TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 180-40481-1

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
1/28/2015 7:58 AM

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01/28/2015

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CASE NARRATIVE

Client: Groundwater Sciences Corporation

Project: Harley Davidson

Report Number: 180-40481-1

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 01/15/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.1 C.

VOLATILES

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

METALS (ICP/MS)

Calcium, Magnesium, Potassium and Sodium were detected in method blank MB 180-130921/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

GENERAL CHEMISTRY

Samples HD-MW-147A-0/1-0 (5) and HD-MW-75S-0/1-0 (6) required dilution prior to analysis for IC. The reporting limits have been adjusted accordingly.

Bicarbonate Alkalinity as CaCO3 and Total Alkalinity as CaCO3 to pH 4.5 were detected in method blank MB 180-131534/2 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.

Nitrate as N was detected in method blank MB 180-130845/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Chloride, Nitrate as N and Sulfate failed the recovery criteria high for the MS/MSD of sample HD-MW-100S-0/1-0 (180-40481-3) in batch 180-130845. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 128329

Lab Sample ID: IC 180-128329/7 Client Sample ID:

Date Analyzed: 12/15/14 14:33 Lab File ID: 51215007.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.72	Split Peak	fergusond	12/15/14 16:41
1,1-Dichloroethene	3.40	Split Peak	fergusond	12/15/14 16:41
Iodomethane	3.66	Split Peak	fergusond	12/15/14 16:41
Methylene Chloride	4.18	Split Peak	fergusond	12/15/14 16:41

Lab Sample ID: IC 180-128329/8 Client Sample ID:

Date Analyzed: 12/15/14 14:57 Lab File ID: 51215008.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.29	Peak Tail	fergusond	12/15/14 16:39
1,4-Dioxane	8.09	Peak Tail	fergusond	12/16/14 08:50

Lab Sample ID: ICIS 180-128329/9 Client Sample ID:

Date Analyzed: 12/15/14 15:21 Lab File ID: 51215009.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein	3.29	Peak Tail	fergusond	12/15/14 16:37

Lab Sample ID: IC 180-128329/11 Client Sample ID:

Date Analyzed: 12/15/14 16:09 Lab File ID: 51215011.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.08	Peak Tail	fergusond	12/15/14 16:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 130947

Lab Sample ID: CCVIS 180-130947/2 Client Sample ID:

Date Analyzed: 01/16/15 12:52 Lab File ID: 50116002.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.25	Peak Tail	fergusond	01/16/15 13:30

Lab Sample ID: 180-40481-3 Client Sample ID: HD-MW-100S-0/1-0

Date Analyzed: 01/16/15 17:22 Lab File ID: 50116016.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	1.89	Split Peak	fergusond	01/19/15 07:39

Lab Sample ID: 180-40481-5 Client Sample ID: HD-MW-147A-0/1-0

Date Analyzed: 01/16/15 18:34 Lab File ID: 50116019.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.34	Split Peak	fergusond	01/19/15 07:42

Lab Sample ID: 180-40481-9 Client Sample ID: HD-QC3-0/1-2

Date Analyzed: 01/16/15 20:11 Lab File ID: 50116023.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.48	Split Peak	fergusond	01/19/15 07:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 131060

Lab Sample ID: CCVIS 180-131060/2 Client Sample ID:

Date Analyzed: 01/19/15 09:42 Lab File ID: 50119002.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.05	Peak Tail	fergusond	01/19/15 10:16

Lab Sample ID: LCS 180-131060/8 Client Sample ID:

Date Analyzed: 01/19/15 12:02 Lab File ID: 50119008.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.06	Peak Tail	fergusond	01/19/15 12:28

Lab Sample ID: 180-40481-8 Client Sample ID: HD-MW-37D-0/1-0

Date Analyzed: 01/19/15 16:52 Lab File ID: 50119020.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.35	Split Peak	fergusond	01/20/15 07:40

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
180-40481-1	HD-MW-100D-0/1-0	Water	01/14/2015 1050	01/15/2015 0900
180-40481-2	HD-MW-100I-0/1-0	Water	01/14/2015 0920	01/15/2015 0900
180-40481-3	HD-MW-100S-0/1-0	Water	01/14/2015 1000	01/15/2015 0900
180-40481-4	HD-MW-99D-0/1-0	Water	01/14/2015 1255	01/15/2015 0900
180-40481-5	HD-MW-147A-0/1-0	Water	01/14/2015 1210	01/15/2015 0900
180-40481-6	HD-MW-75S-0/1-0	Water	01/14/2015 1130	01/15/2015 0900
180-40481-7	HD-MW-75D-0/1-0	Water	01/14/2015 1015	01/15/2015 0900
180-40481-8	HD-MW-37D-0/1-0	Water	01/14/2015 1235	01/15/2015 0900
180-40481-9	HD-QC3-0/1-2	Water	01/14/2015 1200	01/15/2015 0900

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40481-1	**HD-MW-100D-0/1-0**					
1,1-Dichloroethene		2.0	J	5.0	ug/L	8260C
1,1-Dichloroethane		0.86	J	5.0	ug/L	8260C
cis-1,2-Dichloroethene		32		5.0	ug/L	8260C
1,1,1-Trichloroethane		2.2	J	5.0	ug/L	8260C
Trichloroethene		57		5.0	ug/L	8260C
Tetrachloroethene		39		5.0	ug/L	8260C
Calcium		91000	B	100	ug/L	6020A
Potassium		4600	B	100	ug/L	6020A
Magnesium		17000	B	100	ug/L	6020A
Sodium		46000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		240	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		240	B	5.0	mg/L	SM 2320B
Nitrate as N		3.6	B	0.10	mg/L	300.0
Chloride		110		1.0	mg/L	300.0
Sulfate		34		1.0	mg/L	300.0
180-40481-2	**HD-MW-100I-0/1-0**					
1,1-Dichloroethene		1.6		1.0	ug/L	8260C
1,1-Dichloroethane		0.54	J	1.0	ug/L	8260C
cis-1,2-Dichloroethene		24		1.0	ug/L	8260C
Chloroform		0.25	J	1.0	ug/L	8260C
1,1,1-Trichloroethane		1.6		1.0	ug/L	8260C
Trichloroethene		31		1.0	ug/L	8260C
Tetrachloroethene		20		1.0	ug/L	8260C
Calcium		94000	B	100	ug/L	6020A
Potassium		5000	B	100	ug/L	6020A
Magnesium		18000	B	100	ug/L	6020A
Sodium		49000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		240	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		240	B	5.0	mg/L	SM 2320B
Nitrate as N		3.6	B	0.10	mg/L	300.0
Chloride		110		1.0	mg/L	300.0
Sulfate		34		1.0	mg/L	300.0

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40481-3	**HD-MW-100S-0/1-0**					
1,1-Dichloroethene		2.9	J	5.0	ug/L	8260C
1,1-Dichloroethane		1.1	J	5.0	ug/L	8260C
cis-1,2-Dichloroethene		41		5.0	ug/L	8260C
1,1,1-Trichloroethane		2.9	J	5.0	ug/L	8260C
Trichloroethene		95		5.0	ug/L	8260C
Tetrachloroethene		77		5.0	ug/L	8260C
Calcium		89000	B	100	ug/L	6020A
Potassium		4400	B	100	ug/L	6020A
Magnesium		17000	B	100	ug/L	6020A
Sodium		44000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		250	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		250	B	5.0	mg/L	SM 2320B
Nitrate as N		3.9	B	0.10	mg/L	300.0
Chloride		100		1.0	mg/L	300.0
Sulfate		34		1.0	mg/L	300.0
180-40481-4	**HD-MW-99D-0/1-0**					
1,1-Dichloroethene		12		5.0	ug/L	8260C
1,1-Dichloroethane		2.2	J	5.0	ug/L	8260C
cis-1,2-Dichloroethene		62		5.0	ug/L	8260C
1,1,1-Trichloroethane		15		5.0	ug/L	8260C
Trichloroethene		190		5.0	ug/L	8260C
Tetrachloroethene		15		5.0	ug/L	8260C
Calcium		91000	B	100	ug/L	6020A
Potassium		3000	B	100	ug/L	6020A
Magnesium		13000	B	100	ug/L	6020A
Sodium		19000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		260	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		260	B	5.0	mg/L	SM 2320B
Nitrate as N		2.0	B	0.10	mg/L	300.0
Chloride		48		1.0	mg/L	300.0
Sulfate		24		1.0	mg/L	300.0

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40481-5	**HD-MW-147A-0/1-0**					
1,1-Dichloroethene		0.88	J	1.0	ug/L	8260C
1,1-Dichloroethane		0.34	J	1.0	ug/L	8260C
cis-1,2-Dichloroethene		19		1.0	ug/L	8260C
Chloroform		0.20	J	1.0	ug/L	8260C
1,1,1-Trichloroethane		1.5		1.0	ug/L	8260C
Trichloroethene		13		1.0	ug/L	8260C
Tetrachloroethene		8.9		1.0	ug/L	8260C
Calcium		87000	B	100	ug/L	6020A
Potassium		5600	B	100	ug/L	6020A
Magnesium		17000	B	100	ug/L	6020A
Sodium		49000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		220	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		220	B	5.0	mg/L	SM 2320B
Nitrate as N		18	B	0.50	mg/L	300.0
Chloride		550		5.0	mg/L	300.0
Sulfate		170		5.0	mg/L	300.0
180-40481-6	**HD-MW-75S-0/1-0**					
1,1-Dichloroethene		23	J	50	ug/L	8260C
1,1-Dichloroethane		9.9	J	50	ug/L	8260C
cis-1,2-Dichloroethene		190		50	ug/L	8260C
1,1,1-Trichloroethane		100		50	ug/L	8260C
Trichloroethene		1300		50	ug/L	8260C
Tetrachloroethene		6300		400	ug/L	8260C
Calcium		90000	B	100	ug/L	6020A
Potassium		8600	B	100	ug/L	6020A
Magnesium		20000	B	100	ug/L	6020A
Sodium		56000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		200	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		200	B	5.0	mg/L	SM 2320B
Nitrate as N		21	B	0.50	mg/L	300.0
Chloride		820		5.0	mg/L	300.0
Sulfate		160		5.0	mg/L	300.0

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40481-7	**HD-MW-75D-0/1-0**					
1,1-Dichloroethene		62		50	ug/L	8260C
1,1-Dichloroethane		48	J	50	ug/L	8260C
cis-1,2-Dichloroethene		630		50	ug/L	8260C
1,1,1-Trichloroethane		270		50	ug/L	8260C
Trichloroethene		740		50	ug/L	8260C
Tetrachloroethene		390		50	ug/L	8260C
Calcium		100000	B	100	ug/L	6020A
Potassium		6800	B	100	ug/L	6020A
Magnesium		18000	B	100	ug/L	6020A
Sodium		50000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		210	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		210	B	5.0	mg/L	SM 2320B
Nitrate as N		3.5	B	0.10	mg/L	300.0
Chloride		160		1.0	mg/L	300.0
Sulfate		30		1.0	mg/L	300.0
180-40481-8	**HD-MW-37D-0/1-0**					
1,1-Dichloroethene		19		13	ug/L	8260C
1,1-Dichloroethane		16		13	ug/L	8260C
cis-1,2-Dichloroethene		250		13	ug/L	8260C
1,1,1-Trichloroethane		71		13	ug/L	8260C
Trichloroethene		230		13	ug/L	8260C
Tetrachloroethene		280		13	ug/L	8260C
Calcium		96000	B	100	ug/L	6020A
Potassium		12000	B	100	ug/L	6020A
Magnesium		21000	B	100	ug/L	6020A
Sodium		57000	B	100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		230	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		230	B	5.0	mg/L	SM 2320B
Nitrate as N		5.0	B	0.10	mg/L	300.0
Chloride		170		1.0	mg/L	300.0
Sulfate		34		1.0	mg/L	300.0

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL PIT	SW846 8260C	
Purge and Trap	TAL PIT		SW846 5030C
Anions, Ion Chromatography	TAL PIT	MCAWW 300.0	
Metals (ICP/MS)	TAL PIT	SW846 6020A	
Preparation, Total Recoverable or Dissolved Metals	TAL PIT		SW846 3005A
Alkalinity	TAL PIT	SM SM 2320B	

Lab References:

TAL PIT = TestAmerica Pittsburgh

Method 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.

METHOD / ANALYST SUMMARY

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Method	Analyst	Analyst ID
SW846 8260C	Ferguson, Donald	DLF
SW846 6020A	Ferguson, Caitlin N	CNF
SM SM 2320B	Loheyde, Cheryl	CLL
MCAWW 300.0	Hartman, Matthew	MJH

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-100D-0/1-0**

Lab Sample ID: 180-40481-1 Date Sampled: 01/14/2015 1050
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116014.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1634			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1634				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	5.0	U	1.4	5.0
Vinyl chloride	5.0	U	1.1	5.0
Bromomethane	5.0	U	1.6	5.0
Chloroethane	5.0	U	1.1	5.0
1,1-Dichloroethene	2.0	J	1.5	5.0
Acetone	25	U	13	25
Carbon disulfide	5.0	U	1.1	5.0
Methylene Chloride	5.0	U	0.63	5.0
trans-1,2-Dichloroethene	5.0	U	0.85	5.0
Methyl tert-butyl ether	5.0	U	0.92	5.0
1,1-Dichloroethane	0.86	J	0.58	5.0
cis-1,2-Dichloroethene	32		1.2	5.0
Bromochloromethane	5.0	U	0.90	5.0
2-Butanone (MEK)	25	U	2.7	25
Chloroform	5.0	U	0.85	5.0
1,1,1-Trichloroethane	2.2	J	1.4	5.0
Carbon tetrachloride	5.0	U	0.68	5.0
Benzene	5.0	U	0.53	5.0
1,2-Dichloroethane	5.0	U	1.1	5.0
Trichloroethene	57		0.72	5.0
1,2-Dichloropropane	5.0	U	0.47	5.0
Bromodichloromethane	5.0	U	0.65	5.0
cis-1,3-Dichloropropene	5.0	U	0.93	5.0
4-Methyl-2-pentanone (MIBK)	25	U	2.6	25
Toluene	5.0	U	0.75	5.0
trans-1,3-Dichloropropene	5.0	U	0.74	5.0
1,1,2-Trichloroethane	5.0	U	1.0	5.0
Tetrachloroethene	39		0.74	5.0
2-Hexanone	25	U	0.80	25
Dibromochloromethane	5.0	U	0.68	5.0
1,2-Dibromoethane (EDB)	5.0	U	0.90	5.0
Chlorobenzene	5.0	U	0.68	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.4	5.0
Ethylbenzene	5.0	U	1.1	5.0
Xylenes, Total	15	U	2.4	15
Styrene	5.0	U	0.48	5.0
Bromoform	5.0	U	0.96	5.0
1,1,2,2-Tetrachloroethane	5.0	U	1.0	5.0
Acrylonitrile	100	U	2.7	100
1,4-Dioxane	1000	U	170	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105		64 - 135
Toluene-d8 (Surr)	106		71 - 118
4-Bromofluorobenzene (Surr)	99		70 - 118
Dibromofluoromethane (Surr)	109		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100D-0/1-0**

Lab Sample ID: 180-40481-1
Client Matrix: Water

Date Sampled: 01/14/2015 1050
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116014.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1634			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1634				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-100I-0/1-0**

Lab Sample ID: 180-40481-2 Date Sampled: 01/14/2015 0920
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116015.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1658			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1658				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	1.0	U	0.28	1.0
Vinyl chloride	1.0	U	0.23	1.0
Bromomethane	1.0	U	0.31	1.0
Chloroethane	1.0	U	0.21	1.0
1,1-Dichloroethene	1.6		0.30	1.0
Acetone	5.0	U	2.5	5.0
Carbon disulfide	1.0	U	0.21	1.0
Methylene Chloride	1.0	U	0.13	1.0
trans-1,2-Dichloroethene	1.0	U	0.17	1.0
Methyl tert-butyl ether	1.0	U	0.18	1.0
1,1-Dichloroethane	0.54	J	0.12	1.0
cis-1,2-Dichloroethene	24		0.24	1.0
Bromochloromethane	1.0	U	0.18	1.0
2-Butanone (MEK)	5.0	U	0.55	5.0
Chloroform	0.25	J	0.17	1.0
1,1,1-Trichloroethane	1.6		0.29	1.0
Carbon tetrachloride	1.0	U	0.14	1.0
Benzene	1.0	U	0.11	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
Trichloroethene	31		0.14	1.0
1,2-Dichloropropane	1.0	U	0.095	1.0
Bromodichloromethane	1.0	U	0.13	1.0
cis-1,3-Dichloropropene	1.0	U	0.19	1.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.53	5.0
Toluene	1.0	U	0.15	1.0
trans-1,3-Dichloropropene	1.0	U	0.15	1.0
1,1,2-Trichloroethane	1.0	U	0.20	1.0
Tetrachloroethene	20		0.15	1.0
2-Hexanone	5.0	U	0.16	5.0
Dibromochloromethane	1.0	U	0.14	1.0
1,2-Dibromoethane (EDB)	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.14	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.28	1.0
Ethylbenzene	1.0	U	0.23	1.0
Xylenes, Total	3.0	U	0.49	3.0
Styrene	1.0	U	0.097	1.0
Bromoform	1.0	U	0.19	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.20	1.0
Acrylonitrile	20	U	0.55	20
1,4-Dioxane	200	U	34	200

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		64 - 135
Toluene-d8 (Surr)	96		71 - 118
4-Bromofluorobenzene (Surr)	90		70 - 118
Dibromofluoromethane (Surr)	113		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100I-0/1-0**

Lab Sample ID: 180-40481-2
Client Matrix: Water

Date Sampled: 01/14/2015 0920
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116015.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1658			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1658				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-100S-0/1-0**

Lab Sample ID: 180-40481-3 Date Sampled: 01/14/2015 1000
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116016.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1722			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1722				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	5.0	U	1.4	5.0
Vinyl chloride	5.0	U	1.1	5.0
Bromomethane	5.0	U	1.6	5.0
Chloroethane	5.0	U	1.1	5.0
1,1-Dichloroethene	2.9	J	1.5	5.0
Acetone	25	U	13	25
Carbon disulfide	5.0	U	1.1	5.0
Methylene Chloride	5.0	U	0.63	5.0
trans-1,2-Dichloroethene	5.0	U	0.85	5.0
Methyl tert-butyl ether	5.0	U	0.92	5.0
1,1-Dichloroethane	1.1	J	0.58	5.0
cis-1,2-Dichloroethene	41		1.2	5.0
Bromochloromethane	5.0	U	0.90	5.0
2-Butanone (MEK)	25	U	2.7	25
Chloroform	5.0	U	0.85	5.0
1,1,1-Trichloroethane	2.9	J	1.4	5.0
Carbon tetrachloride	5.0	U	0.68	5.0
Benzene	5.0	U	0.53	5.0
1,2-Dichloroethane	5.0	U	1.1	5.0
Trichloroethene	95		0.72	5.0
1,2-Dichloropropane	5.0	U	0.47	5.0
Bromodichloromethane	5.0	U	0.65	5.0
cis-1,3-Dichloropropene	5.0	U	0.93	5.0
4-Methyl-2-pentanone (MIBK)	25	U	2.6	25
Toluene	5.0	U	0.75	5.0
trans-1,3-Dichloropropene	5.0	U	0.74	5.0
1,1,2-Trichloroethane	5.0	U	1.0	5.0
Tetrachloroethene	77		0.74	5.0
2-Hexanone	25	U	0.80	25
Dibromochloromethane	5.0	U	0.68	5.0
1,2-Dibromoethane (EDB)	5.0	U	0.90	5.0
Chlorobenzene	5.0	U	0.68	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.4	5.0
Ethylbenzene	5.0	U	1.1	5.0
Xylenes, Total	15	U	2.4	15
Styrene	5.0	U	0.48	5.0
Bromoform	5.0	U	0.96	5.0
1,1,2,2-Tetrachloroethane	5.0	U	1.0	5.0
Acrylonitrile	100	U	2.7	100
1,4-Dioxane	1000	U	170	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 135
Toluene-d8 (Surr)	96		71 - 118
4-Bromofluorobenzene (Surr)	92		70 - 118
Dibromofluoromethane (Surr)	111		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100S-0/1-0**

Lab Sample ID: 180-40481-3
Client Matrix: Water

Date Sampled: 01/14/2015 1000
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116016.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1722			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1722				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-99D-0/1-0**

Lab Sample ID: 180-40481-4 Date Sampled: 01/14/2015 1255
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116017.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1746			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1746				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	5.0	U	1.4	5.0
Vinyl chloride	5.0	U	1.1	5.0
Bromomethane	5.0	U	1.6	5.0
Chloroethane	5.0	U	1.1	5.0
1,1-Dichloroethene	12		1.5	5.0
Acetone	25	U	13	25
Carbon disulfide	5.0	U	1.1	5.0
Methylene Chloride	5.0	U	0.63	5.0
trans-1,2-Dichloroethene	5.0	U	0.85	5.0
Methyl tert-butyl ether	5.0	U	0.92	5.0
1,1-Dichloroethane	2.2	J	0.58	5.0
cis-1,2-Dichloroethene	62		1.2	5.0
Bromochloromethane	5.0	U	0.90	5.0
2-Butanone (MEK)	25	U	2.7	25
Chloroform	5.0	U	0.85	5.0
1,1,1-Trichloroethane	15		1.4	5.0
Carbon tetrachloride	5.0	U	0.68	5.0
Benzene	5.0	U	0.53	5.0
1,2-Dichloroethane	5.0	U	1.1	5.0
Trichloroethene	190		0.72	5.0
1,2-Dichloropropane	5.0	U	0.47	5.0
Bromodichloromethane	5.0	U	0.65	5.0
cis-1,3-Dichloropropene	5.0	U	0.93	5.0
4-Methyl-2-pentanone (MIBK)	25	U	2.6	25
Toluene	5.0	U	0.75	5.0
trans-1,3-Dichloropropene	5.0	U	0.74	5.0
1,1,2-Trichloroethane	5.0	U	1.0	5.0
Tetrachloroethene	15		0.74	5.0
2-Hexanone	25	U	0.80	25
Dibromochloromethane	5.0	U	0.68	5.0
1,2-Dibromoethane (EDB)	5.0	U	0.90	5.0
Chlorobenzene	5.0	U	0.68	5.0
1,1,1,2-Tetrachloroethane	5.0	U	1.4	5.0
Ethylbenzene	5.0	U	1.1	5.0
Xylenes, Total	15	U	2.4	15
Styrene	5.0	U	0.48	5.0
Bromoform	5.0	U	0.96	5.0
1,1,2,2-Tetrachloroethane	5.0	U	1.0	5.0
Acrylonitrile	100	U	2.7	100
1,4-Dioxane	1000	U	170	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		64 - 135
Toluene-d8 (Surr)	99		71 - 118
4-Bromofluorobenzene (Surr)	91		70 - 118
Dibromofluoromethane (Surr)	112		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-99D-0/1-0**

Lab Sample ID: 180-40481-4
Client Matrix: Water

Date Sampled: 01/14/2015 1255
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116017.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1746			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1746				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-147A-0/1-0**

Lab Sample ID: 180-40481-5 Date Sampled: 01/14/2015 1210
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116019.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1834			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1834				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	1.0	U	0.28	1.0
Vinyl chloride	1.0	U	0.23	1.0
Bromomethane	1.0	U	0.31	1.0
Chloroethane	1.0	U	0.21	1.0
1,1-Dichloroethene	0.88	J	0.30	1.0
Acetone	5.0	U	2.5	5.0
Carbon disulfide	1.0	U	0.21	1.0
Methylene Chloride	1.0	U	0.13	1.0
trans-1,2-Dichloroethene	1.0	U	0.17	1.0
Methyl tert-butyl ether	1.0	U	0.18	1.0
1,1-Dichloroethane	0.34	J	0.12	1.0
cis-1,2-Dichloroethene	19		0.24	1.0
Bromochloromethane	1.0	U	0.18	1.0
2-Butanone (MEK)	5.0	U	0.55	5.0
Chloroform	0.20	J	0.17	1.0
1,1,1-Trichloroethane	1.5		0.29	1.0
Carbon tetrachloride	1.0	U	0.14	1.0
Benzene	1.0	U	0.11	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
Trichloroethene	13		0.14	1.0
1,2-Dichloropropane	1.0	U	0.095	1.0
Bromodichloromethane	1.0	U	0.13	1.0
cis-1,3-Dichloropropene	1.0	U	0.19	1.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.53	5.0
Toluene	1.0	U	0.15	1.0
trans-1,3-Dichloropropene	1.0	U	0.15	1.0
1,1,2-Trichloroethane	1.0	U	0.20	1.0
Tetrachloroethene	8.9		0.15	1.0
2-Hexanone	5.0	U	0.16	5.0
Dibromochloromethane	1.0	U	0.14	1.0
1,2-Dibromoethane (EDB)	1.0	U	0.18	1.0
Chlorobenzene	1.0	U	0.14	1.0
1,1,1,2-Tetrachloroethane	1.0	U	0.28	1.0
Ethylbenzene	1.0	U	0.23	1.0
Xylenes, Total	3.0	U	0.49	3.0
Styrene	1.0	U	0.097	1.0
Bromoform	1.0	U	0.19	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.20	1.0
Acrylonitrile	20	U	0.55	20
1,4-Dioxane	200	U	34	200

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		64 - 135
Toluene-d8 (Surr)	104		71 - 118
4-Bromofluorobenzene (Surr)	95		70 - 118
Dibromofluoromethane (Surr)	110		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-147A-0/1-0**

Lab Sample ID: 180-40481-5
Client Matrix: Water

Date Sampled: 01/14/2015 1210
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116019.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1834			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1834				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6 Date Sampled: 01/14/2015 1130
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116020.D
Dilution:	50			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1858			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1858				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	50	U	14	50
Vinyl chloride	50	U	11	50
Bromomethane	50	U	16	50
Chloroethane	50	U	11	50
1,1-Dichloroethene	23	J	15	50
Acetone	250	U	130	250
Carbon disulfide	50	U	11	50
Methylene Chloride	50	U	6.3	50
trans-1,2-Dichloroethene	50	U	8.5	50
Methyl tert-butyl ether	50	U	9.2	50
1,1-Dichloroethane	9.9	J	5.8	50
cis-1,2-Dichloroethene	190		12	50
Bromochloromethane	50	U	9.0	50
2-Butanone (MEK)	250	U	27	250
Chloroform	50	U	8.5	50
1,1,1-Trichloroethane	100		14	50
Carbon tetrachloride	50	U	6.8	50
Benzene	50	U	5.3	50
1,2-Dichloroethane	50	U	11	50
Trichloroethene	1300		7.2	50
1,2-Dichloropropane	50	U	4.7	50
Bromodichloromethane	50	U	6.5	50
cis-1,3-Dichloropropene	50	U	9.3	50
4-Methyl-2-pentanone (MIBK)	250	U	26	250
Toluene	50	U	7.5	50
trans-1,3-Dichloropropene	50	U	7.4	50
1,1,2-Trichloroethane	50	U	10	50
Tetrachloroethene	5900	E	7.4	50
2-Hexanone	250	U	8.0	250
Dibromochloromethane	50	U	6.8	50
1,2-Dibromoethane (EDB)	50	U	9.0	50
Chlorobenzene	50	U	6.8	50
1,1,1,2-Tetrachloroethane	50	U	14	50
Ethylbenzene	50	U	11	50
Xylenes, Total	150	U	24	150
Styrene	50	U	4.8	50
Bromoform	50	U	9.6	50
1,1,2,2-Tetrachloroethane	50	U	10	50
Acrylonitrile	1000	U	27	1000
1,4-Dioxane	10000	U	1700	10000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		64 - 135
Toluene-d8 (Surr)	99		71 - 118
4-Bromofluorobenzene (Surr)	93		70 - 118
Dibromofluoromethane (Surr)	111		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6
Client Matrix: Water

Date Sampled: 01/14/2015 1130
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116020.D
Dilution:	50			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1858			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1858				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6 Date Sampled: 01/14/2015 1130
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50119018.D
Dilution:	400			Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1603	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1603				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	400	U	110	400
Vinyl chloride	400	U	91	400
Bromomethane	400	U	130	400
Chloroethane	400	U	86	400
1,1-Dichloroethene	400	U	120	400
Acetone	2000	U	1000	2000
Carbon disulfide	400	U	85	400
Methylene Chloride	400	U	50	400
trans-1,2-Dichloroethene	400	U	68	400
Methyl tert-butyl ether	400	U	73	400
1,1-Dichloroethane	400	U	47	400
cis-1,2-Dichloroethene	220	J	95	400
Bromochloromethane	400	U	72	400
2-Butanone (MEK)	2000	U	220	2000
Chloroform	400	U	68	400
1,1,1-Trichloroethane	120	J	110	400
Carbon tetrachloride	400	U	55	400
Benzene	400	U	42	400
1,2-Dichloroethane	400	U	85	400
Trichloroethene	1400		57	400
1,2-Dichloropropane	400	U	38	400
Bromodichloromethane	400	U	52	400
cis-1,3-Dichloropropene	400	U	75	400
4-Methyl-2-pentanone (MIBK)	2000	U	210	2000
Toluene	400	U	60	400
trans-1,3-Dichloropropene	400	U	59	400
1,1,2-Trichloroethane	400	U	81	400
Tetrachloroethene	6300		59	400
2-Hexanone	2000	U	64	2000
Dibromochloromethane	400	U	55	400
1,2-Dibromoethane (EDB)	400	U	72	400
Chlorobenzene	400	U	54	400
1,1,1,2-Tetrachloroethane	400	U	110	400
Ethylbenzene	400	U	91	400
Xylenes, Total	1200	U	200	1200
Styrene	400	U	39	400
Bromoform	400	U	77	400
1,1,2,2-Tetrachloroethane	400	U	80	400
Acrylonitrile	8000	U	220	8000
1,4-Dioxane	80000	U	14000	80000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		64 - 135
Toluene-d8 (Surr)	98		71 - 118
4-Bromofluorobenzene (Surr)	93		70 - 118
Dibromofluoromethane (Surr)	109		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6
Client Matrix: Water

Date Sampled: 01/14/2015 1130
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50119018.D
Dilution:	400			Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1603	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1603				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-75D-0/1-0**

Lab Sample ID: 180-40481-7 Date Sampled: 01/14/2015 1015
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50119019.D
Dilution:	50			Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1627			Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1627				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	50	U	14	50
Vinyl chloride	50	U	11	50
Bromomethane	50	U	16	50
Chloroethane	50	U	11	50
1,1-Dichloroethene	62		15	50
Acetone	250	U	130	250
Carbon disulfide	50	U	11	50
Methylene Chloride	50	U	6.3	50
trans-1,2-Dichloroethene	50	U	8.5	50
Methyl tert-butyl ether	50	U	9.2	50
1,1-Dichloroethane	48	J	5.8	50
cis-1,2-Dichloroethene	630		12	50
Bromochloromethane	50	U	9.0	50
2-Butanone (MEK)	250	U	27	250
Chloroform	50	U	8.5	50
1,1,1-Trichloroethane	270		14	50
Carbon tetrachloride	50	U	6.8	50
Benzene	50	U	5.3	50
1,2-Dichloroethane	50	U	11	50
Trichloroethene	740		7.2	50
1,2-Dichloropropane	50	U	4.7	50
Bromodichloromethane	50	U	6.5	50
cis-1,3-Dichloropropene	50	U	9.3	50
4-Methyl-2-pentanone (MIBK)	250	U	26	250
Toluene	50	U	7.5	50
trans-1,3-Dichloropropene	50	U	7.4	50
1,1,2-Trichloroethane	50	U	10	50
Tetrachloroethene	390		7.4	50
2-Hexanone	250	U	8.0	250
Dibromochloromethane	50	U	6.8	50
1,2-Dibromoethane (EDB)	50	U	9.0	50
Chlorobenzene	50	U	6.8	50
1,1,1,2-Tetrachloroethane	50	U	14	50
Ethylbenzene	50	U	11	50
Xylenes, Total	150	U	24	150
Styrene	50	U	4.8	50
Bromoform	50	U	9.6	50
1,1,2,2-Tetrachloroethane	50	U	10	50
Acrylonitrile	1000	U	27	1000
1,4-Dioxane	10000	U	1700	10000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		64 - 135
Toluene-d8 (Surr)	100		71 - 118
4-Bromofluorobenzene (Surr)	97		70 - 118
Dibromofluoromethane (Surr)	119		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75D-0/1-0**

Lab Sample ID: 180-40481-7
Client Matrix: Water

Date Sampled: 01/14/2015 1015
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50119019.D
Dilution:	50			Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1627			Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1627				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

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

Lab Sample ID: 180-40481-8 Date Sampled: 01/14/2015 1235
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50119020.D
Dilution:	12.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1652			Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1652				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	13	U	3.5	13
Vinyl chloride	13	U	2.8	13
Bromomethane	13	U	3.9	13
Chloroethane	13	U	2.7	13
1,1-Dichloroethene	19		3.7	13
Acetone	63	U	31	63
Carbon disulfide	13	U	2.7	13
Methylene Chloride	13	U	1.6	13
trans-1,2-Dichloroethene	13	U	2.1	13
Methyl tert-butyl ether	13	U	2.3	13
1,1-Dichloroethane	16		1.5	13
cis-1,2-Dichloroethene	250		3.0	13
Bromochloromethane	13	U	2.3	13
2-Butanone (MEK)	63	U	6.8	63
Chloroform	13	U	2.1	13
1,1,1-Trichloroethane	71		3.6	13
Carbon tetrachloride	13	U	1.7	13
Benzene	13	U	1.3	13
1,2-Dichloroethane	13	U	2.6	13
Trichloroethene	230		1.8	13
1,2-Dichloropropane	13	U	1.2	13
Bromodichloromethane	13	U	1.6	13
cis-1,3-Dichloropropene	13	U	2.3	13
4-Methyl-2-pentanone (MIBK)	63	U	6.6	63
Toluene	13	U	1.9	13
trans-1,3-Dichloropropene	13	U	1.9	13
1,1,2-Trichloroethane	13	U	2.5	13
Tetrachloroethene	280		1.9	13
2-Hexanone	63	U	2.0	63
Dibromochloromethane	13	U	1.7	13
1,2-Dibromoethane (EDB)	13	U	2.3	13
Chlorobenzene	13	U	1.7	13
1,1,1,2-Tetrachloroethane	13	U	3.5	13
Ethylbenzene	13	U	2.8	13
Xylenes, Total	38	U	6.1	38
Styrene	13	U	1.2	13
Bromoform	13	U	2.4	13
1,1,2,2-Tetrachloroethane	13	U	2.5	13
Acrylonitrile	250	U	6.8	250
1,4-Dioxane	2500	U	430	2500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		64 - 135
Toluene-d8 (Surr)	96		71 - 118
4-Bromofluorobenzene (Surr)	93		70 - 118
Dibromofluoromethane (Surr)	116		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

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

Lab Sample ID: 180-40481-8
Client Matrix: Water

Date Sampled: 01/14/2015 1235
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50119020.D
Dilution:	12.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1652			Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1652				

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-QC3-0/1-2**

Lab Sample ID: 180-40481-9 Date Sampled: 01/14/2015 1200
Client Matrix: Water Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116023.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 2011			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 2011				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		64 - 135
Toluene-d8 (Surr)	96		71 - 118
4-Bromofluorobenzene (Surr)	93		70 - 118
Dibromofluoromethane (Surr)	115		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-QC3-0/1-2**

Lab Sample ID: 180-40481-9
Client Matrix: Water

Date Sampled: 01/14/2015 1200
Date Received: 01/15/2015 0900

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50116023.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 2011			Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 2011				

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100D-0/1-0**

Lab Sample ID: 180-40481-1
Client Matrix: Water

Date Sampled: 01/14/2015 1050
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1909			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	3.6	B	0.0062	0.10
Chloride	110		0.20	1.0
Sulfate	34		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100I-0/1-0**

Lab Sample ID: 180-40481-2
Client Matrix: Water

Date Sampled: 01/14/2015 0920
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1925			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	3.6	B	0.0062	0.10
Chloride	110		0.20	1.0
Sulfate	34		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100S-0/1-0**

Lab Sample ID: 180-40481-3
Client Matrix: Water

Date Sampled: 01/14/2015 1000
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1823			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	3.9	B	0.0062	0.10
Chloride	100		0.20	1.0
Sulfate	34		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-99D-0/1-0**

Lab Sample ID: 180-40481-4
Client Matrix: Water

Date Sampled: 01/14/2015 1255
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1652			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	2.0	B	0.0062	0.10
Chloride	48		0.20	1.0
Sulfate	24		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-147A-0/1-0**

Lab Sample ID: 180-40481-5
Client Matrix: Water

Date Sampled: 01/14/2015 1210
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	5.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1940			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	18	B	0.031	0.50
Chloride	550		0.98	5.0
Sulfate	170		1.1	5.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6
Client Matrix: Water

Date Sampled: 01/14/2015 1130
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	5.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1955			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	21	B	0.031	0.50
Chloride	820		0.98	5.0
Sulfate	160		1.1	5.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75D-0/1-0**

Lab Sample ID: 180-40481-7
Client Matrix: Water

Date Sampled: 01/14/2015 1015
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 2010			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	3.5	B	0.0062	0.10
Chloride	160		0.20	1.0
Sulfate	30		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

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

Lab Sample ID: 180-40481-8
Client Matrix: Water

Date Sampled: 01/14/2015 1235
Date Received: 01/15/2015 0900

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1413			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	5.0	B	0.0062	0.10
Chloride	170		0.20	1.0
Sulfate	34		0.21	1.0

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-100D-0/1-0**

Lab Sample ID: 180-40481-1 Date Sampled: 01/14/2015 1050
Client Matrix: Water Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1209			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	91000	B	2.8	100
Potassium	4600	B	5.8	100
Magnesium	17000	B	1.2	100
Sodium	46000	B	3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-100I-0/1-0**

Lab Sample ID: 180-40481-2
Client Matrix: Water

Date Sampled: 01/14/2015 0920
Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1213			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	94000	B	2.8	100
Potassium	5000	B	5.8	100
Magnesium	18000	B	1.2	100
Sodium	49000	B	3.8	100

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Client Sample ID: **HD-MW-100S-0/1-0**

Lab Sample ID: 180-40481-3 Date Sampled: 01/14/2015 1000
Client Matrix: Water Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1229			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	89000	B	2.8	100
Potassium	4400	B	5.8	100
Magnesium	17000	B	1.2	100
Sodium	44000	B	3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-99D-0/1-0**

Lab Sample ID: 180-40481-4
Client Matrix: Water

Date Sampled: 01/14/2015 1255
Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1233			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	91000	B	2.8	100
Potassium	3000	B	5.8	100
Magnesium	13000	B	1.2	100
Sodium	19000	B	3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-147A-0/1-0**

Lab Sample ID: 180-40481-5
Client Matrix: Water

Date Sampled: 01/14/2015 1210
Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1237			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	87000	B	2.8	100
Potassium	5600	B	5.8	100
Magnesium	17000	B	1.2	100
Sodium	49000	B	3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6
Client Matrix: Water

Date Sampled: 01/14/2015 1130
Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1241			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	90000	B	2.8	100
Potassium	8600	B	5.8	100
Magnesium	20000	B	1.2	100
Sodium	56000	B	3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Client Sample ID: **HD-MW-75D-0/1-0**

Lab Sample ID: 180-40481-7
Client Matrix: Water

Date Sampled: 01/14/2015 1015
Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1245			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	100000	B	2.8	100
Potassium	6800	B	5.8	100
Magnesium	18000	B	1.2	100
Sodium	50000	B	3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

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

Lab Sample ID: 180-40481-8
Client Matrix: Water

Date Sampled: 01/14/2015 1235
Date Received: 01/15/2015 0900

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131403	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1250			Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	96000	B	2.8	100
Potassium	12000	B	5.8	100
Magnesium	21000	B	1.2	100
Sodium	57000	B	3.8	100

General Chemistry

Client Sample ID: **HD-MW-100D-0/1-0**

Lab Sample ID: 180-40481-1 Date Sampled: 01/14/2015 1050

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	240	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	240	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

Client Sample ID: **HD-MW-100I-0/1-0**

Lab Sample ID: 180-40481-2 Date Sampled: 01/14/2015 0920
Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	240	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	240	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

Client Sample ID: **HD-MW-100S-0/1-0**

Lab Sample ID: 180-40481-3 Date Sampled: 01/14/2015 1000

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	250	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	250	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

Client Sample ID: **HD-MW-99D-0/1-0**

Lab Sample ID: 180-40481-4 Date Sampled: 01/14/2015 1255

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	260	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	260	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

Client Sample ID: **HD-MW-147A-0/1-0**

Lab Sample ID: 180-40481-5 Date Sampled: 01/14/2015 1210

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	220	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	220	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

Client Sample ID: **HD-MW-75S-0/1-0**

Lab Sample ID: 180-40481-6 Date Sampled: 01/14/2015 1130

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	200	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	200	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

Client Sample ID: **HD-MW-75D-0/1-0**

Lab Sample ID: 180-40481-7 Date Sampled: 01/14/2015 1015

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	210	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	210	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

General Chemistry

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

Lab Sample ID: 180-40481-8 Date Sampled: 01/14/2015 1235

Client Matrix: Water Date Received: 01/15/2015 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	230	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Bicarbonate Alkalinity as CaCO3	230	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131534	Analysis Date: 01/23/2015 0550						

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Surrogate Recovery Report

8260C Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
180-40481-1	HD-MW-100D-0/1-0	109	105	106	99
180-40481-2	HD-MW-100I-0/1-0	113	106	96	90
180-40481-3	HD-MW-100S-0/1-0	111	108	96	92
180-40481-4	HD-MW-99D-0/1-0	112	110	99	91
180-40481-5	HD-MW-147A-0/1-0	110	103	104	95
180-40481-6	HD-MW-75S-0/1-0	111	114	99	93
180-40481-6 DL	HD-MW-75S-0/1-0 DL	109	110	98	93
180-40481-7	HD-MW-75D-0/1-0	119	115	100	97
180-40481-8	HD-MW-37D-0/1-0	116	108	96	93
180-40481-9	HD-QC3-0/1-2	115	112	96	93
MB 180-130947/8		110	104	101	98
MB 180-131060/5		107	105	99	96
LCS 180-130947/9		106	98	100	99
LCS 180-131060/8		92	89	95	99
LCSD 180-130947/10		97	94	87	91

Surrogate	Acceptance 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

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Method Blank - Batch: 180-130947

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 180-130947/8	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50116008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1356	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1356				
Leach Date:	N/A				

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

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	64 - 135
Toluene-d8 (Surr)	101	71 - 118
4-Bromofluorobenzene (Surr)	98	70 - 118

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Surrogate	% Rec	Acceptance Limits
Dibromofluoromethane (Surr)	110	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 180-130947

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 180-130947/9	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50116009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1432	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1432				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 180-130947/10	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50116010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1456	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1456				5 mL
Leach Date:	N/A				

	% Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chloromethane	96	88	50 - 139	8	35		
Vinyl chloride	98	91	53 - 138	8	35		
Bromomethane	85	92	33 - 150	8	35		
Chloroethane	89	90	36 - 142	2	35		
1,1-Dichloroethene	103	96	65 - 136	7	35		
Acetone	121	120	22 - 150	1	35		
Carbon disulfide	86	87	54 - 132	1	35		
Methylene Chloride	111	103	63 - 129	8	35		
trans-1,2-Dichloroethene	110	108	73 - 126	2	35		
Methyl tert-butyl ether	102	102	64 - 123	0	35		
1,1-Dichloroethane	109	106	73 - 126	3	35		
cis-1,2-Dichloroethene	103	107	70 - 120	4	35		
Bromochloromethane	109	105	70 - 127	4	35		
2-Butanone (MEK)	105	106	39 - 138	1	35		
Chloroform	106	106	72 - 127	0	35		
1,1,1-Trichloroethane	105	109	63 - 133	4	35		
Carbon tetrachloride	111	106	55 - 150	4	35		
Benzene	107	105	80 - 120	2	32		
1,2-Dichloroethane	107	101	68 - 132	5	32		
Trichloroethene	114	107	73 - 120	6	35		
1,2-Dichloropropane	103	97	76 - 124	6	34		
Bromodichloromethane	99	95	66 - 130	4	35		
cis-1,3-Dichloropropene	106	107	66 - 120	2	35		
4-Methyl-2-pentanone (MIBK)	98	103	45 - 145	5	35		
Toluene	103	100	80 - 123	3	35		
trans-1,3-Dichloropropene	115	108	65 - 125	7	35		
1,1,2-Trichloroethane	100	94	77 - 127	6	35		
Tetrachloroethene	103	94	70 - 135	9	35		
2-Hexanone	98	98	25 - 132	0	35		
Dibromochloromethane	97	98	60 - 140	1	35		
1,2-Dibromoethane (EDB)	103	102	74 - 123	1	35		
Chlorobenzene	109	103	80 - 120	5	29		
1,1,1,2-Tetrachloroethane	100	98	63 - 140	2	34		
Ethylbenzene	108	101	72 - 126	7	33		
Xylenes, Total	108	104	76 - 128	3	32		
Styrene	103	100	71 - 127	3	34		

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 180-130947

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 180-130947/9	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50116009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1432	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1432				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 180-130947/10	Analysis Batch:	180-130947	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50116010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/16/2015 1456	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/16/2015 1456				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Bromoform	87	87	46 - 150	0	35		
1,1,2,2-Tetrachloroethane	99	96	62 - 125	4	35		
1,4-Dioxane	96	94	10 - 160	3	35	J	J

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	94	64 - 135
Toluene-d8 (Surr)	100	87	71 - 118
4-Bromofluorobenzene (Surr)	99	91	70 - 118
Dibromofluoromethane (Surr)	106	97	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 180-130947

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 180-130947/9	Units: ug/L		LCSD Lab Sample ID:	LCSD 180-130947/10
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/16/2015 1432			Analysis Date:	01/16/2015 1456
Prep Date:	01/16/2015 1432			Prep Date:	01/16/2015 1456
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloromethane	10.0	10.0	9.57	8.81
Vinyl chloride	10.0	10.0	9.83	9.05
Bromomethane	10.0	10.0	8.53	9.24
Chloroethane	10.0	10.0	8.87	9.03
1,1-Dichloroethene	10.0	10.0	10.3	9.57
Acetone	20.0	20.0	24.2	23.9
Carbon disulfide	10.0	10.0	8.60	8.69
Methylene Chloride	10.0	10.0	11.1	10.3
trans-1,2-Dichloroethene	10.0	10.0	11.0	10.8
Methyl tert-butyl ether	10.0	10.0	10.2	10.2
1,1-Dichloroethane	10.0	10.0	10.9	10.6
cis-1,2-Dichloroethene	10.0	10.0	10.3	10.7
Bromochloromethane	10.0	10.0	10.9	10.5
2-Butanone (MEK)	20.0	20.0	21.0	21.2
Chloroform	10.0	10.0	10.6	10.6
1,1,1-Trichloroethane	10.0	10.0	10.5	10.9
Carbon tetrachloride	10.0	10.0	11.1	10.6
Benzene	10.0	10.0	10.7	10.5
1,2-Dichloroethane	10.0	10.0	10.7	10.1
Trichloroethene	10.0	10.0	11.4	10.7
1,2-Dichloropropane	10.0	10.0	10.3	9.74
Bromodichloromethane	10.0	10.0	9.85	9.49
cis-1,3-Dichloropropene	10.0	10.0	10.6	10.7
4-Methyl-2-pentanone (MIBK)	20.0	20.0	19.6	20.6
Toluene	10.0	10.0	10.3	9.98
trans-1,3-Dichloropropene	10.0	10.0	11.5	10.8
1,1,2-Trichloroethane	10.0	10.0	10.0	9.43
Tetrachloroethene	10.0	10.0	10.3	9.44
2-Hexanone	20.0	20.0	19.6	19.6
Dibromochloromethane	10.0	10.0	9.74	9.83
1,2-Dibromoethane (EDB)	10.0	10.0	10.3	10.2
Chlorobenzene	10.0	10.0	10.9	10.3
1,1,1,2-Tetrachloroethane	10.0	10.0	9.99	9.80
Ethylbenzene	10.0	10.0	10.8	10.1
Xylenes, Total	20.0	20.0	21.5	20.8
Styrene	10.0	10.0	10.3	9.98
Bromoform	10.0	10.0	8.72	8.71
1,1,2,2-Tetrachloroethane	10.0	10.0	9.92	9.56
1,4-Dioxane	200	200	193 J	188 J

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Method Blank - Batch: 180-131060

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 180-131060/5	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50119005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1037	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1037				
Leach Date:	N/A				

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

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105	64 - 135
Toluene-d8 (Surr)	99	71 - 118
4-Bromofluorobenzene (Surr)	96	70 - 118

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Surrogate	% Rec	Acceptance Limits
Dibromofluoromethane (Surr)	107	70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Lab Control Sample - Batch: 180-131060

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 180-131060/8	Analysis Batch:	180-131060	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50119008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/19/2015 1202	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/19/2015 1202				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloromethane	10.0	7.46	75	50 - 139	
Vinyl chloride	10.0	7.42	74	53 - 138	
Bromomethane	10.0	8.35	83	33 - 150	
Chloroethane	10.0	7.31	73	36 - 142	
1,1-Dichloroethene	10.0	7.51	75	65 - 136	
Acetone	20.0	20.4	102	22 - 150	
Carbon disulfide	10.0	8.34	83	54 - 132	
Methylene Chloride	10.0	8.92	89	63 - 129	
trans-1,2-Dichloroethene	10.0	8.86	89	73 - 126	
Methyl tert-butyl ether	10.0	9.22	92	64 - 123	
1,1-Dichloroethane	10.0	8.88	89	73 - 126	
cis-1,2-Dichloroethene	10.0	9.20	92	70 - 120	
Bromochloromethane	10.0	9.32	93	70 - 127	
2-Butanone (MEK)	20.0	18.1	91	39 - 138	
Chloroform	10.0	9.50	95	72 - 127	
1,1,1-Trichloroethane	10.0	9.58	96	63 - 133	
Carbon tetrachloride	10.0	9.87	99	55 - 150	
Benzene	10.0	8.62	86	80 - 120	
1,2-Dichloroethane	10.0	9.53	95	68 - 132	
Trichloroethene	10.0	8.86	89	73 - 120	
1,2-Dichloropropane	10.0	8.16	82	76 - 124	
Bromodichloromethane	10.0	8.98	90	66 - 130	
cis-1,3-Dichloropropene	10.0	9.55	95	66 - 120	
4-Methyl-2-pentanone (MIBK)	20.0	18.7	94	45 - 145	
Toluene	10.0	9.34	93	80 - 123	
trans-1,3-Dichloropropene	10.0	11.6	116	65 - 125	
1,1,2-Trichloroethane	10.0	9.69	97	77 - 127	
Tetrachloroethene	10.0	9.20	92	70 - 135	
2-Hexanone	20.0	15.6	78	25 - 132	
Dibromochloromethane	10.0	10.5	105	60 - 140	
1,2-Dibromoethane (EDB)	10.0	10.0	100	74 - 123	
Chlorobenzene	10.0	9.86	99	80 - 120	
1,1,1,2-Tetrachloroethane	10.0	9.79	98	63 - 140	
Ethylbenzene	10.0	9.59	96	72 - 126	
Xylenes, Total	20.0	19.4	97	76 - 128	
Styrene	10.0	9.48	95	71 - 127	
Bromoform	10.0	10.1	101	46 - 150	
1,1,2,2-Tetrachloroethane	10.0	9.32	93	62 - 125	
1,4-Dioxane	200	166	83	10 - 160	J

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	64 - 135
Toluene-d8 (Surr)	95	71 - 118
4-Bromofluorobenzene (Surr)	99	70 - 118
Dibromofluoromethane (Surr)	92	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Method Blank - Batch: 180-130845

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 180-130845/6	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015-1
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1151	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate as N	0.00912	J	0.0062	0.10
Chloride	1.0	U	0.20	1.0
Sulfate	1.0	U	0.21	1.0

Lab Control Sample - Batch: 180-130845

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 180-130845/5	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015-1
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1136	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	2.50	2.49	99	90 - 110	
Chloride	50.0	49.8	100	90 - 110	
Sulfate	50.0	49.7	99	90 - 110	

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-130845

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	180-40481-4	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015-3
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1707			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

MSD Lab Sample ID:	180-40481-4	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015-3
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1722			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	111	110	80 - 120	0	20		
Chloride	110	109	80 - 120	0	20		
Sulfate	110	110	80 - 120	0	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-130845

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	180-40481-3	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015-4
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1839			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

MSD Lab Sample ID:	180-40481-3	Analysis Batch:	180-130845	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-15-2015-4
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/15/2015 1854			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	131	128	80 - 120	1	20	F1	F1
Chloride	132	127	80 - 120	1	20	4	4
Sulfate	124	121	80 - 120	1	20	F1	F1

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-130845

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	180-40481-4	Units: mg/L		MSD Lab Sample ID:	180-40481-4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/15/2015 1707			Analysis Date:	01/15/2015 1722
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate as N	2.0	1.25	1.25	3.38	3.37
Chloride	48	25.0	25.0	75.2	75.0
Sulfate	24	25.0	25.0	51.9	51.8

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-130845

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	180-40481-3	Units: mg/L		MSD Lab Sample ID:	180-40481-3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/15/2015 1839			Analysis Date:	01/15/2015 1854
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrate as N	3.9	1.25	1.25	5.59	F1	5.54	F1
Chloride	100	25.0	25.0	133	4	132	4
Sulfate	34	25.0	25.0	64.7	F1	64.1	F1

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Method Blank - Batch: 180-130921

Method: 6020A
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 180-130921/1-A	Analysis Batch:	180-131403	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1139	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Calcium	10.1	J	2.8	100
Potassium	13.6	J	5.8	100
Magnesium	2.86	J	1.2	100
Sodium	5.65	J	3.8	100

Lab Control Sample - Batch: 180-130921

Method: 6020A
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 180-130921/2-A	Analysis Batch:	180-131403	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-130921	Lab File ID:	X50121A.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2015 1144	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/16/2015 0916				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium	50000	47500	95	80 - 120	
Potassium	50000	48200	96	80 - 120	
Magnesium	50000	42900	86	80 - 120	
Sodium	50000	44700	89	80 - 120	

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Method Blank - Batch: 180-131534

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	MB 180-131534/2	Analysis Batch:	180-131534	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/23/2015 0550	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Alkalinity as CaCO3 to pH 4.5	3.96	J	0.41	5.0
Bicarbonate Alkalinity as CaCO3	3.96	J	0.41	5.0
Carbonate Alkalinity as CaCO3	5.0	U	0.41	5.0

Lab Control Sample - Batch: 180-131534

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	LCS 180-131534/1	Analysis Batch:	180-131534	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/23/2015 0550	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Alkalinity as CaCO3 to pH 4.5	250	267	107	80 - 120	

Duplicate - Batch: 180-131534

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	180-40481-4	Analysis Batch:	180-131534	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/23/2015 0550	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Total Alkalinity as CaCO3 to pH 4.5	260		261	0.8	20	
Bicarbonate Alkalinity as CaCO3	260		261	0.8	20	
Carbonate Alkalinity as CaCO3	5.0	U	5.0	NC	20	U

DATA REPORTING QUALIFIERS

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HPLC/IC		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	F1	MS and/or MSD Recovery exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	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.
General Chemistry		
	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.

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:180-130947					
LCS 180-130947/9	Lab Control Sample	T	Water	8260C	
LCSD 180-130947/10	Lab Control Sample Duplicate	T	Water	8260C	
MB 180-130947/8	Method Blank	T	Water	8260C	
180-40481-1	HD-MW-100D-0/1-0	T	Water	8260C	
180-40481-2	HD-MW-100I-0/1-0	T	Water	8260C	
180-40481-3	HD-MW-100S-0/1-0	T	Water	8260C	
180-40481-4	HD-MW-99D-0/1-0	T	Water	8260C	
180-40481-5	HD-MW-147A-0/1-0	T	Water	8260C	
180-40481-6	HD-MW-75S-0/1-0	T	Water	8260C	
180-40481-9	HD-QC3-0/1-2	T	Water	8260C	
Analysis Batch:180-131060					
LCS 180-131060/8	Lab Control Sample	T	Water	8260C	
MB 180-131060/5	Method Blank	T	Water	8260C	
180-40481-6DL	HD-MW-75S-0/1-0	T	Water	8260C	
180-40481-7	HD-MW-75D-0/1-0	T	Water	8260C	
180-40481-8	HD-MW-37D-0/1-0	T	Water	8260C	

Report Basis
T = Total

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 180-130921					
LCS 180-130921/2-A	Lab Control Sample	R	Water	3005A	
MB 180-130921/1-A	Method Blank	R	Water	3005A	
180-40481-1	HD-MW-100D-0/1-0	T	Water	3005A	
180-40481-2	HD-MW-100I-0/1-0	T	Water	3005A	
180-40481-3	HD-MW-100S-0/1-0	T	Water	3005A	
180-40481-4	HD-MW-99D-0/1-0	T	Water	3005A	
180-40481-5	HD-MW-147A-0/1-0	T	Water	3005A	
180-40481-6	HD-MW-75S-0/1-0	T	Water	3005A	
180-40481-7	HD-MW-75D-0/1-0	T	Water	3005A	
180-40481-8	HD-MW-37D-0/1-0	T	Water	3005A	
Analysis Batch:180-131403					
LCS 180-130921/2-A	Lab Control Sample	R	Water	6020A	180-130921
MB 180-130921/1-A	Method Blank	R	Water	6020A	180-130921
180-40481-1	HD-MW-100D-0/1-0	T	Water	6020A	180-130921
180-40481-2	HD-MW-100I-0/1-0	T	Water	6020A	180-130921
180-40481-3	HD-MW-100S-0/1-0	T	Water	6020A	180-130921
180-40481-4	HD-MW-99D-0/1-0	T	Water	6020A	180-130921
180-40481-5	HD-MW-147A-0/1-0	T	Water	6020A	180-130921
180-40481-6	HD-MW-75S-0/1-0	T	Water	6020A	180-130921
180-40481-7	HD-MW-75D-0/1-0	T	Water	6020A	180-130921
180-40481-8	HD-MW-37D-0/1-0	T	Water	6020A	180-130921

Report Basis
R = Total Recoverable
T = Total

General Chemistry

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Analysis Batch:180-131534					
LCS 180-131534/1	Lab Control Sample	T	Water	SM 2320B	
MB 180-131534/2	Method Blank	T	Water	SM 2320B	
180-40481-1	HD-MW-100D-0/1-0	T	Water	SM 2320B	
180-40481-2	HD-MW-100I-0/1-0	T	Water	SM 2320B	
180-40481-3	HD-MW-100S-0/1-0	T	Water	SM 2320B	
180-40481-4	HD-MW-99D-0/1-0	T	Water	SM 2320B	
180-40481-4DU	Duplicate	T	Water	SM 2320B	
180-40481-5	HD-MW-147A-0/1-0	T	Water	SM 2320B	
180-40481-6	HD-MW-75S-0/1-0	T	Water	SM 2320B	
180-40481-7	HD-MW-75D-0/1-0	T	Water	SM 2320B	
180-40481-8	HD-MW-37D-0/1-0	T	Water	SM 2320B	

Report Basis
T = Total

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:180-130845					
LCS 180-130845/5	Lab Control Sample	T	Water	300.0	
MB 180-130845/6	Method Blank	T	Water	300.0	
180-40481-1	HD-MW-100D-0/1-0	T	Water	300.0	
180-40481-2	HD-MW-100I-0/1-0	T	Water	300.0	
180-40481-3	HD-MW-100S-0/1-0	T	Water	300.0	
180-40481-3MS	Matrix Spike	T	Water	300.0	
180-40481-3MSD	Matrix Spike Duplicate	T	Water	300.0	
180-40481-4	HD-MW-99D-0/1-0	T	Water	300.0	
180-40481-4MS	Matrix Spike	T	Water	300.0	
180-40481-4MSD	Matrix Spike Duplicate	T	Water	300.0	
180-40481-5	HD-MW-147A-0/1-0	T	Water	300.0	
180-40481-6	HD-MW-75S-0/1-0	T	Water	300.0	
180-40481-7	HD-MW-75D-0/1-0	T	Water	300.0	
180-40481-8	HD-MW-37D-0/1-0	T	Water	300.0	

Report Basis
T = Total

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Laboratory Chronicle

Lab ID: 180-40481-1 **Client ID:** HD-MW-100D-0/1-0

Sample Date/Time: 01/14/2015 10:50 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-C-1		180-130947		01/16/2015 16:34	5	TAL PIT	DLF
A:8260C	180-40481-C-1		180-130947		01/16/2015 16:34	5	TAL PIT	DLF
A:300.0	180-40481-A-1		180-130845		01/15/2015 19:09	1	TAL PIT	MJH
P:3005A	180-40481-B-1-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-1-A		180-131403	180-130921	01/21/2015 12:09	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-1		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-2 **Client ID:** HD-MW-100I-0/1-0

Sample Date/Time: 01/14/2015 09:20 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-E-2		180-130947		01/16/2015 16:58	1	TAL PIT	DLF
A:8260C	180-40481-E-2		180-130947		01/16/2015 16:58	1	TAL PIT	DLF
A:300.0	180-40481-A-2		180-130845		01/15/2015 19:25	1	TAL PIT	MJH
P:3005A	180-40481-B-2-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-2-A		180-131403	180-130921	01/21/2015 12:13	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-2		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-3 **Client ID:** HD-MW-100S-0/1-0

Sample Date/Time: 01/14/2015 10:00 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-D-3		180-130947		01/16/2015 17:22	5	TAL PIT	DLF
A:8260C	180-40481-D-3		180-130947		01/16/2015 17:22	5	TAL PIT	DLF
A:300.0	180-40481-A-3		180-130845		01/15/2015 18:23	1	TAL PIT	MJH
P:3005A	180-40481-B-3-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-3-A		180-131403	180-130921	01/21/2015 12:29	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-3		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-3 MS **Client ID:** HD-MW-100S-0/1-0

Sample Date/Time: 01/14/2015 10:00 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	180-40481-A-3 MS		180-130845		01/15/2015 18:39	1	TAL PIT	MJH

Lab ID: 180-40481-3 MSD **Client ID:** HD-MW-100S-0/1-0

Sample Date/Time: 01/14/2015 10:00 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	180-40481-A-3 MSD		180-130845		01/15/2015 18:54	1	TAL PIT	MJH

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Laboratory Chronicle

Lab ID: 180-40481-4 **Client ID: HD-MW-99D-0/1-0**

Sample Date/Time: 01/14/2015 12:55 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-D-4		180-130947		01/16/2015 17:46	5	TAL PIT	DLF
A:8260C	180-40481-D-4		180-130947		01/16/2015 17:46	5	TAL PIT	DLF
A:300.0	180-40481-A-4		180-130845		01/15/2015 16:52	1	TAL PIT	MJH
P:3005A	180-40481-B-4-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-4-A		180-131403	180-130921	01/21/2015 12:33	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-4		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-4 MS **Client ID: HD-MW-99D-0/1-0**

Sample Date/Time: 01/14/2015 12:55 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	180-40481-A-4 MS		180-130845		01/15/2015 17:07	1	TAL PIT	MJH

Lab ID: 180-40481-4 MSD **Client ID: HD-MW-99D-0/1-0**

Sample Date/Time: 01/14/2015 12:55 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	180-40481-A-4 MSD		180-130845		01/15/2015 17:22	1	TAL PIT	MJH

Lab ID: 180-40481-4 DU **Client ID: HD-MW-99D-0/1-0**

Sample Date/Time: 01/14/2015 12:55 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	180-40481-A-4 DU		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-5 **Client ID: HD-MW-147A-0/1-0**

Sample Date/Time: 01/14/2015 12:10 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-C-5		180-130947		01/16/2015 18:34	1	TAL PIT	DLF
A:8260C	180-40481-C-5		180-130947		01/16/2015 18:34	1	TAL PIT	DLF
A:300.0	180-40481-A-5		180-130845		01/15/2015 19:40	5	TAL PIT	MJH
P:3005A	180-40481-B-5-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-5-A		180-131403	180-130921	01/21/2015 12:37	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-5		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Laboratory Chronicle

Lab ID: 180-40481-6 **Client ID: HD-MW-75S-0/1-0**

Sample Date/Time: 01/14/2015 11:30 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-C-6		180-130947		01/16/2015 18:58	50	TAL PIT	DLF
A:8260C	180-40481-C-6		180-130947		01/16/2015 18:58	50	TAL PIT	DLF
P:5030C	180-40481-D-6	DL	180-131060		01/19/2015 16:03	400	TAL PIT	DLF
A:8260C	180-40481-D-6	DL	180-131060		01/19/2015 16:03	400	TAL PIT	DLF
A:300.0	180-40481-A-6		180-130845		01/15/2015 19:55	5	TAL PIT	MJH
P:3005A	180-40481-B-6-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-6-A		180-131403	180-130921	01/21/2015 12:41	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-6		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-7 **Client ID: HD-MW-75D-0/1-0**

Sample Date/Time: 01/14/2015 10:15 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-C-7		180-131060		01/19/2015 16:27	50	TAL PIT	DLF
A:8260C	180-40481-C-7		180-131060		01/19/2015 16:27	50	TAL PIT	DLF
A:300.0	180-40481-A-7		180-130845		01/15/2015 20:10	1	TAL PIT	MJH
P:3005A	180-40481-B-7-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-7-A		180-131403	180-130921	01/21/2015 12:45	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-7		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-8 **Client ID: HD-MW-37D-0/1-0**

Sample Date/Time: 01/14/2015 12:35 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-E-8		180-131060		01/19/2015 16:52	12.5	TAL PIT	DLF
A:8260C	180-40481-E-8		180-131060		01/19/2015 16:52	12.5	TAL PIT	DLF
A:300.0	180-40481-A-8		180-130845		01/15/2015 14:13	1	TAL PIT	MJH
P:3005A	180-40481-B-8-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	180-40481-B-8-A		180-131403	180-130921	01/21/2015 12:50	1	TAL PIT	CNF
A:SM 2320B	180-40481-A-8		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: 180-40481-9 **Client ID: HD-QC3-0/1-2**

Sample Date/Time: 01/14/2015 12:00 Received Date/Time: 01/15/2015 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40481-A-9		180-130947		01/16/2015 20:11	1	TAL PIT	DLF
A:8260C	180-40481-A-9		180-130947		01/16/2015 20:11	1	TAL PIT	DLF

Client: Groundwater Sciences Corporation Job Number: 180-40481-1

Laboratory Chronicle

Lab ID: MB **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	MB 180-130947/8		180-130947		01/16/2015 13:56	1	TAL PIT	DLF
A:8260C	MB 180-130947/8		180-130947		01/16/2015 13:56	1	TAL PIT	DLF
P:5030C	MB 180-131060/5		180-131060		01/19/2015 10:37	1	TAL PIT	DLF
A:8260C	MB 180-131060/5		180-131060		01/19/2015 10:37	1	TAL PIT	DLF
A:300.0	MB 180-130845/6		180-130845		01/15/2015 11:51	1	TAL PIT	MJH
P:3005A	MB 180-130921/1-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	MB 180-130921/1-A		180-131403	180-130921	01/21/2015 11:39	1	TAL PIT	CNF
A:SM 2320B	MB 180-131534/2		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: LCS **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	LCS 180-130947/9		180-130947		01/16/2015 14:32	1	TAL PIT	DLF
A:8260C	LCS 180-130947/9		180-130947		01/16/2015 14:32	1	TAL PIT	DLF
P:5030C	LCS 180-131060/8		180-131060		01/19/2015 12:02	1	TAL PIT	DLF
A:8260C	LCS 180-131060/8		180-131060		01/19/2015 12:02	1	TAL PIT	DLF
A:300.0	LCS 180-130845/5		180-130845		01/15/2015 11:36	1	TAL PIT	MJH
P:3005A	LCS 180-130921/2-A		180-131403	180-130921	01/16/2015 09:16	1	TAL PIT	AB1
A:6020A	LCS 180-130921/2-A		180-131403	180-130921	01/21/2015 11:44	1	TAL PIT	CNF
A:SM 2320B	LCS 180-131534/1		180-131534		01/23/2015 05:50	1	TAL PIT	CLL

Lab ID: LCSD **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	LCSD 180-130947/10		180-130947		01/16/2015 14:56	1	TAL PIT	DLF
A:8260C	LCSD 180-130947/10		180-130947		01/16/2015 14:56	1	TAL PIT	DLF

Lab References:
TAL PIT = TestAmerica Pittsburgh

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01143	01/15/15	01/14/15	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_01175	01/15/15	01/14/15	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_00144	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00189	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Orthophosphate as P	0.05 ug/mL
							Sulfate	1 ug/mL
							Nitrite as N	0.05 ug/mL
.ICSTDL6_00189	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL3_00182	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00189	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_00189	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL4_00121	01/13/15	01/12/15	DI Water, Lot na	5 mL	ICSTDL7_00124	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_00124	01/13/15	01/12/15	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_00120	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICSTDL7_00124	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_00124	01/13/15	01/12/15	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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL6_00189	01/13/15	01/12/15	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_00124	01/13/15	01/12/15	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_00095	01/13/15	01/12/15	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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL9_00100	01/13/15	01/12/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.8 mL	Bromide	40 ug/mL
							Chloride	200 ug/mL
							Fluoride	10 ug/mL
							Nitrate as N	10 ug/mL
							Orthophosphate as P	10 ug/mL
							Sulfate	200 ug/mL
					ICPRIMARYSTDB_00008	0.8 mL	Nitrite as N	10 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
MCCV1X_00071	02/06/15	01/06/15	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_00060	01/24/15	12/24/14	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_00065	02/24/15	12/24/14	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mn	0.0225 ppm
							Ni	0.02 ppm
							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_00061	01/24/15	12/05/14	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
.M6020ICS-0A_00005	09/01/15	Inorganic Ventures, Lot G2-MEB476152MCA			(Purchased Reagent)		Al	1000 ppm
							Calcium	1000 ppm
							Fe	1000 ppm
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
MICVX_00028	01/24/15	12/24/14	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_00040	01/12/15	12/12/14	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_00018	04/01/15	INORGANIC VENTURES, Lot G2-MEB506053			(Purchased Reagent)		Ag	5 ug/mL
							Al	200 ug/mL
							As	4 ug/mL
							B	100 ug/mL
							Ba	200 ug/mL
							Be	5 ug/mL
							Cd	5 ug/mL
							Co	50 ug/mL
							Cr	20 ug/mL
							Cu	25 ug/mL
							Fe	100 ug/mL
							Mn	50 ug/mL
							Ni	50 ug/mL
							Pb	2 ug/mL
							Se	1 ug/mL
							Sr	100 ug/mL
							Tl	5 ug/mL
							V	50 ug/mL
							Zn	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MTAPITTMSA_00023	12/01/15	INORGANIC VENTURES, Lot H2-MEB532044			(Purchased Reagent)		Calcium	5000 ug/mL
							Magnesium	5000 ug/mL
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
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_00026	01/10/15	12/10/14	Methanol, Lot 85233	10 mL	VOA8260INTRES_00048	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_00048	02/01/18	Restek, Lot A093504			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
VOA8260SURR_00028	01/10/15	12/10/14	Methanol, Lot 85233	100 mL	VOA8260SURRES_00073	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_00073	01/31/19	Restek, Lot A0101000			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VOA8260SURR_00029	01/30/15	12/30/14	Methanol, Lot 85233	100 mL	VOA8260SURRES_00075	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_00075	01/31/19	Restek, Lot A0101000			(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_00097	01/20/15	01/13/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00078	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00096	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	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
.VOA8260GAS2ND_00078	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_00096	01/31/15	12/31/14	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00026	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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

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	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA2_00026	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_00092	12/18/14	12/11/14	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00077	0.1 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloromethane	25 ug/mL
							Dichlorodifluoromethane	25 ug/mL
							Dichlorofluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00090	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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

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	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Cyclohexane	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Dibromomethane	25 ug/mL
							Ethyl ether	25 ug/mL
							Ethyl methacrylate	25 ug/mL
							Ethylbenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexane	25 ug/mL
							Iodomethane	25 ug/mL
							Isobutyl alcohol	625 ug/mL
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	125 ug/mL
							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_00077	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_00090	01/02/15	12/02/14	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00033	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_00017	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.: 180-40481-1

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.: 180-40481-1

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_00033	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_00017	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.: 180-40481-1

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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

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_00095	01/20/15	01/13/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00083	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00094	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_00083	09/30/16		Restek, Lot A0105755		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOAPRI_00094	01/31/15	12/31/14	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00025	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00025	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
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
VOAACROPRI_00004	12/31/14	12/01/14	Methanol, Lot 34562	50 mL	VOAACRORES_00060	0.0625 mL	Acrolein	25 ug/mL
.VOAACRORES_00060	02/28/15		Restek, Lot A0106504		(Purchased Reagent)		Acrolein	20000 ug/mL
voaWEEpri Res_00001	12/28/14	11/28/14	Methanol, Lot 85233	25 mL	VOARESEE1ST_00015	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_00015	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
voaWket2nd Re_00001	01/29/15	12/29/14	Methanol, Lot 85233	50 mL	VOA8260KET2ND_00036	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
.VOA8260KET2ND_00036	02/28/16		Restek, Lot A0101295		(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
voaWKet2ndRes_00005	12/24/14	11/24/14	Methanol, Lot 85233	50 mL	VOA8260KET2ND_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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.VOA8260KET2ND_00037	02/28/16	Restek, Lot A0101295			(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
voaWVA pri Re_00005	12/31/14	12/01/14	Methanol, Lot 62345	20 mL	VOA8260VARES_00046	0.125 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00046	04/30/15	Restek, Lot A0106957			(Purchased Reagent)		Vinyl acetate	4000 ug/mL
WALK125PPMCCV_00080	07/21/15	01/21/15	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_00089	07/20/15	01/20/15	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

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

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

INORGANIC VENTURES™
300 Technology Drive
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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.

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

x_i = individual results

n = number of measurements

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

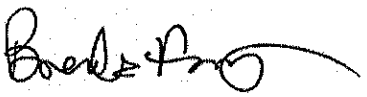
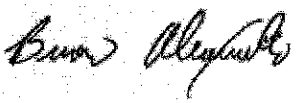
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations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

INORGANIC VENTURES™

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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 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

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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 **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
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- Chemical Testing - Accredited A2LA Certificate Number 883.01

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- Reference Materials Production - Accredited A2LA Certificate Number 883.02

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- 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

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

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

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- 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.

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· "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

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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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-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.

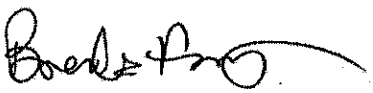
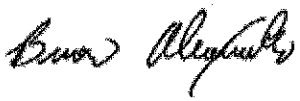
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations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

INORGANIC VENTURES™
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CERTIFICATE OF ANALYSIS

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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"**
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- 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

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inorganicventures.com

CERTIFICATE OF ANALYSIS

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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-MS-ICPMS

Lot Number: **G2-MEB506053**

Matrix: 0.7% HNO3(v/v)

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 ± 1.3 µg/mL	Arsenic, As	4.002 ± 0.030 µg/mL	Barium, Ba	200.0 ± 1.3 µg/mL
Beryllium, Be	5.002 ± 0.029 µg/mL	Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	5.001 ± 0.035 µg/mL
Chromium+3, Cr3	20.01 ± 0.13 µg/mL	Cobalt, Co	50.03 ± 0.25 µg/mL	Copper, Cu	25.01 ± 0.17 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	2.001 ± 0.010 µg/mL	Manganese, Mn	50.03 ± 0.32 µg/mL
Nickel, Ni	50.00 ± 0.33 µg/mL	Selenium, Se	1.000 ± 0.007 µg/mL	Silver, Ag	5.002 ± 0.033 µg/mL
Strontium, Sr	100.0 ± 0.6 µg/mL	Thallium, Tl	5.001 ± 0.034 µg/mL	Vanadium, V	49.99 ± 0.34 µg/mL
Zinc, Zn	50.02 ± 0.28 µg/mL				

Certified Density: 1.005 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
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	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	120629
Zn	EDTA	928	928

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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

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

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

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

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

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

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

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

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

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

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

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

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

Certification Date: December 04, 2013

Expiration Date: EXPIRES 01 APR 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

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

MATERIAL SAFETY DATA SHEET
TAPITT-MS-ICPMS

Revision Number 4, Revision Date March 04, 2014

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code	TAPITTMS-ICPMS
Product name	Multi-element Solution Standard in Dilute Nitric Acid
Common Name	Contains: 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 Cu; 20 µg/mL Cr3; 5 µg/mL ea: Ag, Be, Cd, Tl; 4 µg/mL As; 2 µg/mL Pb; 1 µg/mL Se
Manufacturer, importer, supplier	Inorganic Ventures 300 Technology Drive Christiansburg, VA 24073 web: www.inorganicventures.com
Emergency telephone number	800-424-9300 CHEMTREC (24 hrs)

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% Weight	ACGIH*	OSHA*
7732-18-5	Water	~99.3	N/A	N/A
7697-37-2	Nitric Acid	~0.7	2 ppm TWA	2 ppm TWA; 5 mg/m3 TWA

* ACGIH - Occupational Exposure Limits - TWAs
* OSHA - Final PELs - Time Weighted Averages (TWAs)

3. HAZARDS IDENTIFICATION

Emergency Overview

- Vapours may be irritating to eyes, nose, throat, and lungs
- Corrosive

Eye contact	• Contact with eyes may cause irritation
Skin contact	• Substance may cause slight skin irritation
Inhalation	• May cause irritation of respiratory tract
Ingestion	• Harmful if swallowed

4. FIRST AID MEASURES

General advice	• Show this safety data sheet to the doctor in attendance
Skin contact	• Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes • Consult a physician if necessary
Eye contact	• Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes • Keep eye wide open while rinsing • If eye irritation persists, consult a specialist
Inhalation	• Move to fresh air in case of accidental inhalation of vapours • If breathing is difficult, give oxygen • Consult a physician if necessary
Ingestion	• Call a physician or Poison Control Centre immediately • If swallowed, seek medical advice immediately and show this container or label • If conscious, drink plenty of water

5. FIRE-FIGHTING MEASURES

Flash point	NA
Suitable extinguishing media	• Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards	• Thermal decomposition can lead to release of irritating gases and vapours
Specific methods	• Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations
Special protective equipment for firefighters	• As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
NFPA (National Fire Protection Association)	• Health - 2 • Fire Hazard - 0 • Reactivity - 0
Under conditions giving incomplete combustion, hazardous gases produced may consist of:	• nitrogen oxides (NOx).

6 ACCIDENTAL RELEASE MEASURES

Personal precautions	• Evacuate personnel to safe areas • Keep people away from and upwind of spill/leak • Wear personal protective equipment • Ensure adequate ventilation
Environmental precautions	• Prevent further leakage or spillage if safe to do so • Prevent product from entering drains
Methods for cleaning up	• Dam up • Neutralize with lime milk or soda and flush with plenty of water • Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container • After cleaning, flush away traces with water

7 HANDLING AND STORAGE

Handling

Technical measures/Precautions	• Use only in area provided with appropriate exhaust ventilation
Safe handling advice	• Wear personal protective equipment

Storage

Technical measures/Precautions	• Keep in properly labelled containers • Store at room temperature in the original container • Keep containers tightly closed in a dry, cool and well-ventilated place
Incompatible products	• organic materials • reducing agents

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protective equipment	
Hand protection	• impervious gloves
Eye protection	• tightly fitting safety goggles
Respiratory protection	• Ensure adequate ventilation
Skin and body protection	• Chemical resistant apron • Lab coat
Hygiene measures	• When using, do not eat, drink or smoke • Regular cleaning of equipment, work area and clothing

9 PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form liquid.

Appearance	clear
Colour	yellow tint.
Odour	None.

Important Health Safety and Environmental Information

pH	0 to 2
Boiling point/range	100°C
Flash point	N/A
Vapour pressure	NA.
Water solubility	miscible.

10. STABILITY AND REACTIVITY

Stability	• Stable under normal conditions • Hazardous polymerization does not occur
Materials to avoid	• organic materials • reducing agents
Hazardous decomposition products	• nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

CAS	Chemical Name	% Weight	LD50/oral/rat =	LD50/dermal/rat =
7732-18-5	Water	~99.3	N/A	N/A
7697-37-2	Nitric Acid	~0.7	Inhalation LC50 Rat: 130 mg/kg/4H	Inhalation LC50 Rat: 130 mg/kg/4H

Product Information

Local effects	
Skin irritation	May cause skin irritation and/or dermatitis.
Eye irritation	May cause eye irritation with susceptible persons.
Inhalation	May cause irritation of respiratory tract.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Chronic toxicity	Avoid repeated exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Component Information

CAS	Chemical Name	% Weight	EFAD*	EFFSD*	EMD - Ecotoxicity*
7732-18-5	Water	~99.3	N/A	N/A	N/A
7697-37-2	Nitric Acid	~0.7	N/A	N/A	N/A

* EFAD - Ecotoxicity - Freshwater Algae Data
* EFFSD - Ecotoxicity - Freshwater Fish Species Data
* EMD - Ecotoxicity - Microtox Data

Product Information

Do not allow material to contaminate ground water or sewage system

Other information

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products	• In accordance with local and national regulations
Contaminated packaging	• Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

UN-No	UN3264 / Class 8
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
Packing group	III

IATA-DGR

UN-No	UN3264 / Class 8
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
Packing group	III

15. REGULATORY INFORMATION

U.S. INVENTORIES:

CAS	Chemical Name	% Weight	CPCL*	NJRTK*	CERCLA/SARA*
7732-18-5	Water	~99.3	N/A	N/A	N/A
7697-37-2	Nitric Acid	~0.7	N/A	sn 1356	1000 lb final RQ; 454 kg final RQ

* CPCL - California - Proposition 65 - Carcinogens List
* NJRTK - New Jersey - Department of Health RTK List
* CERCLA/SARA - Hazardous Substances and their Reportable Quantities

:

INTERNATIONAL INVENTORIES:

CAS	Chemical Name	% Weight	WHMIS*	EINECCS - European Union*
7732-18-5	Water	~99.3	Uncontrolled product according to WHMIS classification criteria	231-791-2
7697-37-2	Nitric Acid	~0.7	C, E (including 60%, 61.3%, 63%, 67%, 67.18%, 70%, 90%); E (10%)	231-714-2

* WHMIS - Canada - WHMIS - Classifications of Substances
* EINECCS - European Union - European inventory of Existing Commercial Chemical Substances (EINECCS)

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16. OTHER INFORMATION

The above information is believed to be accurate and represents the best information available to us. It has been compiled from the data presented in various technical publications and our experience and should only be used as a guide for handling this product. It is the user's responsibility to determine the suitability of this information for their particular purposes. We assume that only qualified individuals, trained and familiar with procedures suitable to this product will handle this material. Inorganic Ventures, Inc. assumes no responsibility and shall not be held liable for any damage resulting from misuse of this product.

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CERTIFICATE OF ANALYSIS

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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 863.01
ACCREDITED Reference Material Producer Certificate 863.02

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

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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

rec'd 11/3/14 SLB

2.0 PRODUCT DESCRIPTION

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

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

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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 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

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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

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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

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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. : 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

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

Description : 8260 Internal Standard

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

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

Expiration Date : February 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 25725-11-5		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
2	Fluorobenzene	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 462-06-6		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
3	1,4-Dioxane-d8	5,000.0 µg/mL	+/- 29.0689	µg/mL	Gravimetric
	CAS # 17647-74-4		+/- 110.6323	µg/mL	Unstressed
	Purity 99%		+/- 111.0833	µg/mL	Stressed
4	Chlorobenzene-d5	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3114-55-4		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4	250.0 µg/mL	+/- 1.4535	µg/mL	Gravimetric
	CAS # 3855-82-1		+/- 5.5316	µg/mL	Unstressed
	Purity 99%		+/- 5.5542	µg/mL	Stressed

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

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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%

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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.SEC **Lot No.:** A0101295

Description : 8260 List 1 / Std #2 Ketones

8260/624 Ketones Standard 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

Expiration Date : February 28, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1.SEC (Lot 0902033) **Purity** 99%	10,015.2 µg/mL	+/- 58.6412 µg/mL +/- 533.0320 µg/mL +/- 533.6197 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3.SEC (Lot VEGGI) **Purity** 99%	10,010.0 µg/mL	+/- 58.6108 µg/mL +/- 532.7553 µg/mL +/- 533.3427 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1.SEC (Lot E29T040) **Purity** 99%	10,012.4 µg/mL	+/- 58.6248 µg/mL +/- 532.8830 µg/mL +/- 533.4706 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6.SEC (Lot ZSVCD-FF) **Purity** 99%	10,016.4 µg/mL	+/- 58.6482 µg/mL +/- 533.0959 µg/mL +/- 533.6837 µg/mL	Gravimetric Unstressed Stressed

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

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Catalog No. : 567642.SEC **Lot No.:** A0101295

Description : 8260 List 1 / Std #2 Ketones

8260/624 Ketones Standard 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

Expiration Date : February 28, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone **CAS #** 67-64-1.SEC (Lot 0902033) **Purity** 99%	10,015.2 µg/mL	+/- 58.6412 +/- 533.0320 +/- 533.6197	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3.SEC (Lot VEGGI) **Purity** 99%	10,010.0 µg/mL	+/- 58.6108 +/- 532.7553 +/- 533.3427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1.SEC (Lot E29T040) **Purity** 99%	10,012.4 µg/mL	+/- 58.6248 +/- 532.8830 +/- 533.4706	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6.SEC (Lot ZSVCD-FF) **Purity** 99%	10,016.4 µg/mL	+/- 58.6482 +/- 533.0959 +/- 533.6837	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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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)

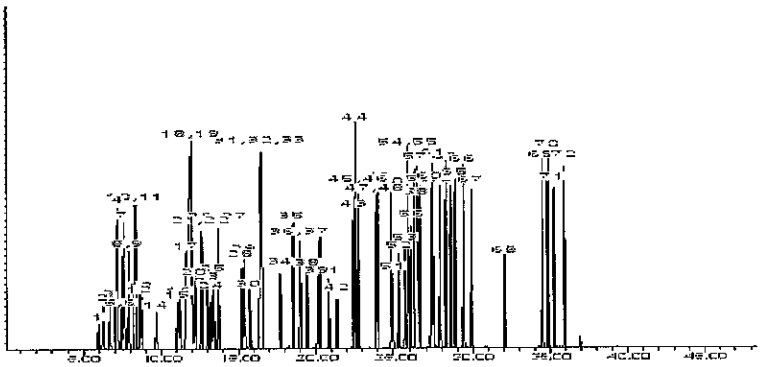
Carrier Gas:
helium-constant pressure 30 psi

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

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Certificate #3222.02

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)

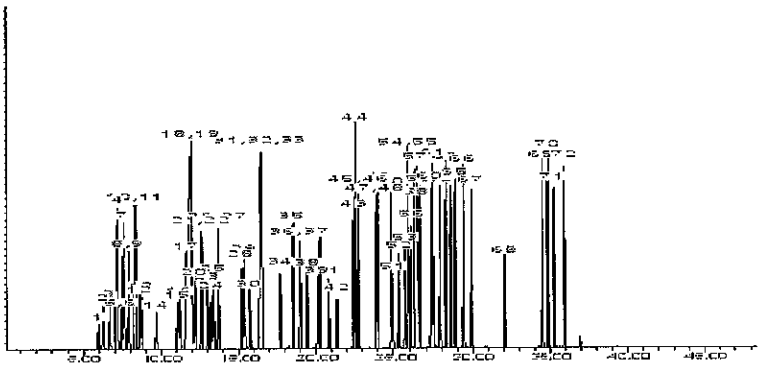
Carrier Gas:
helium-constant pressure 30 psi

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

RESTEK

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Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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

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

Description : 8260 List 1 / Std #1 MegaMix

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

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL 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 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC **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.SEC **Purity** 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC **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.SEC **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.SEC **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.SEC **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.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)

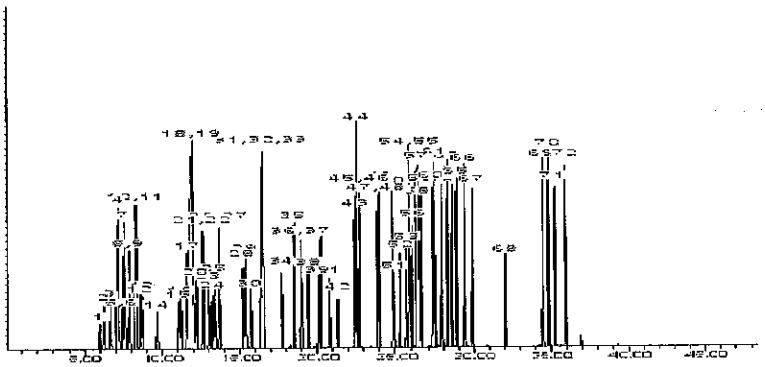
Carrier Gas:
helium-constant pressure 30 psi

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

RESTEK®

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567650 **Lot No.:** A0101000

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

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

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

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane		2,509.6 µg/mL	+/- 14.5910	µg/mL	Gravimetric
	CAS # 1868-53-7	(Lot 022012)		+/- 28.2993	µg/mL	Unstressed
	Purity 99%			+/- 32.5644	µg/mL	Stressed
2	1,2-Dichloroethane-d4		2,508.2 µg/mL	+/- 14.5829	µg/mL	Gravimetric
	CAS # 17060-07-0	(Lot 12K-027)		+/- 28.2836	µg/mL	Unstressed
	Purity 99%			+/- 32.5462	µg/mL	Stressed
3	Toluene-d8		2,508.8 µg/mL	+/- 14.5864	µg/mL	Gravimetric
	CAS # 2037-26-5	(Lot 13I-050)		+/- 28.2903	µg/mL	Unstressed
	Purity 99%			+/- 32.5540	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)		2,509.8 µg/mL	+/- 14.5922	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 01127COV)		+/- 28.3016	µg/mL	Unstressed
	Purity 99%			+/- 32.5670	µg/mL	Stressed

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

RESTEK® CERTIFIED REFERENCE MATERIAL

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Fax: (814)353-1309

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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. : 567650 **Lot No.:** A0101000

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane	2,509.6 µg/mL	+/- 14.5910 µg/mL	Gravimetric
	CAS # 1868-53-7 (Lot 022012)		+/- 28.2993 µg/mL	Unstressed
	Purity 99%		+/- 32.5644 µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,508.2 µg/mL	+/- 14.5829 µg/mL	Gravimetric
	CAS # 17060-07-0 (Lot 12K-027)		+/- 28.2836 µg/mL	Unstressed
	Purity 99%		+/- 32.5462 µg/mL	Stressed
3	Toluene-d8	2,508.8 µg/mL	+/- 14.5864 µg/mL	Gravimetric
	CAS # 2037-26-5 (Lot 13I-050)		+/- 28.2903 µg/mL	Unstressed
	Purity 99%		+/- 32.5540 µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,509.8 µg/mL	+/- 14.5922 µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/- 28.3016 µg/mL	Unstressed
	Purity 99%		+/- 32.5670 µg/mL	Stressed

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

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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. : 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.

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Certificate #3222.02

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. : 568720 **Lot No.:** A0106504

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 : February 28, 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	19,767.0 µg/mL	+/- 115.7401	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 140903JLM)		+/- 633.7922	µg/mL	Unstressed
	Purity 99%		+/- 736.7140	µg/mL	Stressed

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

RESTEK CERTIFIED REFERENCE MATERIAL

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

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

Description : Custom EE Standard

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

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

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

CERTIFIED VALUES

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

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.

Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40481-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pittsburgh	Arkansas DEQ	State Program	6	88-0690
TestAmerica Pittsburgh	California	State Program	9	2891
TestAmerica Pittsburgh	Connecticut	State Program	1	PH-0688
TestAmerica Pittsburgh	Florida	NELAP	4	E871008
TestAmerica Pittsburgh	Illinois	NELAP	5	002602
TestAmerica Pittsburgh	Kansas	NELAP	7	E-10350
TestAmerica Pittsburgh	Louisiana	NELAP	6	04041
TestAmerica Pittsburgh	New Hampshire	NELAP	1	203011
TestAmerica Pittsburgh	New Jersey	NELAP	2	PA005
TestAmerica Pittsburgh	New York	NELAP	2	11182
TestAmerica Pittsburgh	North Carolina (WW/SW)	State Program	4	434
TestAmerica Pittsburgh	Pennsylvania	NELAP	3	02-00416
TestAmerica Pittsburgh	South Carolina	State Program	4	89014
TestAmerica Pittsburgh	Texas	NELAP	6	T104704528
TestAmerica Pittsburgh	US Fish & Wildlife	Federal		LE94312A-1
TestAmerica Pittsburgh	USDA	Federal		P330-10-00139
TestAmerica Pittsburgh	USDA	Federal		P-Soil-01
TestAmerica Pittsburgh	Utah	NELAP	8	STLP
TestAmerica Pittsburgh	Virginia	NELAP	3	460189
TestAmerica Pittsburgh	West Virginia DEP	State Program	3	142
TestAmerica Pittsburgh	Wisconsin	State Program	5	998027800

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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.: 180-40481-1

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-MW-100D-0/1-0	180-40481-1	109	105	106	99
HD-MW-100I-0/1-0	180-40481-2	113	106	96	90
HD-MW-100S-0/1-0	180-40481-3	111	108	96	92
HD-MW-99D-0/1-0	180-40481-4	112	110	99	91
HD-MW-147A-0/1-0	180-40481-5	110	103	104	95
HD-MW-75S-0/1-0	180-40481-6	111	114	99	93
HD-MW-75S-0/1-0 DL	180-40481-6 DL	109	110	98	93
HD-MW-75D-0/1-0	180-40481-7	119	115	100	97
HD-MW-37D-0/1-0	180-40481-8	116	108	96	93
HD-QC3-0/1-2	180-40481-9	115	112	96	93
	MB 180-130947/8	110	104	101	98
	MB 180-131060/5	107	105	99	96
	LCS 180-130947/9	106	98	100	99
	LCS 180-131060/8	92	89	95	99
	LCSD 180-130947/10	97	94	87	91

	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.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50116009.D

Lab ID: LCS 180-130947/9 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	9.57	96	50-139	
Vinyl chloride	10.0	9.83	98	53-138	
Bromomethane	10.0	8.53	85	33-150	
Chloroethane	10.0	8.87	89	36-142	
1,1-Dichloroethene	10.0	10.3	103	65-136	
Acetone	20.0	24.2	121	22-150	
Carbon disulfide	10.0	8.60	86	54-132	
Methylene Chloride	10.0	11.1	111	63-129	
trans-1,2-Dichloroethene	10.0	11.0	110	73-126	
Methyl tert-butyl ether	10.0	10.2	102	64-123	
1,1-Dichloroethane	10.0	10.9	109	73-126	
cis-1,2-Dichloroethene	10.0	10.3	103	70-120	
Bromochloromethane	10.0	10.9	109	70-127	
2-Butanone (MEK)	20.0	21.0	105	39-138	
Chloroform	10.0	10.6	106	72-127	
1,1,1-Trichloroethane	10.0	10.5	105	63-133	
Carbon tetrachloride	10.0	11.1	111	55-150	
Benzene	10.0	10.7	107	80-120	
1,2-Dichloroethane	10.0	10.7	107	68-132	
Trichloroethene	10.0	11.4	114	73-120	
1,2-Dichloropropane	10.0	10.3	103	76-124	
Bromodichloromethane	10.0	9.85	99	66-130	
cis-1,3-Dichloropropene	10.0	10.6	106	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	19.6	98	45-145	
Toluene	10.0	10.3	103	80-123	
trans-1,3-Dichloropropene	10.0	11.5	115	65-125	
1,1,2-Trichloroethane	10.0	10.0	100	77-127	
Tetrachloroethene	10.0	10.3	103	70-135	
2-Hexanone	20.0	19.6	98	25-132	
Dibromochloromethane	10.0	9.74	97	60-140	
1,2-Dibromoethane (EDB)	10.0	10.3	103	74-123	
Chlorobenzene	10.0	10.9	109	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.99	100	63-140	
Ethylbenzene	10.0	10.8	108	72-126	
Xylenes, Total	20.0	21.5	108	76-128	
Styrene	10.0	10.3	103	71-127	
Bromoform	10.0	8.72	87	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.92	99	62-125	
1,4-Dioxane	200	193 J	96	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.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50119008.D

Lab ID: LCS 180-131060/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.46	75	50-139	
Vinyl chloride	10.0	7.42	74	53-138	
Bromomethane	10.0	8.35	83	33-150	
Chloroethane	10.0	7.31	73	36-142	
1,1-Dichloroethene	10.0	7.51	75	65-136	
Acetone	20.0	20.4	102	22-150	
Carbon disulfide	10.0	8.34	83	54-132	
Methylene Chloride	10.0	8.92	89	63-129	
trans-1,2-Dichloroethene	10.0	8.86	89	73-126	
Methyl tert-butyl ether	10.0	9.22	92	64-123	
1,1-Dichloroethane	10.0	8.88	89	73-126	
cis-1,2-Dichloroethene	10.0	9.20	92	70-120	
Bromochloromethane	10.0	9.32	93	70-127	
2-Butanone (MEK)	20.0	18.1	91	39-138	
Chloroform	10.0	9.50	95	72-127	
1,1,1-Trichloroethane	10.0	9.58	96	63-133	
Carbon tetrachloride	10.0	9.87	99	55-150	
Benzene	10.0	8.62	86	80-120	
1,2-Dichloroethane	10.0	9.53	95	68-132	
Trichloroethene	10.0	8.86	89	73-120	
1,2-Dichloropropane	10.0	8.16	82	76-124	
Bromodichloromethane	10.0	8.98	90	66-130	
cis-1,3-Dichloropropene	10.0	9.55	95	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	18.7	94	45-145	
Toluene	10.0	9.34	93	80-123	
trans-1,3-Dichloropropene	10.0	11.6	116	65-125	
1,1,2-Trichloroethane	10.0	9.69	97	77-127	
Tetrachloroethene	10.0	9.20	92	70-135	
2-Hexanone	20.0	15.6	78	25-132	
Dibromochloromethane	10.0	10.5	105	60-140	
1,2-Dibromoethane (EDB)	10.0	10.0	100	74-123	
Chlorobenzene	10.0	9.86	99	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.79	98	63-140	
Ethylbenzene	10.0	9.59	96	72-126	
Xylenes, Total	20.0	19.4	97	76-128	
Styrene	10.0	9.48	95	71-127	
Bromoform	10.0	10.1	101	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.32	93	62-125	
1,4-Dioxane	200	166 J	83	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50116010.D

Lab ID: LCSD 180-130947/10 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chloromethane	10.0	8.81	88	8	35	50-139	
Vinyl chloride	10.0	9.05	91	8	35	53-138	
Bromomethane	10.0	9.24	92	8	35	33-150	
Chloroethane	10.0	9.03	90	2	35	36-142	
1,1-Dichloroethene	10.0	9.57	96	7	35	65-136	
Acetone	20.0	23.9	120	1	35	22-150	
Carbon disulfide	10.0	8.69	87	1	35	54-132	
Methylene Chloride	10.0	10.3	103	8	35	63-129	
trans-1,2-Dichloroethene	10.0	10.8	108	2	35	73-126	
Methyl tert-butyl ether	10.0	10.2	102	0	35	64-123	
1,1-Dichloroethane	10.0	10.6	106	3	35	73-126	
cis-1,2-Dichloroethene	10.0	10.7	107	4	35	70-120	
Bromochloromethane	10.0	10.5	105	4	35	70-127	
2-Butanone (MEK)	20.0	21.2	106	1	35	39-138	
Chloroform	10.0	10.6	106	0	35	72-127	
1,1,1-Trichloroethane	10.0	10.9	109	4	35	63-133	
Carbon tetrachloride	10.0	10.6	106	4	35	55-150	
Benzene	10.0	10.5	105	2	32	80-120	
1,2-Dichloroethane	10.0	10.1	101	5	32	68-132	
Trichloroethene	10.0	10.7	107	6	35	73-120	
1,2-Dichloropropane	10.0	9.74	97	6	34	76-124	
Bromodichloromethane	10.0	9.49	95	4	35	66-130	
cis-1,3-Dichloropropene	10.0	10.7	107	2	35	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	20.6	103	5	35	45-145	
Toluene	10.0	9.98	100	3	35	80-123	
trans-1,3-Dichloropropene	10.0	10.8	108	7	35	65-125	
1,1,2-Trichloroethane	10.0	9.43	94	6	35	77-127	
Tetrachloroethene	10.0	9.44	94	9	35	70-135	
2-Hexanone	20.0	19.6	98	0	35	25-132	
Dibromochloromethane	10.0	9.83	98	1	35	60-140	
1,2-Dibromoethane (EDB)	10.0	10.2	102	1	35	74-123	
Chlorobenzene	10.0	10.3	103	5	29	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.80	98	2	34	63-140	
Ethylbenzene	10.0	10.1	101	7	33	72-126	
Xylenes, Total	20.0	20.8	104	3	32	76-128	
Styrene	10.0	9.98	100	3	34	71-127	
Bromoform	10.0	8.71	87	0	35	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.56	96	4	35	62-125	
1,4-Dioxane	200	188 J	94	3	35	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab File ID: 50116008.D Lab Sample ID: MB 180-130947/8

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

Instrument ID: CHHP5 Date Analyzed: 01/16/2015 13:56

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 180-130947/9	50116009.D	01/16/2015 14:32
	LCSD 180-130947/10	50116010.D	01/16/2015 14:56
HD-MW-100D-0/1-0	180-40481-1	50116014.D	01/16/2015 16:34
HD-MW-100I-0/1-0	180-40481-2	50116015.D	01/16/2015 16:58
HD-MW-100S-0/1-0	180-40481-3	50116016.D	01/16/2015 17:22
HD-MW-99D-0/1-0	180-40481-4	50116017.D	01/16/2015 17:46
HD-MW-147A-0/1-0	180-40481-5	50116019.D	01/16/2015 18:34
HD-MW-75S-0/1-0	180-40481-6	50116020.D	01/16/2015 18:58
HD-QC3-0/1-2	180-40481-9	50116023.D	01/16/2015 20:11

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab File ID: 50119005.D Lab Sample ID: MB 180-131060/5

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

Instrument ID: CHHP5 Date Analyzed: 01/19/2015 10:37

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 180-131060/8	50119008.D	01/19/2015 12:02
HD-MW-75S-0/1-0 DL	180-40481-6 DL	50119018.D	01/19/2015 16:03
HD-MW-75D-0/1-0	180-40481-7	50119019.D	01/19/2015 16:27
HD-MW-37D-0/1-0	180-40481-8	50119020.D	01/19/2015 16:52

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab File ID: 51215001.D BFB Injection Date: 12/15/2014

Instrument ID: CHHP5 BFB Injection Time: 10:05

Analysis Batch No.: 128329

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	30.9	
75	30.0 - 60.0 % of mass 95	48.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.9	
173	Less than 2.0 % of mass 174	0.5	(0.6)1
174	50.0 - 120.00 % of mass 95	72.5	
175	5.0 - 9.0 % of mass 174	6.4	(8.8)1
176	95.0 - 101.0 % of mass 174	71.3	(98.4)1
177	5.0 - 9.0 % of mass 176	4.0	(5.6)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 180-128329/7	51215007.D	12/15/2014	14:33
	IC 180-128329/8	51215008.D	12/15/2014	14:57
	ICIS 180-128329/9	51215009.D	12/15/2014	15:21
	IC 180-128329/10	51215010.D	12/15/2014	15:45
	IC 180-128329/11	51215011.D	12/15/2014	16:09
	IC 180-128329/12	51215012.D	12/15/2014	16:33
	IC 180-128329/13	51215013.D	12/15/2014	16:57

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab File ID: 50116006.D BFB Injection Date: 01/16/2015

Instrument ID: CHHP5 BFB Injection Time: 12:21

Analysis Batch No.: 130947

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	31.5	
75	30.0 - 60.0 % of mass 95	48.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.2	
173	Less than 2.0 % of mass 174	0.7	(1.0)1
174	50.0 - 120.00 % of mass 95	67.5	
175	5.0 - 9.0 % of mass 174	5.6	(8.3)1
176	95.0 - 101.0 % of mass 174	67.4	(99.8)1
177	5.0 - 9.0 % of mass 176	4.4	(6.5)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 180-130947/2	50116002.D	01/16/2015	12:52
	MB 180-130947/8	50116008.D	01/16/2015	13:56
	LCS 180-130947/9	50116009.D	01/16/2015	14:32
	LCSD 180-130947/10	50116010.D	01/16/2015	14:56
HD-MW-100D-0/1-0	180-40481-1	50116014.D	01/16/2015	16:34
HD-MW-100I-0/1-0	180-40481-2	50116015.D	01/16/2015	16:58
HD-MW-100S-0/1-0	180-40481-3	50116016.D	01/16/2015	17:22
HD-MW-99D-0/1-0	180-40481-4	50116017.D	01/16/2015	17:46
HD-MW-147A-0/1-0	180-40481-5	50116019.D	01/16/2015	18:34
HD-MW-75S-0/1-0	180-40481-6	50116020.D	01/16/2015	18:58
HD-QC3-0/1-2	180-40481-9	50116023.D	01/16/2015	20:11

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab File ID: 50119004.D BFB Injection Date: 01/19/2015

Instrument ID: CHHP5 BFB Injection Time: 09:02

Analysis Batch No.: 131060

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	32.3	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	1.0	(1.4)1
174	50.0 - 120.00 % of mass 95	72.7	
175	5.0 - 9.0 % of mass 174	6.4	(8.8)1
176	95.0 - 101.0 % of mass 174	70.8	(97.4)1
177	5.0 - 9.0 % of mass 176	4.3	(6.1)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-131060/2	50119002.D	01/19/2015	09:42
	MB 180-131060/5	50119005.D	01/19/2015	10:37
	LCS 180-131060/8	50119008.D	01/19/2015	12:02
HD-MW-75S-0/1-0 DL	180-40481-6 DL	50119018.D	01/19/2015	16:03
HD-MW-75D-0/1-0	180-40481-7	50119019.D	01/19/2015	16:27
HD-MW-37D-0/1-0	180-40481-8	50119020.D	01/19/2015	16:52

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Sample No.: CCVIS 180-130947/2 Date Analyzed: 01/16/2015 12:52

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

Lab File ID (Standard): 50116002.D Heated Purge: (Y/N) N

Calibration ID: 20600

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		174949	4.30	507858	7.27	118302	10.36
UPPER LIMIT		349898	4.80	1015716	7.77	236604	10.86
LOWER LIMIT		87475	3.80	253929	6.77	59151	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-130947/8		215753	4.29	505374	7.27	112616	10.36
LCS 180-130947/9		180157	4.30	440975	7.27	104078	10.36
LCSD 180-130947/10		176390	4.31	454929	7.27	109311	10.36
180-40481-1	HD-MW-100D-0/1-0	152128	4.29	452422	7.28	96413	10.36
180-40481-2	HD-MW-100I-0/1-0	146540	4.30	461790	7.27	106956	10.36
180-40481-3	HD-MW-100S-0/1-0	143460	4.29	440392	7.27	99819	10.36
180-40481-4	HD-MW-99D-0/1-0	134828	4.29	423846	7.27	96470	10.36
180-40481-5	HD-MW-147A-0/1-0	147352	4.29	437165	7.27	91587	10.36
180-40481-6	HD-MW-75S-0/1-0	167687	4.29	438939	7.27	99423	10.36
180-40481-9	HD-QC3-0/1-2	151880	4.29	420621	7.28	98087	10.37

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.: 180-40481-1

SDG No.:

Sample No.: CCVIS 180-130947/2 Date Analyzed: 01/16/2015 12:52

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

Lab File ID (Standard): 50116002.D Heated Purge: (Y/N) N

Calibration ID: 20600

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		158394	12.69				
UPPER LIMIT		316788	13.19				
LOWER LIMIT		79197	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-130947/8		163327	12.69				
LCS 180-130947/9		143306	12.68				
LCSD 180-130947/10		145692	12.68				
180-40481-1	HD-MW-100D-0/1-0	139602	12.69				
180-40481-2	HD-MW-100I-0/1-0	138024	12.69				
180-40481-3	HD-MW-100S-0/1-0	134404	12.68				
180-40481-4	HD-MW-99D-0/1-0	130879	12.68				
180-40481-5	HD-MW-147A-0/1-0	128148	12.68				
180-40481-6	HD-MW-75S-0/1-0	133633	12.69				
180-40481-9	HD-QC3-0/1-2	128434	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 VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Sample No.: CCVIS 180-131060/2 Date Analyzed: 01/19/2015 09:42

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

Lab File ID (Standard): 50119002.D Heated Purge: (Y/N) N

Calibration ID: 20600

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		159283	4.31	421871	7.27	98865	10.36
UPPER LIMIT		318566	4.81	843742	7.77	197730	10.86
LOWER LIMIT		79642	3.81	210936	6.77	49433	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-131060/5		190181	4.30	451860	7.28	100681	10.36
LCS 180-131060/8		165826	4.31	447697	7.28	96964	10.36
180-40481-6 DL	HD-MW-75S-0/1-0 DL	172553	4.30	412858	7.28	93279	10.37
180-40481-7	HD-MW-75D-0/1-0	179080	4.31	419057	7.28	95555	10.37
180-40481-8	HD-MW-37D-0/1-0	172838	4.30	416482	7.28	96795	10.37

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.: 180-40481-1

SDG No.:

Sample No.: CCVIS 180-131060/2 Date Analyzed: 01/19/2015 09:42

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

Lab File ID (Standard): 50119002.D Heated Purge: (Y/N) N

Calibration ID: 20600

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		139970	12.69				
UPPER LIMIT		279940	13.19				
LOWER LIMIT		69985	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-131060/5		148957	12.69				
LCS 180-131060/8		143878	12.69				
180-40481-6 DL	HD-MW-75S-0/1-0 DL	132299	12.69				
180-40481-7	HD-MW-75D-0/1-0	138123	12.69				
180-40481-8	HD-MW-37D-0/1-0	134685	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 I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100D-0/1-0 Lab Sample ID: 180-40481-1

Matrix: Water Lab File ID: 50116014.D

Analysis Method: 8260C Date Collected: 01/14/2015 10:50

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 16:34

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.: 130947 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	2.0	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	0.86	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	32		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	2.2	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	57		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	39		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100D-0/1-0 Lab Sample ID: 180-40481-1

Matrix: Water Lab File ID: 50116014.D

Analysis Method: 8260C Date Collected: 01/14/2015 10:50

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 16:34

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.: 130947 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)	105		64-135
2037-26-5	Toluene-d8 (Surr)	106		71-118
460-00-4	4-Bromofluorobenzene (Surr)	99		70-118
1868-53-7	Dibromofluoromethane (Surr)	109		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D
Lims ID: 180-40481-C-1 Lab Sample ID: 180-40481-1
Client ID: HD-MW-100D-0/1-0
Sample Type: Client
Inject. Date: 16-Jan-2015 16:34:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-40481-C-1, 5x
Misc. Info.: 180-0005307-014
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:36:04 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:36:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.289	4.302	-0.013	87	152128	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.271	0.005	100	452422	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.361	0.000	99	96413	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	99	139602	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.522	0.006	91	104709	54.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.905	6.900	0.005	91	165874	52.5	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	96	424268	52.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	81	151430	49.6	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.905				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96	3.383	3.371	0.012	75	4883	1.98	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.669				ND	
31 Methylene Chloride	84		4.150				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.190	5.172	0.018	13	4987	0.8592	
45 cis-1,2-Dichloroethene	96	5.944	5.938	0.006	89	86309	32.0	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83		6.346				ND	
53 1,1,1-Trichloroethane	97	6.534	6.535	-0.001	38	6227	2.19	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.985				ND	
64 Trichloroethene	130	7.672	7.666	0.006	94	136457	57.0	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.539	9.534	0.005	94	74248	39.3	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

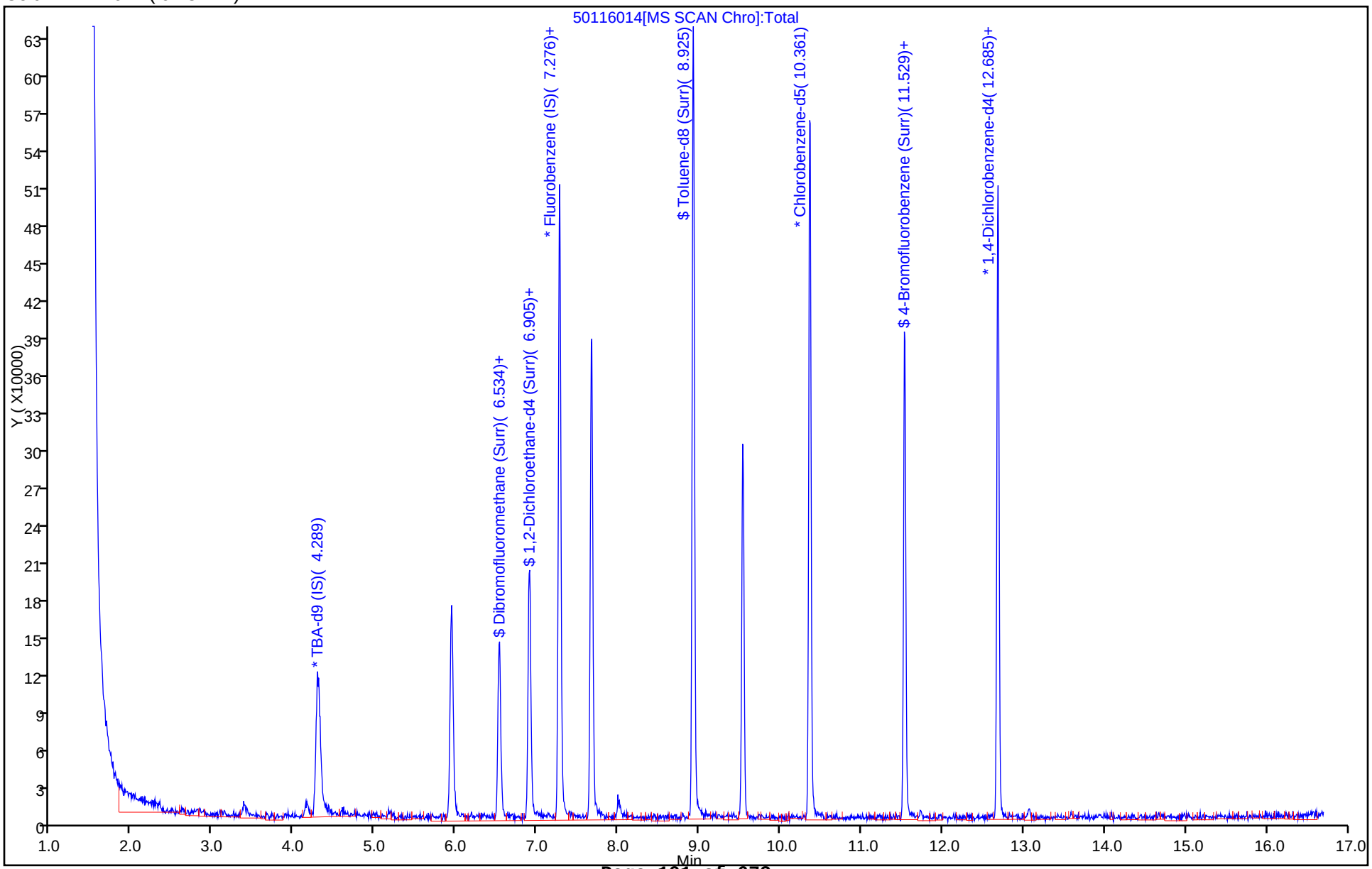
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 19-Jan-2015 07:36:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D				
Injection Date:	16-Jan-2015 16:34:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-C-1	Lab Sample ID:	180-40481-1	Worklist Smp#:	14
Client ID:	HD-MW-100D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	5.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 19-Jan-2015 07:36:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D

Injection Date: 16-Jan-2015 16:34:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-1 Lab Sample ID: 180-40481-1

Client ID: HD-MW-100D-0/1-0

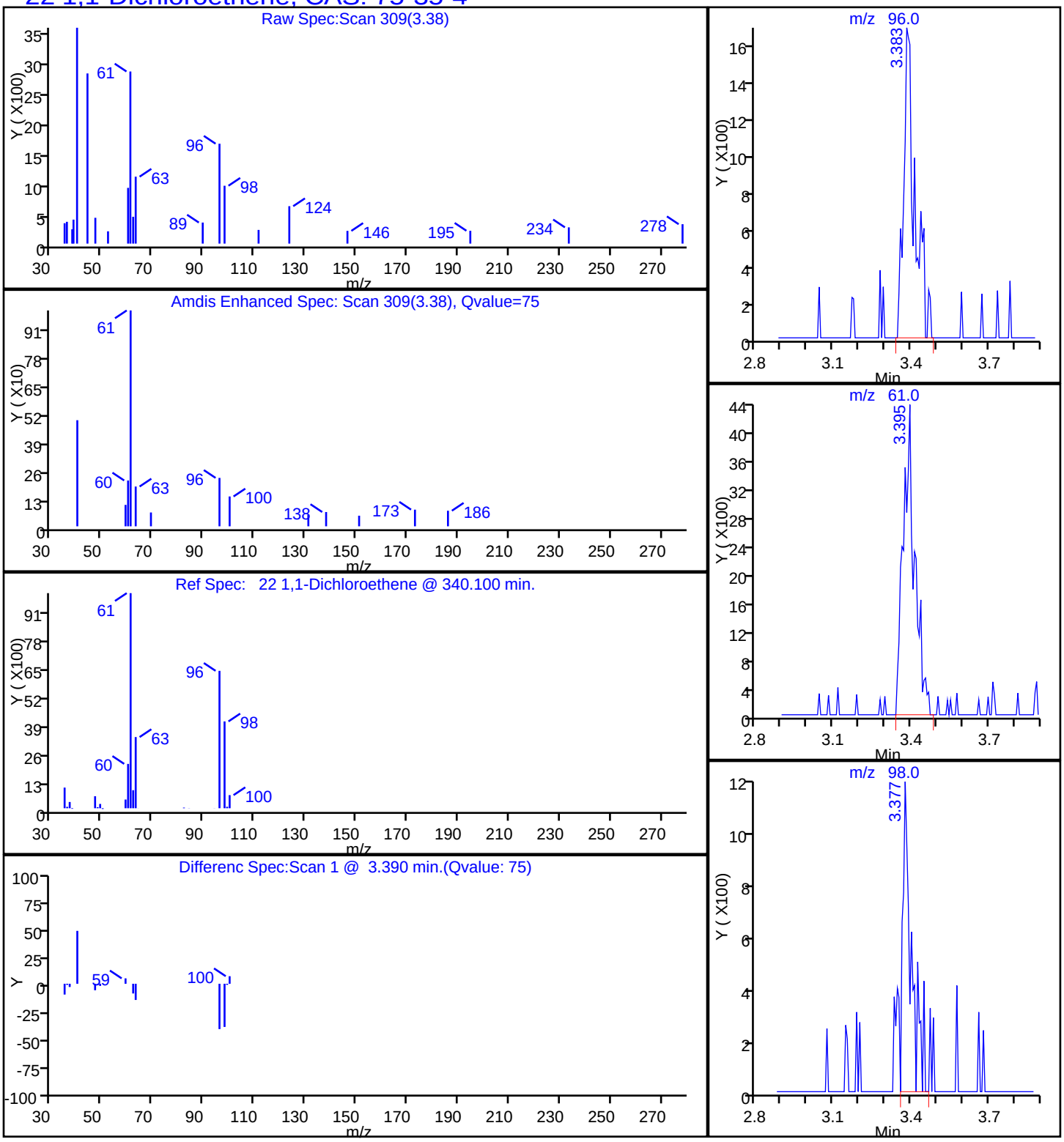
Operator ID: 001562 ALS Bottle#: 10 Worklist Smp#: 14

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



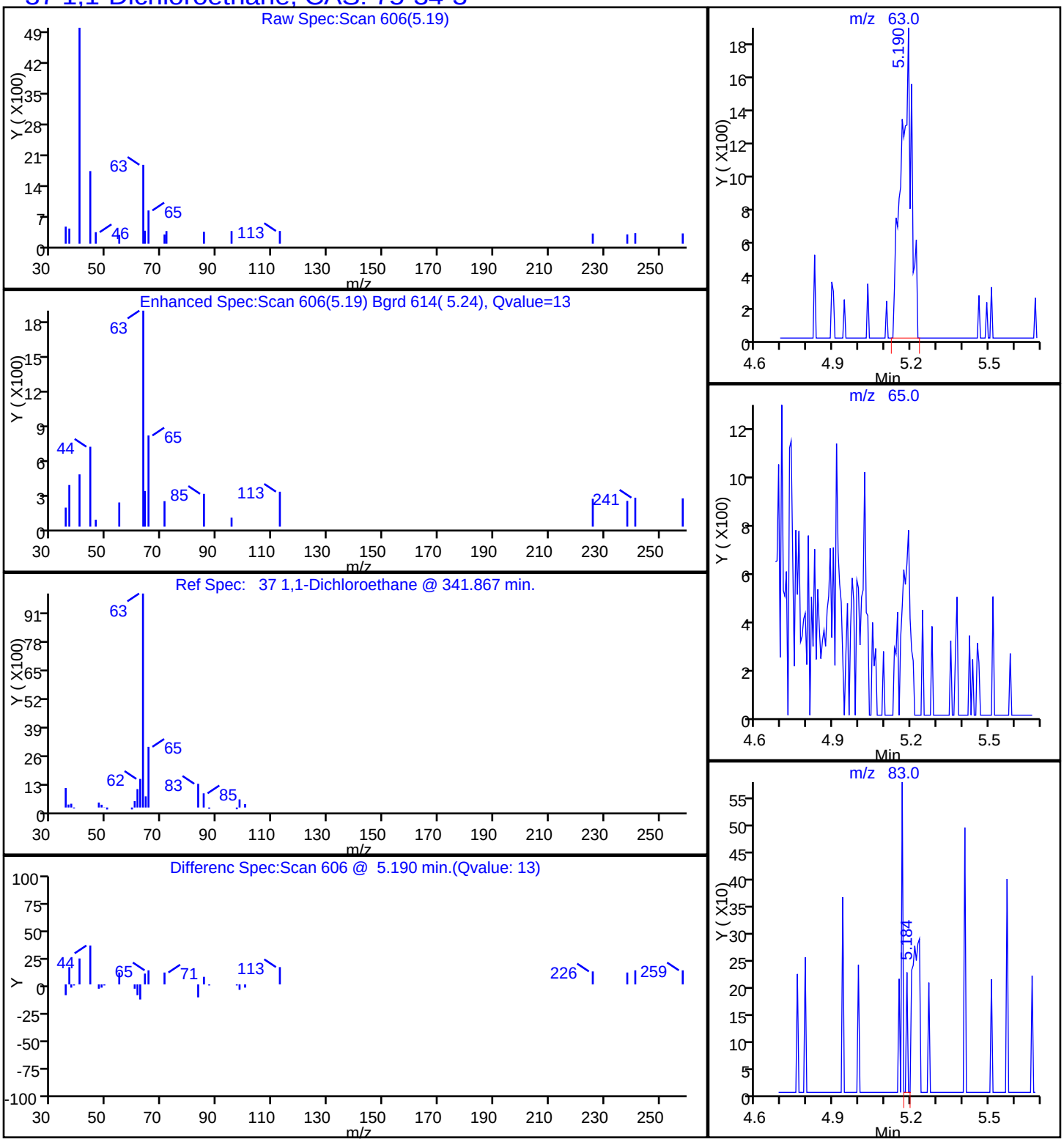
Report Date: 19-Jan-2015 07:36:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D

Injection Date:	16-Jan-2015 16:34:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-1	Lab Sample ID:	180-40481-1		
Client ID:	HD-MW-100D-0/1-0				
Operator ID:	001562	ALS Bottle#:	10	Worklist Smp#:	14
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

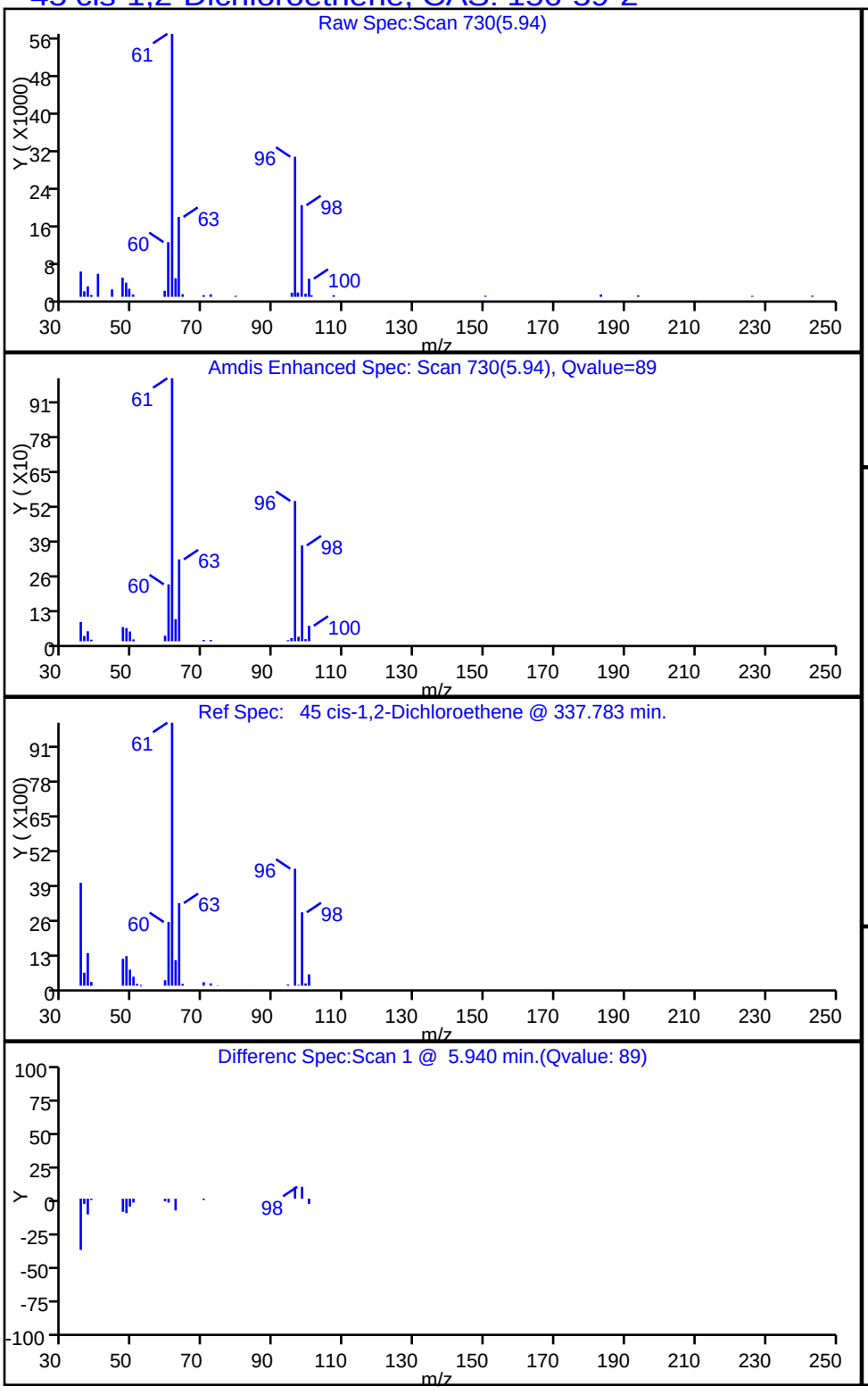


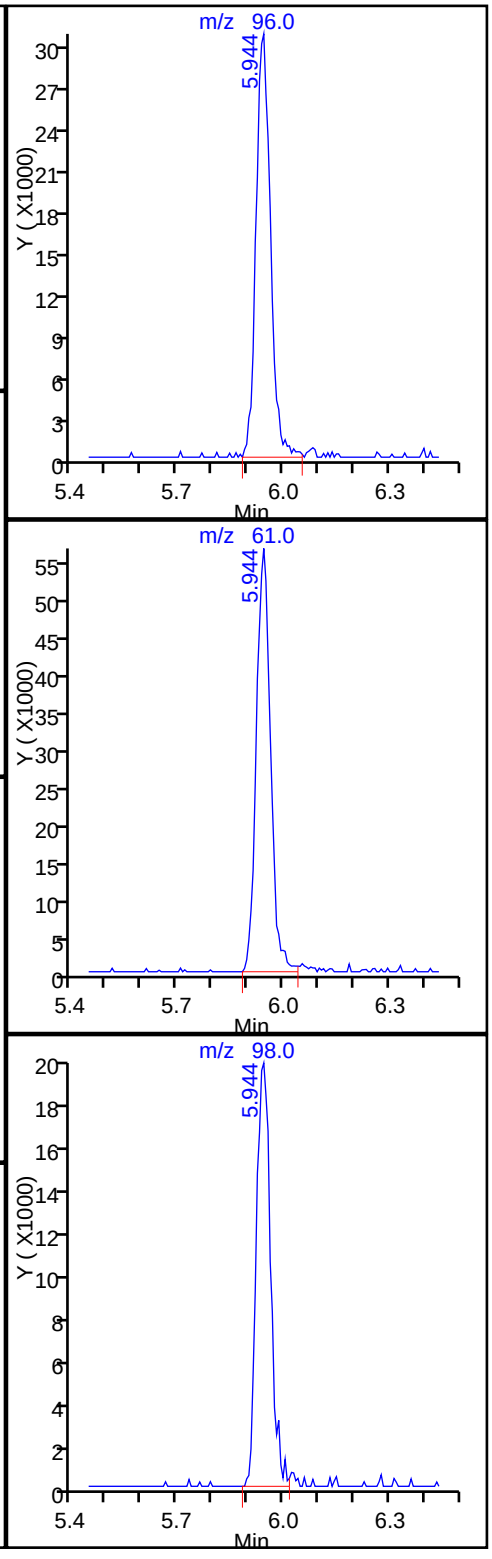
Report Date: 19-Jan-2015 07:36:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D				
Injection Date:	16-Jan-2015 16:34:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-1	Lab Sample ID:	180-40481-1		
Client ID:	HD-MW-100D-0/1-0				
Operator ID:	001562	ALS Bottle#:	10	Worklist Smp#:	14
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





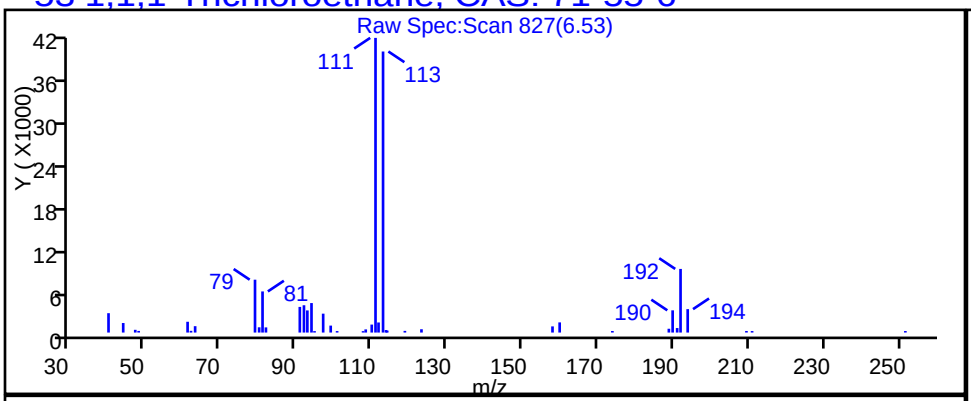
Report Date: 19-Jan-2015 07:36:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

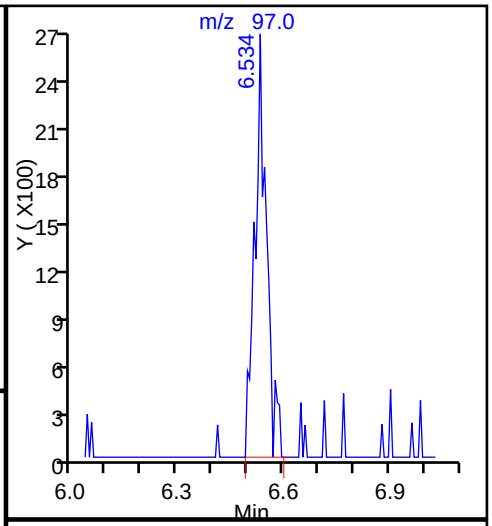
TestAmerica Pittsburgh

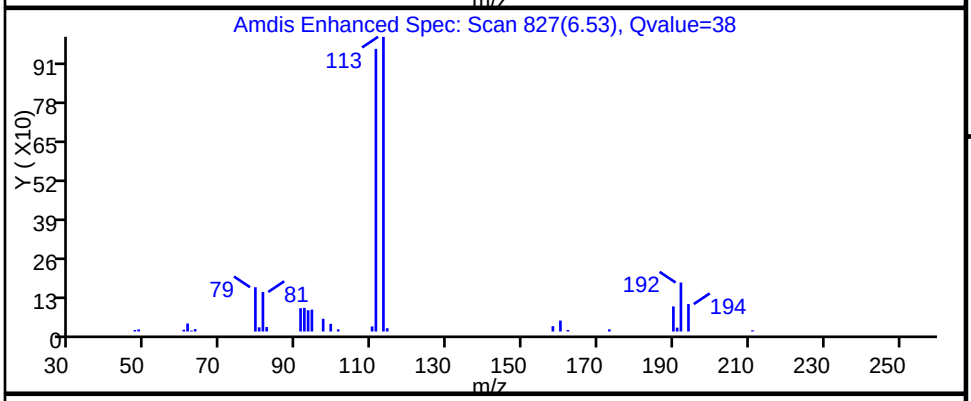
Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D

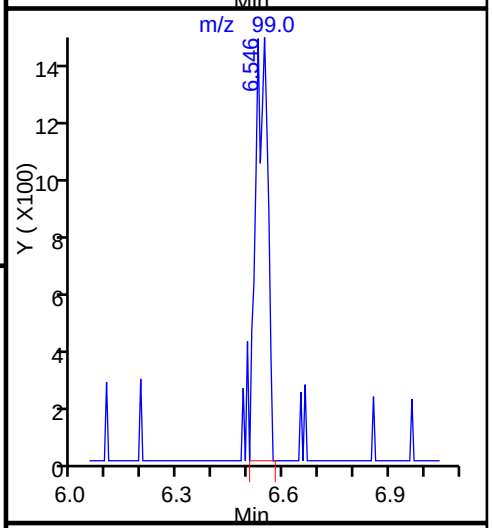
Injection Date:	16-Jan-2015 16:34:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-1	Lab Sample ID:	180-40481-1		
Client ID:	HD-MW-100D-0/1-0				
Operator ID:	001562	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

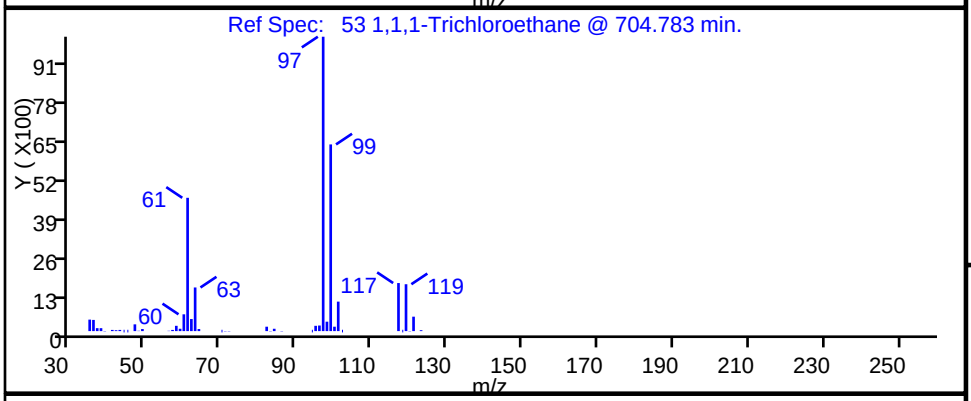
53 1,1,1-Trichloroethane, CAS: 71-55-6

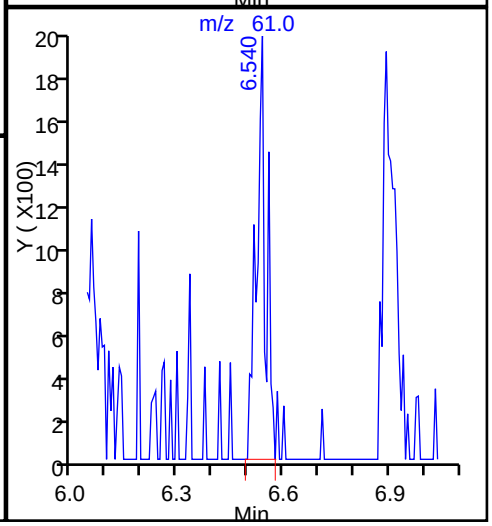


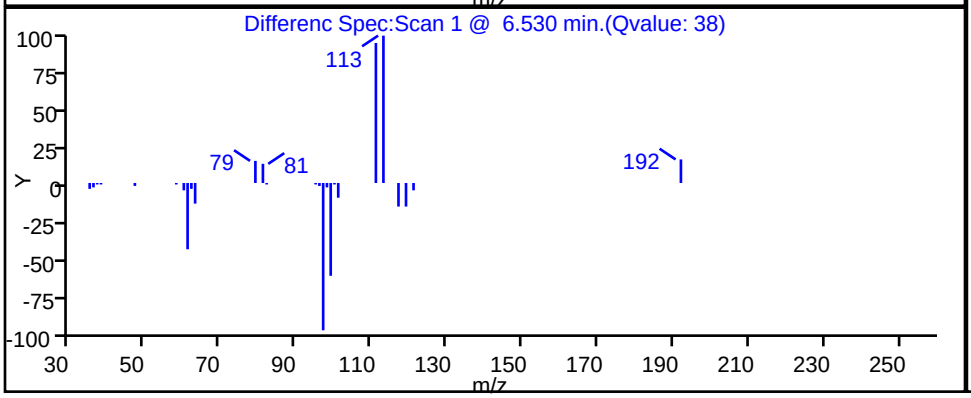












Report Date: 19-Jan-2015 07:36:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D

Injection Date: 16-Jan-2015 16:34:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-1 Lab Sample ID: 180-40481-1

Client ID: HD-MW-100D-0/1-0

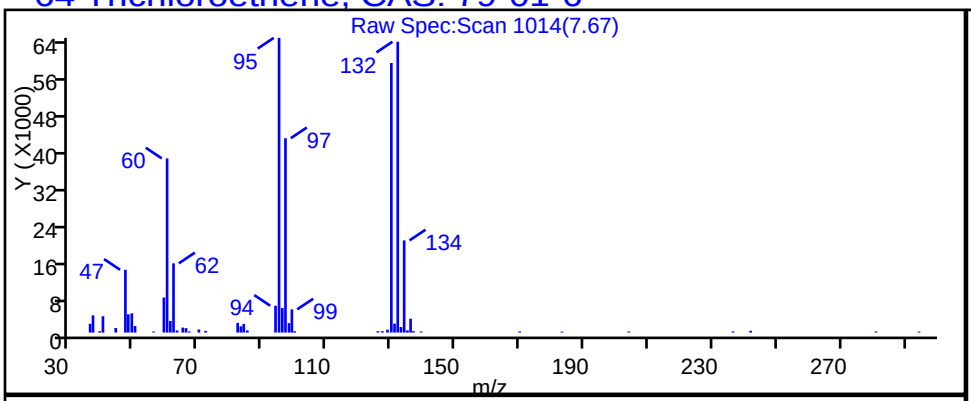
Operator ID: 001562 ALS Bottle#: 10 Worklist Smp#: 14

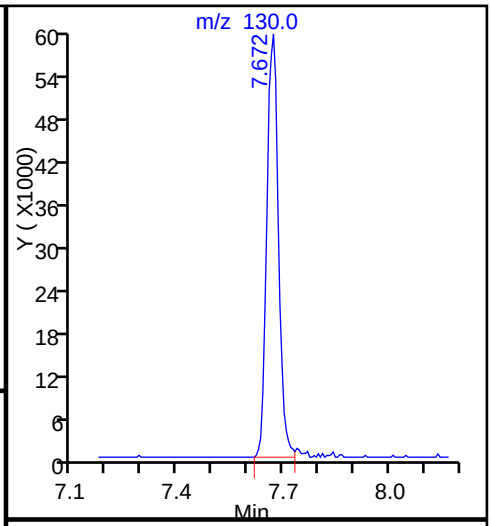
Purge Vol: 5.000 mL Dil. Factor: 5.0000

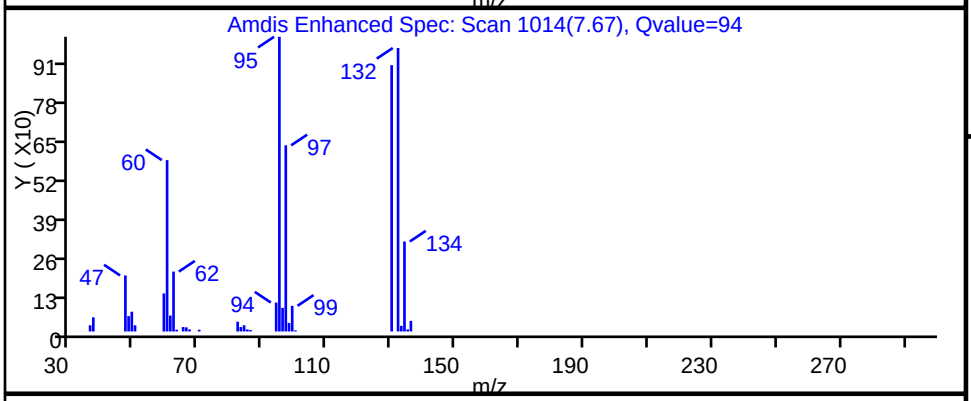
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

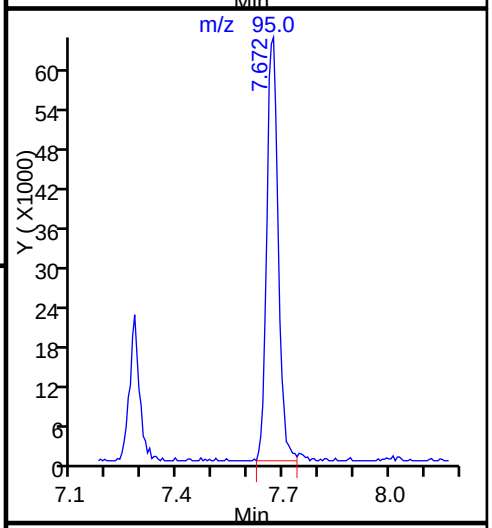
Column: DB-624 (0.18 mm) Detector MS SCAN

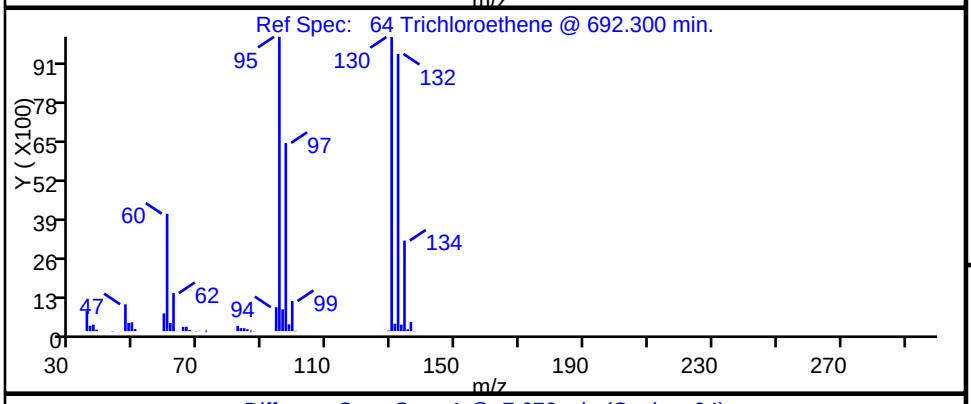
64 Trichloroethene, CAS: 79-01-6

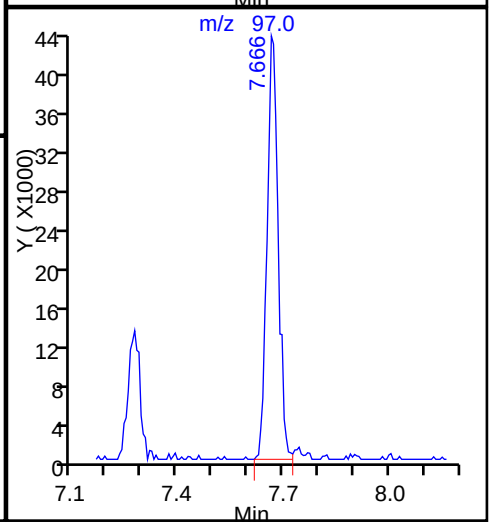


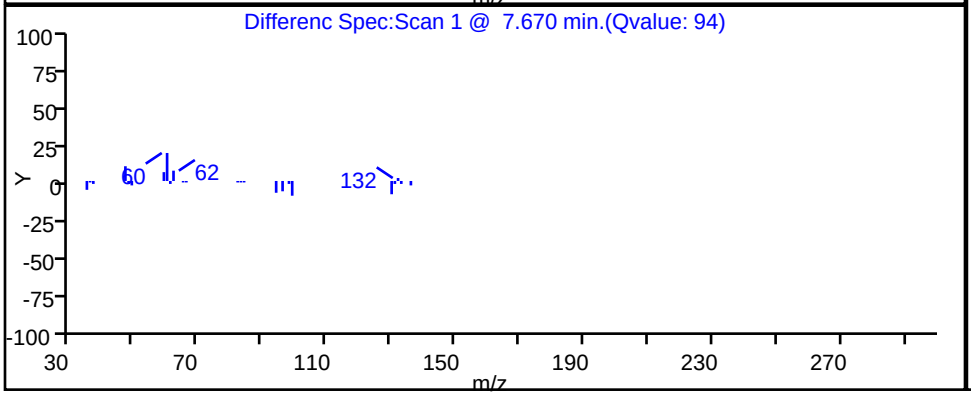












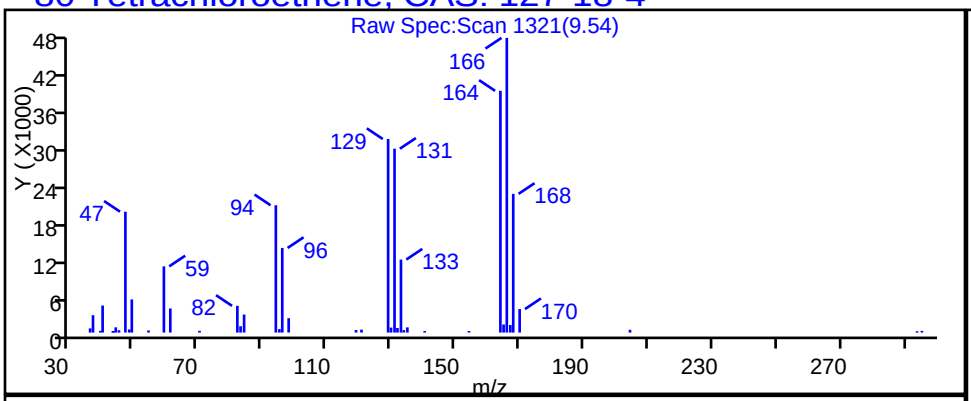
Report Date: 19-Jan-2015 07:36:05 Chrom Revision: 2.2 06-Nov-2014 14:50:32

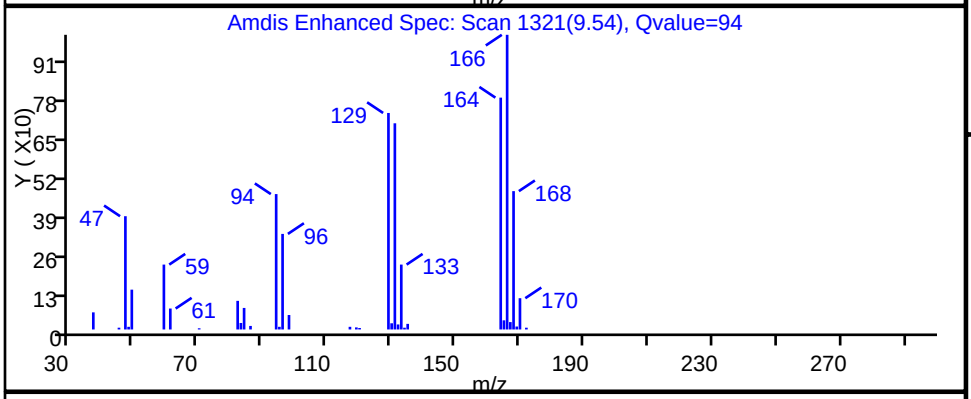
TestAmerica Pittsburgh

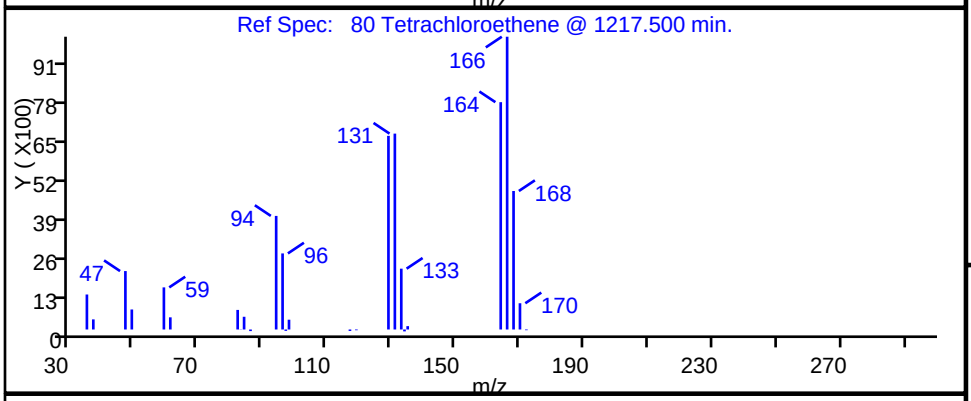
Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116014.D

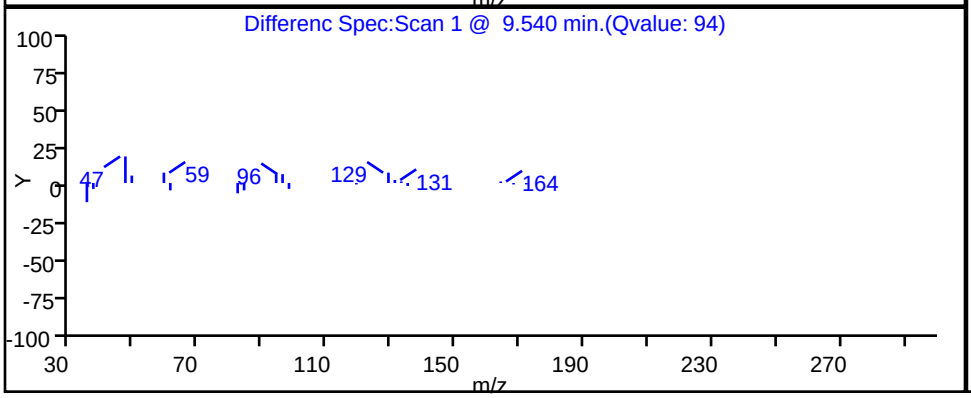
Injection Date:	16-Jan-2015 16:34:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-1	Lab Sample ID:	180-40481-1
Client ID:	HD-MW-100D-0/1-0		
Operator ID:	001562	ALS Bottle#:	10 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

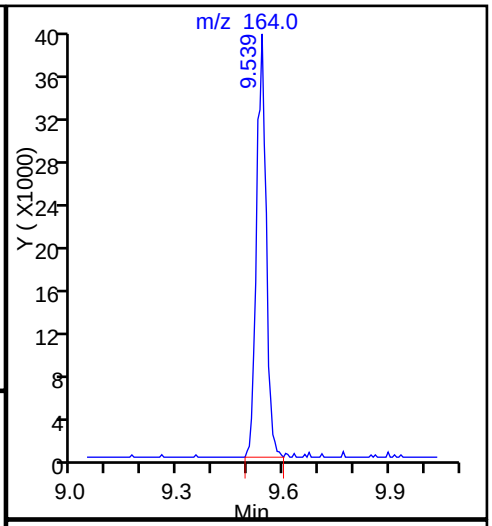
80 Tetrachloroethene, CAS: 127-18-4

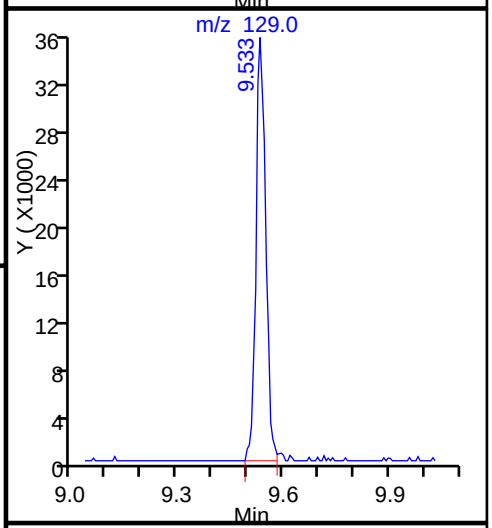


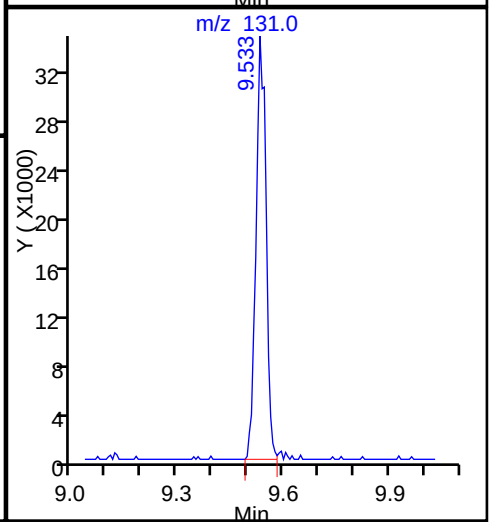












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100I-0/1-0 | Lab Sample ID: 180-40481-2

Matrix: Water | Lab File ID: 50116015.D

Analysis Method: 8260C | Date Collected: 01/14/2015 09:20

Sample wt/vol: 5(mL) | Date Analyzed: 01/16/2015 16:58

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 130947 | 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	1.6		1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.54	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	24		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	0.25	J	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.6		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	31		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	20		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100I-0/1-0 Lab Sample ID: 180-40481-2

Matrix: Water Lab File ID: 50116015.D

Analysis Method: 8260C Date Collected: 01/14/2015 09:20

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 16:58

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 130947 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)	106		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	113		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D
Lims ID: 180-40481-E-2 Lab Sample ID: 180-40481-2
Client ID: HD-MW-100I-0/1-0
Sample Type: Client
Inject. Date: 16-Jan-2015 16:58:30 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-40481-E-2
Misc. Info.: 180-0005307-015
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:37:20 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:37:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.298	4.302	-0.004	88	146540	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	100	461790	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.361	0.003	98	106956	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.685	0.003	99	138024	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.522	0.009	93	111483	56.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	92	171373	53.1	
$ 7 Toluene-d8 (Surr)	98	8.922	8.925	-0.003	96	426240	47.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.529	0.003	83	153185	45.2	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.905				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96	3.392	3.371	0.021	90	20014	7.96	
24 Acetone	43	3.501	3.493	0.008	55	2778	1.92	
26 Carbon disulfide	76		3.669				ND	
31 Methylene Chloride	84		4.150				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73	4.597	4.594	0.002	28	3130	0.4743	
37 1,1-Dichloroethane	63	5.181	5.172	0.009	95	16016	2.70	
45 cis-1,2-Dichloroethene	96	5.941	5.938	0.003	87	328905	119.5	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83	6.349	6.346	0.003	55	5487	1.23	
53 1,1,1-Trichloroethane	97	6.531	6.535	-0.004	49	23021	7.92	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.985				ND	
64 Trichloroethene	130	7.669	7.666	0.003	95	384682	157.3	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.536	9.534	0.002	95	211270	100.9	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

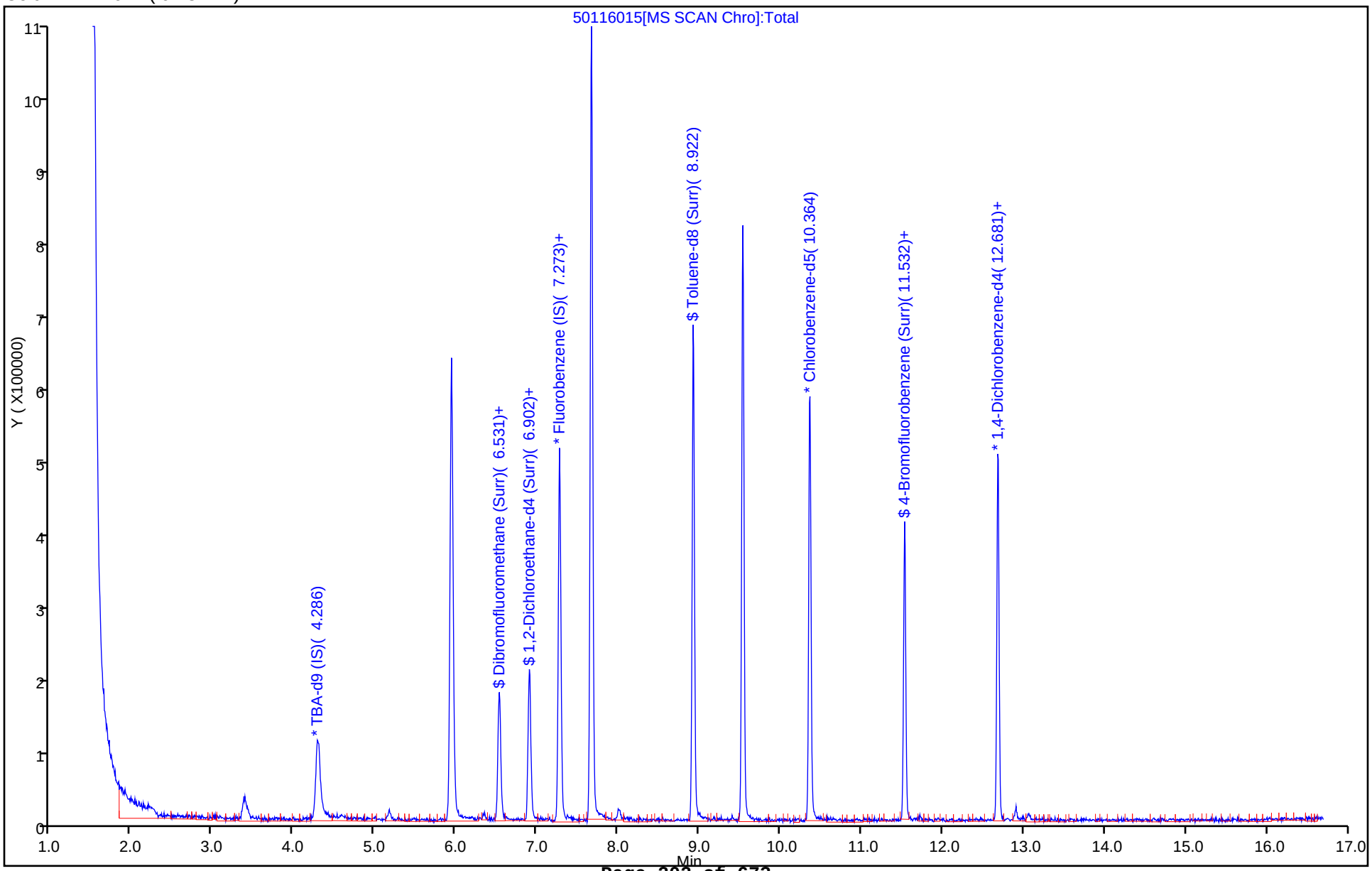
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D				
Injection Date:	16-Jan-2015 16:58:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-E-2	Lab Sample ID:	180-40481-2	Worklist Smp#:	15
Client ID:	HD-MW-100I-0/1-0				
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)

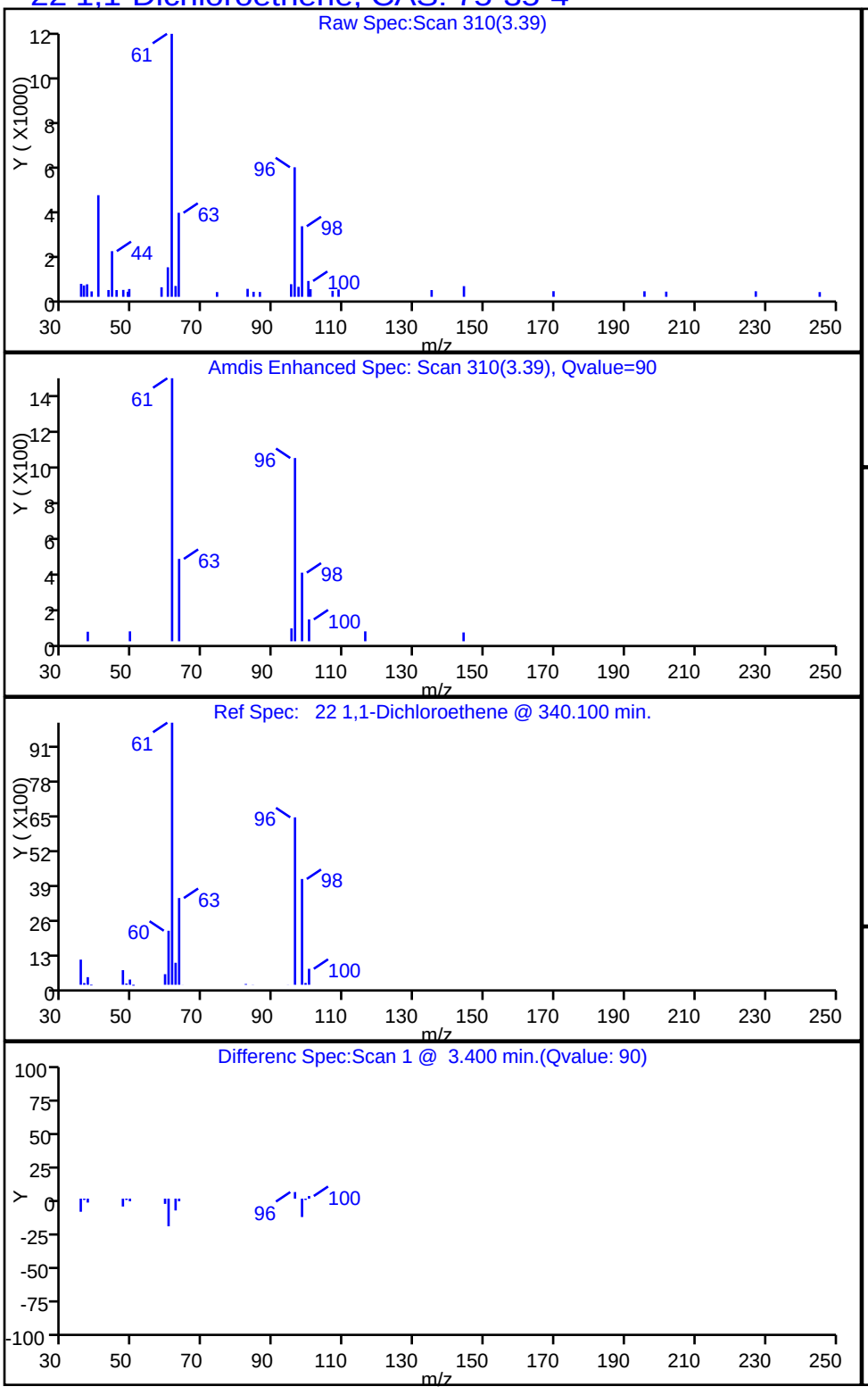


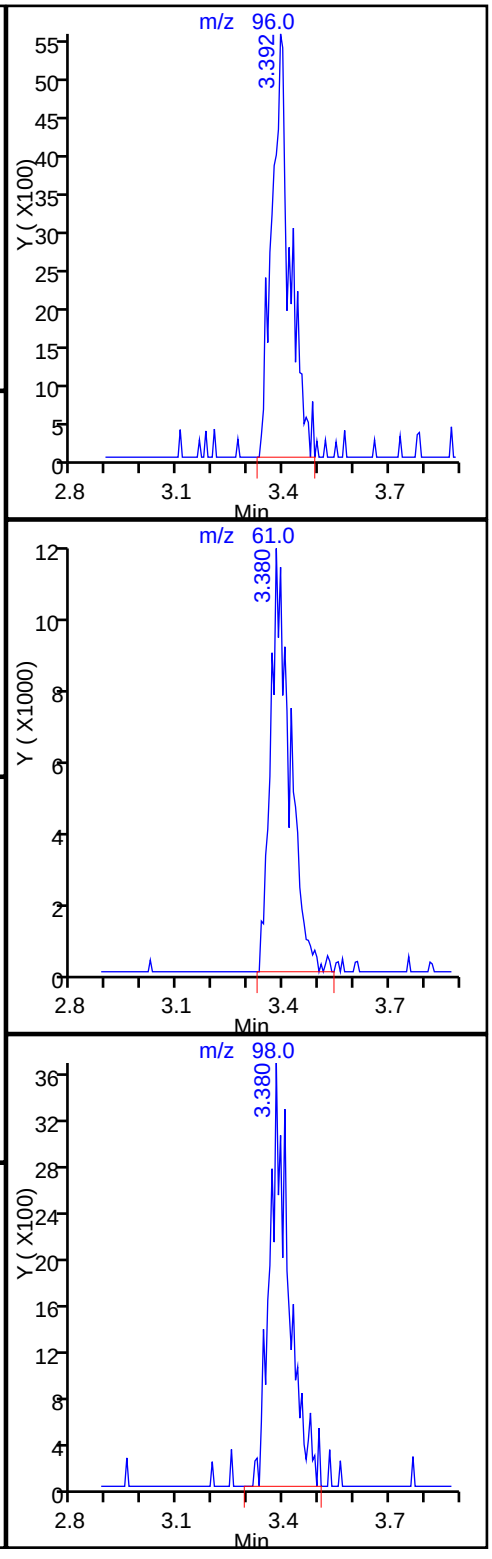
Report Date: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D				
Injection Date:	16-Jan-2015 16:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-2	Lab Sample ID:	180-40481-2		
Client ID:	HD-MW-100I-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	15
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: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D

Injection Date: 16-Jan-2015 16:58:30 Instrument ID: CHHP5

Lims ID: 180-40481-E-2 Lab Sample ID: 180-40481-2

Client ID: HD-MW-100I-0/1-0

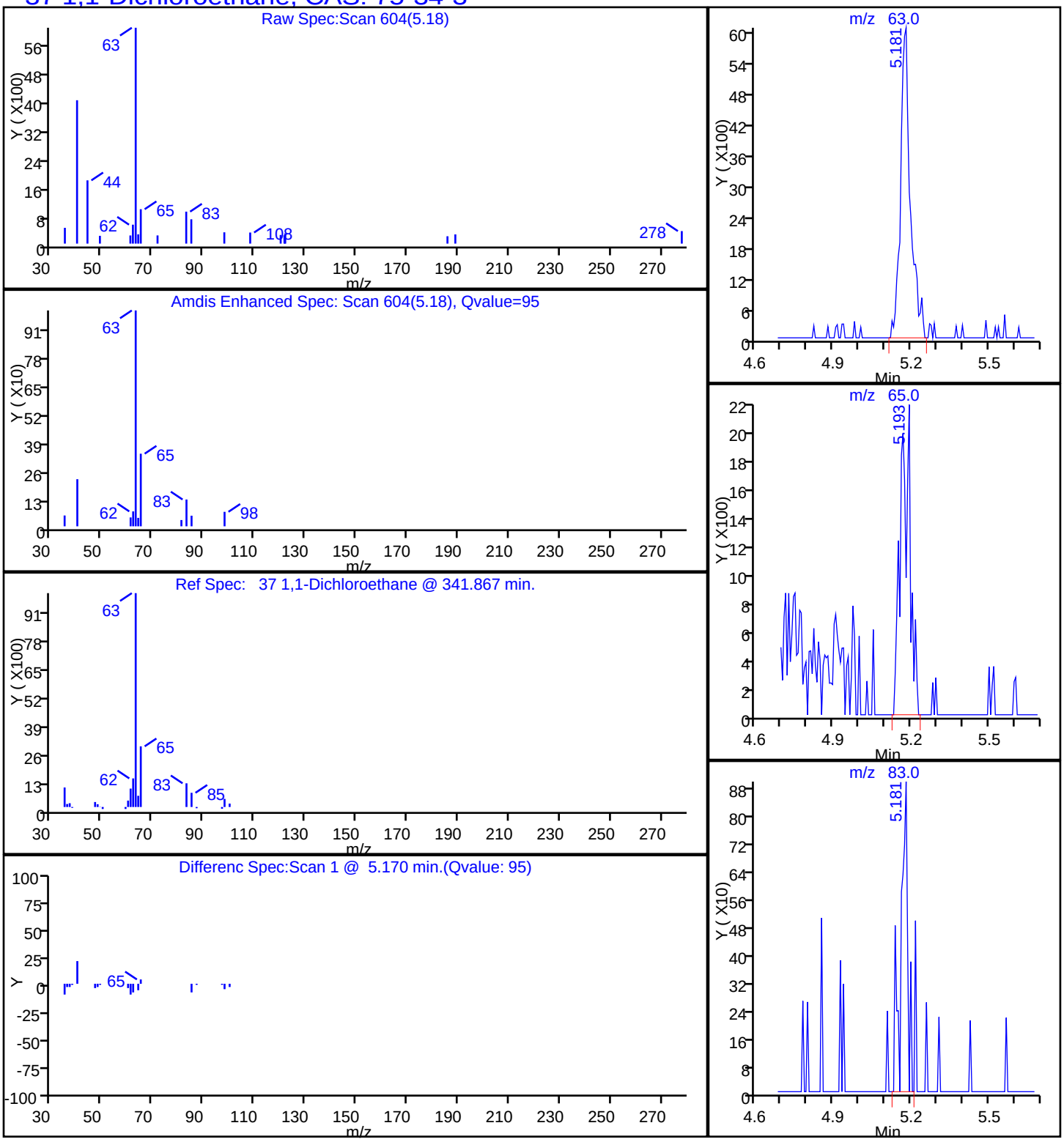
Operator ID: 001562 ALS Bottle#: 11 Worklist Smp#: 15

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: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D

Injection Date: 16-Jan-2015 16:58:30 Instrument ID: CHHP5

Lims ID: 180-40481-E-2 Lab Sample ID: 180-40481-2

Client ID: HD-MW-100I-0/1-0

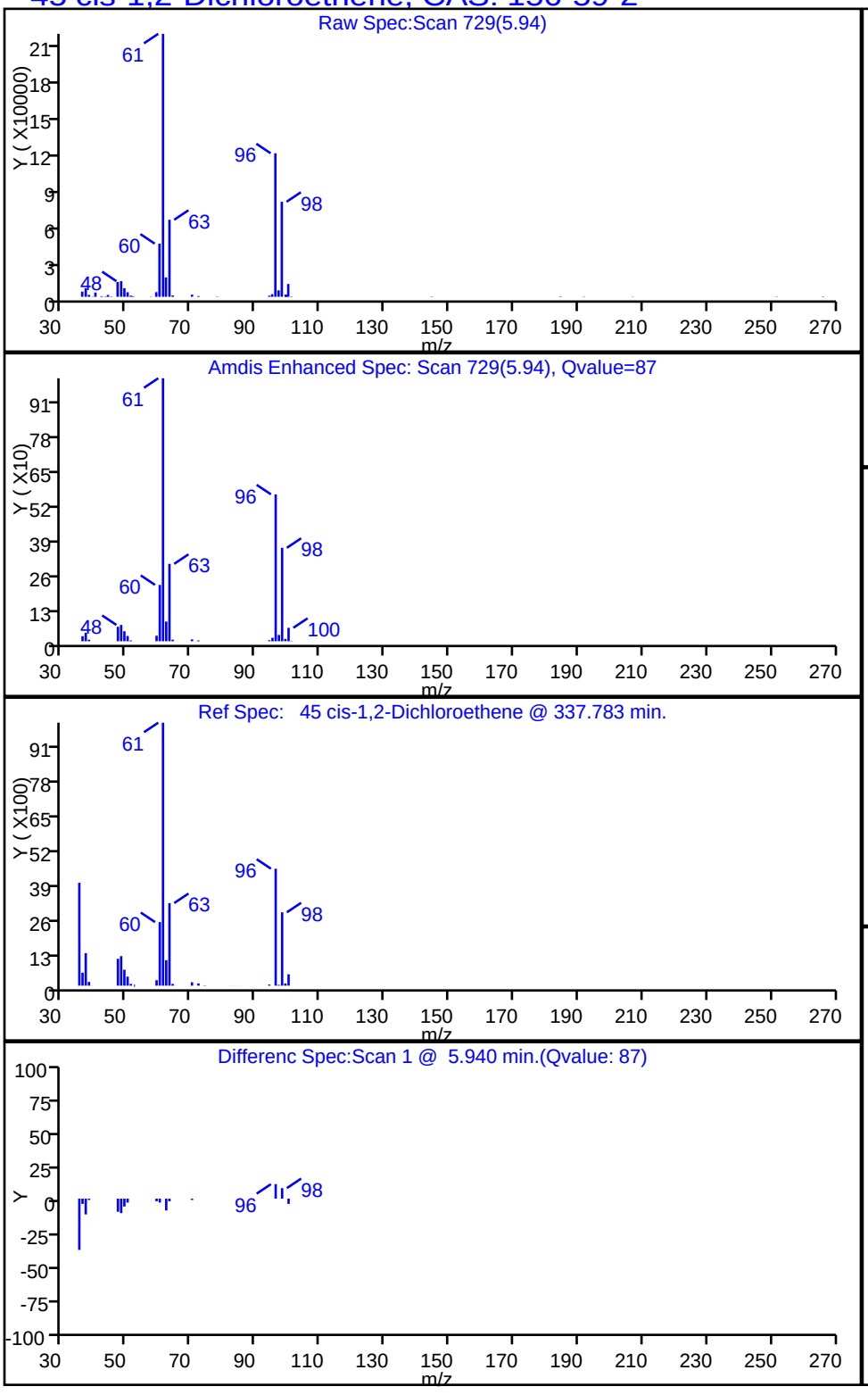
Operator ID: 001562 ALS Bottle#: 11 Worklist Smp#: 15

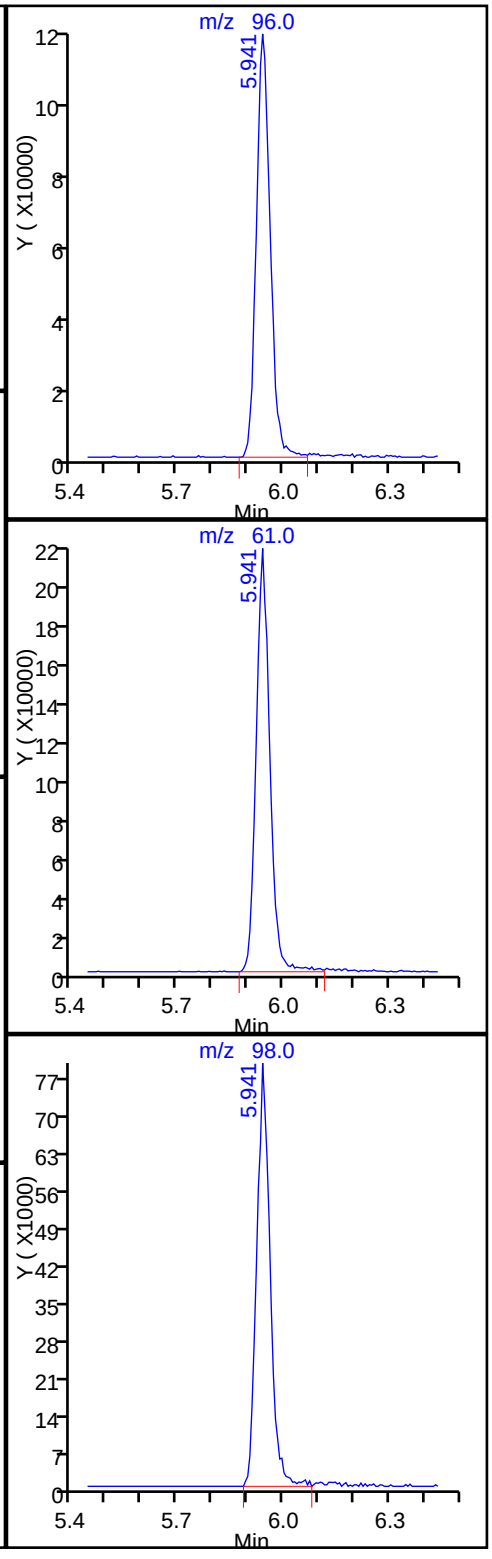
Purge Vol: 5.000 mL Dil. Factor: 1.0000

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



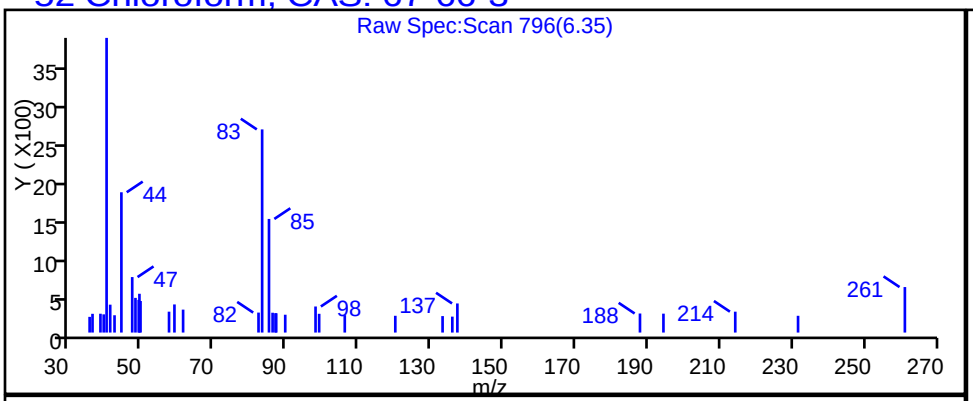


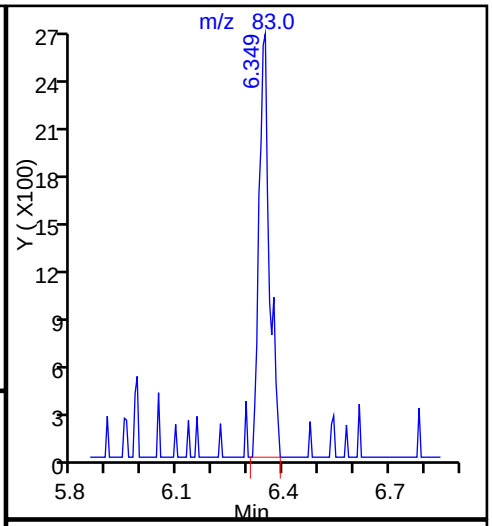
Report Date: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

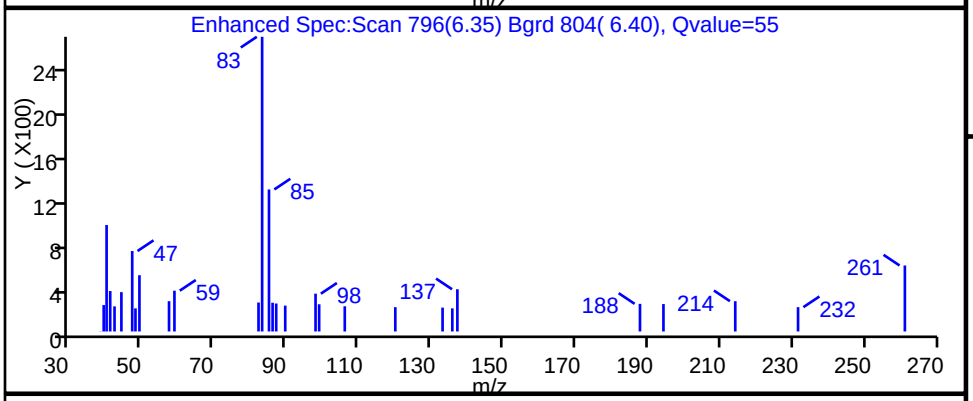
TestAmerica Pittsburgh

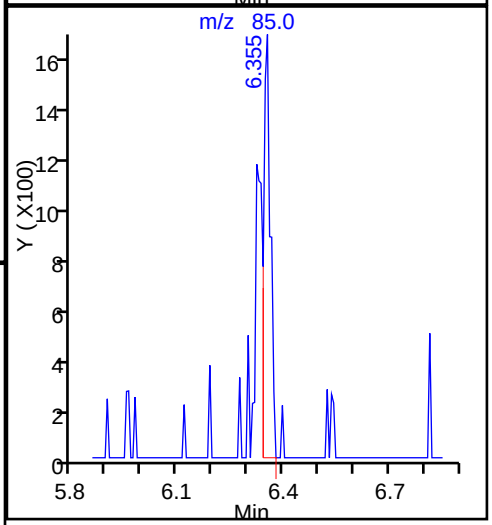
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D				
Injection Date:	16-Jan-2015 16:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-2	Lab Sample ID:	180-40481-2		
Client ID:	HD-MW-100I-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

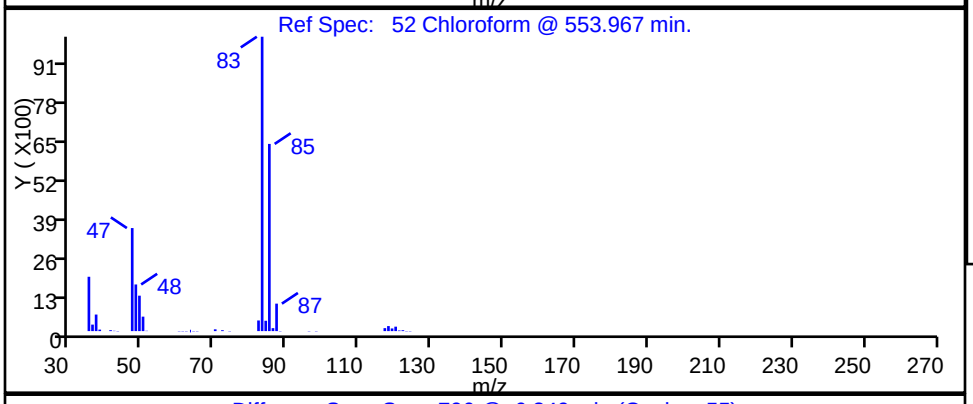
52 Chloroform, CAS: 67-66-3

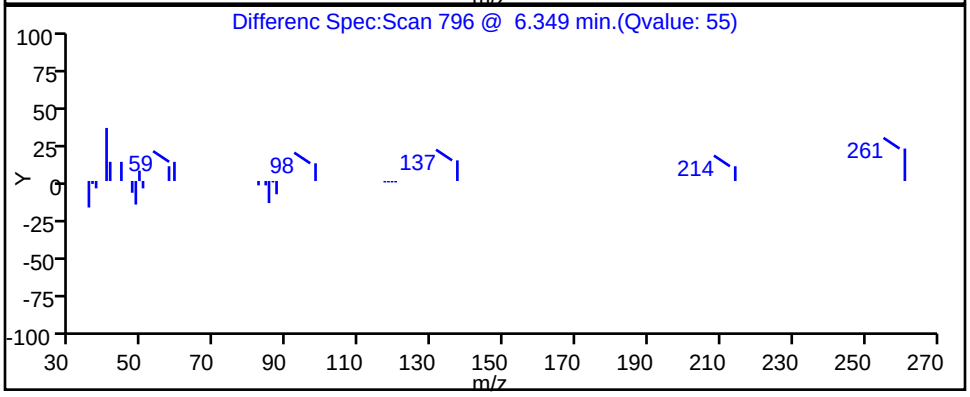










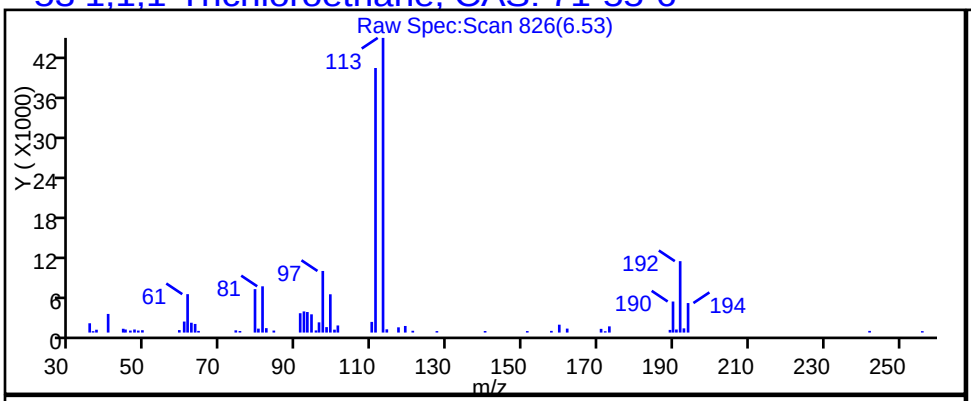


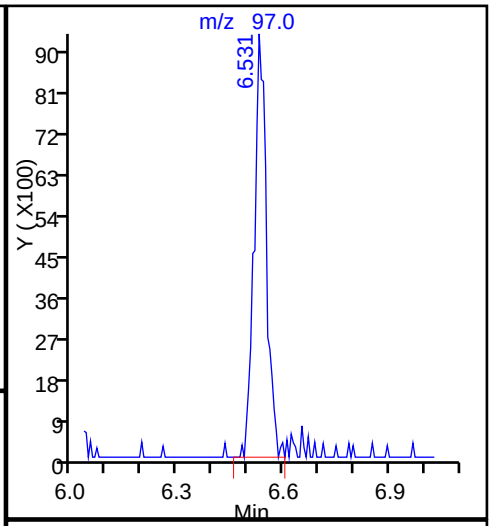
Report Date: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

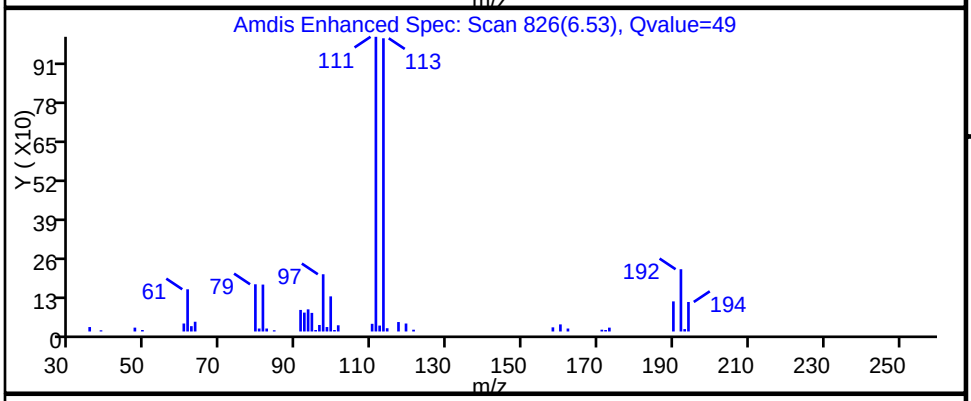
TestAmerica Pittsburgh

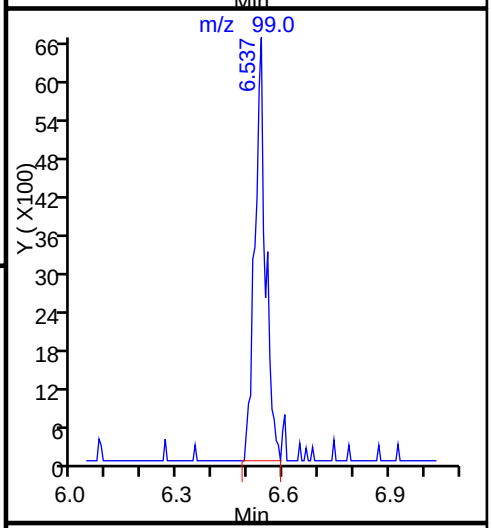
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D				
Injection Date:	16-Jan-2015 16:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-2	Lab Sample ID:	180-40481-2		
Client ID:	HD-MW-100I-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

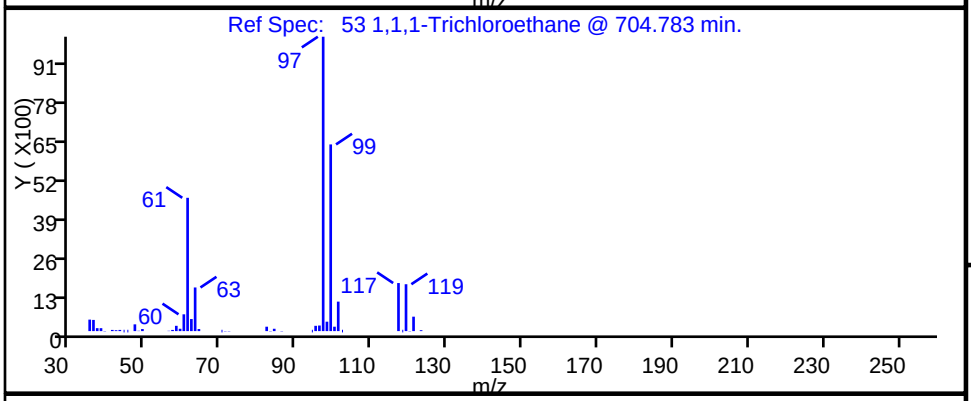
53 1,1,1-Trichloroethane, CAS: 71-55-6

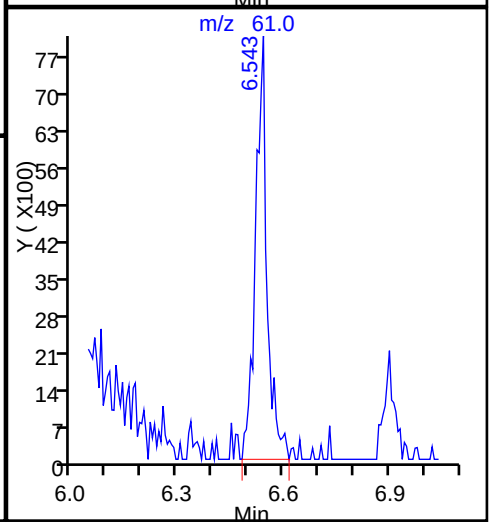


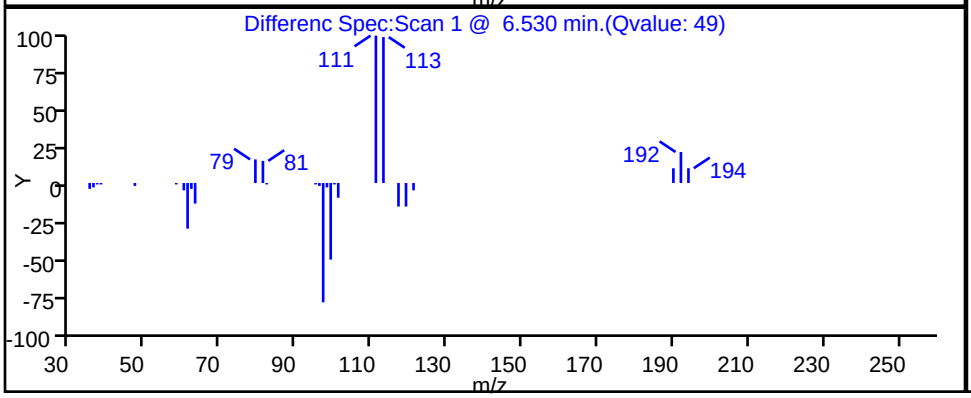










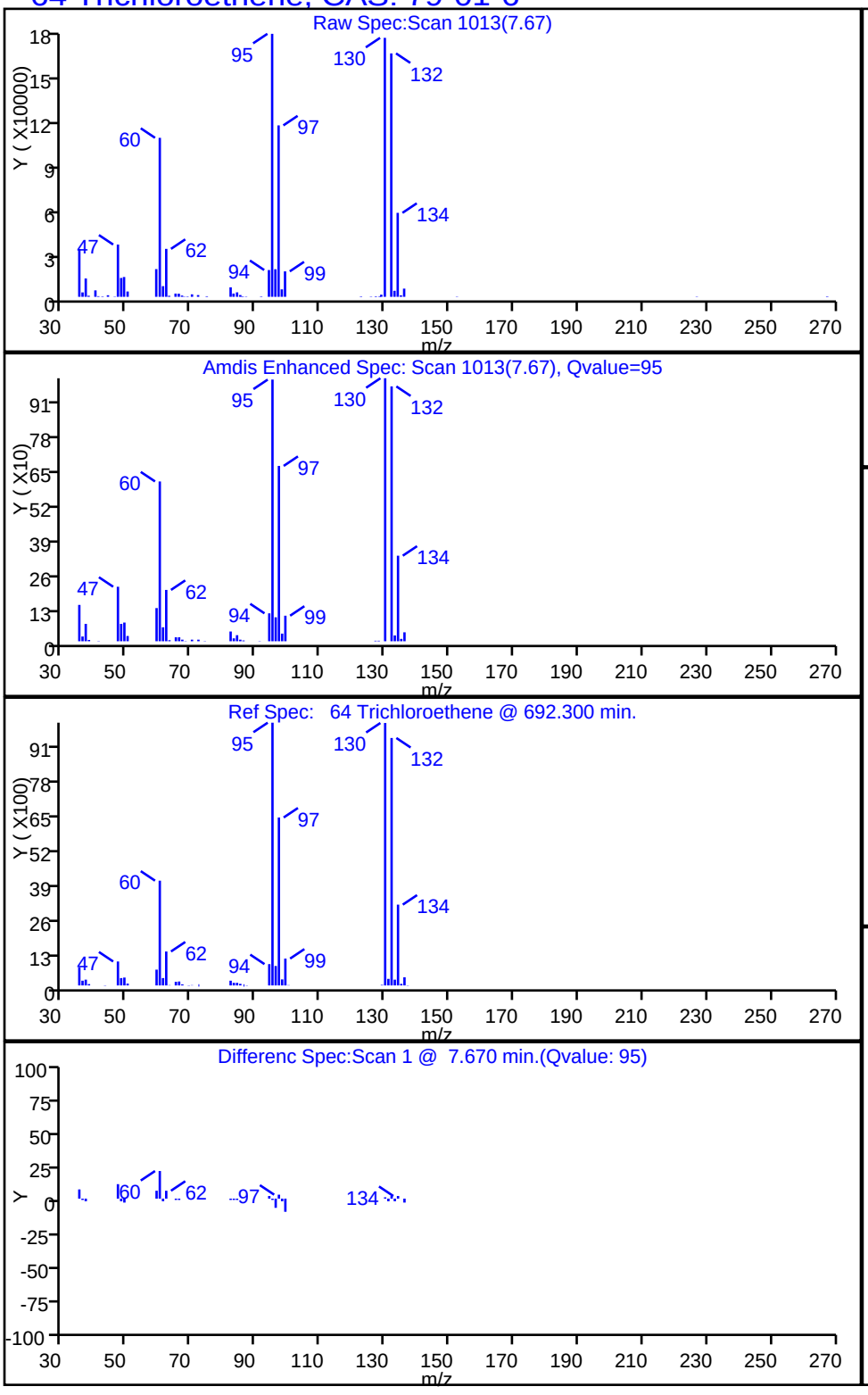


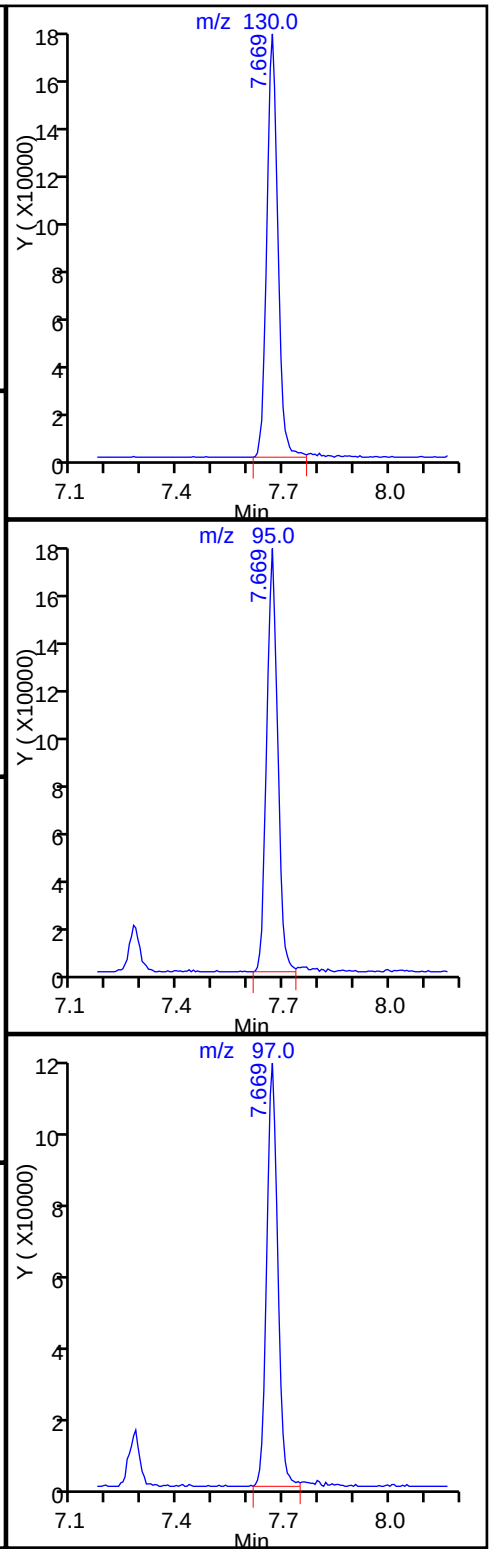
Report Date: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D				
Injection Date:	16-Jan-2015 16:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-2	Lab Sample ID:	180-40481-2		
Client ID:	HD-MW-100I-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	15
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



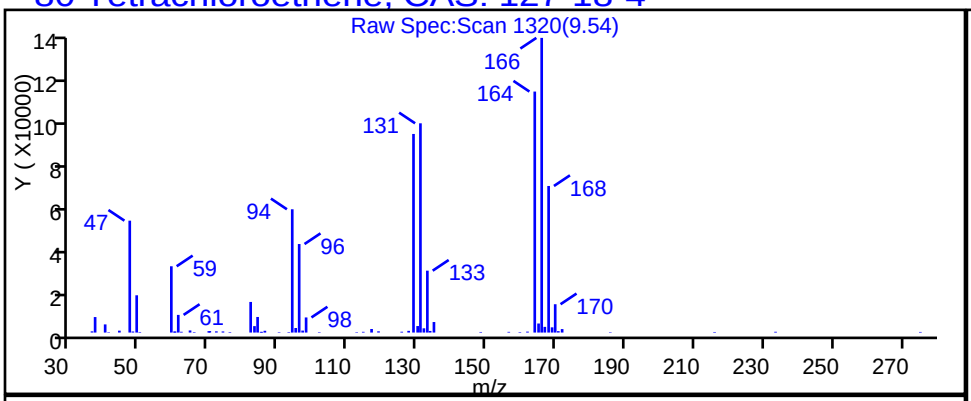


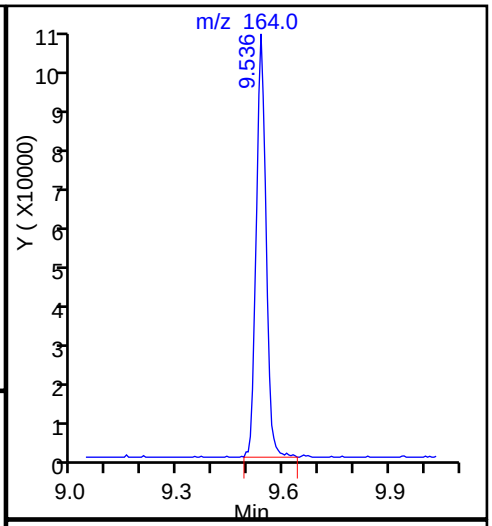
Report Date: 19-Jan-2015 07:37:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

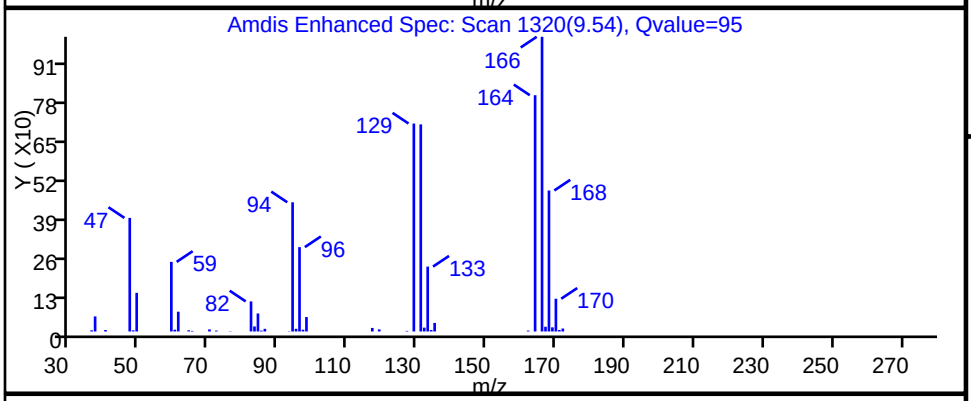
TestAmerica Pittsburgh

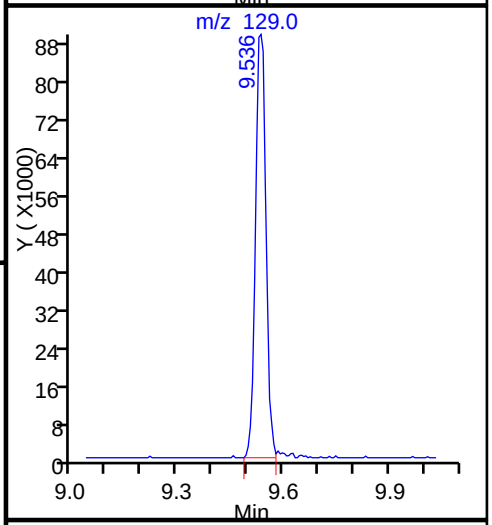
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116015.D				
Injection Date:	16-Jan-2015 16:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-2	Lab Sample ID:	180-40481-2		
Client ID:	HD-MW-100I-0/1-0				
Operator ID:	001562	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

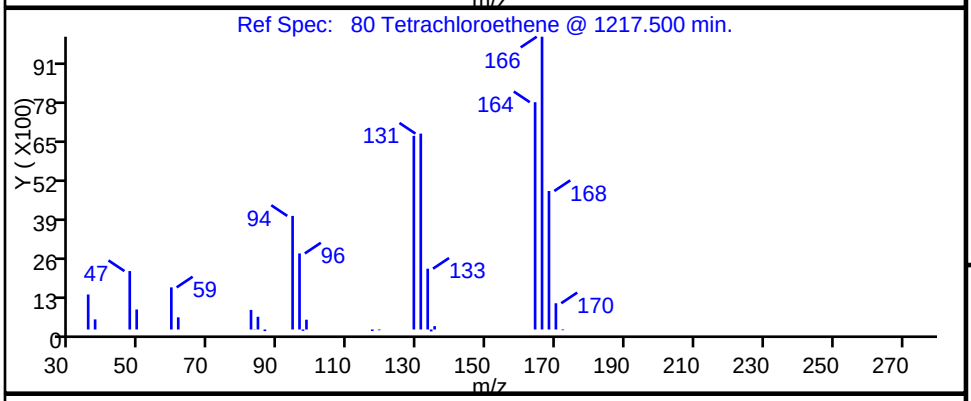
80 Tetrachloroethene, CAS: 127-18-4

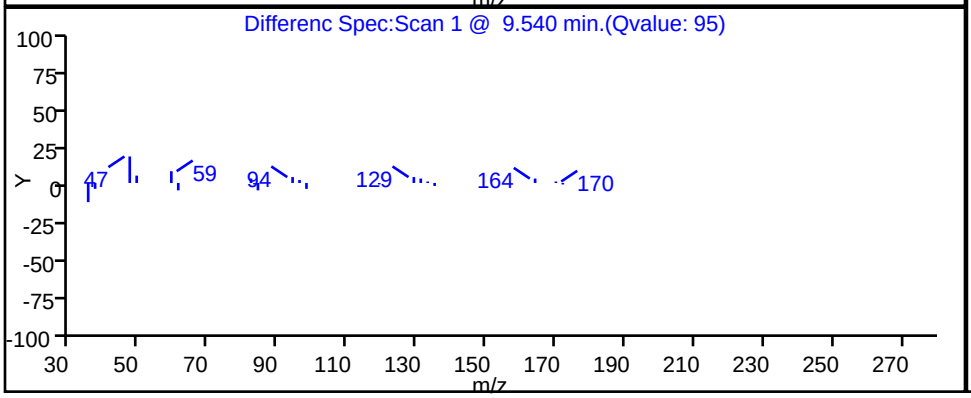


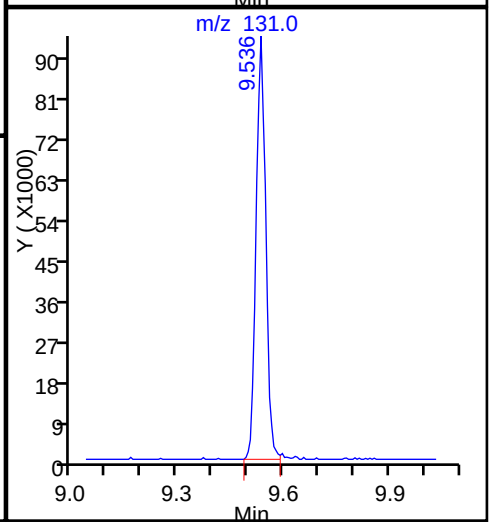












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100S-0/1-0 Lab Sample ID: 180-40481-3

Matrix: Water Lab File ID: 50116016.D

Analysis Method: 8260C Date Collected: 01/14/2015 10:00

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 17:22

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.: 130947 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	2.9	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	1.1	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	41		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	2.9	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	95		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	77		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100S-0/1-0 Lab Sample ID: 180-40481-3

Matrix: Water Lab File ID: 50116016.D

Analysis Method: 8260C Date Collected: 01/14/2015 10:00

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 17:22

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.: 130947 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)	108		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	92		70-118
1868-53-7	Dibromofluoromethane (Surr)	111		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D
Lims ID: 180-40481-D-3 Lab Sample ID: 180-40481-3
Client ID: HD-MW-100S-0/1-0
Sample Type: Client
Inject. Date: 16-Jan-2015 17:22:30 ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-40481-D-3, 5x
Misc. Info.: 180-0005307-016
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:39:12 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:39:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.286	4.302	-0.016	86	143460	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	100	440392	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.361	0.003	98	99819	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.685	-0.003	97	134404	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.522	0.009	93	104147	55.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	92	165752	53.9	
$ 7 Toluene-d8 (Surr)	98	8.922	8.925	-0.003	95	398322	48.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.529	0.003	83	145884	46.1	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62	1.889	1.905	-0.016	1	1616	0.4518	M
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96	3.392	3.371	0.021	68	6996	2.92	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.669				ND	
31 Methylene Chloride	84		4.150				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.181	5.172	0.009	29	6128	1.08	
45 cis-1,2-Dichloroethene	96	5.941	5.938	0.003	85	107323	40.9	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83		6.346				ND	
53 1,1,1-Trichloroethane	97	6.537	6.535	0.002	39	8171	2.95	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.985				ND	
64 Trichloroethene	130	7.669	7.666	0.003	93	221164	94.9	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.536	9.534	0.002	92	150876	77.2	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				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_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

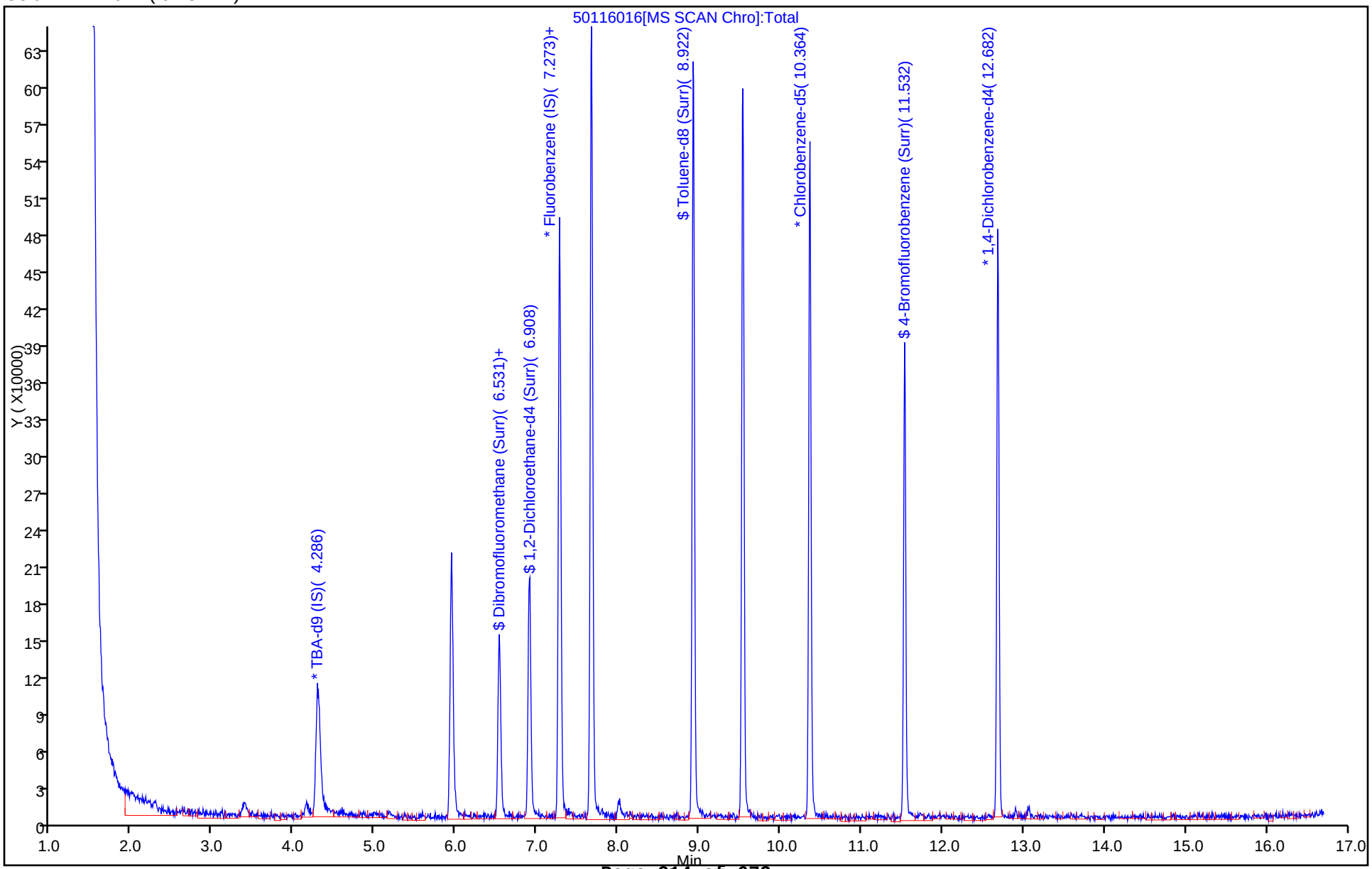
Report Date: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date:	16-Jan-2015 17:22:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-D-3	Lab Sample ID:	180-40481-3	Worklist Smp#:	16
Client ID:	HD-MW-100S-0/1-0				
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: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date: 16-Jan-2015 17:22:30 Instrument ID: CHHP5

Lims ID: 180-40481-D-3 Lab Sample ID: 180-40481-3

Client ID: HD-MW-100S-0/1-0

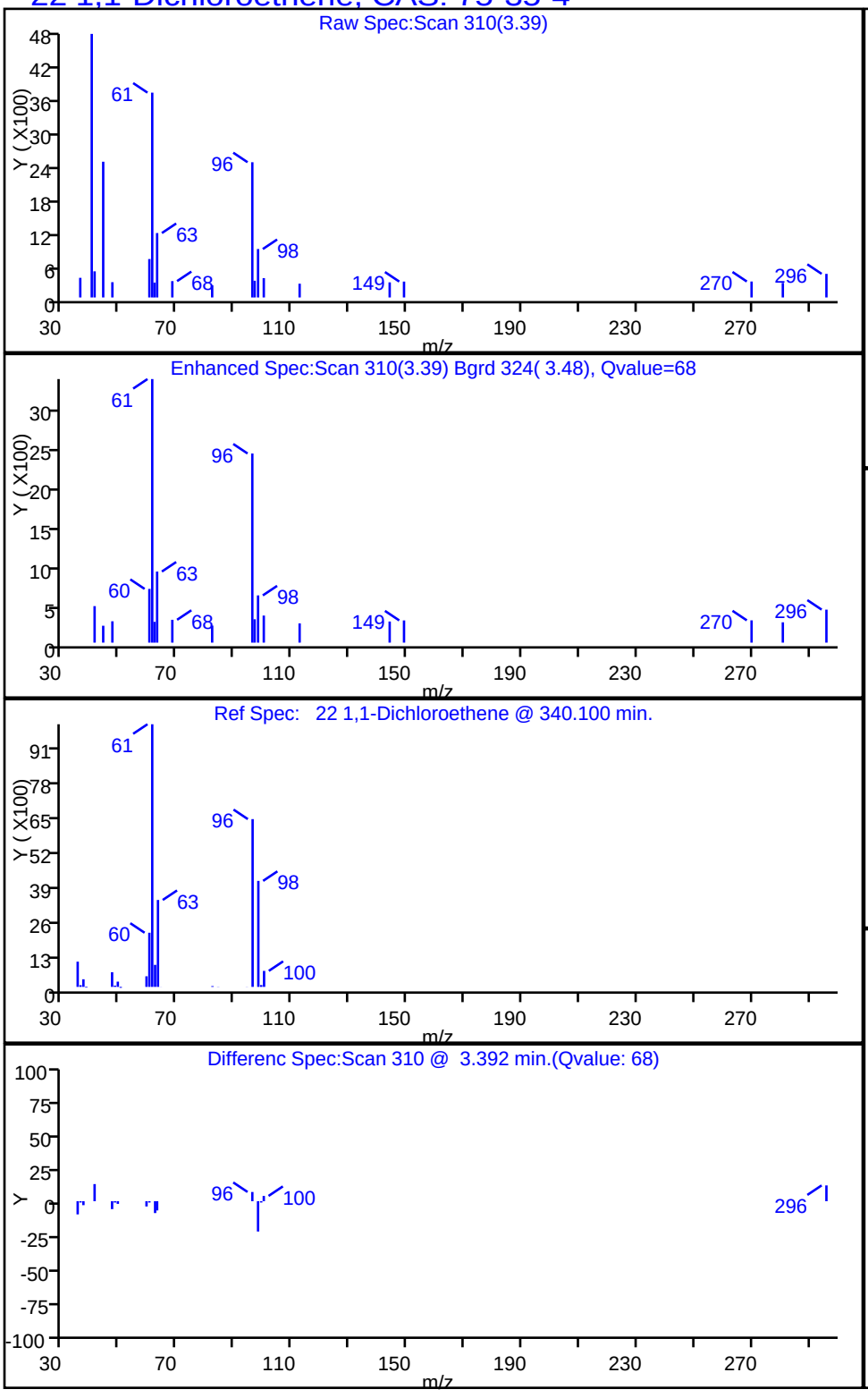
Operator ID: 001562 ALS Bottle#: 12 Worklist Smp#: 16

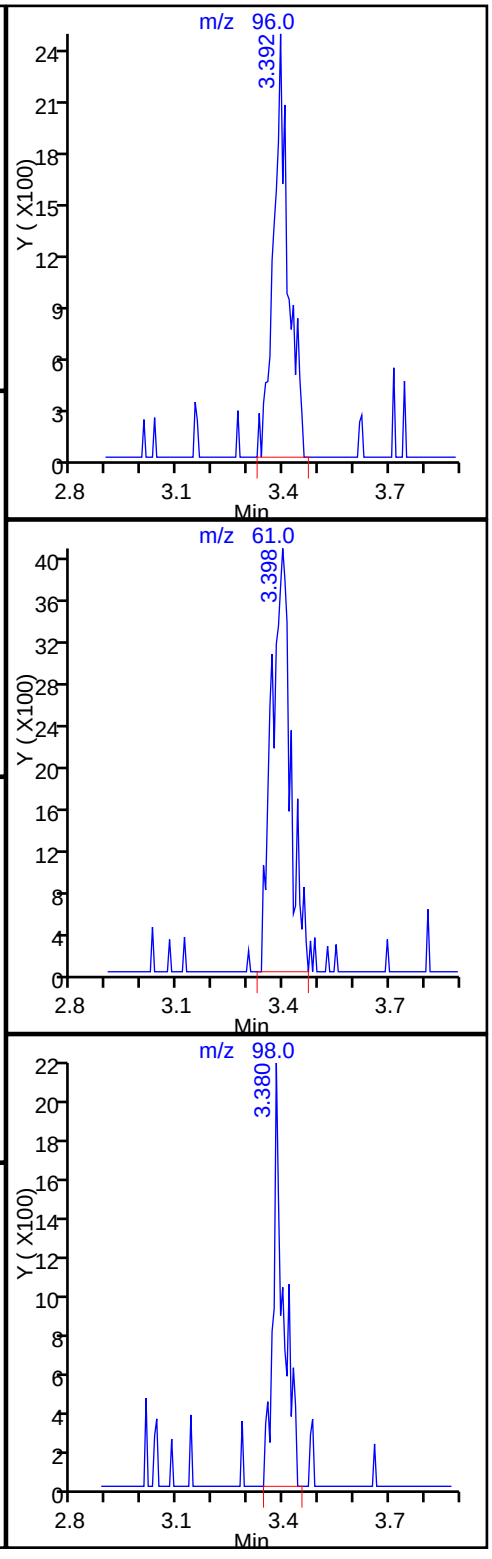
Purge Vol: 5.000 mL Dil. Factor: 5.0000

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





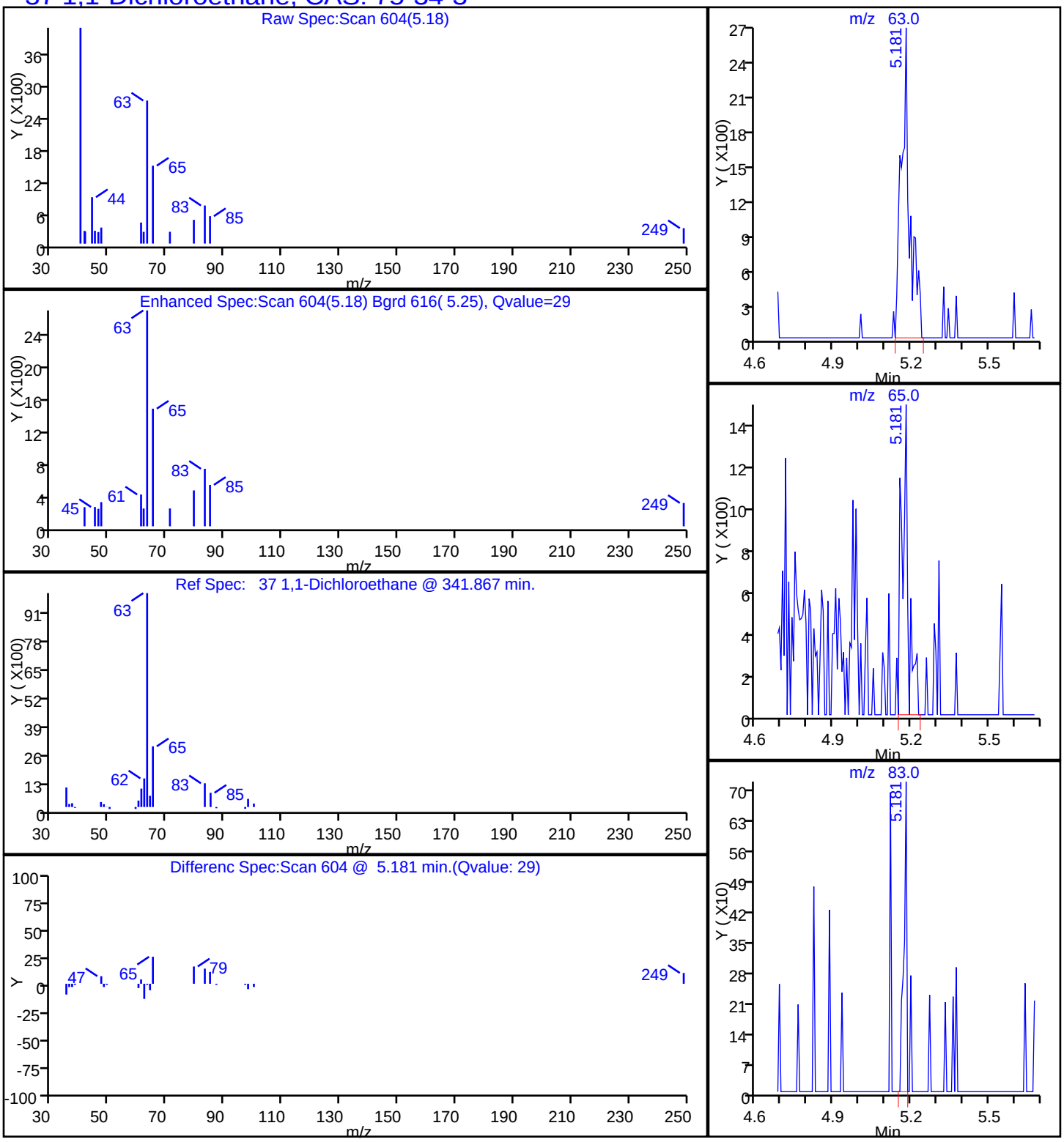
Report Date: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date:	16-Jan-2015 17:22:30	Instrument ID:	CHHP5
Lims ID:	180-40481-D-3	Lab Sample ID:	180-40481-3
Client ID:	HD-MW-100S-0/1-0		
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



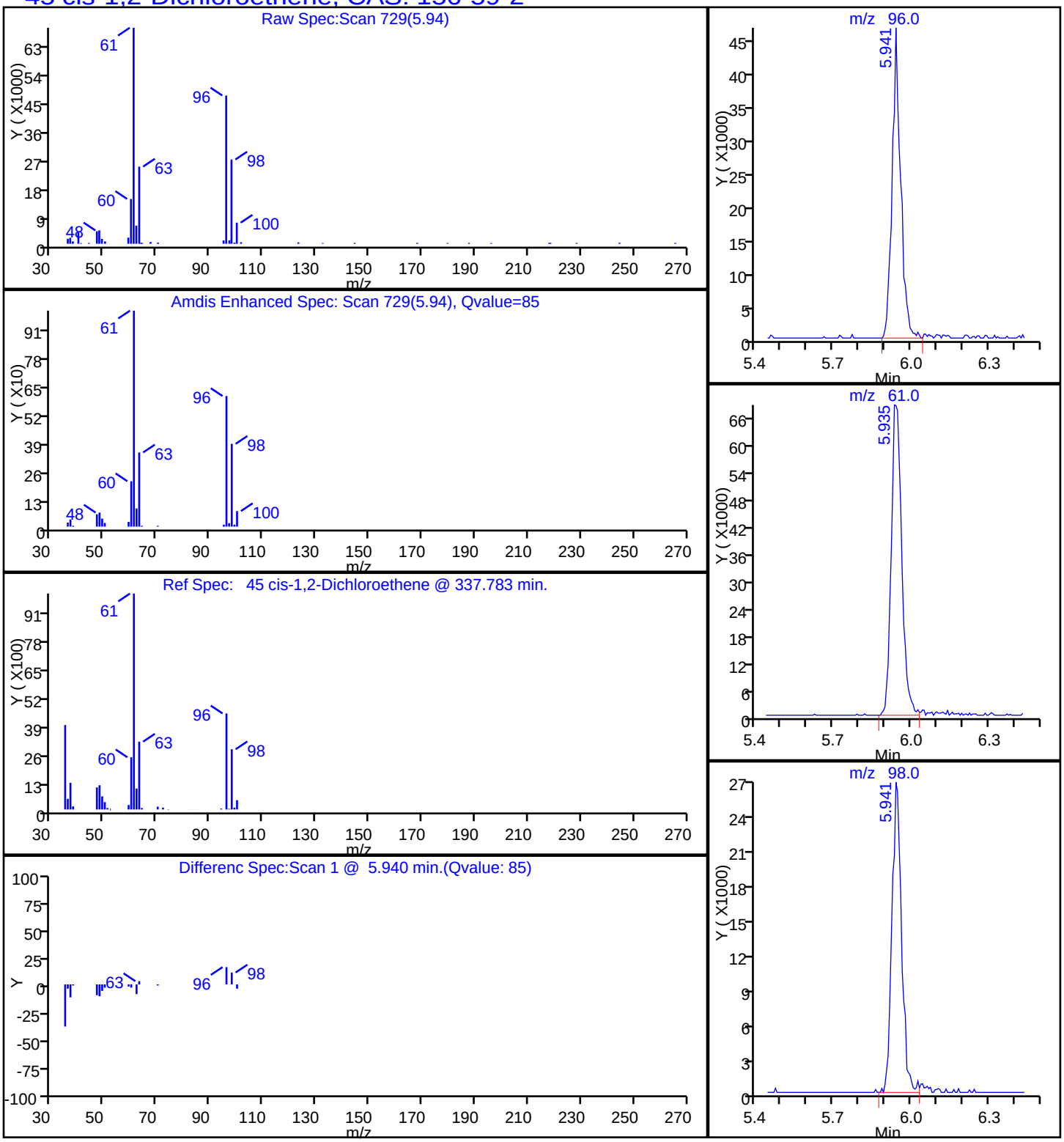
Report Date: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date:	16-Jan-2015 17:22:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-3	Lab Sample ID:	180-40481-3		
Client ID:	HD-MW-100S-0/1-0				
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: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date: 16-Jan-2015 17:22:30 Instrument ID: CHHP5

Lims ID: 180-40481-D-3 Lab Sample ID: 180-40481-3

Client ID: HD-MW-100S-0/1-0

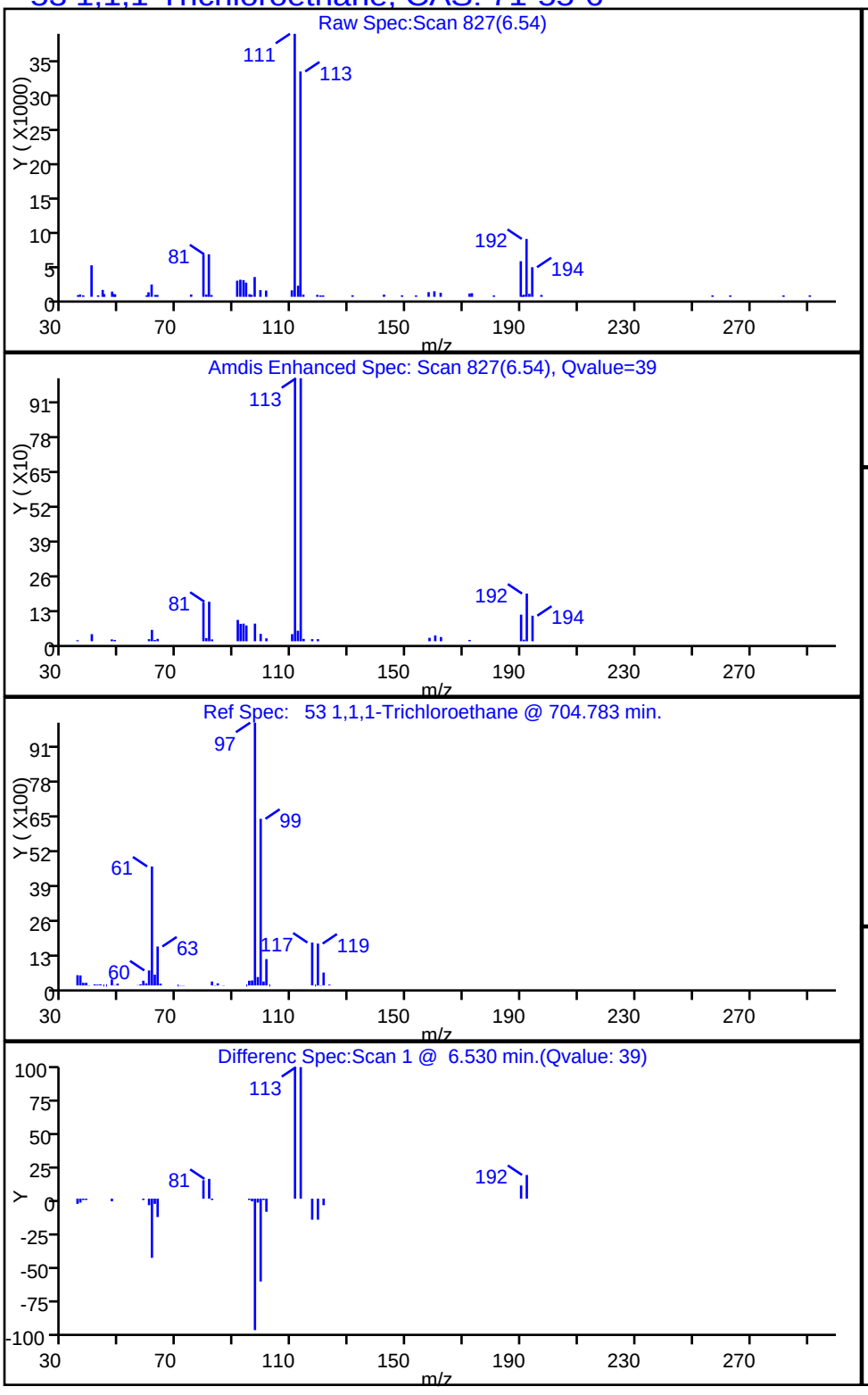
Operator ID: 001562 ALS Bottle#: 12 Worklist Smp#: 16

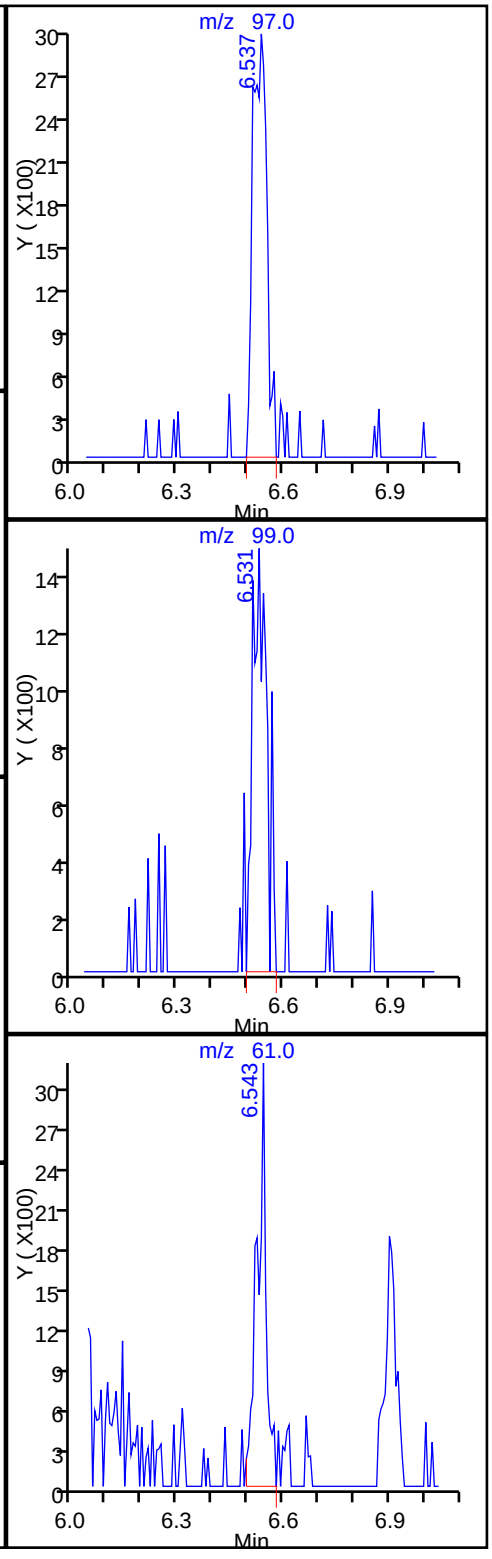
Purge Vol: 5.000 mL Dil. Factor: 5.0000

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: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date: 16-Jan-2015 17:22:30 Instrument ID: CHHP5

Lims ID: 180-40481-D-3 Lab Sample ID: 180-40481-3

Client ID: HD-MW-100S-0/1-0

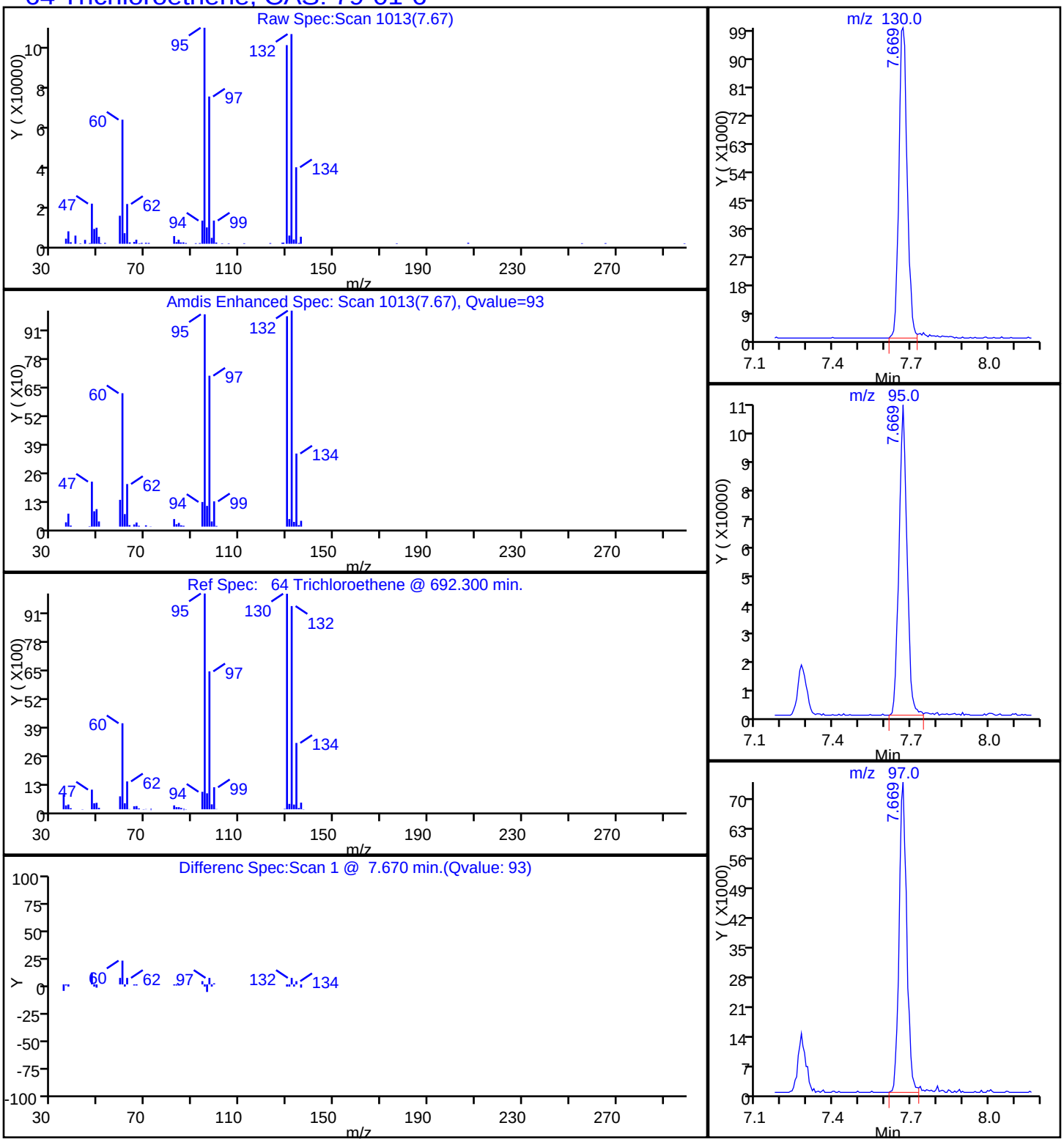
Operator ID: 001562 ALS Bottle#: 12 Worklist Smp#: 16

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: 19-Jan-2015 07:39:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D

Injection Date: 16-Jan-2015 17:22:30 Instrument ID: CHHP5

Lims ID: 180-40481-D-3 Lab Sample ID: 180-40481-3

Client ID: HD-MW-100S-0/1-0

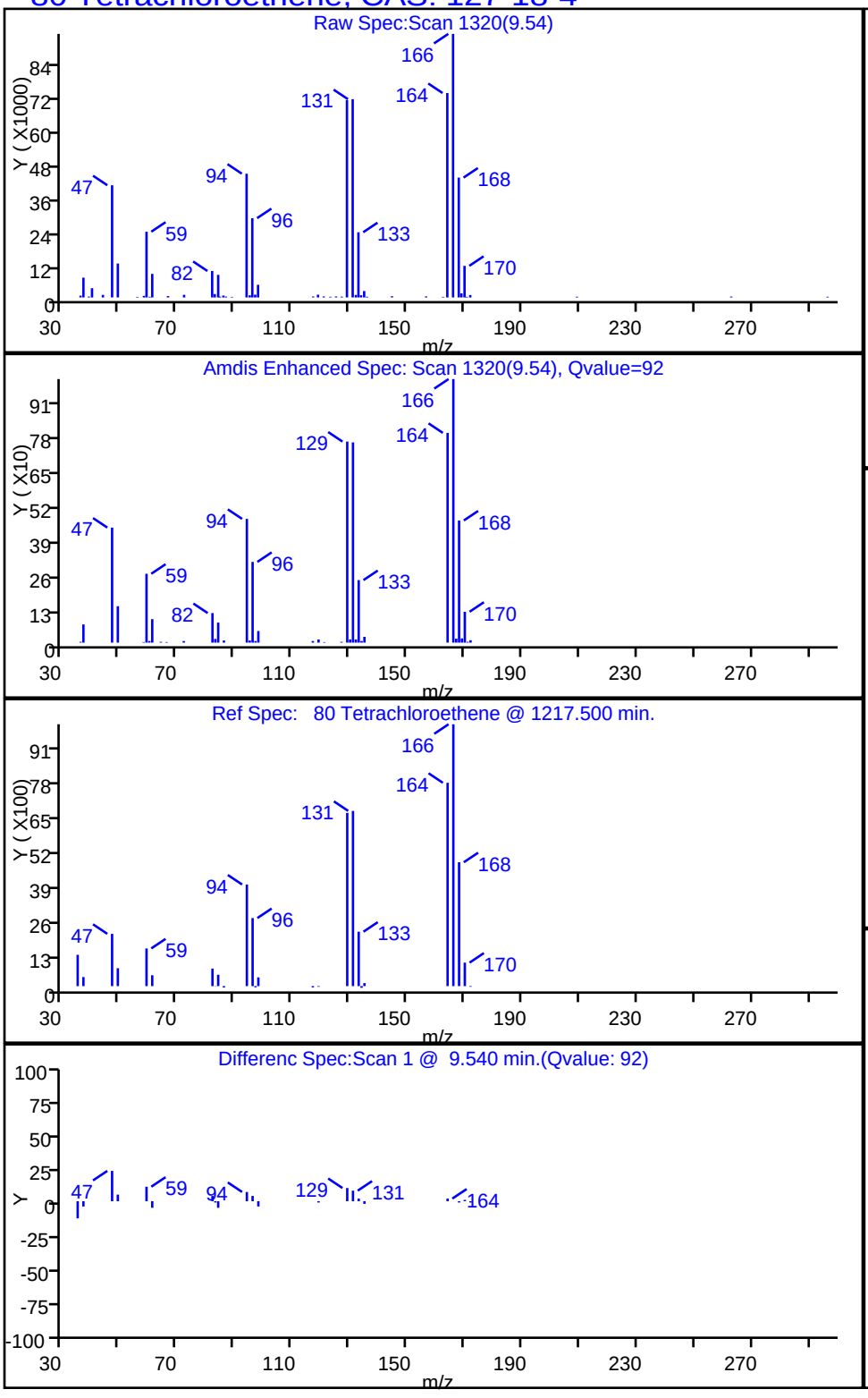
Operator ID: 001562 ALS Bottle#: 12 Worklist Smp#: 16

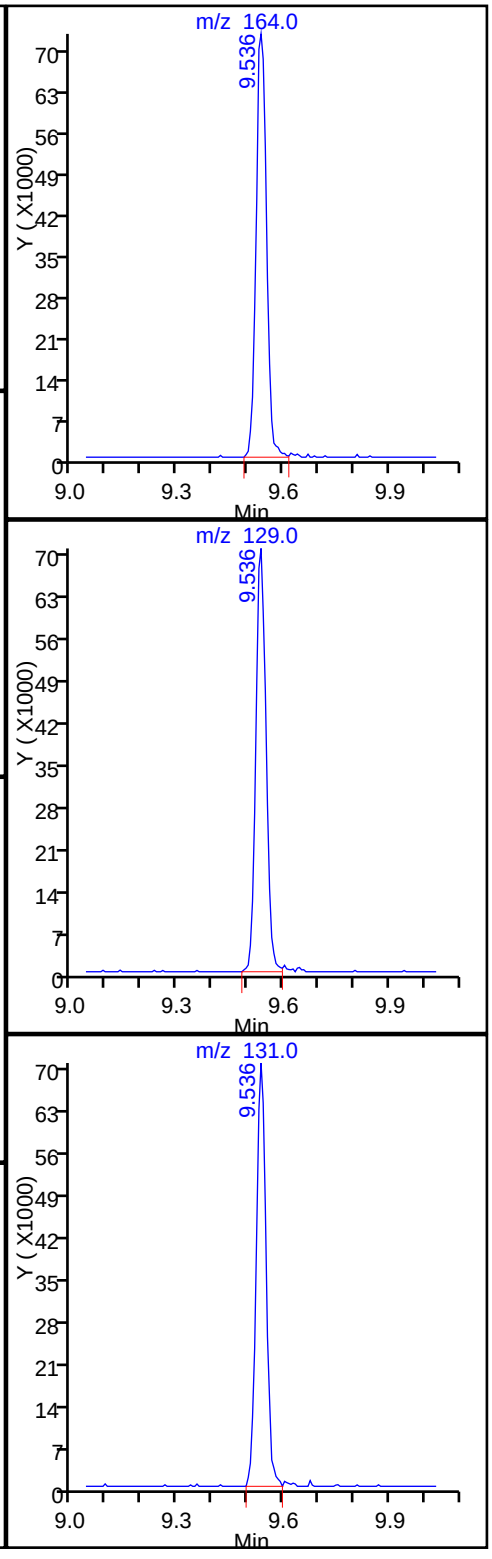
Purge Vol: 5.000 mL Dil. Factor: 5.0000

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

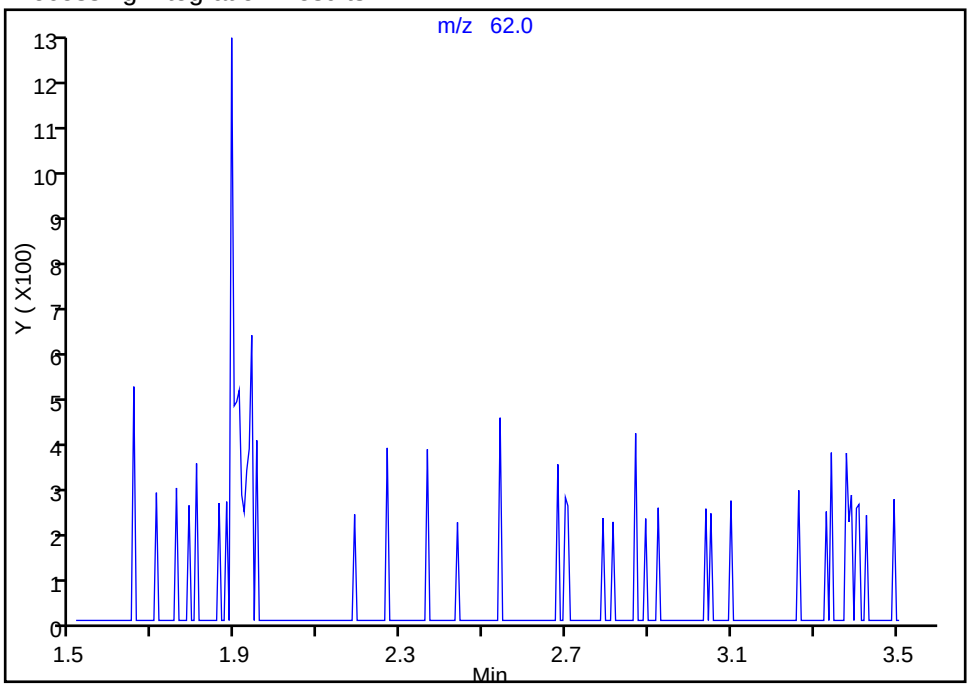
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116016.D				
Injection Date:	16-Jan-2015 17:22:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-3	Lab Sample ID:	180-40481-3		
Client ID:	HD-MW-100S-0/1-0				
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		

13 Vinyl chloride, CAS: 75-01-4

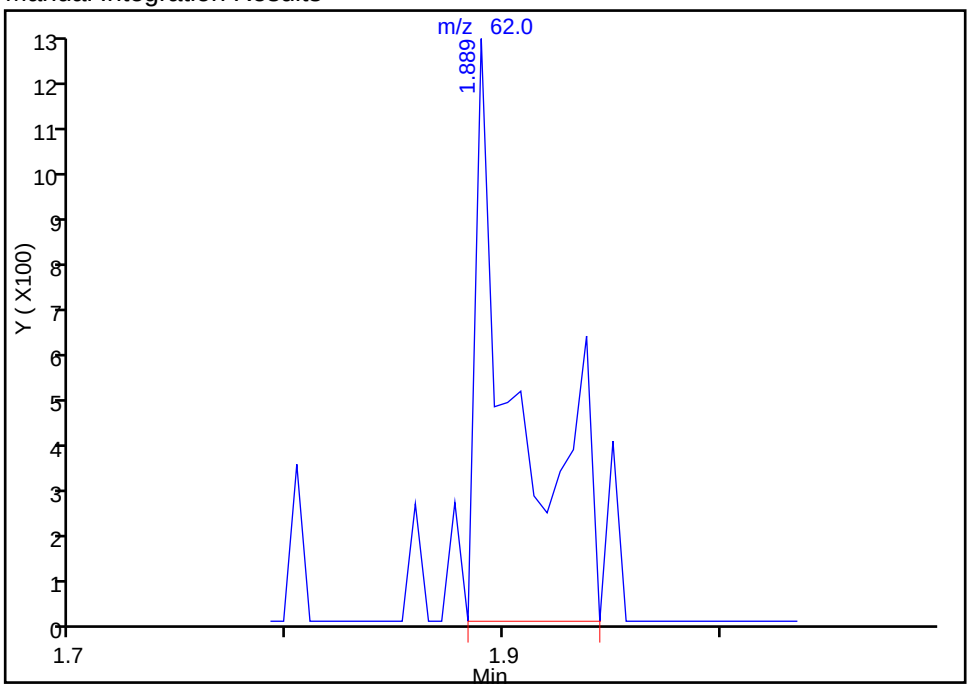
Not Detected
Expected RT: 1.91

Processing Integration Results



Manual Integration Results

RT: 1.89
Response: 1616
Amount: 0.451771



Reviewer: fergusond, 19-Jan-2015 07:39:11
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-99D-0/1-0 Lab Sample ID: 180-40481-4

Matrix: Water Lab File ID: 50116017.D

Analysis Method: 8260C Date Collected: 01/14/2015 12:55

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 17:46

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.: 130947 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	12		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	2.2	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	62		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	15		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	190		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	15		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-99D-0/1-0 Lab Sample ID: 180-40481-4

Matrix: Water Lab File ID: 50116017.D

Analysis Method: 8260C Date Collected: 01/14/2015 12:55

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 17:46

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.: 130947 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)	110		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	91		70-118
1868-53-7	Dibromofluoromethane (Surr)	112		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D
Lims ID: 180-40481-D-4 Lab Sample ID: 180-40481-4
Client ID: HD-MW-99D-0/1-0
Sample Type: Client
Inject. Date: 16-Jan-2015 17:46:30 ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-40481-D-4, 5x
Misc. Info.: 180-0005307-017
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:40:37 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:40:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.293	4.302	-0.009	88	134828	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.271	0.003	100	423846	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.361	0.003	99	96470	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.685	-0.003	99	130879	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.522	0.010	93	101340	56.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.900	-0.003	92	163450	55.2	
$ 7 Toluene-d8 (Surr)	98	8.922	8.925	-0.003	96	397633	49.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.529	0.003	84	138397	45.3	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.905				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96	3.393	3.371	0.022	89	27082	11.7	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.669				ND	
31 Methylene Chloride	84		4.150				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.181	5.172	0.009	93	11981	2.20	
45 cis-1,2-Dichloroethene	96	5.942	5.938	0.004	86	156993	62.1	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83	6.343	6.346	-0.003	1	1538	0.3741	
53 1,1,1-Trichloroethane	97	6.532	6.535	-0.003	58	39582	14.8	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.985				ND	
64 Trichloroethene	130	7.669	7.666	0.003	95	421808	188.0	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97	9.397	9.400	-0.003	1	463	0.2304	
80 Tetrachloroethene	164	9.531	9.534	-0.003	91	28824	15.3	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

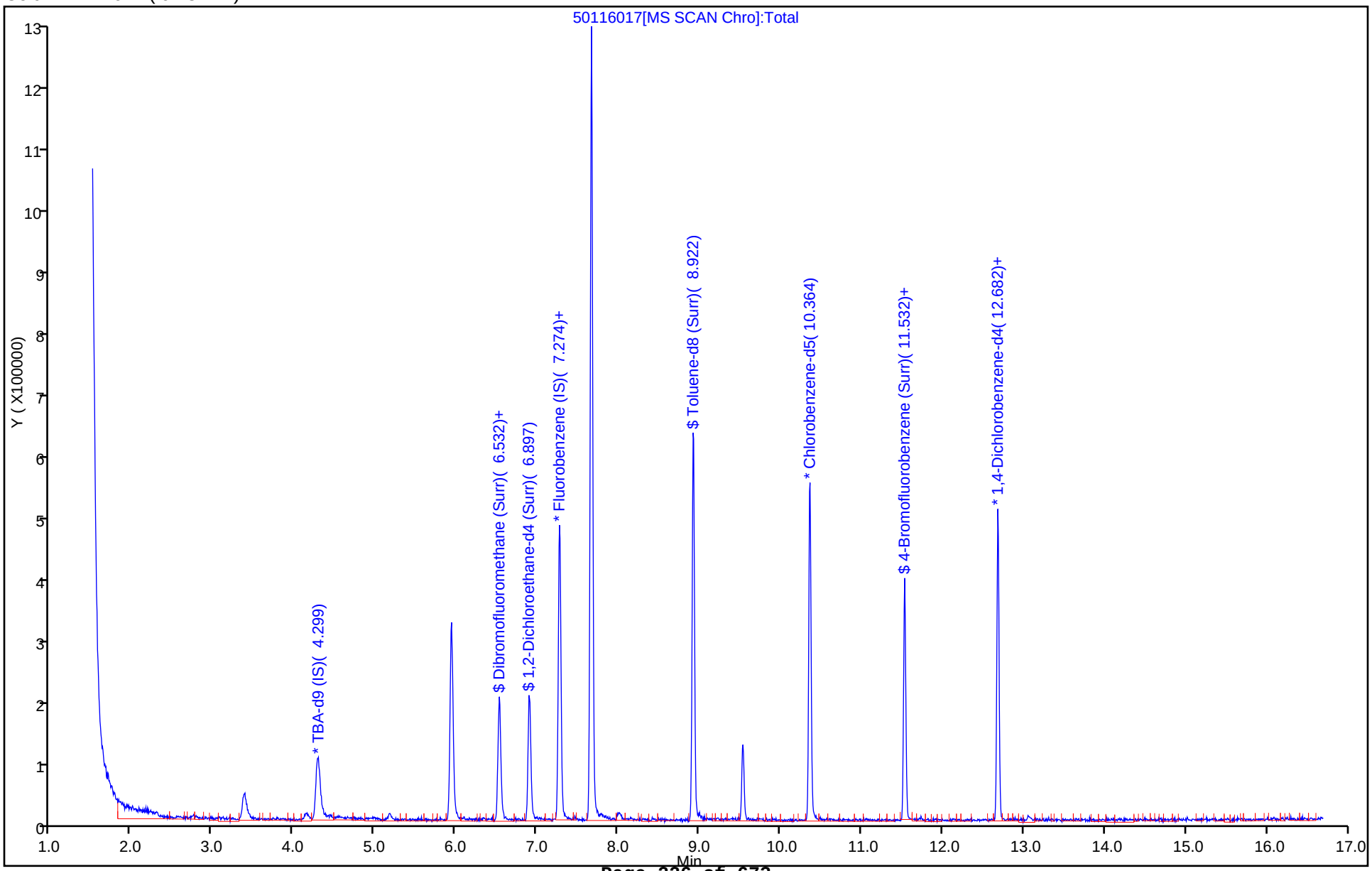
Report Date: 19-Jan-2015 07:40:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D

Injection Date:	16-Jan-2015 17:46:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-D-4	Lab Sample ID:	180-40481-4	Worklist Smp#:	17
Client ID:	HD-MW-99D-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)

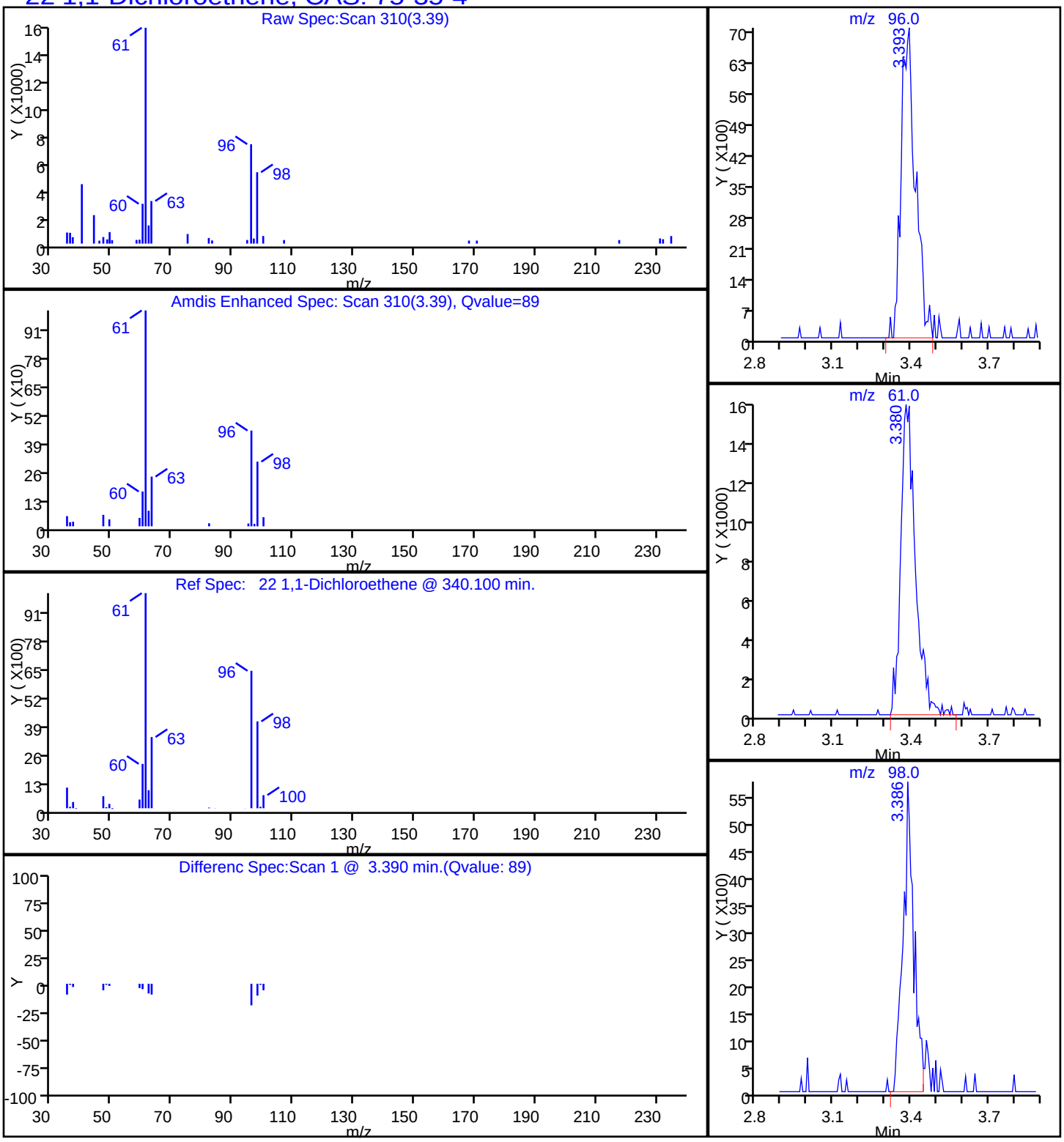


Report Date: 19-Jan-2015 07:40:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D				
Injection Date:	16-Jan-2015 17:46:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-4	Lab Sample ID:	180-40481-4		
Client ID:	HD-MW-99D-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		

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



Report Date: 19-Jan-2015 07:40:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D

Injection Date: 16-Jan-2015 17:46:30 Instrument ID: CHHP5

Lims ID: 180-40481-D-4 Lab Sample ID: 180-40481-4

Client ID: HD-MW-99D-0/1-0

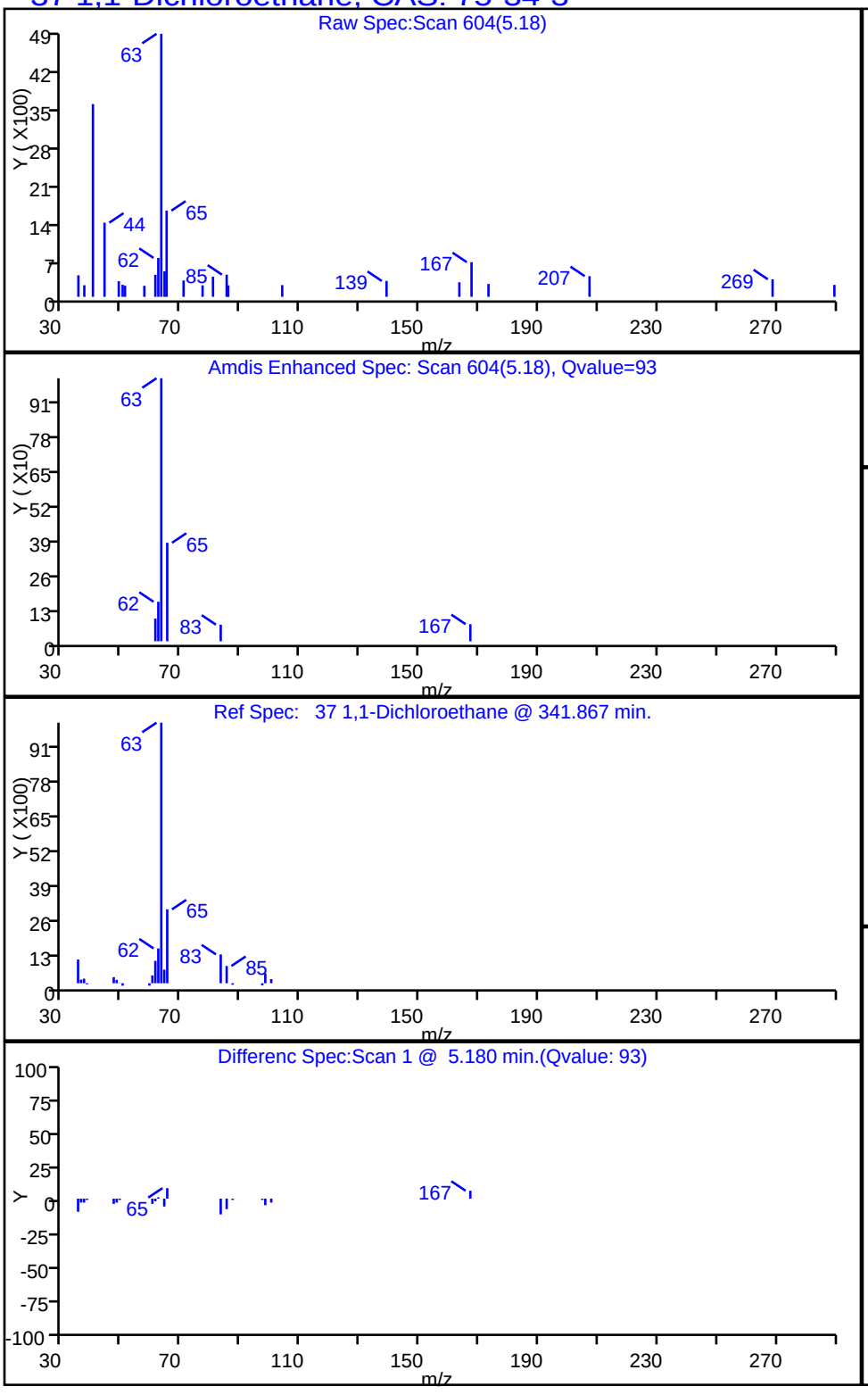
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 17

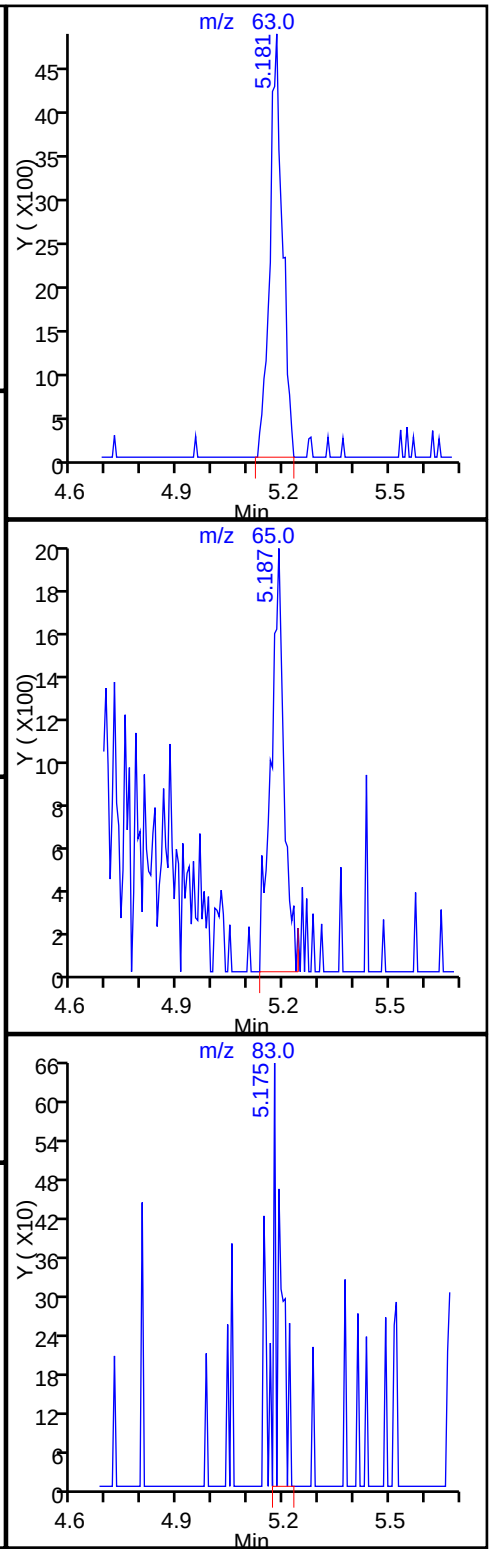
Purge Vol: 5.000 mL Dil. Factor: 5.0000

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





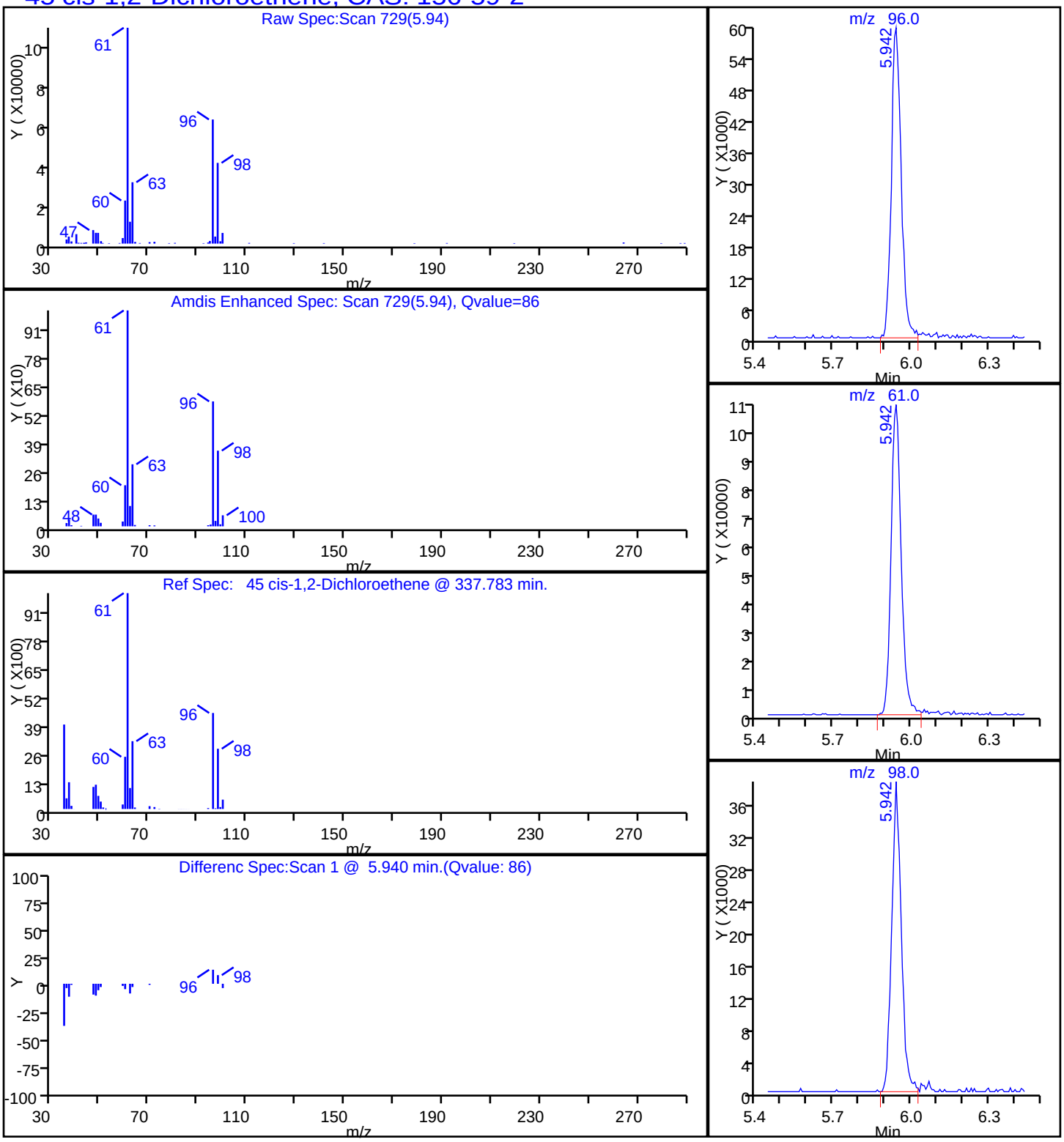
Report Date: 19-Jan-2015 07:40:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D

Injection Date:	16-Jan-2015 17:46:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-4	Lab Sample ID:	180-40481-4		
Client ID:	HD-MW-99D-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

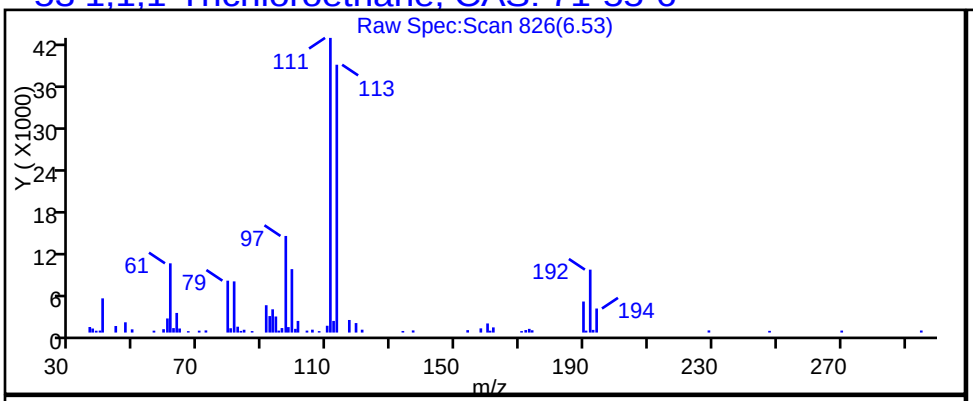


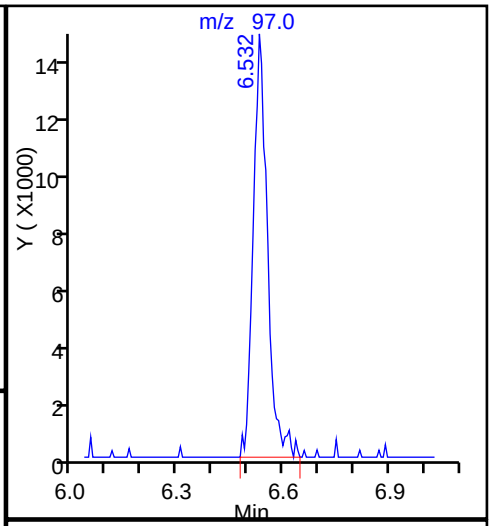
Report Date: 19-Jan-2015 07:40:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

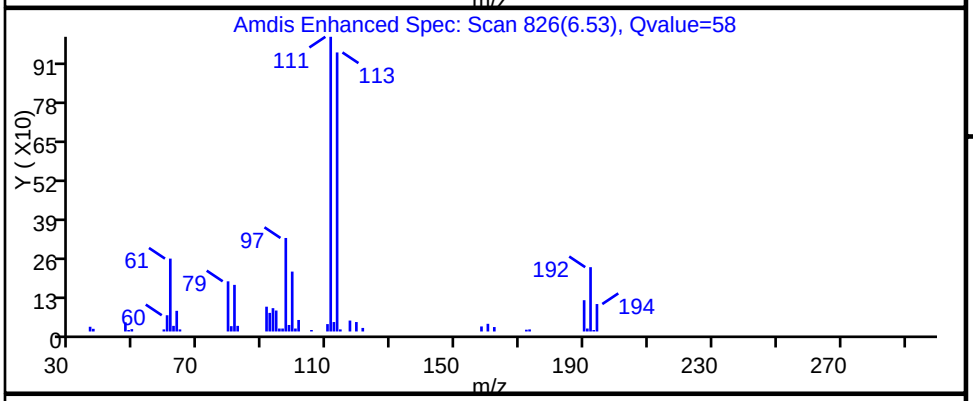
TestAmerica Pittsburgh

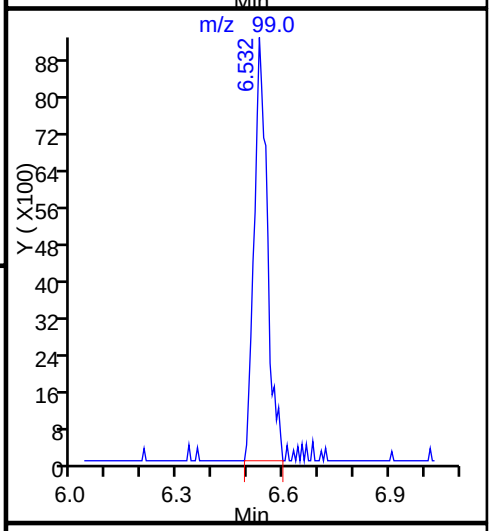
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D				
Injection Date:	16-Jan-2015 17:46:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-4	Lab Sample ID:	180-40481-4		
Client ID:	HD-MW-99D-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

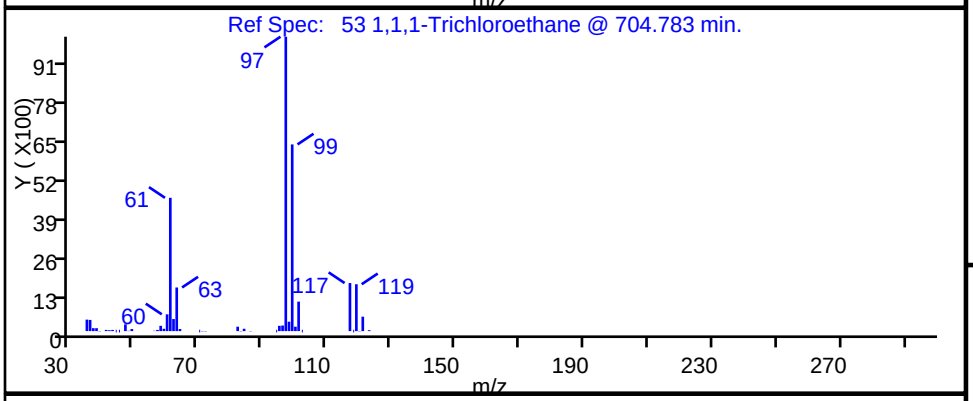
53 1,1,1-Trichloroethane, CAS: 71-55-6

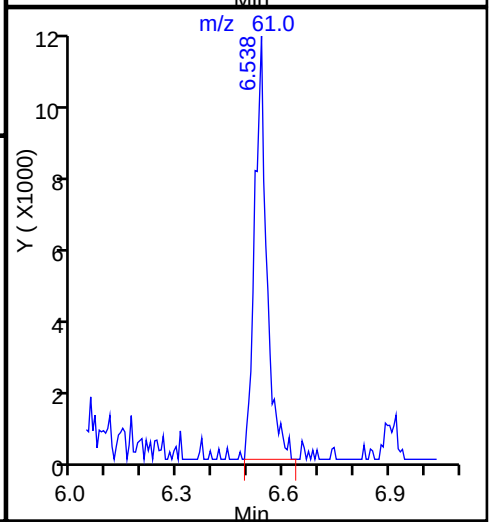


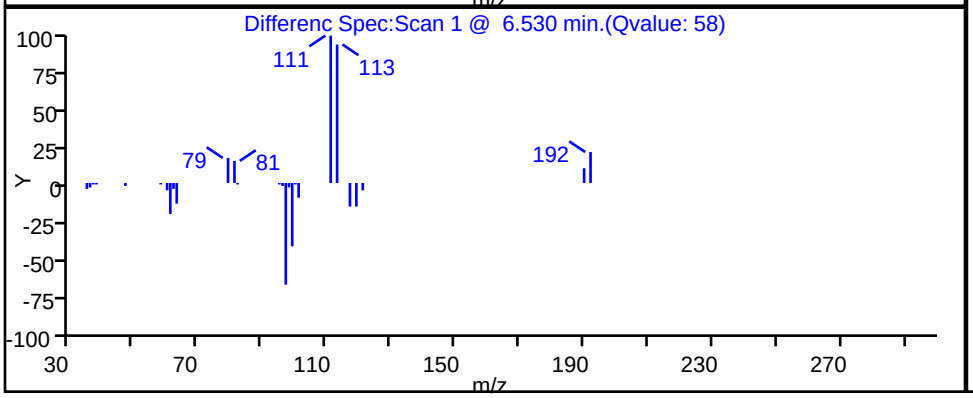












Report Date: 19-Jan-2015 07:40:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D

Injection Date: 16-Jan-2015 17:46:30 Instrument ID: CHHP5

Lims ID: 180-40481-D-4 Lab Sample ID: 180-40481-4

Client ID: HD-MW-99D-0/1-0

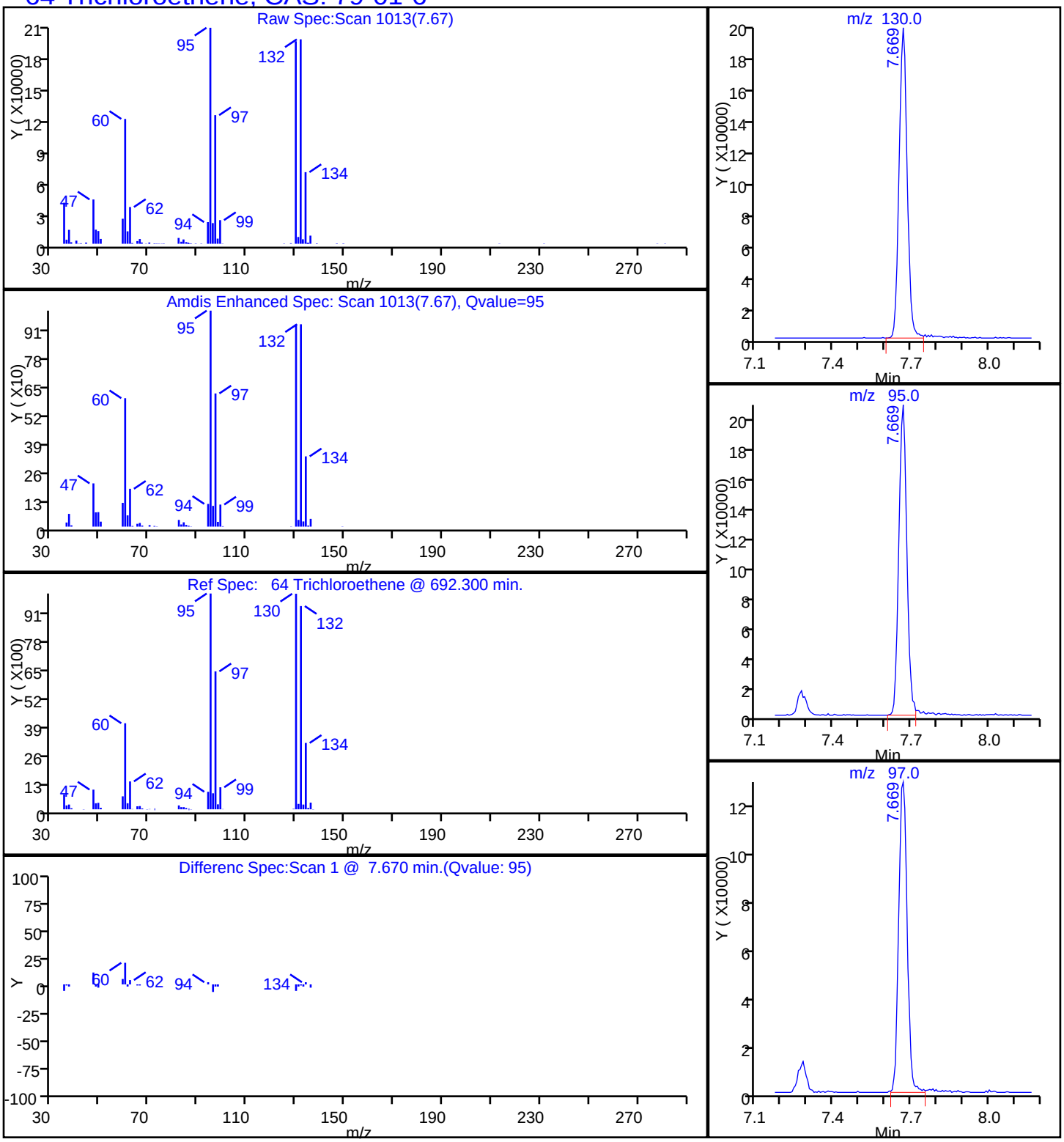
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 17

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

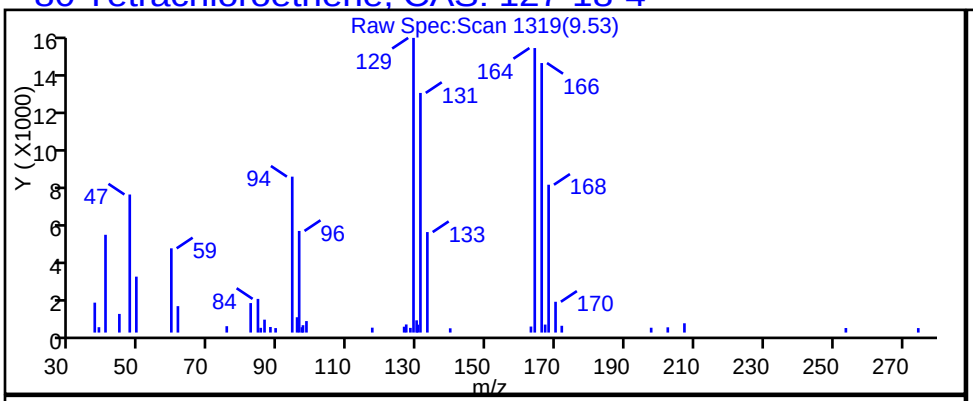


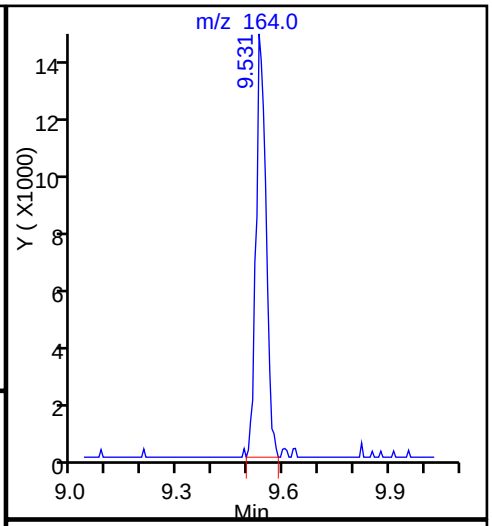
Report Date: 19-Jan-2015 07:40:38 Chrom Revision: 2.2 06-Nov-2014 14:50:32

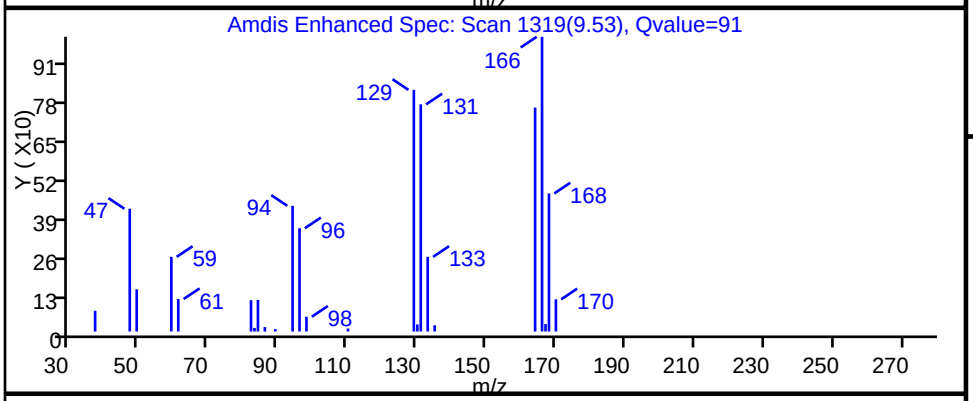
TestAmerica Pittsburgh

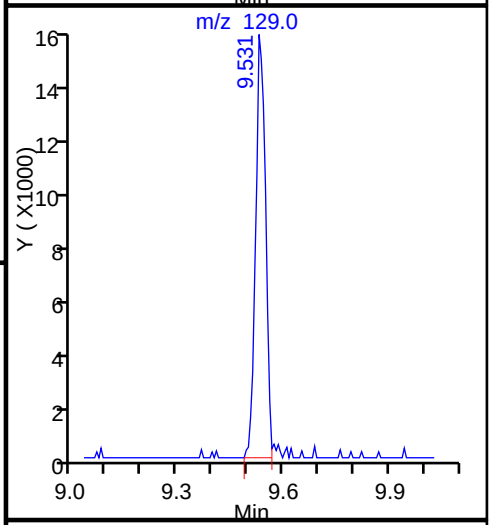
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116017.D		
Injection Date:	16-Jan-2015 17:46:30	Instrument ID:	CHHP5
Lims ID:	180-40481-D-4	Lab Sample ID:	180-40481-4
Client ID:	HD-MW-99D-0/1-0		
Operator ID:	001562	ALS Bottle#:	13 Worklist Smp#: 17
Purge Vol:	5.000 mL	Dil. Factor:	5.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

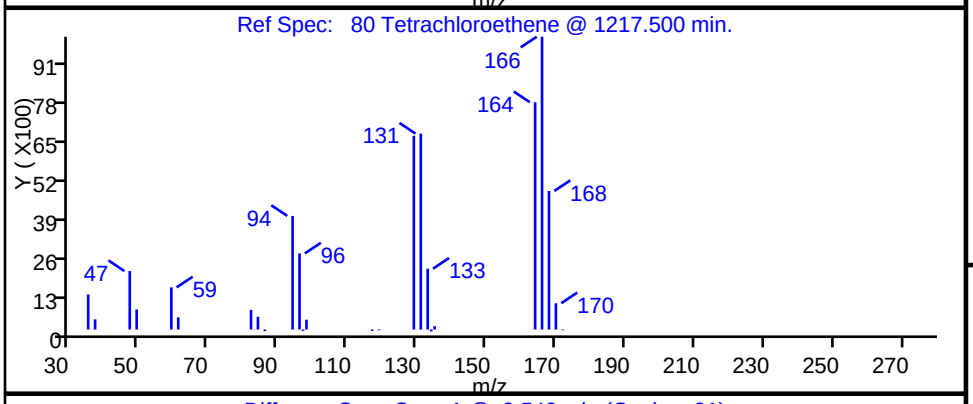
80 Tetrachloroethene, CAS: 127-18-4

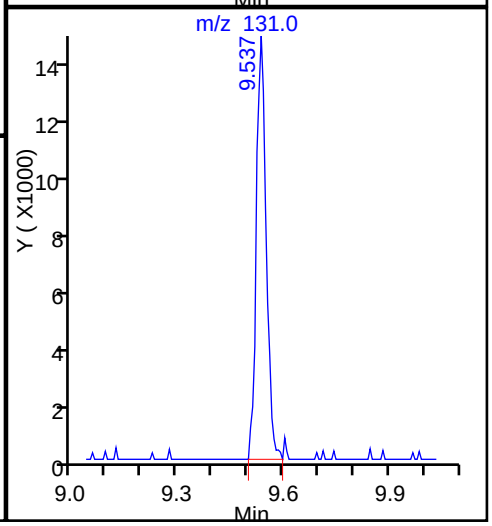


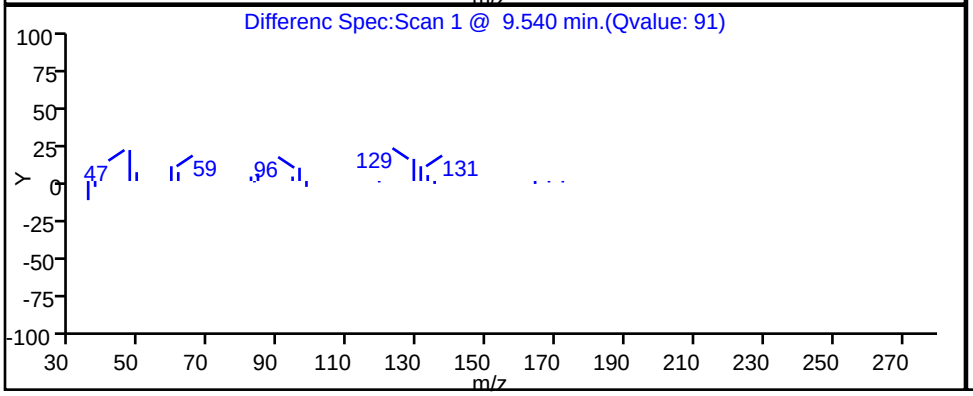












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-147A-0/1-0 | Lab Sample ID: 180-40481-5

Matrix: Water | Lab File ID: 50116019.D

Analysis Method: 8260C | Date Collected: 01/14/2015 12:10

Sample wt/vol: 5(mL) | Date Analyzed: 01/16/2015 18:34

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.: 130947 | 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	0.88	J	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.34	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	19		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	0.20	J	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.5		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	13		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	8.9		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-147A-0/1-0 Lab Sample ID: 180-40481-5

Matrix: Water Lab File ID: 50116019.D

Analysis Method: 8260C Date Collected: 01/14/2015 12:10

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 18:34

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.: 130947 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	95		70-118
1868-53-7	Dibromofluoromethane (Surr)	110		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D
Lims ID: 180-40481-C-5 Lab Sample ID: 180-40481-5
Client ID: HD-MW-147A-0/1-0
Sample Type: Client
Inject. Date: 16-Jan-2015 18:34:30 ALS Bottle#: 15 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-40481-C-5
Misc. Info.: 180-0005307-019
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:42:47 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:42:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.293	4.302	-0.009	87	147352	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.271	0.003	100	437165	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.361	0.003	98	91587	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.685	-0.003	98	128148	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.522	0.010	93	102255	55.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.900	-0.003	94	156908	51.4	
$ 7 Toluene-d8 (Surr)	98	8.922	8.925	-0.003	95	394728	51.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.529	0.003	83	138488	47.7	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62		1.905				ND	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96	3.374	3.371	0.003	88	10536	4.42	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.669				ND	
31 Methylene Chloride	84		4.150				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73	4.585	4.594	-0.009	1	2855	0.4570	
37 1,1-Dichloroethane	63	5.175	5.172	0.003	16	9665	1.72	
45 cis-1,2-Dichloroethene	96	5.942	5.938	0.004	87	247979	95.2	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83	6.343	6.346	-0.003	22	4199	0.99	M
53 1,1,1-Trichloroethane	97	6.538	6.535	0.003	48	21168	7.69	
56 Carbon tetrachloride	117	6.720	6.717	0.003	1	522	0.2185	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.985				ND	
64 Trichloroethene	130	7.669	7.666	0.003	93	153901	66.5	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.537	9.534	0.003	88	79725	44.5	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				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_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

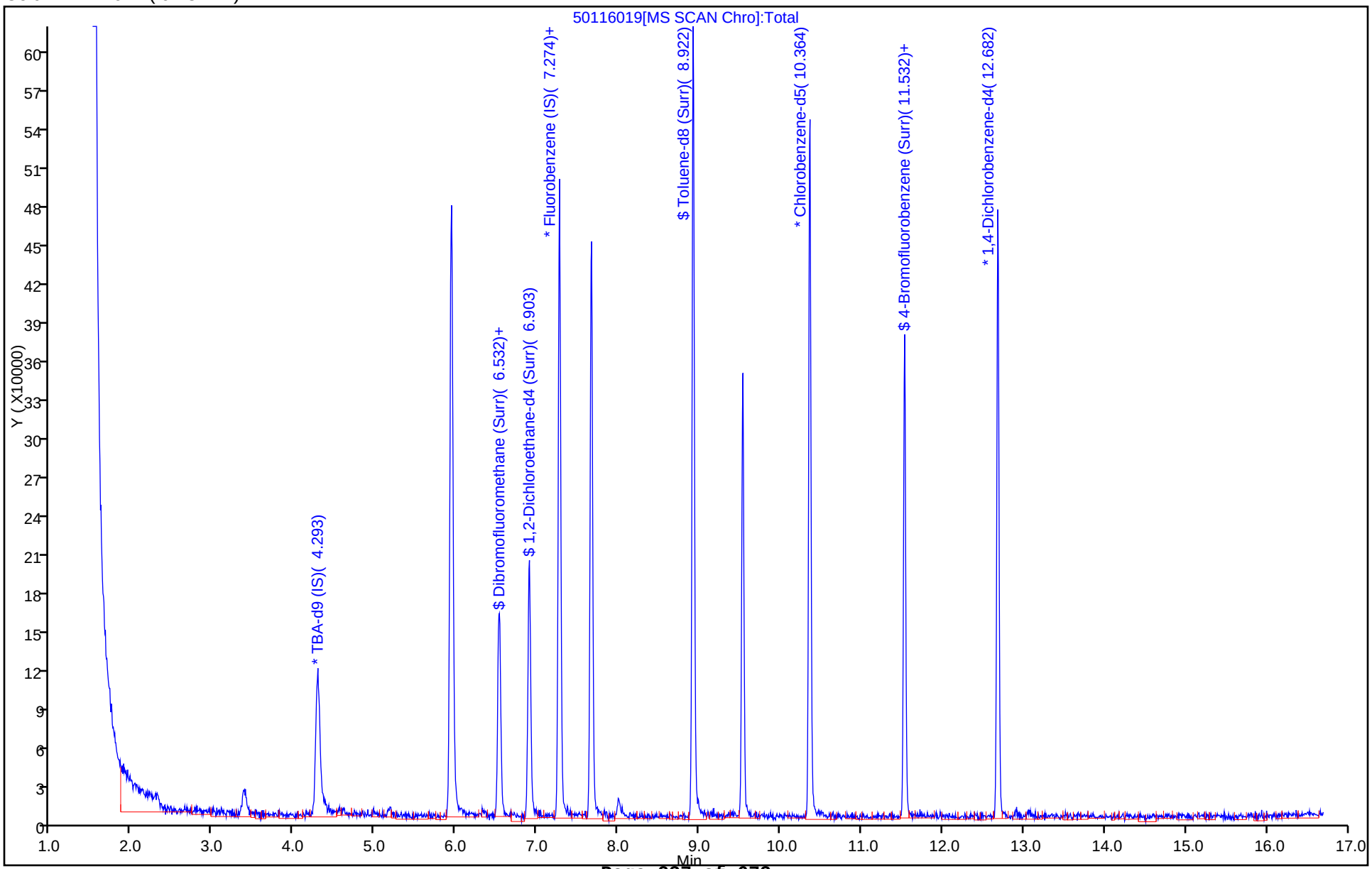
Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

Injection Date:	16-Jan-2015 18:34:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-C-5	Lab Sample ID:	180-40481-5	Worklist Smp#:	19
Client ID:	HD-MW-147A-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

Injection Date: 16-Jan-2015 18:34:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-5 Lab Sample ID: 180-40481-5

Client ID: HD-MW-147A-0/1-0

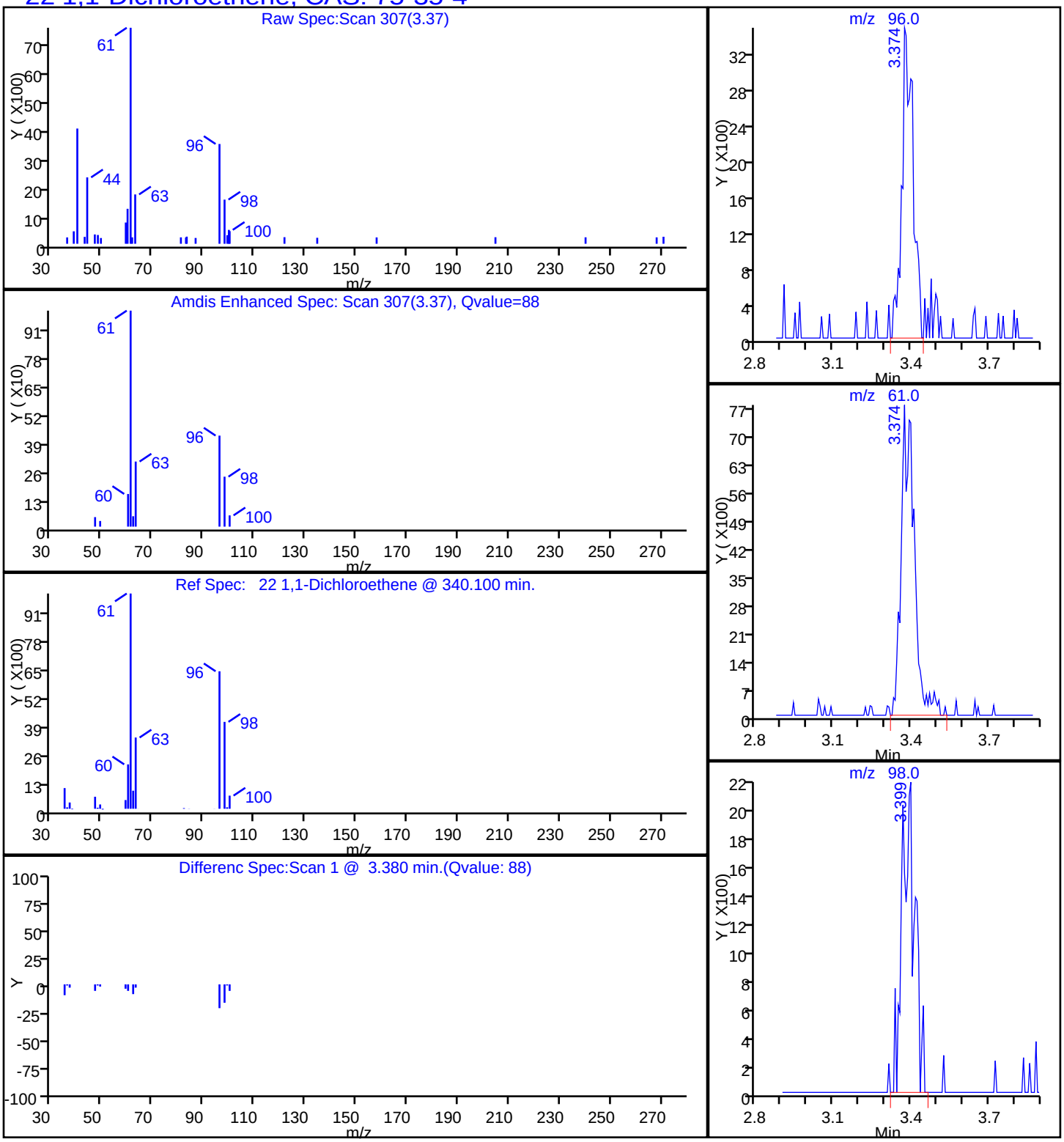
Operator ID: 001562 ALS Bottle#: 15 Worklist Smp#: 19

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

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



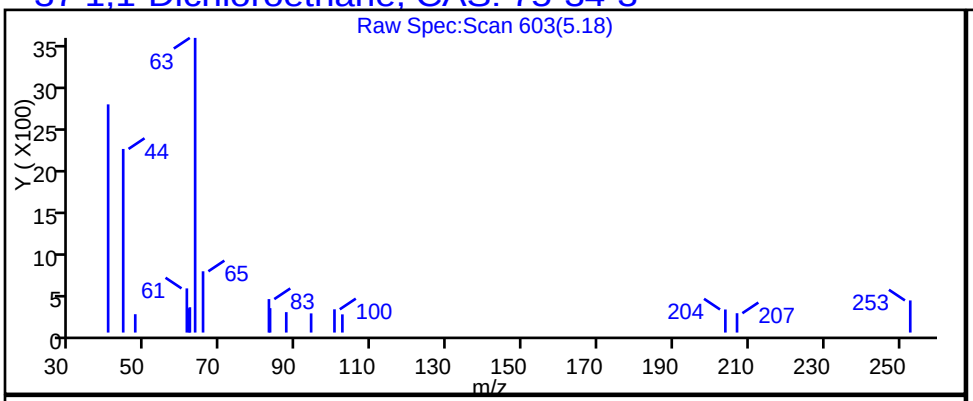
Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

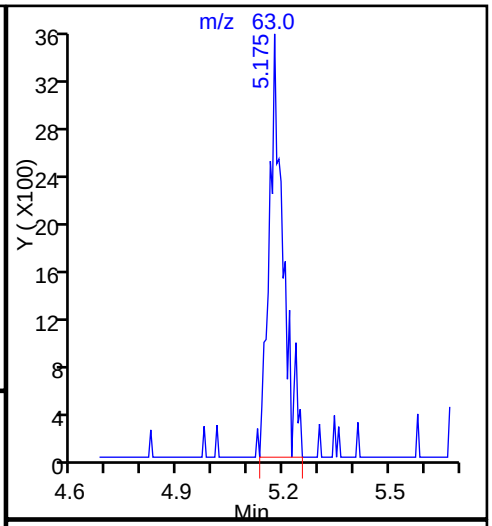
TestAmerica Pittsburgh

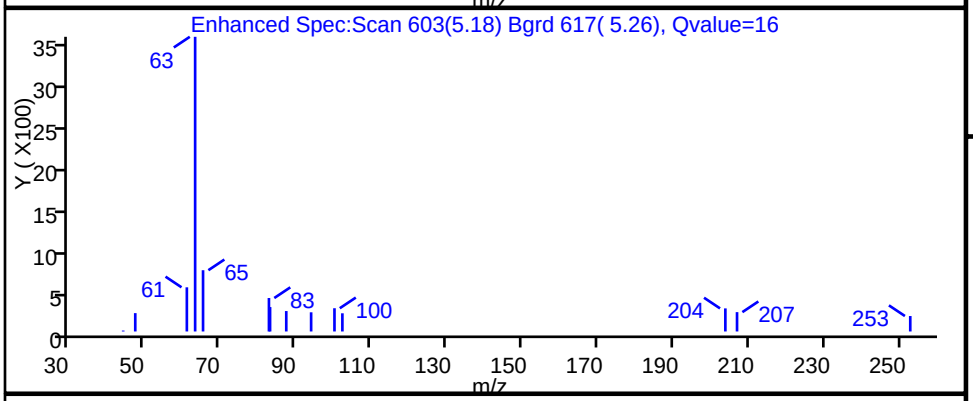
Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

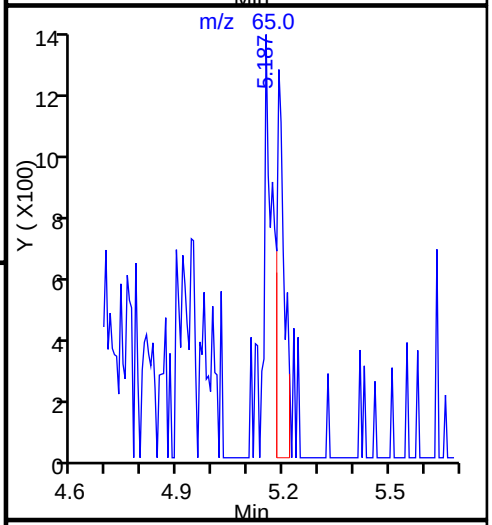
Injection Date:	16-Jan-2015 18:34:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-5	Lab Sample ID:	180-40481-5
Client ID:	HD-MW-147A-0/1-0		
Operator ID:	001562	ALS Bottle#:	15 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

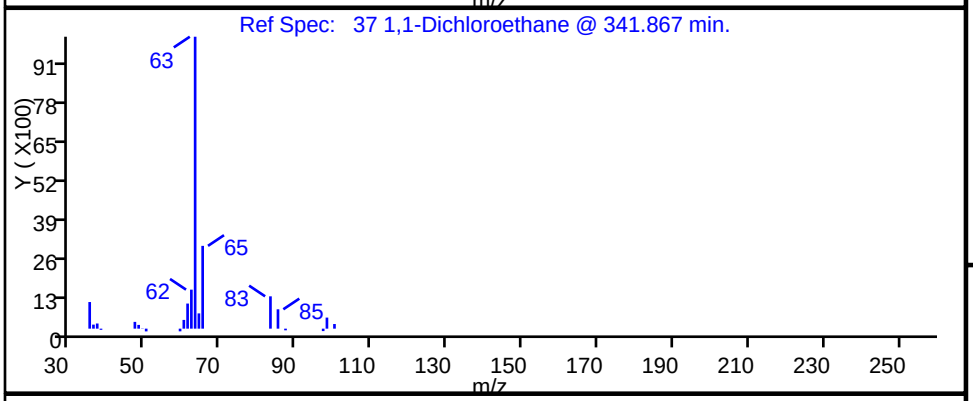
37 1,1-Dichloroethane, CAS: 75-34-3

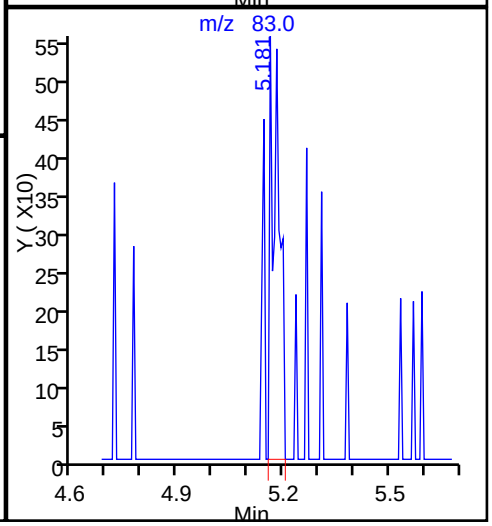


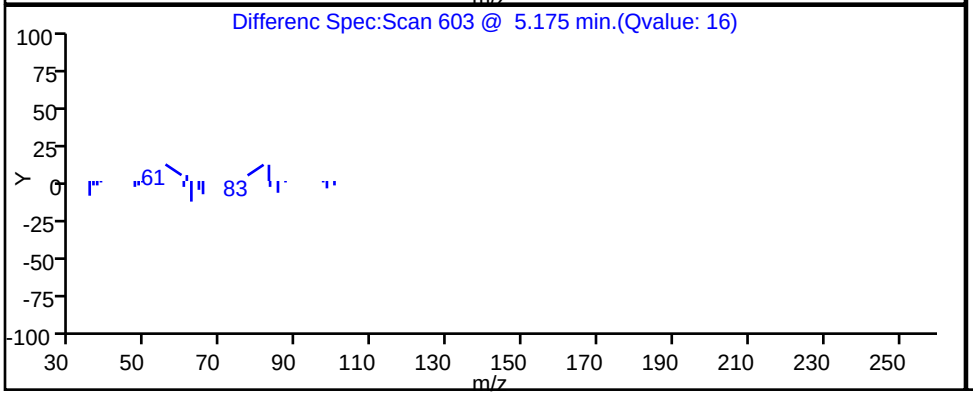












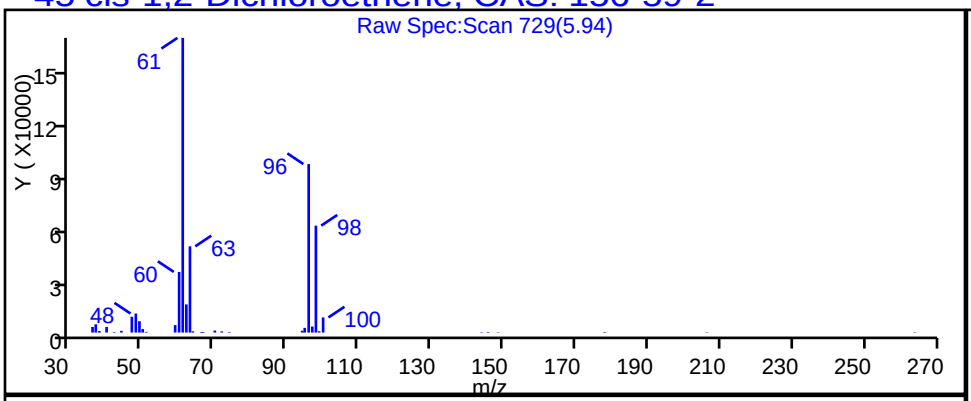
Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

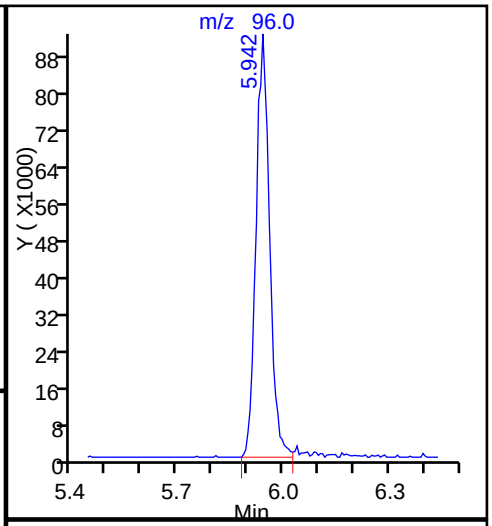
TestAmerica Pittsburgh

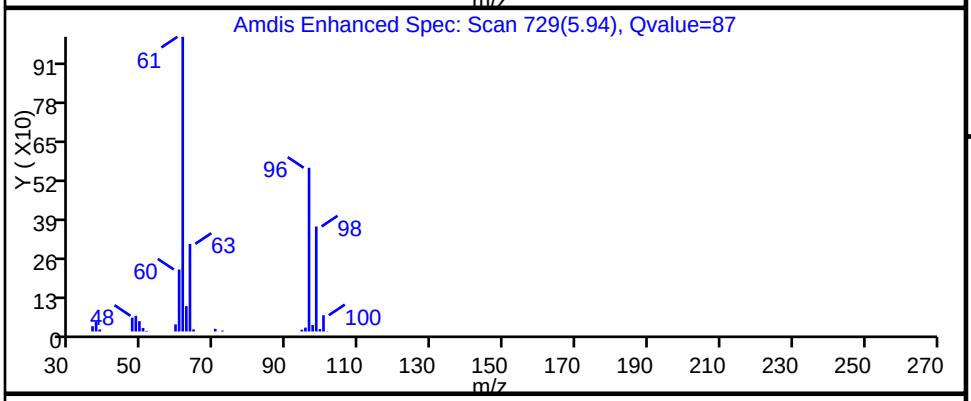
Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

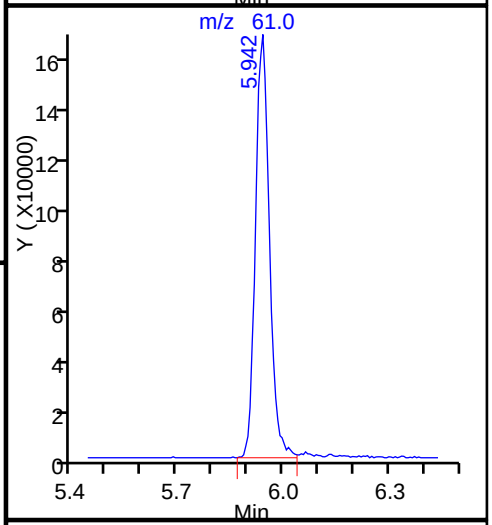
Injection Date:	16-Jan-2015 18:34:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-5	Lab Sample ID:	180-40481-5
Client ID:	HD-MW-147A-0/1-0		
Operator ID:	001562	ALS Bottle#:	15 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

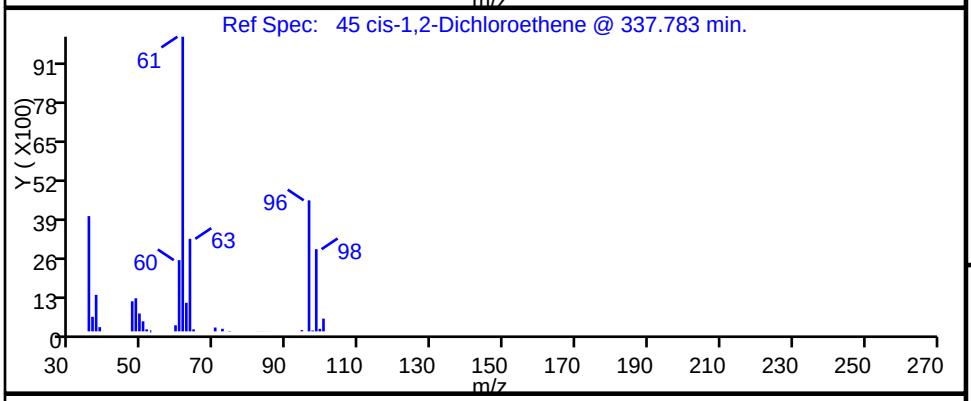
45 cis-1,2-Dichloroethene, CAS: 156-59-2

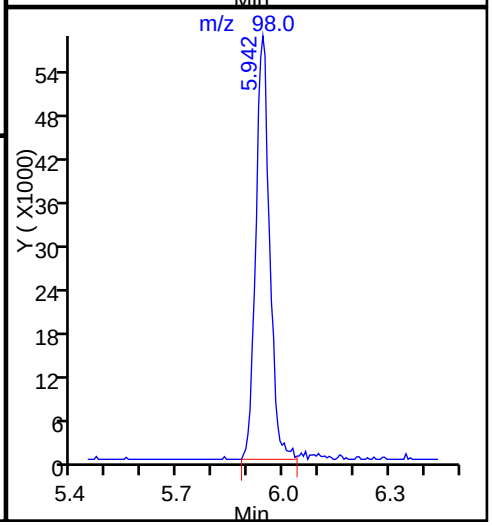


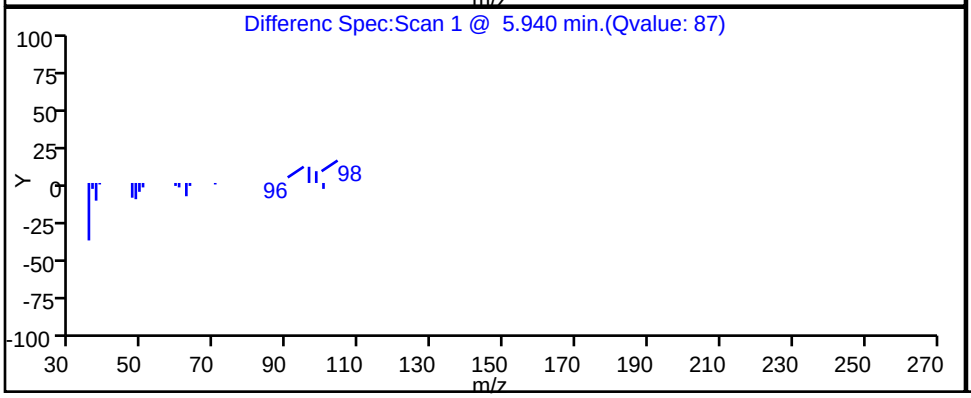












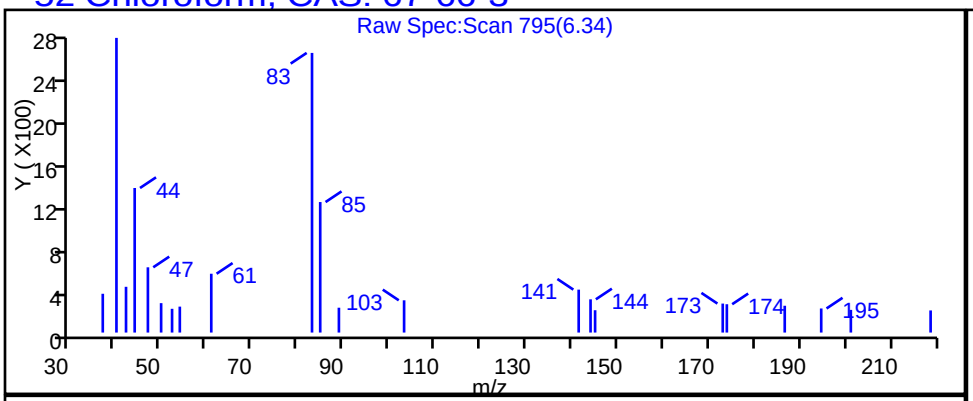
Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

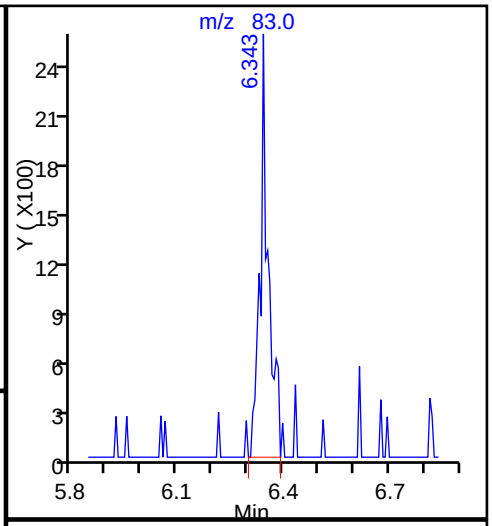
TestAmerica Pittsburgh

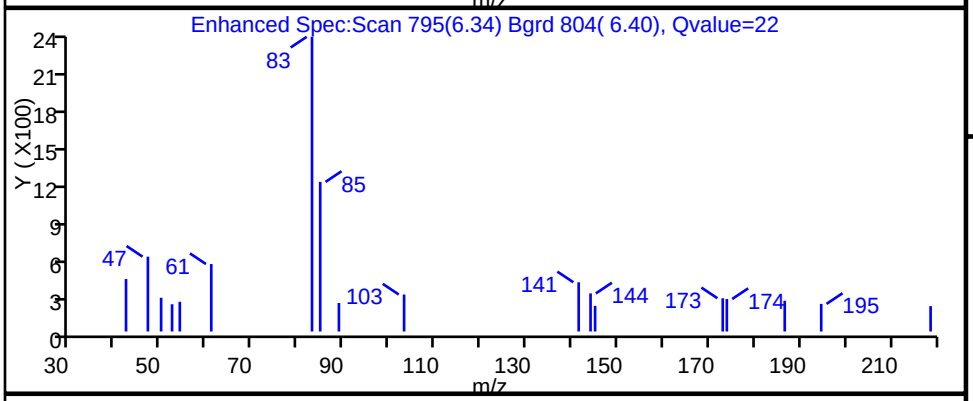
Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

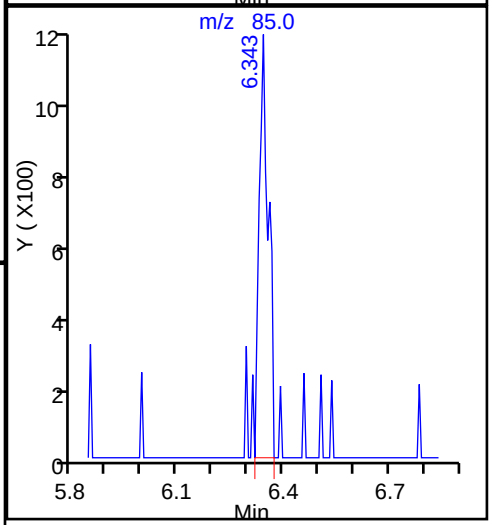
Injection Date:	16-Jan-2015 18:34:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-5	Lab Sample ID:	180-40481-5
Client ID:	HD-MW-147A-0/1-0		
Operator ID:	001562	ALS Bottle#:	15 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

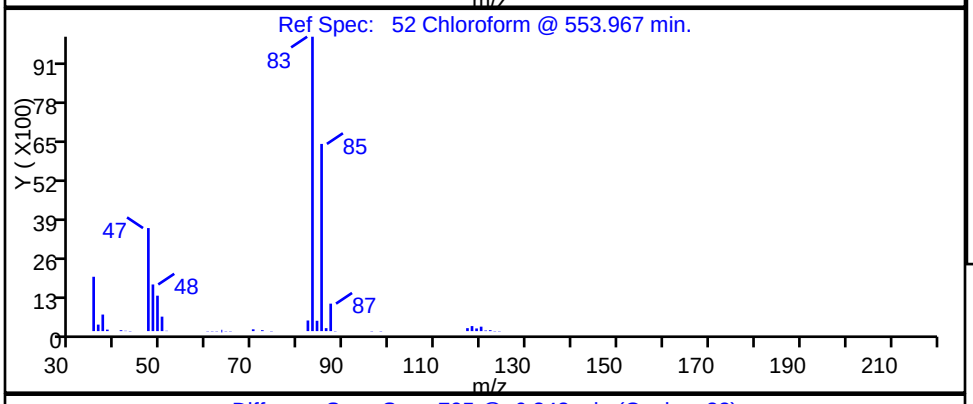
52 Chloroform, CAS: 67-66-3

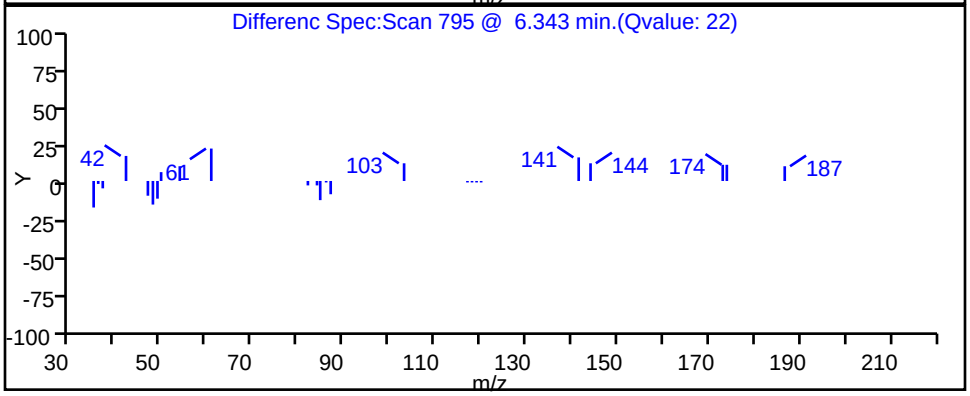










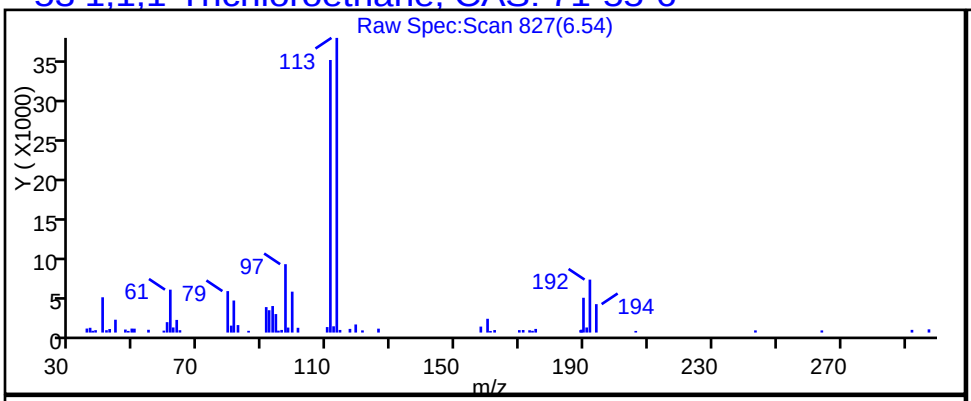


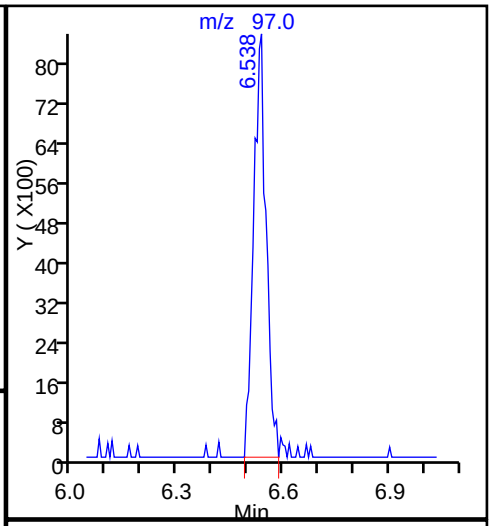
Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

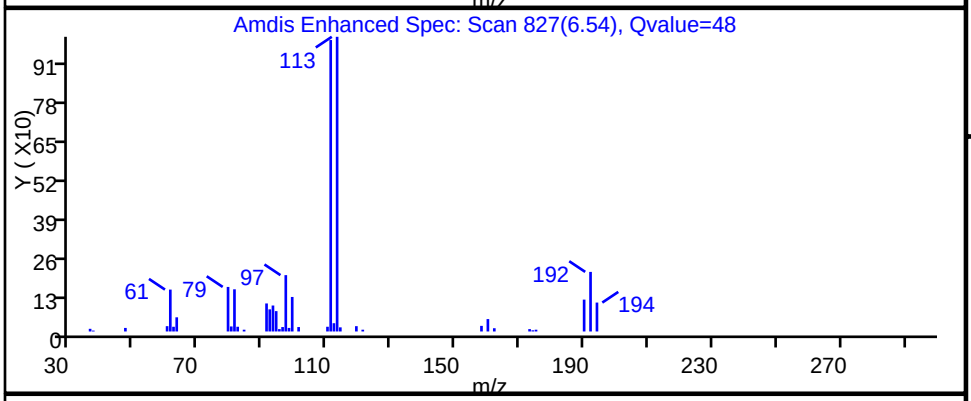
TestAmerica Pittsburgh

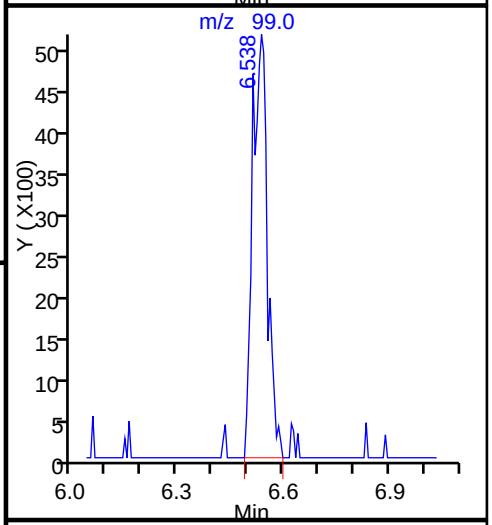
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D				
Injection Date:	16-Jan-2015 18:34:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-5	Lab Sample ID:	180-40481-5		
Client ID:	HD-MW-147A-0/1-0				
Operator ID:	001562	ALS Bottle#:	15	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

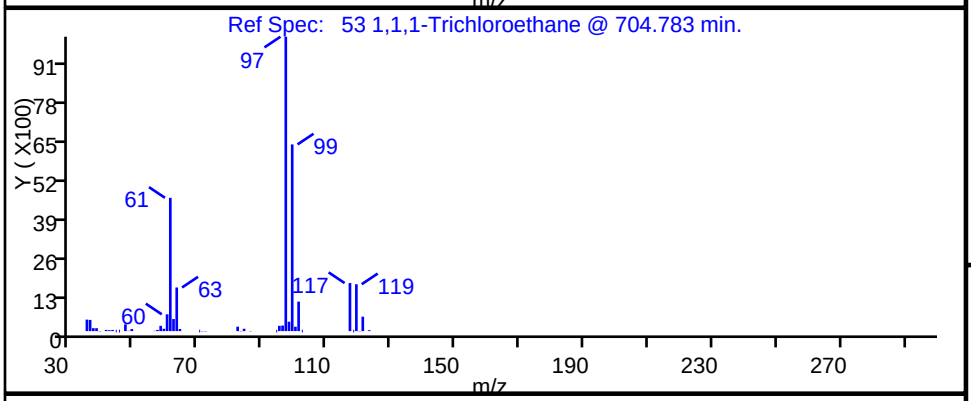
53 1,1,1-Trichloroethane, CAS: 71-55-6

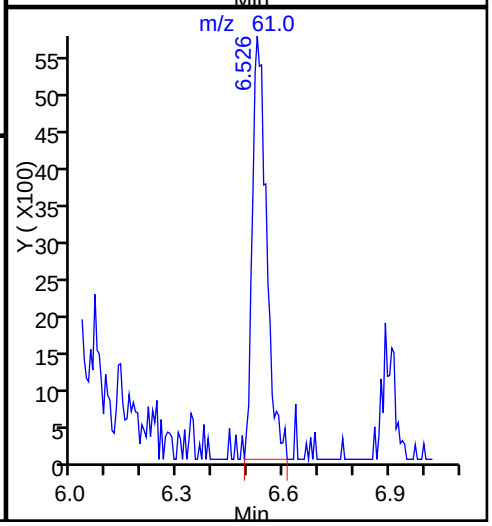


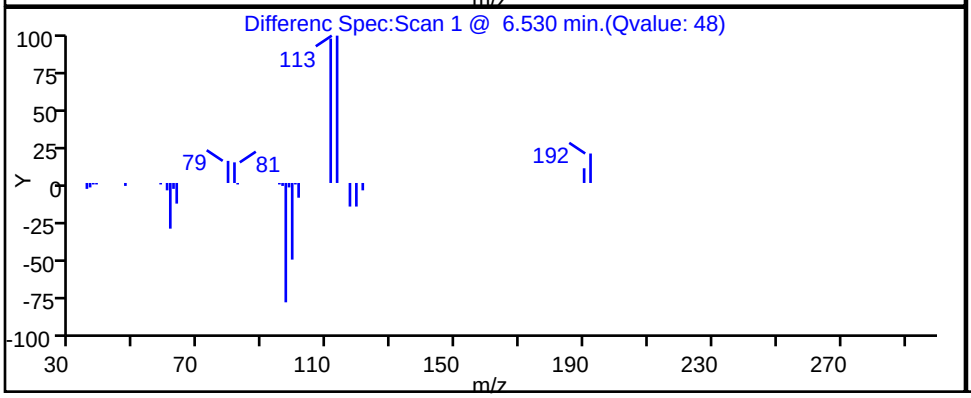












Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

Injection Date: 16-Jan-2015 18:34:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-5 Lab Sample ID: 180-40481-5

Client ID: HD-MW-147A-0/1-0

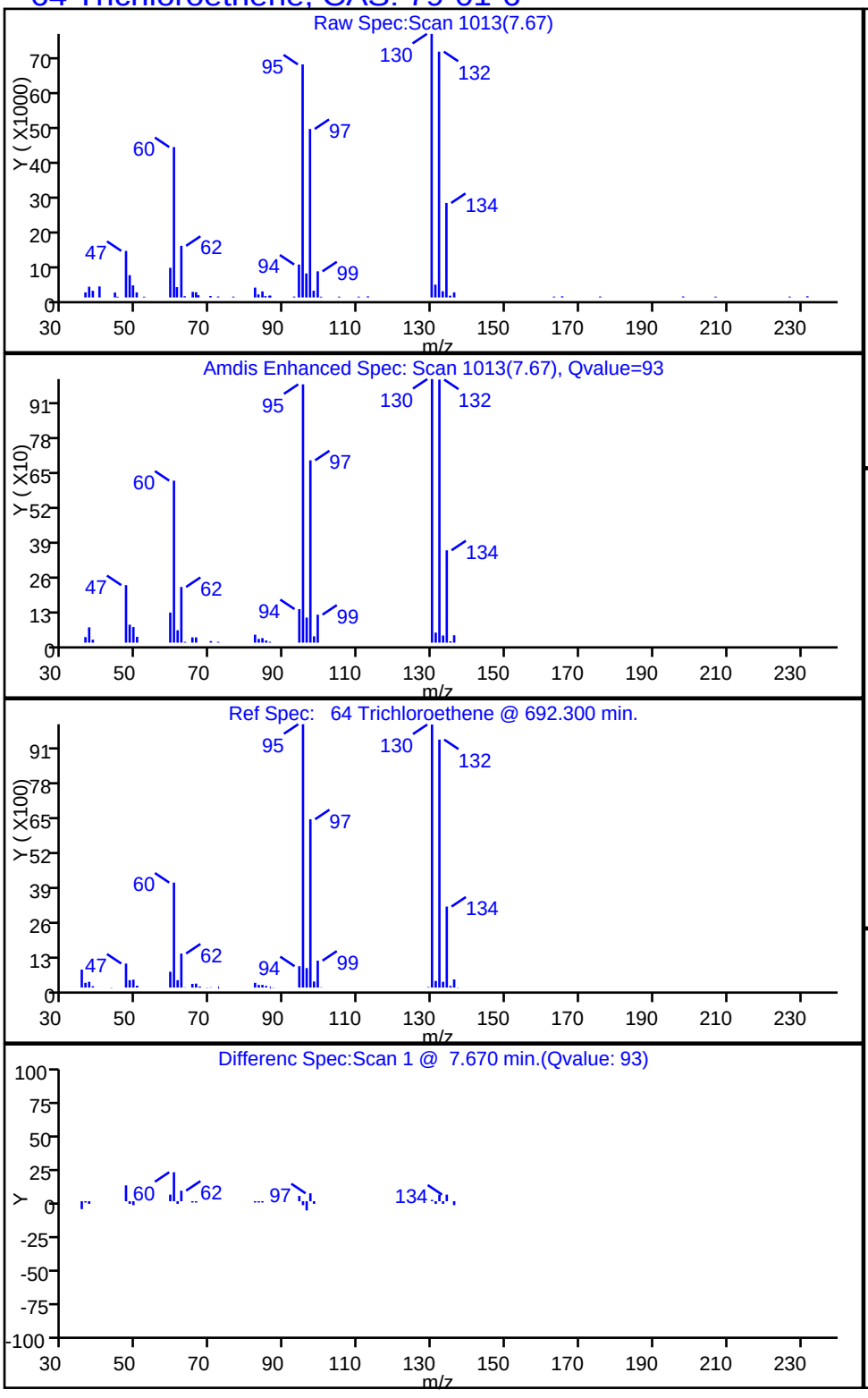
Operator ID: 001562 ALS Bottle#: 15 Worklist Smp#: 19

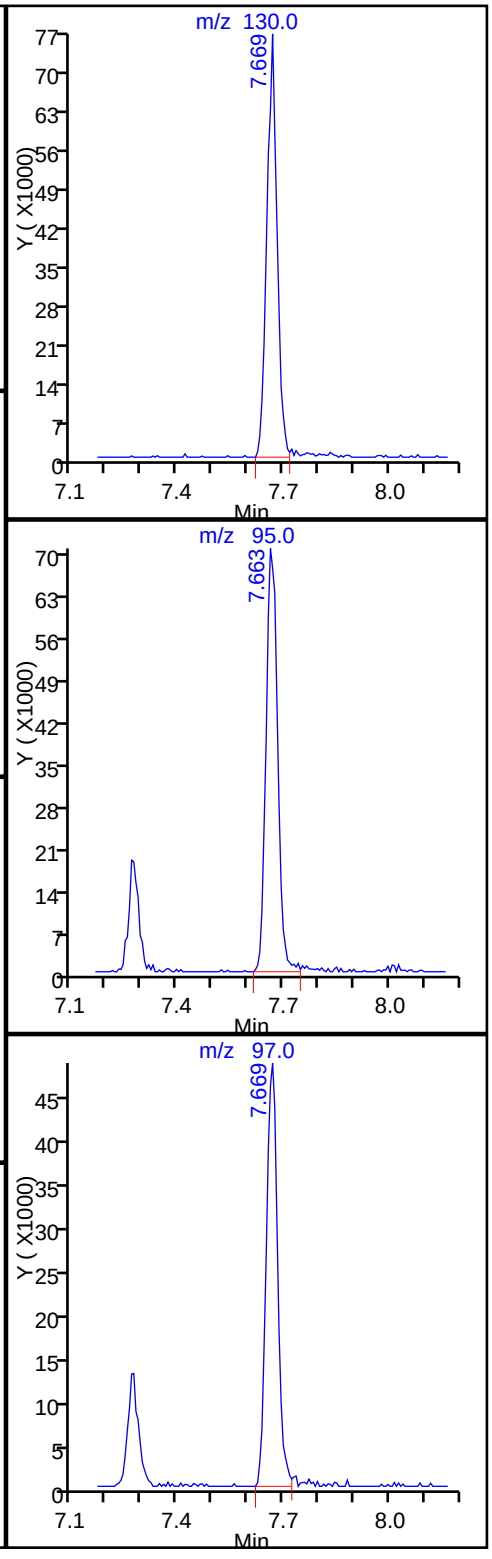
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

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

64 Trichloroethene, CAS: 79-01-6





Report Date: 19-Jan-2015 07:42:47 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D

Injection Date: 16-Jan-2015 18:34:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-5 Lab Sample ID: 180-40481-5

Client ID: HD-MW-147A-0/1-0

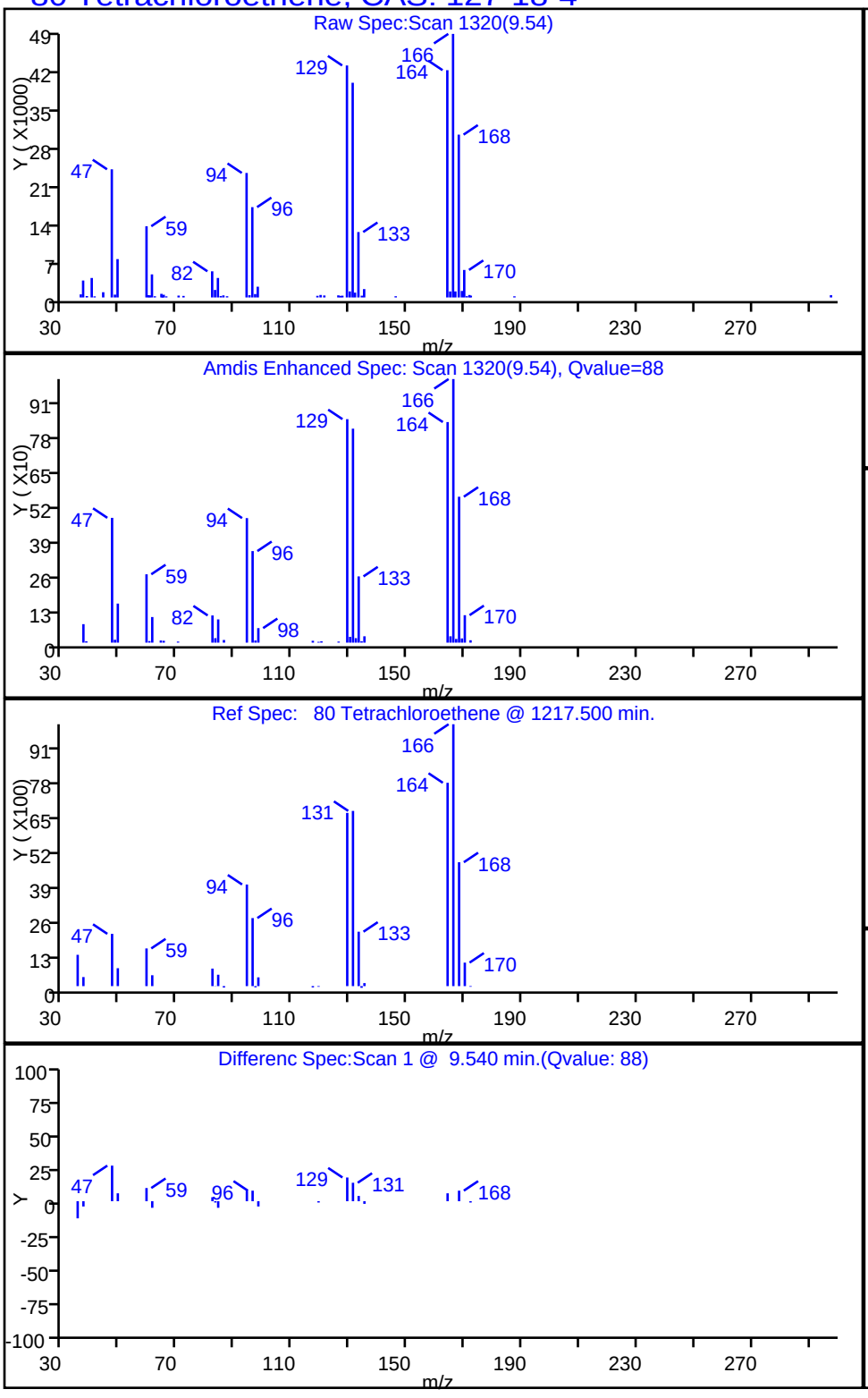
Operator ID: 001562 ALS Bottle#: 15 Worklist Smp#: 19

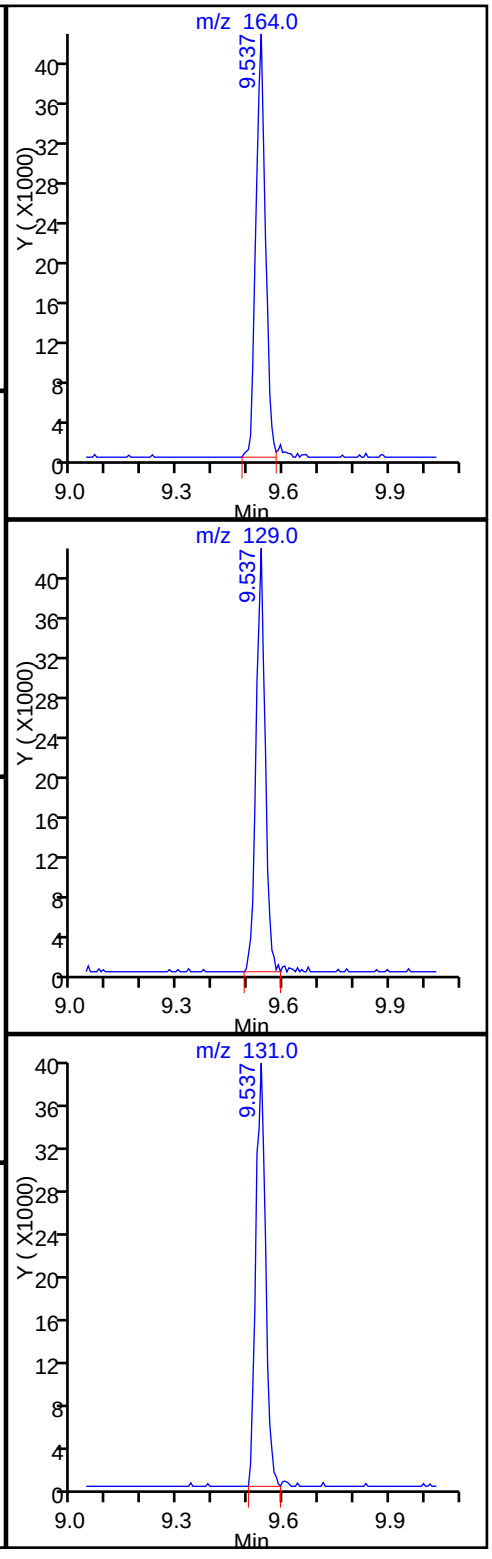
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

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

80 Tetrachloroethene, CAS: 127-18-4





Manual Integration/User Assign Peak Report

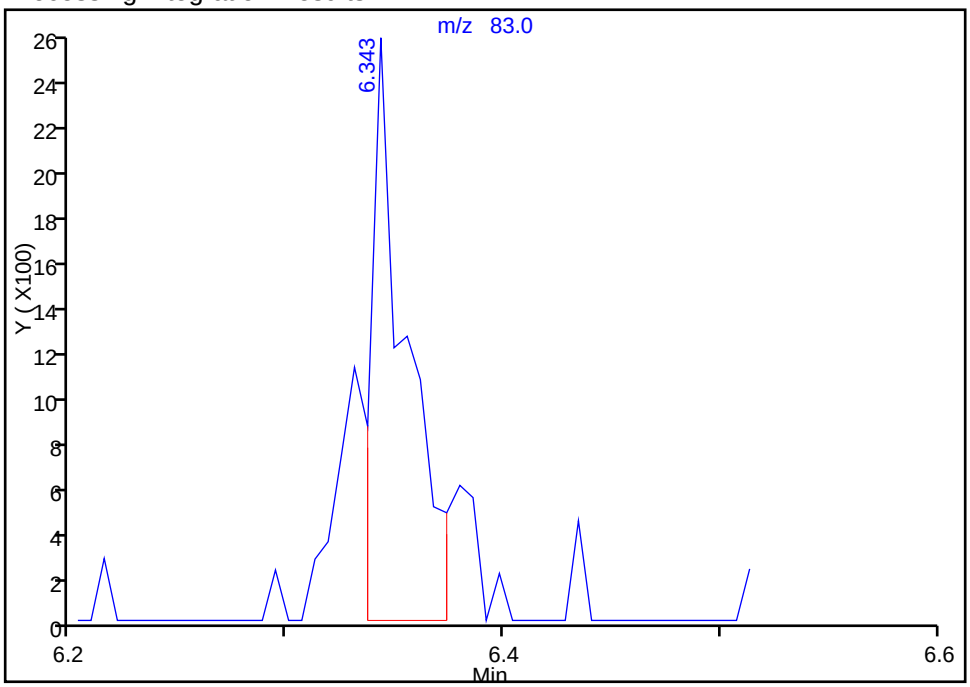
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116019.D				
Injection Date:	16-Jan-2015 18:34:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-5	Lab Sample ID:	180-40481-5		
Client ID:	HD-MW-147A-0/1-0				
Operator ID:	001562	ALS Bottle#:	15	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		

52 Chloroform, CAS: 67-66-3

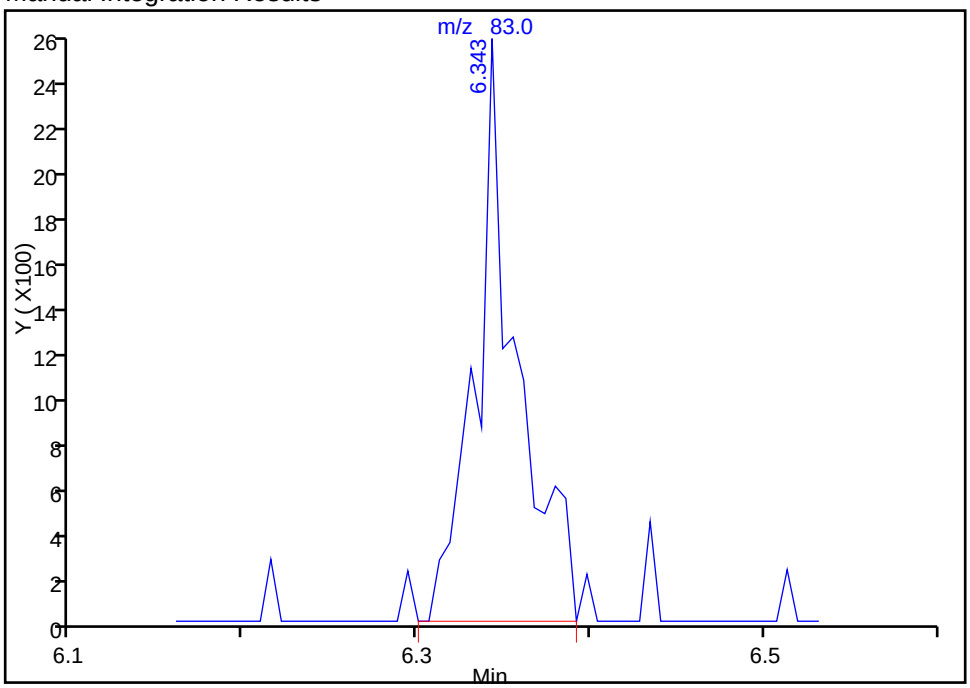
Processing Integration Results

RT: 6.34
Response: 2888
Amount: 0.681086



Manual Integration Results

RT: 6.34
Response: 4199
Amount: 0.990263



Reviewer: fergusond, 19-Jan-2015 07:42:47
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75S-0/1-0 | Lab Sample ID: 180-40481-6

Matrix: Water | Lab File ID: 50116020.D

Analysis Method: 8260C | Date Collected: 01/14/2015 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 01/16/2015 18:58

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.: 130947 | 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	23	J	50	15
67-64-1	Acetone	250	U	250	130
75-15-0	Carbon disulfide	50	U	50	11
75-09-2	Methylene Chloride	50	U	50	6.3
156-60-5	trans-1,2-Dichloroethene	50	U	50	8.5
1634-04-4	Methyl tert-butyl ether	50	U	50	9.2
75-34-3	1,1-Dichloroethane	9.9	J	50	5.8
156-59-2	cis-1,2-Dichloroethene	190		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	100		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	1300		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*	*5900*	*E*	*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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75S-0/1-0 Lab Sample ID: 180-40481-6

Matrix: Water Lab File ID: 50116020.D

Analysis Method: 8260C Date Collected: 01/14/2015 11:30

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 18:58

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.: 130947 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)	114		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	111		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D
Lims ID: 180-40481-C-6 Lab Sample ID: 180-40481-6
Client ID: HD-MW-75S-0/1-0
Sample Type: Client
Inject. Date: 16-Jan-2015 18:58:30 ALS Bottle#: 16 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 50.0000
Sample Info: 180-40481-C-6, 50x
Misc. Info.: 180-0005307-020
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:46:19 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:46:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.286	4.302	-0.016	88	167687	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.271	0.001	100	438939	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.361	0.002	99	99423	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.685	0.002	99	133633	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.522	0.008	93	103837	55.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.900	0.007	92	175013	57.1	
$ 7 Toluene-d8 (Surr)	98	8.927	8.925	0.002	95	409080	49.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.529	0.002	83	146846	46.6	
12 Chloromethane	50		1.777				ND	
13 Vinyl chloride	62	1.901	1.905	-0.004	1	1002	0.2810	
15 Bromomethane	94		2.252				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96	3.391	3.371	0.020	49	5566	2.33	
24 Acetone	43		3.493				ND	
26 Carbon disulfide	76		3.669				ND	
31 Methylene Chloride	84		4.150				ND	
33 Acrylonitrile	53		4.545				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.174	5.172	0.002	46	5570	0.9892	
45 cis-1,2-Dichloroethene	96	5.946	5.938	0.008	86	51003	19.5	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.230				ND	
52 Chloroform	83		6.346				ND	
53 1,1,1-Trichloroethane	97	6.536	6.535	0.001	52	28413	10.3	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.985				ND	
64 Trichloroethene	130	7.668	7.666	0.002	94	298682	128.5	
67 1,2-Dichloropropane	63		7.897				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.536	9.534	0.002	92	1151423	591.5	E
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				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:

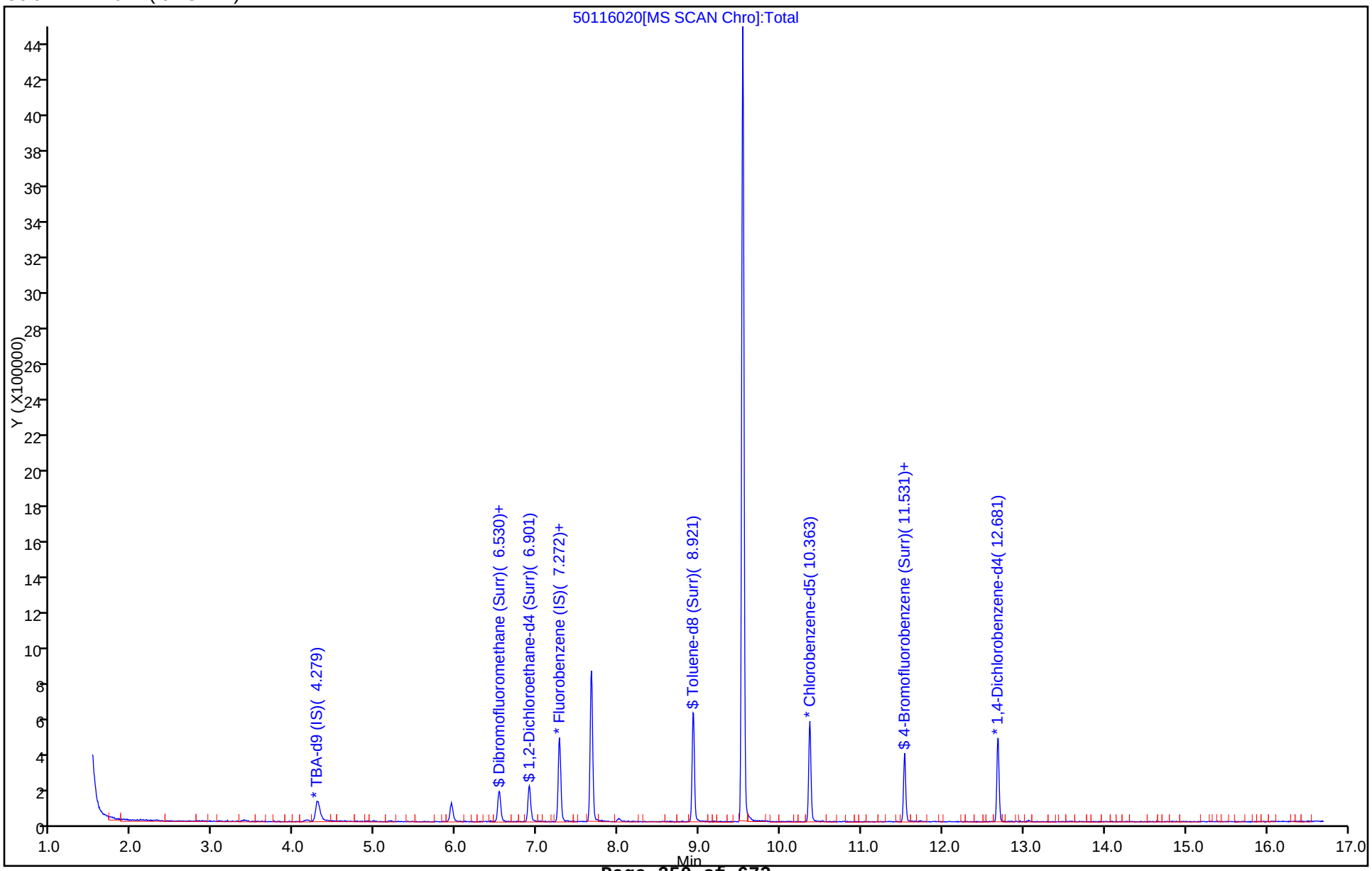
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D				
Injection Date:	16-Jan-2015 18:58:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-C-6	Lab Sample ID:	180-40481-6	Worklist Smp#:	20
Client ID:	HD-MW-75S-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	50.0000	ALS Bottle#:	16
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



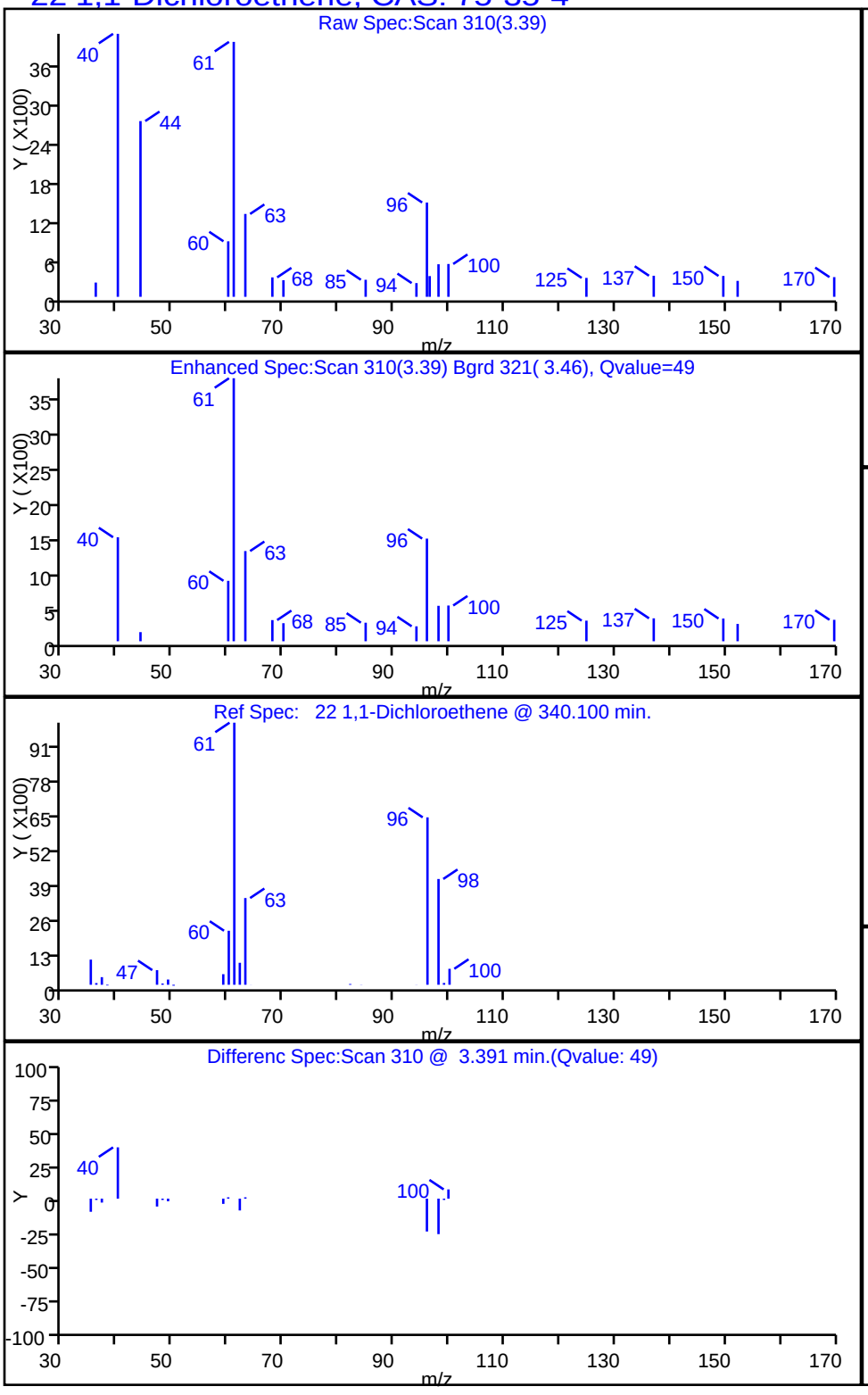
Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

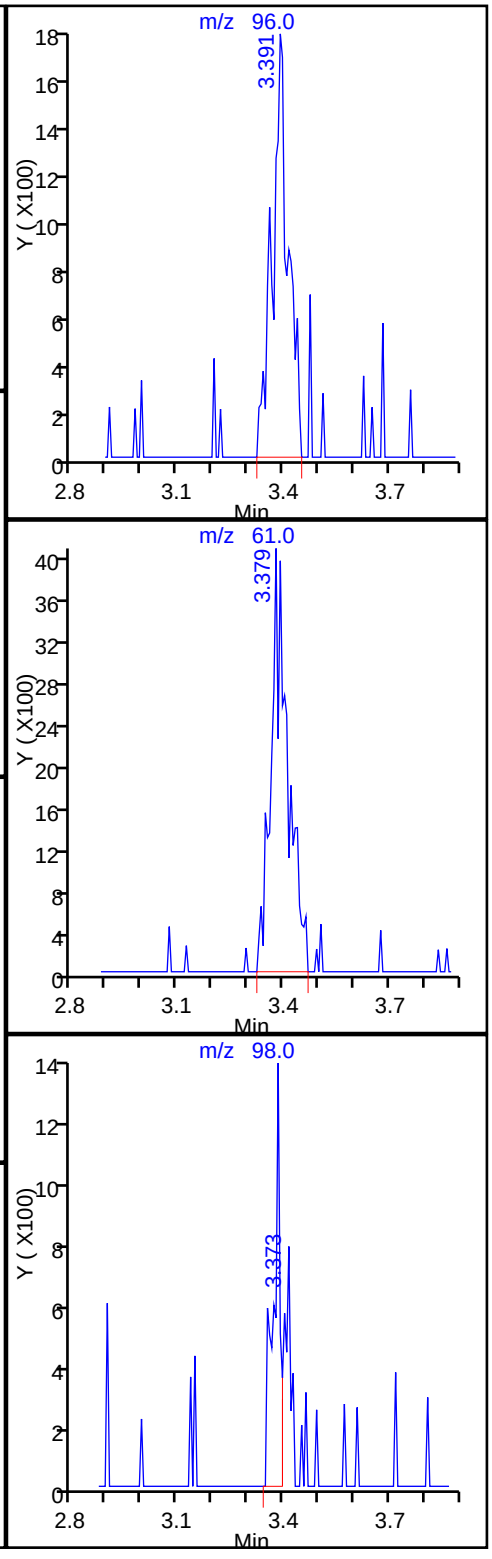
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D

Injection Date:	16-Jan-2015 18:58:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-6	Lab Sample ID:	180-40481-6
Client ID:	HD-MW-75S-0/1-0		
Operator ID:	001562	ALS Bottle#:	16 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	50.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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





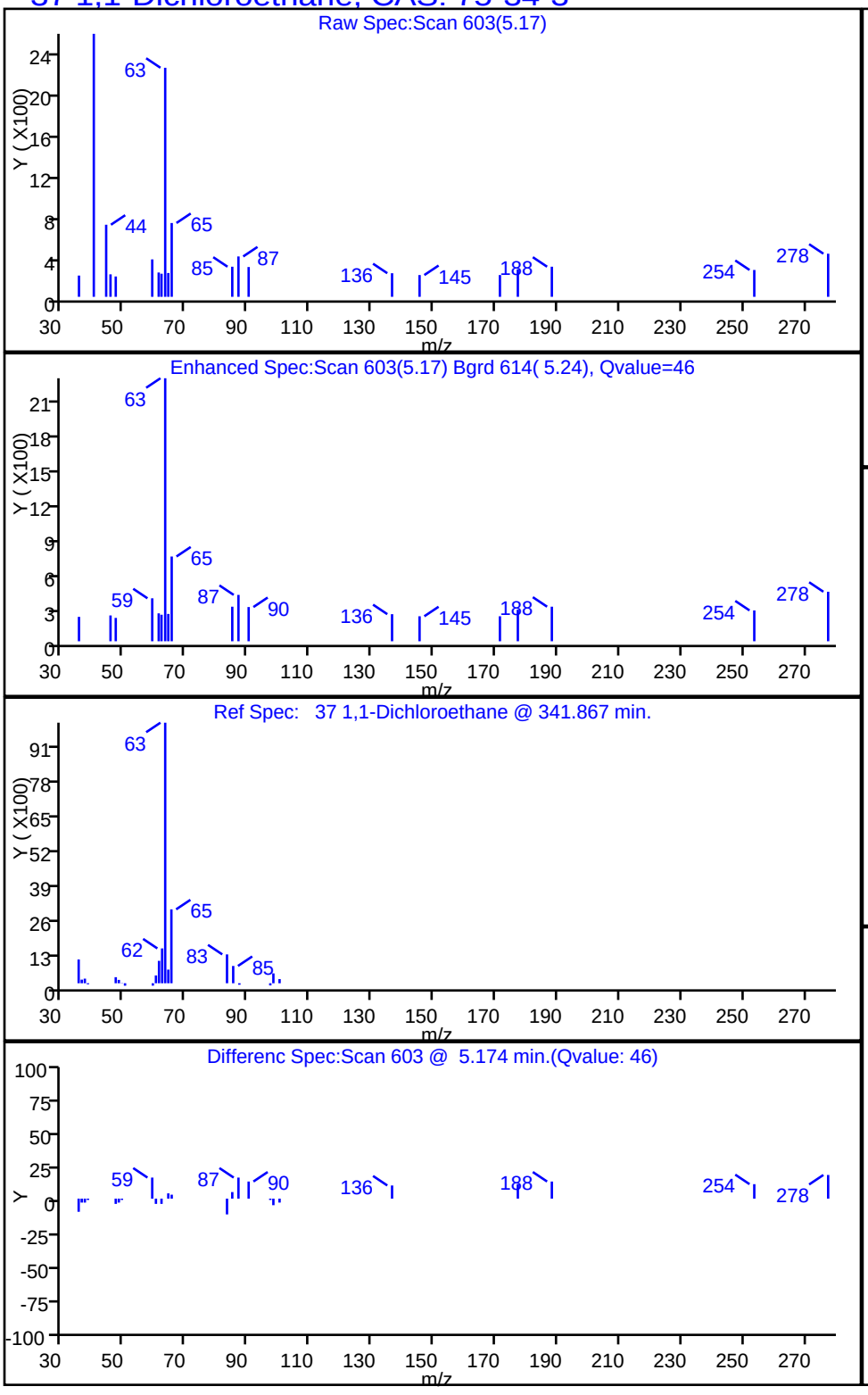
Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

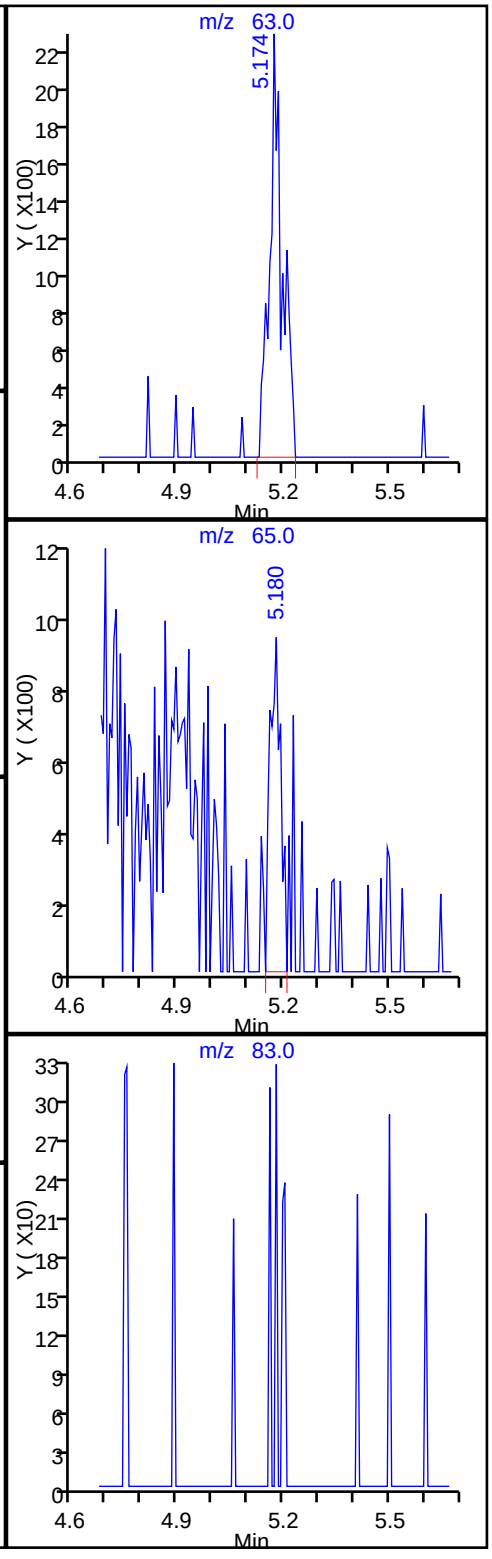
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D

Injection Date:	16-Jan-2015 18:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-6	Lab Sample ID:	180-40481-6		
Client ID:	HD-MW-75S-0/1-0				
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	50.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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





Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D

Injection Date: 16-Jan-2015 18:58:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-6 Lab Sample ID: 180-40481-6

Client ID: HD-MW-75S-0/1-0

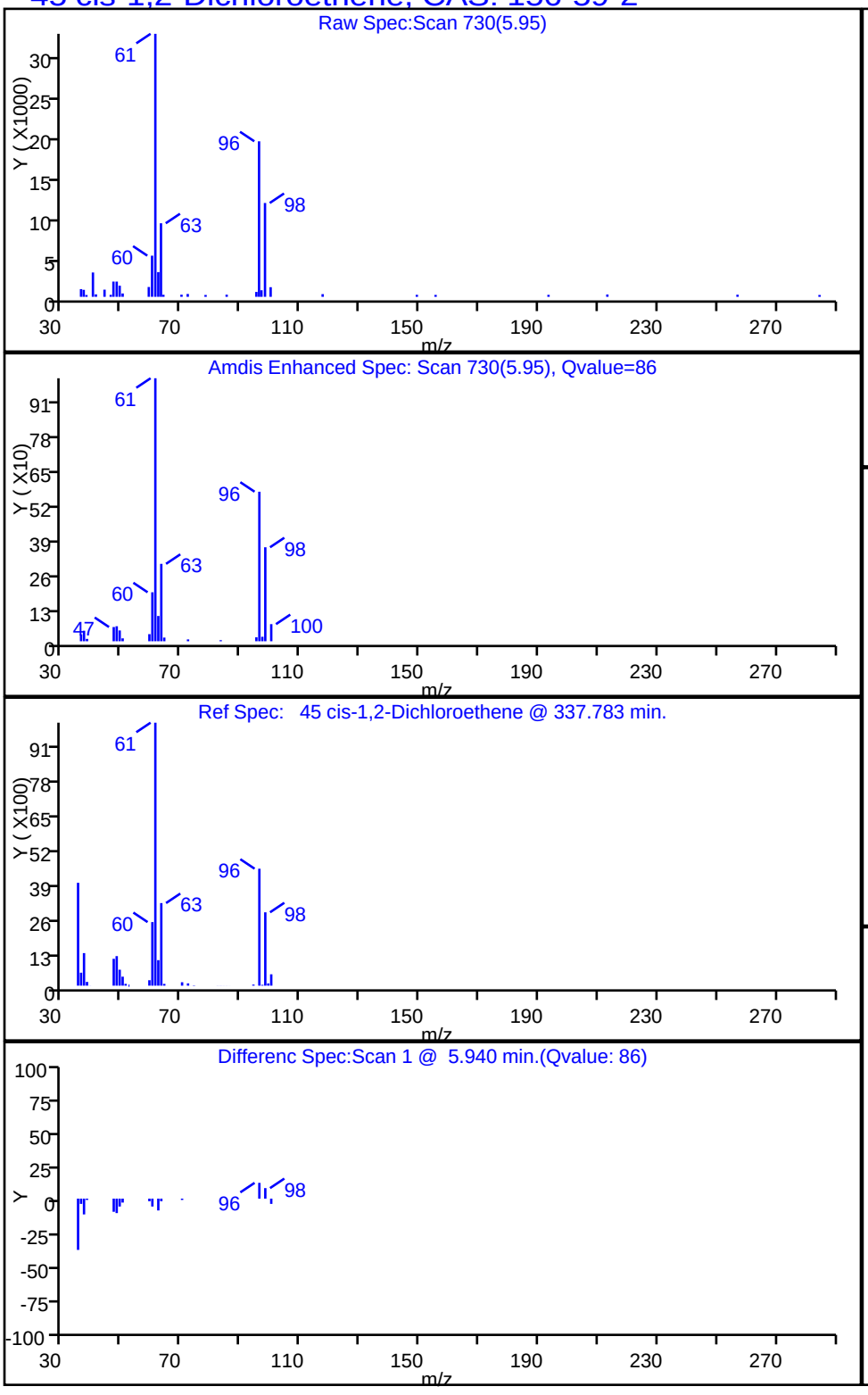
Operator ID: 001562 ALS Bottle#: 16 Worklist Smp#: 20

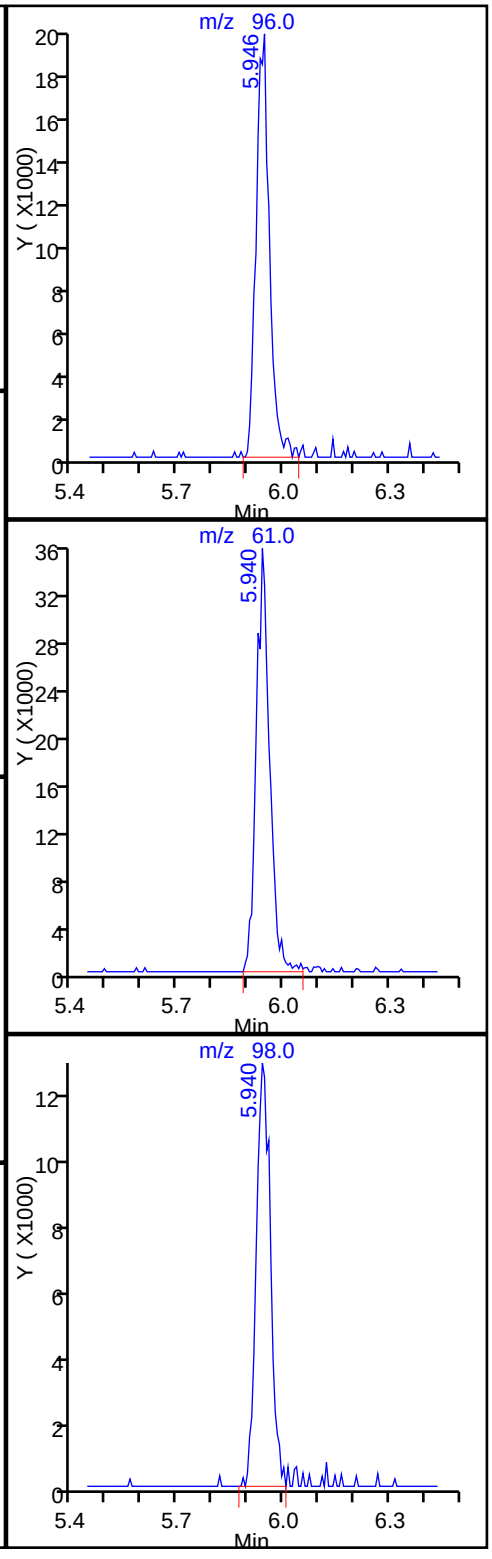
Purge Vol: 5.000 mL Dil. Factor: 50.0000

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



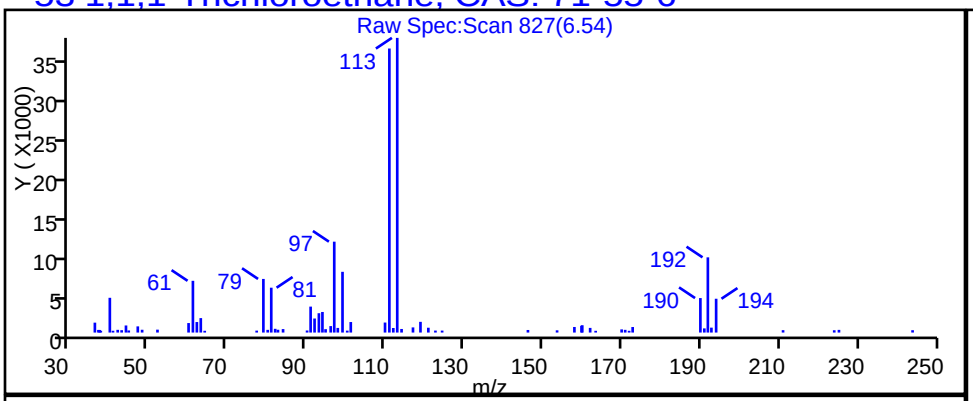


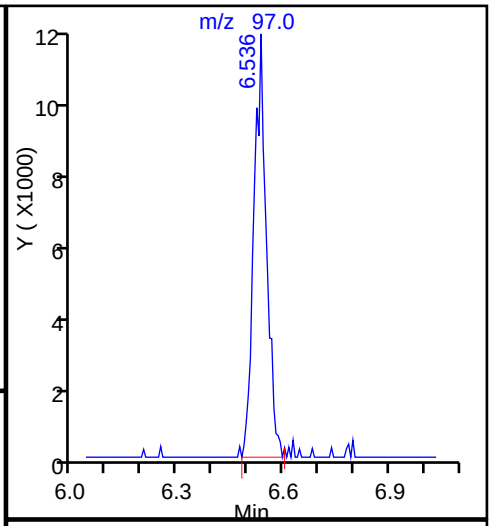
Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

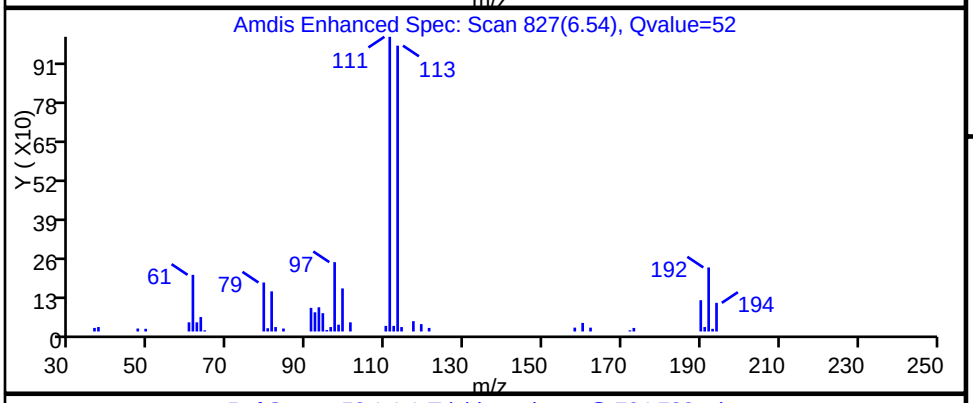
TestAmerica Pittsburgh

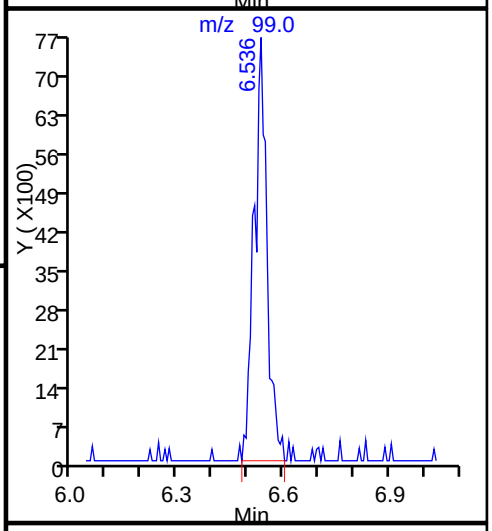
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D				
Injection Date:	16-Jan-2015 18:58:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-6	Lab Sample ID:	180-40481-6		
Client ID:	HD-MW-75S-0/1-0				
Operator ID:	001562	ALS Bottle#:	16	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	50.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

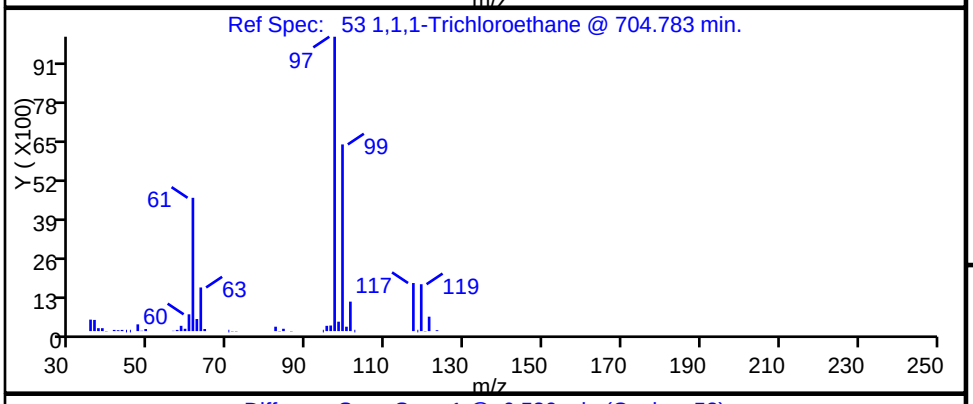
53 1,1,1-Trichloroethane, CAS: 71-55-6

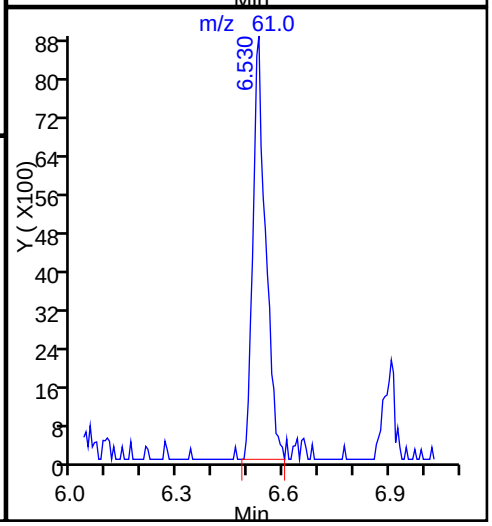


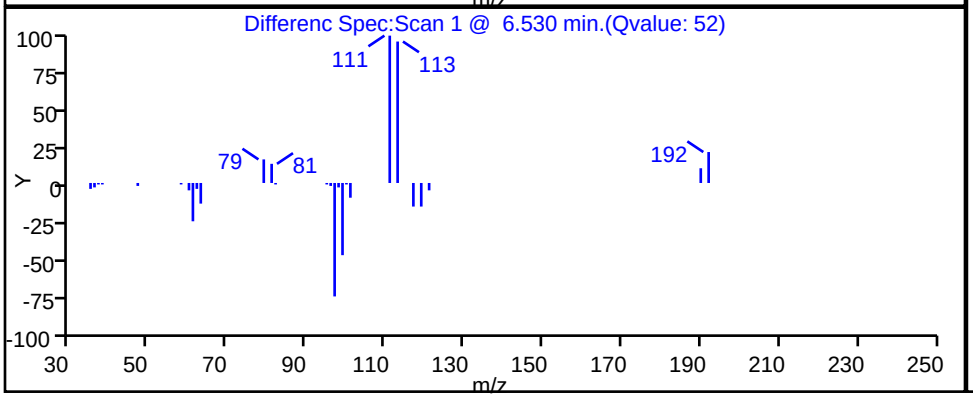












Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D

Injection Date: 16-Jan-2015 18:58:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-6 Lab Sample ID: 180-40481-6

Client ID: HD-MW-75S-0/1-0

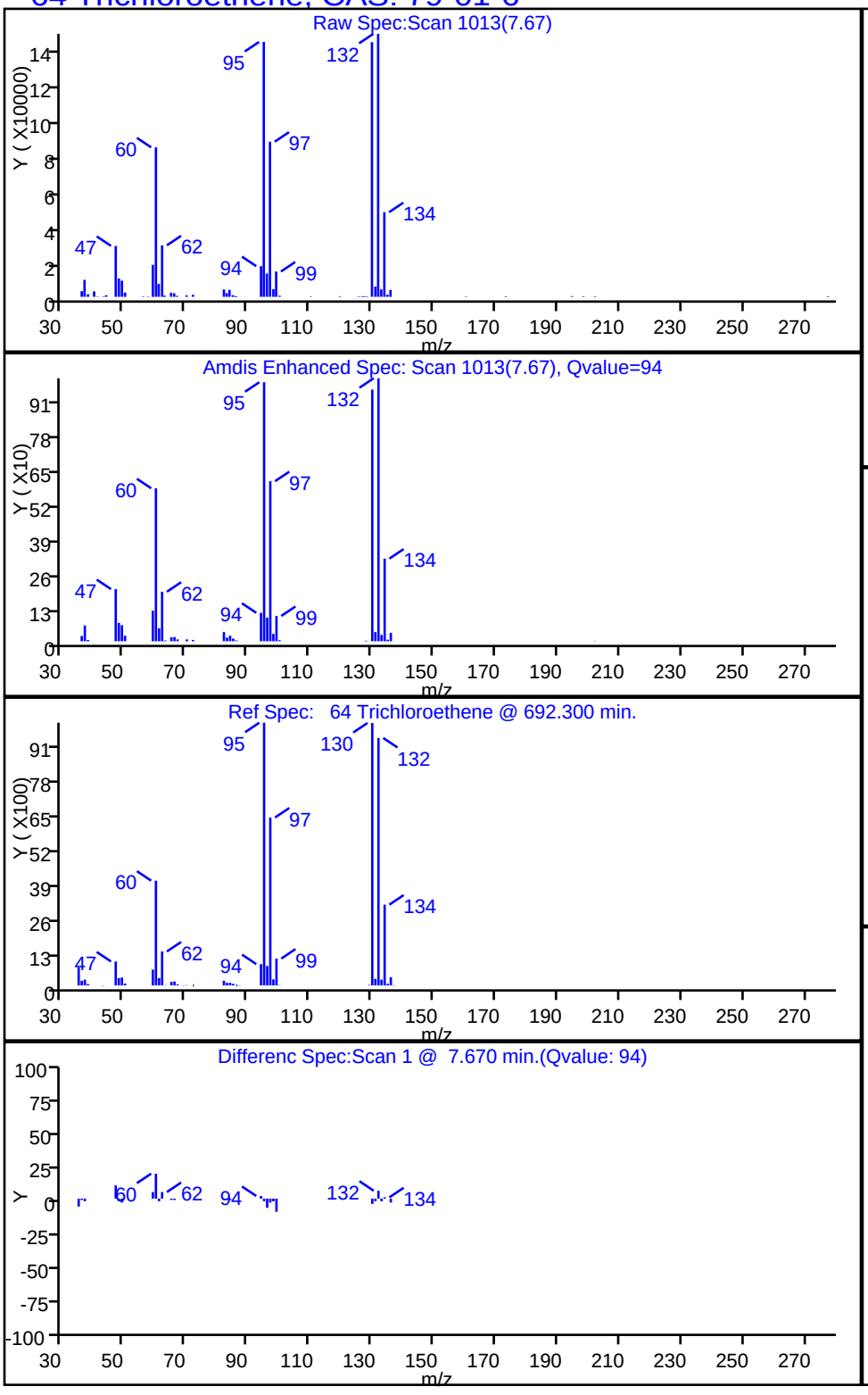
Operator ID: 001562 ALS Bottle#: 16 Worklist Smp#: 20

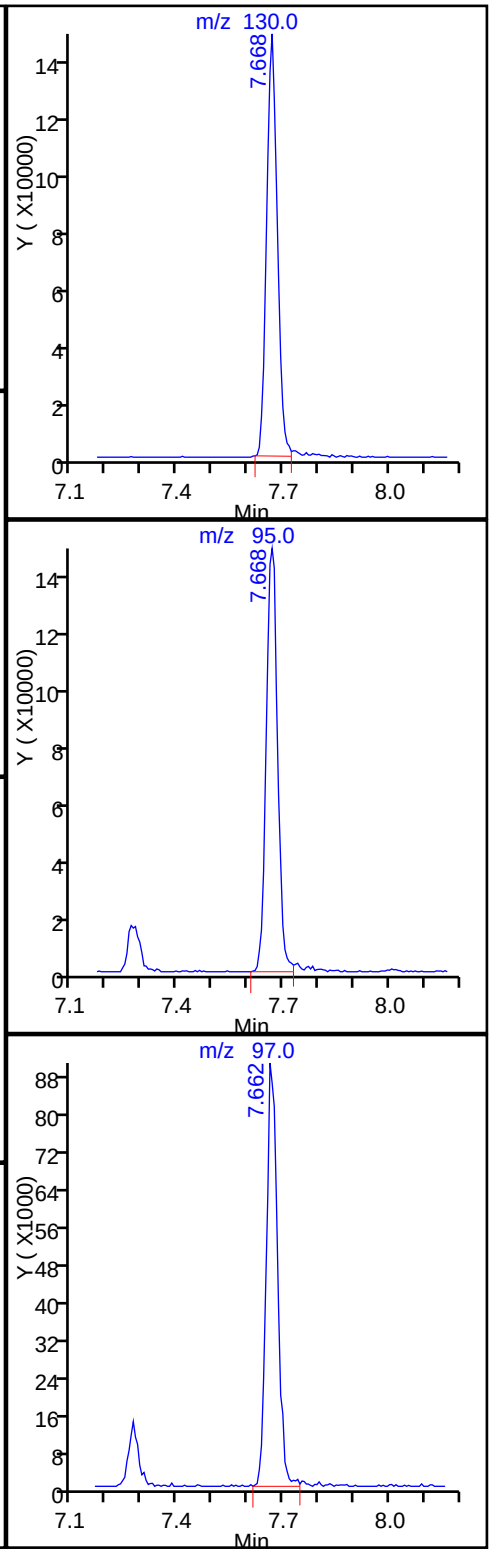
Purge Vol: 5.000 mL Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

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

64 Trichloroethene, CAS: 79-01-6



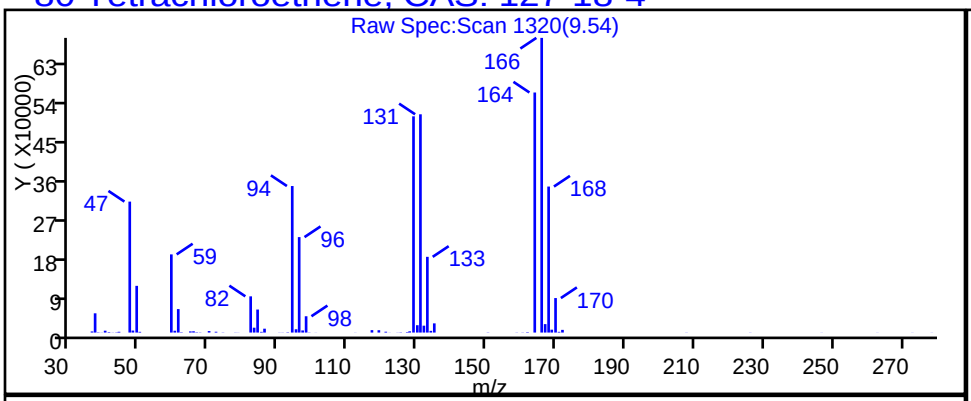


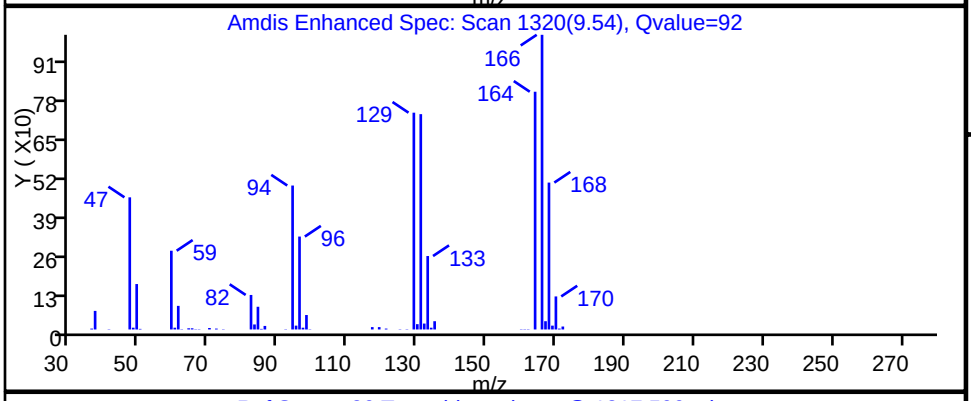
Report Date: 19-Jan-2015 07:46:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

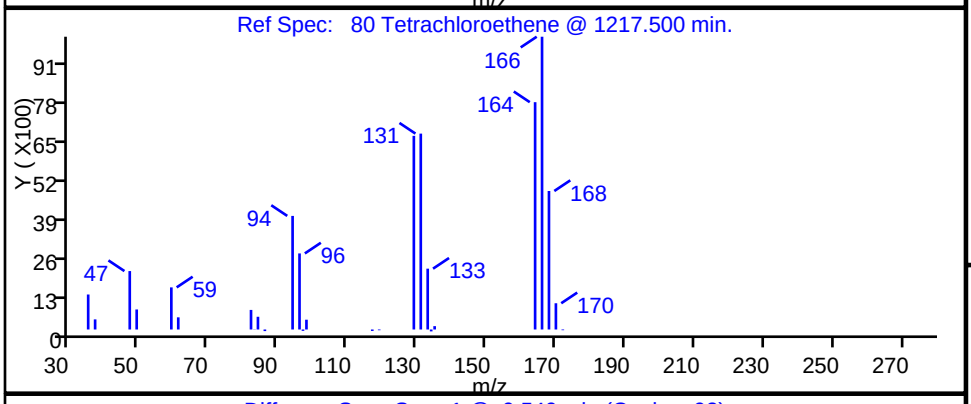
TestAmerica Pittsburgh

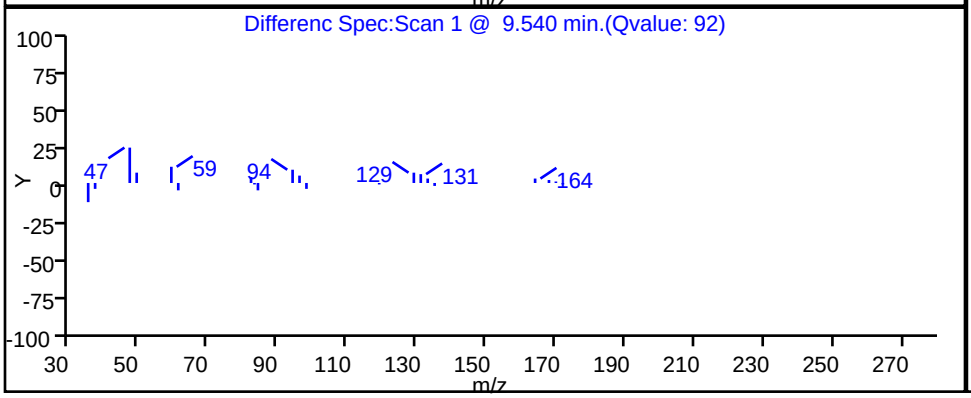
Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116020.D		
Injection Date:	16-Jan-2015 18:58:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-6	Lab Sample ID:	180-40481-6
Client ID:	HD-MW-75S-0/1-0		
Operator ID:	001562	ALS Bottle#:	16 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	50.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

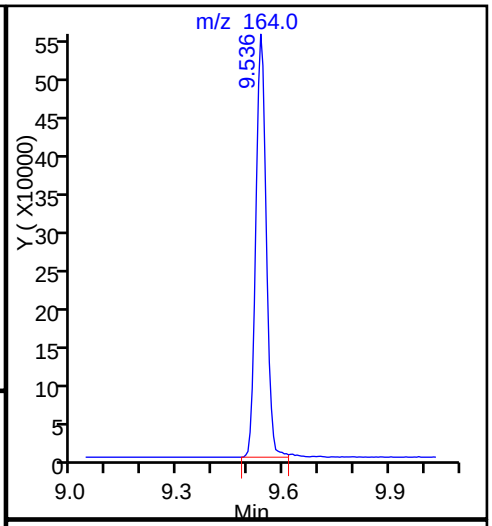
80 Tetrachloroethene, CAS: 127-18-4

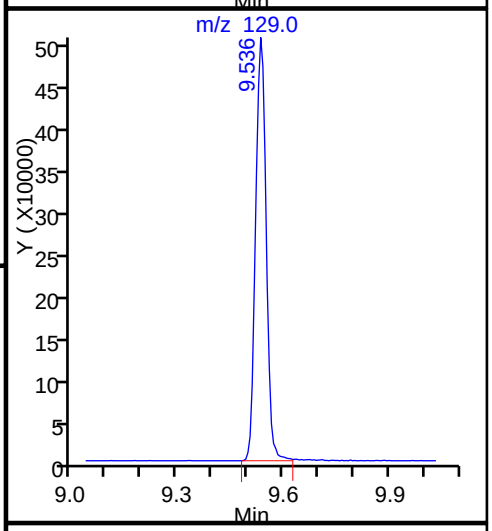


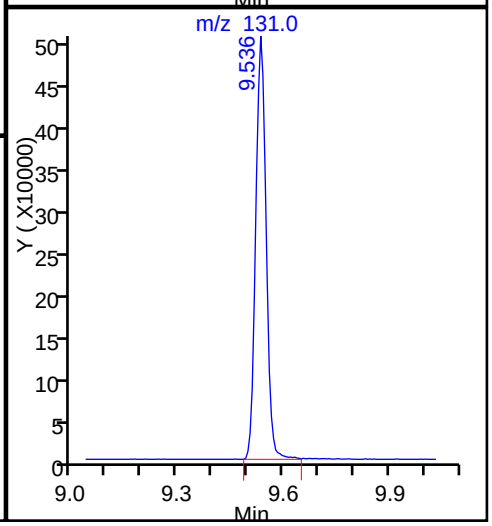












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75S-0/1-0 DL | Lab Sample ID: 180-40481-6 DL

Matrix: Water | Lab File ID: 50119018.D

Analysis Method: 8260C | Date Collected: 01/14/2015 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 01/19/2015 16:03

Soil Aliquot Vol: | Dilution Factor: 400

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

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

Analysis Batch No.: 131060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	400	U	400	110
75-01-4	Vinyl chloride	400	U	400	91
74-83-9	Bromomethane	400	U	400	130
75-00-3	Chloroethane	400	U	400	86
75-35-4	1,1-Dichloroethene	400	U	400	120
67-64-1	Acetone	2000	U	2000	1000
75-15-0	Carbon disulfide	400	U	400	85
75-09-2	Methylene Chloride	400	U	400	50
156-60-5	trans-1,2-Dichloroethene	400	U	400	68
1634-04-4	Methyl tert-butyl ether	400	U	400	73
75-34-3	1,1-Dichloroethane	400	U	400	47
156-59-2	cis-1,2-Dichloroethene	220	J	400	95
74-97-5	Bromochloromethane	400	U	400	72
78-93-3	2-Butanone (MEK)	2000	U	2000	220
67-66-3	Chloroform	400	U	400	68
71-55-6	1,1,1-Trichloroethane	120	J	400	110
56-23-5	Carbon tetrachloride	400	U	400	55
71-43-2	Benzene	400	U	400	42
107-06-2	1,2-Dichloroethane	400	U	400	85
79-01-6	Trichloroethene	1400		400	57
78-87-5	1,2-Dichloropropane	400	U	400	38
75-27-4	Bromodichloromethane	400	U	400	52
10061-01-5	cis-1,3-Dichloropropene	400	U	400	75
108-10-1	4-Methyl-2-pentanone (MIBK)	2000	U	2000	210
108-88-3	Toluene	400	U	400	60
10061-02-6	trans-1,3-Dichloropropene	400	U	400	59
79-00-5	1,1,2-Trichloroethane	400	U	400	81
127-18-4	Tetrachloroethene	6300		400	59
591-78-6	2-Hexanone	2000	U	2000	64
124-48-1	Dibromochloromethane	400	U	400	55
106-93-4	1,2-Dibromoethane (EDB)	400	U	400	72
108-90-7	Chlorobenzene	400	U	400	54
630-20-6	1,1,1,2-Tetrachloroethane	400	U	400	110
100-41-4	Ethylbenzene	400	U	400	91
1330-20-7	Xylenes, Total	1200	U	1200	200
100-42-5	Styrene	400	U	400	39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75S-0/1-0 DL | Lab Sample ID: 180-40481-6 DL

Matrix: Water | Lab File ID: 50119018.D

Analysis Method: 8260C | Date Collected: 01/14/2015 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 01/19/2015 16:03

Soil Aliquot Vol: | Dilution Factor: 400

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

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

Analysis Batch No.: 131060 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	*Bromoform*	*400*	*U*	*400*	*77*
79-34-5	*1,1,2,2-Tetrachloroethane*	*400*	*U*	*400*	*80*
107-13-1	*Acrylonitrile*	*8000*	*U*	*8000*	*220*
123-91-1	*1,4-Dioxane*	*80000*	*U*	*80000*	*14000*

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		64-135
2037-26-5	Toluene-d8 (Surr)	98		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	109		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119018.D
Lims ID: 180-40481-D-6 Lab Sample ID: 180-40481-6
Client ID: HD-MW-75S-0/1-0
Sample Type: Client
Inject. Date: 19-Jan-2015 16:03:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 400.0000
Sample Info: 180-40481-D-6, 400x
Misc. Info.: 180-0005320-018
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jan-2015 07:37:03 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: fergusond Date: 20-Jan-2015 07:37:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.298	4.305	-0.007	86	172553	1000.0	
* 2 Fluorobenzene (IS)	96	7.279	7.274	0.005	100	412858	50.0	
* 3 Chlorobenzene-d5	119	10.370	10.364	0.006	98	93279	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.688	-0.001	97	132299	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.538	-0.007	93	95728	54.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.897	0.005	91	158300	54.9	
$ 7 Toluene-d8 (Surr)	98	8.928	8.923	0.005	96	379184	48.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.539	-0.008	83	137920	46.7	
12 Chloromethane	50		1.775				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96		3.387				ND	
24 Acetone	43		3.490				ND	
26 Carbon disulfide	76		3.673				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		5.175				ND	
45 cis-1,2-Dichloroethene	96	5.953	5.942	0.011	84	6861	2.79	
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97	6.549	6.532	0.017	37	4031	1.55	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.958				ND	
59 1,2-Dichloroethane	62		6.988				ND	
64 Trichloroethene	130	7.668	7.669	-0.001	94	37393	17.1	
67 1,2-Dichloropropane	63		7.907				ND	
70 1,4-Dioxane	88		8.047				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.661				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.996				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.542	9.537	0.005	92	142974	78.3	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.908				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.480				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				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:

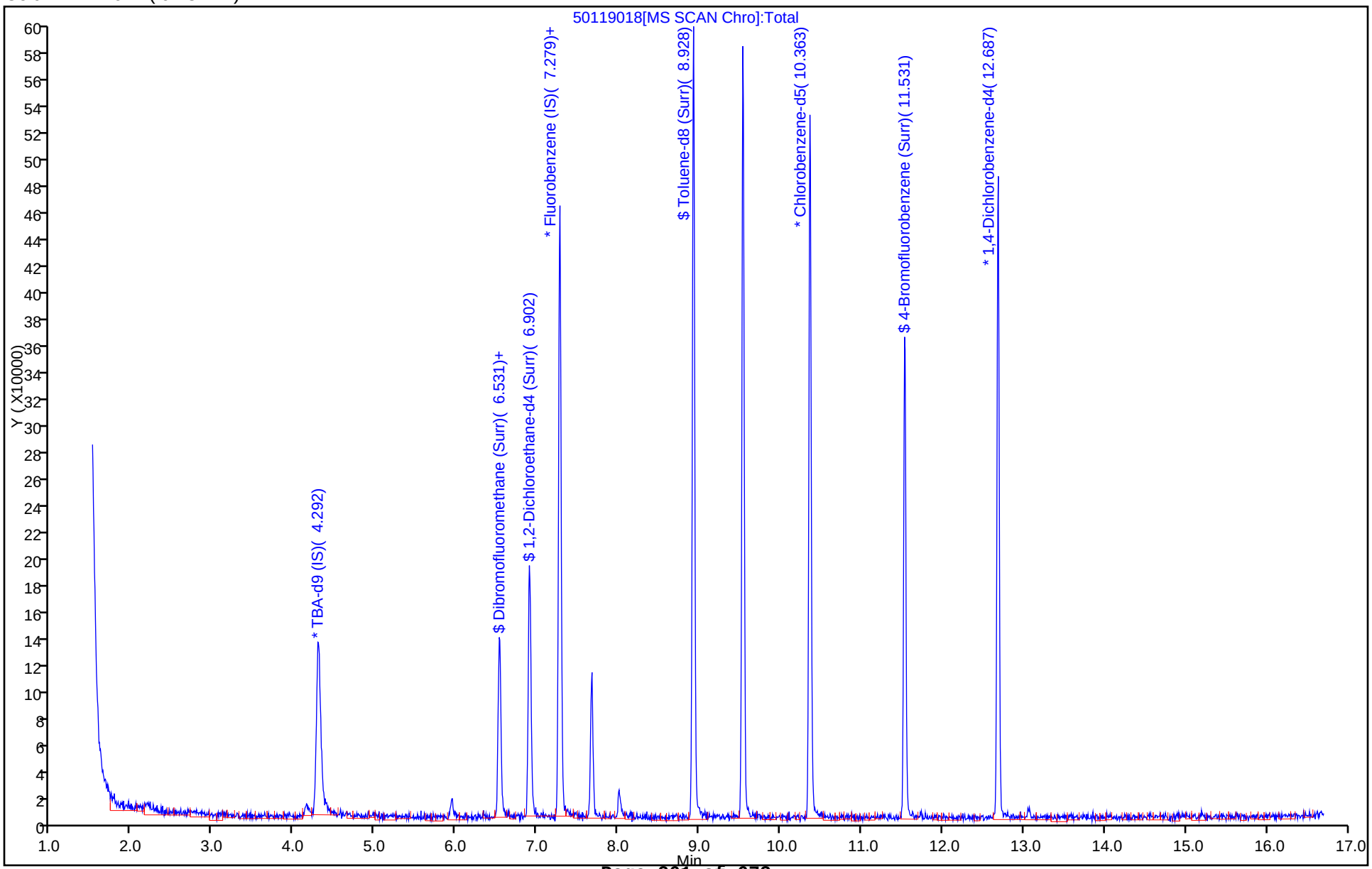
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Jan-2015 07:37:03 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119018.D				
Injection Date:	19-Jan-2015 16:03:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-D-6	Lab Sample ID:	180-40481-6	Worklist Smp#:	18
Client ID:	HD-MW-75S-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	400.0000	ALS Bottle#:	17
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

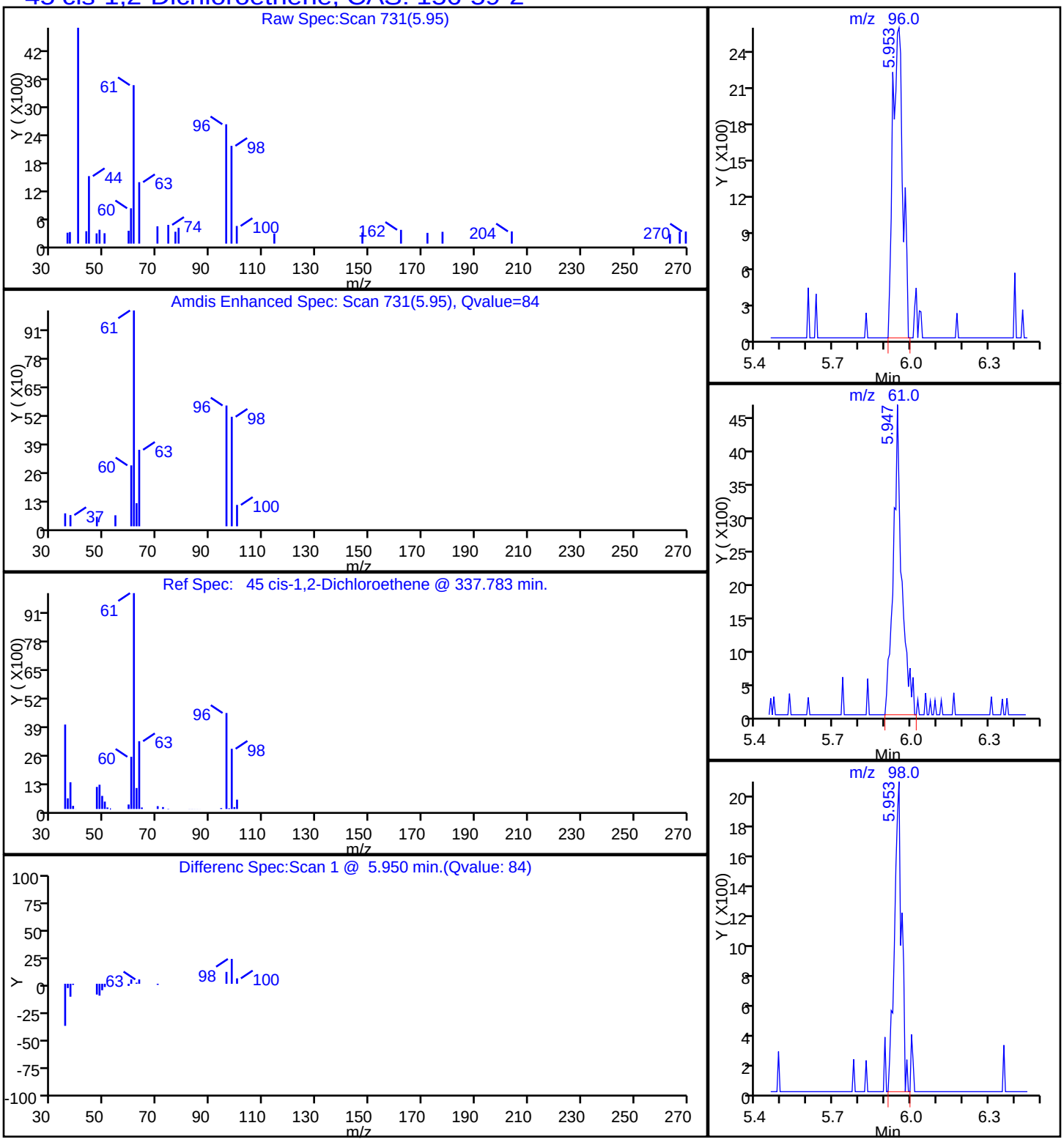


Report Date: 20-Jan-2015 07:37:03 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119018.D				
Injection Date:	19-Jan-2015 16:03:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-6	Lab Sample ID:	180-40481-6		
Client ID:	HD-MW-75S-0/1-0				
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	400.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

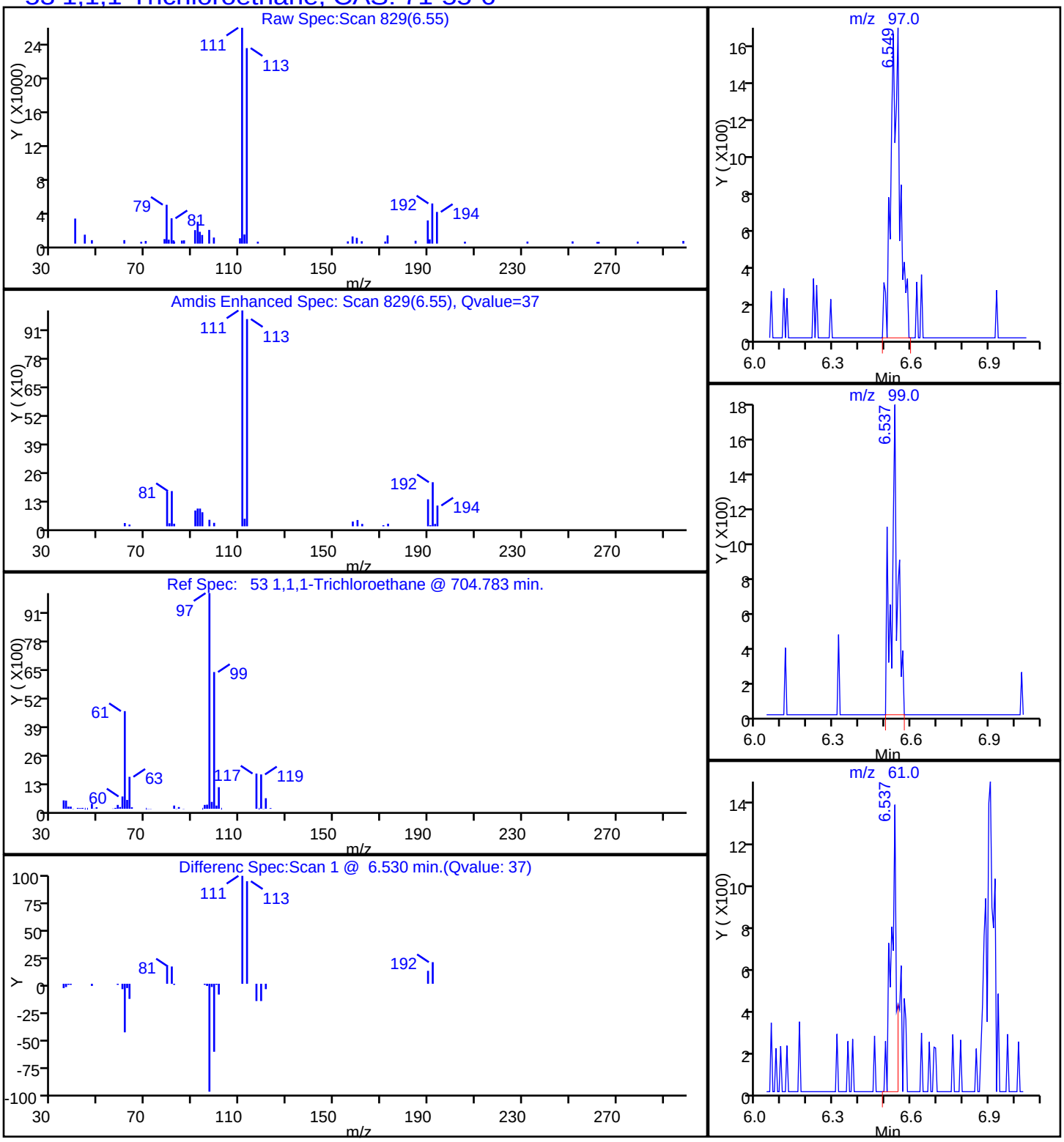


Report Date: 20-Jan-2015 07:37:03 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119018.D				
Injection Date:	19-Jan-2015 16:03:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-6	Lab Sample ID:	180-40481-6		
Client ID:	HD-MW-75S-0/1-0				
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	400.0000		
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

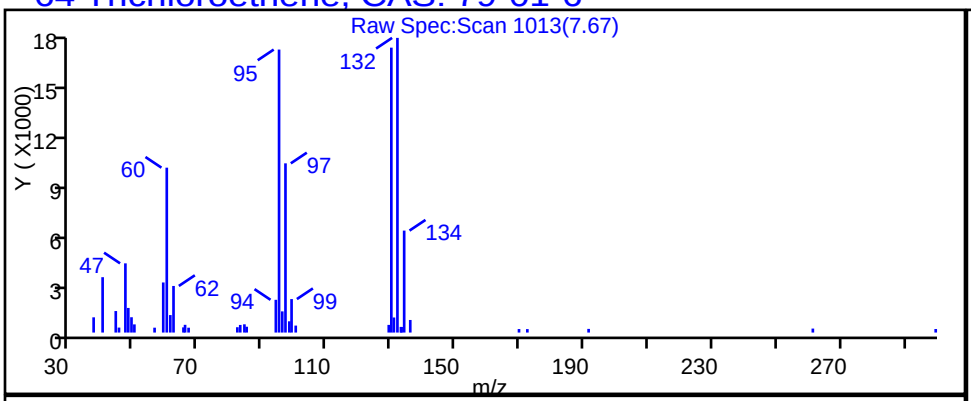


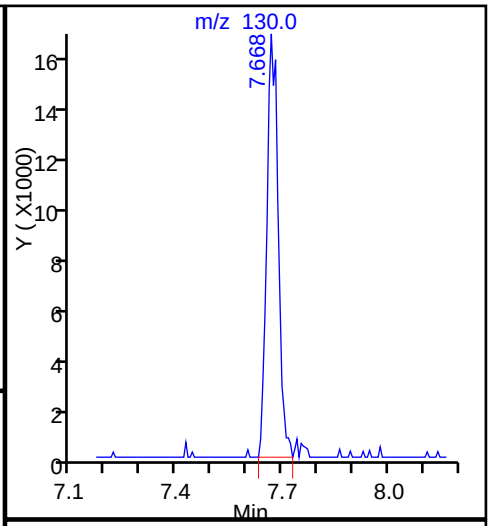
Report Date: 20-Jan-2015 07:37:03 Chrom Revision: 2.2 15-Jan-2015 13:05:58

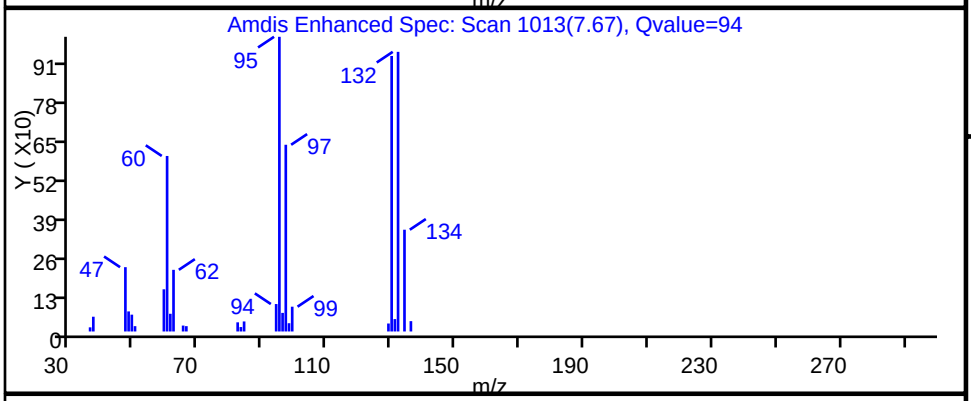
TestAmerica Pittsburgh

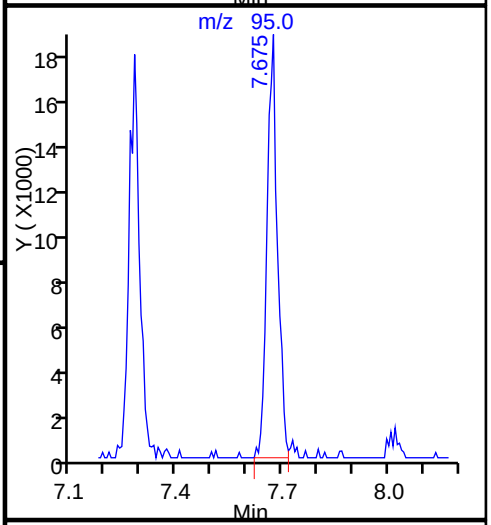
Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119018.D				
Injection Date:	19-Jan-2015 16:03:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-D-6	Lab Sample ID:	180-40481-6		
Client ID:	HD-MW-75S-0/1-0				
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	400.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

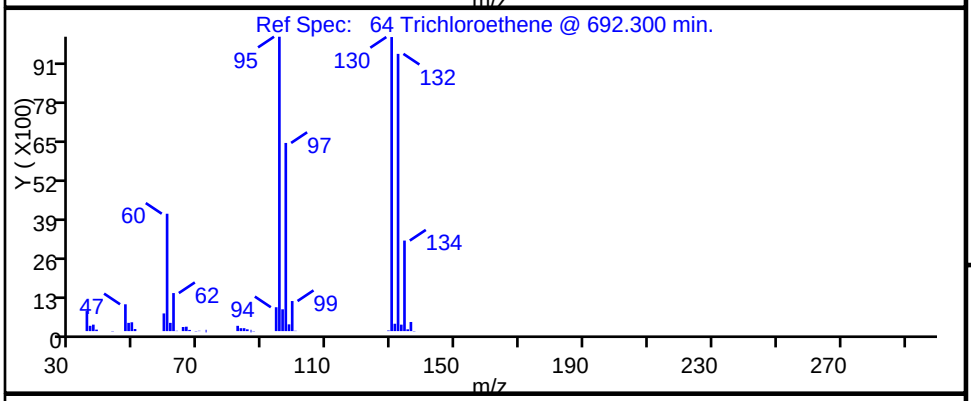
64 Trichloroethene, CAS: 79-01-6

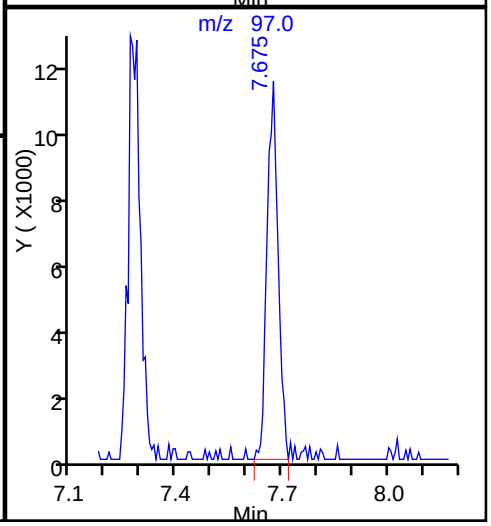


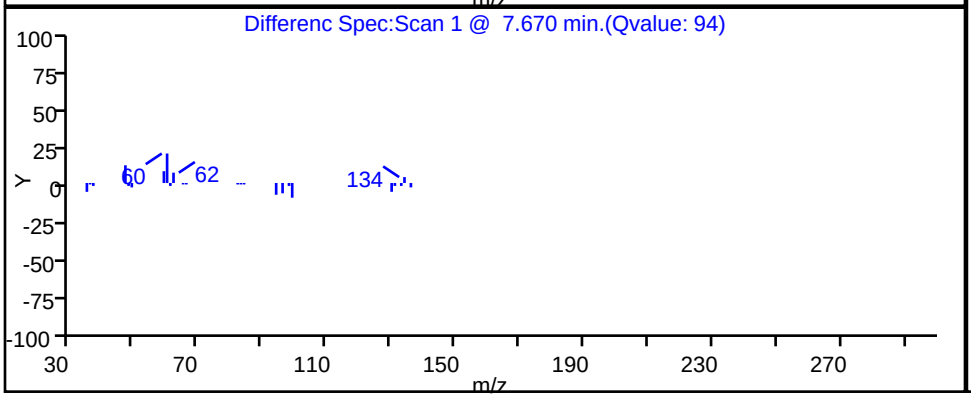












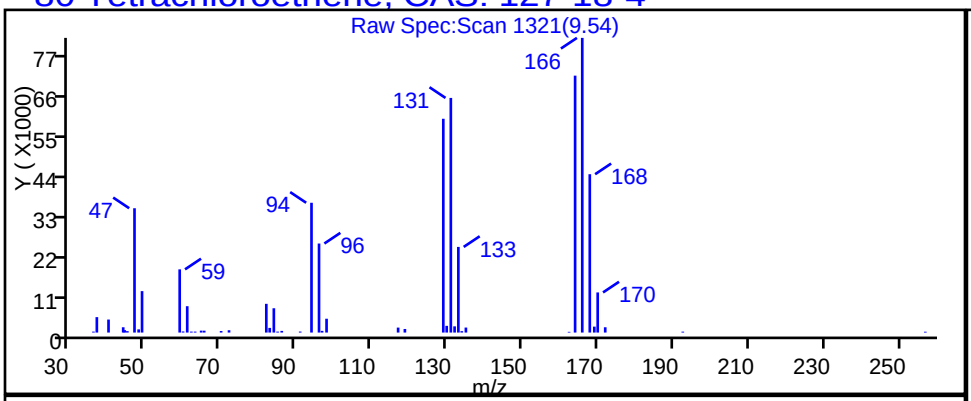
Report Date: 20-Jan-2015 07:37:03 Chrom Revision: 2.2 15-Jan-2015 13:05:58

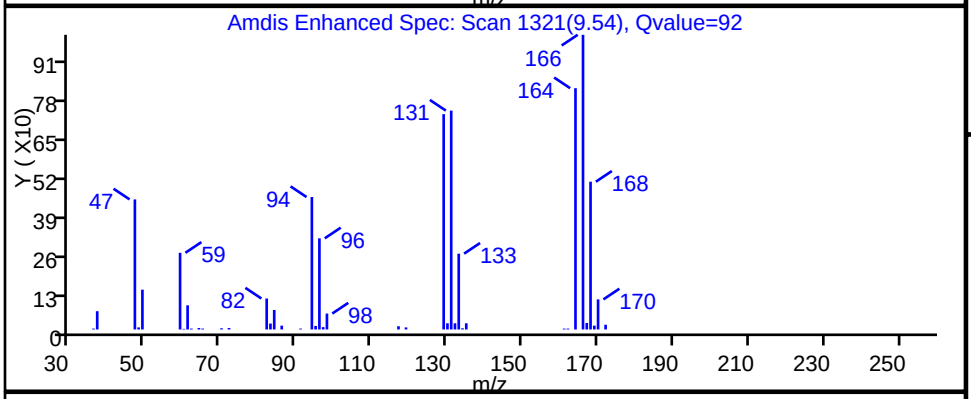
TestAmerica Pittsburgh

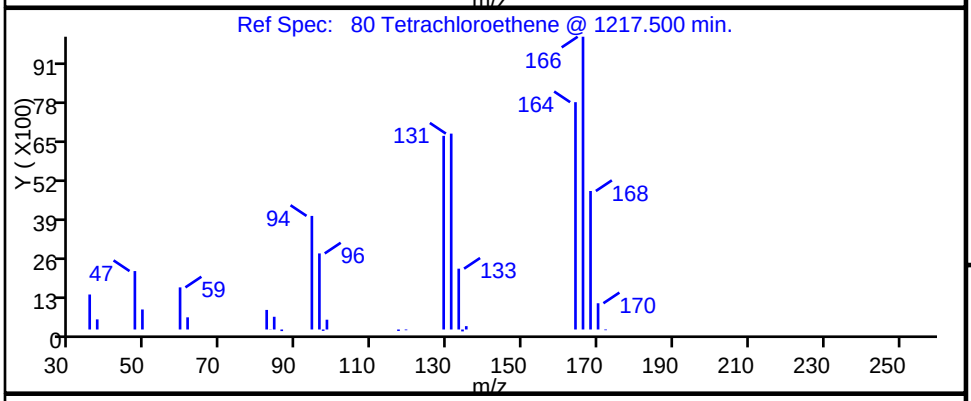
Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119018.D

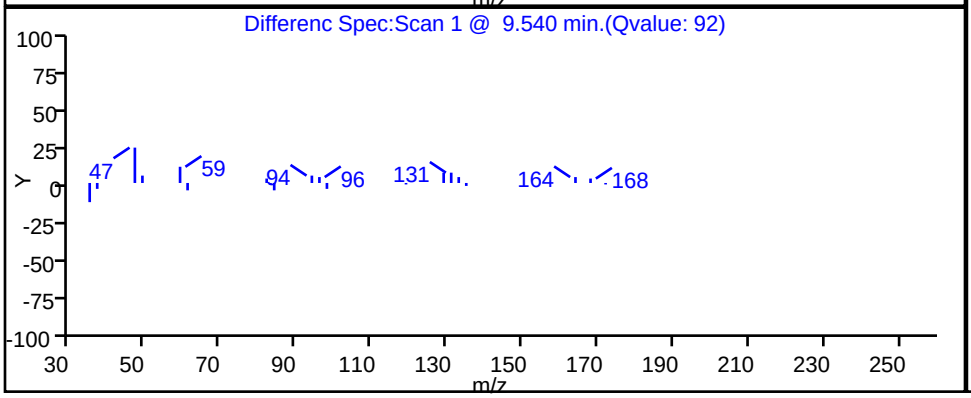
Injection Date:	19-Jan-2015 16:03:30	Instrument ID:	CHHP5
Lims ID:	180-40481-D-6	Lab Sample ID:	180-40481-6
Client ID:	HD-MW-75S-0/1-0		
Operator ID:	001562	ALS Bottle#:	17 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	400.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

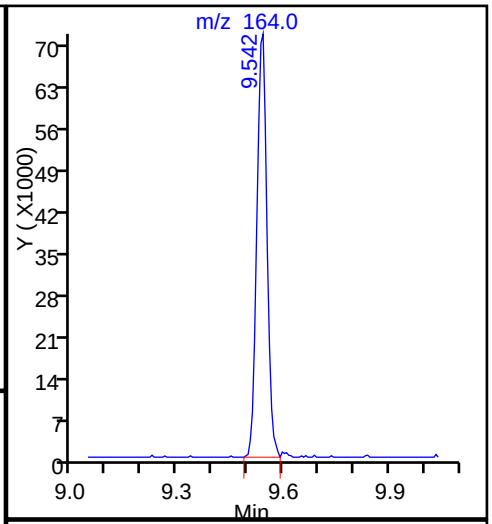
80 Tetrachloroethene, CAS: 127-18-4

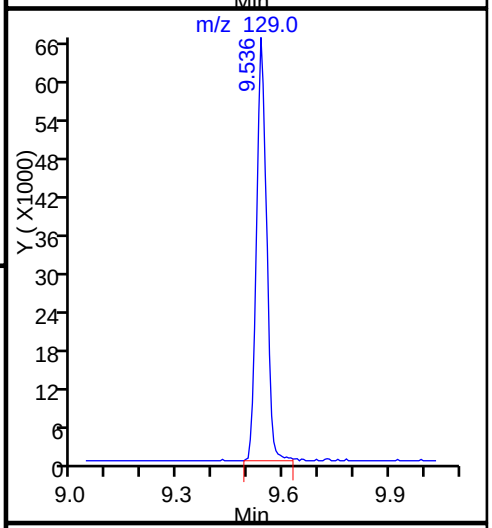


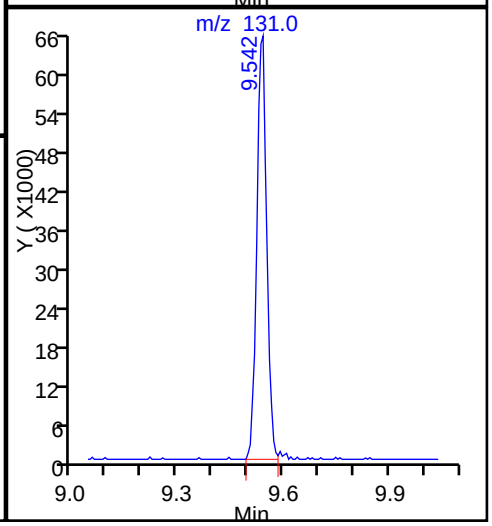












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75D-0/1-0 Lab Sample ID: 180-40481-7

Matrix: Water Lab File ID: 50119019.D

Analysis Method: 8260C Date Collected: 01/14/2015 10:15

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 16:27

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.: 131060 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	62		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	48	J	50	5.8
156-59-2	cis-1,2-Dichloroethene	630		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	270		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	740		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	390		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75D-0/1-0 Lab Sample ID: 180-40481-7

Matrix: Water Lab File ID: 50119019.D

Analysis Method: 8260C Date Collected: 01/14/2015 10:15

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 16:27

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.: 131060 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)	115		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	97		70-118
1868-53-7	Dibromofluoromethane (Surr)	119		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D
Lims ID: 180-40481-C-7 Lab Sample ID: 180-40481-7
Client ID: HD-MW-75D-0/1-0
Sample Type: Client
Inject. Date: 19-Jan-2015 16:27:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 50.0000
Sample Info: 180-40481-C-7, 50x
Misc. Info.: 180-0005320-019
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jan-2015 07:38:37 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: fergusond Date: 20-Jan-2015 07:38:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.309	4.305	0.004	85	179080	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.274	0.004	100	419057	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.364	0.004	98	95555	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.688	-0.002	99	138123	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.538	-0.003	92	106138	59.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	92	168418	57.5	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	97	395873	49.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.539	-0.003	83	146772	48.5	
12 Chloromethane	50		1.775				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.372	3.387	-0.015	79	14060	6.16	
24 Acetone	43		3.490				ND	
26 Carbon disulfide	76		3.673				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	5.173	5.175	-0.002	97	25967	4.83	
45 cis-1,2-Dichloroethene	96	5.945	5.942	0.003	88	156689	62.7	
46 2-Butanone (MEK)	43		5.990				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97	6.535	6.532	0.003	76	70131	26.6	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.958				ND	
59 1,2-Dichloroethane	62		6.988				ND	
64 Trichloroethene	130	7.673	7.669	0.004	93	164771	74.3	
67 1,2-Dichloropropane	63		7.907				ND	
70 1,4-Dioxane	88		8.047				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.661				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.996				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.535	9.537	-0.002	95	73187	39.1	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.908				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.480				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				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_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

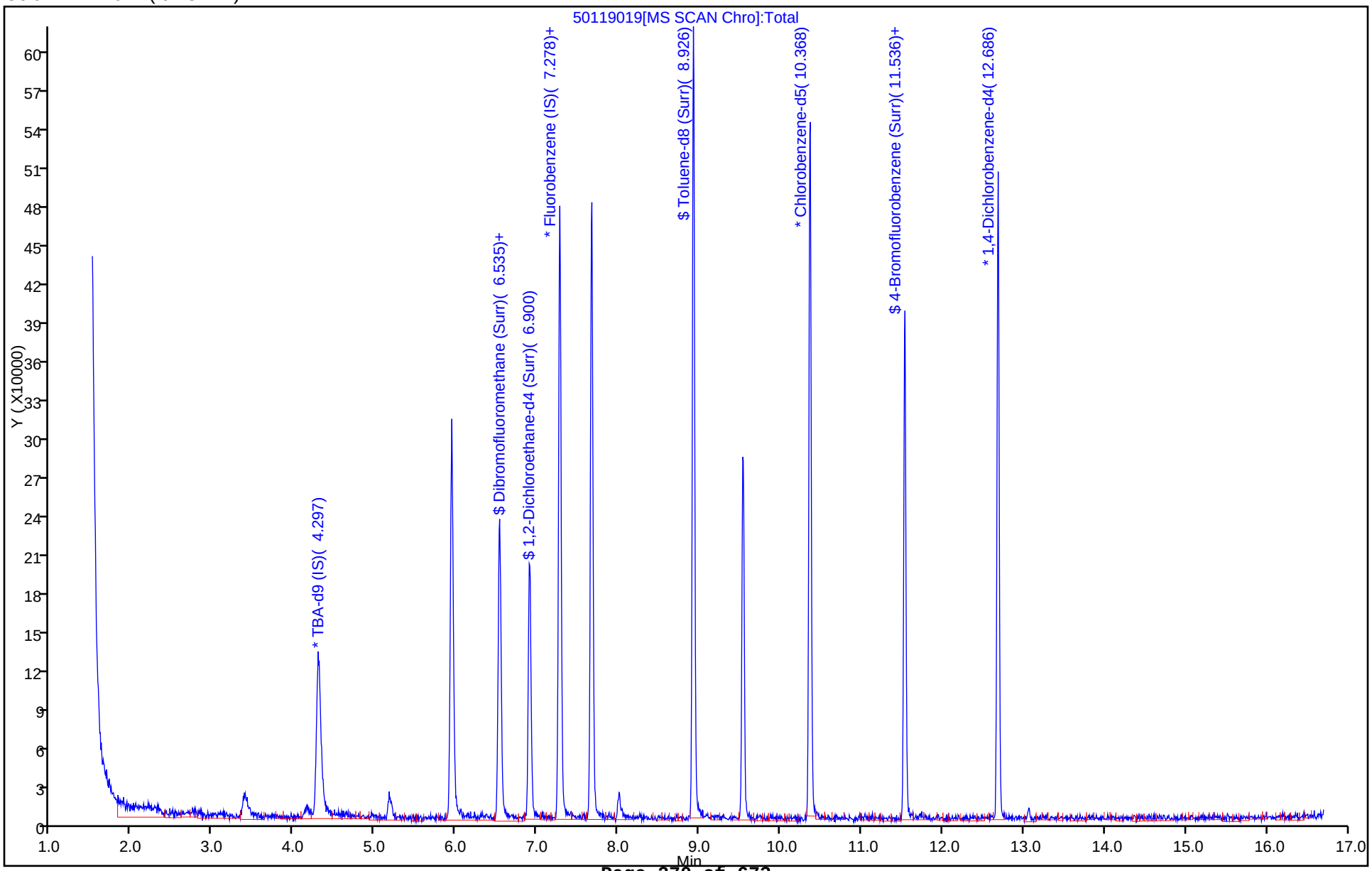
Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D

Injection Date:	19-Jan-2015 16:27:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-C-7	Lab Sample ID:	180-40481-7	Worklist Smp#:	19
Client ID:	HD-MW-75D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	50.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



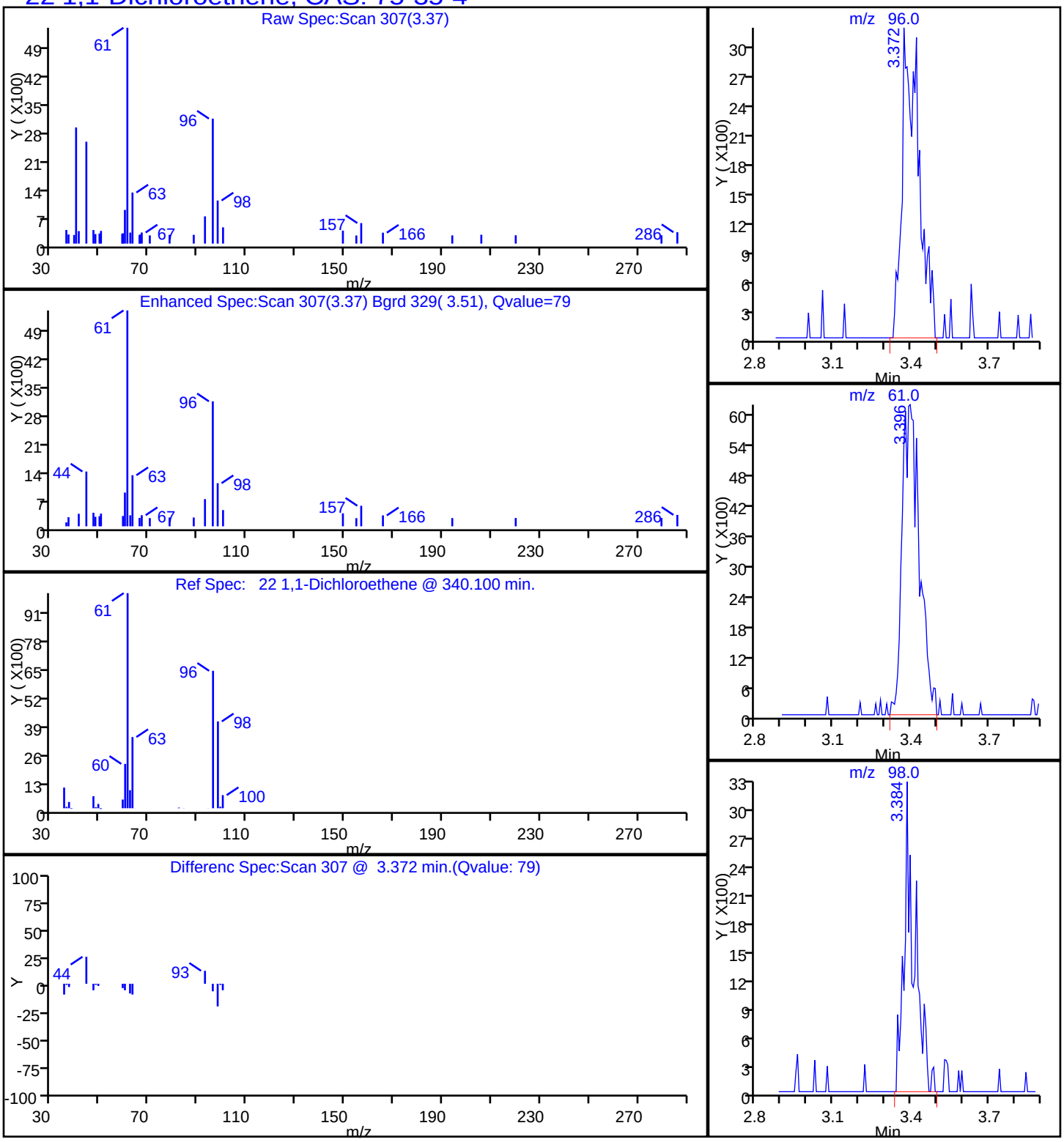
Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D

Injection Date:	19-Jan-2015 16:27:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-7	Lab Sample ID:	180-40481-7
Client ID:	HD-MW-75D-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	50.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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

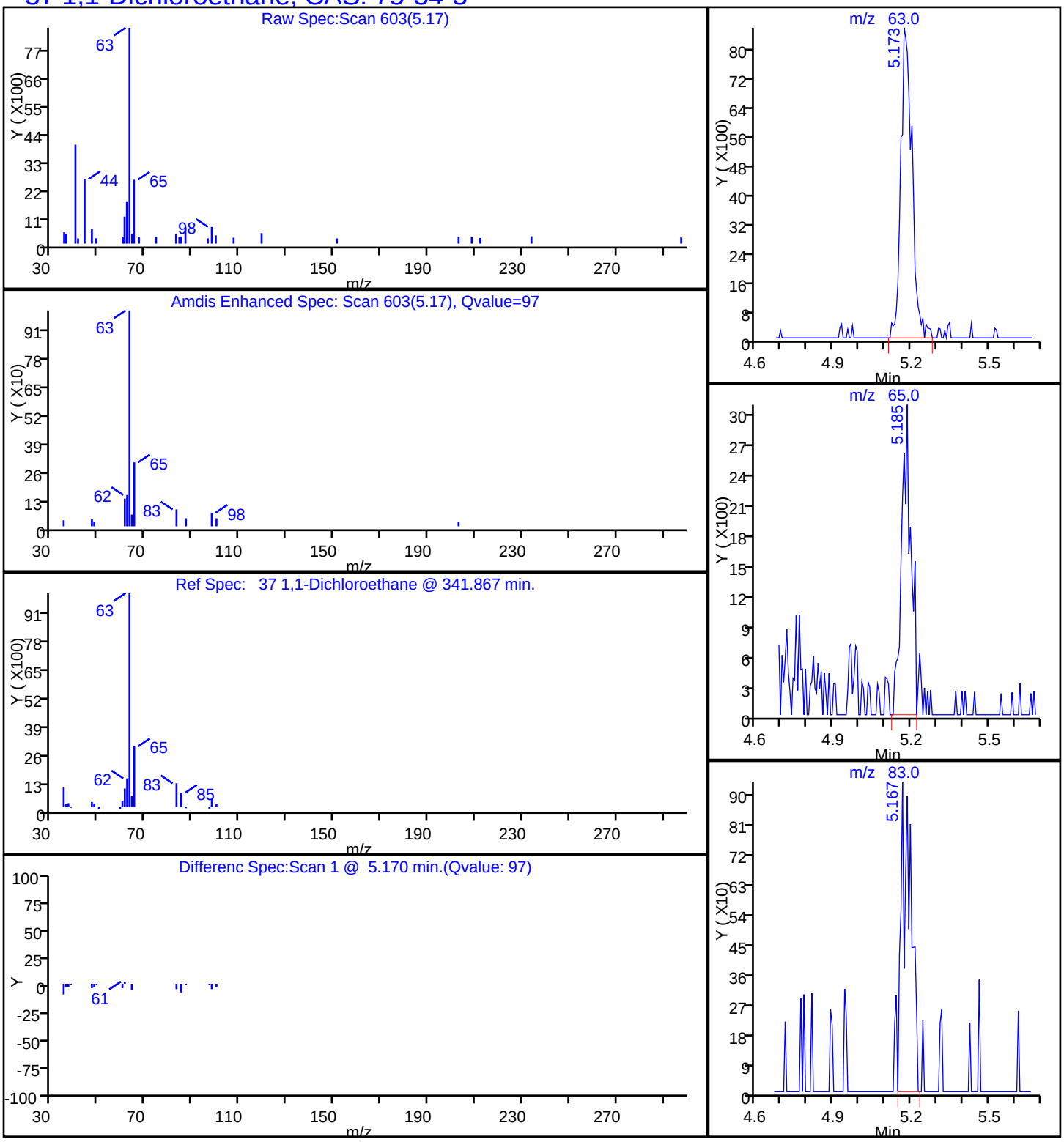


Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D				
Injection Date:	19-Jan-2015 16:27:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-7	Lab Sample ID:	180-40481-7		
Client ID:	HD-MW-75D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	50.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

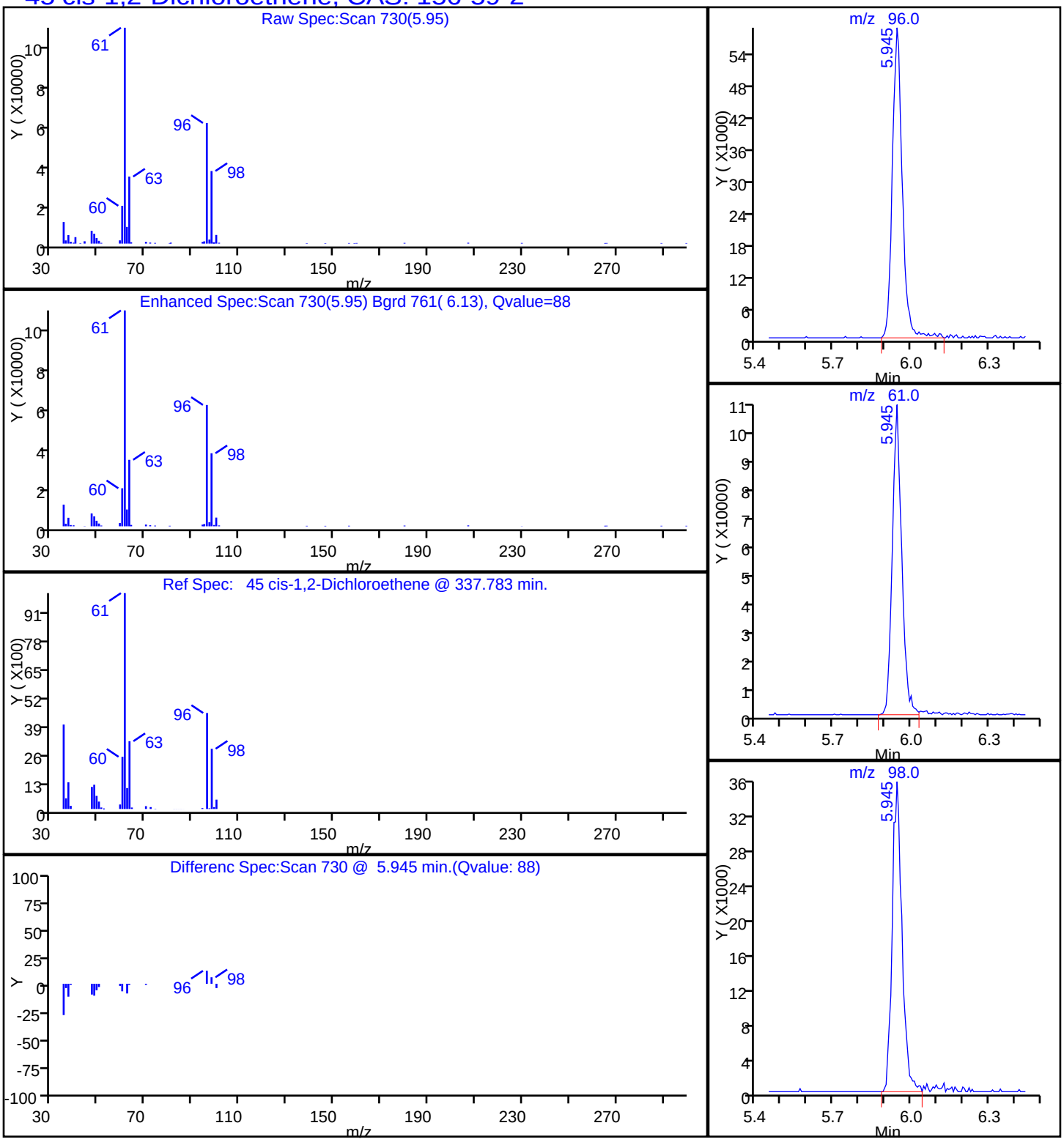


Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D				
Injection Date:	19-Jan-2015 16:27:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-7	Lab Sample ID:	180-40481-7		
Client ID:	HD-MW-75D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	19
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

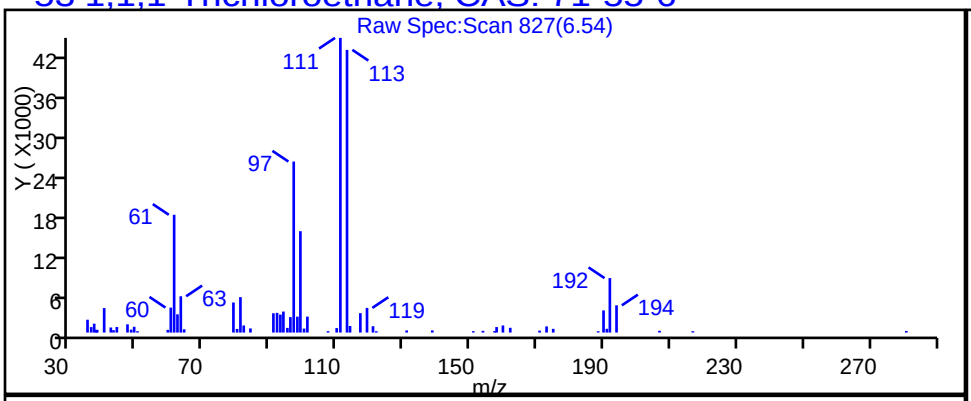


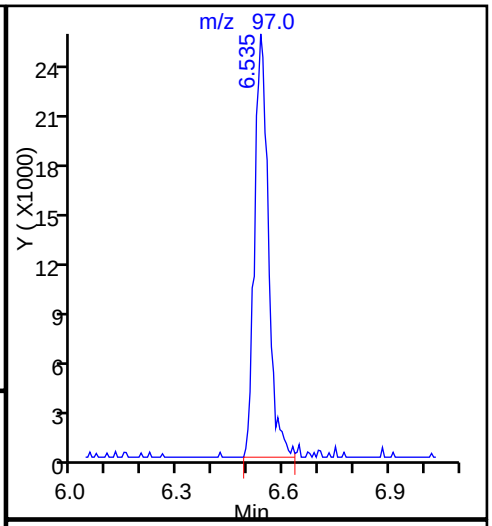
Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

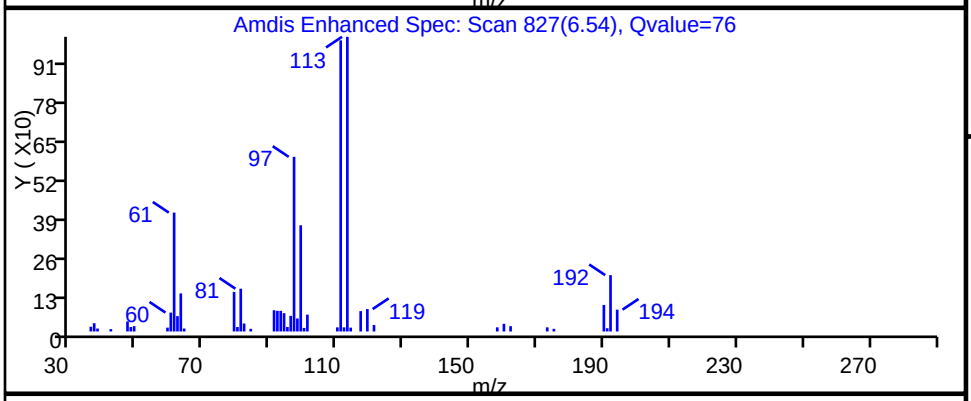
TestAmerica Pittsburgh

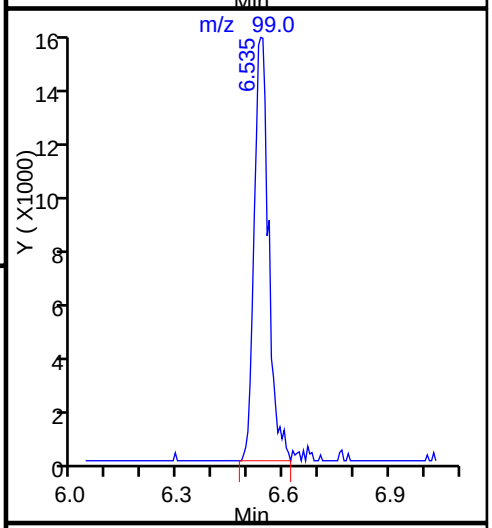
Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D				
Injection Date:	19-Jan-2015 16:27:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-C-7	Lab Sample ID:	180-40481-7		
Client ID:	HD-MW-75D-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	50.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

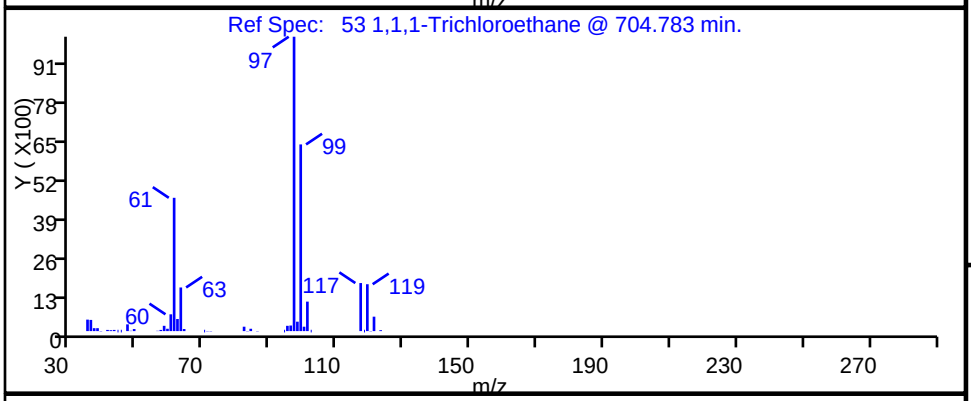
53 1,1,1-Trichloroethane, CAS: 71-55-6

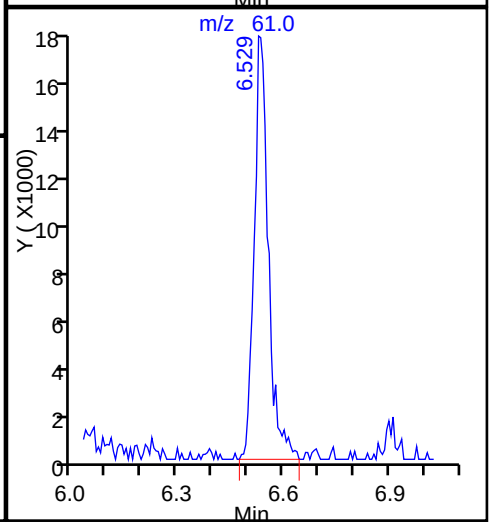


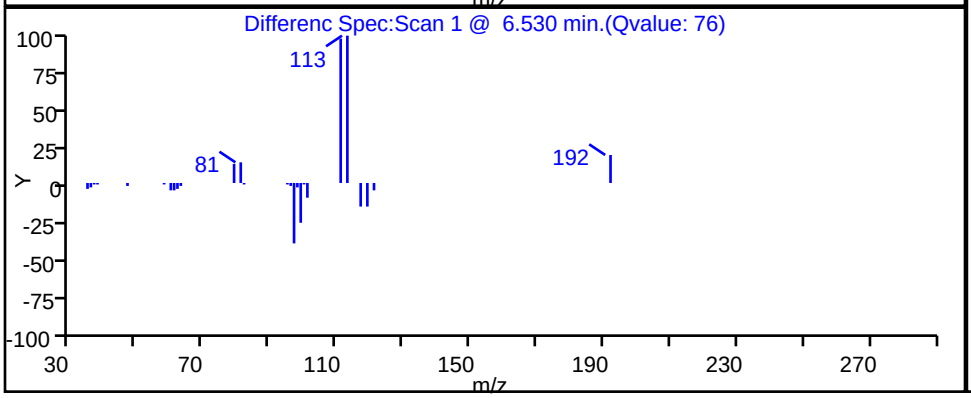












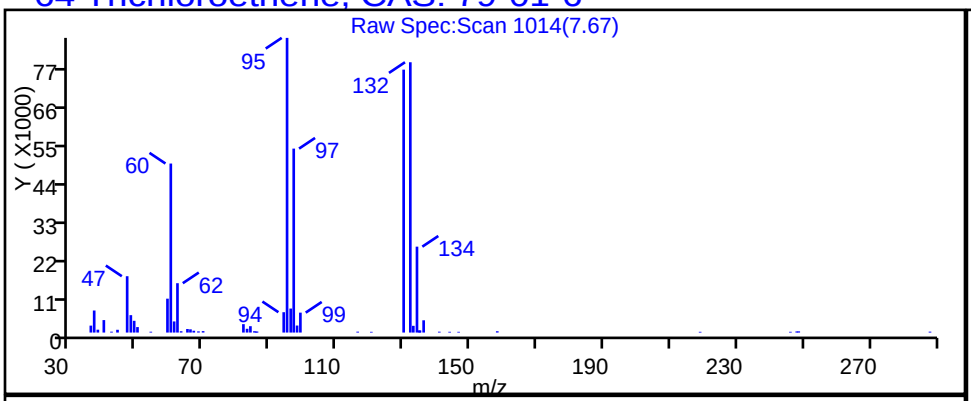
Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

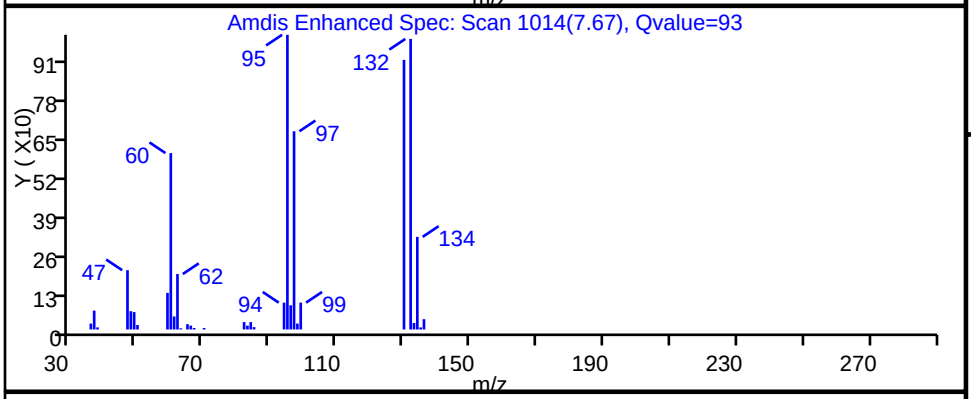
TestAmerica Pittsburgh

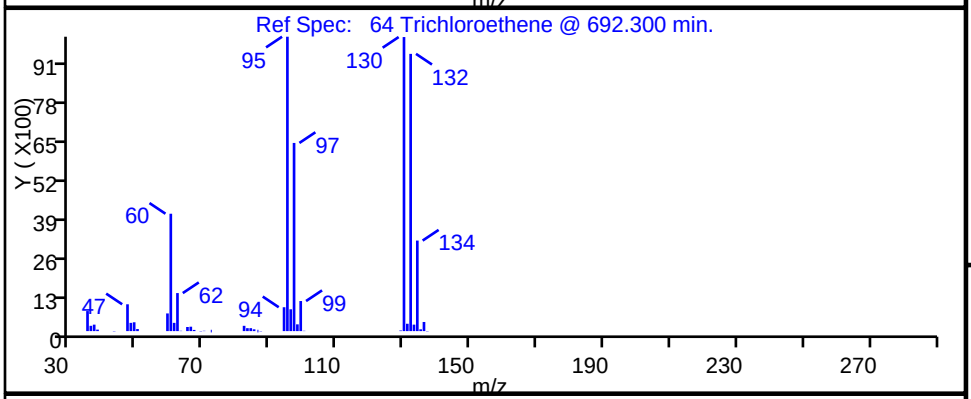
Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D

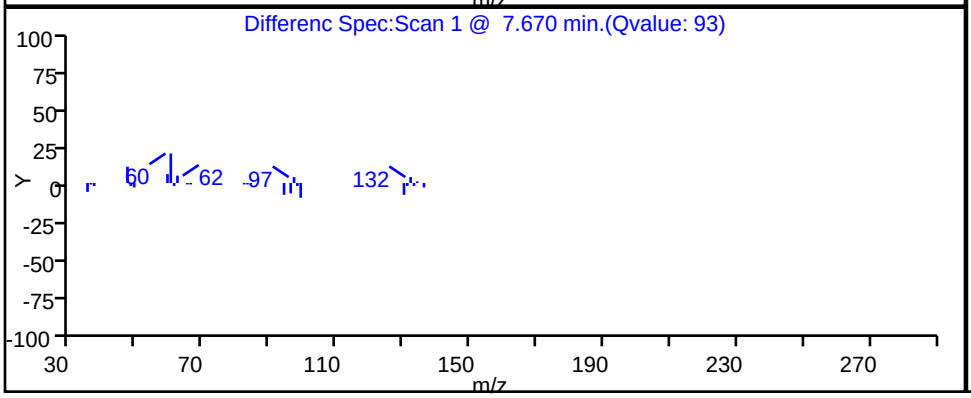
Injection Date:	19-Jan-2015 16:27:30	Instrument ID:	CHHP5
Lims ID:	180-40481-C-7	Lab Sample ID:	180-40481-7
Client ID:	HD-MW-75D-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	50.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

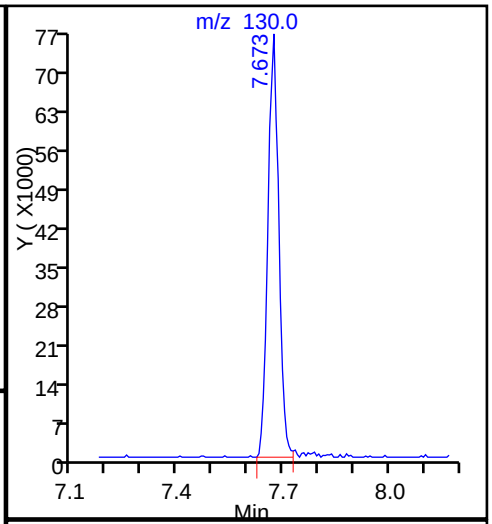
64 Trichloroethene, CAS: 79-01-6

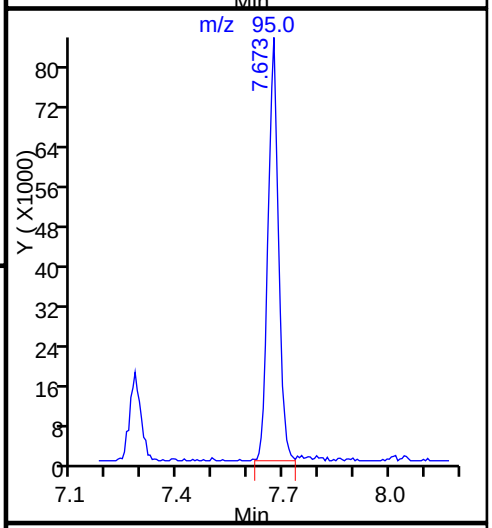


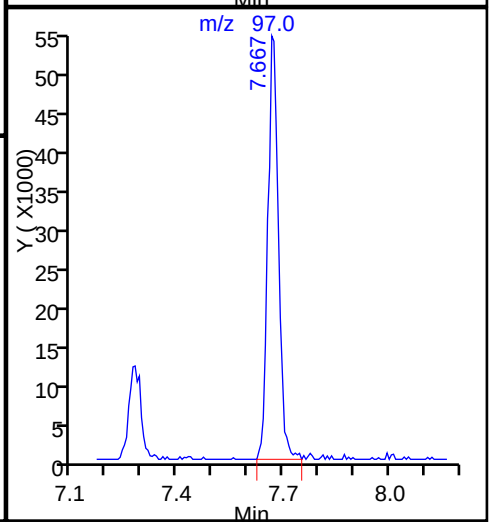












Report Date: 20-Jan-2015 07:38:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119019.D

Injection Date: 19-Jan-2015 16:27:30 Instrument ID: CHHP5

Lims ID: 180-40481-C-7 Lab Sample ID: 180-40481-7

Client ID: HD-MW-75D-0/1-0

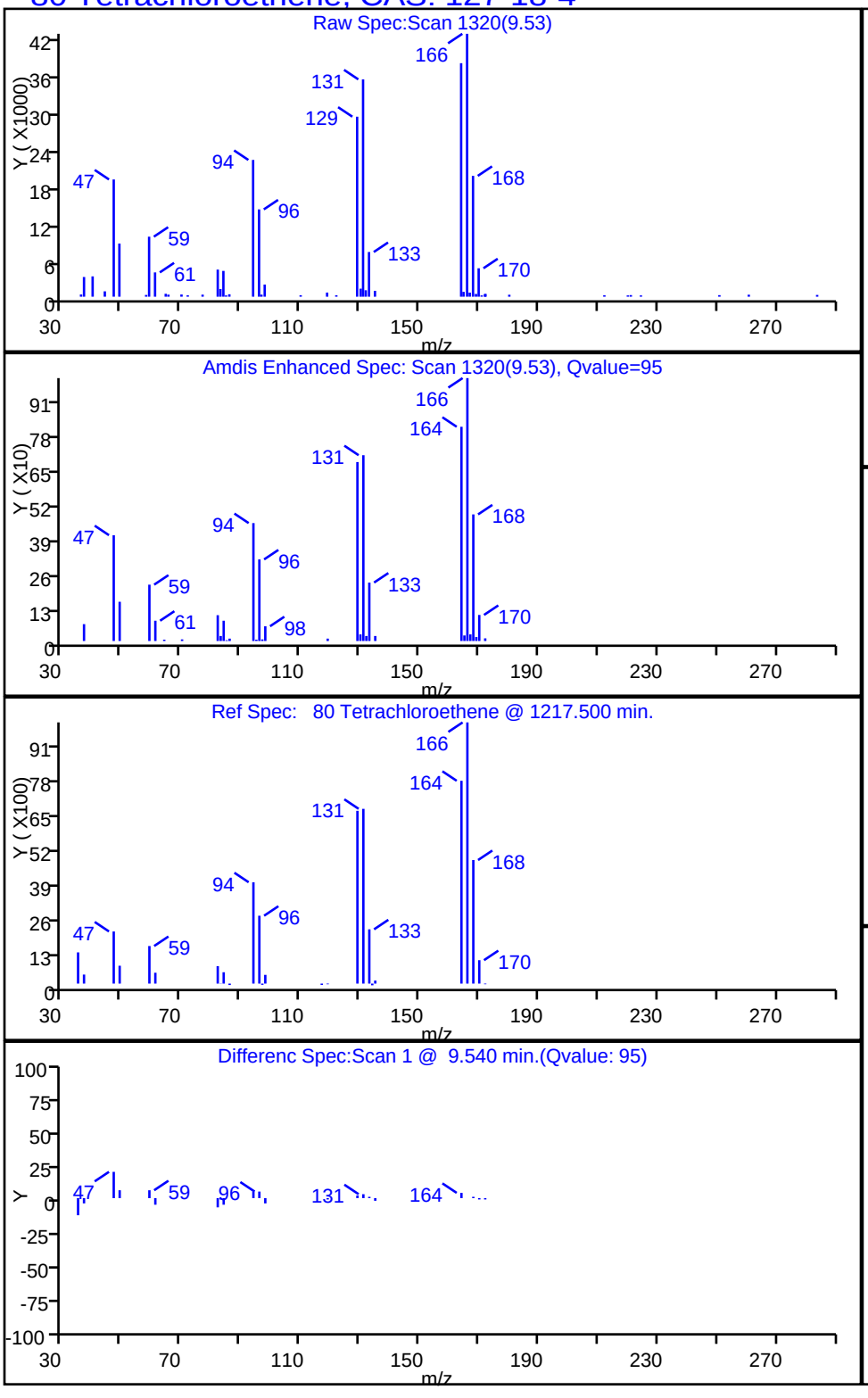
Operator ID: 001562 ALS Bottle#: 18 Worklist Smp#: 19

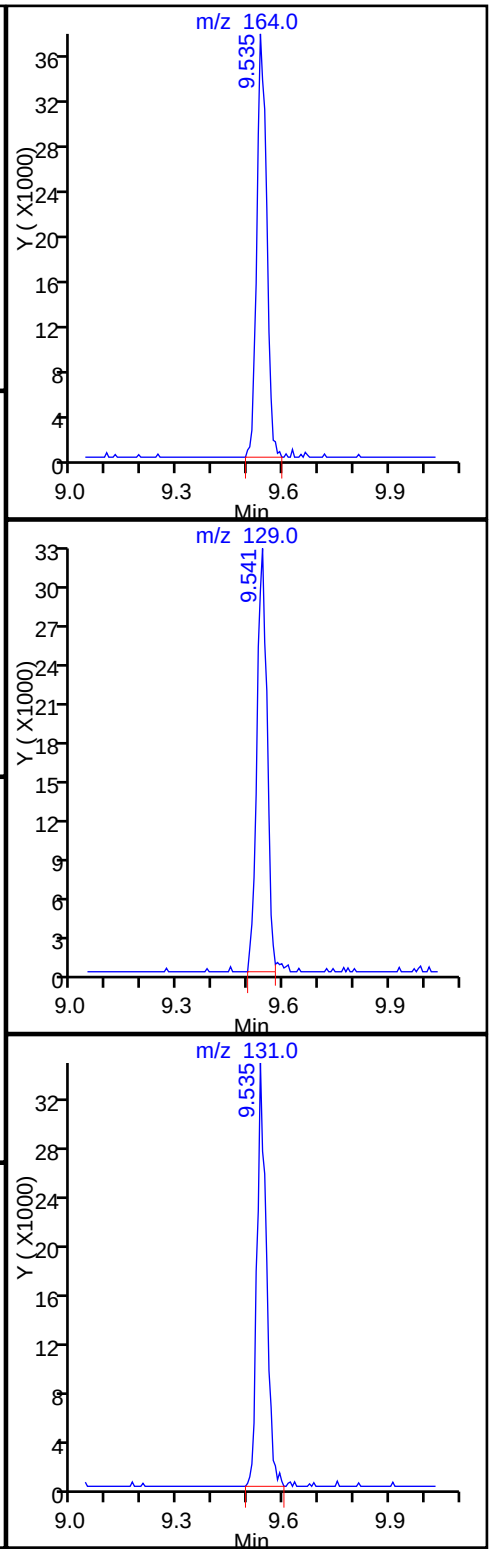
Purge Vol: 5.000 mL Dil. Factor: 50.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

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

80 Tetrachloroethene, CAS: 127-18-4





FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 | Lab Sample ID: 180-40481-8

Matrix: Water | Lab File ID: 50119020.D

Analysis Method: 8260C | Date Collected: 01/14/2015 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 01/19/2015 16:52

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.: 131060 | 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	19		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	16		13	1.5
156-59-2	cis-1,2-Dichloroethene	250		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	71		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	230		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	280		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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-40481-8

Matrix: Water Lab File ID: 50119020.D

Analysis Method: 8260C Date Collected: 01/14/2015 12:35

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 16:52

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.: 131060 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)	108		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	116		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D
Lims ID: 180-40481-E-8 Lab Sample ID: 180-40481-8
Client ID: HD-MW-37D-0/1-0
Sample Type: Client
Inject. Date: 19-Jan-2015 16:52:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 12.5000
Sample Info: 180-40481-E-8, 12.5x
Misc. Info.: 180-0005320-020
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Jan-2015 07:40:41 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: fergusond Date: 20-Jan-2015 07:40:41

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.302	4.305	-0.003	86	172838	1000.0	
*	2 Fluorobenzene (IS)	96	7.277	7.274	0.003	100	416482	50.0	
*	3 Chlorobenzene-d5	119	10.367	10.364	0.003	99	96795	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.685	12.688	-0.003	97	134685	50.0	
$	5 Dibromofluoromethane (Surr	113	6.534	6.538	-0.004	93	102444	57.8	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.897	0.002	92	156715	53.8	
$	7 Toluene-d8 (Surr)	98	8.931	8.923	0.008	96	388065	48.2	
$	8 4-Bromofluorobenzene (Surr	95	11.535	11.539	-0.004	82	143034	46.6	
	12 Chloromethane	50		1.775				ND	
	13 Vinyl chloride	62		1.908				ND	
	15 Bromomethane	94		2.261				ND	
	16 Chloroethane	64		2.401				ND	
	22 1,1-Dichloroethene	96	3.395	3.387	0.008	92	17238	7.60	
	24 Acetone	43		3.490				ND	
	26 Carbon disulfide	76		3.673				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	5.184	5.175	0.009	94	33164	6.21	
	45 cis-1,2-Dichloroethene	96	5.944	5.942	0.002	87	249482	100.5	
	46 2-Butanone (MEK)	43		5.990				ND	
	49 Chlorobromomethane	128		6.222				ND	
	52 Chloroform	83	6.352	6.343	0.009	16	1930	0.4778	M
	53 1,1,1-Trichloroethane	97	6.541	6.532	0.009	81	74910	28.6	
	56 Carbon tetrachloride	117		6.720				ND	
	58 Benzene	78		6.958				ND	
	59 1,2-Dichloroethane	62	6.997	6.988	0.009	1	1205	0.3013	
	64 Trichloroethene	130	7.672	7.669	0.003	95	204014	92.5	
	67 1,2-Dichloropropane	63		7.907				ND	
	70 1,4-Dioxane	88		8.047				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.661				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.996				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.540	9.537	0.003	94	214109	113.0	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.908				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.480				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				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:

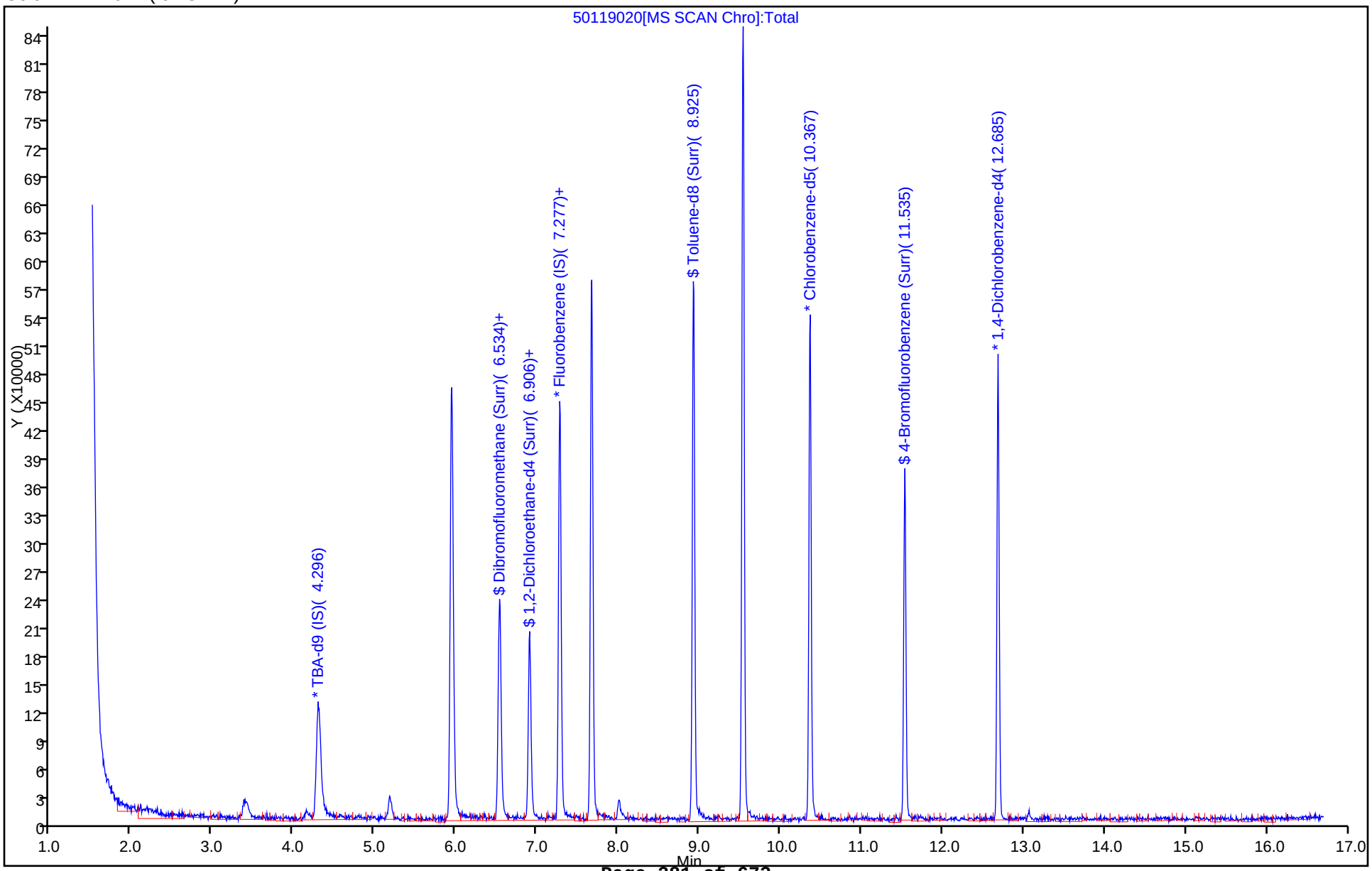
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Jan-2015 07:40:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D				
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8	Worklist Smp#:	20
Client ID:	HD-MW-37D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	12.5000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

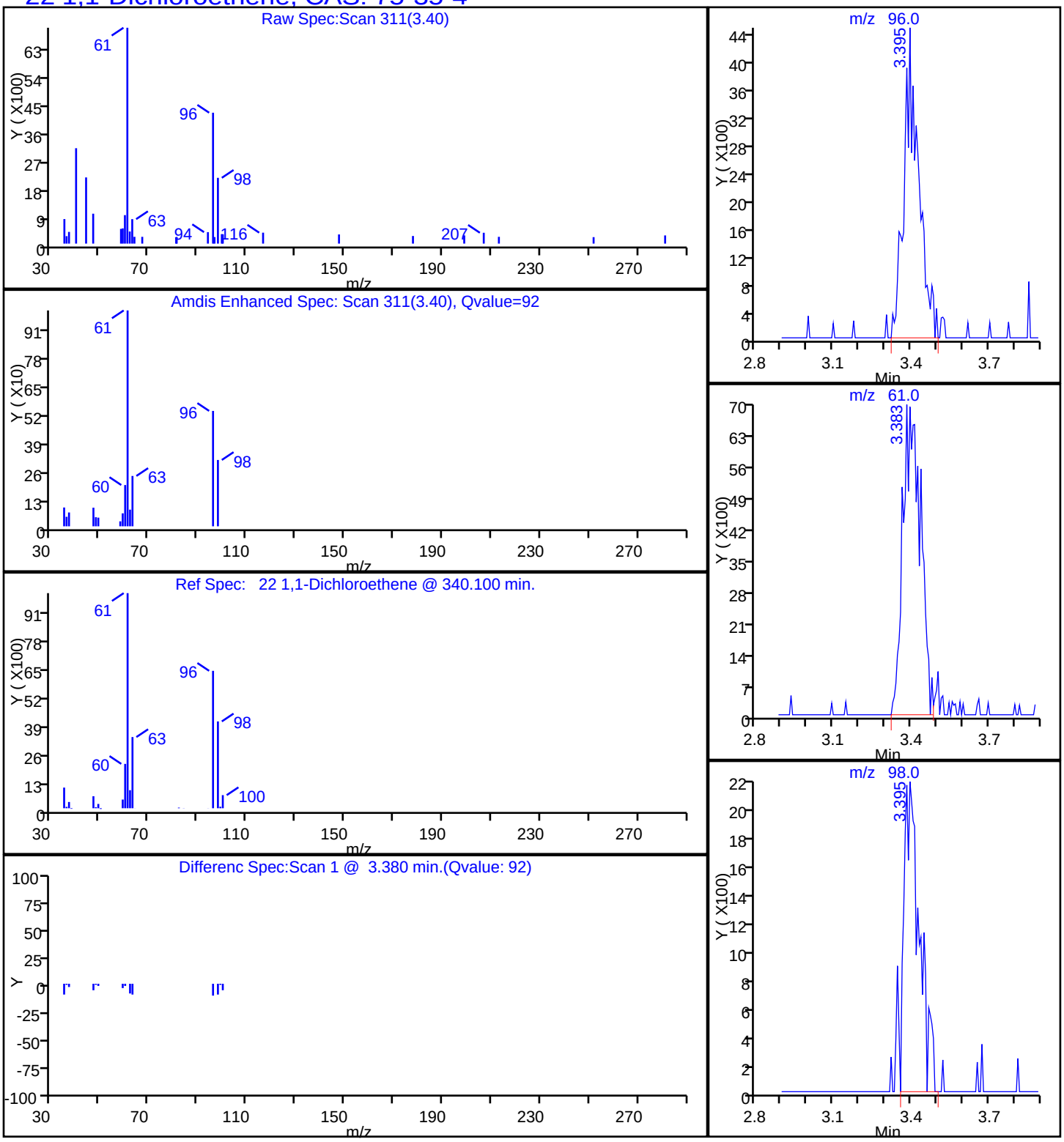


Report Date: 20-Jan-2015 07:40:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D		
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	19 Worklist Smp#: 20
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

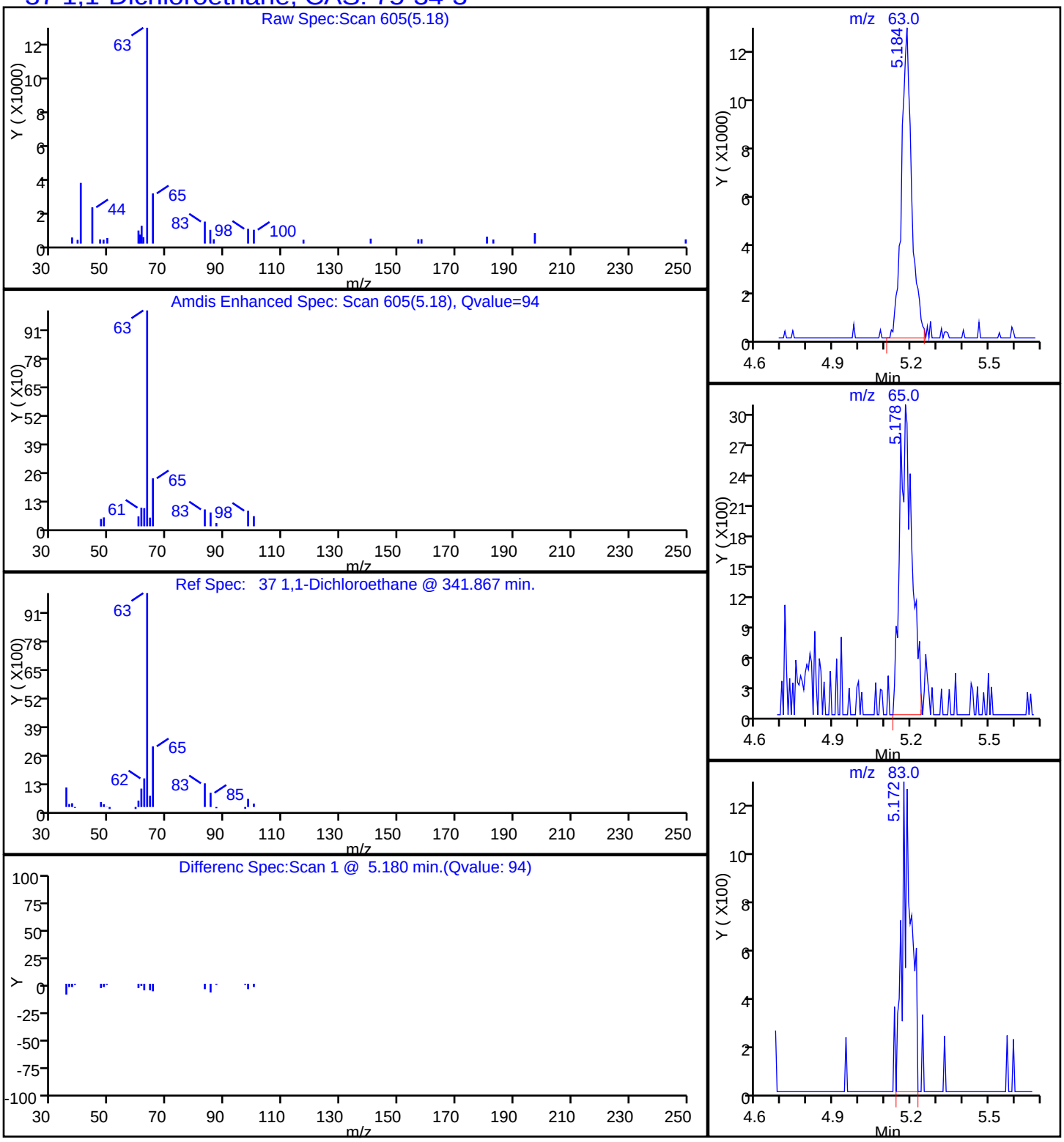


Report Date: 20-Jan-2015 07:40:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D		
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	19 Worklist Smp#: 20
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

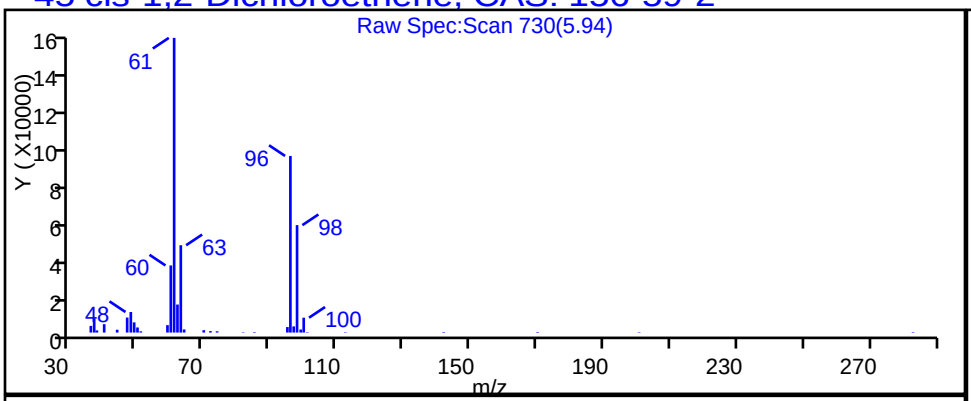


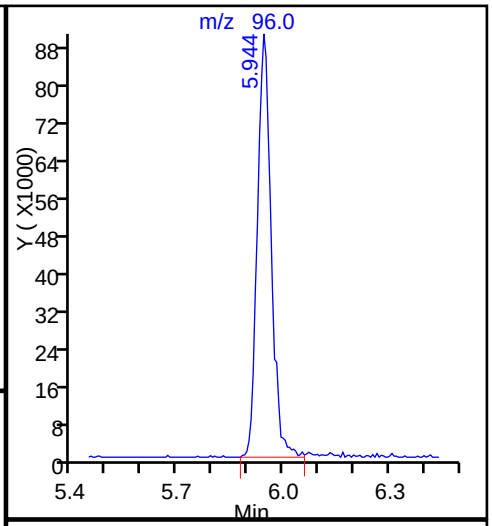
Report Date: 20-Jan-2015 07:40:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

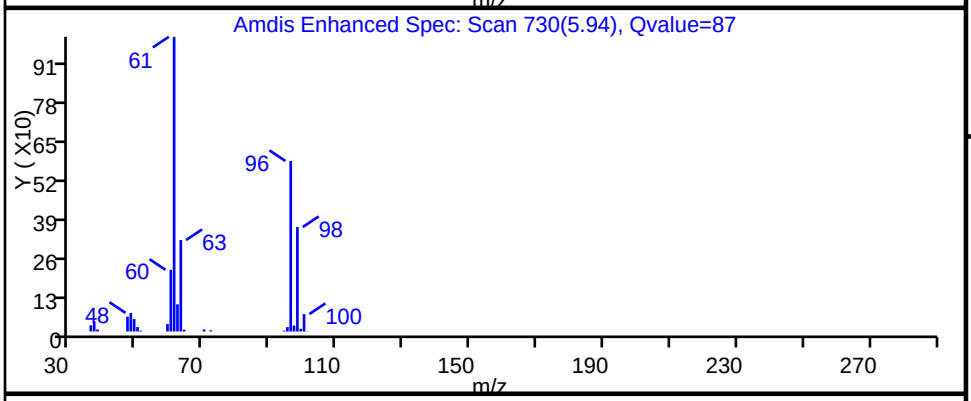
TestAmerica Pittsburgh

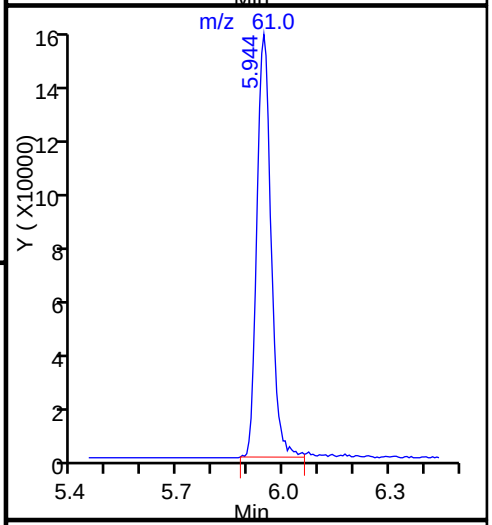
Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D				
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

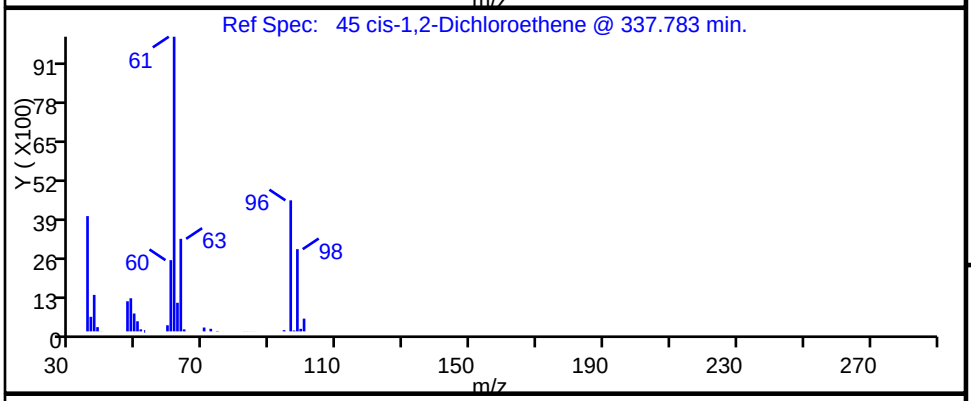
45 cis-1,2-Dichloroethene, CAS: 156-59-2

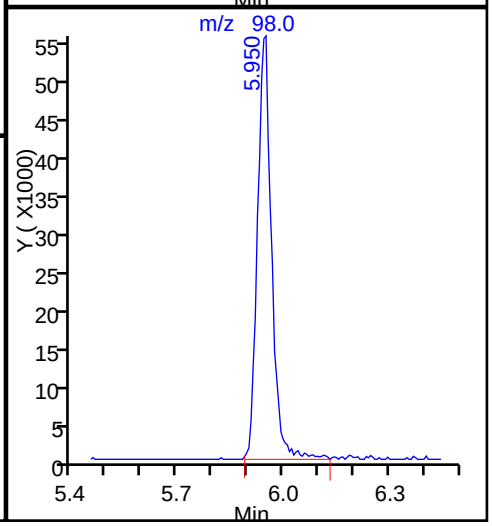


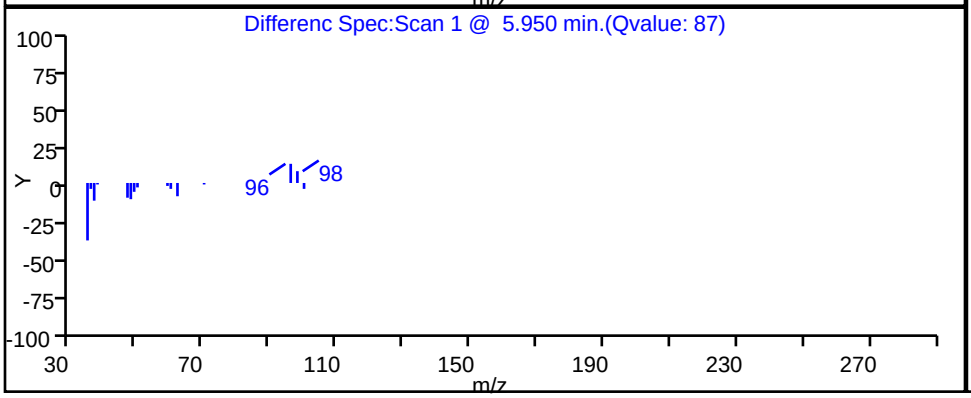












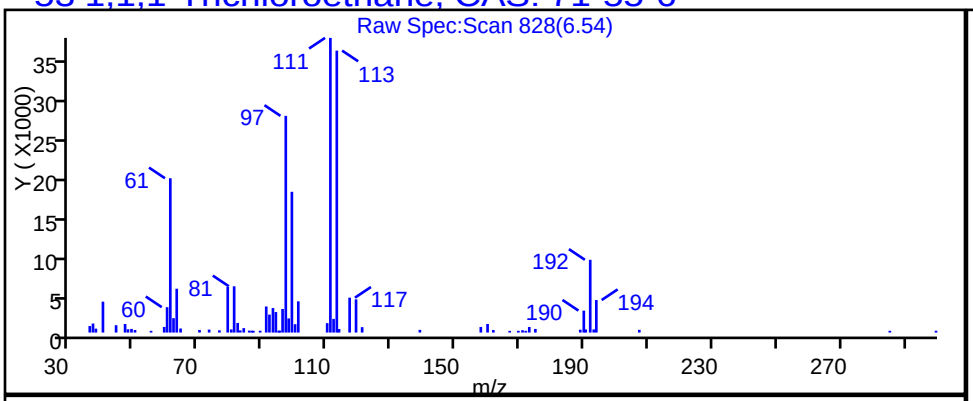
Report Date: 20-Jan-2015 07:40:41 Chrom Revision: 2.2 15-Jan-2015 13:05:58

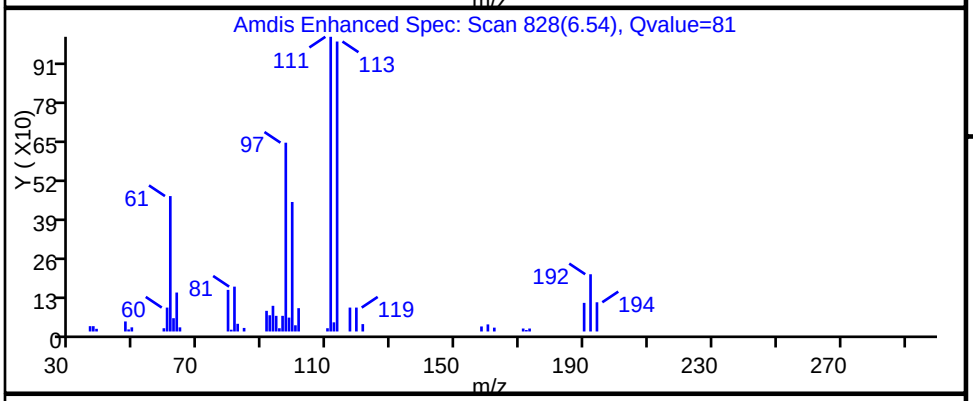
TestAmerica Pittsburgh

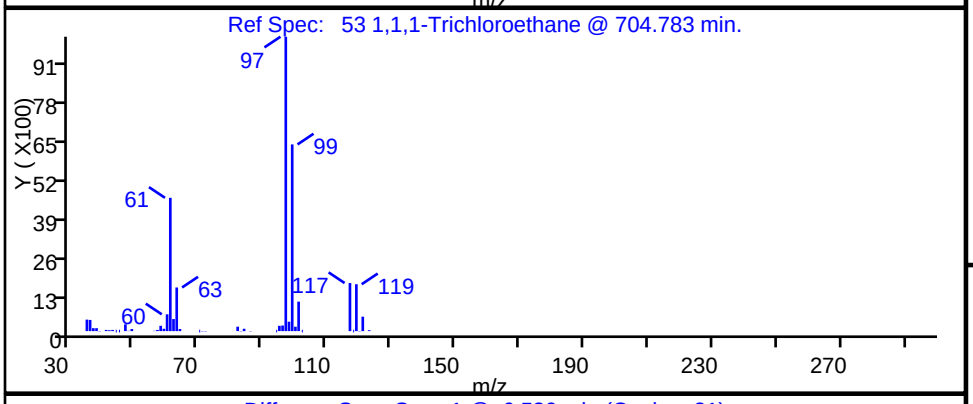
Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D

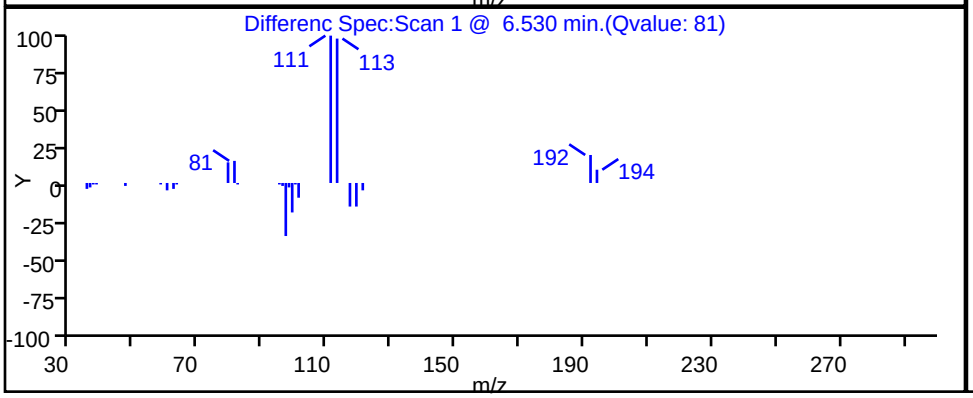
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

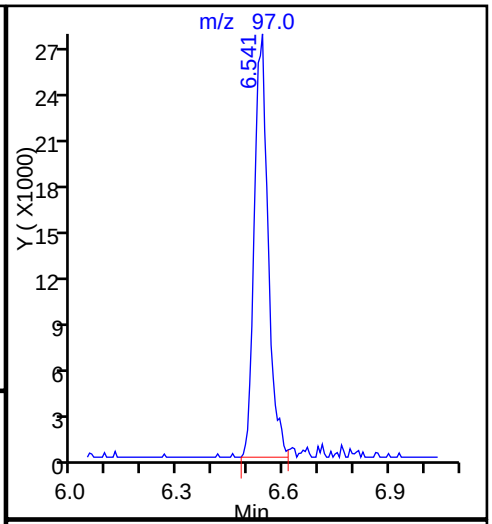
53 1,1,1-Trichloroethane, CAS: 71-55-6

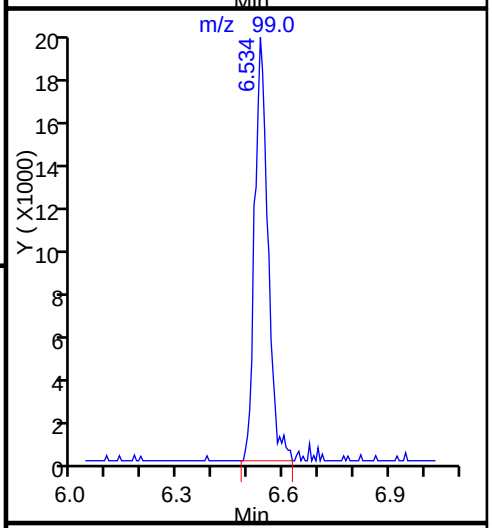


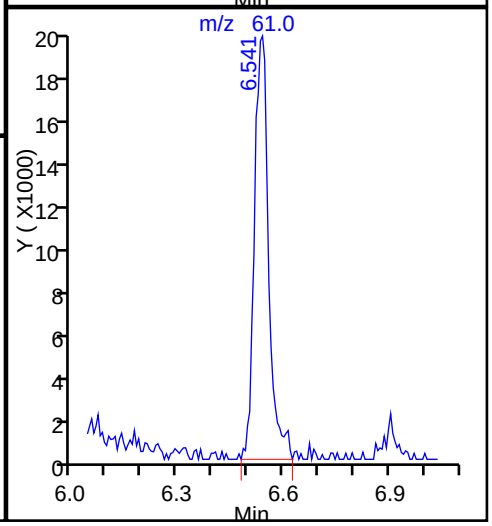












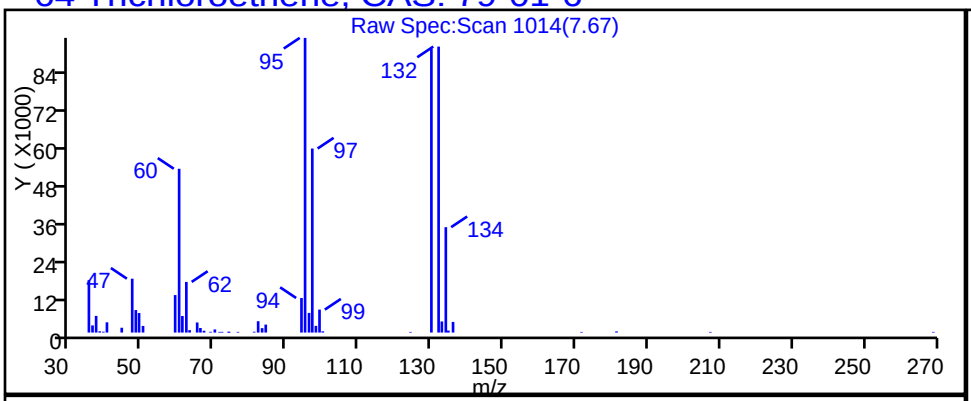
Report Date: 20-Jan-2015 07:40:42 Chrom Revision: 2.2 15-Jan-2015 13:05:58

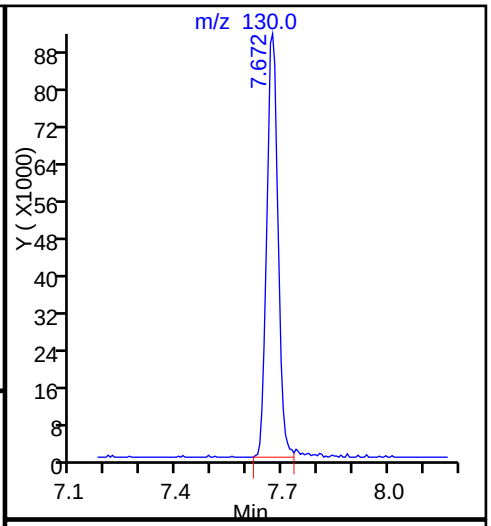
TestAmerica Pittsburgh

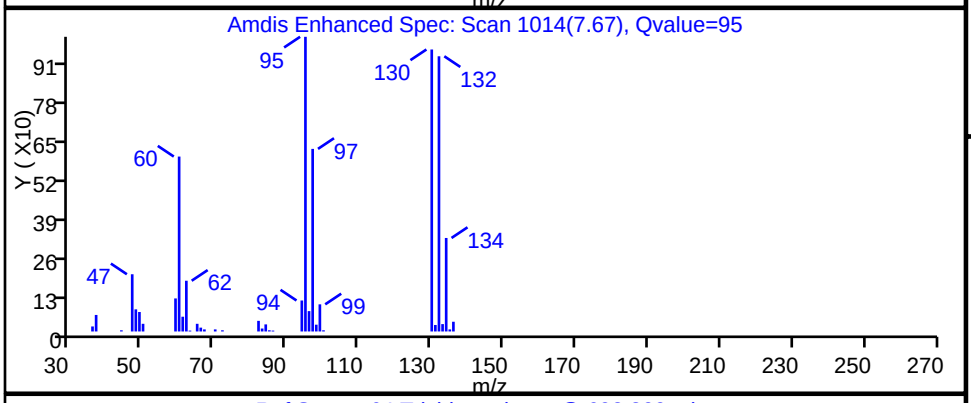
Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D

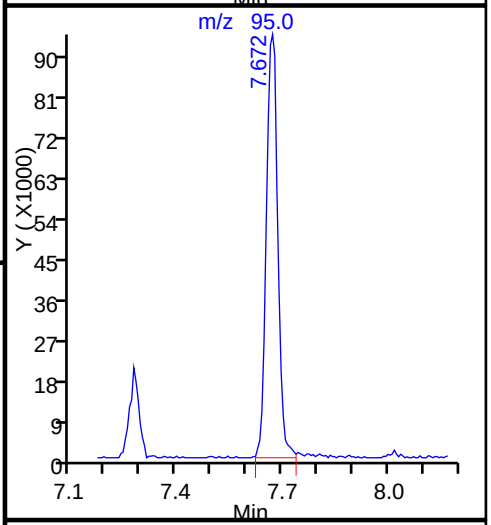
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

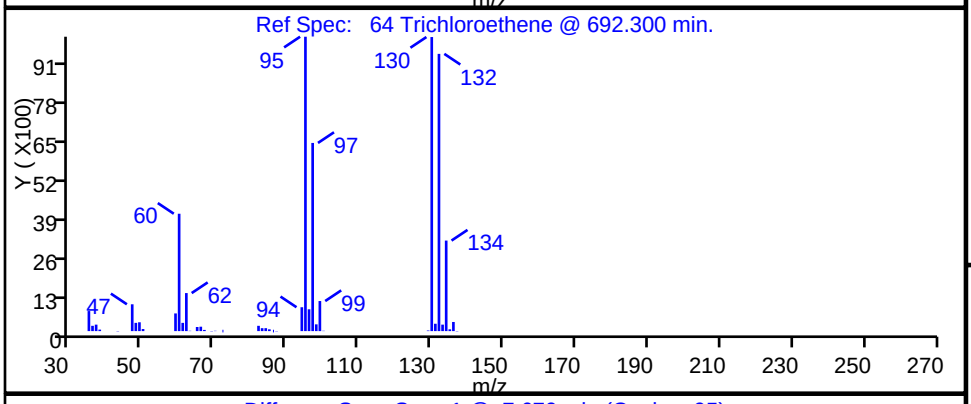
64 Trichloroethene, CAS: 79-01-6

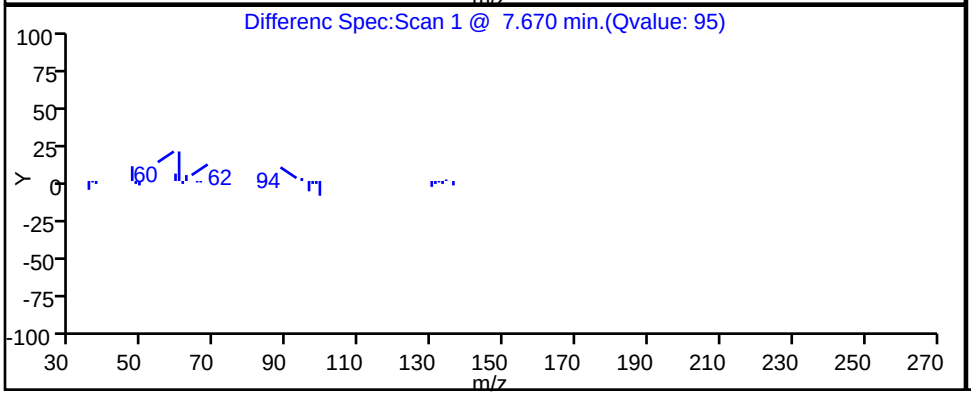


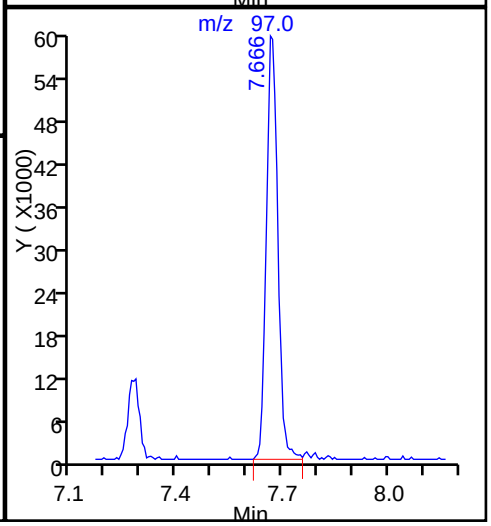












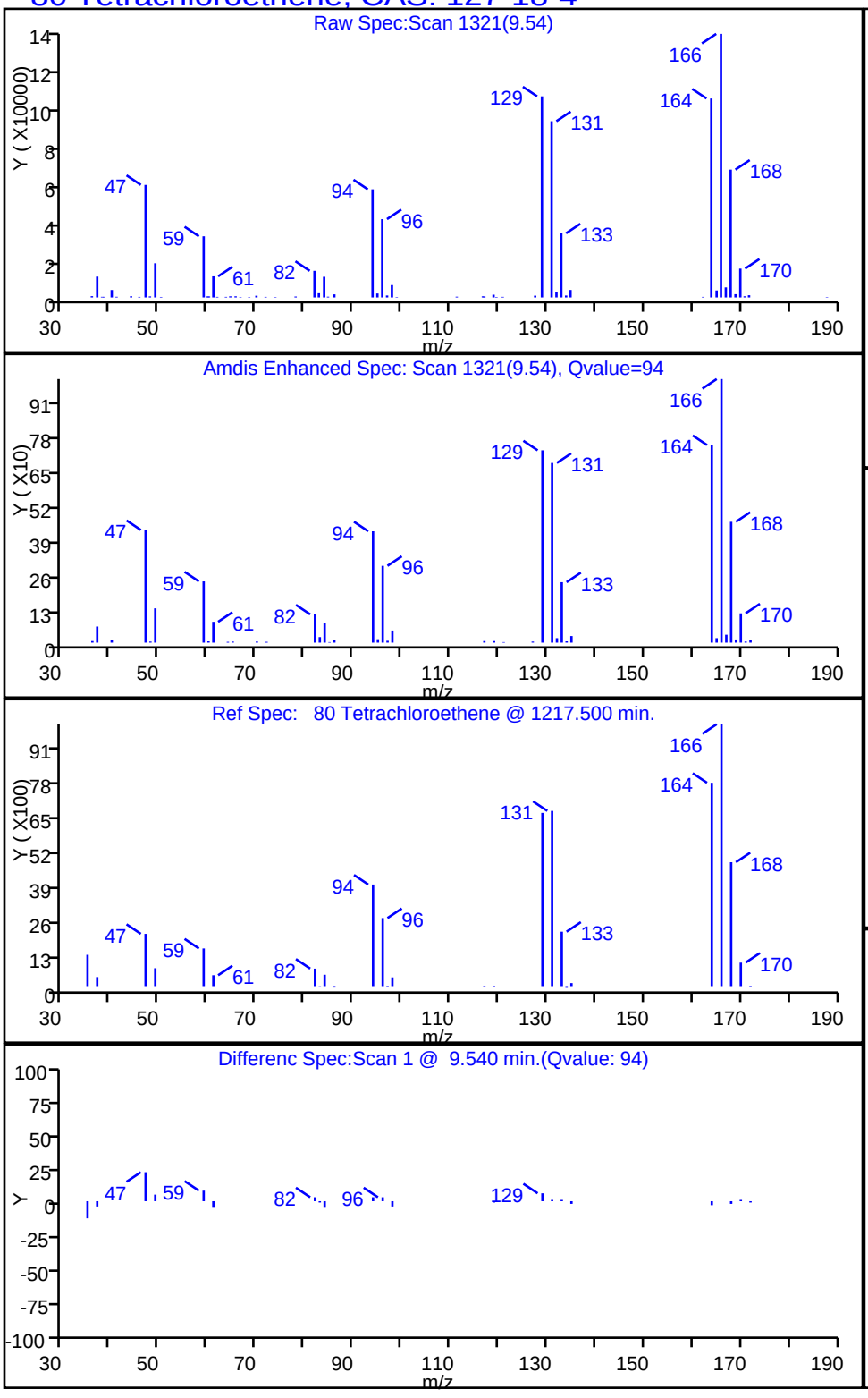
Report Date: 20-Jan-2015 07:40:42 Chrom Revision: 2.2 15-Jan-2015 13:05:58

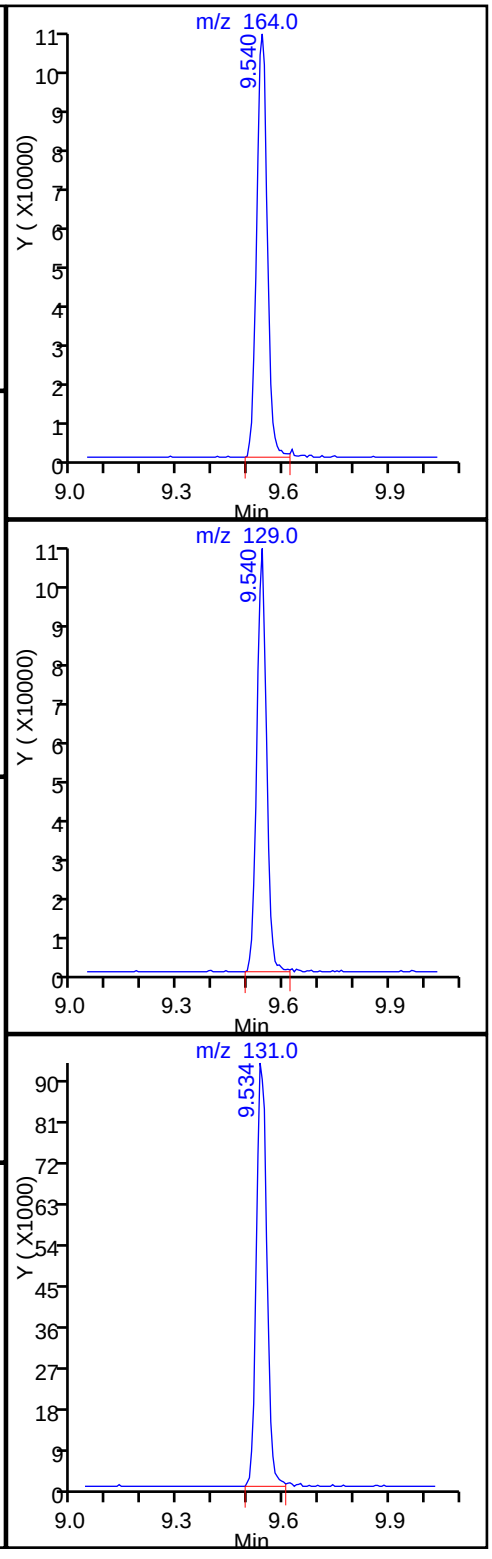
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D

Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8
Client ID:	HD-MW-37D-0/1-0		
Operator ID:	001562	ALS Bottle#:	19 Worklist Smp#: 20
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





Manual Integration/User Assign Peak Report

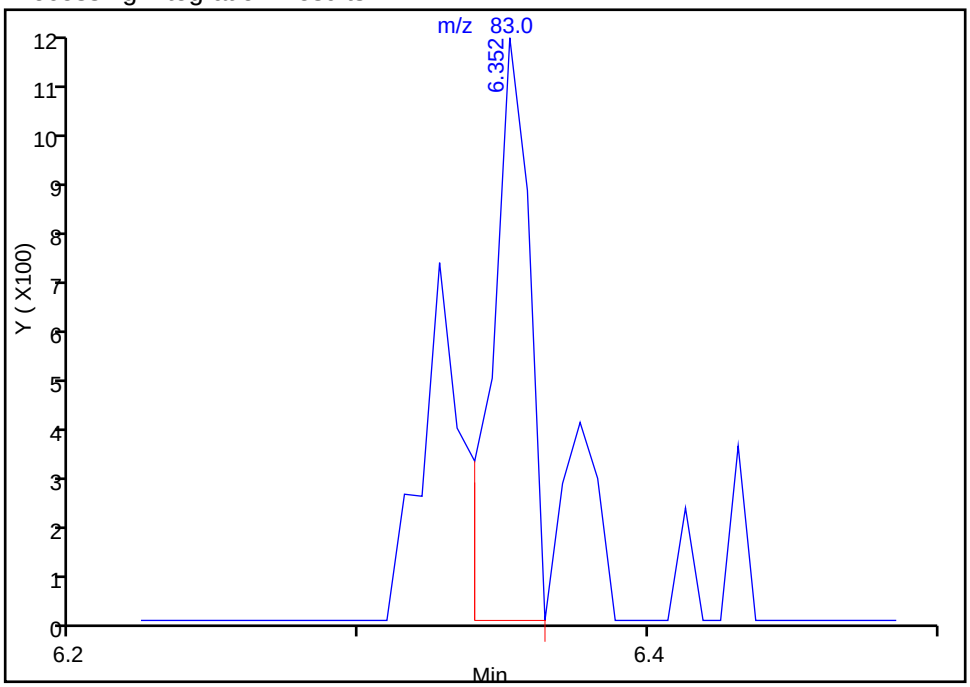
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119020.D				
Injection Date:	19-Jan-2015 16:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-E-8	Lab Sample ID:	180-40481-8		
Client ID:	HD-MW-37D-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
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		

52 Chloroform, CAS: 67-66-3

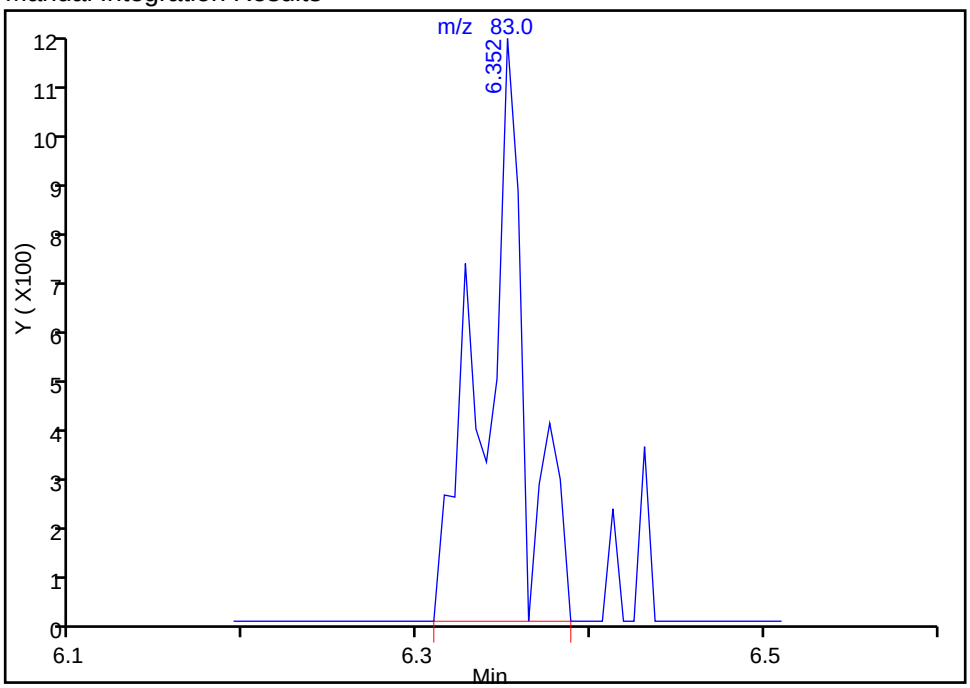
Processing Integration Results

RT: 6.35
Area: 1015
Amount: 0.251258
Amount Units: ng



Manual Integration Results

RT: 6.35
Area: 1930
Amount: 0.477761
Amount Units: ng



Reviewer: fergusond, 20-Jan-2015 07:40:41
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-QC3-0/1-2 | Lab Sample ID: 180-40481-9

Matrix: Water | Lab File ID: 50116023.D

Analysis Method: 8260C | Date Collected: 01/14/2015 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/16/2015 20:11

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.: 130947 | 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.: 180-40481-1

SDG No.:

Client Sample ID: HD-QC3-0/1-2 Lab Sample ID: 180-40481-9

Matrix: Water Lab File ID: 50116023.D

Analysis Method: 8260C Date Collected: 01/14/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 20:11

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.: 130947 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	115		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116023.D
Lims ID: 180-40481-A-9 Lab Sample ID: 180-40481-9
Client ID: HD-QC3-0/1-2
Sample Type: Client
Inject. Date: 16-Jan-2015 20:11:30 ALS Bottle#: 19 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-40481-A-9
Misc. Info.: 180-0005307-023
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 07:50:11 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 07:50:11

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.290	4.302	-0.012	87	151880	1000.0	
*	2 Fluorobenzene (IS)	96	7.277	7.271	0.006	100	420621	50.0	
*	3 Chlorobenzene-d5	119	10.367	10.361	0.006	98	98087	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.679	12.685	-0.006	99	128434	50.0	
$	5 Dibromofluoromethane (Surr	113	6.529	6.522	0.007	92	103147	57.6	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.900	0.006	92	164720	56.0	
$	7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	96	392936	48.2	
$	8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	83	144559	46.5	
	12 Chloromethane	50		1.777				ND	
	13 Vinyl chloride	62		1.905				ND	
	15 Bromomethane	94		2.252				ND	
	16 Chloroethane	64		2.386				ND	
	22 1,1-Dichloroethene	96		3.371				ND	
	24 Acetone	43	3.481	3.493	-0.012	1	4284	3.25	M
	26 Carbon disulfide	76		3.669				ND	
	31 Methylene Chloride	84		4.150				ND	
	33 Acrylonitrile	53		4.545				ND	
	34 trans-1,2-Dichloroethene	96		4.570				ND	
	35 Methyl tert-butyl ether	73		4.594				ND	
	37 1,1-Dichloroethane	63		5.172				ND	
	45 cis-1,2-Dichloroethene	96		5.938				ND	
	46 2-Butanone (MEK)	43		5.987				ND	
	49 Chlorobromomethane	128		6.230				ND	
	52 Chloroform	83		6.346				ND	
	53 1,1,1-Trichloroethane	97		6.535				ND	
	56 Carbon tetrachloride	117		6.717				ND	
	58 Benzene	78		6.954				ND	
	59 1,2-Dichloroethane	62		6.985				ND	
	64 Trichloroethene	130		7.666				ND	
	67 1,2-Dichloropropane	63		7.897				ND	
	70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83	8.189	8.195	-0.006	18	1349	0.4952	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.986				ND	
77 trans-1,3-Dichloropropene	75		9.217				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164		9.534				ND	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.905				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		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.024				ND	
94 Bromoform	173		11.207				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:

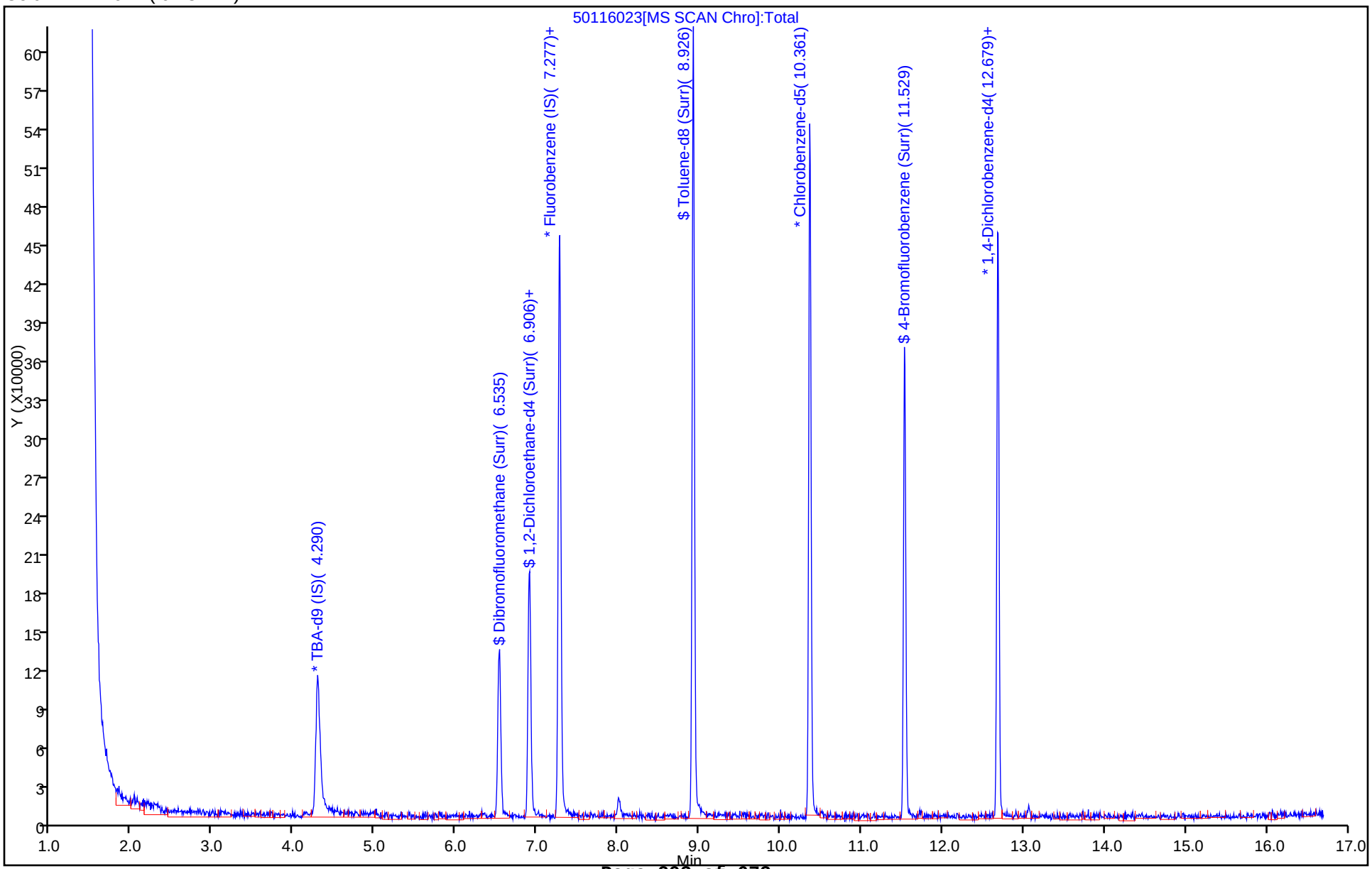
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 19-Jan-2015 07:50:11 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116023.D				
Injection Date:	16-Jan-2015 20:11:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40481-A-9	Lab Sample ID:	180-40481-9	Worklist Smp#:	23
Client ID:	HD-QC3-0/1-2				
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

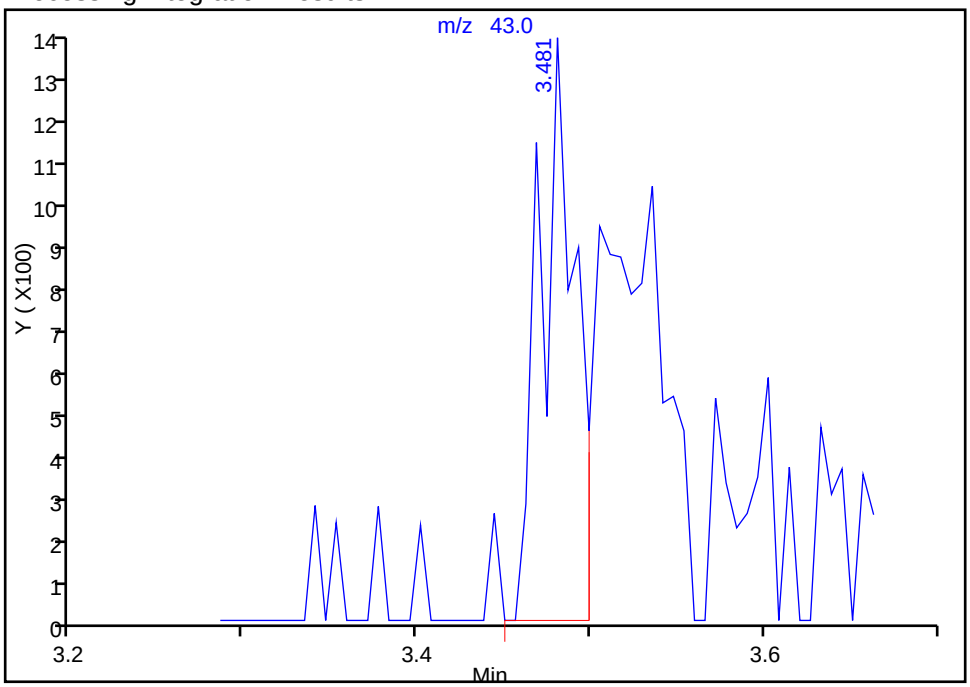
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116023.D				
Injection Date:	16-Jan-2015 20:11:30	Instrument ID:	CHHP5		
Lims ID:	180-40481-A-9	Lab Sample ID:	180-40481-9		
Client ID:	HD-QC3-0/1-2				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	23
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

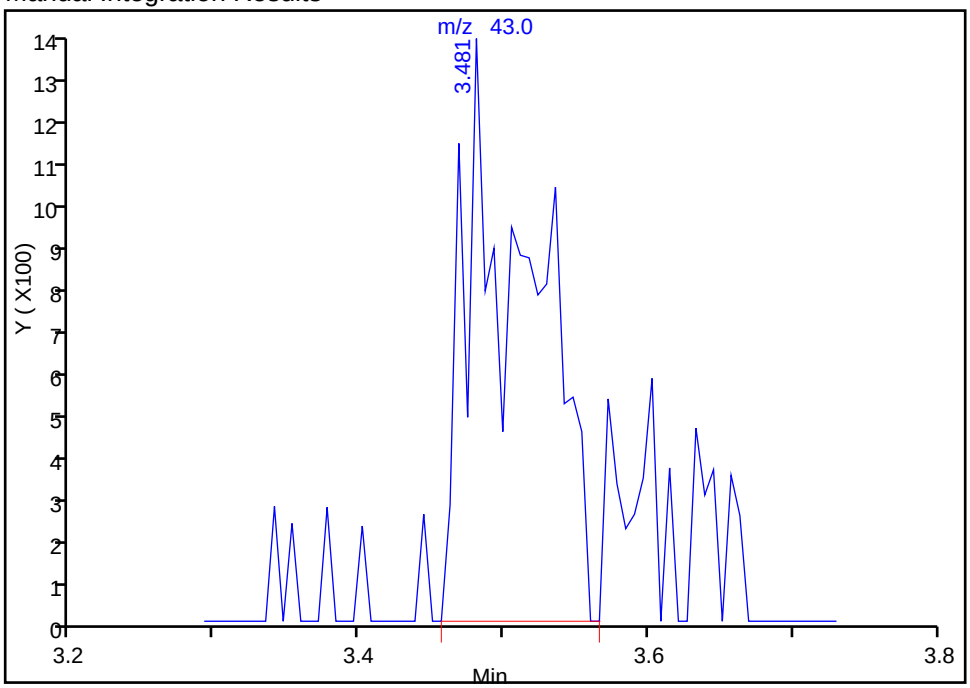
Processing Integration Results

RT: 3.48
Response: 1900
Amount: 1.440562



Manual Integration Results

RT: 3.48
Response: 4284
Amount: 3.248087



Reviewer: fergusond, 19-Jan-2015 07:50:11
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-128329/7	51215007.D
Level 2	IC 180-128329/8	51215008.D
Level 3	ICIS 180-128329/9	51215009.D
Level 4	IC 180-128329/10	51215010.D
Level 5	IC 180-128329/11	51215011.D
Level 6	IC 180-128329/12	51215012.D
Level 7	IC 180-128329/13	51215013.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 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3062 0.3035	0.3007 0.2973	0.3096	0.2868	0.2945	Ave		0.2998			0.1000	2.6		20.0			
Chloromethane	0.6637 0.5790	0.6196 0.5701	0.5840	0.5592	0.5646	Ave		0.5915			0.1000	6.3		20.0			
Vinyl chloride	0.4632 0.4075	0.4060 0.3966	0.3929	0.3822	0.3944	Ave		0.4061			0.1000	6.5		20.0			
1,3-Butadiene	0.6799 0.5615	0.6016 0.5472	0.5886	0.5249	0.5423	Ave		0.5780			0.0100	9.0		20.0			
Bromomethane	0.1497 0.1101	0.1243 0.1130	0.1171	0.1203	0.1157	Ave		0.1215			0.0500	11.0		20.0			
Chloroethane	0.2297 0.1928	0.2011 0.1991	0.1998	0.1915	0.1934	Ave		0.2011			0.0500	6.6		20.0			
Dichlorofluoromethane	0.4259 0.4011	0.4197 0.3917	0.3930	0.3904	0.3776	Ave		0.3999			0.0100	4.3		20.0			
Trichlorofluoromethane	0.2464 0.2726	0.2465 0.2680	0.2432	0.2385	0.2579	Ave		0.2533			0.1000	5.2		20.0			
Ethyl ether	0.4123 0.3465	0.3799 0.3621	0.3539	0.3391	0.3271	Ave		0.3601			0.0100	7.9		20.0			
Acrolein	0.0537 0.0556	0.0508 0.0567	0.0535	0.0536	0.0532	Ave		0.0539			0.0100	3.5		20.0			
1,1-Dichloroethene	0.2959 0.2801	0.2681 0.2703	0.2749	0.2562	0.2610	Ave		0.2724			0.1000	4.8		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3093 0.2836	0.2714 0.2795	0.2696	0.2530	0.2643	Ave		0.2758			0.1000	6.5		20.0			
Acetone	0.1576 0.1595	0.1627 0.1621	0.1605	0.1483	0.1467	Ave		0.1568			0.0500	4.2		20.0			
Iodomethane	0.3546 0.3562	0.3422 0.3744	0.3464	0.3310	0.3371	Ave		0.3488			0.0100	4.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

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 4	LVL 5		B	M1	M2								
Carbon disulfide	0.5435 0.5884	0.4817 0.6028	0.4812	0.4815	0.5166	Ave		0.5280			0.1000	9.8		20.0			
Allyl chloride	0.1418 0.1715	0.1437 0.1733	0.1474	0.1478	0.1505	Ave		0.1537			0.0100	8.5		20.0			
Methyl acetate	0.4835 0.4434	0.4663 0.4598	0.4584	0.4454	0.4301	Ave		0.4553			0.1000	3.8		20.0			
Methylene Chloride	0.6145 0.3099	0.3763 0.3145	0.3247	0.3071	0.3044	Lin2	1.5927	0.2976			0.1000				0.9990		0.9900
tert-Butyl alcohol	1.3299 1.4355	1.3352 1.3666	1.3666	1.2618	1.2625	Ave		1.3369			0.0100	4.6		20.0			
Acrylonitrile	0.2160 0.2046	0.2155 0.2150	0.2130	0.2061	0.1987	Ave		0.2098			0.0100	3.2		20.0			
trans-1,2-Dichloroethene	0.2881 0.2757	0.2830 0.2741	0.2762	0.2705	0.2626	Ave		0.2757			0.1000	3.0		20.0			
Methyl tert-butyl ether	0.7303 0.7077	0.7203 0.7970	0.6858	0.6818	0.6790	Ave		0.7145			0.1000	5.8		20.0			
Hexane	0.8242 0.6885	0.6899 0.6819	0.6853	0.6457	0.6701	Ave		0.6980			0.0100	8.3		20.0			
1,1-Dichloroethane	0.6058 0.6436	0.6659 0.6663	0.6506	0.6346	0.6232	Ave		0.6414			0.2000	3.5		20.0			
Vinyl acetate	0.5940 0.6460	0.6125 0.6680	0.5955	0.5898	0.5998	Ave		0.6151			0.0100	4.9		20.0			
2,2-Dichloropropane	0.1514 0.1792	0.1813 0.1765	0.1728	0.1600	0.1691	Ave		0.1700			0.0100	6.4		20.0			
cis-1,2-Dichloroethene	0.3032 0.3027	0.3003 0.3109	0.2942	0.2891	0.2862	Ave		0.2981			0.1000	2.9		20.0			
2-Butanone (MEK)	0.2430 0.2534	0.2496 0.2673	0.2377	0.2336	0.2418	Ave		0.2466			0.0500	4.6		20.0			
Bromochloromethane	0.1229 0.1250	0.1272 0.1313	0.1241	0.1248	0.1151	Ave		0.1243			0.0100	4.0		20.0			
Tetrahydrofuran	0.2188 0.1877	0.1834 0.1953	0.1826	0.1724	0.1728	Ave		0.1876			0.0100	8.5		20.0			
Chloroform	0.5156 0.4784	0.4964 0.4915	0.4805	0.4705	0.4620	Ave		0.4850			0.2000	3.7		20.0			
1,1,1-Trichloroethane	0.3042 0.3279	0.3143 0.3287	0.3041	0.3089	0.3147	Ave		0.3147			0.1000	3.2		20.0			
Cyclohexane	0.8681 0.9030	0.9043 0.8876	0.8981	0.8552	0.8740	Ave		0.8843			0.1000	2.1		20.0			
Carbon tetrachloride	0.2572 0.2959	0.2558 0.2959	0.2737	0.2633	0.2713	Ave		0.2733			0.1000	6.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

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 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4048 0.4058	0.4019 0.4038	0.3999	0.3729	0.3899	Ave		0.3970			0.0100	3.0		20.0			
Isobutyl alcohol	0.0138 0.0157	0.0134 0.0168	0.0127	0.0135	0.0146	Ave		0.0144			0.0100	10.0		20.0			
Benzene	1.3519 1.1913	1.3153 1.2141	1.2337	1.1932	1.1554	Ave		1.2364			0.5000	5.8		20.0			
1,2-Dichloroethane	0.4692 0.4760	0.4989 0.4961	0.4921	0.4756	0.4530	Ave		0.4801			0.1000	3.4		20.0			
n-Heptane	0.7022 0.7243	0.7478 0.7132	0.7130	0.6587	0.6959	Ave		0.7079			0.0100	3.9		20.0			
Trichloroethene	0.2608 0.2714	0.2702 0.2689	0.2744	0.2530	0.2543	Ave		0.2647			0.2000	3.3		20.0			
Methylcyclohexane	0.4718 0.5254	0.4987 0.5263	0.5179	0.4936	0.5135	Ave		0.5067			0.1000	3.9		20.0			
1,2-Dichloropropane	0.3614 0.3820	0.3824 0.3991	0.3831	0.3789	0.3761	Ave		0.3804			0.1000	2.9		20.0			
Dibromomethane	0.1574 0.1588	0.1585 0.1657	0.1560	0.1528	0.1490	Ave		0.1569			0.0100	3.3		20.0			
1,4-Dioxane	0.0018 0.0031	0.0029 0.0032	0.0030	0.0030	0.0030	Ave		0.0028		*	0.0100	17.0		20.0			
Bromodichloromethane	0.3038 0.3401	0.3260 0.3569	0.3126	0.3150	0.3123	Ave		0.3238			0.2000	5.8		20.0			
cis-1,3-Dichloropropene	0.3050 0.4061	0.3383 0.4319	0.3563	0.3735	0.3754	Ave		0.3695			0.2000	11.0		20.0			
4-Methyl-2-pentanone (MIBK)	2.0070 2.0571	2.2983 2.1625	2.1794	2.1474	2.2651	Ave		2.1596			0.1000	4.8		20.0			
Toluene	6.0359 4.7325	5.9162 4.6763	5.4579	5.1255	5.2161	Ave		5.3086			0.4000	10.0		20.0			
trans-1,3-Dichloropropene	1.1102 1.3080	1.1630 1.3468	1.1734	1.1997	1.3019	Ave		1.2290			0.1000	7.3		20.0			
Ethyl methacrylate	1.1947 1.4902	1.5172 1.6056	1.4384	1.4484	1.5508	Ave		1.4636			0.0100	9.0		20.0			
1,1,2-Trichloroethane	1.1555 0.9528	1.1466 0.9887	1.0173	1.0002	1.0303	Ave		1.0416			0.1000	7.6		20.0			
Tetrachloroethene	1.2291 0.8845	1.0292 0.8744	0.9840	0.9051	0.9464	Ave		0.9790			0.2000	13.0		20.0			
1,3-Dichloropropane	2.2033 1.8410	2.2105 1.8880	1.9789	1.9418	1.9816	Ave		2.0065			0.0100	7.3		20.0			
2-Hexanone	1.4578 1.7305	1.8196 1.8071	1.8111	1.7292	1.7458	Ave		1.7287			0.1000	7.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

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 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.6473 0.7990	0.7489 0.8288	0.7622	0.7731	0.8014	Ave		0.7658			0.1000	7.7		20.0			
1,2-Dibromoethane (EDB)	0.9405 0.9287	1.0364 0.9768	0.9830	0.9294	0.9669	Ave		0.9660			0.1000	4.0		20.0			
3-Chlorobenzotrifluoride	1.9305 1.6427	1.8876 1.6220	1.8725	1.5530	1.7078	Ave		1.7451			0.0100	8.6		20.0			
Chlorobenzene	3.5159 2.9720	3.6049 2.9950	3.2970	3.0280	3.1899	Ave		3.2289			0.5000	7.9		20.0			
4-Chlorobenzotrifluoride	1.7156 1.5705	1.7902 1.5099	1.7285	1.4987	1.6016	Ave		1.6307			0.0100	7.0		20.0			
1,1,1,2-Tetrachloroethane	1.0970 0.9306	1.0515 0.9664	0.9591	0.9304	0.9598	Ave		0.9850			0.0100	6.5		20.0			
Ethylbenzene	1.8648 1.7480	2.0129 1.7278	1.8616	1.7465	1.8341	Ave		1.8280			0.1000	5.5		20.0			
m-Xylene & p-Xylene	2.2615 2.0929	2.4124 2.1071	2.2773	2.1567	2.2774	Ave		2.2265			0.1000	5.1		20.0			
o-Xylene	2.3040 2.0200	2.3242 2.0332	2.2475	2.0639	2.1564	Ave		2.1642			0.3000	6.0		20.0			
Styrene	3.7316 3.3938	4.0109 3.4490	3.7186	3.5198	3.6725	Ave		3.6423			0.3000	5.8		20.0			
Bromoform	0.4456 0.5152	0.4839 0.5501	0.4374	0.4616	0.4945	Ave		0.4840			0.1000	8.3		20.0			
2-Chlorobenzotrifluoride	1.8418 1.5775	1.7892 1.5720	1.7719	1.4902	1.6472	Ave		1.6700			0.0100	7.9		20.0			
Isopropylbenzene	5.6536 5.0088	5.9572 4.9562	5.6220	5.1272	5.4768	Ave		5.4003			0.1000	7.0		20.0			
1,1,2,2-Tetrachloroethane	1.5283 1.3751	1.5606 1.4205	1.5222	1.3994	1.4421	Ave		1.4640			0.3000	4.9		20.0			
Bromobenzene	0.9205 0.8986	0.8841 0.9055	0.9107	0.8919	0.8850	Ave		0.8995			0.0100	1.5		20.0			
1,2,3-Trichloropropane	0.3600 0.3179	0.3372 0.3223	0.3254	0.3199	0.3067	Ave		0.3271			0.0100	5.2		20.0			
trans-1,4-Dichloro-2-butene	0.4447 0.4690	0.4309 0.4842	0.4274	0.4444	0.4435	Ave		0.4491			0.0100	4.5		20.0			
N-Propylbenzene	0.9560 1.0924	1.1066 1.0687	1.0963	1.0332	1.0802	Ave		1.0619			0.0100	4.9		20.0			
2-Chlorotoluene	0.8211 0.9168	0.9285 0.9003	0.8969	0.9069	0.9008	Ave		0.8959			0.0100	3.9		20.0			
3-Chlorotoluene	0.9239 0.9727	0.9611 0.9646	1.0262	0.8918	0.9450	Ave		0.9551			0.0100	4.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

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 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	2.8893 3.1586	3.3493 3.0976	3.4132	3.1484	3.2126	Ave		3.1813			0.0100	5.4		20.0			
4-Chlorotoluene	0.9692 0.9746	1.0581 0.9610	1.0351	1.0076	0.9634	Ave		0.9956			0.0100	3.9		20.0			
tert-Butylbenzene	2.5326 2.6058	2.6961 2.5139	2.7638	2.5398	2.6191	Ave		2.6102			0.0100	3.5		20.0			
1,2,4-Trimethylbenzene	2.9734 3.2760	3.4242 3.1725	3.4768	3.2565	3.3016	Ave		3.2687			0.0100	5.1		20.0			
3,4-Dichlorobenzotrifluoride	0.8211 0.9324	0.9362 0.8896	0.9759	0.8538	0.8958	Ave		0.9007			0.0100	5.8		20.0			
sec-Butylbenzene	3.6490 3.7139	4.0269 3.5563	3.9933	3.6596	3.7287	Ave		3.7611			0.0100	4.8		20.0			
1,3-Dichlorobenzene	1.6505 1.7094	1.8078 1.6809	1.7367	1.6350	1.6636	Ave		1.6977			0.6000	3.5		20.0			
4-Isopropyltoluene	2.5890 3.1017	3.1830 3.0029	3.1952	2.9981	3.1339	Ave		3.0291			0.0100	6.9		20.0			
1,4-Dichlorobenzene	1.8014 1.7329	1.8463 1.7160	1.8095	1.6691	1.6954	Ave		1.7529			0.5000	3.8		20.0			
2,4-Dichlorobenzotrifluoride	0.8747 0.8755	0.8388 0.8332	0.8871	0.7933	0.8139	Ave		0.8452			0.0100	4.2		20.0			
2,5-Dichlorobenzotrifluoride	0.8497 0.9920	0.9280 0.9209	1.0056	0.8587	0.8984	Ave		0.9219			0.0100	6.5		20.0			
n-Butylbenzene	2.5353 2.8684	2.8549 2.7187	2.9413	2.6282	2.8270	Ave		2.7677			0.0100	5.3		20.0			
1,2-Dichlorobenzene	1.6407 1.5644	1.6011 1.5586	1.5884	1.5314	1.5442	Ave		1.5755			0.4000	2.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1163 0.1658	0.1207 0.1706	0.1479	0.1376	0.1413	Ave		0.1429			0.0500	14.0		20.0			
1,2,4-Trichlorobenzene	0.5828 0.7218	0.6250 0.7095	0.7015	0.6008	0.6337	Ave		0.6536			0.2000	8.6		20.0			
Hexachlorobutadiene	0.2994 0.3366	0.3355 0.3109	0.3203	0.2715	0.2955	Ave		0.3100			0.0100	7.5		20.0			
Naphthalene	1.3603 1.9278	1.6284 1.9822	1.8118	1.7337	1.7675	Ave		1.7445			0.0100	12.0		20.0			
1,2,3-Trichlorobenzene	0.4343 0.5624	0.5181 0.5733	0.5246	0.4787	0.4962	Ave		0.5125			0.0100	9.4		20.0			
2,4,5-Trichlorotoluene	0.1942 0.2578	0.2021 0.2596	0.2252	0.1774	0.2073	Ave		0.2177			0.0100	14.0		20.0			
2,3,6-Trichlorotoluene	0.1764 0.2369	0.1790 0.2357	0.2137	0.1716	0.1829	Ave		0.1994			0.0100	14.0		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.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

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 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.2245 0.2062	0.2288 0.2174	0.2234	0.2083	0.1810	Ave		0.2128				7.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3899 0.3406	0.3669 0.3434	0.3628	0.3333	0.3090	Ave		0.3494				7.5		20.0			
Toluene-d8 (Surr)	5.1132 3.6362	4.7853 3.6126	4.4498	3.8300	3.6860	Ave		4.1590				15.0		20.0			
4-Bromofluorobenzene (Surr)	1.8605 1.4396	1.7155 1.4844	1.6637	1.4593	1.4695	Ave		1.5846				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 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-128329/7	51215007.D
Level 2	IC 180-128329/8	51215008.D
Level 3	ICIS 180-128329/9	51215009.D
Level 4	IC 180-128329/10	51215010.D
Level 5	IC 180-128329/11	51215011.D
Level 6	IC 180-128329/12	51215012.D
Level 7	IC 180-128329/13	51215013.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	13529 461200	61930 499452	131229	190564	273288	5.00 175	25.0 200	50.0	75.0	100
Chloromethane	FB	Ave	29328 879810	127605 957633	247505	371573	523947	5.00 175	25.0 200	50.0	75.0	100
Vinyl chloride	FB	Ave	20471 619242	83604 666295	166505	253937	365992	5.00 175	25.0 200	50.0	75.0	100
1,3-Butadiene	FB	Ave	30044 853165	123895 919270	249438	348720	503293	5.00 175	25.0 200	50.0	75.0	100
Bromomethane	FB	Ave	6616 167265	25599 189870	49618	79919	107362	5.00 175	25.0 200	50.0	75.0	100
Chloroethane	FB	Ave	10151 292962	41416 334503	84692	127211	179530	5.00 175	25.0 200	50.0	75.0	100
Dichlorofluoromethane	FB	Ave	18822 609495	86441 658021	166568	259364	350450	5.00 175	25.0 200	50.0	75.0	100
Trichlorofluoromethane	FB	Ave	10889 414214	50772 450195	103060	158442	239313	5.00 175	25.0 200	50.0	75.0	100
Ethyl ether	FB	Ave	18218 526502	78240 608282	149984	225291	303566	5.00 175	25.0 200	50.0	75.0	100
Acrolein	FB	Ave	47439 108540	52294 119026	67959	83110	98752	100 225	125 250	150	175	200
1,1-Dichloroethene	FB	Ave	13078 425581	55204 454023	116523	170252	242263	5.00 175	25.0 200	50.0	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	13668 430964	55892 469441	114250	168083	245306	5.00 175	25.0 200	50.0	75.0	100
Acetone	FB	Ave	34830 484655	67024 544467	136052	197095	272377	25.0 350	50.0 400	100	150	200
Iodomethane	FB	Ave	15672 541195	70477 628901	146806	219902	312818	5.00 175	25.0 200	50.0	75.0	100
Carbon disulfide	FB	Ave	24017 894088	99203 1012677	203932	319940	479421	5.00 175	25.0 200	50.0	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Allyl chloride	FB	Ave	6268 260534	29594 291169	62463	98218	139671	5.00 175	25.0 200	50.0	75.0	100
Methyl acetate	FB	Ave	106822 3368843	480132 3862317	971398	1479687	1995763	25.0 875	125 1000	250	375	500
Methylene Chloride	FB	Lin2	27156 470925	77498 528356	137628	204036	282467	5.00 175	25.0 200	50.0	75.0	100
tert-Butyl alcohol	TBA	Ave	11568 472853	53537 542078	112567	171520	233721	50.0 1750	250 2000	500	750	1000
Acrylonitrile	FB	Ave	95445 3108626	443739 3610987	902499	1369178	1844438	50.0 1750	250 2000	500	750	1000
trans-1,2-Dichloroethene	FB	Ave	12732 418880	58272 460491	117057	179704	243743	5.00 175	25.0 200	50.0	75.0	100
Methyl tert-butyl ether	FB	Ave	32273 1075251	148333 1338818	290628	452968	630126	5.00 175	25.0 200	50.0	75.0	100
Hexane	FB	Ave	36423 1046157	142088 1145508	290414	429042	621883	5.00 175	25.0 200	50.0	75.0	100
1,1-Dichloroethane	FB	Ave	26772 977975	137137 1119222	275718	421630	578361	5.00 175	25.0 200	50.0	75.0	100
Vinyl acetate	FB	Ave	26249 981516	126129 1122187	252355	391840	556672	5.00 175	25.0 200	50.0	75.0	100
2,2-Dichloropropane	FB	Ave	6692 272347	37334 296455	73219	106300	156961	5.00 175	25.0 200	50.0	75.0	100
cis-1,2-Dichloroethene	FB	Ave	13397 459987	61838 522231	124677	192115	265573	5.00 175	25.0 200	50.0	75.0	100
2-Butanone (MEK)	FB	Ave	53686 770041	102794 898036	201478	310437	448845	25.0 350	50.0 400	100	150	200
Bromochloromethane	FB	Ave	5430 189932	26193 220532	52609	82921	106775	5.00 175	25.0 200	50.0	75.0	100
Tetrahydrofuran	FB	Ave	19338 570461	75527 656256	154760	229135	320665	10.0 350	50.0 400	100	150	200
Chloroform	FB	Ave	22786 726926	102224 825564	203645	312586	428736	5.00 175	25.0 200	50.0	75.0	100
1,1,1-Trichloroethane	FB	Ave	13443 498247	64719 552222	128898	205239	292080	5.00 175	25.0 200	50.0	75.0	100
Cyclohexane	FB	Ave	38360 1372084	186239 1491081	380610	568225	811131	5.00 175	25.0 200	50.0	75.0	100
Carbon tetrachloride	FB	Ave	11364 449549	52672 496996	115997	174921	251804	5.00 175	25.0 200	50.0	75.0	100
1,1-Dichloropropene	FB	Ave	17888 616547	82768 678270	169491	247738	361815	5.00 175	25.0 200	50.0	75.0	100
Isobutyl alcohol	FB	Ave	15202 597870	69212 703715	134692	224509	339131	125 4375	625 5000	1250	1875	2500

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	59741 1810201	270867 2039448	522828	792783	1072233	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichloroethane	FB	Ave	20733 723279	102748 833342	208535	315981	420406	5.00 175	25.0 200	50.0	75.0	100
n-Heptane	FB	Ave	31030 1100542	153997 1198073	302184	437674	645815	5.00 175	25.0 200	50.0	75.0	100
Trichloroethene	FB	Ave	11525 412412	55641 451795	116274	168085	236014	5.00 175	25.0 200	50.0	75.0	100
Methylcyclohexane	FB	Ave	20849 798320	102702 884141	219487	327984	476530	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichloropropane	FB	Ave	15972 580507	78759 670378	162350	251775	349012	5.00 175	25.0 200	50.0	75.0	100
Dibromomethane	FB	Ave	6955 241280	32637 278367	66098	101536	138247	5.00 175	25.0 200	50.0	75.0	100
1,4-Dioxane	FB	Ave	1571 94223	11752 107491	25491	40031	55226	100 3500	500 4000	1000	1500	2000
Bromodichloromethane	FB	Ave	13427 516759	67146 599497	132486	209313	289837	5.00 175	25.0 200	50.0	75.0	100
cis-1,3-Dichloropropene	FB	Ave	13480 617016	69677 725599	151006	248192	348436	5.00 175	25.0 200	50.0	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	91901 1587323	204955 1885405	427228	691017	949167	25.0 350	50.0 400	100	150	200
Toluene	CBZ	Ave	55276 1825825	263797 2038543	534952	824691	1092848	5.00 175	25.0 200	50.0	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	10167 504625	51858 587120	115007	193036	272778	5.00 175	25.0 200	50.0	75.0	100
Ethyl methacrylate	CBZ	Ave	10941 574920	67652 699914	140983	233054	324927	5.00 175	25.0 200	50.0	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	10582 367605	51126 431008	99708	160928	215870	5.00 175	25.0 200	50.0	75.0	100
Tetrachloroethene	CBZ	Ave	11256 341247	45891 381182	96447	145626	198281	5.00 175	25.0 200	50.0	75.0	100
1,3-Dichloropropane	CBZ	Ave	20178 710288	98564 823013	193960	312441	415185	5.00 175	25.0 200	50.0	75.0	100
2-Hexanone	CBZ	Ave	66751 1335292	162269 1575531	355030	556468	731532	25.0 350	50.0 400	100	150	200
Dibromochloromethane	CBZ	Ave	5928 308265	33391 361304	74703	124399	167905	5.00 175	25.0 200	50.0	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	8613 358303	46214 425795	96348	149545	202583	5.00 175	25.0 200	50.0	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	17679 633751	84167 707075	183531	249882	357810	5.00 175	25.0 200	50.0	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBZ	Ave	32198 1146615	160738 1305587	323152	487195	668345	5.00 175	25.0 200	50.0	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	15711 605917	79821 658198	169416	241146	335563	5.00 175	25.0 200	50.0	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	10046 359052	46887 421291	94003	149698	201091	5.00 175	25.0 200	50.0	75.0	100
Ethylbenzene	CBZ	Ave	17078 674389	89754 753212	182469	281017	384275	5.00 175	25.0 200	50.0	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	20711 807449	107568 918551	223210	347010	477144	5.00 175	25.0 200	50.0	75.0	100
o-Xylene	CBZ	Ave	21100 779332	103634 886345	220291	332078	451799	5.00 175	25.0 200	50.0	75.0	100
Styrene	CBZ	Ave	34174 1309347	178842 1503510	364481	566334	769446	5.00 175	25.0 200	50.0	75.0	100
Bromoform	CBZ	Ave	4081 198764	21578 239804	42875	74265	103601	5.00 175	25.0 200	50.0	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	16867 608627	79779 685270	173668	239775	345106	5.00 175	25.0 200	50.0	75.0	100
Isopropylbenzene	CBZ	Ave	51775 1932433	265627 2160550	551045	824955	1147487	5.00 175	25.0 200	50.0	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	13996 530535	69587 619241	149203	225157	302138	5.00 175	25.0 200	50.0	75.0	100
Bromobenzene	DCB	Ave	12328 454034	56843 526184	121949	188616	258939	5.00 175	25.0 200	50.0	75.0	100
1,2,3-Trichloropropane	DCB	Ave	4822 160641	21680 187299	43578	67651	89733	5.00 175	25.0 200	50.0	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	5956 236954	27704 281348	57235	93980	129754	5.00 175	25.0 200	50.0	75.0	100
N-Propylbenzene	DCB	Ave	12803 551938	71151 621025	146805	218494	316053	5.00 175	25.0 200	50.0	75.0	100
2-Chlorotoluene	DCB	Ave	10997 463229	59697 523196	120100	191792	263552	5.00 175	25.0 200	50.0	75.0	100
3-Chlorotoluene	DCB	Ave	12374 491483	61796 560555	137425	188584	276497	5.00 175	25.0 200	50.0	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	38695 1595887	215352 1800040	457058	665788	939917	5.00 175	25.0 200	50.0	75.0	100
4-Chlorotoluene	DCB	Ave	12980 492402	68035 558467	138608	213085	281879	5.00 175	25.0 200	50.0	75.0	100
tert-Butylbenzene	DCB	Ave	33918 1316602	173354 1460867	370100	537092	766289	5.00 175	25.0 200	50.0	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	39821 1655214	220166 1843606	465575	688660	965955	5.00 175	25.0 200	50.0	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3,4-Dichlorobenzotrifluoride	DCB	Ave	10996 471091	60194 516955	130684	180560	262077	5.00 175	25.0 200	50.0	75.0	100
sec-Butylbenzene	DCB	Ave	48869 1876479	258920 2066631	534748	773895	1090919	5.00 175	25.0 200	50.0	75.0	100
1,3-Dichlorobenzene	DCB	Ave	22104 863694	116233 976811	232561	345748	486729	5.00 175	25.0 200	50.0	75.0	100
4-Isopropyltoluene	DCB	Ave	34674 1567173	204657 1745049	427869	634008	916889	5.00 175	25.0 200	50.0	75.0	100
1,4-Dichlorobenzene	DCB	Ave	24125 875578	118712 997200	242307	352959	496017	5.00 175	25.0 200	50.0	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	11714 442330	53932 484207	118794	167750	238127	5.00 175	25.0 200	50.0	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	11380 501230	59666 535139	134654	181592	262855	5.00 175	25.0 200	50.0	75.0	100
n-Butylbenzene	DCB	Ave	33954 1449265	183563 1579894	393872	555780	827117	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichlorobenzene	DCB	Ave	21973 790430	102943 905753	212701	323846	451798	5.00 175	25.0 200	50.0	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	1557 83763	7760 99113	19807	29088	41345	5.00 175	25.0 200	50.0	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	7805 364694	40187 412323	93933	127051	185414	5.00 175	25.0 200	50.0	75.0	100
Hexachlorobutadiene	DCB	Ave	4010 170084	21572 180674	42898	57408	86456	5.00 175	25.0 200	50.0	75.0	100
Naphthalene	DCB	Ave	18218 974048	104700 1151885	242621	366622	517111	5.00 175	25.0 200	50.0	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	5816 284156	33314 333142	70246	101227	145164	5.00 175	25.0 200	50.0	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	2601 130241	12992 150868	30153	37510	60662	5.00 175	25.0 200	50.0	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	2362 119691	11506 136944	28614	36291	53522	5.00 175	25.0 200	50.0	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	9922 313362	47124 365236	94689	138420	167966	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	17231 517527	75553 576810	153750	221449	286774	5.00 175	25.0 200	50.0	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	46826 1402860	213372 1574848	436152	616248	772272	5.00 175	25.0 200	50.0	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	17038 555403	76492 647101	163066	234795	307884	5.00 175	25.0 200	50.0	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 128329

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

Report Date: 16-Dec-2014 08:51:06 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D
Lims ID: IC VSTD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 15-Dec-2014 14:33:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD1
Misc. Info.: 180-0004875-007
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:51:05 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 15-Dec-2014 16:41:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.326	4.336	-0.010	87	173968	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.298	-0.003	96	441903	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.383	0.002	94	91579	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.703	12.707	-0.004	96	133926	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.546	6.556	-0.010	81	9922	5.00	5.28	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.921	0.009	92	17231	5.00	5.58	
$ 7 Toluene-d8 (Surr)	98	8.943	8.947	-0.004	94	46826	5.00	6.15	
$ 8 4-Bromofluorobenzene (Surr	95	11.541	11.551	-0.010	85	17038	5.00	5.87	
11 Dichlorodifluoromethane	85	1.631	1.629	0.002	85	13529	5.00	5.11	
12 Chloromethane	50	1.807	1.799	0.008	98	29328	5.00	5.61	
13 Vinyl chloride	62	1.935	1.927	0.008	94	20471	5.00	5.70	
14 Butadiene	39	1.972	1.975	-0.003	95	30044	5.00	5.88	
15 Bromomethane	94	2.276	2.292	-0.016	16	6616	5.00	6.16	
16 Chloroethane	64	2.440	2.438	0.002	93	10151	5.00	5.71	
17 Dichlorofluoromethane	67	2.689	2.687	0.002	94	18822	5.00	5.33	
18 Trichlorofluoromethane	101	2.720	2.736	-0.016	91	10889	5.00	4.86	M
20 Ethyl ether	59	3.115	3.113	0.002	94	18218	5.00	5.72	
21 Acrolein	56	3.292	3.289	0.003	98	47439	100.0	99.7	
22 1,1-Dichloroethene	96	3.395	3.435	-0.040	5	13078	5.00	5.43	M
23 1,1,2-Trichloro-1,2,2-trif	101	3.480	3.466	0.014	72	13668	5.00	5.61	
24 Acetone	43	3.517	3.527	-0.010	96	34830	25.0	25.1	
25 Iodomethane	142	3.657	3.667	-0.010	73	15672	5.00	5.08	M
26 Carbon disulfide	76	3.705	3.709	-0.004	87	24017	5.00	5.15	
28 3-Chloro-1-propene	76	3.973	3.971	0.002	89	6268	5.00	4.61	
30 Methyl acetate	43	4.058	4.050	0.008	99	106822	25.0	26.5	
31 Methylene Chloride	84	4.180	4.172	0.008	88	27156	5.00	4.97	M
32 2-Methyl-2-propanol	59	4.454	4.464	-0.010	78	11568	50.0	49.7	
33 Acrylonitrile	53	4.581	4.585	-0.004	100	95445	50.0	51.5	
34 trans-1,2-Dichloroethene	96	4.587	4.597	-0.010	64	12732	5.00	5.22	
35 Methyl tert-butyl ether	73	4.624	4.622	0.002	82	32273	5.00	5.11	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.013	5.017	-0.004	94	36423	5.00	5.90	
37 1,1-Dichloroethane	63	5.196	5.200	-0.004	97	26772	5.00	4.72	
38 Vinyl acetate	43	5.317	5.321	-0.004	96	26249	5.00	4.83	
44 2,2-Dichloropropane	77	5.962	5.954	0.008	49	6692	5.00	4.45	
45 cis-1,2-Dichloroethene	96	5.975	5.966	0.008	91	13397	5.00	5.09	
46 2-Butanone (MEK)	43	6.017	6.015	0.002	97	53686	25.0	24.6	
49 Chlorobromomethane	128	6.248	6.246	0.002	78	5430	5.00	4.94	
51 Tetrahydrofuran	42	6.315	6.313	0.002	91	19338	10.0	11.7	
52 Chloroform	83	6.370	6.362	0.008	95	22786	5.00	5.32	
53 1,1,1-Trichloroethane	97	6.546	6.550	-0.004	94	13443	5.00	4.83	
54 Cyclohexane	56	6.601	6.611	-0.010	90	38360	5.00	4.91	
56 Carbon tetrachloride	117	6.735	6.739	-0.004	87	11364	5.00	4.71	
55 1,1-Dichloropropene	75	6.753	6.745	0.008	81	17888	5.00	5.10	
57 Isobutyl alcohol	41	6.966	6.964	0.002	46	15202	125.0	119.8	
58 Benzene	78	6.972	6.982	-0.010	95	59741	5.00	5.47	
59 1,2-Dichloroethane	62	7.009	7.013	-0.004	95	20733	5.00	4.89	
62 n-Heptane	43	7.301	7.298	0.003	59	31030	5.00	4.96	
64 Trichloroethene	130	7.696	7.688	0.008	88	11525	5.00	4.93	
66 Methylcyclohexane	83	7.885	7.882	0.003	92	20849	5.00	4.66	
67 1,2-Dichloropropane	63	7.927	7.925	0.002	95	15972	5.00	4.75	
68 Dibromomethane	93	8.043	8.041	0.002	77	6955	5.00	5.02	
70 1,4-Dioxane	88	8.079	8.077	0.002	45	1571	100.0	62.4	
71 Dichlorobromomethane	83	8.225	8.217	0.008	93	13427	5.00	4.69	
74 cis-1,3-Dichloropropene	75	8.682	8.679	0.003	84	13480	5.00	4.13	
75 4-Methyl-2-pentanone (MIBK	43	8.846	8.844	0.002	96	91901	25.0	23.2	
76 Toluene	91	9.010	9.008	0.002	96	55276	5.00	5.68	
77 trans-1,3-Dichloropropene	75	9.247	9.239	0.008	89	10167	5.00	4.52	
78 Ethyl methacrylate	69	9.333	9.336	-0.003	84	10941	5.00	4.08	
79 1,1,2-Trichloroethane	97	9.418	9.422	-0.004	92	10582	5.00	5.55	
80 Tetrachloroethene	164	9.558	9.555	0.003	91	11256	5.00	6.28	
81 1,3-Dichloropropane	76	9.588	9.586	0.002	89	20178	5.00	5.49	
82 2-Hexanone	43	9.679	9.677	0.002	98	66751	25.0	21.1	
84 Chlorodibromomethane	129	9.807	9.811	-0.004	91	5928	5.00	4.23	
85 Ethylene Dibromide	107	9.917	9.920	-0.003	94	8613	5.00	4.87	
86 3-Chlorobenzotrifluoride	180	10.385	10.389	-0.004	55	17679	5.00	5.53	
87 Chlorobenzene	112	10.415	10.413	0.002	87	32198	5.00	5.44	
88 4-Chlorobenzotrifluoride	180	10.446	10.450	-0.004	87	15711	5.00	5.26	
89 1,1,1,2-Tetrachloroethane	131	10.495	10.492	0.003	85	10046	5.00	5.57	
90 Ethylbenzene	106	10.519	10.523	-0.004	98	17078	5.00	5.10	
91 m-Xylene & p-Xylene	106	10.641	10.638	0.003	96	20711	5.00	5.08	
92 o-Xylene	106	11.036	11.034	0.002	97	21100	5.00	5.32	
93 Styrene	104	11.042	11.046	-0.004	90	34174	5.00	5.12	
94 Bromoform	173	11.231	11.234	-0.003	55	4081	5.00	4.60	
96 2-Chlorobenzotrifluoride	180	11.291	11.295	-0.004	96	16867	5.00	5.51	
97 Isopropylbenzene	105	11.401	11.399	0.002	97	51775	5.00	5.23	
99 1,1,2,2-Tetrachloroethane	83	11.693	11.691	0.002	77	13996	5.00	5.22	
100 Bromobenzene	156	11.705	11.703	0.002	94	12328	5.00	5.12	
101 1,2,3-Trichloropropane	110	11.729	11.739	-0.010	85	4822	5.00	5.50	
102 trans-1,4-Dichloro-2-buten	53	11.754	11.752	0.002	63	5956	5.00	4.95	
103 N-Propylbenzene	120	11.809	11.806	0.003	100	12803	5.00	4.50	
104 2-Chlorotoluene	126	11.900	11.898	0.002	93	10997	5.00	4.58	
105 3-Chlorotoluene	126	11.961	11.952	0.009	97	12374	5.00	4.84	

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	11.979	11.983	-0.004	94	38695	5.00	4.54	
107 4-Chlorotoluene	126	12.003	12.001	0.002	94	12980	5.00	4.87	
108 tert-Butylbenzene	119	12.307	12.305	0.002	96	33918	5.00	4.85	
110 1,2,4-Trimethylbenzene	105	12.356	12.354	0.002	96	39821	5.00	4.55	
111 1,2-dichloro-4-(trifluorom	214	12.423	12.421	0.002	94	10996	5.00	4.56	
112 sec-Butylbenzene	105	12.526	12.524	0.002	95	48869	5.00	4.85	
113 1,3-Dichlorobenzene	146	12.636	12.640	-0.004	95	22104	5.00	4.86	
114 4-Isopropyltoluene	119	12.672	12.670	0.002	95	34674	5.00	4.27	
115 1,4-Dichlorobenzene	146	12.721	12.725	-0.004	93	24125	5.00	5.14	
116 2,4-Dichloro-1-(triflourom	214	12.782	12.780	0.002	93	11714	5.00	5.17	
118 2,5-Dichlorobenzotrifluori	214	12.831	12.828	0.003	96	11380	5.00	4.61	
120 n-Butylbenzene	91	13.080	13.078	0.002	98	33954	5.00	4.58	
121 1,2-Dichlorobenzene	146	13.104	13.102	0.002	94	21973	5.00	5.21	
122 1,2-Dibromo-3-Chloropropan	75	13.871	13.881	-0.010	71	1557	5.00	4.07	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.023	14.027	-0.004	96	31645	15.0	11.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.449	14.447	0.002	96	22583	10.0	8.91	
126 1,2,4-Trichlorobenzene	180	14.710	14.708	0.002	93	7805	5.00	4.46	
127 Hexachlorobutadiene	225	14.887	14.885	0.002	92	4010	5.00	4.83	
128 Naphthalene	128	14.960	14.964	-0.004	97	18218	5.00	3.90	
129 1,2,3-Trichlorobenzene	180	15.209	15.207	0.002	88	5816	5.00	4.24	
131 2,4,5-Trichlorotoluene	159	15.982	15.980	0.002	92	2601	5.00	4.46	
130 2,3,6-Trichlorotoluene	159	16.079	16.077	0.002	89	2362	5.00	4.42	
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		10.0	10.3	
S 133 Xylenes, Total	106				0		10.0	10.4	
S 135 1,3-Dichloropropene, Total	1				0		10.0	8.64	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00028	Amount Added:	0.20	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	0.20	Units: uL	
voaWEEpri Res_00001	Amount Added:	0.20	Units: uL	
voaWVA pri Re_00005	Amount Added:	0.20	Units: uL	
voaWKet2ndRes_00005	Amount Added:	0.80	Units: uL	
VOAACROPRI_00004	Amount Added:	4.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

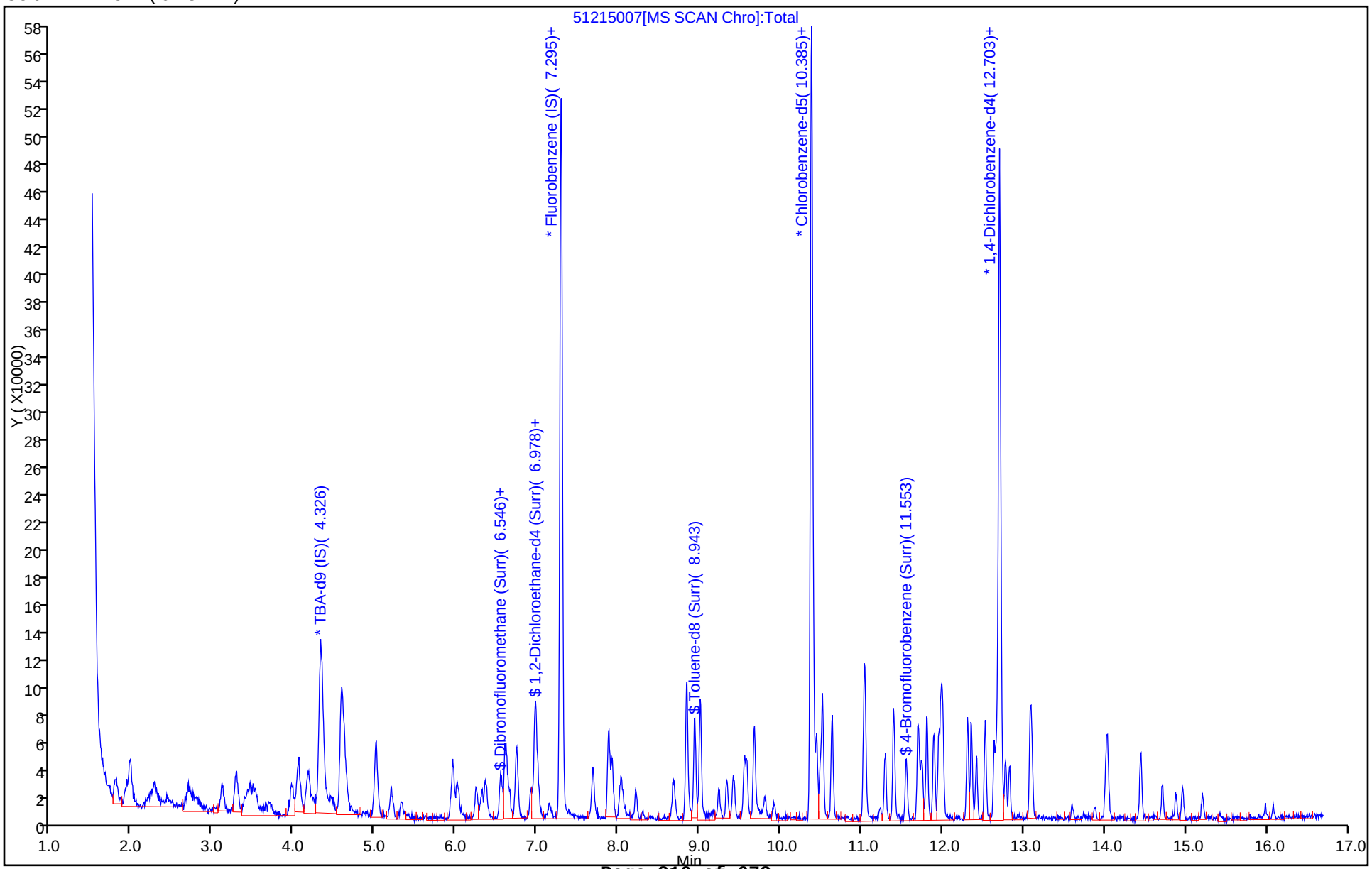
Report Date: 16-Dec-2014 08:51:06 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D

Injection Date:	15-Dec-2014 14:33:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD1			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

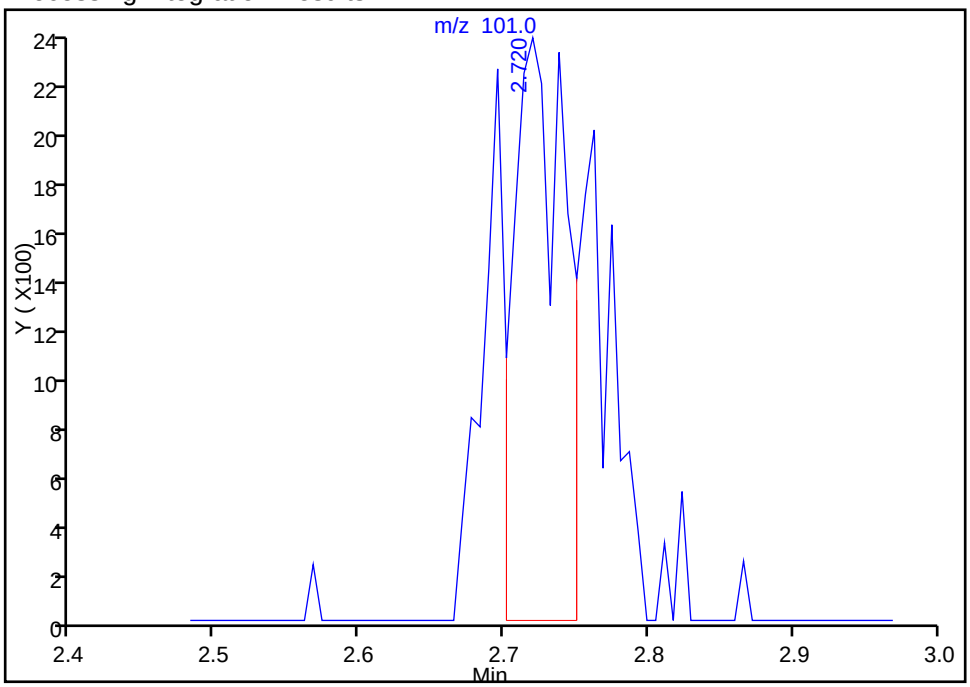
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D				
Injection Date:	15-Dec-2014 14:33:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	7	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		

18 Trichlorofluoromethane, CAS: 75-69-4

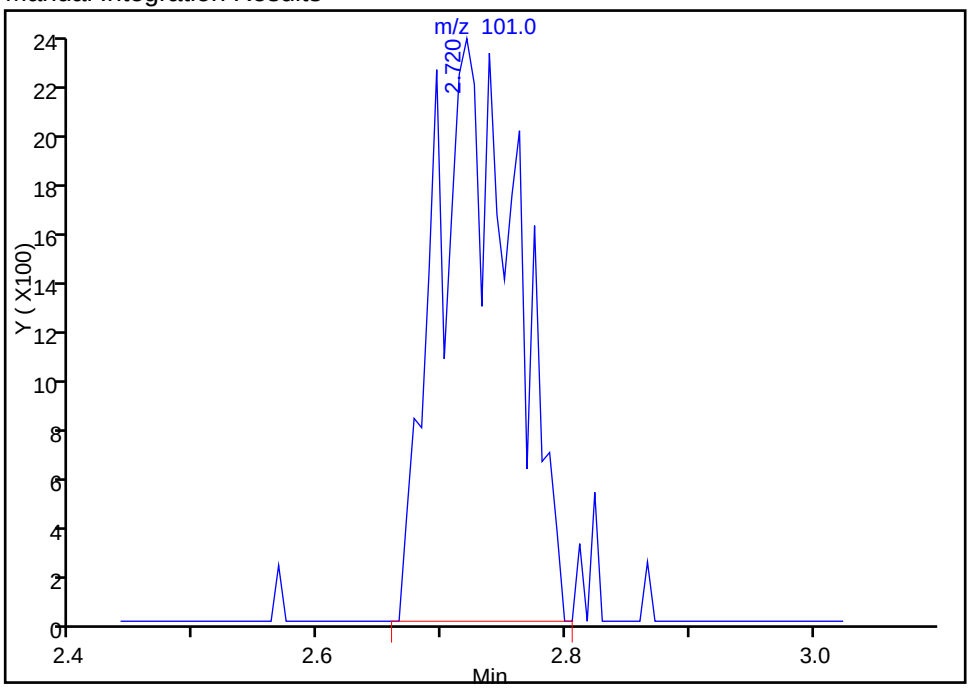
Processing Integration Results

RT: 2.72
Response: 5956
Amount: 4.970615



Manual Integration Results

RT: 2.72
Response: 10889
Amount: 4.864122



Reviewer: fergusond, 15-Dec-2014 16:41:51
Audit Action: Manually Integrated
Audit Reason: Split Peak

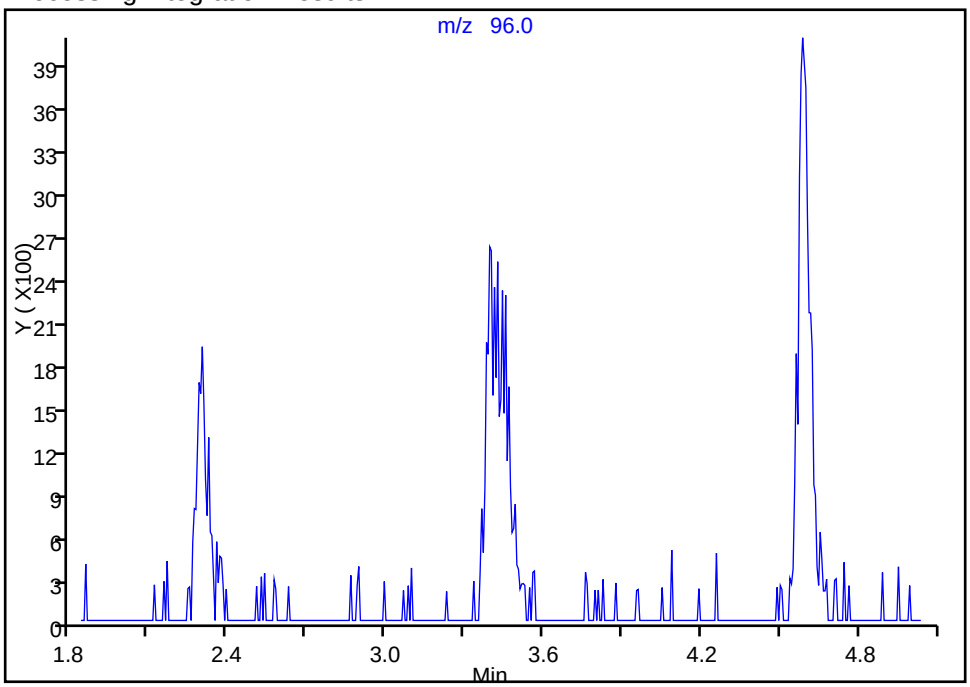
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D
Injection Date: 15-Dec-2014 14:33:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 001562 ALS Bottle#: 7 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

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

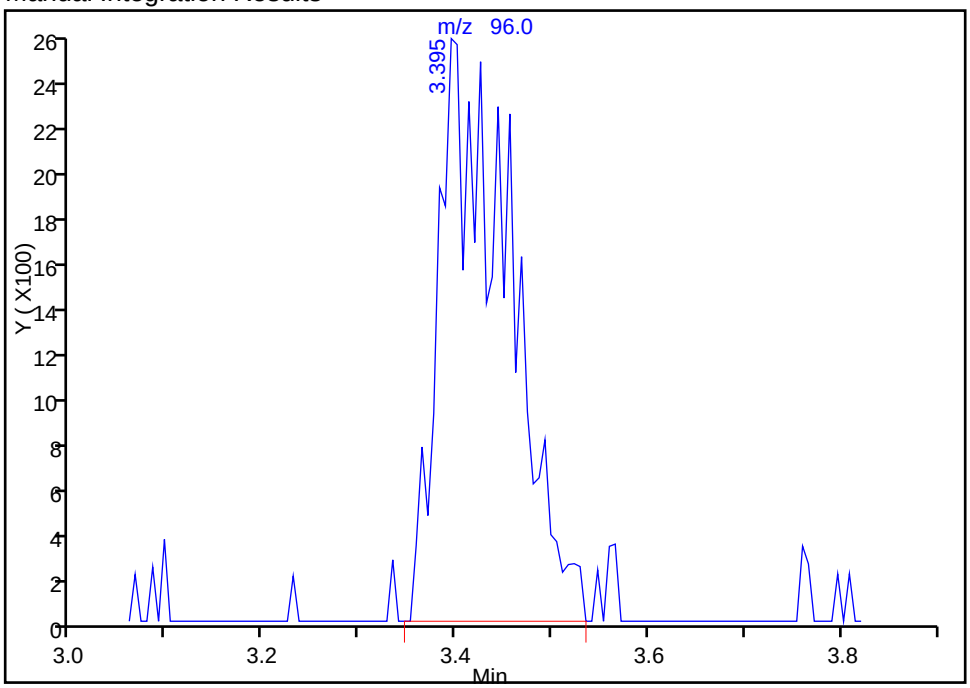
Not Detected
Expected RT: 3.44

Processing Integration Results



Manual Integration Results

RT: 3.40
Response: 13078
Amount: 5.432783



Reviewer: fergusond, 15-Dec-2014 16:41:51
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

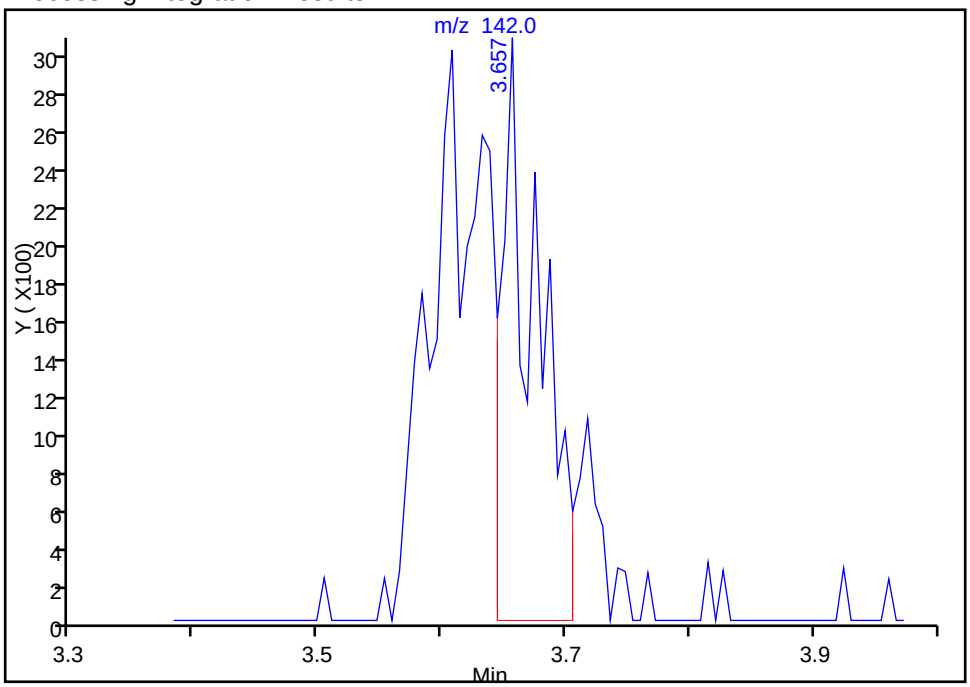
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D				
Injection Date:	15-Dec-2014 14:33:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	7	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		

25 Iodomethane, CAS: 74-88-4

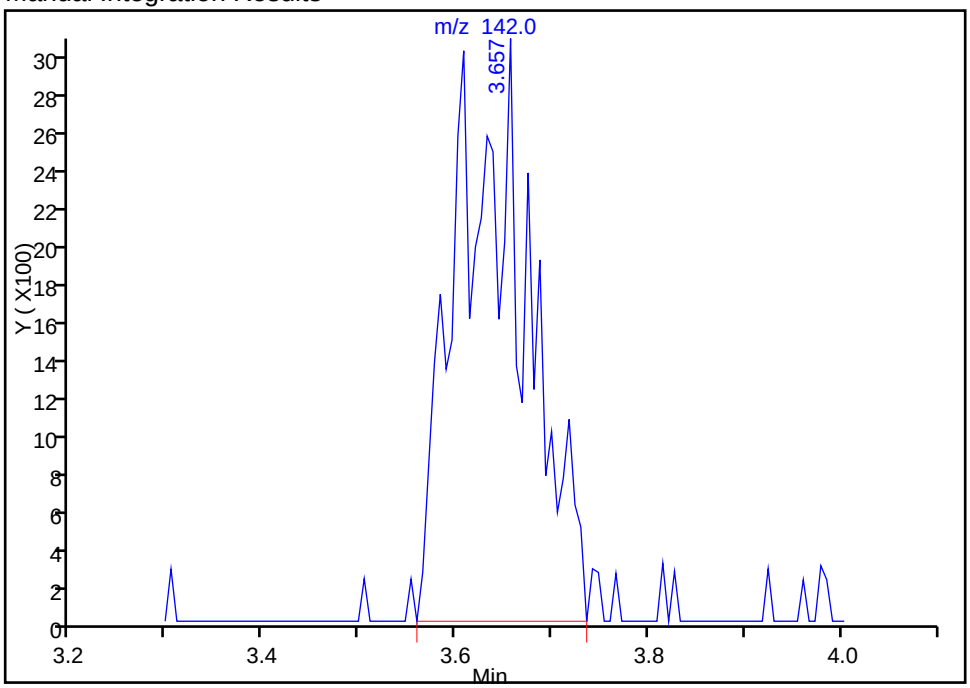
Processing Integration Results

RT: 3.66
Response: 6167
Amount: 4.943931



Manual Integration Results

RT: 3.66
Response: 15672
Amount: 5.083279



Reviewer: fergusond, 15-Dec-2014 16:41:51
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

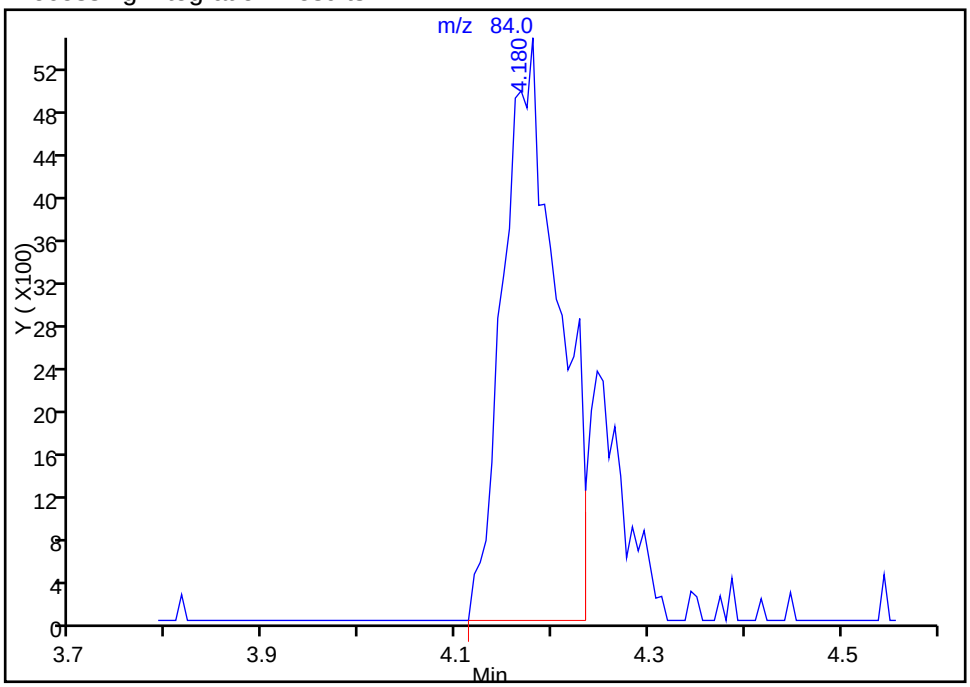
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D				
Injection Date:	15-Dec-2014 14:33:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	7	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		

31 Methylene Chloride, CAS: 75-09-2

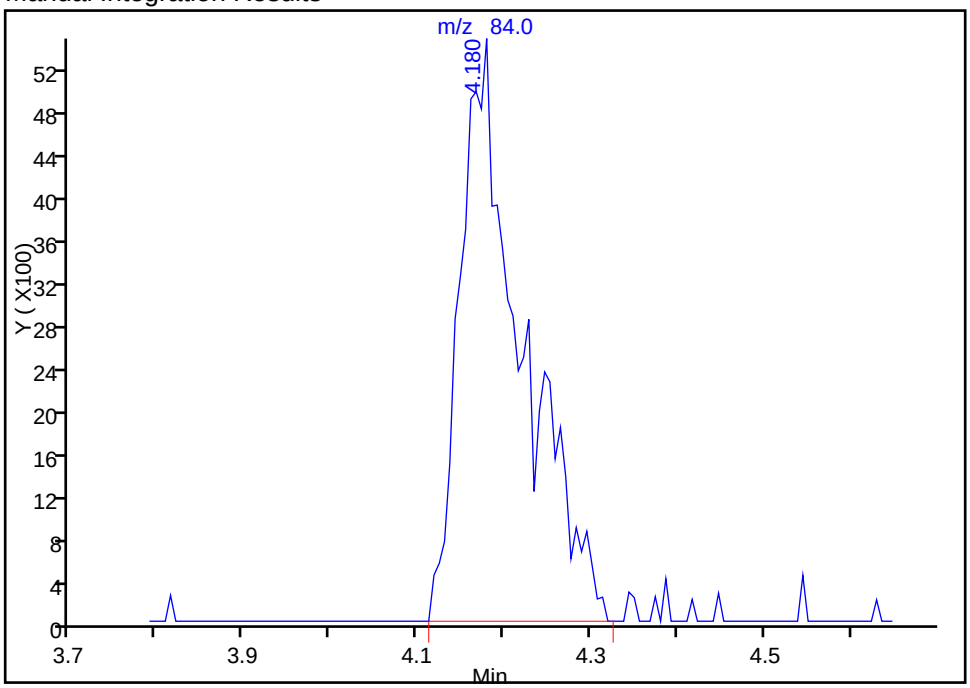
Processing Integration Results

RT: 4.18
Response: 21609
Amount: 4.924009



Manual Integration Results

RT: 4.18
Response: 27156
Amount: 4.972994



Reviewer: fergusond, 15-Dec-2014 16:41:51
Audit Action: Manually Integrated
Audit Reason: Split Peak

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D
Lims ID: IC VSTD5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 15-Dec-2014 14:57:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD5
Misc. Info.: 180-0004875-008
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:51:08 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 15-Dec-2014 16:39:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.332	4.336	-0.004	80	160381	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.301	7.298	0.003	95	411882	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.383	0.002	94	89178	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.703	12.707	-0.004	94	128594	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.552	6.556	-0.004	85	47124	25.0	26.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.917	6.921	-0.004	91	75553	25.0	26.2	
$ 7 Toluene-d8 (Surr)	98	8.943	8.947	-0.004	96	213372	25.0	28.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.553	11.551	0.002	83	76492	25.0	27.1	
11 Dichlorodifluoromethane	85	1.631	1.629	0.002	97	61930	25.0	25.1	
12 Chloromethane	50	1.801	1.799	0.002	99	127605	25.0	26.2	
13 Vinyl chloride	62	1.929	1.927	0.002	98	83604	25.0	25.0	
14 Butadiene	39	1.978	1.975	0.003	97	123895	25.0	26.0	
15 Bromomethane	94	2.288	2.292	-0.004	91	25599	25.0	25.6	M
16 Chloroethane	64	2.446	2.438	0.008	98	41416	25.0	25.0	
17 Dichlorofluoromethane	67	2.689	2.687	0.002	98	86441	25.0	26.2	
18 Trichlorofluoromethane	101	2.738	2.736	0.002	97	50772	25.0	24.3	
20 Ethyl ether	59	3.115	3.113	0.002	93	78240	25.0	26.4	
21 Acrolein	56	3.292	3.289	0.003	99	52294	125.0	117.9	
22 1,1-Dichloroethene	96	3.444	3.435	0.009	92	55204	25.0	24.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.474	3.466	0.008	96	55892	25.0	24.6	
24 Acetone	43	3.523	3.527	-0.004	98	67024	50.0	51.9	
25 Iodomethane	142	3.663	3.667	-0.004	96	70477	25.0	24.5	
26 Carbon disulfide	76	3.699	3.709	-0.010	100	99203	25.0	22.8	
28 3-Chloro-1-propene	76	3.967	3.971	-0.004	87	29594	25.0	23.4	
30 Methyl acetate	43	4.058	4.050	0.008	99	480132	125.0	128.0	
31 Methylene Chloride	84	4.168	4.172	-0.004	90	77498	25.0	26.3	
32 2-Methyl-2-propanol	59	4.466	4.464	0.002	82	53537	250.0	249.7	
33 Acrylonitrile	53	4.581	4.585	-0.004	97	443739	250.0	256.7	
34 trans-1,2-Dichloroethene	96	4.606	4.597	0.009	53	58272	25.0	25.7	
35 Methyl tert-butyl ether	73	4.630	4.622	0.008	89	148333	25.0	25.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.013	5.017	-0.004	95	142088	25.0	24.7	
37 1,1-Dichloroethane	63	5.196	5.200	-0.004	96	137137	25.0	26.0	
38 Vinyl acetate	43	5.330	5.321	0.009	96	126129	25.0	24.9	
44 2,2-Dichloropropane	77	5.944	5.954	-0.010	59	37334	25.0	26.7	
45 cis-1,2-Dichloroethene	96	5.968	5.966	0.002	88	61838	25.0	25.2	
46 2-Butanone (MEK)	43	6.017	6.015	0.002	96	102794	50.0	50.6	
49 Chlorobromomethane	128	6.248	6.246	0.002	80	26193	25.0	25.6	
51 Tetrahydrofuran	42	6.309	6.313	-0.004	92	75527	50.0	48.9	
52 Chloroform	83	6.364	6.362	0.002	97	102224	25.0	25.6	
53 1,1,1-Trichloroethane	97	6.559	6.550	0.009	91	64719	25.0	25.0	
54 Cyclohexane	56	6.607	6.611	-0.004	89	186239	25.0	25.6	
56 Carbon tetrachloride	117	6.735	6.739	-0.004	75	52672	25.0	23.4	
55 1,1-Dichloropropene	75	6.747	6.745	0.002	82	82768	25.0	25.3	
57 Isobutyl alcohol	41	6.966	6.964	0.002	92	69212	625.0	584.9	
58 Benzene	78	6.978	6.982	-0.004	95	270867	25.0	26.6	
59 1,2-Dichloroethane	62	7.009	7.013	-0.004	94	102748	25.0	26.0	
62 n-Heptane	43	7.301	7.298	0.003	91	153997	25.0	26.4	
64 Trichloroethene	130	7.690	7.688	0.002	93	55641	25.0	25.5	
66 Methylcyclohexane	83	7.885	7.882	0.003	93	102702	25.0	24.6	
67 1,2-Dichloropropane	63	7.927	7.925	0.002	94	78759	25.0	25.1	
68 Dibromomethane	93	8.043	8.041	0.002	96	32637	25.0	25.3	
70 1,4-Dioxane	88	8.085	8.077	0.008	86	11752	500.0	501.2	M
71 Dichlorobromomethane	83	8.219	8.217	0.002	94	67146	25.0	25.2	
74 cis-1,3-Dichloropropene	75	8.676	8.679	-0.003	84	69677	25.0	22.9	
75 4-Methyl-2-pentanone (MIBK	43	8.840	8.844	-0.004	98	204955	50.0	53.2	
76 Toluene	91	9.010	9.008	0.002	97	263797	25.0	27.9	
77 trans-1,3-Dichloropropene	75	9.241	9.239	0.002	91	51858	25.0	23.7	
78 Ethyl methacrylate	69	9.339	9.336	0.003	90	67652	25.0	25.9	
79 1,1,2-Trichloroethane	97	9.424	9.422	0.002	93	51126	25.0	27.5	
80 Tetrachloroethene	164	9.558	9.555	0.003	95	45891	25.0	26.3	
81 1,3-Dichloropropane	76	9.588	9.586	0.002	92	98564	25.0	27.5	
82 2-Hexanone	43	9.673	9.677	-0.004	97	162269	50.0	52.6	
84 Chlorodibromomethane	129	9.807	9.811	-0.004	91	33391	25.0	24.4	
85 Ethylene Dibromide	107	9.929	9.920	0.009	98	46214	25.0	26.8	
86 3-Chlorobenzotrifluoride	180	10.391	10.389	0.002	93	84167	25.0	27.0	
87 Chlorobenzene	112	10.415	10.413	0.002	89	160738	25.0	27.9	
88 4-Chlorobenzotrifluoride	180	10.446	10.450	-0.004	97	79821	25.0	27.4	
89 1,1,1,2-Tetrachloroethane	131	10.488	10.492	-0.004	87	46887	25.0	26.7	
90 Ethylbenzene	106	10.519	10.523	-0.004	98	89754	25.0	27.5	
91 m-Xylene & p-Xylene	106	10.634	10.638	-0.004	97	107568	25.0	27.1	
92 o-Xylene	106	11.030	11.034	-0.004	92	103634	25.0	26.8	
93 Styrene	104	11.042	11.046	-0.004	92	178842	25.0	27.5	
94 Bromoform	173	11.225	11.234	-0.009	94	21578	25.0	25.0	
96 2-Chlorobenzotrifluoride	180	11.291	11.295	-0.004	96	79779	25.0	26.8	
97 Isopropylbenzene	105	11.401	11.399	0.002	97	265627	25.0	27.6	
99 1,1,2,2-Tetrachloroethane	83	11.693	11.691	0.002	95	69587	25.0	26.6	
100 Bromobenzene	156	11.699	11.703	-0.004	95	56843	25.0	24.6	
101 1,2,3-Trichloropropane	110	11.742	11.739	0.003	89	21680	25.0	25.8	
102 trans-1,4-Dichloro-2-buten	53	11.748	11.752	-0.004	64	27704	25.0	24.0	
103 N-Propylbenzene	120	11.809	11.806	0.003	99	71151	25.0	26.1	
104 2-Chlorotoluene	126	11.900	11.898	0.002	94	59697	25.0	25.9	
105 3-Chlorotoluene	126	11.955	11.952	0.003	97	61796	25.0	25.2	

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	11.985	11.983	0.002	95	215352	25.0	26.3	
107 4-Chlorotoluene	126	12.003	12.001	0.002	99	68035	25.0	26.6	
108 tert-Butylbenzene	119	12.307	12.305	0.002	95	173354	25.0	25.8	
110 1,2,4-Trimethylbenzene	105	12.356	12.354	0.002	97	220166	25.0	26.2	
111 1,2-dichloro-4-(trifluorom	214	12.417	12.421	-0.004	97	60194	25.0	26.0	
112 sec-Butylbenzene	105	12.526	12.524	0.002	96	258920	25.0	26.8	
113 1,3-Dichlorobenzene	146	12.642	12.640	0.002	97	116233	25.0	26.6	
114 4-Isopropyltoluene	119	12.672	12.670	0.002	96	204657	25.0	26.3	
115 1,4-Dichlorobenzene	146	12.727	12.725	0.002	90	118712	25.0	26.3	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.780	-0.004	98	53932	25.0	24.8	
118 2,5-Dichlorobenzotrifluori	214	12.818	12.828	-0.010	98	59666	25.0	25.2	
120 n-Butylbenzene	91	13.080	13.078	0.002	98	183563	25.0	25.8	
121 1,2-Dichlorobenzene	146	13.098	13.102	-0.004	94	102943	25.0	25.4	
122 1,2-Dibromo-3-Chloropropan	75	13.883	13.881	0.002	70	7760	25.0	21.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.029	14.027	0.002	98	193870	75.0	75.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.443	14.447	-0.004	99	118844	50.0	48.8	
126 1,2,4-Trichlorobenzene	180	14.710	14.708	0.002	93	40187	25.0	23.9	
127 Hexachlorobutadiene	225	14.875	14.885	-0.010	95	21572	25.0	27.1	
128 Naphthalene	128	14.960	14.964	-0.004	97	104700	25.0	23.3	
129 1,2,3-Trichlorobenzene	180	15.197	15.207	-0.010	92	33314	25.0	25.3	
131 2,4,5-Trichlorotoluene	159	15.982	15.980	0.002	94	12992	25.0	23.2	
130 2,3,6-Trichlorotoluene	159	16.079	16.077	0.002	93	11506	25.0	22.4	
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		50.0	50.8	
S 133 Xylenes, Total	106				0		50.0	53.9	
S 135 1,3-Dichloropropene, Total	1				0		50.0	46.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACROPRI_00004	Amount Added:	5.00	Units: uL	
VOA8260SURR_00028	Amount Added:	1.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	1.00	Units: uL	
voaWEEpri Res_00001	Amount Added:	1.00	Units: uL	
voaWKet2ndRes_00005	Amount Added:	1.00	Units: uL	
voaWVA pri Re_00005	Amount Added:	1.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

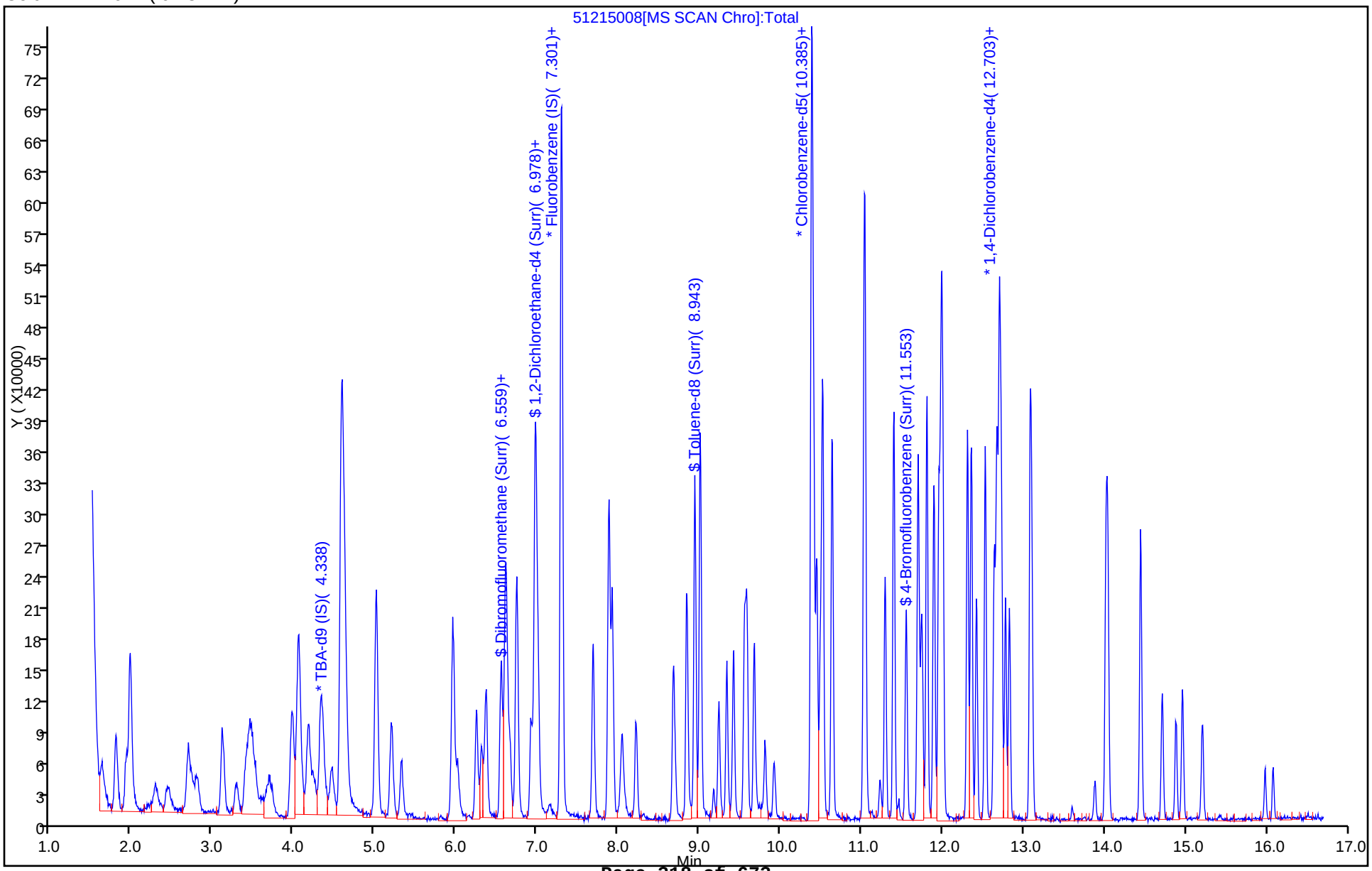
Report Date: 16-Dec-2014 08:51:08 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D

Injection Date:	15-Dec-2014 14:57:30	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#:	8
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

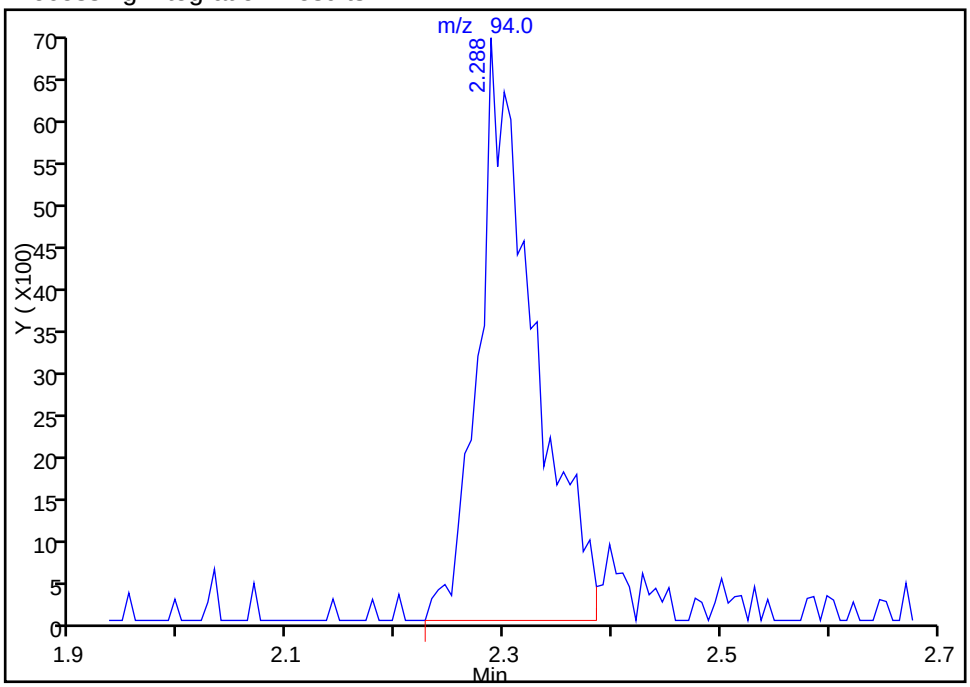
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D				
Injection Date:	15-Dec-2014 14:57:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	001562	ALS Bottle#:	8	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		

15 Bromomethane, CAS: 74-83-9

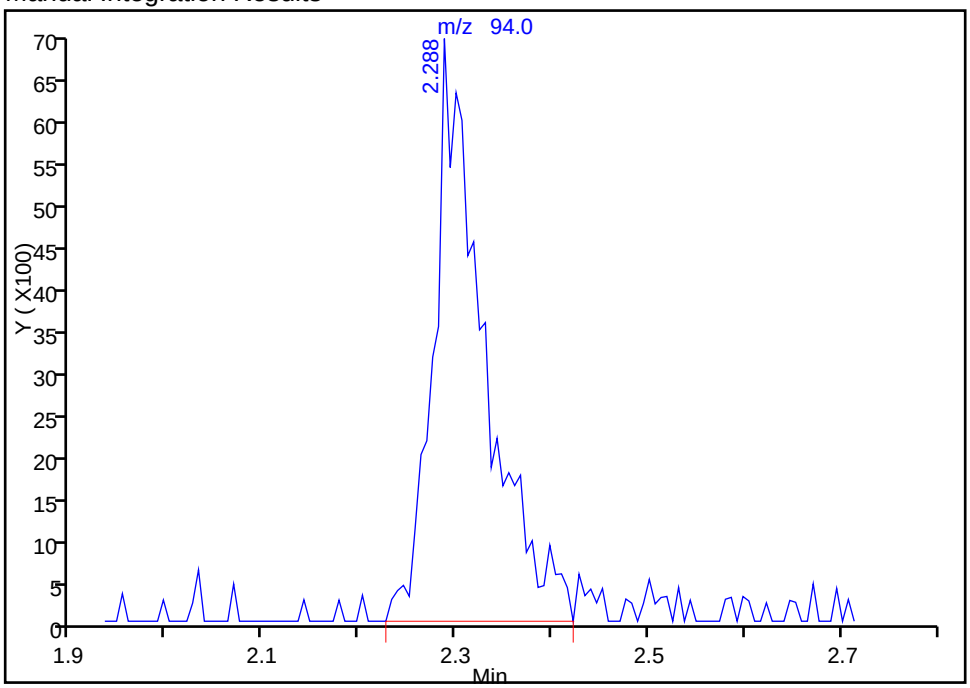
Processing Integration Results

RT: 2.29
Response: 24550
Amount: 23.957816



Manual Integration Results

RT: 2.29
Response: 25599
Amount: 25.586392



Reviewer: fergusond, 15-Dec-2014 16:39:14
Audit Action: Manually Integrated
Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

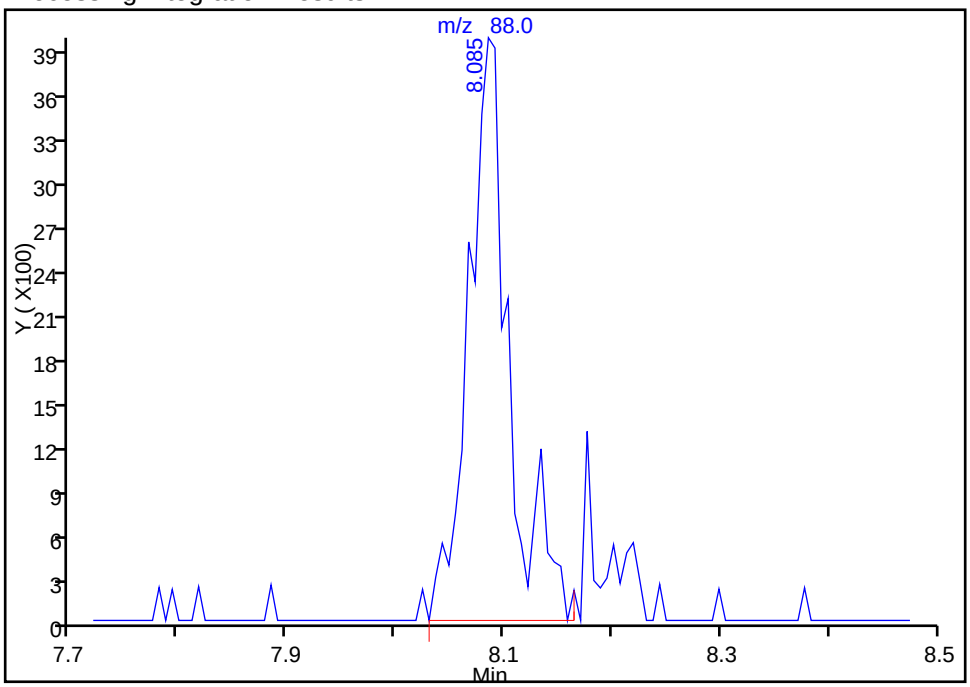
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D				
Injection Date:	15-Dec-2014 14:57:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	001562	ALS Bottle#:	8	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

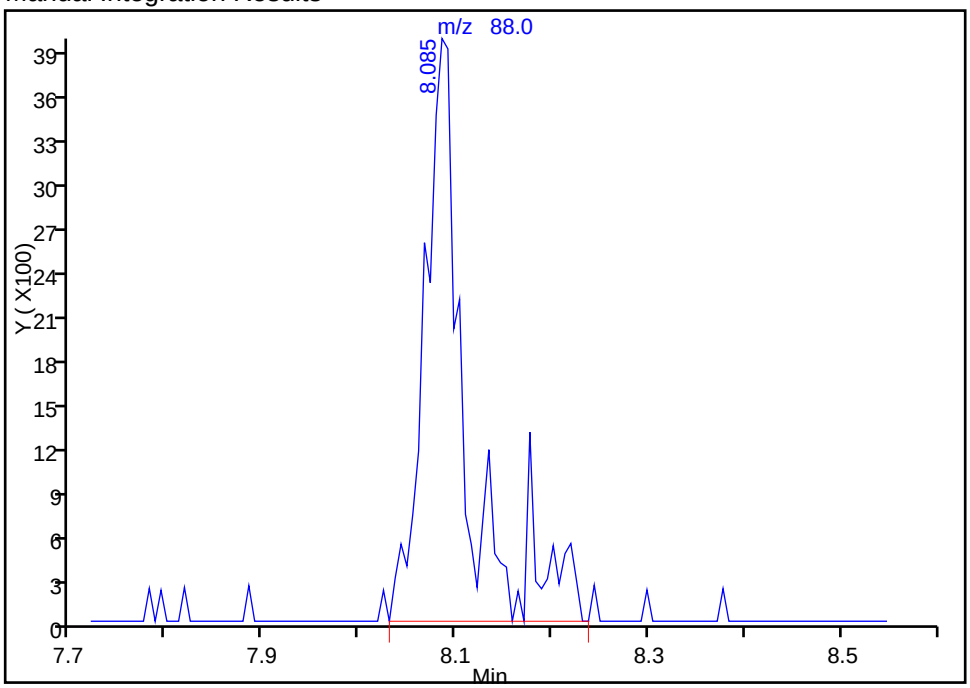
Processing Integration Results

RT: 8.09
Response: 10263
Amount: 448.5612



Manual Integration Results

RT: 8.09
Response: 11752
Amount: 501.1712



Reviewer: fergusond, 16-Dec-2014 08:50:35
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215009.D
Lims ID: ICIS VSTD10
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 15-Dec-2014 15:21:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS VSTD10
Misc. Info.: 180-0004875-009
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 09:09:29 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 16-Dec-2014 09:09:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.338	4.338	0.000	79	164744	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.295	0.000	96	423804	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.385	0.000	93	98015	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.709	12.709	0.000	95	133910	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.552	6.552	0.000	85	94689	50.0	52.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.924	6.924	0.000	92	153750	50.0	51.9	
$ 7 Toluene-d8 (Surr)	98	8.943	8.943	0.000	96	436152	50.0	53.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.553	11.553	0.000	84	163066	50.0	52.5	
11 Dichlorodifluoromethane	85	1.643	1.643	0.000	99	131229	50.0	51.6	
12 Chloromethane	50	1.807	1.807	0.000	99	247505	50.0	49.4	
13 Vinyl chloride	62	1.929	1.929	0.000	98	166505	50.0	48.4	
14 Butadiene	39	1.984	1.984	0.000	96	249438	50.0	50.9	
15 Bromomethane	94	2.294	2.294	0.000	92	49618	50.0	48.2	
16 Chloroethane	64	2.434	2.434	0.000	97	84692	50.0	49.7	
17 Dichlorofluoromethane	67	2.689	2.689	0.000	95	166568	50.0	49.1	
18 Trichlorofluoromethane	101	2.738	2.738	0.000	97	103060	50.0	48.0	
20 Ethyl ether	59	3.115	3.115	0.000	95	149984	50.0	49.1	
21 Acrolein	56	3.286	3.286	0.000	98	67959	150.0	148.9	M
22 1,1-Dichloroethene	96	3.444	3.444	0.000	93	116523	50.0	50.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.486	3.486	0.000	95	114250	50.0	48.9	
24 Acetone	43	3.535	3.535	0.000	97	136052	100.0	102.4	
25 Iodomethane	142	3.669	3.669	0.000	96	146806	50.0	49.7	
26 Carbon disulfide	76	3.718	3.718	0.000	99	203932	50.0	45.6	
28 3-Chloro-1-propene	76	3.979	3.979	0.000	88	62463	50.0	47.9	
30 Methyl acetate	43	4.052	4.052	0.000	100	971398	250.0	251.7	
31 Methylene Chloride	84	4.174	4.174	0.000	90	137628	50.0	49.2	
32 2-Methyl-2-propanol	59	4.466	4.466	0.000	84	112567	500.0	511.1	
33 Acrylonitrile	53	4.581	4.581	0.000	98	902499	500.0	507.5	
34 trans-1,2-Dichloroethene	96	4.594	4.594	0.000	89	117057	50.0	50.1	
35 Methyl tert-butyl ether	73	4.630	4.630	0.000	87	290628	50.0	48.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.019	5.019	0.000	97	290414	50.0	49.1	
37 1,1-Dichloroethane	63	5.202	5.202	0.000	97	275718	50.0	50.7	
38 Vinyl acetate	43	5.324	5.324	0.000	97	252355	50.0	48.4	
44 2,2-Dichloropropane	77	5.956	5.956	0.000	64	73219	50.0	50.8	
45 cis-1,2-Dichloroethene	96	5.968	5.968	0.000	88	124677	50.0	49.3	
46 2-Butanone (MEK)	43	6.017	6.017	0.000	96	201478	100.0	96.4	
49 Chlorobromomethane	128	6.254	6.254	0.000	81	52609	50.0	49.9	
51 Tetrahydrofuran	42	6.309	6.309	0.000	92	154760	100.0	97.3	
52 Chloroform	83	6.370	6.370	0.000	96	203645	50.0	49.5	
53 1,1,1-Trichloroethane	97	6.559	6.559	0.000	92	128898	50.0	48.3	
54 Cyclohexane	56	6.613	6.613	0.000	91	380610	50.0	50.8	
56 Carbon tetrachloride	117	6.741	6.741	0.000	94	115997	50.0	50.1	
55 1,1-Dichloropropene	75	6.747	6.747	0.000	85	169491	50.0	50.4	
57 Isobutyl alcohol	41	6.960	6.960	0.000	75	134692	1250.0	1106.3	
58 Benzene	78	6.978	6.978	0.000	95	522828	50.0	49.9	
59 1,2-Dichloroethane	62	7.009	7.009	0.000	95	208535	50.0	51.2	
62 n-Heptane	43	7.301	7.301	0.000	96	302184	50.0	50.4	
64 Trichloroethene	130	7.690	7.690	0.000	95	116274	50.0	51.8	
66 Methylcyclohexane	83	7.885	7.885	0.000	93	219487	50.0	51.1	
67 1,2-Dichloropropane	63	7.921	7.921	0.000	95	162350	50.0	50.3	
68 Dibromomethane	93	8.043	8.043	0.000	98	66098	50.0	49.7	
70 1,4-Dioxane	88	8.085	8.085	0.000	92	25491	1000.0	1056.5	
71 Dichlorobromomethane	83	8.219	8.219	0.000	95	132486	50.0	48.3	
74 cis-1,3-Dichloropropene	75	8.682	8.682	0.000	85	151006	50.0	48.2	
75 4-Methyl-2-pentanone (MIBK	43	8.846	8.846	0.000	98	427228	100.0	100.9	
76 Toluene	91	9.010	9.010	0.000	96	534952	50.0	51.4	
77 trans-1,3-Dichloropropene	75	9.235	9.235	0.000	93	115007	50.0	47.7	
78 Ethyl methacrylate	69	9.339	9.339	0.000	89	140983	50.0	49.1	
79 1,1,2-Trichloroethane	97	9.424	9.424	0.000	94	99708	50.0	48.8	
80 Tetrachloroethene	164	9.558	9.558	0.000	94	96447	50.0	50.3	
81 1,3-Dichloropropane	76	9.588	9.588	0.000	92	193960	50.0	49.3	
82 2-Hexanone	43	9.673	9.673	0.000	96	355030	100.0	104.8	
84 Chlorodibromomethane	129	9.807	9.807	0.000	89	74703	50.0	49.8	
85 Ethylene Dibromide	107	9.923	9.923	0.000	98	96348	50.0	50.9	
86 3-Chlorobenzotrifluoride	180	10.391	10.391	0.000	93	183531	50.0	53.6	
87 Chlorobenzene	112	10.415	10.415	0.000	91	323152	50.0	51.1	
88 4-Chlorobenzotrifluoride	180	10.446	10.446	0.000	96	169416	50.0	53.0	
89 1,1,1,2-Tetrachloroethane	131	10.495	10.495	0.000	89	94003	50.0	48.7	
90 Ethylbenzene	106	10.525	10.525	0.000	98	182469	50.0	50.9	
91 m-Xylene & p-Xylene	106	10.641	10.641	0.000	97	223210	50.0	51.1	
92 o-Xylene	106	11.030	11.030	0.000	98	220291	50.0	51.9	
93 Styrene	104	11.042	11.042	0.000	91	364481	50.0	51.0	
94 Bromoform	173	11.231	11.231	0.000	95	42875	50.0	45.2	
96 2-Chlorobenzotrifluoride	180	11.291	11.291	0.000	95	173668	50.0	53.1	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	551045	50.0	52.1	
99 1,1,2,2-Tetrachloroethane	83	11.693	11.693	0.000	94	149203	50.0	52.0	
100 Bromobenzene	156	11.705	11.705	0.000	96	121949	50.0	50.6	
101 1,2,3-Trichloropropane	110	11.742	11.742	0.000	90	43578	50.0	49.7	
102 trans-1,4-Dichloro-2-buten	53	11.748	11.748	0.000	65	57235	50.0	47.6	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	146805	50.0	51.6	
104 2-Chlorotoluene	126	11.894	11.894	0.000	94	120100	50.0	50.1	
105 3-Chlorotoluene	126	11.955	11.955	0.000	97	137425	50.0	53.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.985	11.985	0.000	94	457058	50.0	53.6	
107 4-Chlorotoluene	126	12.003	12.003	0.000	99	138608	50.0	52.0	
108 tert-Butylbenzene	119	12.307	12.307	0.000	95	370100	50.0	52.9	
110 1,2,4-Trimethylbenzene	105	12.356	12.356	0.000	99	465575	50.0	53.2	
111 1,2-dichloro-4-(trifluorom	214	12.417	12.417	0.000	98	130684	50.0	54.2	
112 sec-Butylbenzene	105	12.526	12.526	0.000	96	534748	50.0	53.1	
113 1,3-Dichlorobenzene	146	12.642	12.642	0.000	96	232561	50.0	51.1	
114 4-Isopropyltoluene	119	12.672	12.672	0.000	97	427869	50.0	52.7	
115 1,4-Dichlorobenzene	146	12.727	12.727	0.000	93	242307	50.0	51.6	
116 2,4-Dichloro-1-(triflourom	214	12.776	12.776	0.000	98	118794	50.0	52.5	
118 2,5-Dichlorobenzotrifluori	214	12.831	12.831	0.000	98	134654	50.0	54.5	
120 n-Butylbenzene	91	13.080	13.080	0.000	98	393872	50.0	53.1	
121 1,2-Dichlorobenzene	146	13.104	13.104	0.000	95	212701	50.0	50.4	
122 1,2-Dibromo-3-Chloropropan	75	13.883	13.883	0.000	68	19807	50.0	51.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.029	14.029	0.000	98	444038	150.0	167.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.443	14.443	0.000	98	274221	100.0	108.1	
126 1,2,4-Trichlorobenzene	180	14.710	14.710	0.000	94	93933	50.0	53.7	
127 Hexachlorobutadiene	225	14.881	14.881	0.000	95	42898	50.0	51.7	
128 Naphthalene	128	14.960	14.960	0.000	97	242621	50.0	51.9	
129 1,2,3-Trichlorobenzene	180	15.209	15.209	0.000	93	70246	50.0	51.2	
131 2,4,5-Trichlorotoluene	159	15.982	15.982	0.000	96	30153	50.0	51.7	
130 2,3,6-Trichlorotoluene	159	16.079	16.079	0.000	95	28614	50.0	53.6	
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	99.4	
S 133 Xylenes, Total	106				0		100.0	103.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	95.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACROPRI_00004	Amount Added:	6.00	Units: uL	
VOA8260SURR_00028	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	2.00	Units: uL	
voaWEEpri Res_00001	Amount Added:	2.00	Units: uL	
voaWKet2ndRes_00005	Amount Added:	2.00	Units: uL	
voaWVA pri Re_00005	Amount Added:	2.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

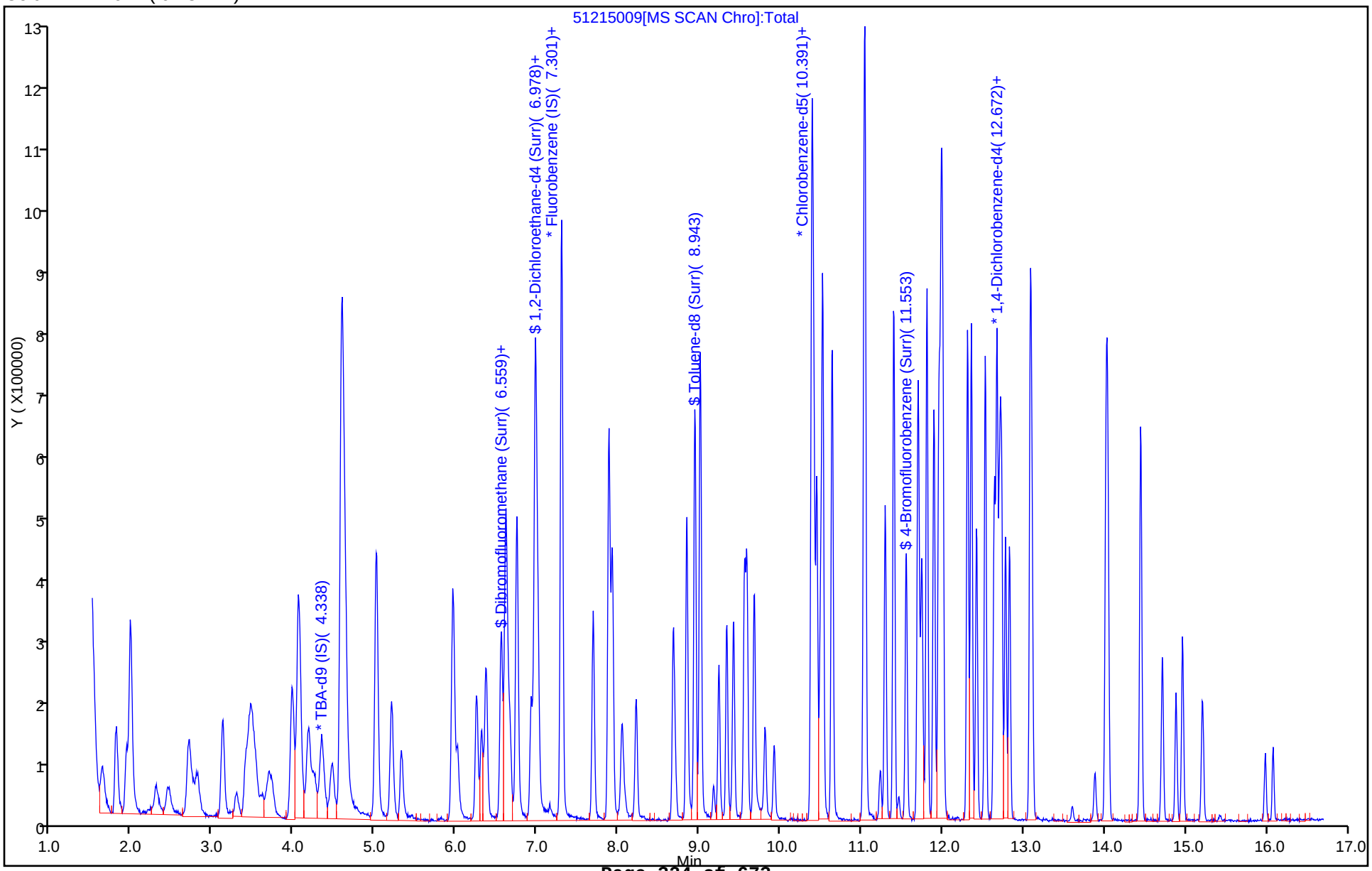
Report Date: 16-Dec-2014 09:09:30 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215009.D

Injection Date:	15-Dec-2014 15:21:30	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#:	9
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

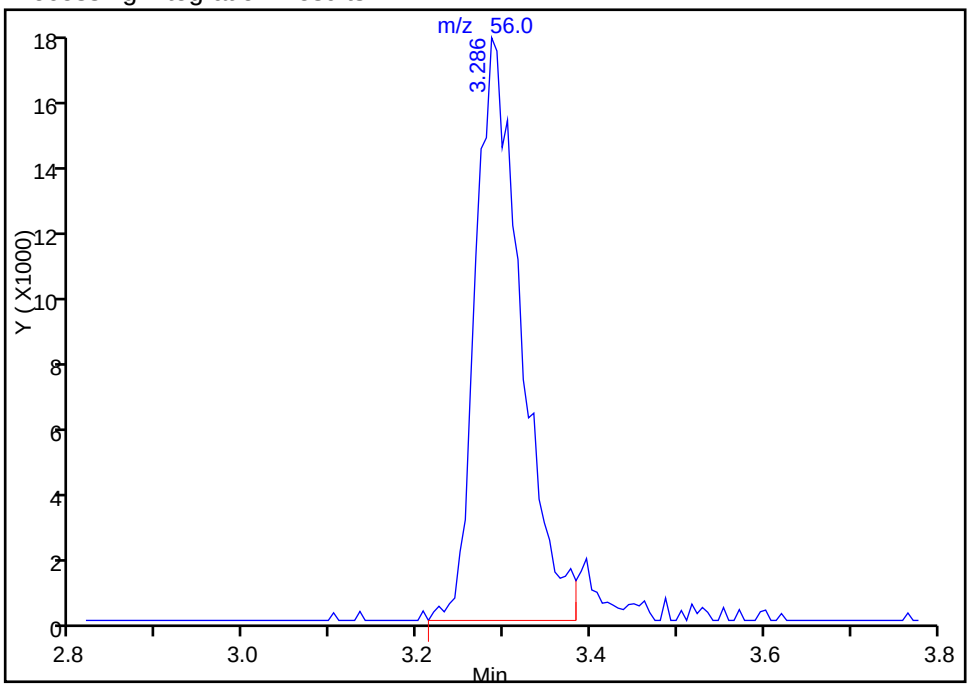
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215009.D				
Injection Date:	15-Dec-2014 15:21:30	Instrument ID:	CHHP5		
Lims ID:	ICIS VSTD10				
Client ID:					
Operator ID:	001562	ALS Bottle#:	9	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		

21 Acrolein, CAS: 107-02-8

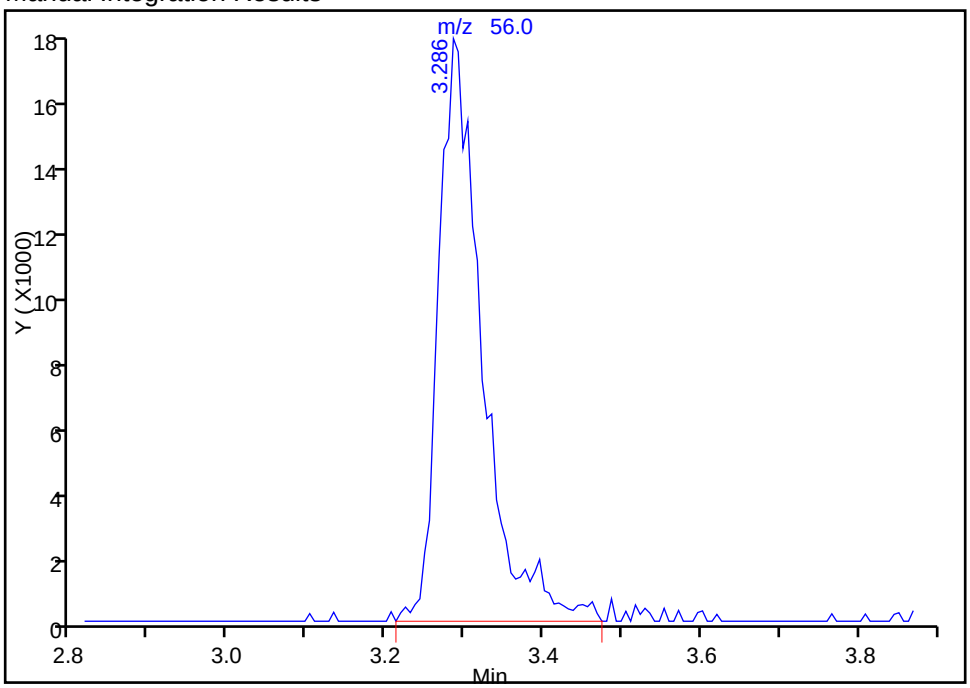
Processing Integration Results

RT: 3.29
Response: 64457
Amount: 145.1414



Manual Integration Results

RT: 3.29
Response: 67959
Amount: 148.8827



Reviewer: fergusond, 15-Dec-2014 16:37:14
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215010.D
Lims ID: IC VSTD15
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 15-Dec-2014 15:45:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD15
Misc. Info.: 180-0004875-010
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:51:12 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 15-Dec-2014 16:42:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.336	4.336	0.000	83	181242	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.298	7.298	0.000	97	442943	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.383	10.383	0.000	94	107266	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.707	12.707	0.000	94	140981	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.556	6.556	0.000	82	138420	75.0	73.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.921	6.921	0.000	91	221449	75.0	71.5	
$ 7 Toluene-d8 (Surr)	98	8.947	8.947	0.000	96	616248	75.0	69.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.551	11.551	0.000	84	234795	75.0	69.1	
11 Dichlorodifluoromethane	85	1.629	1.629	0.000	98	190564	75.0	71.7	
12 Chloromethane	50	1.799	1.799	0.000	99	371573	75.0	70.9	
13 Vinyl chloride	62	1.927	1.927	0.000	97	253937	75.0	70.6	
14 Butadiene	39	1.975	1.975	0.000	99	348720	75.0	68.1	
15 Bromomethane	94	2.292	2.292	0.000	92	79919	75.0	74.3	
16 Chloroethane	64	2.438	2.438	0.000	97	127211	75.0	71.4	
17 Dichlorofluoromethane	67	2.687	2.687	0.000	97	259364	75.0	73.2	
18 Trichlorofluoromethane	101	2.736	2.736	0.000	96	158442	75.0	70.6	
20 Ethyl ether	59	3.113	3.113	0.000	95	225291	75.0	70.6	
21 Acrolein	56	3.289	3.289	0.000	99	83110	175.0	174.2	
22 1,1-Dichloroethene	96	3.435	3.435	0.000	91	170252	75.0	70.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.466	3.466	0.000	95	168083	75.0	68.8	
24 Acetone	43	3.527	3.527	0.000	98	197095	150.0	141.9	
25 Iodomethane	142	3.667	3.667	0.000	96	219902	75.0	71.2	
26 Carbon disulfide	76	3.709	3.709	0.000	100	319940	75.0	68.4	
28 3-Chloro-1-propene	76	3.971	3.971	0.000	87	98218	75.0	72.1	
30 Methyl acetate	43	4.050	4.050	0.000	100	1479687	375.0	366.9	
31 Methylene Chloride	84	4.172	4.172	0.000	90	204036	75.0	72.0	
32 2-Methyl-2-propanol	59	4.464	4.464	0.000	83	171520	750.0	707.9	
33 Acrylonitrile	53	4.585	4.585	0.000	99	1369178	750.0	736.6	
34 trans-1,2-Dichloroethene	96	4.597	4.597	0.000	92	179704	75.0	73.6	
35 Methyl tert-butyl ether	73	4.622	4.622	0.000	88	452968	75.0	71.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.017	5.017	0.000	97	429042	75.0	69.4	
37 1,1-Dichloroethane	63	5.200	5.200	0.000	97	421630	75.0	74.2	
38 Vinyl acetate	43	5.321	5.321	0.000	96	391840	75.0	71.9	
44 2,2-Dichloropropane	77	5.954	5.954	0.000	54	106300	75.0	70.6	
45 cis-1,2-Dichloroethene	96	5.966	5.966	0.000	88	192115	75.0	72.8	
46 2-Butanone (MEK)	43	6.015	6.015	0.000	96	310437	150.0	142.1	
49 Chlorobromomethane	128	6.246	6.246	0.000	82	82921	75.0	75.3	
51 Tetrahydrofuran	42	6.313	6.313	0.000	93	229135	150.0	137.9	
52 Chloroform	83	6.362	6.362	0.000	95	312586	75.0	72.8	
53 1,1,1-Trichloroethane	97	6.550	6.550	0.000	92	205239	75.0	73.6	
54 Cyclohexane	56	6.611	6.611	0.000	93	568225	75.0	72.5	
56 Carbon tetrachloride	117	6.739	6.739	0.000	91	174921	75.0	72.3	
55 1,1-Dichloropropene	75	6.745	6.745	0.000	85	247738	75.0	70.4	
57 Isobutyl alcohol	41	6.964	6.964	0.000	67	224509	1875.0	1764.4	
58 Benzene	78	6.982	6.982	0.000	94	792783	75.0	72.4	
59 1,2-Dichloroethane	62	7.013	7.013	0.000	95	315981	75.0	74.3	
62 n-Heptane	43	7.298	7.298	0.000	96	437674	75.0	69.8	
64 Trichloroethene	130	7.688	7.688	0.000	94	168085	75.0	71.7	
66 Methylcyclohexane	83	7.882	7.882	0.000	94	327984	75.0	73.1	
67 1,2-Dichloropropane	63	7.925	7.925	0.000	96	251775	75.0	74.7	
68 Dibromomethane	93	8.041	8.041	0.000	96	101536	75.0	73.1	
70 1,4-Dioxane	88	8.077	8.077	0.000	90	40031	1500.0	1587.4	
71 Dichlorobromomethane	83	8.217	8.217	0.000	94	209313	75.0	73.0	
74 cis-1,3-Dichloropropene	75	8.679	8.679	0.000	84	248192	75.0	75.8	
75 4-Methyl-2-pentanone (MIBK	43	8.844	8.844	0.000	98	691017	150.0	149.2	
76 Toluene	91	9.008	9.008	0.000	96	824691	75.0	72.4	
77 trans-1,3-Dichloropropene	75	9.239	9.239	0.000	92	193036	75.0	73.2	
78 Ethyl methacrylate	69	9.336	9.336	0.000	89	233054	75.0	74.2	
79 1,1,2-Trichloroethane	97	9.422	9.422	0.000	94	160928	75.0	72.0	
80 Tetrachloroethene	164	9.555	9.555	0.000	94	145626	75.0	69.3	
81 1,3-Dichloropropane	76	9.586	9.586	0.000	94	312441	75.0	72.6	
82 2-Hexanone	43	9.677	9.677	0.000	98	556468	150.0	150.0	
84 Chlorodibromomethane	129	9.811	9.811	0.000	88	124399	75.0	75.7	
85 Ethylene Dibromide	107	9.920	9.920	0.000	97	149545	75.0	72.2	
86 3-Chlorobenzotrifluoride	180	10.389	10.389	0.000	94	249882	75.0	66.7	
87 Chlorobenzene	112	10.413	10.413	0.000	89	487195	75.0	70.3	
88 4-Chlorobenzotrifluoride	180	10.450	10.450	0.000	96	241146	75.0	68.9	
89 1,1,1,2-Tetrachloroethane	131	10.492	10.492	0.000	90	149698	75.0	70.8	
90 Ethylbenzene	106	10.523	10.523	0.000	98	281017	75.0	71.7	
91 m-Xylene & p-Xylene	106	10.638	10.638	0.000	97	347010	75.0	72.6	
92 o-Xylene	106	11.034	11.034	0.000	94	332078	75.0	71.5	
93 Styrene	104	11.046	11.046	0.000	86	566334	75.0	72.5	
94 Bromoform	173	11.234	11.234	0.000	95	74265	75.0	71.5	
96 2-Chlorobenzotrifluoride	180	11.295	11.295	0.000	95	239775	75.0	66.9	
97 Isopropylbenzene	105	11.399	11.399	0.000	97	824955	75.0	71.2	
99 1,1,2,2-Tetrachloroethane	83	11.691	11.691	0.000	94	225157	75.0	71.7	
100 Bromobenzene	156	11.703	11.703	0.000	96	188616	75.0	74.4	
101 1,2,3-Trichloropropane	110	11.739	11.739	0.000	91	67651	75.0	73.4	
102 trans-1,4-Dichloro-2-buten	53	11.752	11.752	0.000	72	93980	75.0	74.2	
103 N-Propylbenzene	120	11.806	11.806	0.000	99	218494	75.0	73.0	
104 2-Chlorotoluene	126	11.898	11.898	0.000	94	191792	75.0	75.9	
105 3-Chlorotoluene	126	11.952	11.952	0.000	96	188584	75.0	70.0	

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	11.983	11.983	0.000	94	665788	75.0	74.2	
107 4-Chlorotoluene	126	12.001	12.001	0.000	99	213085	75.0	75.9	
108 tert-Butylbenzene	119	12.305	12.305	0.000	94	537092	75.0	73.0	
110 1,2,4-Trimethylbenzene	105	12.354	12.354	0.000	97	688660	75.0	74.7	
111 1,2-dichloro-4-(trifluorom	214	12.421	12.421	0.000	97	180560	75.0	71.1	
112 sec-Butylbenzene	105	12.524	12.524	0.000	96	773895	75.0	73.0	
113 1,3-Dichlorobenzene	146	12.640	12.640	0.000	95	345748	75.0	72.2	
114 4-Isopropyltoluene	119	12.670	12.670	0.000	97	634008	75.0	74.2	
115 1,4-Dichlorobenzene	146	12.725	12.725	0.000	91	352959	75.0	71.4	
116 2,4-Dichloro-1-(triflourom	214	12.780	12.780	0.000	98	167750	75.0	70.4	
118 2,5-Dichlorobenzotrifluori	214	12.828	12.828	0.000	97	181592	75.0	69.9	
120 n-Butylbenzene	91	13.078	13.078	0.000	98	555780	75.0	71.2	
121 1,2-Dichlorobenzene	146	13.102	13.102	0.000	95	323846	75.0	72.9	
122 1,2-Dibromo-3-Chloropropan	75	13.881	13.881	0.000	69	29088	75.0	72.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.027	14.027	0.000	98	599364	225.0	214.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.447	14.447	0.000	98	376469	150.0	141.0	
126 1,2,4-Trichlorobenzene	180	14.708	14.708	0.000	94	127051	75.0	68.9	
127 Hexachlorobutadiene	225	14.885	14.885	0.000	95	57408	75.0	65.7	
128 Naphthalene	128	14.964	14.964	0.000	97	366622	75.0	74.5	
129 1,2,3-Trichlorobenzene	180	15.207	15.207	0.000	95	101227	75.0	70.1	
131 2,4,5-Trichlorotoluene	159	15.980	15.980	0.000	96	37510	75.0	61.1	
130 2,3,6-Trichlorotoluene	159	16.077	16.077	0.000	95	36291	75.0	64.5	
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		150.0	146.3	
S 133 Xylenes, Total	106				0		150.0	144.2	
S 135 1,3-Dichloropropene, Total	1				0		150.0	149.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaWVA pri Re_00005	Amount Added:	3.00	Units: uL	
VOA8260SURR_00028	Amount Added:	3.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	3.00	Units: uL	
voaWEEpri Res_00001	Amount Added:	3.00	Units: uL	
voaWKet2ndRes_00005	Amount Added:	3.00	Units: uL	
VOAACROPRI_00004	Amount Added:	7.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

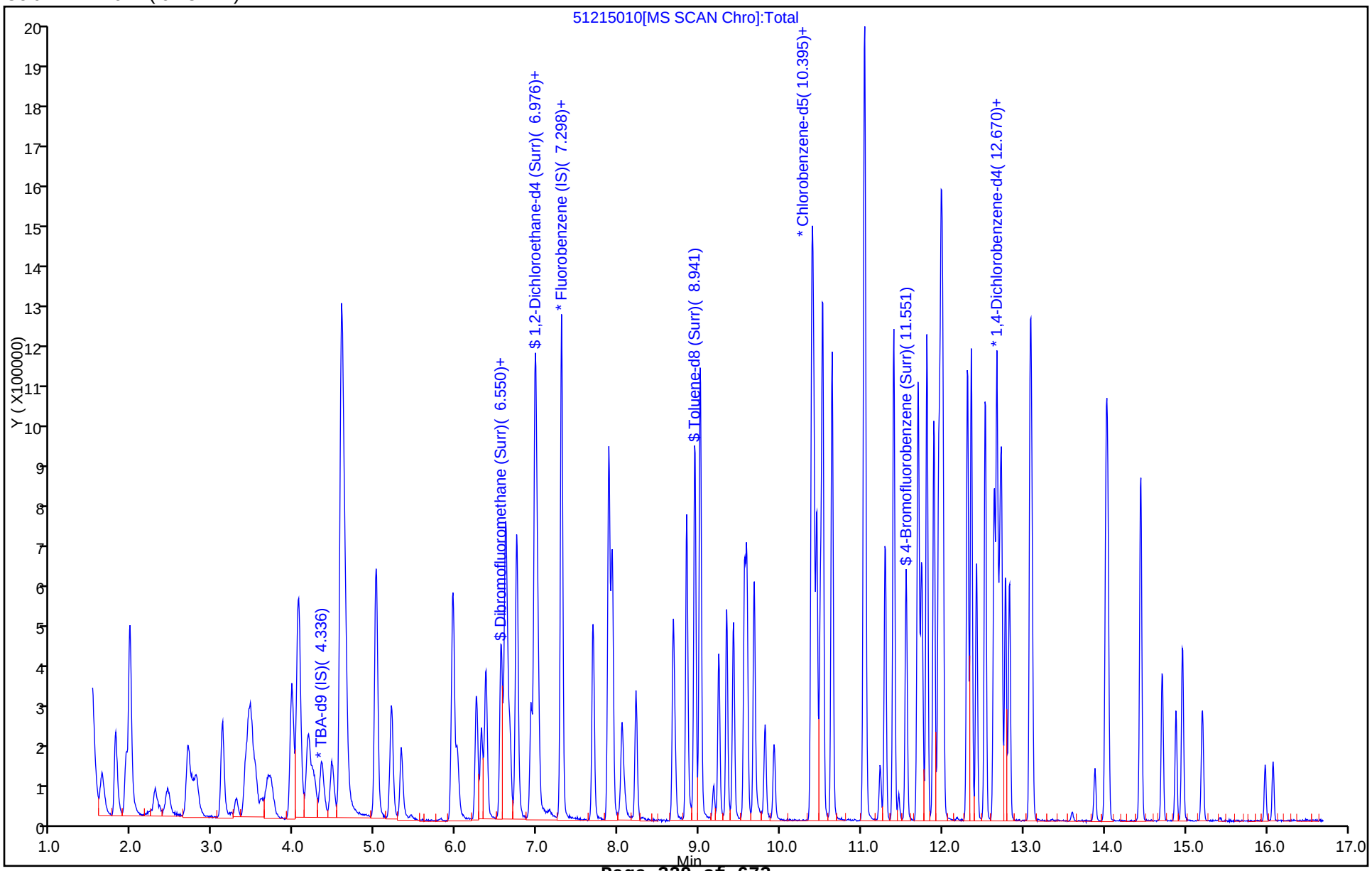
Report Date: 16-Dec-2014 08:51:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215010.D

Injection Date:	15-Dec-2014 15:45:30	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#:	10
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\20141215-4875.b\51215011.D
Lims ID: IC VSTD20
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 15-Dec-2014 16:09:30 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD20
Misc. Info.: 180-0004875-011
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:51:14 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 15-Dec-2014 16:48:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.340	4.336	0.004	81	185121	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.297	7.298	-0.001	95	464026	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.383	0.004	95	104758	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.705	12.707	-0.002	94	146287	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.555	6.556	-0.001	75	167966	100.0	85.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.920	6.921	-0.001	92	286774	100.0	88.4	
$ 7 Toluene-d8 (Surr)	98	8.945	8.947	-0.002	95	772272	100.0	88.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.549	11.551	-0.002	84	307884	100.0	92.7	
11 Dichlorodifluoromethane	85	1.633	1.629	0.004	98	273288	100.0	98.2	
12 Chloromethane	50	1.797	1.799	-0.002	99	523947	100.0	95.5	
13 Vinyl chloride	62	1.931	1.927	0.004	98	365992	100.0	97.1	
14 Butadiene	39	1.974	1.975	-0.001	96	503293	100.0	93.8	
15 Bromomethane	94	2.290	2.292	-0.002	92	107362	100.0	95.3	
16 Chloroethane	64	2.436	2.438	-0.002	96	179530	100.0	96.2	
17 Dichlorofluoromethane	67	2.679	2.687	-0.008	97	350450	100.0	94.4	
18 Trichlorofluoromethane	101	2.752	2.736	0.016	93	239313	100.0	101.8	
20 Ethyl ether	59	3.111	3.113	-0.002	94	303566	100.0	90.8	
21 Acrolein	56	3.282	3.289	-0.007	97	98752	200.0	197.6	
22 1,1-Dichloroethene	96	3.428	3.435	-0.007	91	242263	100.0	95.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.464	3.466	-0.002	95	245306	100.0	95.8	
24 Acetone	43	3.525	3.527	-0.002	97	272377	200.0	187.2	
25 Iodomethane	142	3.653	3.667	-0.014	99	312818	100.0	96.6	
26 Carbon disulfide	76	3.714	3.709	0.005	99	479421	100.0	97.8	
28 3-Chloro-1-propene	76	3.975	3.971	0.004	88	139671	100.0	97.9	
30 Methyl acetate	43	4.048	4.050	-0.002	100	1995763	500.0	472.3	
31 Methylene Chloride	84	4.170	4.172	-0.002	90	282467	100.0	96.9	
32 2-Methyl-2-propanol	59	4.468	4.464	0.004	84	233721	1000.0	944.4	
33 Acrylonitrile	53	4.584	4.585	-0.001	97	1844438	1000.0	947.2	
34 trans-1,2-Dichloroethene	96	4.596	4.597	-0.001	90	243743	100.0	95.2	
35 Methyl tert-butyl ether	73	4.626	4.622	0.004	90	630126	100.0	95.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.003	5.017	-0.014	97	621883	100.0	96.0	
37 1,1-Dichloroethane	63	5.204	5.200	0.004	97	578361	100.0	97.2	
38 Vinyl acetate	43	5.320	5.321	-0.001	97	556672	100.0	97.5	
44 2,2-Dichloropropane	77	5.952	5.954	-0.002	69	156961	100.0	99.5	
45 cis-1,2-Dichloroethene	96	5.965	5.966	-0.001	89	265573	100.0	96.0	
46 2-Butanone (MEK)	43	6.013	6.015	-0.002	97	448845	200.0	196.1	
49 Chlorobromomethane	128	6.244	6.246	-0.002	82	106775	100.0	92.5	
51 Tetrahydrofuran	42	6.311	6.313	-0.002	93	320665	200.0	184.2	
52 Chloroform	83	6.366	6.362	0.004	96	428736	100.0	95.3	
53 1,1,1-Trichloroethane	97	6.555	6.550	0.005	93	292080	100.0	100.0	
54 Cyclohexane	56	6.615	6.611	0.004	91	811131	100.0	98.8	
56 Carbon tetrachloride	117	6.737	6.739	-0.002	75	251804	100.0	99.3	
55 1,1-Dichloropropene	75	6.749	6.745	0.004	84	361815	100.0	98.2	
57 Isobutyl alcohol	41	6.968	6.964	0.004	93	339131	2500.0	2544.1	
58 Benzene	78	6.980	6.982	-0.002	94	1072233	100.0	93.4	
59 1,2-Dichloroethane	62	7.011	7.013	-0.002	94	420406	100.0	94.4	
62 n-Heptane	43	7.303	7.298	0.005	96	645815	100.0	98.3	
64 Trichloroethene	130	7.686	7.688	-0.002	95	236014	100.0	96.1	
66 Methylcyclohexane	83	7.887	7.882	0.005	92	476530	100.0	101.3	
67 1,2-Dichloropropane	63	7.923	7.925	-0.002	96	349012	100.0	98.9	
68 Dibromomethane	93	8.045	8.041	0.004	96	138247	100.0	95.0	
70 1,4-Dioxane	88	8.082	8.077	0.005	86	55226	2000.0	2090.5	M
71 Dichlorobromomethane	83	8.215	8.217	-0.002	95	289837	100.0	96.4	
74 cis-1,3-Dichloropropene	75	8.678	8.679	-0.001	85	348436	100.0	101.6	
75 4-Methyl-2-pentanone (MIBK	43	8.842	8.844	-0.002	98	949167	200.0	209.8	
76 Toluene	91	9.012	9.008	0.004	97	1092848	100.0	98.3	
77 trans-1,3-Dichloropropene	75	9.237	9.239	-0.002	94	272778	100.0	105.9	
78 Ethyl methacrylate	69	9.335	9.336	-0.001	88	324927	100.0	106.0	
79 1,1,2-Trichloroethane	97	9.420	9.422	-0.002	93	215870	100.0	98.9	
80 Tetrachloroethene	164	9.554	9.555	-0.001	94	198281	100.0	96.7	
81 1,3-Dichloropropane	76	9.584	9.586	-0.002	92	415185	100.0	98.8	
82 2-Hexanone	43	9.675	9.677	-0.002	97	731532	200.0	202.0	
84 Chlorodibromomethane	129	9.809	9.811	-0.002	89	167905	100.0	104.6	
85 Ethylene Dibromide	107	9.925	9.920	0.005	99	202583	100.0	100.1	
86 3-Chlorobenzotrifluoride	180	10.393	10.389	0.004	94	357810	100.0	97.9	
87 Chlorobenzene	112	10.412	10.413	-0.001	89	668345	100.0	98.8	
88 4-Chlorobenzotrifluoride	180	10.448	10.450	-0.002	96	335563	100.0	98.2	
89 1,1,1,2-Tetrachloroethane	131	10.497	10.492	0.005	91	201091	100.0	97.4	
90 Ethylbenzene	106	10.521	10.523	-0.002	98	384275	100.0	100.3	
91 m-Xylene & p-Xylene	106	10.637	10.638	-0.001	97	477144	100.0	102.3	
92 o-Xylene	106	11.032	11.034	-0.002	98	451799	100.0	99.6	
93 Styrene	104	11.044	11.046	-0.002	92	769446	100.0	100.8	
94 Bromoform	173	11.233	11.234	-0.001	94	103601	100.0	102.2	
96 2-Chlorobenzotrifluoride	180	11.294	11.295	-0.001	94	345106	100.0	98.6	
97 Isopropylbenzene	105	11.397	11.399	-0.002	97	1147487	100.0	101.4	
99 1,1,2,2-Tetrachloroethane	83	11.695	11.691	0.004	96	302138	100.0	98.5	
100 Bromobenzene	156	11.701	11.703	-0.002	97	258939	100.0	98.4	
101 1,2,3-Trichloropropane	110	11.738	11.739	-0.001	89	89733	100.0	93.8	
102 trans-1,4-Dichloro-2-buten	53	11.750	11.752	-0.002	69	129754	100.0	98.7	
103 N-Propylbenzene	120	11.805	11.806	-0.001	99	316053	100.0	101.7	
104 2-Chlorotoluene	126	11.896	11.898	-0.002	94	263552	100.0	100.5	
105 3-Chlorotoluene	126	11.957	11.952	0.005	96	276497	100.0	99.0	

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	11.981	11.983	-0.002	94	939917	100.0	101.0	
107 4-Chlorotoluene	126	11.999	12.001	-0.002	99	281879	100.0	96.8	
108 tert-Butylbenzene	119	12.310	12.305	0.005	95	766289	100.0	100.3	
110 1,2,4-Trimethylbenzene	105	12.358	12.354	0.004	98	965955	100.0	101.0	
111 1,2-dichloro-4-(trifluorom	214	12.419	12.421	-0.002	98	262077	100.0	99.5	
112 sec-Butylbenzene	105	12.529	12.524	0.005	96	1090919	100.0	99.1	
113 1,3-Dichlorobenzene	146	12.638	12.640	-0.002	96	486729	100.0	98.0	
114 4-Isopropyltoluene	119	12.675	12.670	0.005	96	916889	100.0	103.5	
115 1,4-Dichlorobenzene	146	12.729	12.725	0.004	92	496017	100.0	96.7	
116 2,4-Dichloro-1-(triflourom	214	12.778	12.780	-0.002	98	238127	100.0	96.3	
118 2,5-Dichlorobenzotrifluori	214	12.827	12.828	-0.001	97	262855	100.0	97.5	
120 n-Butylbenzene	91	13.082	13.078	0.004	98	827117	100.0	102.1	
121 1,2-Dichlorobenzene	146	13.100	13.102	-0.002	95	451798	100.0	98.0	
122 1,2-Dibromo-3-Chloropropan	75	13.885	13.881	0.004	70	41345	100.0	98.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.025	14.027	-0.002	98	870798	300.0	299.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.445	14.447	-0.002	98	544526	200.0	196.6	
126 1,2,4-Trichlorobenzene	180	14.713	14.708	0.005	94	185414	100.0	97.0	
127 Hexachlorobutadiene	225	14.877	14.885	-0.008	97	86456	100.0	95.3	
128 Naphthalene	128	14.962	14.964	-0.002	97	517111	100.0	101.3	
129 1,2,3-Trichlorobenzene	180	15.205	15.207	-0.002	93	145164	100.0	96.8	
131 2,4,5-Trichlorotoluene	159	15.984	15.980	0.004	93	60662	100.0	95.3	
130 2,3,6-Trichlorotoluene	159	16.081	16.077	0.004	92	53522	100.0	91.7	
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		200.0	191.3	
S 133 Xylenes, Total	106				0		200.0	201.9	
S 135 1,3-Dichloropropene, Total	1				0		200.0	207.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

voaWVA pri Re_00005	Amount Added:	4.00	Units: uL	
VOA8260SURR_00028	Amount Added:	4.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	4.00	Units: uL	
voaWEEpri Res_00001	Amount Added:	4.00	Units: uL	
voaWKet2ndRes_00005	Amount Added:	4.00	Units: uL	
VOAACROPRI_00004	Amount Added:	8.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

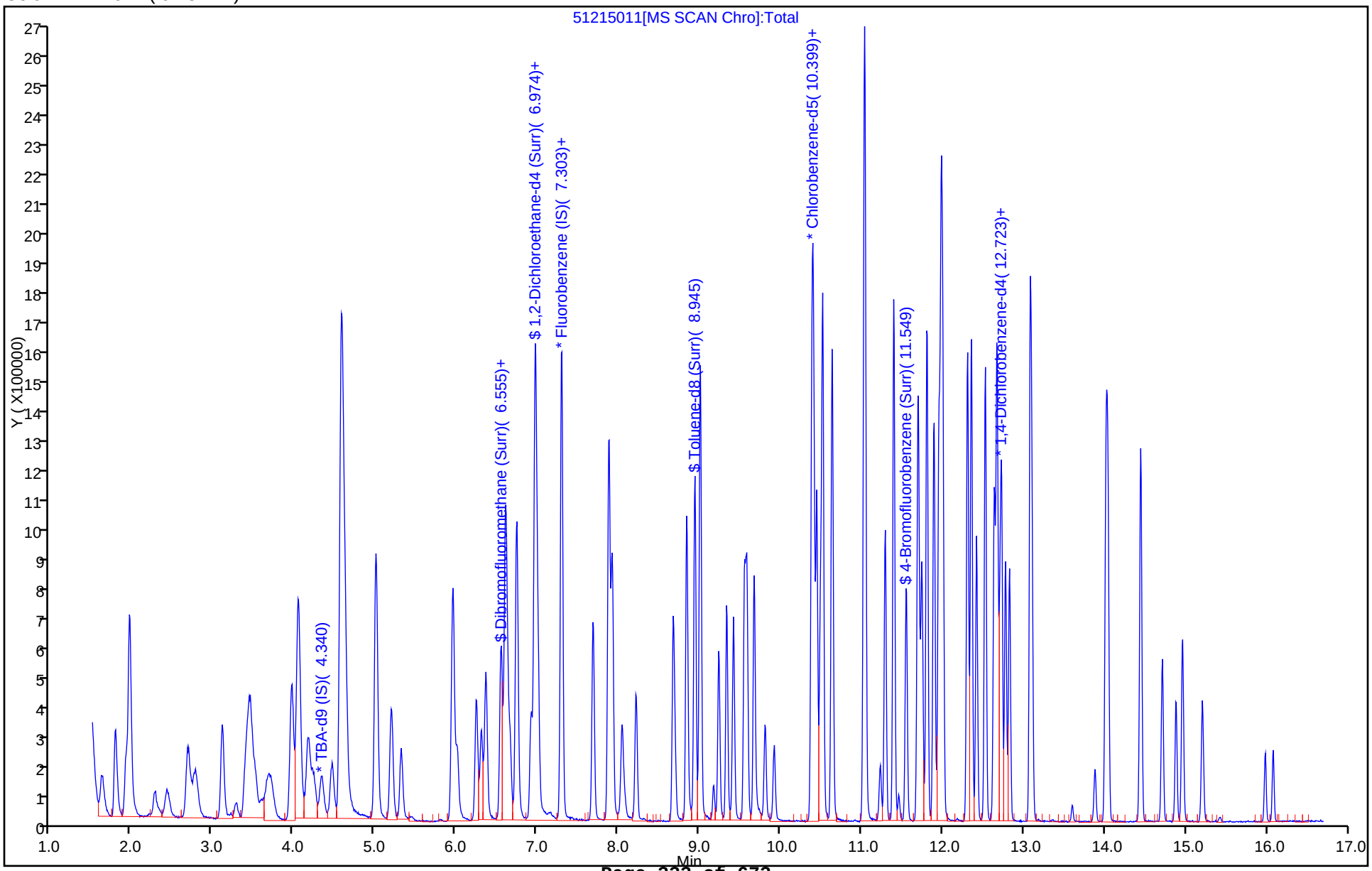
Report Date: 16-Dec-2014 08:51:15 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215011.D

Injection Date:	15-Dec-2014 16:09:30	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#:	11
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

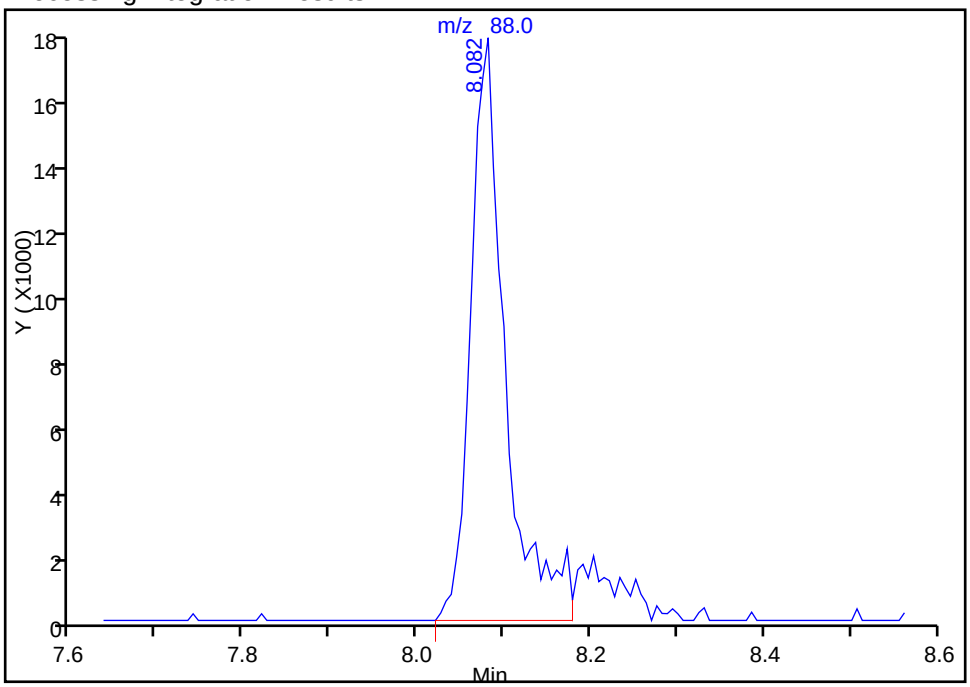
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215011.D				
Injection Date:	15-Dec-2014 16:09:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD20				
Client ID:					
Operator ID:	001562	ALS Bottle#:	11	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		

70 1,4-Dioxane, CAS: 123-91-1

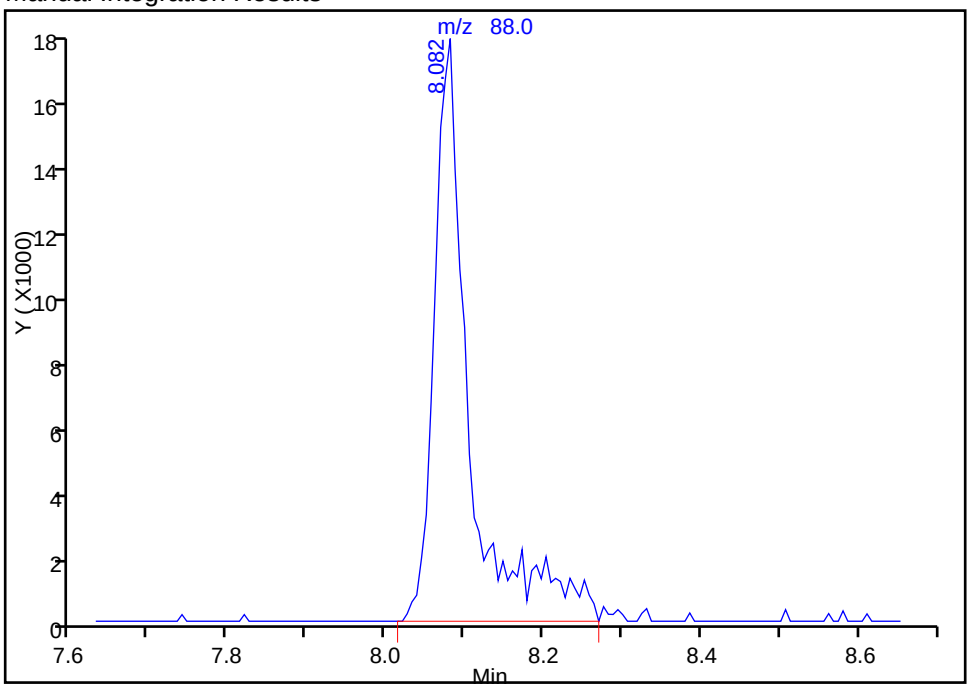
Processing Integration Results

RT: 8.08
Response: 49163
Amount: 1857.3302



Manual Integration Results

RT: 8.08
Response: 55226
Amount: 2090.4917



Reviewer: fergusond, 15-Dec-2014 16:48:16
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215012.D
Lims ID: IC VSTD35
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 15-Dec-2014 16:33:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD35
Misc. Info.: 180-0004875-012
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:51:16 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 16-Dec-2014 08:38:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.345	4.336	0.009	85	188224	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.298	-0.003	97	434131	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.383	0.003	93	110231	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.704	12.707	-0.003	95	144359	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.553	6.556	-0.003	92	313362	175.0	169.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.924	6.921	0.003	92	517527	175.0	170.6	
$ 7 Toluene-d8 (Surr)	98	8.944	8.947	-0.003	95	1402860	175.0	153.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.554	11.551	0.003	87	555403	175.0	159.0	
11 Dichlorodifluoromethane	85	1.632	1.629	0.003	98	461200	175.0	177.2	
12 Chloromethane	50	1.796	1.799	-0.003	99	879810	175.0	171.3	
13 Vinyl chloride	62	1.930	1.927	0.003	98	619242	175.0	175.6	
14 Butadiene	39	1.978	1.975	0.003	95	853165	175.0	170.0	
15 Bromomethane	94	2.289	2.292	-0.003	90	167265	175.0	158.6	
16 Chloroethane	64	2.441	2.438	0.003	96	292962	175.0	167.8	
17 Dichlorofluoromethane	67	2.684	2.687	-0.003	97	609495	175.0	175.5	
18 Trichlorofluoromethane	101	2.751	2.736	0.015	96	414214	175.0	188.3	
20 Ethyl ether	59	3.116	3.113	0.003	94	526502	175.0	168.4	
21 Acrolein	56	3.293	3.289	0.004	98	108540	225.0	232.1	
22 1,1-Dichloroethene	96	3.445	3.435	0.010	91	425581	175.0	180.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.469	3.466	0.003	84	430964	175.0	180.0	
24 Acetone	43	3.530	3.527	0.003	98	484655	350.0	356.0	
25 Iodomethane	142	3.658	3.667	-0.009	98	541195	175.0	178.7	
26 Carbon disulfide	76	3.718	3.709	0.009	99	894088	175.0	195.0	
28 3-Chloro-1-propene	76	3.968	3.971	-0.003	88	260534	175.0	195.2	
30 Methyl acetate	43	4.053	4.050	0.003	100	3368843	875.0	852.2	
31 Methylene Chloride	84	4.175	4.172	0.003	91	470925	175.0	176.9	
32 2-Methyl-2-propanol	59	4.473	4.464	0.009	85	472853	1750.0	1879.1	
33 Acrylonitrile	53	4.582	4.585	-0.003	96	3108626	1750.0	1706.3	
34 trans-1,2-Dichloroethene	96	4.594	4.597	-0.003	90	418880	175.0	175.0	
35 Methyl tert-butyl ether	73	4.631	4.622	0.009	90	1075251	175.0	173.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.014	5.017	-0.003	96	1046157	175.0	172.6	
37 1,1-Dichloroethane	63	5.197	5.200	-0.003	97	977975	175.0	175.6	
38 Vinyl acetate	43	5.318	5.321	-0.003	97	981516	175.0	183.8	
44 2,2-Dichloropropane	77	5.951	5.954	-0.003	72	272347	175.0	184.5	
45 cis-1,2-Dichloroethene	96	5.963	5.966	-0.003	88	459987	175.0	177.7	
46 2-Butanone (MEK)	43	6.012	6.015	-0.003	97	770041	350.0	359.6	
49 Chlorobromomethane	128	6.249	6.246	0.003	82	189932	175.0	175.9	
51 Tetrahydrofuran	42	6.310	6.313	-0.003	93	570461	350.0	350.3	
52 Chloroform	83	6.365	6.362	0.003	97	726926	175.0	172.6	
53 1,1,1-Trichloroethane	97	6.553	6.550	0.003	93	498247	175.0	182.3	
54 Cyclohexane	56	6.614	6.611	0.003	90	1372084	175.0	178.7	
56 Carbon tetrachloride	117	6.742	6.739	0.003	94	449549	175.0	189.5	
55 1,1-Dichloropropene	75	6.748	6.745	0.003	86	616547	175.0	178.9	
57 Isobutyl alcohol	41	6.967	6.964	0.003	95	597870	4375.0	4794.0	
58 Benzene	78	6.979	6.982	-0.003	95	1810201	175.0	168.6	
59 1,2-Dichloroethane	62	7.010	7.013	-0.003	95	723279	175.0	173.5	
62 n-Heptane	43	7.302	7.298	0.004	97	1100542	175.0	179.1	
64 Trichloroethene	130	7.685	7.688	-0.003	95	412412	175.0	179.4	
66 Methylcyclohexane	83	7.886	7.882	0.004	95	798320	175.0	181.4	
67 1,2-Dichloropropane	63	7.922	7.925	-0.003	95	580507	175.0	175.7	
68 Dibromomethane	93	8.044	8.041	0.003	97	241280	175.0	177.1	
70 1,4-Dioxane	88	8.074	8.077	-0.003	87	94223	3500.0	3812.3	
71 Dichlorobromomethane	83	8.220	8.217	0.003	95	516759	175.0	183.8	
74 cis-1,3-Dichloropropene	75	8.676	8.679	-0.003	85	617016	175.0	192.3	
75 4-Methyl-2-pentanone (MIBK	43	8.841	8.844	-0.003	99	1587323	350.0	333.4	
76 Toluene	91	9.011	9.008	0.003	96	1825825	175.0	156.0	
77 trans-1,3-Dichloropropene	75	9.236	9.239	-0.003	92	504625	175.0	186.2	
78 Ethyl methacrylate	69	9.339	9.336	0.003	89	574920	175.0	178.2	
79 1,1,2-Trichloroethane	97	9.419	9.422	-0.003	95	367605	175.0	160.1	
80 Tetrachloroethene	164	9.552	9.555	-0.003	94	341247	175.0	158.1	
81 1,3-Dichloropropane	76	9.583	9.586	-0.003	92	710288	175.0	160.6	
82 2-Hexanone	43	9.674	9.677	-0.003	98	1335292	350.0	350.4	
84 Chlorodibromomethane	129	9.814	9.811	0.003	89	308265	175.0	182.6	
85 Ethylene Dibromide	107	9.917	9.920	-0.003	98	358303	175.0	168.3	
86 3-Chlorobenzotrifluoride	180	10.392	10.389	0.003	92	633751	175.0	164.7	
87 Chlorobenzene	112	10.410	10.413	-0.003	89	1146615	175.0	161.1	
88 4-Chlorobenzotrifluoride	180	10.453	10.450	0.003	95	605917	175.0	168.5	
89 1,1,1,2-Tetrachloroethane	131	10.489	10.492	-0.003	92	359052	175.0	165.3	
90 Ethylbenzene	106	10.520	10.523	-0.003	98	674389	175.0	167.3	
91 m-Xylene & p-Xylene	106	10.635	10.638	-0.003	96	807449	175.0	164.5	
92 o-Xylene	106	11.031	11.034	-0.003	97	779332	175.0	163.3	
93 Styrene	104	11.043	11.046	-0.003	86	1309347	175.0	163.1	
94 Bromoform	173	11.231	11.234	-0.003	96	198764	175.0	186.3	
96 2-Chlorobenzotrifluoride	180	11.292	11.295	-0.003	94	608627	175.0	165.3	
97 Isopropylbenzene	105	11.396	11.399	-0.003	97	1932433	175.0	162.3	
99 1,1,2,2-Tetrachloroethane	83	11.694	11.691	0.003	95	530535	175.0	164.4	
100 Bromobenzene	156	11.706	11.703	0.003	94	454034	175.0	174.8	
101 1,2,3-Trichloropropane	110	11.742	11.739	0.003	89	160641	175.0	170.1	
102 trans-1,4-Dichloro-2-buten	53	11.749	11.752	-0.003	75	236954	175.0	182.7	
103 N-Propylbenzene	120	11.809	11.806	0.003	98	551938	175.0	180.0	
104 2-Chlorotoluene	126	11.895	11.898	-0.003	94	463229	175.0	179.1	
105 3-Chlorotoluene	126	11.955	11.952	0.003	96	491483	175.0	178.2	

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	11.980	11.983	-0.003	94	1595887	175.0	173.8	
107 4-Chlorotoluene	126	12.004	12.001	0.003	99	492402	175.0	171.3	
108 tert-Butylbenzene	119	12.308	12.305	0.003	94	1316602	175.0	174.7	
110 1,2,4-Trimethylbenzene	105	12.357	12.354	0.003	98	1655214	175.0	175.4	
111 1,2-dichloro-4-(trifluorom	214	12.418	12.421	-0.003	98	471091	175.0	181.2	
112 sec-Butylbenzene	105	12.527	12.524	0.003	96	1876479	175.0	172.8	
113 1,3-Dichlorobenzene	146	12.637	12.640	-0.003	96	863694	175.0	176.2	
114 4-Isopropyltoluene	119	12.673	12.670	0.003	96	1567173	175.0	179.2	
115 1,4-Dichlorobenzene	146	12.728	12.725	0.003	91	875578	175.0	173.0	
116 2,4-Dichloro-1-(triflourom	214	12.777	12.780	-0.003	98	442330	175.0	181.3	
118 2,5-Dichlorobenzotrifluori	214	12.825	12.828	-0.003	98	501230	175.0	188.3	
120 n-Butylbenzene	91	13.081	13.078	0.003	97	1449265	175.0	181.4	
121 1,2-Dichlorobenzene	146	13.099	13.102	-0.003	94	790430	175.0	173.8	
122 1,2-Dibromo-3-Chloropropan	75	13.884	13.881	0.003	79	83763	175.0	203.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.024	14.027	-0.003	97	1631254	525.0	569.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.444	14.447	-0.003	98	1022814	350.0	374.2	
126 1,2,4-Trichlorobenzene	180	14.711	14.708	0.003	94	364694	175.0	193.3	
127 Hexachlorobutadiene	225	14.882	14.885	-0.003	95	170084	175.0	190.1	
128 Naphthalene	128	14.961	14.964	-0.003	97	974048	175.0	193.4	
129 1,2,3-Trichlorobenzene	180	15.210	15.207	0.003	93	284156	175.0	192.0	
131 2,4,5-Trichlorotoluene	159	15.983	15.980	0.003	97	130241	175.0	207.3	
130 2,3,6-Trichlorotoluene	159	16.080	16.077	0.003	95	119691	175.0	207.9	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		350.0	352.7	
S 133 Xylenes, Total	106				0		350.0	327.8	
S 135 1,3-Dichloropropene, Total	1				0		350.0	378.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAACROPRI_00004	Amount Added:	9.00	Units: uL	
VOA8260SURR_00028	Amount Added:	7.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	7.00	Units: uL	
voaWEEpri Res_00001	Amount Added:	7.00	Units: uL	
voaWKet2ndRes_00005	Amount Added:	7.00	Units: uL	
voaWVA pri Re_00005	Amount Added:	7.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

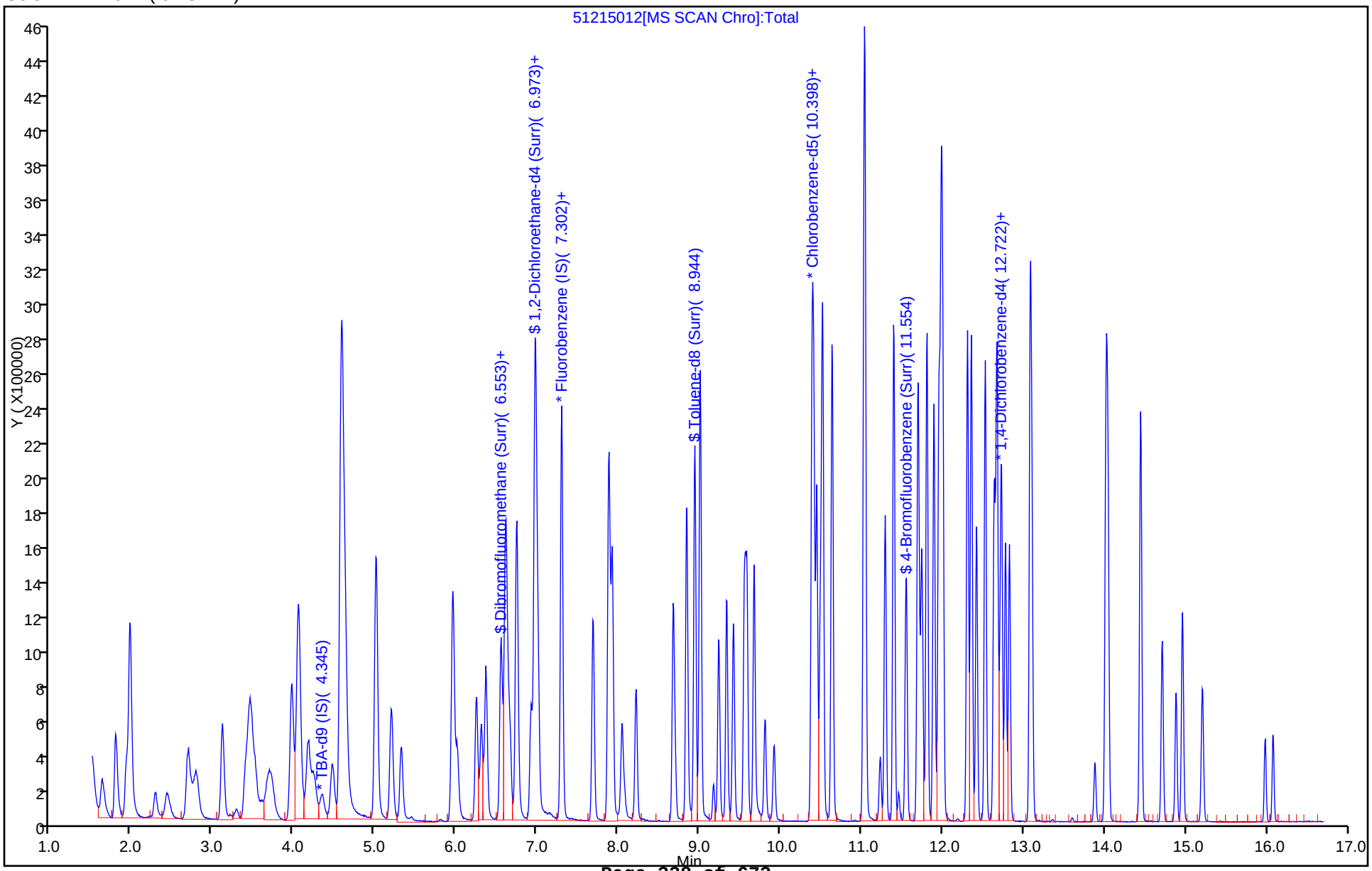
Report Date: 16-Dec-2014 08:51:16 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215012.D

Injection Date:	15-Dec-2014 16:33:30	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#:	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\20141215-4875.b\51215013.D
Lims ID: IC VSTD40
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 15-Dec-2014 16:57:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD40
Misc. Info.: 180-0004875-013
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:51:17 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 16-Dec-2014 08:47:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.352	4.336	0.016	84	198327	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.296	7.298	-0.002	97	419962	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.380	10.383	-0.003	92	108982	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.704	12.707	-0.003	96	145279	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.554	6.556	-0.002	85	365236	200.0	204.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.925	6.921	0.004	91	576810	200.0	196.5	
$ 7 Toluene-d8 (Surr)	98	8.945	8.947	-0.002	95	1574848	200.0	173.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.548	11.551	-0.003	85	647101	200.0	187.4	
11 Dichlorodifluoromethane	85	1.632	1.629	0.003	98	499452	200.0	198.3	
12 Chloromethane	50	1.797	1.799	-0.002	100	957633	200.0	192.8	
13 Vinyl chloride	62	1.930	1.927	0.003	98	666295	200.0	195.3	
14 Butadiene	39	1.979	1.975	0.004	96	919270	200.0	189.4	
15 Bromomethane	94	2.289	2.292	-0.003	90	189870	200.0	186.1	
16 Chloroethane	64	2.441	2.438	0.003	96	334503	200.0	198.1	
17 Dichlorofluoromethane	67	2.691	2.687	0.004	97	658021	200.0	195.9	
18 Trichlorofluoromethane	101	2.739	2.736	0.003	94	450195	200.0	211.6	
20 Ethyl ether	59	3.117	3.113	0.004	95	608282	200.0	201.1	
21 Acrolein	56	3.281	3.289	-0.008	98	119026	250.0	263.1	
22 1,1-Dichloroethene	96	3.427	3.435	-0.008	92	454023	200.0	198.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.482	3.466	0.016	96	469441	200.0	202.6	
24 Acetone	43	3.524	3.527	-0.003	98	544467	400.0	413.5	
25 Iodomethane	142	3.664	3.667	-0.003	99	628901	200.0	214.6	
26 Carbon disulfide	76	3.701	3.709	-0.008	99	1012677	200.0	228.4	
28 3-Chloro-1-propene	76	3.974	3.971	0.003	89	291169	200.0	225.5	
30 Methyl acetate	43	4.054	4.050	0.003	100	3862317	1000.0	1010.0	
31 Methylene Chloride	84	4.175	4.172	0.003	89	528356	200.0	206.0	
32 2-Methyl-2-propanol	59	4.473	4.464	0.009	90	542078	2000.0	2044.5	
33 Acrylonitrile	53	4.583	4.585	-0.002	97	3610987	2000.0	2048.9	
34 trans-1,2-Dichloroethene	96	4.589	4.597	-0.008	90	460491	200.0	198.8	
35 Methyl tert-butyl ether	73	4.625	4.622	0.003	90	1338818	200.0	223.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.009	5.017	-0.008	97	1145508	200.0	195.4	
37 1,1-Dichloroethane	63	5.197	5.200	-0.003	96	1119222	200.0	207.7	
38 Vinyl acetate	43	5.319	5.321	-0.002	97	1122187	200.0	217.2	
44 2,2-Dichloropropane	77	5.952	5.954	-0.002	70	296455	200.0	207.6	
45 cis-1,2-Dichloroethene	96	5.964	5.966	-0.002	89	522231	200.0	208.6	
46 2-Butanone (MEK)	43	6.012	6.015	-0.003	96	898036	400.0	433.5	
49 Chlorobromomethane	128	6.250	6.246	0.004	82	220532	200.0	211.2	
51 Tetrahydrofuran	42	6.310	6.313	-0.003	94	656256	400.0	416.5	
52 Chloroform	83	6.365	6.362	0.003	95	825564	200.0	202.7	
53 1,1,1-Trichloroethane	97	6.554	6.550	0.004	93	552222	200.0	208.9	
54 Cyclohexane	56	6.609	6.611	-0.002	91	1491081	200.0	200.7	
56 Carbon tetrachloride	117	6.736	6.739	-0.003	94	496996	200.0	216.5	
55 1,1-Dichloropropene	75	6.748	6.745	0.003	87	678270	200.0	203.4	
57 Isobutyl alcohol	41	6.967	6.964	0.003	94	703715	5000.0	5833.0	
58 Benzene	78	6.980	6.982	-0.002	94	2039448	200.0	196.4	
59 1,2-Dichloroethane	62	7.010	7.013	-0.003	95	833342	200.0	206.7	
62 n-Heptane	43	7.302	7.298	0.004	97	1198073	200.0	201.5	
64 Trichloroethene	130	7.691	7.688	0.003	93	451795	200.0	203.2	
66 Methylcyclohexane	83	7.880	7.882	-0.002	94	884141	200.0	207.7	
67 1,2-Dichloropropane	63	7.923	7.925	-0.002	95	670378	200.0	209.8	
68 Dibromomethane	93	8.044	8.041	0.003	98	278367	200.0	211.3	
70 1,4-Dioxane	88	8.081	8.077	0.004	86	107491	4000.0	4495.8	
71 Dichlorobromomethane	83	8.221	8.217	0.004	96	599497	200.0	220.4	
74 cis-1,3-Dichloropropene	75	8.677	8.679	-0.002	85	725599	200.0	233.8	
75 4-Methyl-2-pentanone (MIBK	43	8.841	8.844	-0.003	99	1885405	400.0	400.5	
76 Toluene	91	9.012	9.008	0.004	96	2038543	200.0	176.2	
77 trans-1,3-Dichloropropene	75	9.237	9.239	-0.002	92	587120	200.0	219.2	
78 Ethyl methacrylate	69	9.334	9.336	-0.002	91	699914	200.0	219.4	
79 1,1,2-Trichloroethane	97	9.419	9.422	-0.003	95	431008	200.0	189.8	
80 Tetrachloroethene	164	9.559	9.555	0.004	95	381182	200.0	178.6	
81 1,3-Dichloropropane	76	9.583	9.586	-0.003	93	823013	200.0	188.2	
82 2-Hexanone	43	9.675	9.677	-0.002	98	1575531	400.0	418.1	
84 Chlorodibromomethane	129	9.808	9.811	-0.003	88	361304	200.0	216.5	
85 Ethylene Dibromide	107	9.918	9.920	-0.002	99	425795	200.0	202.2	
86 3-Chlorobenzotrifluoride	180	10.392	10.389	0.003	93	707075	200.0	185.9	
87 Chlorobenzene	112	10.411	10.413	-0.002	88	1305587	200.0	185.5	
88 4-Chlorobenzotrifluoride	180	10.447	10.450	-0.003	95	658198	200.0	185.2	
89 1,1,1,2-Tetrachloroethane	131	10.490	10.492	-0.002	93	421291	200.0	196.2	
90 Ethylbenzene	106	10.520	10.523	-0.003	97	753212	200.0	189.0	
91 m-Xylene & p-Xylene	106	10.636	10.638	-0.002	97	918551	200.0	189.3	
92 o-Xylene	106	11.031	11.034	-0.003	94	886345	200.0	187.9	
93 Styrene	104	11.043	11.046	-0.003	86	1503510	200.0	189.4	
94 Bromoform	173	11.232	11.234	-0.002	96	239804	200.0	227.3	
96 2-Chlorobenzotrifluoride	180	11.293	11.295	-0.002	95	685270	200.0	188.3	
97 Isopropylbenzene	105	11.396	11.399	-0.003	97	2160550	200.0	183.6	
99 1,1,2,2-Tetrachloroethane	83	11.694	11.691	0.003	96	619241	200.0	194.1	
100 Bromobenzene	156	11.700	11.703	-0.003	94	526184	200.0	201.3	
101 1,2,3-Trichloropropane	110	11.743	11.739	0.004	89	187299	200.0	197.1	
102 trans-1,4-Dichloro-2-buten	53	11.749	11.752	-0.003	75	281348	200.0	215.6	
103 N-Propylbenzene	120	11.804	11.806	-0.002	97	621025	200.0	201.3	
104 2-Chlorotoluene	126	11.895	11.898	-0.003	94	523196	200.0	201.0	
105 3-Chlorotoluene	126	11.956	11.952	0.004	96	560555	200.0	202.0	

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	11.980	11.983	-0.003	95	1800040	200.0	194.7	
107 4-Chlorotoluene	126	11.999	12.001	-0.003	98	558467	200.0	193.1	
108 tert-Butylbenzene	119	12.309	12.305	0.004	94	1460867	200.0	192.6	
110 1,2,4-Trimethylbenzene	105	12.357	12.354	0.003	98	1843606	200.0	194.1	
111 1,2-dichloro-4-(trifluorom	214	12.418	12.421	-0.003	97	516955	200.0	197.5	
112 sec-Butylbenzene	105	12.528	12.524	0.004	97	2066631	200.0	189.1	
113 1,3-Dichlorobenzene	146	12.637	12.640	-0.003	95	976811	200.0	198.0	
114 4-Isopropyltoluene	119	12.668	12.670	-0.002	96	1745049	200.0	198.3	
115 1,4-Dichlorobenzene	146	12.729	12.725	0.004	90	997200	200.0	195.8	
116 2,4-Dichloro-1-(triflourom	214	12.777	12.780	-0.003	98	484207	200.0	197.2	
118 2,5-Dichlorobenzotrifluori	214	12.826	12.828	-0.002	98	535139	200.0	199.8	
120 n-Butylbenzene	91	13.081	13.078	0.003	96	1579894	200.0	196.5	
121 1,2-Dichlorobenzene	146	13.100	13.102	-0.002	94	905753	200.0	197.9	
122 1,2-Dibromo-3-Chloropropan	75	13.878	13.881	-0.003	87	99113	200.0	238.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.024	14.027	-0.003	97	1812056	600.0	628.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.444	14.447	-0.003	97	1166096	400.0	423.9	
126 1,2,4-Trichlorobenzene	180	14.712	14.708	0.004	94	412323	200.0	217.1	
127 Hexachlorobutadiene	225	14.882	14.885	-0.003	95	180674	200.0	200.6	
128 Naphthalene	128	14.961	14.964	-0.003	97	1151885	200.0	227.2	
129 1,2,3-Trichlorobenzene	180	15.205	15.207	-0.003	94	333142	200.0	223.7	
131 2,4,5-Trichlorotoluene	159	15.983	15.980	0.003	98	150868	200.0	238.6	
130 2,3,6-Trichlorotoluene	159	16.074	16.077	-0.003	93	136944	200.0	236.3	
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		400.0	407.4	
S 133 Xylenes, Total	106				0		400.0	377.2	
S 135 1,3-Dichloropropene, Total	1				0		400.0	453.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaWVA pri Re_00005	Amount Added:	8.00	Units: uL	
VOA8260SURR_00028	Amount Added:	8.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added:	8.00	Units: uL	
voaWEEpri Res_00001	Amount Added:	8.00	Units: uL	
voaWKet2ndRes_00005	Amount Added:	8.00	Units: uL	
VOAACROPRI_00004	Amount Added:	10.00	Units: uL	
VOA8260INT_00026	Amount Added:	2.00	Units: uL	Run Reagent

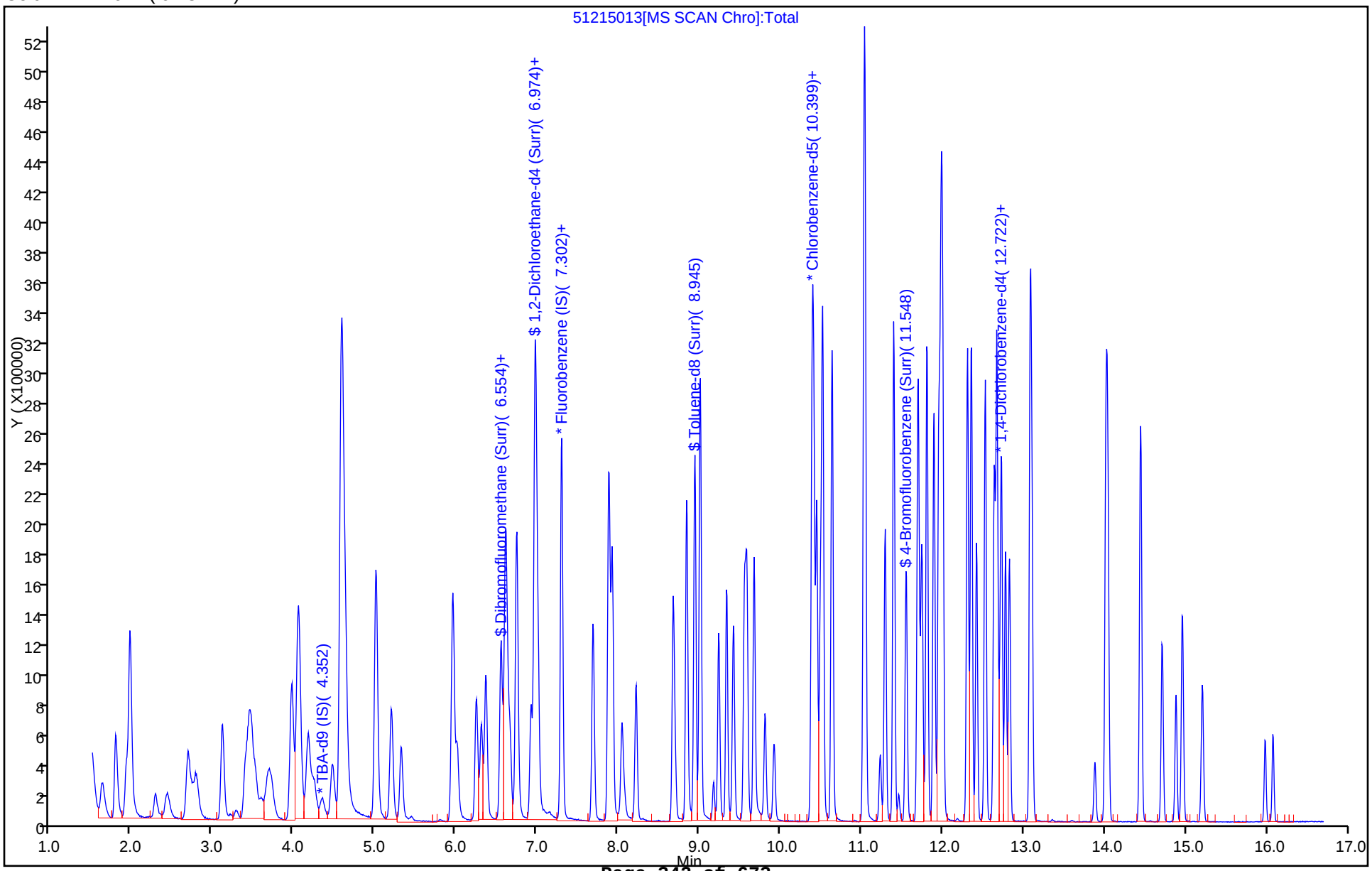
Report Date: 16-Dec-2014 08:51:18 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Injection Date:	15-Dec-2014 16:57:30	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#:	13
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-130947/2 Calibration Date: 01/16/2015 12:52

Instrument ID: CHHP5 Calib Start Date: 11/18/2014 14:22

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/18/2014 16:46

Lab File ID: 50116002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1588	0.1803	0.0100	22.7	20.0	13.5	20.0
1,3,5-Trichlorobenzene	Ave	0.9229	0.8316	0.0100	9.01	10.0	-9.9	20.0

Report Date: 16-Jan-2015 15:00:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 16-Jan-2015 12:52:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005307-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub11

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Jan-2015 15:00:10 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 16-Jan-2015 13:30:59

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	4.302	0.000	87	174949	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	99	507858	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.361	0.000	99	118302	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	158394	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.522	6.522	0.000	78	103373	50.0	47.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	92	160422	50.0	45.2	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	96	453635	50.0	46.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	84	167879	50.0	44.8	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	97	150442	50.0	49.4	
12 Chloromethane	50	1.777	1.777	0.000	99	270502	50.0	45.0	
13 Vinyl chloride	62	1.905	1.905	0.000	97	197152	50.0	47.8	
14 Butadiene	39	1.954	1.954	0.000	98	286259	50.0	48.8	
15 Bromomethane	94	2.252	2.252	0.000	91	44688	50.0	36.2	M
16 Chloroethane	64	2.386	2.386	0.000	95	99531	50.0	48.7	
17 Dichlorofluoromethane	67	2.653	2.653	0.000	96	196959	50.0	48.5	
18 Trichlorofluoromethane	101	2.708	2.708	0.000	91	134135	50.0	52.1	
20 Ethyl ether	59	3.085	3.085	0.000	95	177989	50.0	48.7	
21 Acrolein	56	3.268	3.268	0.000	98	89625	150.0	163.9	
22 1,1-Dichloroethene	96	3.371	3.371	0.000	92	137565	50.0	49.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.432	0.000	95	141582	50.0	50.5	
24 Acetone	43	3.493	3.493	0.000	99	160469	100.0	100.8	
25 Iodomethane	142	3.578	3.578	0.000	96	181008	50.0	51.1	
26 Carbon disulfide	76	3.669	3.669	0.000	99	207966	50.0	38.8	
28 3-Chloro-1-propene	76	3.937	3.937	0.000	87	68172	50.0	43.7	
30 Methyl acetate	43	4.016	4.016	0.000	100	989452	250.0	214.0	
31 Methylene Chloride	84	4.150	4.150	0.000	89	165881	50.0	49.5	
32 2-Methyl-2-propanol	59	4.424	4.424	0.000	85	120040	500.0	513.2	
33 Acrylonitrile	53	4.545	4.545	0.000	100	934523	500.0	438.5	
34 trans-1,2-Dichloroethene	96	4.570	4.570	0.000	54	141775	50.0	50.6	
35 Methyl tert-butyl ether	73	4.594	4.594	0.000	89	333465	50.0	45.9	

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	94	329368	50.0	46.5	
37 1,1-Dichloroethane	63	5.172	5.172	0.000	96	326566	50.0	50.1	
38 Vinyl acetate	43	5.293	5.293	0.000	97	245000	50.0	39.2	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	58	93930	50.0	54.4	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	88	145995	50.0	48.2	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	96	239216	100.0	95.5	
49 Chlorobromomethane	128	6.230	6.230	0.000	84	62818	50.0	49.7	
51 Tetrahydrofuran	42	6.285	6.285	0.000	92	149579	100.0	78.5	
52 Chloroform	83	6.346	6.346	0.000	95	243939	50.0	49.5	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	92	153272	50.0	48.0	
54 Cyclohexane	56	6.583	6.583	0.000	93	421202	50.0	46.9	
56 Carbon tetrachloride	117	6.717	6.717	0.000	65	140378	50.0	50.6	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	84	207063	50.0	51.4	
57 Isobutyl alcohol	41	6.936	6.936	0.000	94	155661	1250.0	1067.0	
58 Benzene	78	6.954	6.954	0.000	95	611141	50.0	48.7	
59 1,2-Dichloroethane	62	6.985	6.985	0.000	95	244034	50.0	50.0	
62 n-Heptane	43	7.277	7.277	0.000	97	334268	50.0	46.5	
64 Trichloroethene	130	7.666	7.666	0.000	96	139720	50.0	52.0	
66 Methylcyclohexane	83	7.861	7.861	0.000	94	254128	50.0	49.4	
67 1,2-Dichloropropane	63	7.897	7.897	0.000	94	171652	50.0	44.4	
68 Dibromomethane	93	8.019	8.019	0.000	95	75262	50.0	47.2	
70 1,4-Dioxane	88	8.049	8.049	0.000	89	26827	1000.0	927.8	
71 Dichlorobromomethane	83	8.195	8.195	0.000	96	141566	50.0	43.0	
73 2-Chloroethyl vinyl ether	63	8.518	8.518	0.000	83	183079	100.0	113.5	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	84	174417	50.0	46.5	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.822	0.000	98	463397	100.0	90.7	
76 Toluene	91	8.986	8.986	0.000	97	608346	50.0	48.4	
77 trans-1,3-Dichloropropene	75	9.217	9.217	0.000	91	141724	50.0	48.7	
78 Ethyl methacrylate	69	9.315	9.315	0.000	90	154339	50.0	44.6	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	94	110933	50.0	45.0	
80 Tetrachloroethene	164	9.534	9.534	0.000	93	112911	50.0	48.7	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	91	214556	50.0	45.2	
82 2-Hexanone	43	9.655	9.655	0.000	97	372446	100.0	91.1	
84 Chlorodibromomethane	129	9.789	9.789	0.000	90	76768	50.0	42.4	
85 Ethylene Dibromide	107	9.905	9.905	0.000	97	109128	50.0	47.7	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	93	209815	50.0	50.8	
87 Chlorobenzene	112	10.391	10.391	0.000	90	392052	50.0	51.3	
88 4-Chlorobenzotrifluoride	180	10.428	10.428	0.000	97	194461	50.0	50.4	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	91	103311	50.0	44.3	
90 Ethylbenzene	106	10.501	10.501	0.000	98	220153	50.0	50.9	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	97	275174	50.0	52.2	
92 o-Xylene	106	11.012	11.012	0.000	93	256558	50.0	50.1	
93 Styrene	104	11.024	11.024	0.000	89	413525	50.0	48.0	
94 Bromoform	173	11.207	11.207	0.000	95	44137	50.0	38.5	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	96	198936	50.0	50.3	
97 Isopropylbenzene	105	11.377	11.377	0.000	97	659737	50.0	51.6	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	150239	50.0	43.4	
100 Bromobenzene	156	11.687	11.687	0.000	94	142245	50.0	49.9	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	88	53771	50.0	51.9	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.730	0.000	66	67733	50.0	47.6	
103 N-Propylbenzene	120	11.791	11.791	0.000	99	179749	50.0	53.4	
104 2-Chlorotoluene	126	11.876	11.876	0.000	94	145972	50.0	51.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.937	11.937	0.000	96	155006	50.0	51.2	
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	95	534869	50.0	53.1	
107 4-Chlorotoluene	126	11.985	11.985	0.000	98	168150	50.0	53.3	
108 tert-Butylbenzene	119	12.289	12.289	0.000	94	424903	50.0	51.4	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	97	552471	50.0	53.4	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.399	0.000	97	151348	50.0	53.0	
112 sec-Butylbenzene	105	12.508	12.508	0.000	96	632963	50.0	53.1	
113 1,3-Dichlorobenzene	146	12.618	12.618	0.000	95	262977	50.0	48.9	
114 4-Isopropyltoluene	119	12.654	12.654	0.000	97	512271	50.0	53.4	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	93	277041	50.0	49.9	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.758	0.000	96	132161	50.0	49.4	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	144550	50.0	49.5	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	435687	50.0	49.7	
121 1,2-Dichlorobenzene	146	13.080	13.080	0.000	94	239034	50.0	47.9	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.859	0.000	67	16019	50.0	35.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	99	485027	150.0	154.2	
124 1,3,5-Trichlorobenzene	180	14.072	14.072	0.000	95	131724	50.0	45.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.425	0.000	99	316923	100.0	105.7	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	94	94531	50.0	45.7	
127 Hexachlorobutadiene	225	14.863	14.863	0.000	96	48077	50.0	49.0	
128 Naphthalene	128	14.942	14.942	0.000	97	240374	50.0	43.5	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	74315	50.0	45.8	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	96	35712	50.0	51.8	
130 2,3,6-Trichlorotoluene	159	16.061	16.061	0.000	93	34021	50.0	53.8	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	98.8	
S 133 Xylenes, Total	106				0		100.0	102.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	95.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00095	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWVApri Res_00001	Amount Added:	2.00	Units: uL	
voaW135tcbABS_00003	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	Amount Added:	6.00	Units: uL	
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

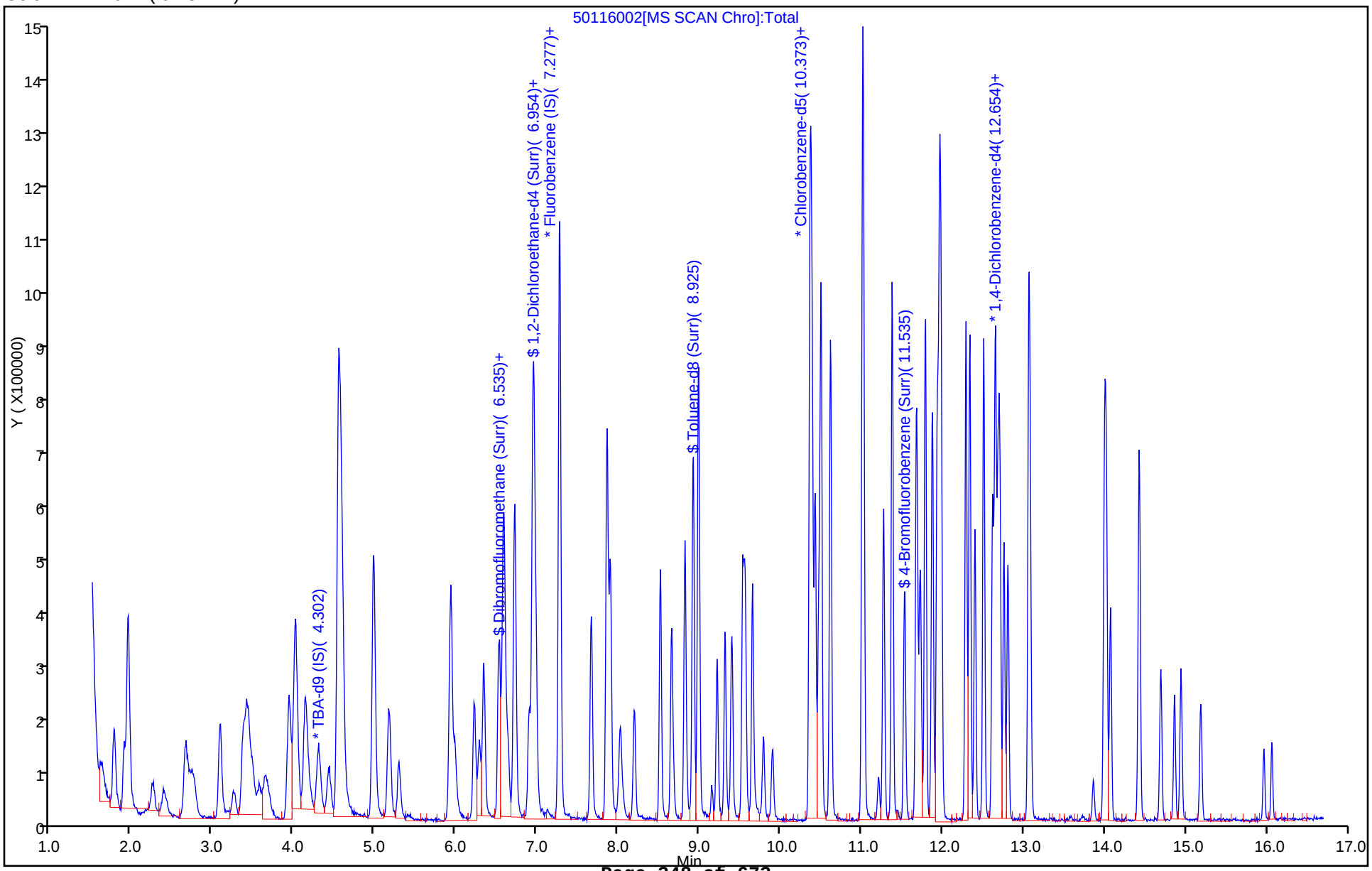
Report Date: 16-Jan-2015 15:00:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116002.D

Injection Date:	16-Jan-2015 12:52:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-130947/2 Calibration Date: 01/16/2015 12:52

Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/15/2014 16:57

Lab File ID: 50116002.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	0.2998	0.2962	0.1000	9.88	10.0	-1.2	20.0
Chloromethane	Ave	0.5915	0.5326	0.1000	9.01	10.0	-9.9	20.0
Vinyl chloride	Ave	0.4061	0.3882	0.1000	9.56	10.0	-4.4	20.0
Bromomethane	Ave	0.1215	0.0880	0.0500	7.24	10.0	-27.6*	20.0
Chloroethane	Ave	0.2011	0.1960	0.0500	9.75	10.0	-2.5	20.0
Dichlorofluoromethane	Ave	0.3999	0.3878	0.0100	9.70	10.0	-3.0	20.0
Trichlorofluoromethane	Ave	0.2533	0.2641	0.1000	10.4	10.0	4.3	20.0
Ethyl ether	Ave	0.3601	0.3505	0.0100	9.73	10.0	-2.7	20.0
Acrolein	Ave	0.0539	0.0588	0.0100	32.8	30.0	9.2	20.0
1,1-Dichloroethene	Ave	0.2724	0.2709	0.1000	9.94	10.0	-0.6	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2758	0.2788	0.1000	10.1	10.0	1.1	20.0
Acetone	Ave	0.1568	0.1580	0.0500	20.2	20.0	0.8	20.0
Iodomethane	Ave	0.3488	0.3564	0.0100	10.2	10.0	2.2	20.0
Carbon disulfide	Ave	0.5280	0.4095	0.1000	7.76	10.0	-22.4*	20.0
Allyl chloride	Ave	0.1537	0.1342	0.0100	8.73	10.0	-12.7	20.0
Methyl acetate	Ave	0.4553	0.3897	0.1000	42.8	50.0	-14.4	20.0
Methylene Chloride	Lin2		0.3266	0.1000	9.91	10.0	-0.9	20.0
tert-Butyl alcohol	Ave	1.337	1.372	0.0100	103	100	2.6	20.0
Acrylonitrile	Ave	0.2098	0.1840	0.0100	87.7	100	-12.3	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.2792	0.1000	10.1	10.0	1.2	20.0
Methyl tert-butyl ether	Ave	0.7145	0.6566	0.1000	9.19	10.0	-8.1	20.0
Hexane	Ave	0.6980	0.6485	0.0100	9.29	10.0	-7.1	20.0
1,1-Dichloroethane	Ave	0.6414	0.6430	0.2000	10.0	10.0	0.2	20.0
Vinyl acetate	Ave	0.6151	0.4824	0.0100	7.84	10.0	-21.6*	20.0
2,2-Dichloropropane	Ave	0.1700	0.1850	0.0100	10.9	10.0	8.8	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.2875	0.1000	9.64	10.0	-3.6	20.0
2-Butanone (MEK)	Ave	0.2466	0.2355	0.0500	19.1	20.0	-4.5	20.0
Bromochloromethane	Ave	0.1243	0.1237	0.0100	9.95	10.0	-0.5	20.0
Tetrahydrofuran	Ave	0.1876	0.1473	0.0100	15.7	20.0	-21.5*	20.0
Chloroform	Ave	0.4850	0.4803	0.2000	9.90	10.0	-1.0	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3018	0.1000	9.59	10.0	-4.1	20.0
Cyclohexane	Ave	0.8843	0.8294	0.1000	9.38	10.0	-6.2	20.0
Carbon tetrachloride	Ave	0.2733	0.2764	0.1000	10.1	10.0	1.1	20.0
1,1-Dichloropropene	Ave	0.3970	0.4077	0.0100	10.3	10.0	2.7	20.0
Isobutyl alcohol	Ave	0.0144	0.0123	0.0100	213	250	-14.6	20.0
Benzene	Ave	1.236	1.203	0.5000	9.73	10.0	-2.7	20.0
1,2-Dichloroethane	Ave	0.4801	0.4805	0.1000	10.0	10.0	0.0	20.0
n-Heptane	Ave	0.7079	0.6582	0.0100	9.30	10.0	-7.0	20.0
Trichloroethene	Ave	0.2647	0.2751	0.2000	10.4	10.0	3.9	20.0
Methylcyclohexane	Ave	0.5067	0.5004	0.1000	9.87	10.0	-1.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-130947/2 Calibration Date: 01/16/2015 12:52

Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/15/2014 16:57

Lab File ID: 50116002.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	0.3804	0.3380	0.1000	8.88	10.0	-11.2	20.0
Dibromomethane	Ave	0.1569	0.1482	0.0100	9.45	10.0	-5.5	20.0
1,4-Dioxane	Ave	0.0028	0.0026*	0.0100	186	200	-7.2	20.0
Bromodichloromethane	Ave	0.3238	0.2788	0.2000	8.61	10.0	-13.9	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.3434	0.2000	9.29	10.0	-7.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	1.959	0.1000	18.1	20.0	-9.3	20.0
Toluene	Ave	5.309	5.142	0.4000	9.69	10.0	-3.1	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.198	0.1000	9.75	10.0	-2.5	20.0
Ethyl methacrylate	Ave	1.464	1.305	0.0100	8.91	10.0	-10.9	20.0
1,1,2-Trichloroethane	Ave	1.042	0.9377	0.1000	9.00	10.0	-10.0	20.0
Tetrachloroethene	Ave	0.9790	0.9544	0.2000	9.75	10.0	-2.5	20.0
1,3-Dichloropropane	Ave	2.006	1.814	0.0100	9.04	10.0	-9.6	20.0
2-Hexanone	Ave	1.729	1.574	0.1000	18.2	20.0	-8.9	20.0
Dibromochloromethane	Ave	0.7658	0.6489	0.1000	8.47	10.0	-15.3	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	0.9225	0.1000	9.55	10.0	-4.5	20.0
3-Chlorobenzotrifluoride	Ave	1.745	1.774	0.0100	10.2	10.0	1.6	20.0
Chlorobenzene	Ave	3.229	3.314	0.5000	10.3	10.0	2.6	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.644	0.0100	10.1	10.0	0.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	0.8733	0.0100	8.87	10.0	-11.3	20.0
Ethylbenzene	Ave	1.828	1.861	0.1000	10.2	10.0	1.8	20.0
m-Xylene & p-Xylene	Ave	2.226	2.326	0.1000	10.4	10.0	4.5	20.0
o-Xylene	Ave	2.164	2.169	0.3000	10.0	10.0	0.2	20.0
Styrene	Ave	3.642	3.496	0.3000	9.60	10.0	-4.0	20.0
Bromoform	Ave	0.4840	0.3731	0.1000	7.71	10.0	-22.9*	20.0
2-Chlorobenzotrifluoride	Ave	1.670	1.682	0.0100	10.1	10.0	0.7	20.0
Isopropylbenzene	Ave	5.400	5.577	0.1000	10.3	10.0	3.3	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.270	0.3000	8.67	10.0	-13.3	20.0
Bromobenzene	Ave	0.8995	0.8981	0.0100	9.98	10.0	-0.2	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.3395	0.0100	10.4	10.0	3.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.4276	0.0100	9.52	10.0	-4.8	20.0
N-Propylbenzene	Ave	1.062	1.135	0.0100	10.7	10.0	6.9	20.0
2-Chlorotoluene	Ave	0.8959	0.9216	0.0100	10.3	10.0	2.9	20.0
3-Chlorotoluene	Ave	0.9551	0.9786	0.0100	10.2	10.0	2.5	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.377	0.0100	10.6	10.0	6.1	20.0
4-Chlorotoluene	Ave	0.996	1.062	0.0100	10.7	10.0	6.6	20.0
tert-Butylbenzene	Ave	2.610	2.683	0.0100	10.3	10.0	2.8	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.488	0.0100	10.7	10.0	6.7	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.9555	0.0100	10.6	10.0	6.1	20.0
sec-Butylbenzene	Ave	3.761	3.996	0.0100	10.6	10.0	6.2	20.0
1,3-Dichlorobenzene	Ave	1.698	1.660	0.6000	9.78	10.0	-2.2	20.0
4-Isopropyltoluene	Ave	3.029	3.234	0.0100	10.7	10.0	6.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-130947/2 Calibration Date: 01/16/2015 12:52

Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/15/2014 16:57

Lab File ID: 50116002.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	1.753	1.749	0.5000	9.98	10.0	-0.2	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.8344	0.0100	9.87	10.0	-1.3	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.9126	0.0100	9.90	10.0	-1.0	20.0
n-Butylbenzene	Ave	2.768	2.751	0.0100	9.94	10.0	-0.6	20.0
1,2-Dichlorobenzene	Ave	1.576	1.509	0.4000	9.58	10.0	-4.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1011	0.0500	7.08	10.0	-29.2*	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	1.021	0.0100	30.8	30.0	2.8	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	1.000	0.0100	21.1	20.0	5.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.5968	0.2000	9.13	10.0	-8.7	20.0
Hexachlorobutadiene	Ave	0.3100	0.3035	0.0100	9.79	10.0	-2.1	20.0
Naphthalene	Ave	1.745	1.518	0.0100	8.70	10.0	-13.0	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.4692	0.0100	9.15	10.0	-8.5	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.2255	0.0100	10.4	10.0	3.6	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.2148	0.0100	10.8	10.0	7.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.2036		9.56	10.0	-4.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.3159		9.04	10.0	-9.6	20.0
Toluene-d8 (Surr)	Ave	4.159	3.835		9.22	10.0	-7.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.419		8.96	10.0	-10.4	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 16-Jan-2015 12:52:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005307-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub11

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Jan-2015 15:00:10 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 16-Jan-2015 13:30:59

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	4.302	0.000	87	174949	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	99	507858	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.361	0.000	99	118302	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	158394	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.522	6.522	0.000	78	103373	50.0	47.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	92	160422	50.0	45.2	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	96	453635	50.0	46.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	84	167879	50.0	44.8	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	97	150442	50.0	49.4	
12 Chloromethane	50	1.777	1.777	0.000	99	270502	50.0	45.0	
13 Vinyl chloride	62	1.905	1.905	0.000	97	197152	50.0	47.8	
14 Butadiene	39	1.954	1.954	0.000	98	286259	50.0	48.8	
15 Bromomethane	94	2.252	2.252	0.000	91	44688	50.0	36.2	M
16 Chloroethane	64	2.386	2.386	0.000	95	99531	50.0	48.7	
17 Dichlorofluoromethane	67	2.653	2.653	0.000	96	196959	50.0	48.5	
18 Trichlorofluoromethane	101	2.708	2.708	0.000	91	134135	50.0	52.1	
20 Ethyl ether	59	3.085	3.085	0.000	95	177989	50.0	48.7	
21 Acrolein	56	3.268	3.268	0.000	98	89625	150.0	163.9	
22 1,1-Dichloroethene	96	3.371	3.371	0.000	92	137565	50.0	49.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.432	0.000	95	141582	50.0	50.5	
24 Acetone	43	3.493	3.493	0.000	99	160469	100.0	100.8	
25 Iodomethane	142	3.578	3.578	0.000	96	181008	50.0	51.1	
26 Carbon disulfide	76	3.669	3.669	0.000	99	207966	50.0	38.8	
28 3-Chloro-1-propene	76	3.937	3.937	0.000	87	68172	50.0	43.7	
30 Methyl acetate	43	4.016	4.016	0.000	100	989452	250.0	214.0	
31 Methylene Chloride	84	4.150	4.150	0.000	89	165881	50.0	49.5	
32 2-Methyl-2-propanol	59	4.424	4.424	0.000	85	120040	500.0	513.2	
33 Acrylonitrile	53	4.545	4.545	0.000	100	934523	500.0	438.5	
34 trans-1,2-Dichloroethene	96	4.570	4.570	0.000	54	141775	50.0	50.6	
35 Methyl tert-butyl ether	73	4.594	4.594	0.000	89	333465	50.0	45.9	

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	94	329368	50.0	46.5	
37 1,1-Dichloroethane	63	5.172	5.172	0.000	96	326566	50.0	50.1	
38 Vinyl acetate	43	5.293	5.293	0.000	97	245000	50.0	39.2	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	58	93930	50.0	54.4	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	88	145995	50.0	48.2	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	96	239216	100.0	95.5	
49 Chlorobromomethane	128	6.230	6.230	0.000	84	62818	50.0	49.7	
51 Tetrahydrofuran	42	6.285	6.285	0.000	92	149579	100.0	78.5	
52 Chloroform	83	6.346	6.346	0.000	95	243939	50.0	49.5	
53 1,1,1-Trichloroethane	97	6.535	6.535	0.000	92	153272	50.0	48.0	
54 Cyclohexane	56	6.583	6.583	0.000	93	421202	50.0	46.9	
56 Carbon tetrachloride	117	6.717	6.717	0.000	65	140378	50.0	50.6	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	84	207063	50.0	51.4	
57 Isobutyl alcohol	41	6.936	6.936	0.000	94	155661	1250.0	1067.0	
58 Benzene	78	6.954	6.954	0.000	95	611141	50.0	48.7	
59 1,2-Dichloroethane	62	6.985	6.985	0.000	95	244034	50.0	50.0	
62 n-Heptane	43	7.277	7.277	0.000	97	334268	50.0	46.5	
64 Trichloroethene	130	7.666	7.666	0.000	96	139720	50.0	52.0	
66 Methylcyclohexane	83	7.861	7.861	0.000	94	254128	50.0	49.4	
67 1,2-Dichloropropane	63	7.897	7.897	0.000	94	171652	50.0	44.4	
68 Dibromomethane	93	8.019	8.019	0.000	95	75262	50.0	47.2	
70 1,4-Dioxane	88	8.049	8.049	0.000	89	26827	1000.0	927.8	
71 Dichlorobromomethane	83	8.195	8.195	0.000	96	141566	50.0	43.0	
73 2-Chloroethyl vinyl ether	63	8.518	8.518	0.000	83	183079	100.0	113.5	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	84	174417	50.0	46.5	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.822	0.000	98	463397	100.0	90.7	
76 Toluene	91	8.986	8.986	0.000	97	608346	50.0	48.4	
77 trans-1,3-Dichloropropene	75	9.217	9.217	0.000	91	141724	50.0	48.7	
78 Ethyl methacrylate	69	9.315	9.315	0.000	90	154339	50.0	44.6	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	94	110933	50.0	45.0	
80 Tetrachloroethene	164	9.534	9.534	0.000	93	112911	50.0	48.7	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	91	214556	50.0	45.2	
82 2-Hexanone	43	9.655	9.655	0.000	97	372446	100.0	91.1	
84 Chlorodibromomethane	129	9.789	9.789	0.000	90	76768	50.0	42.4	
85 Ethylene Dibromide	107	9.905	9.905	0.000	97	109128	50.0	47.7	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	93	209815	50.0	50.8	
87 Chlorobenzene	112	10.391	10.391	0.000	90	392052	50.0	51.3	
88 4-Chlorobenzotrifluoride	180	10.428	10.428	0.000	97	194461	50.0	50.4	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.477	0.000	91	103311	50.0	44.3	
90 Ethylbenzene	106	10.501	10.501	0.000	98	220153	50.0	50.9	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	97	275174	50.0	52.2	
92 o-Xylene	106	11.012	11.012	0.000	93	256558	50.0	50.1	
93 Styrene	104	11.024	11.024	0.000	89	413525	50.0	48.0	
94 Bromoform	173	11.207	11.207	0.000	95	44137	50.0	38.5	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	96	198936	50.0	50.3	
97 Isopropylbenzene	105	11.377	11.377	0.000	97	659737	50.0	51.6	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	150239	50.0	43.4	
100 Bromobenzene	156	11.687	11.687	0.000	94	142245	50.0	49.9	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	88	53771	50.0	51.9	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.730	0.000	66	67733	50.0	47.6	
103 N-Propylbenzene	120	11.791	11.791	0.000	99	179749	50.0	53.4	
104 2-Chlorotoluene	126	11.876	11.876	0.000	94	145972	50.0	51.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.937	11.937	0.000	96	155006	50.0	51.2	
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	95	534869	50.0	53.1	
107 4-Chlorotoluene	126	11.985	11.985	0.000	98	168150	50.0	53.3	
108 tert-Butylbenzene	119	12.289	12.289	0.000	94	424903	50.0	51.4	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	97	552471	50.0	53.4	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.399	0.000	97	151348	50.0	53.0	
112 sec-Butylbenzene	105	12.508	12.508	0.000	96	632963	50.0	53.1	
113 1,3-Dichlorobenzene	146	12.618	12.618	0.000	95	262977	50.0	48.9	
114 4-Isopropyltoluene	119	12.654	12.654	0.000	97	512271	50.0	53.4	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	93	277041	50.0	49.9	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.758	0.000	96	132161	50.0	49.4	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	144550	50.0	49.5	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	435687	50.0	49.7	
121 1,2-Dichlorobenzene	146	13.080	13.080	0.000	94	239034	50.0	47.9	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.859	0.000	67	16019	50.0	35.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	99	485027	150.0	154.2	
124 1,3,5-Trichlorobenzene	180	14.072	14.072	0.000	95	131724	50.0	45.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.425	0.000	99	316923	100.0	105.7	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	94	94531	50.0	45.7	
127 Hexachlorobutadiene	225	14.863	14.863	0.000	96	48077	50.0	49.0	
128 Naphthalene	128	14.942	14.942	0.000	97	240374	50.0	43.5	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	74315	50.0	45.8	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	96	35712	50.0	51.8	
130 2,3,6-Trichlorotoluene	159	16.061	16.061	0.000	93	34021	50.0	53.8	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	98.8	
S 133 Xylenes, Total	106				0		100.0	102.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	95.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00095	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWVApri Res_00001	Amount Added:	2.00	Units: uL	
voaW135tcbABS_00003	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	Amount Added:	6.00	Units: uL	
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

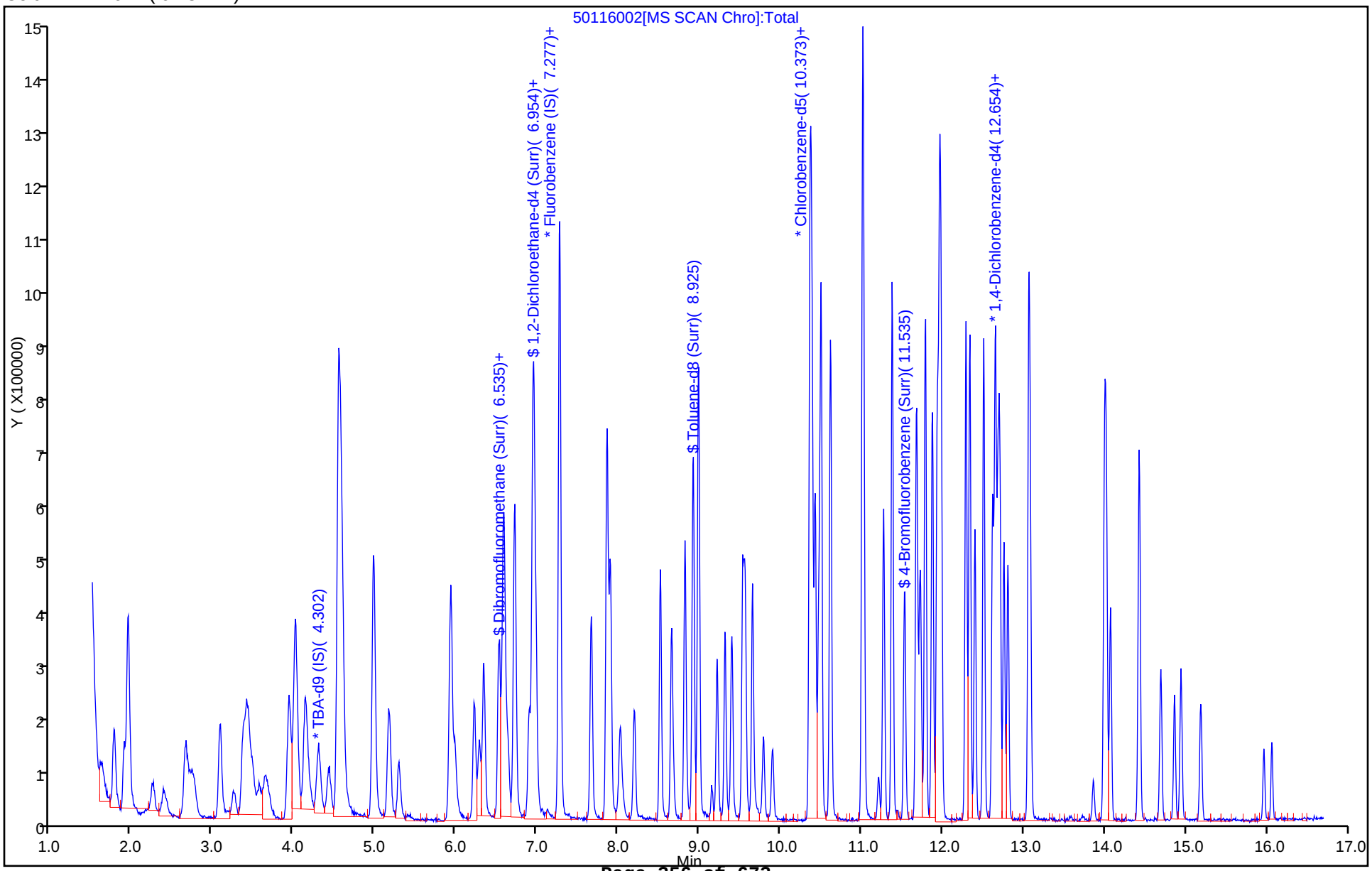
Report Date: 16-Jan-2015 15:00:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116002.D

Injection Date:	16-Jan-2015 12:52:30	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

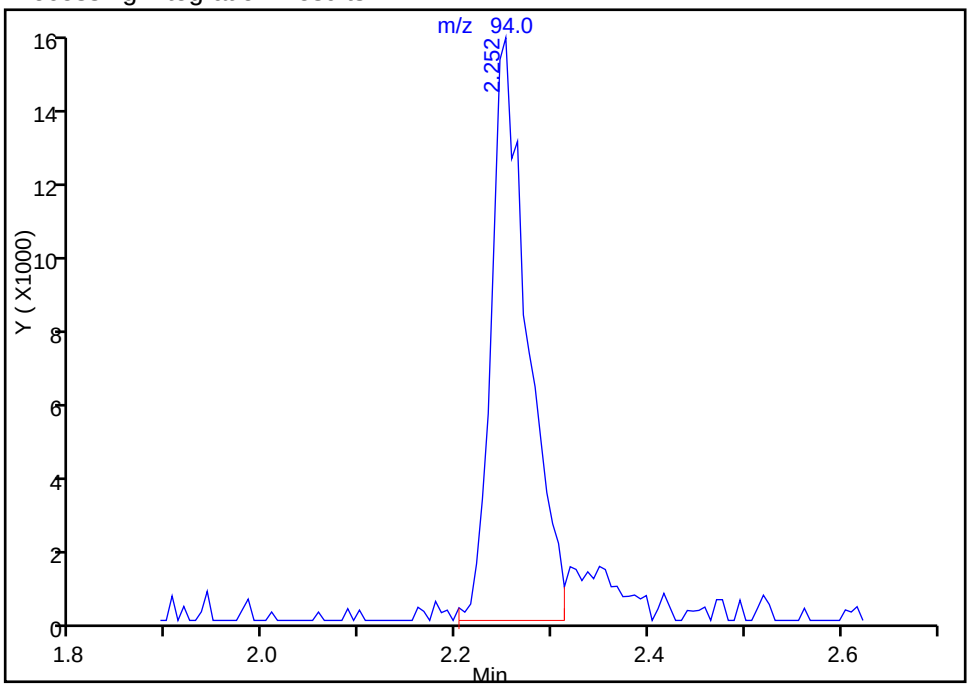
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116002.D				
Injection Date:	16-Jan-2015 12:52:30	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		

15 Bromomethane, CAS: 74-83-9

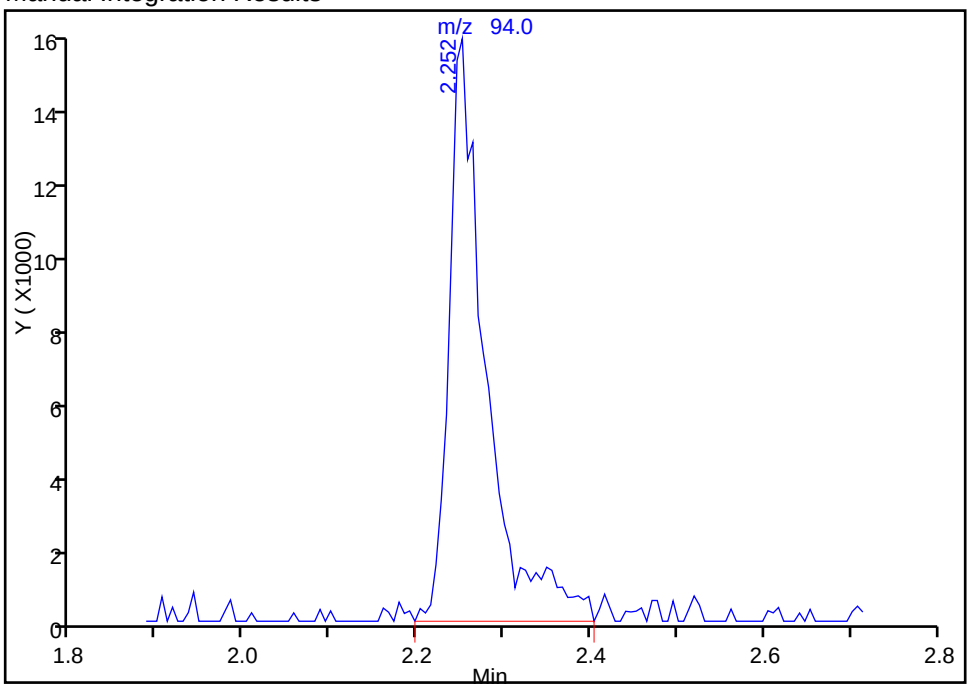
Processing Integration Results

RT: 2.25
Response: 39720
Amount: 32.197771



Manual Integration Results

RT: 2.25
Response: 44688
Amount: 36.224925



Reviewer: fergusond, 16-Jan-2015 13:30:59
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-131060/2 Calibration Date: 01/19/2015 09:42

Instrument ID: CHHP5 Calib Start Date: 11/18/2014 14:22

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/18/2014 16:46

Lab File ID: 50119002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1588	0.1948	0.0100	24.5	20.0	22.7*	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Jan-2015 09:42:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005320-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub12

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 11:32:54 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 11:32:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.305	0.000	86	159283	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	99	421871	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	99	98865	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.688	0.000	97	139970	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.538	6.538	0.000	77	91983	50.0	51.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	92	140741	50.0	47.7	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	95	401626	50.0	48.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.539	11.539	0.000	86	155594	50.0	49.7	
11 Dichlorodifluoromethane	85	1.629	1.629	0.000	97	121020	50.0	47.8	
12 Chloromethane	50	1.775	1.775	0.000	99	239658	50.0	48.0	
13 Vinyl chloride	62	1.908	1.908	0.000	97	163762	50.0	47.8	
14 Butadiene	39	1.951	1.951	0.000	99	234590	50.0	48.1	
15 Bromomethane	94	2.261	2.261	0.000	91	52866	50.0	51.6	
16 Chloroethane	64	2.401	2.401	0.000	97	80453	50.0	47.4	
17 Dichlorofluoromethane	67	2.657	2.657	0.000	97	183000	50.0	54.2	
18 Trichlorofluoromethane	101	2.718	2.718	0.000	89	144766	50.0	67.7	
20 Ethyl ether	59	3.089	3.089	0.000	93	151555	50.0	49.9	
21 Acrolein	56	3.265	3.265	0.000	100	76484	150.0	168.3	
22 1,1-Dichloroethene	96	3.387	3.387	0.000	91	114045	50.0	49.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.435	3.435	0.000	96	124670	50.0	53.6	
24 Acetone	43	3.490	3.490	0.000	97	150846	100.0	114.0	
25 Iodomethane	142	3.581	3.581	0.000	95	176632	50.0	60.0	
26 Carbon disulfide	76	3.673	3.673	0.000	99	242293	50.0	54.4	
28 3-Chloro-1-propene	76	3.953	3.953	0.000	87	65934	50.0	50.8	
30 Methyl acetate	43	4.025	4.025	0.000	100	929401	250.0	241.9	
31 Methylene Chloride	84	4.141	4.141	0.000	89	155756	50.0	56.7	
32 2-Methyl-2-propanol	59	4.433	4.433	0.000	85	109925	500.0	516.2	
33 Acrylonitrile	53	4.549	4.549	0.000	98	843260	500.0	476.3	
34 trans-1,2-Dichloroethene	96	4.561	4.561	0.000	49	129820	50.0	55.8	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	89	307554	50.0	51.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.987	4.987	0.000	96	277602	50.0	47.1	
37 1,1-Dichloroethane	63	5.175	5.175	0.000	96	291800	50.0	53.9	
38 Vinyl acetate	43	5.297	5.297	0.000	96	246091	50.0	47.4	
44 2,2-Dichloropropane	77	5.930	5.930	0.000	61	104499	50.0	72.8	
45 cis-1,2-Dichloroethene	96	5.942	5.942	0.000	89	129746	50.0	51.6	
46 2-Butanone (MEK)	43	5.990	5.990	0.000	96	210193	100.0	101.0	
49 Chlorobromomethane	128	6.222	6.222	0.000	84	55315	50.0	52.7	
51 Tetrahydrofuran	42	6.282	6.282	0.000	90	138356	100.0	87.4	
52 Chloroform	83	6.343	6.343	0.000	95	226225	50.0	55.3	
53 1,1,1-Trichloroethane	97	6.532	6.532	0.000	93	155142	50.0	58.4	
54 Cyclohexane	56	6.587	6.587	0.000	97	344566	50.0	46.2	
56 Carbon tetrachloride	117	6.720	6.720	0.000	91	142387	50.0	61.8	
55 1,1-Dichloropropene	75	6.733	6.733	0.000	83	177927	50.0	53.1	
57 Isobutyl alcohol	41	6.946	6.946	0.000	92	136736	1250.0	1128.3	
58 Benzene	78	6.958	6.958	0.000	95	549057	50.0	52.6	
59 1,2-Dichloroethane	62	6.988	6.988	0.000	95	216600	50.0	53.5	
62 n-Heptane	43	7.280	7.280	0.000	96	280267	50.0	46.9	
64 Trichloroethene	130	7.669	7.669	0.000	95	125073	50.0	56.0	
66 Methylcyclohexane	83	7.870	7.870	0.000	94	213797	50.0	50.0	
67 1,2-Dichloropropane	63	7.907	7.907	0.000	94	155318	50.0	48.4	
68 Dibromomethane	93	8.022	8.022	0.000	95	66150	50.0	50.0	
70 1,4-Dioxane	88	8.047	8.047	0.000	89	20398	1000.0	849.3	M
71 Dichlorobromomethane	83	8.199	8.199	0.000	96	144391	50.0	52.8	
73 2-Chloroethyl vinyl ether	63	8.521	8.521	0.000	85	164368	100.0	122.7	
74 cis-1,3-Dichloropropene	75	8.661	8.661	0.000	83	168797	50.0	54.1	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	97	411866	100.0	96.5	
76 Toluene	91	8.996	8.996	0.000	96	542579	50.0	51.7	
77 trans-1,3-Dichloropropene	75	9.221	9.221	0.000	94	142782	50.0	58.8	
78 Ethyl methacrylate	69	9.318	9.318	0.000	88	131420	50.0	45.4	
79 1,1,2-Trichloroethane	97	9.403	9.403	0.000	93	96909	50.0	47.1	
80 Tetrachloroethene	164	9.537	9.537	0.000	94	94993	50.0	49.1	
81 1,3-Dichloropropane	76	9.568	9.568	0.000	92	198014	50.0	49.9	
82 2-Hexanone	43	9.659	9.659	0.000	98	317148	100.0	92.8	
84 Chlorodibromomethane	129	9.793	9.793	0.000	88	85846	50.0	56.7	
85 Ethylene Dibromide	107	9.908	9.908	0.000	97	99784	50.0	52.2	
86 3-Chlorobenzotrifluoride	180	10.377	10.377	0.000	94	190130	50.0	55.1	
87 Chlorobenzene	112	10.395	10.395	0.000	90	347372	50.0	54.4	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	97	171609	50.0	53.2	
89 1,1,1,2-Tetrachloroethane	131	10.480	10.480	0.000	90	106746	50.0	54.8	
90 Ethylbenzene	106	10.504	10.504	0.000	98	193492	50.0	53.5	
91 m-Xylene & p-Xylene	106	10.620	10.620	0.000	97	229949	50.0	52.2	
92 o-Xylene	106	11.015	11.015	0.000	97	225806	50.0	52.8	
93 Styrene	104	11.028	11.028	0.000	88	366280	50.0	50.9	
94 Bromoform	173	11.216	11.216	0.000	91	47630	50.0	49.8	
96 2-Chlorobenzotrifluoride	180	11.277	11.277	0.000	95	186891	50.0	56.6	
97 Isopropylbenzene	105	11.380	11.380	0.000	97	566099	50.0	53.0	
99 1,1,2,2-Tetrachloroethane	83	11.679	11.679	0.000	94	137516	50.0	47.5	
100 Bromobenzene	156	11.685	11.685	0.000	96	122270	50.0	48.6	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	88	45729	50.0	49.9	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	76	64928	50.0	51.6	
103 N-Propylbenzene	120	11.794	11.794	0.000	99	151004	50.0	50.8	
104 2-Chlorotoluene	126	11.873	11.873	0.000	94	129299	50.0	51.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.940	11.940	0.000	96	148244	50.0	55.4	
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	94	472995	50.0	53.1	
107 4-Chlorotoluene	126	11.983	11.983	0.000	98	143340	50.0	51.4	
108 tert-Butylbenzene	119	12.293	12.293	0.000	95	363137	50.0	49.7	
110 1,2,4-Trimethylbenzene	105	12.342	12.342	0.000	99	482416	50.0	52.7	
111 1,2-dichloro-4-(trifluorom	214	12.409	12.409	0.000	98	134237	50.0	53.2	
112 sec-Butylbenzene	105	12.512	12.512	0.000	96	557068	50.0	52.9	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	97	240879	50.0	50.7	
114 4-Isopropyltoluene	119	12.658	12.658	0.000	97	447626	50.0	52.8	
115 1,4-Dichlorobenzene	146	12.713	12.713	0.000	92	243857	50.0	49.7	
116 2,4-Dichloro-1-(triflourom	214	12.761	12.761	0.000	96	121470	50.0	51.3	
118 2,5-Dichlorobenzotrifluori	214	12.810	12.810	0.000	97	135875	50.0	52.6	
120 n-Butylbenzene	91	13.066	13.066	0.000	98	373711	50.0	48.2	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	94	228139	50.0	51.7	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.862	0.000	71	19909	50.0	49.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	98	459798	150.0	165.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	99	295073	100.0	111.3	
126 1,2,4-Trichlorobenzene	180	14.702	14.702	0.000	93	94335	50.0	51.6	
127 Hexachlorobutadiene	225	14.872	14.872	0.000	95	46720	50.0	53.8	
128 Naphthalene	128	14.945	14.945	0.000	98	227787	50.0	46.6	
129 1,2,3-Trichlorobenzene	180	15.189	15.189	0.000	93	75483	50.0	52.6	
131 2,4,5-Trichlorotoluene	159	15.967	15.967	0.000	97	37436	50.0	61.4	
130 2,3,6-Trichlorotoluene	159	16.065	16.065	0.000	94	36151	50.0	64.7	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	107.4	
S 133 Xylenes, Total	106				0		100.0	105.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	112.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00095	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWVApri Res_00001	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	Amount Added:	6.00	Units: uL	
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

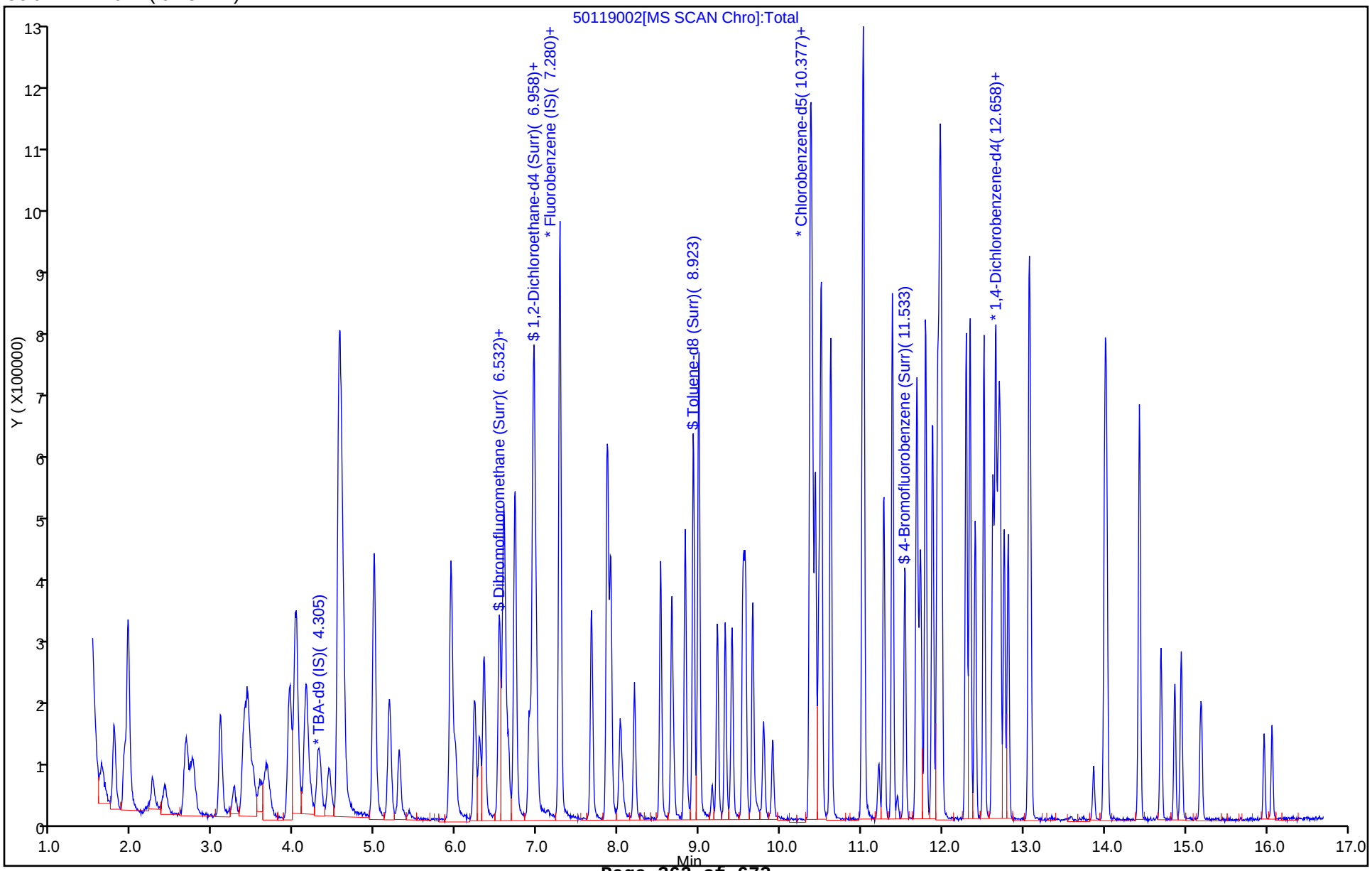
Report Date: 19-Jan-2015 11:32:56 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119002.D

Injection Date:	19-Jan-2015 09:42:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-131060/2 Calibration Date: 01/19/2015 09:42

Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/15/2014 16:57

Lab File ID: 50119002.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	0.2998	0.2869	0.1000	9.57	10.0	-4.3	20.0
Chloromethane	Ave	0.5915	0.5681	0.1000	9.60	10.0	-4.0	20.0
Vinyl chloride	Ave	0.4061	0.3882	0.1000	9.56	10.0	-4.4	20.0
Bromomethane	Ave	0.1215	0.1253	0.0500	10.3	10.0	3.2	20.0
Chloroethane	Ave	0.2011	0.1907	0.0500	9.48	10.0	-5.2	20.0
Dichlorofluoromethane	Ave	0.3999	0.4338	0.0100	10.8	10.0	8.5	20.0
Trichlorofluoromethane	Ave	0.2533	0.3432	0.1000	13.5	10.0	35.5*	20.0
Ethyl ether	Ave	0.3601	0.3592	0.0100	9.98	10.0	-0.2	20.0
Acrolein	Ave	0.0539	0.0604	0.0100	33.7	30.0	12.2	20.0
1,1-Dichloroethene	Ave	0.2724	0.2703	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2758	0.2955	0.1000	10.7	10.0	7.1	20.0
Acetone	Ave	0.1568	0.1788	0.0500	22.8	20.0	14.0	20.0
Iodomethane	Ave	0.3488	0.4187	0.0100	12.0	10.0	20.0	20.0
Carbon disulfide	Ave	0.5280	0.5743	0.1000	10.9	10.0	8.8	20.0
Allyl chloride	Ave	0.1537	0.1563	0.0100	10.2	10.0	1.7	20.0
Methyl acetate	Ave	0.4553	0.4406	0.1000	48.4	50.0	-3.2	20.0
Methylene Chloride	Lin2		0.3692	0.1000	11.3	10.0	13.4	20.0
tert-Butyl alcohol	Ave	1.337	1.380	0.0100	103	100	3.2	20.0
Acrylonitrile	Ave	0.2098	0.1999	0.0100	95.3	100	-4.7	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.3077	0.1000	11.2	10.0	11.6	20.0
Methyl tert-butyl ether	Ave	0.7145	0.7290	0.1000	10.2	10.0	2.0	20.0
Hexane	Ave	0.6980	0.6580	0.0100	9.43	10.0	-5.7	20.0
1,1-Dichloroethane	Ave	0.6414	0.6917	0.2000	10.8	10.0	7.8	20.0
Vinyl acetate	Ave	0.6151	0.5833	0.0100	9.48	10.0	-5.2	20.0
2,2-Dichloropropane	Ave	0.1700	0.2477	0.0100	14.6	10.0	45.7*	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.3076	0.1000	10.3	10.0	3.2	20.0
2-Butanone (MEK)	Ave	0.2466	0.2491	0.0500	20.2	20.0	1.0	20.0
Bromochloromethane	Ave	0.1243	0.1311	0.0100	10.5	10.0	5.5	20.0
Tetrahydrofuran	Ave	0.1876	0.1640	0.0100	17.5	20.0	-12.6	20.0
Chloroform	Ave	0.4850	0.5362	0.2000	11.1	10.0	10.6	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3678	0.1000	11.7	10.0	16.9	20.0
Cyclohexane	Ave	0.8843	0.8168	0.1000	9.24	10.0	-7.6	20.0
Carbon tetrachloride	Ave	0.2733	0.3375	0.1000	12.4	10.0	23.5*	20.0
1,1-Dichloropropene	Ave	0.3970	0.4218	0.0100	10.6	10.0	6.2	20.0
Isobutyl alcohol	Ave	0.0144	0.0130	0.0100	226	250	-9.7	20.0
Benzene	Ave	1.236	1.301	0.5000	10.5	10.0	5.3	20.0
1,2-Dichloroethane	Ave	0.4801	0.5134	0.1000	10.7	10.0	6.9	20.0
n-Heptane	Ave	0.7079	0.6643	0.0100	9.39	10.0	-6.1	20.0
Trichloroethene	Ave	0.2647	0.2965	0.2000	11.2	10.0	12.0	20.0
Methylcyclohexane	Ave	0.5067	0.5068	0.1000	10.0	10.0	0.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-131060/2 Calibration Date: 01/19/2015 09:42

Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/15/2014 16:57

Lab File ID: 50119002.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	0.3804	0.3682	0.1000	9.68	10.0	-3.2	20.0
Dibromomethane	Ave	0.1569	0.1568	0.0100	10.0	10.0	-0.0	20.0
1,4-Dioxane	Ave	0.0028	0.0024*	0.0100	170	200	-15.1	20.0
Bromodichloromethane	Ave	0.3238	0.3423	0.2000	10.6	10.0	5.7	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.4001	0.2000	10.8	10.0	8.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	2.083	0.1000	19.3	20.0	-3.5	20.0
Toluene	Ave	5.309	5.488	0.4000	10.3	10.0	3.4	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.444	0.1000	11.8	10.0	17.5	20.0
Ethyl methacrylate	Ave	1.464	1.329	0.0100	9.08	10.0	-9.2	20.0
1,1,2-Trichloroethane	Ave	1.042	0.9802	0.1000	9.41	10.0	-5.9	20.0
Tetrachloroethene	Ave	0.9790	0.9608	0.2000	9.81	10.0	-1.9	20.0
1,3-Dichloropropane	Ave	2.006	2.003	0.0100	9.98	10.0	-0.2	20.0
2-Hexanone	Ave	1.729	1.604	0.1000	18.6	20.0	-7.2	20.0
Dibromochloromethane	Ave	0.7658	0.8683	0.1000	11.3	10.0	13.4	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	1.009	0.1000	10.4	10.0	4.5	20.0
3-Chlorobenzotrifluoride	Ave	1.745	1.923	0.0100	11.0	10.0	10.2	20.0
Chlorobenzene	Ave	3.229	3.514	0.5000	10.9	10.0	8.8	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.736	0.0100	10.6	10.0	6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	1.080	0.0100	11.0	10.0	9.6	20.0
Ethylbenzene	Ave	1.828	1.957	0.1000	10.7	10.0	7.1	20.0
m-Xylene & p-Xylene	Ave	2.226	2.326	0.1000	10.4	10.0	4.5	20.0
o-Xylene	Ave	2.164	2.284	0.3000	10.6	10.0	5.5	20.0
Styrene	Ave	3.642	3.705	0.3000	10.2	10.0	1.7	20.0
Bromoform	Ave	0.4840	0.4818	0.1000	9.95	10.0	-0.5	20.0
2-Chlorobenzotrifluoride	Ave	1.670	1.890	0.0100	11.3	10.0	13.2	20.0
Isopropylbenzene	Ave	5.400	5.726	0.1000	10.6	10.0	6.0	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.391	0.3000	9.50	10.0	-5.0	20.0
Bromobenzene	Ave	0.8995	0.8735	0.0100	9.71	10.0	-2.9	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.3267	0.0100	9.99	10.0	-0.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.4639	0.0100	10.3	10.0	3.3	20.0
N-Propylbenzene	Ave	1.062	1.079	0.0100	10.2	10.0	1.6	20.0
2-Chlorotoluene	Ave	0.8959	0.9238	0.0100	10.3	10.0	3.1	20.0
3-Chlorotoluene	Ave	0.9551	1.059	0.0100	11.1	10.0	10.9	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.379	0.0100	10.6	10.0	6.2	20.0
4-Chlorotoluene	Ave	0.996	1.024	0.0100	10.3	10.0	2.9	20.0
tert-Butylbenzene	Ave	2.610	2.594	0.0100	9.94	10.0	-0.6	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.447	0.0100	10.5	10.0	5.4	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.9590	0.0100	10.6	10.0	6.5	20.0
sec-Butylbenzene	Ave	3.761	3.980	0.0100	10.6	10.0	5.8	20.0
1,3-Dichlorobenzene	Ave	1.698	1.721	0.6000	10.1	10.0	1.4	20.0
4-Isopropyltoluene	Ave	3.029	3.198	0.0100	10.6	10.0	5.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCVIS 180-131060/2 Calibration Date: 01/19/2015 09:42

Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/15/2014 16:57

Lab File ID: 50119002.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	1.753	1.742	0.5000	9.94	10.0	-0.6	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.8678	0.0100	10.3	10.0	2.7	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.9707	0.0100	10.5	10.0	5.3	20.0
n-Butylbenzene	Ave	2.768	2.670	0.0100	9.65	10.0	-3.5	20.0
1,2-Dichlorobenzene	Ave	1.576	1.630	0.4000	10.3	10.0	3.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1422	0.0500	9.96	10.0	-0.4	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	1.095	0.0100	33.1	30.0	10.3	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	1.054	0.0100	22.3	20.0	11.3	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.6740	0.2000	10.3	10.0	3.1	20.0
Hexachlorobutadiene	Ave	0.3100	0.3338	0.0100	10.8	10.0	7.7	20.0
Naphthalene	Ave	1.745	1.627	0.0100	9.33	10.0	-6.7	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.5393	0.0100	10.5	10.0	5.2	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.2675	0.0100	12.3	10.0	22.9*	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.2583	0.0100	12.9	10.0	29.5*	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.2180		10.2	10.0	2.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.3336		9.55	10.0	-4.5	20.0
Toluene-d8 (Surr)	Ave	4.159	4.062		9.77	10.0	-2.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.574		9.93	10.0	-0.7	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Jan-2015 09:42:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005320-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub12

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 11:32:54 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 11:32:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.305	0.000	86	159283	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	99	421871	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	99	98865	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.688	0.000	97	139970	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.538	6.538	0.000	77	91983	50.0	51.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	92	140741	50.0	47.7	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	95	401626	50.0	48.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.539	11.539	0.000	86	155594	50.0	49.7	
11 Dichlorodifluoromethane	85	1.629	1.629	0.000	97	121020	50.0	47.8	
12 Chloromethane	50	1.775	1.775	0.000	99	239658	50.0	48.0	
13 Vinyl chloride	62	1.908	1.908	0.000	97	163762	50.0	47.8	
14 Butadiene	39	1.951	1.951	0.000	99	234590	50.0	48.1	
15 Bromomethane	94	2.261	2.261	0.000	91	52866	50.0	51.6	
16 Chloroethane	64	2.401	2.401	0.000	97	80453	50.0	47.4	
17 Dichlorofluoromethane	67	2.657	2.657	0.000	97	183000	50.0	54.2	
18 Trichlorofluoromethane	101	2.718	2.718	0.000	89	144766	50.0	67.7	
20 Ethyl ether	59	3.089	3.089	0.000	93	151555	50.0	49.9	
21 Acrolein	56	3.265	3.265	0.000	100	76484	150.0	168.3	
22 1,1-Dichloroethene	96	3.387	3.387	0.000	91	114045	50.0	49.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.435	3.435	0.000	96	124670	50.0	53.6	
24 Acetone	43	3.490	3.490	0.000	97	150846	100.0	114.0	
25 Iodomethane	142	3.581	3.581	0.000	95	176632	50.0	60.0	
26 Carbon disulfide	76	3.673	3.673	0.000	99	242293	50.0	54.4	
28 3-Chloro-1-propene	76	3.953	3.953	0.000	87	65934	50.0	50.8	
30 Methyl acetate	43	4.025	4.025	0.000	100	929401	250.0	241.9	
31 Methylene Chloride	84	4.141	4.141	0.000	89	155756	50.0	56.7	
32 2-Methyl-2-propanol	59	4.433	4.433	0.000	85	109925	500.0	516.2	
33 Acrylonitrile	53	4.549	4.549	0.000	98	843260	500.0	476.3	
34 trans-1,2-Dichloroethene	96	4.561	4.561	0.000	49	129820	50.0	55.8	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	89	307554	50.0	51.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.987	4.987	0.000	96	277602	50.0	47.1	
37 1,1-Dichloroethane	63	5.175	5.175	0.000	96	291800	50.0	53.9	
38 Vinyl acetate	43	5.297	5.297	0.000	96	246091	50.0	47.4	
44 2,2-Dichloropropane	77	5.930	5.930	0.000	61	104499	50.0	72.8	
45 cis-1,2-Dichloroethene	96	5.942	5.942	0.000	89	129746	50.0	51.6	
46 2-Butanone (MEK)	43	5.990	5.990	0.000	96	210193	100.0	101.0	
49 Chlorobromomethane	128	6.222	6.222	0.000	84	55315	50.0	52.7	
51 Tetrahydrofuran	42	6.282	6.282	0.000	90	138356	100.0	87.4	
52 Chloroform	83	6.343	6.343	0.000	95	226225	50.0	55.3	
53 1,1,1-Trichloroethane	97	6.532	6.532	0.000	93	155142	50.0	58.4	
54 Cyclohexane	56	6.587	6.587	0.000	97	344566	50.0	46.2	
56 Carbon tetrachloride	117	6.720	6.720	0.000	91	142387	50.0	61.8	
55 1,1-Dichloropropene	75	6.733	6.733	0.000	83	177927	50.0	53.1	
57 Isobutyl alcohol	41	6.946	6.946	0.000	92	136736	1250.0	1128.3	
58 Benzene	78	6.958	6.958	0.000	95	549057	50.0	52.6	
59 1,2-Dichloroethane	62	6.988	6.988	0.000	95	216600	50.0	53.5	
62 n-Heptane	43	7.280	7.280	0.000	96	280267	50.0	46.9	
64 Trichloroethene	130	7.669	7.669	0.000	95	125073	50.0	56.0	
66 Methylcyclohexane	83	7.870	7.870	0.000	94	213797	50.0	50.0	
67 1,2-Dichloropropane	63	7.907	7.907	0.000	94	155318	50.0	48.4	
68 Dibromomethane	93	8.022	8.022	0.000	95	66150	50.0	50.0	
70 1,4-Dioxane	88	8.047	8.047	0.000	89	20398	1000.0	849.3	M
71 Dichlorobromomethane	83	8.199	8.199	0.000	96	144391	50.0	52.8	
73 2-Chloroethyl vinyl ether	63	8.521	8.521	0.000	85	164368	100.0	122.7	
74 cis-1,3-Dichloropropene	75	8.661	8.661	0.000	83	168797	50.0	54.1	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	97	411866	100.0	96.5	
76 Toluene	91	8.996	8.996	0.000	96	542579	50.0	51.7	
77 trans-1,3-Dichloropropene	75	9.221	9.221	0.000	94	142782	50.0	58.8	
78 Ethyl methacrylate	69	9.318	9.318	0.000	88	131420	50.0	45.4	
79 1,1,2-Trichloroethane	97	9.403	9.403	0.000	93	96909	50.0	47.1	
80 Tetrachloroethene	164	9.537	9.537	0.000	94	94993	50.0	49.1	
81 1,3-Dichloropropane	76	9.568	9.568	0.000	92	198014	50.0	49.9	
82 2-Hexanone	43	9.659	9.659	0.000	98	317148	100.0	92.8	
84 Chlorodibromomethane	129	9.793	9.793	0.000	88	85846	50.0	56.7	
85 Ethylene Dibromide	107	9.908	9.908	0.000	97	99784	50.0	52.2	
86 3-Chlorobenzotrifluoride	180	10.377	10.377	0.000	94	190130	50.0	55.1	
87 Chlorobenzene	112	10.395	10.395	0.000	90	347372	50.0	54.4	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	97	171609	50.0	53.2	
89 1,1,1,2-Tetrachloroethane	131	10.480	10.480	0.000	90	106746	50.0	54.8	
90 Ethylbenzene	106	10.504	10.504	0.000	98	193492	50.0	53.5	
91 m-Xylene & p-Xylene	106	10.620	10.620	0.000	97	229949	50.0	52.2	
92 o-Xylene	106	11.015	11.015	0.000	97	225806	50.0	52.8	
93 Styrene	104	11.028	11.028	0.000	88	366280	50.0	50.9	
94 Bromoform	173	11.216	11.216	0.000	91	47630	50.0	49.8	
96 2-Chlorobenzotrifluoride	180	11.277	11.277	0.000	95	186891	50.0	56.6	
97 Isopropylbenzene	105	11.380	11.380	0.000	97	566099	50.0	53.0	
99 1,1,2,2-Tetrachloroethane	83	11.679	11.679	0.000	94	137516	50.0	47.5	
100 Bromobenzene	156	11.685	11.685	0.000	96	122270	50.0	48.6	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	88	45729	50.0	49.9	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	76	64928	50.0	51.6	
103 N-Propylbenzene	120	11.794	11.794	0.000	99	151004	50.0	50.8	
104 2-Chlorotoluene	126	11.873	11.873	0.000	94	129299	50.0	51.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.940	11.940	0.000	96	148244	50.0	55.4	
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	94	472995	50.0	53.1	
107 4-Chlorotoluene	126	11.983	11.983	0.000	98	143340	50.0	51.4	
108 tert-Butylbenzene	119	12.293	12.293	0.000	95	363137	50.0	49.7	
110 1,2,4-Trimethylbenzene	105	12.342	12.342	0.000	99	482416	50.0	52.7	
111 1,2-dichloro-4-(trifluorom	214	12.409	12.409	0.000	98	134237	50.0	53.2	
112 sec-Butylbenzene	105	12.512	12.512	0.000	96	557068	50.0	52.9	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	97	240879	50.0	50.7	
114 4-Isopropyltoluene	119	12.658	12.658	0.000	97	447626	50.0	52.8	
115 1,4-Dichlorobenzene	146	12.713	12.713	0.000	92	243857	50.0	49.7	
116 2,4-Dichloro-1-(triflourom	214	12.761	12.761	0.000	96	121470	50.0	51.3	
118 2,5-Dichlorobenzotrifluori	214	12.810	12.810	0.000	97	135875	50.0	52.6	
120 n-Butylbenzene	91	13.066	13.066	0.000	98	373711	50.0	48.2	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	94	228139	50.0	51.7	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.862	0.000	71	19909	50.0	49.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	98	459798	150.0	165.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	99	295073	100.0	111.3	
126 1,2,4-Trichlorobenzene	180	14.702	14.702	0.000	93	94335	50.0	51.6	
127 Hexachlorobutadiene	225	14.872	14.872	0.000	95	46720	50.0	53.8	
128 Naphthalene	128	14.945	14.945	0.000	98	227787	50.0	46.6	
129 1,2,3-Trichlorobenzene	180	15.189	15.189	0.000	93	75483	50.0	52.6	
131 2,4,5-Trichlorotoluene	159	15.967	15.967	0.000	97	37436	50.0	61.4	
130 2,3,6-Trichlorotoluene	159	16.065	16.065	0.000	94	36151	50.0	64.7	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	107.4	
S 133 Xylenes, Total	106				0		100.0	105.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	112.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00095	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWVApri Res_00001	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	Amount Added:	6.00	Units: uL	
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

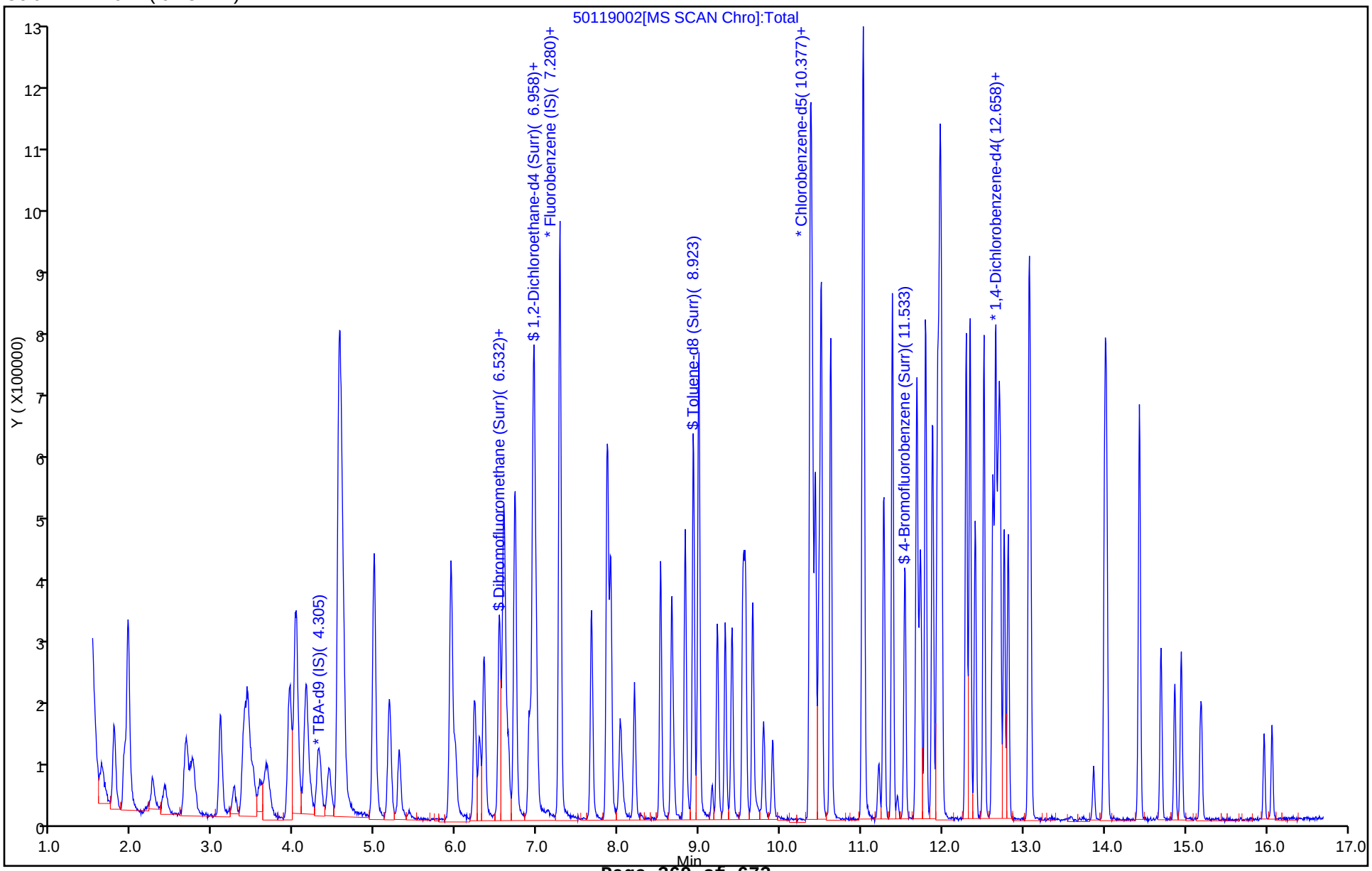
Report Date: 19-Jan-2015 11:32:56 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119002.D

Injection Date:	19-Jan-2015 09:42:30	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

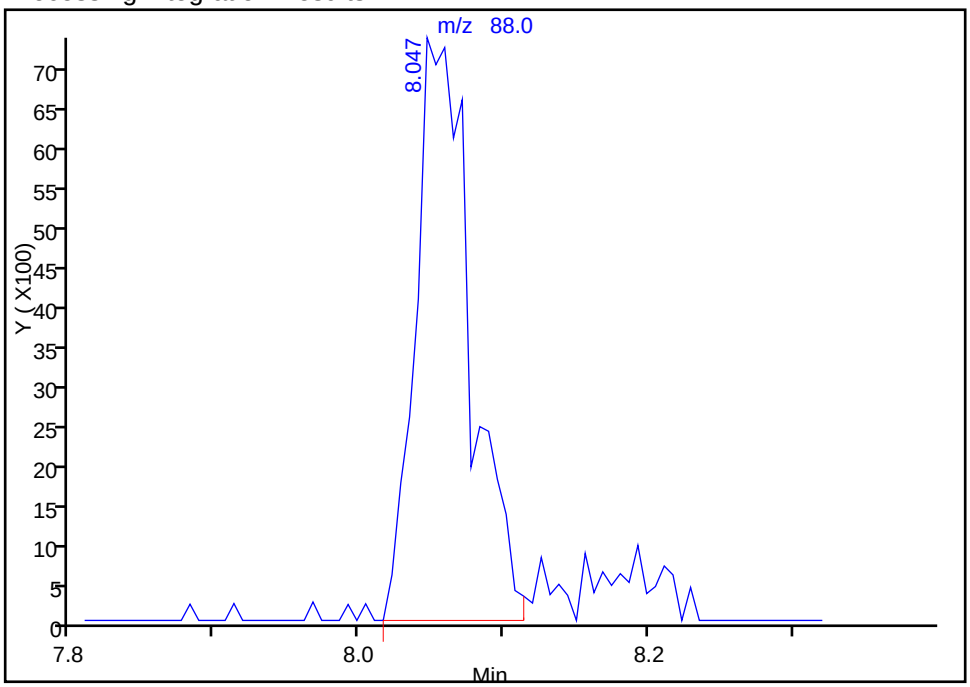
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119002.D
Injection Date: 19-Jan-2015 09:42:30 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

70 1,4-Dioxane, CAS: 123-91-1

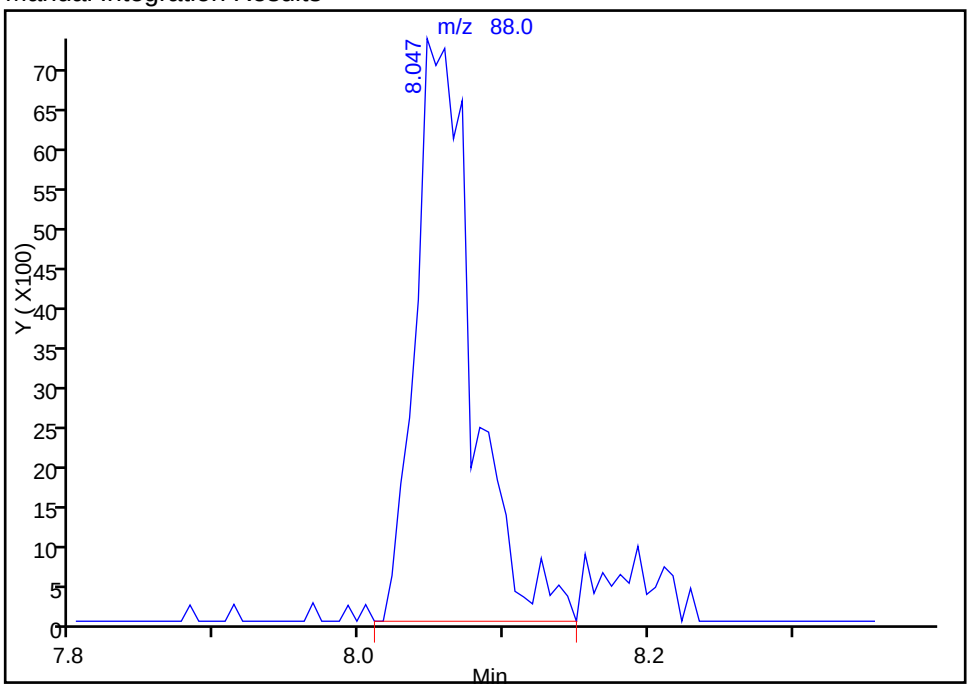
Processing Integration Results

RT: 8.05
Response: 19627
Amount: 817.1870



Manual Integration Results

RT: 8.05
Response: 20398
Amount: 849.2882



Reviewer: fergusond, 19-Jan-2015 10:16:09
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 15-Dec-2014 10:05:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0004875-001
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Dec-2014 08:50:57 Calib Date: 15-Dec-2014 16:57:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: fergusond Date: 15-Dec-2014 10:19:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.359	8.359	0.000	0	90620	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

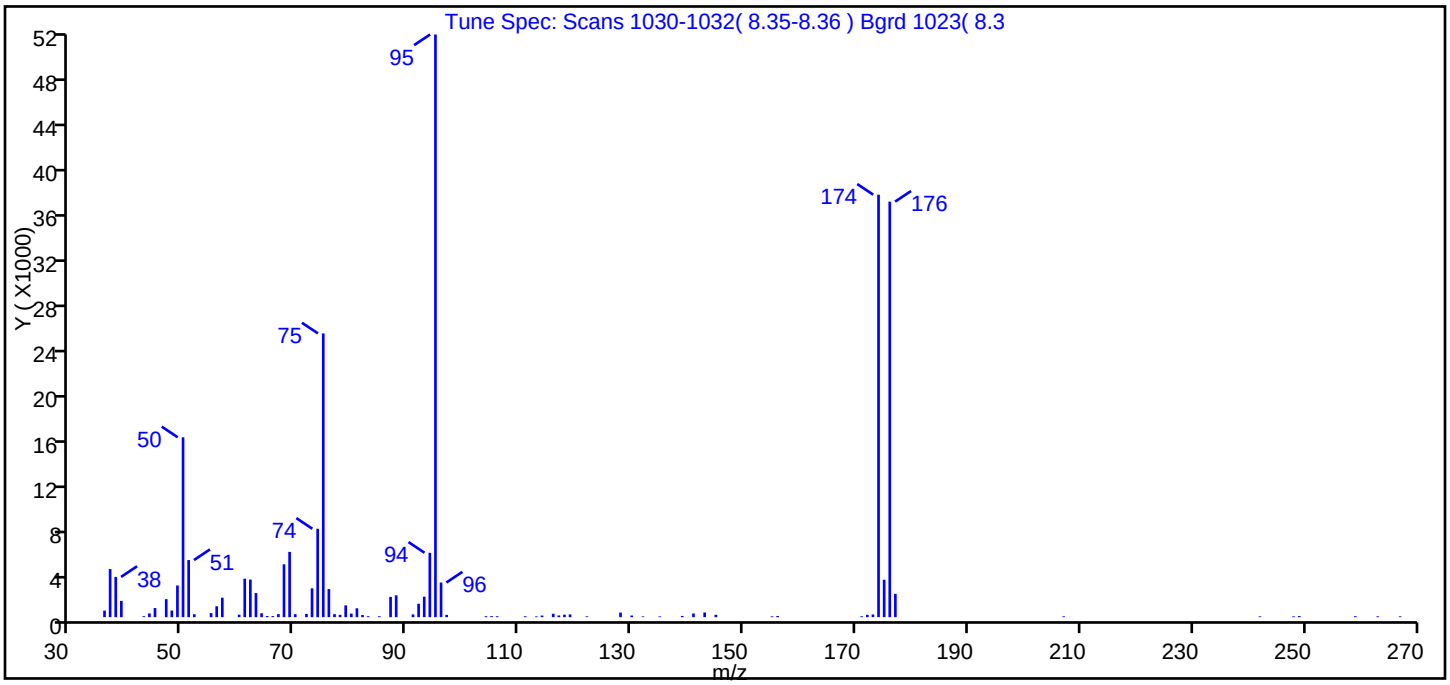
VOABFB25_00056 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D
Injection Date: 15-Dec-2014 10:05:30 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	30.9
75	30 to 60% of m/z 95	48.7
96	5 to 9% of m/z 95	5.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	72.5
175	5 to 9% of m/z 174	6.4 (8.8)
176	Greater than 95% but less than 101% of m/z 174	71.3 (98.4)
177	5 to 9% of m/z 176	4.0 (5.6)

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 15-Dec-2014 10:05:30
Spectrum: Tune Spec: Scans 1030-1032(8.35-8.36) Bgrd 1023(8.3
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	579	65.00	100	91.00	239	135.00	67
37.00	4259	66.00	91	92.00	1186	139.00	106
38.00	3563	67.00	267	93.00	1816	141.00	322
39.00	1442	68.00	4681	94.00	5704	143.00	413
43.00	82	69.00	5781	95.00	51616	145.00	210
44.00	330	70.00	263	96.00	3066	155.00	71
45.00	806	72.00	288	97.00	199	156.00	100
47.00	1594	73.00	2553	104.00	79	171.00	76
48.00	585	74.00	7830	105.00	86	172.00	204
49.00	2804	75.00	25136	106.00	80	173.00	235
50.00	15933	76.00	2490	111.00	79	174.00	37424
51.00	5056	77.00	265	113.00	67	175.00	3312
52.00	256	78.00	204	114.00	142	176.00	36808
55.00	361	79.00	1043	116.00	302	177.00	2064
56.00	966	80.00	313	117.00	150	207.00	71
57.00	1723	81.00	786	118.00	219	242.00	69
60.00	217	82.00	188	119.00	241	248.00	69
61.00	3405	83.00	81	122.00	71	249.00	95
62.00	3328	85.00	79	128.00	406	259.00	83
63.00	2135	87.00	1794	130.00	142	263.00	72
64.00	343	88.00	1933	132.00	67	267.00	70

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116006.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 16-Jan-2015 12:21:30 ALS Bottle#: 1 Worklist Smp#: 6
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005307-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Jan-2015 15:00:09 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 16-Jan-2015 12:43:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.335	8.335	0.000	0	161066	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

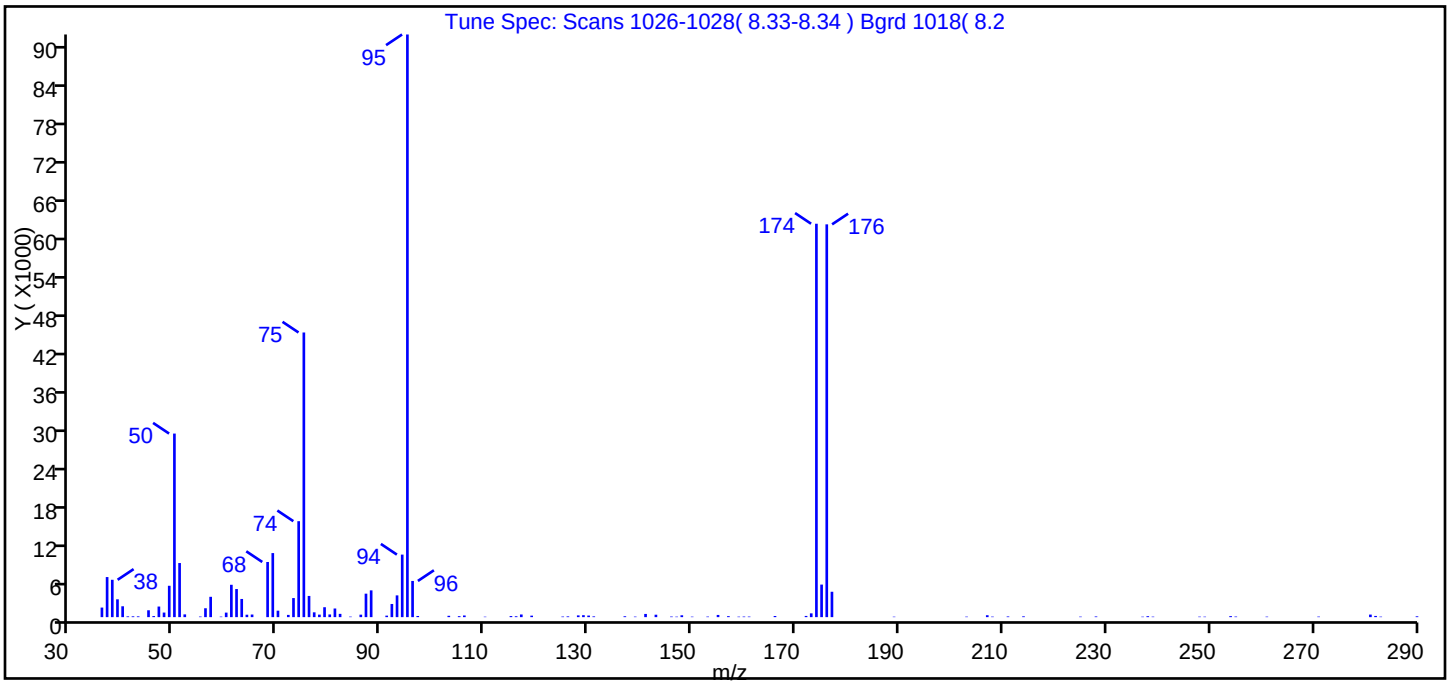
VOABFB25_00057 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116006.D
Injection Date: 16-Jan-2015 12:21:30 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	31.5
75	30 to 60% of m/z 95	48.9
96	5 to 9% of m/z 95	6.2
173	Less than 2% of m/z 174	0.7 (1.0)
174	50 to 120% of m/z 95	67.5
175	5 to 9% of m/z 174	5.6 (8.3)
176	Greater than 95% but less than 101% of m/z 174	67.4 (99.8)
177	5 to 9% of m/z 176	4.4 (6.5)

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116006.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 16-Jan-2015 12:21:30
Spectrum: Tune Spec: Scans 1026-1028(8.33-8.34) Bgrd 1018(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1497	69.00	10014	110.00	69	173.00	593
37.00	6266	70.00	1011	115.00	171	174.00	61496
38.00	5839	72.00	351	116.00	139	175.00	5089
39.00	2788	73.00	2982	117.00	416	176.00	61400
40.00	1699	74.00	15000	119.00	234	177.00	3968
41.00	120	75.00	44496	125.00	92	189.00	70
42.00	127	76.00	3314	126.00	118	203.00	79
43.00	122	77.00	753	128.00	274	207.00	299
45.00	1074	78.00	394	129.00	307	208.00	83
46.00	168	79.00	1550	130.00	247	211.00	108
47.00	1657	80.00	419	131.00	119	214.00	124
48.00	716	81.00	1351	137.00	138	225.00	80
49.00	4904	82.00	513	139.00	83	228.00	108
50.00	28696	84.00	80	141.00	501	237.00	72
51.00	8459	86.00	387	143.00	380	238.00	146
52.00	431	87.00	3670	146.00	94	239.00	78
55.00	93	88.00	4185	147.00	77	248.00	79
56.00	1390	91.00	235	148.00	291	249.00	74
57.00	3178	92.00	2058	150.00	75	254.00	160
59.00	83	93.00	3402	153.00	87	255.00	93
60.00	708	94.00	9776	155.00	344	261.00	79
61.00	5058	95.00	91080	157.00	153	271.00	85
62.00	4394	96.00	5657	159.00	76	281.00	400
63.00	2842	97.00	181	160.00	90	282.00	188
64.00	380	103.00	210	161.00	89	283.00	79
65.00	410	105.00	152	166.00	179	290.00	131
68.00	8622	106.00	260	172.00	189		

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119004.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 19-Jan-2015 09:02:30 ALS Bottle#: 1 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005320-004
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 11:14:36 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 09:18:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.340	8.340	0.000	0	178134	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

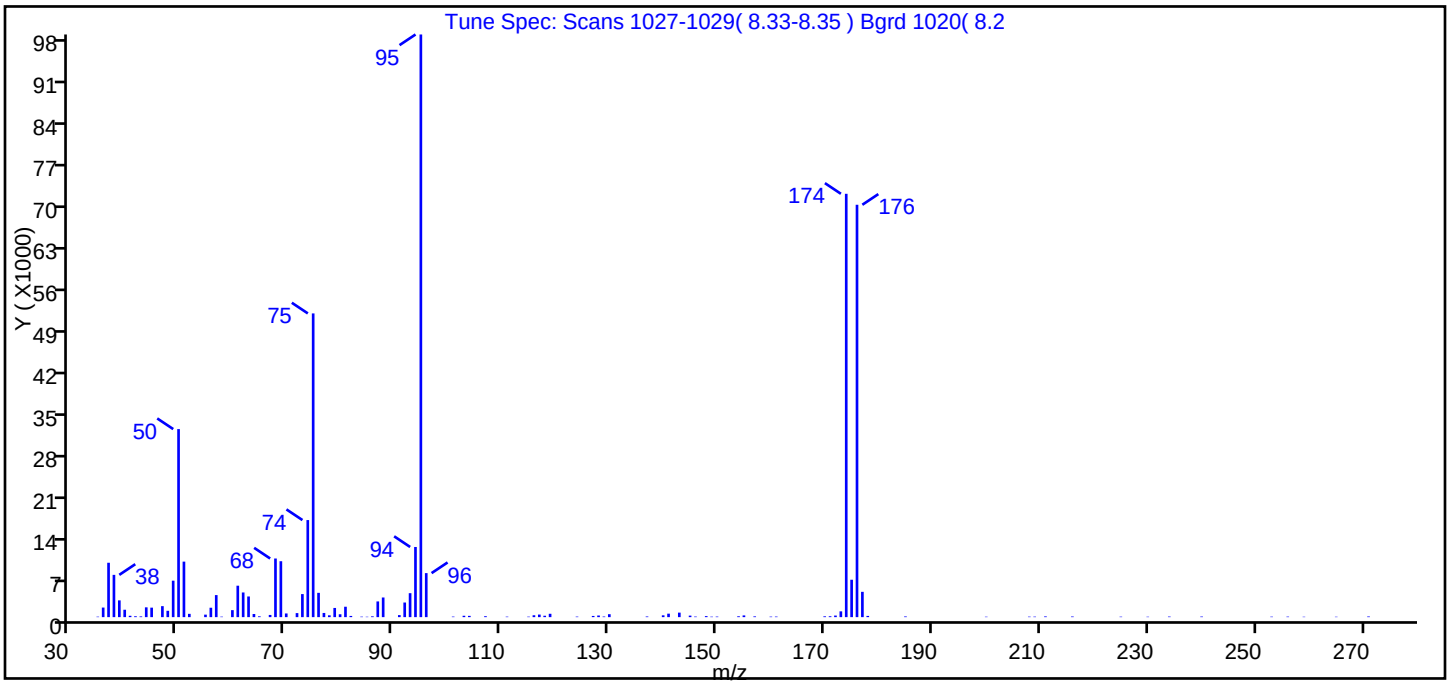
VOABFB25_00057 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119004.D
Injection Date: 19-Jan-2015 09:02:30 Instrument ID: CHHP5
Lims ID: BFB
Client ID:
Operator ID: 001562 ALS Bottle#: 1 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Tune Method: BFB Method 8260

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	32.3
75	30 to 60% of m/z 95	52.1
96	5 to 9% of m/z 95	7.6
173	Less than 2% of m/z 174	1.0 (1.4)
174	50 to 120% of m/z 95	72.7
175	5 to 9% of m/z 174	6.4 (8.8)
176	Greater than 95% but less than 101% of m/z 174	70.8 (97.4)
177	5 to 9% of m/z 176	4.3 (6.1)

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119004.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 19-Jan-2015 09:02:30
Spectrum: Tune Spec: Scans 1027-1029(8.33-8.35) Bgrd 1020(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
35.00	79	67.00	370	103.00	231	161.00	96
36.00	1614	68.00	9879	104.00	216	170.00	137
37.00	9163	69.00	9421	107.00	156	171.00	149
38.00	7124	70.00	620	111.00	84	172.00	266
39.00	2825	72.00	681	115.00	83	173.00	977
40.00	1247	73.00	3884	116.00	319	174.00	71320
41.00	229	74.00	16354	117.00	434	175.00	6303
42.00	149	75.00	51168	118.00	236	176.00	69472
43.00	123	76.00	4094	119.00	566	177.00	4264
44.00	1652	77.00	703	124.00	91	178.00	207
45.00	1601	78.00	308	127.00	202	185.00	117
47.00	1852	79.00	1549	128.00	275	200.00	73
48.00	1068	80.00	485	129.00	103	208.00	84
49.00	6145	81.00	1754	130.00	496	209.00	85
50.00	31680	82.00	204	137.00	113	211.00	122
51.00	9354	84.00	82	140.00	307	216.00	107
52.00	556	85.00	68	141.00	586	225.00	80
55.00	422	86.00	136	143.00	762	230.00	70
56.00	1585	87.00	2647	145.00	256	234.00	98
57.00	3715	88.00	3310	146.00	97	240.00	100
58.00	83	91.00	342	148.00	174	253.00	81
60.00	1180	92.00	2464	149.00	79	256.00	88
61.00	5297	93.00	4038	150.00	94	259.00	67
62.00	4156	94.00	11820	154.00	143	265.00	68
63.00	3483	95.00	98160	155.00	290	271.00	110
64.00	528	96.00	7417	157.00	127		
65.00	136	101.00	91	160.00	88		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-130947/8

Matrix: Water Lab File ID: 50116008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 13:56

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 130947 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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-130947/8

Matrix: Water Lab File ID: 50116008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 13:56

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 130947 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)	104		64-135
2037-26-5	Toluene-d8 (Surr)	101		71-118
460-00-4	4-Bromofluorobenzene (Surr)	98		70-118
1868-53-7	Dibromofluoromethane (Surr)	110		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116008.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 16-Jan-2015 13:56:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005307-008
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Jan-2015 15:00:19 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 16-Jan-2015 14:21:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.290	4.302	-0.012	88	215753	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	100	505374	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.361	0.001	99	112616	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	99	163327	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.522	0.013	93	118171	50.0	54.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	92	183038	50.0	51.8	
$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	96	471733	50.0	50.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.529	0.007	83	174874	50.0	49.0	
11 Dichlorodifluoromethane	85		1.631					ND	
12 Chloromethane	50		1.777					ND	
13 Vinyl chloride	62		1.905					ND	
14 Butadiene	39	2.021	1.954	0.067	15	694		0.1188	
15 Bromomethane	94		2.252					ND	
16 Chloroethane	64		2.386					ND	
17 Dichlorofluoromethane	67		2.653					ND	
18 Trichlorofluoromethane	101		2.708					ND	
19 Ethanol	45		3.006					ND	
20 Ethyl ether	59		3.085					ND	
21 Acrolein	56		3.268					ND	
22 1,1-Dichloroethene	96		3.371					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.432					ND	
24 Acetone	43		3.493					ND	
25 Iodomethane	142		3.578					ND	
26 Carbon disulfide	76		3.669					ND	
27 Isopropyl alcohol	45		3.772					ND	
29 Acetonitrile	40		3.924					ND	
28 3-Chloro-1-propene	76		3.937					ND	
30 Methyl acetate	43		4.016					ND	
31 Methylene Chloride	84		4.150					ND	
32 2-Methyl-2-propanol	59		4.424					ND	
33 Acrylonitrile	53		4.545					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.570					ND	
35 Methyl tert-butyl ether	73		4.594					ND	
36 Hexane	57		4.983					ND	
37 1,1-Dichloroethane	63		5.172					ND	
38 Vinyl acetate	43		5.293					ND	
39 2-Chloro-1,3-butadiene	53		5.305					ND	
41 Isopropyl ether	45		5.323					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.798					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	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43	6.097	6.084	0.013	1	108		0.0554	
49 Chlorobromomethane	128		6.230					ND	
50 Methacrylonitrile	41		6.236					ND	
51 Tetrahydrofuran	42		6.285					ND	
52 Chloroform	83		6.346					ND	
53 1,1,1-Trichloroethane	97		6.535					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		6.936					ND	
58 Benzene	78		6.954					ND	
59 1,2-Dichloroethane	62		6.985					ND	
61 Tert-amyl methyl ether	73		7.106					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43	7.186	7.277	-0.091	1	242		0.0338	
63 n-Butanol	56		7.653					ND	
64 Trichloroethene	130		7.666					ND	
65 Ethyl acrylate	55		7.812					ND	
66 Methylcyclohexane	83		7.861					ND	
67 1,2-Dichloropropane	63		7.897					ND	
68 Dibromomethane	93		8.019					ND	
70 1,4-Dioxane	88		8.049					ND	
69 Methyl methacrylate	69		8.055					ND	
71 Dichlorobromomethane	83		8.195					ND	
72 2-Nitropropane	41		8.444					ND	
73 2-Chloroethyl vinyl ether	63		8.518					ND	
74 cis-1,3-Dichloropropene	75		8.658					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822					ND	
76 Toluene	91		8.986					ND	
77 trans-1,3-Dichloropropene	75		9.217					ND	
78 Ethyl methacrylate	69		9.315					ND	
79 1,1,2-Trichloroethane	97		9.400					ND	
80 Tetrachloroethene	164		9.534					ND	
81 1,3-Dichloropropane	76		9.564					ND	
82 2-Hexanone	43		9.655					ND	
83 n-Butyl acetate	43		9.783					ND	
84 Chlorodibromomethane	129		9.789					ND	
85 Ethylene Dibromide	107		9.905					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.373					ND	
87 Chlorobenzene	112		10.391					ND	
88 4-Chlorobenzotrifluoride	180		10.428					ND	
89 1,1,1,2-Tetrachloroethane	131		10.477					ND	
90 Ethylbenzene	106		10.501					ND	
91 m-Xylene & p-Xylene	106		10.617					ND	
92 o-Xylene	106		11.012					ND	
93 Styrene	104		11.024					ND	
94 Bromoform	173		11.207					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.274					ND	
97 Isopropylbenzene	105		11.377					ND	
98 Cyclohexanone	55		11.474					ND	
99 1,1,2,2-Tetrachloroethane	83		11.675					ND	
100 Bromobenzene	156		11.687					ND	
101 1,2,3-Trichloropropane	110		11.718					ND	
102 trans-1,4-Dichloro-2-buten	53		11.730					ND	
103 N-Propylbenzene	120		11.791					ND	
104 2-Chlorotoluene	126		11.876					ND	
105 3-Chlorotoluene	126		11.937					ND	
106 1,3,5-Trimethylbenzene	105		11.961					ND	
107 4-Chlorotoluene	126		11.985					ND	
108 tert-Butylbenzene	119		12.289					ND	
109 Pentachloroethane	167		12.313					ND	
110 1,2,4-Trimethylbenzene	105		12.338					ND	
111 1,2-dichloro-4-(trifluorom	214		12.399					ND	
112 sec-Butylbenzene	105		12.508					ND	
113 1,3-Dichlorobenzene	146		12.618					ND	
114 4-Isopropyltoluene	119		12.654					ND	
115 1,4-Dichlorobenzene	146		12.709					ND	
116 2,4-Dichloro-1-(triflourom	214		12.758					ND	
117 1,2,3-Trimethylbenzene	105		12.764					ND	
118 2,5-Dichlorobenzotrifluori	214		12.807					ND	
119 Benzyl chloride	91		12.843					ND	
120 n-Butylbenzene	91		13.062					ND	
121 1,2-Dichlorobenzene	146		13.080					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.859					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.005					ND	
124 1,3,5-Trichlorobenzene	180		14.072					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.425					ND	
126 1,2,4-Trichlorobenzene	180		14.692					ND	
127 Hexachlorobutadiene	225		14.863					ND	
128 Naphthalene	128		14.942					ND	
129 1,2,3-Trichlorobenzene	180		15.185					ND	
131 2,4,5-Trichlorotoluene	159		15.964					ND	
130 2,3,6-Trichlorotoluene	159		16.061					ND	
132 2-Methylnaphthalene	142		16.085					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_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

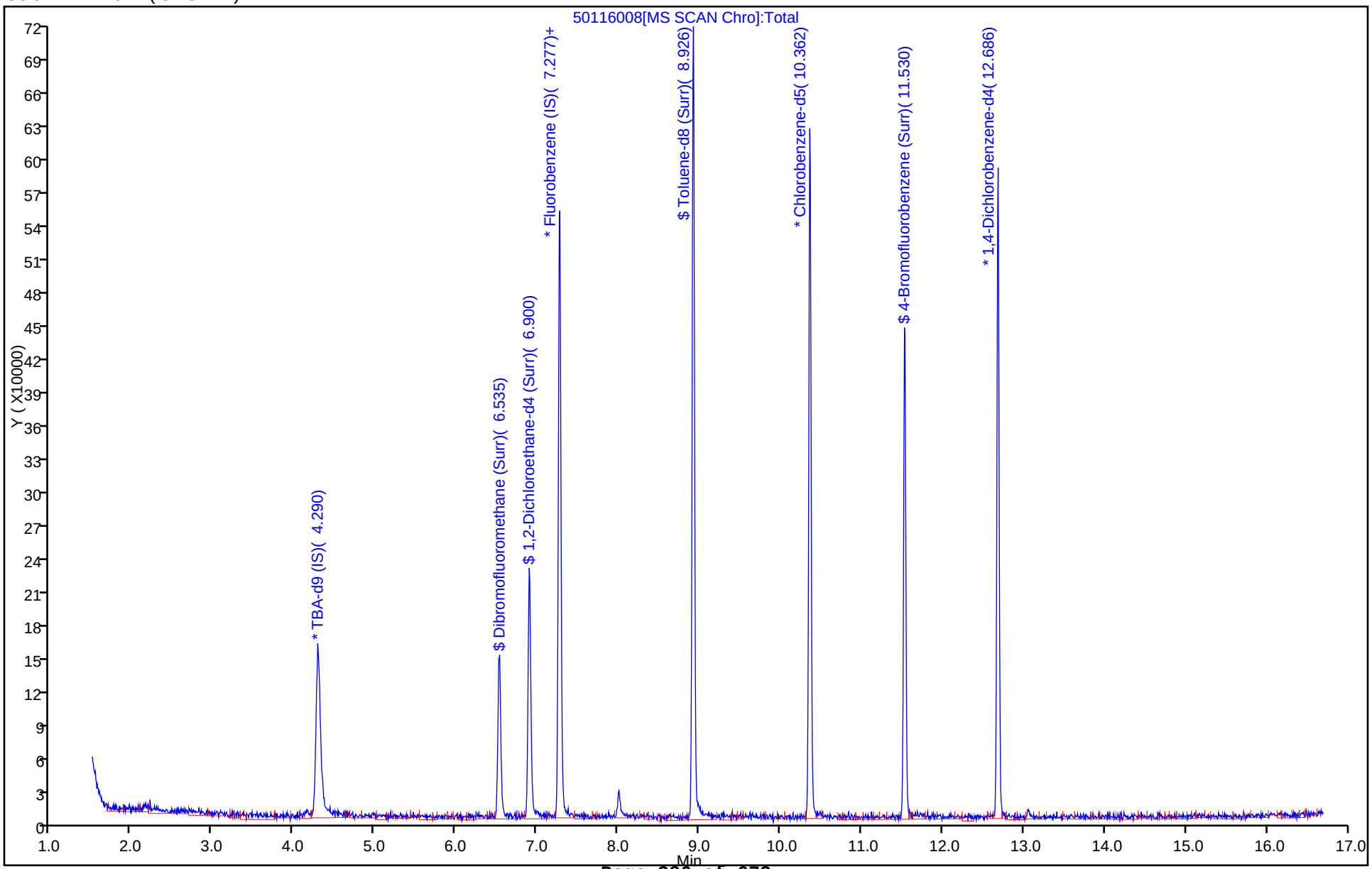
Report Date: 16-Jan-2015 15:00:20 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116008.D

Injection Date:	16-Jan-2015 13:56:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131060/5

Matrix: Water Lab File ID: 50119005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 10:37

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.: 131060 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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131060/5

Matrix: Water Lab File ID: 50119005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 10:37

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.: 131060 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)	105		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	107		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119005.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Jan-2015 10:37:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005320-005
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 11:14:38 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 10:57:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.299	4.305	-0.006	89	190181	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.280	7.274	0.006	99	451860	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	99	100681	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.688	0.000	99	148957	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.538	-0.007	93	102847	50.0	53.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.897	0.005	92	165202	50.0	52.3	
$ 7 Toluene-d8 (Surr)	98	8.928	8.923	0.005	96	415073	50.0	49.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.539	-0.007	83	153906	50.0	48.2	
11 Dichlorodifluoromethane	85		1.629					ND	
12 Chloromethane	50		1.775					ND	
13 Vinyl chloride	62		1.908					ND	
14 Butadiene	39		1.951					ND	
15 Bromomethane	94		2.261					ND	
16 Chloroethane	64		2.401					ND	
17 Dichlorofluoromethane	67		2.657					ND	
18 Trichlorofluoromethane	101		2.718					ND	
19 Ethanol	45		2.994					ND	
20 Ethyl ether	59		3.089					ND	
21 Acrolein	56		3.265					ND	
22 1,1-Dichloroethene	96		3.387					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.435					ND	
24 Acetone	43		3.490					ND	
25 Iodomethane	142		3.581					ND	
26 Carbon disulfide	76		3.673					ND	
27 Isopropyl alcohol	45		3.779					ND	
29 Acetonitrile	40		3.931					ND	
28 3-Chloro-1-propene	76		3.953					ND	
30 Methyl acetate	43		4.025					ND	
31 Methylene Chloride	84		4.141					ND	
32 2-Methyl-2-propanol	59		4.433					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		4.987					ND	
37 1,1-Dichloroethane	63		5.175					ND	
38 Vinyl acetate	43		5.297					ND	
39 2-Chloro-1,3-butadiene	53		5.306					ND	
41 Isopropyl ether	45		5.324					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.793					ND	
44 2,2-Dichloropropane	77		5.930					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		5.990					ND	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43		6.091					ND	
49 Chlorobromomethane	128		6.222					ND	
50 Methacrylonitrile	41		6.237					ND	
51 Tetrahydrofuran	42		6.282					ND	
52 Chloroform	83		6.343					ND	
53 1,1,1-Trichloroethane	97		6.532					ND	
54 Cyclohexane	56		6.587					ND	
56 Carbon tetrachloride	117		6.720					ND	
55 1,1-Dichloropropene	75		6.733					ND	
57 Isobutyl alcohol	41		6.946					ND	
58 Benzene	78		6.958					ND	
59 1,2-Dichloroethane	62		6.988					ND	
61 Tert-amyl methyl ether	73		7.113					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		7.669					ND	
65 Ethyl acrylate	55		7.819					ND	
66 Methylcyclohexane	83		7.870					ND	
67 1,2-Dichloropropane	63		7.907					ND	
68 Dibromomethane	93		8.022					ND	
70 1,4-Dioxane	88		8.047					ND	
69 Methyl methacrylate	69		8.056					ND	
71 Dichlorobromomethane	83		8.199					ND	
72 2-Nitropropane	41		8.439					ND	
73 2-Chloroethyl vinyl ether	63		8.521					ND	
74 cis-1,3-Dichloropropene	75		8.661					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825					ND	
76 Toluene	91		8.996					ND	
77 trans-1,3-Dichloropropene	75		9.221					ND	
78 Ethyl methacrylate	69		9.318					ND	
79 1,1,2-Trichloroethane	97		9.403					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		9.790					ND	
84 Chlorodibromomethane	129		9.793					ND	
85 Ethylene Dibromide	107		9.908					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.377					ND	
87 Chlorobenzene	112		10.395					ND	
88 4-Chlorobenzotrifluoride	180		10.431					ND	
89 1,1,1,2-Tetrachloroethane	131		10.480					ND	
90 Ethylbenzene	106		10.504					ND	
91 m-Xylene & p-Xylene	106		10.620					ND	
92 o-Xylene	106		11.015					ND	
93 Styrene	104		11.028					ND	
94 Bromoform	173		11.216					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.277					ND	
97 Isopropylbenzene	105		11.380					ND	
98 Cyclohexanone	55		11.481					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		11.794					ND	
104 2-Chlorotoluene	126		11.873					ND	
105 3-Chlorotoluene	126		11.940					ND	
106 1,3,5-Trimethylbenzene	105		11.964					ND	
107 4-Chlorotoluene	126		11.983					ND	
108 tert-Butylbenzene	119		12.293					ND	
109 Pentachloroethane	167		12.314					ND	
110 1,2,4-Trimethylbenzene	105		12.342					ND	
111 1,2-dichloro-4-(trifluorom	214		12.409					ND	
112 sec-Butylbenzene	105		12.512					ND	
113 1,3-Dichlorobenzene	146		12.621					ND	
114 4-Isopropyltoluene	119		12.658					ND	
115 1,4-Dichlorobenzene	146		12.713					ND	
116 2,4-Dichloro-1-(triflourom	214		12.761					ND	
117 1,2,3-Trimethylbenzene	105		12.764					ND	
118 2,5-Dichlorobenzotrifluori	214		12.810					ND	
119 Benzyl chloride	91		12.850					ND	
120 n-Butylbenzene	91		13.066					ND	
121 1,2-Dichlorobenzene	146		13.084					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.862					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.008					ND	
124 1,3,5-Trichlorobenzene	180		14.072					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.428					ND	
126 1,2,4-Trichlorobenzene	180		14.702					ND	
127 Hexachlorobutadiene	225		14.872					ND	
128 Naphthalene	128		14.945					ND	
129 1,2,3-Trichlorobenzene	180		15.189					ND	
131 2,4,5-Trichlorotoluene	159		15.967					ND	
130 2,3,6-Trichlorotoluene	159		16.065					ND	
132 2-Methylnaphthalene	142		16.080					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
146 2,5-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
149 3,4-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		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_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

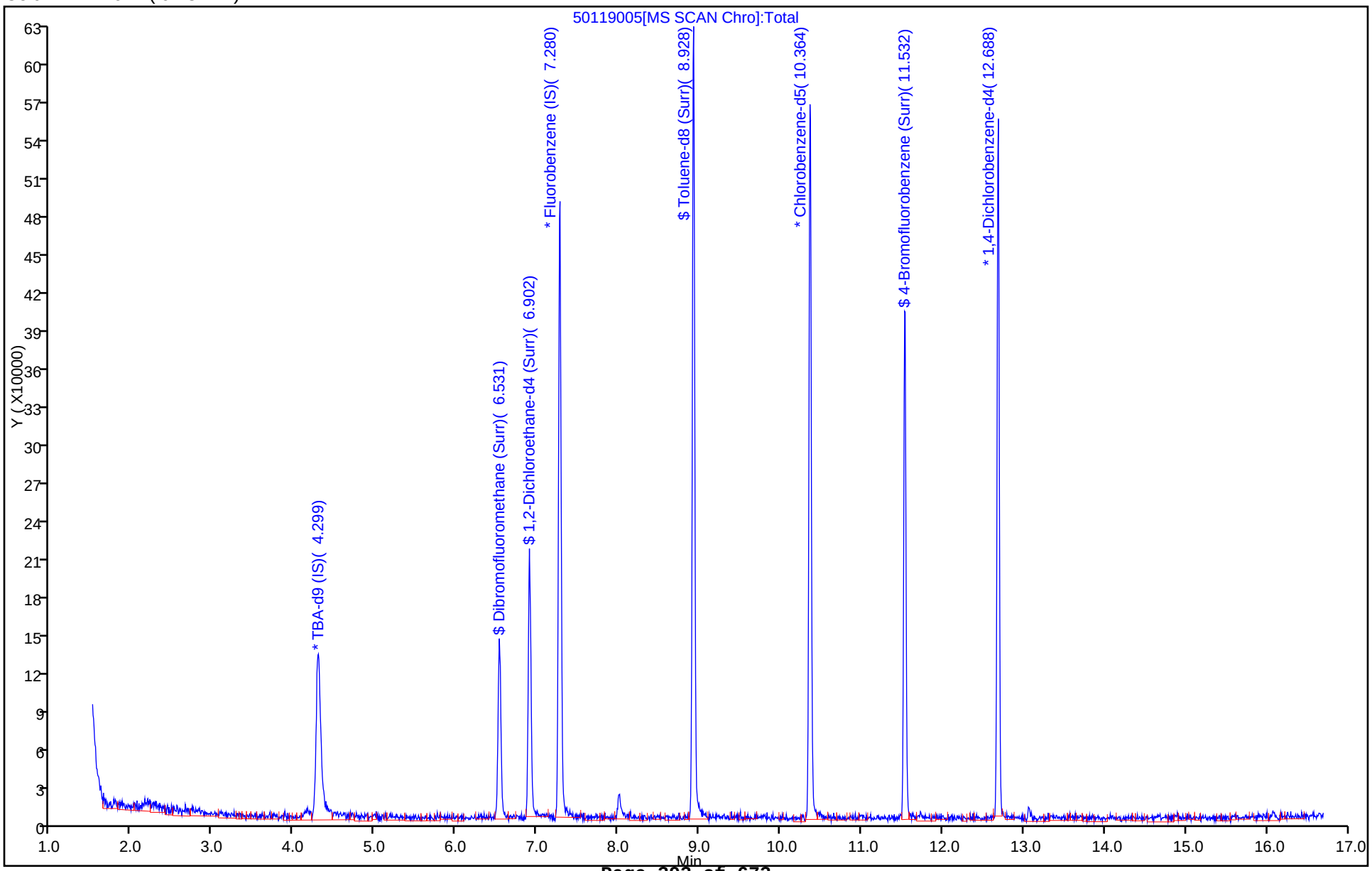
Report Date: 19-Jan-2015 11:14:42 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119005.D

Injection Date:	19-Jan-2015 10:37:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-130947/9

Matrix: Water | Lab File ID: 50116009.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/16/2015 14:32

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 130947 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	9.57		1.0	0.28
75-01-4	Vinyl chloride	9.83		1.0	0.23
74-83-9	Bromomethane	8.53		1.0	0.31
75-00-3	Chloroethane	8.87		1.0	0.21
75-35-4	1,1-Dichloroethene	10.3		1.0	0.30
67-64-1	Acetone	24.2		5.0	2.5
75-15-0	Carbon disulfide	8.60		1.0	0.21
75-09-2	Methylene Chloride	11.1		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	11.0		1.0	0.17
1634-04-4	Methyl tert-butyl ether	10.2		1.0	0.18
75-34-3	1,1-Dichloroethane	10.9		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	10.3		1.0	0.24
74-97-5	Bromochloromethane	10.9		1.0	0.18
78-93-3	2-Butanone (MEK)	21.0		5.0	0.55
67-66-3	Chloroform	10.6		1.0	0.17
71-55-6	1,1,1-Trichloroethane	10.5		1.0	0.29
56-23-5	Carbon tetrachloride	11.1		1.0	0.14
71-43-2	Benzene	10.7		1.0	0.11
107-06-2	1,2-Dichloroethane	10.7		1.0	0.21
79-01-6	Trichloroethene	11.4		1.0	0.14
78-87-5	1,2-Dichloropropane	10.3		1.0	0.095
75-27-4	Bromodichloromethane	9.85		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	10.6		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	19.6		5.0	0.53
108-88-3	Toluene	10.3		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	11.5		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.0		1.0	0.20
127-18-4	Tetrachloroethene	10.3		1.0	0.15
591-78-6	2-Hexanone	19.6		5.0	0.16
124-48-1	Dibromochloromethane	9.74		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.3		1.0	0.18
108-90-7	Chlorobenzene	10.9		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.99		1.0	0.28
100-41-4	Ethylbenzene	10.8		1.0	0.23
1330-20-7	Xylenes, Total	21.5		3.0	0.49
100-42-5	Styrene	10.3		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-130947/9

Matrix: Water Lab File ID: 50116009.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 14:32

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 130947 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.72		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.92		1.0	0.20
107-13-1	Acrylonitrile	98.1		20	0.55
123-91-1	1,4-Dioxane	193	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	99		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116009.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 16-Jan-2015 14:32:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005307-009
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Jan-2015 15:02:19 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 16-Jan-2015 15:00:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.303	4.302	0.001	87	180157	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.271	0.001	99	440975	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.356	10.361	-0.005	99	104078	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	97	143306	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.522	0.008	86	99187	50.0	52.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.895	6.900	-0.005	93	151213	50.0	49.1	
$ 7 Toluene-d8 (Surr)	98	8.921	8.925	-0.005	97	432288	50.0	49.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.529	0.001	84	163129	50.0	49.5	
11 Dichlorodifluoromethane	85	1.620	1.631	-0.011	98	139749	50.0	52.9	
12 Chloromethane	50	1.779	1.777	0.002	100	249532	50.0	47.8	
13 Vinyl chloride	62	1.906	1.905	0.001	98	176124	50.0	49.2	
14 Butadiene	39	1.955	1.954	0.001	98	245779	50.0	48.2	
15 Bromomethane	94	2.259	2.252	0.007	92	45685	50.0	42.6	
16 Chloroethane	64	2.411	2.386	0.025	95	78659	50.0	44.4	
17 Dichlorofluoromethane	67	2.673	2.653	0.020	97	166800	50.0	47.3	
18 Trichlorofluoromethane	101	2.721	2.708	0.013	97	122692	50.0	54.9	
20 Ethyl ether	59	3.099	3.085	0.014	92	148878	50.0	46.9	
21 Acrolein	56	3.251	3.268	-0.017	99	81338	150.0	171.3	
22 1,1-Dichloroethene	96	3.385	3.371	0.014	95	123294	50.0	51.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.433	3.432	0.001	85	132716	50.0	54.6	
24 Acetone	43	3.494	3.493	0.001	97	167345	100.0	121.0	
25 Iodomethane	142	3.567	3.578	-0.011	98	170045	50.0	55.3	
26 Carbon disulfide	76	3.664	3.669	-0.005	99	200190	50.0	43.0	
28 3-Chloro-1-propene	76	3.938	3.937	0.001	87	67918	50.0	50.1	
30 Methyl acetate	43	4.023	4.016	0.007	100	1016493	250.0	253.2	
31 Methylene Chloride	84	4.145	4.150	-0.005	92	159290	50.0	55.3	
32 2-Methyl-2-propanol	59	4.437	4.424	0.013	87	119366	500.0	495.6	
33 Acrylonitrile	53	4.553	4.545	0.008	99	907998	500.0	490.7	
34 trans-1,2-Dichloroethene	96	4.553	4.570	-0.017	43	133964	50.0	55.1	
35 Methyl tert-butyl ether	73	4.595	4.594	0.001	90	321174	50.0	51.0	
36 Hexane	57	4.985	4.983	0.001	94	302800	50.0	49.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.179	5.172	0.007	96	307602	50.0	54.4	
38 Vinyl acetate	43	5.289	5.293	-0.004	96	238004	50.0	43.9	
44 2,2-Dichloropropane	77	5.921	5.926	-0.005	62	98209	50.0	65.5	
45 cis-1,2-Dichloroethene	96	5.934	5.938	-0.004	89	135163	50.0	51.4	
46 2-Butanone (MEK)	43	5.982	5.987	-0.005	96	228691	100.0	105.1	
49 Chlorobromomethane	128	6.226	6.230	-0.004	83	59723	50.0	54.5	
51 Tetrahydrofuran	42	6.286	6.285	0.001	94	148284	100.0	89.6	
52 Chloroform	83	6.341	6.346	-0.005	95	226740	50.0	53.0	
53 1,1,1-Trichloroethane	97	6.530	6.535	-0.005	94	145444	50.0	52.4	
54 Cyclohexane	56	6.584	6.583	0.001	95	383588	50.0	49.2	
56 Carbon tetrachloride	117	6.718	6.717	0.001	71	133741	50.0	55.5	
55 1,1-Dichloropropene	75	6.724	6.723	0.001	83	191862	50.0	54.8	
57 Isobutyl alcohol	41	6.937	6.936	0.001	93	153489	1250.0	1211.6	
58 Benzene	78	6.949	6.954	-0.005	96	581525	50.0	53.3	
59 1,2-Dichloroethane	62	6.980	6.985	-0.005	96	226776	50.0	53.6	
62 n-Heptane	43	7.278	7.277	0.001	96	300648	50.0	48.2	
64 Trichloroethene	130	7.667	7.666	0.001	96	133509	50.0	57.2	
66 Methylcyclohexane	83	7.862	7.861	0.001	96	230756	50.0	51.6	
67 1,2-Dichloropropane	63	7.905	7.897	0.008	94	173320	50.0	51.7	
68 Dibromomethane	93	8.026	8.019	0.007	94	70982	50.0	51.3	
70 1,4-Dioxane	88	8.063	8.049	0.014	87	24184	1000.0	963.3	
71 Dichlorobromomethane	83	8.197	8.195	0.002	95	140681	50.0	49.3	
73 2-Chloroethyl vinyl ether	63	8.519	8.518	0.001	86	171773	100.0	122.6	
74 cis-1,3-Dichloropropene	75	8.653	8.658	-0.005	84	171986	50.0	52.8	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.822	0.001	98	439983	100.0	97.9	
76 Toluene	91	8.987	8.986	0.001	97	570909	50.0	51.7	
77 trans-1,3-Dichloropropene	75	9.219	9.217	0.002	92	147226	50.0	57.5	
78 Ethyl methacrylate	69	9.316	9.315	0.001	89	151909	50.0	49.9	
79 1,1,2-Trichloroethane	97	9.395	9.400	-0.005	94	108478	50.0	50.0	
80 Tetrachloroethene	164	9.535	9.534	0.001	94	104886	50.0	51.5	
81 1,3-Dichloropropane	76	9.565	9.564	0.001	90	203839	50.0	48.8	
82 2-Hexanone	43	9.657	9.655	0.002	98	352449	100.0	97.9	
84 Chlorodibromomethane	129	9.790	9.789	0.001	87	77638	50.0	48.7	
85 Ethylene Dibromide	107	9.894	9.905	-0.011	95	103225	50.0	51.3	
86 3-Chlorobenzotrifluoride	180	10.374	10.373	0.001	91	194839	50.0	53.6	
87 Chlorobenzene	112	10.393	10.391	0.002	90	366004	50.0	54.5	
88 4-Chlorobenzotrifluoride	180	10.429	10.428	0.001	95	186702	50.0	55.0	
89 1,1,1,2-Tetrachloroethane	131	10.472	10.477	-0.005	91	102385	50.0	49.9	
90 Ethylbenzene	106	10.502	10.501	0.001	98	205343	50.0	54.0	
91 m-Xylene & p-Xylene	106	10.618	10.617	0.001	98	249108	50.0	53.8	
92 o-Xylene	106	11.013	11.012	0.001	98	241818	50.0	53.7	
93 Styrene	104	11.025	11.024	0.001	92	391299	50.0	51.6	
94 Bromoform	173	11.208	11.207	0.001	95	43911	50.0	43.6	
96 2-Chlorobenzotrifluoride	180	11.275	11.274	0.001	97	190036	50.0	54.7	
97 Isopropylbenzene	105	11.378	11.377	0.001	97	614572	50.0	54.7	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.675	0.001	95	151173	50.0	49.6	
100 Bromobenzene	156	11.682	11.687	-0.005	98	130463	50.0	50.6	
101 1,2,3-Trichloropropane	110	11.713	11.718	-0.005	91	51159	50.0	54.6	
102 trans-1,4-Dichloro-2-buten	53	11.731	11.730	0.001	72	67732	50.0	52.6	
103 N-Propylbenzene	120	11.786	11.791	-0.005	99	159173	50.0	52.3	
104 2-Chlorotoluene	126	11.877	11.876	0.001	95	139149	50.0	54.2	
105 3-Chlorotoluene	126	11.938	11.937	0.001	96	156063	50.0	57.0	

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	11.962	11.961	0.001	95	508476	50.0	55.8	
107 4-Chlorotoluene	126	11.981	11.985	-0.005	98	148944	50.0	52.2	
108 tert-Butylbenzene	119	12.291	12.289	0.002	96	403386	50.0	53.9	
110 1,2,4-Trimethylbenzene	105	12.333	12.338	-0.005	97	513913	50.0	54.9	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.399	0.001	97	137122	50.0	53.1	
112 sec-Butylbenzene	105	12.510	12.508	0.002	96	582445	50.0	54.0	
113 1,3-Dichlorobenzene	146	12.619	12.618	0.001	96	253471	50.0	52.1	
114 4-Isopropyltoluene	119	12.650	12.654	-0.004	97	475699	50.0	54.8	
115 1,4-Dichlorobenzene	146	12.711	12.709	0.001	92	258891	50.0	51.5	
116 2,4-Dichloro-1-(triflourom	214	12.759	12.758	0.001	96	126697	50.0	52.3	
118 2,5-Dichlorobenzotrifluori	214	12.808	12.807	0.001	97	133099	50.0	50.4	
120 n-Butylbenzene	91	13.057	13.062	-0.005	98	404282	50.0	51.0	
121 1,2-Dichlorobenzene	146	13.082	13.080	0.002	93	232632	50.0	51.5	
122 1,2-Dibromo-3-Chloropropan	75	13.860	13.859	0.001	66	19019	50.0	46.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.005	0.001	99	487612	150.0	171.3	
124 1,3,5-Trichlorobenzene	180	14.073	14.072	0.001	96	125463	50.0	47.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.425	0.001	99	303058	100.0	111.7	
126 1,2,4-Trichlorobenzene	180	14.694	14.692	0.002	94	96124	50.0	51.3	
127 Hexachlorobutadiene	225	14.864	14.863	0.001	96	46194	50.0	52.0	
128 Naphthalene	128	14.937	14.942	-0.005	97	253779	50.0	50.8	
129 1,2,3-Trichlorobenzene	180	15.186	15.185	0.001	93	76220	50.0	51.9	
131 2,4,5-Trichlorotoluene	159	15.965	15.964	0.001	96	36873	50.0	59.1	
130 2,3,6-Trichlorotoluene	159	16.063	16.061	0.001	92	37729	50.0	66.0	
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	106.5	
S 133 Xylenes, Total	106				0		100.0	107.4	
S 135 1,3-Dichloropropene, Total	1				0		100.0	110.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00097	Amount Added:	2.00	Units: uL	
voaWVA 2nd Re_00008	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaW135tcbABS_00003	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOAACRO2ND_00004	Amount Added:	6.00	Units: uL	
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

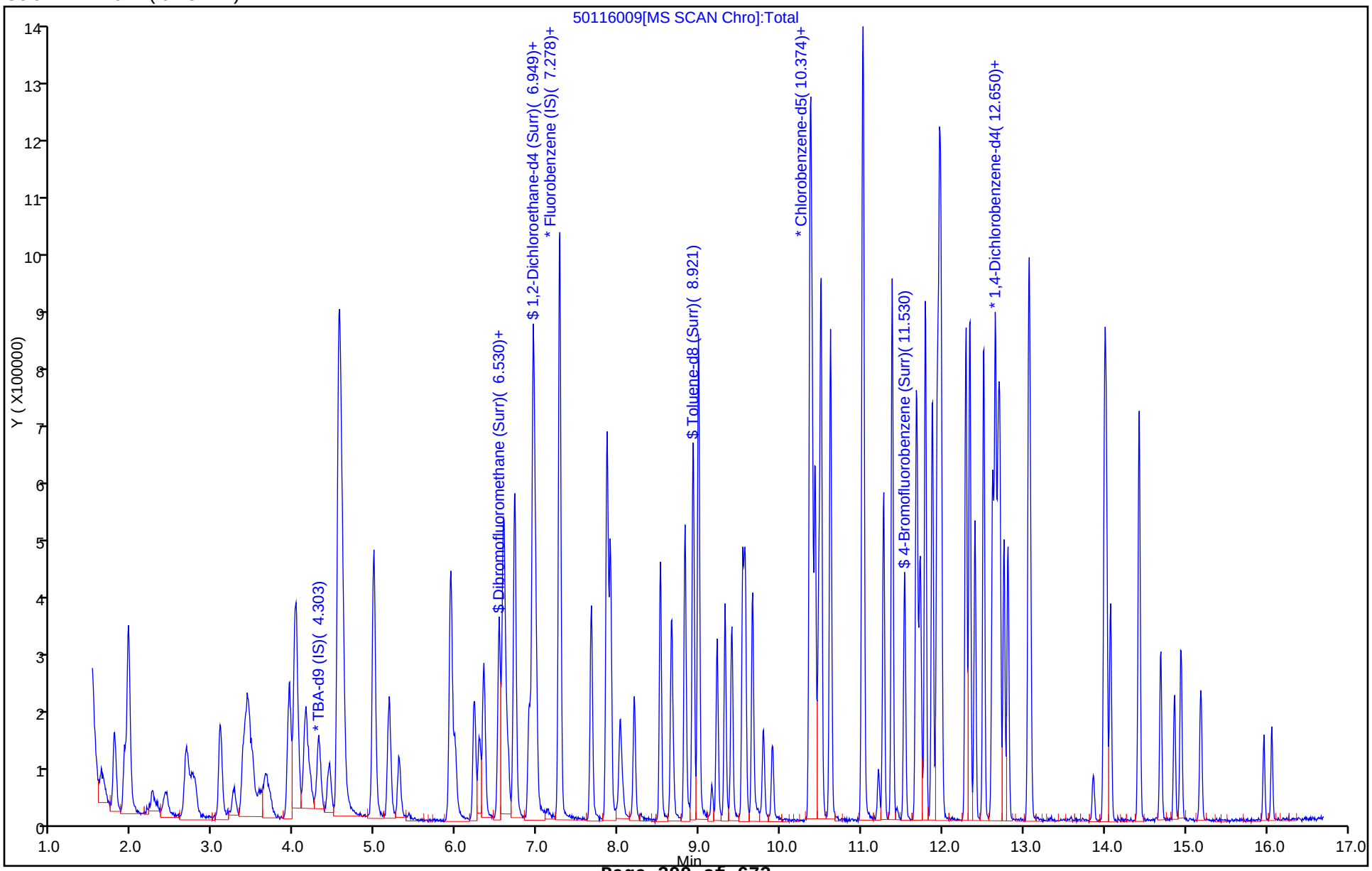
Report Date: 16-Jan-2015 15:02:19 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116009.D

Injection Date:	16-Jan-2015 14:32:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCS			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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131060/8

Matrix: Water Lab File ID: 50119008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 12:02

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.: 131060 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.46		1.0	0.28
75-01-4	Vinyl chloride	7.42		1.0	0.23
74-83-9	Bromomethane	8.35		1.0	0.31
75-00-3	Chloroethane	7.31		1.0	0.21
75-35-4	1,1-Dichloroethene	7.51		1.0	0.30
67-64-1	Acetone	20.4		5.0	2.5
75-15-0	Carbon disulfide	8.34		1.0	0.21
75-09-2	Methylene Chloride	8.92		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	8.86		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.22		1.0	0.18
75-34-3	1,1-Dichloroethane	8.88		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.20		1.0	0.24
74-97-5	Bromochloromethane	9.32		1.0	0.18
78-93-3	2-Butanone (MEK)	18.1		5.0	0.55
67-66-3	Chloroform	9.50		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.58		1.0	0.29
56-23-5	Carbon tetrachloride	9.87		1.0	0.14
71-43-2	Benzene	8.62		1.0	0.11
107-06-2	1,2-Dichloroethane	9.53		1.0	0.21
79-01-6	Trichloroethene	8.86		1.0	0.14
78-87-5	1,2-Dichloropropane	8.16		1.0	0.095
75-27-4	Bromodichloromethane	8.98		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.55		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	18.7		5.0	0.53
108-88-3	Toluene	9.34		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	11.6		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.69		1.0	0.20
127-18-4	Tetrachloroethene	9.20		1.0	0.15
591-78-6	2-Hexanone	15.6		5.0	0.16
124-48-1	Dibromochloromethane	10.5		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.0		1.0	0.18
108-90-7	Chlorobenzene	9.86		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.79		1.0	0.28
100-41-4	Ethylbenzene	9.59		1.0	0.23
1330-20-7	Xylenes, Total	19.4		3.0	0.49
100-42-5	Styrene	9.48		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131060/8

Matrix: Water Lab File ID: 50119008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/19/2015 12:02

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.: 131060 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	10.1		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.32		1.0	0.20
107-13-1	Acrylonitrile	84.8		20	0.55
123-91-1	1,4-Dioxane	166	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		64-135
2037-26-5	Toluene-d8 (Surr)	95		71-118
460-00-4	4-Bromofluorobenzene (Surr)	99		70-118
1868-53-7	Dibromofluoromethane (Surr)	92		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119008.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Jan-2015 12:02:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005320-008
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Jan-2015 12:28:04 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK050

First Level Reviewer: fergusond Date: 19-Jan-2015 12:28:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.308	4.305	0.003	89	165826	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	100	447697	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.364	-0.003	98	96964	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.688	-0.003	97	143878	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.538	-0.009	78	87730	50.0	46.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	92	139604	50.0	44.6	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	96	381399	50.0	47.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.539	-0.004	84	152175	50.0	49.5	
11 Dichlorodifluoromethane	85	1.625	1.629	-0.004	98	81647	50.0	30.4	
12 Chloromethane	50	1.784	1.775	0.009	99	197417	50.0	37.3	
13 Vinyl chloride	62	1.911	1.908	0.003	98	134845	50.0	37.1	
14 Butadiene	39	1.960	1.951	0.009	98	198819	50.0	38.4	
15 Bromomethane	94	2.264	2.261	0.003	87	45401	50.0	41.7	
16 Chloroethane	64	2.428	2.401	0.027	96	65829	50.0	36.6	
17 Dichlorofluoromethane	67	2.666	2.657	0.009	97	140616	50.0	39.3	
18 Trichlorofluoromethane	101	2.714	2.718	-0.004	94	104763	50.0	46.2	
20 Ethyl ether	59	3.092	3.089	0.003	94	148319	50.0	46.0	
21 Acrolein	56	3.262	3.265	-0.003	98	66199	150.0	137.3	
22 1,1-Dichloroethene	96	3.384	3.387	-0.003	89	91597	50.0	37.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.435	0.009	95	104099	50.0	42.2	
24 Acetone	43	3.499	3.490	0.009	97	143140	100.0	102.0	
25 Iodomethane	142	3.578	3.581	-0.003	94	153661	50.0	49.2	
26 Carbon disulfide	76	3.670	3.673	-0.003	99	197078	50.0	41.7	
28 3-Chloro-1-propene	76	3.955	3.953	0.003	87	58929	50.0	42.8	
30 Methyl acetate	43	4.022	4.025	-0.003	100	909017	250.0	223.0	
31 Methylene Chloride	84	4.156	4.141	0.015	90	133133	50.0	44.6	
32 2-Methyl-2-propanol	59	4.442	4.433	0.009	93	110454	500.0	498.2	
33 Acrylonitrile	53	4.558	4.549	0.009	99	796724	500.0	424.1	
34 trans-1,2-Dichloroethene	96	4.564	4.561	0.003	47	109331	50.0	44.3	
35 Methyl tert-butyl ether	73	4.600	4.597	0.003	89	294929	50.0	46.1	
36 Hexane	57	4.984	4.987	-0.003	97	231612	50.0	37.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.175	-0.003	97	255100	50.0	44.4	
38 Vinyl acetate	43	5.300	5.297	0.003	97	226517	50.0	41.1	
44 2,2-Dichloropropane	77	5.926	5.930	-0.004	61	85195	50.0	56.0	
45 cis-1,2-Dichloroethene	96	5.945	5.942	0.003	88	122774	50.0	46.0	
46 2-Butanone (MEK)	43	5.993	5.990	0.003	96	200287	100.0	90.7	
49 Chlorobromomethane	128	6.231	6.222	0.009	82	51900	50.0	46.6	
51 Tetrahydrofuran	42	6.291	6.282	0.009	90	128201	100.0	76.3	
52 Chloroform	83	6.346	6.343	0.003	96	206325	50.0	47.5	
53 1,1,1-Trichloroethane	97	6.529	6.532	-0.003	95	134932	50.0	47.9	
54 Cyclohexane	56	6.590	6.587	0.003	94	297326	50.0	37.5	
56 Carbon tetrachloride	117	6.723	6.720	0.003	71	120815	50.0	49.4	
55 1,1-Dichloropropene	75	6.730	6.733	-0.003	85	155548	50.0	43.8	
57 Isobutyl alcohol	41	6.942	6.946	-0.004	90	127812	1250.0	993.8	
58 Benzene	78	6.955	6.958	-0.003	96	477057	50.0	43.1	
59 1,2-Dichloroethane	62	6.985	6.988	-0.003	95	204778	50.0	47.6	
62 n-Heptane	43	7.283	7.280	0.003	95	224327	50.0	35.4	
64 Trichloroethene	130	7.666	7.669	-0.003	93	105016	50.0	44.3	
66 Methylcyclohexane	83	7.861	7.870	-0.009	95	169684	50.0	37.4	
67 1,2-Dichloropropane	63	7.904	7.907	-0.003	93	138918	50.0	40.8	
68 Dibromomethane	93	8.025	8.022	0.003	96	62207	50.0	44.3	
70 1,4-Dioxane	88	8.056	8.047	0.009	88	21218	1000.0	832.5	M
71 Dichlorobromomethane	83	8.202	8.199	0.003	96	130242	50.0	44.9	
73 2-Chloroethyl vinyl ether	63	8.518	8.521	-0.003	85	150762	100.0	106.0	
74 cis-1,3-Dichloropropene	75	8.658	8.661	-0.003	84	157973	50.0	47.7	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.825	0.003	97	391729	100.0	93.5	
76 Toluene	91	8.993	8.996	-0.003	96	480980	50.0	46.7	
77 trans-1,3-Dichloropropene	75	9.224	9.221	0.003	92	138462	50.0	58.1	
78 Ethyl methacrylate	69	9.315	9.318	-0.003	87	123769	50.0	43.6	
79 1,1,2-Trichloroethane	97	9.400	9.403	-0.003	93	97913	50.0	48.5	
80 Tetrachloroethene	164	9.540	9.537	0.003	93	87309	50.0	46.0	
81 1,3-Dichloropropane	76	9.570	9.568	0.002	92	191479	50.0	49.2	
82 2-Hexanone	43	9.656	9.659	-0.003	97	260683	100.0	77.8	
84 Chlorodibromomethane	129	9.796	9.793	0.003	89	77861	50.0	52.4	
85 Ethylene Dibromide	107	9.905	9.908	-0.003	100	93667	50.0	50.0	
86 3-Chlorobenzotrifluoride	180	10.374	10.377	-0.003	91	180388	50.0	53.3	
87 Chlorobenzene	112	10.392	10.395	-0.003	91	308826	50.0	49.3	
88 4-Chlorobenzotrifluoride	180	10.428	10.431	-0.003	96	167742	50.0	53.0	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.480	-0.003	91	93540	50.0	49.0	
90 Ethylbenzene	106	10.507	10.504	0.003	98	169916	50.0	47.9	
91 m-Xylene & p-Xylene	106	10.617	10.620	-0.003	98	208598	50.0	48.3	
92 o-Xylene	106	11.012	11.015	-0.003	92	205037	50.0	48.9	
93 Styrene	104	11.031	11.028	0.003	92	334878	50.0	47.4	
94 Bromoform	173	11.213	11.216	-0.003	95	47247	50.0	50.3	
96 2-Chlorobenzotrifluoride	180	11.280	11.277	0.003	93	162909	50.0	50.3	
97 Isopropylbenzene	105	11.383	11.380	0.003	97	492216	50.0	47.0	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.679	-0.003	96	132285	50.0	46.6	
100 Bromobenzene	156	11.688	11.685	0.003	95	113088	50.0	43.7	
101 1,2,3-Trichloropropane	110	11.724	11.721	0.003	92	42518	50.0	45.2	
102 trans-1,4-Dichloro-2-buten	53	11.736	11.733	0.003	77	60940	50.0	47.2	
103 N-Propylbenzene	120	11.791	11.794	-0.003	99	131911	50.0	43.2	
104 2-Chlorotoluene	126	11.876	11.873	0.003	94	114289	50.0	44.3	
105 3-Chlorotoluene	126	11.937	11.940	-0.003	96	138775	50.0	50.5	

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	11.964	0.003	94	425565	50.0	46.5	
107 4-Chlorotoluene	126	11.986	11.983	0.003	99	127338	50.0	44.4	
108 tert-Butylbenzene	119	12.290	12.293	-0.003	96	319686	50.0	42.6	
110 1,2,4-Trimethylbenzene	105	12.338	12.342	-0.004	98	421361	50.0	44.8	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.409	-0.003	95	124931	50.0	48.2	
112 sec-Butylbenzene	105	12.509	12.512	-0.003	96	468473	50.0	43.3	
113 1,3-Dichlorobenzene	146	12.624	12.621	0.003	95	219536	50.0	44.9	
114 4-Isopropyltoluene	119	12.655	12.658	-0.003	98	376161	50.0	43.2	
115 1,4-Dichlorobenzene	146	12.710	12.713	-0.003	93	229005	50.0	45.4	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.761	-0.003	97	114038	50.0	46.9	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.810	-0.003	98	118467	50.0	44.7	
120 n-Butylbenzene	91	13.062	13.066	-0.004	97	311073	50.0	39.1	
121 1,2-Dichlorobenzene	146	13.081	13.084	-0.003	94	202788	50.0	44.7	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.862	0.003	67	19155	50.0	46.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.018	14.008	0.010	98	416292	150.0	145.7	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.428	0.003	99	265963	100.0	97.6	
126 1,2,4-Trichlorobenzene	180	14.693	14.702	-0.009	94	79801	50.0	42.4	
127 Hexachlorobutadiene	225	14.863	14.872	-0.009	95	34443	50.0	38.6	
128 Naphthalene	128	14.942	14.945	-0.003	97	202461	50.0	40.3	
129 1,2,3-Trichlorobenzene	180	15.192	15.189	0.003	95	65315	50.0	44.3	
131 2,4,5-Trichlorotoluene	159	15.970	15.967	0.003	96	29389	50.0	46.9	
130 2,3,6-Trichlorotoluene	159	16.068	16.065	0.003	93	28993	50.0	50.5	
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	90.3	
S 133 Xylenes, Total	106				0		100.0	97.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	105.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOA2ND_00097	Amount Added:	2.00	Units: uL		
voaWeemixpri_00001	Amount Added:	2.00	Units: uL		
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL		
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL		
voaWVA 2nd Re_00008	Amount Added:	2.00	Units: uL		
VOAACRO2ND_00004	Amount Added:	6.00	Units: uL		
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent	

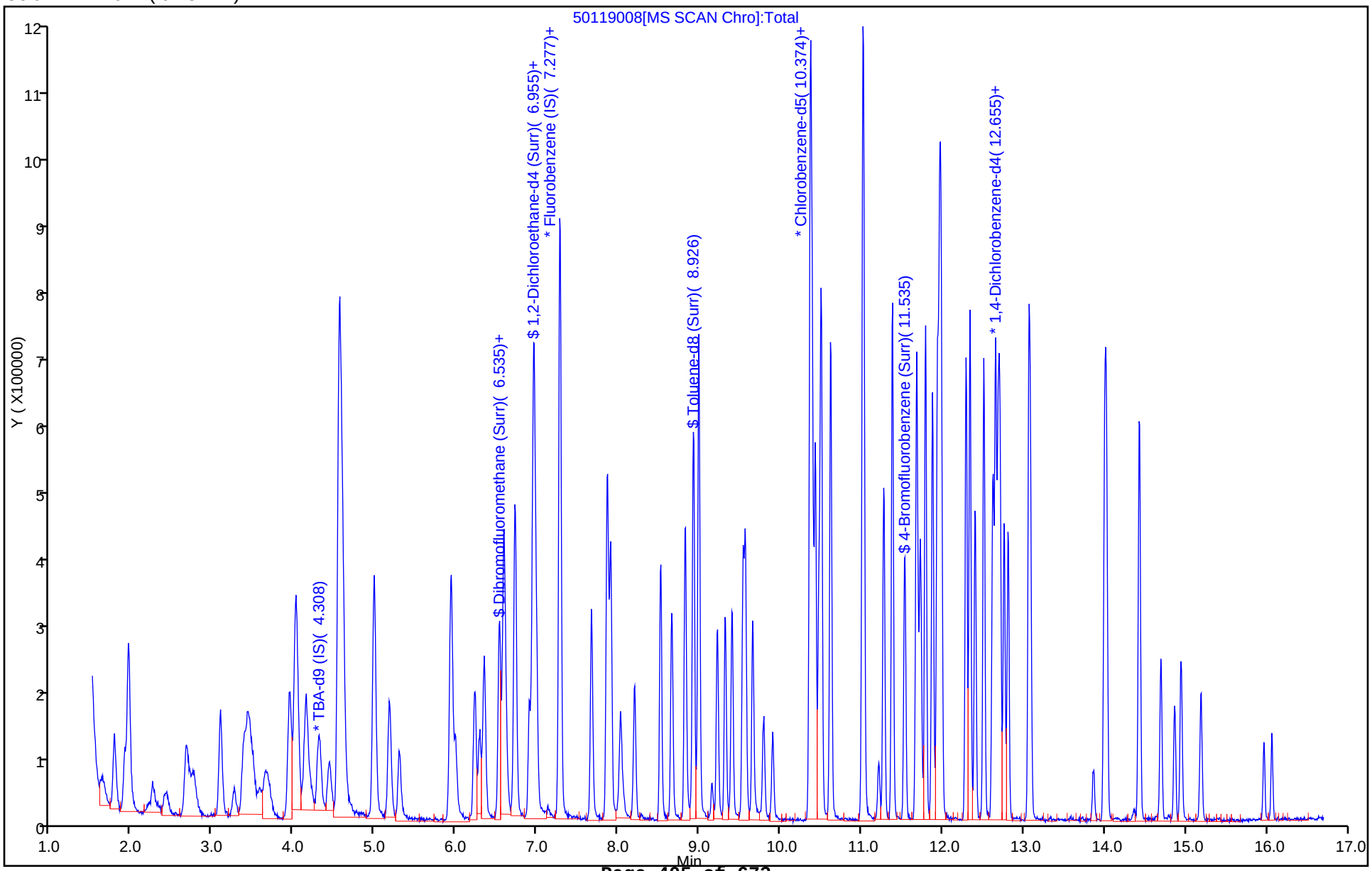
Report Date: 19-Jan-2015 12:28:04 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119008.D

Injection Date:	19-Jan-2015 12:02:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCS			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

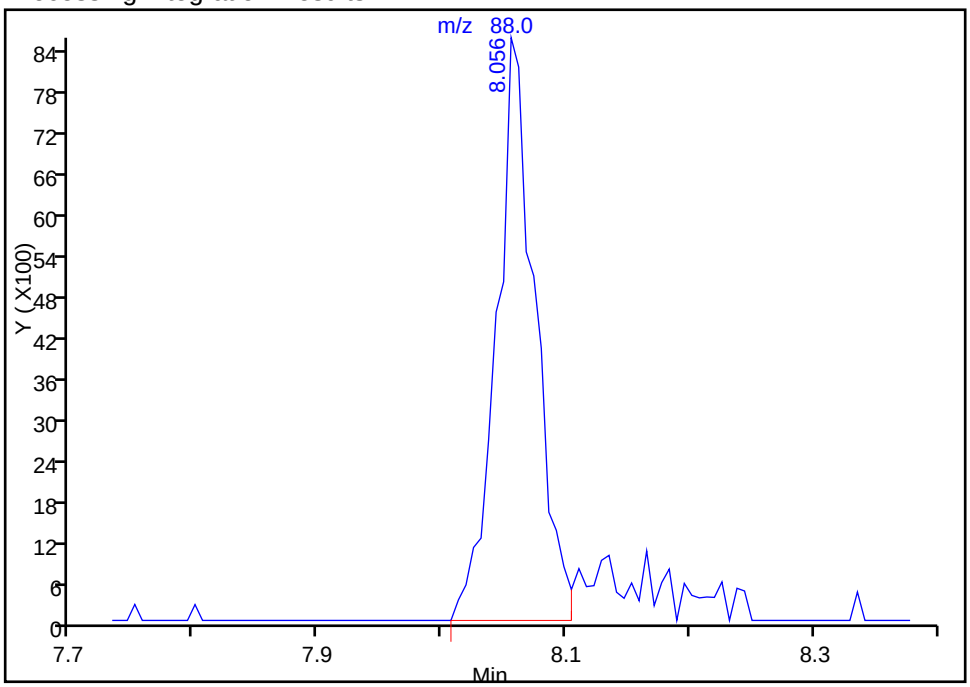
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150119-5320.b\50119008.D
Injection Date: 19-Jan-2015 12:02:30 Instrument ID: CHHP5
Lims ID: LCS
Client ID:
Operator ID: 001562 ALS Bottle#: 7 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

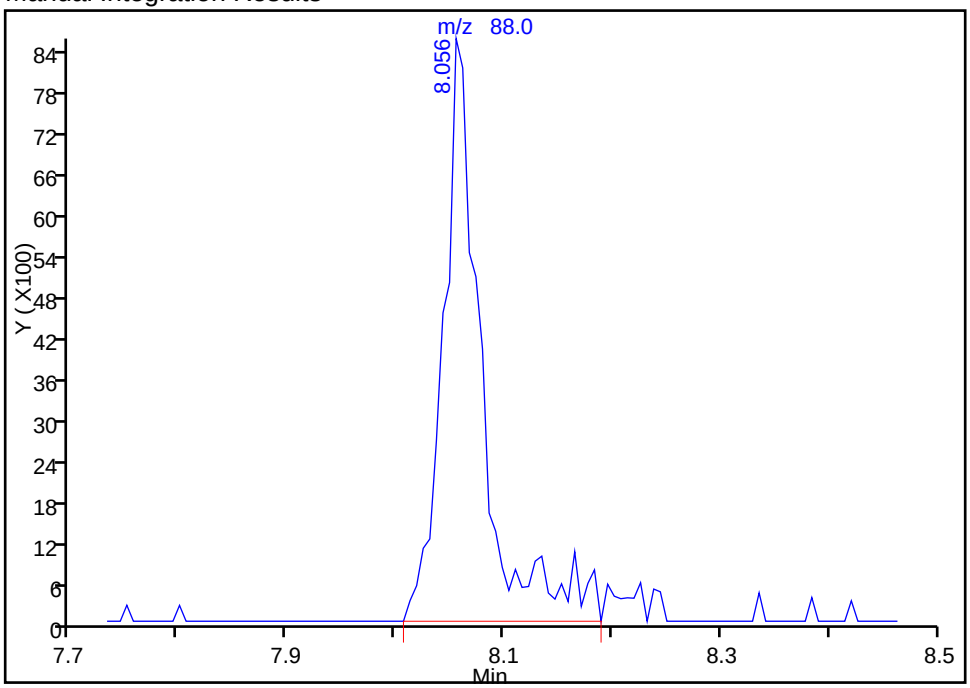
Processing Integration Results

RT: 8.06
Response: 18405
Amount: 722.1024



Manual Integration Results

RT: 8.06
Response: 21218
Amount: 832.4678



Reviewer: fergusond, 19-Jan-2015 12:28:04
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40481-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 180-130947/10

Matrix: Water | Lab File ID: 50116010.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/16/2015 14:56

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 130947 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	8.81		1.0	0.28
75-01-4	Vinyl chloride	9.05		1.0	0.23
74-83-9	Bromomethane	9.24		1.0	0.31
75-00-3	Chloroethane	9.03		1.0	0.21
75-35-4	1,1-Dichloroethene	9.57		1.0	0.30
67-64-1	Acetone	23.9		5.0	2.5
75-15-0	Carbon disulfide	8.69		1.0	0.21
75-09-2	Methylene Chloride	10.3		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.8		1.0	0.17
1634-04-4	Methyl tert-butyl ether	10.2		1.0	0.18
75-34-3	1,1-Dichloroethane	10.6		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	10.7		1.0	0.24
74-97-5	Bromochloromethane	10.5		1.0	0.18
78-93-3	2-Butanone (MEK)	21.2		5.0	0.55
67-66-3	Chloroform	10.6		1.0	0.17
71-55-6	1,1,1-Trichloroethane	10.9		1.0	0.29
56-23-5	Carbon tetrachloride	10.6		1.0	0.14
71-43-2	Benzene	10.5		1.0	0.11
107-06-2	1,2-Dichloroethane	10.1		1.0	0.21
79-01-6	Trichloroethene	10.7		1.0	0.14
78-87-5	1,2-Dichloropropane	9.74		1.0	0.095
75-27-4	Bromodichloromethane	9.49		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	10.7		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	20.6		5.0	0.53
108-88-3	Toluene	9.98		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	10.8		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.43		1.0	0.20
127-18-4	Tetrachloroethene	9.44		1.0	0.15
591-78-6	2-Hexanone	19.6		5.0	0.16
124-48-1	Dibromochloromethane	9.83		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.2		1.0	0.18
108-90-7	Chlorobenzene	10.3		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.80		1.0	0.28
100-41-4	Ethylbenzene	10.1		1.0	0.23
1330-20-7	Xylenes, Total	20.8		3.0	0.49
100-42-5	Styrene	9.98		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 180-130947/10

Matrix: Water Lab File ID: 50116010.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/16/2015 14:56

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 130947 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.71		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.56		1.0	0.20
107-13-1	Acrylonitrile	96.3		20	0.55
123-91-1	1,4-Dioxane	188	J	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)	87		71-118
460-00-4	4-Bromofluorobenzene (Surr)	91		70-118
1868-53-7	Dibromofluoromethane (Surr)	97		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116010.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 16-Jan-2015 14:56:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 180-0005307-010
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 16-Jan-2015 15:19:51 Calib Date: 15-Jan-2015 02:47:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: fergusond Date: 16-Jan-2015 15:19:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.310	4.302	0.008	88	176390	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	99	454929	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.361	0.002	98	109311	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.685	-0.004	97	145692	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.522	0.009	74	94068	50.0	48.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	93	149125	50.0	46.9	
$ 7 Toluene-d8 (Surr)	98	8.922	8.925	-0.003	96	396938	50.0	43.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.529	0.002	82	158397	50.0	45.7	
11 Dichlorodifluoromethane	85	1.646	1.631	0.015	86	126902	50.0	46.5	
12 Chloromethane	50	1.780	1.777	0.003	99	237022	50.0	44.0	
13 Vinyl chloride	62	1.907	1.905	0.002	98	167256	50.0	45.3	
14 Butadiene	39	1.956	1.954	0.002	99	248651	50.0	47.3	
15 Bromomethane	94	2.260	2.252	0.008	93	51032	50.0	46.2	
16 Chloroethane	64	2.412	2.386	0.026	98	82632	50.0	45.2	
17 Dichlorofluoromethane	67	2.674	2.653	0.021	99	170972	50.0	47.0	
18 Trichlorofluoromethane	101	2.716	2.708	0.008	94	118407	50.0	51.4	
20 Ethyl ether	59	3.094	3.085	0.009	93	161010	50.0	49.1	
21 Acrolein	56	3.270	3.268	0.002	99	85451	150.0	174.4	
22 1,1-Dichloroethene	96	3.379	3.371	0.008	95	118530	50.0	47.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.440	3.432	0.008	95	123692	50.0	49.3	
24 Acetone	43	3.501	3.493	0.008	97	170591	100.0	119.6	
25 Iodomethane	142	3.586	3.578	0.008	99	170557	50.0	53.7	
26 Carbon disulfide	76	3.684	3.669	0.015	99	208632	50.0	43.4	
28 3-Chloro-1-propene	76	3.945	3.937	0.008	87	69791	50.0	49.9	
30 Methyl acetate	43	4.024	4.016	0.008	100	1029618	250.0	248.6	
31 Methylene Chloride	84	4.146	4.150	-0.004	90	153428	50.0	51.3	
32 2-Methyl-2-propanol	59	4.426	4.424	0.002	87	115208	500.0	488.6	
33 Acrylonitrile	53	4.554	4.545	0.009	99	919624	500.0	481.7	
34 trans-1,2-Dichloroethene	96	4.578	4.570	0.008	91	135278	50.0	53.9	
35 Methyl tert-butyl ether	73	4.602	4.594	0.008	90	330940	50.0	50.9	
36 Hexane	57	4.986	4.983	0.003	95	295824	50.0	46.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.174	5.172	0.002	97	308862	50.0	52.9	
38 Vinyl acetate	43	5.296	5.293	0.003	96	238289	50.0	42.6	
44 2,2-Dichloropropane	77	5.935	5.926	0.009	52	97757	50.0	63.2	
45 cis-1,2-Dichloroethene	96	5.941	5.938	0.003	87	144902	50.0	53.4	
46 2-Butanone (MEK)	43	5.989	5.987	0.002	97	237964	100.0	106.0	
49 Chlorobromomethane	128	6.220	6.230	-0.010	82	59371	50.0	52.5	
51 Tetrahydrofuran	42	6.287	6.285	0.002	93	155290	100.0	91.0	
52 Chloroform	83	6.348	6.346	0.002	96	234231	50.0	53.1	
53 1,1,1-Trichloroethane	97	6.531	6.535	-0.004	94	155821	50.0	54.4	
54 Cyclohexane	56	6.585	6.583	0.002	92	380330	50.0	47.3	
56 Carbon tetrachloride	117	6.719	6.717	0.002	64	132244	50.0	53.2	
55 1,1-Dichloropropene	75	6.725	6.723	0.002	83	199728	50.0	55.3	
57 Isobutyl alcohol	41	6.938	6.936	0.002	74	153293	1250.0	1173.0	
58 Benzene	78	6.957	6.954	0.003	96	590411	50.0	52.5	
59 1,2-Dichloroethane	62	6.987	6.985	0.002	94	221431	50.0	50.7	
62 n-Heptane	43	7.285	7.277	0.008	95	297996	50.0	46.3	
64 Trichloroethene	130	7.668	7.666	0.002	93	129437	50.0	53.7	
66 Methylcyclohexane	83	7.863	7.861	0.002	93	225254	50.0	48.9	
67 1,2-Dichloropropane	63	7.899	7.897	0.002	94	168539	50.0	48.7	
68 Dibromomethane	93	8.021	8.019	0.002	96	69719	50.0	48.8	
70 1,4-Dioxane	88	8.070	8.049	0.021	81	24298	1000.0	938.2	
71 Dichlorobromomethane	83	8.198	8.195	0.003	96	139868	50.0	47.5	
73 2-Chloroethyl vinyl ether	63	8.520	8.518	0.002	84	181959	100.0	125.9	
74 cis-1,3-Dichloropropene	75	8.654	8.658	-0.004	85	180366	50.0	53.6	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.822	0.002	97	485331	100.0	102.8	
76 Toluene	91	8.988	8.986	0.002	96	579090	50.0	49.9	
77 trans-1,3-Dichloropropene	75	9.220	9.217	0.003	90	144453	50.0	53.8	
78 Ethyl methacrylate	69	9.317	9.315	0.002	90	156684	50.0	49.0	
79 1,1,2-Trichloroethane	97	9.396	9.400	-0.004	95	107405	50.0	47.2	
80 Tetrachloroethene	164	9.536	9.534	0.002	94	100988	50.0	47.2	
81 1,3-Dichloropropane	76	9.566	9.564	0.002	91	208978	50.0	47.6	
82 2-Hexanone	43	9.658	9.655	0.003	97	370696	100.0	98.1	
84 Chlorodibromomethane	129	9.791	9.789	0.002	87	82251	50.0	49.1	
85 Ethylene Dibromide	107	9.901	9.905	-0.004	98	107555	50.0	50.9	
86 3-Chlorobenzotrifluoride	180	10.369	10.373	-0.004	90	184733	50.0	48.4	
87 Chlorobenzene	112	10.394	10.391	0.003	89	365125	50.0	51.7	
88 4-Chlorobenzotrifluoride	180	10.430	10.428	0.002	95	180357	50.0	50.6	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.477	-0.004	90	105491	50.0	49.0	
90 Ethylbenzene	106	10.503	10.501	0.002	98	200987	50.0	50.3	
91 m-Xylene & p-Xylene	106	10.619	10.617	0.002	97	254328	50.0	52.2	
92 o-Xylene	106	11.014	11.012	0.002	98	246415	50.0	52.1	
93 Styrene	104	11.026	11.024	0.002	92	397225	50.0	49.9	
94 Bromoform	173	11.209	11.207	0.002	95	46107	50.0	43.6	
96 2-Chlorobenzotrifluoride	180	11.276	11.274	0.002	94	177856	50.0	48.7	
97 Isopropylbenzene	105	11.379	11.377	0.002	97	613994	50.0	52.0	
99 1,1,2,2-Tetrachloroethane	83	11.671	11.675	-0.004	94	153063	50.0	47.8	
100 Bromobenzene	156	11.683	11.687	-0.004	95	132195	50.0	50.4	
101 1,2,3-Trichloropropane	110	11.720	11.718	0.002	92	49206	50.0	51.6	
102 trans-1,4-Dichloro-2-buten	53	11.732	11.730	0.002	67	68013	50.0	52.0	
103 N-Propylbenzene	120	11.793	11.791	0.002	99	164843	50.0	53.3	
104 2-Chlorotoluene	126	11.878	11.876	0.002	94	132885	50.0	50.9	
105 3-Chlorotoluene	126	11.939	11.937	0.002	68	152349	50.0	54.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.963	11.961	0.002	94	498744	50.0	53.8	
107 4-Chlorotoluene	126	11.981	11.985	-0.004	98	158587	50.0	54.7	
108 tert-Butylbenzene	119	12.292	12.289	0.003	95	403265	50.0	53.0	
110 1,2,4-Trimethylbenzene	105	12.340	12.338	0.002	96	509325	50.0	53.5	
111 1,2-dichloro-4-(trifluorom	214	12.401	12.399	0.002	97	129733	50.0	49.4	
112 sec-Butylbenzene	105	12.511	12.508	0.003	96	574591	50.0	52.4	
113 1,3-Dichlorobenzene	146	12.620	12.618	0.002	96	252967	50.0	51.1	
114 4-Isopropyltoluene	119	12.651	12.654	-0.003	98	471610	50.0	53.4	
115 1,4-Dichlorobenzene	146	12.705	12.709	-0.004	92	265429	50.0	52.0	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.758	0.002	96	115486	50.0	46.9	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.807	0.002	97	129023	50.0	48.0	
120 n-Butylbenzene	91	13.064	13.062	0.002	98	396512	50.0	49.2	
121 1,2-Dichlorobenzene	146	13.083	13.080	0.003	93	239686	50.0	52.2	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.859	0.002	72	19620	50.0	47.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.013	14.005	0.008	99	467676	150.0	161.6	
124 1,3,5-Trichlorobenzene	180	14.074	14.072	0.002	96	115294	50.0	42.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.425	0.002	99	297290	100.0	107.8	
126 1,2,4-Trichlorobenzene	180	14.695	14.692	0.003	94	96163	50.0	50.5	
127 Hexachlorobutadiene	225	14.859	14.863	-0.004	97	41050	50.0	45.4	
128 Naphthalene	128	14.938	14.942	-0.004	97	243475	50.0	47.9	
129 1,2,3-Trichlorobenzene	180	15.181	15.185	-0.004	92	75539	50.0	50.6	
131 2,4,5-Trichlorotoluene	159	15.966	15.964	0.002	96	36935	50.0	58.2	
130 2,3,6-Trichlorotoluene	159	16.064	16.061	0.003	96	36900	50.0	63.5	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	104.3	
S 134 1,2-Dichloroethene, Total	96				0		100.0	107.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	107.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAACRO2ND_00004	Amount Added:	6.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaW135tcbABS_00003	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00004	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA8260VOA2ND_00097	Amount Added:	2.00	Units: uL	
voaWVA 2nd Re_00008	Amount Added:	2.00	Units: uL	
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

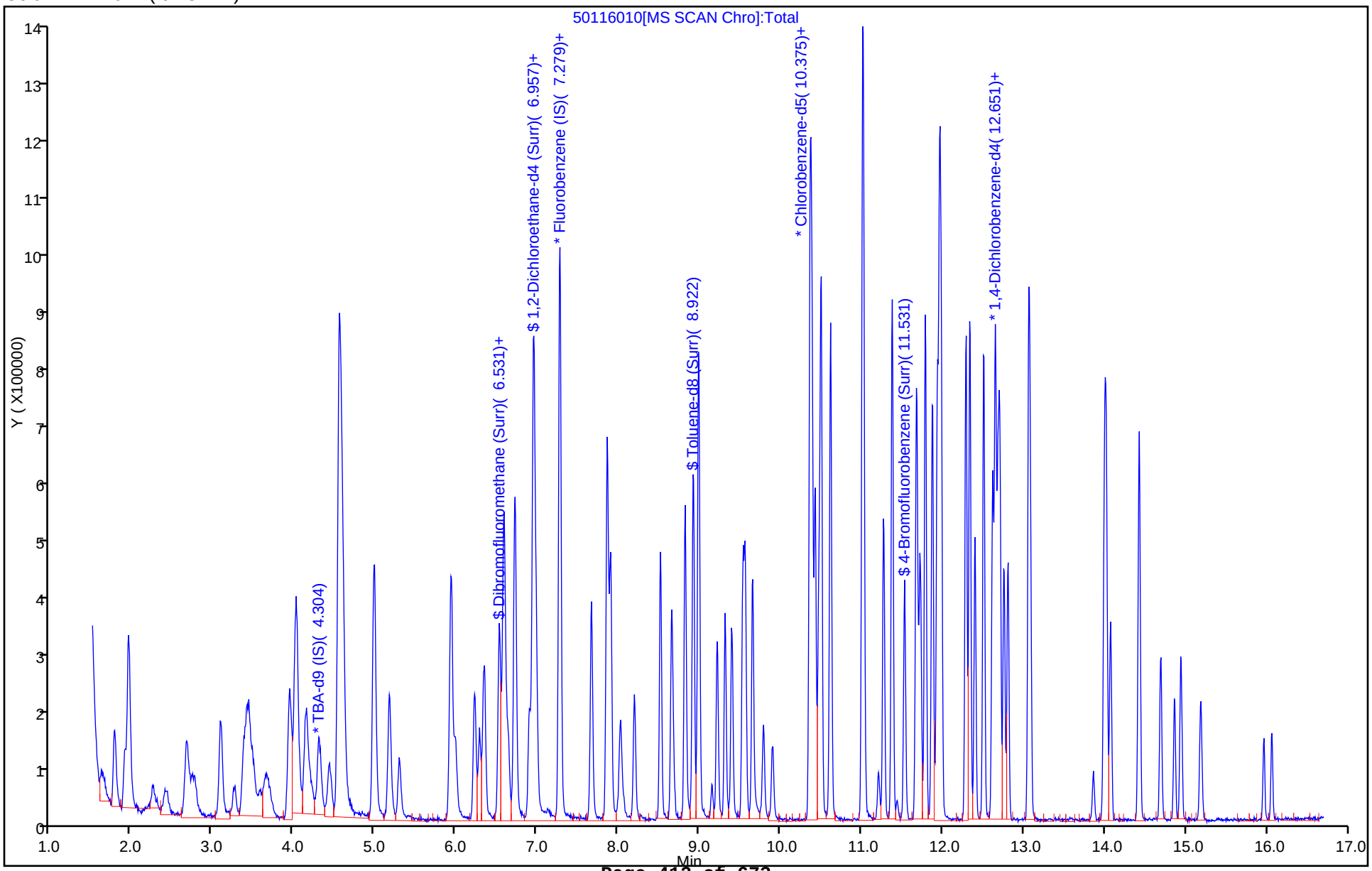
Report Date: 16-Jan-2015 15:19:51 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150116-5307.b\50116010.D

Injection Date:	16-Jan-2015 14:56:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCSD			Worklist Smp#:	10
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)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHHP5 Start Date: 12/15/2014 10:05

Analysis Batch Number: 128329 End Date: 12/16/2014 10:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-128329/1		12/15/2014 10:05	1	51215001.D	DB-624 0.18(mm)
IC 180-128329/7		12/15/2014 14:33	1	51215007.D	DB-624 0.18(mm)
IC 180-128329/8		12/15/2014 14:57	1	51215008.D	DB-624 0.18(mm)
ICIS 180-128329/9		12/15/2014 15:21	1	51215009.D	DB-624 0.18(mm)
IC 180-128329/10		12/15/2014 15:45	1	51215010.D	DB-624 0.18(mm)
IC 180-128329/11		12/15/2014 16:09	1	51215011.D	DB-624 0.18(mm)
IC 180-128329/12		12/15/2014 16:33	1	51215012.D	DB-624 0.18(mm)
IC 180-128329/13		12/15/2014 16:57	1	51215013.D	DB-624 0.18(mm)
ICV 180-128329/17		12/16/2014 10:31	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHHP5 Start Date: 01/16/2015 12:21

Analysis Batch Number: 130947 End Date: 01/16/2015 23:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-130947/6		01/16/2015 12:21	1	50116006.D	DB-624 0.18(mm)
CCVIS 180-130947/2		01/16/2015 12:52	1	50116002.D	DB-624 0.18(mm)
ZZZZZ		01/16/2015 12:52	1		DB-624 0.18(mm)
MB 180-130947/8		01/16/2015 13:56	1	50116008.D	DB-624 0.18(mm)
LCS 180-130947/9		01/16/2015 14:32	1	50116009.D	DB-624 0.18(mm)
LCSD 180-130947/10		01/16/2015 14:56	1	50116010.D	DB-624 0.18(mm)
ZZZZZ		01/16/2015 15:45	5		DB-624 0.18(mm)
ZZZZZ		01/16/2015 16:09	10		DB-624 0.18(mm)
180-40481-1	HD-MW-100D-0/1-0	01/16/2015 16:34	5	50116014.D	DB-624 0.18(mm)
180-40481-2	HD-MW-100I-0/1-0	01/16/2015 16:58	1	50116015.D	DB-624 0.18(mm)
180-40481-3	HD-MW-100S-0/1-0	01/16/2015 17:22	5	50116016.D	DB-624 0.18(mm)
180-40481-4	HD-MW-99D-0/1-0	01/16/2015 17:46	5	50116017.D	DB-624 0.18(mm)
180-40481-5	HD-MW-147A-0/1-0	01/16/2015 18:34	1	50116019.D	DB-624 0.18(mm)
180-40481-6	HD-MW-75S-0/1-0	01/16/2015 18:58	50	50116020.D	DB-624 0.18(mm)
180-40481-9	HD-QC3-0/1-2	01/16/2015 20:11	1	50116023.D	DB-624 0.18(mm)
ZZZZZ		01/16/2015 20:35	10		DB-624 0.18(mm)
ZZZZZ		01/16/2015 20:59	20		DB-624 0.18(mm)
ZZZZZ		01/16/2015 21:23	20		DB-624 0.18(mm)
ZZZZZ		01/16/2015 21:47	1		DB-624 0.18(mm)
ZZZZZ		01/16/2015 22:11	10000		DB-624 0.18(mm)
ZZZZZ		01/16/2015 22:35	1		DB-624 0.18(mm)
ZZZZZ		01/16/2015 22:59	1		DB-624 0.18(mm)
ZZZZZ		01/16/2015 23:23	2		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHHP5 Start Date: 01/19/2015 09:02

Analysis Batch Number: 131060 End Date: 01/19/2015 20:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-131060/4		01/19/2015 09:02	1	50119004.D	DB-624 0.18(mm)
CCVIS 180-131060/2		01/19/2015 09:42	1	50119002.D	DB-624 0.18(mm)
ZZZZZ		01/19/2015 09:42	1		DB-624 0.18(mm)
MB 180-131060/5		01/19/2015 10:37	1	50119005.D	DB-624 0.18(mm)
ZZZZZ		01/19/2015 11:14	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 11:38	1		DB-624 0.18(mm)
LCS 180-131060/8		01/19/2015 12:02	1	50119008.D	DB-624 0.18(mm)
ZZZZZ		01/19/2015 12:26	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 12:50	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 13:39	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 14:03	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 14:27	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 14:51	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 15:15	1		DB-624 0.18(mm)
180-40481-6 DL	HD-MW-75S-0/1-0 DL	01/19/2015 16:03	400	50119018.D	DB-624 0.18(mm)
180-40481-7	HD-MW-75D-0/1-0	01/19/2015 16:27	50	50119019.D	DB-624 0.18(mm)
180-40481-8	HD-MW-37D-0/1-0	01/19/2015 16:52	12.5	50119020.D	DB-624 0.18(mm)
ZZZZZ		01/19/2015 17:16	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 18:04	500		DB-624 0.18(mm)
ZZZZZ		01/19/2015 18:28	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 18:52	1000		DB-624 0.18(mm)
ZZZZZ		01/19/2015 19:40	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 20:05	1		DB-624 0.18(mm)
ZZZZZ		01/19/2015 20:29	1		DB-624 0.18(mm)

300_ORGFMS

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-15-2015-14.d

Lab ID: LCS 180-130845/5 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.49	99	90-110	
Chloride	50.0	49.8	100	90-110	
Sulfate	50.0	49.7	99	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.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-15-2015-40.d

Lab ID: 180-40481-3 MS Client ID: HD-MW-100S-0/1-0 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Nitrate as N	1.25	3.9	5.59	131	80-120	F1
Chloride	25.0	100	133	132	80-120	4
Sulfate	25.0	34	64.7	124	80-120	F1

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.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-15-2015-34.d

Lab ID: 180-40481-4 MS Client ID: HD-MW-99D-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	2.0	3.38	111	80-120	
Chloride	25.0	48	75.2	110	80-120	
Sulfate	25.0	24	51.9	110	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.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-15-2015-41.d

Lab ID: 180-40481-3 MSD Client ID: HD-MW-100S-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	5.54	128	1	20	80-120	F1
Chloride	25.0	132	127	1	20	80-120	4
Sulfate	25.0	64.1	121	1	20	80-120	F1

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.: 180-40481-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-15-2015-35.d

Lab ID: 180-40481-4 MSD Client ID: HD-MW-99D-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	3.37	110	0	20	80-120	
Chloride	25.0	75.0	109	0	20	80-120	
Sulfate	25.0	51.8	110	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.: 180-40481-1

SDG No.:

Lab File ID: A-ICS2100 A 01-15-2015-15.d Lab Sample ID: MB 180-130845/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 01/15/2015 11:51

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-130845/4	A-ICS2100 A 01-15-2015-13.d	01/15/2015 11:20
	LCS 180-130845/5	A-ICS2100 A 01-15-2015-14.d	01/15/2015 11:36
HD-MW-37D-0/1-0	180-40481-8	A-ICS2100 A 01-15-2015-23.d	01/15/2015 14:13
	CCB 180-130845/16	A-ICS2100 A 01-15-2015-25.d	01/15/2015 14:49
HD-MW-99D-0/1-0	180-40481-4	A-ICS2100 A 01-15-2015-33.d	01/15/2015 16:52
HD-MW-99D-0/1-0 MS	180-40481-4 MS	A-ICS2100 A 01-15-2015-34.d	01/15/2015 17:07
HD-MW-99D-0/1-0 MSD	180-40481-4 MSD	A-ICS2100 A 01-15-2015-35.d	01/15/2015 17:22
	CCB 180-130845/28	A-ICS2100 A 01-15-2015-37.d	01/15/2015 17:53
HD-MW-100S-0/1-0	180-40481-3	A-ICS2100 A 01-15-2015-39.d	01/15/2015 18:23
HD-MW-100S-0/1-0 MS	180-40481-3 MS	A-ICS2100 A 01-15-2015-40.d	01/15/2015 18:39
HD-MW-100S-0/1-0 MSD	180-40481-3 MSD	A-ICS2100 A 01-15-2015-41.d	01/15/2015 18:54
HD-MW-100D-0/1-0	180-40481-1	A-ICS2100 A 01-15-2015-42.d	01/15/2015 19:09
HD-MW-100I-0/1-0	180-40481-2	A-ICS2100 A 01-15-2015-43.d	01/15/2015 19:25
HD-MW-147A-0/1-0	180-40481-5	A-ICS2100 A 01-15-2015-44.d	01/15/2015 19:40
HD-MW-75S-0/1-0	180-40481-6	A-ICS2100 A 01-15-2015-45.d	01/15/2015 19:55

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab File ID: A-ICS2100 A 01-15-2015-15.d Lab Sample ID: MB 180-130845/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 01/15/2015 11:51

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
HD-MW-75D-0/1-0	180-40481-7	A-ICS2100 A 01-15-2015-46.d	01/15/2015 20:10
	CCB 180-130845/39	A-ICS2100 A 01-15-2015-48.d	01/15/2015 20:41

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100D-0/1-0 Lab Sample ID: 180-40481-1

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-42.d

Analysis Method: 300.0 Date Collected: 01/14/2015 10:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 19:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.6	B	0.10	0.0062
16887-00-6	Chloride	110		1.0	0.20
14808-79-8	Sulfate	34		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

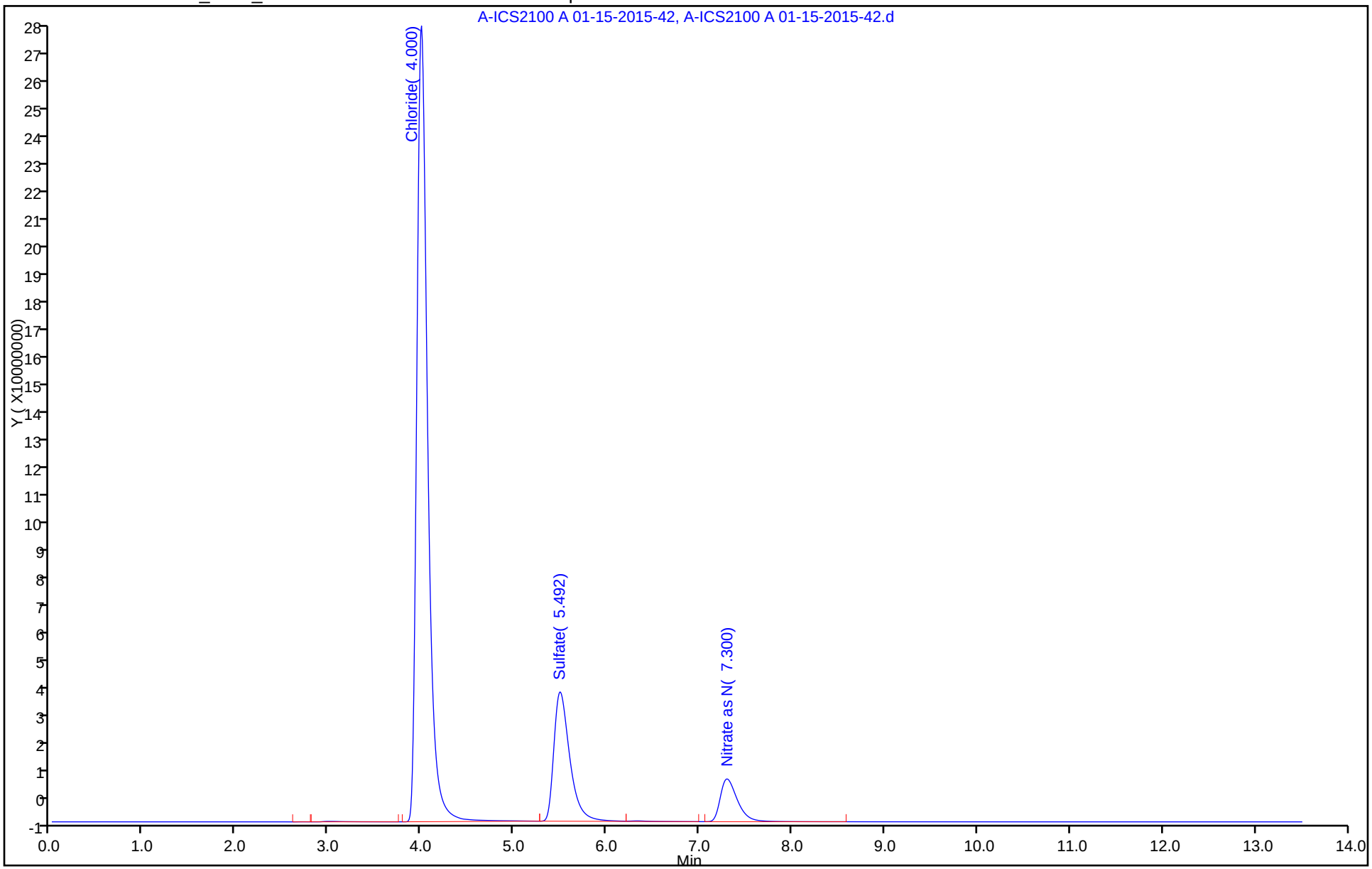
Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-42.d				
Lims ID:	180-40481-A-1	Lab Sample ID:	180-40481-1		
Client ID:	HD-MW-100D-0/1-0				
Sample Type:	Client				
Inject. Date:	15-Jan-2015 19:09:00	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005294-033				
Misc. Info.:	42 180-40481-a-1				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	16-Jan-2015 10:57:49	Calib Date:	13-Jan-2015 14:11:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK028				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.008	-0.008	2246258129	105.5	
3 Sulfate	5.492	5.483	0.009	533261371	34.5	
5 Nitrate as N	7.300	7.317	-0.017	189644351	3.59	

Report Date: 16-Jan-2015 10:57:51 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-42.d				
Injection Date:	15-Jan-2015 19:09:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-1	Lab Sample ID:	180-40481-1	Worklist Smp#:	33
Client ID:	HD-MW-100D-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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100I-0/1-0 Lab Sample ID: 180-40481-2

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-43.d

Analysis Method: 300.0 Date Collected: 01/14/2015 09:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 19:25

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.6	B	0.10	0.0062
16887-00-6	Chloride	110		1.0	0.20
14808-79-8	Sulfate	34		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-43.d				
Lims ID:	180-40481-A-2	Lab Sample ID:	180-40481-2		
Client ID:	HD-MW-100I-0/1-0				
Sample Type:	Client				
Inject. Date:	15-Jan-2015 19:25:00	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005294-034				
Misc. Info.:	43 180-40481-a-2				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	16-Jan-2015 10:57:49	Calib Date:	13-Jan-2015 14:11:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK028				

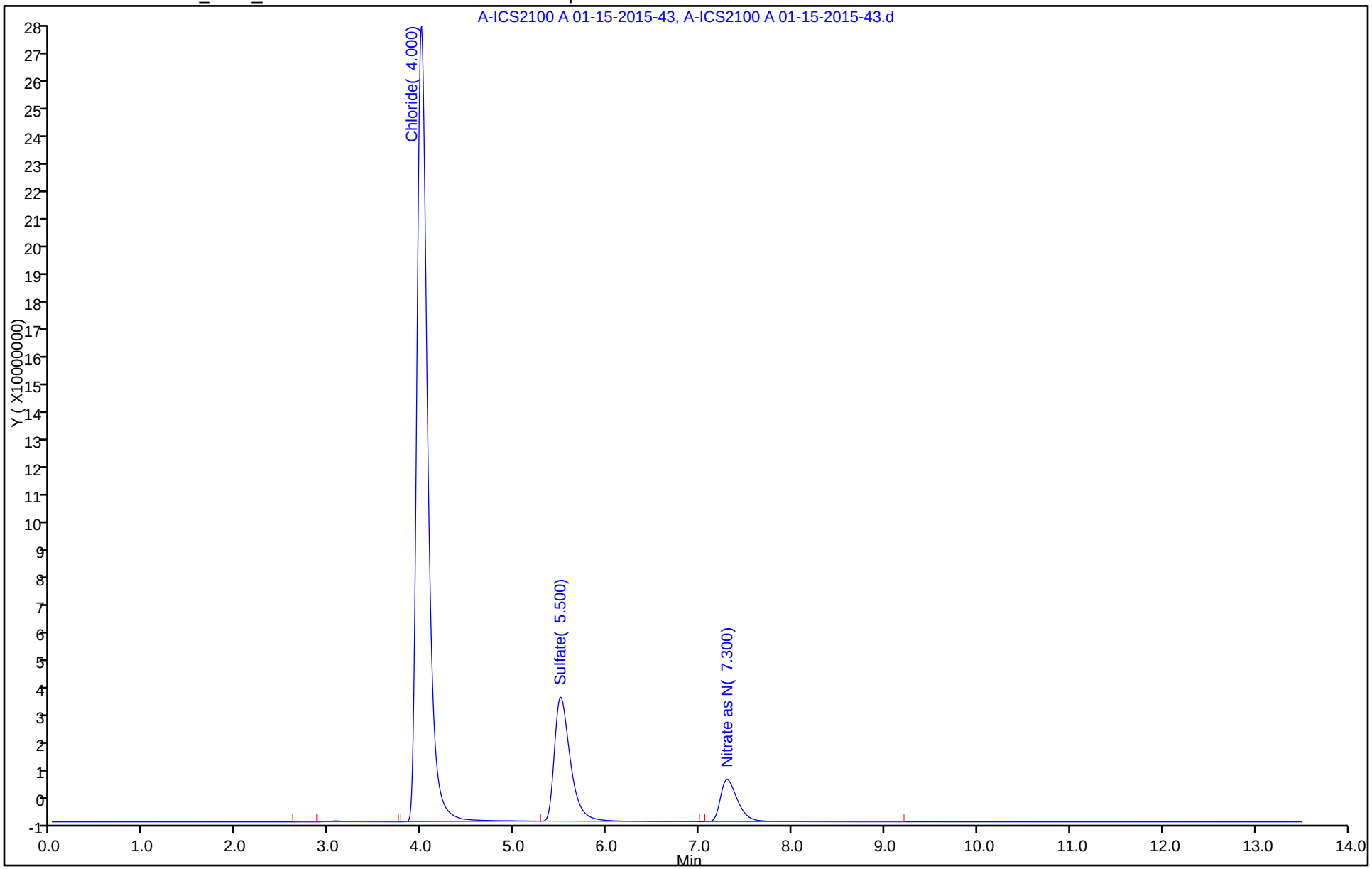
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.008	-0.008	2284912043	107.3	
3 Sulfate	5.500	5.483	0.017	521903504	33.8	
5 Nitrate as N	7.300	7.317	-0.017	191301701	3.62	

Report Date: 16-Jan-2015 10:57:52 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-43.d

Injection Date:	15-Jan-2015 19:25:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-2	Lab Sample ID:	180-40481-2	Worklist Smp#:	34
Client ID:	HD-MW-100I-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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100S-0/1-0 Lab Sample ID: 180-40481-3

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-39.d

Analysis Method: 300.0 Date Collected: 01/14/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 18:23

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.9	B	0.10	0.0062
16887-00-6	Chloride	100		1.0	0.20
14808-79-8	Sulfate	34		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-39.d
Lims ID: 180-40481-A-3 Lab Sample ID: 180-40481-3
Client ID: HD-MW-100S-0/1-0
Sample Type: Client
Inject. Date: 15-Jan-2015 18:23:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-030
Misc. Info.: 39 180-40481-a-3
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:49 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

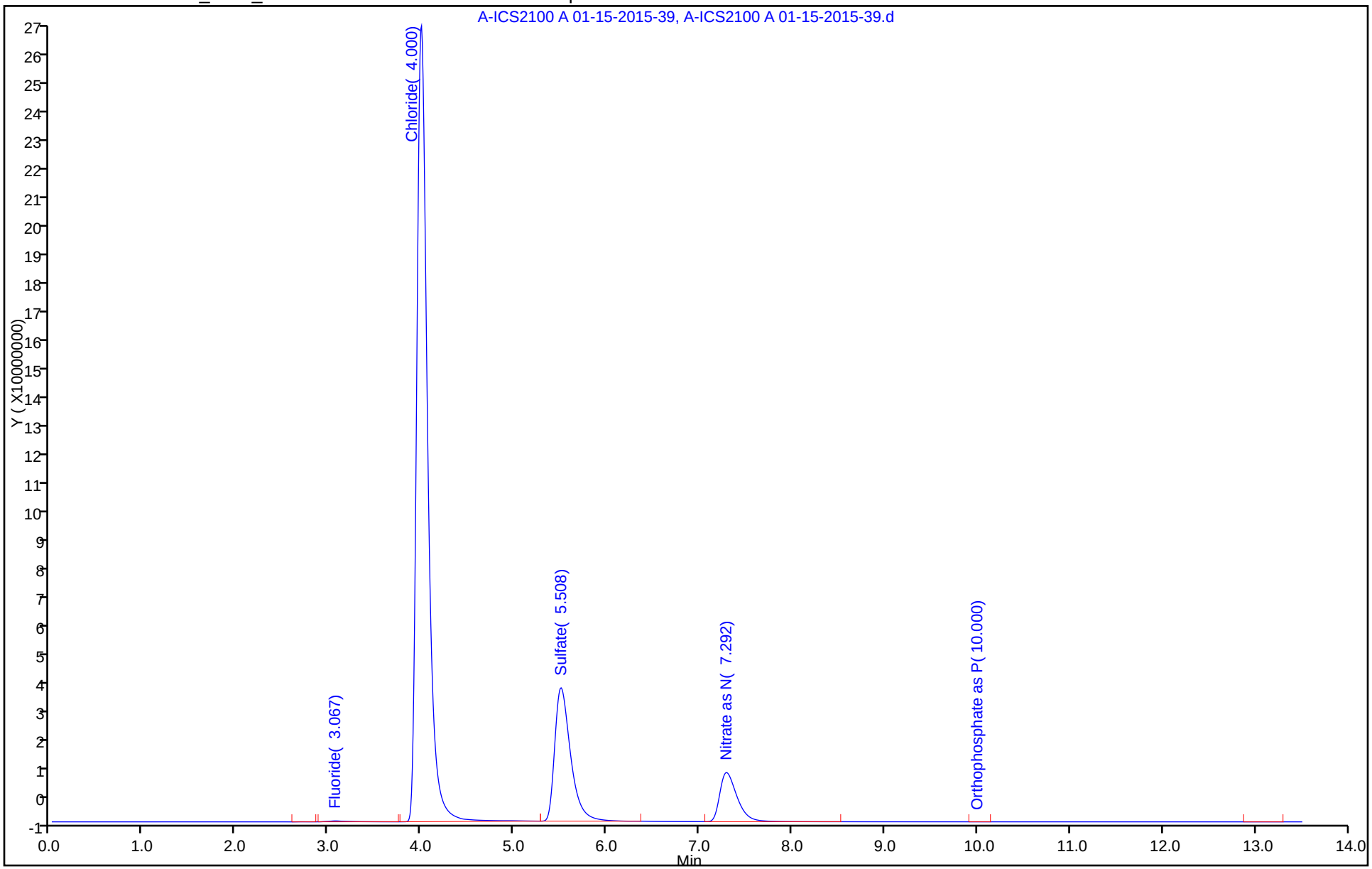
Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.067	2.983	0.084	294323H	0.1033	
2 Chloride	4.000	4.008	-0.008	2135245144	100.3	
7 Nitrite as N		4.717			ND	
3 Sulfate	5.508	5.483	0.025	521943222	33.8	
4 Bromide		6.308			ND	
5 Nitrate as N	7.292	7.317	-0.025	208712121	3.95	
6 Orthophosphate as P	10.000	10.233	-0.233	21469	0.0215	

Report Date: 16-Jan-2015 10:57:50 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-39.d				
Injection Date:	15-Jan-2015 18:23:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-3	Lab Sample ID:	180-40481-3	Worklist Smp#:	30
Client ID:	HD-MW-100S-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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-99D-0/1-0 Lab Sample ID: 180-40481-4

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-33.d

Analysis Method: 300.0 Date Collected: 01/14/2015 12:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 16:52

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.0	B	0.10	0.0062
16887-00-6	Chloride	48		1.0	0.20
14808-79-8	Sulfate	24		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-33.d
Lims ID: 180-40481-A-4 Lab Sample ID: 180-40481-4
Client ID: HD-MW-99D-0/1-0
Sample Type: Client
Inject. Date: 15-Jan-2015 16:52:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-024
Misc. Info.: 33 180-40481-a-4
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 08:46:50 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

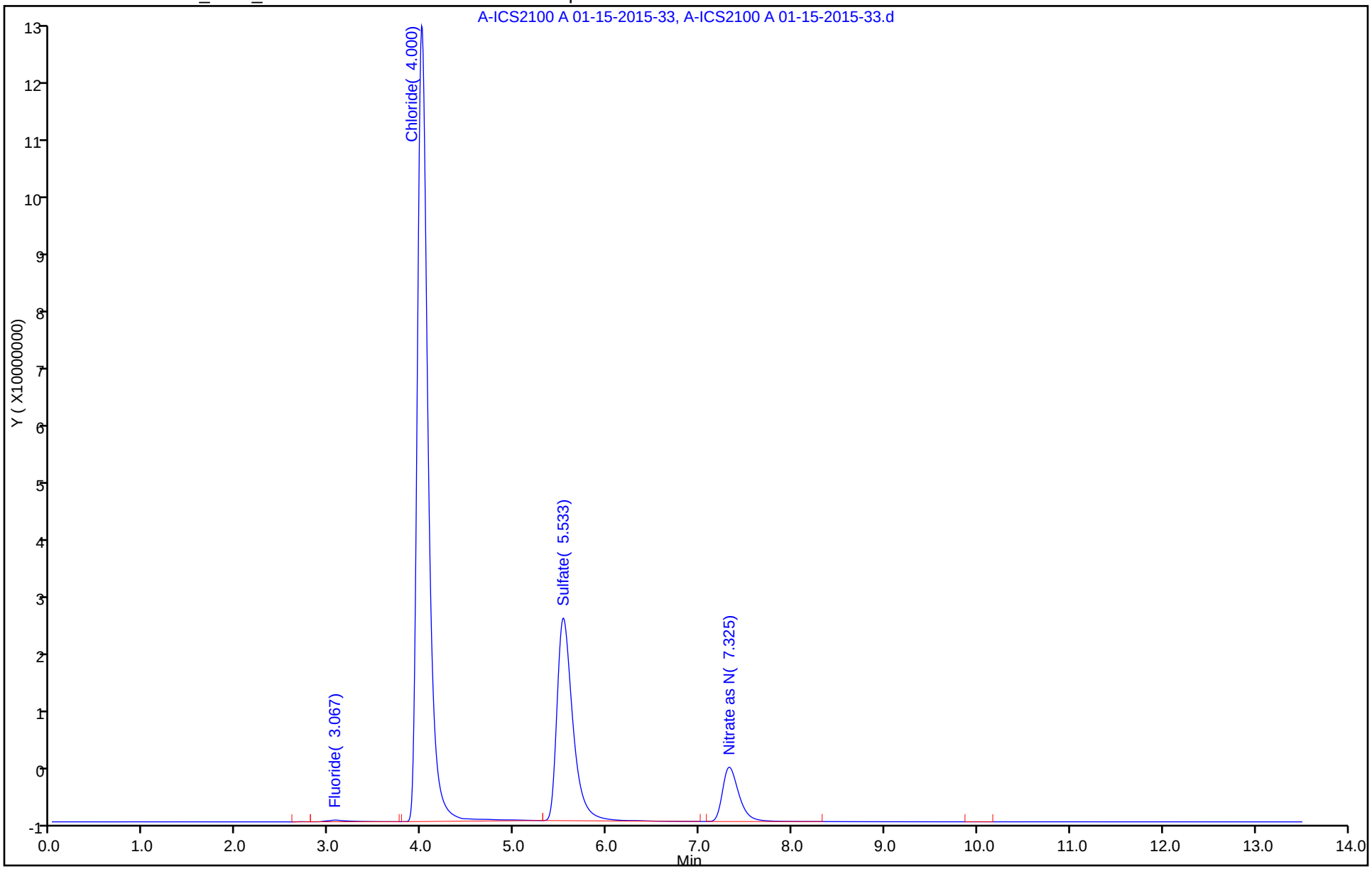
Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.067	2.983	0.084	259920H	0.0924	
2 Chloride	4.000	4.008	-0.008	1015319540	47.6	
7 Nitrite as N		4.717			ND	
3 Sulfate	5.533	5.483	0.050	378128468	24.4	
4 Bromide		6.317			ND	
5 Nitrate as N	7.325	7.317	0.008	105034049	1.99	
6 Orthophosphate as P		10.233			ND	

Report Date: 16-Jan-2015 10:57:48 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-33.d				
Injection Date:	15-Jan-2015 16:52:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-4	Lab Sample ID:	180-40481-4	Worklist Smp#:	24
Client ID:	HD-MW-99D-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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-147A-0/1-0 Lab Sample ID: 180-40481-5

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-44.d

Analysis Method: 300.0 Date Collected: 01/14/2015 12:10

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 19:40

Con. Extract Vol.: Dilution Factor: 5

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	18	B	0.50	0.031
16887-00-6	Chloride	550		5.0	0.98
14808-79-8	Sulfate	170		5.0	1.1

TestAmerica Pittsburgh
Target Compound Quantitation Report

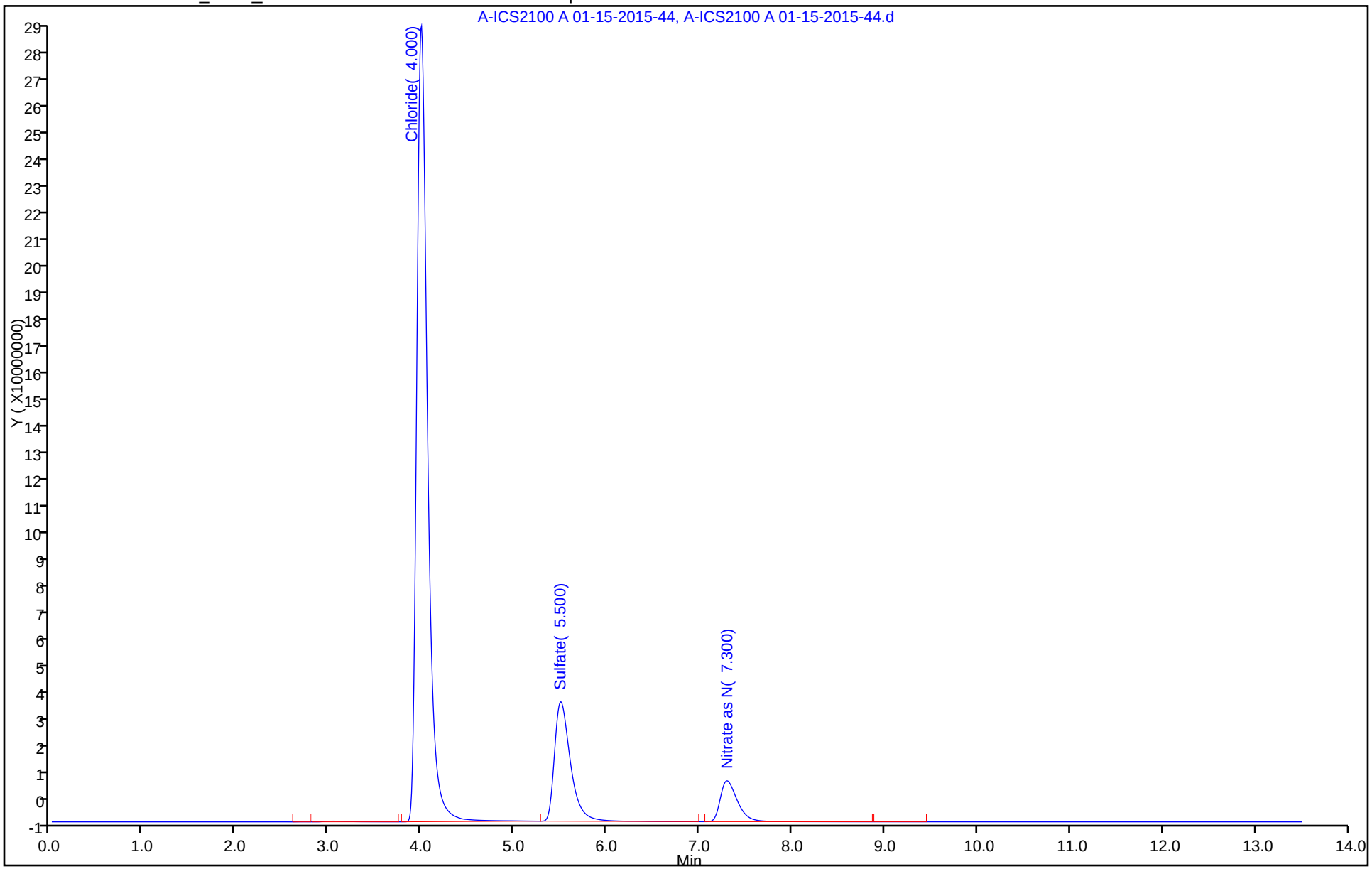
Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-44.d				
Lims ID:	180-40481-A-5	Lab Sample ID:	180-40481-5		
Client ID:	HD-MW-147A-0/1-0				
Sample Type:	Client				
Inject. Date:	15-Jan-2015 19:40:00	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	10.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0005294-035				
Misc. Info.:	44 180-40481-a-5				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	16-Jan-2015 10:57:49	Calib Date:	13-Jan-2015 14:11:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK028				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.008	-0.008	2341905135	110.0	
3 Sulfate	5.500	5.483	0.017	515208171	33.3	
5 Nitrate as N	7.300	7.317	-0.017	189550315	3.59	

Report Date: 16-Jan-2015 10:57:52 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-44.d				
Injection Date:	15-Jan-2015 19:40:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-5	Lab Sample ID:	180-40481-5	Worklist Smp#:	35
Client ID:	HD-MW-147A-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75S-0/1-0 Lab Sample ID: 180-40481-6

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-45.d

Analysis Method: 300.0 Date Collected: 01/14/2015 11:30

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 19:55

Con. Extract Vol.: Dilution Factor: 5

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	21	B	0.50	0.031
16887-00-6	Chloride	820		5.0	0.98
14808-79-8	Sulfate	160		5.0	1.1

TestAmerica Pittsburgh
Target Compound Quantitation Report

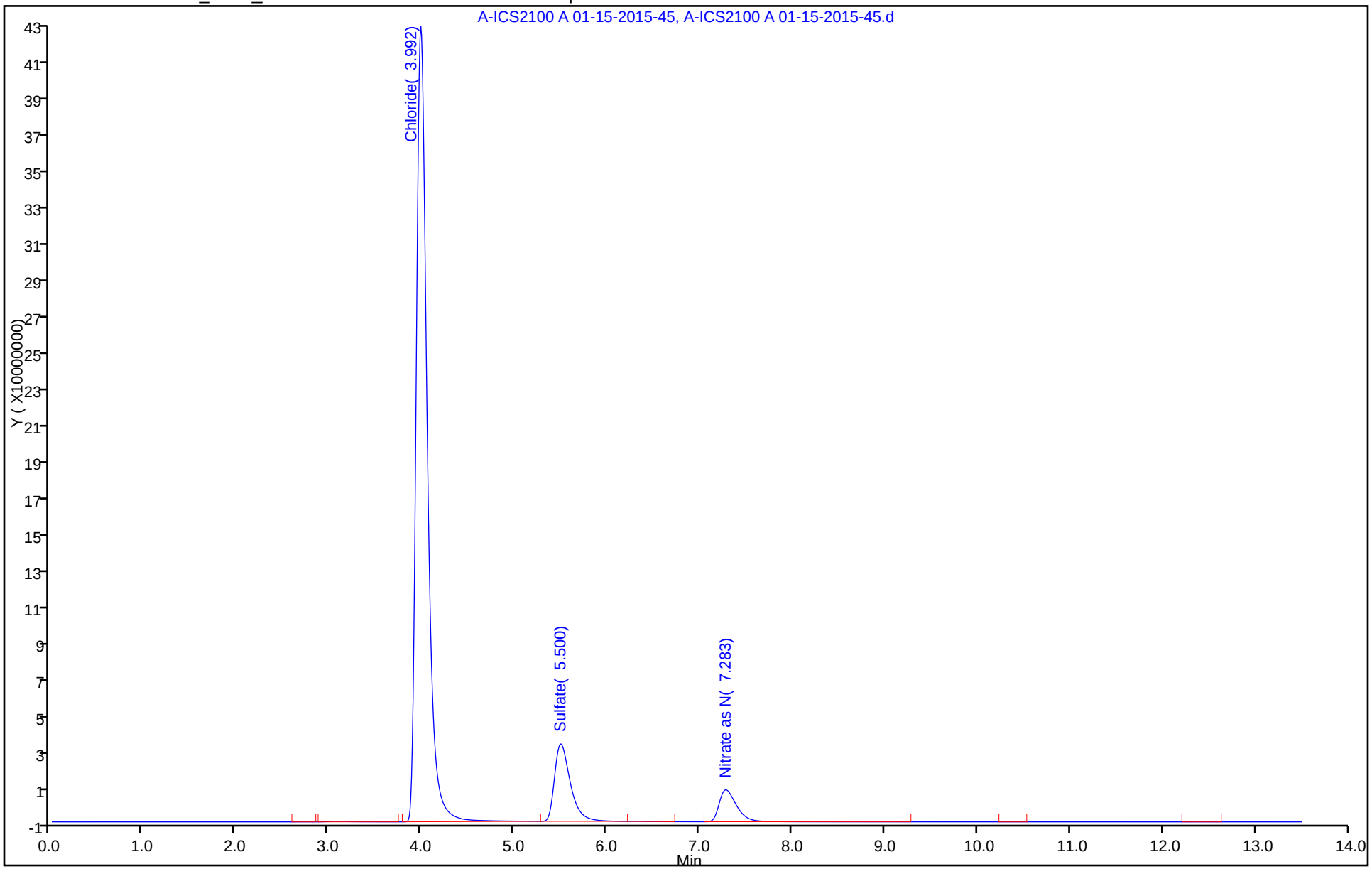
Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-45.d				
Lims ID:	180-40481-A-6	Lab Sample ID:	180-40481-6		
Client ID:	HD-MW-75S-0/1-0				
Sample Type:	Client				
Inject. Date:	15-Jan-2015 19:55:00	ALS Bottle#:	0	Worklist Smp#:	36
Injection Vol:	10.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0005294-036				
Misc. Info.:	45 180-40481-a-6				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	16-Jan-2015 10:57:49	Calib Date:	13-Jan-2015 14:11:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK028				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.008	-0.016	3492818225	164.0	
3 Sulfate	5.500	5.483	0.017	487670931	31.5	
5 Nitrate as N	7.283	7.317	-0.034	220825707	4.18	

Report Date: 16-Jan-2015 10:57:52 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-45.d				
Injection Date:	15-Jan-2015 19:55:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-6	Lab Sample ID:	180-40481-6	Worklist Smp#:	36
Client ID:	HD-MW-75S-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	5.0000	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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-75D-0/1-0 Lab Sample ID: 180-40481-7

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-46.d

Analysis Method: 300.0 Date Collected: 01/14/2015 10:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 20:10

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.5	B	0.10	0.0062
16887-00-6	Chloride	160		1.0	0.20
14808-79-8	Sulfate	30		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-46.d				
Lims ID:	180-40481-A-7	Lab Sample ID:	180-40481-7		
Client ID:	HD-MW-75D-0/1-0				
Sample Type:	Client				
Inject. Date:	15-Jan-2015 20:10:00	ALS Bottle#:	0	Worklist Smp#:	37
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005294-037				
Misc. Info.:	46 180-40481-a-7				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	16-Jan-2015 10:57:49	Calib Date:	13-Jan-2015 14:11:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK028				

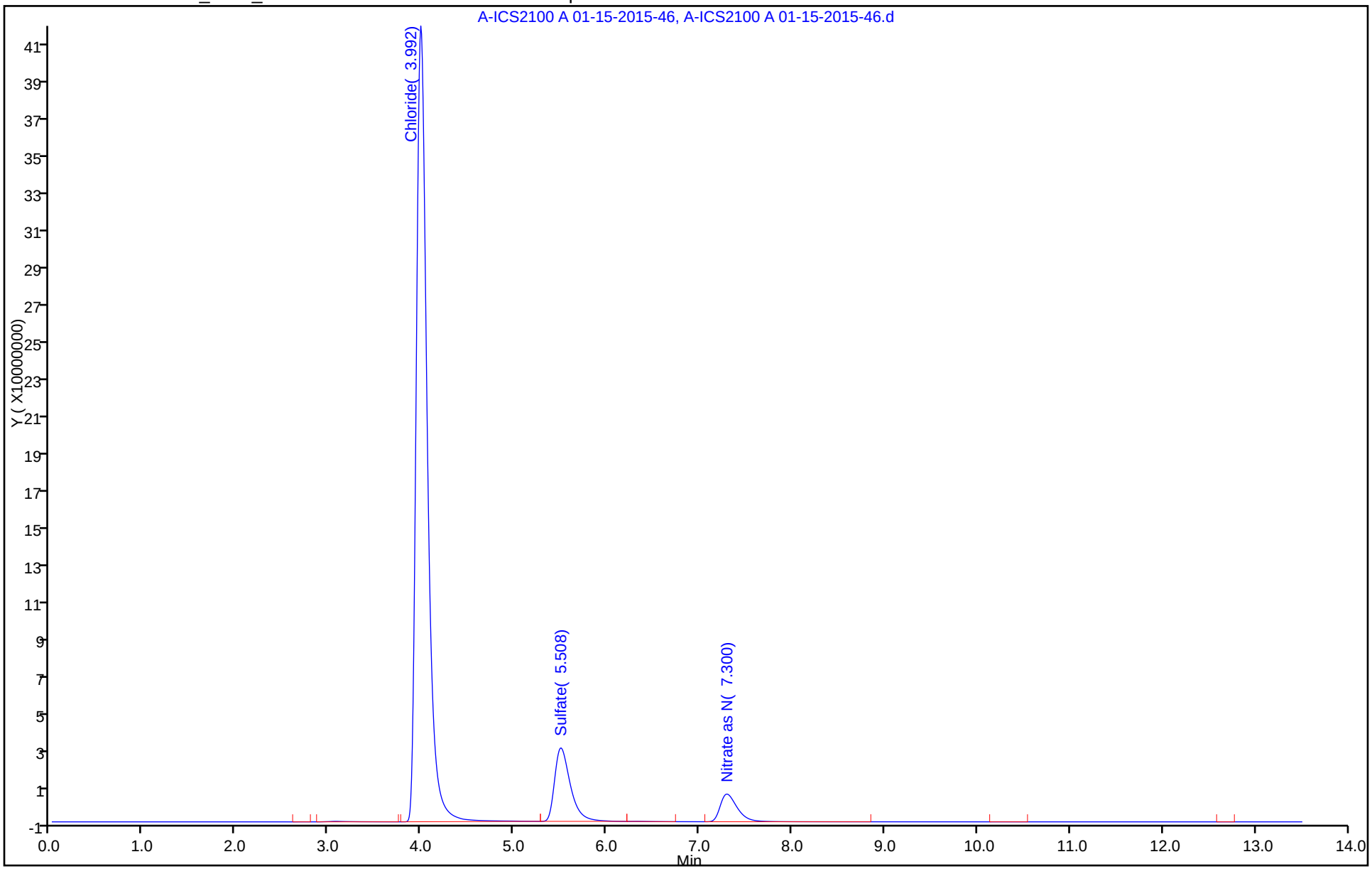
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.008	-0.016	3470475442	163.0	
3 Sulfate	5.508	5.483	0.025	457443634	29.6	
5 Nitrate as N	7.300	7.317	-0.017	187232987	3.54	

Report Date: 16-Jan-2015 10:57:53 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-46.d

Injection Date:	15-Jan-2015 20:10:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-7	Lab Sample ID:	180-40481-7	Worklist Smp#:	37
Client ID:	HD-MW-75D-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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-40481-8

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-23.d

Analysis Method: 300.0 Date Collected: 01/14/2015 12:35

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 14:13

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	5.0	B	0.10	0.0062
16887-00-6	Chloride	170		1.0	0.20
14808-79-8	Sulfate	34		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-23.d
Lims ID: 180-40481-A-8 Lab Sample ID: 180-40481-8
Client ID: HD-MW-37D-0/1-0
Sample Type: Client
Inject. Date: 15-Jan-2015 14:13:00 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-014
Misc. Info.: 23 180-40481-a-8
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:54 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

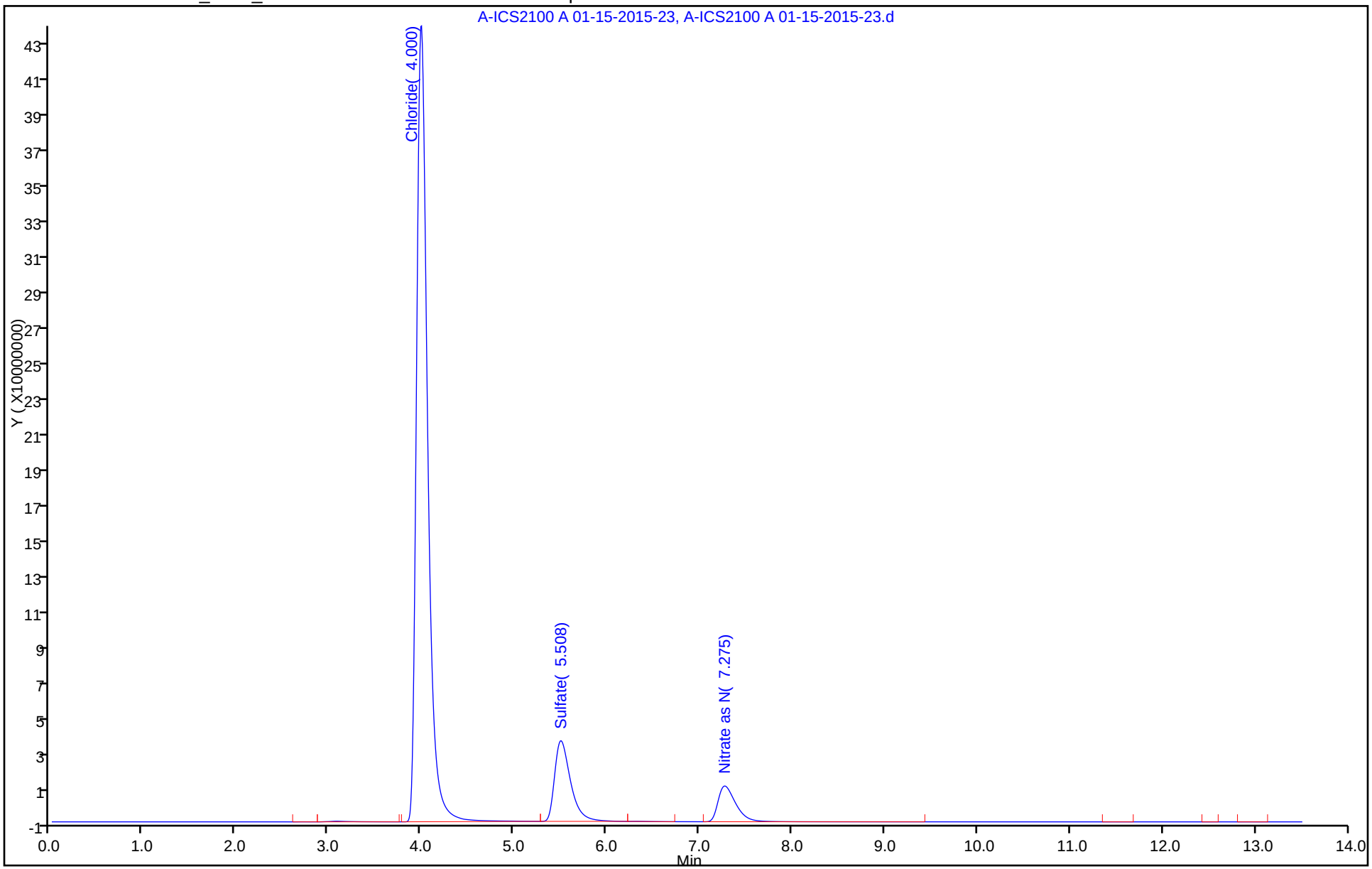
Column 1 : Det: 0008
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.008	-0.008	3662531968	172.0	
3 Sulfate	5.508	5.500	0.008	532277439	34.4	
5 Nitrate as N	7.275	7.317	-0.042	262068522	4.96	

Report Date: 15-Jan-2015 16:09:55 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-23.d				
Injection Date:	15-Jan-2015 14:13:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-8	Lab Sample ID:	180-40481-8	Worklist Smp#:	14
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.: 180-40481-1 Analy Batch No.: 130629

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/13/2015 12:24 Calibration End Date: 01/13/2015 14:11 Calibration ID: 21193

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-130629/2	A-ICS2100 A 01-13A-2015-
Level 2	IC 180-130629/3	A-ICS2100 A 01-13A-2015-
Level 3	ICRT 180-130629/4	A-ICS2100 A 01-13A-2015-
Level 4	IC 180-130629/5	A-ICS2100 A 01-13A-2015-
Level 5	IC 180-130629/6	A-ICS2100 A 01-13A-2015-
Level 6	IC 180-130629/7	A-ICS2100 A 01-13A-2015-
Level 7	IC 180-130629/8	A-ICS2100 A 01-13A-2015-
Level 8	IC 180-130629/9	A-ICS2100 A 01-13A-2015-

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Fluoride	2.992	2.983	2.992	2.992	2.992	2.983	2.983	2.983			2.642 - 3.342	2.988
Chloride	4.033	4.025	4.017	4.017	4.008	4.000	4.000	3.992			3.667 - 4.367	4.012
Nitrite as N	4.742	4.733	4.733	4.725	4.725	4.717	4.708	4.692			4.483 - 4.983	4.722
Sulfate	5.592	5.575	5.558	5.542	5.483	5.442	5.400	5.342			5.208 - 5.908	5.492
Bromide	6.367	6.350	6.342	6.342	6.325	6.292	6.275	6.258			5.992 - 6.692	6.319
Nitrate as N	7.417	7.392	7.375	7.367	7.333	7.275	7.242	7.208			7.125 - 7.625	7.326
Orthophosphate as P	10.408	10.383	10.350	10.342	10.225	10.125	10.042	9.942			10.100 - 10.600	10.227

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1 Analy Batch No.: 130629

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/13/2015 12:24 Calibration End Date: 01/13/2015 14:11 Calibration ID: 21193

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-130629/2	A-ICS2100 A 01-13A-2015-
Level 2	IC 180-130629/3	A-ICS2100 A 01-13A-2015-
Level 3	ICRT 180-130629/4	A-ICS2100 A 01-13A-2015-
Level 4	IC 180-130629/5	A-ICS2100 A 01-13A-2015-
Level 5	IC 180-130629/6	A-ICS2100 A 01-13A-2015-
Level 6	IC 180-130629/7	A-ICS2100 A 01-13A-2015-
Level 7	IC 180-130629/8	A-ICS2100 A 01-13A-2015-
Level 8	IC 180-130629/9	A-ICS2100 A 01-13A-2015-

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	2583680 3266361	2748072 3398549	2994364 3204652	3031121 3175564	Lin2	-32316.095	3162728.31							0.9970		0.9900
Chloride	22687419 20982422	21969428 21620608	22269815 20763498	20890482 21219084	Lin2	1531839.58	21283868.2							0.9990		0.9900
Nitrite as N	87713500 47138433	54620040 46703962	52785410 43221767	49057346 41927138	Lin2	2137110.99	45460584.3							0.9970		0.9900
Sulfate	17870395 15052401	16351244 15739303	16455023 14889589	15149292 15222250	Lin2	2628648.96	15383911.6							0.9990		0.9900
Bromide	9910915 9421279	10323700 9881658	10313336 9504770	9755800 9732279	LinF		9675077.71							1.0000		0.9900
Nitrate as N	44330240 51333611	50854572 54002635	54184390 52091319	51430878 53563317	Lin2	-429206.86	52967152.5							0.9990		0.9900
Orthophosphate as P	10654340 16893744	14516792 18497929	15594030 17798898	15457606 18706890	Lin2	-349118.97	17229671.9							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.: 180-40481-1 Analy Batch No.: 130629

SDG No.:

Instrument ID: CHIC2100A GC Column: AS-18 ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/13/2015 12:24 Calibration End Date: 01/13/2015 14:11 Calibration ID: 21193

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-130629/2	A-ICS2100 A 01-13A-2015-
Level 2	IC 180-130629/3	A-ICS2100 A 01-13A-2015-
Level 3	ICRT 180-130629/4	A-ICS2100 A 01-13A-2015-
Level 4	IC 180-130629/5	A-ICS2100 A 01-13A-2015-
Level 5	IC 180-130629/6	A-ICS2100 A 01-13A-2015-
Level 6	IC 180-130629/7	A-ICS2100 A 01-13A-2015-
Level 7	IC 180-130629/8	A-ICS2100 A 01-13A-2015-
Level 8	IC 180-130629/9	A-ICS2100 A 01-13A-2015-

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	129184 16992744	687018 24034887	1497182 31755636	3031121	8165902	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Chloride	Lin2	22687419 2162060811	109847139 3114524728	222698150 4243816805	417809637	1049121100	1.00 100	5.00 150	10.0 200	20.0	50.0
Nitrite as N	Lin2	4385675 233519809	13655010 324163256	26392705 419271383	49057346	117846083	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Sulfate	Lin2	17870395 1573930251	81756219 2233438307	164550229 3044449965	302985833	752620072	1.00 100	5.00 150	10.0 200	20.0	50.0
Bromide	LinF	1982183 197633159	10323700 285143086	20626672 389291171	39023201	94212788	0.200 20.0	1.00 30.0	2.00 40.0	4.00	10.0
Nitrate as N	Lin2	2216512 270013176	12713643 390684892	27092195 535633171	51430878	128334028	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Orthophosphate as P	Lin2	532717 92489647	3629198 133491737	7797015 187068903	15457606	42234361	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50

Curve Type Legend:

Lin2 = Linear 1/conc^2
LinF = Linear forced zero

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-2.d
Lims ID: ic L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Jan-2015 12:24:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-002
Misc. Info.: 30013 ic l2
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:32 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:14:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	129184H	0.0500	0.0511	
2 Chloride	4.033	4.017	0.016	22687419	1.00	0.99	
7 Nitrite as N	4.742	4.733	0.009	4385675	0.0500	0.0495	
3 Sulfate	5.592	5.558	0.034	17870395	1.00	0.99	
4 Bromide	6.367	6.342	0.025	1982183	0.2000	0.2049	
5 Nitrate as N	7.417	7.375	0.042	2216512	0.0500	0.0500	
6 Orthophosphate as P	10.408	10.350	0.058	532717	0.0500	0.0512	

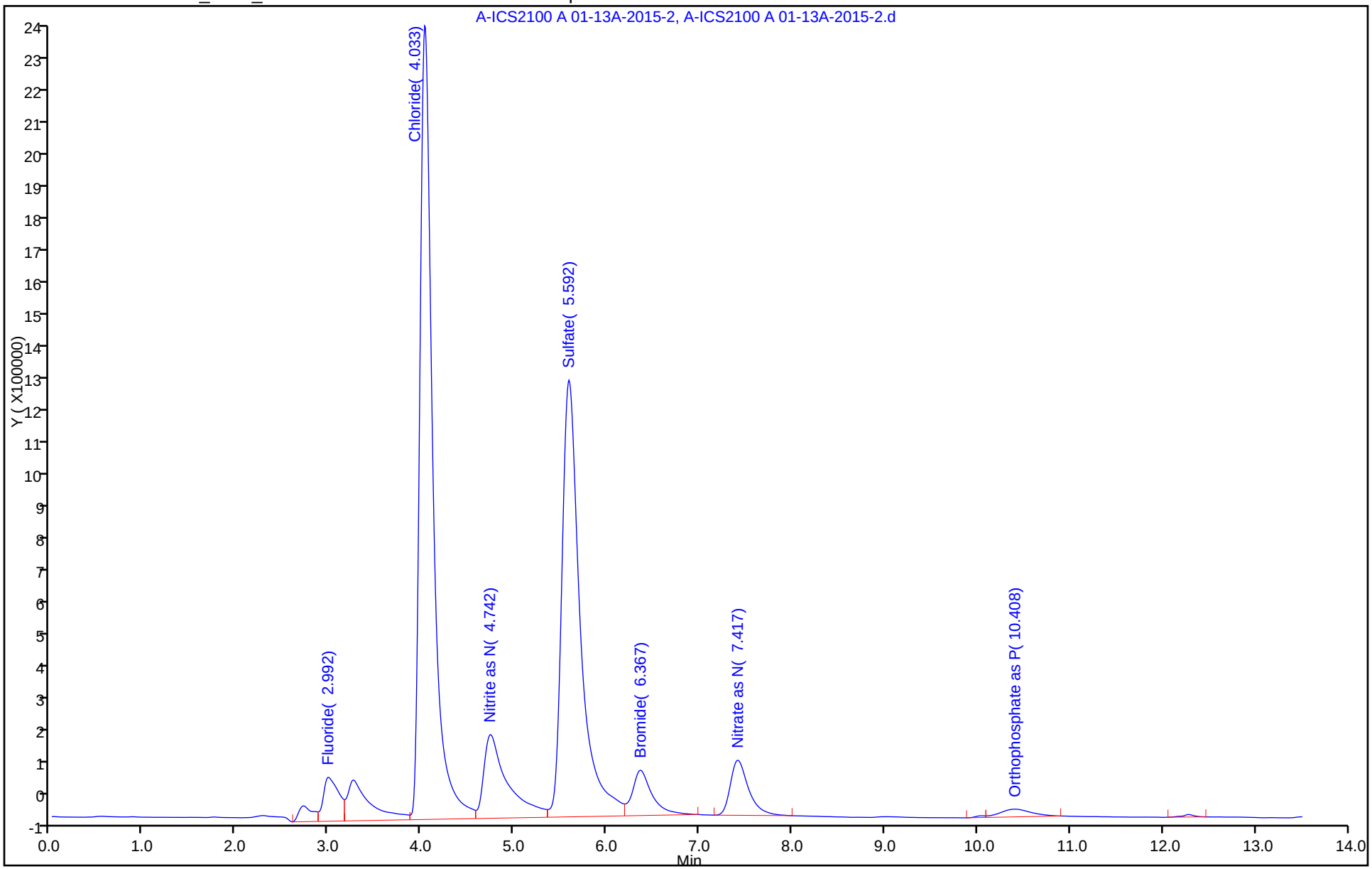
Reagents:

ICSTDL2_00144 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:33 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-2.d				
Injection Date:	13-Jan-2015 12:24:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L2			Worklist Smp#:	2
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-3.d
Lims ID: ic L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Jan-2015 12:39:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-003
Misc. Info.: 14714 ic l3
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:33 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	687018H	0.2500	0.2274	
2 Chloride	4.025	4.017	0.008	109847139	5.00	5.09	
7 Nitrite as N	4.733	4.733	0.000	13655010	0.2500	0.2534	
3 Sulfate	5.575	5.558	0.017	81756219	5.00	5.14	
4 Bromide	6.350	6.342	0.008	10323700	1.00	1.07	
5 Nitrate as N	7.392	7.375	0.017	12713643	0.2500	0.2481	
6 Orthophosphate as P	10.383	10.350	0.033	3629198	0.2500	0.2309	

Reagents:

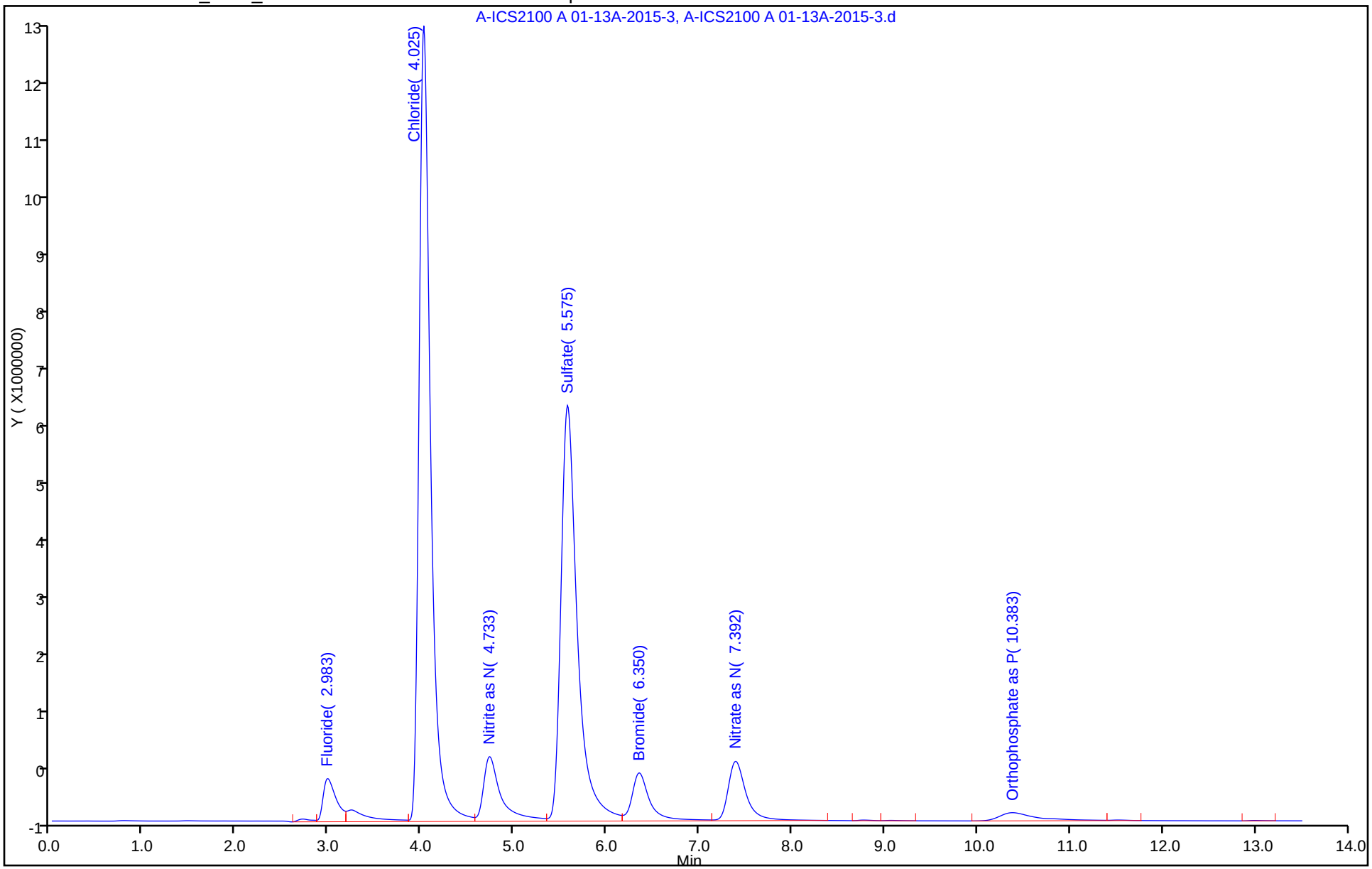
ICSTDL3_00182 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:33 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-3.d

Injection Date:	13-Jan-2015 12:39:00	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\20150113-5255.b\A-ICS2100 A 01-13A-2015-4.d
Lims ID: icrt L4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 13-Jan-2015 12:55:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-004
Misc. Info.: 16265 icrt l4
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:33 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:08:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	1497182H	0.5000	0.4836	
2 Chloride	4.017	4.017	0.000	222698150	10.0	10.4	
7 Nitrite as N	4.733	4.733	0.000	26392705	0.5000	0.5336	
3 Sulfate	5.558	5.558	0.000	164550229	10.0	10.5	
4 Bromide	6.342	6.342	0.000	20626672	2.00	2.13	
5 Nitrate as N	7.375	7.375	0.000	27092195	0.5000	0.5196	
6 Orthophosphate as P	10.350	10.350	0.000	7797015	0.5000	0.4728	

Reagents:

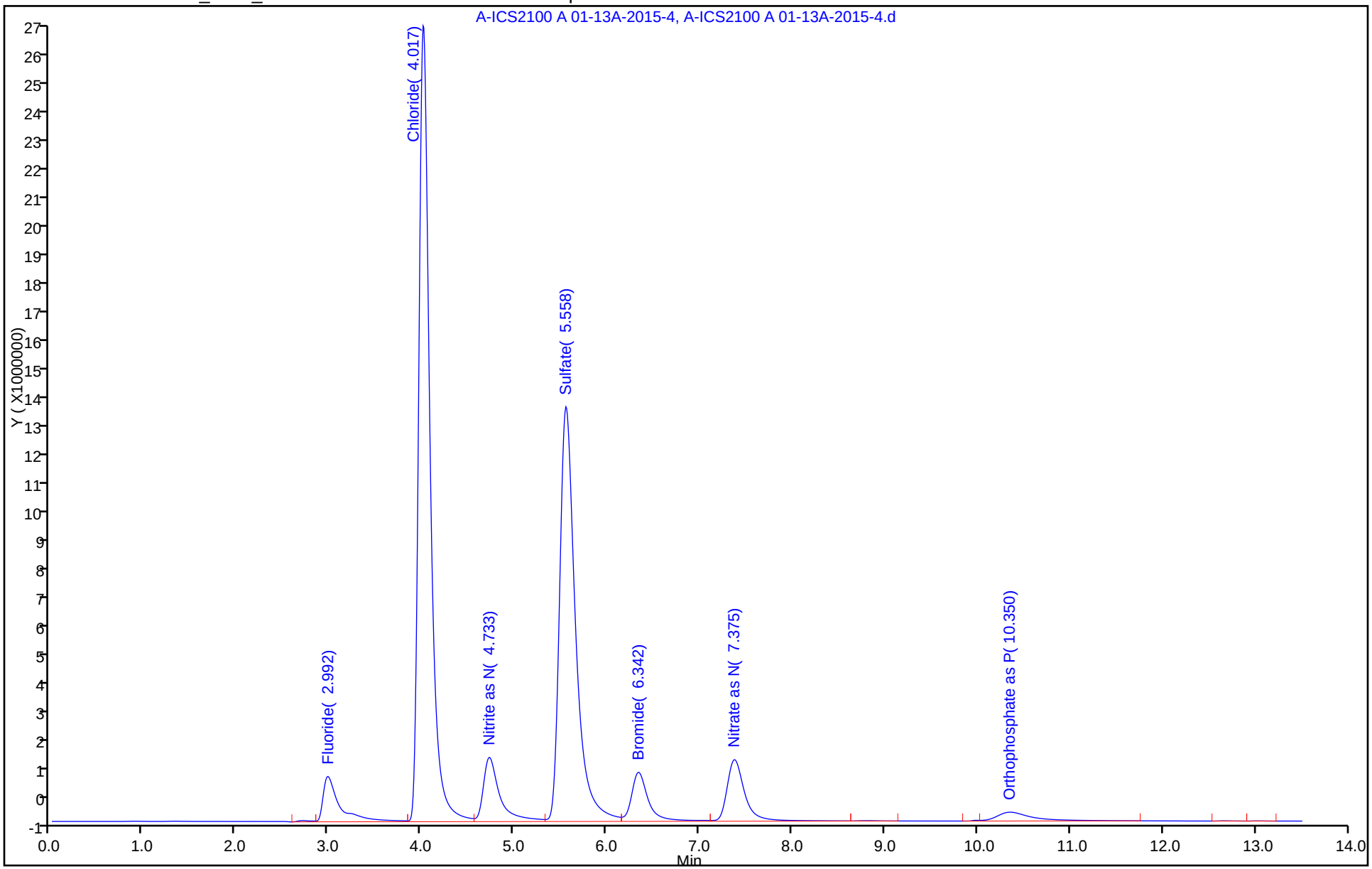
ICSTDL4_00121 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:34 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-4.d

Injection Date:	13-Jan-2015 12:55:00	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\20150113-5255.b\A-ICS2100 A 01-13A-2015-5.d
Lims ID: ic L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Jan-2015 13:10:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-005
Misc. Info.: 15679 ic l5
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:34 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	3031121H	1.00	0.9686	
2 Chloride	4.017	4.017	0.000	417809637	20.0	19.6	
7 Nitrite as N	4.725	4.733	-0.008	49057346	1.00	1.03	
3 Sulfate	5.542	5.558	-0.016	302985833	20.0	19.5	
4 Bromide	6.342	6.342	0.000	39023201	4.00	4.03	
5 Nitrate as N	7.367	7.375	-0.008	51430878	1.00	0.9791	
6 Orthophosphate as P	10.342	10.350	-0.008	15457606	1.00	0.9174	

Reagents:

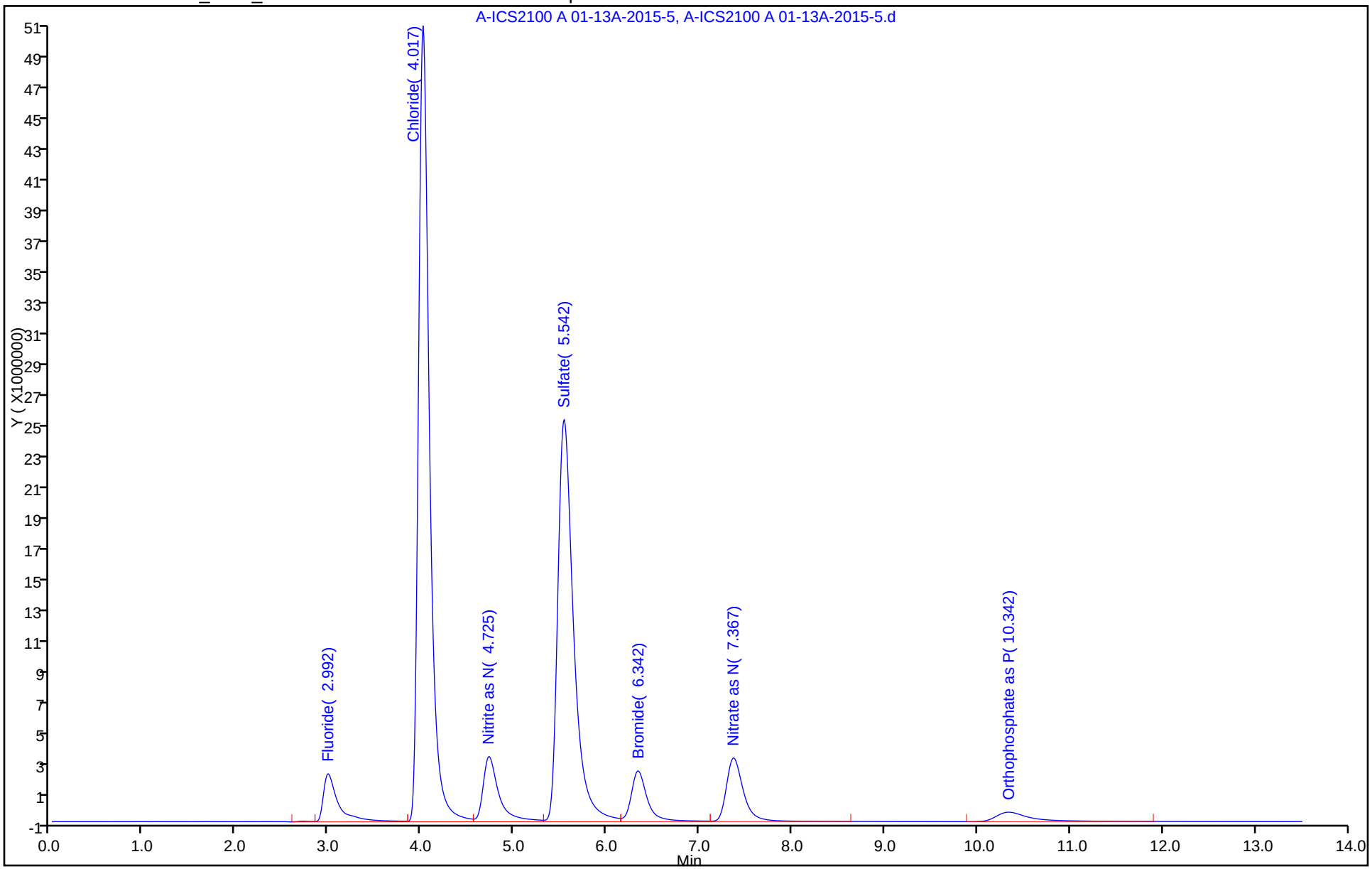
ICSTDL5_00120 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:34 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-5.d

Injection Date:	13-Jan-2015 13:10:00	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\20150113-5255.b\A-ICS2100 A 01-13A-2015-6.d
Lims ID: ic L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Jan-2015 13:25:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-006
Misc. Info.: 15331 ic l6
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:34 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 18:17:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8165902H	2.50	2.59	
2 Chloride	4.008	4.017	-0.009	1049121100	50.0	49.2	
7 Nitrite as N	4.725	4.733	-0.008	117846083	2.50	2.55	
3 Sulfate	5.483	5.558	-0.075	752620072	50.0	48.8	
4 Bromide	6.325	6.342	-0.017	94212788	10.0	9.74	
5 Nitrate as N	7.333	7.375	-0.042	128334028	2.50	2.43	
6 Orthophosphate as P	10.225	10.350	-0.125	42234361	2.50	2.47	

Reagents:

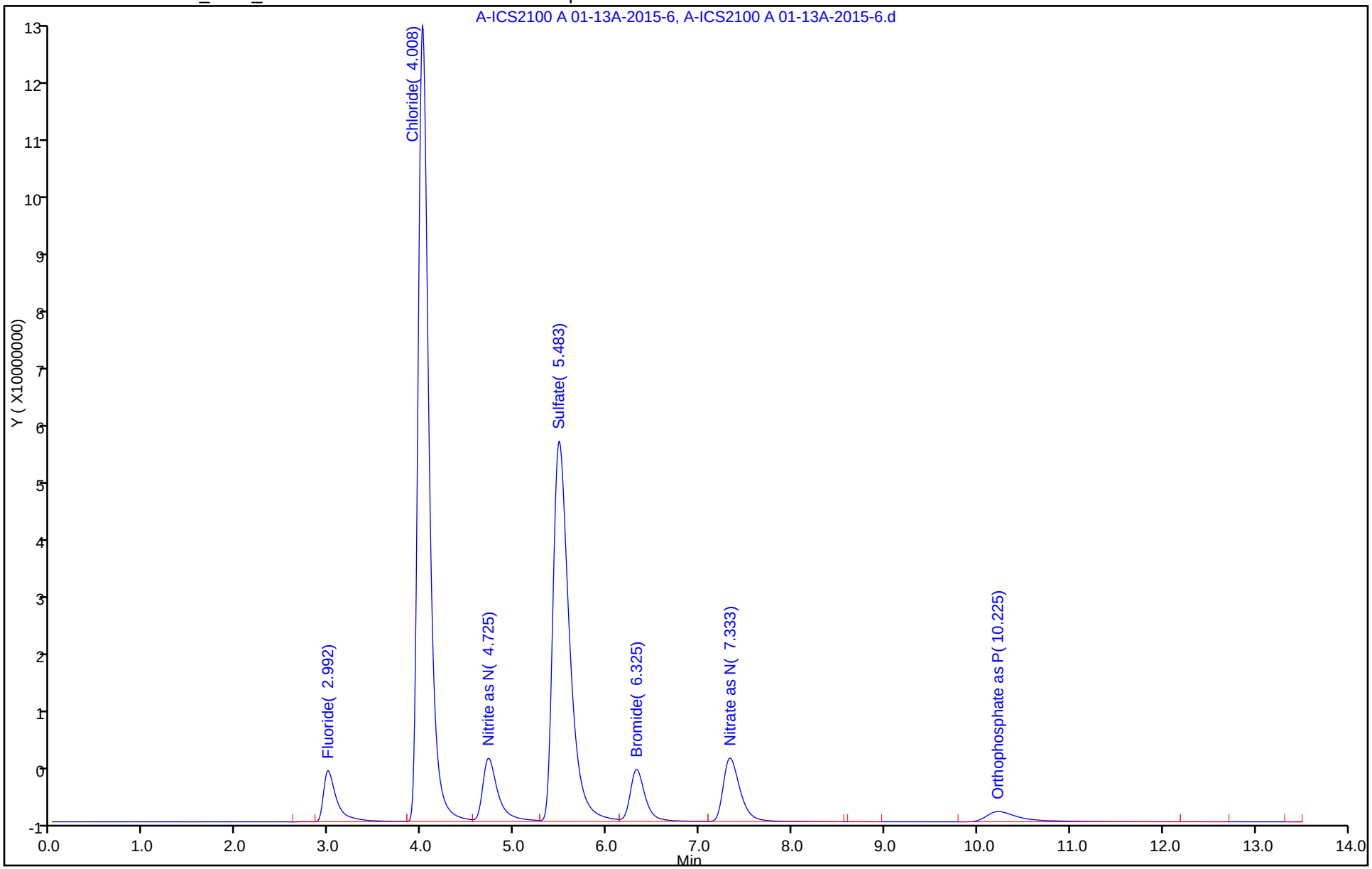
ICSTDL6_00189 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:34 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-6.d

Injection Date:	13-Jan-2015 13:25:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L6			Worklist Smp#:	6
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-7.d
Lims ID: ic L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 13-Jan-2015 13:41:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-007
Misc. Info.: 8785 ic l7
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:35 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:21:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	16992744H	5.00	5.38	
2 Chloride	4.000	4.017	-0.017	2162060811	100.0	101.5	
7 Nitrite as N	4.717	4.733	-0.016	233519809	5.00	5.09	
3 Sulfate	5.442	5.558	-0.116	1573930251	100.0	102.1	
4 Bromide	6.292	6.342	-0.050	197633159	20.0	20.4	
5 Nitrate as N	7.275	7.375	-0.100	270013176	5.00	5.11	
6 Orthophosphate as P	10.125	10.350	-0.225	92489647	5.00	5.39	

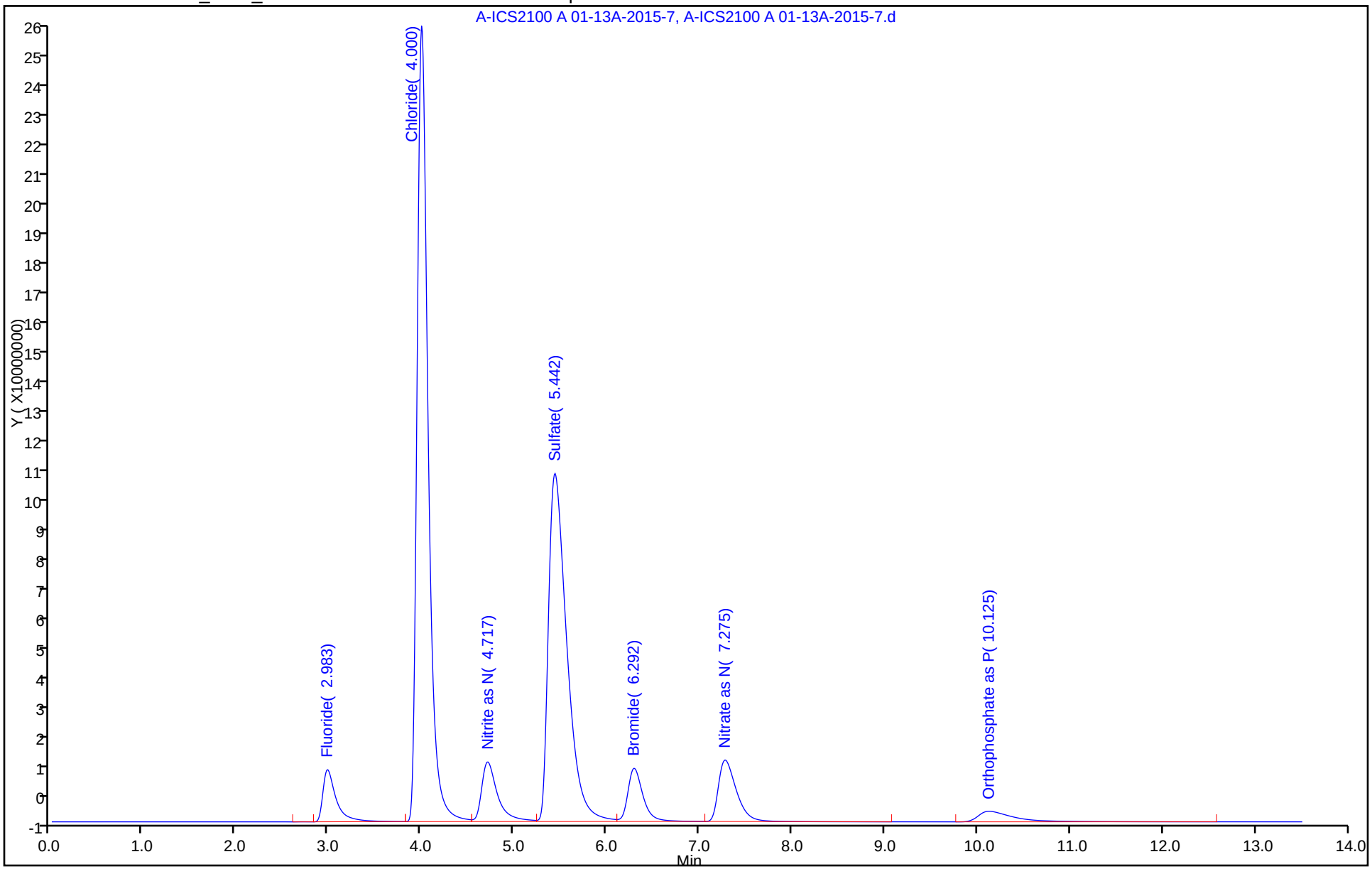
Reagents:

ICSTDL7_00124 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:35 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-7.d				
Injection Date:	13-Jan-2015 13:41:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ic L7			Worklist Smp#:	7
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-8.d
Lims ID: ic L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 13-Jan-2015 13:56:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-008
Misc. Info.: 10979 ic l8
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:35 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:19:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	24034887H	7.50	7.61	
2 Chloride	4.000	4.017	-0.017	3114524728	150.0	146.3	
7 Nitrite as N	4.708	4.733	-0.025	324163256	7.50	7.08	
3 Sulfate	5.400	5.558	-0.158	2233438307	150.0	145.0	
4 Bromide	6.275	6.342	-0.067	285143086	30.0	29.5	
5 Nitrate as N	7.242	7.375	-0.133	390684892	7.50	7.38	
6 Orthophosphate as P	10.042	10.350	-0.308	133491737	7.50	7.77	

Reagents:

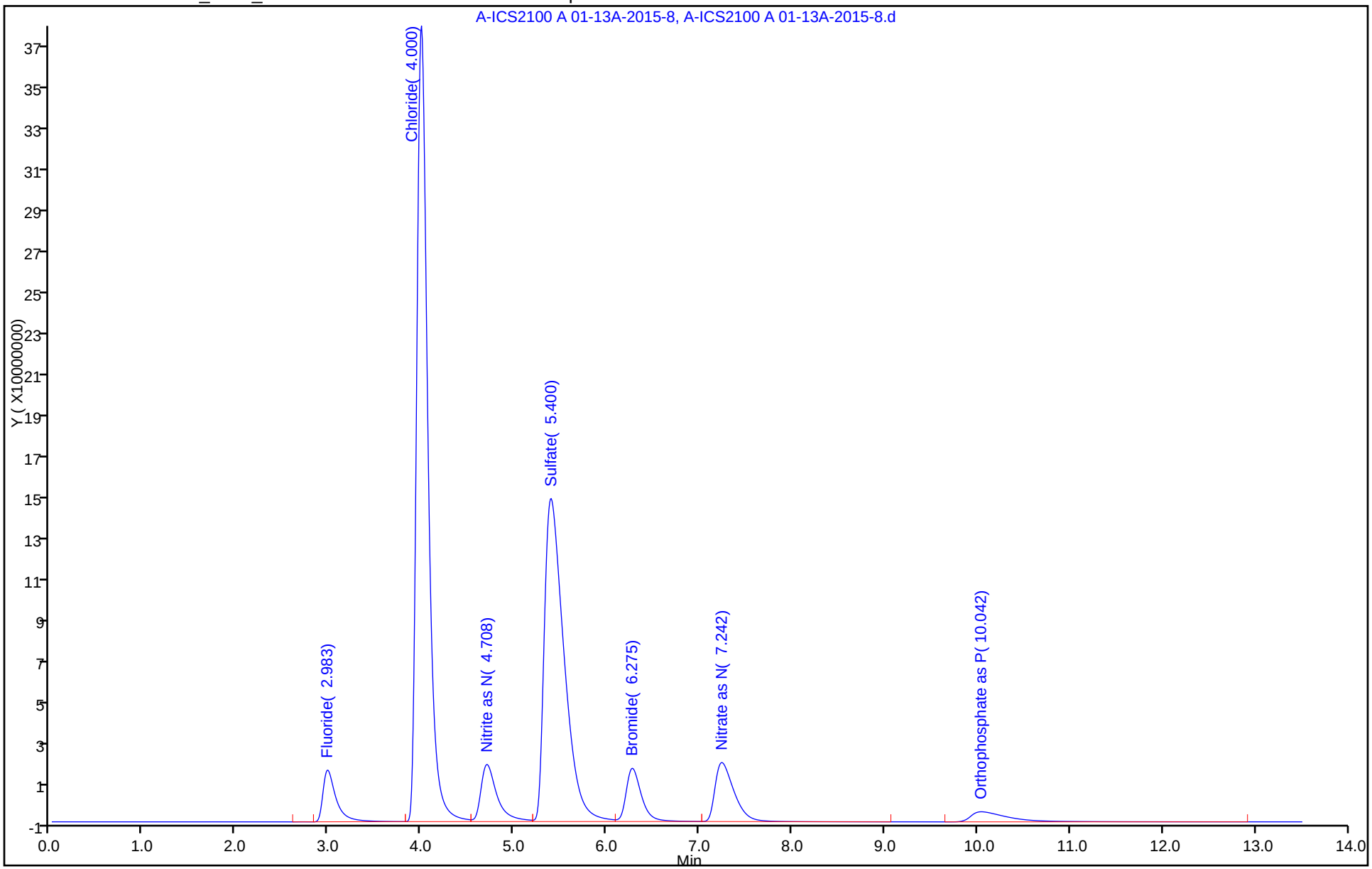
ICSTDL8_00095 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:35 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-8.d

Injection Date:	13-Jan-2015 13:56:00	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: 13-Jan-2015 18:17:36 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d
Lims ID: ic L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 13-Jan-2015 14:11:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005255-009
Misc. Info.: 29899 ic l9
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 13-Jan-2015 18:17:36 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:18:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	31755636H	10.0	10.1	
2 Chloride	3.992	4.017	-0.025	4243816805	200.0	199.3	
7 Nitrite as N	4.692	4.733	-0.041	419271383	10.0	9.18	
3 Sulfate	5.342	5.558	-0.216	3044449965	200.0	197.7	
4 Bromide	6.258	6.342	-0.084	389291171	40.0	40.2	
5 Nitrate as N	7.208	7.375	-0.167	535633171	10.0	10.1	
6 Orthophosphate as P	9.942	10.350	-0.408	187068903	10.0	10.9	

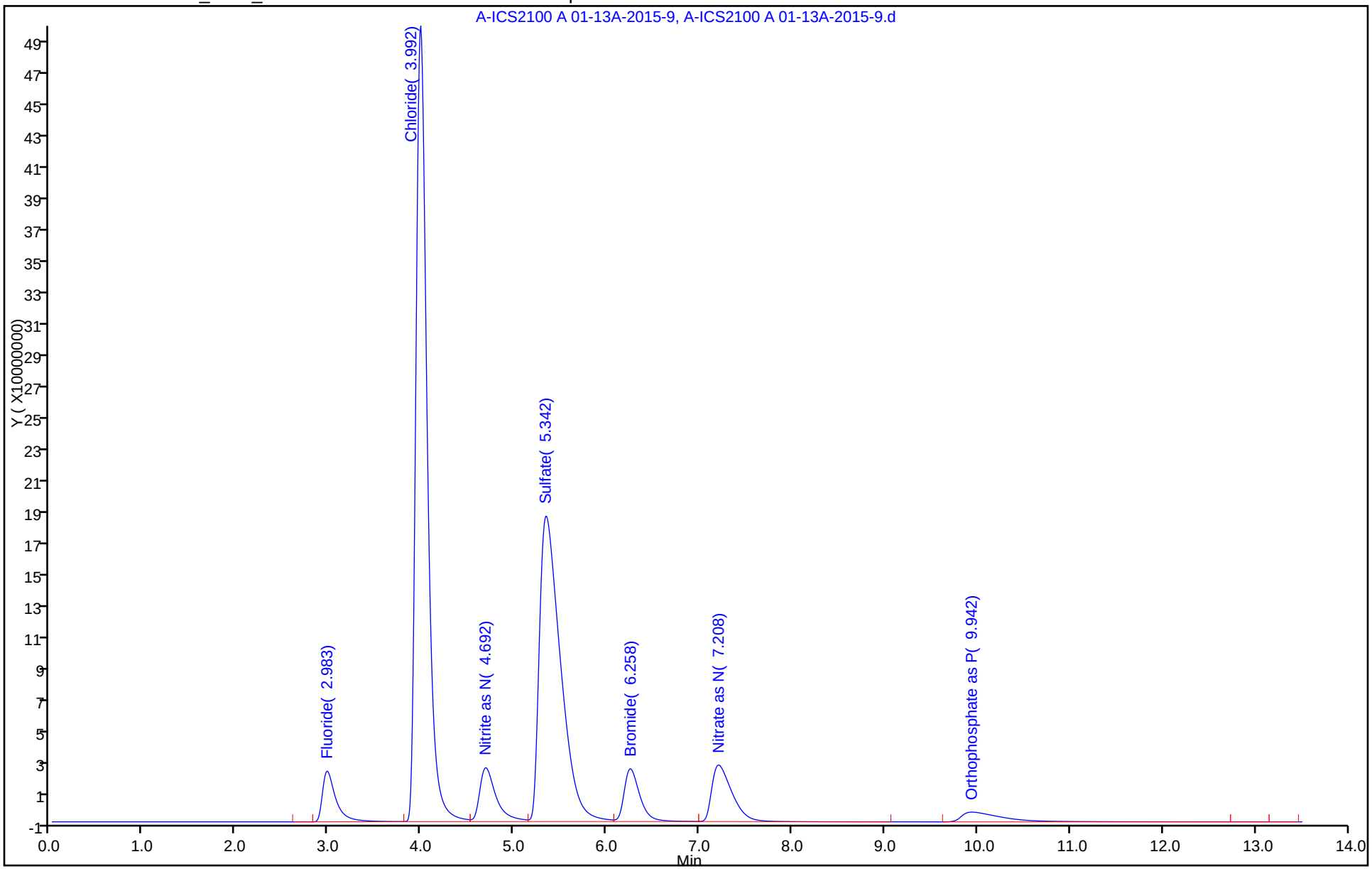
Reagents:

ICSTDL9_00100 Amount Added: 1.00 Units: mL

Report Date: 13-Jan-2015 18:17:36 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d				
Injection Date:	13-Jan-2015 14:11:00	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.: 180-40481-1

SDG No.:

Lab Sample ID: ICV 180-130845/2 Calibration Date: 01/15/2015 10:50

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-11.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3299939		3.14	3.00	4.7	10.0
Chloride	Lin2		21076630		59.3	60.0	-1.1	10.0
Nitrite as N	Lin2		47119067		3.06	3.00	2.1	10.0
Sulfate	Lin2		15351045		59.7	60.0	-0.5	10.0
Bromide	LinF		9586488		11.9	12.0	-0.9	10.0
Nitrate as N	Lin2		51352568		2.92	3.00	-2.8	10.0
Orthophosphate as P	Lin2		16293736		2.86	3.00	-4.8	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: ICV 180-130845/2 Calibration Date: 01/15/2015 10:50

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-11.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.01	3.66	4.36
Nitrite as N	4.71	4.48	4.98
Sulfate	5.48	5.14	5.84
Bromide	6.31	5.97	6.67
Nitrate as N	7.32	7.07	7.57
Orthophosphate as P	10.24	10.00	10.50

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-11.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 15-Jan-2015 10:50:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-002
Misc. Info.: 11 icv
Operator ID: Instrument ID: CHIC2100A
Sublist:

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:59 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	9899816H	3.00	3.14	
2 Chloride	4.008	4.008	0.000	1264597799	60.0	59.3	
7 Nitrite as N	4.708	4.725	-0.017	141413744	3.00	3.06	
3 Sulfate	5.475	5.492	-0.017	921062692	60.0	59.7	
4 Bromide	6.308	6.317	-0.009	115037859	12.0	11.9	
5 Nitrate as N	7.317	7.317	0.000	154057703	3.00	2.92	
6 Orthophosphate as P	10.242	10.250	-0.008	48881209	3.00	2.86	

Reagents:

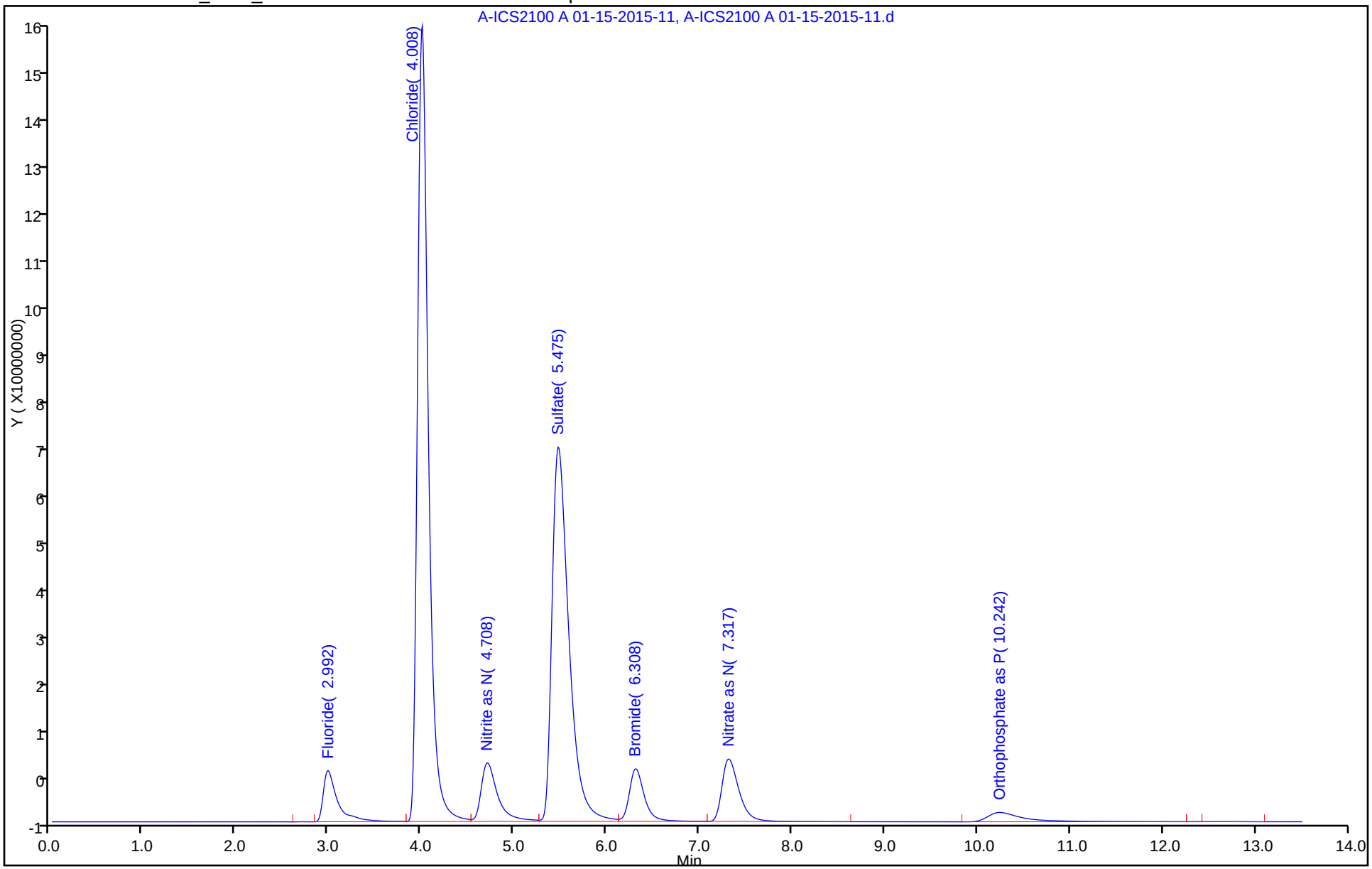
icicv_01175 Amount Added: 1.00 Units: mL

Report Date: 15-Jan-2015 16:09:59 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-11.d

Injection Date:	15-Jan-2015 10:50:00	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.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/3 Calibration Date: 01/15/2015 11:05

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-12.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3410372		2.71	2.50	8.2	10.0
Chloride	Lin2		21484014		50.4	50.0	0.8	10.0
Nitrite as N	Lin2		47642932		2.57	2.50	2.9	10.0
Sulfate	Lin2		15492273		50.2	50.0	0.4	10.0
Bromide	LinF		9666815		9.99	10.0	-0.0	10.0
Nitrate as N	Lin2		52845543		2.50	2.50	0.0	10.0
Orthophosphate as P	Lin2		16378647		2.40	2.50	-4.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/3 Calibration Date: 01/15/2015 11:05

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-12.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.01	3.66	4.36
Nitrite as N	4.73	4.48	4.98
Sulfate	5.49	5.14	5.84
Bromide	6.32	5.97	6.67
Nitrate as N	7.32	7.07	7.57
Orthophosphate as P	10.25	10.00	10.50

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-12.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 15-Jan-2015 11:05:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-003
Misc. Info.: 12 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:59 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8525929H	2.50	2.71	
2 Chloride	4.008	4.008	0.000	1074200723	50.0	50.4	
7 Nitrite as N	4.725	4.725	0.000	119107331	2.50	2.57	
3 Sulfate	5.492	5.492	0.000	774613633	50.0	50.2	
4 Bromide	6.317	6.317	0.000	96668149	10.0	10.0	
5 Nitrate as N	7.317	7.317	0.000	132113857	2.50	2.50	
6 Orthophosphate as P	10.250	10.250	0.000	40946618	2.50	2.40	

Reagents:

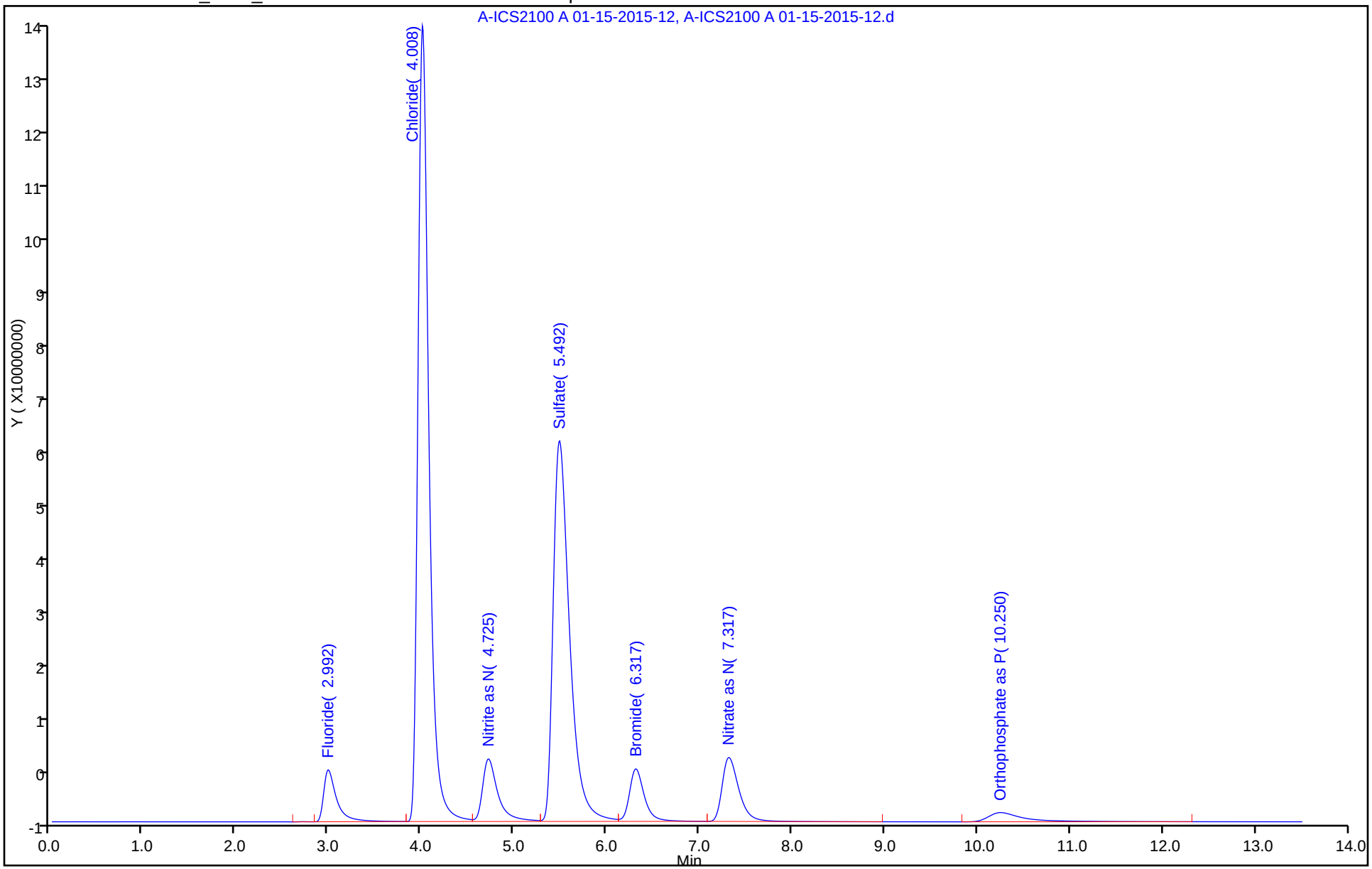
icccv_01143 Amount Added: 1.00 Units: mL

Report Date: 15-Jan-2015 16:09:59 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-12.d

Injection Date:	15-Jan-2015 11:05:00	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.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/15 Calibration Date: 01/15/2015 14:28

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-24.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3432380		2.72	2.50	8.9	10.0
Chloride	Lin2		21376590		50.1	50.0	0.3	10.0
Nitrite as N	Lin2		47407152		2.56	2.50	2.4	10.0
Sulfate	Lin2		15396991		49.9	50.0	-0.3	10.0
Bromide	LinF		9621531		9.94	10.0	-0.6	10.0
Nitrate as N	Lin2		52608124		2.49	2.50	-0.4	10.0
Orthophosphate as P	Lin2		16065264		2.35	2.50	-5.9	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/15 Calibration Date: 01/15/2015 14:28

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-24.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.01	3.66	4.36
Nitrite as N	4.72	4.47	4.97
Sulfate	5.50	5.15	5.85
Bromide	6.31	5.96	6.66
Nitrate as N	7.32	7.07	7.57
Orthophosphate as P	10.24	9.99	10.49

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-24.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 15-Jan-2015 14:28:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-015
Misc. Info.: 24 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:54 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8580950H	2.50	2.72	
2 Chloride	4.008	4.008	0.000	1068829516	50.0	50.1	
7 Nitrite as N	4.717	4.717	0.000	118517881	2.50	2.56	
3 Sulfate	5.500	5.500	0.000	769849570	50.0	49.9	
4 Bromide	6.308	6.308	0.000	96215311	10.0	9.94	
5 Nitrate as N	7.317	7.317	0.000	131520310	2.50	2.49	
6 Orthophosphate as P	10.242	10.242	0.000	40163159	2.50	2.35	

Reagents:

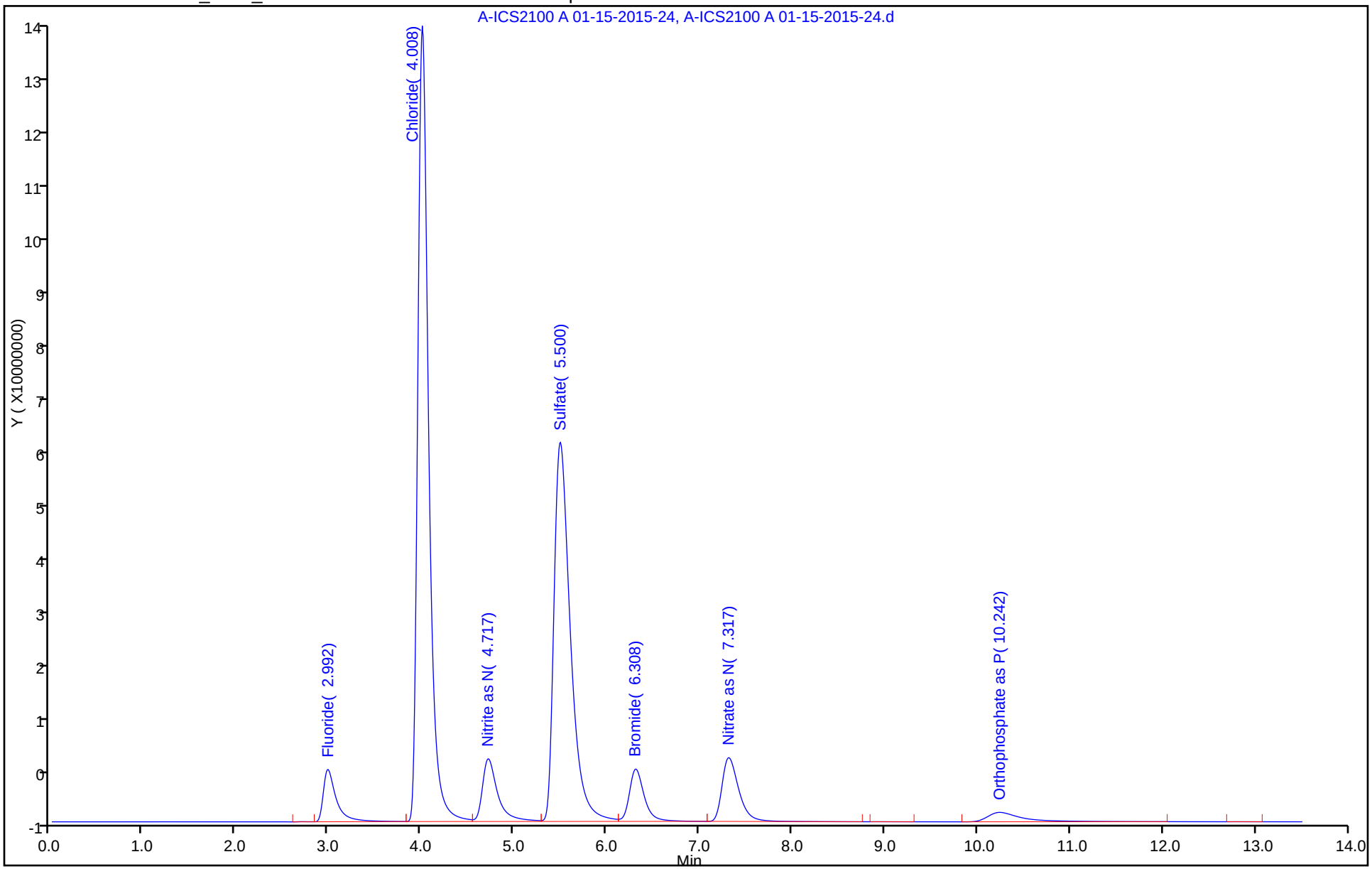
icccv_01143 Amount Added: 1.00 Units: mL

Report Date: 15-Jan-2015 16:09:55 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-24.d

Injection Date:	15-Jan-2015 14:28:00	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.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/27 Calibration Date: 01/15/2015 17:37

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-36.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3591206		2.85	2.50	14.0*	10.0
Chloride	Lin2		21319788		50.0	50.0	0.0	10.0
Nitrite as N	Lin2		45373608		2.45	2.50	-2.1	10.0
Sulfate	Lin2		15276451		49.5	50.0	-1.0	10.0
Bromide	LinF		9355270		9.67	10.0	-3.3	10.0
Nitrate as N	Lin2		52712796		2.50	2.50	-0.2	10.0
Orthophosphate as P	Lin2		16291982		2.38	2.50	-4.6	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/27 Calibration Date: 01/15/2015 17:37

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-36.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.98	2.63	3.33
Chloride	4.01	3.66	4.36
Nitrite as N	4.72	4.47	4.97
Sulfate	5.48	5.13	5.83
Bromide	6.31	5.96	6.66
Nitrate as N	7.32	7.07	7.57
Orthophosphate as P	10.23	9.98	10.48

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-36.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 15-Jan-2015 17:37:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-027
Misc. Info.: 36 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:49 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.983	0.000	8978014H	2.50	2.85	
2 Chloride	4.008	4.008	0.000	1065989392	50.0	50.0	
7 Nitrite as N	4.717	4.717	0.000	113434020	2.50	2.45	
3 Sulfate	5.483	5.483	0.000	763822527	50.0	49.5	
4 Bromide	6.308	6.308	0.000	93552700	10.0	9.67	
5 Nitrate as N	7.317	7.317	0.000	131781990	2.50	2.50	
6 Orthophosphate as P	10.233	10.233	0.000	40729955	2.50	2.38	

Reagents:

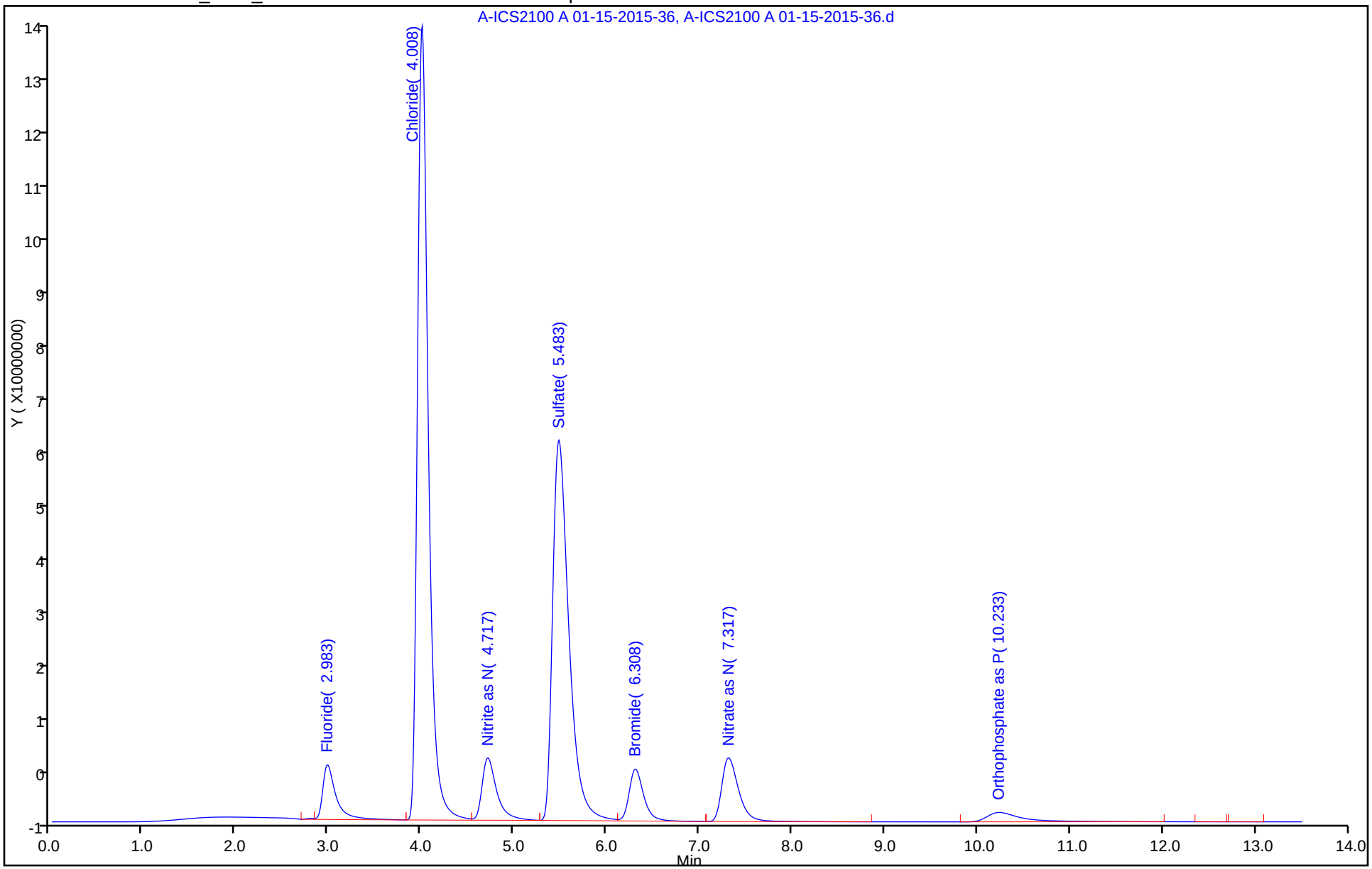
icccv_01143 Amount Added: 1.00 Units: mL

Report Date: 16-Jan-2015 10:57:49 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-36.d

Injection Date:	15-Jan-2015 17:37:00	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.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/38 Calibration Date: 01/15/2015 20:26

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-47.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3585051		2.84	2.50	13.8*	10.0
Chloride	Lin2		22249180		52.2	50.0	4.4	10.0
Nitrite as N	Lin2		49370094		2.67	2.50	6.7	10.0
Sulfate	Lin2		16246402		52.6	50.0	5.3	10.0
Bromide	LinF		10038715		10.4	10.0	3.8	10.0
Nitrate as N	Lin2		54948111		2.60	2.50	4.1	10.0
Orthophosphate as P	Lin2		16022943		2.35	2.50	-6.2	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: CCV 180-130845/38 Calibration Date: 01/15/2015 20:26

Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24

GC Column: AS-18 ID: Calib End Date: 01/13/2015 14:11

Lab File ID: A-ICS2100 A 01-15-2015-47.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.98	2.63	3.33
Chloride	4.01	3.66	4.36
Nitrite as N	4.72	4.47	4.97
Sulfate	5.48	5.13	5.83
Bromide	6.32	5.97	6.67
Nitrate as N	7.32	7.07	7.57
Orthophosphate as P	10.23	9.98	10.48

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-47.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 15-Jan-2015 20:26:00 ALS Bottle#: 0 Worklist Smp#: 38
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-038
Misc. Info.: 48 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:53 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.983	0.000	8962628H	2.50	2.84	
2 Chloride	4.008	4.008	0.000	1112458986	50.0	52.2	
7 Nitrite as N	4.717	4.717	0.000	123425235	2.50	2.67	
3 Sulfate	5.483	5.483	0.000	812320115	50.0	52.6	
4 Bromide	6.317	6.317	0.000	100387149	10.0	10.4	
5 Nitrate as N	7.317	7.317	0.000	137370278	2.50	2.60	
6 Orthophosphate as P	10.233	10.233	0.000	40057357	2.50	2.35	

Reagents:

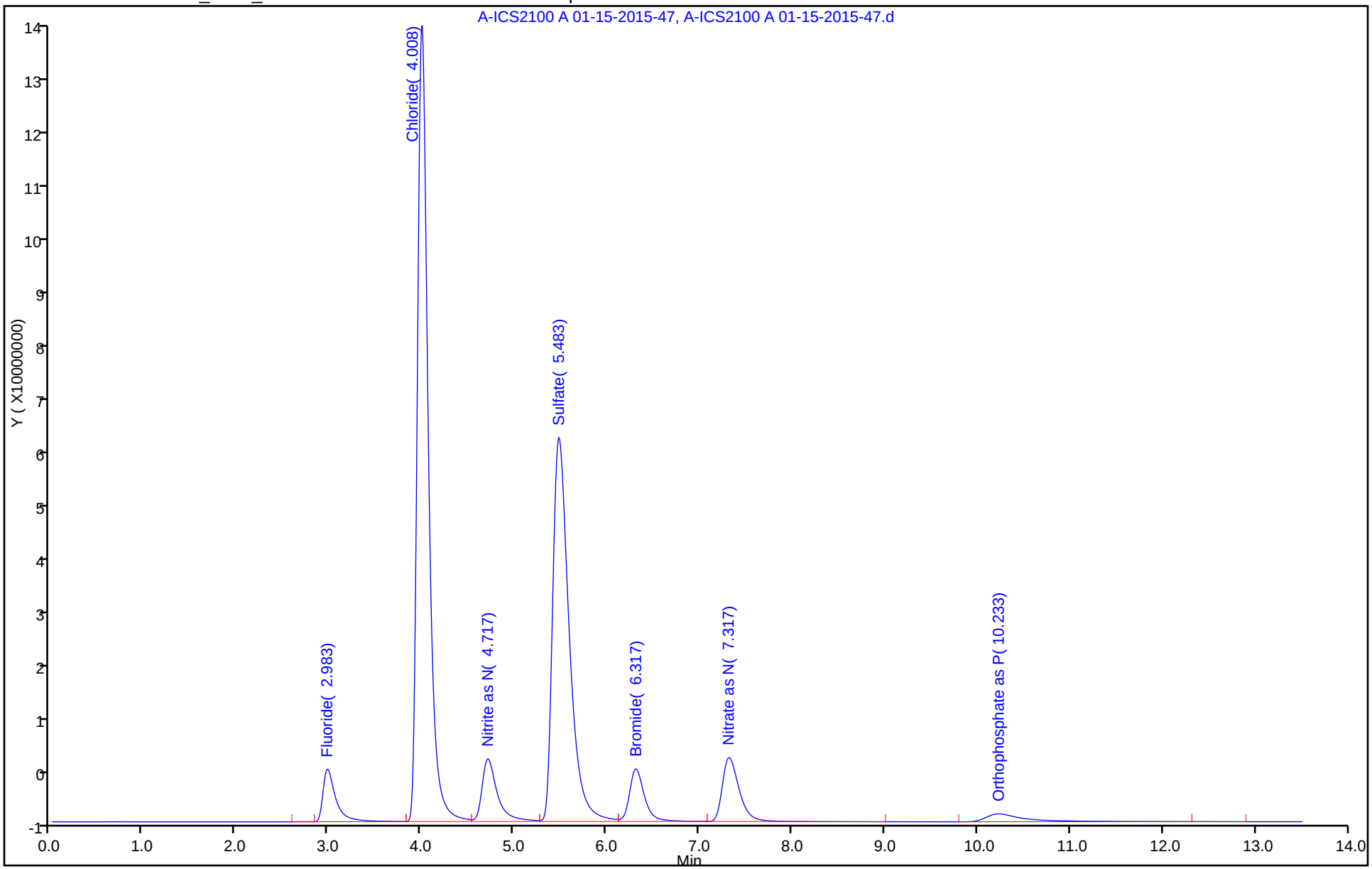
icccv_01143 Amount Added: 1.00 Units: mL

Report Date: 16-Jan-2015 10:57:53 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-47.d

Injection Date:	15-Jan-2015 20:26:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	38
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-130845/6

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-15.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 11:51

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00912	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

Report Date: 15-Jan-2015 16:09:57 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-15.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 15-Jan-2015 11:51:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-006
Misc. Info.: 15 mb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:54 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

First Level Reviewer: hartmanm Date: 15-Jan-2015 12:33:54

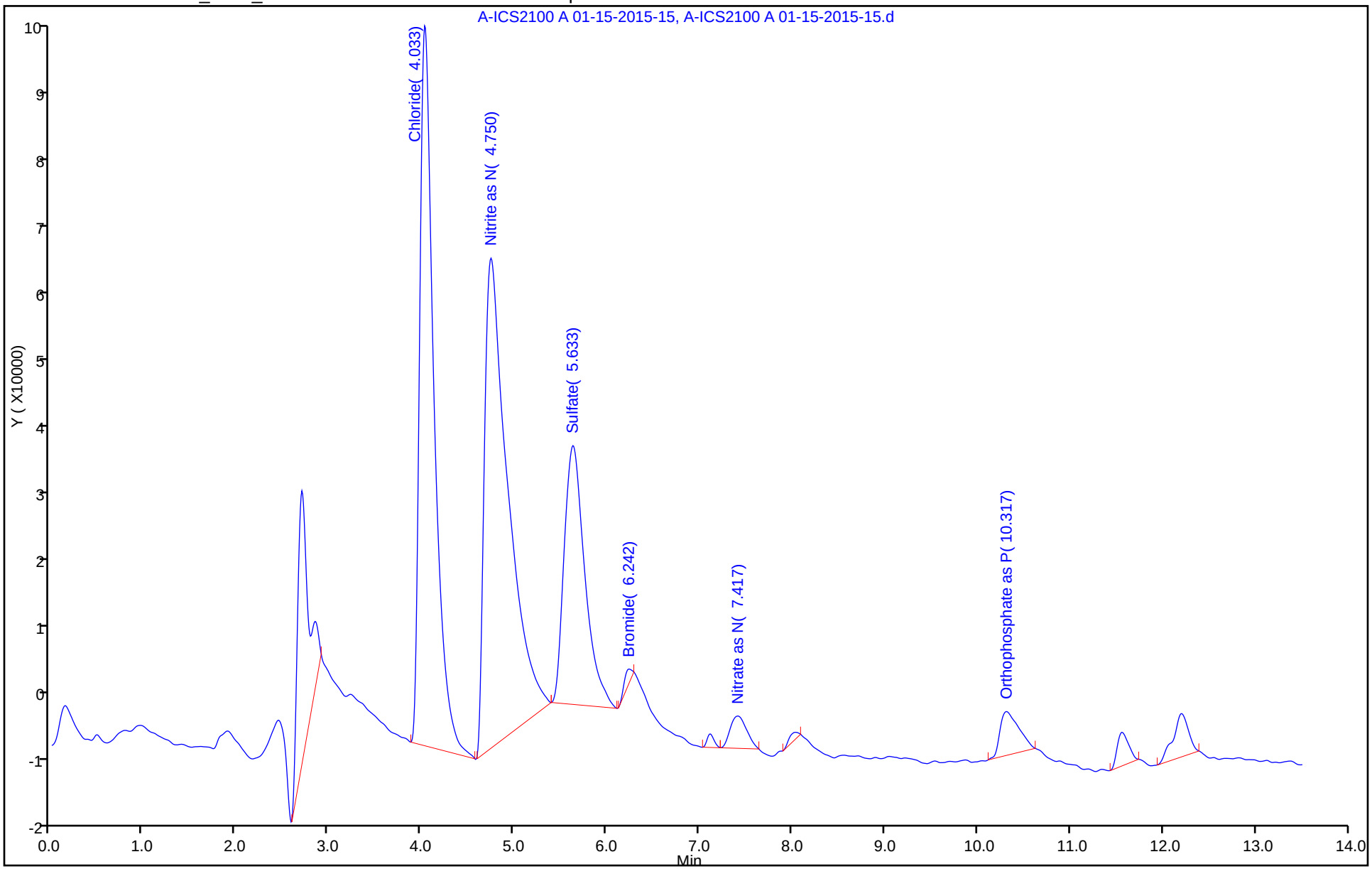
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.992				ND	
2 Chloride	4.033	4.008	0.025	1058905		-0.0222	
7 Nitrite as N	4.750	4.717	0.033	1177901		-0.0211	
3 Sulfate	5.633	5.500	0.133	545164		-0.1354	
4 Bromide	6.242	6.308	-0.066	11742		0.001214	
5 Nitrate as N	7.417	7.317	0.100	53892		0.009121	
6 Orthophosphate as P	10.317	10.242	0.075	82335		0.0250	

Report Date: 15-Jan-2015 16:09:58 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-15.d

Injection Date:	15-Jan-2015 11:51:00	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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-130845/4

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-13.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 11:20

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0103	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	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\20150115-5294.b\A-ICS2100 A 01-15-2015-13.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 15-Jan-2015 11:20:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-004
Misc. Info.: 13 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:54 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

First Level Reviewer: hartmanm Date: 15-Jan-2015 11:55:12

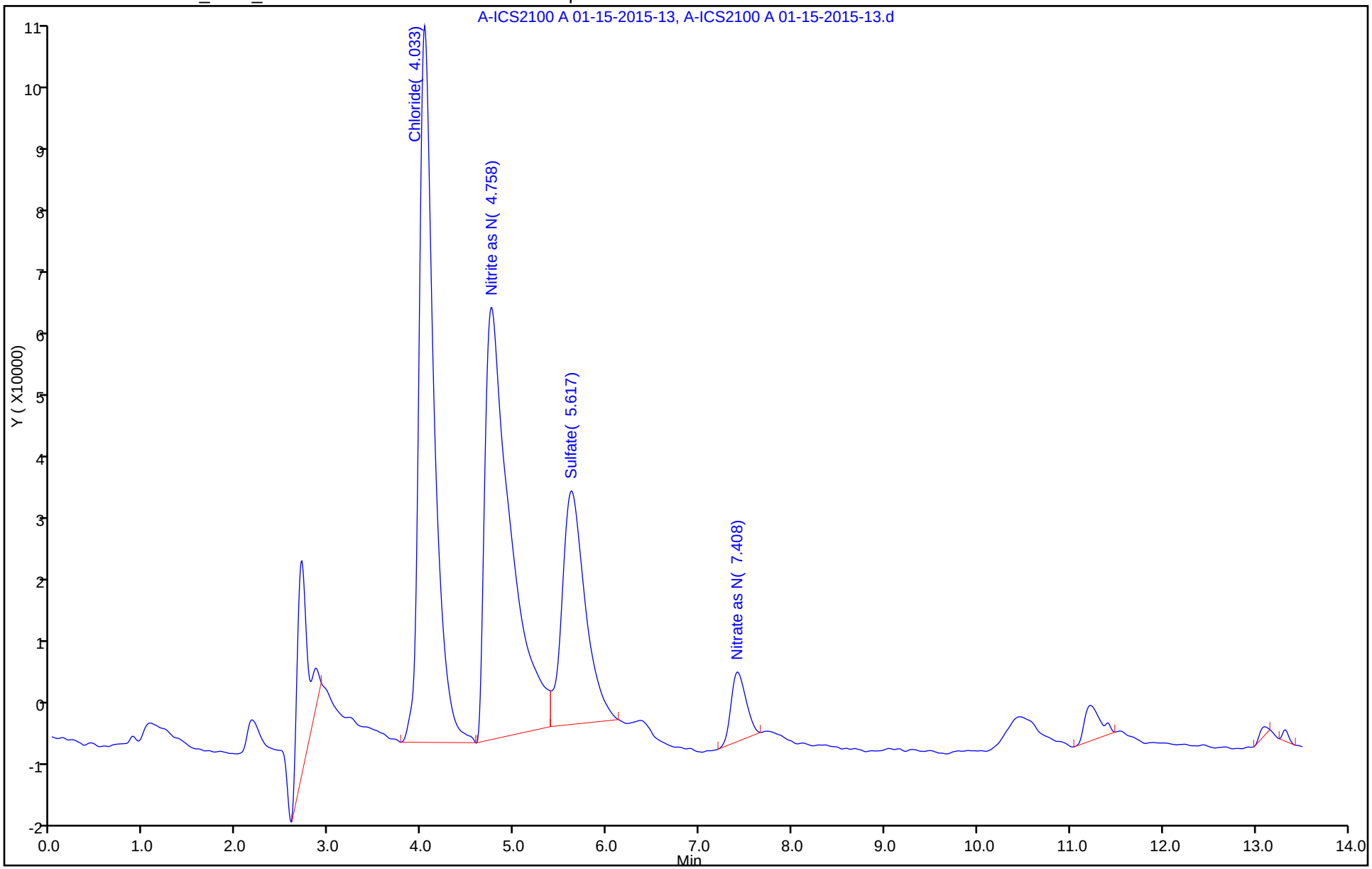
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.992				ND	
2 Chloride	4.033	4.008	0.025	1219246		-0.0147	
7 Nitrite as N	4.758	4.717	0.041	1249948		-0.0195	
3 Sulfate	5.617	5.500	0.117	614263		-0.1309	
4 Bromide		6.308				ND	
5 Nitrate as N	7.408	7.317	0.091	116800		0.0103	
6 Orthophosphate as P		10.242				ND	

Report Date: 15-Jan-2015 16:09:59 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-13.d

Injection Date:	15-Jan-2015 11:20:00	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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-130845/16

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-25.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 14:49

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00983	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	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\20150115-5294.b\A-ICS2100 A 01-15-2015-25.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 15-Jan-2015 14:49:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-016
Misc. Info.: 25 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 14:06:45 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

First Level Reviewer: hartmanm Date: 15-Jan-2015 15:19:39

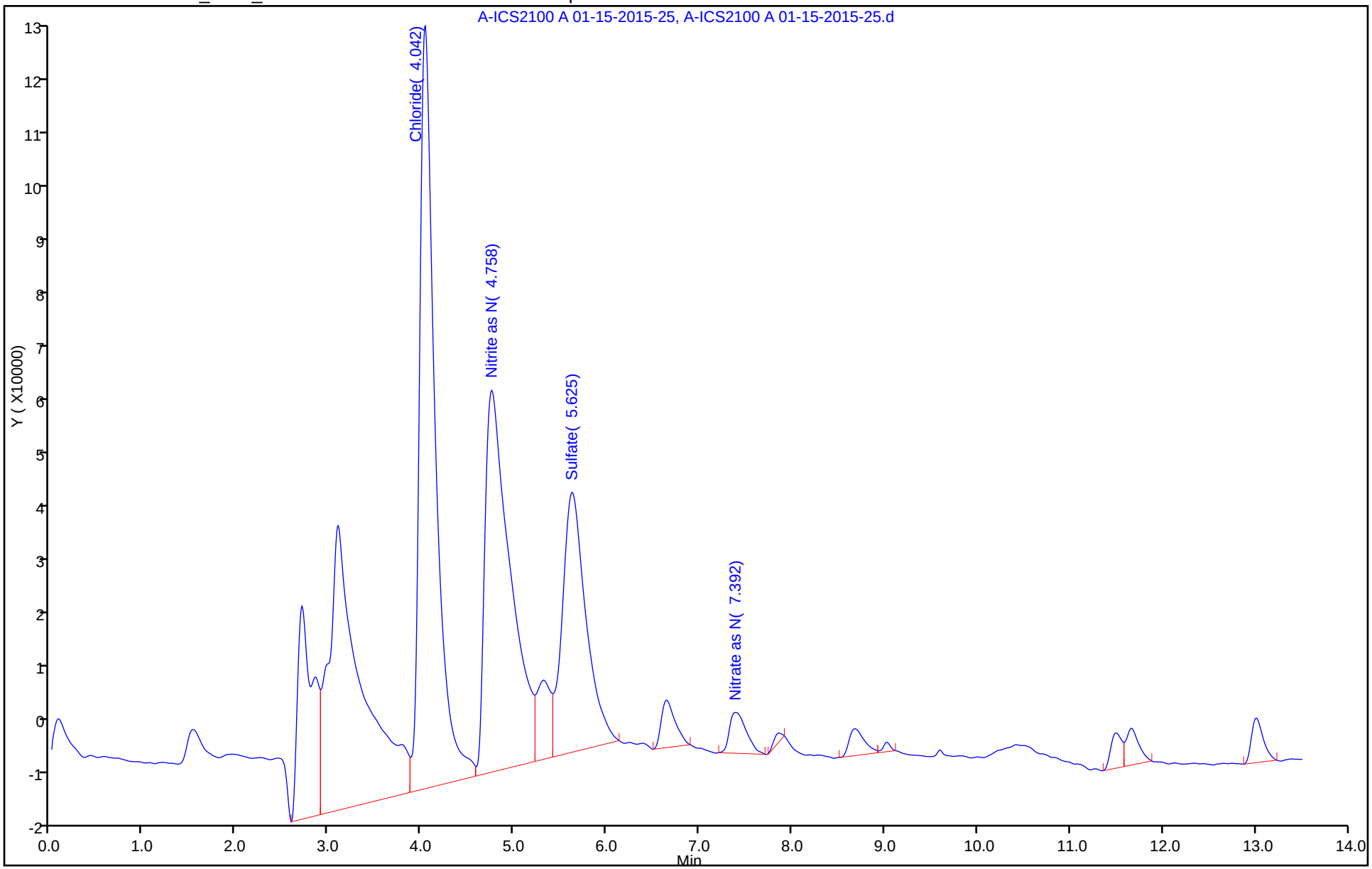
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.992				ND	
2 Chloride	4.042	4.008	0.034	1602760		0.003332	
7 Nitrite as N	4.758	4.717	0.041	1285667		-0.0187	
3 Sulfate	5.625	5.500	0.125	821839		-0.1174	
4 Bromide		6.308				ND	
5 Nitrate as N	7.392	7.317	0.075	91223		0.009826	
6 Orthophosphate as P		10.242				ND	

Report Date: 15-Jan-2015 16:09:54 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-25.d

Injection Date:	15-Jan-2015 14:49:00	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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-130845/28

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-37.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 17:53

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00967	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	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\20150115-5294.b\A-ICS2100 A 01-15-2015-37.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 15-Jan-2015 17:53:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-028
Misc. Info.: 37 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:49 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

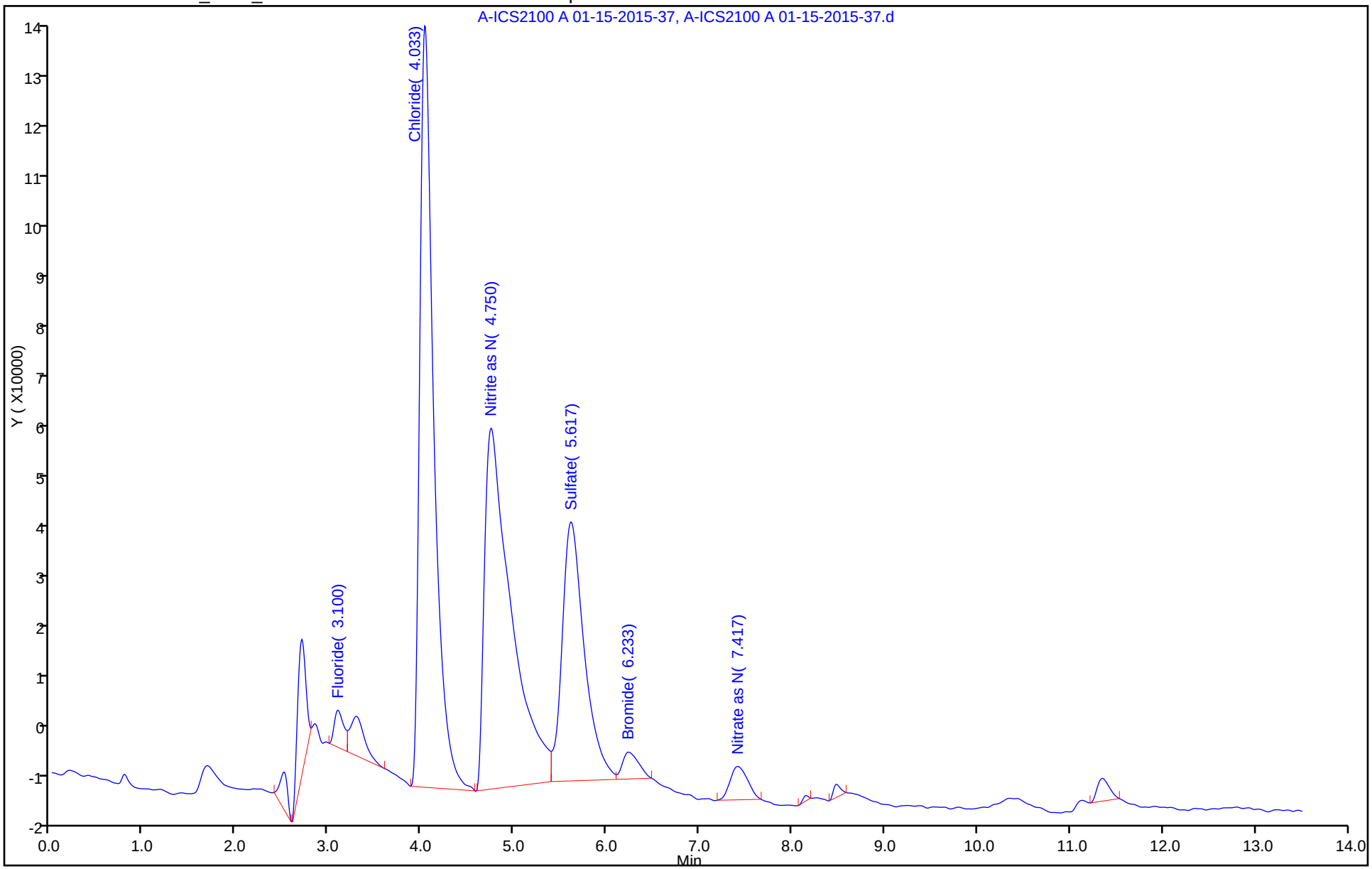
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.100	2.983	0.117	7008H		0.0124	
2 Chloride	4.033	4.008	0.025	1528642		-0.000150	
7 Nitrite as N	4.750	4.717	0.033	1376137		-0.0167	
3 Sulfate	5.617	5.483	0.134	820414		-0.1175	
4 Bromide	6.233	6.308	-0.075	62006		0.006409	
5 Nitrate as N	7.417	7.317	0.100	83176		0.009674	
6 Orthophosphate as P		10.233				ND	

Report Date: 16-Jan-2015 10:57:49 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-37.d

Injection Date:	15-Jan-2015 17:53:00	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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-130845/39

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-48.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 20:41

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0107	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

Report Date: 16-Jan-2015 10:58:15 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-48.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 15-Jan-2015 20:41:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-039
Misc. Info.: 49 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:53 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

First Level Reviewer: hartmanm Date: 16-Jan-2015 10:57:43

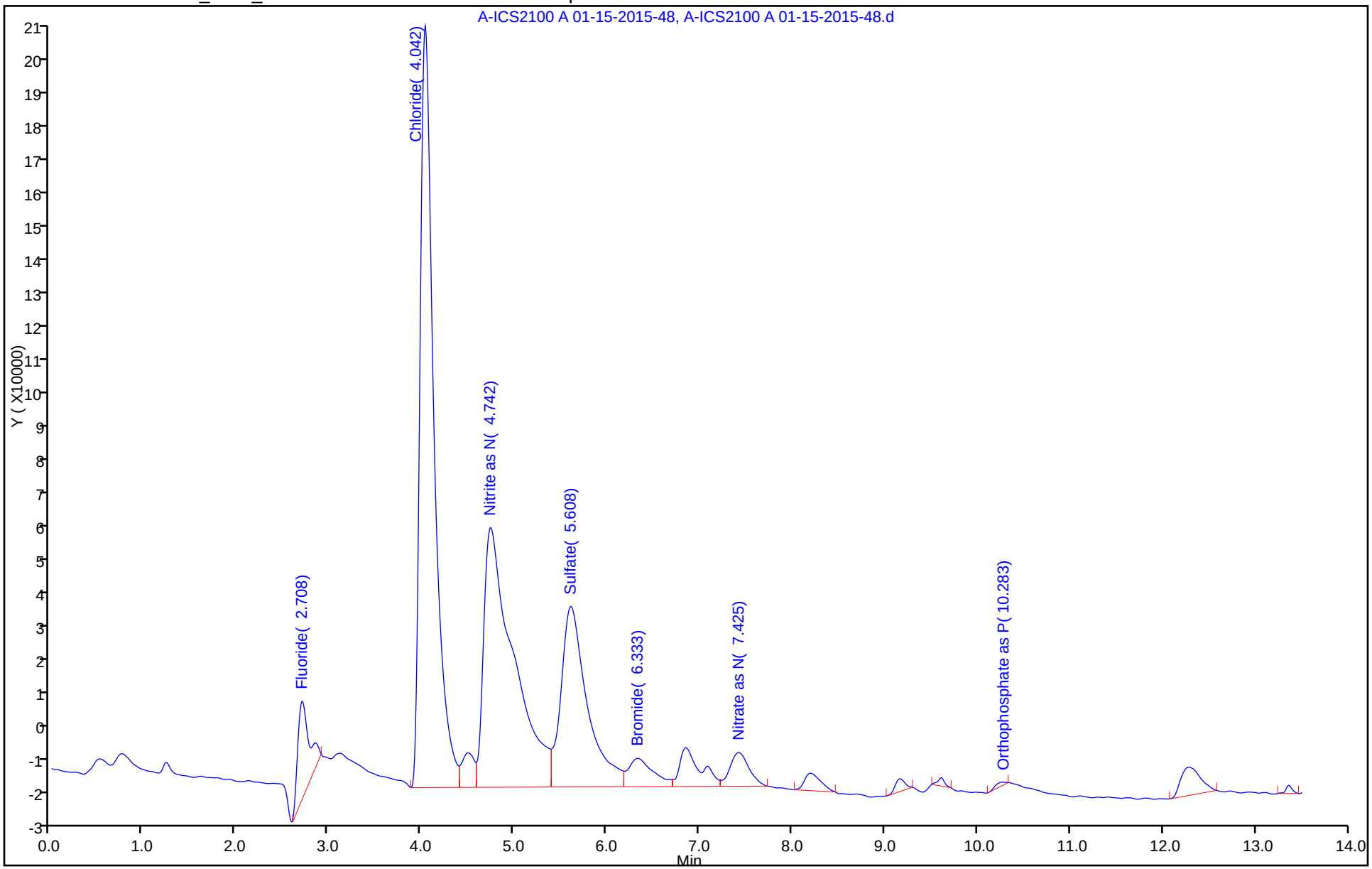
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.708	2.983	-0.275	27830H		0.0190	
2 Chloride	4.042	4.008	0.034	2264178		0.0344	
7 Nitrite as N	4.742	4.717	0.025	1646092		-0.0108	
3 Sulfate	5.608	5.483	0.125	1009248		-0.1053	
4 Bromide	6.333	6.317	0.016	151553		0.0157	
5 Nitrate as N	7.425	7.317	0.108	136998		0.0107	
6 Orthophosphate as P	10.283	10.233	0.050	8443		0.0208	

Report Date: 16-Jan-2015 10:58:15 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-48.d

Injection Date:	15-Jan-2015 20:41:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccb			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.: 180-40481-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-130845/5

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-14.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 11:36

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.49		0.10	0.0062
16887-00-6	Chloride	49.8		1.0	0.20
14808-79-8	Sulfate	49.7		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-14.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 15-Jan-2015 11:36:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-005
Misc. Info.: 14 lcs
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 15-Jan-2015 16:09:54 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK031

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	8508638	H	2.50	2.70
2 Chloride	4.000	4.008	-0.008	1062068077		50.0	49.8
7 Nitrite as N	4.717	4.717	0.000	118111805		2.50	2.55
3 Sulfate	5.483	5.500	-0.017	767750303		50.0	49.7
4 Bromide	6.308	6.308	0.000	96221195		10.0	9.95
5 Nitrate as N	7.308	7.317	-0.009	131245629		2.50	2.49
6 Orthophosphate as P	10.283	10.242	0.041	37354986		2.50	2.19

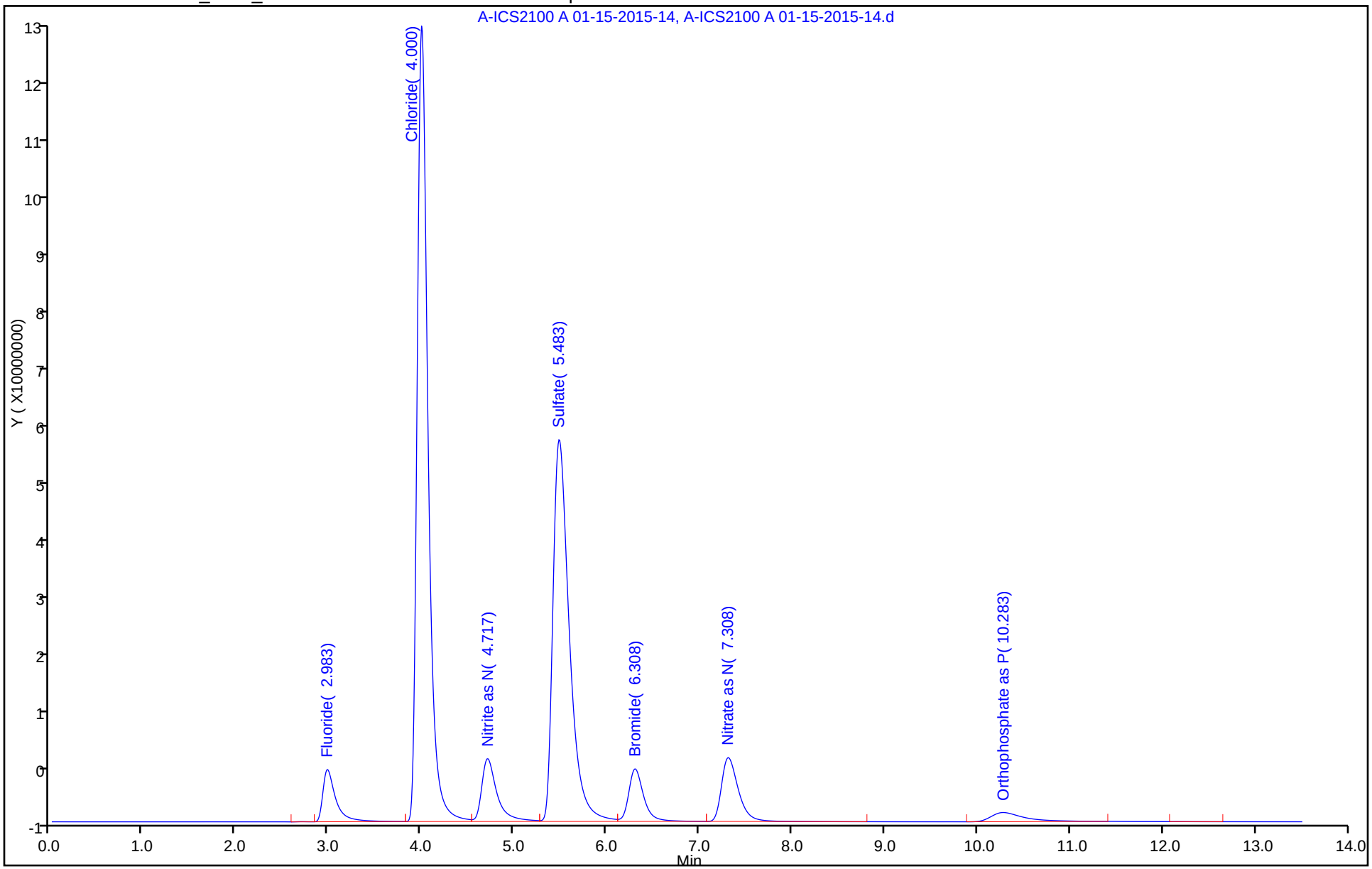
Reagents:

icccv_01143 Amount Added: 1.00 Units: mL

Report Date: 15-Jan-2015 16:09:58 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-14.d				
Injection Date:	15-Jan-2015 11:36:00	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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100S-0/1-0 MS Lab Sample ID: 180-40481-3 MS

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-40.d

Analysis Method: 300.0 Date Collected: 01/14/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 18:39

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	5.59		0.10	0.0062
16887-00-6	Chloride	133		1.0	0.20
14808-79-8	Sulfate	64.7		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-40.d
Lims ID: 180-40481-A-3 MS
Client ID:
Sample Type: MS
Inject. Date: 15-Jan-2015 18:39:00 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-031
Misc. Info.: 40 180-40481-a-3 MS
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:49 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.983	0.000	4660497H	1.25	1.48	
2 Chloride	3.992	4.008	-0.016	2837180952	25.0	133.2	
7 Nitrite as N		4.717				ND	
3 Sulfate	5.458	5.483	-0.025	997691207	25.0	64.7	
4 Bromide	6.317	6.308	0.009	54565257	5.00	5.64	
5 Nitrate as N	7.267	7.317	-0.050	295732496	1.25	5.59	
6 Orthophosphate as P		10.233			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

Reagents:

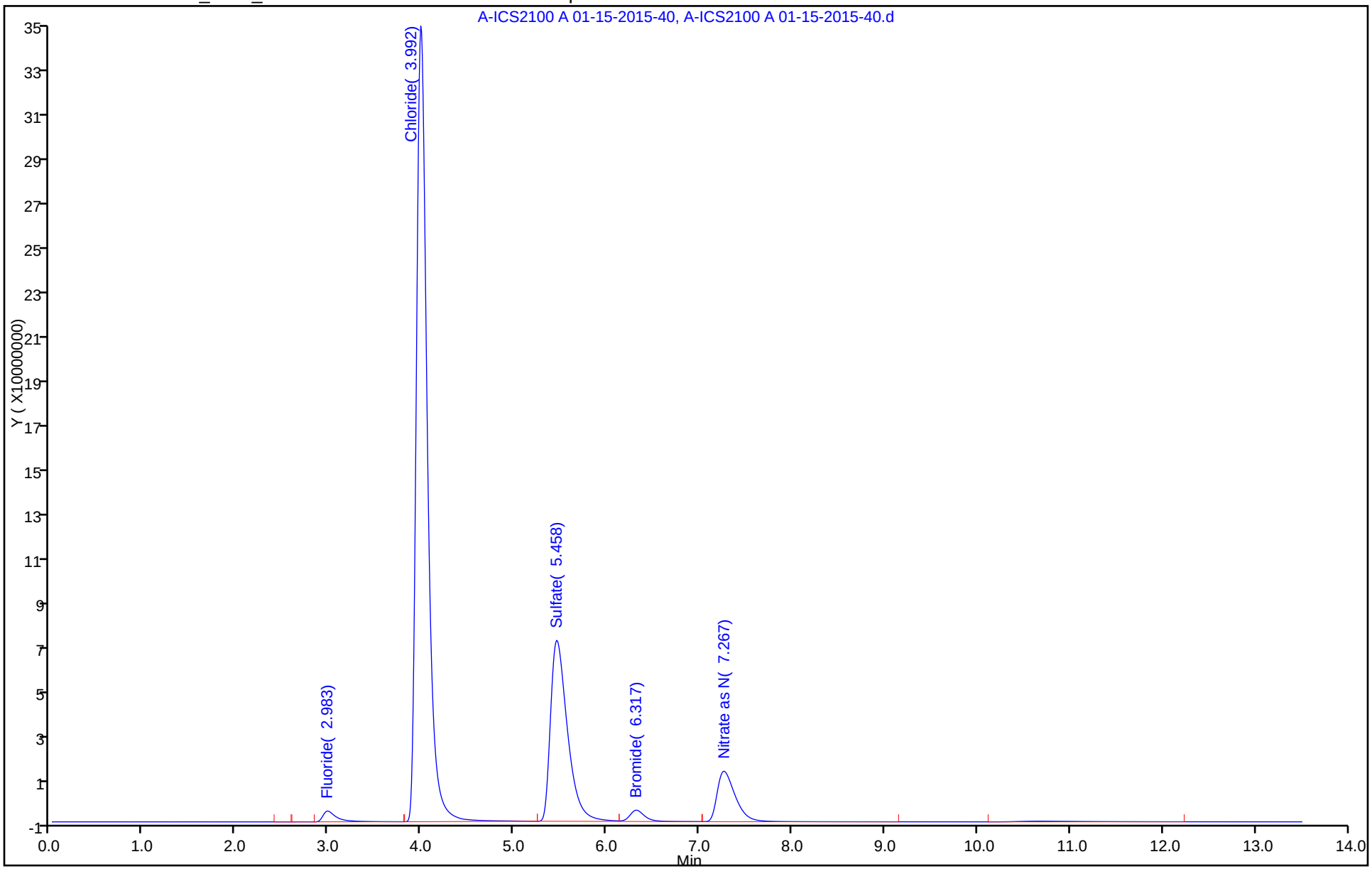
ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 16-Jan-2015 10:57:50 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-40.d

Injection Date:	15-Jan-2015 18:39:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-3 MS			Worklist Smp#:	31
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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-99D-0/1-0 MS Lab Sample ID: 180-40481-4 MS

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-34.d

Analysis Method: 300.0 Date Collected: 01/14/2015 12:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 17:07

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.38		0.10	0.0062
16887-00-6	Chloride	75.2		1.0	0.20
14808-79-8	Sulfate	51.9		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-34.d
Lims ID: 180-40481-A-4 MS
Client ID:
Sample Type: MS
Inject. Date: 15-Jan-2015 17:07:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-025
Misc. Info.: 34 180-40481-a-4 ms
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 08:46:50 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.983	0.000	4760355H	1.25	1.52	
2 Chloride	3.992	4.008	-0.016	1603046116	25.0	75.2	
7 Nitrite as N		4.717				ND	
3 Sulfate	5.483	5.483	0.000	800819342	25.0	51.9	
4 Bromide	6.317	6.317	0.000	49321706	5.00	5.10	
5 Nitrate as N	7.292	7.317	-0.025	178775984	1.25	3.38	
6 Orthophosphate as P		10.233			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

Reagents:

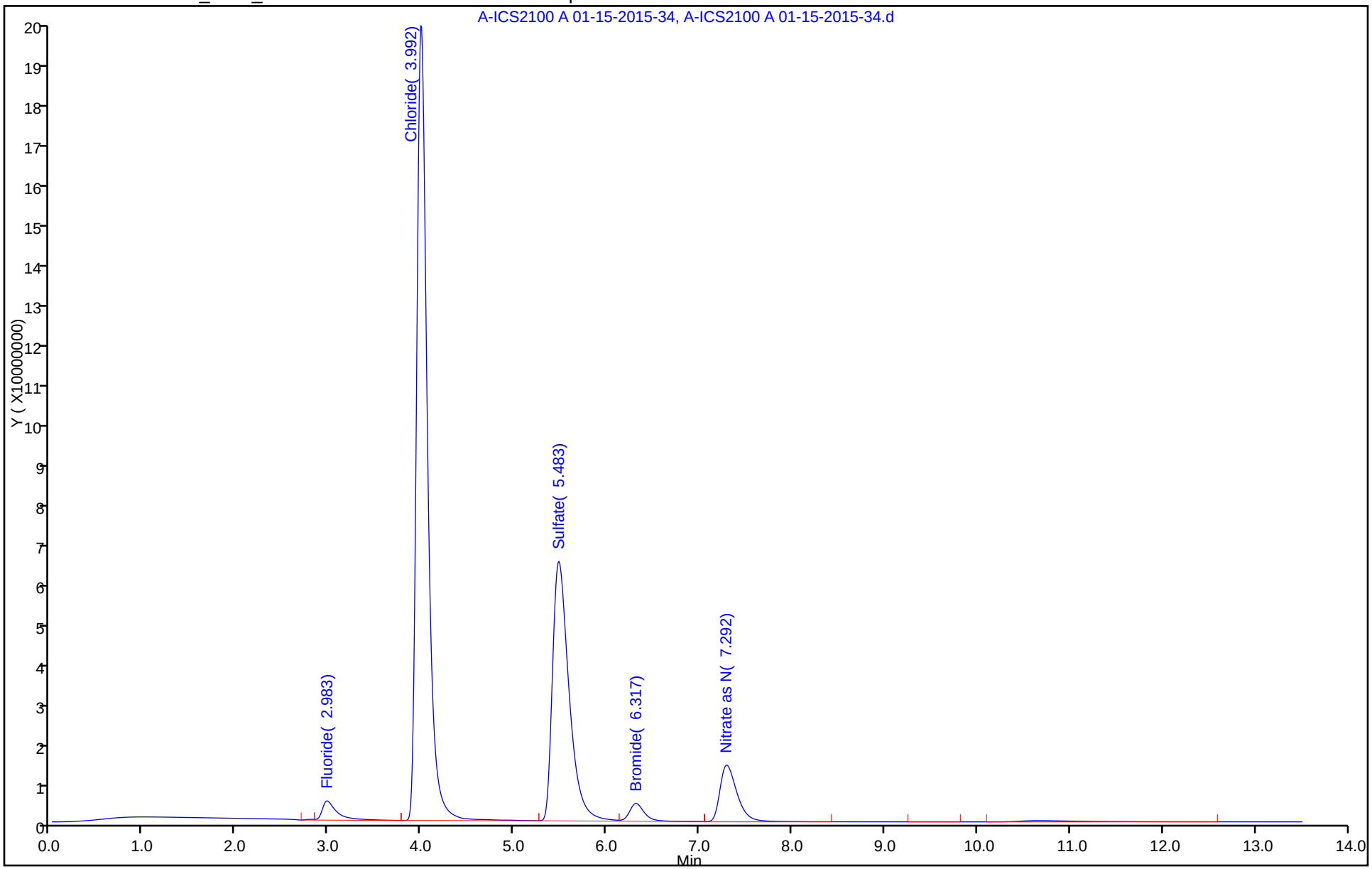
ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 16-Jan-2015 10:57:48 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-34.d

Injection Date:	15-Jan-2015 17:07:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-4 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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-100S-0/1-0 MSD Lab Sample ID: 180-40481-3 MSD

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-41.d

Analysis Method: 300.0 Date Collected: 01/14/2015 10:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 18:54

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	5.54		0.10	0.0062
16887-00-6	Chloride	132		1.0	0.20
14808-79-8	Sulfate	64.1		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-41.d
Lims ID: 180-40481-A-3 MSD
Client ID:
Sample Type: MSD
Inject. Date: 15-Jan-2015 18:54:00 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-032
Misc. Info.: 41 180-40481-a-3 MSD
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 10:57:49 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.983	0.000	4605817H	1.25	1.47	
2 Chloride	3.992	4.008	-0.016	2811458173	25.0	132.0	
7 Nitrite as N		4.717				ND	
3 Sulfate	5.458	5.483	-0.025	988511520	25.0	64.1	
4 Bromide	6.317	6.308	0.009	54057806	5.00	5.59	
5 Nitrate as N	7.258	7.317	-0.059	293264654	1.25	5.54	
6 Orthophosphate as P		10.233			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

Reagents:

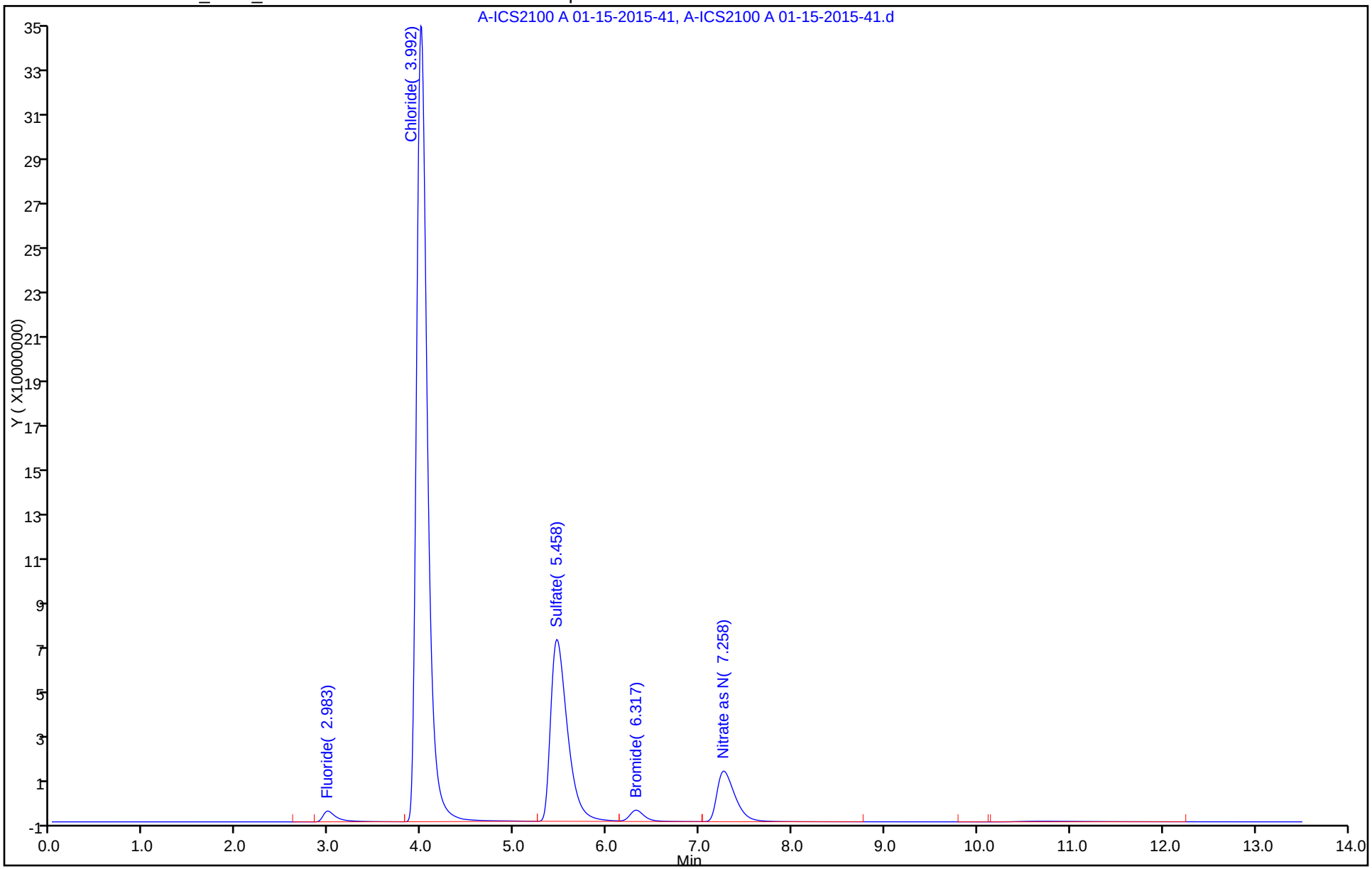
ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 16-Jan-2015 10:57:51 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-41.d

Injection Date:	15-Jan-2015 18:54:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-3 MSD			Worklist Smp#:	32
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.: 180-40481-1

SDG No.:

Client Sample ID: HD-MW-99D-0/1-0 MSD Lab Sample ID: 180-40481-4 MSD

Matrix: Water Lab File ID: A-ICS2100 A 01-15-2015-35.d

Analysis Method: 300.0 Date Collected: 01/14/2015 12:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/15/2015 17:22

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 130845 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.37		0.10	0.0062
16887-00-6	Chloride	75.0		1.0	0.20
14808-79-8	Sulfate	51.8		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-35.d
Lims ID: 180-40481-A-4 MSD
Client ID:
Sample Type: MSD
Inject. Date: 15-Jan-2015 17:22:00 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005294-026
Misc. Info.: 35 180-40481-a-4 msd
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 16-Jan-2015 08:46:50 Calib Date: 13-Jan-2015 14:11:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Column 1 : Det: 0008
Process Host: XAWRK028

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.983	0.000	4703014H	1.25	1.50	
2 Chloride	4.000	4.008	-0.008	1597801855	25.0	75.0	
7 Nitrite as N		4.717				ND	
3 Sulfate	5.483	5.483	0.000	799454391	25.0	51.8	
4 Bromide	6.325	6.317	0.008	48943129	5.00	5.06	
5 Nitrate as N	7.300	7.317	-0.017	178017179	1.25	3.37	
6 Orthophosphate as P		10.233			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

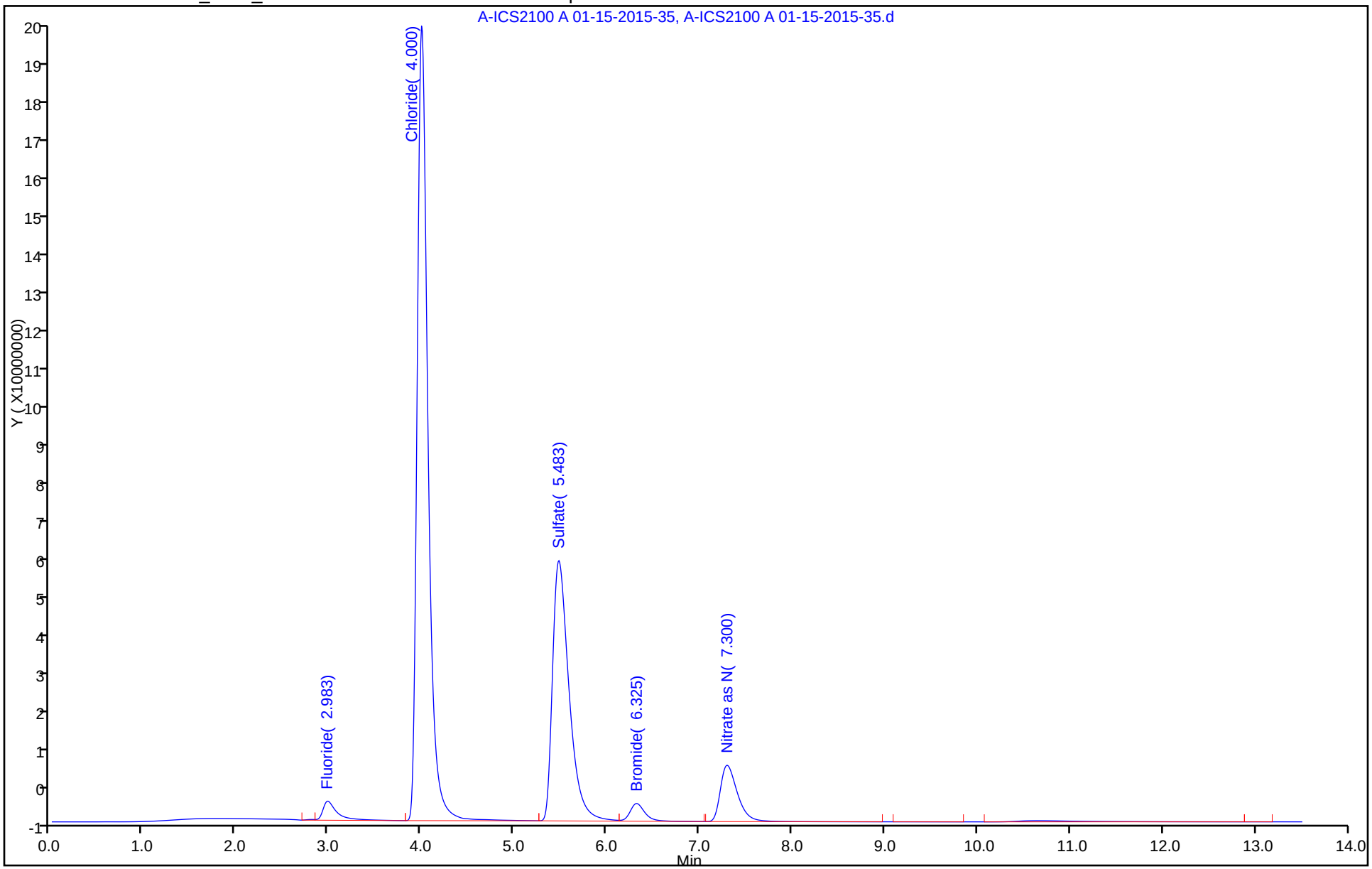
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 16-Jan-2015 10:57:49 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150115-5294.b\A-ICS2100 A 01-15-2015-35.d				
Injection Date:	15-Jan-2015 17:22:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40481-A-4 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		



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 01/13/2015 12:09

Analysis Batch Number: 130629 End Date: 01/13/2015 21:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		01/13/2015 12:09	1		AS-18
IC 180-130629/2		01/13/2015 12:24	1	A-ICS2100 A 01-13A-2015-2.d	AS-18
IC 180-130629/3		01/13/2015 12:39	1	A-ICS2100 A 01-13A-2015-3.d	AS-18
ICRT 180-130629/4		01/13/2015 12:55	1	A-ICS2100 A 01-13A-2015-4.d	AS-18
IC 180-130629/5		01/13/2015 13:10	1	A-ICS2100 A 01-13A-2015-5.d	AS-18
IC 180-130629/6		01/13/2015 13:25	1	A-ICS2100 A 01-13A-2015-6.d	AS-18
IC 180-130629/7		01/13/2015 13:41	1	A-ICS2100 A 01-13A-2015-7.d	AS-18
IC 180-130629/8		01/13/2015 13:56	1	A-ICS2100 A 01-13A-2015-8.d	AS-18
IC 180-130629/9		01/13/2015 14:11	1	A-ICS2100 A 01-13A-2015-9.d	AS-18
ZZZZZ		01/13/2015 14:27	1		AS-18
ZZZZZ		01/13/2015 14:54	1		AS-18
ZZZZZ		01/13/2015 15:09	1		AS-18
ICV 180-130629/13		01/13/2015 15:24	1		AS-18
CCV 180-130629/14		01/13/2015 15:40	1		AS-18
CCB 180-130629/15		01/13/2015 15:55	1		AS-18
ZZZZZ		01/13/2015 16:10	1		AS-18
ZZZZZ		01/13/2015 16:26	1		AS-18
ZZZZZ		01/13/2015 16:43	5		AS-18
ZZZZZ		01/13/2015 16:58	50		AS-18
ZZZZZ		01/13/2015 17:14	10		AS-18
ZZZZZ		01/13/2015 17:29	100		AS-18
ZZZZZ		01/13/2015 17:44	10		AS-18
ZZZZZ		01/13/2015 17:59	100		AS-18
ZZZZZ		01/13/2015 18:15	1		AS-18
ZZZZZ		01/13/2015 18:30	1		AS-18
CCV 180-130629/26		01/13/2015 18:45	1		AS-18
CCB 180-130629/27		01/13/2015 19:01	1		AS-18
ZZZZZ		01/13/2015 19:16	1		AS-18
ZZZZZ		01/13/2015 19:31	25		AS-18
ZZZZZ		01/13/2015 19:47	25		AS-18
ZZZZZ		01/13/2015 20:02	25		AS-18
ZZZZZ		01/13/2015 20:17	25		AS-18
ZZZZZ		01/13/2015 20:32	25		AS-18
ZZZZZ		01/13/2015 20:48	25		AS-18
ZZZZZ		01/13/2015 21:03	100		AS-18
ZZZZZ		01/13/2015 21:18	100		AS-18
CCV 180-130629/37		01/13/2015 21:34	1		AS-18
CCB 180-130629/38		01/13/2015 21:49	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 01/15/2015 09:41

Analysis Batch Number: 130845 End Date: 01/15/2015 20:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		01/15/2015 09:41	1		AS-18
ICV 180-130845/2		01/15/2015 10:50	1	A-ICS2100 A 01-15-2015-11.d	AS-18
CCV 180-130845/3		01/15/2015 11:05	1	A-ICS2100 A 01-15-2015-12.d	AS-18
CCB 180-130845/4		01/15/2015 11:20	1	A-ICS2100 A 01-15-2015-13.d	AS-18
LCS 180-130845/5		01/15/2015 11:36	1	A-ICS2100 A 01-15-2015-14.d	AS-18
MB 180-130845/6		01/15/2015 11:51	1	A-ICS2100 A 01-15-2015-15.d	AS-18
ZZZZZ		01/15/2015 12:06	1		AS-18
ZZZZZ		01/15/2015 12:34	1		AS-18
ZZZZZ		01/15/2015 12:50	10		AS-18
ZZZZZ		01/15/2015 13:05	10		AS-18
ZZZZZ		01/15/2015 13:26	5		AS-18
ZZZZZ		01/15/2015 13:41	100		AS-18
ZZZZZ		01/15/2015 13:58	1		AS-18
180-40481-8	HD-MW-37D-0/1-0	01/15/2015 14:13	1	A-ICS2100 A 01-15-2015-23.d	AS-18
CCV 180-130845/15		01/15/2015 14:28	1	A-ICS2100 A 01-15-2015-24.d	AS-18
CCB 180-130845/16		01/15/2015 14:49	1	A-ICS2100 A 01-15-2015-25.d	AS-18
ZZZZZ		01/15/2015 15:04	25		AS-18
ZZZZZ		01/15/2015 15:20	25		AS-18
ZZZZZ		01/15/2015 15:35	25		AS-18
ZZZZZ		01/15/2015 15:50	25		AS-18
ZZZZZ		01/15/2015 16:06	25		AS-18
ZZZZZ		01/15/2015 16:21	25		AS-18
ZZZZZ		01/15/2015 16:36	25		AS-18
180-40481-4	HD-MW-99D-0/1-0	01/15/2015 16:52	1	A-ICS2100 A 01-15-2015-33.d	AS-18
180-40481-4 MS	HD-MW-99D-0/1-0 MS	01/15/2015 17:07	1	A-ICS2100 A 01-15-2015-34.d	AS-18
180-40481-4 MSD	HD-MW-99D-0/1-0 MSD	01/15/2015 17:22	1	A-ICS2100 A 01-15-2015-35.d	AS-18
CCV 180-130845/27		01/15/2015 17:37	1	A-ICS2100 A 01-15-2015-36.d	AS-18
CCB 180-130845/28		01/15/2015 17:53	1	A-ICS2100 A 01-15-2015-37.d	AS-18
ZZZZZ		01/15/2015 18:08	25		AS-18
180-40481-3	HD-MW-100S-0/1-0	01/15/2015 18:23	1	A-ICS2100 A 01-15-2015-39.d	AS-18
180-40481-3 MS	HD-MW-100S-0/1-0 MS	01/15/2015 18:39	1	A-ICS2100 A 01-15-2015-40.d	AS-18
180-40481-3 MSD	HD-MW-100S-0/1-0 MSD	01/15/2015 18:54	1	A-ICS2100 A 01-15-2015-41.d	AS-18
180-40481-1	HD-MW-100D-0/1-0	01/15/2015 19:09	1	A-ICS2100 A 01-15-2015-42.d	AS-18
180-40481-2	HD-MW-100I-0/1-0	01/15/2015 19:25	1	A-ICS2100 A 01-15-2015-43.d	AS-18
180-40481-5	HD-MW-147A-0/1-0	01/15/2015 19:40	5	A-ICS2100 A 01-15-2015-44.d	AS-18
180-40481-6	HD-MW-75S-0/1-0	01/15/2015 19:55	5	A-ICS2100 A 01-15-2015-45.d	AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 01/15/2015 09:41

Analysis Batch Number: 130845 End Date: 01/15/2015 20:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
180-40481-7	HD-MW-75D-0/1-0	01/15/2015 20:10	1	A-ICS2100 A 01-15-2015-46.d	AS-18
CCV 180-130845/38		01/15/2015 20:26	1	A-ICS2100 A 01-15-2015-47.d	AS-18
CCB 180-130845/39		01/15/2015 20:41	1	A-ICS2100 A 01-15-2015-48.d	AS-18

300.0

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40481-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-MW-100D-0/1-0	180-40481-1
HD-MW-100I-0/1-0	180-40481-2
HD-MW-100S-0/1-0	180-40481-3
HD-MW-99D-0/1-0	180-40481-4
HD-MW-147A-0/1-0	180-40481-5
HD-MW-75S-0/1-0	180-40481-6
HD-MW-75D-0/1-0	180-40481-7
HD-MW-37D-0/1-0	180-40481-8

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-100D-0/1-0 Lab Sample ID: 180-40481-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 10:50

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	91000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4600	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	17000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	46000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-100I-0/1-0 Lab Sample ID: 180-40481-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 09:20

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	94000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	18000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	49000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-100S-0/1-0 Lab Sample ID: 180-40481-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 10:00

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	89000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4400	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	17000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	44000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-99D-0/1-0 Lab Sample ID: 180-40481-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 12:55

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	91000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	13000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	19000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-147A-0/1-0 Lab Sample ID: 180-40481-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 12:10

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	87000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5600	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	17000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	49000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-75S-0/1-0 Lab Sample ID: 180-40481-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 11:30

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	90000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	8600	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	20000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	56000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-75D-0/1-0 Lab Sample ID: 180-40481-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 10:15

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	100000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6800	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	18000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	50000	100	3.8	ug/L		B	1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-37D-0/1-0 Lab Sample ID: 180-40481-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 12:35

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	96000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	12000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	21000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	57000	100	3.8	ug/L		B	1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

ICV Source: MICVX_00028 Concentration Units: ug/L

CCV Source: MCCV1X_00071

Analyte	ICV 180-131403/5 01/21/2015 09:07				CCV 180-131403/10 01/21/2015 09:34				CCV 180-131403/34 01/21/2015 11:28			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	41200		40000	103	48100		50000	96	49200		50000	98
Magnesium	38600		40000	96	48500		50000	97	48300		50000	97
Potassium	40200		40000	101	49300		50000	99	50800		50000	102
Sodium	39300		40000	98	50100		50000	100	49800		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

ICV Source: MICVX_00028 Concentration Units: ug/L

CCV Source: MCCV1X_00071

Analyte	CCV 180-131403/45 01/21/2015 12:17				CCV 180-131403/56 01/21/2015 13:06							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	51700		50000	103	50800		50000	102				
Magnesium	49200		50000	98	49700		50000	99				
Potassium	52800		50000	106	51800		50000	104				
Sodium	50700		50000	101	51300		50000	103				

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.: 180-40481-1

SDG No.:

Method: 6020A Instrument ID: X

Lab Sample ID: CRI 180-131403/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00060

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	104		104	70-130
Potassium	100	120		120	70-130
Magnesium	100	101		101	70-130
Sodium	100	122		122	70-130

Lab Sample ID: CRI 180-131403/90 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00060

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	109		109	70-130
Potassium	100	114		114	70-130
Magnesium	100	102		102	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.: 180-40481-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-131403/6 01/21/2015 09:14		CCB1 180-131403/11 01/21/2015 09:41		CCB3 180-131403/35 01/21/2015 11:35		CCB4 180-131403/46 01/21/2015 12:24	
		Found	C	Found	C	Found	C	Found	C
Calcium	100	8.61	J	15.6	J	24.8	J	27.4	J
Magnesium	100	8.71	J	16.1	J	15.8	J	18.7	J
Potassium	100	18.5	J	38.5	J	18.6	J	23.7	J
Sodium	100	30.0	J	80.1	J	15.5	J	23.9	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB5 180-131403/57 01/21/2015 13:14							
		Found	C	Found	C	Found	C	Found	C
Calcium	100	30.2	J						
Magnesium	100	16.3	J						
Potassium	100	19.4	J						
Sodium	100	19.7	J						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 180-130921/1-A

Instrument Code: X Batch No.: 131403

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	10.1	J		6020A
7440-09-7	Potassium	13.6	J		6020A
7439-95-4	Magnesium	2.86	J		6020A
7440-23-5	Sodium	5.65	J		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Lab Sample ID: ICSA 180-131403/8 Instrument ID: X

Lab File ID: X50121A.xml ICS Source: MICSAX_00061

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**100000**	**98680**	**99**
Magnesium	**100000**	**97950**	**98**
Potassium	**100000**	**101600**	**102**
Sodium	**100000**	**98930**	**99**
Aluminum	*100000*	*94090*	*94*
Antimony		*-0.507*	
Arsenic		*-0.204*	
Barium		*0.115*	
Beryllium		*-0.0370*	
Boron		*-0.0390*	
Cadmium		*2.30*	
Chromium		*0.144*	
Cobalt		*0.133*	
Copper		*2.24*	
Iron	*100000*	*97250*	*97*
Lead		*0.278*	
Manganese		*0.610*	
Molybdenum	*2000*	*2240*	*112*
Nickel		*-0.199*	
Selenium		*-0.401*	
Silicon		*30.6*	
Silver		*0.0180*	
Strontium		*0.694*	
Thallium		*0.0140*	
Tin		*-1.87*	
Titanium	*2000*	*2147*	*107*
Vanadium		*-0.557*	
Zinc		*3.13*	

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.: 180-40481-1

SDG No.:

Lab Sample ID: ICSAB 180-131403/9 Instrument ID: X

Lab File ID: X50121A.xml ICS Source: MICSABX_00065

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Calcium	**100000**	**99823**	**100**
Magnesium	**100000**	**97770**	**98**
Potassium	**100000**	**100137**	**100**
Sodium	**100000**	**99680**	**100**
Aluminum	*100000*	*94823*	*95*
Antimony	*20.0*	*18.9*	*94*
Arsenic	*20.0*	*20.2*	*101*
Barium	*20.0*	*19.0*	*95*
Beryllium	*20.0*	*20.1*	*101*
Boron	*50.0*	*50.3*	*101*
Cadmium	*20.0*	*21.5*	*107*
Chromium	*20.0*	*18.9*	*95*
Cobalt	*20.0*	*19.1*	*95*
Copper	*20.0*	*21.9*	*109*
Iron	*100000*	*97907*	*98*
Lead	*20.0*	*20.7*	*103*
Manganese	*22.5*	*19.5*	*87*
Molybdenum	*2000*	*2250*	*113*
Nickel	*20.0*	*18.9*	*95*
Selenium	*50.0*	*51.9*	*104*
Silicon	*500*	*528*	*106*
Silver	*20.0*	*18.8*	*94*
Strontium	*25.0*	*20.1*	*80*
Thallium	*20.0*	*19.4*	*97*
Tin	*100*	*96.0*	*96*
Titanium	*2000*	*2137*	*107*
Vanadium	*20.0*	*18.1*	*90*
Zinc	*25.0*	*22.5*	*90*

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 180-130921/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

Sample Matrix: Water LCS Source: MTAPITTMSA_00023

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	47500		95	80	120		6020A
Potassium	50000	48200		96	80	120		6020A
Magnesium	50000	42900		86	80	120		6020A
Sodium	50000	44700		89	80	120		6020A

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

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40481-1

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: 180-40481-1

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: 180-40481-1

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.: 180-40481-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-130921/1-A	01/16/2015 09:16	130921		50	50
LCS 180-130921/2-A	01/16/2015 09:16	130921		50	50
180-40481-1	01/16/2015 09:16	130921		50	50
180-40481-2	01/16/2015 09:16	130921		50	50
180-40481-3	01/16/2015 09:16	130921		50	50
180-40481-4	01/16/2015 09:16	130921		50	50
180-40481-5	01/16/2015 09:16	130921		50	50
180-40481-6	01/16/2015 09:16	130921		50	50
180-40481-7	01/16/2015 09:16	130921		50	50
180-40481-8	01/16/2015 09:16	130921		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: X Method: 6020A

Start Date: 01/21/2015 07:43 End Date: 01/21/2015 16:35

Lab Sample ID	D/F	Type	Time	Analytes																				
				Ca	K	Mg	Na																	
ITUNE 180-131403/1			07:43																					
STD1 180-131403/2 IC	1		08:55	X	X	X	X																	
STD2 180-131403/3 IC	1		08:58	X	X	X	X																	
STD3 180-131403/4 IC	1		09:03	X	X	X	X																	
ICV 180-131403/5	1		09:07	X	X	X	X																	
ICB 180-131403/6	1		09:14	X	X	X	X																	
CRI 180-131403/7	1		09:18	X	X	X	X																	
ICSA 180-131403/8	1		09:23	X	X	X	X																	
ICSAB 180-131403/9	1		09:27	X	X	X	X																	
CCV 180-131403/10	1		09:34	X	X	X	X																	
CCB1 180-131403/11	1		09:41	X	X	X	X																	
ZZZZZZ			09:46																					
ZZZZZZ			09:50																					
ZZZZZZ			09:58																					
ZZZZZZ			10:02																					
ZZZZZZ			10:06																					
ZZZZZZ			10:11																					
ZZZZZZ			10:15																					
ZZZZZZ			10:19																					
ZZZZZZ			10:23																					
ZZZZZZ			10:30																					
CCV 180-131403/22			10:34																					
CCB2 180-131403/23			10:42																					
ZZZZZZ			10:46																					
ZZZZZZ			10:50																					
ZZZZZZ			10:54																					
ZZZZZZ			10:58																					
ZZZZZZ			11:03																					
ZZZZZZ			11:07																					
ZZZZZZ			11:11																					
ZZZZZZ			11:15																					
ZZZZZZ			11:19																					
ZZZZZZ			11:24																					
CCV 180-131403/34	1		11:28	X	X	X	X																	
CCB3 180-131403/35	1		11:35	X	X	X	X																	
MB 180-130921/1-A	1	R	11:39	X	X	X	X																	
LCS 180-130921/2-A	1	R	11:44	X	X	X	X																	
ZZZZZZ			11:48																					
ZZZZZZ			11:52																					
ZZZZZZ			11:56																					
ZZZZZZ			12:00																					
ZZZZZZ			12:04																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: X Method: 6020A

Start Date: 01/21/2015 07:43 End Date: 01/21/2015 16:35

Lab Sample ID	D/F	Type	Time	Analytes																			
				Ca	K	Mg	Na																
180-40481-1	1	T	12:09	X	X	X	X																
180-40481-2	1	T	12:13	X	X	X	X																
CCV 180-131403/45	1		12:17	X	X	X	X																
CCB4 180-131403/46	1		12:24	X	X	X	X																
180-40481-3	1	T	12:29	X	X	X	X																
180-40481-4	1	T	12:33	X	X	X	X																
180-40481-5	1	T	12:37	X	X	X	X																
180-40481-6	1	T	12:41	X	X	X	X																
180-40481-7	1	T	12:45	X	X	X	X																
180-40481-8	1	T	12:50	X	X	X	X																
ZZZZZZ			12:54																				
ZZZZZZ			12:58																				
ZZZZZZ			13:02																				
CCV 180-131403/56	1		13:06	X	X	X	X																
CCB5 180-131403/57	1		13:14	X	X	X	X																
ZZZZZZ			13:18																				
ZZZZZZ			13:22																				
ZZZZZZ			13:26																				
ZZZZZZ			13:31																				
ZZZZZZ			13:35																				
ZZZZZZ			13:39																				
ZZZZZZ			13:43																				
ZZZZZZ			13:48																				
ZZZZZZ			13:52																				
ZZZZZZ			13:56																				
CCV 180-131403/68			14:00																				
CCB6 180-131403/69			14:08																				
ZZZZZZ			14:12																				
ZZZZZZ			14:16																				
ZZZZZZ			14:20																				
ZZZZZZ			14:24																				
ZZZZZZ			14:32																				
ZZZZZZ			14:36																				
ZZZZZZ			14:40																				
ZZZZZZ			14:44																				
ZZZZZZ			14:48																				
ZZZZZZ			14:53																				
CCV 180-131403/80			14:57																				
CCB7 180-131403/81			15:04																				
ZZZZZZ			15:09																				
ZZZZZZ			15:13																				
ZZZZZZ			15:17																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Instrument ID: X Method: 6020A

Start Date: 01/21/2015 07:43 End Date: 01/21/2015 16:35

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ca	K	Mg	Na																
ZZZZZZ			15:21																				
ZZZZZZ			15:26																				
CCV 180-131403/87			15:36																				
CCB8 180-131403/88			15:45																				
ZZZZZZ			15:50																				
CRI 180-131403/90	1		15:54	X	X	X	X																
ZZZZZZ			16:02																				
ZZZZZZ			16:06																				
ZZZZZZ			16:11																				
ZZZZZZ			16:15																				
ZZZZZZ			16:19																				
ZZZZZZ			16:23																				
CCV 180-131403/97			16:27																				
CCB9 180-131403/98			16:35																				

Prep Types

R = Total Recoverable

T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 01/21/2015 End Date: 01/21/2015

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 180-131403/2 IC	08:55	100		100		100		100		100	
STD2 180-131403/3 IC	08:58	89		93		92		89		91	
STD3 180-131403/4 IC	09:03	94		93		93		94		94	
ICV 180-131403/5	09:07	91		93		91		89		90	
ICB 180-131403/6	09:14	96		94		93		94		95	
CRI 180-131403/7	09:18	94		95		86		95		86	
ICSA 180-131403/8	09:23	85		87		89		84		86	
ICSAB 180-131403/9	09:27	86		88		86		85		90	
CCV 180-131403/10	09:34	85		92		91		89		91	
CCB1 180-131403/11	09:41	93		95		95		96		95	
CCV 180-131403/34	11:28	83		83		81		85		82	
CCB3 180-131403/35	11:35	89		85		85		86		86	
MB 180-130921/1-A	11:39	86		79		81		82		81	
LCS 180-130921/2-A	11:44	86		78		75		82		77	
180-40481-1	12:09	90		76		78		79		76	
180-40481-2	12:13	91		77		79		81		77	
CCV 180-131403/45	12:17	79		77		78		82		78	
CCB4 180-131403/46	12:24	80		76		77		86		79	
180-40481-3	12:29	85		73		74		78		74	
180-40481-4	12:33	92		79		81		84		81	
180-40481-5	12:37	91		77		79		81		78	
180-40481-6	12:41	92		77		79		81		78	
180-40481-7	12:45	93		78		80		81		79	
180-40481-8	12:50	91		77		79		80		77	
CCV 180-131403/56	13:06	78		77		76		80		76	
CCB5 180-131403/57	13:14	84		79		80		86		82	
CRI 180-131403/90	15:54	83		79		79		85		72	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 01/21/2015 End Date: 01/21/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-131403/2 IC	08:55	100		100		100					
STD2 180-131403/3 IC	08:58	94		93		99					
STD3 180-131403/4 IC	09:03	95		94		92					
ICV 180-131403/5	09:07	94		93		92					
ICB 180-131403/6	09:14	94		93		94					
CRI 180-131403/7	09:18	90		94		98					
ICSA 180-131403/8	09:23	92		92		96					
ICSAB 180-131403/9	09:27	94		95		92					
CCV 180-131403/10	09:34	94		93		89					
CCB1 180-131403/11	09:41	95		94		94					
CCV 180-131403/34	11:28	88		88		88					
CCB3 180-131403/35	11:35	91		91		93					
MB 180-130921/1-A	11:39	88		87		94					
LCS 180-130921/2-A	11:44	87		88		81					
180-40481-1	12:09	87		86		81					
180-40481-2	12:13	87		87		82					
CCV 180-131403/45	12:17	86		86		86					
CCB4 180-131403/46	12:24	83		84		87					
180-40481-3	12:29	84		84		80					
180-40481-4	12:33	89		90		86					
180-40481-5	12:37	87		87		82					
180-40481-6	12:41	88		88		82					
180-40481-7	12:45	88		89		83					
180-40481-8	12:50	87		88		82					
CCV 180-131403/56	13:06	84		84		86					
CCB5 180-131403/57	13:14	87		86		91					
CRI 180-131403/90	15:54	76		86		94					

Dilution Corrected Concentrations

STD1 1456094 1/21/2015 8:55:41 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	08:56:07	97.581%	0.022	-0.069	-0.070	0.000	0.902	0.494	0.039
2	08:56:32	100.862%	0.024	0.365	0.143	0.000	-0.867	0.218	0.291
3	08:56:57	101.557%	-0.047	-0.297	-0.073	0.000	-0.034	-0.712	-0.330
x		100.000%	0.000	0.000	-0.000	0.000	0.000	0.000	0.000
σ		2.124%	0.040	0.336	0.124	0.000	0.885	0.632	0.313
%RSD		2.124	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	08:56:07	0.004	0.241	0.000	2.089	2.941	-0.950	98.994%	-0.018
2	08:56:32	-0.096	-0.091	0.000	2.462	1.324	-0.969	100.266%	-0.040
3	08:56:57	0.091	-0.150	0.000	-4.551	-4.265	1.919	100.740%	0.058
x		-0.000	-0.000	0.000	0.000	0.000	0.000	100.000%	0.000
σ		0.093	0.211	0.000	3.946	3.781	1.662	0.903%	0.051
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.903	0.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:56:07	0.017	-0.012	-0.026	0.503	1.612	-0.003	-0.054	0.005
2	08:56:32	-0.028	0.010	0.001	-0.003	-0.543	-0.002	0.026	0.004
3	08:56:57	0.012	0.002	0.024	-0.499	-1.068	0.005	0.029	-0.009
x		-0.000	0.000	-0.000	0.000	0.000	0.000	0.000	0.000
σ		0.025	0.011	0.025	0.501	1.420	0.005	0.047	0.008
%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	08:56:07	0.029	0.014	-0.017	-0.139	-0.304	-0.948	0.000	-0.001
2	08:56:32	-0.020	0.002	0.015	-0.084	-0.076	-0.432	0.000	-0.000
3	08:56:57	-0.008	-0.016	0.002	0.223	0.380	1.380	0.000	0.001
x		-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	-0.000
σ		0.026	0.015	0.016	0.195	0.348	1.223	0.000	0.001
%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	08:56:07	99.041%	-0.060	0.024	99.572%	0.003	-0.005	0.008	0.058
2	08:56:32	100.243%	0.057	-0.006	100.430%	-0.011	-0.003	-0.004	-0.039
3	08:56:57	100.716%	0.003	-0.018	99.998%	0.008	0.008	-0.004	-0.019
x		100.000%	0.000	-0.000	100.000%	0.000	0.000	0.000	0.000
σ		0.863%	0.058	0.021	0.429%	0.010	0.007	0.007	0.051
%RSD		0.863	0.000	0.000	0.429	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	08:56:07	99.111%	-0.484	-0.074	-0.033	0.005	-0.006	99.271%	99.084%
2	08:56:32	99.547%	0.148	0.012	-0.008	0.005	0.002	99.392%	99.892%
3	08:56:57	101.342%	0.336	0.063	0.042	-0.010	0.004	101.337%	101.024%
x		100.000%	0.000	0.000	-0.000	-0.000	0.000	100.000%	100.000%
σ		1.183%	0.429	0.069	0.038	0.008	0.005	1.159%	0.974%
%RSD		1.183	0.000	0.000	0.000	0.000	0.000	1.159	0.974
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	08:56:07	0.001	-0.000	0.007	-0.008	0.000	99.843%		
2	08:56:32	-0.002	-0.000	-0.000	-0.012	-0.005	99.913%		
3	08:56:57	0.001	0.001	-0.007	0.019	0.005	100.244%		
x		0.000	0.000	-0.000	0.000	0.000	100.000%		
σ		0.002	0.001	0.007	0.017	0.005	0.214%		
%RSD		0.000	0.000	0.000	0.000	0.000	0.214		

STD2 1438946 1/21/2015 8:58:55 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	08:59:21	88.834%	196.700	1.288	0.415	0.000	98280.000	98110.000	98140.000
2	08:59:46	88.947%	199.600	-0.015	0.921	0.000	100100.000	100500.000	100400.000
3	09:00:11	87.672%	203.700	0.762	1.258	0.000	101700.000	101400.000	101500.000
x		88.484%	200.000	0.678	0.865	0.000	100000.000	100000.000	100000.000
σ		0.706%	3.528	0.656	0.424	0.000	1692.000	1696.000	1709.000
%RSD		0.798	1.764	96.660	49.090	0.000	1.692	1.696	1.709

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:59:21	978.200	17.280	0.000	96430.000	96620.000	98470.000	93.252%	-0.044
2	08:59:46	1007.000	17.740	0.000	101200.000	101200.000	100000.000	93.053%	0.204
3	09:00:11	1015.000	17.920	0.000	102400.000	102200.000	101500.000	91.251%	0.156
x		1000.000	17.640	0.000	100000.000	100000.000	100000.000	92.519%	0.105
σ		19.330	0.328	0.000	3155.000	2973.000	1511.000	1.102%	0.132
%RSD		1.933	1.857	0.000	3.155	2.973	1.511	1.191	125.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:59:21	197.100	197.400	983.700	48880.000	48940.000	196.100	195.600	195.200
2	08:59:46	200.800	199.500	999.400	50260.000	50100.000	201.500	201.300	201.100
3	09:00:11	202.100	203.100	1017.000	50860.000	50960.000	202.400	203.000	203.700
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		2.617	2.908	16.620	1014.000	1012.000	3.444	3.862	4.394
%RSD		1.308	1.454	1.662	2.029	2.024	1.722	1.931	2.197

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:59:21	197.000	197.500	198.900	198.300	199.500	200.800	0.000	198.400
2	08:59:46	201.300	200.200	200.100	201.500	203.200	201.900	0.000	200.400
3	09:00:11	201.700	202.400	200.900	200.200	197.300	197.300	0.000	201.100
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.584	2.458	1.014	1.629	2.956	2.434	0.000	1.399
%RSD		1.292	1.229	0.507	0.814	1.478	1.217	0.000	0.699

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:59:21	90.888%	0.074	0.108	88.992%	196.800	197.700	198.100	197.600
2	08:59:46	92.151%	0.089	0.092	89.589%	201.500	201.900	201.500	200.900
3	09:00:11	92.413%	0.142	0.120	88.835%	201.700	200.500	200.300	201.500
x		91.817%	0.102	0.107	89.138%	200.000	200.000	200.000	200.000
σ		0.815%	0.036	0.014	0.398%	2.808	2.135	1.720	2.116
%RSD		0.888	35.290	13.030	0.447	1.404	1.068	0.860	1.058

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:59:21	90.893%	-0.899	0.033	0.085	197.700	199.000	92.864%	92.505%
2	08:59:46	90.749%	-0.310	0.049	0.084	201.400	199.600	94.441%	93.681%
3	09:00:11	91.653%	-0.429	0.102	0.125	200.800	201.500	93.080%	93.548%
x		91.099%	-0.546	0.062	0.098	200.000	200.000	93.461%	93.245%
σ		0.486%	0.311	0.036	0.023	1.996	1.294	0.855%	0.644%
%RSD		0.533	56.980	58.670	23.520	0.998	0.647	0.915	0.691

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	08:59:21	188.500	189.400	186.900	189.000	187.800	103.966%
2	08:59:46	203.300	201.700	203.200	201.400	201.800	98.503%
3	09:00:11	208.200	208.900	209.900	209.600	210.400	95.130%
x		200.000	200.000	200.000	200.000	200.000	99.200%
σ		10.220	9.868	11.800	10.370	11.420	4.459%
%RSD		5.109	4.934	5.899	5.186	5.711	4.495

STD3 1438947 1/21/2015 9:03:05 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:30	91.086%	0.224	197.200	196.300	0.000	205.400	145.600	144.400
2	09:03:55	94.695%	0.267	200.100	196.600	0.000	183.100	132.000	129.000
3	09:04:20	94.877%	0.266	202.800	207.200	0.000	176.200	118.100	118.900
x		93.553%	0.252	200.000	200.000	0.000	188.200	131.900	130.800
σ		2.138%	0.025	2.817	6.201	0.000	15.230	13.710	12.800
%RSD		2.285	9.716	1.408	3.101	0.000	8.090	10.390	9.789
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:30	7.330	9905.000	0.000	151.900	137.700	233.100	91.707%	194.300
2	09:03:55	6.420	10020.000	0.000	139.900	144.400	217.200	92.974%	205.300
3	09:04:20	5.765	10070.000	0.000	139.400	122.200	206.600	93.901%	200.300
x		6.505	10000.000	0.000	143.800	134.700	219.000	92.860%	200.000
σ		0.786	86.550	0.000	7.097	11.390	13.350	1.101%	5.497
%RSD		12.080	0.866	0.000	4.937	8.454	6.096	1.186	2.749
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:30	0.332	0.270	3.216	149.800	159.600	0.297	0.554	0.305
2	09:03:55	0.256	0.258	3.208	114.600	117.000	0.285	0.701	0.254
3	09:04:20	0.247	0.208	2.982	87.670	92.460	0.258	0.559	0.349
x		0.278	0.245	3.135	117.400	123.000	0.280	0.604	0.303
σ		0.047	0.033	0.133	31.140	33.940	0.020	0.083	0.048
%RSD		16.720	13.310	4.228	26.540	27.590	7.234	13.790	15.810
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:30	0.330	1.370	1.354	0.437	-0.015	0.376	0.000	0.389
2	09:03:55	0.341	1.251	1.185	0.387	0.269	0.848	0.000	0.392
3	09:04:20	0.516	1.218	1.382	0.587	0.195	1.848	0.000	0.346
x		0.395	1.279	1.307	0.470	0.149	1.024	0.000	0.376
σ		0.104	0.080	0.107	0.104	0.147	0.752	0.000	0.026
%RSD		26.400	6.251	8.156	22.180	98.630	73.400	0.000	6.805
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:30	91.718%	193.000	193.400	92.287%	0.260	0.251	0.470	-0.234
2	09:03:55	93.151%	201.600	202.100	94.009%	0.260	0.237	0.529	-0.495
3	09:04:20	94.092%	205.300	204.500	94.528%	0.261	0.219	0.475	-0.474
x		92.987%	200.000	200.000	93.608%	0.261	0.236	0.491	-0.401
σ		1.195%	6.319	5.880	1.173%	0.001	0.016	0.032	0.145
%RSD		1.286	3.160	2.940	1.253	0.243	6.859	6.600	36.120
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:30	94.991%	189.600	193.200	191.500	0.557	0.662	93.375%	92.179%
2	09:03:55	93.646%	203.600	201.800	201.900	0.434	0.734	95.801%	93.305%
3	09:04:20	93.608%	206.800	205.000	206.500	0.356	0.661	95.928%	95.019%
x		94.082%	200.000	200.000	200.000	0.449	0.686	95.035%	93.501%
σ		0.788%	9.174	6.074	7.689	0.101	0.042	1.439%	1.430%
%RSD		0.838	4.587	3.037	3.845	22.600	6.090	1.514	1.530
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:03:30	0.326	0.293	0.359	0.359	0.360	93.308%		
2	09:03:55	0.269	0.262	0.323	0.326	0.338	91.432%		
3	09:04:20	0.304	0.278	0.341	0.305	0.320	91.065%		
x		0.300	0.278	0.341	0.330	0.339	91.935%		
σ		0.029	0.016	0.018	0.027	0.020	1.203%		
%RSD		9.565	5.661	5.330	8.284	5.795	1.309		

ICV 1451360 1/21/2015 9:07:14 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:39	89.766%	76.970	79.930	84.880	0.000	38420.000	36920.000	37020.000
2	09:08:04	90.046%	83.950	88.530	89.140	0.000	39410.000	38390.000	39230.000
3	09:08:29	92.156%	80.980	92.280	87.560	0.000	39980.000	38630.000	39430.000
x		90.656%	100.793%	108.646%	108.992%	0.000	98.173%	94.951%	96.397%
σ		1.306%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.441	4.347	7.283	2.468	0.000	2.010	2.444	3.463
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:39	366.300	4377.000	0.000	38410.000	37530.000	39240.000	91.902%	78.690
2	09:08:04	383.600	4762.000	0.000	41300.000	40440.000	41990.000	92.141%	83.960
3	09:08:29	385.600	4841.000	0.000	40920.000	40100.000	42320.000	93.425%	83.930
x		94.622%	116.499%	0.000	100.533%	98.393%	102.959%	92.489%	102.746%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.819%	n/a
%RSD		2.799	5.320	0.000	3.907	4.034	4.105	0.885	3.690
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:39	74.700	76.560	391.400	18920.000	20110.000	76.600	77.130	78.030
2	09:08:04	78.340	79.950	412.500	19970.000	21290.000	79.490	80.770	80.990
3	09:08:29	78.620	80.440	417.400	20170.000	21530.000	81.200	80.590	80.390
x		96.525%	98.725%	101.768%	98.425%	104.875%	98.870%	99.370%	99.751%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.836	2.676	3.397	3.419	3.630	2.943	2.580	1.960
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:39	77.700	76.060	77.460	76.700	74.220	77.230	0.000	75.680
2	09:08:04	79.390	79.130	80.300	80.150	80.360	80.820	0.000	78.140
3	09:08:29	80.360	81.580	80.370	81.820	80.630	81.980	0.000	79.450
x		98.935%	98.652%	99.219%	99.445%	98.003%	100.011%	0.000	97.196%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.697	3.504	2.089	3.284	4.620	3.098	0.000	2.461
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:39	88.901%	83.010	82.720	88.580%	77.020	77.060	77.380	76.560
2	09:08:04	91.347%	85.710	86.860	89.031%	81.090	82.080	80.850	80.960
3	09:08:29	92.600%	86.610	87.420	90.269%	80.660	80.640	80.340	81.970
x		90.949%	106.388%	107.083%	89.293%	99.490%	99.905%	99.401%	99.792%
σ		1.881%	n/a	n/a	0.874%	n/a	n/a	n/a	n/a
%RSD		2.068	2.201	2.998	0.979	2.809	3.235	2.355	3.602
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:07:39	89.353%	79.530	79.870	83.130	77.550	79.250	91.344%	91.032%
2	09:08:04	89.660%	83.980	83.630	84.540	80.480	80.860	95.321%	93.502%
3	09:08:29	90.494%	85.440	84.030	84.760	81.090	81.350	95.819%	93.770%
x		89.836%	103.727%	103.141%	105.177%	99.632%	100.610%	94.162%	92.768%
σ		0.590%	n/a	n/a	n/a	n/a	n/a	2.453%	1.509%
%RSD		0.657	3.713	2.781	1.049	2.373	1.362	2.605	1.627
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:07:39	82.320	80.580	80.720	78.530	79.120	93.660%		
2	09:08:04	89.690	86.470	88.640	85.290	86.810	91.106%		
3	09:08:29	89.820	87.710	89.650	86.200	87.740	91.293%		
x		109.096%	106.151%	107.920%	104.175%	105.697%	92.020%		
σ		n/a	n/a	n/a	n/a	n/a	1.424%		
%RSD		4.919	4.486	5.663	5.030	5.598	1.547		

ICB 1/21/2015 9:14:32 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:57	92.212%	-0.048	0.226	0.473	0.000	35.750	13.450	14.160
2	09:15:22	96.662%	0.038	0.038	-0.105	0.000	27.680	5.772	5.875
3	09:15:47	98.516%	-0.038	-0.668	-0.091	0.000	26.620	6.797	6.084
x		95.796%	-0.016	-0.135	0.092	0.000	30.020	8.674	8.707
σ		3.240%	0.047	0.471	0.330	0.000	4.996	4.170	4.725
%RSD		3.382	296.800	350.500	356.600	0.000	16.650	48.080	54.270
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:57	0.435	13.660	0.000	21.810	25.190	13.130	92.394%	-0.414
2	09:15:22	-0.254	3.531	0.000	17.080	9.665	3.623	94.157%	-0.325
3	09:15:47	-0.515	3.513	0.000	16.580	15.620	9.082	93.869%	-0.279
x		-0.112	6.901	0.000	18.490	16.830	8.611	93.474%	-0.339
σ		0.491	5.852	0.000	2.886	7.833	4.770	0.946%	0.069
%RSD		440.000	84.800	0.000	15.610	46.550	55.400	1.012	20.240
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:57	-0.006	-0.049	0.082	11.800	17.540	0.026	0.018	-0.219
2	09:15:22	-0.014	-0.015	0.015	2.263	9.846	0.004	-0.037	-0.258
3	09:15:47	0.016	-0.017	0.018	2.058	5.035	0.009	0.059	-0.298
x		-0.001	-0.027	0.038	5.372	10.810	0.013	0.013	-0.259
σ		0.016	0.020	0.038	5.564	6.306	0.011	0.048	0.039
%RSD		1236.000	72.710	98.430	103.600	58.360	85.030	357.000	15.260
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:57	-0.177	0.300	0.246	-0.056	-0.358	-0.403	0.000	0.023
2	09:15:22	-0.294	0.027	-0.000	-0.062	-0.280	-0.099	0.000	0.011
3	09:15:47	-0.287	0.030	0.064	0.009	0.058	0.573	0.000	0.011
x		-0.253	0.119	0.103	-0.036	-0.193	0.024	0.000	0.015
σ		0.066	0.157	0.128	0.040	0.221	0.499	0.000	0.007
%RSD		25.950	131.600	123.400	109.200	114.300	2084.000	0.000	46.730
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:57	91.546%	0.249	0.219	93.073%	0.010	0.001	0.021	0.053
2	09:15:22	93.606%	0.111	0.133	93.721%	-0.027	-0.021	0.004	0.028
3	09:15:47	94.574%	0.146	0.098	93.996%	0.002	-0.017	0.008	0.008
x		93.242%	0.169	0.150	93.597%	-0.005	-0.012	0.011	0.029
σ		1.546%	0.071	0.062	0.474%	0.019	0.012	0.009	0.023
%RSD		1.658	42.410	41.320	0.506	382.300	93.080	77.130	76.590
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:57	92.848%	-1.837	-0.534	-0.506	0.003	0.027	91.436%	91.958%
2	09:15:22	95.820%	-2.141	-0.568	-0.498	-0.017	0.014	95.018%	93.908%
3	09:15:47	95.247%	-1.926	-0.538	-0.509	-0.008	0.009	95.490%	94.478%
x		94.638%	-1.968	-0.547	-0.504	-0.007	0.016	93.981%	93.448%
σ		1.577%	0.156	0.018	0.006	0.010	0.009	2.217%	1.321%
%RSD		1.666	7.947	3.379	1.133	144.400	56.200	2.359	1.414
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:14:57	0.033	0.026	0.036	0.006	0.028	94.111%		
2	09:15:22	0.016	0.015	0.017	0.001	0.007	95.049%		
3	09:15:47	0.014	0.014	0.018	-0.008	0.009	93.940%		
x		0.021	0.018	0.024	-0.000	0.015	94.367%		
σ		0.010	0.007	0.011	0.007	0.011	0.597%		
%RSD		48.790	36.450	44.810	2494.000	78.320	0.632		

CRI 1451384 1/21/2015 9:18:47 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:19:12	91.563%	0.717	4.511	5.126	0.000	124.200	101.100	101.300
2	09:19:37	95.178%	0.865	6.025	5.575	0.000	122.800	98.470	101.800
3	09:20:02	96.025%	0.927	5.267	4.622	0.000	119.700	99.340	99.540
x		94.256%	83.597%	105.354%	102.157%	0.000	152.797%	99.651%	100.908%
σ		2.370%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.514	12.920	14.370	9.331	0.000	1.897	1.363	1.201
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:19:12	29.810	486.300	0.000	123.300	115.500	104.100	93.519%	4.013
2	09:19:37	29.880	487.900	0.000	121.200	117.000	104.900	94.415%	5.160
3	09:20:02	30.030	490.900	0.000	116.400	97.860	103.600	95.709%	4.932
x		99.698%	97.675%	0.000	120.316%	110.131%	104.195%	94.547%	94.033%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.101%	n/a
%RSD		0.368	0.469	0.000	2.920	9.670	0.657	1.164	12.920
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:19:12	0.870	1.773	4.672	54.640	65.390	0.464	1.005	1.871
2	09:19:37	0.796	1.919	5.072	54.480	61.810	0.535	1.080	1.979
3	09:20:02	0.768	1.855	5.102	52.450	57.800	0.515	1.012	2.011
x		81.107%	92.437%	98.974%	107.711%	123.333%	100.964%	103.221%	97.686%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		6.493	3.950	4.854	2.264	6.156	7.227	3.998	3.749
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:19:12	1.933	5.468	4.979	1.241	5.206	6.810	0.000	4.953
2	09:19:37	2.154	5.250	5.597	0.623	6.161	4.922	0.000	5.203
3	09:20:02	1.952	5.654	5.950	1.052	5.483	6.002	0.000	5.182
x		100.651%	109.145%	110.171%	97.208%	112.328%	118.221%	0.000	102.246%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		6.098	3.698	8.923	32.630	8.745	16.020	0.000	2.710
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:19:12	83.918%	5.061	4.685	93.817%	0.951	0.919	0.945	4.256
2	09:19:37	86.237%	5.136	4.999	94.830%	0.934	0.994	0.977	1.021
3	09:20:02	87.195%	5.613	5.162	95.419%	0.964	0.995	1.091	1.086
x		85.783%	105.400%	98.971%	94.689%	94.974%	96.926%	100.411%	212.108%
σ		1.685%	n/a	n/a	0.810%	n/a	n/a	n/a	n/a
%RSD		1.964	5.678	4.903	0.856	1.546	4.518	7.665	87.180
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:19:12	83.667%	3.513	1.430	1.616	9.559	10.080	89.228%	92.032%
2	09:19:37	87.460%	3.591	1.524	1.566	10.470	10.400	90.178%	94.923%
3	09:20:02	88.211%	3.729	1.553	1.478	10.660	10.260	91.815%	95.525%
x		86.446%	72.221%	75.123%	77.660%	102.299%	102.461%	90.407%	94.160%
σ		2.436%	n/a	n/a	n/a	n/a	n/a	1.308%	1.867%
%RSD		2.818	3.030	4.292	4.482	5.763	1.528	1.447	1.983
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:19:12	0.913	0.945	1.074	1.009	1.013	97.994%		
2	09:19:37	1.037	0.989	1.035	0.943	0.996	97.828%		
3	09:20:02	0.973	0.965	1.070	1.025	1.031	97.808%		
x		97.417%	96.638%	105.989%	99.243%	101.315%	97.876%		
σ		n/a	n/a	n/a	n/a	n/a	0.102%		
%RSD		6.349	2.307	2.037	4.379	1.744	0.104		

ICSA 1451382 1/21/2015 9:23:02 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	09:23:28	82.424%	-0.063	-0.270	0.268	0.000	98250.000	95350.000	95470.000
2	09:23:53	85.332%	0.012	0.260	-0.246	0.000	98960.000	96670.000	98090.000
3	09:24:18	86.747%	-0.059	-0.447	-0.139	0.000	99560.000	98170.000	100300.000
x		84.834%	-0.037	-0.152	-0.039	0.000	98930.000	96730.000	97950.000
σ		2.204%	0.042	0.367	0.271	0.000	656.600	1410.000	2415.000
%RSD		2.598	115.400	241.500	693.600	0.000	0.664	1.458	2.465
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:28	91420.000	33.370	0.000	98780.000	94110.000	93010.000	87.287%	2062.000
2	09:23:53	94100.000	28.670	0.000	101900.000	101000.000	100900.000	87.293%	2147.000
3	09:24:18	96750.000	29.640	0.000	104200.000	103800.000	102200.000	86.712%	2233.000
x		94090.000	30.560	0.000	101600.000	99650.000	98680.000	87.097%	2147.000
σ		2664.000	2.480	0.000	2734.000	4993.000	4949.000	0.334%	85.320
%RSD		2.831	8.116	0.000	2.690	5.010	5.015	0.383	3.973
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:28	-0.535	0.107	0.587	92810.000	93930.000	0.140	-0.215	1.167
2	09:23:53	-0.718	0.164	0.641	98130.000	98090.000	0.141	-0.150	1.202
3	09:24:18	-0.418	0.160	0.601	100800.000	100900.000	0.119	-0.231	1.171
x		-0.557	0.144	0.610	97250.000	97630.000	0.133	-0.199	1.180
σ		0.151	0.032	0.028	4066.000	3487.000	0.012	0.043	0.019
%RSD		27.180	22.430	4.610	4.181	3.572	9.172	21.600	1.627
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:28	2.321	3.299	1.801	-0.399	0.493	-4.414	0.000	0.689
2	09:23:53	2.030	2.997	2.005	-0.520	-0.491	-1.852	0.000	0.718
3	09:24:18	2.357	3.093	2.097	0.306	-1.204	-0.965	0.000	0.675
x		2.236	3.130	1.967	-0.204	-0.401	-2.410	0.000	0.694
σ		0.180	0.154	0.151	0.446	0.852	1.791	0.000	0.022
%RSD		8.030	4.928	7.693	218.600	212.600	74.290	0.000	3.129
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:28	87.303%	2108.000	2179.000	83.798%	0.036	0.024	2.396	2.609
2	09:23:53	88.386%	2219.000	2345.000	83.363%	0.012	0.020	2.309	0.431
3	09:24:18	89.915%	2268.000	2195.000	84.953%	0.005	0.004	2.191	2.696
x		88.535%	2198.000	2240.000	84.038%	0.018	0.016	2.299	1.912
σ		1.312%	81.630	91.350	0.822%	0.016	0.011	0.103	1.283
%RSD		1.482	3.714	4.079	0.978	89.290	67.260	4.468	67.110
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:23:28	86.019%	-1.977	-0.501	-0.548	0.163	0.117	89.556%	90.645%
2	09:23:53	85.125%	-1.806	-0.528	-0.477	0.155	0.129	93.979%	91.786%
3	09:24:18	86.157%	-1.829	-0.490	-0.492	0.128	0.099	93.694%	93.949%
x		85.767%	-1.870	-0.507	-0.506	0.148	0.115	92.410%	92.127%
σ		0.560%	0.093	0.020	0.038	0.018	0.015	2.476%	1.678%
%RSD		0.653	4.960	3.880	7.415	12.310	12.790	2.679	1.822
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:23:28	0.014	0.012	0.293	0.233	0.256	102.777%		
2	09:23:53	0.011	0.016	0.297	0.281	0.278	95.332%		
3	09:24:18	0.006	0.014	0.301	0.302	0.299	91.146%		
x		0.010	0.014	0.297	0.272	0.278	96.418%		
σ		0.004	0.002	0.004	0.035	0.021	5.891%		
%RSD		36.950	13.920	1.299	13.030	7.694	6.110		

ICSAB 1451383 1/21/2015 9:27:14 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:39	83.357%	19.660	51.120	50.780	0.000	99480.000	95920.000	95700.000
2	09:28:04	86.260%	20.690	51.260	51.090	0.000	100200.000	98300.000	98820.000
3	09:28:29	88.645%	20.010	47.510	48.960	0.000	99360.000	97880.000	98790.000
x		86.087%	100.584%	99.930%	100.561%	0.000	99.680%	97.365%	97.772%
σ		2.649%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.077	2.600	4.258	2.288	0.000	0.453	1.302	1.834
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:39	93250.000	524.200	0.000	97610.000	94270.000	95770.000	87.210%	2080.000
2	09:28:04	95270.000	532.200	0.000	101300.000	99990.000	100400.000	88.626%	2152.000
3	09:28:29	95950.000	528.200	0.000	101500.000	101500.000	103300.000	88.569%	2180.000
x		94.825%	105.643%	0.000	100.123%	98.599%	99.822%	88.135%	106.878%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.801%	n/a
%RSD		1.480	0.752	0.000	2.174	3.880	3.798	0.909	2.420
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:39	17.790	18.440	19.120	95250.000	97520.000	18.780	18.170	19.900
2	09:28:04	18.290	19.200	19.680	98580.000	100100.000	19.020	19.120	20.850
3	09:28:29	18.170	19.060	19.670	99890.000	102000.000	19.410	19.440	20.610
x		90.424%	94.505%	97.454%	97.909%	99.875%	95.353%	94.555%	102.265%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.457	2.130	1.642	2.442	2.235	1.654	3.495	2.426
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:39	21.940	22.060	21.320	20.060	48.730	50.330	0.000	19.750
2	09:28:04	21.660	22.870	21.620	20.690	53.530	52.360	0.000	20.210
3	09:28:29	22.060	22.650	22.620	19.950	53.400	53.280	0.000	20.400
x		109.436%	90.112%	87.409%	101.166%	103.774%	103.982%	0.000	100.590%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.928	1.848	3.107	1.973	5.272	2.903	0.000	1.645
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:39	84.612%	2185.000	2264.000	84.618%	18.280	18.280	20.590	18.620
2	09:28:04	86.160%	2316.000	2224.000	85.065%	18.860	18.820	21.810	21.730
3	09:28:29	87.496%	2341.000	2263.000	85.068%	19.110	18.630	21.960	22.290
x		86.089%	114.047%	112.509%	84.917%	93.761%	92.882%	107.270%	104.387%
σ		1.443%	n/a	n/a	0.259%	n/a	n/a	n/a	n/a
%RSD		1.676	3.670	0.999	0.305	2.263	1.489	3.506	9.465
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:39	89.553%	91.890	18.180	18.240	18.820	18.660	92.024%	93.149%
2	09:28:04	89.931%	97.340	19.010	19.190	18.660	19.130	94.511%	95.202%
3	09:28:29	90.200%	98.820	19.500	19.450	19.800	19.330	95.952%	95.891%
x		89.895%	96.019%	94.478%	94.804%	95.453%	95.201%	94.162%	94.747%
σ		0.325%	n/a	n/a	n/a	n/a	n/a	1.987%	1.427%
%RSD		0.361	3.802	3.541	3.355	3.231	1.822	2.110	1.506
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:27:39	18.960	18.280	19.780	19.740	19.370	93.539%		
2	09:28:04	20.600	19.650	21.640	21.620	21.070	90.732%		
3	09:28:29	20.950	20.150	21.950	21.390	21.550	90.128%		
x		100.853%	96.800%	105.601%	104.584%	103.330%	91.466%		
σ		n/a	n/a	n/a	n/a	n/a	1.820%		
%RSD		5.259	5.019	5.555	4.889	5.546	1.990		

CCV 1455996 1/21/2015 9:34:35 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:35:00	82.740%	97.020	103.100	102.400	0.000	49420.000	47340.000	47790.000
2	09:35:25	85.485%	99.990	105.100	107.300	0.000	50320.000	48450.000	48820.000
3	09:35:50	87.668%	102.000	103.500	105.100	0.000	50470.000	49240.000	48860.000
x		85.298%	99.680%	103.922%	104.924%	0.000	100.134%	96.686%	96.980%
σ		2.469%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.895	2.522	0.988	2.309	0.000	1.135	1.975	1.252
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:35:00	524.800	5038.000	0.000	49150.000	46850.000	46000.000	90.553%	97.110
2	09:35:25	519.100	5163.000	0.000	50010.000	48670.000	48900.000	91.758%	100.800
3	09:35:50	512.000	5073.000	0.000	48880.000	48090.000	49310.000	93.452%	102.600
x		103.733%	101.833%	0.000	98.695%	95.736%	96.142%	91.921%	100.170%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.456%	n/a
%RSD		1.237	1.267	0.000	1.199	1.938	3.748	1.584	2.809
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:35:00	90.760	92.290	489.400	23490.000	25420.000	93.320	95.590	94.940
2	09:35:25	94.160	95.690	508.700	24410.000	26320.000	96.330	96.550	98.350
3	09:35:50	95.230	95.630	512.000	24310.000	26550.000	95.520	98.300	97.740
x		93.384%	94.538%	100.669%	96.279%	104.382%	95.059%	96.813%	97.009%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.501	2.056	2.430	2.078	2.292	1.641	1.420	1.875
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:35:00	93.680	93.180	93.690	95.450	98.100	95.440	0.000	92.730
2	09:35:25	97.380	96.430	95.220	96.280	96.130	99.300	0.000	95.390
3	09:35:50	98.630	100.200	97.280	96.410	95.780	97.240	0.000	96.400
x		96.560%	96.617%	95.395%	96.048%	96.673%	97.327%	0.000	94.838%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.667	3.662	1.885	0.542	1.293	1.985	0.000	1.996
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:35:00	89.210%	96.490	96.390	87.833%	93.450	93.410	93.710	93.260
2	09:35:25	91.985%	101.900	102.800	88.616%	96.810	96.930	97.250	96.870
3	09:35:50	93.121%	104.200	104.300	89.910%	95.970	95.520	98.210	94.580
x		91.438%	100.859%	101.164%	88.786%	95.409%	95.288%	96.388%	94.903%
σ		2.012%	n/a	n/a	1.049%	n/a	n/a	n/a	n/a
%RSD		2.200	3.930	4.156	1.181	1.830	1.862	2.462	1.925
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:35:00	89.286%	92.690	94.040	95.010	95.090	94.990	91.584%	91.589%
2	09:35:25	91.015%	94.930	95.310	95.950	97.010	95.010	94.703%	92.580%
3	09:35:50	93.609%	94.820	96.080	96.320	97.790	96.990	95.284%	95.521%
x		91.303%	94.147%	95.142%	95.761%	96.629%	95.664%	93.857%	93.230%
σ		2.176%	n/a	n/a	n/a	n/a	n/a	1.990%	2.045%
%RSD		2.383	1.342	1.078	0.706	1.433	1.204	2.120	2.193
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:35:00	102.300	100.300	103.200	102.600	102.100	87.619%		
2	09:35:25	105.600	103.900	106.400	107.100	106.600	88.674%		
3	09:35:50	105.700	104.800	107.300	107.800	106.700	90.458%		
x		104.536%	103.003%	105.606%	105.829%	105.120%	88.917%		
σ		n/a	n/a	n/a	n/a	n/a	1.435%		
%RSD		1.883	2.345	2.042	2.657	2.512	1.614		

CCB1 1/21/2015 9:41:53 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:19	89.609%	0.010	-0.035	-0.433	0.000	86.520	22.450	21.620
2	09:42:44	92.698%	-0.087	-0.263	-0.819	0.000	79.700	14.700	14.740
3	09:43:09	95.727%	-0.044	-0.779	-0.635	0.000	74.140	12.190	11.880
x		92.678%	-0.040	-0.359	-0.629	0.000	80.120	16.450	16.080
σ		3.059%	0.049	0.381	0.193	0.000	6.201	5.349	5.003
%RSD		3.301	120.400	106.200	30.680	0.000	7.739	32.520	31.120
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:19	7.445	8.087	0.000	43.750	14.040	23.010	94.705%	0.008
2	09:42:44	4.390	5.163	0.000	37.740	26.950	13.120	95.339%	-0.057
3	09:43:09	2.863	2.441	0.000	34.000	15.160	10.660	95.575%	-0.194
x		4.899	5.230	0.000	38.500	18.720	15.600	95.206%	-0.081
σ		2.333	2.824	0.000	4.920	7.154	6.538	0.450%	0.103
%RSD		47.620	53.990	0.000	12.780	38.220	41.920	0.472	127.600
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:19	-0.027	-0.039	0.080	27.530	31.300	0.014	-0.083	-0.294
2	09:42:44	-0.014	0.036	0.054	20.730	21.200	0.017	-0.067	-0.328
3	09:43:09	-0.013	-0.039	0.040	15.710	13.850	0.009	-0.072	-0.299
x		-0.018	-0.014	0.058	21.320	22.120	0.014	-0.074	-0.307
σ		0.008	0.044	0.020	5.930	8.764	0.004	0.008	0.019
%RSD		41.990	309.400	34.730	27.810	39.620	29.220	11.180	6.066
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:19	-0.278	0.141	0.171	-0.054	0.591	0.162	0.000	0.030
2	09:42:44	-0.299	0.068	0.102	0.196	0.516	1.964	0.000	0.018
3	09:43:09	-0.361	0.122	0.038	0.015	0.481	0.785	0.000	0.015
x		-0.313	0.110	0.104	0.052	0.529	0.970	0.000	0.021
σ		0.043	0.038	0.067	0.129	0.056	0.915	0.000	0.008
%RSD		13.840	34.270	64.370	247.400	10.560	94.310	0.000	39.060
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:19	92.788%	0.839	0.842	94.603%	-0.009	-0.025	0.041	0.012
2	09:42:44	95.140%	0.985	0.945	95.472%	-0.015	-0.035	0.004	0.102
3	09:43:09	97.476%	0.878	0.817	96.341%	-0.020	-0.024	0.000	0.019
x		95.135%	0.900	0.868	95.472%	-0.015	-0.028	0.015	0.044
σ		2.344%	0.076	0.068	0.869%	0.006	0.006	0.022	0.050
%RSD		2.464	8.398	7.860	0.910	38.260	21.260	147.900	112.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:42:19	93.495%	-2.575	-0.529	-0.492	0.028	0.012	92.541%	92.126%
2	09:42:44	95.612%	-2.501	-0.523	-0.532	0.035	0.019	95.389%	94.471%
3	09:43:09	96.767%	-2.526	-0.533	-0.526	-0.008	0.029	97.284%	96.074%
x		95.291%	-2.534	-0.528	-0.517	0.018	0.020	95.071%	94.224%
σ		1.659%	0.038	0.005	0.022	0.023	0.008	2.388%	1.986%
%RSD		1.741	1.482	0.950	4.216	127.400	41.130	2.511	2.107
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:42:19	0.033	0.029	0.054	0.014	0.041	93.947%		
2	09:42:44	0.023	0.026	0.030	0.024	0.026	93.396%		
3	09:43:09	0.029	0.019	0.018	0.022	0.014	93.786%		
x		0.028	0.025	0.034	0.020	0.027	93.710%		
σ		0.005	0.005	0.018	0.005	0.014	0.283%		
%RSD		18.270	21.020	54.540	26.980	51.570	0.302		

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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	09:46:31	91.633%	0.030	-0.074	-0.629	0.000	60.120	3.658	4.584
2	09:46:56	96.085%	-0.130	-1.160	-0.971	0.000	51.810	3.281	3.019
3	09:47:21	98.943%	-0.111	-0.898	-0.651	0.000	47.730	3.315	3.009
x		95.554%	-0.070	-0.710	-0.750	0.000	53.220	3.418	3.537
σ		3.683%	0.087	0.567	0.191	0.000	6.313	0.209	0.906
%RSD		3.855	124.600	79.780	25.520	0.000	11.860	6.102	25.620
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:46:31	1.585	7.096	0.000	64.230	17.970	12.700	91.515%	-0.365
2	09:46:56	1.319	2.997	0.000	52.710	17.130	14.590	93.892%	-0.248
3	09:47:21	1.146	2.863	0.000	47.580	3.559	13.100	95.238%	-0.359
x		1.350	4.319	0.000	54.840	12.880	13.470	93.549%	-0.324
σ		0.221	2.406	0.000	8.528	8.087	0.994	1.885%	0.066
%RSD		16.380	55.710	0.000	15.550	62.770	7.381	2.015	20.330
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:46:31	-0.415	0.749	-0.010	9.825	9.887	-0.003	-0.017	0.621
2	09:46:56	0.021	0.706	-0.024	7.020	8.794	-0.007	0.019	0.677
3	09:47:21	-0.152	0.664	-0.023	4.950	4.952	-0.007	0.019	0.729
x		-0.182	0.707	-0.019	7.265	7.878	-0.006	0.007	0.675
σ		0.219	0.042	0.008	2.446	2.592	0.003	0.021	0.054
%RSD		120.600	5.991	41.020	33.670	32.900	46.700	302.900	8.028
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:46:31	0.587	1.146	1.162	0.028	-0.178	-0.850	0.000	0.023
2	09:46:56	0.543	1.318	1.419	0.098	-0.821	1.036	0.000	0.018
3	09:47:21	0.648	1.123	1.320	-0.817	-0.076	1.023	0.000	0.024
x		0.593	1.196	1.300	-0.230	-0.358	0.403	0.000	0.022
σ		0.052	0.107	0.130	0.509	0.404	1.085	0.000	0.003
%RSD		8.848	8.914	9.973	221.400	112.800	269.300	0.000	14.640
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:46:31	90.160%	0.533	0.477	92.202%	-0.031	-0.023	0.005	0.031
2	09:46:56	93.448%	0.443	0.477	93.955%	-0.048	-0.034	0.000	0.010
3	09:47:21	96.515%	0.510	0.482	94.582%	-0.017	-0.011	-0.004	0.015
x		93.374%	0.496	0.479	93.580%	-0.032	-0.023	0.001	0.019
σ		3.178%	0.047	0.003	1.234%	0.015	0.012	0.004	0.011
%RSD		3.403	9.402	0.629	1.319	48.170	51.600	756.700	58.720
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:46:31	90.774%	-2.203	-0.577	-0.555	0.014	0.005	90.581%	89.897%
2	09:46:56	94.697%	-2.014	-0.586	-0.571	0.022	0.001	94.348%	93.736%
3	09:47:21	94.350%	-1.944	-0.547	-0.559	-0.003	0.020	95.179%	94.699%
x		93.274%	-2.054	-0.570	-0.562	0.011	0.009	93.369%	92.777%
σ		2.172%	0.134	0.021	0.009	0.012	0.010	2.450%	2.541%
%RSD		2.328	6.506	3.607	1.556	112.000	114.500	2.624	2.739
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:46:31	0.016	0.009	0.156	0.131	0.136	103.143%		
2	09:46:56	0.007	0.010	0.160	0.131	0.138	97.518%		
3	09:47:21	0.009	0.008	0.133	0.115	0.120	94.265%		
x		0.010	0.009	0.150	0.126	0.131	98.308%		
σ		0.005	0.001	0.015	0.009	0.010	4.492%		
%RSD		43.080	11.920	9.882	7.455	7.615	4.569		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:40	102.410%	43.140	927.600	924.600	0.000	42440.000	40610.000	41270.000
2	09:51:05	107.489%	45.430	934.800	942.500	0.000	42980.000	41700.000	42440.000
3	09:51:30	110.104%	45.880	951.600	943.000	0.000	43430.000	42360.000	42850.000
x		106.668%	44.820	938.000	936.700	0.000	42950.000	41560.000	42190.000
σ		3.912%	1.473	12.290	10.480	0.000	498.200	884.700	823.200
%RSD		3.668	3.287	1.310	1.119	0.000	1.160	2.129	1.951
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:40	1758.000	8750.000	0.000	45670.000	44560.000	43250.000	93.443%	885.600
2	09:51:05	1659.000	8805.000	0.000	46760.000	45600.000	44910.000	95.099%	923.800
3	09:51:30	1692.000	8842.000	0.000	46560.000	47410.000	47050.000	95.194%	928.400
x		1703.000	8799.000	0.000	46330.000	45850.000	45070.000	94.579%	912.600
σ		50.490	46.460	0.000	584.000	1440.000	1901.000	0.984%	23.500
%RSD		2.965	0.528	0.000	1.261	3.141	4.218	1.041	2.575
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:40	449.100	175.600	451.400	890.000	1084.000	449.300	437.100	233.000
2	09:51:05	470.800	180.200	472.000	924.400	1112.000	468.300	453.000	241.800
3	09:51:30	469.200	183.500	480.600	933.200	1115.000	473.300	457.500	241.700
x		463.000	179.800	468.000	915.900	1104.000	463.600	449.200	238.800
σ		12.090	3.957	14.980	22.840	17.190	12.660	10.750	5.032
%RSD		2.612	2.201	3.200	2.493	1.557	2.730	2.394	2.107
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:40	230.300	441.600	434.300	36.220	8.365	9.302	0.000	876.700
2	09:51:05	238.700	456.800	454.000	36.860	7.951	8.474	0.000	915.600
3	09:51:30	238.300	464.700	461.700	38.070	8.022	9.588	0.000	908.600
x		235.800	454.300	450.000	37.050	8.113	9.121	0.000	900.300
σ		4.705	11.770	14.110	0.943	0.221	0.578	0.000	20.720
%RSD		1.996	2.591	3.136	2.544	2.726	6.341	0.000	2.301
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:40	90.455%	939.400	959.300	85.993%	45.670	45.710	46.110	38.450
2	09:51:05	92.771%	991.000	998.600	87.896%	47.060	46.550	49.050	43.530
3	09:51:30	95.801%	1001.000	1030.000	88.752%	46.200	45.290	48.300	41.580
x		93.009%	977.000	996.100	87.547%	46.310	45.850	47.820	41.190
σ		2.681%	32.940	35.580	1.412%	0.699	0.639	1.528	2.564
%RSD		2.883	3.371	3.572	1.613	1.509	1.393	3.195	6.225
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:40	86.182%	1846.000	474.400	469.900	1822.000	1897.000	92.519%	90.939%
2	09:51:05	86.555%	1945.000	492.500	492.800	1917.000	2000.000	94.094%	93.802%
3	09:51:30	90.453%	1890.000	486.700	481.200	1910.000	1957.000	96.767%	95.660%
x		87.730%	1894.000	484.600	481.300	1883.000	1951.000	94.460%	93.467%
σ		2.365%	49.260	9.251	11.450	52.940	51.990	2.148%	2.378%
%RSD		2.696	2.601	1.909	2.378	2.812	2.664	2.274	2.545
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:50:40	48.360	46.240	20.690	20.440	20.280	82.981%		
2	09:51:05	51.760	49.420	21.590	21.450	21.150	83.034%		
3	09:51:30	50.890	49.370	21.260	21.460	21.050	86.446%		
x		50.340	48.340	21.180	21.120	20.830	84.154%		
σ		1.766	1.821	0.455	0.589	0.479	1.986%		
%RSD		3.508	3.767	2.146	2.787	2.302	2.360		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:02	103.906%	-0.028	36.340	33.740	0.000	24500.000	10260.000	10570.000
2	09:59:27	110.026%	-0.052	33.850	33.850	0.000	24850.000	10610.000	10910.000
3	09:59:52	110.461%	-0.106	35.830	34.240	0.000	25570.000	11020.000	11230.000
x		108.131%	-0.062	35.340	33.950	0.000	24970.000	10630.000	10900.000
σ		3.665%	0.040	1.312	0.263	0.000	543.200	378.100	329.500
%RSD		3.389	64.890	3.713	0.775	0.000	2.175	3.557	3.023
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:02	58.600	3922.000	0.000	3376.000	98530.000	98350.000	93.834%	2.155
2	09:59:27	59.070	4010.000	0.000	3535.000	107800.000	106100.000	93.163%	2.075
3	09:59:52	61.810	4053.000	0.000	3633.000	107900.000	106200.000	92.677%	2.089
x		59.830	3995.000	0.000	3515.000	104800.000	103600.000	93.225%	2.106
σ		1.732	66.480	0.000	129.900	5396.000	4508.000	0.581%	0.042
%RSD		2.894	1.664	0.000	3.695	5.151	4.353	0.623	2.017
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:02	1.337	5.443	7.181	330.300	769.600	0.415	0.421	11.680
2	09:59:27	0.070	5.660	7.675	351.600	791.700	0.443	0.536	11.840
3	09:59:52	-0.578	5.760	7.809	360.500	800.200	0.448	0.763	12.100
x		0.276	5.621	7.555	347.500	787.200	0.435	0.573	11.870
σ		0.974	0.162	0.331	15.500	15.790	0.018	0.174	0.214
%RSD		352.200	2.883	4.376	4.462	2.006	4.129	30.350	1.798
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:02	10.160	4.168	3.667	0.127	-1.031	-0.703	0.000	195.900
2	09:59:27	10.800	4.080	3.855	1.401	-0.670	-0.696	0.000	200.200
3	09:59:52	10.380	4.293	4.387	0.260	-0.806	-0.468	0.000	202.800
x		10.450	4.180	3.970	0.596	-0.836	-0.622	0.000	199.600
σ		0.329	0.107	0.373	0.701	0.182	0.134	0.000	3.493
%RSD		3.154	2.563	9.406	117.600	21.820	21.500	0.000	1.750
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:02	88.194%	3.848	3.732	85.513%	-0.019	-0.015	0.010	-0.036
2	09:59:27	91.847%	3.337	3.478	86.751%	-0.012	-0.034	0.027	1.210
3	09:59:52	91.912%	3.010	3.177	87.605%	-0.039	-0.021	0.018	0.012
x		90.651%	3.398	3.462	86.623%	-0.023	-0.023	0.018	0.396
σ		2.128%	0.422	0.278	1.052%	0.014	0.010	0.009	0.706
%RSD		2.348	12.430	8.018	1.214	58.180	42.780	46.760	178.400
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:59:02	87.357%	7.636	-0.171	-0.145	35.400	35.460	91.704%	91.333%
2	09:59:27	88.362%	6.504	-0.168	-0.175	36.560	36.450	94.376%	93.381%
3	09:59:52	89.819%	5.274	-0.210	-0.164	36.890	36.150	94.363%	94.611%
x		88.512%	6.471	-0.183	-0.161	36.280	36.020	93.481%	93.108%
σ		1.238%	1.182	0.023	0.015	0.783	0.507	1.539%	1.656%
%RSD		1.399	18.260	12.610	9.440	2.156	1.408	1.647	1.778
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	09:59:02	0.085	0.087	0.495	0.479	0.487	84.492%		
2	09:59:27	0.067	0.073	0.523	0.481	0.495	85.830%		
3	09:59:52	0.060	0.070	0.519	0.483	0.483	86.326%		
x		0.071	0.077	0.513	0.481	0.488	85.549%		
σ		0.013	0.009	0.015	0.002	0.006	0.949%		
%RSD		18.180	11.810	2.937	0.389	1.306	1.109		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:14	103.431%	-0.038	27.640	29.000	0.000	20980.000	10640.000	10780.000
2	10:03:39	110.776%	0.021	25.590	27.710	0.000	21470.000	11000.000	11060.000
3	10:04:04	113.130%	-0.058	29.420	28.140	0.000	21590.000	11120.000	11440.000
x		109.112%	-0.025	27.550	28.280	0.000	21350.000	10920.000	11090.000
σ		5.059%	0.041	1.915	0.659	0.000	324.100	253.100	328.700
%RSD		4.637	167.400	6.952	2.331	0.000	1.518	2.317	2.963
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:14	78.840	4276.000	0.000	3153.000	93690.000	92750.000	91.674%	1.979
2	10:03:39	80.790	4298.000	0.000	3092.000	97870.000	98380.000	94.070%	2.571
3	10:04:04	81.910	4348.000	0.000	3288.000	102800.000	100900.000	93.686%	2.626
x		80.510	4307.000	0.000	3178.000	98130.000	97330.000	93.143%	2.392
σ		1.552	36.820	0.000	100.700	4574.000	4156.000	1.287%	0.359
%RSD		1.927	0.855	0.000	3.168	4.662	4.270	1.382	14.990
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:14	-0.029	5.075	39.490	333.800	729.500	0.408	0.837	9.686
2	10:03:39	0.646	5.480	41.140	347.800	746.000	0.334	0.848	10.580
3	10:04:04	1.381	5.674	41.870	358.900	755.500	0.389	0.808	9.795
x		0.666	5.410	40.840	346.800	743.700	0.377	0.831	10.020
σ		0.705	0.305	1.221	12.570	13.140	0.039	0.021	0.490
%RSD		105.800	5.644	2.990	3.624	1.767	10.230	2.520	4.887
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:14	9.346	5.201	4.737	-0.392	0.179	0.247	0.000	211.400
2	10:03:39	8.912	5.373	5.594	-0.793	-0.148	-0.127	0.000	221.200
3	10:04:04	8.913	5.165	5.591	3.138	-1.057	-0.076	0.000	219.500
x		9.057	5.246	5.307	0.651	-0.342	0.015	0.000	217.400
σ		0.250	0.111	0.494	2.163	0.640	0.203	0.000	5.249
%RSD		2.762	2.119	9.314	332.200	187.300	1379.000	0.000	2.415
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:14	88.965%	1.237	1.459	85.355%	-0.011	-0.031	0.032	0.075
2	10:03:39	92.767%	1.358	1.615	87.450%	-0.028	-0.025	0.022	-0.010
3	10:04:04	94.954%	1.400	1.513	88.498%	-0.040	-0.021	0.022	2.366
x		92.229%	1.332	1.529	87.101%	-0.026	-0.026	0.025	0.810
σ		3.031%	0.085	0.080	1.600%	0.014	0.005	0.006	1.348
%RSD		3.286	6.362	5.203	1.837	54.680	19.580	23.240	166.300
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:14	86.261%	-0.567	-0.222	-0.174	45.130	44.440	91.131%	92.039%
2	10:03:39	91.368%	-0.347	-0.228	-0.113	47.150	46.240	95.669%	95.661%
3	10:04:04	90.498%	-0.167	-0.158	-0.167	46.930	45.990	98.820%	96.306%
x		89.376%	-0.360	-0.203	-0.151	46.400	45.560	95.206%	94.669%
σ		2.732%	0.201	0.039	0.034	1.111	0.977	3.865%	2.300%
%RSD		3.057	55.680	19.150	22.320	2.394	2.145	4.060	2.430
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:03:14	0.042	0.038	0.557	0.499	0.515	84.130%		
2	10:03:39	0.044	0.031	0.541	0.520	0.533	88.701%		
3	10:04:04	0.029	0.035	0.557	0.546	0.541	88.187%		
x		0.038	0.035	0.551	0.522	0.530	87.006%		
σ		0.008	0.004	0.009	0.024	0.013	2.504%		
%RSD		21.550	10.520	1.659	4.550	2.461	2.878		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	108.467%	-0.092	25.200	25.650	0.000	19120.000	11520.000	11700.000
2	10:07:49	109.789%	-0.008	28.710	25.620	0.000	19790.000	12050.000	12440.000
3	10:08:14	109.729%	0.014	25.040	26.140	0.000	20370.000	12510.000	12650.000
x		109.328%	-0.029	26.320	25.800	0.000	19760.000	12030.000	12260.000
σ		0.746%	0.056	2.072	0.295	0.000	622.400	497.800	499.000
%RSD		0.682	196.400	7.873	1.142	0.000	3.150	4.138	4.069

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	21.250	4842.000	0.000	3407.000	93950.000	92610.000	92.883%	0.749
2	10:07:49	22.020	5036.000	0.000	3623.000	98370.000	97490.000	92.242%	0.664
3	10:08:14	22.750	5118.000	0.000	3685.000	100300.000	98950.000	91.441%	0.895
x		22.010	4999.000	0.000	3572.000	97540.000	96350.000	92.189%	0.769
σ		0.749	142.000	0.000	145.600	3252.000	3317.000	0.723%	0.117
%RSD		3.405	2.841	0.000	4.078	3.334	3.442	0.784	15.180

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	1.845	6.376	5.620	72.590	473.300	0.250	0.392	10.250
2	10:07:49	-0.069	6.556	5.832	74.940	478.100	0.227	0.414	10.130
3	10:08:14	3.425	6.613	5.789	78.730	478.700	0.242	0.324	9.932
x		1.734	6.515	5.747	75.420	476.700	0.240	0.377	10.100
σ		1.749	0.124	0.112	3.098	2.981	0.011	0.047	0.160
%RSD		100.900	1.905	1.953	4.108	0.625	4.712	12.420	1.579

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	9.265	10.160	9.432	1.652	-0.972	-1.130	0.000	170.600
2	10:07:49	9.607	10.290	10.280	1.898	-0.756	-1.115	0.000	179.600
3	10:08:14	9.063	11.000	10.660	1.598	-1.190	-1.136	0.000	181.700
x		9.312	10.480	10.130	1.716	-0.973	-1.127	0.000	177.300
σ		0.275	0.449	0.631	0.160	0.217	0.011	0.000	5.893
%RSD		2.955	4.282	6.232	9.321	22.320	0.975	0.000	3.323

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	91.228%	2.099	2.248	85.800%	-0.048	-0.041	0.005	2.480
2	10:07:49	92.178%	2.200	2.350	86.413%	-0.038	-0.045	0.005	4.156
3	10:08:14	92.110%	2.223	2.337	87.790%	-0.047	-0.040	0.001	0.973
x		91.839%	2.174	2.312	86.667%	-0.044	-0.042	0.004	2.536
σ		0.530%	0.066	0.056	1.019%	0.005	0.003	0.003	1.592
%RSD		0.577	3.045	2.406	1.176	12.060	6.839	64.360	62.780

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	88.016%	-1.547	-0.488	-0.499	34.620	34.650	93.762%	94.175%
2	10:07:49	88.270%	-1.168	-0.519	-0.480	36.640	35.940	94.888%	94.545%
3	10:08:14	88.036%	-1.200	-0.465	-0.464	37.780	37.240	94.724%	95.019%
x		88.107%	-1.305	-0.491	-0.481	36.340	35.940	94.458%	94.580%
σ		0.141%	0.210	0.027	0.017	1.603	1.297	0.608%	0.423%
%RSD		0.160	16.080	5.554	3.580	4.410	3.609	0.644	0.448

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:23	0.016	0.020	0.260	0.259	0.240	86.813%
2	10:07:49	0.021	0.023	0.234	0.224	0.228	86.264%
3	10:08:14	0.022	0.018	0.269	0.205	0.232	86.718%
x		0.020	0.021	0.254	0.229	0.233	86.599%
σ		0.003	0.003	0.018	0.027	0.006	0.293%
%RSD		16.800	13.310	7.244	11.990	2.458	0.339

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:36	99.703%	-0.135	2.986	3.966	0.000	3978.000	2228.000	2239.000
2	10:12:01	102.864%	-0.094	4.048	4.537	0.000	4051.000	2306.000	2308.000
3	10:12:26	102.182%	-0.104	4.302	4.495	0.000	4146.000	2375.000	2377.000
x		101.583%	-0.111	3.779	4.333	0.000	4058.000	2303.000	2308.000
σ		1.663%	0.022	0.698	0.318	0.000	83.840	73.250	68.980
%RSD		1.637	19.390	18.480	7.345	0.000	2.066	3.180	2.989
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:36	4.243	1020.000	0.000	713.300	18360.000	18230.000	92.531%	-0.290
2	10:12:01	3.952	1034.000	0.000	750.000	19610.000	19240.000	93.142%	0.002
3	10:12:26	4.514	1059.000	0.000	767.500	19830.000	19390.000	93.027%	-0.106
x		4.236	1038.000	0.000	743.600	19270.000	18960.000	92.900%	-0.131
σ		0.281	19.900	0.000	27.620	793.600	630.100	0.325%	0.147
%RSD		6.639	1.918	0.000	3.715	4.118	3.324	0.349	112.300
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:36	0.378	1.306	1.041	18.210	90.450	0.054	0.060	2.126
2	10:12:01	0.658	1.379	1.128	17.140	91.050	0.060	0.113	2.199
3	10:12:26	0.401	1.345	1.131	17.550	92.160	0.053	0.036	2.105
x		0.479	1.343	1.100	17.630	91.220	0.056	0.070	2.143
σ		0.155	0.037	0.051	0.541	0.864	0.004	0.039	0.050
%RSD		32.400	2.734	4.638	3.066	0.947	6.714	56.420	2.313
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:36	2.024	2.064	2.086	-0.393	-0.445	-1.192	0.000	34.040
2	10:12:01	1.916	2.330	2.069	0.072	0.291	-1.011	0.000	34.980
3	10:12:26	1.740	2.313	2.352	0.145	-0.378	-0.452	0.000	35.280
x		1.893	2.236	2.169	-0.059	-0.177	-0.885	0.000	34.760
σ		0.144	0.149	0.159	0.292	0.407	0.386	0.000	0.648
%RSD		7.588	6.672	7.331	499.100	229.500	43.570	0.000	1.863
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:36	91.020%	0.371	0.437	89.827%	-0.050	-0.058	0.005	2.849
2	10:12:01	93.657%	0.330	0.354	91.139%	-0.050	-0.050	-0.008	0.031
3	10:12:26	94.790%	0.334	0.356	92.099%	-0.050	-0.061	-0.004	0.013
x		93.156%	0.345	0.382	91.022%	-0.050	-0.056	-0.002	0.964
σ		1.934%	0.022	0.047	1.140%	0.000	0.006	0.006	1.632
%RSD		2.076	6.518	12.430	1.253	0.519	10.660	305.600	169.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:36	91.699%	-2.897	-0.731	-0.722	7.229	7.212	94.613%	94.344%
2	10:12:01	92.034%	-2.925	-0.737	-0.716	7.573	7.269	97.119%	96.303%
3	10:12:26	92.925%	-2.905	-0.737	-0.728	7.361	7.055	97.890%	97.195%
x		92.219%	-2.909	-0.735	-0.722	7.388	7.179	96.541%	95.947%
σ		0.634%	0.015	0.003	0.006	0.174	0.111	1.713%	1.458%
%RSD		0.687	0.499	0.469	0.784	2.352	1.544	1.774	1.520
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:11:36	0.014	0.009	0.060	0.048	0.053	91.601%		
2	10:12:01	0.016	0.008	0.068	0.059	0.059	92.735%		
3	10:12:26	0.012	0.009	0.062	0.055	0.062	92.034%		
x		0.014	0.009	0.063	0.054	0.058	92.123%		
σ		0.002	0.001	0.004	0.006	0.005	0.572%		
%RSD		13.300	10.680	6.542	11.230	7.793	0.621		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:15:45	103.602%	42.840	915.500	925.300	0.000	59900.000	50450.000	50970.000
2	10:16:10	106.948%	44.790	934.900	936.300	0.000	62230.000	52600.000	53390.000
3	10:16:35	104.418%	46.900	974.100	975.500	0.000	63340.000	54640.000	54580.000
x		104.989%	44.840	941.500	945.700	0.000	61820.000	52570.000	52980.000
σ		1.744%	2.031	29.860	26.360	0.000	1755.000	2095.000	1843.000
%RSD		1.662	4.530	3.171	2.787	0.000	2.839	3.985	3.478
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:15:45	1711.000	13050.000	0.000	49720.000	137200.000	133100.000	90.008%	862.900
2	10:16:10	1815.000	13400.000	0.000	50510.000	141900.000	140700.000	88.982%	901.000
3	10:16:35	1891.000	13560.000	0.000	51720.000	145200.000	142300.000	88.389%	918.200
x		1806.000	13340.000	0.000	50650.000	141500.000	138700.000	89.127%	894.100
σ		90.240	264.600	0.000	1006.000	4054.000	4918.000	0.819%	28.290
%RSD		4.997	1.984	0.000	1.987	2.866	3.546	0.919	3.164
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:15:45	434.600	169.900	447.800	940.300	1488.000	437.300	420.400	220.600
2	10:16:10	459.600	181.000	480.600	993.700	1562.000	459.800	445.800	231.700
3	10:16:35	465.600	183.600	485.300	1007.000	1581.000	466.000	453.000	234.100
x		453.300	178.200	471.200	980.400	1544.000	454.400	439.700	228.800
σ		16.440	7.261	20.440	35.390	49.410	15.110	17.150	7.209
%RSD		3.628	4.075	4.336	3.610	3.201	3.325	3.901	3.151
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:15:45	217.600	445.300	435.500	34.790	7.090	8.333	0.000	1035.000
2	10:16:10	230.700	470.700	463.900	36.070	9.026	7.459	0.000	1088.000
3	10:16:35	231.800	477.500	467.000	37.210	9.728	6.786	0.000	1101.000
x		226.700	464.500	455.500	36.020	8.615	7.526	0.000	1075.000
σ		7.900	16.960	17.370	1.210	1.366	0.776	0.000	34.890
%RSD		3.485	3.651	3.814	3.361	15.860	10.300	0.000	3.246
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:15:45	88.123%	920.900	951.200	81.739%	45.680	45.920	46.970	38.450
2	10:16:10	87.377%	993.500	1011.000	81.579%	45.630	45.850	47.670	40.340
3	10:16:35	88.438%	1010.000	1030.000	81.321%	46.450	45.890	47.580	38.960
x		87.980%	974.900	997.500	81.546%	45.920	45.880	47.410	39.250
σ		0.545%	47.550	41.330	0.211%	0.460	0.036	0.382	0.977
%RSD		0.619	4.877	4.143	0.258	1.002	0.078	0.805	2.489
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:15:45	81.920%	1886.000	470.400	475.000	1832.000	1913.000	92.247%	91.879%
2	10:16:10	82.570%	1927.000	487.200	483.500	1935.000	1973.000	92.584%	92.397%
3	10:16:35	84.463%	1925.000	487.300	485.200	1924.000	1996.000	91.436%	92.692%
x		82.984%	1913.000	481.600	481.200	1897.000	1960.000	92.089%	92.322%
σ		1.321%	23.490	9.758	5.453	56.280	42.730	0.590%	0.412%
%RSD		1.592	1.228	2.026	1.133	2.967	2.180	0.641	0.446
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:15:45	49.370	47.440	20.900	20.690	20.650	81.347%		
2	10:16:10	51.050	49.360	21.470	21.250	21.160	81.793%		
3	10:16:35	51.500	49.860	21.390	21.190	21.290	82.735%		
x		50.640	48.890	21.250	21.040	21.030	81.958%		
σ		1.123	1.282	0.308	0.306	0.336	0.709%		
%RSD		2.218	2.623	1.450	1.456	1.599	0.865		

180-40505-B-3-C MSD 1/21/2015 10:19:30 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:55	100.745%	42.400	912.900	908.100	0.000	60540.000	50310.000	50930.000
2	10:20:20	102.313%	43.740	949.500	934.400	0.000	63350.000	53690.000	53680.000
3	10:20:45	102.260%	46.090	962.000	963.300	0.000	64620.000	54620.000	55440.000
x		101.772%	44.080	941.400	935.300	0.000	62830.000	52870.000	53350.000
σ		0.890%	1.869	25.510	27.590	0.000	2087.000	2270.000	2272.000
%RSD		0.875	4.240	2.710	2.950	0.000	3.322	4.293	4.259
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:55	1584.000	12950.000	0.000	49030.000	134100.000	133400.000	86.085%	857.600
2	10:20:20	1685.000	13640.000	0.000	51360.000	146300.000	145100.000	85.760%	911.900
3	10:20:45	1721.000	13920.000	0.000	52140.000	148900.000	146900.000	85.777%	938.900
x		1663.000	13500.000	0.000	50840.000	143100.000	141800.000	85.874%	902.800
σ		71.450	496.200	0.000	1617.000	7918.000	7294.000	0.183%	41.430
%RSD		4.295	3.674	0.000	3.181	5.534	5.144	0.213	4.589
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:55	434.600	170.900	444.300	971.200	1528.000	428.700	420.000	218.300
2	10:20:20	456.000	182.400	473.400	1023.000	1620.000	455.700	442.600	231.900
3	10:20:45	471.900	185.700	483.500	1038.000	1639.000	462.800	450.400	234.400
x		454.200	179.700	467.100	1011.000	1596.000	449.100	437.700	228.200
σ		18.730	7.769	20.310	35.240	59.470	18.000	15.780	8.651
%RSD		4.124	4.324	4.349	3.486	3.728	4.008	3.605	3.791
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:55	217.600	438.600	435.900	36.370	8.179	7.321	0.000	1045.000
2	10:20:20	231.400	470.500	460.900	36.820	8.989	9.326	0.000	1090.000
3	10:20:45	234.500	480.700	478.300	35.570	9.010	9.813	0.000	1102.000
x		227.900	463.300	458.300	36.250	8.726	8.820	0.000	1079.000
σ		9.038	21.970	21.280	0.631	0.474	1.321	0.000	29.960
%RSD		3.967	4.743	4.644	1.741	5.432	14.970	0.000	2.777
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:55	84.193%	907.900	895.700	87.610%	41.980	41.960	44.380	36.940
2	10:20:20	85.059%	952.300	955.900	86.813%	43.280	43.580	46.200	38.620
3	10:20:45	85.762%	1015.000	1041.000	80.124%	45.810	45.970	48.400	39.730
x		85.005%	958.300	964.100	84.849%	43.690	43.840	46.330	38.430
σ		0.786%	53.700	72.770	4.112%	1.950	2.014	2.014	1.405
%RSD		0.924	5.604	7.548	4.846	4.462	4.595	4.347	3.655
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:55	81.184%	1850.000	463.000	456.200	1800.000	1848.000	88.527%	89.440%
2	10:20:20	82.042%	1915.000	486.500	478.400	1896.000	1946.000	89.574%	90.023%
3	10:20:45	82.360%	1958.000	493.100	487.400	1910.000	1980.000	90.575%	91.119%
x		81.862%	1908.000	480.900	474.000	1869.000	1925.000	89.559%	90.194%
σ		0.608%	54.780	15.810	16.080	60.160	68.580	1.024%	0.852%
%RSD		0.743	2.872	3.288	3.392	3.220	3.563	1.144	0.945
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:19:55	48.140	47.010	20.570	20.520	20.290	80.176%		
2	10:20:20	51.280	49.300	21.750	21.430	21.190	81.239%		
3	10:20:45	52.600	50.780	21.680	21.820	21.600	81.229%		
x		50.670	49.030	21.340	21.260	21.030	80.882%		
σ		2.292	1.901	0.662	0.668	0.670	0.611%		
%RSD		4.523	3.878	3.103	3.142	3.188	0.756		

180-40505-B-3-A PDS 1/21/2015 10:23:39 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	10:24:05	96.486%	49.330	1059.000	1050.000	0.000	66600.000	56970.000	57270.000
2	10:24:31	100.860%	49.550	1079.000	1061.000	0.000	68800.000	58830.000	59570.000
3	10:24:56	100.732%	52.230	1074.000	1080.000	0.000	70280.000	60640.000	61130.000
x		99.359%	50.370	1071.000	1064.000	0.000	68560.000	58810.000	59330.000
σ		2.489%	1.617	10.750	15.220	0.000	1852.000	1836.000	1946.000
%RSD		2.506	3.211	1.004	1.431	0.000	2.701	3.122	3.281
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:05	1937.000	15310.000	0.000	56070.000	139500.000	139000.000	84.251%	1080.000
2	10:24:31	1890.000	15580.000	0.000	57410.000	150800.000	150800.000	83.950%	1137.000
3	10:24:56	1933.000	15870.000	0.000	58020.000	151000.000	151700.000	83.078%	1159.000
x		1920.000	15580.000	0.000	57170.000	147100.000	147200.000	83.760%	1125.000
σ		26.180	279.800	0.000	995.100	6615.000	7088.000	0.609%	40.880
%RSD		1.363	1.795	0.000	1.741	4.497	4.816	0.727	3.633
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:05	497.200	190.600	501.800	1050.000	1641.000	487.200	473.600	243.300
2	10:24:31	520.900	202.600	534.100	1089.000	1721.000	513.300	497.600	257.700
3	10:24:56	527.500	205.500	546.600	1121.000	1736.000	523.400	506.800	259.800
x		515.200	199.600	527.500	1087.000	1699.000	508.000	492.700	253.600
σ		15.900	7.873	23.120	35.540	51.300	18.690	17.150	9.017
%RSD		3.087	3.945	4.383	3.269	3.019	3.680	3.481	3.556
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:05	243.500	498.200	489.200	39.720	9.427	8.855	0.000	1158.000
2	10:24:31	253.600	522.000	510.900	39.740	9.163	9.331	0.000	1217.000
3	10:24:56	257.300	544.900	523.600	41.390	9.330	10.700	0.000	1230.000
x		251.400	521.700	507.900	40.280	9.307	9.630	0.000	1202.000
σ		7.159	23.320	17.400	0.956	0.133	0.960	0.000	38.090
%RSD		2.847	4.470	3.426	2.373	1.433	9.972	0.000	3.169
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:05	82.353%	1156.000	1143.000	85.952%	38.250	39.050	50.220	40.160
2	10:24:31	83.807%	1225.000	1226.000	85.573%	39.530	40.370	52.410	43.440
3	10:24:56	83.601%	1248.000	1243.000	85.189%	40.140	39.740	53.130	43.450
x		83.253%	1210.000	1204.000	85.572%	39.310	39.720	51.920	42.350
σ		0.787%	48.060	53.620	0.381%	0.965	0.661	1.518	1.898
%RSD		0.945	3.973	4.454	0.446	2.455	1.665	2.924	4.481
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:24:05	81.265%	2259.000	575.500	576.500	2017.000	2101.000	87.598%	89.428%
2	10:24:31	80.549%	2358.000	612.600	596.800	2148.000	2181.000	89.445%	89.951%
3	10:24:56	81.817%	2356.000	614.200	603.800	2163.000	2198.000	89.067%	90.193%
x		81.210%	2325.000	600.800	592.400	2109.000	2160.000	88.703%	89.857%
σ		0.636%	56.870	21.880	14.170	80.420	51.880	0.976%	0.391%
%RSD		0.783	2.447	3.641	2.392	3.813	2.402	1.101	0.435
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:24:05	56.260	53.890	22.940	22.850	22.620	81.165%		
2	10:24:31	57.650	56.150	23.560	23.790	23.370	81.887%		
3	10:24:56	57.920	56.920	23.890	23.980	23.660	82.508%		
x		57.280	55.650	23.460	23.540	23.220	81.853%		
σ		0.894	1.576	0.484	0.602	0.533	0.672%		
%RSD		1.561	2.831	2.062	2.558	2.295	0.822		

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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	10:31:04	95.401%	-0.040	44.430	42.390	0.000	41430.000	17190.000	15950.000
2	10:31:30	95.958%	-0.029	42.330	45.250	0.000	42020.000	16120.000	16410.000
3	10:31:56	100.904%	-0.065	41.980	42.640	0.000	41310.000	15900.000	15960.000
x		97.421%	-0.045	42.910	43.430	0.000	41590.000	16410.000	16100.000
σ		3.029%	0.018	1.324	1.582	0.000	378.800	692.000	262.400
%RSD		3.109	40.850	3.085	3.644	0.000	0.911	4.218	1.630
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:04	18.730	4181.000	0.000	4935.000	97920.000	97390.000	79.931%	1.342
2	10:31:30	17.860	4247.000	0.000	5021.000	99090.000	100000.000	81.232%	1.081
3	10:31:56	17.980	4163.000	0.000	5058.000	99080.000	99280.000	82.878%	1.134
x		18.190	4197.000	0.000	5005.000	98700.000	98890.000	81.347%	1.186
σ		0.470	44.020	0.000	63.080	671.400	1355.000	1.477%	0.138
%RSD		2.584	1.049	0.000	1.260	0.680	1.371	1.815	11.640
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:04	0.744	6.984	22.640	642.500	1042.000	1.154	1.188	7.948
2	10:31:30	-0.129	7.092	22.860	574.200	978.900	1.121	1.046	7.866
3	10:31:56	0.173	7.029	23.110	557.400	932.100	0.985	0.855	7.659
x		0.263	7.035	22.870	591.300	984.200	1.087	1.030	7.824
σ		0.443	0.054	0.232	45.110	54.910	0.090	0.167	0.149
%RSD		168.500	0.769	1.015	7.628	5.579	8.248	16.200	1.903
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:04	7.440	6.028	5.387	-0.074	-1.497	-1.914	0.000	208.200
2	10:31:30	7.869	5.468	5.980	0.524	-1.436	-1.008	0.000	210.800
3	10:31:56	7.218	5.817	5.852	0.278	-0.892	-0.885	0.000	209.800
x		7.509	5.771	5.740	0.243	-1.275	-1.269	0.000	209.600
σ		0.331	0.283	0.312	0.300	0.333	0.562	0.000	1.333
%RSD		4.406	4.902	5.435	123.800	26.110	44.300	0.000	0.636
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:04	80.475%	14.940	15.130	83.326%	0.332	0.319	0.124	0.096
2	10:31:30	81.941%	10.360	10.450	85.048%	0.314	0.296	0.025	-0.005
3	10:31:56	83.541%	8.759	8.912	86.163%	0.291	0.348	0.052	-0.020
x		81.985%	11.350	11.500	84.846%	0.312	0.321	0.067	0.024
σ		1.533%	3.207	3.237	1.429%	0.021	0.026	0.051	0.063
%RSD		1.870	28.250	28.150	1.685	6.579	8.121	76.240	265.800
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:31:04	80.087%	4.027	1.946	1.986	40.600	39.730	86.504%	87.069%
2	10:31:30	80.027%	2.320	0.916	0.925	39.940	40.560	88.522%	88.722%
3	10:31:56	81.410%	0.987	0.517	0.542	40.710	40.640	89.350%	89.492%
x		80.508%	2.445	1.126	1.151	40.420	40.310	88.126%	88.428%
σ		0.782%	1.524	0.737	0.748	0.416	0.503	1.464%	1.238%
%RSD		0.971	62.330	65.440	64.990	1.029	1.247	1.661	1.400
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:31:04	0.130	0.125	0.391	0.364	0.358	80.491%		
2	10:31:30	0.106	0.092	0.351	0.291	0.317	81.194%		
3	10:31:56	0.089	0.072	0.304	0.284	0.310	82.831%		
x		0.109	0.096	0.349	0.313	0.328	81.505%		
σ		0.021	0.027	0.043	0.044	0.026	1.200%		
%RSD		19.040	27.780	12.440	14.180	8.006	1.473		

CCV 1455996 1/21/2015 10:34:51 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	85.364%	97.360	102.300	101.500	0.000	48490.000	46650.000	47080.000
2	10:35:41	87.955%	100.200	104.500	100.600	0.000	49030.000	48090.000	48370.000
3	10:36:06	88.816%	102.700	106.500	101.600	0.000	49680.000	48200.000	48640.000
x		87.378%	100.083%	104.427%	101.235%	0.000	98.140%	95.294%	96.061%
σ		1.797%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.056	2.684	1.973	0.525	0.000	1.215	1.821	1.731

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	463.400	4896.000	0.000	48990.000	47070.000	47290.000	84.606%	95.320
2	10:35:41	477.800	4978.000	0.000	51200.000	50540.000	48630.000	85.315%	100.500
3	10:36:06	482.200	4977.000	0.000	51430.000	50950.000	50540.000	86.722%	98.830
x		94.899%	99.001%	0.000	101.083%	99.035%	97.642%	85.548%	98.219%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.077%	n/a
%RSD		2.068	0.952	0.000	2.667	4.308	3.348	1.259	2.693

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	91.180	91.760	492.100	23780.000	25390.000	93.680	94.750	94.420
2	10:35:41	94.370	94.720	511.400	24790.000	26580.000	96.510	98.420	97.870
3	10:36:06	94.390	95.620	515.600	24950.000	26870.000	97.470	97.230	98.840
x		93.315%	94.033%	101.271%	98.021%	105.120%	95.889%	96.800%	97.044%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.978	2.146	2.476	2.598	2.984	2.060	1.935	2.392

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	94.150	96.710	96.310	94.340	93.230	95.160	0.000	93.260
2	10:35:41	98.980	99.960	100.300	98.780	100.100	99.750	0.000	97.820
3	10:36:06	98.620	98.860	100.100	97.590	100.500	99.820	0.000	96.730
x		97.246%	98.511%	98.892%	96.903%	97.960%	98.241%	0.000	95.938%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.767	1.678	2.262	2.370	4.183	2.715	0.000	2.480

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	83.172%	88.800	86.140	89.019%	90.610	90.970	93.640	94.760
2	10:35:41	84.222%	98.340	96.880	82.608%	98.320	97.540	98.370	97.700
3	10:36:06	87.759%	102.200	102.900	83.465%	98.910	98.190	99.910	100.900
x		85.051%	96.430%	95.311%	85.030%	95.944%	95.569%	97.305%	97.790%
σ		2.403%	n/a	n/a	3.480%	n/a	n/a	n/a	n/a
%RSD		2.826	7.136	8.918	4.093	4.825	4.178	3.359	3.145

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	82.677%	93.790	96.450	96.070	97.040	96.070	87.924%	88.002%
2	10:35:41	84.050%	99.030	98.920	99.720	98.990	100.300	89.208%	89.379%
3	10:36:06	85.417%	100.200	101.600	100.800	98.980	99.060	93.200%	92.045%
x		84.048%	97.662%	98.979%	98.880%	98.339%	98.467%	90.111%	89.809%
σ		1.370%	n/a	n/a	n/a	n/a	n/a	2.751%	2.056%
%RSD		1.630	3.487	2.579	2.526	1.140	2.200	3.053	2.289

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:35:16	101.400	100.000	101.300	101.900	101.200	88.799%
2	10:35:41	107.400	104.300	107.600	107.700	107.300	87.267%
3	10:36:06	106.800	104.500	107.900	108.300	107.700	90.805%
x		105.203%	102.937%	105.602%	105.939%	105.407%	88.957%
σ		n/a	n/a	n/a	n/a	n/a	1.774%
%RSD		3.131	2.459	3.530	3.342	3.491	1.994

CCB2 1/21/2015 10:42:09 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	10:42:34	86.635%	0.062	1.069	0.180	0.000	31.970	19.670	20.360
2	10:43:00	90.152%	-0.223	0.701	0.011	0.000	24.290	13.940	13.540
3	10:43:25	92.739%	-0.061	0.701	0.169	0.000	21.690	10.820	10.940
x		89.842%	-0.074	0.824	0.120	0.000	25.980	14.810	14.940
σ		3.064%	0.143	0.213	0.095	0.000	5.344	4.488	4.865
%RSD		3.410	194.100	25.850	79.060	0.000	20.570	30.300	32.550
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:34	1.572	7.037	0.000	27.120	34.900	28.950	85.334%	-0.349
2	10:43:00	1.054	3.200	0.000	23.830	19.670	21.020	86.721%	-0.353
3	10:43:25	0.131	1.984	0.000	13.450	39.970	17.230	87.425%	-0.339
x		0.919	4.074	0.000	21.470	31.510	22.400	86.493%	-0.347
σ		0.730	2.638	0.000	7.133	10.570	5.981	1.064%	0.007
%RSD		79.440	64.750	0.000	33.230	33.530	26.700	1.230	2.151
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:34	-0.059	0.021	0.134	18.290	19.540	0.037	0.077	-0.285
2	10:43:00	0.045	-0.048	0.092	12.940	17.900	0.038	-0.022	-0.280
3	10:43:25	-0.057	-0.021	0.056	9.011	11.980	0.020	0.014	-0.301
x		-0.024	-0.016	0.094	13.420	16.470	0.032	0.023	-0.289
σ		0.059	0.035	0.039	4.659	3.976	0.010	0.050	0.011
%RSD		250.600	220.400	41.510	34.730	24.130	32.580	219.800	3.892
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:34	-0.156	0.223	0.082	-0.002	-1.050	0.222	0.000	0.095
2	10:43:00	-0.308	0.131	0.072	-0.001	-0.059	-0.228	0.000	0.044
3	10:43:25	-0.236	0.111	0.113	0.180	-0.118	0.547	0.000	0.043
x		-0.233	0.155	0.089	0.059	-0.409	0.180	0.000	0.060
σ		0.076	0.060	0.021	0.105	0.556	0.389	0.000	0.030
%RSD		32.470	38.460	24.010	177.500	135.900	215.600	0.000	49.290
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:34	85.037%	0.499	0.473	87.231%	-0.023	-0.017	0.041	-0.062
2	10:43:00	86.790%	0.495	0.418	88.125%	-0.027	-0.034	0.005	0.042
3	10:43:25	89.010%	0.422	0.312	89.497%	-0.019	-0.032	0.009	1.127
x		86.946%	0.472	0.401	88.284%	-0.023	-0.028	0.018	0.369
σ		1.991%	0.043	0.082	1.141%	0.004	0.009	0.019	0.658
%RSD		2.290	9.121	20.460	1.293	16.570	32.530	105.200	178.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:34	86.110%	-2.699	-0.525	-0.525	0.058	0.085	88.842%	88.479%
2	10:43:00	88.346%	-2.764	-0.516	-0.516	0.046	0.062	91.216%	90.871%
3	10:43:25	89.838%	-2.780	-0.536	-0.558	0.034	0.061	92.524%	92.385%
x		88.098%	-2.748	-0.526	-0.533	0.046	0.070	90.861%	90.578%
σ		1.877%	0.043	0.010	0.022	0.012	0.014	1.867%	1.969%
%RSD		2.130	1.569	1.885	4.163	26.280	19.640	2.054	2.174
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:42:34	0.044	0.041	0.039	0.046	0.043	92.696%		
2	10:43:00	0.035	0.035	0.048	0.021	0.035	92.715%		
3	10:43:25	0.039	0.026	0.016	0.012	0.021	93.480%		
x		0.039	0.034	0.034	0.026	0.033	92.964%		
σ		0.005	0.007	0.016	0.017	0.011	0.448%		
%RSD		11.820	21.130	47.660	65.610	33.250	0.481		

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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	10:46:49	92.664%	-0.085	134.200	134.300	0.000	48370.000	27170.000	27510.000
2	10:47:14	96.608%	0.018	137.800	137.200	0.000	48700.000	28340.000	28460.000
3	10:47:39	100.379%	-0.017	137.000	138.200	0.000	48580.000	28170.000	28140.000
x		96.550%	-0.028	136.300	136.600	0.000	48550.000	27900.000	28040.000
σ		3.858%	0.052	1.843	2.053	0.000	169.800	634.200	483.300
%RSD		3.995	188.400	1.352	1.503	0.000	0.350	2.274	1.724
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:49	4.205	4299.000	0.000	25970.000	91880.000	92500.000	81.472%	0.423
2	10:47:14	4.126	4376.000	0.000	26300.000	96260.000	96030.000	81.754%	0.489
3	10:47:39	3.873	4397.000	0.000	26770.000	97000.000	96540.000	83.222%	0.470
x		4.068	4358.000	0.000	26340.000	95050.000	95030.000	82.149%	0.461
σ		0.174	51.650	0.000	403.900	2771.000	2199.000	0.939%	0.034
%RSD		4.269	1.185	0.000	1.533	2.915	2.314	1.144	7.384
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:49	-1.156	5.437	2.082	15.230	416.300	0.268	1.756	4.408
2	10:47:14	-0.896	5.697	2.240	13.180	409.000	0.257	1.603	4.479
3	10:47:39	-2.221	6.021	2.292	11.940	399.300	0.262	1.705	4.545
x		-1.424	5.718	2.205	13.450	408.200	0.262	1.688	4.477
σ		0.702	0.293	0.110	1.660	8.511	0.005	0.078	0.069
%RSD		49.270	5.121	4.978	12.340	2.085	2.011	4.635	1.533
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:49	4.168	2.357	2.180	2.905	-1.205	-1.442	0.000	618.700
2	10:47:14	4.223	2.502	2.499	0.635	-0.829	-0.591	0.000	635.800
3	10:47:39	4.224	2.770	2.434	0.085	-1.443	-0.817	0.000	643.700
x		4.205	2.543	2.371	1.208	-1.159	-0.950	0.000	632.700
σ		0.032	0.210	0.169	1.495	0.309	0.441	0.000	12.760
%RSD		0.763	8.250	7.125	123.700	26.680	46.450	0.000	2.017
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:49	79.949%	1.159	1.250	83.347%	-0.029	-0.041	0.035	0.059
2	10:47:14	81.703%	1.175	1.280	84.682%	-0.041	-0.044	0.020	-0.006
3	10:47:39	83.845%	1.217	1.269	86.030%	-0.033	-0.039	0.029	0.027
x		81.832%	1.184	1.266	84.687%	-0.034	-0.041	0.028	0.026
σ		1.951%	0.030	0.015	1.342%	0.006	0.002	0.007	0.032
%RSD		2.384	2.548	1.204	1.584	17.620	5.265	26.210	122.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:46:49	78.718%	-1.543	0.405	0.395	58.660	58.940	86.047%	86.402%
2	10:47:14	80.017%	-1.552	0.299	0.347	59.780	58.680	87.587%	87.311%
3	10:47:39	80.781%	-1.745	0.263	0.295	60.420	58.920	90.152%	90.106%
x		79.839%	-1.613	0.322	0.346	59.620	58.840	87.929%	87.940%
σ		1.043%	0.114	0.074	0.050	0.888	0.144	2.073%	1.930%
%RSD		1.306	7.060	22.820	14.540	1.490	0.246	2.358	2.195
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:46:49	0.088	0.086	0.111	0.082	0.098	80.535%		
2	10:47:14	0.096	0.084	0.107	0.093	0.087	81.359%		
3	10:47:39	0.094	0.081	0.100	0.093	0.097	83.814%		
x		0.093	0.084	0.106	0.089	0.094	81.902%		
σ		0.004	0.002	0.006	0.007	0.006	1.706%		
%RSD		4.718	2.702	5.480	7.444	5.990	2.083		

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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	10:50:58	93.339%	-0.023	230.500	237.800	0.000	53380.000	15120.000	15290.000
2	10:51:23	97.110%	-0.142	238.800	240.400	0.000	54470.000	14740.000	14600.000
3	10:51:49	97.792%	-0.070	251.400	249.800	0.000	55900.000	16030.000	15040.000
x		96.080%	-0.079	240.200	242.700	0.000	54580.000	15300.000	14980.000
σ		2.399%	0.060	10.540	6.317	0.000	1265.000	662.400	351.100
%RSD		2.497	76.290	4.388	2.603	0.000	2.318	4.330	2.345

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:58	2.295	4401.000	0.000	12070.000	123700.000	121500.000	82.840%	0.145
2	10:51:23	2.460	4492.000	0.000	12250.000	126700.000	126500.000	83.213%	0.470
3	10:51:49	2.514	4501.000	0.000	12810.000	131900.000	128600.000	83.166%	0.037
x		2.423	4465.000	0.000	12380.000	127400.000	125500.000	83.073%	0.217
σ		0.114	55.420	0.000	385.800	4165.000	3622.000	0.203%	0.225
%RSD		4.704	1.241	0.000	3.117	3.268	2.885	0.245	103.700

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:58	-1.549	165.800	80.140	26.620	549.100	3.108	20.340	3.892
2	10:51:23	-4.103	173.300	83.900	26.300	540.400	3.157	22.420	3.785
3	10:51:49	-5.211	178.600	85.410	25.990	556.000	3.253	21.280	3.567
x		-3.621	172.600	83.150	26.300	548.500	3.173	21.350	3.748
σ		1.878	6.421	2.714	0.316	7.836	0.073	1.043	0.166
%RSD		51.860	3.721	3.264	1.202	1.429	2.311	4.886	4.424

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:58	3.729	4.547	4.098	1.818	-1.874	-1.151	0.000	245.900
2	10:51:23	3.920	4.426	4.436	-0.139	-0.929	-0.321	0.000	260.600
3	10:51:49	3.735	4.668	4.258	-1.110	-0.255	-1.359	0.000	260.200
x		3.795	4.547	4.264	0.190	-1.019	-0.944	0.000	255.600
σ		0.109	0.121	0.169	1.492	0.814	0.549	0.000	8.363
%RSD		2.872	2.662	3.968	786.000	79.830	58.200	0.000	3.272

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:58	81.942%	0.445	0.517	85.123%	-0.041	-0.034	0.324	0.356
2	10:51:23	83.528%	0.506	0.529	86.165%	-0.037	-0.036	0.339	0.374
3	10:51:49	85.739%	0.430	0.448	88.117%	-0.039	-0.034	0.342	0.343
x		83.736%	0.460	0.498	86.469%	-0.039	-0.035	0.335	0.358
σ		1.907%	0.041	0.044	1.520%	0.002	0.001	0.010	0.015
%RSD		2.278	8.826	8.748	1.758	4.913	3.967	2.906	4.253

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:58	80.045%	-2.549	-0.549	-0.516	71.160	71.660	88.428%	88.330%
2	10:51:23	82.311%	-2.440	-0.557	-0.502	73.980	73.140	89.121%	89.523%
3	10:51:49	83.647%	-2.393	-0.530	-0.509	75.250	75.230	91.879%	91.992%
x		82.001%	-2.461	-0.545	-0.509	73.460	73.340	89.809%	89.948%
σ		1.821%	0.080	0.014	0.007	2.092	1.795	1.825%	1.868%
%RSD		2.220	3.244	2.526	1.427	2.848	2.447	2.032	2.076

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:58	0.039	0.044	0.223	0.249	0.240	82.720%
2	10:51:23	0.029	0.041	0.278	0.218	0.233	82.525%
3	10:51:49	0.038	0.042	0.269	0.239	0.247	84.574%
x		0.035	0.042	0.257	0.235	0.240	83.273%
σ		0.006	0.001	0.029	0.016	0.007	1.131%
%RSD		16.420	3.047	11.480	6.819	2.946	1.358

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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	10:55:08	91.530%	-0.108	18.580	18.440	0.000	17650.000	46160.000	46140.000
2	10:55:34	95.385%	-0.164	19.940	18.090	0.000	18200.000	48200.000	48680.000
3	10:55:59	95.259%	-0.065	17.790	19.140	0.000	18470.000	49380.000	49770.000
x		94.058%	-0.112	18.770	18.560	0.000	18110.000	47910.000	48190.000
σ		2.191%	0.050	1.086	0.536	0.000	415.500	1628.000	1863.000
%RSD		2.329	44.380	5.783	2.891	0.000	2.295	3.398	3.866
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:08	25.340	5015.000	0.000	2325.000	142700.000	143000.000	81.757%	1.002
2	10:55:34	25.350	5212.000	0.000	2516.000	154500.000	154300.000	81.256%	1.097
3	10:55:59	26.250	5302.000	0.000	2560.000	156700.000	157400.000	81.278%	0.955
x		25.650	5176.000	0.000	2467.000	151300.000	151600.000	81.430%	1.018
σ		0.526	146.500	0.000	125.300	7549.000	7589.000	0.283%	0.072
%RSD		2.052	2.830	0.000	5.079	4.990	5.006	0.347	7.107
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:08	1.659	4.695	175.500	447.900	1049.000	0.826	1.098	3.447
2	10:55:34	1.142	4.978	187.900	482.100	1115.000	0.855	1.622	3.590
3	10:55:59	1.912	5.262	189.400	489.100	1118.000	0.805	1.515	3.375
x		1.571	4.978	184.300	473.000	1094.000	0.829	1.412	3.471
σ		0.393	0.283	7.622	22.070	38.900	0.025	0.277	0.109
%RSD		24.990	5.692	4.136	4.666	3.554	3.036	19.610	3.148
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:08	3.861	7.404	6.904	3.116	-1.006	-0.610	0.000	1064.000
2	10:55:34	4.092	7.729	7.591	1.830	-0.573	-0.694	0.000	1093.000
3	10:55:59	4.033	8.090	7.762	1.446	-0.918	0.160	0.000	1109.000
x		3.995	7.741	7.419	2.131	-0.832	-0.381	0.000	1089.000
σ		0.120	0.343	0.454	0.875	0.229	0.471	0.000	22.700
%RSD		3.000	4.432	6.118	41.050	27.470	123.400	0.000	2.086
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:08	79.204%	0.493	0.377	82.039%	-0.046	-0.049	0.031	0.032
2	10:55:34	82.367%	0.383	0.397	84.597%	-0.039	-0.048	0.034	0.018
3	10:55:59	82.308%	0.401	0.374	85.026%	-0.042	-0.056	0.025	0.042
x		81.293%	0.426	0.382	83.887%	-0.042	-0.051	0.030	0.030
σ		1.809%	0.059	0.012	1.615%	0.004	0.005	0.005	0.012
%RSD		2.226	13.800	3.250	1.925	8.433	8.925	15.450	40.130
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:08	78.359%	-2.732	-0.547	-0.521	45.010	43.530	85.261%	86.375%
2	10:55:34	80.195%	-2.638	-0.544	-0.442	45.690	45.910	87.191%	88.947%
3	10:55:59	79.604%	-2.664	-0.537	-0.484	47.600	46.880	87.890%	88.691%
x		79.386%	-2.678	-0.543	-0.483	46.100	45.440	86.781%	88.004%
σ		0.937%	0.048	0.006	0.040	1.341	1.726	1.362%	1.417%
%RSD		1.181	1.808	1.018	8.204	2.908	3.798	1.569	1.610
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:55:08	0.009	0.012	0.524	0.481	0.490	82.139%		
2	10:55:34	0.016	0.012	0.592	0.480	0.509	82.879%		
3	10:55:59	0.015	0.014	0.577	0.516	0.521	83.065%		
x		0.013	0.013	0.564	0.492	0.507	82.695%		
σ		0.004	0.001	0.035	0.020	0.015	0.490%		
%RSD		30.030	11.330	6.274	4.093	3.007	0.592		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	92.466%	-0.059	30.340	31.080	0.000	22430.000	11430.000	11470.000
2	10:59:44	96.616%	-0.117	34.100	32.900	0.000	23110.000	11920.000	12040.000
3	11:00:10	99.710%	-0.146	32.470	32.010	0.000	23120.000	12110.000	12310.000
x		96.264%	-0.107	32.300	32.000	0.000	22890.000	11820.000	11940.000
σ		3.635%	0.044	1.889	0.910	0.000	398.400	348.600	426.100
%RSD		3.776	41.410	5.849	2.843	0.000	1.741	2.949	3.569

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	82.760	4595.000	0.000	3332.000	101100.000	99920.000	81.651%	2.203
2	10:59:44	86.690	4653.000	0.000	3406.000	103500.000	102500.000	83.921%	1.887
3	11:00:10	86.690	4724.000	0.000	3570.000	109700.000	109000.000	84.813%	1.891
x		85.380	4657.000	0.000	3436.000	104800.000	103800.000	83.462%	1.994
σ		2.271	64.300	0.000	121.400	4451.000	4689.000	1.630%	0.181
%RSD		2.660	1.381	0.000	3.532	4.249	4.516	1.953	9.083

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	0.081	6.826	47.820	357.700	774.800	0.408	0.880	3.026
2	10:59:44	-0.145	7.052	50.890	373.300	798.800	0.393	0.715	3.298
3	11:00:10	0.295	7.049	51.480	383.300	798.800	0.397	0.817	3.145
x		0.077	6.976	50.060	371.400	790.800	0.399	0.804	3.156
σ		0.220	0.130	1.964	12.910	13.840	0.008	0.083	0.136
%RSD		284.300	1.859	3.922	3.477	1.751	1.902	10.380	4.311

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	3.337	4.270	4.464	1.698	-1.009	-0.491	0.000	213.300
2	10:59:44	3.150	4.941	4.379	1.556	-0.910	-2.020	0.000	228.600
3	11:00:10	3.199	4.535	4.506	1.015	-0.193	-1.554	0.000	225.200
x		3.229	4.582	4.450	1.423	-0.704	-1.355	0.000	222.400
σ		0.097	0.338	0.065	0.360	0.445	0.784	0.000	8.071
%RSD		2.996	7.377	1.450	25.310	63.240	57.850	0.000	3.629

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	80.979%	0.812	0.882	84.062%	-0.039	-0.041	0.025	0.064
2	10:59:44	82.958%	0.887	0.822	87.469%	-0.032	-0.050	-0.003	0.067
3	11:00:10	87.178%	0.756	0.954	82.385%	-0.024	-0.038	-0.003	0.013
x		83.705%	0.818	0.886	84.639%	-0.032	-0.043	0.006	0.048
σ		3.166%	0.066	0.066	2.591%	0.008	0.006	0.016	0.030
%RSD		3.783	8.047	7.462	3.061	24.870	14.700	255.700	63.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	78.864%	-2.631	-0.256	-0.279	46.360	47.880	85.280%	86.043%
2	10:59:44	81.689%	-2.632	-0.298	-0.203	50.390	49.170	87.938%	89.696%
3	11:00:10	83.120%	-2.593	-0.264	-0.245	48.570	49.670	94.870%	92.382%
x		81.224%	-2.619	-0.273	-0.242	48.440	48.900	89.363%	89.373%
σ		2.166%	0.022	0.023	0.038	2.018	0.925	4.952%	3.182%
%RSD		2.666	0.851	8.298	15.840	4.167	1.891	5.541	3.560

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:19	0.009	0.011	0.660	0.603	0.599	80.516%
2	10:59:44	0.009	0.011	0.614	0.605	0.600	83.530%
3	11:00:10	0.007	0.013	0.664	0.560	0.590	84.734%
x		0.008	0.012	0.646	0.589	0.596	82.926%
σ		0.001	0.001	0.028	0.026	0.005	2.173%
%RSD		17.030	7.001	4.335	4.332	0.919	2.620

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:30	93.572%	0.002	61.750	60.270	0.000	37490.000	18380.000	17250.000
2	11:03:55	96.235%	0.068	63.440	62.010	0.000	38680.000	18010.000	18070.000
3	11:04:21	94.216%	-0.000	59.810	65.200	0.000	40170.000	18530.000	18540.000
x		94.674%	0.023	61.670	62.500	0.000	38780.000	18310.000	17950.000
σ		1.390%	0.039	1.818	2.502	0.000	1344.000	267.500	654.900
%RSD		1.468	166.600	2.947	4.004	0.000	3.465	1.461	3.648
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:30	2415.000	6647.000	0.000	7379.000	90710.000	91420.000	81.505%	54.940
2	11:03:55	2531.000	6804.000	0.000	7566.000	94510.000	95840.000	81.938%	56.810
3	11:04:21	2628.000	6944.000	0.000	7770.000	94710.000	94080.000	82.206%	57.890
x		2525.000	6798.000	0.000	7572.000	93310.000	93780.000	81.883%	56.540
σ		106.600	148.300	0.000	195.600	2256.000	2225.000	0.354%	1.493
%RSD		4.223	2.181	0.000	2.583	2.418	2.372	0.432	2.640
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:30	5.567	8.292	479.100	9340.000	9795.000	3.412	5.404	7.236
2	11:03:55	5.825	8.256	511.100	9818.000	10420.000	3.562	5.544	7.368
3	11:04:21	4.728	8.038	516.100	10060.000	10610.000	3.646	5.526	6.841
x		5.374	8.195	502.100	9740.000	10270.000	3.540	5.491	7.148
σ		0.574	0.138	20.070	367.200	424.400	0.119	0.076	0.274
%RSD		10.670	1.681	3.997	3.770	4.132	3.347	1.383	3.839
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:30	6.763	43.230	41.570	1.561	-1.951	-2.644	0.000	217.900
2	11:03:55	6.562	46.910	46.190	1.680	-1.204	-2.338	0.000	230.200
3	11:04:21	7.368	47.600	46.600	3.873	-1.361	-2.477	0.000	235.700
x		6.898	45.920	44.790	2.372	-1.505	-2.487	0.000	227.900
σ		0.420	2.348	2.795	1.302	0.394	0.153	0.000	9.086
%RSD		6.087	5.113	6.241	54.890	26.180	6.163	0.000	3.986
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:30	84.034%	0.872	0.793	82.500%	0.089	0.071	0.096	0.087
2	11:03:55	85.656%	0.736	0.858	84.522%	0.045	0.065	0.052	0.098
3	11:04:21	86.875%	0.953	0.813	86.953%	0.068	0.092	0.061	0.093
x		85.522%	0.853	0.821	84.658%	0.067	0.076	0.070	0.092
σ		1.425%	0.110	0.033	2.230%	0.022	0.014	0.023	0.006
%RSD		1.667	12.870	4.077	2.634	32.050	18.760	33.560	6.137
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:30	79.543%	-2.596	-0.550	-0.536	58.220	57.710	88.837%	88.232%
2	11:03:55	81.494%	-2.468	-0.528	-0.537	60.420	59.720	89.898%	90.525%
3	11:04:21	82.179%	-2.379	-0.522	-0.538	60.940	61.660	90.672%	92.608%
x		81.072%	-2.481	-0.533	-0.537	59.860	59.700	89.802%	90.455%
σ		1.368%	0.109	0.015	0.001	1.442	1.976	0.921%	2.189%
%RSD		1.687	4.403	2.822	0.201	2.410	3.310	1.026	2.420
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:03:30	0.066	0.051	3.567	3.266	3.315	81.915%		
2	11:03:55	0.056	0.053	3.750	3.347	3.448	84.520%		
3	11:04:21	0.048	0.053	3.715	3.353	3.475	85.381%		
x		0.056	0.052	3.677	3.322	3.412	83.939%		
σ		0.009	0.001	0.097	0.048	0.086	1.805%		
%RSD		16.130	2.451	2.635	1.452	2.508	2.150		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	90.819%	-0.067	18.780	22.430	0.000	37940.000	4494.000	4516.000
2	11:08:07	94.032%	-0.188	21.400	21.060	0.000	38700.000	4622.000	4729.000
3	11:08:33	96.531%	-0.117	21.690	22.870	0.000	38930.000	4723.000	4700.000
x		93.794%	-0.124	20.620	22.120	0.000	38530.000	4613.000	4648.000
σ		2.863%	0.060	1.603	0.949	0.000	516.200	114.800	115.400
%RSD		3.053	48.780	7.774	4.290	0.000	1.340	2.489	2.483

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	195.600	1830.000	0.000	24450.000	46670.000	47960.000	80.029%	5.052
2	11:08:07	204.700	1874.000	0.000	25380.000	49100.000	48190.000	81.089%	4.901
3	11:08:33	205.800	1854.000	0.000	24800.000	48190.000	48890.000	81.549%	4.763
x		202.000	1853.000	0.000	24880.000	47990.000	48350.000	80.889%	4.905
σ		5.610	22.020	0.000	468.300	1230.000	486.900	0.780%	0.144
%RSD		2.777	1.189	0.000	1.883	2.564	1.007	0.964	2.944

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	-0.868	28.180	5.353	296.200	495.300	0.334	1.770	6.104
2	11:08:07	0.826	30.080	5.689	299.500	502.700	0.328	1.331	6.316
3	11:08:33	1.724	30.110	5.620	294.800	496.800	0.364	1.563	6.586
x		0.561	29.460	5.554	296.800	498.300	0.342	1.555	6.336
σ		1.316	1.103	0.178	2.425	3.912	0.019	0.220	0.241
%RSD		234.700	3.746	3.203	0.817	0.785	5.647	14.150	3.811

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	5.899	6.463	6.488	1.143	-1.284	-0.892	0.000	121.600
2	11:08:07	5.769	6.930	6.670	-0.586	0.138	-1.691	0.000	125.200
3	11:08:33	6.178	6.613	6.707	3.423	-1.073	-1.921	0.000	126.200
x		5.949	6.669	6.622	1.327	-0.740	-1.502	0.000	124.300
σ		0.209	0.239	0.117	2.011	0.767	0.540	0.000	2.442
%RSD		3.515	3.578	1.773	151.600	103.700	35.970	0.000	1.964

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	78.916%	3.866	3.821	83.681%	-0.041	-0.041	0.031	0.047
2	11:08:07	81.711%	3.958	4.007	85.835%	-0.048	-0.052	0.006	0.067
3	11:08:33	82.726%	4.242	4.157	85.788%	-0.054	-0.053	0.001	0.061
x		81.117%	4.022	3.995	85.101%	-0.048	-0.049	0.013	0.058
σ		1.973%	0.196	0.168	1.230%	0.006	0.007	0.016	0.010
%RSD		2.432	4.873	4.203	1.446	12.840	14.300	121.800	17.740

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	78.072%	-2.752	-0.646	-0.585	33.660	34.020	84.772%	86.452%
2	11:08:07	79.853%	-2.650	-0.602	-0.604	35.030	35.910	87.805%	87.768%
3	11:08:33	82.483%	-2.638	-0.602	-0.573	36.050	35.840	88.663%	89.664%
x		80.136%	-2.680	-0.616	-0.588	34.920	35.260	87.080%	87.961%
σ		2.219%	0.062	0.025	0.016	1.200	1.071	2.044%	1.615%
%RSD		2.769	2.327	4.125	2.679	3.438	3.037	2.348	1.836

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:42	0.029	0.023	1.061	0.918	0.989	80.016%
2	11:08:07	0.041	0.028	1.109	1.003	1.012	81.105%
3	11:08:33	0.025	0.020	1.016	0.937	0.960	84.890%
x		0.032	0.024	1.062	0.953	0.987	82.004%
σ		0.008	0.004	0.046	0.044	0.026	2.558%
%RSD		25.930	17.490	4.370	4.660	2.599	3.120

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	88.967%	0.096	50.560	51.540	0.000	66010.000	18830.000	19080.000
2	11:12:20	94.296%	-0.138	51.470	54.660	0.000	67960.000	19660.000	19730.000
3	11:12:45	93.807%	0.014	56.220	55.140	0.000	68380.000	19930.000	20070.000
x		92.357%	-0.009	52.750	53.780	0.000	67450.000	19470.000	19630.000
σ		2.946%	0.119	3.040	1.955	0.000	1266.000	571.300	500.400
%RSD		3.189	1279.000	5.762	3.635	0.000	1.877	2.933	2.549

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	220.500	5533.000	0.000	10010.000	133800.000	131900.000	78.647%	5.110
2	11:12:20	226.900	5615.000	0.000	10430.000	138100.000	135600.000	81.270%	4.229
3	11:12:45	234.800	5668.000	0.000	10580.000	142200.000	139900.000	81.046%	5.041
x		227.400	5605.000	0.000	10340.000	138000.000	135800.000	80.321%	4.793
σ		7.141	68.250	0.000	298.900	4181.000	3985.000	1.454%	0.490
%RSD		3.140	1.218	0.000	2.891	3.029	2.934	1.810	10.220

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	1.886	10.920	114.100	486.300	1031.000	0.942	1.369	2.757
2	11:12:20	0.676	11.250	119.300	515.100	1043.000	0.942	1.349	2.777
3	11:12:45	0.916	10.970	120.300	521.000	1058.000	0.995	1.364	2.841
x		1.159	11.040	117.900	507.500	1044.000	0.959	1.361	2.792
σ		0.641	0.178	3.361	18.580	13.790	0.031	0.011	0.044
%RSD		55.280	1.612	2.851	3.661	1.321	3.195	0.784	1.583

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	2.528	134.500	129.900	-0.135	-2.178	-0.678	0.000	297.300
2	11:12:20	2.411	141.500	139.400	-1.340	-1.521	-3.114	0.000	306.800
3	11:12:45	2.710	140.400	139.400	1.198	-1.265	-1.743	0.000	312.300
x		2.550	138.800	136.200	-0.092	-1.655	-1.845	0.000	305.500
σ		0.151	3.798	5.493	1.270	0.471	1.221	0.000	7.582
%RSD		5.907	2.736	4.031	1373.000	28.480	66.180	0.000	2.482

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	78.868%	0.946	1.244	80.894%	-0.042	-0.041	0.036	0.090
2	11:12:20	83.593%	1.189	1.094	84.950%	-0.047	-0.053	0.039	0.065
3	11:12:45	83.557%	1.163	1.061	84.354%	-0.044	-0.044	0.076	0.063
x		82.006%	1.099	1.133	83.399%	-0.044	-0.046	0.050	0.073
σ		2.717%	0.134	0.097	2.190%	0.002	0.006	0.022	0.015
%RSD		3.314	12.170	8.597	2.626	5.377	13.440	44.380	20.700

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	78.008%	-2.706	-0.567	-0.520	60.560	60.280	85.244%	85.561%
2	11:12:20	80.538%	-2.722	-0.525	-0.513	63.800	63.420	90.737%	91.198%
3	11:12:45	81.198%	-2.676	-0.546	-0.527	63.040	64.010	89.202%	90.407%
x		79.915%	-2.701	-0.546	-0.520	62.460	62.570	88.394%	89.055%
σ		1.684%	0.023	0.021	0.007	1.695	2.001	2.834%	3.052%
%RSD		2.107	0.852	3.848	1.372	2.714	3.199	3.207	3.427

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:11:55	0.049	0.037	0.580	0.539	0.552	80.196%
2	11:12:20	0.053	0.046	0.622	0.563	0.575	83.528%
3	11:12:45	0.046	0.041	0.604	0.560	0.575	84.154%
x		0.049	0.041	0.602	0.554	0.568	82.626%
σ		0.003	0.005	0.021	0.013	0.013	2.128%
%RSD		7.051	11.670	3.541	2.283	2.308	2.575

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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	11:16:07	91.072%	-0.159	67.850	66.580	0.000	55800.000	17430.000	16500.000
2	11:16:32	95.749%	0.020	66.440	66.480	0.000	56470.000	16790.000	17060.000
3	11:16:57	95.465%	-0.177	69.690	69.520	0.000	58380.000	17420.000	17520.000
x		94.095%	-0.105	67.990	67.530	0.000	56880.000	17210.000	17030.000
σ		2.623%	0.109	1.634	1.724	0.000	1342.000	367.500	512.700
%RSD		2.787	103.800	2.402	2.552	0.000	2.359	2.135	3.012

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:07	83.240	4698.000	0.000	7384.000	129200.000	128000.000	81.238%	1.594
2	11:16:32	80.490	4793.000	0.000	7692.000	139100.000	137800.000	81.952%	2.295
3	11:16:57	74.600	4852.000	0.000	7758.000	138500.000	135900.000	82.877%	2.000
x		79.450	4781.000	0.000	7611.000	135600.000	133900.000	82.022%	1.963
σ		4.412	77.660	0.000	199.800	5592.000	5237.000	0.822%	0.352
%RSD		5.554	1.624	0.000	2.625	4.124	3.911	1.002	17.930

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:07	-0.052	19.910	19.920	310.700	843.100	0.786	1.192	2.275
2	11:16:32	1.895	21.150	20.560	342.500	860.800	0.757	0.980	2.377
3	11:16:57	-2.179	21.240	21.050	327.500	863.200	0.726	1.076	2.465
x		-0.112	20.770	20.510	326.900	855.700	0.756	1.082	2.372
σ		2.038	0.744	0.562	15.880	10.980	0.030	0.106	0.095
%RSD		1823.000	3.584	2.739	4.859	1.283	3.966	9.804	4.001

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:07	2.240	12.700	12.200	1.344	-1.927	-0.009	0.000	253.000
2	11:16:32	2.500	13.320	12.760	-0.995	-0.759	-2.077	0.000	264.400
3	11:16:57	2.296	13.360	12.920	3.269	-0.599	0.145	0.000	270.500
x		2.345	13.120	12.630	1.206	-1.095	-0.647	0.000	262.600
σ		0.137	0.370	0.379	2.136	0.725	1.241	0.000	8.906
%RSD		5.842	2.817	2.999	177.100	66.200	191.800	0.000	3.391

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:07	82.263%	0.729	0.695	84.220%	-0.055	-0.053	0.011	0.029
2	11:16:32	83.163%	0.539	0.638	84.932%	-0.042	-0.051	0.002	0.019
3	11:16:57	86.000%	0.662	0.639	87.801%	-0.053	-0.039	0.024	0.104
x		83.809%	0.644	0.657	85.651%	-0.050	-0.047	0.012	0.051
σ		1.950%	0.096	0.033	1.896%	0.007	0.008	0.011	0.047
%RSD		2.327	14.910	5.012	2.213	13.890	16.100	92.110	91.800

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:07	79.048%	-2.817	-0.680	-0.670	66.960	66.150	89.399%	89.554%
2	11:16:32	81.416%	-2.839	-0.666	-0.651	67.790	68.750	91.587%	91.069%
3	11:16:57	81.566%	-2.805	-0.690	-0.638	71.190	70.470	91.759%	92.480%
x		80.677%	-2.821	-0.679	-0.653	68.650	68.450	90.915%	91.034%
σ		1.412%	0.017	0.012	0.016	2.240	2.176	1.316%	1.463%
%RSD		1.751	0.612	1.809	2.440	3.264	3.179	1.447	1.607

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:07	0.013	0.010	0.371	0.325	0.326	82.519%
2	11:16:32	0.014	0.012	0.420	0.374	0.356	84.057%
3	11:16:57	0.021	0.016	0.360	0.312	0.343	84.634%
x		0.016	0.013	0.383	0.337	0.342	83.737%
σ		0.005	0.003	0.032	0.033	0.015	1.093%
%RSD		28.420	22.460	8.310	9.707	4.343	1.305

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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	11:20:20	90.060%	-0.144	171.000	166.200	0.000	28160.000	6326.000	6418.000
2	11:20:44	91.291%	-0.120	173.900	176.100	0.000	29360.000	6737.000	6810.000
3	11:21:10	92.102%	-0.096	181.700	175.700	0.000	29580.000	6859.000	6918.000
x		91.151%	-0.120	175.500	172.700	0.000	29040.000	6641.000	6715.000
σ		1.028%	0.024	5.517	5.584	0.000	762.200	278.900	263.200
%RSD		1.128	20.110	3.143	3.234	0.000	2.625	4.200	3.920
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:20	50.850	4058.000	0.000	3891.000	94100.000	95890.000	79.341%	1.177
2	11:20:44	55.550	4261.000	0.000	4145.000	102800.000	102600.000	80.126%	1.517
3	11:21:10	56.690	3922.000	0.000	4144.000	105100.000	104300.000	79.724%	1.687
x		54.370	4081.000	0.000	4060.000	100700.000	100900.000	79.730%	1.460
σ		3.096	170.400	0.000	146.300	5812.000	4437.000	0.392%	0.260
%RSD		5.695	4.176	0.000	3.604	5.773	4.396	0.492	17.810
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:20	0.084	5.457	1247.000	270.000	678.400	1.559	4.100	2.557
2	11:20:44	-1.008	5.371	1312.000	285.100	703.500	1.727	4.438	2.463
3	11:21:10	0.863	5.505	1344.000	288.100	696.400	1.757	4.516	2.716
x		-0.020	5.444	1301.000	281.100	692.700	1.681	4.351	2.579
σ		0.940	0.068	49.670	9.684	12.940	0.106	0.221	0.128
%RSD		4680.000	1.256	3.818	3.446	1.868	6.325	5.084	4.952
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:20	2.329	26.050	25.720	0.883	-2.123	-1.319	0.000	137.300
2	11:20:44	2.788	27.530	26.860	3.080	-0.817	-0.699	0.000	142.000
3	11:21:10	2.510	27.520	27.240	1.424	-0.875	-1.134	0.000	142.500
x		2.543	27.040	26.610	1.795	-1.272	-1.051	0.000	140.600
σ		0.231	0.853	0.793	1.145	0.738	0.319	0.000	2.872
%RSD		9.088	3.154	2.980	63.750	58.040	30.320	0.000	2.043
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:20	78.179%	0.305	0.341	82.020%	-0.051	-0.056	0.127	0.149
2	11:20:44	80.939%	0.258	0.263	84.258%	-0.053	-0.045	0.124	0.208
3	11:21:10	82.640%	0.311	0.307	83.937%	-0.052	-0.044	0.048	0.154
x		80.586%	0.291	0.303	83.405%	-0.052	-0.048	0.100	0.171
σ		2.251%	0.029	0.039	1.210%	0.001	0.007	0.045	0.032
%RSD		2.794	9.998	12.930	1.451	1.690	14.310	44.640	18.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:20	77.648%	-2.868	-0.693	-0.696	42.210	41.920	84.521%	85.402%
2	11:20:44	79.646%	-2.891	-0.696	-0.681	44.850	44.820	86.892%	87.628%
3	11:21:10	80.399%	-2.922	-0.728	-0.695	43.920	44.090	88.047%	87.824%
x		79.231%	-2.894	-0.706	-0.691	43.660	43.610	86.487%	86.951%
σ		1.422%	0.027	0.020	0.009	1.340	1.505	1.798%	1.346%
%RSD		1.794	0.925	2.765	1.256	3.069	3.450	2.079	1.547
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:20:20	0.023	0.018	0.330	0.356	0.338	81.163%		
2	11:20:44	0.018	0.015	0.423	0.348	0.369	81.384%		
3	11:21:10	0.017	0.018	0.413	0.346	0.382	83.167%		
x		0.019	0.017	0.389	0.350	0.363	81.904%		
σ		0.003	0.002	0.051	0.005	0.022	1.099%		
%RSD		17.610	9.615	13.130	1.523	6.186	1.341		

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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	11:24:32	94.208%	-0.113	6.316	6.755	0.000	154.800	18.600	18.910
2	11:24:57	96.425%	-0.080	5.739	6.390	0.000	147.000	17.830	17.050
3	11:25:22	99.584%	-0.086	6.918	7.253	0.000	143.600	14.490	15.510
x		96.739%	-0.093	6.324	6.799	0.000	148.500	16.970	17.150
σ		2.702%	0.017	0.590	0.433	0.000	5.724	2.184	1.700
%RSD		2.793	18.770	9.326	6.367	0.000	3.855	12.870	9.911
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:32	2.850	131.200	0.000	52.570	158.400	136.700	81.719%	-0.074
2	11:24:57	2.914	135.000	0.000	58.340	127.000	101.900	83.215%	-0.188
3	11:25:22	2.826	130.600	0.000	62.790	103.000	104.100	83.683%	-0.121
x		2.863	132.200	0.000	57.900	129.500	114.200	82.872%	-0.128
σ		0.045	2.392	0.000	5.125	27.750	19.450	1.026%	0.057
%RSD		1.578	1.809	0.000	8.852	21.430	17.030	1.238	44.550
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:32	0.917	3.441	1.031	8.904	3.634	0.024	0.241	1.463
2	11:24:57	0.710	3.289	0.635	8.037	-1.056	0.029	0.206	1.471
3	11:25:22	-1.272	3.148	0.447	6.709	-2.954	0.006	0.258	1.625
x		0.118	3.293	0.704	7.883	-0.125	0.019	0.235	1.520
σ		1.209	0.147	0.298	1.105	3.391	0.012	0.027	0.091
%RSD		1021.000	4.450	42.340	14.020	2704.000	63.120	11.360	5.997
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:32	1.250	3.510	3.227	1.922	-0.812	-1.776	0.000	0.350
2	11:24:57	1.441	3.676	3.570	1.550	-1.044	-3.453	0.000	0.297
3	11:25:22	1.248	3.615	3.544	1.733	-1.199	-1.269	0.000	0.260
x		1.313	3.600	3.447	1.735	-1.018	-2.166	0.000	0.302
σ		0.111	0.084	0.191	0.186	0.195	1.143	0.000	0.045
%RSD		8.457	2.337	5.540	10.710	19.130	52.760	0.000	15.030
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:32	81.412%	-0.107	-0.116	87.173%	-0.046	-0.053	0.006	0.002
2	11:24:57	83.919%	-0.134	-0.145	83.303%	-0.064	-0.053	-0.003	1.095
3	11:25:22	85.536%	-0.135	-0.108	83.376%	-0.052	-0.048	-0.008	-0.006
x		83.622%	-0.125	-0.123	84.617%	-0.054	-0.052	-0.002	0.364
σ		2.078%	0.016	0.019	2.213%	0.009	0.003	0.007	0.633
%RSD		2.485	12.540	15.670	2.616	17.400	5.471	447.900	174.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:32	81.522%	-2.924	-0.746	-0.716	0.194	0.223	87.077%	87.283%
2	11:24:57	84.033%	-2.835	-0.757	-0.738	0.106	0.237	90.985%	89.903%
3	11:25:22	82.409%	-2.834	-0.740	-0.722	0.128	0.189	91.915%	91.110%
x		82.655%	-2.865	-0.748	-0.725	0.143	0.217	89.992%	89.432%
σ		1.273%	0.052	0.009	0.012	0.045	0.025	2.567%	1.956%
%RSD		1.540	1.802	1.148	1.599	31.830	11.520	2.852	2.187
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:24:32	0.002	0.002	0.164	0.116	0.140	87.462%		
2	11:24:57	0.003	0.004	0.154	0.105	0.140	88.163%		
3	11:25:22	0.006	0.003	0.155	0.175	0.167	87.900%		
x		0.004	0.003	0.158	0.132	0.149	87.842%		
σ		0.002	0.001	0.005	0.038	0.016	0.354%		
%RSD		62.350	36.060	3.394	28.550	10.530	0.404		

CCV 1455996 1/21/2015 11:28:18 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	80.739%	99.050	95.140	98.570	0.000	48980.000	47020.000	47090.000
2	11:29:08	84.692%	100.300	105.700	103.900	0.000	50250.000	48780.000	48530.000
3	11:29:33	84.144%	100.200	102.000	103.100	0.000	50260.000	49070.000	49250.000
x		83.192%	99.854%	100.933%	101.868%	0.000	99.658%	96.581%	96.579%
σ		2.141%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.574	0.702	5.296	2.837	0.000	1.480	2.289	2.278

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	464.000	4920.000	0.000	49400.000	47750.000	47300.000	82.724%	96.010
2	11:29:08	482.200	5051.000	0.000	51730.000	50350.000	50140.000	81.386%	101.600
3	11:29:33	487.300	5056.000	0.000	51410.000	50230.000	50280.000	83.271%	98.730
x		95.569%	100.186%	0.000	101.691%	98.887%	98.477%	82.461%	98.791%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.970%	n/a
%RSD		2.562	1.538	0.000	2.475	2.963	3.409	1.176	2.843

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	88.780	89.420	485.500	23570.000	24960.000	92.670	92.990	94.220
2	11:29:08	94.140	95.220	515.400	24960.000	26810.000	96.890	98.830	98.750
3	11:29:33	93.800	95.880	514.300	25090.000	26880.000	96.780	97.960	99.010
x		92.241%	93.506%	101.017%	98.152%	104.862%	95.446%	96.594%	97.323%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.255	3.805	3.352	3.418	4.143	2.522	3.258	2.765

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	93.780	94.880	94.940	93.730	96.250	97.170	0.000	94.900
2	11:29:08	97.640	100.800	101.100	96.690	97.970	97.800	0.000	97.120
3	11:29:33	97.720	99.890	101.000	98.840	100.800	102.700	0.000	98.910
x		96.380%	98.515%	98.998%	96.419%	98.329%	99.232%	0.000	96.978%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.339	3.227	3.553	2.660	2.313	3.070	0.000	2.070

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	79.534%	87.920	85.950	86.263%	91.470	91.110	91.980	94.430
2	11:29:08	81.656%	93.680	91.920	87.200%	92.890	92.950	96.370	98.000
3	11:29:33	82.269%	102.400	101.000	81.013%	97.810	97.120	100.000	99.320
x		81.153%	94.666%	92.962%	84.826%	94.057%	93.725%	96.118%	97.251%
σ		1.435%	n/a	n/a	3.335%	n/a	n/a	n/a	n/a
%RSD		1.769	7.699	8.157	3.931	3.539	3.281	4.176	2.602

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	80.190%	94.330	95.050	95.710	95.290	94.770	87.337%	86.861%
2	11:29:08	82.253%	97.760	98.850	98.820	97.350	98.090	87.008%	88.240%
3	11:29:33	82.566%	98.020	100.600	101.000	100.500	98.360	88.528%	89.197%
x		81.669%	96.703%	98.155%	98.494%	97.704%	97.071%	87.624%	88.100%
σ		1.291%	n/a	n/a	n/a	n/a	n/a	0.800%	1.174%
%RSD		1.581	2.133	2.877	2.677	2.673	2.062	0.913	1.333

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:28:43	103.500	100.200	102.600	101.800	101.800	87.352%
2	11:29:08	106.600	103.700	106.900	106.900	106.400	87.582%
3	11:29:33	107.000	104.300	109.500	108.300	107.800	87.998%
x		105.666%	102.707%	106.337%	105.664%	105.353%	87.644%
σ		n/a	n/a	n/a	n/a	n/a	0.327%
%RSD		1.810	2.140	3.306	3.265	2.976	0.374

CCB3 1/21/2015 11:35:36 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	11:36:02	86.370%	-0.071	-0.095	-0.825	0.000	20.610	21.250	20.980
2	11:36:27	88.695%	-0.169	-1.138	-0.368	0.000	13.850	13.310	14.500
3	11:36:52	90.391%	-0.055	-0.351	-0.628	0.000	12.110	11.250	11.960
x		88.486%	-0.098	-0.528	-0.607	0.000	15.520	15.270	15.810
σ		2.019%	0.062	0.543	0.229	0.000	4.491	5.278	4.655
%RSD		2.281	62.830	102.900	37.790	0.000	28.930	34.560	29.430

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:02	0.743	7.379	0.000	18.410	35.680	33.390	83.934%	-0.380
2	11:36:27	0.598	2.013	0.000	12.840	23.630	24.700	84.948%	-0.399
3	11:36:52	0.350	1.915	0.000	24.550	12.090	16.200	85.259%	-0.383
x		0.564	3.769	0.000	18.600	23.800	24.760	84.714%	-0.387
σ		0.198	3.127	0.000	5.859	11.800	8.594	0.693%	0.010
%RSD		35.200	82.960	0.000	31.500	49.580	34.710	0.818	2.692

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:02	0.071	0.018	0.215	16.040	22.000	0.026	-0.005	-0.172
2	11:36:27	-0.017	-0.026	0.105	10.150	13.550	0.021	0.088	-0.178
3	11:36:52	-0.100	0.023	0.085	7.594	9.236	0.010	0.084	-0.282
x		-0.015	0.005	0.135	11.260	14.930	0.019	0.056	-0.210
σ		0.085	0.027	0.070	4.332	6.492	0.008	0.053	0.062
%RSD		562.600	572.300	52.030	38.470	43.490	42.940	94.550	29.280

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:02	-0.274	0.125	0.222	0.979	-0.937	6.254	0.000	0.081
2	11:36:27	-0.187	0.098	0.097	0.542	-0.515	3.144	0.000	0.060
3	11:36:52	-0.320	0.123	0.113	0.479	-0.861	2.913	0.000	0.053
x		-0.260	0.115	0.144	0.667	-0.771	4.104	0.000	0.065
σ		0.067	0.015	0.068	0.273	0.225	1.865	0.000	0.014
%RSD		25.850	13.080	47.390	40.890	29.200	45.460	0.000	22.210

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:02	82.879%	0.269	0.272	84.892%	-0.016	-0.031	0.055	0.079
2	11:36:27	85.403%	0.153	0.201	85.906%	-0.025	-0.030	0.014	0.011
3	11:36:52	87.730%	0.230	0.256	87.166%	-0.015	-0.041	0.027	0.029
x		85.337%	0.217	0.243	85.988%	-0.019	-0.034	0.032	0.040
σ		2.426%	0.059	0.037	1.139%	0.005	0.006	0.021	0.035
%RSD		2.843	27.100	15.310	1.325	27.150	17.230	64.530	88.920

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:02	84.802%	-2.921	-0.562	-0.583	0.054	0.036	89.682%	89.394%
2	11:36:27	86.619%	-2.886	-0.612	-0.596	0.015	0.031	92.034%	91.514%
3	11:36:52	87.044%	-2.988	-0.571	-0.555	0.005	0.026	92.372%	92.187%
x		86.155%	-2.932	-0.582	-0.578	0.025	0.031	91.362%	91.032%
σ		1.191%	0.052	0.027	0.021	0.026	0.005	1.465%	1.458%
%RSD		1.382	1.765	4.611	3.592	104.400	16.840	1.604	1.601

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:02	0.024	0.032	0.037	0.045	0.039	93.543%
2	11:36:27	0.034	0.022	0.000	0.017	0.020	93.279%
3	11:36:52	0.028	0.023	0.016	0.004	0.013	92.752%
x		0.028	0.026	0.018	0.022	0.024	93.192%
σ		0.005	0.006	0.018	0.021	0.013	0.403%
%RSD		17.170	22.290	104.000	97.160	55.210	0.432

MB 180-130921/1-A 1/21/2015 11:39:51 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	11:40:16	85.237%	-0.095	-0.140	-0.954	0.000	9.168	4.607	3.580
2	11:40:42	86.041%	-0.083	-0.415	-0.690	0.000	4.847	2.770	2.483
3	11:41:07	87.333%	-0.167	-0.523	-0.944	0.000	2.937	1.484	2.521
x		86.204%	-0.115	-0.359	-0.863	0.000	5.651	2.954	2.861
σ		1.058%	0.045	0.197	0.150	0.000	3.192	1.569	0.623
%RSD		1.227	39.150	54.900	17.370	0.000	56.490	53.140	21.760
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:16	0.214	4.921	0.000	10.210	7.023	8.999	79.353%	-0.422
2	11:40:42	0.272	1.099	0.000	13.000	5.214	12.070	79.596%	-0.459
3	11:41:07	-0.072	-0.597	0.000	17.520	7.107	9.108	78.926%	-0.440
x		0.138	1.808	0.000	13.570	6.448	10.060	79.292%	-0.440
σ		0.184	2.827	0.000	3.687	1.070	1.740	0.339%	0.018
%RSD		133.300	156.400	0.000	27.160	16.590	17.300	0.427	4.190
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:16	-0.177	0.433	0.017	0.644	3.802	0.028	0.083	0.111
2	11:40:42	-0.149	0.339	-0.028	-0.557	-0.144	-0.009	0.003	0.039
3	11:41:07	-0.141	0.375	-0.002	-0.716	-1.746	0.006	0.038	0.013
x		-0.156	0.382	-0.004	-0.210	0.637	0.008	0.041	0.054
σ		0.019	0.047	0.023	0.744	2.855	0.019	0.040	0.051
%RSD		12.000	12.410	545.300	354.800	448.200	221.500	96.450	93.560
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:16	0.034	1.384	1.581	-0.027	-0.894	-1.872	0.000	0.023
2	11:40:42	-0.057	1.516	1.338	0.551	0.075	-0.291	0.000	0.021
3	11:41:07	0.057	1.284	1.370	0.235	-1.323	-1.050	0.000	0.012
x		0.011	1.395	1.430	0.253	-0.714	-1.071	0.000	0.019
σ		0.060	0.116	0.132	0.289	0.716	0.791	0.000	0.006
%RSD		538.100	8.345	9.231	114.300	100.300	73.820	0.000	32.570
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:16	79.184%	-0.037	-0.024	80.736%	-0.055	-0.048	0.011	0.045
2	11:40:42	82.210%	-0.070	-0.051	82.559%	-0.043	-0.046	0.006	0.010
3	11:41:07	81.190%	-0.029	-0.081	82.157%	-0.053	-0.056	-0.008	-1.395
x		80.861%	-0.045	-0.052	81.817%	-0.050	-0.050	0.003	-0.447
σ		1.540%	0.022	0.028	0.958%	0.007	0.006	0.010	0.822
%RSD		1.904	47.500	54.830	1.171	13.250	11.080	298.200	184.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:16	82.405%	-2.999	-0.645	-0.653	0.002	0.041	86.778%	86.363%
2	11:40:42	80.383%	-3.042	-0.671	-0.653	-0.009	0.008	88.990%	88.319%
3	11:41:07	79.989%	-2.993	-0.666	-0.688	-0.003	0.008	87.860%	87.305%
x		80.926%	-3.011	-0.661	-0.665	-0.003	0.019	87.876%	87.329%
σ		1.297%	0.027	0.013	0.020	0.005	0.019	1.106%	0.978%
%RSD		1.602	0.893	2.033	3.006	174.200	100.300	1.258	1.120
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:40:16	0.009	0.009	0.021	0.005	0.012	102.914%		
2	11:40:42	0.004	0.005	0.027	0.015	0.016	92.044%		
3	11:41:07	0.010	0.007	0.007	0.014	0.015	88.016%		
x		0.007	0.007	0.018	0.012	0.014	94.324%		
σ		0.003	0.002	0.010	0.006	0.002	7.706%		
%RSD		42.320	25.170	55.020	48.070	15.100	8.170		

LCS 180-130921/2-A 1/21/2015 11:44:04 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	83.551%	45.610	939.600	928.400	0.000	43630.000	41250.000	41740.000
2	11:44:54	87.600%	46.330	955.300	956.300	0.000	44810.000	42800.000	42950.000
3	11:45:19	88.070%	47.490	978.900	975.200	0.000	45580.000	43970.000	43940.000
x		86.407%	46.480	957.900	953.300	0.000	44670.000	42670.000	42880.000
σ		2.485%	0.950	19.790	23.550	0.000	981.000	1369.000	1101.000
%RSD		2.875	2.045	2.066	2.470	0.000	2.196	3.207	2.567

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	1743.000	8745.000	0.000	47190.000	45270.000	45660.000	76.877%	878.600
2	11:44:54	1814.000	8934.000	0.000	48290.000	47150.000	48690.000	78.057%	926.600
3	11:45:19	1859.000	8974.000	0.000	49180.000	48710.000	48040.000	78.032%	946.200
x		1805.000	8885.000	0.000	48220.000	47040.000	47460.000	77.655%	917.100
σ		58.530	122.700	0.000	999.000	1719.000	1593.000	0.674%	34.750
%RSD		3.242	1.381	0.000	2.072	3.654	3.356	0.868	3.789

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	440.600	170.700	450.800	964.000	1086.000	444.300	433.100	220.700
2	11:44:54	463.700	180.400	482.300	1032.000	1149.000	473.900	465.900	235.500
3	11:45:19	466.700	183.700	488.500	1053.000	1166.000	480.900	469.700	240.300
x		457.000	178.300	473.900	1016.000	1134.000	466.300	456.200	232.200
σ		14.290	6.739	20.200	46.540	41.950	19.440	20.120	10.200
%RSD		3.127	3.780	4.262	4.579	3.699	4.168	4.409	4.392

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	220.100	447.900	441.200	34.160	8.152	7.464	0.000	901.900
2	11:44:54	233.800	488.300	474.600	38.480	9.056	9.998	0.000	999.700
3	11:45:19	237.200	489.300	487.700	39.280	10.680	13.470	0.000	993.600
x		230.400	475.200	467.800	37.310	9.295	10.310	0.000	965.100
σ		9.035	23.570	23.960	2.755	1.279	3.016	0.000	54.810
%RSD		3.922	4.961	5.122	7.385	13.760	29.250	0.000	5.680

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	76.120%	930.800	912.400	80.638%	43.220	43.910	44.850	37.160
2	11:44:54	73.735%	1008.000	977.400	82.135%	43.300	43.290	46.520	39.220
3	11:45:19	75.325%	1020.000	997.400	83.294%	43.640	44.210	47.040	40.230
x		75.060%	986.100	962.400	82.022%	43.390	43.800	46.140	38.870
σ		1.214%	48.210	44.450	1.332%	0.221	0.472	1.147	1.562
%RSD		1.618	4.889	4.619	1.623	0.509	1.078	2.485	4.019

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	74.257%	1923.000	472.700	473.100	1815.000	1867.000	85.538%	85.365%
2	11:44:54	78.327%	1944.000	485.800	481.200	1874.000	1924.000	87.690%	88.021%
3	11:45:19	77.437%	1980.000	503.900	489.700	1901.000	1958.000	88.460%	90.030%
x		76.674%	1949.000	487.500	481.300	1863.000	1916.000	87.229%	87.805%
σ		2.140%	28.520	15.680	8.328	43.880	45.780	1.514%	2.340%
%RSD		2.791	1.463	3.216	1.730	2.355	2.389	1.736	2.665

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:29	51.370	48.430	21.170	21.020	20.760	78.130%
2	11:44:54	52.560	49.920	21.170	21.390	21.060	81.306%
3	11:45:19	52.470	50.780	21.610	21.550	21.450	82.023%
x		52.130	49.710	21.320	21.320	21.090	80.487%
σ		0.661	1.189	0.252	0.273	0.346	2.072%
%RSD		1.267	2.391	1.180	1.279	1.642	2.574

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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	11:48:41	90.624%	0.063	12.840	11.130	0.000	319.800	31.160	31.540
2	11:49:06	93.811%	-0.011	9.914	11.510	0.000	315.900	17.170	17.900
3	11:49:31	96.928%	-0.092	10.020	10.500	0.000	309.600	14.760	13.020
x		93.788%	-0.013	10.920	11.050	0.000	315.100	21.030	20.820
σ		3.152%	0.078	1.659	0.513	0.000	5.156	8.852	9.599
%RSD		3.361	586.600	15.180	4.643	0.000	1.636	42.090	46.100

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:41	7.364	353.800	0.000	61.720	120.900	137.900	78.836%	1.099
2	11:49:06	6.974	353.900	0.000	62.110	139.500	130.300	79.986%	0.461
3	11:49:31	6.237	351.500	0.000	54.790	85.510	129.100	80.351%	0.616
x		6.858	353.100	0.000	59.540	115.300	132.500	79.724%	0.725
σ		0.572	1.378	0.000	4.118	27.440	4.797	0.791%	0.333
%RSD		8.343	0.390	0.000	6.916	23.800	3.621	0.992	45.930

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:41	0.387	3.045	0.945	9.806	4.201	0.354	0.554	1.447
2	11:49:06	-0.077	3.035	0.871	8.002	7.330	0.225	0.305	1.513
3	11:49:31	-0.904	2.975	0.793	6.778	0.259	0.139	0.239	1.463
x		-0.198	3.019	0.870	8.195	3.930	0.239	0.366	1.475
σ		0.654	0.038	0.076	1.524	3.543	0.108	0.166	0.034
%RSD		329.800	1.248	8.773	18.590	90.150	45.100	45.380	2.333

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:41	1.443	5.454	5.260	-0.288	-1.938	-3.567	0.000	0.744
2	11:49:06	1.354	5.826	5.213	-2.988	-1.129	-4.363	0.000	0.495
3	11:49:31	1.299	5.642	5.188	0.462	-0.936	-6.484	0.000	0.399
x		1.366	5.641	5.220	-0.938	-1.334	-4.805	0.000	0.546
σ		0.073	0.186	0.036	1.815	0.532	1.508	0.000	0.178
%RSD		5.310	3.293	0.695	193.400	39.860	31.390	0.000	32.570

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:41	75.312%	4.928	4.582	84.510%	-0.033	-0.036	0.011	0.082
2	11:49:06	77.366%	3.100	2.917	86.641%	-0.048	-0.047	0.006	0.046
3	11:49:31	80.127%	2.212	2.276	87.786%	-0.057	-0.044	0.015	0.079
x		77.601%	3.413	3.258	86.312%	-0.046	-0.043	0.011	0.069
σ		2.416%	1.385	1.191	1.663%	0.012	0.006	0.004	0.020
%RSD		3.113	40.570	36.540	1.926	26.950	13.460	40.970	28.390

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:41	78.721%	4.917	-0.346	-0.319	1.194	1.283	83.752%	84.196%
2	11:49:06	79.662%	2.034	-0.504	-0.477	0.738	0.692	87.256%	87.701%
3	11:49:31	80.959%	0.369	-0.529	-0.503	0.667	0.700	88.233%	88.269%
x		79.780%	2.440	-0.460	-0.433	0.867	0.892	86.414%	86.722%
σ		1.124%	2.301	0.099	0.100	0.286	0.339	2.356%	2.206%
%RSD		1.409	94.320	21.550	23.090	32.980	38.030	2.727	2.544

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:41	0.165	0.137	0.060	0.051	0.051	83.652%
2	11:49:06	0.098	0.088	0.046	0.033	0.038	85.029%
3	11:49:31	0.073	0.080	0.033	0.011	0.024	86.105%
x		0.112	0.101	0.046	0.032	0.038	84.929%
σ		0.047	0.031	0.013	0.020	0.013	1.229%
%RSD		42.170	30.210	28.520	63.530	35.100	1.448

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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	11:52:50	87.152%	-0.113	2.578	2.599	0.000	54.700	6.965	7.861
2	11:53:15	90.651%	-0.041	1.516	1.508	0.000	52.850	3.553	4.376
3	11:53:41	91.418%	-0.056	2.376	1.970	0.000	53.450	3.244	3.373
x		89.741%	-0.070	2.157	2.026	0.000	53.660	4.587	5.204
σ		2.274%	0.038	0.564	0.548	0.000	0.944	2.065	2.356
%RSD		2.534	53.900	26.130	27.050	0.000	1.758	45.010	45.270
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:50	0.909	77.540	0.000	9.799	28.580	32.380	81.468%	-0.179
2	11:53:15	0.686	72.660	0.000	13.480	30.160	27.320	81.545%	-0.303
3	11:53:41	0.789	72.960	0.000	13.580	18.500	27.400	80.972%	-0.266
x		0.795	74.390	0.000	12.280	25.750	29.030	81.328%	-0.249
σ		0.112	2.735	0.000	2.153	6.327	2.900	0.311%	0.064
%RSD		14.050	3.676	0.000	17.530	24.570	9.989	0.383	25.620
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:50	-0.460	0.687	0.162	3.741	-1.107	0.078	0.054	0.055
2	11:53:15	0.055	0.688	0.108	2.381	-1.898	0.036	0.104	0.033
3	11:53:41	0.560	0.717	0.087	2.355	-5.493	0.028	0.079	0.085
x		0.052	0.697	0.119	2.825	-2.832	0.047	0.079	0.058
σ		0.510	0.017	0.038	0.793	2.338	0.027	0.025	0.026
%RSD		988.300	2.431	32.160	28.060	82.530	57.210	31.470	44.600
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:50	0.002	1.071	1.034	-0.886	-0.687	-3.073	0.000	0.160
2	11:53:15	0.021	1.074	1.060	0.679	-1.106	-1.037	0.000	0.114
3	11:53:41	0.004	1.040	1.137	-0.577	-1.365	-1.136	0.000	0.079
x		0.009	1.062	1.077	-0.261	-1.052	-1.749	0.000	0.117
σ		0.011	0.019	0.053	0.829	0.342	1.148	0.000	0.041
%RSD		118.300	1.777	4.945	317.100	32.510	65.630	0.000	34.710
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:50	80.458%	0.346	0.288	88.415%	-0.058	-0.046	-0.003	0.071
2	11:53:15	82.762%	0.143	0.181	88.964%	-0.049	-0.055	0.001	0.037
3	11:53:41	83.095%	0.149	0.180	89.178%	-0.049	-0.059	0.006	0.037
x		82.105%	0.213	0.216	88.853%	-0.052	-0.053	0.001	0.048
σ		1.436%	0.115	0.062	0.393%	0.006	0.007	0.005	0.020
%RSD		1.749	54.150	28.790	0.443	10.740	13.070	320.700	40.990
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:50	81.754%	-2.492	-0.696	-0.699	0.282	0.242	86.358%	87.049%
2	11:53:15	82.144%	-2.644	-0.752	-0.714	0.181	0.155	88.003%	87.464%
3	11:53:41	81.699%	-2.685	-0.735	-0.711	0.067	0.151	89.136%	87.609%
x		81.866%	-2.607	-0.727	-0.708	0.176	0.183	87.832%	87.374%
σ		0.243%	0.102	0.029	0.008	0.108	0.051	1.397%	0.290%
%RSD		0.296	3.896	3.955	1.134	60.990	28.170	1.590	0.332
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:52:50	0.026	0.023	0.014	-0.006	-0.000	90.155%		
2	11:53:15	0.031	0.020	0.005	-0.010	-0.007	87.311%		
3	11:53:41	0.014	0.017	0.004	-0.013	-0.007	87.591%		
x		0.024	0.020	0.008	-0.010	-0.005	88.352%		
σ		0.009	0.003	0.005	0.003	0.004	1.567%		
%RSD		35.930	14.440	70.770	32.940	85.050	1.774		

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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	11:57:00	86.328%	45.220	930.300	935.200	0.000	43410.000	41210.000	41430.000
2	11:57:25	91.449%	46.870	945.600	957.900	0.000	44410.000	42180.000	42970.000
3	11:57:50	94.667%	46.530	972.000	949.100	0.000	43810.000	42300.000	42440.000
x		90.815%	46.210	949.300	947.400	0.000	43880.000	41900.000	42280.000
σ		4.206%	0.871	21.110	11.460	0.000	502.400	600.300	779.300
%RSD		4.631	1.886	2.224	1.210	0.000	1.145	1.433	1.843
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:00	1731.000	9007.000	0.000	47540.000	46050.000	46040.000	76.504%	884.800
2	11:57:25	1820.000	9241.000	0.000	49080.000	47430.000	49730.000	77.274%	940.500
3	11:57:50	1819.000	9044.000	0.000	48840.000	47570.000	47030.000	80.825%	922.800
x		1790.000	9097.000	0.000	48480.000	47020.000	47600.000	78.201%	916.000
σ		51.070	126.000	0.000	829.300	840.300	1910.000	2.305%	28.480
%RSD		2.853	1.385	0.000	1.710	1.787	4.012	2.947	3.109
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:00	433.000	170.000	445.900	938.300	1056.000	438.000	423.400	216.800
2	11:57:25	459.800	181.100	475.000	1006.000	1126.000	468.300	455.100	233.200
3	11:57:50	454.800	179.300	473.600	950.500	1099.000	466.100	450.000	230.200
x		449.200	176.800	464.800	965.000	1094.000	457.500	442.800	226.700
σ		14.270	5.923	16.400	36.290	35.170	16.860	17.050	8.712
%RSD		3.177	3.350	3.529	3.760	3.216	3.685	3.851	3.842
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:00	213.100	441.800	432.200	33.660	6.034	13.440	0.000	830.000
2	11:57:25	229.300	477.600	465.800	40.370	8.351	15.230	0.000	919.000
3	11:57:50	226.600	478.800	467.700	35.040	7.511	12.120	0.000	936.900
x		223.000	466.100	455.200	36.350	7.299	13.600	0.000	895.300
σ		8.674	21.040	19.950	3.542	1.173	1.564	0.000	57.250
%RSD		3.890	4.515	4.383	9.743	16.070	11.500	0.000	6.394
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:00	81.663%	875.900	879.100	79.406%	44.470	44.250	45.890	39.380
2	11:57:25	79.166%	953.900	958.800	80.153%	44.510	45.190	47.170	40.630
3	11:57:50	82.108%	968.800	953.600	83.837%	44.230	44.630	47.770	40.500
x		80.979%	932.900	930.500	81.132%	44.400	44.690	46.940	40.170
σ		1.586%	49.910	44.570	2.372%	0.154	0.475	0.959	0.686
%RSD		1.958	5.350	4.789	2.924	0.346	1.064	2.042	1.707
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:00	72.359%	1946.000	482.900	493.400	1836.000	1900.000	84.944%	83.727%
2	11:57:25	75.553%	1955.000	500.300	488.000	1877.000	1932.000	87.580%	86.568%
3	11:57:50	77.516%	2013.000	507.100	501.700	1899.000	1986.000	90.045%	89.536%
x		75.143%	1972.000	496.800	494.300	1870.000	1939.000	87.523%	86.610%
σ		2.603%	36.540	12.510	6.912	31.950	43.480	2.551%	2.905%
%RSD		3.463	1.853	2.518	1.398	1.708	2.242	2.915	3.354
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:57:00	50.500	48.100	21.560	20.820	20.960	77.111%		
2	11:57:25	52.080	49.750	21.660	21.240	21.460	79.730%		
3	11:57:50	52.910	51.420	21.970	21.750	21.780	81.891%		
x		51.830	49.760	21.730	21.270	21.400	79.577%		
σ		1.225	1.657	0.214	0.469	0.414	2.393%		
%RSD		2.363	3.331	0.983	2.203	1.932	3.008		

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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	12:01:10	85.285%	45.550	960.100	943.500	0.000	44370.000	41920.000	42090.000
2	12:01:35	88.499%	48.380	964.800	985.100	0.000	45520.000	43580.000	43740.000
3	12:02:00	89.159%	48.560	975.400	981.700	0.000	46120.000	44320.000	44250.000
x		87.648%	47.500	966.700	970.100	0.000	45340.000	43270.000	43360.000
σ		2.072%	1.690	7.836	23.120	0.000	888.800	1228.000	1127.000
%RSD		2.364	3.559	0.811	2.384	0.000	1.960	2.837	2.600

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:01:10	1765.000	9231.000	0.000	48220.000	46260.000	47370.000	74.906%	905.800
2	12:01:35	1865.000	9417.000	0.000	49790.000	48130.000	49820.000	75.937%	946.100
3	12:02:00	1888.000	9485.000	0.000	49500.000	48360.000	50410.000	76.226%	960.500
x		1839.000	9378.000	0.000	49170.000	47590.000	49200.000	75.690%	937.500
σ		65.650	131.500	0.000	834.800	1152.000	1613.000	0.694%	28.370
%RSD		3.569	1.402	0.000	1.698	2.421	3.278	0.917	3.027

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:01:10	449.800	175.400	466.300	1127.000	1297.000	454.700	444.400	226.900
2	12:01:35	467.900	182.600	488.900	1183.000	1353.000	474.700	458.800	234.600
3	12:02:00	477.700	186.300	485.900	1197.000	1372.000	478.000	463.800	236.600
x		465.100	181.500	480.400	1169.000	1341.000	469.100	455.700	232.700
σ		14.140	5.536	12.270	36.820	38.940	12.600	10.100	5.088
%RSD		3.041	3.051	2.555	3.150	2.905	2.686	2.217	2.186

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:01:10	223.800	464.100	459.400	38.770	7.212	7.900	0.000	914.200
2	12:01:35	232.800	481.400	478.500	38.490	9.034	7.546	0.000	939.300
3	12:02:00	234.100	489.800	480.900	39.460	9.747	6.896	0.000	962.400
x		230.300	478.400	472.900	38.910	8.664	7.447	0.000	938.600
σ		5.619	13.100	11.790	0.499	1.307	0.509	0.000	24.130
%RSD		2.440	2.738	2.492	1.283	15.090	6.837	0.000	2.571

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:01:10	75.000%	949.200	947.700	77.531%	44.920	44.890	45.930	39.030
2	12:01:35	76.879%	990.700	978.500	79.637%	45.290	45.350	49.460	41.500
3	12:02:00	78.008%	1005.000	990.700	80.554%	45.090	44.660	48.650	39.600
x		76.629%	981.800	972.300	79.241%	45.100	44.970	48.010	40.040
σ		1.519%	29.190	22.120	1.550%	0.185	0.352	1.849	1.294
%RSD		1.983	2.973	2.275	1.956	0.409	0.783	3.850	3.231

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:01:10	74.116%	1941.000	488.600	483.700	1838.000	1902.000	83.889%	84.028%
2	12:01:35	73.819%	2028.000	505.800	509.300	1915.000	1993.000	85.427%	86.090%
3	12:02:00	74.767%	2048.000	509.300	507.100	1923.000	2007.000	85.471%	87.485%
x		74.234%	2005.000	501.200	500.100	1892.000	1967.000	84.929%	85.868%
σ		0.484%	56.660	11.070	14.180	46.740	56.840	0.901%	1.739%
%RSD		0.653	2.825	2.209	2.835	2.470	2.889	1.061	2.025

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:01:10	51.540	49.350	21.300	21.100	20.980	77.741%
2	12:01:35	53.210	51.610	22.240	22.000	21.940	78.707%
3	12:02:00	52.940	50.980	21.850	21.940	21.630	80.696%
x		52.560	50.650	21.800	21.680	21.520	79.048%
σ		0.894	1.163	0.468	0.504	0.492	1.506%
%RSD		1.700	2.297	2.149	2.324	2.287	1.906

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	83.341%	48.770	1041.000	1051.000	0.000	50480.000	47680.000	48260.000
2	12:05:47	84.675%	52.570	1077.000	1083.000	0.000	51550.000	49440.000	49700.000
3	12:06:12	88.971%	52.230	1047.000	1052.000	0.000	50720.000	48500.000	48960.000
x		85.662%	51.190	1055.000	1062.000	0.000	50920.000	48540.000	48970.000
σ		2.942%	2.101	19.360	18.220	0.000	561.700	882.200	719.400
%RSD		3.434	4.104	1.835	1.715	0.000	1.103	1.817	1.469

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	1968.000	11400.000	0.000	54950.000	52610.000	53880.000	71.712%	1144.000
2	12:05:47	2054.000	11570.000	0.000	55840.000	54810.000	54010.000	74.386%	1166.000
3	12:06:12	2042.000	11310.000	0.000	53740.000	54100.000	54390.000	75.570%	1146.000
x		2021.000	11430.000	0.000	54840.000	53840.000	54090.000	73.889%	1152.000
σ		46.760	134.300	0.000	1053.000	1118.000	266.000	1.976%	12.090
%RSD		2.314	1.176	0.000	1.921	2.077	0.492	2.674	1.050

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	493.200	193.300	505.800	1098.000	1213.000	501.700	489.600	247.900
2	12:05:47	507.700	197.500	527.100	1059.000	1363.000	517.200	498.400	253.700
3	12:06:12	506.800	200.300	532.900	1052.000	1401.000	513.900	500.800	257.200
x		502.600	197.000	521.900	1070.000	1326.000	510.900	496.300	252.900
σ		8.134	3.509	14.230	24.500	99.120	8.131	5.919	4.699
%RSD		1.618	1.781	2.726	2.290	7.476	1.591	1.193	1.858

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	247.500	513.400	508.400	38.690	10.230	9.067	0.000	990.200
2	12:05:47	253.000	524.400	509.900	41.140	9.743	8.922	0.000	1008.000
3	12:06:12	252.100	534.600	526.500	41.470	9.779	7.674	0.000	1046.000
x		250.800	524.200	515.000	40.440	9.917	8.554	0.000	1014.000
σ		2.942	10.610	10.060	1.516	0.271	0.766	0.000	28.340
%RSD		1.173	2.023	1.954	3.749	2.736	8.953	0.000	2.793

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	71.838%	1185.000	1178.000	74.394%	41.120	40.440	52.860	43.620
2	12:05:47	74.945%	1229.000	1235.000	76.318%	41.030	41.530	53.000	44.660
3	12:06:12	74.544%	1260.000	1259.000	75.951%	39.720	40.320	52.620	43.270
x		73.776%	1225.000	1224.000	75.554%	40.620	40.760	52.830	43.850
σ		1.690%	37.630	41.740	1.021%	0.784	0.665	0.188	0.722
%RSD		2.291	3.072	3.410	1.352	1.931	1.632	0.356	1.647

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	69.059%	2438.000	617.000	618.400	2024.000	2118.000	80.014%	80.513%
2	12:05:47	70.753%	2487.000	637.600	630.800	2109.000	2192.000	82.683%	82.336%
3	12:06:12	75.039%	2378.000	613.800	602.000	2072.000	2105.000	84.398%	83.651%
x		71.617%	2434.000	622.800	617.100	2068.000	2139.000	82.365%	82.167%
σ		3.082%	55.020	12.900	14.450	42.300	46.880	2.209%	1.576%
%RSD		4.304	2.260	2.071	2.341	2.045	2.192	2.682	1.918

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:22	58.920	55.780	23.820	23.590	23.500	73.349%
2	12:05:47	59.850	58.070	24.910	24.270	24.350	74.930%
3	12:06:12	57.170	55.560	23.610	23.450	23.190	78.696%
x		58.650	56.470	24.120	23.770	23.680	75.658%
σ		1.363	1.393	0.697	0.438	0.600	2.747%
%RSD		2.325	2.467	2.891	1.843	2.533	3.630

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:34	87.175%	-0.153	50.840	48.620	0.000	45300.000	17550.000	16820.000
2	12:09:59	89.132%	-0.076	53.130	49.300	0.000	46580.000	18560.000	17560.000
3	12:10:25	92.136%	-0.134	48.850	48.380	0.000	47500.000	17530.000	17510.000
x		89.481%	-0.121	50.940	48.770	0.000	46460.000	17880.000	17290.000
σ		2.499%	0.040	2.145	0.478	0.000	1105.000	590.100	410.500
%RSD		2.793	33.160	4.212	0.980	0.000	2.378	3.300	2.373
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:34	12.220	4587.000	0.000	4418.000	88390.000	88820.000	74.476%	1.735
2	12:09:59	11.170	4727.000	0.000	4714.000	92150.000	91310.000	75.479%	1.244
3	12:10:25	8.938	4255.000	0.000	4519.000	91320.000	93260.000	76.876%	1.135
x		10.780	4523.000	0.000	4550.000	90620.000	91130.000	75.610%	1.371
σ		1.677	242.600	0.000	150.700	1976.000	2226.000	1.205%	0.320
%RSD		15.560	5.364	0.000	3.311	2.180	2.443	1.594	23.300
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:34	-0.194	6.924	32.650	40.940	421.800	1.073	0.634	1.497
2	12:09:59	-0.507	6.810	33.490	38.820	412.900	0.948	0.584	1.347
3	12:10:25	-0.639	6.644	33.460	36.990	410.900	0.833	0.348	1.287
x		-0.447	6.792	33.200	38.920	415.200	0.951	0.522	1.377
σ		0.229	0.141	0.476	1.975	5.811	0.120	0.153	0.108
%RSD		51.200	2.075	1.435	5.075	1.400	12.620	29.230	7.836
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:34	1.327	15.930	15.680	-0.195	-1.317	-0.540	0.000	185.700
2	12:09:59	1.255	16.650	16.330	1.900	-1.038	-0.404	0.000	194.800
3	12:10:25	1.198	16.100	15.400	2.631	-1.408	-0.001	0.000	194.100
x		1.260	16.230	15.800	1.445	-1.254	-0.315	0.000	191.500
σ		0.064	0.374	0.478	1.467	0.192	0.281	0.000	5.073
%RSD		5.105	2.302	3.022	101.500	15.340	89.100	0.000	2.649
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:34	74.791%	12.590	12.450	76.760%	-0.014	-0.021	0.088	0.098
2	12:09:59	77.307%	10.070	9.951	79.576%	-0.049	-0.049	0.022	0.040
3	12:10:25	80.470%	8.500	8.219	80.618%	-0.035	-0.045	0.050	0.049
x		77.523%	10.380	10.210	78.985%	-0.033	-0.038	0.053	0.062
σ		2.846%	2.063	2.128	1.996%	0.018	0.015	0.033	0.031
%RSD		3.671	19.870	20.850	2.527	53.660	40.160	62.160	50.260
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:34	74.720%	6.599	1.958	2.053	38.680	39.040	84.315%	84.304%
2	12:09:59	74.791%	3.401	0.954	1.028	40.360	39.950	86.360%	85.524%
3	12:10:25	79.562%	1.368	0.492	0.471	39.800	38.290	89.287%	88.316%
x		76.358%	3.790	1.134	1.184	39.610	39.100	86.654%	86.048%
σ		2.775%	2.637	0.750	0.802	0.853	0.834	2.499%	2.057%
%RSD		3.634	69.590	66.070	67.760	2.153	2.132	2.884	2.390
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:09:34	0.103	0.109	0.142	0.117	0.127	80.181%		
2	12:09:59	0.080	0.077	0.116	0.105	0.125	79.614%		
3	12:10:25	0.062	0.065	0.113	0.110	0.111	83.622%		
x		0.082	0.083	0.124	0.110	0.121	81.139%		
σ		0.020	0.023	0.016	0.006	0.009	2.169%		
%RSD		24.990	27.390	13.110	5.451	7.114	2.673		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	90.014%	-0.025	51.030	45.630	0.000	47040.000	17910.000	17220.000
2	12:14:12	89.516%	-0.104	49.180	51.510	0.000	50440.000	17930.000	17840.000
3	12:14:37	93.348%	-0.136	54.400	49.150	0.000	49260.000	17920.000	18120.000
x		90.959%	-0.088	51.540	48.770	0.000	48910.000	17920.000	17730.000
σ		2.084%	0.057	2.643	2.958	0.000	1728.000	13.370	458.100
%RSD		2.291	64.390	5.129	6.065	0.000	3.534	0.075	2.584

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	14.190	4676.000	0.000	4881.000	90960.000	92450.000	76.221%	0.773
2	12:14:12	11.010	4368.000	0.000	4997.000	93150.000	92120.000	77.825%	0.673
3	12:14:37	11.450	4373.000	0.000	5211.000	98040.000	96460.000	76.729%	1.157
x		12.220	4472.000	0.000	5030.000	94050.000	93680.000	76.925%	0.868
σ		1.724	176.500	0.000	167.400	3626.000	2415.000	0.820%	0.256
%RSD		14.110	3.946	0.000	3.329	3.855	2.578	1.066	29.460

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	-0.656	8.462	2.187	15.700	381.000	0.299	0.220	1.401
2	12:14:12	1.893	8.695	2.171	15.220	397.800	0.269	0.337	1.425
3	12:14:37	1.223	8.718	2.150	15.720	391.400	0.227	0.197	1.326
x		0.820	8.625	2.169	15.550	390.100	0.265	0.251	1.384
σ		1.321	0.142	0.019	0.281	8.477	0.036	0.075	0.052
%RSD		161.100	1.642	0.859	1.806	2.173	13.710	29.830	3.722

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	1.220	6.409	6.172	0.017	-0.976	0.088	0.000	188.900
2	12:14:12	1.404	6.617	6.336	2.154	-1.729	-1.834	0.000	200.800
3	12:14:37	1.353	6.450	6.309	2.023	-0.345	-0.923	0.000	200.300
x		1.326	6.492	6.272	1.398	-1.017	-0.890	0.000	196.700
σ		0.095	0.110	0.088	1.198	0.693	0.962	0.000	6.714
%RSD		7.179	1.697	1.407	85.670	68.170	108.100	0.000	3.414

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	78.271%	4.826	5.435	78.914%	-0.048	-0.053	0.027	0.058
2	12:14:12	78.093%	5.162	5.297	81.175%	-0.061	-0.057	0.026	0.007
3	12:14:37	79.699%	5.374	5.192	81.594%	-0.051	-0.050	0.022	0.091
x		78.688%	5.121	5.308	80.561%	-0.053	-0.053	0.025	0.052
σ		0.880%	0.276	0.122	1.441%	0.006	0.004	0.003	0.042
%RSD		1.119	5.393	2.298	1.789	12.100	7.092	10.820	81.440

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	77.034%	-1.519	0.033	0.125	39.500	41.390	87.564%	86.347%
2	12:14:12	78.414%	-1.719	-0.023	-0.018	41.970	43.170	86.210%	87.987%
3	12:14:37	76.041%	-1.754	-0.066	-0.044	44.110	44.500	87.487%	87.424%
x		77.163%	-1.664	-0.018	0.021	41.860	43.020	87.087%	87.252%
σ		1.191%	0.127	0.050	0.091	2.307	1.563	0.761%	0.833%
%RSD		1.544	7.636	270.000	432.600	5.510	3.634	0.874	0.955

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:47	0.048	0.051	0.127	0.084	0.107	81.991%
2	12:14:12	0.038	0.041	0.126	0.101	0.104	82.617%
3	12:14:37	0.040	0.038	0.110	0.100	0.106	80.825%
x		0.042	0.043	0.121	0.095	0.106	81.811%
σ		0.005	0.007	0.009	0.010	0.001	0.909%
%RSD		12.360	15.350	7.817	10.020	1.254	1.111

CCV 1455996 1/21/2015 12:17:33 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:58	77.521%	101.000	102.000	99.550	0.000	49650.000	47290.000	47670.000
2	12:18:23	78.996%	105.600	107.800	103.100	0.000	51280.000	49380.000	49690.000
3	12:18:48	81.242%	102.100	105.100	101.800	0.000	51290.000	49950.000	50350.000
x		79.253%	102.917%	104.994%	101.462%	0.000	101.481%	97.751%	98.472%
σ		1.874%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.365	2.335	2.765	1.753	0.000	1.863	2.869	2.836
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:58	471.600	4963.000	0.000	51790.000	49370.000	51420.000	76.457%	96.830
2	12:18:23	489.100	5074.000	0.000	53090.000	52120.000	51380.000	76.568%	104.400
3	12:18:48	493.000	5078.000	0.000	53440.000	53020.000	52270.000	76.369%	103.700
x		96.912%	100.768%	0.000	105.539%	103.005%	103.379%	76.465%	101.629%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.100%	n/a
%RSD		2.352	1.293	0.000	1.648	3.695	0.971	0.131	4.108
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:58	90.450	91.690	491.200	24230.000	25630.000	94.640	95.010	93.980
2	12:18:23	95.440	96.710	522.200	25510.000	26890.000	97.600	98.220	97.920
3	12:18:48	96.140	97.420	526.400	25890.000	27440.000	99.580	101.900	99.870
x		94.009%	95.275%	102.653%	100.834%	106.621%	97.274%	98.358%	97.257%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.295	3.282	3.753	3.448	3.482	2.560	3.482	3.082
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:58	95.930	97.480	96.530	94.980	95.740	96.750	0.000	95.580
2	12:18:23	98.830	104.800	101.600	99.350	98.140	101.900	0.000	99.450
3	12:18:48	100.600	102.700	104.800	100.300	97.980	101.400	0.000	100.400
x		98.454%	101.678%	100.980%	98.207%	97.287%	99.997%	0.000	98.467%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.395	3.726	4.147	2.883	1.381	2.823	0.000	2.577
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:58	76.165%	91.510	87.350	81.206%	93.170	93.710	94.960	97.110
2	12:18:23	77.464%	96.580	94.840	82.161%	94.550	95.940	98.660	99.700
3	12:18:48	78.824%	101.300	98.460	83.297%	93.820	94.890	99.120	100.900
x		77.485%	96.454%	93.551%	82.221%	93.847%	94.846%	97.583%	99.235%
σ		1.329%	n/a	n/a	1.047%	n/a	n/a	n/a	n/a
%RSD		1.716	5.061	6.058	1.274	0.733	1.174	2.337	1.948
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:58	77.144%	96.460	97.660	96.880	94.890	97.480	84.309%	84.885%
2	12:18:23	78.125%	98.920	99.180	100.700	99.410	98.960	86.665%	86.242%
3	12:18:48	78.262%	101.900	102.700	103.400	101.900	101.100	87.789%	87.811%
x		77.844%	99.099%	99.850%	100.322%	98.737%	99.191%	86.255%	86.313%
σ		0.610%	n/a	n/a	n/a	n/a	n/a	1.776%	1.465%
%RSD		0.783	2.764	2.597	3.261	3.603	1.847	2.059	1.697
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:17:58	105.100	103.500	106.100	106.000	105.400	85.198%		
2	12:18:23	109.000	107.200	110.400	110.200	110.000	85.758%		
3	12:18:48	110.100	108.200	110.900	111.300	110.300	85.438%		
x		108.046%	106.295%	109.132%	109.159%	108.568%	85.465%		
σ		n/a	n/a	n/a	n/a	n/a	0.281%		
%RSD		2.420	2.313	2.396	2.543	2.546	0.329		

CCB4 1/21/2015 12:24:52 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	12:25:16	78.608%	0.069	-0.053	1.295	0.000	30.020	24.140	25.540
2	12:25:41	80.116%	-0.127	0.997	0.192	0.000	23.850	16.250	17.360
3	12:26:06	82.441%	-0.075	-0.420	0.393	0.000	17.870	12.690	13.240
x		80.388%	-0.044	0.175	0.627	0.000	23.920	17.690	18.710
σ		1.931%	0.102	0.736	0.588	0.000	6.075	5.859	6.257
%RSD		2.402	229.800	421.300	93.780	0.000	25.400	33.120	33.440

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:16	0.993	8.109	0.000	28.310	32.010	34.550	75.489%	-0.242
2	12:25:41	0.541	2.893	0.000	28.980	40.410	26.510	76.569%	-0.398
3	12:26:06	0.333	1.958	0.000	13.890	14.820	21.230	77.119%	-0.250
x		0.622	4.320	0.000	23.730	29.080	27.430	76.392%	-0.297
σ		0.337	3.314	0.000	8.525	13.040	6.711	0.830%	0.088
%RSD		54.190	76.720	0.000	35.930	44.860	24.470	1.086	29.530

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:16	-0.015	0.007	0.193	15.290	22.730	0.066	0.062	-0.266
2	12:25:41	-0.100	-0.008	0.159	11.140	19.200	0.052	0.047	-0.287
3	12:26:06	-0.055	-0.024	0.093	7.550	15.330	0.034	0.033	-0.223
x		-0.057	-0.008	0.148	11.330	19.090	0.051	0.048	-0.258
σ		0.043	0.016	0.051	3.872	3.701	0.016	0.015	0.033
%RSD		74.740	192.300	34.250	34.190	19.390	32.420	31.140	12.580

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:16	-0.195	0.184	0.197	-0.189	-1.222	-0.849	0.000	0.140
2	12:25:41	-0.313	0.206	0.087	-0.064	-1.530	-0.686	0.000	0.090
3	12:26:06	-0.231	0.062	0.146	-0.551	-1.203	-1.553	0.000	0.071
x		-0.246	0.151	0.143	-0.268	-1.318	-1.029	0.000	0.101
σ		0.061	0.078	0.055	0.253	0.184	0.460	0.000	0.035
%RSD		24.640	51.480	38.450	94.270	13.950	44.720	0.000	35.230

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:16	75.779%	0.453	0.370	83.613%	-0.025	-0.025	0.031	0.074
2	12:25:41	76.659%	0.285	0.381	85.956%	-0.037	-0.031	0.007	0.044
3	12:26:06	79.021%	0.329	0.239	86.902%	-0.037	-0.042	0.024	0.021
x		77.153%	0.356	0.330	85.490%	-0.033	-0.032	0.021	0.047
σ		1.676%	0.087	0.079	1.694%	0.007	0.009	0.013	0.026
%RSD		2.173	24.490	23.980	1.981	21.270	26.850	61.250	56.740

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:16	77.014%	-2.723	-0.539	-0.521	0.151	0.159	80.922%	81.209%
2	12:25:41	78.282%	-2.751	-0.538	-0.545	0.084	0.098	84.031%	83.540%
3	12:26:06	81.343%	-2.763	-0.554	-0.588	0.042	0.083	84.184%	85.630%
x		78.880%	-2.746	-0.544	-0.551	0.092	0.113	83.045%	83.460%
σ		2.225%	0.021	0.009	0.034	0.055	0.041	1.841%	2.211%
%RSD		2.821	0.748	1.602	6.119	59.670	35.890	2.217	2.649

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:25:16	0.045	0.044	0.043	0.039	0.047	85.661%
2	12:25:41	0.031	0.029	0.020	0.019	0.025	86.268%
3	12:26:06	0.033	0.029	0.036	0.013	0.031	87.916%
x		0.036	0.034	0.033	0.024	0.034	86.615%
σ		0.008	0.009	0.012	0.014	0.012	1.167%
%RSD		21.420	25.370	35.260	57.950	34.490	1.347

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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	12:29:29	82.835%	-0.146	40.950	43.920	0.000	42410.000	17560.000	16800.000
2	12:29:53	85.403%	-0.067	48.750	44.390	0.000	44450.000	18900.000	17700.000
3	12:30:19	87.780%	-0.180	47.270	44.040	0.000	44370.000	17850.000	17960.000
x		85.339%	-0.131	45.660	44.120	0.000	43740.000	18100.000	17490.000
σ		2.473%	0.058	4.141	0.248	0.000	1158.000	703.300	609.700
%RSD		2.898	44.340	9.069	0.562	0.000	2.647	3.886	3.486
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:29	8.962	4821.000	0.000	4225.000	85550.000	85310.000	72.243%	1.150
2	12:29:53	9.604	4964.000	0.000	4370.000	89210.000	89240.000	74.028%	1.009
3	12:30:19	13.650	4569.000	0.000	4468.000	92000.000	91110.000	74.011%	0.930
x		10.740	4785.000	0.000	4354.000	88920.000	88550.000	73.427%	1.030
σ		2.542	200.000	0.000	122.000	3232.000	2961.000	1.026%	0.112
%RSD		23.670	4.181	0.000	2.803	3.635	3.344	1.397	10.830
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:29	-0.259	4.152	41.410	19.180	394.800	0.205	0.304	2.912
2	12:29:53	-0.772	4.246	43.360	16.370	398.200	0.245	0.146	2.733
3	12:30:19	0.409	4.407	44.080	14.960	386.300	0.230	0.206	2.876
x		-0.207	4.268	42.950	16.840	393.100	0.227	0.219	2.840
σ		0.592	0.129	1.382	2.151	6.137	0.020	0.080	0.095
%RSD		285.400	3.029	3.218	12.780	1.561	8.978	36.460	3.344
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:29	2.815	14.950	14.870	0.245	-1.350	-1.580	0.000	186.200
2	12:29:53	2.653	14.840	15.380	-0.647	-1.528	-1.210	0.000	193.700
3	12:30:19	2.814	15.420	15.160	0.919	-1.387	-1.932	0.000	191.700
x		2.760	15.070	15.140	0.173	-1.422	-1.574	0.000	190.500
σ		0.093	0.311	0.256	0.785	0.094	0.361	0.000	3.901
%RSD		3.380	2.062	1.689	455.000	6.600	22.950	0.000	2.047
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:29	71.309%	2.542	2.455	75.471%	-0.058	-0.041	0.045	0.059
2	12:29:53	74.990%	2.519	2.601	77.412%	-0.048	-0.049	0.018	0.071
3	12:30:19	76.805%	2.492	2.382	79.819%	-0.053	-0.043	0.032	0.045
x		74.368%	2.518	2.479	77.567%	-0.053	-0.044	0.031	0.059
σ		2.800%	0.025	0.111	2.178%	0.005	0.004	0.014	0.013
%RSD		3.765	1.003	4.484	2.808	9.925	8.705	43.180	22.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:29:29	71.652%	-1.889	-0.120	-0.122	40.680	41.720	81.515%	80.463%
2	12:29:53	74.722%	-2.060	-0.194	-0.163	42.620	42.100	84.595%	84.402%
3	12:30:19	75.635%	-2.158	-0.231	-0.234	43.320	43.010	85.699%	85.573%
x		74.003%	-2.036	-0.182	-0.173	42.210	42.270	83.937%	83.479%
σ		2.087%	0.136	0.056	0.056	1.368	0.665	2.168%	2.677%
%RSD		2.820	6.677	30.990	32.590	3.242	1.573	2.583	3.207
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:29:29	0.042	0.031	0.149	0.126	0.131	78.068%		
2	12:29:53	0.031	0.027	0.148	0.141	0.131	80.314%		
3	12:30:19	0.029	0.027	0.103	0.087	0.104	81.454%		
x		0.034	0.028	0.133	0.118	0.122	79.945%		
σ		0.007	0.002	0.026	0.028	0.015	1.723%		
%RSD		21.080	7.341	19.720	23.420	12.500	2.155		

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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	12:33:41	89.954%	-0.183	23.450	24.640	0.000	18420.000	12260.000	12400.000
2	12:34:07	90.436%	-0.092	26.470	26.330	0.000	19270.000	13210.000	13230.000
3	12:34:32	96.277%	-0.165	24.650	24.300	0.000	18930.000	13010.000	13280.000
x		92.222%	-0.147	24.860	25.090	0.000	18880.000	12830.000	12970.000
σ		3.520%	0.048	1.521	1.087	0.000	426.900	500.200	492.500
%RSD		3.817	32.680	6.117	4.334	0.000	2.262	3.899	3.797

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:41	4.750	4829.000	0.000	2914.000	88320.000	89300.000	77.941%	0.873
2	12:34:07	4.975	5051.000	0.000	3050.000	90560.000	90930.000	78.893%	0.691
3	12:34:32	5.199	4941.000	0.000	2918.000	90990.000	93510.000	79.913%	0.674
x		4.975	4940.000	0.000	2960.000	89960.000	91250.000	78.916%	0.746
σ		0.225	110.900	0.000	77.360	1431.000	2118.000	0.986%	0.111
%RSD		4.515	2.244	0.000	2.613	1.591	2.321	1.249	14.830

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:41	-0.649	4.413	3.912	5.434	367.100	0.223	-0.032	1.173
2	12:34:07	0.873	4.510	3.957	5.438	369.600	0.186	-0.217	1.097
3	12:34:32	3.566	4.567	4.172	4.357	360.600	0.181	-0.143	1.060
x		1.263	4.497	4.014	5.076	365.800	0.197	-0.131	1.110
σ		2.134	0.077	0.139	0.623	4.621	0.023	0.093	0.057
%RSD		169.000	1.724	3.457	12.270	1.263	11.790	71.020	5.179

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:41	1.091	13.070	12.240	0.499	-2.286	-2.227	0.000	175.000
2	12:34:07	1.091	13.770	13.650	0.394	-1.312	-0.974	0.000	183.900
3	12:34:32	1.089	13.590	14.340	-2.112	-1.914	-1.416	0.000	183.000
x		1.090	13.480	13.410	-0.406	-1.837	-1.539	0.000	180.600
σ		0.001	0.361	1.067	1.478	0.492	0.636	0.000	4.902
%RSD		0.130	2.676	7.953	363.900	26.760	41.320	0.000	2.714

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:41	79.307%	0.942	0.946	81.560%	-0.059	-0.044	0.021	0.034
2	12:34:07	81.600%	1.088	0.980	84.608%	-0.051	-0.053	0.029	0.023
3	12:34:32	83.115%	0.917	0.985	85.214%	-0.049	-0.043	0.010	0.042
x		81.341%	0.982	0.970	83.794%	-0.053	-0.047	0.020	0.033
σ		1.917%	0.092	0.021	1.958%	0.005	0.006	0.010	0.010
%RSD		2.357	9.381	2.196	2.337	10.300	11.810	46.790	29.710

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:41	77.918%	-2.617	-0.084	-0.051	26.710	26.960	88.436%	87.857%
2	12:34:07	80.891%	-2.540	-0.100	-0.094	28.380	28.710	87.715%	90.250%
3	12:34:32	83.688%	-2.579	-0.098	-0.063	27.340	27.490	92.036%	91.879%
x		80.832%	-2.579	-0.094	-0.069	27.480	27.720	89.396%	89.995%
σ		2.885%	0.039	0.009	0.022	0.844	0.895	2.315%	2.023%
%RSD		3.569	1.504	9.243	31.620	3.070	3.227	2.589	2.248

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:33:41	0.016	0.016	0.038	0.052	0.054	83.768%
2	12:34:07	0.013	0.016	0.070	0.037	0.065	85.852%
3	12:34:32	0.018	0.013	0.065	0.036	0.049	88.536%
x		0.016	0.015	0.057	0.042	0.056	86.052%
σ		0.003	0.002	0.017	0.009	0.008	2.390%
%RSD		16.000	11.100	30.150	21.270	14.090	2.778

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:53	88.175%	-0.154	40.880	46.080	0.000	47740.000	16750.000	17030.000
2	12:38:18	91.298%	-0.094	46.010	46.220	0.000	49620.000	17650.000	16500.000
3	12:38:43	91.965%	-0.211	47.340	47.240	0.000	49920.000	18140.000	16850.000
x		90.479%	-0.153	44.740	46.510	0.000	49090.000	17510.000	16790.000
σ		2.023%	0.059	3.411	0.637	0.000	1183.000	706.900	271.800
%RSD		2.236	38.330	7.624	1.370	0.000	2.410	4.037	1.619
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:53	3.316	4026.000	0.000	5543.000	83660.000	83440.000	76.234%	0.453
2	12:38:18	3.426	3860.000	0.000	5643.000	86600.000	88190.000	76.965%	0.349
3	12:38:43	3.354	3891.000	0.000	5750.000	89150.000	89260.000	77.624%	0.452
x		3.365	3926.000	0.000	5645.000	86470.000	86960.000	76.941%	0.418
σ		0.056	88.290	0.000	103.200	2745.000	3099.000	0.695%	0.060
%RSD		1.665	2.249	0.000	1.828	3.174	3.564	0.903	14.240
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:53	0.836	7.623	2.149	107.000	466.400	0.167	-0.007	1.070
2	12:38:18	1.057	7.810	2.291	113.000	470.500	0.178	-0.113	1.082
3	12:38:43	-0.662	7.873	2.283	113.900	473.900	0.197	0.119	1.200
x		0.411	7.768	2.241	111.300	470.300	0.181	-0.000	1.118
σ		0.935	0.130	0.080	3.747	3.746	0.015	0.116	0.072
%RSD		227.800	1.676	3.555	3.367	0.796	8.488	25070.000	6.448
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:53	1.009	5.920	6.102	0.609	-0.816	-1.203	0.000	171.700
2	12:38:18	1.126	6.633	6.550	0.911	-0.666	-1.508	0.000	180.500
3	12:38:43	1.146	6.411	6.849	-0.518	-0.180	-1.872	0.000	182.000
x		1.094	6.321	6.500	0.334	-0.554	-1.528	0.000	178.100
σ		0.074	0.365	0.376	0.753	0.333	0.335	0.000	5.588
%RSD		6.772	5.772	5.787	225.500	59.970	21.930	0.000	3.138
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:53	76.729%	8.633	9.134	78.482%	-0.054	-0.050	0.012	0.042
2	12:38:18	78.409%	9.126	9.073	81.085%	-0.055	-0.051	0.031	0.100
3	12:38:43	80.900%	9.281	9.129	81.875%	-0.057	-0.042	0.021	-0.021
x		78.680%	9.013	9.112	80.481%	-0.055	-0.048	0.021	0.040
σ		2.099%	0.339	0.034	1.776%	0.002	0.005	0.010	0.061
%RSD		2.668	3.757	0.369	2.206	3.107	10.630	44.470	150.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:53	75.902%	-2.829	-0.622	-0.563	35.250	34.830	84.837%	84.910%
2	12:38:18	77.237%	-2.797	-0.597	-0.559	37.260	36.620	86.590%	87.236%
3	12:38:43	79.901%	-2.786	-0.606	-0.639	35.830	36.080	88.980%	89.264%
x		77.680%	-2.804	-0.608	-0.587	36.110	35.850	86.802%	87.137%
σ		2.036%	0.022	0.013	0.045	1.035	0.916	2.080%	2.179%
%RSD		2.621	0.800	2.092	7.680	2.866	2.555	2.396	2.500
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:37:53	0.022	0.034	0.057	0.053	0.059	79.908%		
2	12:38:18	0.017	0.028	0.075	0.059	0.056	81.928%		
3	12:38:43	0.034	0.021	0.053	0.051	0.052	83.320%		
x		0.024	0.028	0.062	0.055	0.056	81.719%		
σ		0.009	0.006	0.012	0.004	0.003	1.716%		
%RSD		35.830	23.440	19.750	7.118	5.839	2.100		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	90.138%	-0.170	37.190	35.280	0.000	54920.000	18670.000	18970.000
2	12:42:34	90.696%	-0.132	34.950	37.410	0.000	57510.000	19800.000	19850.000
3	12:42:59	94.620%	-0.125	32.770	36.880	0.000	56760.000	19560.000	20130.000
x		91.818%	-0.142	34.970	36.520	0.000	56390.000	19350.000	19650.000
σ		2.442%	0.024	2.212	1.109	0.000	1335.000	595.700	605.400
%RSD		2.660	17.090	6.325	3.037	0.000	2.367	3.079	3.081

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	68.490	3793.000	0.000	8287.000	86240.000	85890.000	77.314%	1.984
2	12:42:34	68.890	4241.000	0.000	8595.000	89670.000	90490.000	77.134%	1.523
3	12:42:59	69.850	4250.000	0.000	8875.000	93320.000	93360.000	77.730%	3.186
x		69.080	4095.000	0.000	8586.000	89740.000	89920.000	77.393%	2.231
σ		0.700	261.600	0.000	294.000	3545.000	3768.000	0.306%	0.859
%RSD		1.014	6.388	0.000	3.424	3.950	4.190	0.395	38.490

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	0.033	9.309	23.050	188.600	554.800	0.322	0.510	1.056
2	12:42:34	-1.457	9.439	23.940	197.500	570.900	0.308	0.625	1.033
3	12:42:59	1.641	10.010	24.620	199.700	562.700	0.263	0.554	0.915
x		0.072	9.586	23.870	195.300	562.800	0.297	0.563	1.001
σ		1.549	0.373	0.786	5.906	8.055	0.031	0.058	0.076
%RSD		2141.000	3.888	3.292	3.025	1.431	10.380	10.250	7.578

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	0.820	37.840	38.230	-0.100	-1.814	-2.416	0.000	197.100
2	12:42:34	0.914	40.180	38.690	2.506	-0.644	-0.922	0.000	207.000
3	12:42:59	0.934	40.200	39.390	-0.733	-1.326	-2.608	0.000	207.000
x		0.889	39.410	38.770	0.558	-1.261	-1.982	0.000	203.700
σ		0.061	1.356	0.586	1.717	0.588	0.923	0.000	5.679
%RSD		6.830	3.441	1.512	307.800	46.580	46.560	0.000	2.788

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	77.966%	0.129	0.128	79.589%	-0.061	-0.058	0.012	0.068
2	12:42:34	78.527%	0.069	0.170	80.353%	-0.055	-0.055	0.007	0.076
3	12:42:59	81.690%	0.183	0.117	81.692%	-0.056	-0.045	0.007	0.021
x		79.394%	0.127	0.138	80.545%	-0.057	-0.053	0.009	0.055
σ		2.008%	0.057	0.028	1.064%	0.004	0.007	0.003	0.030
%RSD		2.529	44.680	20.160	1.322	6.375	12.600	35.120	54.260

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	76.575%	-2.893	-0.666	-0.662	47.900	48.720	87.196%	86.492%
2	12:42:34	77.489%	-2.833	-0.641	-0.618	49.930	50.270	87.599%	88.192%
3	12:42:59	78.721%	-2.817	-0.634	-0.594	51.600	51.000	89.331%	88.895%
x		77.595%	-2.848	-0.647	-0.625	49.810	50.000	88.042%	87.860%
σ		1.077%	0.040	0.017	0.035	1.854	1.162	1.135%	1.235%
%RSD		1.388	1.404	2.610	5.527	3.722	2.324	1.289	1.406

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:08	0.011	0.013	0.126	0.122	0.118	81.270%
2	12:42:34	0.025	0.017	0.130	0.119	0.133	82.241%
3	12:42:59	0.014	0.020	0.144	0.110	0.130	82.798%
x		0.017	0.017	0.133	0.117	0.127	82.103%
σ		0.007	0.003	0.010	0.006	0.008	0.773%
%RSD		41.120	18.620	7.367	5.465	6.292	0.942

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:23	90.405%	-0.144	36.650	41.980	0.000	49040.000	17650.000	17860.000
2	12:46:48	96.940%	-0.141	40.890	38.550	0.000	49640.000	18010.000	18190.000
3	12:47:13	91.078%	-0.067	39.460	41.820	0.000	52050.000	19090.000	19050.000
x		92.808%	-0.118	39.000	40.790	0.000	50240.000	18250.000	18370.000
σ		3.595%	0.044	2.158	1.936	0.000	1590.000	749.100	616.400
%RSD		3.873	37.120	5.532	4.746	0.000	3.164	4.105	3.356
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:23	99.440	4522.000	0.000	6734.000	97520.000	98650.000	77.800%	2.077
2	12:46:48	102.700	4491.000	0.000	6852.000	97860.000	98960.000	79.527%	1.913
3	12:47:13	109.400	4669.000	0.000	6950.000	100400.000	101100.000	76.838%	2.335
x		103.900	4561.000	0.000	6845.000	98590.000	99560.000	78.055%	2.108
σ		5.062	95.120	0.000	108.000	1570.000	1320.000	1.362%	0.213
%RSD		4.874	2.086	0.000	1.578	1.592	1.326	1.745	10.100
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:23	-0.070	29.410	10.880	336.500	741.600	0.364	0.438	1.114
2	12:46:48	2.090	29.990	11.380	373.800	753.700	0.428	0.448	1.040
3	12:47:13	0.480	30.820	11.710	360.000	771.700	0.404	0.630	1.172
x		0.833	30.070	11.320	356.800	755.700	0.399	0.505	1.109
σ		1.122	0.710	0.419	18.830	15.130	0.032	0.108	0.066
%RSD		134.700	2.361	3.697	5.279	2.003	8.095	21.400	5.944
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:23	1.054	13.940	13.880	0.104	-1.225	-2.863	0.000	278.200
2	12:46:48	1.025	14.660	14.740	0.517	-1.062	-0.260	0.000	297.100
3	12:47:13	1.127	14.280	14.900	0.883	-1.291	-0.252	0.000	297.600
x		1.069	14.290	14.510	0.501	-1.192	-1.125	0.000	290.900
σ		0.053	0.357	0.548	0.390	0.118	1.505	0.000	11.070
%RSD		4.944	2.497	3.775	77.720	9.891	133.800	0.000	3.804
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:23	79.783%	0.063	0.074	80.299%	-0.035	-0.035	0.002	0.032
2	12:46:48	80.339%	0.159	0.073	81.758%	-0.050	-0.044	0.002	0.007
3	12:47:13	78.914%	0.103	0.112	81.344%	-0.041	-0.051	-0.008	0.006
x		79.679%	0.108	0.086	81.134%	-0.042	-0.043	-0.001	0.015
σ		0.718%	0.048	0.022	0.752%	0.008	0.008	0.006	0.015
%RSD		0.902	44.490	25.880	0.927	17.810	19.030	452.300	98.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:23	76.602%	-2.831	-0.694	-0.660	62.460	61.850	88.951%	87.391%
2	12:46:48	79.940%	-2.834	-0.702	-0.651	63.680	64.320	87.144%	89.929%
3	12:47:13	79.098%	-2.791	-0.674	-0.670	65.860	66.450	86.428%	88.070%
x		78.547%	-2.819	-0.690	-0.660	64.000	64.210	87.507%	88.463%
σ		1.736%	0.024	0.014	0.010	1.726	2.301	1.301%	1.314%
%RSD		2.210	0.841	2.045	1.491	2.697	3.584	1.486	1.486
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:46:23	0.017	0.023	0.268	0.229	0.244	82.231%		
2	12:46:48	0.017	0.015	0.265	0.231	0.249	84.300%		
3	12:47:13	0.023	0.018	0.268	0.235	0.248	83.399%		
x		0.019	0.018	0.267	0.232	0.247	83.310%		
σ		0.004	0.004	0.002	0.003	0.003	1.037%		
%RSD		18.520	21.980	0.564	1.132	1.039	1.245		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	87.438%	-0.086	36.130	37.330	0.000	55890.000	20240.000	20260.000
2	12:51:00	92.735%	-0.186	36.830	36.400	0.000	56560.000	20750.000	20800.000
3	12:51:26	92.162%	-0.224	34.130	37.940	0.000	57660.000	21220.000	21430.000
x		90.778%	-0.165	35.700	37.230	0.000	56700.000	20730.000	20830.000
σ		2.907%	0.071	1.400	0.776	0.000	892.700	490.400	586.700
%RSD		3.202	43.200	3.921	2.085	0.000	1.574	2.365	2.816

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	314.000	4263.000	0.000	11590.000	91700.000	92470.000	76.540%	6.225
2	12:51:00	339.200	4387.000	0.000	11930.000	96390.000	95880.000	77.675%	7.156
3	12:51:26	322.800	4475.000	0.000	12080.000	96990.000	98250.000	78.076%	7.263
x		325.300	4375.000	0.000	11860.000	95030.000	95530.000	77.431%	6.881
σ		12.770	106.900	0.000	250.200	2898.000	2906.000	0.797%	0.571
%RSD		3.926	2.444	0.000	2.109	3.049	3.042	1.029	8.291

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	1.636	14.880	19.600	767.700	1117.000	0.480	0.535	1.099
2	12:51:00	-0.499	15.650	20.310	812.600	1151.000	0.489	0.414	1.109
3	12:51:26	0.477	15.830	21.060	829.600	1150.000	0.565	0.572	1.261
x		0.538	15.450	20.330	803.300	1139.000	0.511	0.507	1.156
σ		1.069	0.501	0.732	31.970	18.920	0.047	0.083	0.091
%RSD		198.700	3.243	3.600	3.980	1.661	9.107	16.330	7.866

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	1.077	8.825	8.666	1.939	-1.140	-2.568	0.000	208.200
2	12:51:00	1.054	8.951	8.819	1.057	-0.387	0.138	0.000	213.100
3	12:51:26	1.120	9.655	8.752	1.768	-1.209	-1.327	0.000	213.800
x		1.084	9.143	8.746	1.588	-0.912	-1.253	0.000	211.700
σ		0.034	0.447	0.077	0.468	0.456	1.355	0.000	3.075
%RSD		3.105	4.890	0.878	29.440	49.980	108.200	0.000	1.452

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	76.939%	0.092	0.109	78.326%	-0.036	-0.040	-0.008	0.044
2	12:51:00	80.034%	0.107	0.156	79.989%	-0.050	-0.052	0.007	0.020
3	12:51:26	80.587%	0.163	0.147	81.113%	-0.037	-0.047	-0.003	0.010
x		79.186%	0.121	0.137	79.809%	-0.041	-0.047	-0.001	0.025
σ		1.966%	0.037	0.025	1.402%	0.008	0.006	0.007	0.017
%RSD		2.483	30.950	18.330	1.757	18.760	12.790	631.600	69.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	75.272%	-2.849	-0.605	-0.577	61.060	62.200	85.430%	86.330%
2	12:51:00	77.488%	-2.892	-0.596	-0.588	62.510	63.230	88.009%	89.096%
3	12:51:26	78.152%	-2.855	-0.577	-0.563	64.780	64.220	87.955%	88.272%
x		76.971%	-2.865	-0.593	-0.576	62.780	63.220	87.131%	87.899%
σ		1.508%	0.024	0.014	0.013	1.875	1.010	1.473%	1.420%
%RSD		1.959	0.820	2.393	2.207	2.986	1.597	1.691	1.615

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:36	0.024	0.014	0.422	0.341	0.378	80.723%
2	12:51:00	0.024	0.015	0.448	0.398	0.411	82.769%
3	12:51:26	0.018	0.019	0.480	0.382	0.416	81.843%
x		0.022	0.016	0.450	0.374	0.402	81.778%
σ		0.004	0.002	0.029	0.030	0.021	1.025%
%RSD		16.500	15.020	6.448	7.936	5.123	1.253

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	87.710%	-0.153	50.190	50.630	0.000	22460.000	3723.000	3672.000
2	12:55:10	90.702%	-0.145	50.870	50.560	0.000	22970.000	3849.000	3843.000
3	12:55:35	90.365%	-0.223	51.120	51.740	0.000	23140.000	3906.000	3972.000
x		89.592%	-0.174	50.730	50.980	0.000	22860.000	3826.000	3829.000
σ		1.639%	0.043	0.482	0.663	0.000	354.200	93.410	150.300
%RSD		1.829	24.590	0.950	1.301	0.000	1.549	2.441	3.925

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	11.330	6250.000	0.000	8314.000	122100.000	122900.000	75.849%	2.765
2	12:55:10	11.750	6445.000	0.000	8639.000	130200.000	130300.000	76.739%	3.211
3	12:55:35	12.130	6617.000	0.000	8967.000	135700.000	135200.000	75.834%	2.866
x		11.740	6437.000	0.000	8640.000	129300.000	129500.000	76.141%	2.948
σ		0.399	183.600	0.000	326.400	6848.000	6173.000	0.519%	0.234
%RSD		3.402	2.852	0.000	3.778	5.296	4.767	0.681	7.937

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	0.118	1.323	103.200	1634.000	2107.000	0.246	-0.174	10.430
2	12:55:10	1.002	0.904	108.600	1720.000	2187.000	0.218	-0.002	10.490
3	12:55:35	1.830	0.951	112.800	1807.000	2287.000	0.234	0.011	11.470
x		0.983	1.059	108.200	1720.000	2194.000	0.232	-0.055	10.800
σ		0.856	0.229	4.844	86.480	89.960	0.014	0.103	0.584
%RSD		87.080	21.660	4.478	5.027	4.101	6.061	186.700	5.410

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	10.480	375.000	368.200	-1.025	-1.603	-4.136	0.000	686.200
2	12:55:10	10.890	392.700	388.400	0.338	-1.607	-5.588	0.000	713.200
3	12:55:35	11.540	424.700	412.200	0.752	-0.805	-2.931	0.000	776.400
x		10.970	397.500	389.600	0.022	-1.338	-4.218	0.000	725.300
σ		0.532	25.220	22.020	0.929	0.462	1.331	0.000	46.300
%RSD		4.846	6.344	5.651	4278.000	34.530	31.540	0.000	6.384

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	81.491%	2.955	2.786	77.956%	-0.047	-0.058	0.071	0.133
2	12:55:10	83.179%	3.031	3.158	79.422%	-0.058	-0.059	0.094	0.083
3	12:55:35	78.337%	3.225	3.273	79.409%	-0.057	-0.046	0.046	0.144
x		81.002%	3.070	3.072	78.929%	-0.054	-0.054	0.071	0.120
σ		2.458%	0.139	0.254	0.842%	0.006	0.007	0.024	0.033
%RSD		3.035	4.539	8.273	1.067	11.370	13.740	34.090	27.320

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	76.682%	-2.638	-0.655	-0.619	140.000	140.800	83.835%	84.183%
2	12:55:10	78.022%	-2.659	-0.689	-0.620	145.200	145.700	86.125%	86.811%
3	12:55:35	77.148%	-2.589	-0.641	-0.620	147.900	149.700	87.790%	87.439%
x		77.284%	-2.629	-0.661	-0.619	144.400	145.400	85.917%	86.144%
σ		0.680%	0.036	0.025	0.001	4.030	4.466	1.986%	1.728%
%RSD		0.880	1.375	3.803	0.108	2.791	3.071	2.311	2.006

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:45	0.000	0.005	1.981	1.861	1.892	82.090%
2	12:55:10	0.007	0.003	1.998	1.878	1.904	83.581%
3	12:55:35	0.005	0.001	2.117	1.868	1.986	82.289%
x		0.004	0.003	2.032	1.869	1.927	82.653%
σ		0.003	0.002	0.074	0.008	0.051	0.810%
%RSD		81.220	70.940	3.644	0.450	2.632	0.980

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:57	83.266%	-0.133	2.371	1.468	0.000	1917.000	842.900	836.500
2	12:59:22	85.421%	-0.082	1.662	1.082	0.000	1958.000	855.800	864.300
3	12:59:47	87.614%	-0.140	1.240	1.695	0.000	1956.000	859.700	871.200
x		85.434%	-0.118	1.758	1.415	0.000	1943.000	852.800	857.300
σ		2.174%	0.032	0.571	0.310	0.000	23.290	8.777	18.390
%RSD		2.545	26.950	32.500	21.900	0.000	1.198	1.029	2.145
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:57	114.600	434.500	0.000	286.700	2417.000	2283.000	77.711%	2.305
2	12:59:22	117.500	439.000	0.000	289.600	2489.000	2332.000	77.933%	2.330
3	12:59:47	117.500	437.900	0.000	281.400	2482.000	2353.000	77.244%	2.301
x		116.500	437.100	0.000	285.900	2462.000	2323.000	77.629%	2.312
σ		1.718	2.359	0.000	4.179	39.890	36.140	0.352%	0.016
%RSD		1.474	0.540	0.000	1.462	1.620	1.556	0.453	0.693
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:57	0.438	0.824	101.100	253.400	247.200	0.277	1.840	0.759
2	12:59:22	0.819	0.872	105.100	260.000	263.200	0.313	1.773	0.679
3	12:59:47	1.044	0.935	107.900	261.800	258.200	0.256	1.919	0.791
x		0.767	0.877	104.700	258.400	256.200	0.282	1.844	0.743
σ		0.306	0.056	3.406	4.461	8.162	0.029	0.073	0.058
%RSD		39.910	6.354	3.253	1.726	3.186	10.270	3.985	7.773
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:57	0.581	2.964	3.027	-0.699	-1.511	-2.054	0.000	10.040
2	12:59:22	0.684	3.231	2.962	0.178	-1.334	-2.096	0.000	9.735
3	12:59:47	0.769	3.087	2.922	0.090	-1.501	-3.024	0.000	10.020
x		0.678	3.094	2.970	-0.144	-1.449	-2.391	0.000	9.933
σ		0.094	0.134	0.053	0.483	0.100	0.548	0.000	0.172
%RSD		13.910	4.318	1.795	336.100	6.874	22.910	0.000	1.731
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:57	78.394%	0.085	0.028	86.046%	-0.060	-0.055	-0.008	0.060
2	12:59:22	80.535%	0.018	0.038	86.638%	-0.051	-0.050	0.006	0.050
3	12:59:47	79.629%	0.102	0.017	85.907%	-0.057	-0.062	0.002	0.020
x		79.519%	0.068	0.028	86.197%	-0.056	-0.056	0.000	0.044
σ		1.074%	0.045	0.010	0.388%	0.004	0.006	0.007	0.021
%RSD		1.351	65.330	37.770	0.450	7.887	11.330	13470.000	47.460
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:57	80.044%	-3.105	-0.754	-0.741	4.848	5.093	86.884%	87.818%
2	12:59:22	80.637%	-3.152	-0.717	-0.731	5.348	5.180	88.400%	88.163%
3	12:59:47	80.654%	-3.139	-0.727	-0.704	5.013	4.952	86.069%	87.164%
x		80.445%	-3.132	-0.733	-0.725	5.070	5.075	87.118%	87.715%
σ		0.347%	0.025	0.019	0.019	0.255	0.115	1.183%	0.507%
%RSD		0.432	0.783	2.631	2.609	5.029	2.266	1.358	0.578
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:58:57	0.001	0.003	0.443	0.399	0.418	89.149%		
2	12:59:22	0.006	0.005	0.483	0.388	0.448	87.637%		
3	12:59:47	0.004	0.005	0.497	0.376	0.434	86.312%		
x		0.004	0.004	0.474	0.388	0.433	87.699%		
σ		0.002	0.001	0.028	0.011	0.015	1.420%		
%RSD		68.270	21.560	5.974	2.959	3.384	1.619		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:09	81.637%	-0.130	9.885	9.895	0.000	3563.000	3664.000	3657.000
2	13:03:34	84.695%	-0.122	8.608	9.808	0.000	3580.000	3721.000	3720.000
3	13:04:00	86.534%	-0.125	9.085	10.130	0.000	3615.000	3796.000	3813.000
x		84.289%	-0.126	9.193	9.943	0.000	3586.000	3727.000	3730.000
σ		2.474%	0.004	0.646	0.164	0.000	26.560	66.140	78.760
%RSD		2.935	3.397	7.022	1.650	0.000	0.741	1.775	2.111
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:09	87.300	1345.000	0.000	1149.000	6882.000	6671.000	77.057%	2.500
2	13:03:34	88.960	1404.000	0.000	1202.000	7221.000	6944.000	78.128%	3.008
3	13:04:00	91.000	1368.000	0.000	1227.000	7485.000	7185.000	77.740%	2.612
x		89.090	1372.000	0.000	1193.000	7196.000	6933.000	77.642%	2.707
σ		1.853	29.730	0.000	40.300	302.500	257.100	0.542%	0.267
%RSD		2.080	2.167	0.000	3.378	4.203	3.708	0.698	9.854
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:09	-0.056	0.588	224.700	213.700	235.200	0.245	1.034	0.695
2	13:03:34	0.083	0.580	231.500	220.200	235.100	0.280	1.257	0.751
3	13:04:00	0.397	0.564	238.700	223.500	242.700	0.287	1.229	0.738
x		0.141	0.577	231.600	219.200	237.700	0.270	1.174	0.728
σ		0.232	0.012	7.000	4.989	4.328	0.022	0.121	0.029
%RSD		163.900	2.133	3.023	2.276	1.821	8.316	10.320	4.002
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:09	0.719	14.210	13.550	0.375	-0.768	-1.168	0.000	35.190
2	13:03:34	0.905	14.650	13.870	0.539	-1.247	-0.113	0.000	36.730
3	13:04:00	0.799	15.130	14.100	0.449	-1.978	-1.923	0.000	36.400
x		0.808	14.660	13.840	0.454	-1.331	-1.068	0.000	36.110
σ		0.093	0.459	0.278	0.082	0.609	0.909	0.000	0.810
%RSD		11.550	3.128	2.008	18.090	45.790	85.140	0.000	2.243
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:09	76.222%	0.082	0.012	83.226%	-0.039	-0.060	0.016	0.061
2	13:03:34	78.873%	0.084	-0.011	86.084%	-0.053	-0.052	0.048	0.037
3	13:04:00	81.865%	0.075	0.014	79.746%	-0.058	-0.051	0.058	0.064
x		78.986%	0.081	0.005	83.018%	-0.050	-0.054	0.041	0.054
σ		2.823%	0.005	0.014	3.174%	0.010	0.005	0.022	0.015
%RSD		3.574	5.689	264.400	3.823	20.070	8.510	53.370	27.480
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:09	77.939%	-3.160	-0.764	-0.735	9.061	8.917	84.601%	84.471%
2	13:03:34	79.890%	-3.179	-0.753	-0.744	8.659	9.169	88.055%	87.953%
3	13:04:00	82.276%	-3.179	-0.760	-0.734	8.833	9.174	91.873%	89.187%
x		80.035%	-3.173	-0.759	-0.738	8.851	9.086	88.176%	87.204%
σ		2.172%	0.011	0.005	0.005	0.202	0.147	3.638%	2.446%
%RSD		2.714	0.347	0.724	0.708	2.277	1.618	4.125	2.805
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:03:09	0.007	0.002	0.214	0.245	0.234	91.907%		
2	13:03:34	0.009	0.003	0.295	0.278	0.280	89.898%		
3	13:04:00	0.003	0.003	0.316	0.282	0.286	90.589%		
x		0.006	0.002	0.275	0.268	0.267	90.798%		
σ		0.003	0.000	0.054	0.020	0.028	1.021%		
%RSD		45.040	8.726	19.570	7.544	10.650	1.124		

CCV 1455996 1/21/2015 1:06:57 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:22	75.675%	101.600	103.400	103.200	0.000	50690.000	48620.000	48210.000
2	13:07:47	78.484%	103.700	98.790	102.400	0.000	51840.000	50120.000	50780.000
3	13:08:12	80.043%	100.900	105.400	103.300	0.000	51480.000	49780.000	50020.000
x		78.067%	102.037%	102.530%	102.953%	0.000	102.675%	99.016%	99.341%
σ		2.214%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.836	1.438	3.297	0.459	0.000	1.148	1.594	2.652
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:22	479.000	5043.000	0.000	50160.000	46960.000	48880.000	76.512%	98.650
2	13:07:47	496.600	5225.000	0.000	53370.000	52140.000	51200.000	76.800%	101.600
3	13:08:12	499.300	5167.000	0.000	51840.000	52000.000	52290.000	76.472%	106.400
x		98.326%	102.895%	0.000	103.583%	100.733%	101.579%	76.595%	102.196%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.179%	n/a
%RSD		2.240	1.803	0.000	3.098	5.858	3.432	0.234	3.819
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:22	91.830	91.310	493.100	24290.000	25470.000	93.080	94.090	95.050
2	13:07:47	96.000	97.770	523.800	25780.000	27020.000	99.050	98.580	99.220
3	13:08:12	97.520	98.360	530.400	25730.000	27480.000	99.460	100.200	100.000
x		95.113%	95.818%	103.152%	101.061%	106.637%	97.198%	97.612%	98.102%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.098	4.082	3.851	3.360	3.957	3.672	3.229	2.726
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:22	94.420	98.260	98.260	97.070	99.920	97.960	0.000	96.870
2	13:07:47	98.390	102.600	102.500	99.530	103.200	101.100	0.000	98.730
3	13:08:12	99.630	103.800	101.200	99.780	101.200	100.900	0.000	99.050
x		97.475%	101.546%	100.667%	98.792%	101.452%	99.992%	0.000	98.218%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.792	2.868	2.175	1.519	1.652	1.764	0.000	1.199
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:22	73.980%	92.500	89.130	79.191%	92.590	93.060	94.920	96.450
2	13:07:47	77.148%	96.430	94.540	80.834%	95.500	96.080	98.930	101.900
3	13:08:12	77.179%	100.300	98.740	80.657%	93.720	94.210	96.890	100.600
x		76.102%	96.413%	94.138%	80.228%	93.937%	94.450%	96.915%	99.647%
σ		1.838%	n/a	n/a	0.902%	n/a	n/a	n/a	n/a
%RSD		2.415	4.050	5.117	1.124	1.562	1.617	2.065	2.848
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:22	75.205%	95.710	97.540	97.780	96.720	97.860	80.783%	82.383%
2	13:07:47	75.963%	101.800	101.800	102.900	99.110	100.700	85.135%	84.241%
3	13:08:12	77.633%	98.930	100.800	99.790	99.700	98.600	84.816%	83.911%
x		76.267%	98.809%	100.033%	100.171%	98.512%	99.039%	83.578%	83.512%
σ		1.242%	n/a	n/a	n/a	n/a	n/a	2.426%	0.991%
%RSD		1.629	3.076	2.216	2.599	1.603	1.466	2.902	1.187
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:07:22	100.000	97.280	99.870	99.990	98.830	86.592%		
2	13:07:47	107.100	104.400	109.700	108.200	107.900	84.538%		
3	13:08:12	104.500	102.300	106.700	106.100	105.400	86.253%		
x		103.886%	101.350%	105.405%	104.769%	104.062%	85.794%		
σ		n/a	n/a	n/a	n/a	n/a	1.101%		
%RSD		3.454	3.627	4.762	4.085	4.509	1.283		

CCB5 1/21/2015 1:14:17 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	13:14:42	81.713%	-0.059	-0.408	-0.710	0.000	24.590	20.020	20.130
2	13:15:08	84.013%	-0.079	-0.719	-0.773	0.000	18.850	12.960	15.720
3	13:15:33	85.086%	-0.150	-0.397	-0.715	0.000	15.590	14.650	13.010
x		83.604%	-0.096	-0.508	-0.732	0.000	19.680	15.880	16.290
σ		1.723%	0.048	0.183	0.035	0.000	4.558	3.688	3.593
%RSD		2.061	50.110	36.000	4.805	0.000	23.160	23.220	22.060

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:42	0.870	9.103	0.000	25.220	46.380	40.870	78.179%	-0.438
2	13:15:08	0.364	3.436	0.000	13.940	17.650	28.110	78.990%	-0.367
3	13:15:33	0.241	1.597	0.000	18.890	37.880	21.700	80.246%	-0.352
x		0.492	4.712	0.000	19.350	33.970	30.230	79.138%	-0.386
σ		0.333	3.912	0.000	5.652	14.760	9.759	1.041%	0.046
%RSD		67.750	83.020	0.000	29.200	43.440	32.280	1.316	11.890

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:42	-0.018	0.011	0.187	13.910	23.550	0.040	0.070	-0.339
2	13:15:08	0.033	-0.043	0.129	10.850	14.230	0.022	0.043	-0.316
3	13:15:33	-0.158	-0.094	0.107	7.484	7.041	0.021	0.045	-0.292
x		-0.048	-0.042	0.141	10.750	14.940	0.028	0.053	-0.316
σ		0.099	0.052	0.041	3.216	8.278	0.011	0.015	0.023
%RSD		207.400	124.500	29.120	29.920	55.400	38.430	28.320	7.399

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:42	-0.290	0.214	0.206	-0.138	-0.475	-0.822	0.000	0.102
2	13:15:08	-0.297	0.140	0.087	-0.182	-1.366	-1.225	0.000	0.085
3	13:15:33	-0.295	0.147	0.019	0.032	-1.672	0.145	0.000	0.066
x		-0.294	0.167	0.104	-0.096	-1.171	-0.634	0.000	0.084
σ		0.004	0.041	0.095	0.113	0.622	0.704	0.000	0.018
%RSD		1.305	24.560	91.070	118.000	53.100	111.000	0.000	21.130

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:42	78.122%	0.194	0.228	87.252%	-0.037	-0.038	0.020	0.102
2	13:15:08	81.383%	0.202	0.196	87.997%	-0.046	-0.035	0.033	0.059
3	13:15:33	81.272%	0.197	0.147	83.184%	-0.042	-0.039	0.020	0.031
x		80.259%	0.197	0.190	86.144%	-0.042	-0.038	0.024	0.064
σ		1.851%	0.004	0.041	2.591%	0.005	0.002	0.008	0.036
%RSD		2.307	2.022	21.510	3.008	11.060	5.187	31.140	56.380

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:42	80.136%	-2.937	-0.607	-0.581	0.037	0.086	85.357%	84.847%
2	13:15:08	81.997%	-2.932	-0.586	-0.587	0.094	0.068	88.255%	86.706%
3	13:15:33	82.535%	-2.968	-0.597	-0.589	0.045	0.053	87.154%	87.626%
x		81.556%	-2.946	-0.596	-0.586	0.059	0.069	86.922%	86.393%
σ		1.259%	0.020	0.011	0.004	0.031	0.017	1.463%	1.416%
%RSD		1.543	0.665	1.761	0.702	52.710	24.060	1.683	1.639

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:42	0.035	0.037	0.050	0.050	0.040	91.940%
2	13:15:08	0.024	0.025	0.031	0.034	0.033	90.599%
3	13:15:33	0.037	0.030	0.043	0.003	0.026	89.873%
x		0.032	0.031	0.041	0.029	0.033	90.804%
σ		0.007	0.006	0.010	0.024	0.007	1.048%
%RSD		21.600	19.520	23.440	81.180	22.380	1.155

MB 180-130801/1-A 1/21/2015 1:18:30 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	13:18:55	80.151%	-0.127	0.642	-0.372	0.000	8.509	2.331	2.921
2	13:19:20	82.168%	-0.116	-0.319	-0.812	0.000	6.321	1.195	1.164
3	13:19:45	86.193%	-0.042	-1.176	-0.820	0.000	3.755	1.029	0.942
x		82.837%	-0.095	-0.285	-0.668	0.000	6.195	1.518	1.676
σ		3.076%	0.046	0.909	0.257	0.000	2.379	0.708	1.084
%RSD		3.713	48.710	319.500	38.430	0.000	38.410	46.660	64.700
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:55	0.316	5.578	0.000	10.600	-0.878	7.940	74.327%	-0.431
2	13:19:20	0.208	1.221	0.000	21.400	10.080	5.975	74.953%	-0.451
3	13:19:45	-0.229	0.158	0.000	7.302	6.058	5.048	76.066%	-0.397
x		0.099	2.319	0.000	13.100	5.085	6.321	75.115%	-0.426
σ		0.288	2.872	0.000	7.372	5.542	1.477	0.881%	0.028
%RSD		292.600	123.800	0.000	56.270	109.000	23.360	1.173	6.488
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:55	0.143	0.383	0.001	-0.281	2.765	0.017	0.107	-0.192
2	13:19:20	-0.104	0.445	-0.001	-0.573	-3.605	0.005	0.011	-0.200
3	13:19:45	0.402	0.398	-0.030	-1.888	-4.098	-0.002	-0.020	-0.241
x		0.147	0.409	-0.010	-0.914	-1.646	0.006	0.033	-0.211
σ		0.253	0.032	0.017	0.856	3.828	0.010	0.066	0.026
%RSD		172.400	7.896	173.000	93.630	232.600	146.400	204.100	12.480
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:55	-0.205	0.998	0.945	0.258	-0.468	-1.569	0.000	0.033
2	13:19:20	-0.181	1.151	1.067	0.240	-1.526	-0.907	0.000	0.025
3	13:19:45	-0.276	1.085	0.950	-0.192	-0.691	-2.466	0.000	0.021
x		-0.221	1.078	0.988	0.102	-0.895	-1.647	0.000	0.026
σ		0.049	0.077	0.069	0.255	0.558	0.783	0.000	0.006
%RSD		22.390	7.130	6.998	249.800	62.300	47.520	0.000	22.400
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:55	75.138%	-0.005	-0.020	82.591%	-0.049	-0.048	0.002	0.019
2	13:19:20	77.135%	-0.046	-0.076	84.265%	-0.052	-0.059	0.002	0.012
3	13:19:45	78.579%	-0.012	-0.046	84.955%	-0.063	-0.049	-0.003	0.029
x		76.951%	-0.021	-0.048	83.937%	-0.055	-0.052	0.000	0.020
σ		1.728%	0.022	0.028	1.216%	0.008	0.006	0.003	0.009
%RSD		2.245	104.400	58.100	1.448	13.820	11.320	894.400	43.510
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:55	77.583%	-2.970	-0.669	-0.657	-0.007	-0.006	82.079%	83.456%
2	13:19:20	77.342%	-2.970	-0.670	-0.697	-0.007	0.032	85.181%	85.180%
3	13:19:45	79.471%	-3.028	-0.683	-0.706	-0.014	-0.007	87.103%	86.934%
x		78.132%	-2.989	-0.674	-0.687	-0.009	0.006	84.788%	85.190%
σ		1.166%	0.034	0.008	0.026	0.004	0.022	2.535%	1.739%
%RSD		1.492	1.128	1.207	3.800	41.650	349.400	2.990	2.041
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:18:55	0.006	0.006	0.005	0.013	0.016	101.504%		
2	13:19:20	0.002	0.005	0.015	0.001	0.013	90.573%		
3	13:19:45	0.004	0.001	0.015	0.018	0.014	91.440%		
x		0.004	0.004	0.012	0.011	0.014	94.506%		
σ		0.002	0.003	0.006	0.009	0.001	6.076%		
%RSD		58.120	62.620	50.390	83.230	8.229	6.430		

PB 180-130693/1-C 1/21/2015 1:22:39 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:05	80.384%	-0.157	-0.278	-0.885	0.000	-0.798	1.550	1.647
2	13:23:30	83.844%	-0.148	-0.530	-1.022	0.000	-2.825	1.244	1.009
3	13:23:55	85.735%	-0.150	-0.480	-0.829	0.000	-1.906	0.665	0.223
x		83.321%	-0.152	-0.429	-0.912	0.000	-1.843	1.153	0.960
σ		2.713%	0.005	0.134	0.100	0.000	1.015	0.449	0.713
%RSD		3.257	3.050	31.170	10.920	0.000	55.060	38.970	74.320
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:05	-0.463	6.165	0.000	9.572	23.220	8.083	74.552%	-0.295
2	13:23:30	-0.675	0.854	0.000	15.940	-0.976	5.287	74.752%	-0.412
3	13:23:55	-0.670	-0.503	0.000	15.200	4.562	7.483	74.704%	-0.431
x		-0.603	2.172	0.000	13.570	8.936	6.951	74.670%	-0.380
σ		0.121	3.524	0.000	3.482	12.680	1.472	0.104%	0.074
%RSD		20.040	162.300	0.000	25.660	141.900	21.170	0.140	19.390
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:05	-0.360	0.590	-0.002	2.354	6.086	-0.009	0.075	-0.167
2	13:23:30	0.368	0.629	-0.011	2.484	-2.039	-0.008	0.009	-0.117
3	13:23:55	0.381	0.592	-0.004	1.738	0.869	0.002	0.065	-0.145
x		0.130	0.604	-0.005	2.192	1.639	-0.005	0.050	-0.143
σ		0.424	0.022	0.005	0.399	4.117	0.006	0.036	0.025
%RSD		326.500	3.665	83.070	18.190	251.200	120.100	72.370	17.590
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:05	-0.157	1.453	1.476	-0.125	-1.422	-2.238	0.000	0.026
2	13:23:30	-0.260	1.434	1.407	0.640	-2.170	-1.398	0.000	0.020
3	13:23:55	-0.211	1.544	1.692	-0.004	-0.522	-2.176	0.000	0.011
x		-0.209	1.477	1.525	0.170	-1.371	-1.937	0.000	0.019
σ		0.051	0.059	0.149	0.411	0.825	0.468	0.000	0.008
%RSD		24.450	3.991	9.768	241.400	60.170	24.170	0.000	40.170
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:05	72.362%	-0.072	-0.134	78.378%	-0.051	-0.060	0.002	0.028
2	13:23:30	74.406%	-0.118	-0.145	80.935%	-0.052	-0.065	-0.008	0.033
3	13:23:55	75.309%	-0.132	-0.133	81.444%	-0.052	-0.059	0.007	0.005
x		74.026%	-0.107	-0.137	80.252%	-0.052	-0.062	0.001	0.022
σ		1.510%	0.031	0.006	1.643%	0.000	0.003	0.008	0.015
%RSD		2.040	28.970	4.656	2.047	0.684	5.297	1205.000	68.650
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:05	74.408%	-3.083	-0.742	-0.719	-0.023	-0.005	79.710%	79.584%
2	13:23:30	74.291%	-3.029	-0.719	-0.725	-0.012	-0.012	81.489%	81.137%
3	13:23:55	75.618%	-3.077	-0.721	-0.728	-0.000	0.014	82.450%	83.044%
x		74.772%	-3.063	-0.727	-0.724	-0.012	-0.001	81.216%	81.255%
σ		0.735%	0.029	0.013	0.005	0.011	0.013	1.391%	1.733%
%RSD		0.983	0.960	1.775	0.630	96.580	1410.000	1.712	2.133
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:23:05	0.004	0.003	0.027	-0.006	0.010	85.828%		
2	13:23:30	0.004	0.003	-0.004	-0.006	-0.005	83.778%		
3	13:23:55	0.004	0.002	-0.003	0.010	0.009	83.248%		
x		0.004	0.003	0.007	-0.001	0.005	84.285%		
σ		0.000	0.001	0.018	0.009	0.008	1.362%		
%RSD		2.022	23.580	262.800	1031.000	179.600	1.616		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:20	85.730%	42.430	915.800	897.500	0.000	43210.000	41190.000	41370.000
2	13:27:45	89.708%	43.650	934.000	923.100	0.000	43840.000	41840.000	42350.000
3	13:28:10	88.574%	45.270	948.500	941.700	0.000	44700.000	43100.000	43030.000
x		88.004%	43.780	932.800	920.800	0.000	43910.000	42040.000	42250.000
σ		2.049%	1.427	16.360	22.220	0.000	749.000	972.800	838.300
%RSD		2.328	3.260	1.754	2.413	0.000	1.706	2.314	1.984
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:20	1662.000	8651.000	0.000	47250.000	45680.000	45890.000	73.238%	886.200
2	13:27:45	1731.000	8688.000	0.000	48150.000	46430.000	48280.000	74.967%	915.800
3	13:28:10	1770.000	8866.000	0.000	48790.000	47590.000	49170.000	74.047%	940.200
x		1721.000	8735.000	0.000	48070.000	46570.000	47780.000	74.084%	914.100
σ		54.580	115.200	0.000	772.800	962.300	1693.000	0.865%	27.030
%RSD		3.172	1.318	0.000	1.608	2.067	3.544	1.168	2.957
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:20	425.800	167.100	441.700	934.000	1064.000	434.400	424.600	216.000
2	13:27:45	448.900	176.600	474.400	1003.000	1108.000	465.600	448.800	231.000
3	13:28:10	453.200	178.700	478.700	1020.000	1149.000	469.800	455.100	235.300
x		442.600	174.100	464.900	985.500	1107.000	456.600	442.900	227.400
σ		14.770	6.172	20.200	45.400	42.870	19.320	16.110	10.120
%RSD		3.337	3.544	4.344	4.607	3.872	4.232	3.639	4.448
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:20	213.900	435.800	431.000	32.200	8.536	6.715	0.000	855.500
2	13:27:45	225.900	479.900	471.400	37.600	7.177	10.930	0.000	957.500
3	13:28:10	230.400	488.700	477.500	36.840	9.012	9.500	0.000	965.400
x		223.400	468.100	459.900	35.550	8.242	9.048	0.000	926.100
σ		8.543	28.350	25.290	2.926	0.953	2.142	0.000	61.250
%RSD		3.824	6.055	5.498	8.232	11.560	23.680	0.000	6.614
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:20	76.190%	901.200	894.400	75.417%	43.850	43.090	46.770	34.790
2	13:27:45	72.582%	979.400	961.800	77.615%	43.270	43.790	45.890	38.100
3	13:28:10	71.867%	1001.000	984.800	76.697%	43.080	43.090	44.680	37.460
x		73.546%	960.700	947.000	76.576%	43.400	43.320	45.780	36.780
σ		2.317%	52.690	46.990	1.104%	0.401	0.404	1.047	1.754
%RSD		3.150	5.485	4.962	1.441	0.924	0.933	2.287	4.768
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:20	69.595%	2048.000	478.800	486.000	1777.000	1853.000	82.712%	81.908%
2	13:27:45	73.459%	1959.000	485.300	484.000	1836.000	1903.000	84.133%	84.581%
3	13:28:10	73.823%	1942.000	490.200	478.300	1853.000	1882.000	83.385%	83.844%
x		72.292%	1983.000	484.700	482.700	1822.000	1879.000	83.410%	83.445%
σ		2.343%	56.680	5.719	3.981	39.710	25.060	0.711%	1.381%
%RSD		3.241	2.858	1.180	0.825	2.179	1.334	0.852	1.655
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:27:20	49.320	46.710	20.400	20.530	20.280	75.992%		
2	13:27:45	50.590	48.780	21.270	20.670	20.650	78.103%		
3	13:28:10	51.000	49.230	21.240	20.910	20.930	77.506%		
x		50.300	48.240	20.970	20.700	20.620	77.200%		
σ		0.879	1.342	0.492	0.190	0.325	1.088%		
%RSD		1.747	2.782	2.347	0.918	1.577	1.410		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:34	86.870%	0.093	26.220	24.990	0.000	18320.000	8218.000	8380.000
2	13:31:59	88.973%	0.230	24.780	24.360	0.000	18960.000	8705.000	8848.000
3	13:32:24	90.096%	0.211	27.870	25.770	0.000	19130.000	8772.000	8867.000
x		88.646%	0.178	26.290	25.040	0.000	18810.000	8565.000	8698.000
σ		1.637%	0.074	1.547	0.706	0.000	427.900	302.500	276.000
%RSD		1.847	41.690	5.887	2.818	0.000	2.275	3.532	3.173
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:34	1172.000	4499.000	0.000	2833.000	22960.000	22530.000	73.787%	24.060
2	13:31:59	1233.000	4279.000	0.000	2904.000	24410.000	23710.000	76.009%	26.290
3	13:32:24	1240.000	4254.000	0.000	2970.000	24610.000	23750.000	75.502%	30.460
x		1215.000	4344.000	0.000	2903.000	23990.000	23330.000	75.099%	26.940
σ		37.620	134.800	0.000	68.670	900.800	692.300	1.164%	3.253
%RSD		3.096	3.103	0.000	2.366	3.755	2.968	1.550	12.080
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:34	7.458	7.288	1015.000	2385.000	2408.000	3.112	17.780	9.308
2	13:31:59	8.134	7.166	1064.000	2505.000	2549.000	3.100	17.840	9.491
3	13:32:24	7.912	7.407	1070.000	2509.000	2560.000	3.026	18.190	9.483
x		7.835	7.287	1050.000	2466.000	2505.000	3.079	17.940	9.428
σ		0.344	0.121	30.350	70.110	84.780	0.046	0.222	0.104
%RSD		4.393	1.658	2.892	2.843	3.384	1.508	1.237	1.098
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:34	8.956	24.870	25.020	0.969	-1.567	-3.252	0.000	89.710
2	13:31:59	9.553	26.230	25.520	4.241	-1.495	-2.340	0.000	92.800
3	13:32:24	9.098	26.720	25.840	3.491	-1.177	-1.855	0.000	91.990
x		9.202	25.940	25.460	2.900	-1.413	-2.482	0.000	91.500
σ		0.312	0.957	0.414	1.714	0.208	0.709	0.000	1.603
%RSD		3.387	3.690	1.627	59.090	14.710	28.580	0.000	1.751
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:34	76.426%	6.900	7.046	76.639%	-0.010	0.012	0.125	0.100
2	13:31:59	81.213%	5.422	5.453	80.084%	-0.024	-0.014	0.124	0.142
3	13:32:24	80.931%	4.705	4.509	79.591%	-0.030	-0.014	0.122	0.175
x		79.523%	5.676	5.670	78.772%	-0.021	-0.006	0.124	0.139
σ		2.686%	1.119	1.282	1.863%	0.010	0.015	0.002	0.037
%RSD		3.378	19.720	22.620	2.365	47.480	267.500	1.392	26.800
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:31:34	73.961%	4.491	0.119	0.141	48.450	49.780	82.624%	83.069%
2	13:31:59	76.847%	2.233	-0.000	0.010	49.540	49.890	87.563%	86.767%
3	13:32:24	75.247%	0.638	-0.044	-0.009	49.360	50.720	85.379%	86.231%
x		75.351%	2.454	0.025	0.047	49.120	50.130	85.189%	85.356%
σ		1.446%	1.936	0.084	0.081	0.584	0.511	2.475%	1.998%
%RSD		1.919	78.890	342.400	172.400	1.188	1.020	2.905	2.341
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:31:34	0.212	0.202	4.469	4.136	4.233	78.788%		
2	13:31:59	0.156	0.131	4.583	4.250	4.317	82.102%		
3	13:32:24	0.114	0.110	4.684	4.211	4.397	81.038%		
x		0.160	0.148	4.578	4.199	4.316	80.643%		
σ		0.049	0.048	0.108	0.058	0.082	1.692%		
%RSD		30.690	32.540	2.351	1.388	1.907	2.098		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:49	83.558%	0.008	100.600	104.100	0.000	33940.000	35960.000	36150.000
2	13:36:14	85.603%	-0.109	95.220	106.800	0.000	34750.000	37450.000	37460.000
3	13:36:39	88.781%	-0.088	97.780	105.100	0.000	34430.000	37340.000	37490.000
x		85.981%	-0.063	97.860	105.300	0.000	34380.000	36920.000	37030.000
σ		2.632%	0.062	2.678	1.338	0.000	407.100	834.000	766.000
%RSD		3.061	99.330	2.737	1.271	0.000	1.184	2.259	2.068
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:49	887.100	13040.000	0.000	11160.000	68640.000	69640.000	73.335%	28.210
2	13:36:14	909.800	13320.000	0.000	11640.000	73090.000	71300.000	73.248%	30.040
3	13:36:39	925.100	13190.000	0.000	11430.000	72490.000	73640.000	74.035%	30.040
x		907.400	13180.000	0.000	11410.000	71410.000	71530.000	73.539%	29.430
σ		19.120	138.100	0.000	237.600	2415.000	2013.000	0.431%	1.058
%RSD		2.107	1.048	0.000	2.082	3.382	2.814	0.587	3.596
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:49	2.526	4.398	2236.000	2073.000	2308.000	2.512	10.310	9.176
2	13:36:14	2.832	4.786	2305.000	2159.000	2409.000	2.536	10.630	9.409
3	13:36:39	2.853	4.545	2354.000	2200.000	2419.000	2.627	10.080	9.452
x		2.737	4.576	2298.000	2144.000	2379.000	2.559	10.340	9.346
σ		0.183	0.196	59.200	64.690	61.550	0.061	0.279	0.149
%RSD		6.691	4.282	2.576	3.017	2.588	2.377	2.698	1.591
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:49	9.235	134.100	133.100	3.493	-0.634	-0.631	0.000	358.400
2	13:36:14	10.280	138.400	137.700	5.660	-1.789	0.715	0.000	371.900
3	13:36:39	9.970	142.000	139.600	2.473	-0.886	0.898	0.000	374.300
x		9.830	138.200	136.800	3.875	-1.103	0.328	0.000	368.200
σ		0.538	3.970	3.321	1.627	0.607	0.835	0.000	8.566
%RSD		5.478	2.873	2.428	42.000	55.050	254.900	0.000	2.327
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:49	73.759%	2.247	2.381	74.854%	0.022	0.019	0.597	0.650
2	13:36:14	74.294%	2.339	2.271	76.463%	-0.004	0.017	0.540	0.615
3	13:36:39	76.395%	2.565	2.518	76.610%	0.017	-0.005	0.682	0.721
x		74.816%	2.384	2.390	75.976%	0.011	0.010	0.606	0.662
σ		1.394%	0.163	0.124	0.974%	0.014	0.014	0.071	0.054
%RSD		1.863	6.855	5.175	1.282	122.100	130.500	11.780	8.165
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:49	71.328%	-2.170	-0.246	-0.197	83.570	85.870	82.245%	82.353%
2	13:36:14	71.432%	-2.133	-0.248	-0.252	89.520	88.990	83.280%	82.978%
3	13:36:39	74.405%	-2.330	-0.262	-0.286	88.520	87.990	84.859%	85.173%
x		72.389%	-2.211	-0.252	-0.245	87.200	87.610	83.461%	83.502%
σ		1.747%	0.105	0.009	0.045	3.189	1.596	1.317%	1.481%
%RSD		2.414	4.738	3.516	18.210	3.657	1.822	1.578	1.774
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:35:49	0.082	0.062	3.080	2.856	2.891	78.114%		
2	13:36:14	0.062	0.063	3.095	2.838	2.958	77.533%		
3	13:36:39	0.039	0.052	2.984	2.935	2.914	81.438%		
x		0.061	0.059	3.053	2.876	2.921	79.028%		
σ		0.022	0.006	0.060	0.052	0.034	2.107%		
%RSD		35.640	10.080	1.973	1.800	1.173	2.666		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:01	85.040%	-0.149	41.210	38.870	0.000	62350.000	19690.000	19800.000
2	13:40:26	86.225%	-0.165	43.350	39.980	0.000	64540.000	20650.000	21050.000
3	13:40:51	87.374%	-0.058	39.870	40.850	0.000	65590.000	21060.000	21300.000
x		86.213%	-0.124	41.480	39.900	0.000	64160.000	20470.000	20720.000
σ		1.167%	0.058	1.758	0.994	0.000	1652.000	707.700	808.300
%RSD		1.354	46.400	4.239	2.492	0.000	2.575	3.458	3.902
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:01	53.610	2827.000	0.000	26390.000	85560.000	85640.000	74.303%	1.102
2	13:40:26	56.190	2945.000	0.000	27690.000	90320.000	90630.000	75.177%	0.889
3	13:40:51	57.330	2966.000	0.000	28320.000	91460.000	93180.000	75.130%	1.043
x		55.710	2913.000	0.000	27470.000	89110.000	89820.000	74.870%	1.012
σ		1.907	74.710	0.000	983.900	3132.000	3837.000	0.492%	0.110
%RSD		3.423	2.565	0.000	3.582	3.514	4.272	0.657	10.860
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:01	-0.354	7.105	7.163	125.600	500.000	0.233	0.564	1.392
2	13:40:26	0.553	7.146	6.275	128.300	502.100	0.241	0.742	1.547
3	13:40:51	-0.698	7.365	6.049	128.500	504.000	0.262	0.681	1.692
x		-0.166	7.205	6.496	127.500	502.000	0.245	0.662	1.544
σ		0.646	0.139	0.589	1.618	1.993	0.015	0.090	0.150
%RSD		389.200	1.935	9.068	1.269	0.397	6.147	13.610	9.744
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:01	1.391	40.790	39.660	1.383	-0.894	0.604	0.000	166.700
2	13:40:26	1.454	42.320	41.700	-1.152	-1.059	-0.653	0.000	172.100
3	13:40:51	1.683	42.050	42.480	-1.932	-0.761	-0.468	0.000	178.200
x		1.509	41.720	41.280	-0.567	-0.905	-0.172	0.000	172.300
σ		0.154	0.816	1.459	1.733	0.149	0.679	0.000	5.760
%RSD		10.180	1.956	3.533	305.700	16.490	394.100	0.000	3.343
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:01	73.090%	0.538	0.426	75.026%	-0.051	-0.053	0.024	0.063
2	13:40:26	75.465%	0.491	0.449	76.932%	-0.059	-0.051	0.003	0.031
3	13:40:51	75.669%	0.417	0.475	77.223%	-0.055	-0.060	0.038	0.075
x		74.742%	0.482	0.450	76.394%	-0.055	-0.055	0.021	0.056
σ		1.434%	0.061	0.025	1.193%	0.004	0.005	0.018	0.023
%RSD		1.918	12.630	5.481	1.562	7.282	8.569	83.490	40.370
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:01	72.488%	-2.633	-0.413	-0.450	59.380	58.480	81.125%	81.857%
2	13:40:26	73.986%	-2.646	-0.404	-0.375	60.650	60.570	82.285%	83.265%
3	13:40:51	74.291%	-2.628	-0.419	-0.336	62.330	61.370	83.831%	84.451%
x		73.589%	-2.636	-0.412	-0.387	60.780	60.140	82.414%	83.191%
σ		0.965%	0.009	0.007	0.058	1.482	1.490	1.357%	1.298%
%RSD		1.311	0.350	1.786	14.970	2.438	2.477	1.647	1.561
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:40:01	0.035	0.027	0.281	0.309	0.298	76.895%		
2	13:40:26	0.032	0.034	0.355	0.296	0.332	77.767%		
3	13:40:51	0.031	0.029	0.342	0.315	0.321	77.921%		
x		0.032	0.030	0.326	0.306	0.317	77.528%		
σ		0.002	0.004	0.040	0.009	0.017	0.553%		
%RSD		6.650	12.130	12.140	3.079	5.499	0.714		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:13	80.907%	-0.172	6.231	7.823	0.000	13150.000	4039.000	4066.000
2	13:44:38	86.409%	-0.138	7.084	8.217	0.000	13200.000	4156.000	4211.000
3	13:45:04	85.908%	-0.206	6.893	7.695	0.000	13320.000	4213.000	4270.000
x		84.408%	-0.172	6.736	7.912	0.000	13220.000	4136.000	4183.000
σ		3.042%	0.034	0.447	0.272	0.000	87.380	88.600	105.100
%RSD		3.604	19.680	6.640	3.434	0.000	0.661	2.142	2.512
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:13	11.450	559.000	0.000	5456.000	17430.000	16520.000	74.201%	0.036
2	13:44:38	11.910	562.500	0.000	5662.000	18610.000	17710.000	76.088%	-0.094
3	13:45:04	12.240	567.900	0.000	5654.000	18790.000	18120.000	74.872%	-0.125
x		11.860	563.100	0.000	5591.000	18270.000	17450.000	75.054%	-0.061
σ		0.396	4.480	0.000	116.600	737.700	835.300	0.956%	0.085
%RSD		3.334	0.796	0.000	2.085	4.037	4.787	1.274	140.100
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:13	0.237	1.685	1.283	30.090	99.490	0.072	0.184	0.025
2	13:44:38	-0.626	1.789	1.325	29.570	99.420	0.046	0.071	0.073
3	13:45:04	0.738	1.763	1.256	30.020	102.300	0.027	0.188	0.009
x		0.116	1.745	1.288	29.890	100.400	0.048	0.148	0.036
σ		0.690	0.054	0.035	0.283	1.647	0.023	0.067	0.033
%RSD		592.800	3.110	2.698	0.948	1.640	47.100	45.210	92.570
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:13	0.005	8.084	8.234	-0.332	-2.066	-2.025	0.000	33.060
2	13:44:38	0.026	9.162	8.635	0.121	-1.565	-1.046	0.000	34.340
3	13:45:04	0.035	8.927	8.599	0.059	-0.886	-2.309	0.000	34.200
x		0.022	8.724	8.489	-0.051	-1.506	-1.793	0.000	33.860
σ		0.015	0.567	0.222	0.246	0.592	0.662	0.000	0.702
%RSD		70.410	6.500	2.612	486.000	39.320	36.940	0.000	2.073
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:13	73.224%	-0.009	0.015	77.843%	-0.050	-0.066	-0.008	0.042
2	13:44:38	77.475%	-0.019	-0.019	81.604%	-0.060	-0.053	-0.003	0.002
3	13:45:04	77.801%	0.001	0.002	80.939%	-0.056	-0.061	-0.003	0.085
x		76.167%	-0.009	-0.001	80.129%	-0.055	-0.060	-0.004	0.043
σ		2.554%	0.010	0.017	2.007%	0.005	0.007	0.003	0.042
%RSD		3.353	113.100	2795.000	2.505	9.566	10.960	64.860	96.890
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:44:13	72.243%	-3.024	-0.704	-0.706	11.960	12.190	79.438%	79.887%
2	13:44:38	76.097%	-3.045	-0.724	-0.707	12.920	12.340	85.028%	85.104%
3	13:45:04	75.545%	-3.062	-0.714	-0.697	12.830	12.630	84.513%	83.813%
x		74.628%	-3.044	-0.714	-0.703	12.570	12.390	82.993%	82.935%
σ		2.084%	0.019	0.010	0.005	0.530	0.222	3.090%	2.718%
%RSD		2.792	0.626	1.425	0.732	4.216	1.789	3.723	3.277
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:44:13	0.022	0.013	0.070	0.060	0.055	81.035%		
2	13:44:38	0.009	0.012	0.072	0.039	0.054	83.378%		
3	13:45:04	0.015	0.019	0.046	0.041	0.054	81.885%		
x		0.015	0.015	0.063	0.047	0.054	82.099%		
σ		0.006	0.004	0.014	0.012	0.001	1.186%		
%RSD		40.640	26.610	22.780	25.490	1.016	1.445		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:29	84.189%	47.770	1008.000	1005.000	0.000	109000.000	63580.000	64300.000
2	13:48:54	84.861%	49.250	1069.000	1062.000	0.000	113200.000	67190.000	68150.000
3	13:49:19	85.478%	47.820	1041.000	1041.000	0.000	113100.000	67450.000	67730.000
x		84.843%	48.280	1039.000	1036.000	0.000	111800.000	66070.000	66730.000
σ		0.645%	0.838	30.300	28.930	0.000	2406.000	2162.000	2112.000
%RSD		0.760	1.735	2.916	2.793	0.000	2.153	3.273	3.165
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:29	1949.000	12000.000	0.000	75190.000	135200.000	136500.000	73.661%	929.300
2	13:48:54	2070.000	12360.000	0.000	79300.000	144400.000	143600.000	73.260%	979.000
3	13:49:19	2067.000	12410.000	0.000	78610.000	145500.000	144700.000	71.098%	995.900
x		2029.000	12260.000	0.000	77700.000	141700.000	141600.000	72.673%	968.100
σ		69.130	220.100	0.000	2203.000	5694.000	4439.000	1.378%	34.610
%RSD		3.407	1.796	0.000	2.835	4.018	3.135	1.897	3.575
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:29	449.200	180.600	473.200	1066.000	1601.000	456.900	443.100	226.300
2	13:48:54	475.900	189.700	497.000	1111.000	1913.000	478.600	463.300	235.400
3	13:49:19	473.800	191.600	505.600	1135.000	1677.000	486.100	472.500	239.600
x		466.300	187.300	491.900	1104.000	1730.000	473.900	459.600	233.800
σ		14.860	5.878	16.760	35.070	162.500	15.170	15.070	6.779
%RSD		3.187	3.138	3.408	3.178	9.389	3.201	3.279	2.900
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:29	222.600	501.700	495.400	34.140	8.924	6.298	0.000	1096.000
2	13:48:54	230.800	527.800	515.400	37.680	7.833	7.894	0.000	1132.000
3	13:49:19	237.000	524.500	515.100	36.740	7.902	10.350	0.000	1157.000
x		230.100	518.000	508.600	36.190	8.220	8.179	0.000	1128.000
σ		7.216	14.210	11.480	1.831	0.611	2.039	0.000	30.400
%RSD		3.136	2.743	2.257	5.060	7.432	24.930	0.000	2.695
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:29	74.019%	978.600	969.300	73.059%	44.890	44.630	47.820	39.510
2	13:48:54	74.873%	1025.000	1010.000	74.437%	45.240	45.540	48.870	38.980
3	13:49:19	73.070%	1031.000	1030.000	72.546%	45.570	45.090	48.800	39.640
x		73.987%	1011.000	1003.000	73.348%	45.230	45.090	48.500	39.380
σ		0.902%	28.630	30.920	0.978%	0.339	0.454	0.591	0.352
%RSD		1.219	2.830	3.082	1.333	0.750	1.007	1.219	0.894
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:48:29	70.283%	2011.000	518.000	503.700	1939.000	1989.000	81.722%	82.141%
2	13:48:54	70.940%	2087.000	531.600	519.900	2015.000	2084.000	82.168%	82.536%
3	13:49:19	69.896%	2082.000	531.700	521.400	2022.000	2098.000	79.163%	80.743%
x		70.373%	2060.000	527.100	515.000	1992.000	2057.000	81.018%	81.806%
σ		0.528%	42.180	7.905	9.812	45.790	59.030	1.622%	0.942%
%RSD		0.750	2.048	1.500	1.905	2.298	2.870	2.002	1.151
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:48:29	51.180	49.150	21.660	21.390	21.360	75.268%		
2	13:48:54	53.280	51.760	23.080	22.500	22.430	74.638%		
3	13:49:19	52.940	51.660	22.380	22.360	22.090	74.178%		
x		52.470	50.860	22.370	22.080	21.960	74.695%		
σ		1.129	1.481	0.714	0.605	0.543	0.547%		
%RSD		2.153	2.913	3.190	2.738	2.473	0.733		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	85.504%	46.250	1001.000	996.600	0.000	108900.000	63320.000	64090.000
2	13:53:08	84.899%	48.540	1058.000	1056.000	0.000	113400.000	67480.000	67840.000
3	13:53:33	85.779%	51.490	1091.000	1073.000	0.000	114200.000	68150.000	68980.000
x		85.394%	48.760	1050.000	1042.000	0.000	112200.000	66320.000	66970.000
σ		0.450%	2.630	45.400	40.180	0.000	2892.000	2616.000	2556.000
%RSD		0.527	5.393	4.323	3.856	0.000	2.578	3.944	3.817

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	1943.000	11930.000	0.000	76630.000	137800.000	138500.000	72.070%	945.000
2	13:53:08	2088.000	12560.000	0.000	80250.000	146600.000	146700.000	71.951%	987.300
3	13:53:33	2108.000	12500.000	0.000	80700.000	145700.000	147100.000	73.725%	982.300
x		2046.000	12330.000	0.000	79190.000	143400.000	144100.000	72.582%	971.500
σ		90.190	348.000	0.000	2227.000	4876.000	4883.000	0.992%	23.090
%RSD		4.407	2.822	0.000	2.812	3.401	3.389	1.366	2.377

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	456.100	182.700	478.600	1089.000	1620.000	462.000	451.000	226.800
2	13:53:08	485.200	193.300	501.800	1145.000	1688.000	481.400	462.100	236.100
3	13:53:33	486.900	192.300	503.000	1146.000	1969.000	486.000	465.400	239.700
x		476.100	189.400	494.400	1126.000	1759.000	476.500	459.500	234.200
σ		17.320	5.838	13.750	32.700	185.400	12.760	7.537	6.678
%RSD		3.639	3.082	2.782	2.903	10.540	2.677	1.640	2.851

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	226.400	502.600	496.600	36.890	9.305	7.748	0.000	1114.000
2	13:53:08	236.400	526.800	514.400	37.590	9.541	9.121	0.000	1147.000
3	13:53:33	235.900	530.400	519.500	39.280	8.992	7.736	0.000	1166.000
x		232.900	519.900	510.200	37.920	9.279	8.202	0.000	1143.000
σ		5.621	15.120	12.000	1.230	0.275	0.796	0.000	26.470
%RSD		2.413	2.909	2.353	3.243	2.968	9.707	0.000	2.317

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	72.473%	991.500	987.700	72.536%	44.600	44.930	48.940	39.640
2	13:53:08	74.917%	1036.000	1031.000	73.385%	45.300	45.740	49.640	40.790
3	13:53:33	76.181%	1045.000	1041.000	75.294%	45.840	45.340	49.350	41.020
x		74.524%	1024.000	1020.000	73.739%	45.250	45.340	49.310	40.480
σ		1.885%	28.730	28.260	1.412%	0.623	0.406	0.348	0.740
%RSD		2.529	2.805	2.770	1.915	1.376	0.896	0.705	1.829

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	69.818%	2009.000	508.900	505.800	1958.000	1996.000	81.125%	81.792%
2	13:53:08	70.960%	2086.000	524.200	522.700	2015.000	2091.000	82.640%	82.970%
3	13:53:33	72.322%	2099.000	521.900	525.100	2035.000	2095.000	84.009%	83.817%
x		71.034%	2065.000	518.300	517.900	2003.000	2061.000	82.591%	82.860%
σ		1.253%	48.330	8.260	10.510	39.640	55.850	1.443%	1.017%
%RSD		1.765	2.341	1.594	2.029	1.979	2.710	1.747	1.228

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:43	51.310	50.020	21.710	22.090	21.630	74.860%
2	13:53:08	53.280	52.150	22.550	22.400	22.350	75.258%
3	13:53:33	54.050	52.370	22.780	22.910	22.600	76.924%
x		52.880	51.510	22.350	22.460	22.200	75.681%
σ		1.414	1.299	0.564	0.414	0.503	1.095%
%RSD		2.675	2.522	2.525	1.843	2.268	1.447

180-40434-B-25-A PDS 1/21/2015 1:56:33 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	13:56:59	79.091%	51.050	1094.000	1074.000	0.000	113700.000	68110.000	68810.000
2	13:57:24	82.304%	52.970	1122.000	1096.000	0.000	115900.000	70680.000	71650.000
3	13:57:49	84.622%	52.430	1085.000	1102.000	0.000	116100.000	71440.000	72100.000
x		82.006%	52.150	1100.000	1091.000	0.000	115200.000	70070.000	70850.000
σ		2.778%	0.994	19.450	14.470	0.000	1345.000	1746.000	1781.000
%RSD		3.387	1.906	1.768	1.327	0.000	1.168	2.491	2.513
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:59	1924.000	13770.000	0.000	80940.000	140100.000	140600.000	69.012%	1125.000
2	13:57:24	1979.000	14190.000	0.000	84040.000	150600.000	149300.000	69.871%	1192.000
3	13:57:49	2125.000	14150.000	0.000	84130.000	150600.000	149100.000	70.704%	1198.000
x		2009.000	14040.000	0.000	83040.000	147100.000	146300.000	69.862%	1172.000
σ		103.900	230.800	0.000	1814.000	6026.000	4942.000	0.846%	40.810
%RSD		5.173	1.644	0.000	2.185	4.098	3.378	1.211	3.484
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:59	482.000	193.300	501.600	1131.000	1687.000	487.000	474.100	239.900
2	13:57:24	514.000	202.400	529.200	1182.000	1738.000	507.400	492.700	249.500
3	13:57:49	505.300	204.300	537.200	1203.000	1760.000	512.400	496.500	249.600
x		500.400	200.000	522.700	1172.000	1729.000	502.300	487.700	246.400
σ		16.570	5.904	18.670	36.900	37.640	13.500	12.000	5.566
%RSD		3.311	2.952	3.573	3.149	2.177	2.688	2.460	2.259
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:59	241.500	532.800	531.800	37.300	8.724	9.325	0.000	1151.000
2	13:57:24	248.100	564.300	548.400	40.310	9.747	9.271	0.000	1198.000
3	13:57:49	247.000	560.600	552.300	43.140	9.958	9.386	0.000	1205.000
x		245.600	552.600	544.200	40.250	9.476	9.327	0.000	1185.000
σ		3.528	17.230	10.860	2.919	0.660	0.058	0.000	29.640
%RSD		1.437	3.119	1.996	7.252	6.966	0.617	0.000	2.503
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:59	69.827%	1200.000	1191.000	70.182%	39.660	39.050	50.850	39.470
2	13:57:24	71.510%	1247.000	1258.000	71.154%	40.680	40.360	51.840	42.740
3	13:57:49	73.107%	1267.000	1282.000	71.893%	40.660	39.840	52.780	41.630
x		71.481%	1238.000	1244.000	71.076%	40.330	39.750	51.820	41.280
σ		1.640%	34.560	46.810	0.858%	0.586	0.662	0.962	1.659
%RSD		2.295	2.792	3.764	1.207	1.452	1.665	1.856	4.020
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:59	67.399%	2418.000	601.300	605.100	2062.000	2114.000	78.263%	78.636%
2	13:57:24	68.422%	2499.000	638.500	626.900	2123.000	2210.000	80.087%	80.279%
3	13:57:49	69.370%	2534.000	637.900	630.500	2163.000	2226.000	80.907%	81.446%
x		68.397%	2484.000	625.900	620.800	2116.000	2184.000	79.752%	80.120%
σ		0.985%	59.410	21.290	13.760	50.660	60.850	1.353%	1.411%
%RSD		1.441	2.392	3.402	2.216	2.394	2.787	1.697	1.762
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:56:59	55.340	53.990	23.010	23.050	22.730	72.350%		
2	13:57:24	57.420	55.000	24.080	23.850	23.660	74.347%		
3	13:57:49	57.090	55.460	23.880	23.850	23.500	75.670%		
x		56.620	54.820	23.660	23.580	23.300	74.122%		
σ		1.116	0.752	0.566	0.466	0.497	1.671%		
%RSD		1.972	1.372	2.393	1.974	2.134	2.254		

CCV 1455996 1/21/2015 2:00:45 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	14:01:10	70.327%	99.330	108.900	105.100	0.000	50040.000	47820.000	47840.000
2	14:01:35	73.868%	102.500	104.200	107.000	0.000	50660.000	48630.000	49020.000
3	14:02:00	73.610%	107.600	114.200	107.800	0.000	52100.000	50470.000	50560.000
x		72.602%	103.139%	109.093%	106.643%	0.000	101.867%	97.949%	98.274%
σ		1.974%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.719	4.032	4.585	1.321	0.000	2.080	2.765	2.775

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:10	451.400	5433.000	0.000	50410.000	48970.000	49500.000	69.574%	100.600
2	14:01:35	467.600	5052.000	0.000	52120.000	51510.000	53020.000	70.151%	102.400
3	14:02:00	478.700	5677.000	0.000	52030.000	51110.000	54480.000	70.429%	102.700
x		93.179%	107.742%	0.000	103.037%	101.061%	104.672%	70.051%	101.879%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.436%	n/a
%RSD		2.955	5.848	0.000	1.874	2.710	4.889	0.623	1.121

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:10	90.770	90.750	486.800	24160.000	25130.000	93.890	93.880	93.060
2	14:01:35	95.720	96.290	511.800	25400.000	26690.000	98.150	97.260	98.320
3	14:02:00	95.170	96.310	522.600	25870.000	27270.000	98.250	99.770	98.070
x		93.884%	94.446%	101.412%	100.567%	105.465%	96.761%	96.968%	96.483%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.892	3.393	3.628	3.522	4.195	2.573	3.050	3.074

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:10	92.580	95.650	94.500	93.940	96.110	94.120	0.000	92.950
2	14:01:35	95.890	101.500	99.910	98.120	99.410	100.900	0.000	96.500
3	14:02:00	98.040	101.300	100.300	97.680	98.800	98.480	0.000	97.210
x		95.505%	99.461%	98.251%	96.581%	98.107%	97.827%	0.000	95.554%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.879	3.323	3.315	2.375	1.793	3.500	0.000	2.392

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:10	70.009%	95.790	93.590	72.804%	90.140	90.360	91.700	93.640
2	14:01:35	71.057%	101.400	99.650	74.304%	93.230	93.990	96.410	99.370
3	14:02:00	73.568%	102.500	102.000	74.897%	92.740	92.660	97.910	97.540
x		71.545%	99.905%	98.402%	74.002%	92.039%	92.337%	95.343%	96.846%
σ		1.829%	n/a	n/a	1.079%	n/a	n/a	n/a	n/a
%RSD		2.556	3.614	4.391	1.458	1.805	1.992	3.397	3.023

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:10	70.990%	98.910	95.560	97.310	93.450	94.500	78.030%	77.743%
2	14:01:35	71.251%	102.900	100.900	101.000	99.850	98.350	80.242%	79.477%
3	14:02:00	73.626%	100.300	100.700	100.600	97.600	97.150	81.970%	80.931%
x		71.955%	100.704%	99.068%	99.621%	96.967%	96.667%	80.080%	79.384%
σ		1.453%	n/a	n/a	n/a	n/a	n/a	1.975%	1.596%
%RSD		2.019	2.025	3.067	2.018	3.347	2.035	2.466	2.011

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:10	102.900	100.400	103.800	102.800	102.200	78.077%
2	14:01:35	106.500	104.400	108.300	108.300	107.800	78.019%
3	14:02:00	106.700	104.000	108.000	107.800	107.300	80.181%
x		105.367%	102.930%	106.711%	106.326%	105.773%	78.759%
σ		n/a	n/a	n/a	n/a	n/a	1.232%
%RSD		2.049	2.167	2.340	2.864	2.939	1.564

CCB6 1/21/2015 2:08:09 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	75.696%	-0.087	1.392	0.775	0.000	63.170	43.160	43.230
2	14:09:00	76.191%	-0.088	0.792	0.977	0.000	44.120	28.820	27.600
3	14:09:25	78.619%	-0.169	0.979	1.074	0.000	34.640	19.390	21.300
x		76.835%	-0.115	1.054	0.942	0.000	47.310	30.460	30.710
σ		1.564%	0.047	0.307	0.153	0.000	14.530	11.970	11.290
%RSD		2.036	40.920	29.120	16.190	0.000	30.720	39.300	36.770

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	1.361	10.980	0.000	57.070	65.600	69.040	71.443%	-0.001
2	14:09:00	0.732	5.947	0.000	41.860	30.350	51.120	72.005%	-0.326
3	14:09:25	0.601	4.609	0.000	34.100	43.040	37.080	72.928%	-0.290
x		0.898	7.178	0.000	44.340	46.330	52.410	72.125%	-0.206
σ		0.406	3.359	0.000	11.680	17.860	16.020	0.750%	0.178
%RSD		45.260	46.790	0.000	26.350	38.550	30.560	1.040	86.580

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	0.234	0.098	0.419	20.440	22.460	0.192	0.198	-0.249
2	14:09:00	-0.003	0.040	0.280	14.780	20.970	0.100	0.050	-0.291
3	14:09:25	-0.002	0.038	0.183	11.070	14.680	0.075	0.041	-0.299
x		0.076	0.058	0.294	15.430	19.370	0.123	0.096	-0.280
σ		0.137	0.034	0.119	4.717	4.130	0.061	0.088	0.027
%RSD		179.100	58.400	40.320	30.570	21.320	50.040	91.260	9.669

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	-0.225	0.319	0.418	-0.051	-0.871	-0.872	0.000	0.390
2	14:09:00	-0.339	0.182	0.174	-0.157	-0.855	-0.830	0.000	0.235
3	14:09:25	-0.275	0.126	0.217	0.016	-1.882	-0.213	0.000	0.190
x		-0.280	0.209	0.270	-0.064	-1.202	-0.639	0.000	0.272
σ		0.057	0.099	0.130	0.087	0.588	0.369	0.000	0.105
%RSD		20.520	47.490	48.310	136.100	48.940	57.780	0.000	38.600

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	72.013%	1.051	1.081	78.420%	0.016	-0.007	0.043	0.096
2	14:09:00	73.799%	0.865	0.830	80.394%	-0.025	-0.025	0.042	-0.007
3	14:09:25	74.167%	0.802	0.826	80.594%	-0.027	-0.031	0.046	0.066
x		73.326%	0.906	0.912	79.803%	-0.012	-0.021	0.044	0.052
σ		1.152%	0.130	0.146	1.201%	0.024	0.013	0.002	0.053
%RSD		1.572	14.300	16.030	1.505	201.400	60.670	5.379	102.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	73.189%	-1.799	-0.328	-0.283	0.434	0.663	80.022%	78.886%
2	14:09:00	75.611%	-1.998	-0.414	-0.412	0.278	0.382	80.137%	79.973%
3	14:09:25	76.182%	-2.214	-0.414	-0.441	0.233	0.209	81.425%	80.595%
x		74.994%	-2.004	-0.385	-0.378	0.315	0.418	80.528%	79.818%
σ		1.589%	0.208	0.050	0.084	0.106	0.229	0.779%	0.865%
%RSD		2.119	10.370	12.940	22.140	33.520	54.900	0.967	1.083

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:08:34	0.087	0.071	0.072	0.065	0.065	82.667%
2	14:09:00	0.052	0.059	0.044	0.012	0.037	83.265%
3	14:09:25	0.056	0.057	0.032	0.034	0.035	82.222%
x		0.065	0.062	0.049	0.037	0.046	82.718%
σ		0.019	0.008	0.021	0.027	0.017	0.523%
%RSD		28.820	12.430	41.490	72.230	36.330	0.632

180-40444-G-1-A 1/21/2015 2:12:24 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	14:12:49	79.343%	-0.065	5.891	5.610	0.000	51.640	8.584	7.502
2	14:13:14	82.459%	-0.202	5.410	5.193	0.000	45.650	7.308	6.261
3	14:13:39	86.123%	-0.095	5.806	5.137	0.000	41.150	6.428	5.339
x		82.642%	-0.121	5.702	5.313	0.000	46.150	7.440	6.367
σ		3.394%	0.072	0.257	0.258	0.000	5.263	1.084	1.085
%RSD		4.107	59.550	4.505	4.862	0.000	11.410	14.570	17.040
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:49	2.499	209.500	0.000	59.280	37.800	49.280	69.413%	0.100
2	14:13:14	2.611	205.300	0.000	71.390	51.830	46.760	71.369%	-0.081
3	14:13:39	2.379	205.200	0.000	66.570	44.000	57.100	71.344%	-0.101
x		2.496	206.700	0.000	65.740	44.540	51.040	70.709%	-0.028
σ		0.116	2.458	0.000	6.097	7.030	5.394	1.122%	0.111
%RSD		4.644	1.189	0.000	9.274	15.780	10.570	1.587	401.600
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:49	0.598	3.656	1.001	27.850	28.490	0.068	0.401	0.524
2	14:13:14	0.549	3.579	1.041	26.960	30.820	0.071	0.296	0.480
3	14:13:39	-0.160	3.732	1.056	26.270	26.900	0.069	0.203	0.483
x		0.329	3.655	1.032	27.020	28.730	0.069	0.300	0.496
σ		0.424	0.077	0.029	0.791	1.970	0.001	0.099	0.025
%RSD		129.000	2.096	2.767	2.928	6.858	1.670	33.020	4.997
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:49	0.415	6.520	6.491	0.714	-1.703	0.223	0.000	0.191
2	14:13:14	0.666	7.046	7.043	2.329	-0.709	-0.619	0.000	0.157
3	14:13:39	0.665	6.973	6.820	-1.415	-1.844	-1.189	0.000	0.152
x		0.582	6.846	6.785	0.543	-1.418	-0.528	0.000	0.167
σ		0.145	0.285	0.278	1.878	0.619	0.710	0.000	0.021
%RSD		24.860	4.165	4.094	346.200	43.610	134.500	0.000	12.560
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:49	68.246%	0.598	0.606	74.483%	-0.037	-0.054	0.003	0.010
2	14:13:14	71.233%	0.514	0.488	77.254%	-0.062	-0.048	0.003	0.093
3	14:13:39	72.670%	0.497	0.434	78.153%	-0.046	-0.046	0.008	-0.004
x		70.716%	0.536	0.509	76.630%	-0.049	-0.049	0.005	0.033
σ		2.257%	0.054	0.088	1.913%	0.013	0.004	0.003	0.052
%RSD		3.192	10.080	17.330	2.496	25.930	8.618	62.730	160.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:49	69.622%	-0.654	-0.145	-0.118	0.243	0.291	76.472%	77.077%
2	14:13:14	71.561%	-1.075	-0.335	-0.292	0.272	0.295	78.821%	80.002%
3	14:13:39	71.912%	-1.275	-0.352	-0.394	0.176	0.263	81.258%	80.770%
x		71.032%	-1.002	-0.277	-0.268	0.230	0.283	78.850%	79.283%
σ		1.233%	0.317	0.115	0.140	0.049	0.017	2.393%	1.949%
%RSD		1.736	31.690	41.410	52.150	21.280	6.177	3.035	2.458
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:12:49	0.039	0.027	0.044	0.039	0.042	78.729%		
2	14:13:14	0.026	0.024	0.061	0.048	0.046	79.538%		
3	14:13:39	0.016	0.021	0.048	0.052	0.048	80.493%		
x		0.027	0.024	0.051	0.046	0.045	79.587%		
σ		0.011	0.003	0.009	0.007	0.003	0.883%		
%RSD		42.340	12.190	17.950	14.820	6.356	1.110		

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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	14:16:58	79.680%	-0.141	3.423	3.065	0.000	2749.000	705.200	715.200
2	14:17:23	81.186%	-0.129	2.600	3.267	0.000	2800.000	730.000	747.200
3	14:17:48	85.164%	-0.205	2.646	2.685	0.000	2788.000	735.500	740.500
x		82.010%	-0.158	2.889	3.006	0.000	2779.000	723.600	734.300
σ		2.833%	0.041	0.462	0.295	0.000	26.960	16.170	16.850
%RSD		3.455	25.940	16.000	9.829	0.000	0.970	2.234	2.294

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	22.950	347.400	0.000	335.000	2230.000	2085.000	72.935%	-0.112
2	14:17:23	23.990	350.000	0.000	354.800	2383.000	2193.000	73.416%	-0.135
3	14:17:48	24.500	348.100	0.000	358.800	2309.000	2244.000	74.406%	0.169
x		23.810	348.500	0.000	349.500	2307.000	2174.000	73.585%	-0.026
σ		0.790	1.353	0.000	12.750	76.890	81.420	0.750%	0.169
%RSD		3.316	0.388	0.000	3.649	3.332	3.745	1.019	650.900

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	0.632	0.566	39.870	33.250	43.050	0.084	0.241	0.126
2	14:17:23	0.322	0.478	42.120	33.800	42.650	0.067	0.273	0.166
3	14:17:48	0.660	0.513	42.420	33.560	38.050	0.068	0.197	0.110
x		0.538	0.519	41.470	33.540	41.250	0.073	0.237	0.134
σ		0.188	0.044	1.393	0.277	2.777	0.009	0.038	0.029
%RSD		34.820	8.552	3.358	0.827	6.732	12.400	16.200	21.690

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	0.240	1.123	1.264	-0.284	-0.947	-1.956	0.000	10.160
2	14:17:23	0.151	1.257	1.221	0.166	-0.698	-0.149	0.000	10.730
3	14:17:48	0.293	1.162	1.314	-0.447	-1.001	-0.145	0.000	10.540
x		0.228	1.181	1.266	-0.188	-0.882	-0.750	0.000	10.480
σ		0.072	0.069	0.046	0.317	0.162	1.045	0.000	0.290
%RSD		31.470	5.808	3.659	168.500	18.350	139.300	0.000	2.769

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	72.704%	0.322	0.222	79.612%	-0.057	-0.060	0.012	0.019
2	14:17:23	74.708%	0.260	0.191	80.703%	-0.058	-0.057	-0.003	0.017
3	14:17:48	76.476%	0.264	0.269	83.273%	-0.056	-0.054	0.007	0.029
x		74.629%	0.282	0.227	81.196%	-0.057	-0.057	0.005	0.022
σ		1.887%	0.035	0.039	1.879%	0.001	0.003	0.008	0.007
%RSD		2.529	12.230	17.370	2.315	1.727	6.011	138.900	30.450

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	75.253%	-2.877	-0.617	-0.627	5.771	5.502	80.357%	80.383%
2	14:17:23	75.736%	-2.827	-0.644	-0.603	5.616	5.659	82.232%	82.099%
3	14:17:48	76.766%	-2.883	-0.587	-0.591	5.729	5.622	86.123%	85.216%
x		75.919%	-2.862	-0.616	-0.607	5.705	5.594	82.904%	82.566%
σ		0.773%	0.030	0.028	0.018	0.080	0.082	2.941%	2.450%
%RSD		1.018	1.061	4.617	2.996	1.404	1.470	3.547	2.968

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:58	0.021	0.016	0.054	0.044	0.045	83.651%
2	14:17:23	0.017	0.015	0.073	0.045	0.054	81.838%
3	14:17:48	0.022	0.024	0.082	0.061	0.068	83.879%
x		0.020	0.018	0.070	0.050	0.056	83.123%
σ		0.003	0.005	0.014	0.010	0.011	1.118%
%RSD		14.600	26.530	20.730	19.220	20.440	1.346

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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	14:21:10	79.138%	-0.095	1.970	2.443	0.000	1994.000	928.400	922.500
2	14:21:35	79.633%	-0.244	1.122	1.737	0.000	2067.000	986.400	976.100
3	14:22:01	81.835%	-0.202	2.019	2.570	0.000	2027.000	961.500	960.900
x		80.202%	-0.180	1.704	2.250	0.000	2029.000	958.800	953.200
σ		1.436%	0.076	0.504	0.449	0.000	36.850	29.110	27.630
%RSD		1.790	42.410	29.590	19.940	0.000	1.816	3.036	2.898
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:10	-0.195	285.500	0.000	291.500	2712.000	2497.000	74.018%	-0.235
2	14:21:35	-0.482	285.900	0.000	302.900	2902.000	2599.000	73.532%	-0.390
3	14:22:01	-0.595	288.700	0.000	300.900	2772.000	2720.000	74.585%	-0.431
x		-0.424	286.700	0.000	298.400	2795.000	2605.000	74.045%	-0.352
σ		0.206	1.778	0.000	6.124	97.050	111.700	0.527%	0.103
%RSD		48.550	0.620	0.000	2.052	3.472	4.288	0.712	29.350
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:10	0.071	0.366	107.000	3.923	11.620	0.153	0.333	-0.154
2	14:21:35	0.064	0.318	111.700	2.929	9.074	0.178	0.255	-0.164
3	14:22:01	-0.013	0.369	112.000	2.085	8.320	0.192	0.264	-0.182
x		0.041	0.351	110.200	2.979	9.672	0.175	0.284	-0.166
σ		0.047	0.029	2.812	0.920	1.730	0.020	0.043	0.014
%RSD		115.000	8.132	2.551	30.880	17.890	11.250	15.010	8.452
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:10	-0.118	1.013	1.164	0.285	-1.058	-0.274	0.000	11.220
2	14:21:35	-0.160	1.051	0.921	-0.186	-1.168	-1.199	0.000	11.660
3	14:22:01	-0.215	0.903	0.852	-0.395	-1.543	-1.705	0.000	11.340
x		-0.164	0.989	0.979	-0.099	-1.257	-1.059	0.000	11.400
σ		0.048	0.077	0.163	0.348	0.254	0.726	0.000	0.228
%RSD		29.520	7.773	16.690	353.100	20.240	68.490	0.000	1.998
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:10	73.552%	0.316	0.246	78.755%	-0.054	-0.052	-0.008	0.041
2	14:21:35	74.360%	0.265	0.178	80.969%	-0.064	-0.058	0.002	0.042
3	14:22:01	76.962%	0.271	0.155	81.364%	-0.059	-0.053	-0.003	-0.028
x		74.958%	0.284	0.193	80.362%	-0.059	-0.054	-0.003	0.018
σ		1.782%	0.028	0.047	1.406%	0.005	0.003	0.005	0.040
%RSD		2.377	9.858	24.550	1.749	8.383	6.208	182.500	218.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:10	74.664%	-2.944	-0.666	-0.639	5.013	4.836	79.870%	79.936%
2	14:21:35	75.011%	-2.941	-0.629	-0.611	5.002	4.933	81.970%	81.778%
3	14:22:01	76.262%	-2.939	-0.640	-0.666	5.001	5.068	84.860%	83.719%
x		75.312%	-2.942	-0.645	-0.639	5.006	4.946	82.233%	81.811%
σ		0.840%	0.003	0.019	0.028	0.007	0.117	2.505%	1.891%
%RSD		1.116	0.089	2.970	4.330	0.131	2.355	3.047	2.312
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:21:10	0.009	0.014	0.020	0.003	0.015	88.507%		
2	14:21:35	0.018	0.011	0.025	0.025	0.023	84.890%		
3	14:22:01	0.012	0.011	-0.003	0.003	0.005	84.966%		
x		0.013	0.012	0.014	0.011	0.014	86.121%		
σ		0.005	0.002	0.015	0.013	0.009	2.066%		
%RSD		37.250	16.070	108.000	121.500	60.710	2.399		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	81.007%	-0.143	2.766	2.657	0.000	1966.000	717.900	709.500
2	14:25:48	82.363%	-0.188	2.869	2.008	0.000	1993.000	731.700	735.700
3	14:26:13	83.632%	-0.176	2.449	2.583	0.000	2009.000	747.000	749.300
x		82.334%	-0.169	2.695	2.416	0.000	1989.000	732.200	731.500
σ		1.313%	0.023	0.219	0.355	0.000	21.930	14.530	20.220
%RSD		1.594	13.680	8.131	14.700	0.000	1.102	1.984	2.764
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	6.226	284.800	0.000	262.100	2196.000	2024.000	76.741%	-0.210
2	14:25:48	6.368	286.600	0.000	296.400	2264.000	2090.000	76.563%	-0.134
3	14:26:13	6.667	288.000	0.000	275.200	2281.000	2139.000	76.441%	-0.228
x		6.421	286.500	0.000	277.900	2247.000	2084.000	76.582%	-0.191
σ		0.225	1.641	0.000	17.310	44.870	57.940	0.151%	0.050
%RSD		3.507	0.573	0.000	6.229	1.997	2.780	0.197	26.140
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	0.057	0.338	45.810	12.410	22.570	0.051	0.201	0.097
2	14:25:48	0.031	0.353	46.900	14.620	16.250	0.058	0.178	0.045
3	14:26:13	0.229	0.356	47.730	12.970	19.660	0.059	0.183	-0.072
x		0.106	0.349	46.810	13.330	19.490	0.056	0.187	0.024
σ		0.108	0.010	0.965	1.147	3.165	0.004	0.012	0.087
%RSD		102.200	2.862	2.061	8.605	16.240	7.997	6.419	366.800
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	0.008	1.159	1.243	-0.112	-1.134	-1.009	0.000	9.204
2	14:25:48	0.063	1.250	1.476	-0.870	-1.433	-1.143	0.000	9.529
3	14:26:13	0.070	1.282	0.949	0.440	-0.738	-0.227	0.000	9.794
x		0.047	1.230	1.222	-0.181	-1.102	-0.793	0.000	9.509
σ		0.034	0.064	0.264	0.657	0.349	0.495	0.000	0.296
%RSD		72.630	5.202	21.620	363.400	31.640	62.410	0.000	3.109
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	76.205%	0.105	0.113	81.884%	-0.051	-0.061	-0.003	0.038
2	14:25:48	76.141%	0.118	0.127	83.976%	-0.057	-0.055	0.007	0.035
3	14:26:13	77.036%	0.109	0.128	82.912%	-0.059	-0.068	0.021	0.019
x		76.461%	0.111	0.123	82.924%	-0.056	-0.061	0.008	0.031
σ		0.499%	0.007	0.009	1.046%	0.004	0.007	0.012	0.010
%RSD		0.653	6.001	7.013	1.261	6.936	10.910	143.200	32.220
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:23	77.657%	-3.053	-0.688	-0.675	4.991	4.441	83.930%	84.008%
2	14:25:48	76.144%	-2.976	-0.685	-0.646	4.612	4.738	83.062%	83.953%
3	14:26:13	79.205%	-3.010	-0.674	-0.653	4.624	4.595	82.826%	84.130%
x		77.669%	-3.013	-0.682	-0.658	4.742	4.592	83.273%	84.030%
σ		1.531%	0.039	0.008	0.015	0.215	0.149	0.581%	0.090%
%RSD		1.971	1.286	1.121	2.312	4.540	3.234	0.698	0.108
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:25:23	0.009	0.009	0.055	0.047	0.044	93.854%		
2	14:25:48	0.007	0.012	0.079	0.054	0.064	87.146%		
3	14:26:13	0.005	0.011	0.052	0.049	0.049	87.645%		
x		0.007	0.011	0.062	0.050	0.052	89.548%		
σ		0.002	0.001	0.015	0.004	0.010	3.738%		
%RSD		29.760	10.120	23.780	7.286	20.020	4.174		

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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	14:32:38	79.307%	-0.126	0.382	0.126	0.000	-5.749	1.076	1.127
2	14:33:03	82.431%	-0.089	-0.156	-0.597	0.000	-6.782	0.746	0.390
3	14:33:28	83.071%	-0.246	-0.345	-0.259	0.000	-5.276	0.916	-0.092
x		81.603%	-0.154	-0.040	-0.243	0.000	-5.936	0.913	0.475
σ		2.014%	0.082	0.377	0.362	0.000	0.771	0.165	0.614
%RSD		2.468	53.330	952.100	148.700	0.000	12.980	18.040	129.200
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:38	-0.807	6.035	0.000	0.611	2.220	4.052	77.409%	-0.474
2	14:33:03	-0.652	1.393	0.000	0.718	16.440	6.409	77.596%	-0.474
3	14:33:28	-0.831	0.001	0.000	2.748	-1.303	5.896	76.823%	-0.398
x		-0.763	2.476	0.000	1.359	5.784	5.452	77.276%	-0.449
σ		0.097	3.160	0.000	1.204	9.391	1.240	0.404%	0.044
%RSD		12.740	127.600	0.000	88.580	162.400	22.740	0.522	9.735
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:38	0.240	0.106	0.044	1.109	1.149	0.009	0.052	-0.338
2	14:33:03	-0.127	0.079	-0.002	1.454	-2.819	-0.004	0.092	-0.360
3	14:33:28	0.169	0.148	0.013	0.731	-2.762	-0.004	0.027	-0.377
x		0.094	0.111	0.018	1.098	-1.477	0.001	0.057	-0.358
σ		0.195	0.035	0.024	0.362	2.274	0.008	0.033	0.019
%RSD		207.500	31.370	128.000	32.920	154.000	1206.000	57.020	5.390
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:38	-0.373	1.115	1.121	0.037	-0.999	-0.498	0.000	0.017
2	14:33:03	-0.344	1.185	1.066	-0.038	-1.655	-0.605	0.000	0.010
3	14:33:28	-0.314	1.194	1.014	0.153	-1.531	-0.757	0.000	0.017
x		-0.343	1.165	1.067	0.051	-1.395	-0.620	0.000	0.015
σ		0.029	0.043	0.054	0.096	0.348	0.130	0.000	0.004
%RSD		8.561	3.690	5.016	190.200	24.950	20.990	0.000	25.130
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:38	76.004%	-0.137	-0.132	83.555%	-0.065	-0.058	-0.008	0.035
2	14:33:03	79.289%	-0.105	-0.096	86.184%	-0.060	-0.054	-0.008	0.026
3	14:33:28	79.711%	-0.150	-0.131	79.905%	-0.060	-0.066	-0.003	0.049
x		78.335%	-0.130	-0.120	83.215%	-0.062	-0.059	-0.006	0.037
σ		2.029%	0.023	0.021	3.153%	0.003	0.006	0.003	0.012
%RSD		2.591	17.770	17.430	3.790	4.740	9.644	45.740	32.150
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:38	76.970%	-3.125	-0.782	-0.780	-0.018	0.016	84.179%	82.903%
2	14:33:03	79.835%	-3.126	-0.775	-0.763	0.008	0.005	87.799%	85.694%
3	14:33:28	79.278%	-3.105	-0.772	-0.776	-0.030	0.005	87.995%	86.930%
x		78.694%	-3.119	-0.776	-0.773	-0.014	0.009	86.657%	85.176%
σ		1.519%	0.012	0.005	0.009	0.020	0.006	2.149%	2.063%
%RSD		1.930	0.380	0.664	1.152	146.200	71.210	2.479	2.422
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:32:38	0.007	0.007	0.042	0.027	0.032	93.398%		
2	14:33:03	0.005	0.008	0.042	0.018	0.035	91.686%		
3	14:33:28	0.012	0.002	0.033	0.043	0.038	88.896%		
x		0.008	0.006	0.039	0.029	0.035	91.327%		
σ		0.004	0.003	0.005	0.013	0.003	2.272%		
%RSD		47.740	52.200	13.380	43.820	7.285	2.488		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:47	77.290%	45.210	918.900	895.300	0.000	45100.000	42760.000	42750.000
2	14:37:13	78.958%	47.330	929.700	915.400	0.000	46410.000	44570.000	44370.000
3	14:37:38	78.910%	46.760	938.200	946.200	0.000	46370.000	44610.000	45090.000
x		78.386%	46.430	928.900	919.000	0.000	45960.000	43980.000	44070.000
σ		0.950%	1.095	9.701	25.600	0.000	747.200	1056.000	1198.000
%RSD		1.212	2.358	1.044	2.786	0.000	1.626	2.401	2.719
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:47	1753.000	8982.000	0.000	46590.000	43490.000	45490.000	73.359%	891.600
2	14:37:13	1842.000	9296.000	0.000	48650.000	47660.000	49210.000	72.089%	946.900
3	14:37:38	1850.000	9295.000	0.000	49240.000	47340.000	49000.000	72.375%	956.000
x		1815.000	9191.000	0.000	48160.000	46160.000	47900.000	72.608%	931.500
σ		53.400	181.100	0.000	1390.000	2319.000	2091.000	0.666%	34.880
%RSD		2.942	1.971	0.000	2.887	5.022	4.364	0.918	3.744
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:47	427.600	166.100	441.900	919.800	1046.000	432.300	424.100	213.000
2	14:37:13	457.500	178.800	477.100	1007.000	1135.000	466.900	456.900	229.500
3	14:37:38	460.200	180.200	481.800	1017.000	1129.000	469.100	458.800	229.400
x		448.400	175.100	466.900	981.000	1103.000	456.100	446.600	223.900
σ		18.110	7.746	21.840	53.340	49.610	20.660	19.490	9.457
%RSD		4.038	4.425	4.677	5.437	4.496	4.531	4.364	4.223
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:47	211.300	442.300	428.600	33.060	7.599	5.119	0.000	845.200
2	14:37:13	228.600	477.500	472.900	35.470	8.829	8.779	0.000	934.300
3	14:37:38	229.700	485.800	483.700	36.530	8.165	8.808	0.000	950.500
x		223.200	468.500	461.700	35.020	8.198	7.568	0.000	910.000
σ		10.300	23.100	29.200	1.779	0.616	2.122	0.000	56.710
%RSD		4.613	4.931	6.324	5.081	7.511	28.030	0.000	6.232
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:47	77.410%	823.500	824.700	74.993%	42.990	43.500	46.280	37.710
2	14:37:13	72.747%	919.300	914.800	75.170%	43.570	43.570	46.480	38.710
3	14:37:38	73.003%	956.500	943.500	75.513%	44.100	44.520	48.600	40.140
x		74.386%	899.800	894.300	75.226%	43.550	43.860	47.120	38.850
σ		2.621%	68.620	61.990	0.265%	0.557	0.566	1.283	1.219
%RSD		3.524	7.626	6.931	0.352	1.279	1.291	2.722	3.139
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:47	71.082%	1961.000	505.600	485.700	1838.000	1901.000	80.528%	79.960%
2	14:37:13	72.454%	1998.000	502.200	498.700	1912.000	1950.000	80.235%	81.281%
3	14:37:38	71.307%	2053.000	509.200	514.000	1905.000	1993.000	82.020%	82.018%
x		71.614%	2004.000	505.600	499.500	1885.000	1948.000	80.928%	81.086%
σ		0.736%	46.340	3.489	14.140	40.750	46.310	0.958%	1.043%
%RSD		1.028	2.312	0.690	2.831	2.161	2.378	1.183	1.286
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:36:47	41.740	40.050	17.610	17.740	17.440	88.938%		
2	14:37:13	47.390	45.340	19.370	19.410	19.140	82.948%		
3	14:37:38	49.980	47.600	20.660	20.460	20.430	79.758%		
x		46.370	44.330	19.210	19.200	19.000	83.881%		
σ		4.211	3.877	1.533	1.373	1.499	4.660%		
%RSD		9.081	8.746	7.979	7.148	7.888	5.556		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:58	73.526%	44.820	906.100	911.700	0.000	46030.000	43340.000	43560.000
2	14:41:23	77.988%	46.190	932.300	922.800	0.000	46290.000	44170.000	44090.000
3	14:41:48	77.904%	48.950	928.900	932.600	0.000	47040.000	45260.000	45160.000
x		76.473%	46.650	922.500	922.400	0.000	46450.000	44260.000	44270.000
σ		2.552%	2.103	14.260	10.480	0.000	528.200	965.400	813.500
%RSD		3.338	4.508	1.546	1.136	0.000	1.137	2.181	1.838
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:58	1774.000	9138.000	0.000	46840.000	44500.000	45870.000	69.924%	890.900
2	14:41:23	1806.000	9120.000	0.000	49190.000	47880.000	48750.000	70.834%	931.300
3	14:41:48	1841.000	9208.000	0.000	49240.000	48030.000	49250.000	70.406%	965.700
x		1807.000	9155.000	0.000	48420.000	46800.000	47960.000	70.388%	929.300
σ		33.430	46.440	0.000	1372.000	2000.000	1827.000	0.455%	37.440
%RSD		1.850	0.507	0.000	2.834	4.274	3.810	0.647	4.029
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:58	431.000	168.700	448.800	940.600	1078.000	440.300	431.100	216.600
2	14:41:23	449.800	176.200	471.800	999.800	1117.000	464.400	455.200	229.300
3	14:41:48	461.100	179.400	476.400	1020.000	1132.000	464.700	460.200	228.500
x		447.300	174.800	465.700	986.700	1109.000	456.400	448.800	224.800
σ		15.190	5.482	14.800	41.220	27.720	14.000	15.540	7.093
%RSD		3.396	3.137	3.179	4.177	2.499	3.068	3.462	3.155
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:58	215.800	453.700	449.500	34.520	7.154	8.892	0.000	894.600
2	14:41:23	225.300	483.200	469.800	36.660	8.343	10.500	0.000	932.300
3	14:41:48	230.800	487.100	475.400	36.390	7.819	8.305	0.000	930.200
x		224.000	474.700	464.900	35.850	7.772	9.232	0.000	919.000
σ		7.601	18.250	13.590	1.164	0.596	1.137	0.000	21.160
%RSD		3.394	3.844	2.923	3.248	7.662	12.310	0.000	2.303
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:58	70.274%	842.600	835.500	72.958%	42.240	43.370	45.300	32.690
2	14:41:23	71.509%	918.000	903.700	74.857%	43.570	43.950	46.630	38.250
3	14:41:48	73.158%	953.900	925.200	75.581%	43.310	43.340	47.120	37.270
x		71.647%	904.800	888.100	74.466%	43.040	43.550	46.350	36.070
σ		1.447%	56.830	46.860	1.355%	0.707	0.341	0.941	2.970
%RSD		2.019	6.280	5.276	1.819	1.643	0.783	2.030	8.235
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:58	69.024%	2068.000	488.000	482.000	1812.000	1849.000	79.348%	79.154%
2	14:41:23	70.915%	2034.000	502.300	500.200	1898.000	1950.000	81.067%	81.879%
3	14:41:48	72.159%	2041.000	519.300	501.900	1898.000	1954.000	81.893%	82.538%
x		70.699%	2048.000	503.200	494.700	1869.000	1918.000	80.769%	81.191%
σ		1.578%	18.180	15.630	11.060	49.300	59.470	1.299%	1.794%
%RSD		2.233	0.888	3.107	2.235	2.637	3.101	1.608	2.210
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:40:58	43.270	41.330	18.240	17.920	17.840	83.199%		
2	14:41:23	47.460	45.600	19.950	19.940	19.680	81.648%		
3	14:41:48	48.900	46.910	20.200	20.300	19.900	80.942%		
x		46.540	44.620	19.460	19.390	19.140	81.930%		
σ		2.924	2.918	1.064	1.285	1.135	1.154%		
%RSD		6.282	6.540	5.468	6.630	5.931	1.409		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	79.233%	-0.035	12.310	12.250	0.000	3232.000	11910.000	12120.000
2	14:45:35	80.470%	-0.112	11.360	11.680	0.000	3280.000	12510.000	12760.000
3	14:46:00	81.588%	-0.144	10.090	11.870	0.000	3316.000	12590.000	12650.000
x		80.430%	-0.097	11.250	11.930	0.000	3276.000	12340.000	12510.000
σ		1.178%	0.056	1.112	0.293	0.000	41.970	371.900	343.300
%RSD		1.465	57.510	9.882	2.456	0.000	1.281	3.015	2.744

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	2.955	4701.000	0.000	1126.000	27920.000	28030.000	69.671%	1.107
2	14:45:35	2.051	4864.000	0.000	1177.000	30130.000	29800.000	70.321%	1.540
3	14:46:00	2.044	4817.000	0.000	1144.000	29430.000	29530.000	71.148%	0.809
x		2.350	4794.000	0.000	1149.000	29160.000	29120.000	70.380%	1.152
σ		0.524	83.770	0.000	26.010	1131.000	954.400	0.740%	0.368
%RSD		22.290	1.747	0.000	2.264	3.879	3.277	1.052	31.920

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	0.249	1.994	235.600	203.300	320.700	0.693	1.925	0.263
2	14:45:35	-0.035	1.981	247.300	210.100	323.200	0.518	1.558	0.334
3	14:46:00	0.348	1.955	247.300	205.500	316.500	0.525	1.492	0.172
x		0.187	1.977	243.400	206.300	320.100	0.578	1.659	0.256
σ		0.199	0.020	6.767	3.452	3.370	0.099	0.234	0.081
%RSD		106.300	1.023	2.780	1.673	1.053	17.100	14.080	31.680

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	0.389	6.700	7.047	-0.675	-0.673	-1.999	0.000	124.100
2	14:45:35	0.327	6.631	6.632	0.716	-0.257	-0.616	0.000	128.300
3	14:46:00	0.424	6.699	6.166	-0.120	-2.038	-1.125	0.000	130.600
x		0.380	6.677	6.615	-0.026	-0.990	-1.247	0.000	127.700
σ		0.049	0.040	0.440	0.701	0.932	0.700	0.000	3.311
%RSD		12.880	0.597	6.658	2650.000	94.130	56.120	0.000	2.593

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	71.832%	17.930	18.110	74.860%	-0.006	0.000	0.081	0.097
2	14:45:35	73.435%	14.800	14.830	76.609%	-0.024	-0.033	0.069	0.032
3	14:46:00	73.723%	12.410	11.990	76.763%	-0.020	-0.035	0.038	0.045
x		72.997%	15.050	14.980	76.077%	-0.017	-0.023	0.062	0.058
σ		1.019%	2.767	3.064	1.057%	0.009	0.020	0.022	0.034
%RSD		1.396	18.390	20.460	1.390	54.650	87.620	35.440	59.240

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	72.746%	8.970	-0.290	-0.271	59.830	59.480	81.614%	80.664%
2	14:45:35	73.426%	6.711	-0.455	-0.433	61.290	60.740	82.928%	81.694%
3	14:46:00	74.853%	5.464	-0.515	-0.480	60.240	61.520	81.547%	82.133%
x		73.675%	7.048	-0.420	-0.395	60.450	60.580	82.029%	81.497%
σ		1.075%	1.777	0.117	0.110	0.752	1.028	0.779%	0.754%
%RSD		1.460	25.220	27.720	27.870	1.245	1.696	0.950	0.925

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:10	0.245	0.242	0.074	0.058	0.065	91.889%
2	14:45:35	0.202	0.193	0.070	0.066	0.073	87.353%
3	14:46:00	0.176	0.140	0.095	0.061	0.067	85.026%
x		0.208	0.192	0.080	0.062	0.068	88.089%
σ		0.035	0.051	0.014	0.004	0.004	3.490%
%RSD		16.820	26.790	17.110	6.125	5.896	3.962

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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	14:49:24	76.005%	-0.087	7.920	8.767	0.000	3157.000	11780.000	12000.000
2	14:49:49	79.765%	-0.096	8.960	8.952	0.000	3196.000	12150.000	12220.000
3	14:50:14	80.569%	-0.157	9.494	7.871	0.000	3190.000	12110.000	12310.000
x		78.780%	-0.113	8.791	8.530	0.000	3181.000	12020.000	12170.000
σ		2.436%	0.038	0.800	0.578	0.000	21.210	202.800	160.000
%RSD		3.093	33.130	9.103	6.778	0.000	0.667	1.688	1.315
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	39.030	4599.000	0.000	1086.000	27030.000	26480.000	71.130%	0.974
2	14:49:49	40.850	4335.000	0.000	1127.000	27820.000	27810.000	71.240%	0.869
3	14:50:14	40.160	4668.000	0.000	1102.000	28110.000	28420.000	71.518%	1.043
x		40.010	4534.000	0.000	1105.000	27650.000	27570.000	71.296%	0.962
σ		0.918	175.800	0.000	20.530	555.000	989.100	0.200%	0.088
%RSD		2.293	3.878	0.000	1.858	2.007	3.588	0.280	9.132
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	0.036	2.206	209.000	287.700	394.200	0.446	1.612	0.587
2	14:49:49	-0.261	2.186	221.600	302.400	406.400	0.442	1.732	0.528
3	14:50:14	-0.208	2.086	221.700	306.200	407.200	0.431	1.782	0.454
x		-0.145	2.160	217.400	298.800	402.600	0.440	1.709	0.523
σ		0.159	0.064	7.293	9.780	7.304	0.007	0.088	0.067
%RSD		109.700	2.972	3.354	3.273	1.814	1.704	5.122	12.740
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	0.659	6.553	6.635	-0.345	-0.836	0.296	0.000	121.500
2	14:49:49	0.658	6.642	6.065	0.655	-1.075	-0.193	0.000	124.400
3	14:50:14	0.697	7.186	6.435	0.500	-0.384	-0.416	0.000	124.300
x		0.671	6.794	6.378	0.270	-0.765	-0.104	0.000	123.400
σ		0.022	0.342	0.290	0.538	0.351	0.364	0.000	1.648
%RSD		3.329	5.038	4.539	199.500	45.870	349.000	0.000	1.335
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	71.035%	2.369	2.142	75.374%	-0.020	-0.031	0.040	0.017
2	14:49:49	73.044%	2.250	2.143	76.612%	-0.029	-0.034	0.028	0.055
3	14:50:14	74.339%	2.175	2.077	76.167%	-0.034	-0.047	0.038	0.053
x		72.806%	2.265	2.120	76.051%	-0.028	-0.038	0.035	0.042
σ		1.665%	0.098	0.038	0.627%	0.007	0.009	0.006	0.022
%RSD		2.287	4.319	1.788	0.825	24.990	23.230	17.560	51.590
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:24	71.286%	-0.221	-0.562	-0.594	60.610	60.570	79.512%	79.363%
2	14:49:49	73.515%	-0.320	-0.629	-0.633	61.930	60.670	81.342%	80.532%
3	14:50:14	74.803%	-0.448	-0.636	-0.626	60.490	59.820	82.401%	81.294%
x		73.201%	-0.330	-0.609	-0.618	61.010	60.350	81.085%	80.397%
σ		1.779%	0.114	0.041	0.021	0.797	0.467	1.461%	0.973%
%RSD		2.431	34.580	6.752	3.437	1.306	0.773	1.802	1.210
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:49:24	0.094	0.072	0.188	0.151	0.174	86.654%		
2	14:49:49	0.081	0.078	0.168	0.180	0.171	83.356%		
3	14:50:14	0.052	0.057	0.193	0.187	0.182	83.434%		
x		0.076	0.069	0.183	0.173	0.176	84.481%		
σ		0.021	0.011	0.013	0.019	0.005	1.882%		
%RSD		28.100	15.850	7.158	10.950	3.106	2.227		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	75.860%	-0.087	49.790	51.710	0.000	34920.000	8677.000	8839.000
2	14:54:04	77.281%	-0.212	53.890	51.740	0.000	36110.000	9144.000	9238.000
3	14:54:29	81.410%	-0.201	46.690	54.190	0.000	35410.000	9066.000	9118.000
x		78.184%	-0.167	50.120	52.550	0.000	35480.000	8962.000	9065.000
σ		2.883%	0.069	3.611	1.426	0.000	598.900	250.600	204.900
%RSD		3.687	41.430	7.203	2.713	0.000	1.688	2.797	2.260
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	1.361	3735.000	0.000	4299.000	57300.000	56330.000	71.932%	0.436
2	14:54:04	2.101	3811.000	0.000	4415.000	60030.000	58980.000	72.659%	0.465
3	14:54:29	0.974	3797.000	0.000	4488.000	60140.000	59960.000	73.306%	0.102
x		1.479	3781.000	0.000	4401.000	59160.000	58420.000	72.632%	0.335
σ		0.573	40.620	0.000	95.040	1609.000	1878.000	0.688%	0.202
%RSD		38.760	1.074	0.000	2.160	2.720	3.214	0.947	60.340
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	0.476	1.024	378.400	287.700	525.300	0.226	0.320	-0.120
2	14:54:04	-0.780	0.924	400.100	302.600	546.200	0.196	-0.009	-0.088
3	14:54:29	-0.535	0.919	404.300	308.200	550.800	0.161	0.215	-0.077
x		-0.280	0.956	394.300	299.500	540.800	0.194	0.175	-0.095
σ		0.665	0.060	13.870	10.630	13.580	0.033	0.168	0.022
%RSD		237.900	6.229	3.517	3.548	2.510	16.880	95.770	23.730
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	-0.007	4.719	4.276	-1.338	-1.054	-1.574	0.000	413.900
2	14:54:04	-0.033	5.065	4.142	-0.153	-1.223	0.414	0.000	429.100
3	14:54:29	-0.033	4.634	4.076	0.251	-1.959	-0.501	0.000	434.800
x		-0.024	4.806	4.164	-0.413	-1.412	-0.554	0.000	425.900
σ		0.015	0.228	0.102	0.826	0.481	0.995	0.000	10.850
%RSD		62.850	4.750	2.446	199.800	34.080	179.700	0.000	2.548
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	70.753%	1.080	0.991	73.103%	-0.055	-0.065	-0.002	0.009
2	14:54:04	72.643%	1.155	0.983	75.066%	-0.056	-0.052	0.008	0.058
3	14:54:29	73.498%	1.163	0.944	75.611%	-0.055	-0.056	-0.008	-0.016
x		72.298%	1.132	0.973	74.593%	-0.055	-0.058	-0.001	0.017
σ		1.405%	0.046	0.025	1.320%	0.001	0.007	0.008	0.038
%RSD		1.943	4.054	2.617	1.769	0.924	11.500	1185.000	217.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:53:39	71.843%	-1.404	-0.698	-0.689	399.800	404.500	78.471%	78.590%
2	14:54:04	72.017%	-1.327	-0.733	-0.722	418.300	418.600	81.963%	81.079%
3	14:54:29	73.765%	-1.351	-0.709	-0.714	421.600	421.900	80.661%	81.171%
x		72.542%	-1.361	-0.714	-0.708	413.300	415.000	80.365%	80.280%
σ		1.063%	0.040	0.018	0.017	11.750	9.201	1.764%	1.465%
%RSD		1.465	2.912	2.515	2.452	2.842	2.217	2.195	1.824
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:53:39	0.035	0.040	0.036	0.022	0.024	84.760%		
2	14:54:04	0.051	0.042	0.017	0.005	0.020	81.741%		
3	14:54:29	0.040	0.035	0.032	0.003	0.014	80.894%		
x		0.042	0.039	0.028	0.010	0.019	82.465%		
σ		0.008	0.004	0.010	0.010	0.005	2.032%		
%RSD		19.930	9.682	36.630	102.000	25.250	2.464		

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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	14:57:51	71.654%	97.080	101.400	99.100	0.000	49060.000	46580.000	46610.000
2	14:58:16	72.833%	99.640	108.200	102.400	0.000	50220.000	48090.000	48420.000
3	14:58:41	73.438%	100.100	101.300	103.700	0.000	50840.000	49000.000	49170.000
x		72.642%	98.940%	103.608%	101.736%	0.000	100.080%	95.773%	96.125%
σ		0.908%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.249	1.644	3.815	2.330	0.000	1.803	2.551	2.738

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:51	446.300	5369.000	0.000	49320.000	46960.000	48360.000	71.022%	93.260
2	14:58:16	461.300	5518.000	0.000	50300.000	48540.000	50930.000	71.667%	99.260
3	14:58:41	469.900	5578.000	0.000	51800.000	49960.000	51880.000	71.929%	102.100
x		91.834%	109.761%	0.000	100.948%	96.973%	100.776%	71.540%	98.214%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.467%	n/a
%RSD		2.610	1.958	0.000	2.479	3.099	3.618	0.652	4.601

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:51	89.660	89.220	477.200	23560.000	24690.000	90.670	92.590	92.540
2	14:58:16	92.570	92.950	500.100	24780.000	26030.000	95.090	95.430	94.470
3	14:58:41	91.910	94.180	505.000	25200.000	26460.000	95.700	95.310	96.790
x		91.381%	92.116%	98.825%	98.054%	102.896%	93.820%	94.445%	94.601%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.670	2.803	3.001	3.486	3.594	2.928	1.705	2.253

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:51	91.450	94.130	94.910	92.750	93.980	93.200	0.000	91.860
2	14:58:16	94.300	98.760	98.360	96.760	99.370	98.070	0.000	95.940
3	14:58:41	95.610	99.570	97.610	96.870	96.610	98.870	0.000	96.380
x		93.786%	97.486%	96.957%	95.458%	96.656%	96.714%	0.000	94.727%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.272	3.011	1.872	2.459	2.788	3.170	0.000	2.628

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:51	70.083%	89.340	87.500	73.656%	90.170	90.450	91.540	94.420
2	14:58:16	71.529%	94.450	93.810	74.553%	91.400	92.030	95.930	97.230
3	14:58:41	72.878%	97.330	95.450	76.271%	91.610	91.370	96.940	96.910
x		71.497%	93.705%	92.255%	74.827%	91.062%	91.285%	94.803%	96.187%
σ		1.398%	n/a	n/a	1.329%	n/a	n/a	n/a	n/a
%RSD		1.955	4.318	4.547	1.776	0.852	0.868	3.027	1.603

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:51	70.582%	93.820	94.350	96.040	93.240	94.460	78.718%	78.737%
2	14:58:16	72.166%	97.240	97.250	98.820	98.150	97.060	80.198%	79.177%
3	14:58:41	73.637%	97.380	98.590	99.000	97.930	97.420	80.333%	80.919%
x		72.128%	96.146%	96.731%	97.954%	96.440%	96.311%	79.750%	79.611%
σ		1.528%	n/a	n/a	n/a	n/a	n/a	0.896%	1.154%
%RSD		2.118	2.096	2.239	1.695	2.874	1.676	1.123	1.450

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:51	103.900	100.500	103.900	104.200	103.200	76.460%
2	14:58:16	107.200	104.800	108.800	108.700	108.000	77.354%
3	14:58:41	108.900	106.100	111.000	110.700	110.700	76.633%
x		106.652%	103.811%	107.899%	107.878%	107.305%	76.816%
σ		n/a	n/a	n/a	n/a	n/a	0.474%
%RSD		2.367	2.793	3.353	3.070	3.530	0.617

CCB7 1/21/2015 3:04:50 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	15:05:15	76.055%	-0.103	0.508	-0.111	0.000	29.480	16.280	17.310
2	15:05:40	80.043%	-0.127	1.378	-0.262	0.000	23.390	11.670	11.570
3	15:06:05	79.263%	-0.111	-0.069	0.051	0.000	21.360	8.506	8.650
x		78.454%	-0.114	0.606	-0.107	0.000	24.740	12.150	12.510
σ		2.113%	0.012	0.729	0.157	0.000	4.226	3.910	4.408
%RSD		2.694	10.570	120.300	145.900	0.000	17.080	32.180	35.230

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:15	-0.252	7.147	0.000	19.410	22.570	30.280	72.170%	-0.386
2	15:05:40	-0.663	2.046	0.000	14.800	30.960	16.260	74.028%	-0.313
3	15:06:05	-0.797	1.219	0.000	16.150	28.440	13.600	75.261%	-0.413
x		-0.571	3.471	0.000	16.790	27.320	20.050	73.820%	-0.371
σ		0.284	3.210	0.000	2.367	4.305	8.963	1.556%	0.052
%RSD		49.790	92.510	0.000	14.100	15.750	44.710	2.108	13.940

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:15	0.074	0.017	0.216	11.370	20.010	0.031	0.032	-0.388
2	15:05:40	0.070	0.008	0.102	6.721	14.060	0.025	-0.038	-0.411
3	15:06:05	-0.011	-0.021	0.118	4.145	7.398	0.023	-0.000	-0.422
x		0.044	0.001	0.145	7.411	13.820	0.027	-0.002	-0.407
σ		0.048	0.020	0.062	3.660	6.310	0.004	0.035	0.017
%RSD		108.900	1471.000	42.330	49.390	45.650	15.930	1602.000	4.187

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:15	-0.366	0.100	0.136	0.131	-0.229	0.921	0.000	0.105
2	15:05:40	-0.356	0.092	-0.012	-0.004	-0.000	0.603	0.000	0.088
3	15:06:05	-0.424	0.093	0.090	-0.441	-1.558	-1.586	0.000	0.065
x		-0.382	0.095	0.071	-0.105	-0.596	-0.021	0.000	0.086
σ		0.037	0.004	0.076	0.299	0.841	1.365	0.000	0.020
%RSD		9.666	4.302	106.500	286.200	141.200	6631.000	0.000	23.760

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:15	73.902%	0.431	0.399	80.622%	-0.037	-0.028	-0.003	0.051
2	15:05:40	75.482%	0.381	0.303	82.090%	-0.044	-0.050	0.021	0.011
3	15:06:05	76.366%	0.313	0.285	83.186%	-0.039	-0.049	0.011	0.052
x		75.250%	0.375	0.329	81.966%	-0.040	-0.042	0.010	0.038
σ		1.248%	0.059	0.062	1.286%	0.004	0.012	0.012	0.023
%RSD		1.659	15.770	18.690	1.569	9.816	28.630	121.100	60.540

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:15	75.611%	-2.536	-0.589	-0.570	0.152	0.138	81.637%	81.434%
2	15:05:40	77.120%	-2.497	-0.621	-0.625	0.114	0.132	82.612%	82.483%
3	15:06:05	79.018%	-2.519	-0.628	-0.646	0.072	0.095	82.715%	84.465%
x		77.250%	-2.517	-0.613	-0.614	0.113	0.121	82.321%	82.794%
σ		1.707%	0.020	0.021	0.039	0.040	0.023	0.595%	1.539%
%RSD		2.210	0.782	3.442	6.360	35.310	19.080	0.723	1.859

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:15	0.038	0.040	0.050	0.031	0.037	87.888%
2	15:05:40	0.029	0.034	0.034	0.021	0.027	87.863%
3	15:06:05	0.035	0.028	0.017	0.020	0.025	86.626%
x		0.034	0.034	0.034	0.024	0.030	87.459%
σ		0.005	0.006	0.017	0.006	0.007	0.721%
%RSD		13.320	17.840	48.930	25.520	22.840	0.825

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:33	82.792%	-0.146	31.200	28.300	0.000	25130.000	6664.000	6713.000
2	15:09:58	86.386%	-0.124	30.140	30.150	0.000	26060.000	6979.000	7044.000
3	15:10:23	88.746%	-0.168	28.930	29.600	0.000	26260.000	7208.000	7245.000
x		85.974%	-0.146	30.090	29.350	0.000	25810.000	6950.000	7001.000
σ		2.998%	0.022	1.136	0.949	0.000	603.400	273.300	268.100
%RSD		3.487	15.140	3.774	3.234	0.000	2.337	3.932	3.830
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:33	218.200	3333.000	0.000	3147.000	20620.000	19990.000	71.916%	3.941
2	15:09:58	231.600	3416.000	0.000	3230.000	21950.000	21600.000	73.412%	4.588
3	15:10:23	253.000	3468.000	0.000	3385.000	22410.000	22210.000	74.043%	4.771
x		234.300	3406.000	0.000	3254.000	21660.000	21270.000	73.124%	4.433
σ		17.510	68.220	0.000	121.200	927.900	1144.000	1.093%	0.436
%RSD		7.475	2.003	0.000	3.724	4.285	5.380	1.494	9.833
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:33	3.383	3.450	382.400	291.100	385.600	0.603	2.160	4.466
2	15:09:58	4.081	3.510	407.700	303.000	391.000	0.664	1.886	4.187
3	15:10:23	2.135	3.560	412.600	307.800	393.500	0.707	1.947	4.342
x		3.200	3.507	400.900	300.600	390.000	0.658	1.997	4.332
σ		0.986	0.055	16.210	8.591	4.047	0.053	0.144	0.140
%RSD		30.810	1.566	4.043	2.858	1.038	7.979	7.211	3.229
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:33	4.220	10.160	10.140	2.084	-0.756	0.198	0.000	96.520
2	15:09:58	4.205	10.580	10.540	2.488	-1.094	-2.357	0.000	100.200
3	15:10:23	4.393	10.850	10.440	2.625	-1.486	-1.190	0.000	99.590
x		4.273	10.530	10.380	2.399	-1.112	-1.116	0.000	98.780
σ		0.104	0.350	0.208	0.282	0.365	1.279	0.000	1.992
%RSD		2.439	3.323	2.005	11.740	32.850	114.600	0.000	2.017
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:33	71.759%	2.599	2.420	75.698%	-0.034	-0.042	0.096	0.106
2	15:09:58	75.494%	2.586	2.393	77.818%	-0.049	-0.031	0.103	0.068
3	15:10:23	77.978%	2.438	2.467	79.368%	-0.041	-0.054	0.071	0.097
x		75.077%	2.541	2.427	77.628%	-0.042	-0.042	0.090	0.090
σ		3.130%	0.089	0.038	1.842%	0.007	0.012	0.017	0.020
%RSD		4.169	3.522	1.546	2.373	17.610	27.270	18.840	22.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:33	72.348%	1.208	0.492	0.579	50.010	50.400	79.608%	81.465%
2	15:09:58	75.177%	0.786	0.423	0.503	51.270	51.890	84.507%	84.977%
3	15:10:23	77.193%	0.116	0.459	0.487	52.220	52.510	86.010%	86.537%
x		74.906%	0.703	0.458	0.523	51.160	51.600	83.375%	84.326%
σ		2.434%	0.551	0.035	0.049	1.111	1.082	3.348%	2.598%
%RSD		3.249	78.320	7.563	9.394	2.171	2.096	4.015	3.081
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:09:33	0.038	0.042	0.638	0.592	0.635	81.068%		
2	15:09:58	0.042	0.034	0.642	0.600	0.597	84.001%		
3	15:10:23	0.044	0.039	0.668	0.585	0.590	83.787%		
x		0.041	0.038	0.649	0.592	0.607	82.952%		
σ		0.003	0.004	0.017	0.007	0.025	1.635%		
%RSD		7.248	9.389	2.560	1.243	4.041	1.971		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:47	83.423%	-0.076	18.710	19.230	0.000	18420.000	8707.000	8840.000
2	15:14:12	88.921%	-0.155	19.260	20.080	0.000	18480.000	8971.000	9198.000
3	15:14:37	89.896%	-0.196	21.780	20.250	0.000	18660.000	9212.000	9369.000
x		87.413%	-0.142	19.910	19.850	0.000	18520.000	8963.000	9136.000
σ		3.490%	0.061	1.637	0.548	0.000	127.200	252.600	270.300
%RSD		3.993	42.710	8.222	2.759	0.000	0.687	2.819	2.958
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:47	4.092	2743.000	0.000	2805.000	24830.000	24750.000	73.757%	0.430
2	15:14:12	3.644	2768.000	0.000	2899.000	26520.000	26070.000	75.027%	0.182
3	15:14:37	3.997	2817.000	0.000	2991.000	27210.000	26580.000	74.859%	0.164
x		3.911	2776.000	0.000	2898.000	26190.000	25800.000	74.547%	0.258
σ		0.236	37.650	0.000	92.880	1225.000	944.200	0.690%	0.149
%RSD		6.032	1.356	0.000	3.205	4.677	3.660	0.925	57.600
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:47	0.264	2.497	1013.000	23.720	110.900	1.580	2.100	1.374
2	15:14:12	0.067	2.504	1058.000	5.333	111.200	1.689	2.118	1.455
3	15:14:37	-0.114	2.503	1094.000	5.606	106.700	1.725	2.455	1.568
x		0.072	2.502	1055.000	11.550	109.600	1.665	2.224	1.466
σ		0.189	0.004	40.370	10.540	2.492	0.076	0.200	0.098
%RSD		261.700	0.153	3.827	91.220	2.273	4.544	8.983	6.662
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:47	1.319	7.287	7.329	2.287	-1.757	-0.497	0.000	104.000
2	15:14:12	1.535	7.636	7.269	2.111	-2.496	-3.085	0.000	106.600
3	15:14:37	1.692	8.023	7.448	2.237	-0.892	-0.763	0.000	108.700
x		1.515	7.649	7.349	2.212	-1.715	-1.448	0.000	106.400
σ		0.187	0.368	0.091	0.091	0.802	1.424	0.000	2.351
%RSD		12.370	4.818	1.239	4.101	46.790	98.340	0.000	2.210
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:47	74.174%	2.366	2.435	77.133%	-0.057	-0.060	0.003	0.064
2	15:14:12	76.820%	2.417	2.469	79.257%	-0.055	-0.058	0.017	0.060
3	15:14:37	77.909%	2.538	2.534	80.453%	-0.054	-0.053	0.002	-0.001
x		76.301%	2.440	2.479	78.947%	-0.056	-0.057	0.007	0.041
σ		1.921%	0.088	0.050	1.682%	0.001	0.004	0.009	0.036
%RSD		2.517	3.618	2.023	2.130	2.666	6.262	116.200	88.610
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:13:47	73.018%	-1.933	0.099	0.120	43.730	43.630	83.080%	83.187%
2	15:14:12	75.204%	-1.910	0.048	0.116	45.320	46.130	85.819%	85.850%
3	15:14:37	75.344%	-1.742	0.100	0.170	47.400	46.610	86.788%	86.222%
x		74.522%	-1.862	0.082	0.135	45.490	45.460	85.229%	85.086%
σ		1.304%	0.104	0.030	0.030	1.838	1.602	1.923%	1.655%
%RSD		1.750	5.597	36.030	22.290	4.042	3.525	2.257	1.945
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:13:47	0.025	0.022	0.076	0.064	0.060	80.635%		
2	15:14:12	0.022	0.021	0.064	0.042	0.057	80.775%		
3	15:14:37	0.009	0.016	0.048	0.025	0.039	81.691%		
x		0.019	0.020	0.063	0.044	0.052	81.034%		
σ		0.009	0.003	0.014	0.020	0.011	0.574%		
%RSD		46.610	17.570	21.850	45.660	21.490	0.708		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:02	87.922%	-0.181	24.400	25.270	0.000	18720.000	7028.000	7056.000
2	15:18:27	88.860%	-0.142	28.970	27.700	0.000	19560.000	7473.000	7510.000
3	15:18:52	93.067%	-0.122	26.120	26.420	0.000	19430.000	7473.000	7539.000
x		89.950%	-0.148	26.500	26.460	0.000	19230.000	7324.000	7368.000
σ		2.740%	0.030	2.310	1.214	0.000	454.100	257.100	270.400
%RSD		3.046	20.040	8.719	4.587	0.000	2.361	3.511	3.670
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:02	66.960	2844.000	0.000	2797.000	21030.000	20910.000	75.819%	1.904
2	15:18:27	71.160	2977.000	0.000	2921.000	22600.000	22150.000	75.784%	1.790
3	15:18:52	70.830	2958.000	0.000	2906.000	22820.000	22900.000	75.870%	2.221
x		69.650	2926.000	0.000	2875.000	22150.000	21990.000	75.824%	1.972
σ		2.333	72.210	0.000	67.680	973.400	1006.000	0.043%	0.224
%RSD		3.349	2.467	0.000	2.354	4.394	4.575	0.057	11.350
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:02	1.775	3.093	468.400	127.400	224.000	0.566	1.885	3.132
2	15:18:27	-0.182	2.868	494.200	135.500	224.300	0.550	2.035	3.273
3	15:18:52	2.187	2.983	512.400	139.700	230.200	0.514	1.915	3.427
x		1.260	2.981	491.600	134.200	226.200	0.543	1.945	3.277
σ		1.265	0.112	22.090	6.285	3.474	0.027	0.080	0.148
%RSD		100.400	3.771	4.492	4.683	1.536	4.979	4.091	4.508
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:02	2.975	11.270	11.010	1.374	-1.931	-0.731	0.000	91.250
2	15:18:27	3.249	12.060	12.470	1.761	-0.807	-1.307	0.000	97.210
3	15:18:52	3.453	12.250	11.860	0.023	-0.284	-0.762	0.000	97.230
x		3.225	11.860	11.780	1.052	-1.007	-0.933	0.000	95.230
σ		0.240	0.522	0.736	0.913	0.842	0.324	0.000	3.442
%RSD		7.432	4.405	6.248	86.700	83.550	34.700	0.000	3.614
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:02	75.471%	1.984	2.045	77.693%	-0.065	-0.055	0.104	0.126
2	15:18:27	76.179%	2.059	1.948	79.423%	-0.061	-0.054	0.042	0.086
3	15:18:52	77.506%	2.205	1.977	80.021%	-0.057	-0.053	0.080	0.095
x		76.386%	2.083	1.990	79.046%	-0.061	-0.054	0.075	0.102
σ		1.033%	0.113	0.050	1.209%	0.004	0.001	0.031	0.021
%RSD		1.352	5.408	2.506	1.530	6.548	1.667	41.310	20.870
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:18:02	73.754%	-2.259	0.060	0.061	44.310	43.750	82.062%	82.668%
2	15:18:27	74.951%	-2.178	0.055	0.178	44.950	45.560	84.966%	84.880%
3	15:18:52	77.092%	-2.168	0.035	0.154	45.510	45.920	85.002%	87.099%
x		75.266%	-2.202	0.050	0.131	44.920	45.080	84.010%	84.883%
σ		1.691%	0.050	0.014	0.062	0.598	1.164	1.687%	2.215%
%RSD		2.247	2.263	27.010	47.240	1.331	2.583	2.008	2.610
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:18:02	0.027	0.028	0.452	0.421	0.433	80.433%		
2	15:18:27	0.024	0.022	0.470	0.479	0.463	80.661%		
3	15:18:52	0.027	0.020	0.454	0.416	0.450	83.919%		
x		0.026	0.023	0.459	0.439	0.449	81.671%		
σ		0.002	0.004	0.010	0.035	0.015	1.950%		
%RSD		6.452	18.740	2.198	7.965	3.292	2.388		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	79.987%	-0.112	45.030	44.640	0.000	30580.000	8114.000	8304.000
2	15:22:42	82.726%	-0.217	43.090	46.020	0.000	31350.000	8618.000	8700.000
3	15:23:07	82.710%	-0.146	42.020	47.010	0.000	31820.000	8874.000	8869.000
x		81.808%	-0.158	43.380	45.890	0.000	31250.000	8535.000	8624.000
σ		1.577%	0.053	1.526	1.186	0.000	625.300	386.500	290.100
%RSD		1.928	33.760	3.519	2.584	0.000	2.001	4.528	3.364

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	27.740	3605.000	0.000	3987.000	55160.000	55210.000	75.396%	0.332
2	15:22:42	28.800	3702.000	0.000	4147.000	59130.000	59010.000	74.281%	0.614
3	15:23:07	29.120	3716.000	0.000	4084.000	58400.000	58900.000	74.404%	0.439
x		28.550	3674.000	0.000	4073.000	57560.000	57710.000	74.693%	0.462
σ		0.719	60.360	0.000	80.350	2115.000	2163.000	0.611%	0.143
%RSD		2.518	1.643	0.000	1.973	3.675	3.748	0.818	30.950

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	-0.575	1.007	402.000	395.700	621.900	0.225	0.464	-0.073
2	15:22:42	0.046	0.989	432.500	430.100	667.800	0.273	0.344	0.062
3	15:23:07	-0.897	1.108	440.100	439.700	665.100	0.286	0.512	-0.005
x		-0.476	1.034	424.900	421.900	651.600	0.261	0.440	-0.005
σ		0.480	0.064	20.140	23.140	25.760	0.033	0.087	0.068
%RSD		100.900	6.181	4.740	5.485	3.954	12.460	19.710	1331.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	0.002	4.485	3.970	-0.129	-2.260	-1.475	0.000	383.600
2	15:22:42	0.198	4.447	3.862	1.056	-0.315	-1.565	0.000	402.100
3	15:23:07	0.069	4.334	4.637	-0.049	-1.315	-0.307	0.000	410.400
x		0.090	4.422	4.156	0.293	-1.296	-1.116	0.000	398.700
σ		0.100	0.079	0.420	0.662	0.973	0.702	0.000	13.700
%RSD		110.900	1.780	10.100	226.400	75.040	62.930	0.000	3.435

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	75.309%	0.101	0.053	77.936%	-0.059	-0.052	-0.008	0.003
2	15:22:42	77.509%	0.105	0.037	79.734%	-0.058	-0.061	-0.003	0.060
3	15:23:07	77.189%	0.118	0.019	80.004%	-0.056	-0.066	-0.003	0.003
x		76.669%	0.108	0.036	79.225%	-0.058	-0.059	-0.004	0.022
σ		1.189%	0.009	0.017	1.124%	0.002	0.007	0.003	0.033
%RSD		1.551	8.018	47.470	1.419	2.710	12.060	63.400	148.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	75.401%	-3.007	-0.780	-0.764	380.900	386.000	84.657%	82.252%
2	15:22:42	77.010%	-3.026	-0.773	-0.763	403.400	405.300	86.010%	85.310%
3	15:23:07	78.898%	-3.082	-0.774	-0.776	402.400	405.900	84.149%	85.552%
x		77.103%	-3.038	-0.776	-0.768	395.500	399.100	84.939%	84.371%
σ		1.750%	0.039	0.004	0.007	12.690	11.310	0.962%	1.839%
%RSD		2.270	1.280	0.460	0.931	3.209	2.835	1.132	2.180

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:22:17	0.007	0.008	0.132	0.115	0.131	81.669%
2	15:22:42	0.010	0.010	0.152	0.145	0.144	81.675%
3	15:23:07	0.013	0.008	0.125	0.130	0.129	82.287%
x		0.010	0.009	0.136	0.130	0.135	81.877%
σ		0.003	0.001	0.014	0.015	0.008	0.355%
%RSD		29.070	15.860	10.200	11.460	6.281	0.433

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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	15:26:32	82.851%	-0.217	6.991	8.595	0.000	5965.000	1547.000	1553.000
2	15:26:57	86.207%	-0.206	8.592	7.943	0.000	6063.000	1595.000	1595.000
3	15:27:22	86.296%	-0.234	9.076	8.371	0.000	6095.000	1618.000	1610.000
x		85.118%	-0.219	8.220	8.303	0.000	6041.000	1586.000	1586.000
σ		1.964%	0.014	1.091	0.331	0.000	67.480	35.920	29.600
%RSD		2.307	6.285	13.270	3.986	0.000	1.117	2.264	1.866

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:32	4.187	652.400	0.000	787.400	10440.000	10050.000	76.790%	-0.304
2	15:26:57	4.350	656.800	0.000	797.100	11070.000	10530.000	79.083%	-0.294
3	15:27:22	4.558	657.300	0.000	798.300	11260.000	10520.000	80.014%	-0.334
x		4.365	655.500	0.000	794.200	10920.000	10370.000	78.629%	-0.311
σ		0.186	2.696	0.000	5.974	426.400	274.500	1.659%	0.021
%RSD		4.255	0.411	0.000	0.752	3.904	2.648	2.110	6.595

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:32	-0.106	0.236	75.710	83.790	125.200	0.038	0.134	-0.324
2	15:26:57	-0.154	0.184	78.630	84.730	124.000	0.022	0.031	-0.347
3	15:27:22	-0.143	0.208	79.720	83.490	122.300	0.046	0.019	-0.365
x		-0.134	0.209	78.020	84.000	123.900	0.035	0.061	-0.345
σ		0.025	0.026	2.075	0.649	1.461	0.012	0.063	0.020
%RSD		18.760	12.340	2.660	0.772	1.180	34.640	103.300	5.914

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:32	-0.218	0.906	0.869	-0.573	-0.370	-1.919	0.000	70.570
2	15:26:57	-0.268	0.931	0.849	0.049	-1.221	-1.047	0.000	73.950
3	15:27:22	-0.268	1.151	0.907	0.048	-1.928	-1.254	0.000	74.020
x		-0.251	0.996	0.875	-0.158	-1.173	-1.407	0.000	72.850
σ		0.029	0.134	0.030	0.359	0.780	0.456	0.000	1.968
%RSD		11.370	13.480	3.393	226.500	66.470	32.410	0.000	2.702

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:32	77.999%	-0.039	-0.107	83.976%	-0.062	-0.065	0.002	0.062
2	15:26:57	80.454%	-0.095	-0.088	87.105%	-0.057	-0.060	-0.008	0.063
3	15:27:22	82.018%	-0.057	-0.100	81.169%	-0.062	-0.065	-0.003	0.025
x		80.157%	-0.063	-0.098	84.083%	-0.060	-0.063	-0.003	0.050
σ		2.026%	0.029	0.010	2.969%	0.003	0.003	0.005	0.021
%RSD		2.527	45.120	9.814	3.532	4.888	4.035	160.800	42.830

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:32	78.957%	-3.090	-0.799	-0.795	75.320	74.690	85.630%	84.832%
2	15:26:57	80.231%	-3.100	-0.791	-0.795	78.270	77.060	88.755%	88.554%
3	15:27:22	82.015%	-3.066	-0.800	-0.788	78.000	77.230	88.548%	88.772%
x		80.401%	-3.085	-0.797	-0.793	77.200	76.330	87.644%	87.386%
σ		1.536%	0.018	0.005	0.004	1.630	1.418	1.748%	2.214%
%RSD		1.911	0.572	0.672	0.514	2.112	1.858	1.994	2.534

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:32	0.004	0.008	0.036	0.036	0.028	84.266%
2	15:26:57	0.009	0.008	0.040	0.028	0.031	86.030%
3	15:27:22	0.006	0.006	0.019	0.037	0.025	86.020%
x		0.006	0.007	0.032	0.034	0.028	85.438%
σ		0.003	0.001	0.011	0.005	0.003	1.016%
%RSD		44.700	17.670	34.200	15.870	9.894	1.189

CCV 1455996 1/21/2015 3:36:38 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	15:37:04	78.521%	99.520	105.500	99.450	0.000	50180.000	48700.000	48170.000
2	15:37:29	79.122%	101.100	99.730	99.180	0.000	51020.000	49660.000	50010.000
3	15:37:54	79.069%	102.500	98.340	102.500	0.000	51350.000	49880.000	50450.000
x		78.904%	101.054%	101.191%	100.360%	0.000	101.704%	98.825%	99.092%
σ		0.333%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.422	1.478	3.760	1.812	0.000	1.181	1.270	2.442

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:04	464.300	4962.000	0.000	50180.000	47420.000	50370.000	78.096%	99.720
2	15:37:29	474.500	5158.000	0.000	52490.000	51840.000	53850.000	75.427%	104.500
3	15:37:54	483.200	5167.000	0.000	52830.000	51890.000	51560.000	75.904%	101.800
x		94.801%	101.912%	0.000	103.665%	100.763%	103.850%	76.475%	102.030%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.423%	n/a
%RSD		1.991	2.269	0.000	2.781	5.090	3.408	1.861	2.372

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:04	91.870	92.240	500.600	24550.000	25910.000	94.290	96.770	94.470
2	15:37:29	94.810	97.230	519.700	25610.000	27100.000	98.930	97.910	98.640
3	15:37:54	96.260	97.240	520.900	25710.000	27110.000	98.050	97.950	97.610
x		94.314%	95.570%	102.747%	101.156%	106.829%	97.089%	97.545%	96.907%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.373	3.015	2.220	2.549	2.584	2.537	0.686	2.245

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:04	95.660	96.470	99.490	96.990	96.070	99.740	0.000	97.660
2	15:37:29	98.670	102.900	101.800	98.860	100.500	98.060	0.000	97.750
3	15:37:54	99.100	101.500	99.690	98.710	100.800	99.730	0.000	97.910
x		97.807%	100.287%	100.309%	98.187%	99.115%	99.178%	0.000	97.772%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.916	3.378	1.248	1.057	2.661	0.973	0.000	0.127

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:04	75.676%	92.090	87.920	79.964%	90.600	90.080	95.710	96.030
2	15:37:29	75.852%	95.740	92.920	79.357%	92.360	92.950	98.090	99.610
3	15:37:54	76.126%	98.440	95.730	79.405%	93.090	93.300	96.970	99.300
x		75.885%	95.423%	92.191%	79.575%	92.016%	92.110%	96.924%	98.314%
σ		0.227%	n/a	n/a	0.337%	n/a	n/a	n/a	n/a
%RSD		0.299	3.338	4.287	0.424	1.395	1.919	1.226	2.020

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:04	76.792%	96.350	97.310	97.660	98.540	97.060	80.873%	82.639%
2	15:37:29	74.882%	99.480	100.200	101.400	99.480	98.370	83.373%	82.287%
3	15:37:54	75.882%	99.030	98.730	99.630	97.570	97.980	83.115%	82.755%
x		75.852%	98.283%	98.740%	99.548%	98.527%	97.806%	82.454%	82.560%
σ		0.955%	n/a	n/a	n/a	n/a	n/a	1.375%	0.244%
%RSD		1.260	1.722	1.447	1.857	0.967	0.689	1.668	0.295

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:04	96.320	93.240	97.310	97.170	96.110	90.369%
2	15:37:29	101.400	98.400	103.300	103.200	103.000	85.435%
3	15:37:54	103.900	100.600	106.200	105.400	104.900	84.078%
x		100.517%	97.422%	102.262%	101.902%	101.347%	86.627%
σ		n/a	n/a	n/a	n/a	n/a	3.311%
%RSD		3.817	3.895	4.435	4.158	4.578	3.822

CCB8 1/21/2015 3:45:43 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	15:46:08	84.756%	-0.108	-0.130	-0.807	0.000	20.170	13.910	13.560
2	15:46:34	83.515%	-0.092	-0.711	-1.029	0.000	18.120	11.270	10.670
3	15:47:00	87.965%	-0.101	-0.786	-0.509	0.000	13.960	8.504	8.425
x		85.412%	-0.100	-0.542	-0.782	0.000	17.420	11.230	10.890
σ		2.296%	0.008	0.359	0.261	0.000	3.162	2.704	2.577
%RSD		2.689	8.252	66.240	33.420	0.000	18.150	24.080	23.670

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	-0.095	2.346	0.000	16.000	15.660	22.860	79.627%	-0.423
2	15:46:34	-0.516	2.321	0.000	14.550	15.770	17.670	79.384%	-0.441
3	15:47:00	-0.602	0.628	0.000	14.370	13.930	17.110	79.447%	-0.386
x		-0.404	1.765	0.000	14.970	15.120	19.210	79.486%	-0.417
σ		0.271	0.985	0.000	0.895	1.031	3.172	0.126%	0.028
%RSD		67.120	55.790	0.000	5.976	6.816	16.510	0.159	6.626

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	0.036	-0.038	0.153	19.370	22.190	0.013	-0.021	-0.399
2	15:46:34	-0.061	-0.023	0.146	16.650	19.620	0.035	0.016	-0.418
3	15:47:00	0.081	-0.023	0.090	6.960	7.466	0.018	-0.023	-0.376
x		0.019	-0.028	0.130	14.330	16.420	0.022	-0.009	-0.397
σ		0.072	0.009	0.035	6.525	7.863	0.011	0.022	0.021
%RSD		387.500	30.860	26.780	45.530	47.880	50.780	241.100	5.368

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	-0.336	0.048	0.162	0.192	-0.954	1.203	0.000	0.069
2	15:46:34	-0.334	0.120	0.037	-0.007	0.311	1.908	0.000	0.086
3	15:47:00	-0.406	0.112	0.128	-0.051	-0.912	-0.328	0.000	0.043
x		-0.359	0.093	0.109	0.045	-0.518	0.928	0.000	0.066
σ		0.041	0.040	0.064	0.129	0.718	1.143	0.000	0.022
%RSD		11.400	42.640	59.070	288.500	138.600	123.200	0.000	33.100

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	78.435%	0.240	0.160	85.452%	-0.041	-0.039	0.011	0.007
2	15:46:34	80.209%	0.140	0.148	88.319%	-0.054	-0.045	0.015	0.009
3	15:47:00	81.141%	0.101	0.070	86.840%	-0.043	-0.048	0.029	0.030
x		79.928%	0.160	0.126	86.870%	-0.046	-0.044	0.018	0.015
σ		1.374%	0.072	0.049	1.434%	0.007	0.004	0.009	0.012
%RSD		1.720	44.790	38.970	1.651	15.160	10.100	50.840	79.780

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	80.206%	-2.833	-0.607	-0.612	0.081	0.080	85.501%	85.317%
2	15:46:34	80.401%	-2.834	-0.627	-0.640	0.131	0.079	85.677%	86.028%
3	15:47:00	81.761%	-2.922	-0.666	-0.650	0.073	0.035	87.458%	85.865%
x		80.789%	-2.863	-0.633	-0.634	0.095	0.065	86.212%	85.737%
σ		0.847%	0.051	0.030	0.020	0.031	0.026	1.083%	0.372%
%RSD		1.049	1.782	4.724	3.109	32.910	39.710	1.256	0.434

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:46:08	0.034	0.030	0.046	0.049	0.043	94.256%
2	15:46:34	0.015	0.025	0.009	0.031	0.026	91.143%
3	15:47:00	0.028	0.020	0.018	0.022	0.020	91.291%
x		0.026	0.025	0.024	0.034	0.030	92.230%
σ		0.010	0.005	0.019	0.014	0.012	1.756%
%RSD		37.180	20.790	78.540	40.580	38.610	1.904

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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	15:50:26	81.525%	-0.173	-1.031	-0.729	0.000	474.800	6.486	6.667
2	15:50:51	84.327%	-0.177	-0.985	-0.618	0.000	481.800	5.896	6.552
3	15:51:16	84.711%	-0.164	-0.820	-0.748	0.000	481.400	4.717	5.644
x		83.521%	-0.171	-0.945	-0.698	0.000	479.300	5.700	6.288
σ		1.739%	0.007	0.111	0.070	0.000	3.909	0.901	0.560
%RSD		2.082	4.016	11.760	10.010	0.000	0.816	15.800	8.907

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:26	3.902	3.721	0.000	9.617	31.840	13.640	78.829%	-0.458
2	15:50:51	3.824	1.587	0.000	9.135	17.520	11.280	79.327%	-0.404
3	15:51:16	3.765	0.990	0.000	14.070	27.630	12.130	80.039%	-0.478
x		3.830	2.099	0.000	10.940	25.660	12.350	79.399%	-0.446
σ		0.069	1.436	0.000	2.719	7.360	1.196	0.608%	0.038
%RSD		1.790	68.400	0.000	24.850	28.680	9.684	0.766	8.521

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:26	0.013	-0.047	0.040	1.825	5.271	0.031	0.041	-0.257
2	15:50:51	-0.020	-0.046	0.034	1.480	5.715	0.012	0.016	-0.283
3	15:51:16	-0.092	-0.012	0.100	1.056	4.656	0.022	0.137	-0.246
x		-0.033	-0.035	0.058	1.454	5.214	0.021	0.065	-0.262
σ		0.054	0.020	0.037	0.385	0.532	0.009	0.064	0.019
%RSD		164.700	56.560	63.230	26.490	10.200	44.350	98.200	7.317

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:26	-0.180	0.436	0.381	0.017	-0.171	0.475	0.000	0.048
2	15:50:51	-0.234	0.457	0.630	-0.233	0.001	-0.266	0.000	0.036
3	15:51:16	-0.243	0.518	0.317	-0.178	-0.343	-0.415	0.000	0.041
x		-0.219	0.470	0.443	-0.131	-0.171	-0.069	0.000	0.041
σ		0.034	0.043	0.165	0.131	0.172	0.477	0.000	0.006
%RSD		15.530	9.096	37.340	99.830	100.500	691.000	0.000	14.240

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:26	77.835%	-0.091	-0.030	85.775%	-0.042	-0.043	0.002	0.012
2	15:50:51	80.012%	0.041	-0.065	87.266%	-0.042	-0.048	-0.003	0.027
3	15:51:16	81.101%	-0.051	-0.034	89.372%	-0.036	-0.038	0.010	-0.003
x		79.649%	-0.034	-0.043	87.471%	-0.040	-0.043	0.003	0.012
σ		1.663%	0.068	0.019	1.807%	0.004	0.005	0.007	0.015
%RSD		2.088	201.600	44.170	2.066	8.995	11.490	229.600	122.600

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:26	80.261%	-3.010	-0.742	-0.737	0.031	0.040	83.889%	84.910%
2	15:50:51	82.053%	-3.070	-0.704	-0.722	0.002	0.054	85.915%	86.287%
3	15:51:16	82.112%	-3.008	-0.716	-0.736	0.008	0.011	87.040%	86.693%
x		81.475%	-3.030	-0.721	-0.731	0.014	0.035	85.615%	85.963%
σ		1.052%	0.035	0.019	0.009	0.015	0.022	1.597%	0.935%
%RSD		1.291	1.164	2.677	1.168	111.700	62.790	1.866	1.087

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:26	0.012	0.013	0.041	0.026	0.035	91.835%
2	15:50:51	0.015	0.009	0.037	0.027	0.029	90.888%
3	15:51:16	0.016	0.008	0.029	0.033	0.029	88.968%
x		0.014	0.010	0.036	0.028	0.031	90.564%
σ		0.002	0.003	0.006	0.004	0.003	1.461%
%RSD		12.590	25.830	17.280	12.580	11.040	1.613

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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	15:54:38	81.333%	0.762	5.068	4.251	0.000	101.600	98.510	100.500
2	15:55:03	83.648%	0.945	4.875	4.283	0.000	104.600	101.700	102.500
3	15:55:28	83.768%	0.915	3.470	4.618	0.000	104.900	101.800	101.700
x		82.916%	87.375%	89.421%	87.682%	0.000	129.587%	100.661%	101.582%
σ		1.372%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.655	11.200	19.520	4.626	0.000	1.758	1.852	0.982

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:38	28.390	488.100	0.000	110.700	121.100	105.700	78.072%	4.657
2	15:55:03	30.190	498.500	0.000	119.000	105.400	113.800	78.988%	4.628
3	15:55:28	29.750	500.400	0.000	113.000	119.100	108.000	79.154%	4.760
x		98.154%	99.131%	0.000	114.250%	115.196%	109.143%	78.738%	93.640%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.582%	n/a
%RSD		3.184	1.340	0.000	3.759	7.432	3.814	0.740	1.477

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:38	0.826	1.822	4.984	50.670	52.920	0.514	0.998	1.712
2	15:55:03	0.942	1.889	5.034	50.580	54.790	0.528	1.118	1.717
3	15:55:28	0.944	1.883	5.165	50.790	58.010	0.556	1.022	1.623
x		90.412%	93.223%	101.221%	101.358%	110.474%	106.495%	104.582%	84.183%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		7.503	1.974	1.846	0.210	4.661	4.006	6.052	3.149

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:38	1.705	5.280	5.356	1.080	5.077	5.284	0.000	4.748
2	15:55:03	1.720	4.864	5.529	1.036	3.777	5.791	0.000	4.957
3	15:55:28	1.797	5.416	5.262	0.959	4.106	4.751	0.000	4.909
x		87.040%	103.730%	107.647%	102.477%	86.405%	105.506%	0.000	97.424%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.818	5.541	2.521	5.967	15.640	9.860	0.000	2.249

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:38	76.977%	4.561	4.399	84.978%	0.886	0.867	1.006	1.174
2	15:55:03	79.430%	4.815	4.610	87.612%	0.861	0.821	1.153	1.165
3	15:55:28	80.595%	5.017	4.782	81.169%	0.953	0.940	0.826	1.110
x		79.001%	95.957%	91.941%	84.586%	89.989%	87.603%	99.511%	114.969%
σ		1.847%	n/a	n/a	3.240%	n/a	n/a	n/a	n/a
%RSD		2.338	4.759	4.179	3.830	5.268	6.871	16.500	3.048

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:38	70.530%	2.559	1.289	1.360	10.490	10.900	73.769%	84.005%
2	15:55:03	71.855%	2.722	1.460	1.416	10.790	10.620	76.172%	86.092%
3	15:55:28	72.846%	2.882	1.495	1.427	11.680	11.140	77.106%	86.715%
x		71.744%	54.418%	70.736%	70.045%	109.889%	108.843%	75.682%	85.604%
σ		1.162%	n/a	n/a	n/a	n/a	n/a	1.721%	1.420%
%RSD		1.620	5.941	7.790	2.552	5.602	2.399	2.275	1.658

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:54:38	0.951	0.881	1.006	0.926	0.943	95.854%
2	15:55:03	0.986	0.981	1.045	0.990	0.999	93.306%
3	15:55:28	1.055	0.970	1.074	0.990	1.023	91.456%
x		99.726%	94.395%	104.159%	96.850%	98.831%	93.539%
σ		n/a	n/a	n/a	n/a	n/a	2.208%
%RSD		5.274	5.802	3.280	3.798	4.181	2.361

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	80.545%	-0.171	-0.553	-0.782	0.000	26.880	0.744	0.788
2	16:03:33	83.879%	-0.162	-0.885	-1.331	0.000	24.980	0.915	0.327
3	16:03:58	84.194%	-0.232	-0.978	-0.952	0.000	24.550	0.234	-0.127
x		82.872%	-0.189	-0.805	-1.022	0.000	25.470	0.631	0.329
σ		2.022%	0.038	0.223	0.282	0.000	1.238	0.354	0.458
%RSD		2.440	20.230	27.730	27.550	0.000	4.859	56.130	138.900

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	-0.481	2.160	0.000	10.200	14.020	2.263	74.321%	-0.527
2	16:03:33	-0.324	0.467	0.000	13.140	2.435	4.841	76.123%	-0.472
3	16:03:58	-0.627	-0.002	0.000	17.030	14.880	4.861	76.872%	-0.492
x		-0.477	0.875	0.000	13.460	10.440	3.989	75.772%	-0.497
σ		0.152	1.138	0.000	3.429	6.949	1.494	1.311%	0.028
%RSD		31.730	130.000	0.000	25.480	66.540	37.460	1.731	5.627

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	-0.225	0.002	0.003	1.303	6.655	-0.003	-0.009	-0.343
2	16:03:33	0.083	0.046	0.035	-0.891	0.280	-0.002	0.069	-0.381
3	16:03:58	0.154	0.056	0.025	-0.665	-1.826	0.002	-0.006	-0.336
x		0.004	0.035	0.021	-0.084	1.703	-0.001	0.018	-0.353
σ		0.201	0.029	0.016	1.207	4.416	0.003	0.044	0.024
%RSD		4992.000	84.110	78.060	1429.000	259.300	268.800	243.100	6.907

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	-0.250	1.478	1.314	-0.041	-0.563	-0.942	0.000	0.036
2	16:03:33	-0.306	1.389	1.303	-0.187	-1.114	-0.046	0.000	0.025
3	16:03:58	-0.308	1.378	1.403	0.295	-1.344	0.772	0.000	0.008
x		-0.288	1.415	1.340	0.022	-1.007	-0.072	0.000	0.023
σ		0.033	0.055	0.055	0.247	0.402	0.857	0.000	0.014
%RSD		11.540	3.901	4.090	1103.000	39.880	1194.000	0.000	60.090

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	74.995%	-0.094	-0.138	81.188%	-0.056	-0.058	0.002	0.024
2	16:03:33	78.974%	-0.123	-0.130	84.667%	-0.059	-0.058	0.006	0.012
3	16:03:58	79.273%	-0.113	-0.111	87.578%	-0.058	-0.060	-0.003	-0.020
x		77.747%	-0.110	-0.126	84.478%	-0.058	-0.059	0.002	0.005
σ		2.388%	0.015	0.014	3.199%	0.002	0.001	0.005	0.023
%RSD		3.071	13.590	10.870	3.787	2.671	2.271	257.900	424.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	77.120%	-2.972	-0.777	-0.755	-0.030	0.036	82.017%	80.798%
2	16:03:33	79.492%	-3.039	-0.781	-0.776	-0.002	0.021	84.840%	84.346%
3	16:03:58	79.580%	-2.972	-0.777	-0.764	-0.008	-0.006	83.517%	84.928%
x		78.731%	-2.994	-0.778	-0.765	-0.013	0.017	83.458%	83.358%
σ		1.395%	0.038	0.002	0.010	0.015	0.022	1.413%	2.235%
%RSD		1.772	1.284	0.289	1.363	111.700	126.700	1.693	2.682

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:08	0.005	0.004	0.057	0.050	0.048	93.025%
2	16:03:33	0.005	0.005	0.057	0.032	0.043	92.257%
3	16:03:58	0.009	0.003	0.064	0.033	0.052	89.947%
x		0.006	0.004	0.059	0.038	0.048	91.743%
σ		0.002	0.001	0.004	0.010	0.005	1.602%
%RSD		34.640	18.060	7.315	26.440	9.733	1.747

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	78.054%	47.910	946.400	923.600	0.000	47040.000	44780.000	44370.000
2	16:07:45	79.010%	48.420	976.500	959.400	0.000	48200.000	46410.000	46640.000
3	16:08:10	79.945%	50.830	972.000	949.200	0.000	48250.000	46330.000	46670.000
x		79.003%	49.050	965.000	944.100	0.000	47830.000	45840.000	45900.000
σ		0.946%	1.558	16.220	18.450	0.000	683.500	917.000	1319.000
%RSD		1.197	3.175	1.681	1.954	0.000	1.429	2.000	2.874

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	1859.000	9549.000	0.000	49880.000	48230.000	49450.000	73.442%	967.000
2	16:07:45	1956.000	9835.000	0.000	51960.000	50620.000	52040.000	73.038%	1005.000
3	16:08:10	1954.000	9767.000	0.000	51590.000	50690.000	52990.000	72.811%	1008.000
x		1923.000	9717.000	0.000	51140.000	49850.000	51490.000	73.097%	993.200
σ		55.210	149.400	0.000	1108.000	1399.000	1833.000	0.320%	22.780
%RSD		2.871	1.538	0.000	2.167	2.807	3.559	0.437	2.294

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	458.800	179.200	474.800	996.700	1137.000	468.900	460.200	232.600
2	16:07:45	479.400	184.300	495.800	1055.000	1192.000	487.200	473.500	239.500
3	16:08:10	478.800	186.800	499.800	1070.000	1188.000	488.900	480.100	240.200
x		472.300	183.400	490.200	1041.000	1172.000	481.600	471.300	237.400
σ		11.720	3.886	13.440	38.690	30.630	11.050	10.110	4.215
%RSD		2.482	2.118	2.742	3.718	2.613	2.294	2.145	1.775

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	231.700	485.500	480.400	35.720	9.018	9.996	0.000	954.300
2	16:07:45	238.000	499.500	494.200	36.930	8.599	8.370	0.000	979.400
3	16:08:10	236.600	505.100	494.000	37.630	8.363	9.110	0.000	981.300
x		235.400	496.700	489.500	36.760	8.660	9.159	0.000	971.700
σ		3.276	10.090	7.872	0.970	0.332	0.814	0.000	15.110
%RSD		1.392	2.031	1.608	2.638	3.831	8.888	0.000	1.555

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	73.090%	912.200	904.900	76.426%	45.180	45.650	47.280	40.020
2	16:07:45	74.959%	969.000	957.800	77.512%	45.770	45.480	49.890	40.300
3	16:08:10	75.440%	1000.000	995.100	77.394%	46.190	46.310	49.730	40.680
x		74.496%	960.400	952.600	77.110%	45.710	45.810	48.970	40.330
σ		1.242%	44.600	45.320	0.596%	0.506	0.442	1.462	0.331
%RSD		1.667	4.644	4.758	0.773	1.106	0.964	2.985	0.821

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	72.790%	2085.000	533.700	518.700	1967.000	2018.000	80.788%	81.813%
2	16:07:45	73.731%	2137.000	534.500	527.100	2003.000	2069.000	83.237%	83.390%
3	16:08:10	73.611%	2159.000	538.600	536.100	2016.000	2084.000	83.916%	84.357%
x		73.377%	2127.000	535.600	527.300	1995.000	2057.000	82.647%	83.187%
σ		0.512%	37.970	2.624	8.688	25.290	34.680	1.646%	1.284%
%RSD		0.698	1.785	0.490	1.648	1.267	1.686	1.991	1.544

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:07:20	44.560	42.810	18.680	18.330	18.300	91.212%
2	16:07:45	49.340	47.110	20.180	20.000	19.830	86.187%
3	16:08:10	51.010	49.090	21.200	21.190	20.700	83.986%
x		48.300	46.330	20.020	19.840	19.610	87.128%
σ		3.344	3.211	1.268	1.435	1.218	3.704%
%RSD		6.922	6.930	6.333	7.232	6.209	4.251

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:11:32	71.284%	48.940	944.400	935.100	0.000	47690.000	45250.000	45330.000
2	16:11:57	75.872%	46.400	924.900	919.300	0.000	47590.000	45480.000	45740.000
3	16:12:22	76.742%	48.130	918.500	930.100	0.000	47470.000	45300.000	45860.000
x		74.633%	47.820	929.300	928.100	0.000	47590.000	45350.000	45640.000
σ		2.933%	1.298	13.460	8.077	0.000	108.300	121.500	279.200
%RSD		3.930	2.714	1.449	0.870	0.000	0.228	0.268	0.612
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:11:32	1835.000	9555.000	0.000	50600.000	47920.000	47800.000	69.886%	941.500
2	16:11:57	1863.000	9458.000	0.000	48790.000	48770.000	50640.000	71.264%	962.900
3	16:12:22	1874.000	9554.000	0.000	51050.000	50120.000	51720.000	69.954%	996.000
x		1857.000	9522.000	0.000	50150.000	48940.000	50050.000	70.368%	966.800
σ		20.030	55.500	0.000	1200.000	1108.000	2025.000	0.777%	27.440
%RSD		1.078	0.583	0.000	2.393	2.263	4.047	1.104	2.838
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:11:32	443.500	173.000	453.500	965.000	1103.000	446.200	443.500	221.100
2	16:11:57	458.000	180.600	482.900	1017.000	1156.000	469.400	465.800	233.300
3	16:12:22	467.200	184.200	492.400	1041.000	1161.000	483.200	472.300	240.900
x		456.200	179.300	476.300	1008.000	1140.000	466.300	460.500	231.800
σ		11.980	5.703	20.280	38.960	31.960	18.710	15.120	10.000
%RSD		2.625	3.181	4.259	3.866	2.803	4.012	3.284	4.316
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:11:32	219.800	457.700	446.900	34.380	9.101	8.420	0.000	887.400
2	16:11:57	232.800	494.000	482.500	36.990	8.646	8.925	0.000	988.500
3	16:12:22	235.400	503.500	489.600	36.840	8.653	9.659	0.000	991.800
x		229.300	485.100	473.000	36.070	8.800	9.001	0.000	955.900
σ		8.353	24.140	22.880	1.463	0.261	0.623	0.000	59.310
%RSD		3.642	4.977	4.837	4.056	2.961	6.922	0.000	6.205
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:11:32	73.395%	873.500	868.000	73.890%	42.960	43.790	46.030	37.210
2	16:11:57	69.329%	983.900	961.900	74.366%	43.420	43.300	47.560	36.950
3	16:12:22	68.836%	1003.000	996.500	74.441%	44.390	44.860	47.290	40.520
x		70.520%	953.500	942.100	74.232%	43.590	43.980	46.960	38.230
σ		2.502%	69.890	66.470	0.299%	0.731	0.797	0.815	1.990
%RSD		3.548	7.331	7.056	0.403	1.677	1.812	1.735	5.205
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:11:32	68.579%	2063.000	524.500	510.400	1876.000	1962.000	79.002%	78.468%
2	16:11:57	73.114%	2015.000	506.100	500.100	1914.000	1949.000	82.226%	82.005%
3	16:12:22	70.717%	2085.000	527.600	511.300	1922.000	1991.000	81.402%	80.780%
x		70.803%	2054.000	519.400	507.200	1904.000	1967.000	80.877%	80.418%
σ		2.269%	36.180	11.630	6.227	24.520	21.710	1.675%	1.796%
%RSD		3.204	1.761	2.239	1.228	1.288	1.103	2.071	2.234
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:11:32	45.320	43.560	19.430	18.760	18.780	81.924%		
2	16:11:57	47.550	46.340	19.740	19.740	19.370	82.535%		
3	16:12:22	49.980	48.370	20.840	20.380	20.570	78.950%		
x		47.620	46.090	20.000	19.630	19.570	81.136%		
σ		2.328	2.411	0.744	0.813	0.913	1.918%		
%RSD		4.889	5.232	3.720	4.141	4.664	2.363		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	73.769%	-0.209	483.500	467.300	0.000	14880.000	16910.000	17240.000
2	16:16:07	76.841%	-0.089	481.300	481.300	0.000	15040.000	17440.000	17560.000
3	16:16:32	77.395%	-0.151	485.100	485.800	0.000	15220.000	17780.000	17130.000
x		76.002%	-0.150	483.300	478.100	0.000	15040.000	17380.000	17310.000
σ		1.953%	0.060	1.889	9.655	0.000	172.300	439.300	222.600
%RSD		2.570	39.870	0.391	2.020	0.000	1.145	2.528	1.286

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	3.436	6876.000	0.000	6365.000	107200.000	105300.000	68.139%	1.970
2	16:16:07	2.607	6871.000	0.000	6165.000	107000.000	110400.000	69.795%	1.373
3	16:16:32	2.557	7008.000	0.000	6547.000	112400.000	111900.000	69.567%	1.357
x		2.866	6918.000	0.000	6359.000	108800.000	109200.000	69.167%	1.567
σ		0.494	77.570	0.000	190.900	3037.000	3483.000	0.897%	0.350
%RSD		17.220	1.121	0.000	3.002	2.790	3.190	1.297	22.320

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	0.221	0.643	631.300	3472.000	3792.000	0.941	1.412	0.400
2	16:16:07	0.263	0.566	649.500	3535.000	3971.000	0.732	0.942	0.287
3	16:16:32	0.247	0.430	669.800	3666.000	4014.000	0.694	0.820	0.217
x		0.244	0.546	650.200	3558.000	3926.000	0.789	1.058	0.301
σ		0.021	0.108	19.290	99.140	117.700	0.133	0.313	0.092
%RSD		8.707	19.740	2.966	2.787	2.999	16.870	29.540	30.560

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	0.605	12.850	13.020	0.655	-1.097	1.510	0.000	462.800
2	16:16:07	0.375	13.040	13.520	0.843	-0.649	-1.059	0.000	484.100
3	16:16:32	0.406	13.720	13.340	0.123	-0.949	-1.024	0.000	487.100
x		0.462	13.200	13.290	0.540	-0.898	-0.191	0.000	478.000
σ		0.125	0.457	0.256	0.373	0.229	1.473	0.000	13.230
%RSD		27.040	3.459	1.928	69.030	25.440	771.000	0.000	2.768

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	69.253%	22.730	21.770	72.420%	-0.014	-0.029	0.057	-0.016
2	16:16:07	71.422%	19.530	18.700	73.730%	-0.041	-0.043	0.034	-0.051
3	16:16:32	72.760%	17.740	17.070	74.494%	-0.047	-0.049	0.050	0.014
x		71.145%	20.000	19.180	73.548%	-0.034	-0.040	0.047	-0.018
σ		1.770%	2.530	2.391	1.049%	0.017	0.010	0.012	0.033
%RSD		2.488	12.650	12.470	1.426	50.900	24.860	25.210	182.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	69.412%	8.851	-0.209	-0.228	75.860	76.650	78.474%	77.653%
2	16:16:07	72.659%	6.241	-0.513	-0.459	76.930	77.400	79.639%	81.235%
3	16:16:32	71.208%	5.078	-0.527	-0.567	78.160	79.000	81.045%	80.855%
x		71.093%	6.723	-0.416	-0.418	76.980	77.690	79.719%	79.914%
σ		1.627%	1.932	0.179	0.173	1.148	1.197	1.288%	1.968%
%RSD		2.288	28.740	43.090	41.440	1.492	1.541	1.615	2.462

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:15:41	0.269	0.243	0.084	0.056	0.071	86.055%
2	16:16:07	0.213	0.175	0.082	0.057	0.066	85.414%
3	16:16:32	0.163	0.141	0.056	0.035	0.048	81.239%
x		0.215	0.186	0.074	0.049	0.062	84.236%
σ		0.053	0.052	0.016	0.013	0.012	2.615%
%RSD		24.690	27.830	21.410	25.710	19.600	3.104

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:54	72.843%	-0.208	494.900	502.900	0.000	15480.000	18050.000	18420.000
2	16:20:19	76.755%	-0.242	506.300	504.300	0.000	15350.000	18260.000	18590.000
3	16:20:44	77.794%	-0.182	511.900	500.000	0.000	15490.000	18470.000	18680.000
x		75.797%	-0.211	504.400	502.400	0.000	15440.000	18260.000	18560.000
σ		2.611%	0.030	8.698	2.175	0.000	80.090	207.800	135.700
%RSD		3.444	14.300	1.724	0.433	0.000	0.519	1.138	0.731
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:54	2.934	7059.000	0.000	6533.000	109600.000	108400.000	69.695%	0.778
2	16:20:19	2.597	7061.000	0.000	6711.000	114500.000	113500.000	69.808%	0.775
3	16:20:44	2.362	7151.000	0.000	6738.000	118000.000	118700.000	69.036%	0.497
x		2.631	7090.000	0.000	6660.000	114000.000	113500.000	69.513%	0.683
σ		0.287	52.450	0.000	111.200	4215.000	5150.000	0.417%	0.161
%RSD		10.920	0.740	0.000	1.670	3.697	4.537	0.599	23.570
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:54	0.074	0.435	636.400	2653.000	3024.000	0.655	1.196	0.733
2	16:20:19	-0.053	0.374	674.800	2800.000	3172.000	0.599	0.885	0.686
3	16:20:44	-0.114	0.262	687.200	2811.000	3229.000	0.695	1.053	0.571
x		-0.031	0.357	666.200	2755.000	3142.000	0.650	1.044	0.663
σ		0.096	0.088	26.480	87.920	105.800	0.048	0.156	0.084
%RSD		311.600	24.660	3.975	3.192	3.367	7.454	14.910	12.610
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:54	0.908	13.900	13.950	0.465	-0.067	0.339	0.000	490.700
2	16:20:19	1.002	14.420	14.470	0.675	-1.182	-1.416	0.000	498.900
3	16:20:44	1.101	15.000	14.600	0.623	-1.432	1.459	0.000	500.900
x		1.004	14.440	14.340	0.588	-0.894	0.128	0.000	496.800
σ		0.097	0.550	0.341	0.110	0.727	1.449	0.000	5.404
%RSD		9.621	3.811	2.376	18.640	81.310	1136.000	0.000	1.088
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:54	70.015%	8.818	8.111	73.874%	-0.053	-0.057	0.019	-0.026
2	16:20:19	71.766%	8.607	8.167	74.711%	-0.063	-0.062	0.008	0.005
3	16:20:44	71.954%	8.446	8.607	73.341%	-0.055	-0.060	0.008	-0.011
x		71.245%	8.623	8.295	73.975%	-0.057	-0.060	0.012	-0.011
σ		1.069%	0.187	0.272	0.691%	0.005	0.003	0.006	0.015
%RSD		1.501	2.163	3.273	0.934	9.514	4.570	52.830	140.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:19:54	70.454%	-0.579	-0.628	-0.619	74.490	74.670	77.944%	79.844%
2	16:20:19	71.005%	-0.681	-0.663	-0.630	76.420	76.510	80.824%	80.638%
3	16:20:44	71.544%	-0.707	-0.674	-0.680	77.080	75.440	81.893%	80.073%
x		71.001%	-0.656	-0.655	-0.643	76.000	75.540	80.220%	80.185%
σ		0.545%	0.068	0.024	0.033	1.342	0.925	2.043%	0.409%
%RSD		0.767	10.320	3.666	5.087	1.766	1.224	2.546	0.510
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:19:54	0.067	0.060	0.101	0.095	0.090	84.608%		
2	16:20:19	0.061	0.053	0.076	0.087	0.087	81.490%		
3	16:20:44	0.057	0.053	0.095	0.088	0.093	79.673%		
x		0.062	0.055	0.090	0.090	0.090	81.924%		
σ		0.005	0.004	0.013	0.005	0.003	2.496%		
%RSD		7.680	7.365	14.380	5.086	3.583	3.047		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:06	76.793%	-0.166	100.700	97.460	0.000	3021.000	3299.000	3299.000
2	16:24:31	76.239%	-0.181	106.000	100.700	0.000	3140.000	3442.000	3427.000
3	16:24:56	79.315%	-0.125	97.630	101.800	0.000	3100.000	3420.000	3410.000
x		77.449%	-0.157	101.400	99.960	0.000	3087.000	3387.000	3379.000
σ		1.640%	0.029	4.210	2.240	0.000	60.610	76.690	69.390
%RSD		2.117	18.170	4.150	2.241	0.000	1.963	2.264	2.054
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:06	-0.238	1384.000	0.000	1294.000	21400.000	20660.000	73.233%	-0.074
2	16:24:31	-0.089	1425.000	0.000	1319.000	21750.000	21610.000	73.448%	-0.233
3	16:24:56	-0.362	1414.000	0.000	1323.000	21810.000	21690.000	74.412%	-0.276
x		-0.230	1408.000	0.000	1312.000	21650.000	21320.000	73.698%	-0.194
σ		0.137	20.860	0.000	15.960	224.000	571.400	0.628%	0.106
%RSD		59.560	1.482	0.000	1.217	1.034	2.680	0.852	54.680
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:06	-0.041	0.077	120.300	547.200	619.200	0.149	0.218	-0.217
2	16:24:31	-0.070	0.049	126.200	567.300	636.500	0.148	0.269	-0.197
3	16:24:56	0.102	0.031	126.300	567.400	643.300	0.120	0.142	-0.235
x		-0.003	0.052	124.300	560.600	633.000	0.139	0.210	-0.217
σ		0.092	0.023	3.440	11.650	12.410	0.016	0.064	0.019
%RSD		2794.000	44.300	2.768	2.078	1.961	11.850	30.590	8.746
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:06	-0.099	3.104	2.778	0.119	-1.199	1.011	0.000	91.840
2	16:24:31	-0.142	3.059	2.420	0.276	-0.847	0.562	0.000	93.110
3	16:24:56	-0.099	2.988	2.924	-0.346	-0.304	-1.018	0.000	94.410
x		-0.113	3.051	2.707	0.016	-0.783	0.185	0.000	93.120
σ		0.025	0.058	0.259	0.323	0.451	1.065	0.000	1.283
%RSD		21.970	1.914	9.579	1962.000	57.530	576.000	0.000	1.377
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:06	73.225%	2.271	2.086	78.663%	-0.064	-0.054	0.007	0.005
2	16:24:31	73.736%	2.146	2.054	78.674%	-0.067	-0.064	0.007	0.011
3	16:24:56	75.247%	2.240	2.103	80.613%	-0.062	-0.060	0.012	0.016
x		74.070%	2.219	2.081	79.317%	-0.064	-0.059	0.009	0.011
σ		1.051%	0.065	0.025	1.123%	0.003	0.005	0.002	0.006
%RSD		1.420	2.926	1.184	1.415	4.461	8.465	28.730	54.590
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:24:06	75.596%	-2.164	-0.728	-0.737	14.210	14.570	81.981%	81.391%
2	16:24:31	76.074%	-1.916	-0.749	-0.749	15.220	14.640	81.058%	80.662%
3	16:24:56	78.694%	-1.979	-0.748	-0.780	14.440	14.790	83.266%	82.973%
x		76.788%	-2.020	-0.742	-0.755	14.620	14.670	82.102%	81.675%
σ		1.668%	0.128	0.012	0.022	0.530	0.117	1.109%	1.182%
%RSD		2.172	6.359	1.572	2.891	3.625	0.794	1.351	1.447
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:24:06	0.032	0.036	0.041	0.032	0.037	85.138%		
2	16:24:31	0.045	0.025	0.035	0.027	0.035	82.973%		
3	16:24:56	0.031	0.034	0.023	0.034	0.032	84.808%		
x		0.036	0.031	0.033	0.031	0.035	84.306%		
σ		0.008	0.006	0.009	0.004	0.003	1.166%		
%RSD		21.650	18.730	28.440	11.780	8.183	1.383		

CCV 1455996 1/21/2015 4:27:53 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:18	70.855%	102.000	102.300	103.800	0.000	50710.000	48370.000	48460.000
2	16:28:44	74.378%	100.900	104.900	104.000	0.000	51450.000	49610.000	49830.000
3	16:29:09	75.354%	101.800	108.400	105.800	0.000	51750.000	50380.000	50630.000
x		73.529%	101.574%	105.202%	104.510%	0.000	102.606%	98.907%	99.277%
σ		2.367%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.219	0.553	2.895	1.050	0.000	1.045	2.051	2.205
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:18	465.500	5554.000	0.000	50660.000	46840.000	48750.000	73.767%	95.130
2	16:28:44	475.000	5143.000	0.000	52270.000	50470.000	52640.000	74.058%	101.900
3	16:29:09	486.100	5194.000	0.000	54020.000	51500.000	53730.000	74.332%	103.900
x		95.104%	105.943%	0.000	104.630%	99.210%	103.413%	74.052%	100.315%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.283%	n/a
%RSD		2.162	4.235	0.000	3.215	4.931	5.062	0.382	4.597
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:18	90.100	90.120	480.000	23970.000	24860.000	92.010	93.650	92.610
2	16:28:44	94.250	94.880	509.200	25220.000	26560.000	96.890	97.720	97.250
3	16:29:09	95.160	96.910	515.200	25490.000	26800.000	97.840	97.120	97.680
x		93.167%	93.970%	100.298%	99.577%	104.296%	95.577%	96.165%	95.849%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.896	3.708	3.752	3.266	4.063	3.272	2.283	2.937
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:18	92.520	97.280	96.450	94.660	98.350	98.390	0.000	94.630
2	16:28:44	96.370	101.700	99.290	99.160	100.300	98.970	0.000	97.610
3	16:29:09	97.910	102.900	102.100	99.070	102.400	100.400	0.000	97.690
x		95.599%	100.626%	99.275%	97.628%	100.352%	99.259%	0.000	96.643%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.905	2.940	2.839	2.632	2.034	1.045	0.000	1.808
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:18	72.023%	90.890	87.010	76.473%	91.040	92.360	95.510	95.710
2	16:28:44	74.001%	97.770	93.960	78.300%	92.820	93.960	96.860	98.820
3	16:29:09	75.345%	98.500	97.100	79.933%	92.590	93.360	96.740	99.060
x		73.789%	95.720%	92.691%	78.235%	92.151%	93.225%	96.368%	97.863%
σ		1.671%	n/a	n/a	1.731%	n/a	n/a	n/a	n/a
%RSD		2.265	4.390	5.568	2.212	1.053	0.869	0.776	1.907
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:28:18	72.855%	95.810	95.830	96.460	96.230	97.210	79.145%	81.101%
2	16:28:44	74.493%	98.510	99.390	100.500	98.500	98.340	83.173%	82.216%
3	16:29:09	75.951%	100.000	99.970	101.100	98.610	99.000	83.085%	82.854%
x		74.433%	98.117%	98.397%	99.326%	97.779%	98.184%	81.801%	82.057%
σ		1.549%	n/a	n/a	n/a	n/a	n/a	2.301%	0.887%
%RSD		2.081	2.177	2.278	2.518	1.371	0.919	2.813	1.081
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:28:18	102.700	98.330	100.500	101.100	100.000	82.405%		
2	16:28:44	106.700	103.400	107.700	107.700	106.700	82.390%		
3	16:29:09	107.400	104.500	109.500	109.500	109.300	81.870%		
x		105.581%	102.099%	105.906%	106.109%	105.346%	82.222%		
σ		n/a	n/a	n/a	n/a	n/a	0.305%		
%RSD		2.415	3.244	4.535	4.144	4.557	0.370		

CCB9 1/21/2015 4:35:17 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

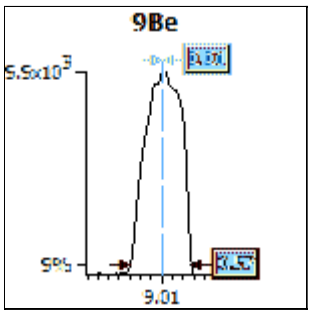
Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:35:42	75.991%	-0.119	0.120	0.795	0.000	31.390	19.680	18.200
2	16:36:07	77.731%	-0.168	-0.122	0.965	0.000	26.060	14.580	13.130
3	16:36:32	80.403%	-0.186	0.538	0.316	0.000	23.930	10.960	10.900
x		78.042%	-0.158	0.179	0.692	0.000	27.130	15.070	14.080
σ		2.222%	0.035	0.334	0.336	0.000	3.846	4.383	3.738
%RSD		2.847	22.040	186.900	48.620	0.000	14.180	29.080	26.550
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:35:42	-0.417	7.691	0.000	33.340	23.680	29.850	73.813%	-0.469
2	16:36:07	-0.757	3.331	0.000	22.340	21.190	22.630	75.083%	-0.279
3	16:36:32	-0.633	2.609	0.000	30.870	24.680	19.670	75.358%	-0.433
x		-0.602	4.544	0.000	28.850	23.180	24.050	74.751%	-0.393
σ		0.172	2.750	0.000	5.770	1.801	5.232	0.824%	0.101
%RSD		28.630	60.520	0.000	20.000	7.767	21.750	1.103	25.640
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:35:42	0.026	-0.013	0.183	12.460	18.700	0.054	0.005	-0.451
2	16:36:07	0.037	-0.049	0.144	9.340	9.581	0.025	0.007	-0.441
3	16:36:32	-0.072	-0.036	0.099	6.693	8.770	0.018	0.022	-0.406
x		-0.003	-0.033	0.142	9.499	12.350	0.032	0.011	-0.433
σ		0.060	0.019	0.042	2.889	5.513	0.019	0.010	0.024
%RSD		1997.000	57.060	29.480	30.410	44.640	58.630	84.740	5.538
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:35:42	-0.399	0.102	0.108	-0.072	-0.073	0.452	0.000	0.132
2	16:36:07	-0.428	0.073	0.101	-0.156	-0.371	-0.506	0.000	0.072
3	16:36:32	-0.419	0.037	0.101	0.004	-0.943	1.215	0.000	0.079
x		-0.415	0.070	0.103	-0.075	-0.463	0.387	0.000	0.094
σ		0.015	0.033	0.004	0.080	0.442	0.862	0.000	0.033
%RSD		3.610	46.350	4.073	107.000	95.570	222.900	0.000	34.660
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:35:42	73.639%	0.392	0.291	80.268%	-0.036	-0.048	0.042	0.038
2	16:36:07	75.497%	0.343	0.329	82.460%	-0.045	-0.039	0.007	-0.012
3	16:36:32	76.321%	0.423	0.296	83.300%	-0.049	-0.053	0.021	0.035
x		75.153%	0.386	0.305	82.009%	-0.043	-0.047	0.023	0.021
σ		1.374%	0.040	0.021	1.566%	0.007	0.007	0.018	0.028
%RSD		1.828	10.350	6.766	1.909	15.080	14.480	76.480	137.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:35:42	74.859%	-2.524	-0.603	-0.579	0.114	0.117	79.592%	79.662%
2	16:36:07	78.220%	-2.514	-0.624	-0.604	0.068	0.106	81.164%	82.233%
3	16:36:32	78.083%	-2.447	-0.641	-0.633	0.114	0.103	81.597%	83.253%
x		77.054%	-2.495	-0.623	-0.605	0.099	0.109	80.785%	81.716%
σ		1.902%	0.042	0.019	0.027	0.026	0.008	1.055%	1.850%
%RSD		2.469	1.679	2.999	4.501	26.720	6.979	1.306	2.264
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:35:42	0.050	0.039	0.052	0.039	0.034	85.516%		
2	16:36:07	0.029	0.030	0.033	0.031	0.033	85.401%		
3	16:36:32	0.038	0.036	0.033	0.016	0.017	85.955%		
x		0.039	0.035	0.039	0.029	0.028	85.624%		
σ		0.010	0.005	0.011	0.012	0.009	0.292%		
%RSD		26.780	13.480	27.510	42.010	33.740	0.341		

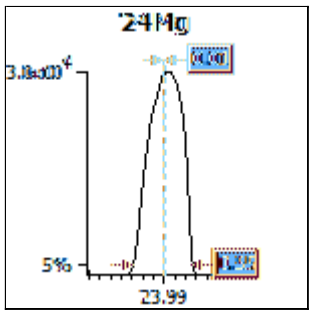
Performance Report

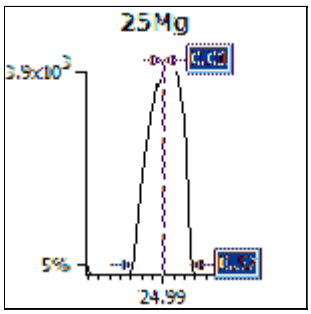
Sample details
Sample name : ITUNE
Acquired at : 1/21/2015 7:43:47 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

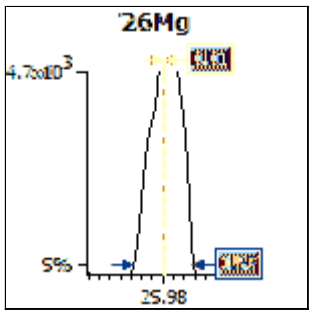
Mass Calibration verification

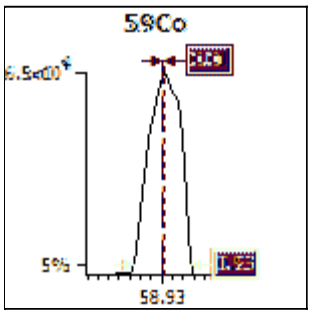
Acquisition parameters
Sweeps : 50
Dwell : 1.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

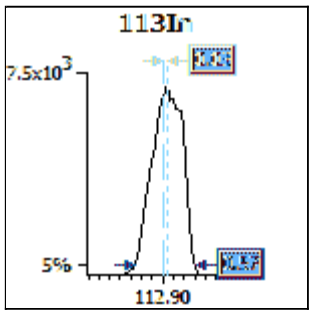


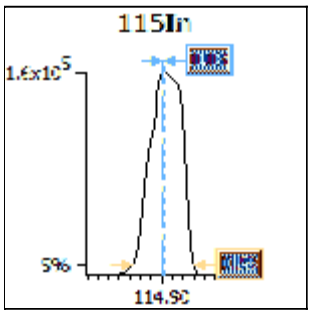


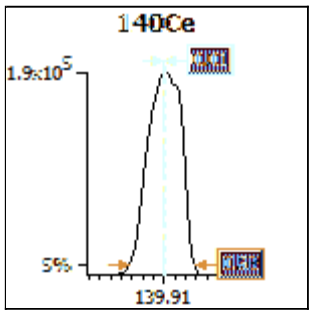


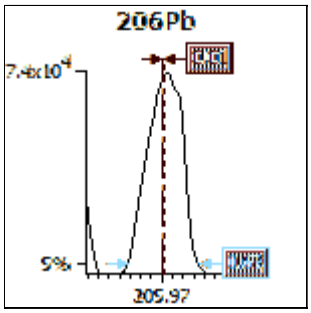


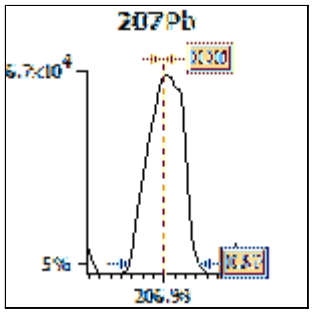


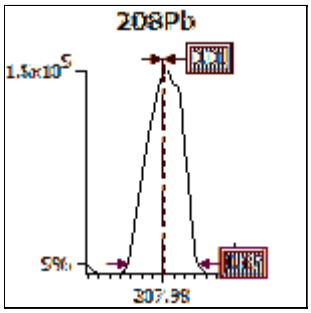












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.40	0.10	0.57	0.01
24Mg	0.90	0.40	0.10	0.55	0.01
25Mg	0.90	0.40	0.10	0.57	0.01
26Mg	0.90	0.40	0.10	0.57	0.01
59Co	0.90	0.40	0.10	0.53	0.01
113In	0.90	0.40	0.10	0.57	0.03
115In	0.90	0.40	0.10	0.59	0.03
140Ce	0.90	0.40	0.10	0.63	0.01
206Pb	0.90	0.40	0.10	0.69	0.01
207Pb	0.90	0.40	0.10	0.67	0.01
208Pb	0.90	0.40	0.10	0.67	0.01

Sample details
Sample name : ITUNE
Acquired at : 1/21/2015 7:43:47 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

Tune conditions

Major	
Extraction	-200
Lens 1	4.7
Focus	20.8
D1	-29.0
Pole Bias	-0.0
Hexapole Bias	-3.4
Nebuliser	0.84
Sampling Depth	200

Minor	
Lens 2	-47.8
Lens 3	-170.2
Forward power	1404
Horizontal	31
Vertical	435
D2	-121
DA	-80.0
Cool	14.0
Auxiliary	0.80

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT1	0.00
CCT2	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 180

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	113In	115In
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	-	>100	>500	>150	>150	>500	>500	>10000
1	7:44:33 AM	0	5188	30491	4183	5069	66476	6722	154133
2	7:45:45 AM	1	5283	31070	4325	5154	67105	6704	154021
3	7:46:57 AM	0	5265	31240	4196	5098	66047	6560	151337
4	7:48:08 AM	1	5346	31268	4196	5121	66023	6654	150109
5	7:49:20 AM	0	5432	31372	4326	5096	66125	6415	148712
x		0	5303	31088	4245	5107	66355	6611	151662
σ		0.20	91.41	351.04	73.56	31.84	456.77	126.25	2392.05
%RSD		52.489	1.724	1.129	1.733	0.623	0.688	1.910	1.577

Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	5.0%	-	5.0%	5.0%	5.0%	-
	Countrate	>10000	-	>1000	>1000	>5000	-
1	7:44:33 AM	194178	3464	70980	64829	154068	0
2	7:45:45 AM	193831	3381	71015	64510	153030	0
3	7:46:57 AM	190543	3267	69385	63507	150331	0
4	7:48:08 AM	189568	3297	68752	62462	148800	0
5	7:49:20 AM	186842	3208	68069	62098	146121	0
x		190992	3324	69640	63481	150470	0
σ		3068.55	100.54	1323.46	1206.98	3210.16	0.05
%RSD		1.607	3.025	1.900	1.901	2.133	29.881

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	7:44:33 AM	0
2	7:45:45 AM	0
3	7:46:57 AM	0
4	7:48:08 AM	0
5	7:49:20 AM	0
x		0.0174
σ		0.00
%RSD		1.6112

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Batch Number: 130921 Batch Start Date: 01/16/15 11:00 Batch Analyst: Baikadi, Ashwin

Batch Method: 3005A Batch End Date: 01/16/15 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTICPMS 00018	MTAPITTMSA 00023	MTAPITTMSC 00029	
MB 180-130921/1		3005A, 6020A		50 mL	50 mL				
LCS 180-130921/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-40481-B-1	HD-MW-100D-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-2	HD-MW-100I-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-3	HD-MW-100S-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-4	HD-MW-99D-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-5	HD-MW-147A-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-6	HD-MW-75S-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-7	HD-MW-75D-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40481-B-8	HD-MW-37D-0/1-0	3005A, 6020A	T	50 mL	50 mL				

Batch Notes	
Batch Comment	Metals B5
First End time	15:00
Lot # of hydrochloric acid	2.5 ml 1452455
Lot # of Nitric Acid	1.0 ml 1459659
Hot Block ID number	#3
Oven, Bath or Block Temperature 1	95
Pipette ID	L1201611U
Person who witnessed spiking	AB
First Start time	11:00
ID number of the thermometer	IP2-14 CF=0.0 C2
Digestion Tube/Cup Lot #	1406020
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: 180-40481-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-MW-100D-0/1-0	180-40481-1
HD-MW-100I-0/1-0	180-40481-2
HD-MW-100S-0/1-0	180-40481-3
HD-MW-99D-0/1-0	180-40481-4
HD-MW-147A-0/1-0	180-40481-5
HD-MW-75S-0/1-0	180-40481-6
HD-MW-75D-0/1-0	180-40481-7
HD-MW-37D-0/1-0	180-40481-8

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-100D-0/1-0 Lab Sample ID: 180-40481-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 10:50

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	240	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	240	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-100I-0/1-0 Lab Sample ID: 180-40481-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 09:20

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	240	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	240	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-100S-0/1-0 Lab Sample ID: 180-40481-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 10:00

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	250	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	250	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	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-99D-0/1-0 Lab Sample ID: 180-40481-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 12:55

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	260	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	260	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-147A-0/1-0 Lab Sample ID: 180-40481-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 12:10

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	220	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	220	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	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-75S-0/1-0 Lab Sample ID: 180-40481-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 11:30

Reporting Basis: WET Date Received: 01/15/2015 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	200	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	200	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-75D-0/1-0 Lab Sample ID: 180-40481-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 10:15

Reporting Basis: WET Date Received: 01/15/2015 09:00

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: 180-40481-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG ID.:

Matrix: Water Date Sampled: 01/14/2015 12:35

Reporting Basis: WET Date Received: 01/15/2015 09:00

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

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Analyst: CLL Batch Start Date: 01/23/2015

Reporting Units: mg/L Analytical Batch No.: 131534

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
21	CCB	05:50	Total Alkalinity as CaCO3 to pH 4.5	3.96				J	
			Bicarbonate Alkalinity as CaCO3	3.96				J	
			Carbonate Alkalinity as CaCO3	5.0				U	
12	CCV	05:50	Total Alkalinity as CaCO3 to pH 4.5	135	125	108	80-120		WALK125PPMCCV_00080
13	CCB	05:50	Total Alkalinity as CaCO3 to pH 4.5	3.96				J	
			Bicarbonate Alkalinity as CaCO3	3.96				J	
			Carbonate Alkalinity as CaCO3	5.0				U	
20	CCV	05:50	Total Alkalinity as CaCO3 to pH 4.5	133	125	106	80-120		WALK125PPMCCV_00080

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.: 180-40481-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 131534 Date: 01/23/2015 05:50							
SM 2320B	MB 180-131534/2	Total Alkalinity as CaCO3 to pH 4.5	3.96	J	mg/L	5.0	1
SM 2320B	MB 180-131534/2	Bicarbonate Alkalinity as CaCO3	3.96	J	mg/L	5.0	1
SM 2320B	MB 180-131534/2	Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 131534 Date: 01/23/2015 05:50								
SM 2320B	HD-MW-99D-0/1-0	180-40481-4	Total Alkalinity as CaCO3 to pH 4.5	260	mg/L			
SM 2320B	HD-MW-99D-0/1-0	180-40481-4 DU	Total Alkalinity as CaCO3 to pH 4.5	261	mg/L	0.8	20	
SM 2320B	HD-MW-99D-0/1-0	180-40481-4	Bicarbonate Alkalinity as CaCO3	260	mg/L			
SM 2320B	HD-MW-99D-0/1-0	180-40481-4 DU	Bicarbonate Alkalinity as CaCO3	261	mg/L	0.8	20	
SM 2320B	HD-MW-99D-0/1-0	180-40481-4	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	HD-MW-99D-0/1-0	180-40481-4 DU	Carbonate Alkalinity as CaCO3	5.0	mg/L	NC	20	U

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

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 131534 Date: 01/23/2015 05:50											
						LCS Source: WALK250PPMPi_00089					
SM 2320B	LCS 180-131534/1	Total Alkalinity as CaCO3 to pH 4.5	267		mg/L	250	107	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: 180-40481-1

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: 180-40481-1

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.: 180-40481-1

SDG No.:

Instrument ID: NOEQUIP Method: SM 2320B

Start Date: 01/23/2015 05:50 End Date: 01/23/2015 05:50

Lab Sample ID	D / F	Type	Time	Analytes																				
				Alk	BALKCC	CarAlk																		
CCB 180-131534/21	1		05:50	X	X	X																		
LCS 180-131534/1	1	T	05:50	X																				
MB 180-131534/2	1	T	05:50	X	X	X																		
ZZZZZZ			05:50																					
ZZZZZZ			05:50																					
ZZZZZZ			05:50																					
ZZZZZZ			05:50																					
ZZZZZZ			05:50																					
ZZZZZZ			05:50																					
180-40481-1	1	T	05:50	X	X	X																		
180-40481-2	1	T	05:50	X	X	X																		
180-40481-3	1	T	05:50	X	X	X																		
CCV 180-131534/12	1		05:50	X																				
CCB 180-131534/13	1		05:50	X	X	X																		
180-40481-4	1	T	05:50	X	X	X																		
180-40481-4 DU	1	T	05:50	X	X	X																		
180-40481-5	1	T	05:50	X	X	X																		
180-40481-6	1	T	05:50	X	X	X																		
180-40481-7	1	T	05:50	X	X	X																		
180-40481-8	1	T	05:50	X	X	X																		
CCV 180-131534/20	1		05:50	X																				

Prep Types

T = Total/NA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PITTSBURGH
ALKALINITY LOGSHEET
Method 2320B

Analyst: C L Lohrde
Date: 1-23-15
Reviewed By: See DCC
Date: ~~Oct-23-15~~
pH Meter ID: Accumet XL S/N #94102132
AD Batch: 131534
pH 4 Start: 4.04
pH 4 End: 4.06

Job Number(s): 40575-40577-40481

Calculations:

$$\text{Alkalinity as } CaCO_3 \text{ mg/L} = \frac{\text{(mL of } H_2SO_4\text{) (N)(50,000)}}{\text{mL of Sample}}$$

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-2014-051

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	10.91	50	6.8	13.5	.0198	267.3				
MB	5.73		0	0.2		3.96				
180-40575-1	6.84		0	12.5		247.5				
2	6.24		0	8.2		162.36				
3	7.53		0	4.1		81.18				
4	9.39		0.3	2.0		39.6				
180-40577-1	6.72		0	1.5		29.7				
-1X	6.77		0	1.5		29.7				
180-40481-1	7.48		0	12.0		237.6				
2	7.48		0	12.2		241.56				
3	7.53		0	12.6		249.48				
CCV	10.76		3.4	6.8		134.64				
CCB	5.49		0	0.2		3.96				
180-40481-4	7.50		0	13.1		259.38				
4X	7.54		0	13.2		261.36				
5	7.44		0	11.3		223.74				
6	7.50		0	10.1		199.98				
7	7.37		0	10.5		207.9				
8	7.41		0	11.5		227.7				
CCV	10.80		3.5	6.7		132.66				
CCB	5.53		0	0.2		3.96				

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Batch Number: 131534 Batch Start Date: 01/23/15 05:50 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 180-131534/1		SM 2320B		50 mL	10.91 SU	0 mL	6.8 mL	6.8 mL	0 mL
MB 180-131534/2		SM 2320B		50 mL	5.73 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-1	HD-MW-100D-0/1-0	SM 2320B	T	50 mL	7.48 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-2	HD-MW-100I-0/1-0	SM 2320B	T	50 mL	7.48 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-3	HD-MW-100S-0/1-0	SM 2320B	T	50 mL	7.53 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-131534/12		SM 2320B		50 mL	10.76 SU	0 mL	3.4 mL	3.4 mL	0 mL
CCB 180-131534/13		SM 2320B		50 mL	5.49 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-4	HD-MW-99D-0/1-0	SM 2320B	T	50 mL	7.50 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-4 DU	HD-MW-99D-0/1-0	SM 2320B	T	50 mL	7.54 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-5	HD-MW-147A-0/1-0	SM 2320B	T	50 mL	7.44 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-6	HD-MW-75S-0/1-0	SM 2320B	T	50 mL	7.50 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-7	HD-MW-75D-0/1-0	SM 2320B	T	50 mL	7.37 SU	0 mL	0 mL	0 mL	0 mL
180-40481-A-8	HD-MW-37D-0/1-0	SM 2320B	T	50 mL	7.41 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-131534/20		SM 2320B		50 mL	10.80 SU	0 mL	3.5 mL	3.5 mL	0 mL
CCB 180-131534/21		SM 2320B		50 mL	5.53 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 180-131534/1		SM 2320B		6.7 mL	6.7 mL	Case 4	265.32 mg/L	1.979999999999 6 mg/L	0 mg/L
MB 180-131534/2		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L
180-40481-A-1	HD-MW-100D-0/1-0	SM 2320B	T	12.0 mL	12 mL	Case 1	0 mg/L	0 mg/L	237.6 mg/L
180-40481-A-2	HD-MW-100I-0/1-0	SM 2320B	T	12.2 mL	12.2 mL	Case 1	0 mg/L	0 mg/L	241.56 mg/L
180-40481-A-3	HD-MW-100S-0/1-0	SM 2320B	T	12.6 mL	12.6 mL	Case 1	0 mg/L	0 mg/L	249.48 mg/L
CCV 180-131534/12		SM 2320B		3.4 mL	3.4 mL	Case 3	134.64 mg/L	0 mg/L	0 mg/L
CCB 180-131534/13		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L
180-40481-A-4	HD-MW-99D-0/1-0	SM 2320B	T	13.1 mL	13.1 mL	Case 1	0 mg/L	0 mg/L	259.38 mg/L
180-40481-A-4 DU	HD-MW-99D-0/1-0	SM 2320B	T	13.2 mL	13.2 mL	Case 1	0 mg/L	0 mg/L	261.36 mg/L

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40481-1

SDG No.:

Batch Number: 131534 Batch Start Date: 01/23/15 05:50 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
180-40481-A-5	HD-MW-147A-0/1-0	SM 2320B	T	11.3 mL	11.3 mL	Case 1	0 mg/L	0 mg/L	223.74 mg/L
180-40481-A-6	HD-MW-75S-0/1-0	SM 2320B	T	10.1 mL	10.1 mL	Case 1	0 mg/L	0 mg/L	199.98 mg/L
180-40481-A-7	HD-MW-75D-0/1-0	SM 2320B	T	10.5 mL	10.5 mL	Case 1	0 mg/L	0 mg/L	207.9 mg/L
180-40481-A-8	HD-MW-37D-0/1-0	SM 2320B	T	11.5 mL	11.5 mL	Case 1	0 mg/L	0 mg/L	227.7 mg/L
CCV 180-131534/20		SM 2320B		3.2 mL	3.2 mL	Case 4	126.72 mg/L	5.94 mg/L	0 mg/L
CCB 180-131534/21		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00080	WALK250PPMPi 00089	
LCS 180-131534/1		SM 2320B		134.64 mg/L	267.3 mg/L	50 mL		50 mL	
MB 180-131534/2		SM 2320B		0 mg/L	3.96 mg/L	50 mL			
180-40481-A-1	HD-MW-100D-0/1-0	SM 2320B	T	0 mg/L	237.6 mg/L	50 mL			
180-40481-A-2	HD-MW-100I-0/1-0	SM 2320B	T	0 mg/L	241.56 mg/L	50 mL			
180-40481-A-3	HD-MW-100S-0/1-0	SM 2320B	T	0 mg/L	249.48 mg/L	50 mL			
CCV 180-131534/12		SM 2320B		67.32 mg/L	134.64 mg/L	50 mL	50 mL		
CCB 180-131534/13		SM 2320B		0 mg/L	3.96 mg/L	50 mL			
180-40481-A-4	HD-MW-99D-0/1-0	SM 2320B	T	0 mg/L	259.38 mg/L	50 mL			
180-40481-A-4 DU	HD-MW-99D-0/1-0	SM 2320B	T	0 mg/L	261.36 mg/L	50 mL			
180-40481-A-5	HD-MW-147A-0/1-0	SM 2320B	T	0 mg/L	223.74 mg/L	50 mL			
180-40481-A-6	HD-MW-75S-0/1-0	SM 2320B	T	0 mg/L	199.98 mg/L	50 mL			
180-40481-A-7	HD-MW-75D-0/1-0	SM 2320B	T	0 mg/L	207.9 mg/L	50 mL			
180-40481-A-8	HD-MW-37D-0/1-0	SM 2320B	T	0 mg/L	227.7 mg/L	50 mL			
CCV 180-131534/20		SM 2320B		69.3 mg/L	132.66 mg/L	50 mL	50 mL		
CCB 180-131534/21		SM 2320B		0 mg/L	3.96 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.: 180-40481-1

SDG No.:

Batch Number: 131534 Batch Start Date: 01/23/15 05:50 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Batch Notes	
Batch Comment	PH 4 START: 4.04 PH 4 END: 4.06
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	1443296
Sulfuric Acid Vendor	RICCA
Nominal Amount Used	50 mL
Normality of first Titrant	.0198 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: 1/14/2015	COC No: TAP2015011402
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. 10012.16.004
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			
Project Name: Dry Season Shutdown Event 9	☐ 1 week			
Site: Harley-Davidson, York PA	☐ 5 days			
Quote # 18000557	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO4, CL, NO3 2320B/300.0	Total Na, Ca, K, and Mg (SW846 6020A)
HD-MW-100D-0/1-0	1/14/15	10:50	Groundwater	Water	5	X	X	X
HD-MW-100I-0/1-0	1/14/15	9:20	Groundwater	Water	5	X	X	X
HD-MW-100S-0/1-0	1/14/15	10:00	Groundwater	Water	5	X	X	X
HD-MW-99D-0/1-0	1/14/15	12:55	Groundwater	Water	5	X	X	X
HD-MW-147A-0/1-0	1/14/15	12:10	Groundwater	Water	5	X	X	X
HD-MW-75S-0/1-0	1/14/15	11:30	Groundwater	Water	5	X	X	X
HD-MW-75D-0/1-0	1/14/15	10:15	Groundwater	Water	5	X	X	X
HD-MW-37D-0/1-0	1/14/15	12:35	Groundwater	Water	5	X	X	X
HD-QC3-0/1-2	1/14/15	12:00	Trip Blank	Water	2	X		
Number of Containers						3	1	1
Preservation Used: 1= Ice, 2= HCL, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Unpreserved 7=Na2S2O3						2	1	4
Field Filter						N	N	N

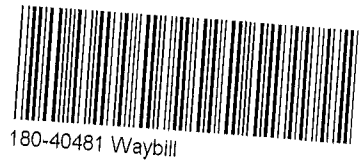
Specific Notes:

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: 1/14/15 1500	Received by:	Company: T.A.	Date/Time: 1/14/15 15:00
Relinquished by:	Company: TA	Date/Time: 1/14/15 1630	Received by:	Company: TAP	Date/Time: 1-15-15 9:00
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: 14JAN15
ACTWGT: 43.0 LB
CAD: 8490299/INET3550

BILL RECIPIENT

TO **SAMPLE RECEIPT**
TEST AMERICA - PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF:
INV:
PO: DEPT:

52251/8F15/8AC9

Uncorrected temp 0.2 °C
Thermometer ID 6
CF 0 Initials AB
PT-WI-SR-001 effective 7/26/13

FedEx Express

J14221405230luv

THU - 15 JAN AA
TRK# 0201 7725 8309 1805 STANDARD OVERNIGHT

EV AGCA

15238
PIT

Part # 156297-435 RIT 09/14

King of Prussia

450

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-40481-1

Login Number: 40481

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	