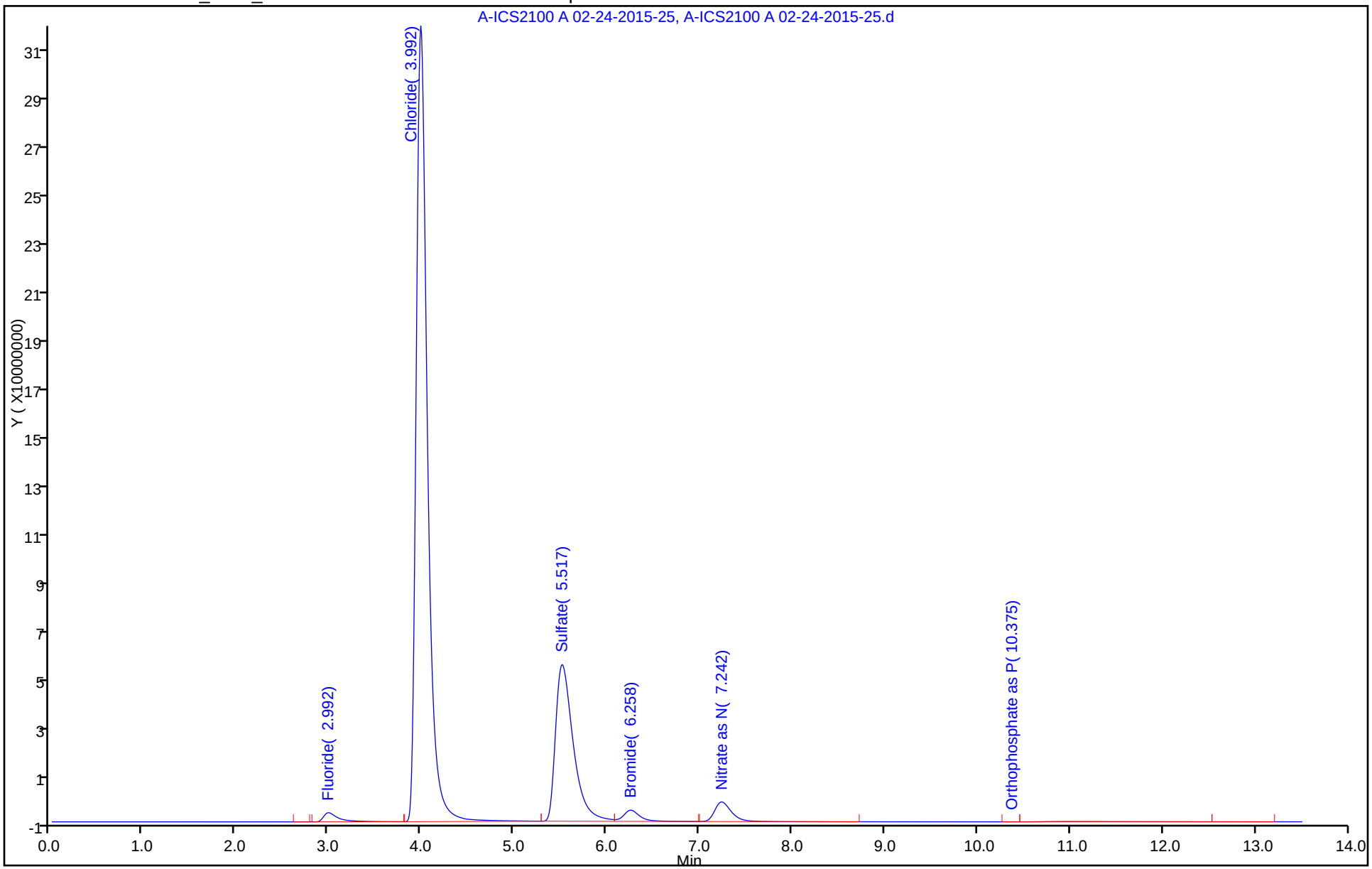
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 09-Mar-2015 07:42:15 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-25.d				
Injection Date:	24-Feb-2015 17:48:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-3 MS			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.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 MS Lab Sample ID: 180-41453-4 MS

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-22.d

Analysis Method: 300.0 Date Collected: 02/23/2015 11:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 17:03

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.17		0.10	0.0062
16887-00-6	Chloride	174		1.0	0.20
14808-79-8	Sulfate	59.9		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-22.d
Lims ID: 180-41453-A-4 MS
Client ID:
Sample Type: MS
Inject. Date: 24-Feb-2015 17:03:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-022
Misc. Info.: 22 180-41453-a-4 MS
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	3827879H	1.25	1.29	
2 Chloride	4.000	4.008	-0.008	442134795H	25.0	174.4	
7 Nitrite as N		4.708				ND	
3 Sulfate	5.517	5.525	-0.008	939120337	25.0	59.9	
4 Bromide	6.267	6.258	0.009	4464234H	5.00	5.34	
5 Nitrate as N	7.225	7.242	-0.017	12399518H	1.25	3.17	
6 Orthophosphate as P		10.367			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

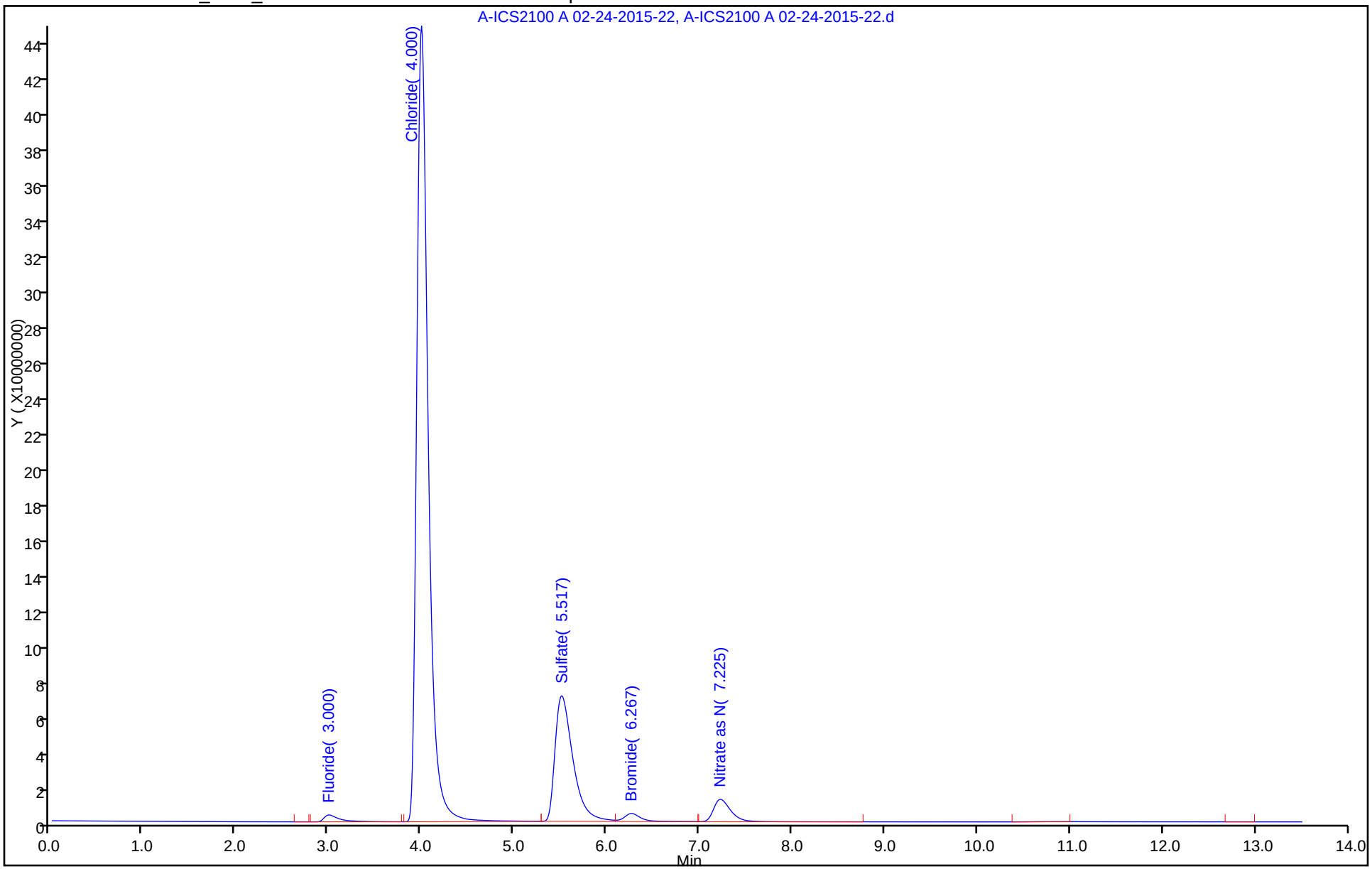
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 09-Mar-2015 07:42:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-22.d				
Injection Date:	24-Feb-2015 17:03:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-4 MS			Worklist Smp#:	22
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.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93D-0/1-0 MSD Lab Sample ID: 180-41453-3 MSD

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-26.d

Analysis Method: 300.0 Date Collected: 02/23/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 18:04

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.02		0.10	0.0062
16887-00-6	Chloride	126		1.0	0.20
14808-79-8	Sulfate	53.5		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-26.d
Lims ID: 180-41453-A-3 MSD
Client ID:
Sample Type: MSD
Inject. Date: 24-Feb-2015 18:04:00 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-026
Misc. Info.: 18247 180-41453-a-3 msd
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	3.000	-0.008	3658741H	1.25	1.23	
2 Chloride	3.992	4.008	-0.016	319443170H	25.0	126.1	
7 Nitrite as N		4.708				ND	
3 Sulfate	5.525	5.525	0.000	838795201	25.0	53.5	
4 Bromide	6.258	6.258	0.000	4495538H	5.00	5.38	
5 Nitrate as N	7.242	7.242	0.000	7876174H	1.25	2.02	
6 Orthophosphate as P		10.367			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

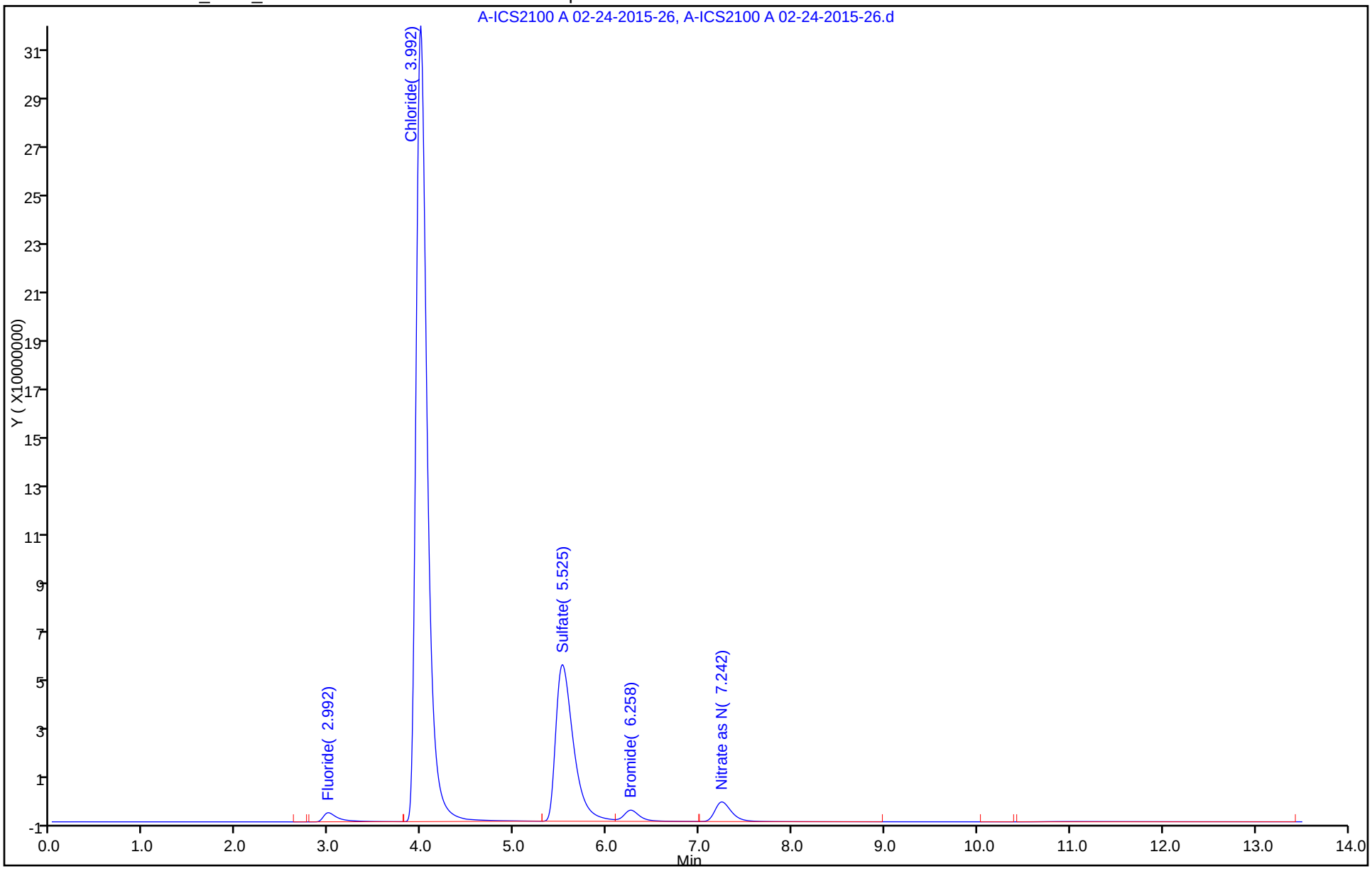
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 09-Mar-2015 07:42:15 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-26.d				
Injection Date:	24-Feb-2015 18:04:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-3 MSD			Worklist Smp#:	26
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.: 180-41453-1

SDG No.:

Client Sample ID: HD-MW-93S-0/1-0 MSD Lab Sample ID: 180-41453-4 MSD

Matrix: Water Lab File ID: A-ICS2100 A 02-24-2015-23.d

Analysis Method: 300.0 Date Collected: 02/23/2015 11:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 02/24/2015 17:18

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 134114 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.15		0.10	0.0062
16887-00-6	Chloride	174		1.0	0.20
14808-79-8	Sulfate	59.6		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-23.d
Lims ID: 180-41453-A-4 MSD
Client ID:
Sample Type: MSD
Inject. Date: 24-Feb-2015 17:18:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005804-023
Misc. Info.: 23 180-41453-a-4 MSD
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 09-Mar-2015 07:42:11 Calib Date: 18-Feb-2015 18:25:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150218-5751.b\A-ICS2100 A 02-18A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK025

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	3.000	0.000	3640912H	1.25	1.23	
2 Chloride	3.992	4.008	-0.016	440619730H	25.0	173.8	
7 Nitrite as N		4.708				ND	
3 Sulfate	5.508	5.525	-0.017	934565811	25.0	59.6	
4 Bromide	6.258	6.258	0.000	4443047H	5.00	5.32	
5 Nitrate as N	7.225	7.242	-0.017	12332354H	1.25	3.15	
6 Orthophosphate as P		10.367			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

Reagents:

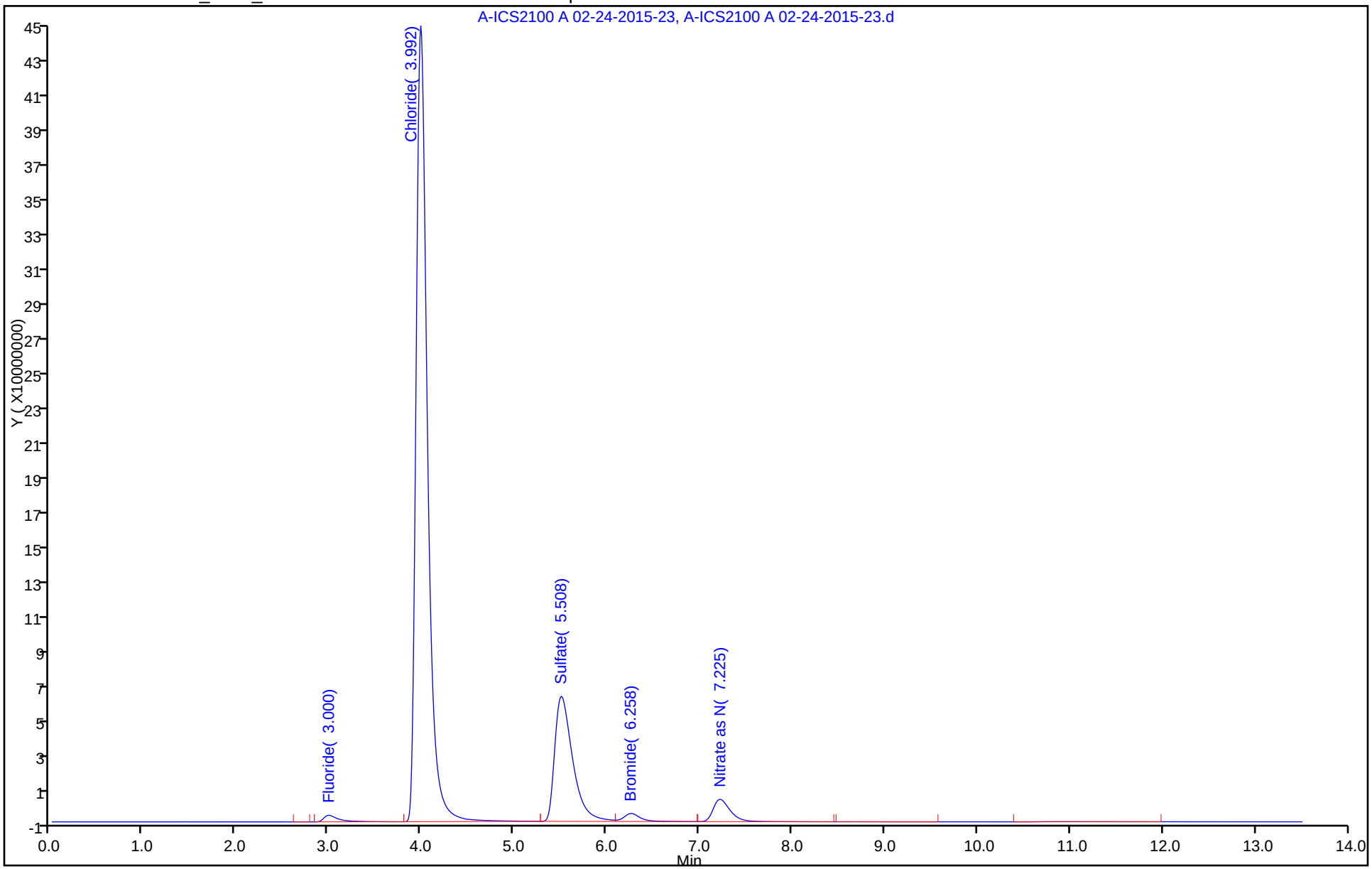
ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 09-Mar-2015 07:42:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150224-5804.b\A-ICS2100 A 02-24-2015-23.d

Injection Date:	24-Feb-2015 17:18:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-41453-A-4 MSD			Worklist Smp#:	23
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 02/18/2015 16:38

Analysis Batch Number: 133779 End Date: 02/19/2015 10:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 180-133779/2		02/18/2015 16:38	1	A-ICS2100 A 02-18A-2015-2.d	AS-18
IC 180-133779/3		02/18/2015 16:53	1	A-ICS2100 A 02-18A-2015-3.d	AS-18
ICRT 180-133779/4		02/18/2015 17:08	1	A-ICS2100 A 02-18A-2015-4.d	AS-18
IC 180-133779/5		02/18/2015 17:24	1	A-ICS2100 A 02-18A-2015-5.d	AS-18
IC 180-133779/6		02/18/2015 17:39	1	A-ICS2100 A 02-18A-2015-6.d	AS-18
IC 180-133779/7		02/18/2015 17:54	1	A-ICS2100 A 02-18A-2015-7.d	AS-18
IC 180-133779/8		02/18/2015 18:09	1	A-ICS2100 A 02-18A-2015-8.d	AS-18
IC 180-133779/9		02/18/2015 18:25	1	A-ICS2100 A 02-18A-2015-9.d	AS-18
ZZZZZ		02/18/2015 18:40	1		AS-18
ZZZZZ		02/18/2015 18:55	1		AS-18
ZZZZZ		02/18/2015 19:11	1		AS-18
ICV 180-133779/13		02/18/2015 19:49	1		AS-18
CCV 180-133779/14		02/18/2015 20:04	1		AS-18
CCB 180-133779/15		02/18/2015 20:20	1		AS-18
ZZZZZ		02/18/2015 20:35	1		AS-18
ZZZZZ		02/18/2015 20:50	1		AS-18
ZZZZZ		02/18/2015 21:06	1		AS-18
ZZZZZ		02/18/2015 21:21	1		AS-18
ZZZZZ		02/18/2015 21:36	1		AS-18
ZZZZZ		02/18/2015 21:52	1		AS-18
ZZZZZ		02/18/2015 22:07	1		AS-18
ZZZZZ		02/18/2015 22:22	1		AS-18
ZZZZZ		02/18/2015 22:38	1		AS-18
ZZZZZ		02/18/2015 22:53	1		AS-18
CCV 180-133779/26		02/18/2015 23:08	1		AS-18
CCB 180-133779/27		02/18/2015 23:23	1		AS-18
ZZZZZ		02/18/2015 23:39	1		AS-18
ZZZZZ		02/18/2015 23:54	5		AS-18
ZZZZZ		02/19/2015 00:09	5		AS-18
ZZZZZ		02/19/2015 00:25	50		AS-18
ZZZZZ		02/19/2015 00:40	1		AS-18
ZZZZZ		02/19/2015 00:55	5		AS-18
ZZZZZ		02/19/2015 01:11	10		AS-18
ZZZZZ		02/19/2015 01:26	100		AS-18
ZZZZZ		02/19/2015 01:41	2.5		AS-18
ZZZZZ		02/19/2015 01:56	25		AS-18
CCV 180-133779/38		02/19/2015 02:12	1		AS-18
CCB 180-133779/39		02/19/2015 02:27	1		AS-18
ZZZZZ		02/19/2015 02:42	10		AS-18
ZZZZZ		02/19/2015 02:58	100		AS-18
ZZZZZ		02/19/2015 03:13	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 02/18/2015 16:38

Analysis Batch Number: 133779 End Date: 02/19/2015 10:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/19/2015 03:28	10		AS-18
ZZZZZ		02/19/2015 03:44	1		AS-18
ZZZZZ		02/19/2015 03:59	1		AS-18
ZZZZZ		02/19/2015 04:14	1		AS-18
ZZZZZ		02/19/2015 04:29	1		AS-18
ZZZZZ		02/19/2015 04:45	1		AS-18
ZZZZZ		02/19/2015 05:00	1		AS-18
CCV 180-133779/50		02/19/2015 05:15	1		AS-18
CCB 180-133779/51		02/19/2015 05:31	1		AS-18
ZZZZZ		02/19/2015 05:46	1		AS-18
ZZZZZ		02/19/2015 06:01	1		AS-18
ZZZZZ		02/19/2015 06:17	1		AS-18
ZZZZZ		02/19/2015 06:32	1		AS-18
ZZZZZ		02/19/2015 06:47	1		AS-18
ZZZZZ		02/19/2015 07:02	1		AS-18
ZZZZZ		02/19/2015 07:18	1		AS-18
ZZZZZ		02/19/2015 07:33	1		AS-18
ZZZZZ		02/19/2015 07:48	1		AS-18
ZZZZZ		02/19/2015 08:04	10		AS-18
CCV 180-133779/62		02/19/2015 08:19	1		AS-18
CCB 180-133779/63		02/19/2015 08:34	1		AS-18
ZZZZZ		02/19/2015 08:49	1		AS-18
ZZZZZ		02/19/2015 09:05	10		AS-18
ZZZZZ		02/19/2015 09:20	1		AS-18
ZZZZZ		02/19/2015 09:35	10		AS-18
CCV 180-133779/68		02/19/2015 09:51	1		AS-18
CCB 180-133779/69		02/19/2015 10:06	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 02/24/2015 11:11

Analysis Batch Number: 134114 End Date: 02/25/2015 11:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/24/2015 11:11	1		AS-18
ICV 180-134114/2		02/24/2015 11:27	1	A-ICS2100 A 02-24-2015-2.d	AS-18
CCV 180-134114/3		02/24/2015 11:42	1	A-ICS2100 A 02-24-2015-3.d	AS-18
CCB 180-134114/4		02/24/2015 11:57	1	A-ICS2100 A 02-24-2015-4.d	AS-18
LCS 180-134114/5		02/24/2015 12:13	1	A-ICS2100 A 02-24-2015-5.d	AS-18
MB 180-134114/6		02/24/2015 12:28	1	A-ICS2100 A 02-24-2015-6.d	AS-18
ZZZZZ		02/24/2015 12:58	25		AS-18
ZZZZZ		02/24/2015 13:13	25		AS-18
ZZZZZ		02/24/2015 13:29	25		AS-18
ZZZZZ		02/24/2015 13:44	25		AS-18
ZZZZZ		02/24/2015 13:59	10		AS-18
ZZZZZ		02/24/2015 14:14	100		AS-18
ZZZZZ		02/24/2015 14:30	1		AS-18
ZZZZZ		02/24/2015 14:45	5		AS-18
CCV 180-134114/15		02/24/2015 15:00	1	A-ICS2100 A 02-24-2015-15.d	AS-18
CCB 180-134114/16		02/24/2015 15:16	1	A-ICS2100 A 02-24-2015-16.d	AS-18
ZZZZZ		02/24/2015 15:31	25		AS-18
ZZZZZ		02/24/2015 15:46	25		AS-18
ZZZZZ		02/24/2015 16:02	25		AS-18
ZZZZZ		02/24/2015 16:17	25		AS-18
180-41453-4	HD-MW-93S-0/1-0	02/24/2015 16:32	1	A-ICS2100 A 02-24-2015-21.d	AS-18
180-41453-4 MS	HD-MW-93S-0/1-0 MS	02/24/2015 17:03	1	A-ICS2100 A 02-24-2015-22.d	AS-18
180-41453-4 MSD	HD-MW-93S-0/1-0 MSD	02/24/2015 17:18	1	A-ICS2100 A 02-24-2015-23.d	AS-18
180-41453-3	HD-MW-93D-0/1-0	02/24/2015 17:33	1	A-ICS2100 A 02-24-2015-24.d	AS-18
180-41453-3 MS	HD-MW-93D-0/1-0 MS	02/24/2015 17:48	1	A-ICS2100 A 02-24-2015-25.d	AS-18
180-41453-3 MSD	HD-MW-93D-0/1-0 MSD	02/24/2015 18:04	1	A-ICS2100 A 02-24-2015-26.d	AS-18
CCV 180-134114/27		02/24/2015 18:19	1	A-ICS2100 A 02-24-2015-27.d	AS-18
CCB 180-134114/28		02/24/2015 18:34	1	A-ICS2100 A 02-24-2015-28.d	AS-18
180-41453-1	HD-QC1-0/1-1	02/24/2015 18:50	1	A-ICS2100 A 02-24-2015-29.d	AS-18
180-41453-5	HD-MW-37D-0/1-0	02/24/2015 19:05	1	A-ICS2100 A 02-24-2015-30.d	AS-18
ZZZZZ		02/24/2015 19:20	100		AS-18
ZZZZZ		02/24/2015 19:36	1		AS-18
ZZZZZ		02/24/2015 19:51	1		AS-18
ZZZZZ		02/24/2015 20:06	1		AS-18
ZZZZZ		02/24/2015 20:21	10		AS-18
ZZZZZ		02/24/2015 20:37	100		AS-18
CCV 180-134114/39		02/24/2015 21:23	1	A-ICS2100 A 02-24-2015-39.d	AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 02/24/2015 11:11

Analysis Batch Number: 134114 End Date: 02/25/2015 11:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCB 180-134114/40		02/24/2015 21:38	1	A-ICS2100 A 02-24-2015-40.d	AS-18
CCV 180-134114/44		02/25/2015 10:03	1		AS-18
CCB 180-134114/45		02/25/2015 10:19	1		AS-18
ZZZZZ		02/25/2015 10:34	50		AS-18
ZZZZZ		02/25/2015 10:49	50		AS-18
ZZZZZ		02/25/2015 11:05	50		AS-18
CCV 180-134114/49		02/25/2015 11:20	1		AS-18
CCB 180-134114/50		02/25/2015 11:35	1		AS-18

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41453-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-QC1-0/1-1	180-41453-1
HD-MW-93D-0/1-0	180-41453-3
HD-MW-93S-0/1-0	180-41453-4
HD-MW-37D-0/1-0	180-41453-5

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41453-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 08:00

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	71000	100	2.8	ug/L			1	6020A
7440-09-7	Potassium	14000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	21000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	73000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-93D-0/1-0 Lab Sample ID: 180-41453-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 10:00

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	68000	100	2.8	ug/L			1	6020A
7440-09-7	Potassium	5400	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	16000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	38000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-93S-0/1-0 Lab Sample ID: 180-41453-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 11:50

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	70000	100	2.8	ug/L			1	6020A
7440-09-7	Potassium	14000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	21000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	73000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-41453-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 15:20

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	87000	100	2.8	ug/L			1	6020A
7440-09-7	Potassium	6900	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	22000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	63000	100	3.8	ug/L		B	1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

ICV Source: MICVX_00029 Concentration Units: ug/L

CCV Source: MCCV1X_00073

Analyte	ICV 180-134563/5 03/02/2015 11:11				CCV 180-134563/10 03/02/2015 11:40				CCV 180-134563/20 03/02/2015 12:25			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	38500		40000	96	48800		50000	98	49700		50000	99
Magnesium	38400		40000	96	51300		50000	103	49900		50000	100
Potassium	39100		40000	98	50600		50000	101	50800		50000	102
Sodium	38900		40000	97	50600		50000	101	50600		50000	101

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.: 180-41453-1

SDG No.:

Method: 6020A Instrument ID: X

Lab Sample ID: CRI 180-134563/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	101		101	70-130
Potassium	100	99.5	J	99	70-130
Magnesium	100	104		104	70-130
Sodium	100	108		108	70-130

Lab Sample ID: CRI 180-134563/35 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	97.0	J	97	70-130
Potassium	100	99.5	J	100	70-130
Magnesium	100	103		103	70-130
Sodium	100	104		104	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.: 180-41453-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-134563/6 03/02/2015 11:19		CCB1 180-134563/11 03/02/2015 11:47		CCB2 180-134563/21 03/02/2015 12:33			
		Found	C	Found	C	Found	C	Found	C
Calcium	100	100	U	100	U	100	U		
Magnesium	100	100	U	1.53	J	100	U		
Potassium	100	100	U	100	U	100	U		
Sodium	100	3.86	J	12.0	J	100	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 180-134168/1-A

Instrument Code: X Batch No.: 134563

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	100	U		6020A
7440-09-7	Potassium	100	U		6020A
7439-95-4	Magnesium	100	U		6020A
7440-23-5	Sodium	12.8	J		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Lab Sample ID: ICSA 180-134563/8 Instrument ID: X

Lab File ID: X50302A.xml ICS Source: MICSAX_00063

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**100000**	**106300**	**106**
Magnesium	**100000**	**108700**	**109**
Potassium	**100000**	**106700**	**107**
Sodium	**100000**	**106300**	**106**
Aluminum	*100000*	*102900*	*103*
Antimony		*0.105*	
Arsenic		*0.293*	
Barium		*0.185*	
Beryllium		*0.0380*	
Boron		*0.773*	
Cadmium		*2.40*	
Chromium		*1.46*	
Cobalt		*0.116*	
Copper		*1.92*	
Iron	*100000*	*104800*	*105*
Lead		*0.244*	
Manganese		*0.822*	
Molybdenum	*2000*	*2262*	*113*
Nickel		*-0.262*	
Selenium		*0.724*	
Silicon		*23.1*	
Silver		*0.0670*	
Strontium		*0.708*	
Thallium		*0.0180*	
Tin		*0.227*	
Titanium	*2000*	*2214*	*111*
Vanadium		*-0.0100*	
Zinc		*2.78*	

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.: 180-41453-1

SDG No.:

Lab Sample ID: ICSAB 180-134563/9 Instrument ID: X

Lab File ID: X50302A.xml ICS Source: MICSABX_00067

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Calcium	**100000**	**104400**	**104**
Magnesium	**100000**	**106767**	**107**
Potassium	**100000**	**104500**	**105**
Sodium	**100000**	**102767**	**103**
Aluminum	*100000*	*99993*	*100*
Antimony	*20.0*	*20.1*	*101*
Arsenic	*20.0*	*21.4*	*107*
Barium	*20.0*	*19.9*	*99*
Beryllium	*20.0*	*19.0*	*95*
Boron	*50.0*	*52.2*	*104*
Cadmium	*20.0*	*21.4*	*107*
Chromium	*20.0*	*21.3*	*107*
Cobalt	*20.0*	*20.5*	*103*
Copper	*20.0*	*22.5*	*112*
Iron	*100000*	*104200*	*104*
Lead	*20.0*	*21.2*	*106*
Manganese	*22.5*	*20.8*	*92*
Molybdenum	*2000*	*2257*	*113*
Nickel	*20.0*	*20.2*	*101*
Selenium	*50.0*	*55.0*	*110*
Silicon	*500*	*566*	*113*
Silver	*20.0*	*19.3*	*97*
Strontium	*25.0*	*20.8*	*83*
Thallium	*20.0*	*20.7*	*103*
Tin	*100*	*102*	*102*
Titanium	*2000*	*2180*	*109*
Vanadium	*20.0*	*20.3*	*101*
Zinc	*25.0*	*23.5*	*94*

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

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-134168/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

Sample Matrix: Water LCS Source: MTAPITTMSA_00023

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	46700		93	80	120		6020A
Potassium	50000	46100		92	80	120		6020A
Magnesium	50000	46900		94	80	120		6020A
Sodium	50000	44300		89	80	120		6020A

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

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS - TOTAL RECOVERABLE

Lab ID: LCSD 180-134168/3-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

Sample Matrix: Water LCS Source: MTAPITTMSA_00023

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	48300		50000	97	80-120	3	20		6020A
Potassium	47200		50000	94	80-120	2	20		6020A
Magnesium	48100		50000	96	80-120	3	20		6020A
Sodium	45300		50000	91	80-120	2	20		6020A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 180-41453-5

SDG No:

Lab Name: TestAmerica Pittsburgh Job No: 180-41453-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	87000		79900		7.9		6020A
Potassium	6900		7170		3.5		6020A
Magnesium	22000		19400		12	V	6020A
Sodium	63000		62600		0.13		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: 180-41453-1

SDG Number:

Matrix: Water Instrument ID: X

Method: 6020A MDL Date: 01/23/2010 18:33

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41453-1

SDG Number:

Matrix: Water Instrument ID: X

Method: 6020A XMDL Date: 01/23/2010 18:33

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Pittsburgh Job No: 180-41453-1

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.: 180-41453-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-134168/1-A	02/25/2015 08:11	134168		50	50
LCS 180-134168/2-A	02/25/2015 08:11	134168		50	50
LCSD 180-134168/3-A	02/25/2015 08:11	134168		50	50
180-41453-1	02/25/2015 08:11	134168		50	50
180-41453-3	02/25/2015 08:11	134168		50	50
180-41453-4	02/25/2015 08:11	134168		50	50
180-41453-5	02/25/2015 08:11	134168		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 03/02/2015 08:16 End Date: 03/02/2015 15:28

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na																						
ITUNE 180-134563/1			08:16																										
STD1 180-134563/2 IC	1		10:57	X	X	X	X																						
STD2 180-134563/3 IC	1		11:02	X	X	X	X																						
STD3 180-134563/4 IC	1		11:06	X	X	X	X																						
ICV 180-134563/5	1		11:11	X	X	X	X																						
ICB 180-134563/6	1		11:19	X	X	X	X																						
CRI 180-134563/7	1		11:24	X	X	X	X																						
ICSA 180-134563/8	1		11:28	X	X	X	X																						
ICSAB 180-134563/9	1		11:32	X	X	X	X																						
CCV 180-134563/10	1		11:40	X	X	X	X																						
CCB1 180-134563/11	1		11:47	X	X	X	X																						
MB 180-134168/1-A	1	R	11:51	X	X	X	X																						
LCS 180-134168/2-A	1	R	11:55	X	X	X	X																						
LCSD 180-134168/3-A	1	R	12:00	X	X	X	X																						
180-41453-1	1	T	12:04	X	X	X	X																						
180-41453-3	1	T	12:08	X	X	X	X																						
180-41453-4	1	T	12:12	X	X	X	X																						
180-41453-5	1	T	12:17	X	X	X	X																						
180-41453-5 SD	5	T	12:21	X	X	X	X																						
CCV 180-134563/20	1		12:25	X	X	X	X																						
CCB2 180-134563/21	1		12:33	X	X	X	X																						
ZZZZZZ			12:37																										
ZZZZZZ			12:41																										
ZZZZZZ			12:45																										
ZZZZZZ			12:50																										
ZZZZZZ			12:54																										
ZZZZZZ			12:58																										
ZZZZZZ			13:02																										
ZZZZZZ			13:07																										
ZZZZZZ			13:11																										
CCV 180-134563/31			13:15																										
CCB3 180-134563/32			13:23																										
ZZZZZZ			13:27																										
ZZZZZZ			13:31																										
CRI 180-134563/35	1		13:39	X	X	X	X																						
ZZZZZZ			13:43																										
ZZZZZZ			13:47																										
ZZZZZZ			13:51																										
ZZZZZZ			13:56																										
ZZZZZZ			14:00																										
ZZZZZZ			14:04																										
ZZZZZZ			14:09																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Instrument ID: X Analysis Method: 6020A

Start Date: 03/02/2015 08:16 End Date: 03/02/2015 15:28

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na																						
CCV 180-134563/43			14:13																										
CCB4 180-134563/44			14:20																										
ZZZZZZ			14:25																										
ZZZZZZ			14:29																										
ZZZZZZ			14:33																										
ZZZZZZ			14:37																										
ZZZZZZ			14:42																										
ZZZZZZ			14:46																										
ZZZZZZ			14:50																										
ZZZZZZ			14:55																										
ZZZZZZ			14:59																										
CCV 180-134563/54			15:03																										
CCB5 180-134563/55			15:11																										
ZZZZZZ			15:15																										
ZZZZZZ			15:19																										
CCV 180-134563/58			15:23																										
CCB6 180-134563/59			15:28																										

Prep Types:
R = Total Recoverable
T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 03/02/2015 End Date: 03/02/2015

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 180-134563/2 IC	10:57	100		100		100		100		100	
STD2 180-134563/3 IC	11:02	91		95		93		90		90	
STD3 180-134563/4 IC	11:06	102		102		99		99		99	
ICV 180-134563/5	11:11	97		102		97		94		95	
ICB 180-134563/6	11:19	99		101		99		99		98	
CRI 180-134563/7	11:24	98		99		98		98		98	
ICSA 180-134563/8	11:28	82		89		91		86		88	
ICSAB 180-134563/9	11:32	75		83		83		83		86	
CCV 180-134563/10	11:40	80		91		88		86		87	
CCB1 180-134563/11	11:47	86		90		92		94		94	
MB 180-134168/1-A	11:51	86		89		91		92		93	
LCS 180-134168/2-A	11:55	75		77		84		83		84	
LCSD 180-134168/3-A	12:00	75		76		84		84		84	
180-41453-1	12:04	75		76		82		81		83	
180-41453-3	12:08	77		77		84		85		85	
180-41453-4	12:12	75		77		83		84		85	
180-41453-5	12:17	74		76		86		83		84	
180-41453-5 SD	12:21	85		86		88		89		89	
CCV 180-134563/20	12:25	89		96		89		86		85	
CCB2 180-134563/21	12:33	95		97		91		93		91	
CRI 180-134563/35	13:39	97		98		93		93		91	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 03/02/2015 End Date: 03/02/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-134563/2 IC	10:57	100		100		100					
STD2 180-134563/3 IC	11:02	93		94		97					
STD3 180-134563/4 IC	11:06	98		99		100					
ICV 180-134563/5	11:11	97		97		98					
ICB 180-134563/6	11:19	99		98		102					
CRI 180-134563/7	11:24	98		99		103					
ICSA 180-134563/8	11:28	94		95		96					
ICSAB 180-134563/9	11:32	93		93		87					
CCV 180-134563/10	11:40	93		93		93					
CCB1 180-134563/11	11:47	96		96		101					
MB 180-134168/1-A	11:51	95		96		99					
LCS 180-134168/2-A	11:55	92		93		85					
LCSD 180-134168/3-A	12:00	92		94		87					
180-41453-1	12:04	91		91		84					
180-41453-3	12:08	91		93		87					
180-41453-4	12:12	93		94		87					
180-41453-5	12:17	92		93		85					
180-41453-5 SD	12:21	92		94		93					
CCV 180-134563/20	12:25	88		89		87					
CCB2 180-134563/21	12:33	91		92		97					
CRI 180-134563/35	13:39	91		93		95					

Dilution Corrected Concentrations

STD1 1490881 3/2/2015 10:57:55 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:22	99.900%	0.012	-0.156	-0.061	0.000	-0.442	-0.042	-0.041
2	10:58:48	99.986%	-0.023	0.156	-0.061	0.000	-0.197	-0.001	0.166
3	10:59:15	100.114%	0.012	-0.000	0.122	0.000	0.639	0.043	-0.125
x		100.000%	0.000	-0.000	0.000	0.000	0.000	0.000	0.000
σ		0.108%	0.020	0.156	0.106	0.000	0.566	0.043	0.150
%RSD		0.108	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	10:58:22	-0.084	-0.821	0.000	-0.862	-5.308	0.057	100.261%	0.010
2	10:58:48	-0.072	-0.105	0.000	1.684	6.244	0.140	100.228%	-0.005
3	10:59:15	0.156	0.927	0.000	-0.822	-0.936	-0.197	99.511%	-0.005
x		0.000	0.000	0.000	0.000	-0.000	-0.000	100.000%	-0.000
σ		0.135	0.879	0.000	1.458	5.833	0.176	0.424%	0.009
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.424	0.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:22	0.008	-0.010	0.007	-0.070	-0.376	-0.006	0.024	-0.005
2	10:58:48	0.012	0.017	-0.010	0.216	-0.090	0.006	0.005	-0.011
3	10:59:15	-0.019	-0.007	0.003	-0.146	0.465	0.001	-0.029	0.015
x		-0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000
σ		0.017	0.015	0.008	0.191	0.428	0.006	0.027	0.014
%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	10:58:22	0.014	-0.041	0.061	0.024	-0.832	0.108	0.000	0.004
2	10:58:48	-0.027	-0.074	-0.033	0.016	0.718	0.192	0.000	-0.003
3	10:59:15	0.014	0.116	-0.028	-0.040	0.114	-0.300	0.000	-0.001
x		-0.000	0.000	-0.000	0.000	0.000	0.000	0.000	-0.000
σ		0.024	0.101	0.053	0.035	0.781	0.263	0.000	0.003
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:22	99.395%	-0.003	-0.001	99.244%	0.004	0.002	-0.004	-0.003
2	10:58:48	100.265%	0.003	0.002	100.207%	-0.004	-0.001	0.030	0.025
3	10:59:15	100.339%	-0.000	-0.001	100.550%	-0.000	-0.000	-0.026	-0.022
x		100.000%	0.000	-0.000	100.000%	0.000	-0.000	-0.000	0.000
σ		0.525%	0.003	0.002	0.677%	0.004	0.001	0.028	0.024
%RSD		0.525	0.000	0.000	0.677	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	10:58:22	99.671%	-0.014	0.003	-0.000	-0.008	0.005	99.384%	99.765%
2	10:58:48	99.584%	0.000	-0.006	0.004	0.004	-0.006	100.207%	99.790%
3	10:59:15	100.745%	0.014	0.003	-0.003	0.004	0.001	100.409%	100.445%
x		100.000%	-0.000	0.000	0.000	-0.000	0.000	100.000%	100.000%
σ		0.647%	0.014	0.006	0.004	0.007	0.006	0.543%	0.386%
%RSD		0.647	0.000	0.000	0.000	0.000	0.000	0.543	0.386
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:58:22	-0.000	0.001	-0.002	0.007	-0.001	100.013%		
2	10:58:48	0.001	0.001	0.000	-0.003	-0.001	99.383%		
3	10:59:15	-0.001	-0.001	0.001	-0.004	0.001	100.604%		
x		-0.000	-0.000	-0.000	-0.000	-0.000	100.000%		
σ		0.001	0.001	0.002	0.006	0.001	0.611%		
%RSD		0.000	0.000	0.000	0.000	0.000	0.611		

STD2 1487947 3/2/2015 11:02:39 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:06	89.974%	195.900	0.404	0.323	0.000	99290.000	99100.000	98810.000
2	11:03:33	92.229%	199.700	-0.040	0.109	0.000	99890.000	100200.000	100100.000
3	11:03:59	92.057%	204.400	0.552	-0.050	0.000	100800.000	100700.000	101100.000
x		91.420%	200.000	0.305	0.127	0.000	100000.000	100000.000	100000.000
σ		1.256%	4.283	0.308	0.187	0.000	765.100	823.800	1166.000
%RSD		1.373	2.141	100.900	147.000	0.000	0.765	0.824	1.166
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:06	989.000	5.386	0.000	98720.000	97000.000	97130.000	94.659%	0.225
2	11:03:33	997.300	4.388	0.000	100900.000	102200.000	101600.000	94.493%	0.306
3	11:03:59	1014.000	4.427	0.000	100300.000	100800.000	101300.000	95.864%	0.141
x		1000.000	4.734	0.000	100000.000	100000.000	100000.000	95.005%	0.224
σ		12.640	0.565	0.000	1152.000	2685.000	2490.000	0.748%	0.083
%RSD		1.264	11.940	0.000	1.152	2.685	2.490	0.788	36.790
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:06	197.100	197.100	983.400	49100.000	48970.000	195.800	197.400	196.600
2	11:03:33	201.700	201.200	1006.000	50370.000	50380.000	201.700	200.600	201.700
3	11:03:59	201.200	201.700	1010.000	50530.000	50650.000	202.400	202.000	201.600
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		2.523	2.567	14.470	781.500	899.600	3.618	2.373	2.907
%RSD		1.262	1.284	1.447	1.563	1.799	1.809	1.186	1.454
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:06	197.400	197.700	199.600	198.400	201.400	201.400	0.000	198.600
2	11:03:33	201.000	201.300	200.800	200.800	199.800	200.300	0.000	200.500
3	11:03:59	201.700	201.100	199.600	200.800	198.800	198.300	0.000	200.900
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.292	2.013	0.661	1.390	1.292	1.600	0.000	1.206
%RSD		1.146	1.006	0.331	0.695	0.646	0.800	0.000	0.603
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:06	92.014%	0.062	0.104	89.215%	198.700	198.100	199.600	197.700
2	11:03:33	93.297%	0.121	0.118	89.582%	200.600	201.500	200.900	202.200
3	11:03:59	94.341%	0.084	0.106	90.268%	200.700	200.500	199.500	200.100
x		93.217%	0.089	0.109	89.688%	200.000	200.000	200.000	200.000
σ		1.165%	0.030	0.008	0.535%	1.140	1.753	0.783	2.287
%RSD		1.250	33.150	6.931	0.596	0.570	0.876	0.391	1.144
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:06	89.800%	0.087	0.167	0.164	198.200	200.200	91.868%	93.448%
2	11:03:33	90.520%	0.064	0.167	0.167	200.700	199.000	94.011%	94.248%
3	11:03:59	90.968%	0.065	0.160	0.201	201.100	200.900	94.458%	94.477%
x		90.429%	0.072	0.164	0.177	200.000	200.000	93.446%	94.058%
σ		0.589%	0.013	0.004	0.021	1.602	0.955	1.384%	0.540%
%RSD		0.652	17.670	2.418	11.610	0.801	0.478	1.481	0.574
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:03:06	193.900	192.300	193.200	193.700	192.300	98.533%		
2	11:03:33	202.500	202.900	204.200	202.200	204.500	95.250%		
3	11:03:59	203.600	204.800	202.600	204.100	203.200	95.589%		
x		200.000	200.000	200.000	200.000	200.000	96.457%		
σ		5.316	6.712	5.922	5.532	6.697	1.806%		
%RSD		2.658	3.356	2.961	2.766	3.348	1.872		

STD3 1487948 3/2/2015 11:06:54 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:21	103.093%	0.226	196.800	196.600	0.000	145.500	113.500	116.200
2	11:07:47	101.294%	0.323	201.800	198.500	0.000	144.800	119.700	118.300
3	11:08:14	100.846%	0.289	201.400	205.000	0.000	148.200	119.200	119.100
x		101.744%	0.280	200.000	200.000	0.000	146.200	117.500	117.900
σ		1.189%	0.049	2.762	4.425	0.000	1.791	3.425	1.508
%RSD		1.169	17.540	1.381	2.212	0.000	1.225	2.916	1.280
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:21	14.770	9824.000	0.000	114.200	99.430	148.800	102.163%	194.300
2	11:07:47	14.430	9996.000	0.000	112.800	118.900	151.300	101.391%	201.900
3	11:08:14	14.480	10180.000	0.000	115.100	131.500	151.800	102.673%	203.800
x		14.560	10000.000	0.000	114.000	116.600	150.600	102.076%	200.000
σ		0.180	178.500	0.000	1.190	16.150	1.620	0.645%	5.026
%RSD		1.234	1.785	0.000	1.043	13.850	1.075	0.632	2.513
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:21	0.230	0.236	1.627	120.600	121.400	0.278	0.500	0.617
2	11:07:47	0.268	0.260	1.596	92.960	96.980	0.249	0.467	0.708
3	11:08:14	0.231	0.284	1.678	77.470	77.900	0.222	0.607	0.720
x		0.243	0.260	1.634	97.020	98.770	0.250	0.525	0.682
σ		0.021	0.024	0.041	21.870	21.820	0.028	0.074	0.056
%RSD		8.842	9.137	2.538	22.540	22.090	11.070	14.050	8.235
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:21	0.659	1.565	1.610	0.224	0.731	0.769	0.000	0.319
2	11:07:47	0.691	1.800	1.510	0.343	1.146	0.445	0.000	0.316
3	11:08:14	0.822	1.721	1.717	0.121	0.523	0.066	0.000	0.287
x		0.724	1.695	1.612	0.229	0.800	0.427	0.000	0.307
σ		0.086	0.120	0.104	0.111	0.317	0.352	0.000	0.018
%RSD		11.900	7.052	6.438	48.500	39.660	82.420	0.000	5.767
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:21	98.053%	193.700	192.200	98.867%	0.252	0.254	0.266	-0.489
2	11:07:47	99.069%	202.500	201.700	99.111%	0.219	0.232	0.201	-0.611
3	11:08:14	100.164%	203.800	206.100	99.988%	0.254	0.272	0.296	-0.511
x		99.095%	200.000	200.000	99.322%	0.242	0.252	0.254	-0.537
σ		1.056%	5.519	7.079	0.589%	0.020	0.020	0.048	0.065
%RSD		1.066	2.760	3.540	0.593	8.119	7.857	18.960	12.060
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:21	98.660%	196.000	196.200	197.900	0.311	0.423	95.931%	97.907%
2	11:07:47	98.958%	201.700	201.800	201.800	0.307	0.417	98.072%	99.223%
3	11:08:14	100.110%	202.300	202.000	200.400	0.275	0.461	99.552%	100.134%
x		99.243%	200.000	200.000	200.000	0.297	0.434	97.852%	99.088%
σ		0.765%	3.453	3.288	1.976	0.020	0.024	1.821%	1.120%
%RSD		0.771	1.726	1.644	0.988	6.584	5.469	1.861	1.130
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:07:21	0.233	0.212	0.258	0.254	0.250	101.253%		
2	11:07:47	0.225	0.219	0.258	0.266	0.253	99.127%		
3	11:08:14	0.246	0.230	0.292	0.275	0.271	99.616%		
x		0.235	0.220	0.269	0.265	0.258	99.999%		
σ		0.011	0.009	0.020	0.010	0.011	1.113%		
%RSD		4.546	4.025	7.251	3.848	4.422	1.113		

ICV 1470870 3/2/2015 11:11:09 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:35	98.007%	76.910	85.040	82.790	0.000	38300.000	37170.000	37200.000
2	11:12:02	97.399%	79.010	84.930	83.710	0.000	38920.000	38790.000	38700.000
3	11:12:28	95.673%	80.280	85.310	85.500	0.000	39470.000	38860.000	39230.000
x		97.026%	98.416%	106.367%	104.999%	0.000	97.237%	95.679%	95.935%
σ		1.210%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.248	2.159	0.229	1.641	0.000	1.503	2.506	2.746
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:35	370.700	4514.000	0.000	38620.000	37040.000	37030.000	101.927%	78.040
2	11:12:02	383.900	4228.000	0.000	39640.000	39280.000	39570.000	101.227%	78.900
3	11:12:28	389.500	4320.000	0.000	38980.000	37690.000	38810.000	102.679%	80.150
x		95.339%	108.852%	0.000	97.699%	95.013%	96.176%	101.945%	98.783%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.726%	n/a
%RSD		2.528	3.351	0.000	1.328	3.036	3.397	0.712	1.344
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:35	73.950	74.970	386.300	18770.000	19330.000	75.710	77.760	77.900
2	11:12:02	77.270	78.440	400.300	19440.000	20060.000	78.040	79.760	79.950
3	11:12:28	76.540	78.090	400.300	19460.000	20150.000	78.030	79.600	79.630
x		94.896%	96.454%	98.911%	96.130%	99.238%	96.572%	98.802%	98.952%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.300	2.476	2.055	2.046	2.266	1.738	1.409	1.392
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:35	78.400	75.670	75.330	78.140	79.230	79.000	0.000	74.820
2	11:12:02	79.840	78.040	78.170	79.740	80.540	81.690	0.000	76.240
3	11:12:28	80.920	77.250	78.770	79.700	80.130	79.960	0.000	77.190
x		99.648%	96.235%	96.779%	98.995%	99.957%	100.272%	0.000	95.105%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.583	1.567	2.373	1.155	0.835	1.702	0.000	1.570
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:35	96.062%	79.860	78.810	93.554%	77.180	77.500	76.900	75.930
2	11:12:02	97.666%	81.400	82.640	94.371%	78.760	79.190	77.890	79.410
3	11:12:28	97.843%	83.090	84.340	94.903%	77.980	78.690	79.850	77.020
x		97.191%	101.814%	102.413%	94.276%	97.467%	98.074%	97.764%	96.818%
σ		0.981%	n/a	n/a	0.679%	n/a	n/a	n/a	n/a
%RSD		1.009	1.983	3.454	0.720	1.014	1.109	1.920	2.297
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:35	94.419%	76.880	77.130	78.150	76.890	76.540	94.800%	96.349%
2	11:12:02	94.460%	79.690	79.120	79.680	77.800	78.570	97.928%	97.303%
3	11:12:28	96.200%	79.190	78.190	78.800	78.470	78.780	97.690%	98.568%
x		95.027%	98.230%	97.685%	98.597%	97.151%	97.456%	96.806%	97.407%
σ		1.017%	n/a	n/a	n/a	n/a	n/a	1.741%	1.113%
%RSD		1.070	1.908	1.275	0.972	1.021	1.585	1.799	1.143
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:11:35	77.690	75.130	75.140	72.970	73.290	100.799%		
2	11:12:02	82.860	79.810	82.810	78.560	80.730	95.454%		
3	11:12:28	80.150	78.540	80.140	77.860	78.180	98.831%		
x		100.293%	97.284%	99.203%	95.577%	96.749%	98.362%		
σ		n/a	n/a	n/a	n/a	n/a	2.703%		
%RSD		3.220	3.111	4.908	3.979	4.879	2.748		

ICB 3/2/2015 11:19:41 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	99.920%	0.012	0.156	0.488	0.000	3.765	0.621	0.829
2	11:20:36	99.987%	-0.000	0.156	0.195	0.000	3.695	0.501	0.716
3	11:21:02	97.354%	0.049	0.334	0.079	0.000	4.117	0.603	0.475
x		99.087%	0.020	0.215	0.254	0.000	3.859	0.575	0.674
σ		1.501%	0.025	0.103	0.210	0.000	0.226	0.065	0.181
%RSD		1.515	126.200	47.620	82.830	0.000	5.857	11.230	26.890

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	-0.447	3.859	0.000	0.540	1.821	2.024	101.354%	-0.066
2	11:20:36	-0.361	1.441	0.000	1.236	0.462	-0.673	100.327%	-0.005
3	11:21:02	-0.367	1.573	0.000	1.493	-0.961	0.642	100.108%	0.056
x		-0.392	2.291	0.000	1.090	0.441	0.664	100.596%	-0.005
σ		0.048	1.360	0.000	0.493	1.391	1.349	0.665%	0.061
%RSD		12.290	59.350	0.000	45.210	315.700	203.000	0.661	1185.000

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	0.006	0.037	-0.002	1.438	2.048	0.010	-0.020	0.005
2	11:20:36	-0.011	-0.012	0.014	1.631	3.230	-0.000	-0.014	-0.004
3	11:21:02	0.004	0.013	-0.002	0.848	3.977	-0.004	-0.014	0.016
x		-0.000	0.013	0.003	1.306	3.085	0.002	-0.016	0.005
σ		0.009	0.024	0.009	0.408	0.973	0.007	0.003	0.010
%RSD		1964.000	189.500	297.600	31.220	31.530	432.500	19.590	184.100

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	-0.007	0.056	0.087	0.164	0.704	0.888	0.000	0.002
2	11:20:36	0.006	0.067	0.106	0.059	0.385	0.437	0.000	0.002
3	11:21:02	0.080	-0.081	0.132	0.140	0.449	0.725	0.000	0.003
x		0.026	0.014	0.108	0.121	0.513	0.683	0.000	0.002
σ		0.047	0.082	0.022	0.055	0.169	0.228	0.000	0.001
%RSD		178.700	574.800	20.590	45.430	32.950	33.440	0.000	23.370

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	98.678%	0.153	0.160	98.011%	-0.004	0.000	-0.063	-0.042
2	11:20:36	98.953%	0.166	0.185	98.711%	0.005	0.015	0.015	0.012
3	11:21:02	98.821%	0.193	0.145	99.204%	-0.001	0.015	-0.023	-0.011
x		98.818%	0.170	0.163	98.642%	-0.000	0.010	-0.024	-0.013
σ		0.137%	0.021	0.020	0.599%	0.004	0.008	0.039	0.027
%RSD		0.139	12.050	12.240	0.608	2022.000	85.600	163.900	199.500

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	98.201%	0.043	0.022	0.028	-0.004	0.012	98.783%	97.197%
2	11:20:36	98.322%	0.015	0.015	0.040	0.020	0.015	98.918%	98.669%
3	11:21:02	98.177%	0.027	0.035	0.030	0.008	0.003	99.105%	99.015%
x		98.233%	0.028	0.024	0.032	0.008	0.010	98.935%	98.293%
σ		0.078%	0.014	0.010	0.006	0.012	0.006	0.162%	0.966%
%RSD		0.079	49.190	41.670	19.630	143.300	59.300	0.163	0.982

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:08	0.001	0.000	0.013	0.005	0.009	103.701%
2	11:20:36	0.003	0.001	0.007	0.004	0.009	101.981%
3	11:21:02	0.002	0.001	0.009	0.010	0.007	101.580%
x		0.002	0.001	0.010	0.006	0.008	102.421%
σ		0.001	0.000	0.003	0.003	0.001	1.127%
%RSD		35.100	29.190	30.670	50.470	9.325	1.100

CRI 1470869 3/2/2015 11:24:02 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:28	99.051%	0.897	5.603	4.802	0.000	106.200	99.870	100.400
2	11:24:55	97.235%	0.830	4.591	5.047	0.000	108.600	107.500	106.000
3	11:25:21	96.827%	1.123	5.256	5.238	0.000	108.800	111.900	106.400
x		97.705%	95.006%	103.003%	100.584%	0.000	134.847%	106.424%	104.241%
σ		1.184%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.212	16.160	9.984	4.352	0.000	1.322	5.702	3.226
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:28	27.950	487.800	0.000	98.110	123.700	97.800	99.905%	4.273
2	11:24:55	29.210	502.300	0.000	99.800	134.400	101.600	98.495%	5.217
3	11:25:21	29.570	500.400	0.000	100.500	116.900	105.000	98.375%	4.819
x		96.377%	99.368%	0.000	99.457%	124.991%	101.480%	98.925%	95.391%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.850%	n/a
%RSD		2.938	1.589	0.000	1.220	7.050	3.545	0.860	9.942
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:28	0.916	1.895	4.818	47.510	53.040	0.504	1.004	2.070
2	11:24:55	0.979	2.048	4.972	49.750	52.880	0.501	1.122	2.163
3	11:25:21	0.889	2.043	5.083	50.550	52.180	0.508	1.079	2.262
x		92.792%	99.781%	99.151%	98.543%	105.403%	100.895%	106.830%	108.243%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		4.973	4.359	2.685	3.199	0.866	0.759	5.592	4.437
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:28	1.955	5.275	4.847	1.382	3.587	5.570	0.000	4.627
2	11:24:55	2.217	5.150	5.371	1.002	4.562	5.263	0.000	4.775
3	11:25:21	2.335	5.438	5.192	0.871	5.525	4.703	0.000	4.708
x		108.459%	105.751%	102.735%	108.509%	91.161%	103.571%	0.000	94.070%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		8.982	2.730	5.192	24.490	21.260	8.492	0.000	1.572
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:28	97.766%	4.771	4.554	97.894%	0.900	0.921	0.905	0.869
2	11:24:55	98.013%	4.810	5.103	98.349%	0.964	1.000	0.870	0.890
3	11:25:21	97.975%	4.954	5.037	98.918%	0.958	0.904	0.919	0.960
x		97.918%	96.897%	97.961%	98.387%	94.074%	94.135%	89.799%	90.663%
σ		0.133%	n/a	n/a	0.513%	n/a	n/a	n/a	n/a
%RSD		0.136	1.994	6.125	0.522	3.759	5.435	2.786	5.260
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:28	96.662%	4.610	1.855	1.864	9.505	9.608	97.436%	98.184%
2	11:24:55	97.995%	4.804	1.889	1.858	9.431	9.779	97.950%	98.717%
3	11:25:21	98.520%	4.871	1.881	1.849	9.965	10.040	99.393%	99.544%
x		97.726%	95.232%	93.755%	92.863%	96.337%	98.083%	98.260%	98.815%
σ		0.957%	n/a	n/a	n/a	n/a	n/a	1.015%	0.686%
%RSD		0.980	2.851	0.949	0.404	3.000	2.205	1.033	0.694
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:24:28	0.980	0.922	0.945	0.899	0.912	103.294%		
2	11:24:55	0.986	0.921	1.040	0.988	1.003	102.069%		
3	11:25:21	0.966	0.894	0.987	0.924	0.952	102.787%		
x		97.755%	91.240%	99.082%	93.718%	95.576%	102.717%		
σ		n/a	n/a	n/a	n/a	n/a	0.615%		
%RSD		1.049	1.722	4.830	4.890	4.759	0.599		

ICSA 1488332 3/2/2015 11:28:16 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	83.424%	0.074	0.475	0.445	0.000	103900.000	103900.000	104000.000
2	11:29:09	81.390%	-0.009	0.786	1.002	0.000	107100.000	110100.000	110200.000
3	11:29:36	79.715%	0.049	0.425	0.873	0.000	108000.000	111900.000	111900.000
x		81.510%	0.038	0.562	0.773	0.000	106300.000	108600.000	108700.000
σ		1.857%	0.043	0.196	0.291	0.000	2126.000	4196.000	4171.000
%RSD		2.278	112.000	34.800	37.650	0.000	1.999	3.862	3.839
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	98580.000	26.210	0.000	104500.000	103000.000	102200.000	90.679%	2130.000
2	11:29:09	104200.000	21.100	0.000	107300.000	107800.000	107500.000	88.843%	2232.000
3	11:29:36	105700.000	21.950	0.000	108100.000	110300.000	109200.000	87.208%	2280.000
x		102900.000	23.080	0.000	106700.000	107100.000	106300.000	88.910%	2214.000
σ		3779.000	2.737	0.000	1886.000	3716.000	3626.000	1.736%	76.450
%RSD		3.674	11.850	0.000	1.768	3.471	3.412	1.953	3.453
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	-0.040	1.391	0.826	100600.000	101000.000	0.112	-0.359	1.714
2	11:29:09	0.092	1.484	0.800	105800.000	105800.000	0.116	-0.213	1.664
3	11:29:36	-0.081	1.501	0.841	107900.000	107300.000	0.120	-0.215	1.767
x		-0.010	1.459	0.822	104800.000	104700.000	0.116	-0.262	1.715
σ		0.090	0.059	0.021	3735.000	3311.000	0.004	0.084	0.051
%RSD		929.900	4.075	2.553	3.565	3.162	3.509	31.910	2.984
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	1.886	2.744	2.256	0.303	0.579	0.647	0.000	0.714
2	11:29:09	1.943	2.899	2.190	0.227	1.071	0.951	0.000	0.703
3	11:29:36	1.918	2.697	1.900	0.348	0.522	0.928	0.000	0.707
x		1.916	2.780	2.115	0.293	0.724	0.842	0.000	0.708
σ		0.028	0.106	0.189	0.061	0.302	0.170	0.000	0.005
%RSD		1.487	3.795	8.953	20.850	41.720	20.150	0.000	0.758
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	91.020%	2190.000	2171.000	86.028%	0.071	0.078	0.340	0.159
2	11:29:09	91.257%	2342.000	2287.000	86.108%	0.065	0.073	0.236	0.195
3	11:29:36	90.794%	2380.000	2327.000	85.182%	0.064	0.054	6.628	4.556
x		91.024%	2304.000	2262.000	85.773%	0.067	0.068	2.401	1.637
σ		0.232%	100.300	80.820	0.513%	0.004	0.013	3.661	2.528
%RSD		0.254	4.351	3.573	0.598	5.841	18.490	152.500	154.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	88.455%	0.268	0.092	0.090	0.201	0.222	93.901%	94.236%
2	11:29:09	88.560%	0.185	0.099	0.078	0.179	0.162	94.301%	94.978%
3	11:29:36	87.677%	0.229	0.122	0.093	0.189	0.171	93.587%	94.165%
x		88.231%	0.227	0.105	0.087	0.190	0.185	93.930%	94.460%
σ		0.482%	0.041	0.016	0.008	0.011	0.032	0.358%	0.450%
%RSD		0.547	18.220	15.190	9.262	5.826	17.320	0.381	0.477
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:28:43	0.018	0.017	0.207	0.194	0.213	103.806%		
2	11:29:09	0.017	0.018	0.294	0.242	0.256	92.834%		
3	11:29:36	0.020	0.019	0.267	0.282	0.263	89.913%		
x		0.018	0.018	0.256	0.239	0.244	95.518%		
σ		0.002	0.001	0.045	0.044	0.027	7.325%		
%RSD		9.870	5.457	17.480	18.450	10.990	7.669		

ICSAB 1488333 3/2/2015 11:32:34 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	76.347%	18.430	47.560	52.310	0.000	101500.000	103600.000	103600.000
2	11:33:26	75.180%	19.260	50.570	51.680	0.000	103200.000	108000.000	107900.000
3	11:33:53	74.635%	19.400	48.990	52.500	0.000	103600.000	109100.000	108800.000
x		75.388%	95.145%	98.077%	104.325%	0.000	102.802%	106.920%	106.761%
σ		0.875%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.160	2.755	3.068	0.826	0.000	1.071	2.733	2.589
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	97380.000	556.600	0.000	103300.000	102600.000	101500.000	83.542%	2115.000
2	11:33:26	100900.000	568.200	0.000	104600.000	104900.000	105000.000	82.384%	2202.000
3	11:33:53	101700.000	574.200	0.000	105600.000	107800.000	106700.000	81.431%	2223.000
x		99.970%	113.270%	0.000	104.513%	105.106%	104.399%	82.452%	108.992%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.057%	n/a
%RSD		2.279	1.583	0.000	1.097	2.462	2.554	1.282	2.631
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	19.820	20.540	20.370	101200.000	100900.000	20.160	19.490	21.080
2	11:33:26	20.450	21.630	20.750	104800.000	104200.000	20.660	20.490	22.010
3	11:33:53	20.490	21.760	21.300	106600.000	106100.000	20.790	20.530	22.070
x		101.258%	106.554%	104.032%	104.200%	103.726%	102.674%	100.842%	108.594%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.869	3.141	2.255	2.655	2.554	1.625	2.920	2.566
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	21.860	22.830	22.370	20.960	54.610	53.900	0.000	20.300
2	11:33:26	22.930	23.920	23.340	21.130	55.090	55.410	0.000	20.850
3	11:33:53	22.580	23.760	23.000	22.150	55.250	55.180	0.000	21.140
x		112.280%	94.014%	91.623%	107.068%	109.965%	109.658%	0.000	103.818%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.420	2.511	2.150	3.005	0.606	1.490	0.000	2.075
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	83.373%	2216.000	2188.000	83.012%	19.210	19.140	19.840	19.120
2	11:33:26	83.495%	2342.000	2279.000	82.734%	19.440	19.410	23.780	22.050
3	11:33:53	83.228%	2371.000	2304.000	82.998%	19.300	19.950	20.690	19.850
x		83.366%	115.473%	112.855%	82.914%	96.584%	97.481%	107.185%	101.682%
σ		0.134%	n/a	n/a	0.157%	n/a	n/a	n/a	n/a
%RSD		0.161	3.574	2.721	0.189	0.580	2.113	9.665	7.494
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	85.520%	98.590	19.690	19.930	20.340	19.720	92.305%	92.629%
2	11:33:26	85.543%	102.500	20.340	20.370	21.180	19.660	92.574%	93.093%
3	11:33:53	85.687%	103.600	20.320	20.600	19.940	20.170	92.867%	93.411%
x		85.583%	101.557%	100.572%	101.499%	102.431%	99.241%	92.582%	93.045%
σ		0.090%	n/a	n/a	n/a	n/a	n/a	0.281%	0.394%
%RSD		0.106	2.596	1.848	1.662	3.101	1.409	0.303	0.423
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:33:00	19.840	19.190	20.450	20.570	20.390	88.137%		
2	11:33:26	20.870	19.990	21.500	21.490	21.320	86.482%		
3	11:33:53	21.300	20.420	22.410	22.020	21.990	85.351%		
x		103.356%	99.328%	107.268%	106.817%	106.157%	86.657%		
σ		n/a	n/a	n/a	n/a	n/a	1.401%		
%RSD		3.636	3.134	4.556	3.433	3.766	1.617		

CCV 1487954 3/2/2015 11:40:00 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:27	80.383%	100.500	105.800	102.700	0.000	49840.000	49920.000	50000.000
2	11:40:53	80.475%	103.500	104.100	106.300	0.000	50690.000	51810.000	51700.000
3	11:41:20	80.299%	102.400	105.800	103.100	0.000	51240.000	52390.000	52330.000
x		80.386%	102.139%	105.232%	104.041%	0.000	101.184%	102.748%	102.687%
σ		0.088%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.110	1.462	0.937	1.897	0.000	1.398	2.514	2.351
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:27	498.700	5138.000	0.000	49890.000	47960.000	47500.000	91.273%	96.620
2	11:40:53	518.100	5247.000	0.000	50620.000	49940.000	49070.000	91.047%	99.720
3	11:41:20	524.800	5304.000	0.000	51150.000	50810.000	49740.000	90.628%	101.200
x		102.782%	104.592%	0.000	101.105%	99.143%	97.533%	90.983%	99.183%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.327%	n/a
%RSD		2.637	1.619	0.000	1.256	2.950	2.359	0.359	2.363
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:27	94.580	94.930	506.700	24390.000	25350.000	97.760	98.730	99.300
2	11:40:53	98.450	98.290	518.700	25030.000	26020.000	100.000	101.500	100.200
3	11:41:20	99.130	100.300	531.100	25560.000	26640.000	101.400	103.300	103.500
x		97.390%	97.829%	103.770%	99.977%	103.999%	99.710%	101.192%	101.004%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.520	2.758	2.344	2.359	2.479	1.832	2.296	2.168
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:27	100.600	100.000	98.390	101.000	100.900	102.100	0.000	99.020
2	11:40:53	102.700	103.400	101.300	102.500	99.570	104.200	0.000	101.600
3	11:41:20	104.400	103.700	103.900	104.300	102.000	105.700	0.000	102.700
x		102.592%	102.362%	101.196%	102.593%	100.809%	104.025%	0.000	101.117%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.855	2.002	2.703	1.606	1.193	1.730	0.000	1.886
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:27	87.712%	103.500	105.800	85.834%	99.840	100.200	100.900	100.700
2	11:40:53	88.305%	108.100	109.800	86.300%	101.100	100.700	104.000	103.400
3	11:41:20	88.217%	111.500	111.400	86.537%	99.220	100.500	104.000	103.100
x		88.078%	107.677%	109.006%	86.224%	100.048%	100.509%	102.942%	102.384%
σ		0.320%	n/a	n/a	0.357%	n/a	n/a	n/a	n/a
%RSD		0.363	3.739	2.643	0.415	0.956	0.251	1.724	1.444
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:27	86.946%	100.400	100.400	101.200	102.300	101.800	91.783%	92.667%
2	11:40:53	87.110%	103.000	102.500	103.100	103.800	103.700	93.116%	93.390%
3	11:41:20	87.735%	103.300	102.400	102.600	104.100	103.600	93.059%	93.635%
x		87.263%	102.228%	101.756%	102.325%	103.389%	103.014%	92.653%	93.231%
σ		0.416%	n/a	n/a	n/a	n/a	n/a	0.754%	0.503%
%RSD		0.477	1.563	1.121	0.973	0.938	1.061	0.813	0.540
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:40:27	102.300	99.470	101.200	102.000	100.900	94.913%		
2	11:40:53	106.000	103.100	106.600	105.900	105.900	92.925%		
3	11:41:20	107.600	104.000	107.700	107.600	107.200	91.811%		
x		105.262%	102.195%	105.159%	105.174%	104.667%	93.216%		
σ		n/a	n/a	n/a	n/a	n/a	1.572%		
%RSD		2.586	2.355	3.310	2.749	3.196	1.686		

CCB1 3/2/2015 11:47:23 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	86.449%	0.004	0.083	0.165	0.000	10.920	1.174	1.549
2	11:48:16	86.213%	0.031	0.175	-0.044	0.000	12.240	1.613	1.698
3	11:48:43	84.314%	0.004	-0.086	0.159	0.000	12.700	1.218	1.344
x		85.659%	0.013	0.057	0.093	0.000	11.950	1.335	1.530
σ		1.171%	0.015	0.132	0.119	0.000	0.925	0.242	0.178
%RSD		1.367	120.500	230.300	127.500	0.000	7.736	18.090	11.600

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	-0.297	2.076	0.000	2.900	1.266	2.095	90.463%	0.103
2	11:48:16	-0.301	-0.024	0.000	0.863	7.789	0.927	89.757%	0.087
3	11:48:43	-0.213	-0.559	0.000	2.285	-5.110	-0.370	88.392%	0.141
x		-0.271	0.498	0.000	2.016	1.315	0.884	89.537%	0.110
σ		0.050	1.393	0.000	1.045	6.450	1.233	1.053%	0.028
%RSD		18.330	279.900	0.000	51.820	490.500	139.500	1.176	25.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	0.014	0.025	-0.012	6.292	5.500	0.002	-0.037	-0.008
2	11:48:16	-0.004	-0.023	-0.003	5.655	2.400	0.005	-0.048	0.001
3	11:48:43	0.022	0.038	0.017	5.142	3.890	0.012	-0.026	0.032
x		0.011	0.013	0.001	5.696	3.930	0.006	-0.037	0.008
σ		0.014	0.032	0.015	0.576	1.550	0.005	0.011	0.021
%RSD		126.400	238.000	2530.000	10.120	39.450	76.740	30.020	262.200

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	-0.034	0.112	0.192	0.033	-0.084	0.195	0.000	0.002
2	11:48:16	0.025	0.058	0.005	0.087	0.041	0.649	0.000	0.000
3	11:48:43	-0.011	-0.054	0.075	0.042	0.202	0.315	0.000	0.005
x		-0.007	0.039	0.091	0.054	0.053	0.386	0.000	0.002
σ		0.030	0.084	0.095	0.029	0.144	0.236	0.000	0.003
%RSD		451.300	218.000	104.800	53.410	270.700	60.970	0.000	115.900

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	91.657%	0.633	0.720	93.388%	0.004	0.006	-0.017	-0.005
2	11:48:16	92.043%	0.668	0.609	93.891%	0.002	-0.001	-0.116	-0.072
3	11:48:43	92.925%	0.626	0.629	94.008%	0.005	0.000	-0.037	-0.027
x		92.208%	0.642	0.653	93.762%	0.004	0.002	-0.057	-0.035
σ		0.650%	0.023	0.060	0.330%	0.001	0.004	0.052	0.034
%RSD		0.705	3.510	9.124	0.352	38.460	210.100	92.770	99.230

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	93.156%	0.079	0.093	0.094	0.031	-0.007	95.136%	95.220%
2	11:48:16	94.576%	0.073	0.086	0.104	0.009	0.011	96.271%	96.685%
3	11:48:43	93.508%	0.191	0.071	0.087	-0.003	0.004	96.575%	97.280%
x		93.747%	0.114	0.084	0.095	0.012	0.003	95.994%	96.395%
σ		0.739%	0.066	0.011	0.008	0.017	0.009	0.759%	1.061%
%RSD		0.788	58.080	13.330	8.813	136.700	347.900	0.790	1.100

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:50	0.005	0.004	0.016	0.007	0.011	102.688%
2	11:48:16	0.004	0.002	0.000	0.016	0.011	101.543%
3	11:48:43	0.006	0.006	0.017	0.012	0.013	99.779%
x		0.005	0.004	0.011	0.011	0.012	101.337%
σ		0.001	0.002	0.009	0.004	0.001	1.465%
%RSD		16.140	40.980	82.900	38.640	11.770	1.446

MB 180-134168/1-A 3/2/2015 11:51:41 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:07	87.309%	0.003	0.256	0.098	0.000	11.860	0.412	0.474
2	11:52:33	86.220%	-0.023	-0.005	-0.044	0.000	13.170	0.806	0.034
3	11:53:00	85.387%	-0.010	-0.091	-0.083	0.000	13.500	0.479	0.198
x		86.305%	-0.010	0.053	-0.010	0.000	12.840	0.566	0.235
σ		0.964%	0.013	0.181	0.095	0.000	0.868	0.211	0.222
%RSD		1.117	134.600	339.400	985.100	0.000	6.756	37.260	94.330
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:07	-0.231	1.017	0.000	-0.099	6.129	0.625	90.018%	0.138
2	11:52:33	-0.189	-0.717	0.000	-1.088	6.249	3.432	89.204%	-0.015
3	11:53:00	-0.296	-0.972	0.000	3.367	1.413	2.312	88.797%	0.020
x		-0.239	-0.224	0.000	0.727	4.597	2.123	89.340%	0.048
σ		0.054	1.082	0.000	2.340	2.758	1.413	0.622%	0.080
%RSD		22.700	483.400	0.000	322.100	59.990	66.570	0.696	168.300
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:07	0.014	0.029	-0.026	1.380	1.523	-0.007	-0.058	-0.020
2	11:52:33	-0.003	0.006	-0.024	1.397	-0.157	0.003	-0.048	-0.003
3	11:53:00	0.015	0.019	-0.013	1.071	1.583	-0.004	-0.042	0.006
x		0.009	0.018	-0.021	1.283	0.983	-0.003	-0.049	-0.006
σ		0.010	0.012	0.007	0.184	0.988	0.005	0.008	0.014
%RSD		115.000	65.360	32.610	14.300	100.400	172.200	17.090	246.300
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:07	0.008	0.137	0.294	0.024	0.000	0.078	0.000	0.003
2	11:52:33	-0.028	0.112	0.202	0.107	-0.104	0.641	0.000	0.007
3	11:53:00	-0.001	0.217	0.126	0.155	0.086	0.745	0.000	0.004
x		-0.007	0.155	0.207	0.095	-0.006	0.488	0.000	0.005
σ		0.019	0.055	0.084	0.066	0.095	0.359	0.000	0.002
%RSD		267.900	35.500	40.370	69.500	1679.000	73.470	0.000	41.290
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:07	90.204%	0.287	0.323	92.002%	-0.007	0.007	-0.066	-0.041
2	11:52:33	91.193%	0.358	0.326	92.604%	0.005	0.008	-0.115	-0.071
3	11:53:00	91.341%	0.346	0.333	92.479%	0.003	-0.005	-0.070	-0.051
x		90.913%	0.330	0.328	92.361%	0.000	0.003	-0.083	-0.054
σ		0.618%	0.038	0.005	0.318%	0.006	0.007	0.027	0.015
%RSD		0.680	11.570	1.591	0.344	3163.000	238.800	32.740	28.190
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:07	91.475%	0.026	0.032	0.055	-0.007	0.007	94.190%	95.065%
2	11:52:33	92.837%	0.053	0.052	0.041	-0.003	0.012	94.671%	95.900%
3	11:53:00	93.052%	0.022	0.052	0.054	-0.007	0.014	95.252%	96.419%
x		92.455%	0.034	0.046	0.050	-0.005	0.011	94.704%	95.795%
σ		0.855%	0.017	0.011	0.008	0.002	0.003	0.532%	0.683%
%RSD		0.925	49.800	25.100	16.200	44.800	31.030	0.561	0.713
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:52:07	0.002	0.002	-0.005	-0.008	-0.004	99.525%		
2	11:52:33	0.003	-0.001	0.006	-0.007	0.001	98.293%		
3	11:53:00	0.004	-0.000	-0.004	0.006	0.000	97.765%		
x		0.003	0.000	-0.001	-0.003	-0.001	98.528%		
σ		0.001	0.001	0.006	0.008	0.003	0.903%		
%RSD		25.780	442.700	973.800	286.000	295.800	0.917		

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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	11:56:20	76.039%	41.130	908.100	921.500	0.000	43490.000	44990.000	45240.000
2	11:56:46	74.225%	41.790	925.000	954.700	0.000	44780.000	47220.000	47540.000
3	11:57:13	74.390%	42.710	907.000	955.000	0.000	44610.000	47470.000	47770.000
x		74.884%	41.880	913.400	943.700	0.000	44290.000	46560.000	46850.000
σ		1.003%	0.798	10.070	19.260	0.000	699.100	1364.000	1397.000
%RSD		1.340	1.905	1.102	2.041	0.000	1.578	2.929	2.982
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:20	1794.000	9316.000	0.000	45480.000	45300.000	45380.000	77.531%	922.200
2	11:56:46	1874.000	9689.000	0.000	46390.000	46760.000	47340.000	77.028%	954.600
3	11:57:13	1872.000	9650.000	0.000	46450.000	47670.000	47500.000	76.580%	967.700
x		1847.000	9552.000	0.000	46110.000	46580.000	46740.000	77.046%	948.200
σ		45.240	204.800	0.000	547.500	1198.000	1183.000	0.476%	23.410
%RSD		2.450	2.144	0.000	1.187	2.572	2.531	0.617	2.469
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:20	462.100	182.500	468.300	980.200	1000.000	470.900	465.500	230.400
2	11:56:46	478.000	188.200	485.700	1016.000	1036.000	481.700	479.400	236.400
3	11:57:13	481.800	192.400	493.000	1034.000	1036.000	488.900	482.800	238.500
x		474.000	187.700	482.300	1010.000	1024.000	480.500	475.900	235.100
σ		10.430	4.977	12.700	27.320	20.620	9.073	9.143	4.244
%RSD		2.200	2.652	2.633	2.705	2.014	1.888	1.921	1.805
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:20	234.000	455.700	453.000	36.640	10.370	10.290	0.000	903.700
2	11:56:46	243.500	468.200	468.700	36.330	9.830	9.100	0.000	923.000
3	11:57:13	245.200	474.500	467.900	37.530	9.378	11.690	0.000	927.800
x		240.900	466.100	463.200	36.840	9.860	10.360	0.000	918.200
σ		6.017	9.558	8.865	0.622	0.498	1.296	0.000	12.720
%RSD		2.498	2.051	1.914	1.687	5.049	12.510	0.000	1.385
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:20	83.120%	948.300	977.700	82.456%	45.110	45.290	51.490	41.450
2	11:56:46	84.995%	991.100	1016.000	83.660%	45.480	46.220	46.830	38.820
3	11:57:13	84.245%	1002.000	1033.000	84.001%	45.540	45.350	45.930	39.600
x		84.120%	980.400	1009.000	83.372%	45.370	45.620	48.080	39.960
σ		0.943%	28.280	28.220	0.812%	0.230	0.517	2.986	1.352
%RSD		1.121	2.885	2.797	0.974	0.508	1.133	6.210	3.384
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:56:20	82.446%	1881.000	480.000	474.300	1862.000	1922.000	90.673%	91.692%
2	11:56:46	83.587%	1934.000	492.400	486.500	1911.000	1975.000	92.162%	93.143%
3	11:57:13	84.735%	1923.000	488.700	483.800	1902.000	1977.000	92.970%	93.914%
x		83.589%	1913.000	487.000	481.600	1892.000	1958.000	91.935%	92.917%
σ		1.145%	27.550	6.366	6.409	25.700	31.620	1.165%	1.128%
%RSD		1.370	1.441	1.307	1.331	1.359	1.615	1.267	1.214
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:56:20	47.410	45.670	20.040	20.140	19.990	84.051%		
2	11:56:46	49.390	47.830	20.740	20.860	20.560	85.035%		
3	11:57:13	49.460	47.560	20.310	20.280	20.260	86.585%		
x		48.750	47.020	20.360	20.430	20.270	85.224%		
σ		1.167	1.177	0.352	0.385	0.285	1.277%		
%RSD		2.394	2.503	1.726	1.885	1.404	1.499		

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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	12:00:35	76.494%	42.160	911.300	950.800	0.000	44700.000	46330.000	46280.000
2	12:01:02	74.586%	40.570	941.000	973.600	0.000	45360.000	48670.000	48420.000
3	12:01:28	72.996%	43.480	952.900	995.400	0.000	45920.000	49620.000	49540.000
x		74.692%	42.070	935.100	973.300	0.000	45330.000	48210.000	48080.000
σ		1.751%	1.456	21.430	22.310	0.000	611.200	1693.000	1655.000
%RSD		2.345	3.460	2.292	2.292	0.000	1.348	3.513	3.443
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:35	1825.000	9587.000	0.000	46640.000	46350.000	46910.000	77.372%	951.000
2	12:01:02	1903.000	9895.000	0.000	47400.000	48410.000	48580.000	76.250%	980.700
3	12:01:28	1934.000	10050.000	0.000	47690.000	48750.000	49430.000	75.619%	993.400
x		1887.000	9846.000	0.000	47240.000	47840.000	48310.000	76.414%	975.100
σ		56.440	237.400	0.000	540.100	1296.000	1285.000	0.888%	21.770
%RSD		2.991	2.411	0.000	1.143	2.710	2.659	1.162	2.232
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:35	471.300	185.900	478.900	999.000	1012.000	476.800	471.900	235.700
2	12:01:02	487.300	193.000	496.800	1038.000	1054.000	495.200	490.100	240.500
3	12:01:28	495.300	195.300	501.600	1049.000	1052.000	500.200	494.700	242.600
x		484.700	191.400	492.400	1029.000	1039.000	490.700	485.600	239.600
σ		12.200	4.899	11.940	26.280	23.570	12.320	12.040	3.522
%RSD		2.518	2.559	2.424	2.555	2.267	2.512	2.480	1.470
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:35	238.000	461.800	464.600	37.860	9.268	10.250	0.000	925.300
2	12:01:02	246.700	475.700	474.000	37.900	10.200	10.310	0.000	951.900
3	12:01:28	247.700	480.300	479.500	37.700	9.905	11.660	0.000	949.400
x		244.100	472.600	472.700	37.820	9.793	10.740	0.000	942.200
σ		5.353	9.608	7.487	0.104	0.478	0.795	0.000	14.710
%RSD		2.193	2.033	1.584	0.275	4.886	7.404	0.000	1.561
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:35	83.865%	983.500	1013.000	83.664%	45.810	46.190	46.500	39.090
2	12:01:02	83.537%	1023.000	1058.000	83.540%	46.150	46.740	47.560	38.920
3	12:01:28	84.157%	1029.000	1061.000	84.248%	46.140	46.130	47.360	39.440
x		83.853%	1012.000	1044.000	83.817%	46.030	46.360	47.140	39.150
σ		0.310%	24.840	26.700	0.378%	0.193	0.336	0.559	0.265
%RSD		0.370	2.454	2.557	0.451	0.419	0.726	1.186	0.677
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:35	83.359%	1930.000	491.900	485.900	1893.000	1958.000	91.826%	93.246%
2	12:01:02	84.123%	1971.000	502.900	495.700	1934.000	1999.000	92.359%	94.346%
3	12:01:28	84.505%	1967.000	499.600	494.300	1948.000	2005.000	93.064%	94.647%
x		83.995%	1956.000	498.100	492.000	1925.000	1987.000	92.417%	94.080%
σ		0.584%	22.630	5.636	5.292	28.610	25.340	0.621%	0.737%
%RSD		0.695	1.157	1.132	1.076	1.487	1.275	0.672	0.784
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:00:35	48.380	47.070	20.610	20.720	20.370	86.128%		
2	12:01:02	49.890	47.880	20.610	20.650	20.360	88.513%		
3	12:01:28	50.680	48.890	20.920	20.880	20.670	87.231%		
x		49.650	47.950	20.710	20.750	20.470	87.291%		
σ		1.167	0.910	0.178	0.117	0.176	1.194%		
%RSD		2.350	1.897	0.861	0.564	0.862	1.368		

180-41453-B-1-A 3/2/2015 12:04:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	76.069%	0.069	58.620	60.970	0.000	72640.000	20340.000	20520.000
2	12:05:16	74.836%	0.023	60.170	64.870	0.000	73870.000	21320.000	21420.000
3	12:05:43	73.629%	0.008	57.010	63.210	0.000	73500.000	21400.000	21670.000
x		74.845%	0.034	58.600	63.020	0.000	73340.000	21020.000	21200.000
σ		1.220%	0.031	1.580	1.956	0.000	635.000	590.600	609.200
%RSD		1.630	93.880	2.696	3.103	0.000	0.866	2.810	2.873

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	5.393	5543.000	0.000	14000.000	69660.000	69550.000	76.389%	1.032
2	12:05:16	5.723	5727.000	0.000	14260.000	71940.000	72190.000	75.867%	1.079
3	12:05:43	5.531	5728.000	0.000	14250.000	72850.000	71910.000	74.882%	0.789
x		5.549	5666.000	0.000	14170.000	71480.000	71220.000	75.713%	0.967
σ		0.166	106.400	0.000	146.600	1639.000	1450.000	0.765%	0.156
%RSD		2.984	1.877	0.000	1.035	2.293	2.037	1.011	16.130

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	1.308	14.440	0.457	17.350	183.900	0.310	0.408	1.660
2	12:05:16	0.770	14.760	0.469	16.380	189.200	0.336	0.243	1.712
3	12:05:43	0.605	15.150	0.487	16.510	190.500	0.323	0.255	1.618
x		0.894	14.780	0.471	16.740	187.800	0.323	0.302	1.664
σ		0.367	0.354	0.015	0.528	3.493	0.013	0.092	0.047
%RSD		41.100	2.396	3.182	3.152	1.860	3.966	30.470	2.831

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	1.453	2.680	3.071	1.193	1.489	1.242	0.000	164.500
2	12:05:16	1.472	3.679	2.882	0.444	0.466	1.473	0.000	168.900
3	12:05:43	1.526	3.264	2.752	0.245	0.862	0.882	0.000	170.900
x		1.484	3.208	2.901	0.628	0.939	1.199	0.000	168.100
σ		0.038	0.502	0.160	0.500	0.516	0.298	0.000	3.254
%RSD		2.561	15.650	5.530	79.680	54.980	24.850	0.000	1.936

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	82.214%	7.651	7.509	81.284%	0.002	0.003	0.016	-0.034
2	12:05:16	82.605%	5.648	5.714	81.134%	-0.011	0.007	-0.041	-0.049
3	12:05:43	81.898%	4.577	4.674	81.536%	0.001	-0.012	-0.057	-0.032
x		82.239%	5.959	5.966	81.318%	-0.003	-0.001	-0.027	-0.038
σ		0.354%	1.560	1.434	0.203%	0.007	0.010	0.038	0.009
%RSD		0.431	26.190	24.040	0.250	278.700	1387.000	139.100	24.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	82.928%	5.160	0.651	0.672	43.150	42.700	90.420%	90.390%
2	12:05:16	82.976%	3.811	0.618	0.660	44.410	44.370	91.137%	90.845%
3	12:05:43	83.518%	2.877	0.574	0.668	44.440	44.840	90.006%	91.486%
x		83.141%	3.950	0.614	0.667	44.000	43.970	90.521%	90.907%
σ		0.328%	1.148	0.038	0.006	0.736	1.121	0.572%	0.550%
%RSD		0.394	29.060	6.264	0.901	1.674	2.548	0.632	0.605

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:04:50	0.332	0.353	0.040	0.036	0.040	82.837%
2	12:05:16	0.166	0.166	0.047	0.033	0.039	83.260%
3	12:05:43	0.110	0.101	0.048	0.037	0.041	84.944%
x		0.203	0.207	0.045	0.035	0.040	83.681%
σ		0.115	0.131	0.005	0.002	0.001	1.114%
%RSD		56.800	63.220	10.130	4.970	1.711	1.332

180-41453-B-3-A 3/2/2015 12:08:38 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	78.767%	0.021	54.610	54.080	0.000	36660.000	15120.000	15310.000
2	12:09:31	75.772%	0.054	55.610	57.400	0.000	38010.000	16050.000	16230.000
3	12:09:57	75.536%	0.008	50.230	54.390	0.000	37860.000	16240.000	16490.000
x		76.692%	0.027	53.480	55.290	0.000	37510.000	15800.000	16010.000
σ		1.801%	0.024	2.861	1.833	0.000	741.900	599.300	621.300
%RSD		2.349	86.260	5.349	3.316	0.000	1.978	3.792	3.881

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	4.777	4030.000	0.000	5281.000	67150.000	65410.000	77.793%	0.856
2	12:09:31	4.725	4185.000	0.000	5386.000	69690.000	68770.000	76.788%	0.708
3	12:09:57	5.146	4227.000	0.000	5426.000	70070.000	69210.000	76.130%	0.594
x		4.883	4147.000	0.000	5365.000	68970.000	67800.000	76.903%	0.719
σ		0.229	103.700	0.000	74.740	1585.000	2078.000	0.837%	0.131
%RSD		4.694	2.500	0.000	1.393	2.298	3.065	1.089	18.240

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	0.825	1.287	295.700	19.190	184.300	0.377	0.429	1.201
2	12:09:31	0.767	1.374	309.200	18.780	187.500	0.406	0.663	1.215
3	12:09:57	0.825	1.293	312.000	19.810	188.000	0.389	0.595	1.326
x		0.806	1.318	305.700	19.260	186.600	0.390	0.562	1.247
σ		0.033	0.048	8.710	0.517	2.033	0.015	0.121	0.069
%RSD		4.122	3.675	2.849	2.683	1.090	3.722	21.440	5.492

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	1.046	4.233	3.889	-0.325	-0.629	-1.040	0.000	166.200
2	12:09:31	1.192	3.871	3.534	0.392	-0.517	0.802	0.000	172.000
3	12:09:57	1.245	4.050	4.304	-0.111	0.506	-0.132	0.000	172.600
x		1.161	4.051	3.909	-0.015	-0.214	-0.123	0.000	170.300
σ		0.103	0.181	0.385	0.368	0.625	0.921	0.000	3.523
%RSD		8.870	4.471	9.852	2529.000	292.900	747.500	0.000	2.069

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	82.669%	1.172	1.088	83.685%	-0.008	0.001	4.441	3.002
2	12:09:31	83.620%	1.051	1.105	84.647%	-0.009	0.001	-0.008	0.014
3	12:09:57	84.292%	1.122	1.076	85.387%	0.001	0.001	-0.047	-0.028
x		83.527%	1.115	1.089	84.573%	-0.005	0.001	1.462	0.996
σ		0.816%	0.061	0.015	0.853%	0.005	0.000	2.580	1.737
%RSD		0.977	5.435	1.352	1.009	101.300	29.620	176.500	174.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	83.114%	0.837	0.432	0.508	41.610	41.820	89.851%	91.456%
2	12:09:31	85.213%	0.850	0.475	0.535	42.430	42.310	91.424%	93.334%
3	12:09:57	86.325%	0.862	0.435	0.486	42.650	41.940	91.965%	94.684%
x		84.884%	0.850	0.447	0.510	42.230	42.020	91.080%	93.158%
σ		1.630%	0.013	0.024	0.025	0.550	0.257	1.098%	1.621%
%RSD		1.921	1.502	5.387	4.820	1.302	0.611	1.206	1.740

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:04	0.044	0.045	0.085	0.063	0.073	84.750%
2	12:09:31	0.055	0.042	0.070	0.073	0.069	86.278%
3	12:09:57	0.048	0.042	0.072	0.062	0.073	89.048%
x		0.049	0.043	0.076	0.066	0.072	86.692%
σ		0.006	0.002	0.008	0.006	0.003	2.179%
%RSD		11.440	4.364	10.930	9.705	3.488	2.513

180-41453-B-4-A 3/2/2015 12:12:53 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:20	76.561%	0.007	56.160	61.550	0.000	71280.000	19880.000	20050.000
2	12:13:46	73.579%	-0.008	54.410	62.390	0.000	73520.000	20910.000	21240.000
3	12:14:13	73.862%	0.040	59.080	60.360	0.000	72940.000	21080.000	21470.000
x		74.667%	0.013	56.550	61.440	0.000	72580.000	20620.000	20920.000
σ		1.646%	0.024	2.361	1.021	0.000	1165.000	650.400	764.600
%RSD		2.204	184.500	4.174	1.661	0.000	1.605	3.154	3.655
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:20	6.032	5455.000	0.000	13830.000	68020.000	67390.000	77.437%	0.800
2	12:13:46	6.447	5687.000	0.000	14140.000	71290.000	70400.000	76.113%	0.574
3	12:14:13	6.315	5715.000	0.000	14150.000	71650.000	70880.000	76.007%	0.535
x		6.265	5619.000	0.000	14040.000	70320.000	69560.000	76.519%	0.637
σ		0.212	142.600	0.000	181.600	2000.000	1891.000	0.797%	0.143
%RSD		3.389	2.537	0.000	1.293	2.844	2.718	1.041	22.470
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:20	1.232	13.830	0.356	4.880	165.800	0.211	0.049	1.724
2	12:13:46	1.746	14.690	0.428	4.932	175.200	0.258	0.161	1.799
3	12:14:13	1.477	14.780	0.410	5.246	174.300	0.278	0.127	1.644
x		1.485	14.430	0.398	5.019	171.800	0.249	0.112	1.722
σ		0.257	0.522	0.037	0.198	5.218	0.035	0.057	0.077
%RSD		17.300	3.616	9.397	3.945	3.037	13.920	51.050	4.498
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:20	1.197	3.056	3.059	0.676	0.833	1.162	0.000	163.500
2	12:13:46	1.348	3.092	3.051	0.182	1.020	2.172	0.000	169.000
3	12:14:13	1.588	2.856	3.458	1.067	0.923	1.927	0.000	171.400
x		1.378	3.001	3.189	0.642	0.925	1.754	0.000	168.000
σ		0.197	0.127	0.233	0.443	0.094	0.527	0.000	4.063
%RSD		14.310	4.232	7.289	69.090	10.160	30.060	0.000	2.419
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:20	83.448%	1.177	1.261	83.838%	0.006	0.004	7.422	4.984
2	12:13:46	83.525%	1.118	1.175	83.822%	-0.003	0.019	-0.053	-0.030
3	12:14:13	83.290%	1.092	1.198	84.085%	0.004	-0.004	6.884	4.629
x		83.421%	1.129	1.211	83.915%	0.002	0.006	4.751	3.194
σ		0.120%	0.044	0.045	0.147%	0.005	0.011	4.169	2.798
%RSD		0.144	3.853	3.706	0.175	191.100	184.000	87.740	87.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:20	84.264%	0.591	0.540	0.581	43.460	43.440	91.926%	93.395%
2	12:13:46	85.111%	0.681	0.498	0.658	44.200	44.200	93.126%	94.649%
3	12:14:13	85.067%	0.664	0.562	0.590	44.590	45.250	92.567%	93.973%
x		84.814%	0.645	0.533	0.610	44.080	44.290	92.540%	94.006%
σ		0.477%	0.048	0.033	0.042	0.577	0.912	0.601%	0.628%
%RSD		0.562	7.397	6.117	6.951	1.308	2.059	0.649	0.668
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:13:20	0.015	0.016	0.035	0.050	0.044	86.546%		
2	12:13:46	0.009	0.012	0.046	0.045	0.041	86.964%		
3	12:14:13	0.019	0.015	0.057	0.053	0.052	87.475%		
x		0.014	0.014	0.046	0.049	0.045	86.995%		
σ		0.005	0.002	0.011	0.004	0.006	0.465%		
%RSD		35.490	14.630	24.040	8.439	12.390	0.535		

180-41453-B-5-A 3/2/2015 12:17:10 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:36	76.365%	0.053	45.750	47.890	0.000	61480.000	21010.000	21130.000
2	12:18:02	72.543%	0.170	52.570	51.780	0.000	63720.000	22470.000	22610.000
3	12:18:29	72.850%	0.105	48.850	49.840	0.000	62840.000	22480.000	22590.000
x		73.919%	0.109	49.050	49.840	0.000	62680.000	21990.000	22110.000
σ		2.124%	0.058	3.417	1.948	0.000	1127.000	847.700	851.200
%RSD		2.873	53.460	6.966	3.909	0.000	1.798	3.855	3.850
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:36	1554.000	5713.000	0.000	6793.000	85500.000	83860.000	77.688%	28.340
2	12:18:02	1607.000	5944.000	0.000	7010.000	89550.000	88080.000	75.668%	31.140
3	12:18:29	1596.000	5937.000	0.000	6961.000	89230.000	88120.000	75.586%	31.000
x		1586.000	5864.000	0.000	6921.000	88090.000	86690.000	76.314%	30.160
σ		28.000	131.300	0.000	113.700	2253.000	2446.000	1.190%	1.577
%RSD		1.766	2.239	0.000	1.643	2.557	2.822	1.560	5.227
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:36	2.294	8.547	101.700	4092.000	4145.000	1.811	3.217	3.884
2	12:18:02	2.328	8.835	106.500	4278.000	4315.000	1.847	3.220	4.143
3	12:18:29	2.713	8.805	107.300	4310.000	4369.000	1.892	3.403	4.261
x		2.445	8.729	105.100	4227.000	4276.000	1.850	3.280	4.096
σ		0.232	0.159	2.996	118.100	116.500	0.041	0.107	0.193
%RSD		9.506	1.816	2.849	2.794	2.725	2.192	3.249	4.703
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:36	4.164	13.360	13.610	1.359	-0.293	1.566	0.000	183.400
2	12:18:02	3.812	14.400	14.300	1.705	0.661	1.527	0.000	190.700
3	12:18:29	4.013	14.380	14.080	0.549	0.114	1.029	0.000	191.000
x		3.996	14.050	14.000	1.205	0.160	1.374	0.000	188.400
σ		0.177	0.594	0.354	0.593	0.479	0.300	0.000	4.293
%RSD		4.421	4.230	2.532	49.250	298.500	21.800	0.000	2.279
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:36	85.599%	2.625	2.759	82.127%	-0.002	0.015	0.046	0.035
2	12:18:02	85.565%	2.840	2.810	82.730%	0.005	0.008	4.088	2.764
3	12:18:29	85.346%	2.976	2.800	82.821%	0.006	0.010	5.497	3.676
x		85.503%	2.814	2.790	82.559%	0.003	0.011	3.210	2.158
σ		0.137%	0.177	0.027	0.377%	0.004	0.003	2.829	1.894
%RSD		0.160	6.279	0.981	0.457	159.900	30.290	88.130	87.770
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:36	83.245%	0.496	0.564	0.634	57.650	57.520	91.371%	91.683%
2	12:18:02	83.406%	0.530	0.583	0.642	59.720	59.100	91.518%	93.483%
3	12:18:29	84.318%	0.599	0.606	0.612	58.850	58.820	92.483%	93.731%
x		83.656%	0.542	0.584	0.629	58.740	58.480	91.791%	92.966%
σ		0.578%	0.053	0.021	0.016	1.040	0.844	0.604%	1.117%
%RSD		0.691	9.702	3.619	2.464	1.770	1.444	0.658	1.202
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:17:36	0.034	0.036	2.262	2.036	2.085	84.774%		
2	12:18:02	0.045	0.036	2.338	2.110	2.158	85.443%		
3	12:18:29	0.042	0.034	2.389	2.106	2.192	86.056%		
x		0.040	0.035	2.330	2.084	2.145	85.424%		
σ		0.006	0.001	0.064	0.042	0.055	0.642%		
%RSD		13.750	3.731	2.756	2.000	2.548	0.751		

180-41453-B-5-A SD@5 3/2/2015 12:21:25 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:52	85.086%	0.059	10.090	9.389	0.000	12290.000	3785.000	3755.000
2	12:22:18	84.938%	0.032	10.210	10.410	0.000	12540.000	3908.000	3908.000
3	12:22:44	83.500%	0.047	10.280	11.450	0.000	12710.000	4000.000	3960.000
x		84.508%	0.046	10.190	10.420	0.000	12520.000	3898.000	3874.000
σ		0.876%	0.014	0.098	1.029	0.000	210.800	108.300	106.800
%RSD		1.037	29.910	0.965	9.880	0.000	1.684	2.779	2.758
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:52	284.800	1141.000	0.000	1412.000	16560.000	15510.000	87.006%	4.926
2	12:22:18	299.500	1173.000	0.000	1442.000	17330.000	16210.000	85.770%	5.795
3	12:22:44	303.500	1181.000	0.000	1444.000	17050.000	16200.000	85.992%	5.853
x		295.900	1165.000	0.000	1433.000	16980.000	15970.000	86.256%	5.525
σ		9.852	21.370	0.000	17.970	390.300	401.900	0.659%	0.519
%RSD		3.329	1.835	0.000	1.254	2.299	2.516	0.764	9.398
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:52	0.553	1.693	19.850	847.000	832.500	0.323	0.729	0.885
2	12:22:18	0.457	1.732	20.750	873.900	845.300	0.346	0.599	0.836
3	12:22:44	0.700	1.810	20.550	886.400	854.800	0.372	0.608	0.862
x		0.570	1.745	20.380	869.100	844.200	0.347	0.646	0.861
σ		0.123	0.060	0.473	20.140	11.170	0.025	0.073	0.025
%RSD		21.510	3.410	2.321	2.318	1.324	7.077	11.260	2.860
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:52	0.889	2.610	2.974	0.500	0.522	1.092	0.000	36.330
2	12:22:18	0.842	3.024	2.633	0.653	1.430	1.222	0.000	37.190
3	12:22:44	0.792	2.834	3.330	0.169	0.626	-0.662	0.000	37.960
x		0.841	2.823	2.979	0.440	0.859	0.551	0.000	37.160
σ		0.048	0.207	0.349	0.247	0.497	1.052	0.000	0.814
%RSD		5.768	7.335	11.700	56.200	57.790	191.100	0.000	2.191
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:52	87.907%	0.533	0.611	88.982%	0.002	0.002	-0.041	-0.023
2	12:22:18	88.583%	0.572	0.609	89.478%	0.002	-0.001	-0.051	-0.017
3	12:22:44	87.999%	0.684	0.610	89.729%	0.005	0.000	-0.071	-0.038
x		88.163%	0.597	0.610	89.397%	0.003	0.001	-0.055	-0.026
σ		0.367%	0.078	0.001	0.380%	0.002	0.002	0.015	0.011
%RSD		0.416	13.150	0.186	0.425	55.890	260.100	27.590	40.780
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:21:52	88.181%	0.093	0.092	0.099	11.720	11.420	92.068%	92.965%
2	12:22:18	88.756%	0.072	0.122	0.131	11.760	11.660	92.369%	93.537%
3	12:22:44	90.099%	0.032	0.112	0.104	11.380	11.750	92.557%	95.049%
x		89.012%	0.066	0.108	0.111	11.620	11.610	92.331%	93.850%
σ		0.984%	0.031	0.015	0.017	0.209	0.171	0.247%	1.077%
%RSD		1.106	46.700	14.250	15.500	1.802	1.470	0.267	1.147
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:21:52	0.009	0.010	0.456	0.362	0.397	92.939%		
2	12:22:18	0.010	0.008	0.475	0.378	0.423	91.798%		
3	12:22:44	0.019	0.008	0.447	0.405	0.417	94.005%		
x		0.013	0.008	0.460	0.381	0.413	92.914%		
σ		0.005	0.001	0.014	0.022	0.013	1.104%		
%RSD		41.580	14.010	3.147	5.708	3.262	1.188		

CCV 1487954 3/2/2015 12:25:40 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	12:26:06	90.508%	103.500	108.400	101.600	0.000	48580.000	47060.000	47230.000
2	12:26:33	88.867%	111.800	106.100	107.000	0.000	51570.000	51160.000	51020.000
3	12:27:00	88.629%	112.900	109.400	108.100	0.000	51780.000	51760.000	51560.000
x		89.335%	109.416%	107.992%	105.545%	0.000	101.286%	99.990%	99.878%
σ		1.023%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.145	4.690	1.559	3.270	0.000	3.531	5.113	4.725

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:06	483.600	4953.000	0.000	48110.000	46870.000	46350.000	100.046%	95.740
2	12:26:33	525.400	5341.000	0.000	52000.000	51450.000	51380.000	93.795%	103.200
3	12:27:00	530.100	5380.000	0.000	52380.000	52120.000	51260.000	94.256%	104.500
x		102.606%	104.489%	0.000	101.665%	100.290%	99.332%	96.032%	101.129%
σ		n/a	n/a	0.000	n/a	n/a	n/a	3.484%	n/a
%RSD		4.991	4.516	0.000	4.646	5.703	5.782	3.627	4.658

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:06	94.760	95.300	500.800	24020.000	25170.000	96.260	97.660	98.380
2	12:26:33	102.500	103.900	544.200	26300.000	27580.000	103.900	104.900	105.100
3	12:27:00	104.300	105.000	544.600	26450.000	27710.000	104.500	106.500	106.500
x		100.510%	101.400%	105.968%	102.369%	107.274%	101.538%	103.015%	103.311%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		5.030	5.236	4.753	5.328	5.340	4.510	4.563	4.186

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:06	99.440	97.650	97.330	101.300	99.470	103.900	0.000	98.590
2	12:26:33	106.300	104.600	103.200	105.100	104.800	105.900	0.000	100.900
3	12:27:00	108.700	104.900	104.000	105.800	101.300	105.600	0.000	101.900
x		104.824%	102.367%	101.482%	104.051%	101.859%	105.136%	0.000	100.453%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		4.601	3.996	3.570	2.335	2.645	0.992	0.000	1.676

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:06	87.881%	99.780	99.400	86.447%	99.240	99.680	99.770	100.200
2	12:26:33	88.728%	104.900	104.500	86.361%	100.300	101.300	102.800	102.000
3	12:27:00	88.749%	106.200	107.900	86.537%	100.900	101.800	103.100	103.000
x		88.453%	103.616%	103.929%	86.448%	100.132%	100.931%	101.901%	101.742%
σ		0.495%	n/a	n/a	0.088%	n/a	n/a	n/a	n/a
%RSD		0.560	3.268	4.115	0.102	0.829	1.097	1.817	1.422

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:06	84.908%	100.800	100.200	101.100	100.900	100.700	87.733%	89.386%
2	12:26:33	85.766%	103.000	102.300	102.300	102.900	103.400	88.729%	89.286%
3	12:27:00	85.503%	104.600	102.400	103.500	104.900	104.600	88.106%	89.046%
x		85.392%	102.807%	101.625%	102.322%	102.894%	102.938%	88.189%	89.239%
σ		0.440%	n/a	n/a	n/a	n/a	n/a	0.503%	0.175%
%RSD		0.515	1.838	1.182	1.211	1.947	1.950	0.570	0.196

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:26:06	105.300	102.200	103.300	104.000	103.100	88.894%
2	12:26:33	108.100	104.800	107.800	108.400	107.800	87.194%
3	12:27:00	110.100	105.900	110.300	110.500	110.000	85.572%
x		107.867%	104.281%	107.135%	107.624%	106.992%	87.220%
σ		n/a	n/a	n/a	n/a	n/a	1.661%
%RSD		2.239	1.834	3.316	3.079	3.304	1.905

CCB2 3/2/2015 12:33:06 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	96.702%	0.001	0.422	0.917	0.000	1.646	0.924	1.381
2	12:33:59	94.573%	-0.011	0.689	0.674	0.000	2.090	1.341	0.781
3	12:34:26	93.543%	0.002	0.620	0.686	0.000	2.908	1.096	0.923
x		94.939%	-0.003	0.577	0.759	0.000	2.214	1.120	1.028
σ		1.611%	0.007	0.139	0.137	0.000	0.640	0.209	0.314
%RSD		1.697	243.400	24.050	18.000	0.000	28.920	18.690	30.490

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	-0.308	1.658	0.000	-0.860	-5.269	0.973	97.683%	0.012
2	12:33:59	-0.467	-0.183	0.000	-1.341	2.203	1.540	97.097%	-0.050
3	12:34:26	-0.420	-1.276	0.000	2.611	-5.244	0.641	96.169%	-0.034
x		-0.398	0.067	0.000	0.137	-2.770	1.052	96.983%	-0.024
σ		0.081	1.483	0.000	2.156	4.307	0.455	0.763%	0.033
%RSD		20.440	2229.000	0.000	1578.000	155.500	43.220	0.787	134.800

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	0.030	0.019	0.014	4.053	7.027	-0.001	-0.025	0.013
2	12:33:59	0.038	0.010	-0.008	2.840	7.334	-0.001	-0.061	-0.010
3	12:34:26	0.008	-0.005	-0.001	1.642	3.634	-0.002	-0.004	-0.000
x		0.025	0.008	0.001	2.845	5.998	-0.001	-0.030	0.001
σ		0.016	0.012	0.011	1.206	2.053	0.001	0.029	0.012
%RSD		60.900	146.600	769.600	42.380	34.230	59.920	95.800	1045.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	0.010	0.065	0.140	0.356	0.697	2.370	0.000	0.001
2	12:33:59	0.005	0.074	0.079	0.163	-0.037	1.344	0.000	0.005
3	12:34:26	0.045	0.029	0.034	0.208	0.838	1.027	0.000	-0.002
x		0.020	0.056	0.084	0.242	0.499	1.580	0.000	0.001
σ		0.022	0.024	0.053	0.102	0.470	0.702	0.000	0.003
%RSD		108.800	42.550	62.810	41.920	94.050	44.410	0.000	236.200

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	90.819%	0.294	0.255	92.636%	-0.007	0.007	-0.052	-0.031
2	12:33:59	91.559%	0.235	0.199	93.062%	-0.005	-0.000	-0.079	-0.052
3	12:34:26	91.516%	0.244	0.233	93.468%	-0.000	0.001	0.002	0.006
x		91.298%	0.258	0.229	93.055%	-0.004	0.002	-0.043	-0.025
σ		0.416%	0.031	0.028	0.416%	0.003	0.004	0.041	0.029
%RSD		0.455	12.210	12.350	0.447	85.810	171.600	96.170	116.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	90.762%	0.092	0.088	0.088	0.016	0.001	89.908%	91.680%
2	12:33:59	91.638%	0.098	0.079	0.096	-0.002	0.008	91.089%	92.767%
3	12:34:26	91.015%	0.073	0.072	0.123	-0.002	0.025	91.808%	92.587%
x		91.138%	0.088	0.080	0.102	0.004	0.011	90.935%	92.345%
σ		0.450%	0.013	0.008	0.018	0.010	0.012	0.959%	0.583%
%RSD		0.494	14.630	10.460	17.750	266.600	112.200	1.055	0.631

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:33	0.008	0.007	0.014	0.019	0.023	98.352%
2	12:33:59	0.004	0.004	0.028	0.032	0.027	97.169%
3	12:34:26	0.002	0.003	0.019	0.048	0.031	94.519%
x		0.005	0.005	0.020	0.033	0.027	96.680%
σ		0.003	0.002	0.007	0.014	0.004	1.963%
%RSD		57.720	45.600	33.030	43.830	15.470	2.030

MB 180-134292/1-A 3/2/2015 12:37:24 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:50	95.070%	0.038	0.028	0.439	0.000	-0.323	0.159	-0.065
2	12:38:17	96.004%	0.001	1.162	0.699	0.000	-0.515	0.113	-0.139
3	12:38:43	95.857%	0.013	0.595	0.453	0.000	0.301	0.073	-0.063
x		95.643%	0.017	0.595	0.530	0.000	-0.179	0.115	-0.089
σ		0.502%	0.019	0.567	0.146	0.000	0.427	0.043	0.043
%RSD		0.525	108.500	95.360	27.550	0.000	237.900	37.290	48.680
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:50	-0.534	1.608	0.000	-0.091	3.747	-0.656	96.560%	-0.019
2	12:38:17	-0.669	-1.508	0.000	-2.570	-2.239	-1.297	96.212%	-0.050
3	12:38:43	-0.609	-1.757	0.000	0.164	3.886	-2.650	95.193%	0.030
x		-0.604	-0.552	0.000	-0.832	1.798	-1.534	95.988%	-0.013
σ		0.067	1.875	0.000	1.510	3.497	1.018	0.710%	0.041
%RSD		11.170	339.400	0.000	181.400	194.500	66.330	0.740	315.200
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:50	0.024	0.020	-0.017	-0.757	5.040	-0.006	-0.045	0.002
2	12:38:17	0.000	0.001	-0.006	-1.929	3.282	0.004	-0.020	-0.020
3	12:38:43	0.010	0.005	-0.021	-1.229	0.389	-0.007	-0.050	-0.010
x		0.011	0.008	-0.015	-1.305	2.904	-0.003	-0.038	-0.010
σ		0.012	0.010	0.008	0.590	2.348	0.006	0.016	0.011
%RSD		106.300	119.900	54.670	45.190	80.870	195.900	42.560	113.200
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:50	0.002	0.077	0.102	0.178	1.243	1.046	0.000	-0.003
2	12:38:17	-0.042	-0.020	0.093	0.087	0.124	0.477	0.000	-0.004
3	12:38:43	0.033	-0.041	0.156	-0.045	0.490	0.062	0.000	-0.004
x		-0.002	0.005	0.117	0.073	0.619	0.528	0.000	-0.004
σ		0.038	0.063	0.034	0.112	0.570	0.494	0.000	0.001
%RSD		1533.000	1182.000	29.410	153.000	92.160	93.560	0.000	13.850
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:50	91.000%	0.124	0.095	92.154%	-0.005	0.001	-0.028	-0.018
2	12:38:17	92.174%	0.096	0.101	92.954%	-0.008	-0.003	-0.023	-0.012
3	12:38:43	91.838%	0.070	0.112	93.127%	-0.000	-0.002	-0.023	-0.013
x		91.671%	0.097	0.102	92.745%	-0.004	-0.002	-0.024	-0.014
σ		0.605%	0.027	0.009	0.519%	0.004	0.002	0.003	0.003
%RSD		0.660	28.160	8.393	0.560	92.910	141.400	12.040	19.920
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:50	89.166%	0.007	0.023	0.032	0.007	-0.002	92.270%	92.180%
2	12:38:17	91.670%	0.011	0.045	0.036	0.002	-0.002	92.448%	92.681%
3	12:38:43	90.814%	0.018	0.036	0.048	-0.011	-0.017	91.763%	93.072%
x		90.550%	0.012	0.035	0.039	-0.001	-0.007	92.160%	92.644%
σ		1.273%	0.005	0.011	0.008	0.009	0.008	0.355%	0.447%
%RSD		1.406	42.860	31.220	20.720	1538.000	122.200	0.385	0.482
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:37:50	0.007	0.000	0.009	0.017	0.017	96.031%		
2	12:38:17	0.002	0.001	0.007	0.017	0.011	97.304%		
3	12:38:43	0.003	0.002	0.005	0.015	0.012	94.909%		
x		0.004	0.001	0.007	0.017	0.013	96.081%		
σ		0.003	0.001	0.002	0.001	0.003	1.198%		
%RSD		76.440	77.870	28.590	6.347	25.100	1.247		

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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	12:42:07	95.176%	0.038	1.012	0.554	0.000	-0.316	-0.014	-0.135
2	12:42:34	95.837%	0.013	0.432	0.338	0.000	-0.144	-0.191	-0.082
3	12:43:00	93.338%	0.014	0.457	0.574	0.000	0.354	-0.227	-0.032
x		94.784%	0.022	0.634	0.489	0.000	-0.035	-0.144	-0.083
σ		1.295%	0.014	0.328	0.131	0.000	0.348	0.114	0.051
%RSD		1.366	64.430	51.780	26.740	0.000	991.300	78.950	61.680
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:07	-0.583	1.426	0.000	-1.214	2.310	-2.106	95.854%	-0.018
2	12:42:34	-0.477	-0.226	0.000	-1.507	6.866	-0.657	95.628%	-0.050
3	12:43:00	-0.467	-0.504	0.000	0.431	-3.679	-1.036	94.231%	-0.001
x		-0.509	0.232	0.000	-0.763	1.832	-1.266	95.238%	-0.023
σ		0.064	1.043	0.000	1.045	5.288	0.752	0.879%	0.025
%RSD		12.570	449.700	0.000	136.900	288.600	59.340	0.923	107.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:07	-0.025	-0.012	-0.002	-1.712	2.235	0.002	-0.066	0.026
2	12:42:34	0.028	0.025	0.005	-1.895	-0.327	0.003	-0.050	-0.008
3	12:43:00	0.021	0.028	-0.009	-1.852	1.360	-0.003	-0.039	0.003
x		0.008	0.014	-0.002	-1.819	1.089	0.000	-0.052	0.007
σ		0.029	0.023	0.007	0.096	1.302	0.003	0.013	0.017
%RSD		350.100	166.400	397.200	5.274	119.600	917.300	25.770	240.100
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:07	-0.036	0.042	0.064	0.058	1.551	0.513	0.000	0.001
2	12:42:34	0.003	-0.001	0.098	0.196	0.302	1.170	0.000	-0.001
3	12:43:00	0.008	0.169	0.174	0.085	-0.178	0.411	0.000	0.001
x		-0.009	0.070	0.112	0.113	0.558	0.698	0.000	0.000
σ		0.024	0.089	0.056	0.073	0.892	0.412	0.000	0.001
%RSD		281.700	126.500	49.910	64.630	159.900	59.010	0.000	2320.000
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:07	90.406%	0.050	0.040	91.797%	-0.008	-0.001	-0.065	-0.040
2	12:42:34	90.633%	0.056	0.065	93.127%	-0.012	-0.000	-0.066	-0.045
3	12:43:00	91.397%	0.088	0.072	93.213%	-0.005	0.001	-0.085	-0.053
x		90.812%	0.065	0.059	92.712%	-0.009	-0.000	-0.072	-0.046
σ		0.519%	0.020	0.017	0.794%	0.004	0.001	0.011	0.006
%RSD		0.571	31.360	28.410	0.856	45.160	350.800	15.820	14.050
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:07	89.638%	0.003	0.016	0.025	0.007	-0.007	91.930%	91.577%
2	12:42:34	91.614%	0.019	0.020	0.021	-0.015	0.000	91.743%	92.859%
3	12:43:00	89.654%	-0.001	0.008	0.012	0.007	-0.004	92.354%	93.596%
x		90.302%	0.007	0.015	0.020	-0.000	-0.004	92.009%	92.677%
σ		1.136%	0.011	0.006	0.007	0.013	0.004	0.313%	1.022%
%RSD		1.258	158.600	42.170	34.150	2520.000	100.200	0.340	1.102
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:42:07	0.001	0.002	0.007	0.011	0.008	98.073%		
2	12:42:34	0.001	0.001	0.009	0.011	0.002	97.511%		
3	12:43:00	0.002	0.001	0.004	0.015	0.012	94.070%		
x		0.002	0.001	0.007	0.013	0.007	96.551%		
σ		0.001	0.001	0.002	0.002	0.005	2.167%		
%RSD		51.120	57.700	31.180	15.550	63.170	2.245		

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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	12:46:25	76.587%	40.320	880.300	929.000	0.000	42880.000	43700.000	44130.000
2	12:46:51	74.527%	40.850	913.000	945.900	0.000	44450.000	46430.000	46670.000
3	12:47:17	74.263%	40.790	915.800	943.800	0.000	44750.000	47480.000	47280.000
x		75.126%	40.650	903.000	939.600	0.000	44030.000	45870.000	46020.000
σ		1.272%	0.288	19.730	9.170	0.000	1003.000	1950.000	1673.000
%RSD		1.693	0.709	2.185	0.976	0.000	2.277	4.251	3.634
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:25	1738.000	8965.000	0.000	44420.000	43150.000	43930.000	78.586%	886.600
2	12:46:51	1816.000	9347.000	0.000	45780.000	46770.000	46140.000	77.046%	916.300
3	12:47:17	1838.000	9443.000	0.000	45730.000	47510.000	46810.000	76.088%	933.500
x		1798.000	9251.000	0.000	45310.000	45810.000	45630.000	77.240%	912.100
σ		52.770	252.800	0.000	769.700	2336.000	1507.000	1.260%	23.700
%RSD		2.936	2.732	0.000	1.699	5.099	3.302	1.632	2.599
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:25	442.500	174.900	452.200	934.900	980.200	448.000	448.700	223.100
2	12:46:51	462.200	185.200	470.100	979.900	1015.000	469.500	462.700	230.700
3	12:47:17	468.200	186.700	477.700	993.500	1001.000	473.500	467.900	231.500
x		457.600	182.300	466.700	969.400	998.500	463.700	459.800	228.400
σ		13.450	6.430	13.100	30.650	17.240	13.720	9.965	4.669
%RSD		2.940	3.527	2.806	3.162	1.727	2.959	2.167	2.044
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:25	226.800	441.900	437.200	34.890	8.939	9.444	0.000	883.300
2	12:46:51	234.900	458.700	453.400	35.810	8.749	10.790	0.000	908.100
3	12:47:17	235.400	463.900	460.000	36.870	9.572	10.640	0.000	915.000
x		232.400	454.800	450.200	35.860	9.087	10.290	0.000	902.100
σ		4.823	11.500	11.710	0.990	0.431	0.739	0.000	16.660
%RSD		2.075	2.528	2.601	2.760	4.744	7.176	0.000	1.847
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:25	82.808%	913.500	934.100	83.836%	43.090	43.310	44.320	35.720
2	12:46:51	83.254%	948.600	975.300	84.315%	44.210	44.720	45.660	38.090
3	12:47:17	83.397%	962.100	990.600	84.075%	44.000	44.700	45.810	37.990
x		83.153%	941.400	966.700	84.075%	43.770	44.240	45.270	37.270
σ		0.307%	25.050	29.220	0.239%	0.598	0.810	0.821	1.343
%RSD		0.369	2.661	3.023	0.285	1.366	1.830	1.813	3.605
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:25	83.907%	1808.000	457.200	450.400	1790.000	1841.000	90.422%	92.459%
2	12:46:51	82.646%	1886.000	474.800	472.400	1856.000	1931.000	91.673%	93.332%
3	12:47:17	83.385%	1879.000	474.900	470.600	1864.000	1924.000	92.714%	94.568%
x		83.313%	1857.000	469.000	464.500	1836.000	1899.000	91.603%	93.453%
σ		0.634%	43.260	10.150	12.220	40.540	50.270	1.148%	1.060%
%RSD		0.761	2.329	2.165	2.631	2.207	2.647	1.253	1.134
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:46:25	44.720	43.350	18.890	19.380	18.890	87.169%		
2	12:46:51	48.340	46.270	20.020	19.950	19.910	86.106%		
3	12:47:17	48.240	46.400	20.080	20.070	19.730	88.117%		
x		47.100	45.340	19.660	19.800	19.510	87.130%		
σ		2.062	1.727	0.670	0.370	0.541	1.006%		
%RSD		4.378	3.809	3.408	1.869	2.775	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	12:50:40	75.334%	42.820	923.800	966.400	0.000	44710.000	46550.000	46500.000
2	12:51:07	73.386%	41.850	922.700	978.400	0.000	44720.000	47710.000	48000.000
3	12:51:33	73.786%	41.320	914.800	970.100	0.000	44770.000	47920.000	47970.000
x		74.169%	42.000	920.500	971.600	0.000	44740.000	47390.000	47490.000
σ		1.029%	0.758	4.947	6.163	0.000	31.590	734.100	859.600
%RSD		1.387	1.806	0.537	0.634	0.000	0.071	1.549	1.810
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:40	1881.000	9482.000	0.000	46170.000	46290.000	46130.000	75.650%	925.500
2	12:51:07	1922.000	9586.000	0.000	46240.000	46640.000	47050.000	75.201%	953.700
3	12:51:33	1909.000	9568.000	0.000	46020.000	47930.000	47630.000	74.400%	971.400
x		1904.000	9545.000	0.000	46140.000	46950.000	46940.000	75.083%	950.200
σ		21.150	55.590	0.000	109.700	866.200	755.900	0.633%	23.140
%RSD		1.111	0.582	0.000	0.238	1.845	1.611	0.843	2.436
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:40	467.700	184.800	478.100	991.300	1016.000	473.300	474.600	234.500
2	12:51:07	478.500	190.200	489.200	1020.000	1021.000	485.600	482.500	237.200
3	12:51:33	483.400	192.200	495.000	1030.000	1027.000	488.200	484.400	239.600
x		476.600	189.100	487.400	1014.000	1022.000	482.400	480.500	237.100
σ		8.042	3.810	8.606	20.220	5.367	7.933	5.220	2.559
%RSD		1.687	2.015	1.766	1.994	0.525	1.645	1.086	1.079
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:40	237.900	463.700	463.100	37.270	9.316	10.680	0.000	911.500
2	12:51:07	243.800	471.200	466.300	36.680	8.852	10.880	0.000	945.800
3	12:51:33	243.600	477.200	475.000	36.570	8.578	10.160	0.000	941.100
x		241.800	470.700	468.100	36.840	8.915	10.570	0.000	932.800
σ		3.368	6.784	6.173	0.376	0.373	0.370	0.000	18.610
%RSD		1.393	1.441	1.319	1.020	4.184	3.496	0.000	1.995
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:40	81.925%	951.700	975.400	81.676%	44.680	46.050	46.400	37.940
2	12:51:07	81.726%	996.100	1019.000	82.042%	45.420	45.830	54.130	42.950
3	12:51:33	82.427%	995.400	1017.000	82.929%	45.000	45.760	54.060	43.130
x		82.026%	981.100	1004.000	82.216%	45.030	45.880	51.530	41.340
σ		0.361%	25.430	24.440	0.644%	0.374	0.151	4.442	2.948
%RSD		0.440	2.592	2.435	0.783	0.830	0.330	8.621	7.131
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:40	80.632%	1914.000	481.300	477.300	1881.000	1934.000	89.912%	91.028%
2	12:51:07	82.119%	1933.000	485.600	482.300	1920.000	1978.000	89.558%	92.274%
3	12:51:33	82.385%	1940.000	489.100	485.500	1907.000	1981.000	91.210%	92.527%
x		81.712%	1929.000	485.300	481.700	1903.000	1964.000	90.227%	91.943%
σ		0.945%	13.450	3.899	4.152	19.890	26.230	0.870%	0.803%
%RSD		1.156	0.697	0.803	0.862	1.045	1.335	0.964	0.873
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:50:40	48.070	46.220	20.610	20.540	20.300	82.785%		
2	12:51:07	49.300	47.650	20.370	20.830	20.330	84.599%		
3	12:51:33	50.590	47.830	20.880	20.880	20.650	84.123%		
x		49.320	47.230	20.620	20.750	20.430	83.836%		
σ		1.260	0.878	0.257	0.182	0.193	0.941%		
%RSD		2.555	1.859	1.246	0.876	0.942	1.122		

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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	12:54:52	72.612%	-0.007	70.300	73.760	0.000	50180.000	30160.000	30120.000
2	12:55:18	71.572%	0.058	72.240	75.780	0.000	51540.000	31930.000	31810.000
3	12:55:45	71.133%	0.026	68.520	73.060	0.000	50370.000	31830.000	32120.000
x		71.773%	0.026	70.350	74.200	0.000	50690.000	31310.000	31350.000
σ		0.760%	0.033	1.857	1.409	0.000	735.200	991.000	1080.000
%RSD		1.059	128.100	2.640	1.899	0.000	1.450	3.165	3.444
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:52	3.648	12250.000	0.000	12860.000	53590.000	54690.000	74.794%	1.443
2	12:55:18	3.612	12730.000	0.000	13300.000	56370.000	57640.000	73.376%	1.637
3	12:55:45	3.626	12690.000	0.000	13200.000	57220.000	57650.000	72.890%	1.459
x		3.629	12560.000	0.000	13120.000	55720.000	56660.000	73.687%	1.513
σ		0.018	269.400	0.000	231.100	1901.000	1705.000	0.989%	0.107
%RSD		0.500	2.145	0.000	1.762	3.411	3.009	1.342	7.095
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:52	0.021	1.039	446.200	15.800	154.900	0.410	6.591	6.802
2	12:55:18	0.812	1.221	470.500	14.960	145.900	0.413	7.144	7.290
3	12:55:45	0.414	1.225	471.000	14.090	142.300	0.416	7.090	7.196
x		0.416	1.162	462.600	14.950	147.700	0.413	6.942	7.096
σ		0.395	0.106	14.150	0.852	6.466	0.003	0.305	0.259
%RSD		95.130	9.148	3.059	5.701	4.377	0.781	4.390	3.650
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:52	6.954	96.240	96.960	1.076	0.579	1.944	0.000	315.700
2	12:55:18	7.382	101.200	102.000	0.573	1.601	1.893	0.000	327.800
3	12:55:45	7.326	105.000	101.600	2.522	0.543	2.097	0.000	330.100
x		7.221	100.800	100.200	1.390	0.908	1.978	0.000	324.500
σ		0.233	4.375	2.810	1.012	0.600	0.106	0.000	7.721
%RSD		3.223	4.341	2.805	72.800	66.160	5.363	0.000	2.379
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:52	80.113%	8.485	8.778	81.152%	0.002	0.023	6.195	4.314
2	12:55:18	80.807%	6.492	6.569	81.784%	0.010	0.005	4.957	3.418
3	12:55:45	80.928%	5.599	5.569	82.204%	0.016	0.009	5.340	3.715
x		80.616%	6.859	6.972	81.713%	0.009	0.013	5.497	3.816
σ		0.440%	1.477	1.642	0.530%	0.007	0.010	0.634	0.457
%RSD		0.546	21.540	23.550	0.648	73.330	76.160	11.530	11.970
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:52	81.658%	5.003	0.568	0.606	47.420	47.190	90.148%	91.104%
2	12:55:18	82.402%	3.680	0.517	0.597	49.760	50.170	91.245%	92.521%
3	12:55:45	82.419%	2.918	0.545	0.608	49.810	50.290	91.054%	93.011%
x		82.160%	3.867	0.543	0.604	49.000	49.220	90.816%	92.212%
σ		0.435%	1.055	0.026	0.006	1.367	1.754	0.586%	0.990%
%RSD		0.529	27.280	4.757	0.925	2.789	3.564	0.646	1.074
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:54:52	0.414	0.364	0.075	0.092	0.093	85.149%		
2	12:55:18	0.201	0.176	0.095	0.083	0.088	87.353%		
3	12:55:45	0.123	0.100	0.077	0.092	0.082	88.637%		
x		0.246	0.213	0.082	0.089	0.088	87.046%		
σ		0.150	0.136	0.011	0.005	0.006	1.764%		
%RSD		61.250	63.910	13.670	6.038	6.297	2.027		

180-41484-B-2-A 3/2/2015 12:58:41 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:08	72.952%	0.057	50.520	56.430	0.000	84850.000	26420.000	24230.000
2	12:59:34	72.235%	0.074	53.290	54.510	0.000	85930.000	25130.000	25130.000
3	13:00:00	70.969%	0.125	52.050	54.760	0.000	85890.000	27640.000	25380.000
x		72.052%	0.085	51.950	55.230	0.000	85550.000	26400.000	24920.000
σ		1.004%	0.035	1.385	1.046	0.000	612.400	1254.000	605.600
%RSD		1.394	41.680	2.666	1.893	0.000	0.716	4.752	2.431
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:08	782.900	5110.000	0.000	15100.000	78720.000	77960.000	75.127%	11.230
2	12:59:34	790.300	4870.000	0.000	15320.000	81730.000	81590.000	74.504%	13.060
3	13:00:00	818.100	5306.000	0.000	15500.000	84140.000	82860.000	73.248%	12.120
x		797.100	5095.000	0.000	15310.000	81530.000	80800.000	74.293%	12.140
σ		18.590	218.600	0.000	196.000	2716.000	2543.000	0.957%	0.915
%RSD		2.332	4.291	0.000	1.280	3.331	3.147	1.288	7.540
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:08	1.280	4.442	47.960	1305.000	1434.000	0.636	0.839	5.170
2	12:59:34	1.005	4.460	49.560	1363.000	1492.000	0.629	0.701	5.402
3	13:00:00	1.232	4.738	50.620	1386.000	1493.000	0.659	0.743	5.626
x		1.172	4.547	49.380	1352.000	1473.000	0.641	0.761	5.399
σ		0.147	0.166	1.342	41.880	34.070	0.016	0.071	0.228
%RSD		12.520	3.647	2.719	3.099	2.313	2.429	9.294	4.224
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:08	4.842	222.700	220.500	1.612	-0.208	0.907	0.000	160.600
2	12:59:34	5.237	231.600	228.400	1.065	0.653	1.735	0.000	165.500
3	13:00:00	5.221	233.000	233.900	2.171	0.760	1.502	0.000	167.900
x		5.100	229.100	227.600	1.616	0.402	1.382	0.000	164.700
σ		0.224	5.548	6.735	0.553	0.531	0.427	0.000	3.705
%RSD		4.381	2.422	2.960	34.210	132.100	30.910	0.000	2.250
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:08	82.515%	1.432	1.473	82.740%	0.032	0.025	-0.058	-0.020
2	12:59:34	82.341%	1.419	1.238	82.966%	0.019	0.013	0.014	0.001
3	13:00:00	81.937%	1.361	1.372	82.395%	0.013	0.024	3.761	2.557
x		82.264%	1.404	1.361	82.700%	0.021	0.020	1.239	0.846
σ		0.297%	0.038	0.118	0.288%	0.010	0.007	2.184	1.482
%RSD		0.360	2.693	8.672	0.348	45.620	32.740	176.200	175.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:08	83.217%	1.085	0.349	0.399	47.140	46.350	90.397%	92.274%
2	12:59:34	83.495%	1.176	0.380	0.441	47.360	48.020	91.719%	93.359%
3	13:00:00	83.334%	1.167	0.371	0.463	47.050	47.990	91.651%	93.187%
x		83.349%	1.143	0.367	0.434	47.180	47.450	91.255%	92.940%
σ		0.140%	0.050	0.016	0.032	0.161	0.957	0.745%	0.583%
%RSD		0.168	4.377	4.341	7.408	0.342	2.016	0.816	0.627
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:59:08	0.062	0.047	2.223	1.967	2.070	86.515%		
2	12:59:34	0.054	0.057	2.219	2.006	2.086	87.762%		
3	13:00:00	0.043	0.033	2.211	2.013	2.040	88.749%		
x		0.053	0.046	2.218	1.995	2.065	87.675%		
σ		0.009	0.012	0.006	0.025	0.023	1.120%		
%RSD		17.680	27.080	0.283	1.235	1.134	1.277		

180-41484-B-3-A 3/2/2015 1:02:56 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	73.828%	0.008	53.660	51.780	0.000	49700.000	19060.000	19290.000
2	13:03:49	72.486%	0.041	49.270	52.750	0.000	50220.000	19860.000	19920.000
3	13:04:16	73.791%	0.008	46.910	53.030	0.000	49700.000	19900.000	19980.000
x		73.368%	0.019	49.950	52.520	0.000	49870.000	19600.000	19730.000
σ		0.765%	0.019	3.426	0.657	0.000	301.100	474.600	382.000
%RSD		1.042	98.540	6.859	1.250	0.000	0.604	2.421	1.936

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	41.730	4480.000	0.000	5615.000	75500.000	74130.000	75.345%	1.472
2	13:03:49	45.180	4577.000	0.000	5638.000	78160.000	77120.000	74.210%	1.186
3	13:04:16	44.100	4586.000	0.000	5673.000	78190.000	77760.000	73.829%	1.398
x		43.670	4548.000	0.000	5642.000	77290.000	76340.000	74.461%	1.352
σ		1.764	58.980	0.000	28.950	1544.000	1940.000	0.789%	0.148
%RSD		4.040	1.297	0.000	0.513	1.998	2.541	1.059	10.980

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	0.281	2.832	24.790	115.400	296.900	0.240	0.213	1.558
2	13:03:49	1.001	2.723	26.330	118.400	295.500	0.280	0.329	1.650
3	13:04:16	0.848	2.905	26.470	119.500	291.500	0.275	0.442	1.625
x		0.710	2.820	25.860	117.700	294.600	0.265	0.328	1.611
σ		0.380	0.092	0.930	2.134	2.817	0.022	0.115	0.047
%RSD		53.480	3.257	3.595	1.812	0.956	8.231	34.910	2.930

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	1.284	17.270	17.850	0.463	-0.698	1.048	0.000	182.900
2	13:03:49	1.470	17.900	18.370	1.052	-0.118	2.643	0.000	187.700
3	13:04:16	1.415	18.680	17.800	0.033	0.988	1.487	0.000	188.200
x		1.390	17.950	18.010	0.516	0.057	1.726	0.000	186.300
σ		0.096	0.711	0.317	0.511	0.856	0.824	0.000	2.941
%RSD		6.906	3.959	1.759	99.090	1499.000	47.740	0.000	1.579

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	81.548%	0.939	1.013	81.825%	0.003	-0.001	-0.036	-0.008
2	13:03:49	82.085%	0.940	0.974	82.294%	0.001	-0.005	0.041	0.016
3	13:04:16	82.299%	0.962	0.943	82.766%	-0.004	0.003	-0.090	-0.062
x		81.978%	0.947	0.976	82.295%	0.000	-0.001	-0.029	-0.018
σ		0.387%	0.013	0.035	0.470%	0.003	0.004	0.066	0.040
%RSD		0.472	1.400	3.593	0.572	3144.000	414.300	229.700	221.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	82.218%	0.617	0.117	0.167	32.230	32.840	90.465%	91.812%
2	13:03:49	83.506%	0.690	0.124	0.146	33.690	33.520	91.552%	93.004%
3	13:04:16	84.184%	0.638	0.118	0.151	34.740	33.750	92.497%	93.541%
x		83.303%	0.648	0.120	0.155	33.560	33.370	91.505%	92.786%
σ		0.999%	0.038	0.004	0.011	1.257	0.476	1.017%	0.885%
%RSD		1.199	5.786	3.299	7.114	3.746	1.428	1.111	0.954

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:22	0.018	0.027	0.154	0.168	0.158	84.710%
2	13:03:49	0.020	0.025	0.173	0.118	0.145	87.006%
3	13:04:16	0.023	0.022	0.149	0.163	0.159	87.139%
x		0.020	0.025	0.158	0.150	0.154	86.285%
σ		0.003	0.002	0.013	0.027	0.008	1.365%
%RSD		12.300	9.104	8.054	18.250	5.197	1.582

180-41484-B-4-A 3/2/2015 1:07:11 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	74.627%	0.055	18.560	17.600	0.000	19390.000	10420.000	10560.000
2	13:08:04	73.901%	-0.008	18.140	18.870	0.000	19490.000	10900.000	11000.000
3	13:08:30	73.587%	0.040	14.820	17.500	0.000	19670.000	10930.000	11070.000
x		74.038%	0.029	17.170	17.990	0.000	19520.000	10750.000	10880.000
σ		0.533%	0.033	2.051	0.766	0.000	140.700	283.200	276.700
%RSD		0.720	112.100	11.940	4.257	0.000	0.721	2.635	2.544

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	86.690	5662.000	0.000	3020.000	87180.000	87770.000	77.100%	2.386
2	13:08:04	86.060	5818.000	0.000	3071.000	91140.000	91730.000	75.298%	2.422
3	13:08:30	87.030	5836.000	0.000	3081.000	92610.000	91200.000	75.500%	2.900
x		86.590	5772.000	0.000	3057.000	90310.000	90230.000	75.966%	2.569
σ		0.493	95.630	0.000	32.720	2806.000	2153.000	0.987%	0.287
%RSD		0.569	1.657	0.000	1.070	3.108	2.386	1.300	11.170

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	0.240	3.178	10.650	197.200	397.400	0.178	-0.245	1.223
2	13:08:04	0.948	3.179	10.950	208.400	414.600	0.208	-0.147	1.225
3	13:08:30	0.769	3.117	10.990	208.400	411.700	0.191	-0.331	1.240
x		0.652	3.158	10.860	204.700	407.900	0.193	-0.241	1.229
σ		0.368	0.036	0.183	6.484	9.210	0.015	0.092	0.010
%RSD		56.470	1.129	1.684	3.168	2.258	7.818	38.130	0.782

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	1.256	4.779	4.837	0.244	0.541	1.005	0.000	149.300
2	13:08:04	1.344	5.105	4.969	0.409	0.683	0.554	0.000	154.500
3	13:08:30	1.288	5.212	5.250	1.615	-0.016	1.670	0.000	156.400
x		1.296	5.032	5.019	0.756	0.402	1.076	0.000	153.400
σ		0.044	0.226	0.211	0.749	0.370	0.561	0.000	3.662
%RSD		3.424	4.483	4.198	99.040	91.820	52.160	0.000	2.388

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	83.455%	1.380	1.314	84.579%	-0.013	-0.008	-0.035	-0.016
2	13:08:04	83.923%	1.349	1.452	85.218%	-0.002	-0.005	-0.081	-0.049
3	13:08:30	83.480%	1.419	1.479	85.913%	-0.000	-0.001	-0.111	-0.067
x		83.620%	1.383	1.415	85.237%	-0.005	-0.005	-0.076	-0.044
σ		0.263%	0.035	0.088	0.667%	0.007	0.004	0.039	0.026
%RSD		0.315	2.549	6.240	0.782	134.000	75.490	50.950	58.670

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	86.524%	0.323	0.048	0.097	32.330	32.980	91.939%	94.295%
2	13:08:04	86.749%	0.411	0.062	0.080	33.690	33.630	92.938%	95.724%
3	13:08:30	86.391%	0.461	0.076	0.102	34.490	34.720	93.918%	95.798%
x		86.555%	0.398	0.062	0.093	33.500	33.780	92.932%	95.272%
σ		0.181%	0.070	0.014	0.012	1.089	0.880	0.990%	0.847%
%RSD		0.209	17.570	22.730	12.630	3.252	2.607	1.065	0.889

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:37	0.015	0.017	0.162	0.168	0.152	91.957%
2	13:08:04	0.019	0.015	0.143	0.158	0.146	93.886%
3	13:08:30	0.013	0.012	0.161	0.156	0.153	92.398%
x		0.016	0.014	0.155	0.161	0.150	92.747%
σ		0.003	0.002	0.011	0.006	0.004	1.011%
%RSD		18.410	17.460	7.001	3.850	2.706	1.090

180-41484-B-5-A 3/2/2015 1:11:25 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	13:11:52	75.234%	0.039	39.250	46.210	0.000	59720.000	22010.000	22000.000
2	13:12:18	73.073%	-0.023	43.770	46.280	0.000	61710.000	23210.000	23390.000
3	13:12:45	74.032%	0.024	44.630	47.880	0.000	61470.000	23260.000	23390.000
x		74.113%	0.013	42.550	46.790	0.000	60970.000	22830.000	22930.000
σ		1.083%	0.032	2.889	0.947	0.000	1090.000	710.300	801.700
%RSD		1.461	247.400	6.791	2.025	0.000	1.789	3.112	3.496

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:52	119.100	4900.000	0.000	7498.000	90630.000	90720.000	75.232%	2.669
2	13:12:18	126.700	5083.000	0.000	7714.000	94980.000	93220.000	74.417%	3.229
3	13:12:45	127.900	5071.000	0.000	7683.000	95520.000	94980.000	74.335%	2.699
x		124.600	5018.000	0.000	7632.000	93710.000	92970.000	74.662%	2.865
σ		4.744	102.200	0.000	117.100	2682.000	2139.000	0.496%	0.315
%RSD		3.808	2.037	0.000	1.535	2.862	2.301	0.664	10.990

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:52	0.640	15.580	16.430	364.800	571.800	0.334	0.374	1.768
2	13:12:18	0.031	16.430	16.940	379.900	577.100	0.379	0.144	1.925
3	13:12:45	0.735	16.930	16.760	382.500	577.100	0.354	0.162	1.796
x		0.469	16.310	16.710	375.800	575.300	0.356	0.227	1.830
σ		0.382	0.678	0.257	9.546	3.020	0.023	0.128	0.084
%RSD		81.570	4.159	1.539	2.540	0.525	6.441	56.360	4.567

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:52	1.527	8.274	8.428	1.239	-0.139	1.116	0.000	240.000
2	13:12:18	1.762	8.199	8.003	0.828	-0.469	1.426	0.000	246.200
3	13:12:45	1.659	8.212	8.008	-0.443	0.618	1.455	0.000	247.000
x		1.649	8.228	8.147	0.541	0.003	1.332	0.000	244.400
σ		0.118	0.040	0.244	0.877	0.557	0.188	0.000	3.823
%RSD		7.162	0.483	2.994	161.900	17270.000	14.100	0.000	1.564

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:52	81.952%	0.792	0.830	82.165%	-0.002	0.012	-0.043	-0.025
2	13:12:18	83.030%	0.859	0.793	82.846%	0.010	0.015	-0.079	-0.041
3	13:12:45	83.619%	0.843	0.831	82.660%	0.005	0.007	-0.009	-0.009
x		82.867%	0.831	0.818	82.557%	0.004	0.011	-0.044	-0.025
σ		0.845%	0.035	0.022	0.352%	0.006	0.004	0.035	0.016
%RSD		1.020	4.185	2.631	0.426	152.100	33.990	80.170	65.070

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:52	84.447%	0.431	0.133	0.167	59.600	59.640	91.155%	92.161%
2	13:12:18	84.223%	0.467	0.119	0.175	60.770	60.910	91.626%	93.501%
3	13:12:45	84.490%	0.498	0.113	0.148	61.500	61.370	93.392%	94.047%
x		84.387%	0.465	0.121	0.164	60.630	60.640	92.057%	93.236%
σ		0.144%	0.034	0.010	0.014	0.958	0.898	1.179%	0.971%
%RSD		0.170	7.239	8.579	8.569	1.580	1.480	1.281	1.041

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:52	0.028	0.030	0.271	0.238	0.243	85.814%
2	13:12:18	0.024	0.022	0.272	0.237	0.246	86.446%
3	13:12:45	0.033	0.032	0.271	0.243	0.261	87.383%
x		0.028	0.028	0.271	0.239	0.250	86.548%
σ		0.004	0.005	0.000	0.003	0.010	0.789%
%RSD		15.020	18.980	0.102	1.342	3.904	0.912

CCV 1487954 3/2/2015 1:15:40 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	13:16:06	87.918%	105.400	107.000	109.100	0.000	51330.000	50490.000	50620.000
2	13:16:33	87.042%	108.400	109.200	107.800	0.000	51300.000	51230.000	51080.000
3	13:17:00	89.285%	109.300	105.900	105.300	0.000	52460.000	52410.000	52390.000
x		88.082%	107.714%	107.384%	107.415%	0.000	103.393%	102.758%	102.728%
σ		1.130%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.283	1.886	1.562	1.790	0.000	1.285	1.883	1.788
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:06	512.500	5254.000	0.000	51810.000	49580.000	49800.000	92.490%	101.700
2	13:16:33	521.300	5244.000	0.000	50360.000	48980.000	48280.000	98.069%	98.220
3	13:17:00	531.300	5350.000	0.000	52640.000	51450.000	51960.000	93.396%	103.400
x		104.342%	105.649%	0.000	103.199%	100.002%	100.022%	94.652%	101.095%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.994%	n/a
%RSD		1.806	1.106	0.000	2.236	2.582	3.698	3.163	2.600
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:06	98.860	98.330	523.800	25310.000	26420.000	100.500	103.300	103.200
2	13:16:33	97.020	97.970	518.500	25250.000	26320.000	100.900	102.700	101.900
3	13:17:00	101.700	104.300	545.600	26400.000	27580.000	104.400	105.100	106.000
x		99.194%	100.207%	105.861%	102.619%	107.082%	101.915%	103.680%	103.681%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.379	3.559	2.719	2.528	2.619	2.105	1.222	1.991
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:06	103.600	102.500	101.500	103.200	107.600	107.500	0.000	99.750
2	13:16:33	103.600	103.100	100.800	104.200	104.400	105.800	0.000	102.200
3	13:17:00	107.700	104.400	103.300	105.500	105.000	108.500	0.000	103.100
x		104.944%	103.341%	101.839%	104.304%	105.665%	107.272%	0.000	101.665%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.271	0.966	1.251	1.116	1.603	1.299	0.000	1.686
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:06	88.478%	99.200	100.100	87.445%	98.710	100.200	98.620	99.580
2	13:16:33	89.259%	105.700	105.000	87.610%	99.810	101.700	104.300	103.100
3	13:17:00	90.147%	108.700	108.300	88.283%	101.200	101.300	102.400	103.100
x		89.295%	104.523%	104.448%	87.779%	99.893%	101.059%	101.764%	101.918%
σ		0.835%	n/a	n/a	0.444%	n/a	n/a	n/a	n/a
%RSD		0.935	4.631	3.959	0.506	1.230	0.769	2.825	1.986
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:06	86.897%	99.970	98.790	99.460	101.100	100.100	90.005%	90.683%
2	13:16:33	86.077%	103.800	103.600	103.400	106.000	102.900	90.551%	91.157%
3	13:17:00	86.867%	104.500	103.900	104.600	106.400	104.900	89.292%	90.399%
x		86.614%	102.775%	102.124%	102.513%	104.495%	102.656%	89.949%	90.746%
σ		0.465%	n/a	n/a	n/a	n/a	n/a	0.631%	0.383%
%RSD		0.537	2.388	2.829	2.650	2.785	2.339	0.702	0.422
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:16:06	106.800	103.300	104.800	105.000	104.200	88.445%		
2	13:16:33	110.200	106.700	110.200	109.900	109.600	86.223%		
3	13:17:00	110.300	107.300	112.100	111.100	111.400	86.108%		
x		109.095%	105.766%	109.041%	108.675%	108.411%	86.925%		
σ		n/a	n/a	n/a	n/a	n/a	1.317%		
%RSD		1.795	2.077	3.468	3.009	3.460	1.515		

CCB3 3/2/2015 1:23:06 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:33	97.679%	0.024	0.732	0.791	0.000	1.449	1.037	1.185
2	13:24:00	96.523%	-0.011	1.148	0.802	0.000	1.845	1.383	1.205
3	13:24:26	97.849%	0.036	0.891	0.453	0.000	1.669	1.083	0.907
x		97.350%	0.017	0.924	0.682	0.000	1.655	1.168	1.099
σ		0.721%	0.025	0.210	0.199	0.000	0.198	0.188	0.167
%RSD		0.741	150.300	22.750	29.120	0.000	11.990	16.080	15.180
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:33	-0.380	1.860	0.000	-0.579	4.993	1.364	98.615%	0.089
2	13:24:00	-0.366	-0.060	0.000	-1.257	7.817	0.706	99.486%	-0.051
3	13:24:26	-0.317	-0.951	0.000	0.332	6.526	1.666	98.101%	0.059
x		-0.354	0.283	0.000	-0.501	6.445	1.245	98.734%	0.032
σ		0.033	1.436	0.000	0.797	1.413	0.491	0.700%	0.074
%RSD		9.320	507.700	0.000	159.100	21.930	39.390	0.709	227.600
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:33	0.050	0.021	0.010	4.639	6.042	-0.002	-0.047	0.048
2	13:24:00	0.035	0.029	-0.002	3.938	5.164	0.003	-0.022	0.037
3	13:24:26	0.007	0.014	0.026	2.787	3.508	0.000	-0.037	0.029
x		0.031	0.021	0.011	3.788	4.905	0.001	-0.035	0.038
σ		0.022	0.007	0.014	0.935	1.286	0.003	0.012	0.009
%RSD		71.130	34.640	119.700	24.680	26.230	499.600	35.200	24.490
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:33	0.007	0.048	0.223	0.135	-0.886	1.195	0.000	0.001
2	13:24:00	0.011	0.134	0.090	0.112	0.680	0.916	0.000	0.006
3	13:24:26	0.011	0.099	0.183	0.148	-0.471	1.066	0.000	0.006
x		0.010	0.094	0.165	0.132	-0.226	1.059	0.000	0.005
σ		0.002	0.043	0.068	0.019	0.811	0.140	0.000	0.003
%RSD		23.150	46.210	41.410	14.090	359.600	13.200	0.000	60.850
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:33	93.195%	0.285	0.243	93.636%	-0.001	0.000	-0.050	-0.035
2	13:24:00	93.288%	0.301	0.249	94.348%	-0.002	0.005	-0.072	-0.039
3	13:24:26	93.789%	0.257	0.219	94.046%	0.012	0.000	-0.063	-0.038
x		93.424%	0.281	0.237	94.010%	0.003	0.002	-0.062	-0.038
σ		0.319%	0.022	0.016	0.357%	0.008	0.003	0.011	0.002
%RSD		0.342	7.935	6.806	0.380	252.100	139.400	17.740	5.132
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:33	92.171%	0.071	0.085	0.087	-0.006	0.032	91.671%	91.831%
2	13:24:00	93.630%	0.075	0.088	0.112	0.014	0.019	92.524%	93.300%
3	13:24:26	91.966%	0.126	0.103	0.107	0.010	0.002	94.092%	93.341%
x		92.589%	0.091	0.092	0.102	0.006	0.018	92.762%	92.824%
σ		0.907%	0.031	0.010	0.013	0.011	0.015	1.228%	0.861%
%RSD		0.980	33.950	10.710	12.840	182.000	82.860	1.324	0.927
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:23:33	0.008	0.004	0.019	0.021	0.015	97.989%		
2	13:24:00	0.006	0.006	0.007	0.020	0.016	98.230%		
3	13:24:26	0.006	0.006	0.015	0.030	0.018	95.658%		
x		0.007	0.005	0.014	0.024	0.016	97.292%		
σ		0.001	0.001	0.006	0.006	0.001	1.420%		
%RSD		18.520	15.650	41.780	23.420	8.474	1.460		

180-41484-B-6-A 3/2/2015 1:27:27 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:53	78.461%	-0.009	32.390	35.310	0.000	36330.000	16310.000	16410.000
2	13:28:20	76.571%	0.007	33.160	33.910	0.000	36890.000	17120.000	17190.000
3	13:28:46	76.183%	0.038	32.560	33.740	0.000	36720.000	17160.000	17260.000
x		77.072%	0.012	32.700	34.320	0.000	36650.000	16870.000	16950.000
σ		1.219%	0.024	0.402	0.860	0.000	287.700	478.700	471.700
%RSD		1.581	194.000	1.229	2.507	0.000	0.785	2.838	2.782
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:53	91.520	5883.000	0.000	8405.000	116000.000	114700.000	79.425%	2.413
2	13:28:20	94.080	5400.000	0.000	8471.000	119600.000	119100.000	78.588%	2.263
3	13:28:46	98.420	6035.000	0.000	8473.000	121500.000	121100.000	76.968%	2.469
x		94.670	5773.000	0.000	8450.000	119100.000	118300.000	78.327%	2.381
σ		3.490	331.500	0.000	38.750	2793.000	3241.000	1.249%	0.107
%RSD		3.686	5.742	0.000	0.459	2.346	2.739	1.595	4.474
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:53	0.086	3.763	11.280	233.900	516.900	0.313	-0.296	1.551
2	13:28:20	0.350	3.946	11.670	240.000	522.100	0.325	-0.285	1.398
3	13:28:46	-0.047	3.820	11.720	244.500	518.000	0.299	-0.355	1.499
x		0.130	3.843	11.560	239.500	519.000	0.312	-0.312	1.483
σ		0.202	0.093	0.242	5.312	2.736	0.013	0.037	0.078
%RSD		155.800	2.432	2.091	2.218	0.527	4.183	11.970	5.246
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:53	1.424	12.940	12.390	0.719	0.006	1.868	0.000	236.900
2	13:28:20	1.589	12.840	12.710	-0.600	0.670	0.655	0.000	243.800
3	13:28:46	1.411	12.530	13.250	0.725	-1.245	1.452	0.000	247.000
x		1.474	12.770	12.780	0.281	-0.189	1.325	0.000	242.600
σ		0.099	0.211	0.434	0.763	0.972	0.616	0.000	5.154
%RSD		6.734	1.655	3.393	271.200	513.300	46.510	0.000	2.125
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:53	84.065%	0.648	0.672	83.616%	0.008	0.023	-4.751	-3.200
2	13:28:20	84.636%	0.629	0.628	83.623%	0.027	0.021	-0.098	-0.050
3	13:28:46	84.081%	0.563	0.611	83.770%	0.016	0.014	3.480	2.328
x		84.261%	0.613	0.637	83.670%	0.017	0.020	-0.456	-0.307
σ		0.325%	0.045	0.031	0.087%	0.010	0.005	4.128	2.773
%RSD		0.386	7.279	4.936	0.104	57.420	23.720	904.600	902.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:53	82.951%	0.519	0.286	0.302	51.940	52.780	91.299%	91.344%
2	13:28:20	84.779%	0.539	0.236	0.281	53.620	52.940	91.885%	92.906%
3	13:28:46	84.589%	0.534	0.203	0.245	52.700	53.310	92.043%	92.993%
x		84.107%	0.531	0.242	0.276	52.750	53.010	91.742%	92.415%
σ		1.005%	0.011	0.042	0.029	0.840	0.273	0.392%	0.928%
%RSD		1.195	2.017	17.420	10.420	1.593	0.515	0.427	1.004
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:27:53	0.013	0.007	0.339	0.290	0.331	83.613%		
2	13:28:20	0.014	0.006	0.346	0.346	0.328	86.167%		
3	13:28:46	0.015	0.010	0.346	0.330	0.315	86.292%		
x		0.014	0.007	0.344	0.322	0.325	85.357%		
σ		0.001	0.002	0.004	0.029	0.009	1.512%		
%RSD		9.865	25.350	1.167	8.951	2.674	1.771		

180-41484-B-6-A SD@5 3/2/2015 1:31:44 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:10	86.744%	0.004	6.195	7.029	0.000	7137.000	2981.000	2955.000
2	13:32:37	86.397%	-0.010	6.581	6.846	0.000	7327.000	3118.000	3071.000
3	13:33:03	85.346%	0.018	6.216	6.192	0.000	7367.000	3119.000	3127.000
x		86.162%	0.004	6.331	6.689	0.000	7277.000	3073.000	3051.000
σ		0.728%	0.014	0.217	0.440	0.000	122.700	78.910	88.010
%RSD		0.845	365.800	3.431	6.582	0.000	1.686	2.568	2.885
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:10	13.820	1033.000	0.000	1624.000	25600.000	21390.000	88.928%	0.295
2	13:32:37	14.680	1063.000	0.000	1666.000	26180.000	21820.000	88.761%	0.571
3	13:33:03	15.270	1070.000	0.000	1665.000	22900.000	22170.000	87.167%	0.442
x		14.590	1056.000	0.000	1652.000	24890.000	21800.000	88.285%	0.436
σ		0.731	19.640	0.000	24.120	1752.000	393.900	0.972%	0.138
%RSD		5.011	1.860	0.000	1.460	7.037	1.807	1.101	31.690
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:10	0.056	0.787	2.197	43.680	102.600	0.064	-0.139	0.300
2	13:32:37	0.024	0.807	2.313	44.690	105.300	0.062	-0.184	0.291
3	13:33:03	0.145	0.793	2.256	45.370	106.900	0.045	-0.130	0.340
x		0.075	0.796	2.255	44.580	104.900	0.057	-0.151	0.310
σ		0.062	0.010	0.058	0.854	2.162	0.010	0.029	0.026
%RSD		83.040	1.287	2.567	1.916	2.060	17.830	19.350	8.311
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:10	0.326	2.611	2.982	0.331	0.734	1.148	0.000	45.490
2	13:32:37	0.307	2.626	2.853	-0.226	0.421	0.897	0.000	46.810
3	13:33:03	0.310	2.855	2.642	0.329	0.286	1.370	0.000	46.520
x		0.315	2.697	2.826	0.145	0.480	1.138	0.000	46.270
σ		0.010	0.137	0.172	0.321	0.230	0.237	0.000	0.694
%RSD		3.240	5.061	6.076	221.900	47.880	20.820	0.000	1.499
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:10	88.850%	0.140	0.123	90.346%	0.003	0.001	0.024	0.012
2	13:32:37	89.381%	0.147	0.175	91.707%	0.001	0.004	-0.054	-0.042
3	13:33:03	89.891%	0.144	0.144	91.382%	0.004	0.003	-0.025	-0.020
x		89.374%	0.144	0.148	91.145%	0.003	0.002	-0.018	-0.017
σ		0.520%	0.004	0.026	0.711%	0.001	0.002	0.039	0.028
%RSD		0.582	2.595	17.720	0.780	50.850	60.980	219.000	164.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:10	91.465%	0.014	0.027	0.030	10.070	9.941	94.032%	94.743%
2	13:32:37	89.734%	0.009	0.024	0.055	10.600	10.570	92.943%	95.227%
3	13:33:03	91.116%	0.020	0.023	0.029	10.540	10.650	94.295%	95.699%
x		90.772%	0.014	0.025	0.038	10.400	10.380	93.757%	95.223%
σ		0.915%	0.005	0.002	0.015	0.291	0.387	0.717%	0.478%
%RSD		1.008	35.980	8.742	38.530	2.795	3.727	0.765	0.502
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:32:10	0.002	0.003	0.072	0.059	0.061	95.973%		
2	13:32:37	0.002	0.003	0.056	0.056	0.062	92.557%		
3	13:33:03	0.005	0.000	0.074	0.050	0.057	93.901%		
x		0.003	0.002	0.067	0.055	0.060	94.144%		
σ		0.002	0.002	0.010	0.004	0.003	1.721%		
%RSD		54.870	69.310	14.500	7.917	4.712	1.828		

CRI 1470869 3/2/2015 1:39:05 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	13:39:32	98.302%	1.010	5.643	5.262	0.000	100.300	102.800	100.200
2	13:39:58	97.074%	1.060	4.038	5.926	0.000	105.300	106.000	104.400
3	13:40:25	96.941%	0.954	5.097	5.413	0.000	107.600	112.600	104.300
x		97.439%	100.829%	98.523%	110.674%	0.000	130.516%	107.152%	102.977%
σ		0.751%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.770	5.281	16.560	6.293	0.000	3.593	4.669	2.365
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:32	27.710	485.300	0.000	95.700	98.740	89.500	100.243%	4.380
2	13:39:58	29.310	504.400	0.000	101.000	111.500	98.430	97.981%	5.462
3	13:40:25	29.870	508.700	0.000	101.800	134.900	103.000	97.031%	4.783
x		96.553%	99.886%	0.000	99.492%	115.045%	96.962%	98.418%	97.502%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.650%	n/a
%RSD		3.874	2.491	0.000	3.319	15.960	7.064	1.677	11.220
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:32	0.865	1.917	4.751	46.730	51.810	0.485	1.069	2.107
2	13:39:58	1.054	1.988	5.001	49.420	54.060	0.547	1.183	2.183
3	13:40:25	0.901	2.118	4.995	50.590	50.830	0.497	1.144	2.235
x		93.982%	100.394%	98.317%	97.832%	104.467%	101.942%	113.178%	108.751%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		10.670	5.077	2.897	4.050	3.170	6.503	5.129	2.972
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:32	2.090	5.175	5.017	1.088	4.927	5.748	0.000	4.752
2	13:39:58	2.205	5.292	5.170	1.289	4.740	6.052	0.000	4.753
3	13:40:25	2.214	5.317	5.448	1.214	5.639	5.614	0.000	4.827
x		108.490%	105.226%	104.234%	119.680%	102.037%	116.089%	0.000	95.547%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.175	1.437	4.192	8.475	9.302	3.869	0.000	0.908
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:32	91.383%	4.703	4.576	92.859%	0.956	0.943	0.959	0.932
2	13:39:58	92.289%	4.941	4.814	93.683%	1.019	0.957	0.836	1.013
3	13:40:25	93.679%	4.903	4.965	93.226%	1.045	0.980	1.029	0.931
x		92.451%	96.978%	95.702%	93.256%	100.685%	96.013%	94.126%	95.847%
σ		1.157%	n/a	n/a	0.413%	n/a	n/a	n/a	n/a
%RSD		1.251	2.629	4.101	0.443	4.537	1.934	10.420	4.901
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:32	91.347%	4.484	1.836	1.845	9.979	9.339	89.823%	91.643%
2	13:39:58	90.147%	4.752	1.890	1.991	9.864	10.010	91.492%	92.926%
3	13:40:25	91.922%	4.822	1.929	1.983	9.424	9.788	92.710%	93.024%
x		91.139%	93.724%	94.241%	96.983%	97.555%	97.125%	91.342%	92.531%
σ		0.905%	n/a	n/a	n/a	n/a	n/a	1.449%	0.770%
%RSD		0.993	3.808	2.486	4.244	3.003	3.517	1.586	0.833
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:39:32	0.985	0.929	0.967	0.956	0.955	96.712%		
2	13:39:58	1.008	0.954	1.131	0.991	1.025	93.369%		
3	13:40:25	1.013	0.958	1.060	0.950	1.005	94.447%		
x		100.186%	94.679%	105.278%	96.570%	99.474%	94.843%		
σ		n/a	n/a	n/a	n/a	n/a	1.706%		
%RSD		1.512	1.681	7.818	2.305	3.639	1.799		

MB 180-134291/1-A 3/2/2015 1:43:22 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	13:43:49	98.130%	-0.023	0.169	0.450	0.000	-1.994	0.053	-0.029
2	13:44:16	98.200%	-0.011	0.249	0.393	0.000	-1.791	-0.075	0.041
3	13:44:42	98.324%	0.000	0.168	0.485	0.000	-1.944	0.179	-0.188
x		98.218%	-0.012	0.195	0.443	0.000	-1.910	0.052	-0.059
σ		0.098%	0.012	0.046	0.046	0.000	0.106	0.127	0.118
%RSD		0.100	103.400	23.640	10.450	0.000	5.541	242.900	199.700
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:49	-0.555	2.398	0.000	-2.032	0.581	0.944	98.709%	-0.004
2	13:44:16	-0.603	0.156	0.000	-1.448	0.592	-1.166	98.547%	-0.004
3	13:44:42	-0.613	-0.771	0.000	-1.359	7.878	-0.548	98.946%	-0.051
x		-0.590	0.595	0.000	-1.613	3.017	-0.257	98.734%	-0.020
σ		0.031	1.630	0.000	0.365	4.210	1.085	0.201%	0.027
%RSD		5.280	274.100	0.000	22.650	139.500	422.900	0.203	137.100
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:49	-0.005	0.031	-0.007	-0.586	1.010	0.002	-0.042	0.004
2	13:44:16	0.002	0.003	-0.029	-1.036	0.993	0.000	-0.072	-0.025
3	13:44:42	0.002	0.003	-0.029	-1.772	-1.855	-0.007	-0.057	-0.046
x		-0.000	0.012	-0.022	-1.131	0.049	-0.002	-0.057	-0.022
σ		0.004	0.016	0.013	0.599	1.649	0.005	0.015	0.025
%RSD		1171.000	131.500	60.270	52.900	3344.000	309.000	26.530	114.300
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:49	0.003	0.070	0.058	0.021	-0.099	0.209	0.000	-0.000
2	13:44:16	-0.011	0.008	0.101	0.170	0.969	1.015	0.000	-0.005
3	13:44:42	0.014	-0.045	0.067	0.207	0.742	1.098	0.000	-0.003
x		0.002	0.011	0.075	0.132	0.537	0.774	0.000	-0.003
σ		0.012	0.058	0.023	0.099	0.563	0.492	0.000	0.002
%RSD		626.600	519.200	30.420	74.470	104.700	63.500	0.000	86.040
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:49	93.490%	0.042	0.058	94.168%	-0.011	-0.002	-0.031	-0.022
2	13:44:16	94.551%	0.042	0.039	95.230%	-0.005	-0.002	-0.036	-0.022
3	13:44:42	95.046%	0.047	0.044	95.525%	0.002	-0.000	-0.059	-0.031
x		94.362%	0.044	0.047	94.974%	-0.005	-0.001	-0.042	-0.025
σ		0.795%	0.003	0.010	0.714%	0.006	0.001	0.015	0.005
%RSD		0.842	6.755	20.500	0.752	134.400	79.900	35.820	20.290
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:49	92.440%	0.066	0.004	-0.000	0.002	-0.000	93.951%	93.396%
2	13:44:16	93.651%	0.040	-0.006	0.003	-0.007	-0.012	94.831%	94.630%
3	13:44:42	94.382%	0.040	0.003	0.001	0.001	-0.000	94.324%	95.560%
x		93.491%	0.049	0.001	0.001	-0.001	-0.004	94.369%	94.529%
σ		0.981%	0.015	0.005	0.002	0.005	0.007	0.442%	1.085%
%RSD		1.049	30.560	995.600	142.500	398.200	166.600	0.468	1.148
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:43:49	0.000	-0.000	0.004	-0.001	-0.000	98.618%		
2	13:44:16	0.001	0.000	0.001	0.002	0.004	97.486%		
3	13:44:42	0.003	0.001	0.007	-0.002	0.005	99.849%		
x		0.001	0.000	0.004	-0.000	0.003	98.651%		
σ		0.001	0.001	0.003	0.002	0.003	1.182%		
%RSD		118.600	388.200	78.580	716.900	96.340	1.198		

LCS 180-134291/2-A 3/2/2015 1:47:40 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	13:48:06	81.503%	45.590	916.200	922.000	0.000	45440.000	44310.000	44460.000
2	13:48:33	82.057%	44.170	917.000	927.300	0.000	45300.000	45400.000	45570.000
3	13:48:59	79.688%	45.310	920.100	952.200	0.000	45960.000	46290.000	46150.000
x		81.083%	45.020	917.800	933.800	0.000	45570.000	45330.000	45390.000
σ		1.239%	0.751	2.031	16.130	0.000	345.200	991.300	857.900
%RSD		1.529	1.669	0.221	1.727	0.000	0.758	2.187	1.890

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:06	1816.000	9191.000	0.000	45390.000	43470.000	44320.000	86.662%	879.000
2	13:48:33	1857.000	9315.000	0.000	46110.000	45290.000	45970.000	84.621%	918.500
3	13:48:59	1885.000	9449.000	0.000	46290.000	45340.000	46310.000	85.393%	918.600
x		1852.000	9319.000	0.000	45930.000	44700.000	45530.000	85.559%	905.400
σ		34.880	129.200	0.000	480.100	1067.000	1066.000	1.031%	22.830
%RSD		1.883	1.387	0.000	1.045	2.386	2.340	1.204	2.522

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:06	443.500	174.800	449.400	928.200	977.900	451.600	455.900	225.800
2	13:48:33	459.600	181.000	465.100	962.000	1010.000	462.700	464.100	231.700
3	13:48:59	459.300	180.800	464.500	969.700	985.100	463.900	464.200	231.100
x		454.100	178.800	459.700	953.300	990.900	459.400	461.400	229.600
σ		9.191	3.531	8.875	22.080	16.680	6.752	4.756	3.257
%RSD		2.024	1.975	1.931	2.317	1.683	1.470	1.031	1.419

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:06	230.800	450.300	446.300	35.770	8.596	11.410	0.000	910.400
2	13:48:33	233.500	460.700	457.700	36.900	8.955	12.390	0.000	922.200
3	13:48:59	235.600	466.000	458.400	37.350	8.930	11.390	0.000	927.000
x		233.300	459.000	454.200	36.680	8.827	11.730	0.000	919.900
σ		2.393	7.985	6.817	0.814	0.201	0.572	0.000	8.551
%RSD		1.026	1.739	1.501	2.218	2.274	4.872	0.000	0.930

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:06	83.999%	829.200	845.600	84.307%	44.230	45.330	44.970	37.240
2	13:48:33	84.219%	884.700	909.200	84.015%	44.760	44.870	46.810	38.080
3	13:48:59	84.502%	925.800	944.800	84.619%	44.340	45.400	46.550	38.890
x		84.240%	879.900	899.900	84.314%	44.440	45.200	46.110	38.070
σ		0.252%	48.470	50.270	0.302%	0.280	0.286	0.996	0.826
%RSD		0.299	5.509	5.587	0.358	0.630	0.632	2.159	2.169

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:06	81.426%	1917.000	479.900	475.300	1862.000	1918.000	86.913%	87.693%
2	13:48:33	82.013%	1938.000	487.000	480.200	1889.000	1967.000	87.587%	89.286%
3	13:48:59	82.127%	1946.000	484.100	479.900	1907.000	1959.000	87.889%	89.022%
x		81.855%	1934.000	483.700	478.500	1886.000	1948.000	87.463%	88.667%
σ		0.376%	14.790	3.569	2.728	22.430	25.920	0.500%	0.854%
%RSD		0.460	0.765	0.738	0.570	1.189	1.330	0.571	0.963

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:06	38.840	37.170	16.760	16.700	16.600	97.971%
2	13:48:33	43.810	42.400	18.640	18.380	18.270	90.708%
3	13:48:59	46.190	44.280	19.100	19.090	18.940	87.556%
x		42.950	41.280	18.170	18.060	17.940	92.078%
σ		3.749	3.686	1.240	1.228	1.202	5.341%
%RSD		8.730	8.928	6.827	6.798	6.700	5.801

LCSD 180-134291/3-A 3/2/2015 1:51:58 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	13:52:24	79.103%	43.800	874.000	892.600	0.000	43250.000	42570.000	42590.000
2	13:52:50	78.871%	44.640	867.000	896.700	0.000	43960.000	43850.000	44020.000
3	13:53:17	76.766%	45.990	922.000	914.200	0.000	44500.000	44500.000	44640.000
x		78.246%	44.810	887.700	901.200	0.000	43900.000	43640.000	43750.000
σ		1.288%	1.104	29.910	11.470	0.000	625.800	977.400	1051.000
%RSD		1.646	2.464	3.369	1.273	0.000	1.425	2.240	2.403

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:24	1738.000	8864.000	0.000	44000.000	42590.000	42290.000	82.727%	858.200
2	13:52:50	1784.000	9009.000	0.000	44440.000	44150.000	43720.000	81.559%	885.000
3	13:53:17	1798.000	9100.000	0.000	44590.000	44230.000	44040.000	80.545%	883.000
x		1773.000	8991.000	0.000	44340.000	43660.000	43350.000	81.611%	875.400
σ		31.530	119.000	0.000	305.200	925.200	931.700	1.092%	14.950
%RSD		1.778	1.324	0.000	0.688	2.119	2.149	1.338	1.708

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:24	429.400	168.600	437.000	908.500	958.300	440.000	439.000	221.300
2	13:52:50	445.300	175.700	451.000	939.200	977.600	449.600	448.800	225.500
3	13:53:17	448.200	176.600	451.500	948.800	989.100	452.000	452.900	226.500
x		441.000	173.600	446.500	932.200	975.000	447.200	446.900	224.400
σ		10.170	4.408	8.243	21.010	15.550	6.382	7.170	2.745
%RSD		2.306	2.539	1.846	2.254	1.595	1.427	1.604	1.223

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:24	222.800	439.600	440.200	35.980	10.240	12.440	0.000	887.900
2	13:52:50	228.800	449.200	450.500	35.700	9.768	11.920	0.000	905.800
3	13:53:17	229.400	453.200	449.000	36.360	9.402	11.700	0.000	903.300
x		227.000	447.400	446.600	36.010	9.804	12.020	0.000	899.000
σ		3.659	7.004	5.573	0.330	0.421	0.383	0.000	9.667
%RSD		1.612	1.566	1.248	0.916	4.290	3.183	0.000	1.075

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:24	79.453%	817.500	830.100	81.113%	43.090	43.870	47.380	37.900
2	13:52:50	79.708%	876.300	892.500	81.187%	43.490	43.820	44.910	35.980
3	13:53:17	80.202%	908.500	924.900	81.115%	43.180	43.860	43.800	37.130
x		79.788%	867.400	882.500	81.138%	43.250	43.850	45.360	37.010
σ		0.381%	46.100	48.180	0.042%	0.213	0.023	1.835	0.968
%RSD		0.478	5.315	5.459	0.052	0.493	0.054	4.045	2.617

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:24	78.180%	1873.000	463.200	458.600	1808.000	1859.000	83.236%	84.497%
2	13:52:50	78.252%	1913.000	473.500	469.000	1846.000	1905.000	85.161%	86.014%
3	13:53:17	79.269%	1895.000	469.500	462.600	1840.000	1889.000	84.407%	85.860%
x		78.567%	1894.000	468.700	463.400	1831.000	1884.000	84.268%	85.457%
σ		0.609%	20.290	5.174	5.264	20.370	23.220	0.970%	0.835%
%RSD		0.775	1.071	1.104	1.136	1.112	1.232	1.151	0.977

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:24	40.200	38.590	17.650	17.300	17.360	86.868%
2	13:52:50	44.270	42.520	18.780	18.530	18.450	83.806%
3	13:53:17	46.320	44.450	19.280	19.130	19.030	81.800%
x		43.600	41.850	18.570	18.320	18.280	84.158%
σ		3.111	2.989	0.837	0.936	0.844	2.552%
%RSD		7.137	7.141	4.505	5.109	4.616	3.033

180-41503-C-3-A 3/2/2015 1:56:15 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:42	78.693%	0.006	126.100	122.200	0.000	82550.000	17590.000	17670.000
2	13:57:09	77.201%	0.022	118.400	123.800	0.000	83040.000	17970.000	18300.000
3	13:57:35	78.295%	0.051	117.700	117.400	0.000	82830.000	18110.000	18230.000
x		78.063%	0.026	120.700	121.100	0.000	82810.000	17890.000	18070.000
σ		0.773%	0.023	4.665	3.306	0.000	246.500	270.900	343.200
%RSD		0.990	86.250	3.864	2.729	0.000	0.298	1.514	1.900
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:42	61.720	5006.000	0.000	2372.000	184800.000	181600.000	82.116%	25.500
2	13:57:09	63.870	5105.000	0.000	2390.000	190800.000	189500.000	80.182%	27.340
3	13:57:35	62.680	5111.000	0.000	2399.000	192800.000	191100.000	79.757%	26.200
x		62.760	5074.000	0.000	2387.000	189500.000	187400.000	80.685%	26.350
σ		1.077	58.720	0.000	13.610	4194.000	5094.000	1.258%	0.932
%RSD		1.716	1.157	0.000	0.570	2.213	2.718	1.559	3.536
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:42	1.448	0.818	27.420	195.300	686.300	0.533	5.160	2.570
2	13:57:09	1.770	0.836	27.940	201.700	693.600	0.558	5.173	2.556
3	13:57:35	1.662	0.876	28.500	202.700	681.900	0.493	5.241	2.546
x		1.627	0.843	27.950	199.900	687.300	0.528	5.191	2.557
σ		0.164	0.029	0.542	4.020	5.904	0.033	0.044	0.012
%RSD		10.070	3.471	1.937	2.011	0.859	6.171	0.840	0.460
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:42	2.535	5.786	5.775	1.975	1.121	2.524	0.000	256.900
2	13:57:09	2.420	5.845	5.358	2.186	1.503	2.648	0.000	262.100
3	13:57:35	2.501	5.889	5.514	1.848	0.006	3.023	0.000	263.900
x		2.485	5.840	5.549	2.003	0.877	2.732	0.000	260.900
σ		0.059	0.052	0.211	0.171	0.778	0.259	0.000	3.625
%RSD		2.392	0.885	3.794	8.526	88.690	9.495	0.000	1.389
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:42	82.943%	18.180	18.650	83.472%	0.005	0.007	5.614	3.798
2	13:57:09	83.016%	15.480	15.590	82.843%	0.011	0.005	0.022	0.012
3	13:57:35	82.753%	13.320	13.220	83.000%	-0.000	-0.004	0.006	-0.008
x		82.904%	15.660	15.820	83.105%	0.005	0.003	1.881	1.267
σ		0.136%	2.434	2.719	0.327%	0.006	0.006	3.233	2.192
%RSD		0.164	15.540	17.190	0.394	112.300	194.000	171.900	173.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:42	83.093%	5.692	0.126	0.115	12.260	12.210	87.792%	89.439%
2	13:57:09	83.871%	5.110	0.150	0.160	12.760	12.490	89.102%	90.197%
3	13:57:35	83.554%	4.474	0.120	0.131	12.800	12.270	89.525%	90.872%
x		83.506%	5.092	0.132	0.135	12.610	12.320	88.806%	90.169%
σ		0.391%	0.610	0.016	0.023	0.299	0.148	0.904%	0.717%
%RSD		0.468	11.970	11.940	16.810	2.375	1.198	1.018	0.795
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:56:42	0.394	0.392	0.385	0.374	0.364	91.661%		
2	13:57:09	0.206	0.199	0.416	0.367	0.383	89.020%		
3	13:57:35	0.122	0.116	0.419	0.408	0.385	87.590%		
x		0.241	0.236	0.407	0.383	0.378	89.424%		
σ		0.139	0.141	0.019	0.022	0.012	2.065%		
%RSD		57.850	60.040	4.656	5.688	3.082	2.310		

180-41504-A-3-A 3/2/2015 2:00:33 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	14:00:59	82.873%	0.061	36.110	38.870	0.000	39210.000	7491.000	7476.000
2	14:01:26	81.841%	0.062	37.340	38.480	0.000	39550.000	7697.000	7685.000
3	14:01:52	80.627%	-0.023	38.160	39.460	0.000	40100.000	7801.000	7809.000
x		81.780%	0.033	37.200	38.940	0.000	39620.000	7663.000	7657.000
σ		1.124%	0.049	1.033	0.497	0.000	447.900	158.200	167.800
%RSD		1.375	147.300	2.777	1.276	0.000	1.131	2.064	2.192
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:59	47.770	2360.000	0.000	1689.000	28350.000	27510.000	83.792%	0.208
2	14:01:26	48.880	2402.000	0.000	1643.000	28800.000	28360.000	82.598%	0.433
3	14:01:52	49.600	2413.000	0.000	1639.000	29210.000	28570.000	82.238%	0.287
x		48.750	2392.000	0.000	1657.000	28780.000	28150.000	82.876%	0.309
σ		0.918	27.830	0.000	27.630	427.600	561.700	0.813%	0.115
%RSD		1.883	1.163	0.000	1.667	1.486	1.995	0.981	37.080
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:59	-0.139	0.261	73.010	116.900	189.400	0.483	3.064	3.819
2	14:01:26	-0.167	0.281	74.680	121.100	196.800	0.447	3.262	3.939
3	14:01:52	0.008	0.206	75.090	119.600	194.900	0.454	3.105	4.157
x		-0.099	0.249	74.260	119.200	193.700	0.461	3.144	3.972
σ		0.094	0.039	1.100	2.150	3.841	0.019	0.105	0.172
%RSD		94.690	15.650	1.481	1.804	1.983	4.204	3.337	4.317
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:59	3.803	11.020	10.560	-0.052	-0.151	0.495	0.000	144.400
2	14:01:26	3.971	10.960	11.330	0.433	1.059	0.315	0.000	149.800
3	14:01:52	4.059	10.640	10.720	-0.011	0.294	-0.266	0.000	147.500
x		3.945	10.870	10.870	0.124	0.401	0.181	0.000	147.200
σ		0.130	0.205	0.407	0.269	0.612	0.398	0.000	2.705
%RSD		3.293	1.888	3.747	217.400	152.800	219.700	0.000	1.838
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:59	84.621%	2.864	2.802	85.607%	-0.010	-0.013	0.018	0.008
2	14:01:26	84.195%	2.847	2.872	85.819%	-0.006	0.001	-0.007	-0.017
3	14:01:52	85.077%	2.740	3.048	85.838%	-0.008	0.001	-0.128	-0.072
x		84.631%	2.817	2.907	85.755%	-0.008	-0.004	-0.039	-0.027
σ		0.441%	0.067	0.126	0.128%	0.002	0.008	0.078	0.041
%RSD		0.521	2.382	4.347	0.149	23.440	220.200	198.800	152.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:59	85.296%	1.625	0.042	0.054	35.640	35.710	91.334%	91.203%
2	14:01:26	87.124%	1.607	0.053	0.080	36.210	36.350	90.549%	92.809%
3	14:01:52	86.551%	1.723	0.033	0.066	36.240	36.200	92.058%	92.466%
x		86.324%	1.652	0.043	0.067	36.030	36.090	91.314%	92.159%
σ		0.935%	0.062	0.010	0.013	0.340	0.331	0.755%	0.846%
%RSD		1.083	3.773	22.420	19.300	0.943	0.918	0.826	0.918
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:00:59	0.033	0.027	0.399	0.354	0.382	96.542%		
2	14:01:26	0.028	0.026	0.452	0.398	0.419	96.063%		
3	14:01:52	0.027	0.023	0.429	0.410	0.416	95.148%		
x		0.030	0.025	0.427	0.387	0.406	95.918%		
σ		0.003	0.002	0.027	0.029	0.020	0.708%		
%RSD		11.110	9.701	6.302	7.500	5.014	0.739		

180-41504-B-4-A 3/2/2015 2:04:47 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	14:05:13	81.008%	-0.009	33.400	38.180	0.000	40880.000	6982.000	6971.000
2	14:05:40	82.173%	0.005	32.350	36.240	0.000	41090.000	7122.000	7126.000
3	14:06:07	79.070%	0.080	34.250	37.890	0.000	42010.000	7365.000	7336.000
x		80.750%	0.025	33.330	37.440	0.000	41330.000	7156.000	7144.000
σ		1.567%	0.048	0.953	1.049	0.000	604.300	194.100	183.300
%RSD		1.941	188.700	2.859	2.801	0.000	1.462	2.713	2.566
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:13	86.630	2269.000	0.000	1553.000	25660.000	24870.000	83.904%	0.974
2	14:05:40	88.770	2313.000	0.000	1563.000	26900.000	26430.000	82.631%	0.785
3	14:06:07	91.780	2354.000	0.000	1599.000	27440.000	26620.000	81.340%	0.610
x		89.060	2312.000	0.000	1572.000	26670.000	25970.000	82.625%	0.789
σ		2.588	42.770	0.000	24.030	913.100	962.700	1.282%	0.182
%RSD		2.906	1.850	0.000	1.529	3.424	3.706	1.552	23.050
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:13	0.204	0.333	107.500	264.600	325.700	0.858	3.119	2.224
2	14:05:40	0.086	0.229	111.200	275.700	338.000	0.848	3.292	2.345
3	14:06:07	0.060	0.282	112.800	281.800	336.600	0.900	2.919	2.326
x		0.117	0.282	110.500	274.000	333.400	0.868	3.110	2.298
σ		0.076	0.052	2.697	8.713	6.741	0.028	0.187	0.065
%RSD		65.660	18.450	2.441	3.180	2.022	3.167	6.003	2.837
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:13	2.133	6.109	6.228	0.314	0.502	0.217	0.000	134.900
2	14:05:40	2.219	6.140	5.837	0.229	-0.740	0.709	0.000	137.800
3	14:06:07	2.248	6.354	6.409	0.208	-0.715	0.269	0.000	137.900
x		2.200	6.201	6.158	0.250	-0.318	0.399	0.000	136.800
σ		0.060	0.133	0.292	0.056	0.710	0.271	0.000	1.701
%RSD		2.728	2.152	4.748	22.520	223.200	67.910	0.000	1.243
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:13	83.365%	1.502	1.582	85.808%	-0.009	-0.004	5.503	3.738
2	14:05:40	84.238%	1.650	1.680	85.009%	-0.007	-0.012	-0.077	-0.051
3	14:06:07	84.762%	1.563	1.600	85.915%	-0.010	0.003	-0.038	-0.000
x		84.122%	1.572	1.621	85.577%	-0.009	-0.004	1.796	1.229
σ		0.706%	0.075	0.053	0.495%	0.002	0.008	3.210	2.173
%RSD		0.839	4.740	3.241	0.579	18.030	183.800	178.800	176.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:13	84.419%	0.762	0.050	0.050	34.720	34.900	88.622%	91.121%
2	14:05:40	85.281%	0.762	0.065	0.064	35.660	35.260	90.625%	91.612%
3	14:06:07	84.756%	0.839	0.066	0.041	35.660	35.580	91.052%	91.687%
x		84.819%	0.788	0.060	0.051	35.350	35.250	90.100%	91.473%
σ		0.434%	0.044	0.009	0.011	0.545	0.338	1.298%	0.308%
%RSD		0.512	5.649	14.460	22.090	1.543	0.960	1.440	0.336
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:05:13	0.012	0.016	0.238	0.198	0.210	95.906%		
2	14:05:40	0.019	0.018	0.209	0.211	0.213	94.387%		
3	14:06:07	0.019	0.022	0.250	0.243	0.233	89.692%		
x		0.017	0.019	0.233	0.217	0.219	93.329%		
σ		0.004	0.003	0.021	0.023	0.013	3.239%		
%RSD		25.340	14.440	8.929	10.530	5.810	3.471		

180-41504-B-4-A SD@5 3/2/2015 2:09:02 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	87.289%	0.003	9.030	8.113	0.000	8112.000	1338.000	1325.000
2	14:09:54	86.605%	0.044	7.387	7.963	0.000	8205.000	1379.000	1375.000
3	14:10:20	85.952%	0.045	8.534	7.980	0.000	8218.000	1389.000	1377.000
x		86.615%	0.031	8.317	8.019	0.000	8178.000	1369.000	1359.000
σ		0.669%	0.024	0.843	0.082	0.000	57.910	27.300	29.360
%RSD		0.772	77.020	10.130	1.026	0.000	0.708	1.994	2.161

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	16.280	428.700	0.000	285.500	5156.000	4837.000	87.708%	0.283
2	14:09:54	17.990	432.800	0.000	289.300	5351.000	4938.000	87.556%	0.108
3	14:10:20	17.390	440.900	0.000	292.700	5382.000	4982.000	87.209%	0.179
x		17.220	434.100	0.000	289.200	5296.000	4919.000	87.491%	0.190
σ		0.869	6.198	0.000	3.602	122.200	74.180	0.256%	0.088
%RSD		5.049	1.428	0.000	1.246	2.308	1.508	0.292	46.100

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	0.066	0.056	21.160	55.180	68.540	0.167	0.646	0.555
2	14:09:54	0.124	0.063	21.620	56.060	67.570	0.165	0.520	0.506
3	14:10:20	0.057	0.089	22.210	54.570	69.230	0.219	0.521	0.450
x		0.082	0.069	21.670	55.270	68.450	0.184	0.562	0.504
σ		0.036	0.018	0.527	0.748	0.830	0.031	0.073	0.053
%RSD		43.710	25.570	2.431	1.354	1.213	16.620	12.900	10.520

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	0.525	1.283	1.174	0.184	-0.192	1.155	0.000	26.560
2	14:09:54	0.509	1.073	1.223	0.384	0.322	1.473	0.000	26.880
3	14:10:20	0.426	1.179	1.301	0.157	1.106	0.937	0.000	26.770
x		0.487	1.178	1.233	0.242	0.412	1.188	0.000	26.740
σ		0.054	0.105	0.064	0.124	0.654	0.270	0.000	0.164
%RSD		11.010	8.907	5.171	51.380	158.500	22.670	0.000	0.614

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	87.026%	0.563	0.523	89.398%	-0.001	-0.003	0.005	0.019
2	14:09:54	87.760%	0.524	0.620	90.569%	-0.010	-0.003	-0.045	-0.048
3	14:10:20	88.263%	0.639	0.637	91.071%	-0.009	-0.005	-0.069	-0.049
x		87.683%	0.575	0.593	90.346%	-0.007	-0.004	-0.037	-0.026
σ		0.622%	0.059	0.062	0.858%	0.005	0.001	0.038	0.039
%RSD		0.709	10.210	10.380	0.950	71.820	34.450	103.100	150.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	89.300%	0.457	0.001	0.004	7.094	7.017	91.110%	92.121%
2	14:09:54	89.791%	0.484	0.010	0.005	6.991	6.873	92.341%	93.788%
3	14:10:20	89.662%	0.509	0.004	0.009	7.126	7.089	93.742%	94.436%
x		89.584%	0.483	0.005	0.006	7.070	6.993	92.398%	93.448%
σ		0.255%	0.026	0.005	0.003	0.070	0.110	1.317%	1.194%
%RSD		0.284	5.362	95.450	48.860	0.995	1.575	1.426	1.278

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:28	0.014	0.007	0.039	0.059	0.042	98.599%
2	14:09:54	0.011	0.006	0.052	0.040	0.039	99.106%
3	14:10:20	0.009	0.009	0.051	0.030	0.033	97.168%
x		0.011	0.007	0.047	0.043	0.038	98.291%
σ		0.002	0.002	0.007	0.014	0.005	1.005%
%RSD		21.840	22.520	15.410	33.680	13.040	1.023

CCV 1487954 3/2/2015 2:13:17 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	14:13:43	84.170%	97.250	89.690	98.810	0.000	46490.000	46110.000	46190.000
2	14:14:09	83.129%	99.830	101.900	99.490	0.000	47920.000	48050.000	48100.000
3	14:14:36	85.291%	96.830	99.470	95.090	0.000	47190.000	47740.000	47760.000
x		84.197%	97.968%	97.020%	97.800%	0.000	94.398%	94.596%	94.698%
σ		1.081%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.284	1.658	6.661	2.422	0.000	1.515	2.208	2.152
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:43	447.500	5357.000	0.000	47240.000	46060.000	46330.000	88.180%	92.090
2	14:14:09	463.100	5461.000	0.000	47840.000	46750.000	48310.000	87.662%	94.910
3	14:14:36	462.600	4883.000	0.000	48080.000	47020.000	48400.000	86.802%	98.100
x		91.549%	104.673%	0.000	95.439%	93.223%	95.364%	87.548%	95.030%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.696%	n/a
%RSD		1.941	5.894	0.000	0.908	1.065	2.453	0.795	3.163
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:43	90.350	90.910	476.900	23280.000	23780.000	91.830	92.110	93.870
2	14:14:09	91.790	93.430	488.000	24050.000	24690.000	94.960	96.450	95.500
3	14:14:36	94.260	95.820	495.600	24300.000	24910.000	94.930	96.170	96.760
x		92.133%	93.387%	97.368%	95.503%	97.833%	93.904%	94.910%	95.377%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.145	2.625	1.930	2.233	2.445	1.916	2.557	1.522
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:43	95.550	93.040	94.240	95.100	93.160	97.450	0.000	90.430
2	14:14:09	96.250	96.990	96.460	95.570	94.980	97.670	0.000	92.700
3	14:14:36	98.620	96.170	95.320	96.840	92.990	100.400	0.000	93.620
x		96.808%	95.403%	95.336%	95.835%	93.710%	98.495%	0.000	92.251%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.660	2.185	1.165	0.936	1.181	1.654	0.000	1.782
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:43	85.243%	90.210	89.990	84.547%	90.770	91.550	91.720	91.680
2	14:14:09	85.514%	94.280	95.060	84.342%	91.300	92.760	94.760	94.540
3	14:14:36	85.292%	97.600	97.230	85.156%	91.710	92.310	98.870	96.340
x		85.350%	94.029%	94.093%	84.682%	91.260%	92.207%	95.118%	94.188%
σ		0.145%	n/a	n/a	0.424%	n/a	n/a	n/a	n/a
%RSD		0.169	3.938	3.950	0.500	0.514	0.660	3.770	2.491
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:43	83.877%	91.060	91.030	90.650	90.030	92.680	88.623%	89.735%
2	14:14:09	84.592%	93.710	93.010	92.640	93.750	92.560	89.153%	89.514%
3	14:14:36	84.389%	94.880	94.070	93.730	93.780	95.160	88.938%	90.705%
x		84.286%	93.220%	92.704%	92.339%	92.516%	93.471%	88.905%	89.985%
σ		0.368%	n/a	n/a	n/a	n/a	n/a	0.267%	0.633%
%RSD		0.437	2.098	1.664	1.689	2.331	1.571	0.300	0.704
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:13:43	92.570	89.250	91.220	91.540	91.270	93.003%		
2	14:14:09	94.890	92.250	94.660	95.660	94.610	91.977%		
3	14:14:36	95.920	93.010	96.790	96.960	96.460	90.414%		
x		94.457%	91.506%	94.225%	94.716%	94.114%	91.798%		
σ		n/a	n/a	n/a	n/a	n/a	1.304%		
%RSD		1.816	2.173	2.984	2.988	2.795	1.420		

CCB4 3/2/2015 2:20:43 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	14:21:09	89.827%	0.003	0.755	0.775	0.000	5.037	1.172	1.205
2	14:21:36	89.105%	0.003	1.555	0.991	0.000	5.086	1.239	1.284
3	14:22:02	89.952%	0.042	0.582	0.856	0.000	4.803	1.785	1.311
x		89.628%	0.016	0.964	0.874	0.000	4.975	1.399	1.267
σ		0.457%	0.022	0.519	0.109	0.000	0.151	0.336	0.055
%RSD		0.510	143.200	53.850	12.480	0.000	3.041	24.050	4.355
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:09	-0.243	2.805	0.000	-0.989	-2.017	1.039	91.803%	0.034
2	14:21:36	-0.248	0.064	0.000	0.173	2.846	-0.596	90.537%	0.086
3	14:22:02	-0.220	-0.661	0.000	-3.204	2.828	1.434	90.676%	-0.016
x		-0.237	0.736	0.000	-1.340	1.219	0.625	91.005%	0.035
σ		0.015	1.828	0.000	1.716	2.803	1.076	0.694%	0.051
%RSD		6.173	248.400	0.000	128.000	229.900	172.000	0.763	146.300
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:09	0.017	0.023	0.024	3.739	4.100	-0.001	-0.032	-0.010
2	14:21:36	0.027	0.045	0.026	2.875	4.586	0.007	-0.058	0.019
3	14:22:02	0.015	-0.010	-0.003	1.747	2.532	0.019	-0.032	0.004
x		0.019	0.019	0.016	2.787	3.739	0.008	-0.041	0.004
σ		0.006	0.028	0.016	0.999	1.074	0.010	0.015	0.015
%RSD		33.120	144.800	105.000	35.840	28.710	120.200	37.880	339.400
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:09	0.066	0.101	0.105	-0.137	0.063	-0.807	0.000	0.005
2	14:21:36	0.022	0.004	0.044	-0.147	0.313	-0.428	0.000	0.004
3	14:22:02	0.012	0.157	0.092	-0.263	0.529	-1.631	0.000	0.002
x		0.033	0.087	0.080	-0.182	0.302	-0.955	0.000	0.004
σ		0.029	0.077	0.032	0.070	0.233	0.615	0.000	0.001
%RSD		85.610	89.080	39.910	38.550	77.200	64.400	0.000	36.470
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:09	88.750%	0.324	0.310	91.513%	-0.004	0.002	-0.057	-0.037
2	14:21:36	89.130%	0.334	0.354	92.168%	-0.006	0.001	-0.072	-0.052
3	14:22:02	89.503%	0.380	0.345	92.737%	0.007	-0.001	-0.077	-0.058
x		89.128%	0.346	0.336	92.140%	-0.001	0.000	-0.069	-0.049
σ		0.377%	0.030	0.023	0.612%	0.007	0.002	0.010	0.011
%RSD		0.423	8.676	6.913	0.665	591.300	339.800	15.140	22.640
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:09	89.476%	0.282	0.065	0.091	0.016	0.018	91.212%	92.558%
2	14:21:36	90.479%	0.260	0.069	0.063	-0.006	0.017	92.748%	92.991%
3	14:22:02	90.593%	0.246	0.072	0.060	0.006	0.008	92.931%	93.607%
x		90.183%	0.263	0.069	0.071	0.005	0.014	92.297%	93.052%
σ		0.614%	0.018	0.003	0.017	0.011	0.006	0.944%	0.527%
%RSD		0.681	6.991	4.733	23.820	211.200	40.620	1.023	0.567
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:21:09	0.013	0.007	0.010	0.013	0.020	100.947%		
2	14:21:36	0.011	0.008	0.018	0.024	0.016	99.837%		
3	14:22:02	0.008	0.008	0.015	0.030	0.017	99.630%		
x		0.011	0.008	0.014	0.022	0.018	100.138%		
σ		0.003	0.001	0.004	0.009	0.002	0.708%		
%RSD		26.040	7.637	28.300	38.040	9.274	0.707		

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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	14:25:29	92.528%	0.027	0.130	0.587	0.000	0.624	-0.034	0.135
2	14:25:56	90.603%	0.028	0.920	1.031	0.000	2.633	0.066	-0.046
3	14:26:22	88.234%	0.030	0.337	0.610	0.000	2.309	-0.019	0.233
x		90.455%	0.028	0.462	0.742	0.000	1.856	0.004	0.107
σ		2.150%	0.001	0.410	0.250	0.000	1.079	0.054	0.141
%RSD		2.377	4.028	88.630	33.690	0.000	58.120	1211.000	131.600
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:29	-0.599	1.054	0.000	-0.183	-3.563	0.450	90.664%	0.035
2	14:25:56	-0.460	-0.452	0.000	1.442	1.254	-1.386	90.370%	0.069
3	14:26:22	-0.436	-0.119	0.000	-1.471	2.856	0.302	90.495%	-0.049
x		-0.498	0.161	0.000	-0.071	0.182	-0.212	90.510%	0.018
σ		0.088	0.791	0.000	1.460	3.341	1.020	0.147%	0.061
%RSD		17.650	491.200	0.000	2059.000	1832.000	481.900	0.163	333.200
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:29	0.030	0.036	0.001	-0.211	-0.155	0.005	0.018	0.000
2	14:25:56	-0.012	0.000	-0.025	-0.967	1.499	0.006	-0.026	-0.005
3	14:26:22	0.013	0.009	-0.003	-1.575	2.538	0.004	-0.058	-0.014
x		0.010	0.015	-0.009	-0.918	1.294	0.005	-0.022	-0.006
σ		0.021	0.019	0.014	0.683	1.358	0.001	0.038	0.007
%RSD		203.400	125.500	153.000	74.450	105.000	23.260	172.600	118.500
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:29	-0.027	0.016	0.139	0.126	0.157	0.857	0.000	-0.002
2	14:25:56	-0.001	0.044	0.157	-0.036	-0.286	-0.242	0.000	-0.000
3	14:26:22	0.027	0.044	0.096	0.106	1.568	0.559	0.000	-0.004
x		-0.000	0.035	0.130	0.065	0.480	0.391	0.000	-0.002
σ		0.027	0.016	0.031	0.088	0.968	0.568	0.000	0.002
%RSD		6330.000	46.320	23.920	135.700	201.700	145.200	0.000	100.300
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:29	87.838%	0.163	0.131	89.303%	-0.011	-0.008	-0.077	-0.049
2	14:25:56	89.073%	0.152	0.144	90.291%	-0.009	0.007	-0.052	-0.032
3	14:26:22	88.969%	0.167	0.204	90.388%	-0.007	-0.003	-0.048	-0.043
x		88.626%	0.161	0.160	89.994%	-0.009	-0.001	-0.059	-0.041
σ		0.685%	0.008	0.039	0.601%	0.002	0.008	0.016	0.008
%RSD		0.772	4.941	24.370	0.668	20.630	745.100	27.290	20.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:29	88.609%	0.163	0.023	0.026	-0.006	-0.007	90.050%	90.755%
2	14:25:56	87.436%	0.234	0.030	0.025	-0.010	-0.002	91.714%	91.680%
3	14:26:22	89.240%	0.189	0.037	0.031	-0.011	-0.009	92.413%	91.716%
x		88.429%	0.195	0.030	0.027	-0.009	-0.006	91.392%	91.384%
σ		0.915%	0.036	0.007	0.003	0.003	0.004	1.214%	0.545%
%RSD		1.035	18.380	23.520	11.540	29.090	66.500	1.328	0.596
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:25:29	0.004	0.004	0.007	-0.007	-0.001	98.260%		
2	14:25:56	0.005	0.001	0.003	-0.003	-0.002	94.629%		
3	14:26:22	0.007	0.003	0.017	0.002	0.010	95.734%		
x		0.005	0.003	0.009	-0.003	0.003	96.208%		
σ		0.001	0.001	0.007	0.005	0.006	1.861%		
%RSD		21.520	49.180	74.980	183.300	242.000	1.934		

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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	14:29:48	86.728%	47.580	948.200	947.700	0.000	46790.000	45970.000	46030.000
2	14:30:14	86.629%	48.280	968.200	960.900	0.000	47510.000	47270.000	47260.000
3	14:30:41	85.037%	49.170	957.200	964.500	0.000	47740.000	47560.000	47580.000
x		86.131%	48.350	957.900	957.700	0.000	47350.000	46940.000	46960.000
σ		0.949%	0.797	10.010	8.840	0.000	493.300	847.300	822.900
%RSD		1.101	1.649	1.045	0.923	0.000	1.042	1.805	1.752

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:48	1914.000	9847.000	0.000	47510.000	46610.000	47430.000	89.222%	977.600
2	14:30:14	1968.000	10020.000	0.000	48140.000	47640.000	48500.000	89.446%	990.800
3	14:30:41	1983.000	10090.000	0.000	48270.000	48090.000	48950.000	89.868%	991.900
x		1955.000	9986.000	0.000	47970.000	47450.000	48290.000	89.512%	986.800
σ		36.140	125.600	0.000	403.900	758.600	784.300	0.328%	7.962
%RSD		1.848	1.258	0.000	0.842	1.599	1.624	0.366	0.807

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:48	472.100	184.300	480.500	986.500	1029.000	473.800	473.600	235.500
2	14:30:14	481.300	189.100	485.200	1012.000	1056.000	483.500	477.900	239.100
3	14:30:41	478.600	188.300	486.700	1018.000	1050.000	481.900	478.600	238.100
x		477.400	187.200	484.100	1005.000	1045.000	479.700	476.700	237.600
σ		4.714	2.590	3.236	16.600	14.120	5.186	2.706	1.868
%RSD		0.988	1.383	0.668	1.651	1.351	1.081	0.568	0.786

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:48	238.400	469.200	469.400	36.580	9.627	10.740	0.000	941.300
2	14:30:14	242.000	476.400	470.600	36.980	12.120	9.462	0.000	947.800
3	14:30:41	238.700	473.400	473.500	36.800	9.548	11.510	0.000	950.800
x		239.700	473.000	471.100	36.790	10.430	10.570	0.000	946.700
σ		1.979	3.578	2.100	0.200	1.463	1.033	0.000	4.845
%RSD		0.826	0.756	0.446	0.543	14.020	9.775	0.000	0.512

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:48	86.877%	940.300	965.800	85.316%	43.800	43.850	51.040	39.960
2	14:30:14	88.322%	988.100	1026.000	86.081%	44.000	44.710	47.760	38.570
3	14:30:41	88.620%	1019.000	1055.000	86.411%	43.790	44.460	47.480	39.110
x		87.940%	982.500	1016.000	85.936%	43.870	44.340	48.760	39.210
σ		0.932%	39.740	45.690	0.561%	0.118	0.440	1.983	0.703
%RSD		1.060	4.045	4.499	0.653	0.269	0.992	4.068	1.793

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:48	85.796%	2009.000	498.800	495.900	1917.000	1984.000	90.045%	91.700%
2	14:30:14	86.004%	2050.000	510.300	502.900	1949.000	2017.000	91.440%	91.884%
3	14:30:41	86.498%	2047.000	510.400	505.900	1949.000	2021.000	91.931%	92.857%
x		86.099%	2035.000	506.500	501.600	1938.000	2007.000	91.139%	92.147%
σ		0.360%	22.680	6.703	5.144	18.220	19.860	0.979%	0.621%
%RSD		0.418	1.114	1.323	1.025	0.940	0.989	1.074	0.674

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:48	45.480	43.680	18.010	18.260	17.920	94.319%
2	14:30:14	46.990	45.390	19.020	18.990	18.810	91.799%
3	14:30:41	46.610	45.500	19.200	19.250	18.960	92.397%
x		46.360	44.860	18.740	18.830	18.560	92.838%
σ		0.788	1.021	0.642	0.515	0.563	1.317%
%RSD		1.700	2.276	3.426	2.737	3.032	1.419

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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	14:34:04	85.373%	46.870	937.600	929.000	0.000	46660.000	45640.000	45760.000
2	14:34:31	85.103%	47.850	946.200	955.500	0.000	47300.000	47180.000	47040.000
3	14:34:58	85.736%	46.360	926.400	945.500	0.000	47460.000	47390.000	47620.000
x		85.404%	47.030	936.800	943.300	0.000	47140.000	46740.000	46810.000
σ		0.318%	0.760	9.928	13.390	0.000	422.900	953.700	951.300
%RSD		0.372	1.616	1.060	1.419	0.000	0.897	2.041	2.032
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:04	1874.000	9742.000	0.000	47570.000	45830.000	46770.000	88.919%	943.400
2	14:34:31	1916.000	9839.000	0.000	47840.000	47370.000	47880.000	89.423%	978.700
3	14:34:58	1936.000	9852.000	0.000	48180.000	47600.000	47510.000	88.622%	980.400
x		1909.000	9811.000	0.000	47860.000	46930.000	47390.000	88.988%	967.500
σ		31.750	59.960	0.000	302.900	958.700	566.800	0.405%	20.900
%RSD		1.663	0.611	0.000	0.633	2.043	1.196	0.455	2.160
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:04	459.300	179.000	465.200	965.000	1001.000	462.900	462.000	229.800
2	14:34:31	469.600	184.200	474.800	988.500	1034.000	472.700	467.000	233.300
3	14:34:58	472.800	185.300	479.400	1001.000	1023.000	474.600	473.100	234.600
x		467.200	182.900	473.100	984.700	1019.000	470.100	467.400	232.600
σ		7.078	3.345	7.240	18.100	16.620	6.255	5.524	2.477
%RSD		1.515	1.829	1.530	1.838	1.630	1.331	1.182	1.065
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:04	232.000	453.400	454.400	35.890	9.839	11.140	0.000	911.900
2	14:34:31	235.900	469.100	462.900	35.450	9.142	9.828	0.000	933.200
3	14:34:58	239.100	474.200	466.400	36.420	11.100	9.985	0.000	937.500
x		235.600	465.600	461.200	35.920	10.030	10.320	0.000	927.500
σ		3.538	10.860	6.185	0.484	0.994	0.719	0.000	13.670
%RSD		1.501	2.333	1.341	1.348	9.912	6.963	0.000	1.474
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:04	88.129%	916.000	938.900	86.396%	43.010	43.080	45.330	36.480
2	14:34:31	89.258%	971.800	1003.000	87.046%	43.300	43.360	46.080	38.130
3	14:34:58	89.025%	1004.000	1032.000	86.780%	43.060	43.740	46.710	38.520
x		88.804%	964.000	991.500	86.741%	43.120	43.390	46.040	37.710
σ		0.596%	44.570	47.740	0.327%	0.153	0.335	0.695	1.082
%RSD		0.671	4.623	4.815	0.377	0.355	0.771	1.509	2.870
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:04	86.498%	1960.000	488.100	484.900	1865.000	1928.000	91.078%	92.089%
2	14:34:31	87.002%	2001.000	496.600	494.800	1899.000	1976.000	92.154%	93.201%
3	14:34:58	86.661%	2022.000	501.900	498.000	1936.000	2005.000	92.126%	93.117%
x		86.720%	1994.000	495.500	492.600	1900.000	1969.000	91.786%	92.802%
σ		0.257%	31.510	6.952	6.849	35.920	38.680	0.613%	0.620%
%RSD		0.296	1.580	1.403	1.390	1.891	1.964	0.668	0.668
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:34:04	44.660	42.710	17.850	17.870	17.660	94.924%		
2	14:34:31	45.830	43.760	18.370	18.660	18.250	94.157%		
3	14:34:58	46.970	44.820	18.880	18.770	18.660	92.120%		
x		45.820	43.760	18.370	18.430	18.190	93.734%		
σ		1.157	1.056	0.510	0.492	0.504	1.449%		
%RSD		2.525	2.413	2.779	2.671	2.771	1.546		

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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	14:38:22	84.962%	0.032	7065.000	7366.000	0.000	22660.000	11140.000	11190.000
2	14:38:49	82.422%	0.047	7081.000	7517.000	0.000	22320.000	11170.000	11150.000
3	14:39:15	83.059%	0.005	6980.000	7402.000	0.000	22190.000	11120.000	11180.000
x		83.481%	0.028	7042.000	7428.000	0.000	22390.000	11140.000	11170.000
σ		1.321%	0.021	54.090	79.210	0.000	244.700	24.790	23.510
%RSD		1.583	77.490	0.768	1.066	0.000	1.093	0.223	0.210
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:22	7.335	5097.000	0.000	5048.000	51910.000	51850.000	87.861%	1.327
2	14:38:49	7.090	5035.000	0.000	4793.000	50460.000	50090.000	92.605%	1.225
3	14:39:15	7.146	5033.000	0.000	4800.000	50480.000	50400.000	91.617%	1.104
x		7.190	5055.000	0.000	4881.000	50950.000	50780.000	90.694%	1.219
σ		0.128	36.740	0.000	145.400	832.000	938.800	2.503%	0.111
%RSD		1.785	0.727	0.000	2.978	1.633	1.849	2.760	9.127
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:22	1.775	0.067	295.000	0.613	140.800	0.259	0.264	0.561
2	14:38:49	1.793	0.045	282.800	-1.907	135.800	0.246	0.279	0.575
3	14:39:15	1.889	0.036	285.900	-1.758	127.400	0.234	0.155	0.562
x		1.819	0.049	287.900	-1.017	134.700	0.246	0.233	0.566
σ		0.061	0.016	6.316	1.414	6.761	0.012	0.068	0.007
%RSD		3.365	31.980	2.194	139.000	5.020	5.059	29.190	1.298
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:22	0.552	5.926	6.454	7.217	1.187	4.338	0.000	350.700
2	14:38:49	0.588	5.891	5.939	7.034	1.653	4.336	0.000	348.200
3	14:39:15	0.715	5.690	5.686	6.958	0.845	4.118	0.000	352.900
x		0.618	5.836	6.026	7.070	1.228	4.264	0.000	350.600
σ		0.085	0.128	0.392	0.133	0.406	0.126	0.000	2.348
%RSD		13.810	2.184	6.497	1.884	33.050	2.962	0.000	0.670
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:22	88.425%	63.620	62.980	88.412%	0.010	0.011	-0.068	-0.086
2	14:38:49	89.237%	66.910	67.630	88.410%	0.006	0.007	-0.043	-0.026
3	14:39:15	89.034%	70.790	70.560	88.888%	-0.002	-0.001	0.020	0.004
x		88.899%	67.110	67.060	88.570%	0.005	0.006	-0.030	-0.036
σ		0.423%	3.590	3.819	0.275%	0.006	0.006	0.045	0.046
%RSD		0.475	5.349	5.695	0.311	134.200	106.800	151.700	128.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:22	89.860%	2.253	2.730	2.786	12.100	12.020	91.715%	93.339%
2	14:38:49	88.616%	2.149	2.737	2.820	11.970	11.720	94.233%	93.300%
3	14:39:15	89.896%	2.052	2.651	2.619	11.450	12.210	93.158%	94.182%
x		89.457%	2.152	2.706	2.742	11.840	11.980	93.035%	93.607%
σ		0.729%	0.101	0.048	0.108	0.347	0.247	1.264%	0.498%
%RSD		0.815	4.677	1.760	3.927	2.927	2.059	1.358	0.533
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:38:22	0.038	0.031	0.017	0.006	0.017	92.630%		
2	14:38:49	0.026	0.025	0.017	0.026	0.020	90.359%		
3	14:39:15	0.023	0.020	0.013	0.009	0.015	92.131%		
x		0.029	0.025	0.016	0.014	0.017	91.706%		
σ		0.008	0.006	0.002	0.011	0.003	1.193%		
%RSD		26.990	21.880	12.940	76.960	15.780	1.301		

180-41553-B-2 3/2/2015 2:42:13 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:40	81.230%	0.005	38.420	37.620	0.000	60640.000	359.900	359.500
2	14:43:06	79.522%	-0.009	34.100	36.310	0.000	62280.000	470.100	469.500
3	14:43:33	80.385%	0.034	32.880	31.590	0.000	61870.000	521.800	523.600
x		80.379%	0.010	35.130	35.170	0.000	61600.000	450.600	450.800
σ		0.854%	0.022	2.914	3.172	0.000	855.800	82.680	83.600
%RSD		1.062	214.300	8.295	9.019	0.000	1.389	18.350	18.540
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:40	3.385	48660.000	0.000	790600.000	258.600	455.200	87.623%	35.880
2	14:43:06	3.141	49490.000	0.000	799700.000	416.200	565.900	88.081%	35.840
3	14:43:33	2.687	49820.000	0.000	807200.000	449.800	625.900	88.593%	34.940
x		3.071	49330.000	0.000	799100.000	374.800	549.000	88.099%	35.550
σ		0.354	595.600	0.000	8301.000	102.100	86.580	0.485%	0.533
%RSD		11.540	1.208	0.000	1.039	27.230	15.770	0.551	1.499
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:40	3.831	0.274	0.998	12.630	16.510	0.008	0.002	0.566
2	14:43:06	3.811	0.154	1.338	14.870	21.190	0.017	0.027	0.687
3	14:43:33	3.765	0.110	0.980	12.790	16.040	0.028	-0.019	0.559
x		3.802	0.179	1.105	13.430	17.910	0.018	0.003	0.604
σ		0.034	0.085	0.202	1.252	2.846	0.010	0.023	0.072
%RSD		0.896	47.590	18.260	9.321	15.890	57.320	734.800	11.940
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:40	0.278	0.175	0.438	6.584	0.856	0.967	0.000	3.198
2	14:43:06	0.248	0.127	0.249	6.518	0.637	0.990	0.000	4.385
3	14:43:33	0.156	0.039	0.280	6.782	1.068	2.651	0.000	5.013
x		0.227	0.113	0.323	6.628	0.854	1.536	0.000	4.199
σ		0.064	0.069	0.101	0.138	0.216	0.966	0.000	0.922
%RSD		28.020	60.890	31.320	2.077	25.240	62.860	0.000	21.960
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:40	85.299%	17.240	17.460	83.087%	-0.008	-0.009	0.023	-0.007
2	14:43:06	85.376%	9.210	9.636	83.702%	-0.012	-0.000	-0.052	-0.034
3	14:43:33	86.898%	7.616	7.489	83.726%	-0.012	-0.007	-0.030	-0.014
x		85.858%	11.360	11.530	83.505%	-0.011	-0.005	-0.020	-0.019
σ		0.902%	5.161	5.245	0.362%	0.002	0.004	0.039	0.014
%RSD		1.050	45.440	45.510	0.434	23.290	82.750	198.100	76.340
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:40	83.199%	0.772	1.951	1.913	0.436	0.382	87.907%	88.279%
2	14:43:06	83.585%	0.870	1.990	1.986	0.468	0.563	87.624%	88.901%
3	14:43:33	83.325%	0.875	1.919	1.937	0.762	0.660	89.114%	89.288%
x		83.370%	0.839	1.953	1.945	0.555	0.535	88.215%	88.823%
σ		0.197%	0.058	0.035	0.037	0.180	0.141	0.791%	0.509%
%RSD		0.236	6.929	1.804	1.911	32.340	26.380	0.897	0.573
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:42:40	0.010	0.012	-0.001	0.015	0.006	83.167%		
2	14:43:06	0.015	0.009	-0.001	0.014	0.008	82.806%		
3	14:43:33	0.010	0.015	0.015	0.012	0.011	83.024%		
x		0.011	0.012	0.004	0.014	0.008	82.999%		
σ		0.003	0.003	0.009	0.002	0.003	0.182%		
%RSD		25.900	22.440	231.200	12.650	31.710	0.219		

180-41553-B-3 3/2/2015 2:46:33 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	14:47:00	91.107%	0.708	106.500	105.800	0.000	10560.000	1808.000	1815.000
2	14:47:26	89.669%	0.718	109.700	111.400	0.000	10790.000	1881.000	1856.000
3	14:47:52	88.804%	0.817	111.100	111.800	0.000	10820.000	1883.000	1870.000
x		89.860%	0.747	109.100	109.700	0.000	10720.000	1858.000	1847.000
σ		1.163%	0.060	2.403	3.324	0.000	143.500	42.740	28.720
%RSD		1.295	8.084	2.202	3.030	0.000	1.338	2.301	1.555
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:00	2629.000	3411.000	0.000	723.500	5760.000	5315.000	92.729%	18.720
2	14:47:26	2699.000	3505.000	0.000	715.200	5740.000	5356.000	93.588%	18.090
3	14:47:52	2717.000	3527.000	0.000	684.000	5777.000	5457.000	92.738%	18.710
x		2682.000	3481.000	0.000	707.500	5759.000	5376.000	93.018%	18.510
σ		46.520	61.750	0.000	20.810	18.600	73.090	0.493%	0.359
%RSD		1.735	1.774	0.000	2.942	0.323	1.360	0.530	1.942
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:00	0.439	7.997	111.400	87170.000	87470.000	3.800	64.880	2.450
2	14:47:26	0.395	8.190	112.400	87980.000	87950.000	3.744	64.660	2.482
3	14:47:52	0.345	8.309	113.000	88540.000	88270.000	3.736	64.540	2.541
x		0.393	8.165	112.300	87900.000	87900.000	3.760	64.690	2.491
σ		0.047	0.158	0.817	689.000	401.600	0.035	0.172	0.046
%RSD		11.980	1.931	0.728	0.784	0.457	0.940	0.266	1.850
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:00	2.608	95.670	95.500	0.232	0.556	0.764	0.000	116.900
2	14:47:26	2.559	96.080	97.310	0.234	1.756	0.520	0.000	117.800
3	14:47:52	2.597	98.410	96.590	0.287	0.707	0.921	0.000	118.200
x		2.588	96.720	96.470	0.251	1.007	0.735	0.000	117.600
σ		0.025	1.477	0.908	0.031	0.654	0.202	0.000	0.655
%RSD		0.980	1.527	0.941	12.380	64.970	27.510	0.000	0.557
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:00	92.819%	0.373	0.349	90.706%	-0.013	-0.003	0.144	0.150
2	14:47:26	93.117%	0.299	0.344	91.778%	-0.002	-0.006	0.110	0.114
3	14:47:52	93.281%	0.365	0.321	91.096%	-0.005	-0.008	0.087	0.111
x		93.073%	0.346	0.338	91.193%	-0.006	-0.006	0.114	0.125
σ		0.234%	0.040	0.015	0.543%	0.006	0.003	0.029	0.022
%RSD		0.252	11.660	4.300	0.595	91.110	44.740	25.210	17.670
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:00	89.968%	0.752	0.235	0.270	515.400	518.700	93.141%	93.794%
2	14:47:26	91.324%	0.783	0.237	0.232	516.100	517.300	93.558%	94.774%
3	14:47:52	90.747%	0.801	0.254	0.248	518.700	520.000	93.715%	93.935%
x		90.680%	0.779	0.242	0.250	516.700	518.700	93.471%	94.168%
σ		0.680%	0.025	0.011	0.019	1.718	1.316	0.297%	0.530%
%RSD		0.750	3.235	4.356	7.610	0.333	0.254	0.317	0.563
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:47:00	3.013	2.834	111.500	99.230	104.300	93.549%		
2	14:47:26	2.996	2.853	112.300	99.460	105.200	94.882%		
3	14:47:52	3.014	2.839	112.100	99.300	104.800	93.998%		
x		3.008	2.842	112.000	99.330	104.700	94.143%		
σ		0.010	0.010	0.387	0.121	0.458	0.678%		
%RSD		0.330	0.349	0.346	0.121	0.437	0.720		

180-41553-B-4 3/2/2015 2:50:51 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:17	84.480%	1.990	113.800	119.900	0.000	27510.000	1161.000	1152.000
2	14:51:43	84.183%	2.287	120.300	126.100	0.000	27890.000	1198.000	1180.000
3	14:52:10	83.598%	1.956	122.500	124.300	0.000	27880.000	1187.000	1182.000
x		84.087%	2.078	118.900	123.400	0.000	27760.000	1182.000	1171.000
σ		0.449%	0.182	4.505	3.162	0.000	215.500	18.870	16.730
%RSD		0.534	8.781	3.790	2.562	0.000	0.777	1.597	1.429
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:17	5586.000	1035.000	0.000	253.800	1467.000	1362.000	89.587%	105.600
2	14:51:43	5718.000	1048.000	0.000	254.900	1458.000	1376.000	89.114%	106.300
3	14:52:10	5740.000	1056.000	0.000	256.500	1607.000	1401.000	87.979%	106.300
x		5681.000	1046.000	0.000	255.100	1511.000	1380.000	88.893%	106.100
σ		82.750	10.390	0.000	1.323	83.540	19.600	0.826%	0.448
%RSD		1.457	0.993	0.000	0.519	5.531	1.420	0.929	0.422
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:17	2.925	20.660	274.100	200300.000	202500.000	7.430	126.300	6.113
2	14:51:43	2.906	21.600	279.800	204000.000	205200.000	7.870	125.400	5.868
3	14:52:10	2.870	21.360	280.900	204800.000	206300.000	7.849	127.200	6.089
x		2.900	21.210	278.300	203000.000	204600.000	7.716	126.300	6.023
σ		0.028	0.491	3.609	2428.000	1967.000	0.248	0.921	0.135
%RSD		0.968	2.315	1.297	1.196	0.961	3.216	0.729	2.245
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:17	5.841	169.800	170.300	0.424	0.056	0.617	0.000	150.800
2	14:51:43	6.082	174.200	174.900	0.112	-0.898	-0.982	0.000	154.000
3	14:52:10	5.959	172.300	173.900	0.516	0.179	-0.219	0.000	154.600
x		5.960	172.100	173.000	0.351	-0.221	-0.195	0.000	153.100
σ		0.120	2.212	2.429	0.212	0.590	0.800	0.000	2.054
%RSD		2.021	1.286	1.404	60.500	266.800	411.200	0.000	1.341
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:17	93.052%	0.260	0.198	86.249%	-0.005	-0.007	0.226	0.233
2	14:51:43	92.635%	0.221	0.207	86.725%	-0.011	-0.000	0.307	0.250
3	14:52:10	92.639%	0.236	0.233	86.614%	-0.007	-0.006	0.122	0.209
x		92.775%	0.239	0.213	86.529%	-0.007	-0.005	0.218	0.231
σ		0.240%	0.020	0.019	0.249%	0.003	0.004	0.093	0.021
%RSD		0.259	8.303	8.744	0.288	36.270	84.460	42.410	9.077
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:17	86.422%	2.726	0.174	0.182	1014.000	1024.000	89.702%	89.411%
2	14:51:43	87.024%	2.843	0.204	0.199	1030.000	1041.000	89.666%	90.347%
3	14:52:10	86.962%	3.038	0.197	0.190	1028.000	1045.000	90.587%	90.922%
x		86.803%	2.869	0.192	0.190	1024.000	1037.000	89.985%	90.227%
σ		0.331%	0.157	0.016	0.008	8.608	11.380	0.521%	0.763%
%RSD		0.382	5.481	8.336	4.421	0.841	1.098	0.579	0.845
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:51:17	3.157	2.968	357.400	315.700	338.800	94.930%		
2	14:51:43	3.155	2.983	370.100	325.200	351.300	94.280%		
3	14:52:10	3.136	3.067	373.500	329.000	354.900	93.625%		
x		3.149	3.006	367.000	323.300	348.300	94.278%		
σ		0.012	0.054	8.499	6.820	8.430	0.653%		
%RSD		0.370	1.783	2.316	2.110	2.420	0.692		

180-41585-A-1 3/2/2015 2:55:08 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:35	82.505%	0.005	31.590	33.910	0.000	21260.000	11170.000	11180.000
2	14:56:02	81.686%	0.033	31.170	33.290	0.000	21540.000	11500.000	11510.000
3	14:56:28	79.928%	0.064	30.920	34.490	0.000	21970.000	11770.000	11750.000
x		81.373%	0.034	31.230	33.900	0.000	21590.000	11480.000	11480.000
σ		1.317%	0.029	0.341	0.599	0.000	359.700	298.600	289.700
%RSD		1.618	86.770	1.093	1.766	0.000	1.666	2.601	2.524
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:35	321.200	1498.000	0.000	4215.000	37560.000	36880.000	92.422%	0.447
2	14:56:02	331.600	1520.000	0.000	4306.000	38300.000	38310.000	91.126%	0.219
3	14:56:28	339.400	1554.000	0.000	4323.000	38490.000	38690.000	91.649%	0.334
x		330.700	1524.000	0.000	4281.000	38120.000	37960.000	91.732%	0.334
σ		9.134	28.300	0.000	57.830	494.000	951.300	0.652%	0.114
%RSD		2.762	1.857	0.000	1.351	1.296	2.506	0.711	34.230
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:35	0.049	0.195	7.485	32.310	132.000	0.072	0.023	0.674
2	14:56:02	0.017	0.159	7.708	28.010	119.500	0.086	0.239	0.706
3	14:56:28	0.004	0.176	7.843	23.120	116.400	0.084	0.179	0.744
x		0.023	0.176	7.679	27.810	122.600	0.081	0.147	0.708
σ		0.023	0.018	0.180	4.598	8.267	0.007	0.111	0.035
%RSD		99.730	10.270	2.350	16.530	6.742	9.175	75.620	4.997
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:35	0.685	25.180	25.300	0.870	-0.561	2.195	0.000	108.200
2	14:56:02	0.606	25.850	26.880	0.921	2.282	2.070	0.000	109.800
3	14:56:28	0.666	26.270	26.210	0.581	1.401	0.813	0.000	110.300
x		0.652	25.770	26.130	0.791	1.041	1.693	0.000	109.400
σ		0.041	0.548	0.796	0.183	1.455	0.765	0.000	1.103
%RSD		6.317	2.128	3.045	23.160	139.800	45.170	0.000	1.008
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:35	90.863%	0.580	0.538	91.309%	-0.010	-0.008	-0.112	-0.071
2	14:56:02	92.149%	0.561	0.551	91.969%	-0.013	-0.006	-0.092	-0.064
3	14:56:28	93.251%	0.629	0.635	92.468%	-0.003	-0.010	-0.085	-0.062
x		92.088%	0.590	0.575	91.915%	-0.009	-0.008	-0.096	-0.066
σ		1.195%	0.035	0.053	0.581%	0.005	0.002	0.014	0.005
%RSD		1.298	5.956	9.191	0.633	59.040	24.540	14.460	6.935
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:35	91.608%	0.362	0.166	0.164	27.850	27.690	94.038%	95.017%
2	14:56:02	92.331%	0.417	0.165	0.183	27.820	28.270	95.533%	96.173%
3	14:56:28	93.953%	0.486	0.177	0.199	28.580	27.730	97.297%	96.123%
x		92.631%	0.422	0.169	0.182	28.080	27.900	95.623%	95.771%
σ		1.201%	0.062	0.007	0.017	0.431	0.324	1.631%	0.654%
%RSD		1.296	14.810	3.939	9.540	1.535	1.163	1.706	0.683
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:55:35	0.004	0.003	0.062	0.066	0.070	94.999%		
2	14:56:02	0.004	0.003	0.062	0.053	0.061	95.312%		
3	14:56:28	0.004	0.003	0.061	0.045	0.053	95.852%		
x		0.004	0.003	0.062	0.054	0.061	95.387%		
σ		0.000	0.000	0.001	0.010	0.009	0.432%		
%RSD		10.600	13.380	1.094	19.100	14.210	0.452		

180-41585-A-2 3/2/2015 2:59:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:50	81.838%	0.048	113.800	123.400	0.000	47250.000	1955.000	1936.000
2	15:00:16	80.745%	0.048	118.900	126.400	0.000	48390.000	2026.000	2047.000
3	15:00:42	79.043%	-0.009	127.200	128.800	0.000	48770.000	2067.000	2059.000
x		80.542%	0.029	120.000	126.200	0.000	48130.000	2016.000	2014.000
σ		1.408%	0.033	6.745	2.672	0.000	791.700	56.590	67.510
%RSD		1.749	112.600	5.622	2.118	0.000	1.645	2.807	3.352
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:50	3.274	7645.000	0.000	2133.000	58980.000	59190.000	91.396%	0.537
2	15:00:16	3.469	7910.000	0.000	2188.000	61520.000	61200.000	89.962%	0.648
3	15:00:42	3.681	8010.000	0.000	2191.000	61600.000	62290.000	89.557%	0.583
x		3.475	7855.000	0.000	2171.000	60700.000	60890.000	90.305%	0.589
σ		0.203	188.500	0.000	32.990	1490.000	1574.000	0.966%	0.056
%RSD		5.852	2.400	0.000	1.520	2.455	2.586	1.070	9.474
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:50	1.322	1.382	0.054	5.686	159.700	0.052	-0.503	0.527
2	15:00:16	1.361	1.393	0.072	5.940	166.500	0.057	-0.544	0.461
3	15:00:42	1.494	1.401	0.074	5.002	155.300	0.055	-0.407	0.450
x		1.393	1.392	0.067	5.543	160.500	0.055	-0.485	0.479
σ		0.090	0.010	0.011	0.485	5.606	0.003	0.070	0.042
%RSD		6.475	0.699	16.080	8.751	3.492	4.674	14.550	8.699
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:50	0.218	10.750	10.620	7.387	1.911	1.991	0.000	652.700
2	15:00:16	0.224	11.240	10.780	7.900	0.739	2.508	0.000	670.800
3	15:00:42	0.329	11.300	11.290	7.632	0.608	1.787	0.000	672.600
x		0.257	11.100	10.900	7.640	1.086	2.095	0.000	665.400
σ		0.063	0.299	0.354	0.257	0.718	0.372	0.000	11.040
%RSD		24.340	2.691	3.248	3.358	66.080	17.740	0.000	1.659
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:50	90.115%	0.724	0.669	89.446%	-0.005	0.004	-0.066	-0.050
2	15:00:16	90.583%	0.825	0.794	90.245%	0.002	-0.002	-0.075	-0.058
3	15:00:42	90.647%	0.860	0.779	90.283%	-0.005	-0.001	-0.092	-0.055
x		90.448%	0.803	0.747	89.992%	-0.003	0.000	-0.078	-0.054
σ		0.290%	0.071	0.068	0.472%	0.004	0.003	0.013	0.004
%RSD		0.321	8.779	9.123	0.525	167.100	749.700	16.510	7.740
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:50	90.089%	0.287	0.406	0.365	94.960	94.640	92.719%	93.660%
2	15:00:16	89.872%	0.291	0.427	0.409	97.590	96.430	93.437%	93.976%
3	15:00:42	90.036%	0.306	0.390	0.431	97.620	96.690	93.679%	94.068%
x		89.999%	0.295	0.408	0.402	96.720	95.920	93.278%	93.901%
σ		0.114%	0.010	0.018	0.034	1.528	1.116	0.499%	0.214%
%RSD		0.126	3.460	4.500	8.433	1.579	1.163	0.535	0.228
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:59:50	0.001	0.001	0.045	0.038	0.036	94.187%		
2	15:00:16	0.001	0.000	0.022	0.042	0.032	93.327%		
3	15:00:42	0.002	-0.000	0.034	0.036	0.033	93.144%		
x		0.001	0.000	0.034	0.038	0.034	93.553%		
σ		0.000	0.001	0.012	0.003	0.002	0.557%		
%RSD		38.860	147.100	34.900	7.890	5.256	0.595		

CCV 1487954 3/2/2015 3:03:38 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:05	80.255%	93.310	103.900	103.000	0.000	47820.000	47790.000	47740.000
2	15:04:32	80.460%	94.640	99.970	101.800	0.000	48580.000	49290.000	49340.000
3	15:04:57	79.742%	97.640	106.200	105.000	0.000	49380.000	50210.000	49990.000
x		80.152%	95.195%	103.371%	103.277%	0.000	97.186%	98.192%	98.054%
σ		0.370%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.461	2.331	3.066	1.580	0.000	1.599	2.485	2.361
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:05	456.900	5584.000	0.000	48620.000	46530.000	47260.000	87.993%	92.370
2	15:04:32	470.800	5115.000	0.000	49090.000	48030.000	48970.000	88.432%	97.340
3	15:04:57	480.800	5149.000	0.000	49670.000	49020.000	49860.000	88.321%	98.040
x		93.901%	105.656%	0.000	98.258%	95.716%	97.395%	88.249%	95.918%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.228%	n/a
%RSD		2.558	4.951	0.000	1.073	2.613	2.715	0.259	3.222
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:05	91.360	91.530	480.800	23520.000	24070.000	93.410	94.310	94.530
2	15:04:32	93.720	94.620	490.900	24150.000	24530.000	94.440	96.710	96.640
3	15:04:57	95.200	95.420	498.300	24540.000	25010.000	95.800	97.030	98.910
x		93.429%	93.857%	97.994%	96.272%	98.140%	94.551%	96.020%	96.692%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.072	2.192	1.793	2.132	1.908	1.265	1.547	2.266
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:05	95.540	93.000	92.380	95.720	94.850	95.970	0.000	89.990
2	15:04:32	97.110	95.340	95.680	96.180	95.760	97.640	0.000	92.880
3	15:04:57	97.680	96.160	95.260	97.530	99.330	99.130	0.000	92.600
x		96.775%	94.833%	94.441%	96.476%	96.647%	97.580%	0.000	91.820%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.147	1.731	1.899	0.976	2.449	1.621	0.000	1.737
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:05	87.862%	89.630	90.040	86.358%	90.910	91.980	90.940	90.560
2	15:04:32	88.783%	94.570	95.090	86.720%	92.210	92.940	92.160	92.690
3	15:04:57	89.519%	97.110	97.840	87.838%	92.620	93.770	93.820	94.620
x		88.721%	93.769%	94.327%	86.972%	91.917%	92.896%	92.305%	92.624%
σ		0.831%	n/a	n/a	0.772%	n/a	n/a	n/a	n/a
%RSD		0.936	4.055	4.193	0.887	0.972	0.965	1.569	2.194
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:05	86.942%	90.570	91.010	90.860	91.110	91.330	89.905%	85.994%
2	15:04:32	87.723%	93.190	93.790	93.280	93.770	94.570	91.411%	88.076%
3	15:04:57	87.108%	95.960	95.410	95.170	94.330	95.100	92.994%	88.385%
x		87.258%	93.240%	93.400%	93.102%	93.069%	93.665%	91.437%	87.485%
σ		0.411%	n/a	n/a	n/a	n/a	n/a	1.544%	1.300%
%RSD		0.472	2.888	2.384	2.320	1.843	2.178	1.689	1.486
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:04:05	89.090	85.730	87.250	87.060	86.090	98.872%		
2	15:04:32	92.480	90.170	93.020	92.590	91.640	96.296%		
3	15:04:57	98.490	95.050	98.840	96.730	97.330	91.600%		
x		93.353%	90.318%	93.037%	92.126%	91.688%	95.590%		
σ		n/a	n/a	n/a	n/a	n/a	3.687%		
%RSD		5.096	5.161	6.232	5.270	6.130	3.858		

CCB5 3/2/2015 3:11:02 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	15:11:28	84.598%	-0.010	4.849	3.446	0.000	11.300	2.578	1.725
2	15:11:55	86.941%	0.017	4.187	3.651	0.000	11.050	1.706	1.877
3	15:12:21	86.297%	0.044	3.319	3.972	0.000	10.550	1.950	1.444
x		85.945%	0.017	4.118	3.689	0.000	10.970	2.078	1.682
σ		1.210%	0.027	0.767	0.265	0.000	0.381	0.450	0.220
%RSD		1.408	157.600	18.630	7.190	0.000	3.474	21.630	13.070
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:28	-0.329	10.250	0.000	10.560	2.544	3.145	93.935%	-0.001
2	15:11:55	-0.295	6.996	0.000	10.400	10.440	3.878	92.921%	0.065
3	15:12:21	-0.328	7.159	0.000	6.962	-0.499	2.141	92.935%	0.049
x		-0.317	8.135	0.000	9.306	4.162	3.054	93.264%	0.038
σ		0.019	1.834	0.000	2.031	5.646	0.872	0.581%	0.035
%RSD		6.040	22.550	0.000	21.830	135.700	28.560	0.623	91.740
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:28	0.012	0.021	0.011	6.255	5.831	0.010	-0.044	-0.008
2	15:11:55	0.027	0.027	0.009	4.870	3.252	0.008	-0.029	0.025
3	15:12:21	0.005	-0.032	-0.017	4.454	3.542	0.005	-0.023	-0.016
x		0.015	0.005	0.001	5.193	4.208	0.008	-0.032	0.000
σ		0.011	0.032	0.016	0.943	1.412	0.003	0.011	0.022
%RSD		77.940	618.400	1435.000	18.160	33.560	33.420	34.020	5210.000
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:28	-0.006	0.105	0.133	0.307	0.722	1.822	0.000	0.009
2	15:11:55	0.056	0.062	0.113	0.330	0.943	1.696	0.000	0.010
3	15:12:21	-0.010	0.027	0.096	0.254	1.018	1.911	0.000	0.008
x		0.013	0.065	0.114	0.297	0.894	1.810	0.000	0.009
σ		0.037	0.039	0.019	0.039	0.154	0.108	0.000	0.001
%RSD		278.100	60.140	16.210	13.040	17.200	5.962	0.000	14.190
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:28	92.332%	0.312	0.263	94.366%	-0.002	-0.003	-0.031	-0.024
2	15:11:55	93.257%	0.260	0.276	94.456%	-0.007	0.002	-0.040	-0.005
3	15:12:21	93.649%	0.233	0.252	94.456%	-0.001	-0.000	-0.061	-0.038
x		93.079%	0.268	0.264	94.426%	-0.003	-0.000	-0.044	-0.022
σ		0.676%	0.040	0.012	0.052%	0.003	0.003	0.015	0.016
%RSD		0.727	14.810	4.497	0.055	98.180	665.700	34.710	73.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:28	91.370%	0.362	0.146	0.167	0.027	0.010	94.210%	94.447%
2	15:11:55	91.805%	0.364	0.141	0.159	0.018	0.043	96.384%	94.980%
3	15:12:21	95.227%	0.387	0.145	0.138	0.054	0.020	96.587%	95.866%
x		92.801%	0.371	0.144	0.155	0.033	0.024	95.727%	95.097%
σ		2.112%	0.014	0.002	0.015	0.019	0.017	1.318%	0.717%
%RSD		2.276	3.776	1.684	9.786	56.230	69.260	1.377	0.754
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:11:28	0.003	0.003	0.011	0.019	0.012	101.166%		
2	15:11:55	0.005	0.005	0.011	0.008	0.011	99.449%		
3	15:12:21	0.006	0.004	0.015	0.008	0.014	102.523%		
x		0.005	0.004	0.012	0.011	0.012	101.046%		
σ		0.002	0.001	0.002	0.006	0.002	1.540%		
%RSD		36.920	15.010	19.400	54.490	13.920	1.524		

180-41583-A-1 3/2/2015 3:15:19 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:46	84.937%	0.018	6.485	7.267	0.000	6309.000	2498.000	2474.000
2	15:16:12	85.338%	0.004	6.001	6.960	0.000	6381.000	2575.000	2553.000
3	15:16:39	83.731%	0.046	5.193	8.065	0.000	6390.000	2591.000	2595.000
x		84.669%	0.023	5.893	7.431	0.000	6360.000	2555.000	2541.000
σ		0.836%	0.021	0.653	0.570	0.000	44.340	49.840	61.140
%RSD		0.988	95.390	11.080	7.677	0.000	0.697	1.951	2.406
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:46	254.400	6657.000	0.000	1798.000	11470.000	10670.000	91.802%	0.901
2	15:16:12	261.900	6722.000	0.000	1806.000	13070.000	10910.000	91.666%	0.818
3	15:16:39	263.600	6787.000	0.000	1820.000	14220.000	11020.000	91.101%	0.806
x		260.000	6722.000	0.000	1808.000	12920.000	10870.000	91.523%	0.841
σ		4.887	65.280	0.000	11.150	1380.000	183.600	0.371%	0.051
%RSD		1.880	0.971	0.000	0.617	10.680	1.689	0.406	6.118
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:46	0.451	0.320	5.726	26.170	53.890	0.081	0.280	0.672
2	15:16:12	0.521	0.318	5.859	25.080	56.450	0.074	0.231	0.619
3	15:16:39	0.497	0.354	5.850	26.720	54.540	0.084	0.196	0.569
x		0.490	0.330	5.811	25.990	54.960	0.080	0.236	0.620
σ		0.036	0.020	0.074	0.838	1.330	0.005	0.042	0.051
%RSD		7.262	6.085	1.280	3.225	2.420	6.354	17.850	8.304
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:46	0.631	2.629	2.863	0.435	1.142	2.365	0.000	42.550
2	15:16:12	0.641	2.784	2.789	0.260	1.858	1.159	0.000	43.460
3	15:16:39	0.622	2.671	2.535	0.313	0.175	1.245	0.000	43.020
x		0.631	2.695	2.729	0.336	1.058	1.590	0.000	43.010
σ		0.009	0.080	0.172	0.089	0.845	0.673	0.000	0.453
%RSD		1.493	2.977	6.295	26.640	79.820	42.320	0.000	1.052
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:46	91.747%	0.147	0.136	92.429%	-0.016	-0.012	-0.017	-0.022
2	15:16:12	92.861%	0.157	0.162	93.046%	-0.006	-0.001	-0.039	-0.036
3	15:16:39	93.888%	0.167	0.157	93.732%	-0.001	-0.003	-0.066	-0.047
x		92.832%	0.157	0.151	93.069%	-0.008	-0.005	-0.041	-0.035
σ		1.071%	0.010	0.014	0.652%	0.008	0.006	0.025	0.012
%RSD		1.153	6.352	8.987	0.701	105.200	117.200	60.500	35.760
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:46	92.301%	0.078	0.063	0.067	16.920	17.300	95.153%	94.666%
2	15:16:12	93.794%	0.065	0.061	0.055	17.870	17.620	95.861%	96.193%
3	15:16:39	94.286%	0.078	0.077	0.071	17.110	17.280	96.545%	96.590%
x		93.460%	0.074	0.067	0.064	17.300	17.400	95.853%	95.816%
σ		1.034%	0.008	0.009	0.008	0.501	0.193	0.696%	1.015%
%RSD		1.106	10.530	13.110	13.210	2.896	1.106	0.726	1.060
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:15:46	0.009	0.006	0.022	0.039	0.032	95.000%		
2	15:16:12	0.007	0.003	0.039	0.038	0.034	96.154%		
3	15:16:39	0.007	0.002	0.047	0.047	0.038	96.273%		
x		0.007	0.004	0.036	0.042	0.035	95.809%		
σ		0.001	0.002	0.013	0.005	0.003	0.703%		
%RSD		18.170	56.250	36.020	12.590	8.512	0.734		

180-41583-A-1 SD@5 3/2/2015 3:19:34 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	15:20:01	86.237%	0.017	3.680	3.405	0.000	1283.000	492.400	490.200
2	15:20:28	84.107%	0.032	3.779	3.601	0.000	1319.000	504.300	506.600
3	15:20:54	83.733%	0.004	4.079	3.470	0.000	1331.000	521.200	507.800
x		84.693%	0.018	3.846	3.492	0.000	1311.000	506.000	501.500
σ		1.351%	0.014	0.207	0.100	0.000	24.680	14.470	9.820
%RSD		1.595	77.480	5.391	2.862	0.000	1.882	2.861	1.958
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:01	49.060	1327.000	0.000	350.900	2267.000	2082.000	93.259%	0.147
2	15:20:28	51.150	1362.000	0.000	349.900	2320.000	2114.000	92.701%	0.231
3	15:20:54	51.150	1367.000	0.000	355.300	2316.000	2144.000	91.794%	0.050
x		50.450	1352.000	0.000	352.000	2301.000	2114.000	92.584%	0.143
σ		1.211	21.850	0.000	2.895	29.810	30.790	0.739%	0.090
%RSD		2.400	1.616	0.000	0.822	1.296	1.457	0.799	63.280
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:01	0.097	0.110	1.124	8.055	11.760	-0.001	0.025	0.104
2	15:20:28	0.089	0.053	1.099	8.010	11.710	0.021	-0.023	0.093
3	15:20:54	0.118	0.085	1.114	7.158	9.962	0.030	-0.022	0.073
x		0.101	0.083	1.113	7.741	11.150	0.017	-0.007	0.090
σ		0.015	0.028	0.013	0.506	1.024	0.016	0.027	0.016
%RSD		14.550	34.360	1.134	6.532	9.192	97.040	399.600	17.420
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:01	0.108	0.438	0.518	0.077	2.025	0.247	0.000	8.293
2	15:20:28	0.056	0.682	0.620	-0.050	0.438	-0.420	0.000	8.464
3	15:20:54	0.136	0.572	0.620	0.004	1.914	-0.156	0.000	8.550
x		0.100	0.564	0.586	0.010	1.459	-0.110	0.000	8.436
σ		0.041	0.122	0.059	0.064	0.886	0.336	0.000	0.131
%RSD		40.830	21.710	9.998	625.900	60.740	305.800	0.000	1.549
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:01	92.871%	0.075	0.089	93.763%	-0.008	-0.004	-0.116	-0.069
2	15:20:28	93.731%	0.094	0.081	94.292%	-0.003	-0.001	-0.063	-0.041
3	15:20:54	93.746%	0.080	0.086	94.495%	-0.003	-0.010	-0.097	-0.058
x		93.449%	0.083	0.085	94.183%	-0.005	-0.005	-0.092	-0.056
σ		0.501%	0.010	0.004	0.378%	0.003	0.005	0.027	0.014
%RSD		0.536	12.240	4.731	0.401	61.870	91.400	29.410	24.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:01	92.546%	0.248	0.057	0.051	3.548	3.380	96.312%	95.633%
2	15:20:28	94.253%	0.220	0.050	0.069	3.394	3.292	96.995%	96.431%
3	15:20:54	94.912%	0.219	0.046	0.049	3.266	3.514	96.748%	97.265%
x		93.904%	0.229	0.051	0.056	3.403	3.395	96.685%	96.443%
σ		1.221%	0.017	0.006	0.011	0.141	0.112	0.346%	0.816%
%RSD		1.300	7.300	11.220	19.370	4.149	3.291	0.358	0.846
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:20:01	0.004	0.001	-0.006	0.008	0.003	103.486%		
2	15:20:28	0.002	0.000	0.003	0.003	0.004	103.683%		
3	15:20:54	0.003	0.002	0.015	0.002	0.004	101.561%		
x		0.003	0.001	0.004	0.004	0.004	102.910%		
σ		0.001	0.001	0.011	0.003	0.001	1.172%		
%RSD		33.530	90.320	272.600	79.040	13.840	1.139		

CCV 1487954 3/2/2015 3:23:49 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	15:24:15	81.676%	92.040	100.400	98.410	0.000	47980.000	47390.000	47260.000
2	15:24:42	81.867%	97.680	101.000	99.080	0.000	49160.000	49580.000	49560.000
3	15:25:08	81.996%	94.170	98.520	99.310	0.000	49170.000	50300.000	50110.000
x		81.846%	94.628%	99.956%	98.935%	0.000	97.535%	98.178%	97.948%
σ		0.161%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.196	3.013	1.278	0.470	0.000	1.405	3.089	3.085

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:15	456.200	5480.000	0.000	48050.000	45780.000	46570.000	91.663%	90.280
2	15:24:42	474.500	5102.000	0.000	49560.000	48300.000	47980.000	90.874%	96.160
3	15:25:08	482.100	5123.000	0.000	49620.000	48420.000	48180.000	91.340%	97.920
x		94.183%	104.703%	0.000	98.154%	94.999%	95.155%	91.292%	94.787%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.397%	n/a
%RSD		2.828	4.052	0.000	1.807	3.144	1.840	0.434	4.220

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:15	90.610	90.040	473.300	23210.000	23640.000	92.440	91.810	93.770
2	15:24:42	93.820	94.960	495.500	24240.000	24670.000	94.960	95.870	96.390
3	15:25:08	94.400	94.290	496.700	24480.000	25050.000	96.060	96.910	95.730
x		92.947%	93.097%	97.705%	95.915%	97.810%	94.486%	94.865%	95.295%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.196	2.867	2.697	2.818	2.966	1.964	2.841	1.431

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:15	94.050	92.550	91.060	94.280	95.960	96.350	0.000	90.020
2	15:24:42	98.070	94.460	93.870	96.000	94.330	96.590	0.000	92.780
3	15:25:08	97.580	95.530	96.270	97.540	96.840	99.730	0.000	93.370
x		96.568%	94.180%	93.731%	95.940%	95.710%	97.559%	0.000	92.060%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.269	1.603	2.785	1.703	1.327	1.932	0.000	1.943

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:15	89.977%	88.080	89.640	88.721%	91.040	91.630	91.680	88.970
2	15:24:42	91.209%	95.110	94.990	88.994%	91.870	93.330	92.900	92.670
3	15:25:08	91.857%	96.470	97.100	89.742%	92.770	93.700	94.110	93.210
x		91.014%	93.221%	93.913%	89.152%	91.894%	92.886%	92.899%	91.619%
σ		0.955%	n/a	n/a	0.529%	n/a	n/a	n/a	n/a
%RSD		1.049	4.830	4.096	0.593	0.944	1.189	1.308	2.521

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:15	88.903%	90.000	90.220	90.720	91.490	91.130	92.952%	89.207%
2	15:24:42	89.946%	93.310	92.600	91.870	94.820	94.830	93.078%	89.922%
3	15:25:08	90.281%	93.860	93.050	93.380	96.350	95.200	93.928%	90.180%
x		89.710%	92.388%	91.957%	91.989%	94.222%	93.720%	93.319%	89.770%
σ		0.719%	n/a	n/a	n/a	n/a	n/a	0.531%	0.504%
%RSD		0.802	2.260	1.655	1.453	2.640	2.404	0.569	0.562

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:24:15	89.330	86.310	86.850	86.880	85.970	101.084%
2	15:24:42	94.520	91.700	94.990	94.540	93.820	95.886%
3	15:25:08	96.780	94.070	97.720	97.610	96.490	93.655%
x		93.541%	90.693%	93.185%	93.012%	92.095%	96.875%
σ		n/a	n/a	n/a	n/a	n/a	3.812%
%RSD		4.084	4.383	6.068	5.943	5.936	3.935

CCB6 3/2/2015 3:28:06 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

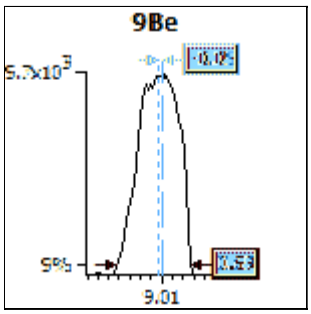
Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:33	88.405%	0.016	2.089	2.577	0.000	12.410	2.821	3.047
2	15:28:59	87.763%	0.016	1.842	2.143	0.000	12.710	2.707	2.541
3	15:29:26	87.804%	0.003	2.550	2.205	0.000	12.440	2.572	2.507
x		87.991%	0.012	2.160	2.308	0.000	12.520	2.700	2.698
σ		0.359%	0.008	0.359	0.235	0.000	0.168	0.125	0.302
%RSD		0.408	63.800	16.630	10.160	0.000	1.343	4.626	11.200
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:33	-0.351	5.958	0.000	11.530	5.579	2.494	94.202%	0.096
2	15:28:59	-0.272	3.413	0.000	9.406	14.980	1.371	93.541%	0.065
3	15:29:26	-0.277	3.530	0.000	9.878	2.588	1.142	93.265%	0.032
x		-0.300	4.300	0.000	10.270	7.715	1.669	93.669%	0.064
σ		0.045	1.437	0.000	1.113	6.466	0.723	0.482%	0.032
%RSD		14.850	33.410	0.000	10.840	83.810	43.340	0.514	49.950
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:33	0.005	0.025	0.016	42.670	42.700	0.011	-0.019	-0.021
2	15:28:59	0.015	0.004	-0.007	27.790	28.900	0.002	-0.040	0.021
3	15:29:26	0.013	-0.011	-0.007	17.750	18.010	0.015	-0.060	0.012
x		0.011	0.006	0.001	29.400	29.870	0.009	-0.040	0.004
σ		0.005	0.018	0.014	12.540	12.370	0.007	0.021	0.022
%RSD		49.650	296.800	1972.000	42.630	41.430	71.760	52.420	520.700
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:33	0.042	0.016	0.035	0.291	0.783	1.665	0.000	0.008
2	15:28:59	0.041	0.082	0.147	0.138	0.774	0.623	0.000	0.009
3	15:29:26	0.014	0.075	0.131	0.434	1.443	2.213	0.000	0.012
x		0.032	0.058	0.104	0.288	1.000	1.500	0.000	0.009
σ		0.016	0.036	0.061	0.148	0.384	0.808	0.000	0.002
%RSD		48.240	62.330	58.000	51.520	38.390	53.830	0.000	20.360
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:33	92.846%	1.699	1.622	94.911%	0.001	0.002	-0.008	-0.002
2	15:28:59	94.251%	1.131	1.194	94.858%	0.002	-0.002	-0.061	-0.049
3	15:29:26	95.500%	0.850	0.747	95.094%	0.005	-0.002	-0.059	-0.041
x		94.199%	1.226	1.188	94.954%	0.003	-0.001	-0.043	-0.031
σ		1.328%	0.433	0.438	0.124%	0.002	0.002	0.030	0.025
%RSD		1.410	35.260	36.840	0.130	66.980	392.400	69.770	81.040
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:28:33	92.567%	0.484	0.298	0.341	-0.007	0.019	93.326%	93.910%
2	15:28:59	94.113%	0.428	0.267	0.285	0.018	0.042	96.250%	95.819%
3	15:29:26	94.725%	0.371	0.230	0.226	0.017	0.016	97.823%	96.365%
x		93.802%	0.428	0.265	0.284	0.009	0.026	95.800%	95.365%
σ		1.112%	0.057	0.035	0.058	0.014	0.014	2.282%	1.289%
%RSD		1.186	13.290	13.010	20.360	147.300	55.630	2.382	1.352
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:28:33	0.010	0.010	0.021	0.016	0.019	100.616%		
2	15:28:59	0.011	0.008	0.017	0.028	0.019	100.359%		
3	15:29:26	0.008	0.008	0.012	0.015	0.013	99.659%		
x		0.010	0.009	0.017	0.020	0.017	100.211%		
σ		0.002	0.001	0.004	0.007	0.003	0.495%		
%RSD		18.580	15.470	26.830	34.620	20.410	0.494		

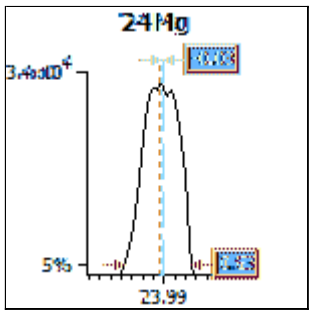
Performance Report

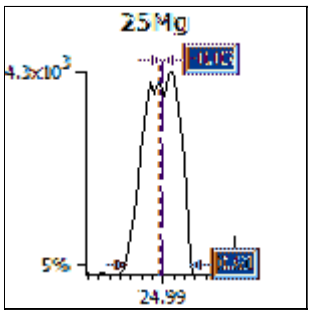
Sample details
Sample name : ITUNE
Acquired at : 3/2/2015 8:16:08 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

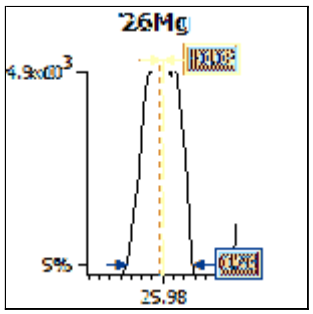
Mass Calibration verification

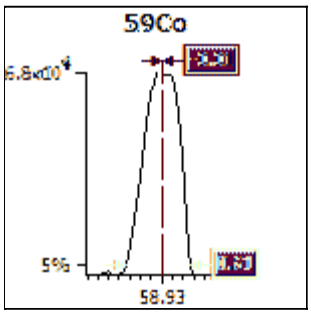
Acquisition parameters
Sweeps : 50
Dwell : 1.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

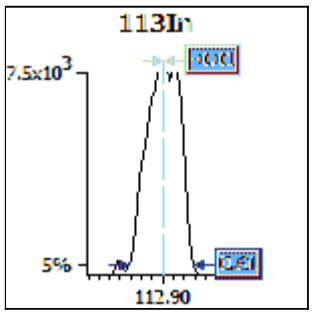


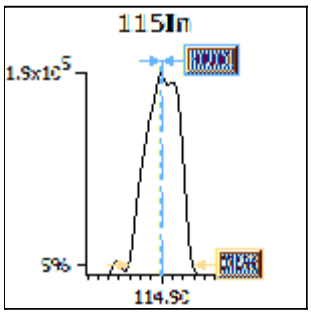


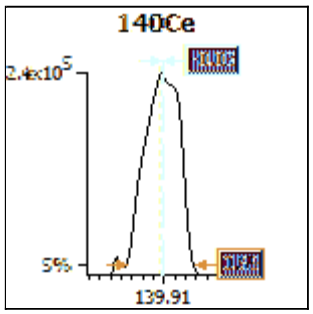


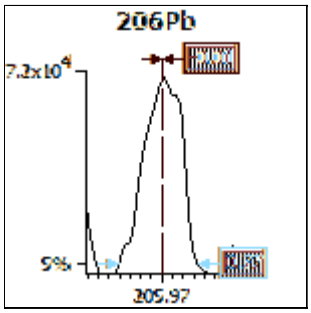


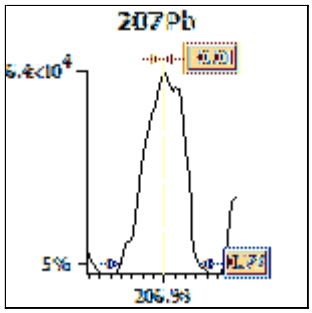


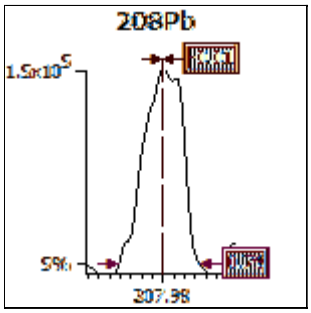












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.40	0.10	0.69	-0.05
24Mg	0.90	0.40	0.10	0.63	-0.03
25Mg	0.90	0.40	0.10	0.61	-0.03
26Mg	0.90	0.40	0.10	0.63	-0.03
59Co	0.90	0.40	0.10	0.61	-0.01
113In	0.90	0.40	0.10	0.61	-0.01
115In	0.90	0.40	0.10	0.63	-0.01
140Ce	0.90	0.40	0.10	0.65	-0.03
206Pb	0.90	0.40	0.10	0.77	-0.01
207Pb	0.90	0.40	0.10	0.79	-0.01
208Pb	0.90	0.40	0.10	0.79	-0.01

Sample details
Sample name : ITUNE
Acquired at : 3/2/2015 8:16:08 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

Tune conditions

Major	
Extraction	-153
Lens 1	4.7
Focus	22.7
D1	-29.8
Pole Bias	-0.0
Hexapole Bias	-3.4
Nebuliser	0.87
Sampling Depth	200

Minor	
Lens 2	-35.3
Lens 3	-181.2
Forward power	1404
Horizontal	30
Vertical	409
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	8:16:55 AM	0	5775	31157	4291	5032	69368	8076	194005
2	8:18:07 AM	0	5851	31375	4175	5130	69749	8131	193636
3	8:19:19 AM	0	5689	31151	4292	5123	69942	8223	194479
4	8:20:31 AM	0	5717	31376	4265	5268	69834	8300	194906
5	8:21:43 AM	0	5615	31009	4176	5255	69714	8321	193572
x		0	5729	31214	4240	5162	69722	8210	194119
σ		0.09	88.96	159.17	59.80	99.30	216.26	105.93	568.83
%RSD		79.057	1.553	0.510	1.410	1.924	0.310	1.290	0.293

Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	5.0%	-	5.0%	5.0%	5.0%	-
	Countrate	>10000	-	>1000	>1000	>5000	-
1	8:16:55 AM	238050	3804	72027	61765	148081	0
2	8:18:07 AM	238416	3850	71758	61663	147703	0
3	8:19:19 AM	240465	3857	72211	62389	149707	0
4	8:20:31 AM	240299	3850	72895	62804	150029	0
5	8:21:43 AM	239637	3798	73366	63179	151000	0
x		239373	3832	72452	62360	149304	0
σ		1093.72	28.44	661.72	653.59	1380.56	0.08
%RSD		0.457	0.742	0.913	1.048	0.925	94.786

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	8:16:55 AM	0
2	8:18:07 AM	0
3	8:19:19 AM	0
4	8:20:31 AM	0
5	8:21:43 AM	0
x		0.0160
σ		0.00
%RSD		0.6781

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Batch Number: 134168 Batch Start Date: 02/25/15 09:10 Batch Analyst: Baikadi, Ashwin

Batch Method: 3005A Batch End Date: 02/25/15 13:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTICPMS 00020	MTAPITTMSA 00023	MTAPITTMSC 00029	
MB 180-134168/1		3005A, 6020A		50 mL	50 mL				
LCS 180-134168/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
LCSD 180-134168/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41453-B-1	HD-QC1-0/1-1	3005A, 6020A	T	50 mL	50 mL				
180-41453-B-3	HD-MW-93D-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41453-B-4	HD-MW-93S-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41453-B-5	HD-MW-37D-0/1-0	3005A, 6020A	T	50 mL	50 mL				

Batch Notes	
Batch Comment	Metals C2
First End time	13:10
Lot # of hydrochloric acid	2.5 ml 1452455
Lot # of Nitric Acid	1.0 ml 1472455
Hot Block ID number	#3
Oven, Bath or Block Temperature 1	95
Pipette ID	L1201611U
Person who witnessed spiking	AB
First Start time	09:10
ID number of the thermometer	IP2-14 CF=0.0 I2
Digestion Tube/Cup Lot #	1408268
Uncorrected Temperature	95 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41453-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-QC1-0/1-1	180-41453-1
HD-MW-93D-0/1-0	180-41453-3
HD-MW-93S-0/1-0	180-41453-4
HD-MW-37D-0/1-0	180-41453-5

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41453-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 08:00

Reporting Basis: WET Date Received: 02/24/2015 12:20

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	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-93D-0/1-0 Lab Sample ID: 180-41453-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 10:00

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	180	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	180	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-93S-0/1-0 Lab Sample ID: 180-41453-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 11:50

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	210	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	210	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-41453-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG ID.:

Matrix: Water Date Sampled: 02/23/2015 15:20

Reporting Basis: WET Date Received: 02/24/2015 12:20

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	210	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	210	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Analyst: CLL Batch Start Date: 03/02/2015

Reporting Units: mg/L Analytical Batch No.: 134503

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	09:03	Total Alkalinity as CaCO3 to pH 4.5	135	125	108	80-120		WALK125PPMCCV_00081
14	CCB	09:03	Total Alkalinity as CaCO3 to pH 4.5	2.04				J	
			Bicarbonate Alkalinity as CaCO3	2.04				J	
			Carbonate Alkalinity as CaCO3	5.0				U	

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

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 134503 Date: 03/02/2015 09:03							
SM 2320B	MB 180-134503/2	Total Alkalinity as CaCO3 to pH 4.5	2.04	J	mg/L	5.0	1
SM 2320B	MB 180-134503/2	Bicarbonate Alkalinity as CaCO3	2.04	J	mg/L	5.0	1
SM 2320B	MB 180-134503/2	Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 134503 Date: 03/02/2015 09:03								
SM 2320B	HD-QC1-0/1-1	180-41453-1	Total Alkalinity as CaCO3 to pH 4.5	230	mg/L			
SM 2320B	HD-QC1-0/1-1	180-41453-1 DU	Total Alkalinity as CaCO3 to pH 4.5	220	mg/L	3	20	
SM 2320B	HD-QC1-0/1-1	180-41453-1	Bicarbonate Alkalinity as CaCO3	230	mg/L			
SM 2320B	HD-QC1-0/1-1	180-41453-1 DU	Bicarbonate Alkalinity as CaCO3	220	mg/L	3	20	
SM 2320B	HD-QC1-0/1-1	180-41453-1	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	HD-QC1-0/1-1	180-41453-1 DU	Carbonate Alkalinity as CaCO3	5.0	mg/L	NC	20	U

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

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 134503 Date: 03/02/2015 09:03											
						LCS Source: WALK250PPMPi_00090					
SM 2320B	LCS 180-134503/1	Total Alkalinity as CaCO3 to pH 4.5	261		mg/L	250	104	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: 180-41453-1

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: 180-41453-1

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.: 180-41453-1

SDG No.:

Instrument ID: NOEQUIP   Analysis Method: SM 2320B

Start Date: 03/02/2015 09:03   End Date: 03/02/2015 09:03

Lab Sample Id	D/F	Type	Time	Analytes		
				Alk	BALKCC	CarAlk
LCS 180-134503/1	1	T	09:03	X		
MB 180-134503/2	1	T	09:03	X	X	X
ZZZZZZ			09:03			
ZZZZZZ			09:03			
180-41453-1	1	T	09:03	X	X	X
180-41453-1 DU	1	T	09:03	X	X	X
180-41453-3	1	T	09:03	X	X	X
180-41453-4	1	T	09:03	X	X	X
180-41453-5	1	T	09:03	X	X	X
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
CCV 180-134503/13	1		09:03	X		
CCB 180-134503/14	1		09:03	X	X	X
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
CCV 180-134503/23			09:03			
CCB 180-134503/24			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
ZZZZZZ			09:03			
CCV 180-134503/29			09:03			
CCB 180-134503/30			09:03			

Prep Types:
T = Total/NA

FORM XIII-IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lab#030215ALK

PITTSBURGH
ALKALINITY LOGSHEET
Method 2320B
NB-2015-007

Analyst: CLLahuyde
Reviewed By: SelDRC
pH Meter ID: Accumet XL S/N# 94102132
pH 4 Start: 4.05

Date: 3-2-15
Date: ~~3-3-15~~ 3-2-15
AD Batch: 134503
pH 4 End: 4.07

Job Number(s): 41412-41453-41484-41507-41516-41522
41572

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-2015-007

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	10.84	50	6.3	12.8	.0204	261.12				
MB	5.50		0	0.1		2.04				
180-41412-1	7.03		0	15.1		308.04				
↓ 2	8.76		2.0	20.6		420.24				
180-41453-1	7.45		0	11.1		226.44				
1X	7.47		0	10.8		220.32				
3	7.50		0	8.8		179.52				
4	7.71		0	10.4		212.16				
↓ 5	7.25		0	10.4		212.16				
180-41484-2	7.42		0	12.6		257.04				
3	7.51		0	10.5		214.2				
↓ 4	7.21		0	11.9		242.76				
CCV	10.56		3.1	6.6		134.64				
CCB	5.51		0	0.1		2.04				
180-41484-5	7.42		0	10.3		210.12				
↓ -6	7.17		0	14.1		287.64				
180-41507-1	11.76			~~CCV 3-2-15~~						
2	6.29		0	2.2		44.88				
↓ 3	~~11.83~~			~~CCV 3-2-15~~						
180-41516-1	7.37		0	17.3		352.92				
↓ -1X	7.27		0	17.5		357				
~~CCV~~ 180-41522-1	5.95		0	7.8		159.12				
CCB CCV	10.53		3.1	6.5		132.6				
CCB	5.50		0	0.1		2.04				
180-41572-1	7.08		0	12.5		255				
↓ -1X	7.06	↓	0	12.1	↓	246.84				

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Pittsburgh
ALKALINITY LOGSHEET
Method 2320B
NB-2015-007

Sample ID	pH	Sample Volume	mL to pH 8.3	Ttl mL pH 4.5	N	T	P	OH^-	CO_3^{2}	HCO_3
180-41572-2	6.58	50	0	10.5	.1024	214.2				
↓ -3	7.64	↓	0	5.9	↓	120.36				
CCV	10.61		3.1	6.5		132.6				
CCB	5.57	↓	0	0.1	↓	2.04				

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41453-1

SDG No.:

Batch Number: 134503 Batch Start Date: 03/02/15 09:03 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 180-134503/1		SM 2320B		50 mL	10.84 SU	0 mL	6.3 mL	6.3 mL	0 mL
MB 180-134503/2		SM 2320B		50 mL	5.50 SU	0 mL	0 mL	0 mL	0 mL
180-41453-A-1	HD-QC1-0/1-1	SM 2320B	T	50 mL	7.45 SU	0 mL	0 mL	0 mL	0 mL
180-41453-A-1 DU	HD-QC1-0/1-1	SM 2320B	T	50 mL	7.47 SU	0 mL	0 mL	0 mL	0 mL
180-41453-A-3	HD-MW-93D-0/1-0	SM 2320B	T	50 mL	7.50 SU	0 mL	0 mL	0 mL	0 mL
180-41453-A-4	HD-MW-93S-0/1-0	SM 2320B	T	50 mL	7.71 SU	0 mL	0 mL	0 mL	0 mL
180-41453-A-5	HD-MW-37D-0/1-0	SM 2320B	T	50 mL	7.25 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-134503/13		SM 2320B		50 mL	10.56 SU	0 mL	3.1 mL	3.1 mL	0 mL
CCB 180-134503/14		SM 2320B		50 mL	5.51 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 180-134503/1		SM 2320B		6.5 mL	6.5 mL	Case 2	257.04 mg/L	0 mg/L	4.0799999999998 mg/L
MB 180-134503/2		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.04 mg/L
180-41453-A-1	HD-QC1-0/1-1	SM 2320B	T	11.1 mL	11.1 mL	Case 1	0 mg/L	0 mg/L	226.44 mg/L
180-41453-A-1 DU	HD-QC1-0/1-1	SM 2320B	T	10.8 mL	10.8 mL	Case 1	0 mg/L	0 mg/L	220.32 mg/L
180-41453-A-3	HD-MW-93D-0/1-0	SM 2320B	T	8.8 mL	8.8 mL	Case 1	0 mg/L	0 mg/L	179.52 mg/L
180-41453-A-4	HD-MW-93S-0/1-0	SM 2320B	T	10.4 mL	10.4 mL	Case 1	0 mg/L	0 mg/L	212.16 mg/L
180-41453-A-5	HD-MW-37D-0/1-0	SM 2320B	T	10.4 mL	10.4 mL	Case 1	0 mg/L	0 mg/L	212.16 mg/L
CCV 180-134503/13		SM 2320B		3.5 mL	3.5 mL	Case 2	126.48 mg/L	0 mg/L	8.1599999999998 mg/L
CCB 180-134503/14		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.04 mg/L

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00081	WALK250PPMPi 00090	
LCS 180-134503/1		SM 2320B		128.52 mg/L	261.12 mg/L	50 mL		50 mL	
MB 180-134503/2		SM 2320B		0 mg/L	2.04 mg/L	50 mL			
180-41453-A-1	HD-QC1-0/1-1	SM 2320B	T	0 mg/L	226.44 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.: 180-41453-1

SDG No.:

Batch Number: 134503 Batch Start Date: 03/02/15 09:03 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00081	WALK250PPMPi 00090	
180-41453-A-1 DU	HD-QC1-0/1-1	SM 2320B	T	0 mg/L	220.32 mg/L	50 mL			
180-41453-A-3	HD-MW-93D-0/1-0	SM 2320B	T	0 mg/L	179.52 mg/L	50 mL			
180-41453-A-4	HD-MW-93S-0/1-0	SM 2320B	T	0 mg/L	212.16 mg/L	50 mL			
180-41453-A-5	HD-MW-37D-0/1-0	SM 2320B	T	0 mg/L	212.16 mg/L	50 mL			
CCV 180-134503/13		SM 2320B		63.24 mg/L	134.64 mg/L	50 mL	50 mL		
CCB 180-134503/14		SM 2320B		0 mg/L	2.04 mg/L	50 mL			

Batch Notes	
Batch Comment	PH 4 START: 4.05 PH 4 END: 4.07
pH Buffer 1 ID	1179927
pH Buffer 2 ID	1282792
pH Buffer 3 ID	1393069
pH Buffer 4 ID	1233635
pH Buffer 5 ID	1179928
Sulfuric Acid Lot Number	1473396
Sulfuric Acid Vendor	RICCA
Nominal Amount Used	50 mL
Normality of first Titrant	.0204 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2470

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: 2/23/2015	COC No: TAP201502230
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
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			COG No.
Project Name: Dry Season Shutdown Event 10	☐ 1 week			
Site: Harley-Davidson, York PA	☐ 5 days			
Quote # 18000557	☐ 1 day			

180-41453 Chain of Custody

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-QC1-0/1-1	2/23/15	8:00	Groundwater	Water	5	X	X	X	
HD-QC1-0/1-2	2/23/15	12:00	Trip Blank	Water	2	X			
HD-MW-93D-0/1-0	2/23/15	10:00	Groundwater	Water	5	X	X	X	
HD-MW-93S-0/1-0	2/23/15	11:50	Groundwater	Water	5	X	X	X	
HD-MW-37D-0/1-0	2/23/15	15:20	Groundwater	Water	5	X	X	X	
Number of Containers						3	1	1	
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Unpreserved 7=Na2S2O3						2	1	4	
Field Filter						N	N	N	

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: 2/23/15 1556	Received by:	Company: T.A.	Date/Time: 2/23/15 15:56
Relinquished by:	Company: TA	Date/Time: 2/23/15 1729	Received by:	Company: TA	Date/Time: 2/24/15 12:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

ORIGIN ID:KPDA (610) 337-9992
SAMPLE RECEIPT
TEST AMERICA
1008 WEST 9TH AVE

KING OF PRUSSIA, PA 19406
UNITED STATES US

SHIP DATE: 23FEB15
ACTWGT: 32.0 LB
CAD: 849C299/INET3610

180-41453 Waybill

TO SAMPLE RECEIPT
TEST AMERICA - P1
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF:
INV:
PO: DEPT:

FedEx Express

J151215020301uv

TRK# 0201 7729 7400 5728

TUE - 24 FEB AA
STANDARD OVERNIGHT

EV AGCA

15238
PA-US PIT

Uncorrected temp 1.4 °C
Thermometer ID #6

CF 0.0 Initials

PIT-WI-SR-001 effective 7/26/13

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-41453-1

Login Number: 41453

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Watson, Debbie

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	