TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 180-40541-1

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
1/30/2015 11:05 AM

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01/30/2015

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CASE NARRATIVE

Client: Groundwater Sciences Corporation

Project: Harley Davidson

Report Number: 180-40541-1

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 01/17/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.3 C.

The two voa vials received for the Trip Blank have an id of HD-QC5-0/1-2 on the COC; however the id on the labels reads HD-QC1-0/1-2. The id on the COC was used.

VOLATILES

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

The laboratory control sample (LCS) for batch 131582 recovered outside control limits for the following analytes:
Trans-1,3-Dichloropropene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

METALS

Calcium and Magnesium were detected in method blank MB 180-131320/1-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

Sample HD-CW-18-0/1-0 (4) 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 180-131669/2 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 180-131000/6 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.

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 131443

Lab Sample ID: CCVIS 180-131443/2 Client Sample ID:

Date Analyzed: 01/22/15 10:50 Lab File ID: 50121002.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.26	Peak Tail	fergusond	01/22/15 11:20

Lab Sample ID: LCS 180-131443/9 Client Sample ID:

Date Analyzed: 01/22/15 13:26 Lab File ID: 50121009.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.06	Split Peak	fergusond	01/22/15 14:16

Lab Sample ID: 180-40541-1 Client Sample ID: HD-QC5-0/1-2

Date Analyzed: 01/22/15 17:03 Lab File ID: 50121018.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.50	Split Peak	fergusond	01/23/15 08:05

Lab Sample ID: 180-40541-6 Client Sample ID: HD-MW-39D-0/1-0

Date Analyzed: 01/22/15 19:28 Lab File ID: 50121024.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	4.58	Split Peak	fergusond	01/23/15 08:16
Chloroform	6.34	Split Peak	fergusond	01/23/15 08:16

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 131443

Lab Sample ID: 180-40541-7 Client Sample ID: HD-MW-127-0/1-0

Date Analyzed: 01/22/15 19:52 Lab File ID: 50121025.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethene	3.39	Split Peak	fergusond	01/23/15 08:19
trans-1,2-Dichloroethene	4.58	Split Peak	fergusond	01/23/15 08:19
Chloroform	6.34	Split Peak	fergusond	01/23/15 08:19

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 131582

Lab Sample ID: LCSD 180-131582/7 Client Sample ID:

Date Analyzed: 01/23/15 13:20 Lab File ID: 50123007.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.06	Split Peak	fergusond	01/23/15 13:43

Lab Sample ID: 180-40541-8 Client Sample ID: HD-MW-50S-0/1-0

Date Analyzed: 01/23/15 15:59 Lab File ID: 50123013.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.36	Poor chromatography	gordonk	01/25/15 20:27

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 131906

Lab Sample ID: LCS 180-131906/8 Client Sample ID:

Date Analyzed: 01/28/15 12:00 Lab File ID: 50128008.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	01/28/15 12:42

SAMPLE SUMMARY

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
180-40541-1	HD-QC5-0/1-2	Water	01/16/2015 1200	01/17/2015 0930
180-40541-2	HD-MW-114-0/1-0	Water	01/16/2015 1115	01/17/2015 0930
180-40541-3	HD-MW-132-0/1-0	Water	01/16/2015 0940	01/17/2015 0930
180-40541-4	HD-CW-18-0/1-0	Water	01/16/2015 1220	01/17/2015 0930
180-40541-5	HD-MW-74S-0/1-0	Water	01/16/2015 0950	01/17/2015 0930
180-40541-6	HD-MW-39D-0/1-0	Water	01/16/2015 1045	01/17/2015 0930
180-40541-7	HD-MW-127-0/1-0	Water	01/16/2015 1220	01/17/2015 0930
180-40541-8	HD-MW-50S-0/1-0	Water	01/16/2015 1230	01/17/2015 0930

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40541-2	**HD-MW-114-0/1-0**					
Vinyl chloride		16		13	ug/L	8260C
1,1-Dichloroethene		29		13	ug/L	8260C
trans-1,2-Dichloroethene		12	J	13	ug/L	8260C
1,1-Dichloroethane		29		13	ug/L	8260C
cis-1,2-Dichloroethene		2300		130	ug/L	8260C
Trichloroethene		2200		130	ug/L	8260C
Tetrachloroethene		760		130	ug/L	8260C
Calcium		120000	B	100	ug/L	6020A
Potassium		8100		100	ug/L	6020A
Magnesium		20000	B	100	ug/L	6020A
Sodium		35000		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		0.61	B	0.10	mg/L	300.0
Chloride		160		1.0	mg/L	300.0
Sulfate		77		1.0	mg/L	300.0
180-40541-3	**HD-MW-132-0/1-0**					
1,1-Dichloroethene		23		2.5	ug/L	8260C
trans-1,2-Dichloroethene		2.8		2.5	ug/L	8260C
1,1-Dichloroethane		13		2.5	ug/L	8260C
cis-1,2-Dichloroethene		590		25	ug/L	8260C
Trichloroethene		530		25	ug/L	8260C
Tetrachloroethene		1.8	J	2.5	ug/L	8260C
Calcium		56000	B	100	ug/L	6020A
Potassium		1900		100	ug/L	6020A
Magnesium		3600	B	100	ug/L	6020A
Sodium		4800		100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		160	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		160	B	5.0	mg/L	SM 2320B
Nitrate as N		4.8	B	0.10	mg/L	300.0
Chloride		11		1.0	mg/L	300.0
Sulfate		3.7		1.0	mg/L	300.0

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40541-4	**HD-CW-18-0/1-0**					
1,1-Dichloroethene		0.97	J	1.0	ug/L	8260C
1,1-Dichloroethane		1.4		1.0	ug/L	8260C
cis-1,2-Dichloroethene		29		1.0	ug/L	8260C
Trichloroethene		8.3		1.0	ug/L	8260C
Tetrachloroethene		0.41	J	1.0	ug/L	8260C
Calcium		80000	B	100	ug/L	6020A
Potassium		11000		100	ug/L	6020A
Magnesium		40000	B	100	ug/L	6020A
Sodium		140000		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		0.037	J B	0.10	mg/L	300.0
Chloride		230		5.0	mg/L	300.0
Sulfate		250		5.0	mg/L	300.0
180-40541-5	**HD-MW-74S-0/1-0**					
1,1-Dichloroethene		66		25	ug/L	8260C
1,1-Dichloroethane		15	J	25	ug/L	8260C
cis-1,2-Dichloroethene		270		25	ug/L	8260C
1,1,1-Trichloroethane		210		25	ug/L	8260C
Trichloroethene		540		25	ug/L	8260C
Tetrachloroethene		230		25	ug/L	8260C
Calcium		130000	B	100	ug/L	6020A
Potassium		9700		100	ug/L	6020A
Magnesium		14000	B	100	ug/L	6020A
Sodium		52000		100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		280	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		280	B	5.0	mg/L	SM 2320B
Nitrate as N		3.7	B	0.10	mg/L	300.0
Chloride		160		1.0	mg/L	300.0
Sulfate		54		1.0	mg/L	300.0

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40541-6	**HD-MW-39D-0/1-0**					
1,1-Dichloroethene		2.4	J	3.0	ug/L	8260C
trans-1,2-Dichloroethene		0.76	J	3.0	ug/L	8260C
1,1-Dichloroethane		1.5	J	3.0	ug/L	8260C
cis-1,2-Dichloroethene		85		3.0	ug/L	8260C
1,1,1-Trichloroethane		6.7		3.0	ug/L	8260C
Trichloroethene		110		3.0	ug/L	8260C
Tetrachloroethene		50		3.0	ug/L	8260C
Calcium		130000	B	100	ug/L	6020A
Potassium		7700		100	ug/L	6020A
Magnesium		14000	B	100	ug/L	6020A
Sodium		30000		100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		310	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		310	B	5.0	mg/L	SM 2320B
Nitrate as N		4.2	B	0.10	mg/L	300.0
Chloride		120		1.0	mg/L	300.0
Sulfate		36		1.0	mg/L	300.0
180-40541-7	**HD-MW-127-0/1-0**					
1,1-Dichloroethene		5.3	J	13	ug/L	8260C
1,1-Dichloroethane		3.1	J	13	ug/L	8260C
cis-1,2-Dichloroethene		310		13	ug/L	8260C
1,1,1-Trichloroethane		7.9	J	13	ug/L	8260C
Trichloroethene		110		13	ug/L	8260C
Tetrachloroethene		18		13	ug/L	8260C
Calcium		100000	B	100	ug/L	6020A
Potassium		4700		100	ug/L	6020A
Magnesium		19000	B	100	ug/L	6020A
Sodium		25000		100	ug/L	6020A
Total Alkalinity as CaCO3 to pH 4.5		330	B	5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		330	B	5.0	mg/L	SM 2320B
Nitrate as N		2.3	B	0.10	mg/L	300.0
Chloride		100		1.0	mg/L	300.0
Sulfate		7.7		1.0	mg/L	300.0

EXECUTIVE SUMMARY - Detections

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
180-40541-8	**HD-MW-50S-0/1-0**					
1,1-Dichloroethene		6.6		5.0	ug/L	8260C
1,1-Dichloroethane		1.7	J	5.0	ug/L	8260C
cis-1,2-Dichloroethene		130		5.0	ug/L	8260C
1,1,1-Trichloroethane		29		5.0	ug/L	8260C
Trichloroethene		83		5.0	ug/L	8260C
Tetrachloroethene		34		5.0	ug/L	8260C
Calcium		110000	B	100	ug/L	6020A
Potassium		9900		100	ug/L	6020A
Magnesium		11000	B	100	ug/L	6020A
Sodium		76000		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		1.8	B	0.10	mg/L	300.0
Chloride		170		1.0	mg/L	300.0
Sulfate		68		1.0	mg/L	300.0

METHOD SUMMARY

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

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: 180-40541-1

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

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Client Sample ID: **HD-QC5-0/1-2**

Lab Sample ID: 180-40541-1 Date Sampled: 01/16/2015 1200
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121018.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1703			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1703				

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)	123		64 - 135
Toluene-d8 (Surr)	92		71 - 118
4-Bromofluorobenzene (Surr)	93		70 - 118
Dibromofluoromethane (Surr)	120		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-QC5-0/1-2**

Lab Sample ID: 180-40541-1
Client Matrix: Water

Date Sampled: 01/16/2015 1200
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121018.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1703			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1703				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2 Date Sampled: 01/16/2015 1115
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121029.D
Dilution:	12.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 2129			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 2129				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	13	U	3.5	13
Vinyl chloride	16		2.8	13
Bromomethane	13	U	3.9	13
Chloroethane	13	U	2.7	13
1,1-Dichloroethene	29		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	12	J	2.1	13
Methyl tert-butyl ether	13	U	2.3	13
1,1-Dichloroethane	29		1.5	13
cis-1,2-Dichloroethene	2100	E	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	13	U	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	1900	E	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	700	E	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)	115		64 - 135
Toluene-d8 (Surr)	97		71 - 118
4-Bromofluorobenzene (Surr)	89		70 - 118
Dibromofluoromethane (Surr)	122		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2
Client Matrix: Water

Date Sampled: 01/16/2015 1115
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121029.D
Dilution:	12.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 2129			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 2129				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2 Date Sampled: 01/16/2015 1115
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121019.D
Dilution:	125			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1727	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1727				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	130	U	35	130
Vinyl chloride	130	U	28	130
Bromomethane	130	U	39	130
Chloroethane	130	U	27	130
1,1-Dichloroethene	130	U	37	130
Acetone	630	U	310	630
Carbon disulfide	130	U	27	130
Methylene Chloride	130	U	16	130
trans-1,2-Dichloroethene	130	U	21	130
Methyl tert-butyl ether	130	U	23	130
1,1-Dichloroethane	32	J	15	130
cis-1,2-Dichloroethene	2300		30	130
Bromochloromethane	130	U	23	130
2-Butanone (MEK)	630	U	68	630
Chloroform	130	U	21	130
1,1,1-Trichloroethane	130	U	36	130
Carbon tetrachloride	130	U	17	130
Benzene	130	U	13	130
1,2-Dichloroethane	130	U	26	130
Trichloroethene	2200		18	130
1,2-Dichloropropane	130	U	12	130
Bromodichloromethane	130	U	16	130
cis-1,3-Dichloropropene	130	U	23	130
4-Methyl-2-pentanone (MIBK)	630	U	66	630
Toluene	130	U	19	130
trans-1,3-Dichloropropene	130	U	19	130
1,1,2-Trichloroethane	130	U	25	130
Tetrachloroethene	760		19	130
2-Hexanone	630	U	20	630
Dibromochloromethane	130	U	17	130
1,2-Dibromoethane (EDB)	130	U	23	130
Chlorobenzene	130	U	17	130
1,1,1,2-Tetrachloroethane	130	U	35	130
Ethylbenzene	130	U	28	130
Xylenes, Total	380	U	61	380
Styrene	130	U	12	130
Bromoform	130	U	24	130
1,1,2,2-Tetrachloroethane	130	U	25	130
Acrylonitrile	2500	U	68	2500
1,4-Dioxane	25000	U	4300	25000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	116		64 - 135
Toluene-d8 (Surr)	95		71 - 118
4-Bromofluorobenzene (Surr)	91		70 - 118
Dibromofluoromethane (Surr)	122		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2
Client Matrix: Water

Date Sampled: 01/16/2015 1115
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121019.D
Dilution:	125			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1727	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1727				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-3 Date Sampled: 01/16/2015 0940
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131906	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50128027.D
Dilution:	2.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/28/2015 1938			Final Weight/Volume:	5 mL
Prep Date:	01/28/2015 1938				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	2.5	U	0.71	2.5
Vinyl chloride	2.5	U	0.57	2.5
Bromomethane	2.5	U	0.78	2.5
Chloroethane	2.5	U	0.54	2.5
1,1-Dichloroethene	23		0.74	2.5
Acetone	13	U	6.3	13
Carbon disulfide	2.5	U	0.53	2.5
Methylene Chloride	2.5	U	0.31	2.5
trans-1,2-Dichloroethene	2.8		0.42	2.5
Methyl tert-butyl ether	2.5	U	0.46	2.5
1,1-Dichloroethane	13		0.29	2.5
cis-1,2-Dichloroethene	590	E	0.59	2.5
Bromochloromethane	2.5	U	0.45	2.5
2-Butanone (MEK)	13	U	1.4	13
Chloroform	2.5	U	0.43	2.5
1,1,1-Trichloroethane	2.5	U	0.72	2.5
Carbon tetrachloride	2.5	U	0.34	2.5
Benzene	2.5	U	0.26	2.5
1,2-Dichloroethane	2.5	U	0.53	2.5
Trichloroethene	500	E	0.36	2.5
1,2-Dichloropropane	2.5	U	0.24	2.5
Bromodichloromethane	2.5	U	0.33	2.5
cis-1,3-Dichloropropene	2.5	U	0.47	2.5
4-Methyl-2-pentanone (MIBK)	13	U	1.3	13
Toluene	2.5	U	0.38	2.5
trans-1,3-Dichloropropene	2.5	U	0.37	2.5
1,1,2-Trichloroethane	2.5	U	0.50	2.5
Tetrachloroethene	1.8	J	0.37	2.5
2-Hexanone	13	U	0.40	13
Dibromochloromethane	2.5	U	0.34	2.5
1,2-Dibromoethane (EDB)	2.5	U	0.45	2.5
Chlorobenzene	2.5	U	0.34	2.5
1,1,1,2-Tetrachloroethane	2.5	U	0.69	2.5
Ethylbenzene	2.5	U	0.57	2.5
Xylenes, Total	7.5	U	1.2	7.5
Styrene	2.5	U	0.24	2.5
Bromoform	2.5	U	0.48	2.5
1,1,2,2-Tetrachloroethane	2.5	U	0.50	2.5
Acrylonitrile	50	U	1.4	50
1,4-Dioxane	500	U	86	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		64 - 135
Toluene-d8 (Surr)	96		71 - 118
4-Bromofluorobenzene (Surr)	93		70 - 118
Dibromofluoromethane (Surr)	114		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-3
Client Matrix: Water

Date Sampled: 01/16/2015 0940
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131906	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50128027.D
Dilution:	2.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/28/2015 1938			Final Weight/Volume:	5 mL
Prep Date:	01/28/2015 1938				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-3 Date Sampled: 01/16/2015 0940
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121020.D
Dilution:	25			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1752	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1752				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	25	U	7.1	25
Vinyl chloride	25	U	5.7	25
Bromomethane	25	U	7.8	25
Chloroethane	25	U	5.4	25
1,1-Dichloroethene	24	J	7.4	25
Acetone	130	U	63	130
Carbon disulfide	25	U	5.3	25
Methylene Chloride	25	U	3.1	25
trans-1,2-Dichloroethene	25	U	4.2	25
Methyl tert-butyl ether	25	U	4.6	25
1,1-Dichloroethane	13	J	2.9	25
cis-1,2-Dichloroethene	590		5.9	25
Bromochloromethane	25	U	4.5	25
2-Butanone (MEK)	130	U	14	130
Chloroform	25	U	4.3	25
1,1,1-Trichloroethane	25	U	7.2	25
Carbon tetrachloride	25	U	3.4	25
Benzene	25	U	2.6	25
1,2-Dichloroethane	25	U	5.3	25
Trichloroethene	530		3.6	25
1,2-Dichloropropane	25	U	2.4	25
Bromodichloromethane	25	U	3.3	25
cis-1,3-Dichloropropene	25	U	4.7	25
4-Methyl-2-pentanone (MIBK)	130	U	13	130
Toluene	25	U	3.8	25
trans-1,3-Dichloropropene	25	U	3.7	25
1,1,2-Trichloroethane	25	U	5.0	25
Tetrachloroethene	25	U	3.7	25
2-Hexanone	130	U	4.0	130
Dibromochloromethane	25	U	3.4	25
1,2-Dibromoethane (EDB)	25	U	4.5	25
Chlorobenzene	25	U	3.4	25
1,1,1,2-Tetrachloroethane	25	U	6.9	25
Ethylbenzene	25	U	5.7	25
Xylenes, Total	75	U	12	75
Styrene	25	U	2.4	25
Bromoform	25	U	4.8	25
1,1,2,2-Tetrachloroethane	25	U	5.0	25
Acrylonitrile	500	U	14	500
1,4-Dioxane	5000	U	860	5000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		64 - 135
Toluene-d8 (Surr)	97		71 - 118
4-Bromofluorobenzene (Surr)	90		70 - 118
Dibromofluoromethane (Surr)	119		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-3
Client Matrix: Water

Date Sampled: 01/16/2015 0940
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121020.D
Dilution:	25			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1752	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1752				

Client: Groundwater Sciences Corporation | Job Number: 180-40541-1

Client Sample ID: **HD-CW-18-0/1-0**

Lab Sample ID: 180-40541-4 | Date Sampled: 01/16/2015 1220
Client Matrix: Water | Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50123012.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1535			Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1535				

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	0.97	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	1.4		0.12	1.0
cis-1,2-Dichloroethene	29		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	8.3		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	0.41	J	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)	102		71 - 118
4-Bromofluorobenzene (Surr)	101		70 - 118
Dibromofluoromethane (Surr)	109		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-CW-18-0/1-0**

Lab Sample ID: 180-40541-4
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50123012.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1535			Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1535				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Client Sample ID: **HD-MW-74S-0/1-0**

Lab Sample ID: 180-40541-5 Date Sampled: 01/16/2015 0950
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121022.D
Dilution:	25			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1840			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1840				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	25	U	7.1	25
Vinyl chloride	25	U	5.7	25
Bromomethane	25	U	7.8	25
Chloroethane	25	U	5.4	25
1,1-Dichloroethene	66		7.4	25
Acetone	130	U	63	130
Carbon disulfide	25	U	5.3	25
Methylene Chloride	25	U	3.1	25
trans-1,2-Dichloroethene	25	U	4.2	25
Methyl tert-butyl ether	25	U	4.6	25
1,1-Dichloroethane	15	J	2.9	25
cis-1,2-Dichloroethene	270		5.9	25
Bromochloromethane	25	U	4.5	25
2-Butanone (MEK)	130	U	14	130
Chloroform	25	U	4.3	25
1,1,1-Trichloroethane	210		7.2	25
Carbon tetrachloride	25	U	3.4	25
Benzene	25	U	2.6	25
1,2-Dichloroethane	25	U	5.3	25
Trichloroethene	540		3.6	25
1,2-Dichloropropane	25	U	2.4	25
Bromodichloromethane	25	U	3.3	25
cis-1,3-Dichloropropene	25	U	4.7	25
4-Methyl-2-pentanone (MIBK)	130	U	13	130
Toluene	25	U	3.8	25
trans-1,3-Dichloropropene	25	U	3.7	25
1,1,2-Trichloroethane	25	U	5.0	25
Tetrachloroethene	230		3.7	25
2-Hexanone	130	U	4.0	130
Dibromochloromethane	25	U	3.4	25
1,2-Dibromoethane (EDB)	25	U	4.5	25
Chlorobenzene	25	U	3.4	25
1,1,1,2-Tetrachloroethane	25	U	6.9	25
Ethylbenzene	25	U	5.7	25
Xylenes, Total	75	U	12	75
Styrene	25	U	2.4	25
Bromoform	25	U	4.8	25
1,1,2,2-Tetrachloroethane	25	U	5.0	25
Acrylonitrile	500	U	14	500
1,4-Dioxane	5000	U	860	5000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		64 - 135
Toluene-d8 (Surr)	90		71 - 118
4-Bromofluorobenzene (Surr)	82		70 - 118
Dibromofluoromethane (Surr)	110		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-74S-0/1-0**

Lab Sample ID: 180-40541-5
Client Matrix: Water

Date Sampled: 01/16/2015 0950
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121022.D
Dilution:	25			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1840			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1840				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Client Sample ID: **HD-MW-39D-0/1-0**

Lab Sample ID: 180-40541-6 Date Sampled: 01/16/2015 1045
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121024.D
Dilution:	3.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1928			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1928				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chloromethane	3.0	U	0.85	3.0
Vinyl chloride	3.0	U	0.68	3.0
Bromomethane	3.0	U	0.94	3.0
Chloroethane	3.0	U	0.64	3.0
1,1-Dichloroethene	2.4	J	0.89	3.0
Acetone	15	U	7.5	15
Carbon disulfide	3.0	U	0.64	3.0
Methylene Chloride	3.0	U	0.38	3.0
trans-1,2-Dichloroethene	0.76	J	0.51	3.0
Methyl tert-butyl ether	3.0	U	0.55	3.0
1,1-Dichloroethane	1.5	J	0.35	3.0
cis-1,2-Dichloroethene	85		0.71	3.0
Bromochloromethane	3.0	U	0.54	3.0
2-Butanone (MEK)	15	U	1.6	15
Chloroform	3.0	U	0.51	3.0
1,1,1-Trichloroethane	6.7		0.86	3.0
Carbon tetrachloride	3.0	U	0.41	3.0
Benzene	3.0	U	0.32	3.0
1,2-Dichloroethane	3.0	U	0.64	3.0
Trichloroethene	110		0.43	3.0
1,2-Dichloropropane	3.0	U	0.28	3.0
Bromodichloromethane	3.0	U	0.39	3.0
cis-1,3-Dichloropropene	3.0	U	0.56	3.0
4-Methyl-2-pentanone (MIBK)	15	U	1.6	15
Toluene	3.0	U	0.45	3.0
trans-1,3-Dichloropropene	3.0	U	0.44	3.0
1,1,2-Trichloroethane	3.0	U	0.60	3.0
Tetrachloroethene	50		0.45	3.0
2-Hexanone	15	U	0.48	15
Dibromochloromethane	3.0	U	0.41	3.0
1,2-Dibromoethane (EDB)	3.0	U	0.54	3.0
Chlorobenzene	3.0	U	0.41	3.0
1,1,1,2-Tetrachloroethane	3.0	U	0.83	3.0
Ethylbenzene	3.0	U	0.68	3.0
Xylenes, Total	9.0	U	1.5	9.0
Styrene	3.0	U	0.29	3.0
Bromoform	3.0	U	0.57	3.0
1,1,2,2-Tetrachloroethane	3.0	U	0.60	3.0
Acrylonitrile	60	U	1.6	60
1,4-Dioxane	600	U	100	600

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		64 - 135
Toluene-d8 (Surr)	94		71 - 118
4-Bromofluorobenzene (Surr)	88		70 - 118
Dibromofluoromethane (Surr)	117		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-39D-0/1-0**

Lab Sample ID: 180-40541-6
Client Matrix: Water

Date Sampled: 01/16/2015 1045
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121024.D
Dilution:	3.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1928			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1928				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-7 Date Sampled: 01/16/2015 1220
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121025.D
Dilution:	12.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1952			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1952				

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	5.3	J	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	3.1	J	1.5	13
cis-1,2-Dichloroethene	310		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	7.9	J	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	110		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	18		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)	117		64 - 135
Toluene-d8 (Surr)	101		71 - 118
4-Bromofluorobenzene (Surr)	94		70 - 118
Dibromofluoromethane (Surr)	117		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-7
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50121025.D
Dilution:	12.5			Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1952			Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1952				

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-8 Date Sampled: 01/16/2015 1230
Client Matrix: Water Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50123013.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1559			Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1559				

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	6.6		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	1.7	J	0.58	5.0
cis-1,2-Dichloroethene	130		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	29		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	83		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	34		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)	103		64 - 135
Toluene-d8 (Surr)	101		71 - 118
4-Bromofluorobenzene (Surr)	99		70 - 118
Dibromofluoromethane (Surr)	109		70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-8
Client Matrix: Water

Date Sampled: 01/16/2015 1230
Date Received: 01/17/2015 0930

8260C Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	50123013.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1559			Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1559				

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2
Client Matrix: Water

Date Sampled: 01/16/2015 1115
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1108			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	0.61	B	0.0062	0.10
Chloride	160		0.20	1.0
Sulfate	77		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-3
Client Matrix: Water

Date Sampled: 01/16/2015 0940
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1123			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	4.8	B	0.0062	0.10
Chloride	11		0.20	1.0
Sulfate	3.7		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-CW-18-0/1-0**

Lab Sample ID: 180-40541-4
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1139			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	0.037	J B	0.0062	0.10

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-CW-18-0/1-0**

Lab Sample ID: 180-40541-4
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	5.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1954			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Chloride	230		0.98	5.0
Sulfate	250		1.1	5.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-74S-0/1-0**

Lab Sample ID: 180-40541-5
Client Matrix: Water

Date Sampled: 01/16/2015 0950
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1154			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	3.7	B	0.0062	0.10
Chloride	160		0.20	1.0
Sulfate	54		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-39D-0/1-0**

Lab Sample ID: 180-40541-6
Client Matrix: Water

Date Sampled: 01/16/2015 1045
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1212			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	4.2	B	0.0062	0.10
Chloride	120		0.20	1.0
Sulfate	36		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-7
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1721			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	2.3	B	0.0062	0.10
Chloride	100		0.20	1.0
Sulfate	7.7		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-8
Client Matrix: Water

Date Sampled: 01/16/2015 1230
Date Received: 01/17/2015 0930

300.0 Anions, Ion Chromatography

Analysis Method:	300.0	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
	N/A	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015
Dilution:	1.0			Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1752			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Nitrate as N	1.8	B	0.0062	0.10
Chloride	170		0.20	1.0
Sulfate	68		0.21	1.0

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2
Client Matrix: Water

Date Sampled: 01/16/2015 1115
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1539			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	120000	B	2.8	100
Potassium	8100		5.8	100
Magnesium	20000	B	1.2	100
Sodium	35000		3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-3
Client Matrix: Water

Date Sampled: 01/16/2015 0940
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1613			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	56000	B	2.8	100
Potassium	1900		5.8	100
Magnesium	3600	B	1.2	100
Sodium	4800		3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-CW-18-0/1-0**

Lab Sample ID: 180-40541-4
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1617			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	80000	B	2.8	100
Potassium	11000		5.8	100
Magnesium	40000	B	1.2	100
Sodium	140000		3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-74S-0/1-0**

Lab Sample ID: 180-40541-5
Client Matrix: Water

Date Sampled: 01/16/2015 0950
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1621			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	130000	B	2.8	100
Potassium	9700		5.8	100
Magnesium	14000	B	1.2	100
Sodium	52000		3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Client Sample ID: **HD-MW-39D-0/1-0**

Lab Sample ID: 180-40541-6
Client Matrix: Water

Date Sampled: 01/16/2015 1045
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1626			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	130000	B	2.8	100
Potassium	7700		5.8	100
Magnesium	14000	B	1.2	100
Sodium	30000		3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-7
Client Matrix: Water

Date Sampled: 01/16/2015 1220
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1630			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	100000	B	2.8	100
Potassium	4700		5.8	100
Magnesium	19000	B	1.2	100
Sodium	25000		3.8	100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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

Lab Sample ID: 180-40541-8
Client Matrix: Water

Date Sampled: 01/16/2015 1230
Date Received: 01/17/2015 0930

6020A Metals (ICP/MS)

Analysis Method:	6020A	Analysis Batch:	180-131802	Instrument ID:	X
Prep Method:	3005A	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1634			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	110000	B	2.8	100
Potassium	9900		5.8	100
Magnesium	11000	B	1.2	100
Sodium	76000		3.8	100

General Chemistry

Client Sample ID: **HD-MW-114-0/1-0**

Lab Sample ID: 180-40541-2 Date Sampled: 01/16/2015 1115
Client Matrix: Water Date Received: 01/17/2015 0930

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: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	240	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

General Chemistry

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

Lab Sample ID: 180-40541-3 Date Sampled: 01/16/2015 0940

Client Matrix: Water Date Received: 01/17/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	160	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	160	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

General Chemistry

Client Sample ID: **HD-CW-18-0/1-0**

Lab Sample ID: 180-40541-4 Date Sampled: 01/16/2015 1220

Client Matrix: Water Date Received: 01/17/2015 0930

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: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	260	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

General Chemistry

Client Sample ID: **HD-MW-74S-0/1-0**

Lab Sample ID: 180-40541-5 Date Sampled: 01/16/2015 0950

Client Matrix: Water Date Received: 01/17/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	280	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	280	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

General Chemistry

Client Sample ID: **HD-MW-39D-0/1-0**

Lab Sample ID: 180-40541-6 Date Sampled: 01/16/2015 1045

Client Matrix: Water Date Received: 01/17/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	310	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	310	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

General Chemistry

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

Lab Sample ID: 180-40541-7 Date Sampled: 01/16/2015 1220

Client Matrix: Water Date Received: 01/17/2015 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Total Alkalinity as CaCO3 to pH 4.5	330	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	330	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

General Chemistry

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

Lab Sample ID: 180-40541-8 Date Sampled: 01/16/2015 1230

Client Matrix: Water Date Received: 01/17/2015 0930

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: 180-131669	Analysis Date: 01/26/2015 0602						
Bicarbonate Alkalinity as CaCO3	240	B	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						
Carbonate Alkalinity as CaCO3	5.0	U	mg/L	0.41	5.0	1.0	SM 2320B
Analysis Batch: 180-131669	Analysis Date: 01/26/2015 0602						

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

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
180-40541-1	HD-QC5-0/1-2	120	123	92	93
180-40541-2 DL	HD-MW-114-0/1-0 DL	122	116	95	91
180-40541-2	HD-MW-114-0/1-0	122	115	97	89
180-40541-3 DL	HD-MW-132-0/1-0 DL	119	117	97	90
180-40541-3	HD-MW-132-0/1-0	114	94	96	93
180-40541-4	HD-CW-18-0/1-0	109	106	102	101
180-40541-5	HD-MW-74S-0/1-0	110	115	90	82
180-40541-6	HD-MW-39D-0/1-0	117	114	94	88
180-40541-7	HD-MW-127-0/1-0	117	117	101	94
180-40541-8	HD-MW-50S-0/1-0	109	103	101	99
MB 180-131443/6		118	113	100	96
MB 180-131582/5		104	101	105	99
MB 180-131906/5		106	90	102	101
LCS 180-131443/9		105	98	103	96
LCS 180-131582/6		95	91	100	101
LCS 180-131906/8		102	90	96	94
LCSD 180-131582/7		100	87	97	96

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: 180-40541-1

Method Blank - Batch: 180-131443

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 180-131443/6	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50121006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1202	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1202				
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)	113	64 - 135
Toluene-d8 (Surr)	100	71 - 118
4-Bromofluorobenzene (Surr)	96	70 - 118

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Surrogate	% Rec	Acceptance Limits
Dibromofluoromethane (Surr)	118	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Control Sample - Batch: 180-131443

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 180-131443/9	Analysis Batch:	180-131443	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50121009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2015 1326	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2015 1326				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloromethane	10.0	8.76	88	50 - 139	
Vinyl chloride	10.0	8.35	83	53 - 138	
Bromomethane	10.0	10.8	108	33 - 150	
Chloroethane	10.0	9.08	91	36 - 142	
1,1-Dichloroethene	10.0	9.72	97	65 - 136	
Acetone	20.0	20.3	102	22 - 150	
Carbon disulfide	10.0	10.5	105	54 - 132	
Methylene Chloride	10.0	9.90	99	63 - 129	
trans-1,2-Dichloroethene	10.0	10.1	101	73 - 126	
Methyl tert-butyl ether	10.0	8.51	85	64 - 123	
1,1-Dichloroethane	10.0	10.3	103	73 - 126	
cis-1,2-Dichloroethene	10.0	9.61	96	70 - 120	
Bromochloromethane	10.0	9.66	97	70 - 127	
2-Butanone (MEK)	20.0	18.2	91	39 - 138	
Chloroform	10.0	10.6	106	72 - 127	
1,1,1-Trichloroethane	10.0	11.3	113	63 - 133	
Carbon tetrachloride	10.0	12.2	122	55 - 150	
Benzene	10.0	9.63	96	80 - 120	
1,2-Dichloroethane	10.0	10.1	101	68 - 132	
Trichloroethene	10.0	10.3	103	73 - 120	
1,2-Dichloropropane	10.0	8.63	86	76 - 124	
Bromodichloromethane	10.0	9.76	98	66 - 130	
cis-1,3-Dichloropropene	10.0	9.69	97	66 - 120	
4-Methyl-2-pentanone (MIBK)	20.0	17.6	88	45 - 145	
Toluene	10.0	10.3	103	80 - 123	
trans-1,3-Dichloropropene	10.0	11.0	110	65 - 125	
1,1,2-Trichloroethane	10.0	9.36	94	77 - 127	
Tetrachloroethene	10.0	11.0	110	70 - 135	
2-Hexanone	20.0	14.5	72	25 - 132	
Dibromochloromethane	10.0	10.7	107	60 - 140	
1,2-Dibromoethane (EDB)	10.0	10.1	101	74 - 123	
Chlorobenzene	10.0	10.7	107	80 - 120	
1,1,1,2-Tetrachloroethane	10.0	10.2	102	63 - 140	
Ethylbenzene	10.0	10.4	104	72 - 126	
Xylenes, Total	20.0	21.2	106	76 - 128	
Styrene	10.0	10.0	100	71 - 127	
Bromoform	10.0	9.89	99	46 - 150	
1,1,2,2-Tetrachloroethane	10.0	9.48	95	62 - 125	
1,4-Dioxane	200	153	76	10 - 160	J

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	64 - 135
Toluene-d8 (Surr)	103	71 - 118
4-Bromofluorobenzene (Surr)	96	70 - 118
Dibromofluoromethane (Surr)	105	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Method Blank - Batch: 180-131582

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 180-131582/5	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50123005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1213	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1213				
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)	101	64 - 135
Toluene-d8 (Surr)	105	71 - 118
4-Bromofluorobenzene (Surr)	99	70 - 118

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Surrogate	% Rec	Acceptance Limits
Dibromofluoromethane (Surr)	104	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 180-131582

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 180-131582/6	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50123006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1256	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1256				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 180-131582/7	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50123007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1320	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1320				5 mL
Leach Date:	N/A				

	% Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chloromethane	74	71	50 - 139	4	35		
Vinyl chloride	82	79	53 - 138	3	35		
Bromomethane	93	99	33 - 150	7	35		
Chloroethane	86	82	36 - 142	5	35		
1,1-Dichloroethene	95	93	65 - 136	2	35		
Acetone	90	83	22 - 150	9	35		
Carbon disulfide	104	99	54 - 132	5	35		
Methylene Chloride	99	94	63 - 129	6	35		
trans-1,2-Dichloroethene	107	97	73 - 126	10	35		
Methyl tert-butyl ether	94	93	64 - 123	2	35		
1,1-Dichloroethane	95	94	73 - 126	1	35		
cis-1,2-Dichloroethene	100	98	70 - 120	2	35		
Bromochloromethane	93	95	70 - 127	1	35		
2-Butanone (MEK)	87	75	39 - 138	15	35		
Chloroform	100	96	72 - 127	4	35		
1,1,1-Trichloroethane	109	108	63 - 133	1	35		
Carbon tetrachloride	112	105	55 - 150	7	35		
Benzene	98	95	80 - 120	4	32		
1,2-Dichloroethane	97	93	68 - 132	5	32		
Trichloroethene	97	97	73 - 120	1	35		
1,2-Dichloropropane	90	84	76 - 124	7	34		
Bromodichloromethane	104	95	66 - 130	9	35		
cis-1,3-Dichloropropene	106	103	66 - 120	3	35		
4-Methyl-2-pentanone (MIBK)	92	88	45 - 145	4	35		
Toluene	109	103	80 - 123	5	35		
trans-1,3-Dichloropropene	131	120	65 - 125	9	35	*	
1,1,2-Trichloroethane	108	98	77 - 127	11	35		
Tetrachloroethene	98	90	70 - 135	9	35		
2-Hexanone	84	81	25 - 132	4	35		
Dibromochloromethane	114	101	60 - 140	12	35		
1,2-Dibromoethane (EDB)	106	97	74 - 123	9	35		
Chlorobenzene	108	101	80 - 120	7	29		
1,1,1,2-Tetrachloroethane	109	103	63 - 140	6	34		
Ethylbenzene	105	100	72 - 126	5	33		
Xylenes, Total	109	102	76 - 128	7	32		
Styrene	105	98	71 - 127	6	34		

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 180-131582

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 180-131582/6	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50123006.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1256	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1256				5 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 180-131582/7	Analysis Batch:	180-131582	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50123007.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2015 1320	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2015 1320				5 mL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Bromoform	110	95	46 - 150	15	35		
1,1,2,2-Tetrachloroethane	107	95	62 - 125	12	35		
1,4-Dioxane	86	89	10 - 160	4	35	J	J

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	87	64 - 135
Toluene-d8 (Surr)	100	97	71 - 118
4-Bromofluorobenzene (Surr)	101	96	70 - 118
Dibromofluoromethane (Surr)	95	100	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 180-131582

Method: 8260C
Preparation: 5030C

LCS Lab Sample ID:	LCS 180-131582/6	Units: ug/L		LCSD Lab Sample ID:	LCSD 180-131582/7
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2015 1256			Analysis Date:	01/23/2015 1320
Prep Date:	01/23/2015 1256			Prep Date:	01/23/2015 1320
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	7.43		7.12	
Vinyl chloride	10.0	10.0	8.18		7.93	
Bromomethane	10.0	10.0	9.26		9.90	
Chloroethane	10.0	10.0	8.60		8.17	
1,1-Dichloroethene	10.0	10.0	9.50		9.34	
Acetone	20.0	20.0	18.1		16.6	
Carbon disulfide	10.0	10.0	10.4		9.88	
Methylene Chloride	10.0	10.0	9.95		9.38	
trans-1,2-Dichloroethene	10.0	10.0	10.7		9.69	
Methyl tert-butyl ether	10.0	10.0	9.41		9.26	
1,1-Dichloroethane	10.0	10.0	9.45		9.38	
cis-1,2-Dichloroethene	10.0	10.0	9.98		9.81	
Bromochloromethane	10.0	10.0	9.32		9.45	
2-Butanone (MEK)	20.0	20.0	17.3		15.0	
Chloroform	10.0	10.0	10.0		9.63	
1,1,1-Trichloroethane	10.0	10.0	10.9		10.8	
Carbon tetrachloride	10.0	10.0	11.2		10.5	
Benzene	10.0	10.0	9.83		9.48	
1,2-Dichloroethane	10.0	10.0	9.74		9.29	
Trichloroethene	10.0	10.0	9.73		9.65	
1,2-Dichloropropane	10.0	10.0	9.01		8.36	
Bromodichloromethane	10.0	10.0	10.4		9.47	
cis-1,3-Dichloropropene	10.0	10.0	10.6		10.3	
4-Methyl-2-pentanone (MIBK)	20.0	20.0	18.4		17.7	
Toluene	10.0	10.0	10.9		10.3	
trans-1,3-Dichloropropene	10.0	10.0	13.1	*	12.0	
1,1,2-Trichloroethane	10.0	10.0	10.8		9.75	
Tetrachloroethene	10.0	10.0	9.76		8.96	
2-Hexanone	20.0	20.0	16.7		16.1	
Dibromochloromethane	10.0	10.0	11.4		10.1	
1,2-Dibromoethane (EDB)	10.0	10.0	10.6		9.70	
Chlorobenzene	10.0	10.0	10.8		10.1	
1,1,1,2-Tetrachloroethane	10.0	10.0	10.9		10.3	
Ethylbenzene	10.0	10.0	10.5		10.0	
Xylenes, Total	20.0	20.0	21.8		20.4	
Styrene	10.0	10.0	10.5		9.80	
Bromoform	10.0	10.0	11.0		9.46	
1,1,2,2-Tetrachloroethane	10.0	10.0	10.7		9.54	
1,4-Dioxane	200	200	172	J	179	J

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Method Blank - Batch: 180-131906

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 180-131906/5	Analysis Batch:	180-131906	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50128005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/28/2015 1035	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/28/2015 1035				
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)	90	64 - 135
Toluene-d8 (Surr)	102	71 - 118
4-Bromofluorobenzene (Surr)	101	70 - 118

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Surrogate	% Rec	Acceptance Limits
Dibromofluoromethane (Surr)	106	70 - 128

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Lab Control Sample - Batch: 180-131906

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 180-131906/8	Analysis Batch:	180-131906	Instrument ID:	CHHP5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	50128008.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/28/2015 1200	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/28/2015 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloromethane	10.0	7.25	73	50 - 139	
Vinyl chloride	10.0	8.63	86	53 - 138	
Bromomethane	10.0	10.7	107	33 - 150	
Chloroethane	10.0	8.87	89	36 - 142	
1,1-Dichloroethene	10.0	9.30	93	65 - 136	
Acetone	20.0	16.9	85	22 - 150	
Carbon disulfide	10.0	10.3	103	54 - 132	
Methylene Chloride	10.0	9.00	90	63 - 129	
trans-1,2-Dichloroethene	10.0	11.0	110	73 - 126	
Methyl tert-butyl ether	10.0	9.14	91	64 - 123	
1,1-Dichloroethane	10.0	9.56	96	73 - 126	
cis-1,2-Dichloroethene	10.0	9.96	100	70 - 120	
Bromochloromethane	10.0	9.94	99	70 - 127	
2-Butanone (MEK)	20.0	15.7	79	39 - 138	
Chloroform	10.0	9.92	99	72 - 127	
1,1,1-Trichloroethane	10.0	11.6	116	63 - 133	
Carbon tetrachloride	10.0	12.3	123	55 - 150	
Benzene	10.0	9.83	98	80 - 120	
1,2-Dichloroethane	10.0	9.32	93	68 - 132	
Trichloroethene	10.0	10.9	109	73 - 120	
1,2-Dichloropropane	10.0	8.59	86	76 - 124	
Bromodichloromethane	10.0	9.52	95	66 - 130	
cis-1,3-Dichloropropene	10.0	9.78	98	66 - 120	
4-Methyl-2-pentanone (MIBK)	20.0	15.3	76	45 - 145	
Toluene	10.0	10.2	102	80 - 123	
trans-1,3-Dichloropropene	10.0	10.3	103	65 - 125	
1,1,2-Trichloroethane	10.0	8.96	90	77 - 127	
Tetrachloroethene	10.0	10.2	102	70 - 135	
2-Hexanone	20.0	12.4	62	25 - 132	
Dibromochloromethane	10.0	10.1	101	60 - 140	
1,2-Dibromoethane (EDB)	10.0	9.41	94	74 - 123	
Chlorobenzene	10.0	10.6	106	80 - 120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	63 - 140	
Ethylbenzene	10.0	9.82	98	72 - 126	
Xylenes, Total	20.0	19.6	98	76 - 128	
Styrene	10.0	9.44	94	71 - 127	
Bromoform	10.0	9.13	91	46 - 150	
1,1,2,2-Tetrachloroethane	10.0	8.62	86	62 - 125	
1,4-Dioxane	200	140	70	10 - 160	J

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	64 - 135
Toluene-d8 (Surr)	96	71 - 118
4-Bromofluorobenzene (Surr)	94	70 - 118
Dibromofluoromethane (Surr)	102	70 - 128

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Method Blank - Batch: 180-131000

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 180-131000/6	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015-1
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1053	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	0.00944	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: 180-131000

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 180-131000/5	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015-1
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1037	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	2.61	104	90 - 110	
Chloride	50.0	52.3	105	90 - 110	
Sulfate	50.0	52.4	105	90 - 110	

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-131000

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	180-40541-3	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015-3
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1651			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	10 uL
Leach Date:	N/A				

MSD Lab Sample ID:	180-40541-3	Analysis Batch:	180-131000	Instrument ID:	CHIC2100A
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	A-ICS2100 A 01-17-2015-3
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	01/17/2015 1706			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	96	94	80 - 120	0	20		
Chloride	103	103	80 - 120	0	20		
Sulfate	104	105	80 - 120	0	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-131000

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	180-40541-3	Units:	mg/L	MSD Lab Sample ID:	180-40541-3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/17/2015 1651			Analysis Date:	01/17/2015 1706
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	4.8	1.25	1.25	6.05	6.03
Chloride	11	25.0	25.0	37.1	37.2
Sulfate	3.7	25.0	25.0	29.8	29.9

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Method Blank - Batch: 180-131320

Method: 6020A
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 180-131320/1-A	Analysis Batch:	180-131802	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1527	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Calcium	15.4	J	2.8	100
Potassium	100	U	5.8	100
Magnesium	3.25	J	1.2	100
Sodium	100	U	3.8	100

Lab Control Sample - Batch: 180-131320

Method: 6020A
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 180-131320/2-A	Analysis Batch:	180-131802	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1535	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium	50000	44900	90	80 - 120	
Potassium	50000	46800	94	80 - 120	
Magnesium	50000	40600	81	80 - 120	
Sodium	50000	42900	86	80 - 120	

Post Digestion Spike - Batch: 180-131320

Method: 6020A
Preparation: 3005A

Lab Sample ID:	180-40541-2	Analysis Batch:	180-131802	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1608	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Calcium	120000	50000	163000	80	75 - 125	
Potassium	8100	50000	53900	91	75 - 125	
Magnesium	20000	50000	58900	78	75 - 125	
Sodium	35000	50000	76800	83	75 - 125	

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-131320

Method: 6020A
Preparation: 3005A

MS Lab Sample ID:	180-40541-2	Analysis Batch:	180-131802	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1548			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				
Leach Date:	N/A				

MSD Lab Sample ID:	180-40541-2	Analysis Batch:	180-131802	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1552			Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Calcium	95	100	75 - 125	2	20		
Potassium	94	96	75 - 125	1	20		
Magnesium	81	83	75 - 125	1	20		
Sodium	88	89	75 - 125	1	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 180-131320

Method: 6020A
Preparation: 3005A

MS Lab Sample ID:	180-40541-2	Units:	ug/L	MSD Lab Sample ID:	180-40541-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/26/2015 1548			Analysis Date:	01/26/2015 1552
Prep Date:	01/21/2015 0957			Prep Date:	01/21/2015 0957
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Calcium	120000	50000	50000	170000	173000
Potassium	8100	50000	50000	55200	55900
Magnesium	20000	50000	50000	60600	61400
Sodium	35000	50000	50000	79300	80100

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Serial Dilution - Batch: 180-131320

Method: 6020A
Preparation: 3005A

Lab Sample ID:	180-40541-2	Analysis Batch:	180-131802	Instrument ID:	X
Client Matrix:	Water	Prep Batch:	180-131320	Lab File ID:	X50126B.xml
Dilution:	5.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/26/2015 1544	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2015 0957				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Calcium	120000	112000	8.7	10	
Potassium	8100	8380	2.9	10	
Magnesium	20000	19500	3.2	10	
Sodium	35000	37100	5.0	10	

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Method Blank - Batch: 180-131669

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	MB 180-131669/2	Analysis Batch:	180-131669	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:	01/26/2015 0602	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: 180-131669

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	LCS 180-131669/1	Analysis Batch:	180-131669	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:	01/26/2015 0602	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	269	108	80 - 120	

Duplicate - Batch: 180-131669

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	180-40541-2	Analysis Batch:	180-131669	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:	01/26/2015 0602	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	240		251	3	20	
Bicarbonate Alkalinity as CaCO3	240		251	3	20	
Carbonate Alkalinity as CaCO3	5.0	U	5.0	NC	20	U

DATA REPORTING QUALIFIERS

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	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.
	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: 180-40541-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:180-131443					
LCS 180-131443/9	Lab Control Sample	T	Water	8260C	
MB 180-131443/6	Method Blank	T	Water	8260C	
180-40541-1	HD-QC5-0/1-2	T	Water	8260C	
180-40541-2	HD-MW-114-0/1-0	T	Water	8260C	
180-40541-2DL	HD-MW-114-0/1-0	T	Water	8260C	
180-40541-3DL	HD-MW-132-0/1-0	T	Water	8260C	
180-40541-5	HD-MW-74S-0/1-0	T	Water	8260C	
180-40541-6	HD-MW-39D-0/1-0	T	Water	8260C	
180-40541-7	HD-MW-127-0/1-0	T	Water	8260C	
Analysis Batch:180-131582					
LCS 180-131582/6	Lab Control Sample	T	Water	8260C	
LCSD 180-131582/7	Lab Control Sample Duplicate	T	Water	8260C	
MB 180-131582/5	Method Blank	T	Water	8260C	
180-40541-4	HD-CW-18-0/1-0	T	Water	8260C	
180-40541-8	HD-MW-50S-0/1-0	T	Water	8260C	
Analysis Batch:180-131906					
LCS 180-131906/8	Lab Control Sample	T	Water	8260C	
MB 180-131906/5	Method Blank	T	Water	8260C	
180-40541-3	HD-MW-132-0/1-0	T	Water	8260C	

Report Basis
T = Total

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 180-131320					
LCS 180-131320/2-A	Lab Control Sample	R	Water	3005A	
MB 180-131320/1-A	Method Blank	R	Water	3005A	
180-40541-2	HD-MW-114-0/1-0	T	Water	3005A	
180-40541-2MS	Matrix Spike	T	Water	3005A	
180-40541-2MSD	Matrix Spike Duplicate	T	Water	3005A	
180-40541-3	HD-MW-132-0/1-0	T	Water	3005A	
180-40541-4	HD-CW-18-0/1-0	T	Water	3005A	
180-40541-5	HD-MW-74S-0/1-0	T	Water	3005A	
180-40541-6	HD-MW-39D-0/1-0	T	Water	3005A	
180-40541-7	HD-MW-127-0/1-0	T	Water	3005A	
180-40541-8	HD-MW-50S-0/1-0	T	Water	3005A	
Analysis Batch:180-131802					
LCS 180-131320/2-A	Lab Control Sample	R	Water	6020A	180-131320
MB 180-131320/1-A	Method Blank	R	Water	6020A	180-131320
180-40541-2	HD-MW-114-0/1-0	T	Water	6020A	180-131320
180-40541-2MS	Matrix Spike	T	Water	6020A	180-131320
180-40541-2MSD	Matrix Spike Duplicate	T	Water	6020A	180-131320
180-40541-3	HD-MW-132-0/1-0	T	Water	6020A	180-131320
180-40541-4	HD-CW-18-0/1-0	T	Water	6020A	180-131320
180-40541-5	HD-MW-74S-0/1-0	T	Water	6020A	180-131320
180-40541-6	HD-MW-39D-0/1-0	T	Water	6020A	180-131320
180-40541-7	HD-MW-127-0/1-0	T	Water	6020A	180-131320
180-40541-8	HD-MW-50S-0/1-0	T	Water	6020A	180-131320

Report Basis
R = Total Recoverable
T = Total

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:180-131669					
LCS 180-131669/1	Lab Control Sample	T	Water	SM 2320B	
MB 180-131669/2	Method Blank	T	Water	SM 2320B	
180-40541-2	HD-MW-114-0/1-0	T	Water	SM 2320B	
180-40541-2DU	Duplicate	T	Water	SM 2320B	
180-40541-3	HD-MW-132-0/1-0	T	Water	SM 2320B	
180-40541-4	HD-CW-18-0/1-0	T	Water	SM 2320B	
180-40541-5	HD-MW-74S-0/1-0	T	Water	SM 2320B	
180-40541-6	HD-MW-39D-0/1-0	T	Water	SM 2320B	
180-40541-7	HD-MW-127-0/1-0	T	Water	SM 2320B	
180-40541-8	HD-MW-50S-0/1-0	T	Water	SM 2320B	

Report Basis
T = Total

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:180-131000					
LCS 180-131000/5	Lab Control Sample	T	Water	300.0	
MB 180-131000/6	Method Blank	T	Water	300.0	
180-40541-2	HD-MW-114-0/1-0	T	Water	300.0	
180-40541-3	HD-MW-132-0/1-0	T	Water	300.0	
180-40541-3MS	Matrix Spike	T	Water	300.0	
180-40541-3MSD	Matrix Spike Duplicate	T	Water	300.0	
180-40541-4	HD-CW-18-0/1-0	T	Water	300.0	
180-40541-5	HD-MW-74S-0/1-0	T	Water	300.0	
180-40541-6	HD-MW-39D-0/1-0	T	Water	300.0	
180-40541-7	HD-MW-127-0/1-0	T	Water	300.0	
180-40541-8	HD-MW-50S-0/1-0	T	Water	300.0	

Report Basis
T = Total

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Laboratory Chronicle

Lab ID: 180-40541-1 **Client ID: HD-QC5-0/1-2**

Sample Date/Time: 01/16/2015 12:00 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-B-1		180-131443		01/22/2015 17:03	1	TAL PIT	DLF
A:8260C	180-40541-B-1		180-131443		01/22/2015 17:03	1	TAL PIT	DLF

Lab ID: 180-40541-2 **Client ID: HD-MW-114-0/1-0**

Sample Date/Time: 01/16/2015 11:15 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-E-2	DL	180-131443		01/22/2015 17:27	125	TAL PIT	DLF
A:8260C	180-40541-E-2	DL	180-131443		01/22/2015 17:27	125	TAL PIT	DLF
P:5030C	180-40541-C-2		180-131443		01/22/2015 21:29	12.5	TAL PIT	DLF
A:8260C	180-40541-C-2		180-131443		01/22/2015 21:29	12.5	TAL PIT	DLF
A:300.0	180-40541-A-2		180-131000		01/17/2015 11:08	1	TAL PIT	MJH
P:3005A	180-40541-B-2-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-2-A		180-131802	180-131320	01/26/2015 15:39	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-2		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Lab ID: 180-40541-2 MS **Client ID: HD-MW-114-0/1-0**

Sample Date/Time: 01/16/2015 11:15 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	180-40541-B-2-B MS		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-2-B MS		180-131802	180-131320	01/26/2015 15:48	1	TAL PIT	CNF

Lab ID: 180-40541-2 MSD **Client ID: HD-MW-114-0/1-0**

Sample Date/Time: 01/16/2015 11:15 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	180-40541-B-2-C MSD		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-2-C MSD		180-131802	180-131320	01/26/2015 15:52	1	TAL PIT	CNF

Lab ID: 180-40541-2 DU **Client ID: HD-MW-114-0/1-0**

Sample Date/Time: 01/16/2015 11:15 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	180-40541-A-2 DU		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Laboratory Chronicle

Lab ID: 180-40541-2 SD **Client ID: HD-MW-114-0/1-0**

Sample Date/Time: 01/16/2015 11:15 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	180-40541-B-2-A SD ^5		180-131802	180-131320	01/21/2015 09:57	5	TAL PIT	AB1
A:6020A	180-40541-B-2-A SD ^5		180-131802	180-131320	01/26/2015 15:44	5	TAL PIT	CNF
P:3005A	180-40541-B-2-A PDS		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-2-A PDS		180-131802	180-131320	01/26/2015 16:08	1	TAL PIT	CNF

Lab ID: 180-40541-3 **Client ID: HD-MW-132-0/1-0**

Sample Date/Time: 01/16/2015 09:40 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-E-3	DL	180-131443		01/22/2015 17:52	25	TAL PIT	DLF
A:8260C	180-40541-E-3	DL	180-131443		01/22/2015 17:52	25	TAL PIT	DLF
P:5030C	180-40541-C-3		180-131906		01/28/2015 19:38	2.5	TAL PIT	DLF
A:8260C	180-40541-C-3		180-131906		01/28/2015 19:38	2.5	TAL PIT	DLF
A:300.0	180-40541-A-3		180-131000		01/17/2015 11:23	1	TAL PIT	MJH
P:3005A	180-40541-B-3-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-3-A		180-131802	180-131320	01/26/2015 16:13	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-3		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Lab ID: 180-40541-3 MS **Client ID: HD-MW-132-0/1-0**

Sample Date/Time: 01/16/2015 09:40 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	180-40541-A-3 MS		180-131000		01/17/2015 16:51	1	TAL PIT	MJH

Lab ID: 180-40541-3 MSD **Client ID: HD-MW-132-0/1-0**

Sample Date/Time: 01/16/2015 09:40 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	180-40541-A-3 MSD		180-131000		01/17/2015 17:06	1	TAL PIT	MJH

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Laboratory Chronicle

Lab ID: 180-40541-4 **Client ID: HD-CW-18-0/1-0**

Sample Date/Time: 01/16/2015 12:20 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-C-4		180-131582		01/23/2015 15:35	1	TAL PIT	KLG
A:8260C	180-40541-C-4		180-131582		01/23/2015 15:35	1	TAL PIT	KLG
A:300.0	180-40541-A-4		180-131000		01/17/2015 11:39	1	TAL PIT	MJH
A:300.0	180-40541-A-4		180-131000		01/17/2015 19:54	5	TAL PIT	MJH
P:3005A	180-40541-B-4-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-4-A		180-131802	180-131320	01/26/2015 16:17	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-4		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Lab ID: 180-40541-5 **Client ID: HD-MW-74S-0/1-0**

Sample Date/Time: 01/16/2015 09:50 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-D-5		180-131443		01/22/2015 18:40	25	TAL PIT	DLF
A:8260C	180-40541-D-5		180-131443		01/22/2015 18:40	25	TAL PIT	DLF
A:300.0	180-40541-A-5		180-131000		01/17/2015 11:54	1	TAL PIT	MJH
P:3005A	180-40541-B-5-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-5-A		180-131802	180-131320	01/26/2015 16:21	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-5		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Lab ID: 180-40541-6 **Client ID: HD-MW-39D-0/1-0**

Sample Date/Time: 01/16/2015 10:45 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-E-6		180-131443		01/22/2015 19:28	3	TAL PIT	DLF
A:8260C	180-40541-E-6		180-131443		01/22/2015 19:28	3	TAL PIT	DLF
A:300.0	180-40541-A-6		180-131000		01/17/2015 12:12	1	TAL PIT	MJH
P:3005A	180-40541-B-6-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-6-A		180-131802	180-131320	01/26/2015 16:26	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-6		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Lab ID: 180-40541-7 **Client ID: HD-MW-127-0/1-0**

Sample Date/Time: 01/16/2015 12:20 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-D-7		180-131443		01/22/2015 19:52	12.5	TAL PIT	DLF
A:8260C	180-40541-D-7		180-131443		01/22/2015 19:52	12.5	TAL PIT	DLF
A:300.0	180-40541-A-7		180-131000		01/17/2015 17:21	1	TAL PIT	MJH
P:3005A	180-40541-B-7-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-7-A		180-131802	180-131320	01/26/2015 16:30	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-7		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Laboratory Chronicle

Lab ID: 180-40541-8 **Client ID: HD-MW-50S-0/1-0**

Sample Date/Time: 01/16/2015 12:30 Received Date/Time: 01/17/2015 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	180-40541-E-8		180-131582		01/23/2015 15:59	5	TAL PIT	KLG
A:8260C	180-40541-E-8		180-131582		01/23/2015 15:59	5	TAL PIT	KLG
A:300.0	180-40541-A-8		180-131000		01/17/2015 17:52	1	TAL PIT	MJH
P:3005A	180-40541-B-8-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	180-40541-B-8-A		180-131802	180-131320	01/26/2015 16:34	1	TAL PIT	CNF
A:SM 2320B	180-40541-A-8		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

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 180-131443/6		180-131443		01/22/2015 12:02	1	TAL PIT	DLF
A:8260C	MB 180-131443/6		180-131443		01/22/2015 12:02	1	TAL PIT	DLF
P:5030C	MB 180-131582/5		180-131582		01/23/2015 12:13	1	TAL PIT	KLG
A:8260C	MB 180-131582/5		180-131582		01/23/2015 12:13	1	TAL PIT	KLG
P:5030C	MB 180-131906/5		180-131906		01/28/2015 10:35	1	TAL PIT	DLF
A:8260C	MB 180-131906/5		180-131906		01/28/2015 10:35	1	TAL PIT	DLF
A:300.0	MB 180-131000/6		180-131000		01/17/2015 10:53	1	TAL PIT	MJH
P:3005A	MB 180-131320/1-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	MB 180-131320/1-A		180-131802	180-131320	01/26/2015 15:27	1	TAL PIT	CNF
A:SM 2320B	MB 180-131669/2		180-131669		01/26/2015 06:02	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 180-131443/9		180-131443		01/22/2015 13:26	1	TAL PIT	DLF
A:8260C	LCS 180-131443/9		180-131443		01/22/2015 13:26	1	TAL PIT	DLF
P:5030C	LCS 180-131582/6		180-131582		01/23/2015 12:56	1	TAL PIT	KLG
A:8260C	LCS 180-131582/6		180-131582		01/23/2015 12:56	1	TAL PIT	KLG
P:5030C	LCS 180-131906/8		180-131906		01/28/2015 12:00	1	TAL PIT	DLF
A:8260C	LCS 180-131906/8		180-131906		01/28/2015 12:00	1	TAL PIT	DLF
A:300.0	LCS 180-131000/5		180-131000		01/17/2015 10:37	1	TAL PIT	MJH
P:3005A	LCS 180-131320/2-A		180-131802	180-131320	01/21/2015 09:57	1	TAL PIT	AB1
A:6020A	LCS 180-131320/2-A		180-131802	180-131320	01/26/2015 15:35	1	TAL PIT	CNF
A:SM 2320B	LCS 180-131669/1		180-131669		01/26/2015 06:02	1	TAL PIT	CLL

Client: Groundwater Sciences Corporation Job Number: 180-40541-1

Laboratory Chronicle

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 180-131582/7		180-131582		01/23/2015 13:20	1	TAL PIT	KLG
A:8260C	LCSD 180-131582/7		180-131582		01/23/2015 13:20	1	TAL PIT	KLG

Lab References:
TAL PIT = TestAmerica Pittsburgh

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01144	01/17/15	01/16/15	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_01176	01/17/15	01/16/15	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.: 180-40541-1

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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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_00072	02/22/15	01/22/15	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00005	10 mL	Calcium	50 ppm
							Magnesium	50 ppm
							Potassium	50 ppm
							Sodium	50 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MCRIX_00061	02/26/15	01/26/15	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00004	1 mL	Calcium	0.1 ppm
							Magnesium	0.1 ppm
							Potassium	0.1 ppm
							Sodium	0.1 ppm
.MMSCRI-1B_00004	10/01/15	Inorganic Ventures, Lot H2-MEB549023			(Purchased Reagent)		Calcium	25 ppm
							Magnesium	25 ppm
							Potassium	25 ppm
							Sodium	25 ppm
MICSABX_00066	02/16/15	01/16/15	2% Nitric Acid, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
					M6020ICS-0B_00006	1 mL	Ag	0.02 ppm
							As	0.02 ppm
							Cd	0.02 ppm
							Co	0.02 ppm
							Cr	0.02 ppm
							Cu	0.02 ppm

REAGENT TRACEABILITY SUMMARY

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00062	02/16/15	01/16/15	DI Water, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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_00029	02/23/15	01/23/15	2% Nitric Acid, Lot 25106	250 mg/L	MICPMSICV_00018	10 mg/L	Calcium	40 mg/L
							Magnesium	40 mg/L
							Potassium	40 mg/L
							Sodium	40 mg/L
.MICPMSICV_00018	11/30/15	SPEX CertiPrep, Lot 7-230WL			(Purchased Reagent)		Calcium	1000 ppm
							Magnesium	1000 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
MSTD2X_00041	02/22/15	01/22/15	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00005	10 mg/L	Calcium	100 ppm
							Magnesium	100 ppm
							Potassium	100 ppm
							Sodium	100 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MTAPITTICPMS_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

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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_00099	01/29/15	01/22/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00051	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00051	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

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SDG No.:

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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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.: 180-40541-1

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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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.: 180-40541-1

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.: 180-40541-1

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.: 180-40541-1

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_00097	01/28/15	01/21/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00081	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_00081	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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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.: 180-40541-1

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
VOAKETONEPRI_00003	02/20/15	01/20/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00034	0.125 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00034	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
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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.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
.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
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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
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
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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 $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{½}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{½}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 **TRACEABILITY TO NIST 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.

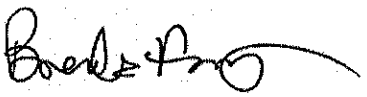
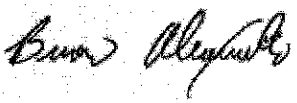
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations 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
fax: 540.585.3012
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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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tel: 800.669.6799 · 540.585.3030
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CERTIFICATE OF ANALYSIS

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

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 DESCRIPTION OF CRM **Stock Solution**

Catalog No.: 6020ICS-0B

Lot Number: **G2-MEB463151**

Matrix: 3% HNO3(v/v)

2 µg/mL ea:
Ag, As, Cd, Co, Cr3, Cu, Mn, Ni, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Arsenic, As	2.000 ± 0.013 µg/mL	Cadmium, Cd	2.000 ± 0.013 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	2.000 ± 0.013 µg/mL	Copper, Cu	2.000 ± 0.013 µg/mL	Manganese, Mn	2.000 ± 0.013 µg/mL
Nickel, Ni	2.000 ± 0.013 µg/mL	Silver, Ag	2.000 ± 0.013 µg/mL	Zinc, Zn	2.000 ± 0.013 µg/mL

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

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

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

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

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

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

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

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

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

4.1 ASSAY INFORMATION

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

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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

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

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

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

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
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10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

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

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

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

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

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

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

Certification Date: March 25, 2013

Expiration Date: EXPIRES 01 SEP 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Zach Saunders
Product Documentation Technician

Certificate Approved By: Allyson Guilliams
Quality Control Supervisor

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

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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** **Custom Solution**

Catalog No.: TAPITT-CAL-SPECA-REV

Lot Number: **H2-MEB524026**

Matrix: 3% HNO3(v/v)

2,500 µg/mL ea:
Ca, K, Mg, Na,

1,250 µg/mL ea:
Fe,

25 µg/mL ea:
Al, Mn,

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

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

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

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

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

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

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

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

2 = the coverage factor.

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

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

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

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

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

4.1 ASSAY INFORMATION

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

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

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

x_i = individual results

n = number of measurements

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

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

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

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

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

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

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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

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

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

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

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

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

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

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

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

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

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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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.

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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
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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-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"
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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.

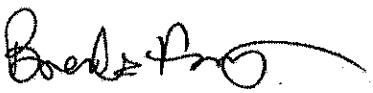
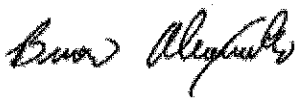
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations 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™
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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

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

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

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

Catalog No.: TAPITT-MSICSAB-2

Lot Number: **G2-MEB467043**

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

250 µg/mL ea:
Si,

50 µg/mL ea:
Sn,

25 µg/mL ea:
B, Se,

10 µg/mL ea:
Sb

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

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

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

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

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

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

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

2 = the coverage factor.

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

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

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

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

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

4.1 ASSAY INFORMATION

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

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

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

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

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

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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

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

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

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

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

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

10.0 QUALITY STANDARD DOCUMENTATION

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

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

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

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

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

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

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

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

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

Certification Date: March 08, 2013

Expiration Date: EXPIRES 01 May 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn
Product Documentation Technician

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

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

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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-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.

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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.

4.1 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

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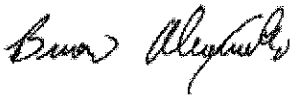
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations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

:

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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Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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

1.0 ACCREDITATION / REGISTRATION

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

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

rec. 11/13/14 SLB

2.0 PRODUCT DESCRIPTION

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

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

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

Assay Information:

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

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

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

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

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

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

- N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at 20 ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

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

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

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

11.3 Expiration Date

EXPIRES
01 02 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

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1407261
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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

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 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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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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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : 8260 List 1 / Std #3 Gases

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

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

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

CERTIFIED VALUES

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

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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

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

Description : 8260 Internal Standard

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

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

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

CERTIFIED VALUES

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

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

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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

Catalog No. : 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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Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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

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

Description : 8260 List 1 / Std #2 Ketones

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

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

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

CERTIFIED VALUES

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

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

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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. : 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	10,015.2 µg/mL	+/- 58.6412	µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot 0902033)		+/- 533.0320	µg/mL	Unstressed
	Purity 99%		+/- 533.6197	µg/mL	Stressed
2	2-Butanone (MEK)	10,010.0 µg/mL	+/- 58.6108	µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot VEGGI)		+/- 532.7553	µg/mL	Unstressed
	Purity 99%		+/- 533.3427	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,012.4 µg/mL	+/- 58.6248	µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 532.8830	µg/mL	Unstressed
	Purity 99%		+/- 533.4706	µg/mL	Stressed
4	2-Hexanone	10,016.4 µg/mL	+/- 58.6482	µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot ZSVCD-FF)		+/- 533.0959	µg/mL	Unstressed
	Purity 99%		+/- 533.6837	µg/mL	Stressed

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

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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. : 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	10,015.2 µg/mL	+/- 58.6412	µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot 0902033)		+/- 533.0320	µg/mL	Unstressed
	Purity 99%		+/- 533.6197	µg/mL	Stressed
2	2-Butanone (MEK)	10,010.0 µg/mL	+/- 58.6108	µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot VEGGI)		+/- 532.7553	µg/mL	Unstressed
	Purity 99%		+/- 533.3427	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,012.4 µg/mL	+/- 58.6248	µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 532.8830	µg/mL	Unstressed
	Purity 99%		+/- 533.4706	µg/mL	Stressed
4	2-Hexanone	10,016.4 µg/mL	+/- 58.6482	µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot ZSVCD-FF)		+/- 533.0959	µg/mL	Unstressed
	Purity 99%		+/- 533.6837	µg/mL	Stressed

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

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

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

Catalog No. : 567641 **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)

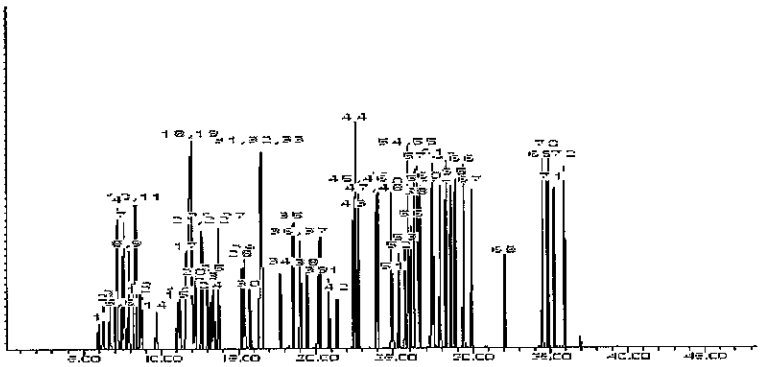
Carrier Gas:
helium-constant pressure 30 psi

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 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)

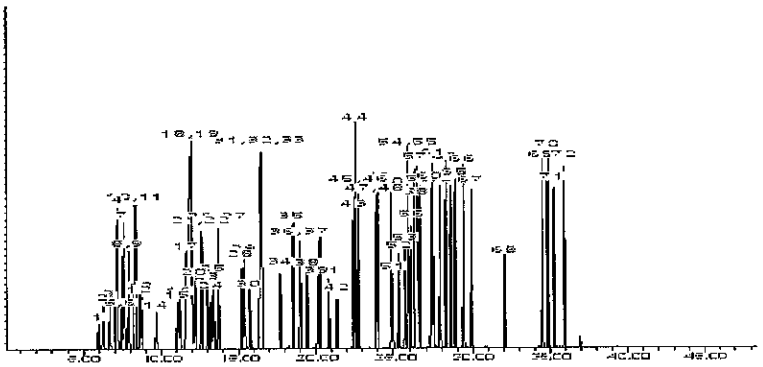
Carrier Gas:
helium-constant pressure 30 psi

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

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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.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)

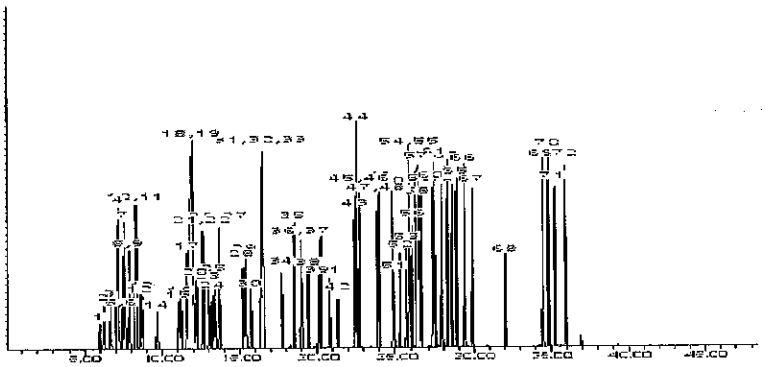
Carrier Gas:
helium-constant pressure 30 psi

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
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567650 **Lot No.:** 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 **CAS #** 1868-53-7 (Lot 022012) **Purity** 99%	2,509.6 µg/mL	+/- 14.5910 µg/mL +/- 28.2993 µg/mL +/- 32.5644 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 12K-027) **Purity** 99%	2,508.2 µg/mL	+/- 14.5829 µg/mL +/- 28.2836 µg/mL +/- 32.5462 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot 13I-050) **Purity** 99%	2,508.8 µg/mL	+/- 14.5864 µg/mL +/- 28.2903 µg/mL +/- 32.5540 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 01127COV) **Purity** 99%	2,509.8 µg/mL	+/- 14.5922 µg/mL +/- 28.3016 µg/mL +/- 32.5670 µg/mL	Gravimetric Unstressed Stressed

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567650 **Lot No.:** 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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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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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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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%

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom EE Standard

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

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

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

CERTIFIED VALUES

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

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

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

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: 180-40541-1

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.: 180-40541-1

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-QC5-0/1-2	180-40541-1	120	123	92	93
HD-MW-114-0/1-0	180-40541-2	122	115	97	89
HD-MW-114-0/1-0 DL	180-40541-2 DL	122	116	95	91
HD-MW-132-0/1-0	180-40541-3	114	94	96	93
HD-MW-132-0/1-0 DL	180-40541-3 DL	119	117	97	90
HD-CW-18-0/1-0	180-40541-4	109	106	102	101
HD-MW-74S-0/1-0	180-40541-5	110	115	90	82
HD-MW-39D-0/1-0	180-40541-6	117	114	94	88
HD-MW-127-0/1-0	180-40541-7	117	117	101	94
HD-MW-50S-0/1-0	180-40541-8	109	103	101	99
	MB 180-131443/6	118	113	100	96
	MB 180-131582/5	104	101	105	99
	MB 180-131906/5	106	90	102	101
	LCS 180-131443/9	105	98	103	96
	LCS 180-131582/6	95	91	100	101
	LCS 180-131906/8	102	90	96	94
	LCSD 180-131582/7	100	87	97	96

	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.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50121009.D

Lab ID: LCS 180-131443/9 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	8.76	88	50-139	
Vinyl chloride	10.0	8.35	83	53-138	
Bromomethane	10.0	10.8	108	33-150	
Chloroethane	10.0	9.08	91	36-142	
1,1-Dichloroethene	10.0	9.72	97	65-136	
Acetone	20.0	20.3	102	22-150	
Carbon disulfide	10.0	10.5	105	54-132	
Methylene Chloride	10.0	9.90	99	63-129	
trans-1,2-Dichloroethene	10.0	10.1	101	73-126	
Methyl tert-butyl ether	10.0	8.51	85	64-123	
1,1-Dichloroethane	10.0	10.3	103	73-126	
cis-1,2-Dichloroethene	10.0	9.61	96	70-120	
Bromochloromethane	10.0	9.66	97	70-127	
2-Butanone (MEK)	20.0	18.2	91	39-138	
Chloroform	10.0	10.6	106	72-127	
1,1,1-Trichloroethane	10.0	11.3	113	63-133	
Carbon tetrachloride	10.0	12.2	122	55-150	
Benzene	10.0	9.63	96	80-120	
1,2-Dichloroethane	10.0	10.1	101	68-132	
Trichloroethene	10.0	10.3	103	73-120	
1,2-Dichloropropane	10.0	8.63	86	76-124	
Bromodichloromethane	10.0	9.76	98	66-130	
cis-1,3-Dichloropropene	10.0	9.69	97	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.6	88	45-145	
Toluene	10.0	10.3	103	80-123	
trans-1,3-Dichloropropene	10.0	11.0	110	65-125	
1,1,2-Trichloroethane	10.0	9.36	94	77-127	
Tetrachloroethene	10.0	11.0	110	70-135	
2-Hexanone	20.0	14.5	72	25-132	
Dibromochloromethane	10.0	10.7	107	60-140	
1,2-Dibromoethane (EDB)	10.0	10.1	101	74-123	
Chlorobenzene	10.0	10.7	107	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.2	102	63-140	
Ethylbenzene	10.0	10.4	104	72-126	
Xylenes, Total	20.0	21.2	106	76-128	
Styrene	10.0	10.0	100	71-127	
Bromoform	10.0	9.89	99	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.48	95	62-125	
1,4-Dioxane	200	153 J	76	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.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50123006.D

Lab ID: LCS 180-131582/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.43	74	50-139	
Vinyl chloride	10.0	8.18	82	53-138	
Bromomethane	10.0	9.26	93	33-150	
Chloroethane	10.0	8.60	86	36-142	
1,1-Dichloroethene	10.0	9.50	95	65-136	
Acetone	20.0	18.1	90	22-150	
Carbon disulfide	10.0	10.4	104	54-132	
Methylene Chloride	10.0	9.95	99	63-129	
trans-1,2-Dichloroethene	10.0	10.7	107	73-126	
Methyl tert-butyl ether	10.0	9.41	94	64-123	
1,1-Dichloroethane	10.0	9.45	95	73-126	
cis-1,2-Dichloroethene	10.0	9.98	100	70-120	
Bromochloromethane	10.0	9.32	93	70-127	
2-Butanone (MEK)	20.0	17.3	87	39-138	
Chloroform	10.0	10.0	100	72-127	
1,1,1-Trichloroethane	10.0	10.9	109	63-133	
Carbon tetrachloride	10.0	11.2	112	55-150	
Benzene	10.0	9.83	98	80-120	
1,2-Dichloroethane	10.0	9.74	97	68-132	
Trichloroethene	10.0	9.73	97	73-120	
1,2-Dichloropropane	10.0	9.01	90	76-124	
Bromodichloromethane	10.0	10.4	104	66-130	
cis-1,3-Dichloropropene	10.0	10.6	106	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	18.4	92	45-145	
Toluene	10.0	10.9	109	80-123	
trans-1,3-Dichloropropene	10.0	13.1	131	65-125	*
1,1,2-Trichloroethane	10.0	10.8	108	77-127	
Tetrachloroethene	10.0	9.76	98	70-135	
2-Hexanone	20.0	16.7	84	25-132	
Dibromochloromethane	10.0	11.4	114	60-140	
1,2-Dibromoethane (EDB)	10.0	10.6	106	74-123	
Chlorobenzene	10.0	10.8	108	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.9	109	63-140	
Ethylbenzene	10.0	10.5	105	72-126	
Xylenes, Total	20.0	21.8	109	76-128	
Styrene	10.0	10.5	105	71-127	
Bromoform	10.0	11.0	110	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.7	107	62-125	
1,4-Dioxane	200	172 J	86	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50128008.D

Lab ID: LCS 180-131906/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.25	73	50-139	
Vinyl chloride	10.0	8.63	86	53-138	
Bromomethane	10.0	10.7	107	33-150	
Chloroethane	10.0	8.87	89	36-142	
1,1-Dichloroethene	10.0	9.30	93	65-136	
Acetone	20.0	16.9	85	22-150	
Carbon disulfide	10.0	10.3	103	54-132	
Methylene Chloride	10.0	9.00	90	63-129	
trans-1,2-Dichloroethene	10.0	11.0	110	73-126	
Methyl tert-butyl ether	10.0	9.14	91	64-123	
1,1-Dichloroethane	10.0	9.56	96	73-126	
cis-1,2-Dichloroethene	10.0	9.96	100	70-120	
Bromochloromethane	10.0	9.94	99	70-127	
2-Butanone (MEK)	20.0	15.7	79	39-138	
Chloroform	10.0	9.92	99	72-127	
1,1,1-Trichloroethane	10.0	11.6	116	63-133	
Carbon tetrachloride	10.0	12.3	123	55-150	
Benzene	10.0	9.83	98	80-120	
1,2-Dichloroethane	10.0	9.32	93	68-132	
Trichloroethene	10.0	10.9	109	73-120	
1,2-Dichloropropane	10.0	8.59	86	76-124	
Bromodichloromethane	10.0	9.52	95	66-130	
cis-1,3-Dichloropropene	10.0	9.78	98	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	15.3	76	45-145	
Toluene	10.0	10.2	102	80-123	
trans-1,3-Dichloropropene	10.0	10.3	103	65-125	
1,1,2-Trichloroethane	10.0	8.96	90	77-127	
Tetrachloroethene	10.0	10.2	102	70-135	
2-Hexanone	20.0	12.4	62	25-132	
Dibromochloromethane	10.0	10.1	101	60-140	
1,2-Dibromoethane (EDB)	10.0	9.41	94	74-123	
Chlorobenzene	10.0	10.6	106	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	63-140	
Ethylbenzene	10.0	9.82	98	72-126	
Xylenes, Total	20.0	19.6	98	76-128	
Styrene	10.0	9.44	94	71-127	
Bromoform	10.0	9.13	91	46-150	
1,1,2,2-Tetrachloroethane	10.0	8.62	86	62-125	
1,4-Dioxane	200	140 J	70	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.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50123007.D

Lab ID: LCSD 180-131582/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chloromethane	10.0	7.12	71	4	35	50-139	
Vinyl chloride	10.0	7.93	79	3	35	53-138	
Bromomethane	10.0	9.90	99	7	35	33-150	
Chloroethane	10.0	8.17	82	5	35	36-142	
1,1-Dichloroethene	10.0	9.34	93	2	35	65-136	
Acetone	20.0	16.6	83	9	35	22-150	
Carbon disulfide	10.0	9.88	99	5	35	54-132	
Methylene Chloride	10.0	9.38	94	6	35	63-129	
trans-1,2-Dichloroethene	10.0	9.69	97	10	35	73-126	
Methyl tert-butyl ether	10.0	9.26	93	2	35	64-123	
1,1-Dichloroethane	10.0	9.38	94	1	35	73-126	
cis-1,2-Dichloroethene	10.0	9.81	98	2	35	70-120	
Bromochloromethane	10.0	9.45	95	1	35	70-127	
2-Butanone (MEK)	20.0	15.0	75	15	35	39-138	
Chloroform	10.0	9.63	96	4	35	72-127	
1,1,1-Trichloroethane	10.0	10.8	108	1	35	63-133	
Carbon tetrachloride	10.0	10.5	105	7	35	55-150	
Benzene	10.0	9.48	95	4	32	80-120	
1,2-Dichloroethane	10.0	9.29	93	5	32	68-132	
Trichloroethene	10.0	9.65	97	1	35	73-120	
1,2-Dichloropropane	10.0	8.36	84	7	34	76-124	
Bromodichloromethane	10.0	9.47	95	9	35	66-130	
cis-1,3-Dichloropropene	10.0	10.3	103	3	35	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.7	88	4	35	45-145	
Toluene	10.0	10.3	103	5	35	80-123	
trans-1,3-Dichloropropene	10.0	12.0	120	9	35	65-125	
1,1,2-Trichloroethane	10.0	9.75	98	11	35	77-127	
Tetrachloroethene	10.0	8.96	90	9	35	70-135	
2-Hexanone	20.0	16.1	81	4	35	25-132	
Dibromochloromethane	10.0	10.1	101	12	35	60-140	
1,2-Dibromoethane (EDB)	10.0	9.70	97	9	35	74-123	
Chlorobenzene	10.0	10.1	101	7	29	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	6	34	63-140	
Ethylbenzene	10.0	10.0	100	5	33	72-126	
Xylenes, Total	20.0	20.4	102	7	32	76-128	
Styrene	10.0	9.80	98	6	34	71-127	
Bromoform	10.0	9.46	95	15	35	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.54	95	12	35	62-125	
1,4-Dioxane	200	179 J	89	4	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.: 180-40541-1

SDG No.:

Lab File ID: 50121006.D Lab Sample ID: MB 180-131443/6

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

Instrument ID: CHHP5 Date Analyzed: 01/22/2015 12:02

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 180-131443/9	50121009.D	01/22/2015 13:26
HD-QC5-0/1-2	180-40541-1	50121018.D	01/22/2015 17:03
HD-MW-114-0/1-0 DL	180-40541-2 DL	50121019.D	01/22/2015 17:27
HD-MW-132-0/1-0 DL	180-40541-3 DL	50121020.D	01/22/2015 17:52
HD-MW-74S-0/1-0	180-40541-5	50121022.D	01/22/2015 18:40
HD-MW-39D-0/1-0	180-40541-6	50121024.D	01/22/2015 19:28
HD-MW-127-0/1-0	180-40541-7	50121025.D	01/22/2015 19:52
HD-MW-114-0/1-0	180-40541-2	50121029.D	01/22/2015 21:29

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab File ID: 50123005.D Lab Sample ID: MB 180-131582/5

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

Instrument ID: CHHP5 Date Analyzed: 01/23/2015 12:13

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

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-131582/6	50123006.D	01/23/2015 12:56
	LCSD 180-131582/7	50123007.D	01/23/2015 13:20
HD-CW-18-0/1-0	180-40541-4	50123012.D	01/23/2015 15:35
HD-MW-50S-0/1-0	180-40541-8	50123013.D	01/23/2015 15:59

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab File ID: 50128005.D Lab Sample ID: MB 180-131906/5

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

Instrument ID: CHHP5 Date Analyzed: 01/28/2015 10:35

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 180-131906/8	50128008.D	01/28/2015 12:00
HD-MW-132-0/1-0	180-40541-3	50128027.D	01/28/2015 19:38

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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.: 180-40541-1

SDG No.:

Lab File ID: 50121004.D BFB Injection Date: 01/22/2015

Instrument ID: CHHP5 BFB Injection Time: 10:12

Analysis Batch No.: 131443

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	30.1	
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	7.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	69.6	
175	5.0 - 9.0 % of mass 174	6.2	(8.9)1
176	95.0 - 101.0 % of mass 174	68.8	(98.8)1
177	5.0 - 9.0 % of mass 176	5.1	(7.4)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-131443/2	50121002.D	01/22/2015	10:50
	CCV 180-131443/5	50121005.D	01/22/2015	11:38
	MB 180-131443/6	50121006.D	01/22/2015	12:02
	LCS 180-131443/9	50121009.D	01/22/2015	13:26
HD-QC5-0/1-2	180-40541-1	50121018.D	01/22/2015	17:03
HD-MW-114-0/1-0 DL	180-40541-2 DL	50121019.D	01/22/2015	17:27
HD-MW-132-0/1-0 DL	180-40541-3 DL	50121020.D	01/22/2015	17:52
HD-MW-74S-0/1-0	180-40541-5	50121022.D	01/22/2015	18:40
HD-MW-39D-0/1-0	180-40541-6	50121024.D	01/22/2015	19:28
HD-MW-127-0/1-0	180-40541-7	50121025.D	01/22/2015	19:52
HD-MW-114-0/1-0	180-40541-2	50121029.D	01/22/2015	21:29

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab File ID: 50123001.D BFB Injection Date: 01/23/2015

Instrument ID: CHHP5 BFB Injection Time: 09:59

Analysis Batch No.: 131582

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.6	
75	30.0 - 60.0 % of mass 95	57.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.1	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	69.7	
175	5.0 - 9.0 % of mass 174	4.3	(6.2)1
176	95.0 - 101.0 % of mass 174	68.6	(98.5)1
177	5.0 - 9.0 % of mass 176	4.3	(6.3)2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-131582/3	50123003.D	01/23/2015	11:21
	MB 180-131582/5	50123005.D	01/23/2015	12:13
	LCS 180-131582/6	50123006.D	01/23/2015	12:56
	LCSD 180-131582/7	50123007.D	01/23/2015	13:20
HD-CW-18-0/1-0	180-40541-4	50123012.D	01/23/2015	15:35
HD-MW-50S-0/1-0	180-40541-8	50123013.D	01/23/2015	15:59

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab File ID: 50127001.D BFB Injection Date: 01/28/2015

Instrument ID: CHHP5 BFB Injection Time: 07:58

Analysis Batch No.: 131906

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.7	
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	7.3	
173	Less than 2.0 % of mass 174	0.5	(0.6)1
174	50.0 - 120.00 % of mass 95	73.9	
175	5.0 - 9.0 % of mass 174	5.7	(7.7)1
176	95.0 - 101.0 % of mass 174	73.0	(98.8)1
177	5.0 - 9.0 % of mass 176	4.7	(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 180-131906/3	50128003.D	01/28/2015	09:13
	MB 180-131906/5	50128005.D	01/28/2015	10:35
	LCS 180-131906/8	50128008.D	01/28/2015	12:00
HD-MW-132-0/1-0	180-40541-3	50128027.D	01/28/2015	19:38

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Sample No.: CCVIS 180-131443/2 Date Analyzed: 01/22/2015 10:50

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

Lab File ID (Standard): 50121002.D Heated Purge: (Y/N) N

Calibration ID: 20600

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		179611	4.30	487517	7.27	107895	10.36
UPPER LIMIT		359222	4.80	975034	7.77	215790	10.86
LOWER LIMIT		89806	3.80	243759	6.77	53948	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 180-131443/5		159927	4.30	430576	7.28	91792	10.37
MB 180-131443/6		181013	4.31	452864	7.28	99926	10.36
LCS 180-131443/9		165405	4.32	464214	7.27	101442	10.36
180-40541-1	HD-QC5-0/1-2	156284	4.29	407388	7.28	100903	10.36
180-40541-2 DL	HD-MW-114-0/1-0 DL	166178	4.29	423917	7.28	99118	10.36
180-40541-3 DL	HD-MW-132-0/1-0 DL	156651	4.29	431365	7.27	101073	10.36
180-40541-5	HD-MW-74S-0/1-0	169096	4.30	418141	7.27	100642	10.36
180-40541-6	HD-MW-39D-0/1-0	162494	4.29	427430	7.27	100826	10.36
180-40541-7	HD-MW-127-0/1-0	165923	4.30	410308	7.27	90917	10.36
180-40541-2	HD-MW-114-0/1-0	175618	4.30	424429	7.27	99761	10.36

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

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Sample No.: CCVIS 180-131443/2 Date Analyzed: 01/22/2015 10:50

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

Lab File ID (Standard): 50121002.D Heated Purge: (Y/N) N

Calibration ID: 20600

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		167132	12.68				
UPPER LIMIT		334264	13.18				
LOWER LIMIT		83566	12.18				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 180-131443/5		113974	12.69				
MB 180-131443/6		151947	12.68				
LCS 180-131443/9		165509	12.68				
180-40541-1	HD-QC5-0/1-2	142252	12.69				
180-40541-2 DL	HD-MW-114-0/1-0 DL	138995	12.69				
180-40541-3 DL	HD-MW-132-0/1-0 DL	138023	12.68				
180-40541-5	HD-MW-74S-0/1-0	128390	12.69				
180-40541-6	HD-MW-39D-0/1-0	139479	12.69				
180-40541-7	HD-MW-127-0/1-0	134458	12.68				
180-40541-2	HD-MW-114-0/1-0	139222	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.: 180-40541-1

SDG No.:

Sample No.: CCVIS 180-131582/3 Date Analyzed: 01/23/2015 11:21

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

Lab File ID (Standard): 50123003.D Heated Purge: (Y/N) N

Calibration ID: 20600

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		190658	4.30	536762	7.27	113288	10.36
UPPER LIMIT		381316	4.80	1073524	7.77	226576	10.86
LOWER LIMIT		95329	3.80	268381	6.77	56644	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-131582/5		216671	4.30	542614	7.27	114807	10.37
LCS 180-131582/6		193155	4.30	523683	7.27	109183	10.36
LCSD 180-131582/7		181141	4.30	520617	7.28	112998	10.36
180-40541-4	HD-CW-18-0/1-0	190637	4.30	477463	7.28	101656	10.37
180-40541-8	HD-MW-50S-0/1-0	195931	4.30	488315	7.28	102089	10.36

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

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Sample No.: CCVIS 180-131582/3 Date Analyzed: 01/23/2015 11:21

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

Lab File ID (Standard): 50123003.D Heated Purge: (Y/N) N

Calibration ID: 20600

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		150622	12.68				
UPPER LIMIT		301244	13.18				
LOWER LIMIT		75311	12.18				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-131582/5		161221	12.68				
LCS 180-131582/6		162532	12.68				
LCSD 180-131582/7		158871	12.69				
180-40541-4	HD-CW-18-0/1-0	147568	12.69				
180-40541-8	HD-MW-50S-0/1-0	142839	12.69				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Sample No.: CCVIS 180-131906/3 Date Analyzed: 01/28/2015 09:13

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

Lab File ID (Standard): 50128003.D Heated Purge: (Y/N) N

Calibration ID: 20600

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		174016	4.31	474967	7.28	108247	10.37
UPPER LIMIT		348032	4.81	949934	7.78	216494	10.87
LOWER LIMIT		87008	3.81	237484	6.78	54124	9.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-131906/5		196224	4.30	520134	7.28	113079	10.36
LCS 180-131906/8		154775	4.30	470504	7.28	109410	10.36
180-40541-3	HD-MW-132-0/1-0	142843	4.29	412494	7.28	94754	10.36

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

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Sample No.: CCVIS 180-131906/3 Date Analyzed: 01/28/2015 09:13

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

Lab File ID (Standard): 50128003.D Heated Purge: (Y/N) N

Calibration ID: 20600

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		151657	12.69				
UPPER LIMIT		303314	13.19				
LOWER LIMIT		75829	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-131906/5		167894	12.69				
LCS 180-131906/8		158029	12.69				
180-40541-3	HD-MW-132-0/1-0	127358	12.68				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-QC5-0/1-2 Lab Sample ID: 180-40541-1

Matrix: Water Lab File ID: 50121018.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 17:03

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.: 131443 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.: 180-40541-1

SDG No.:

Client Sample ID: HD-QC5-0/1-2 Lab Sample ID: 180-40541-1

Matrix: Water Lab File ID: 50121018.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 17:03

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.: 131443 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)	123		64-135
2037-26-5	Toluene-d8 (Surr)	92		71-118
460-00-4	4-Bromofluorobenzene (Surr)	93		70-118
1868-53-7	Dibromofluoromethane (Surr)	120		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121018.D
Lims ID: 180-40541-B-1 Lab Sample ID: 180-40541-1
Client ID: HD-QC5-0/1-2
Sample Type: Client
Inject. Date: 22-Jan-2015 17:03:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-40541-B-1
Misc. Info.: 180-0005379-018
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:05:49 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:05:49

	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	93	156284	1000.0	
*	2 Fluorobenzene (IS)	96	7.277	7.277	0.000	99	407388	50.0	
*	3 Chlorobenzene-d5	119	10.361	10.367	-0.006	99	100903	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	97	142252	50.0	
$	5 Dibromofluoromethane (Surr	113	6.523	6.526	-0.003	91	103771	59.8	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.897	0.009	89	175526	61.7	
$	7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	97	387372	46.2	
$	8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	82	149362	46.7	
	12 Chloromethane	50		1.781				ND	
	13 Vinyl chloride	62		1.914				ND	
	15 Bromomethane	94		2.261				ND	
	16 Chloroethane	64		2.401				ND	
	22 1,1-Dichloroethene	96		3.381				ND	
	24 Acetone	43	3.499	3.496	0.003	19	4877	3.82	M
	26 Carbon disulfide	76		3.666				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		5.936				ND	
	46 2-Butanone (MEK)	43		5.978				ND	
	49 Chlorobromomethane	128		6.228				ND	
	52 Chloroform	83	6.322	6.337	-0.015	1	1425	0.3606	
	53 1,1,1-Trichloroethane	97		6.532				ND	
	56 Carbon tetrachloride	117		6.708				ND	
	58 Benzene	78		6.952				ND	
	59 1,2-Dichloroethane	62		6.982				ND	
	64 Trichloroethene	130		7.663				ND	
	67 1,2-Dichloropropane	63		7.901				ND	
	70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164		9.531				ND	
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

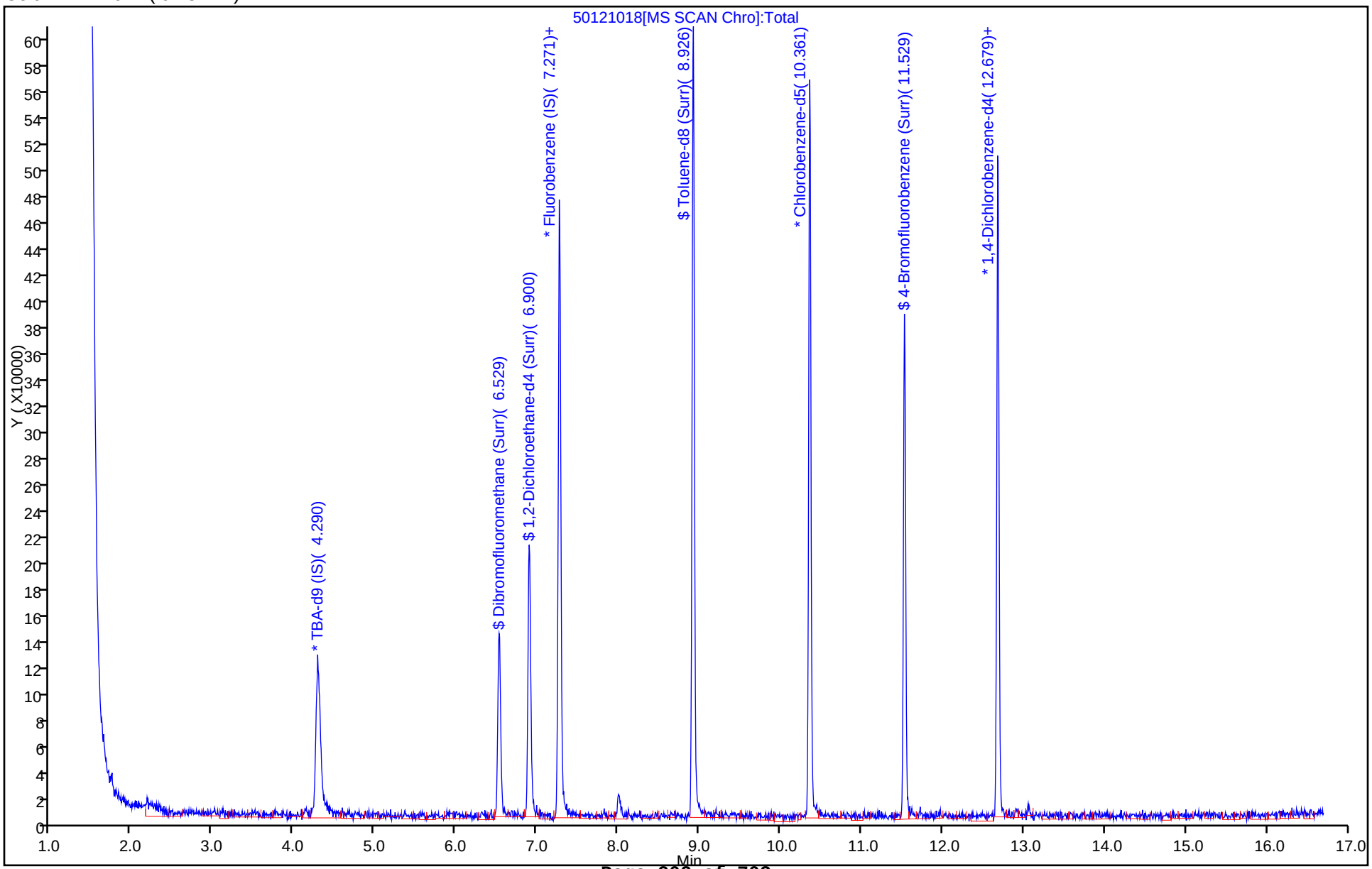
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:05:49 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121018.D				
Injection Date:	22-Jan-2015 17:03:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-B-1	Lab Sample ID:	180-40541-1	Worklist Smp#:	18
Client ID:	HD-QC5-0/1-2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

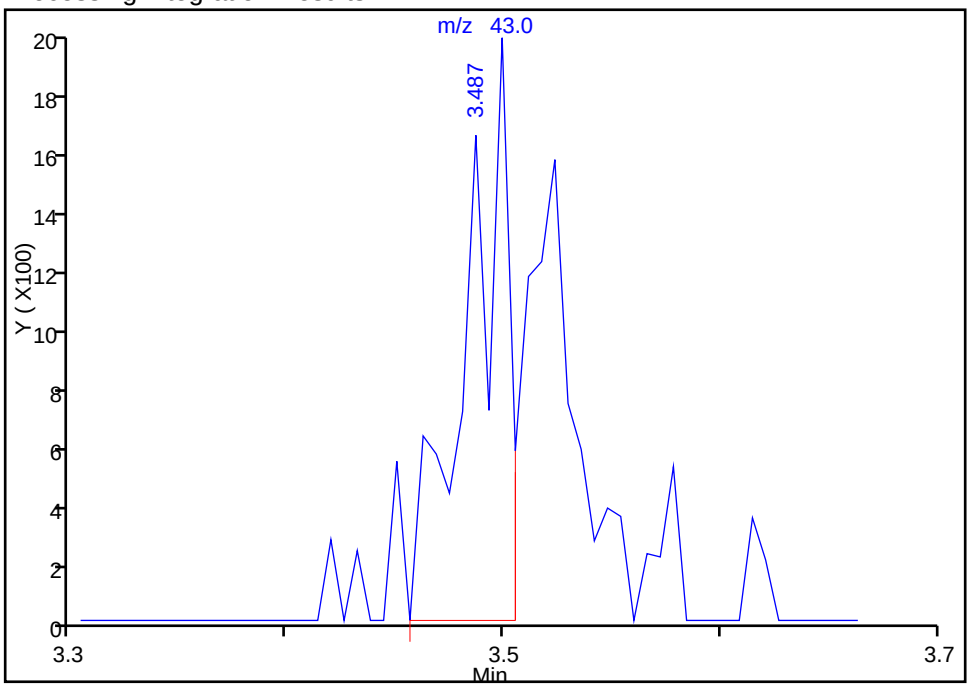
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121018.D				
Injection Date:	22-Jan-2015 17:03:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-B-1	Lab Sample ID:	180-40541-1		
Client ID:	HD-QC5-0/1-2				
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

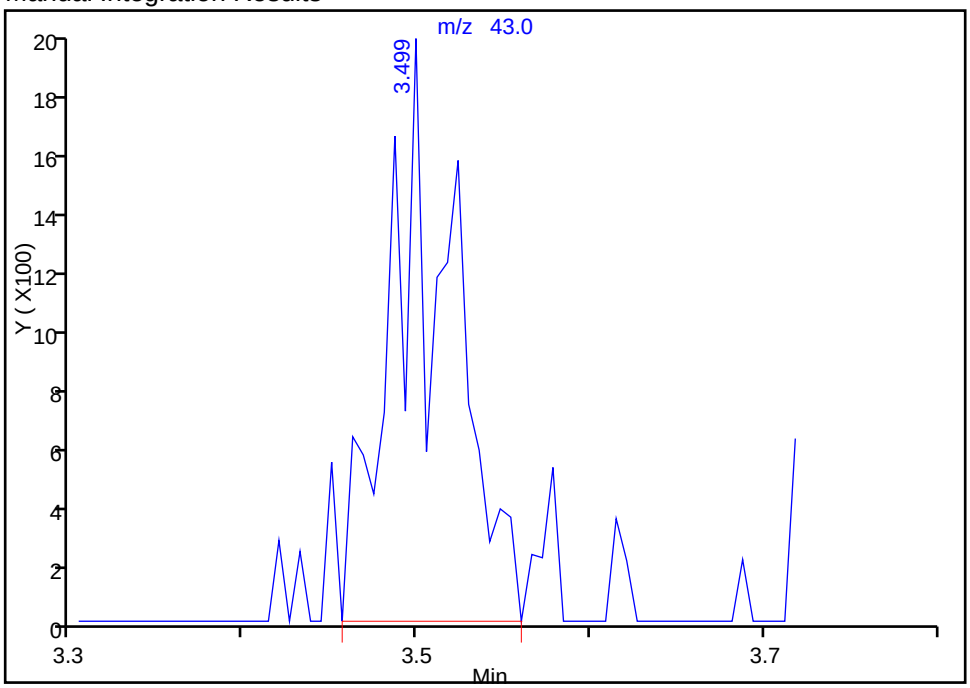
Processing Integration Results

RT: 3.49
Area: 2614
Amount: 2.046287
Amount Units: ng



Manual Integration Results

RT: 3.50
Area: 4877
Amount: 3.817805
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 08:05:49
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-114-0/1-0 | Lab Sample ID: 180-40541-2

Matrix: Water | Lab File ID: 50121029.D

Analysis Method: 8260C | Date Collected: 01/16/2015 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 21:29

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.: 131443 | 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	16		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	29		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	12	J	13	2.1
1634-04-4	Methyl tert-butyl ether	13	U	13	2.3
75-34-3	1,1-Dichloroethane	29		13	1.5
156-59-2	*cis-1,2-Dichloroethene*	*2100*	*E*	*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	13	U	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*	*1900*	*E*	*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*	*700*	*E*	*13*	*1.9*
591-78-6	2-Hexanone	63	U	63	2.0
124-48-1	Dibromochloromethane	13	U	13	1.7
106-93-4	1,2-Dibromoethane (EDB)	13	U	13	2.3
108-90-7	Chlorobenzene	13	U	13	1.7
630-20-6	1,1,1,2-Tetrachloroethane	13	U	13	3.5
100-41-4	Ethylbenzene	13	U	13	2.8
1330-20-7	Xylenes, Total	38	U	38	6.1
100-42-5	Styrene	13	U	13	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-114-0/1-0 Lab Sample ID: 180-40541-2

Matrix: Water Lab File ID: 50121029.D

Analysis Method: 8260C Date Collected: 01/16/2015 11:15

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 21:29

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.: 131443 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)	115		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	89		70-118
1868-53-7	Dibromofluoromethane (Surr)	122		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D
Lims ID: 180-40541-C-2 Lab Sample ID: 180-40541-2
Client ID: HD-MW-114-0/1-0
Sample Type: Client
Inject. Date: 22-Jan-2015 21:29:30 ALS Bottle#: 28 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 12.5000
Sample Info: 180-40541-C-2, 12.5x
Misc. Info.: 180-0005379-029
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:46:04 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:46:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.297	4.302	-0.005	89	175618	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.277	-0.006	100	424429	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	98	99761	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	97	139222	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.526	0.009	92	110399	61.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	92	170366	57.4	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	96	401179	48.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	85	140315	44.4	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62	1.918	1.914	0.004	92	22421	6.50	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.390	3.381	0.009	90	26364	11.4	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.666				ND	
31 Methylene Chloride	84		4.141				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96	4.576	4.561	0.015	91	11024	4.71	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.185	5.175	0.010	96	63208	11.6	
45 cis-1,2-Dichloroethene	96	5.945	5.936	0.009	86	2139500	845.6	E
46 2-Butanone (MEK)	43		5.978				ND	
49 Chlorobromomethane	128		6.228				ND	
52 Chloroform	83		6.337				ND	
53 1,1,1-Trichloroethane	97		6.532				ND	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.667	7.663	0.004	93	1740148	774.4	E
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.534	9.531	0.003	93	550282	281.7	E
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

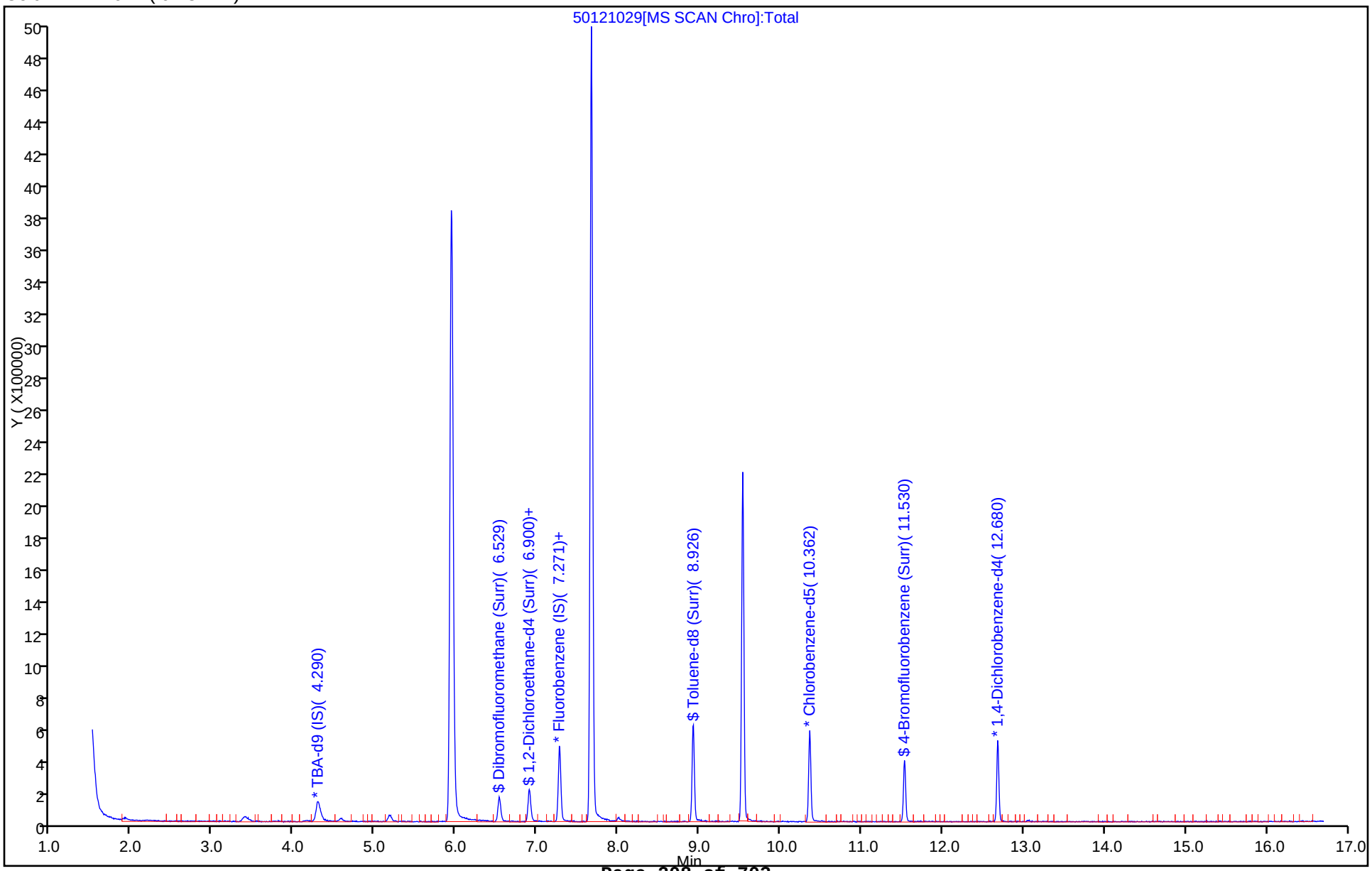
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D				
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2	Worklist Smp#:	29
Client ID:	HD-MW-114-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	12.5000	ALS Bottle#:	28
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

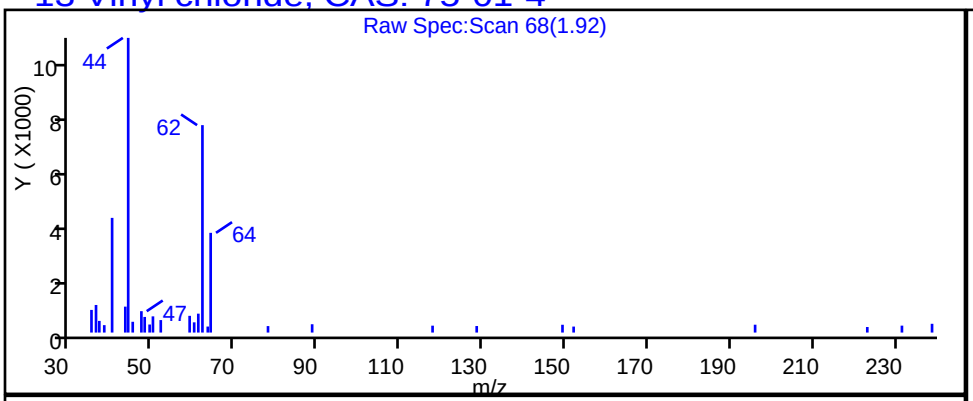


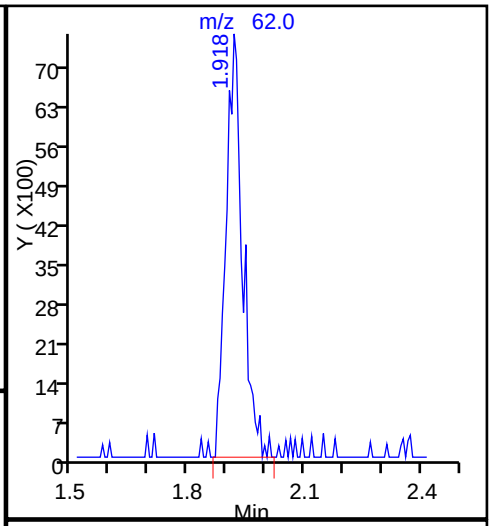
Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

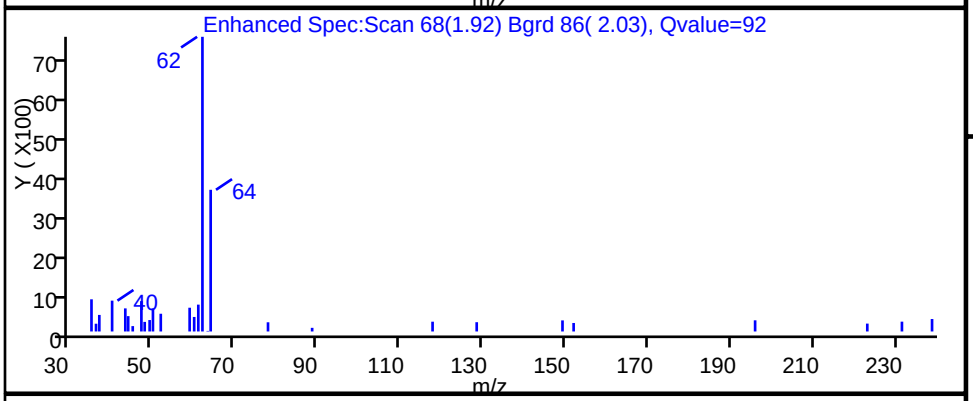
TestAmerica Pittsburgh

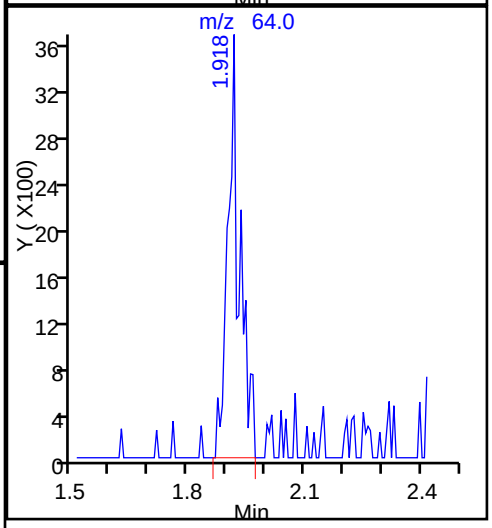
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D				
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	28	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

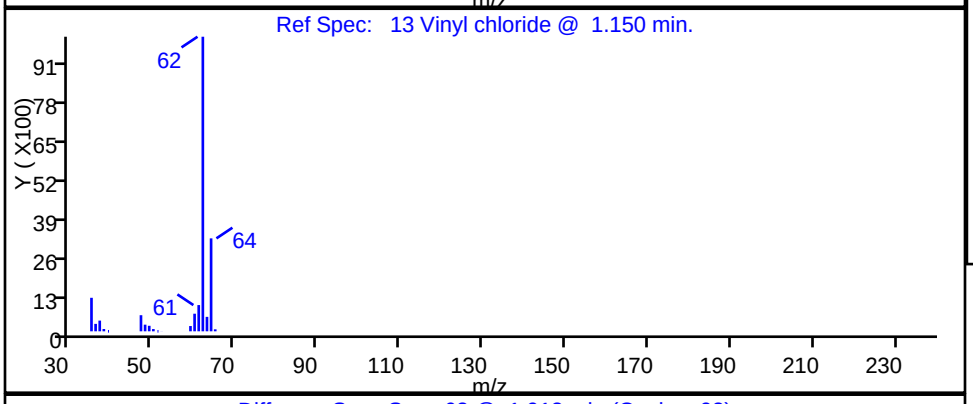
13 Vinyl chloride, CAS: 75-01-4

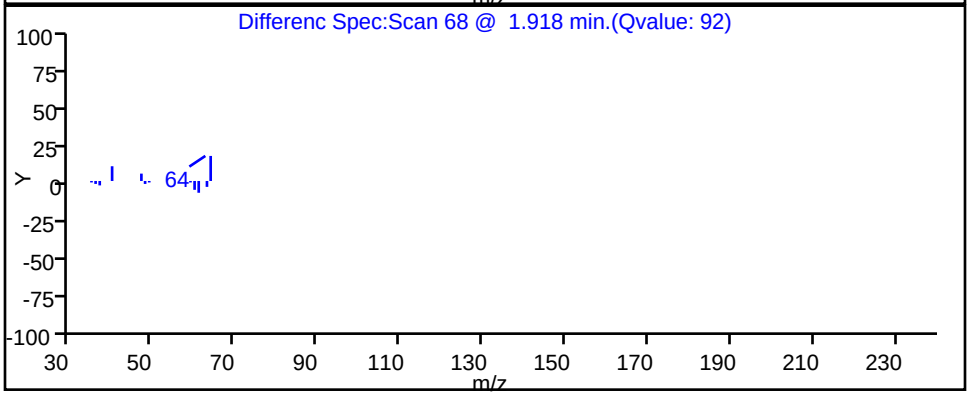










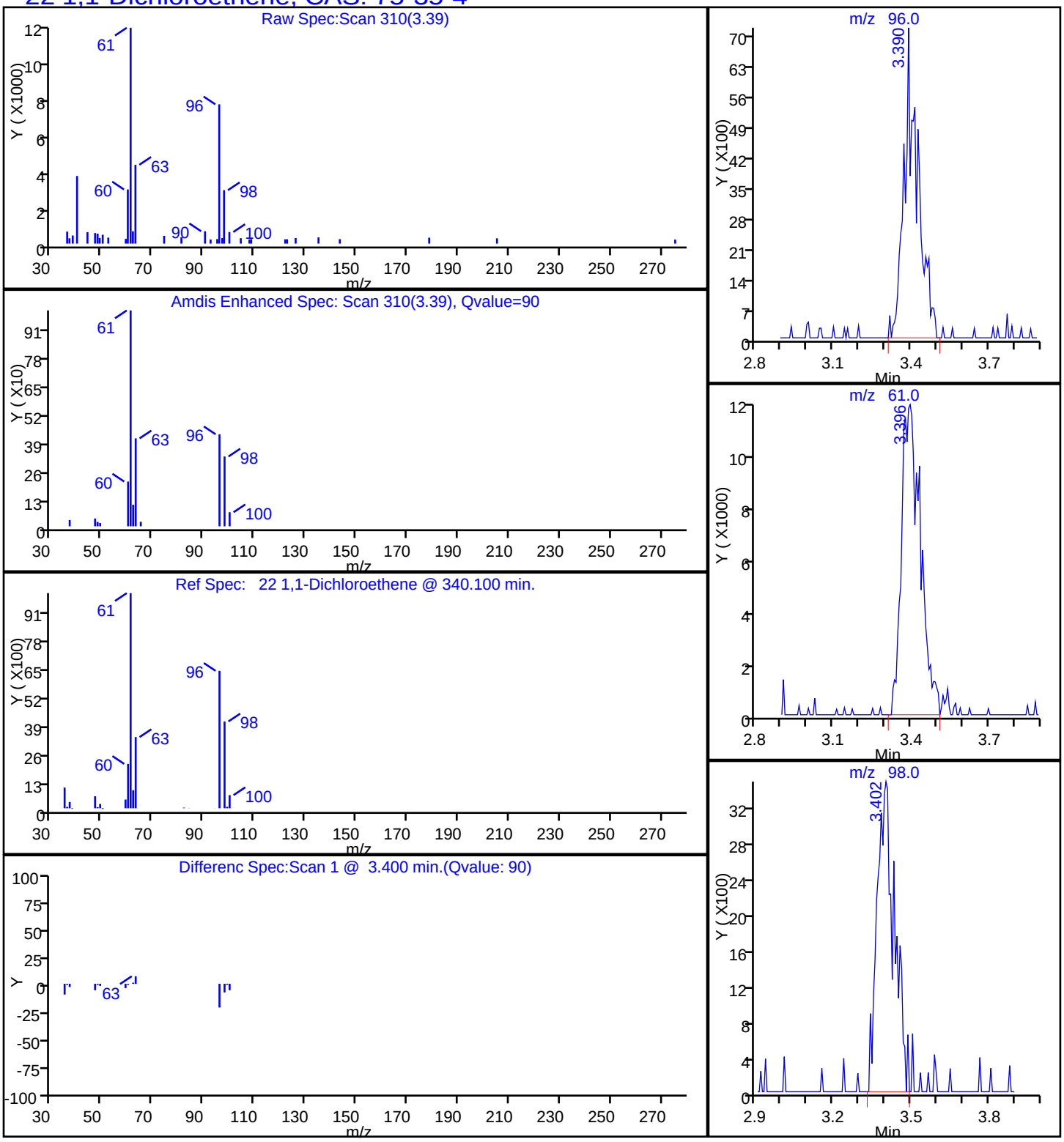


Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D				
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	28	Worklist Smp#:	29
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

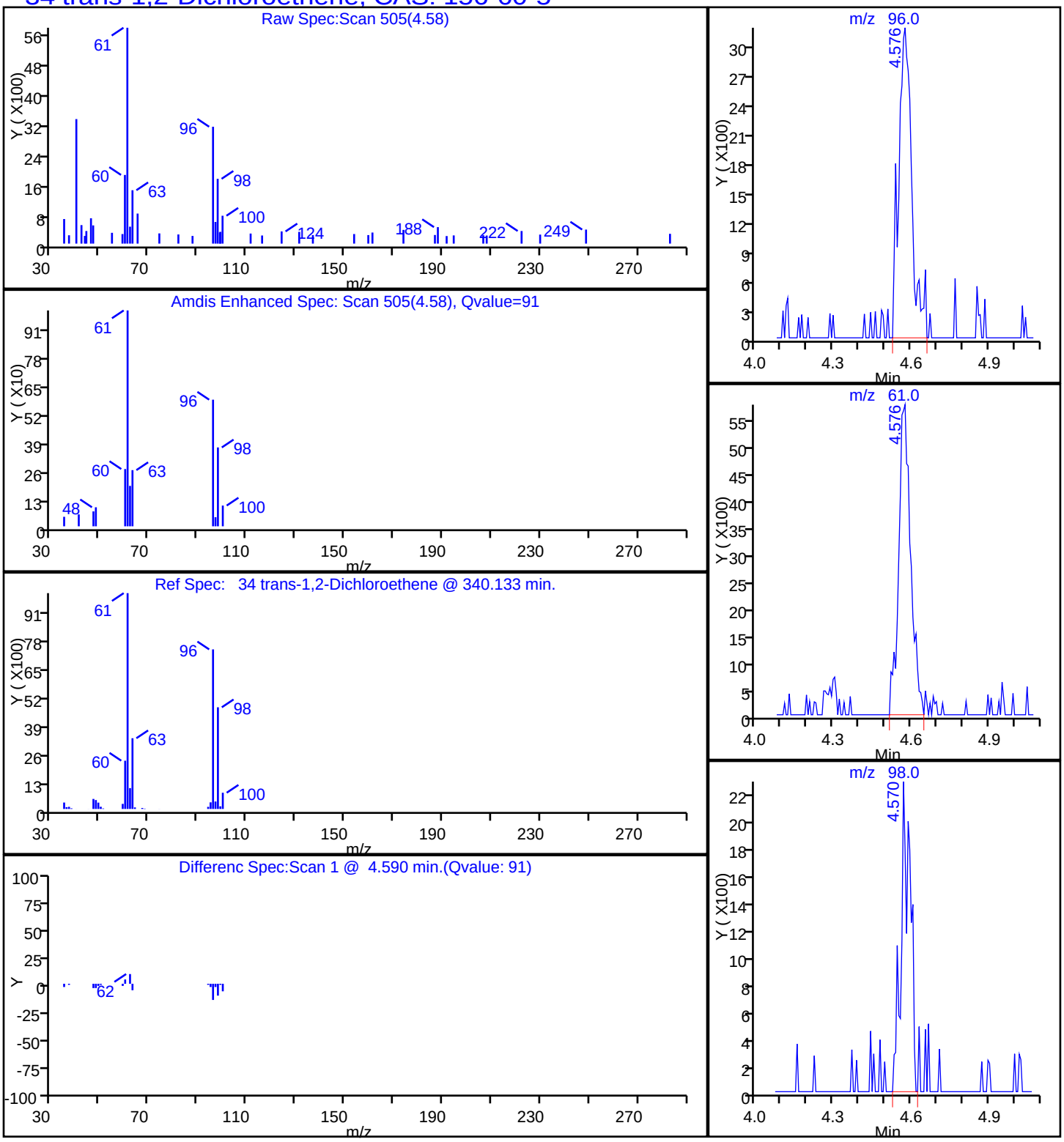


Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D				
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	28	Worklist Smp#:	29
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		

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

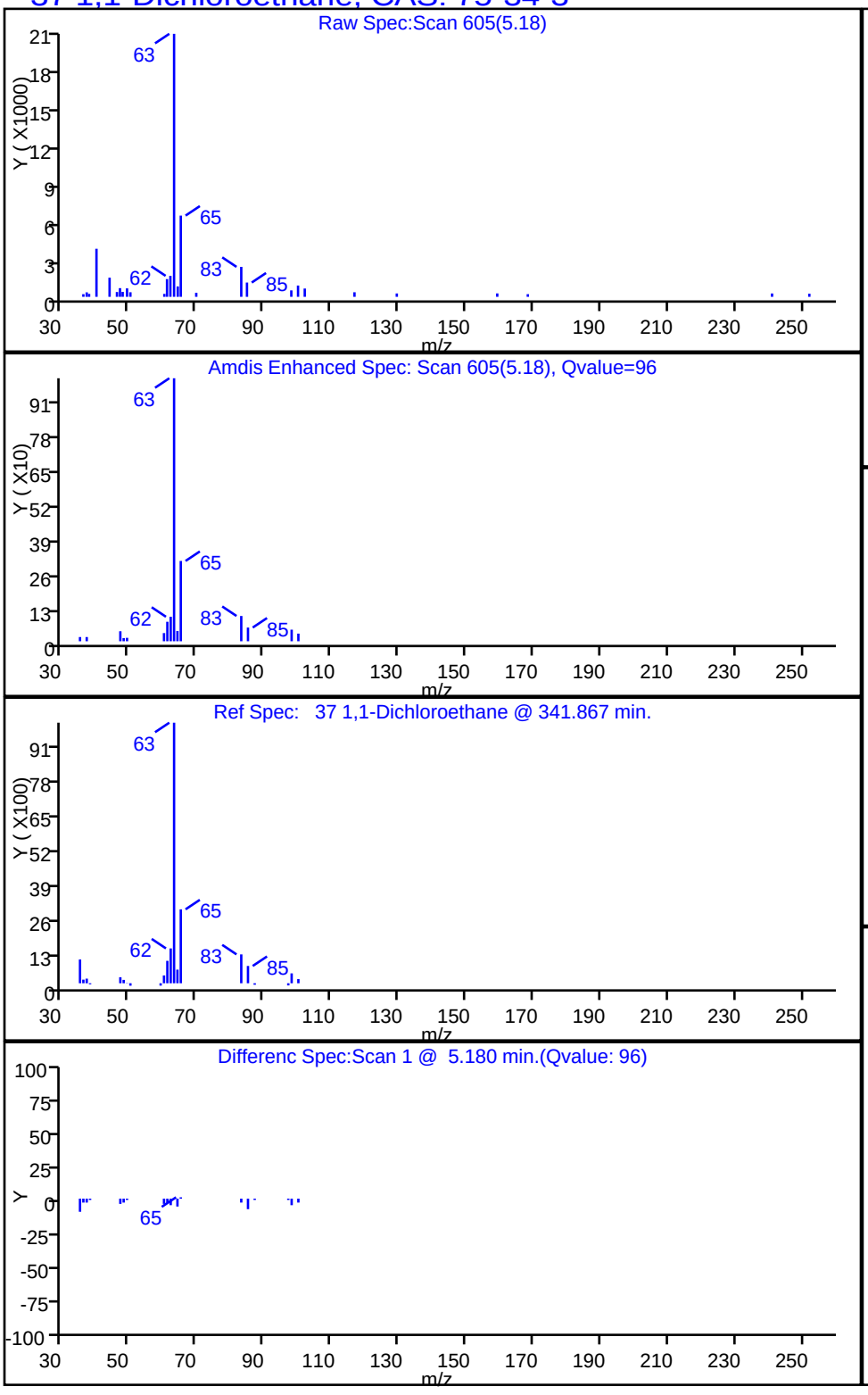


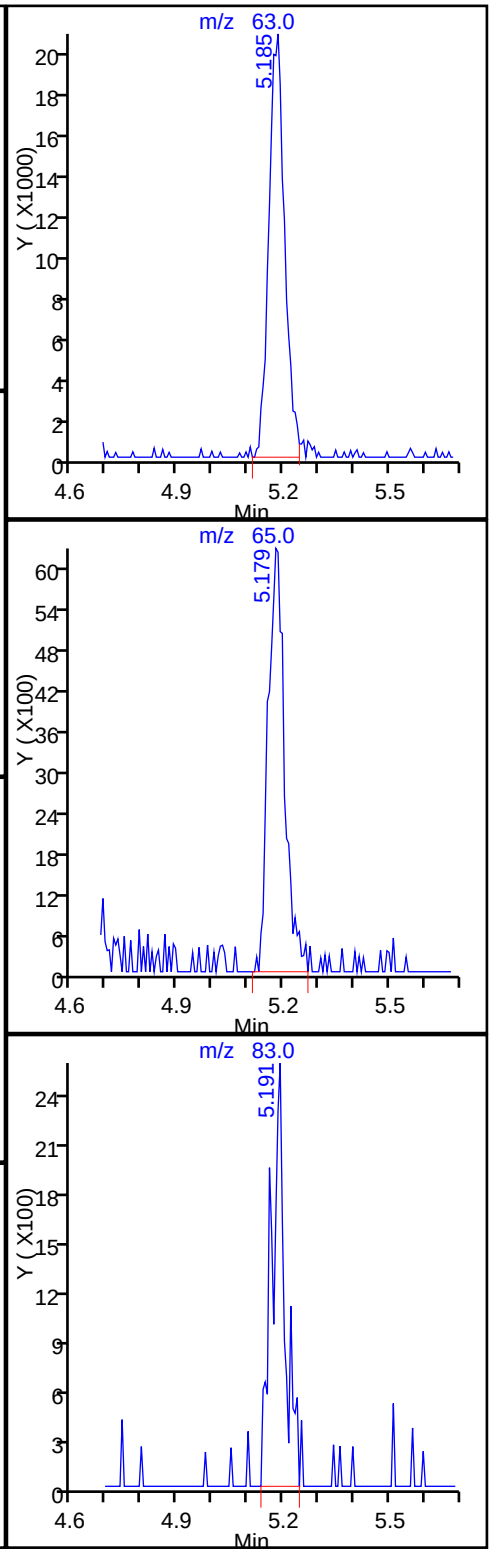
Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D				
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	28	Worklist Smp#:	29
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



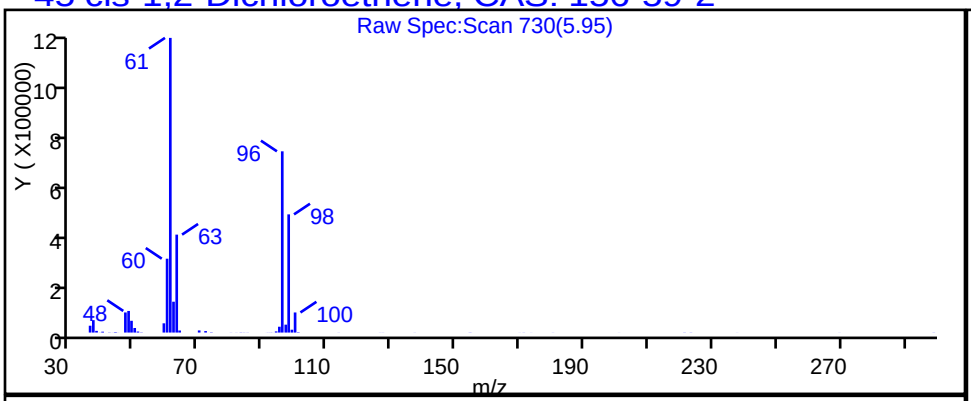


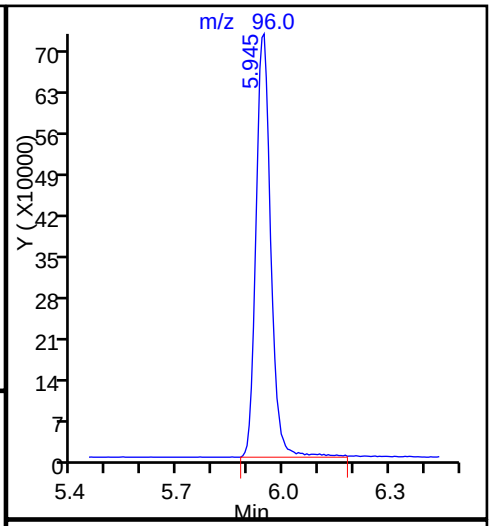
Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

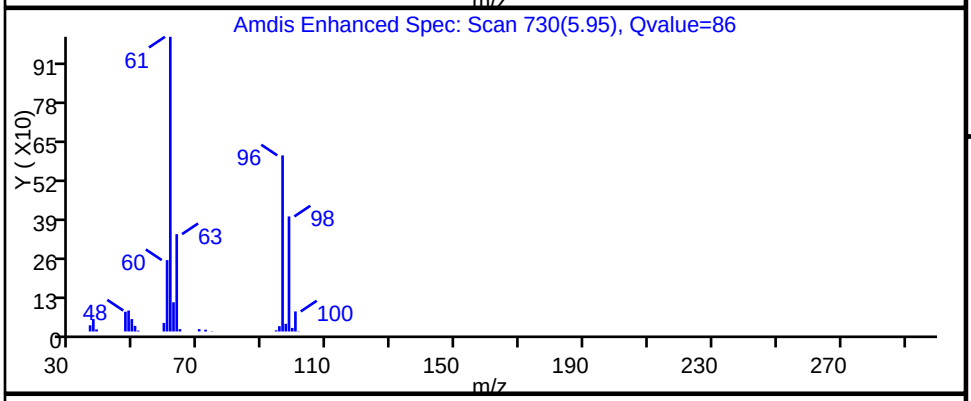
TestAmerica Pittsburgh

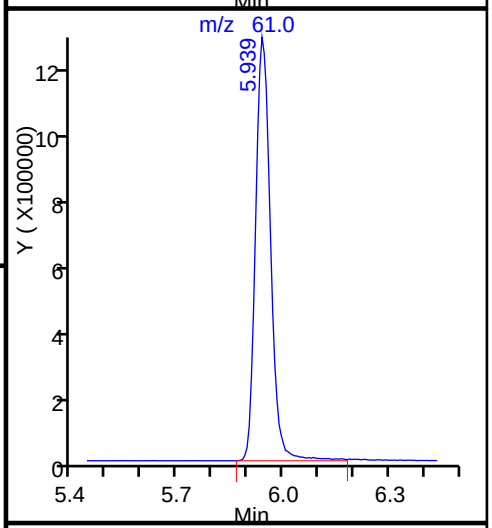
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D		
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2
Client ID:	HD-MW-114-0/1-0		
Operator ID:	001562	ALS Bottle#:	28 Worklist Smp#: 29
Purge Vol:	5.000 mL	Dil. Factor:	12.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

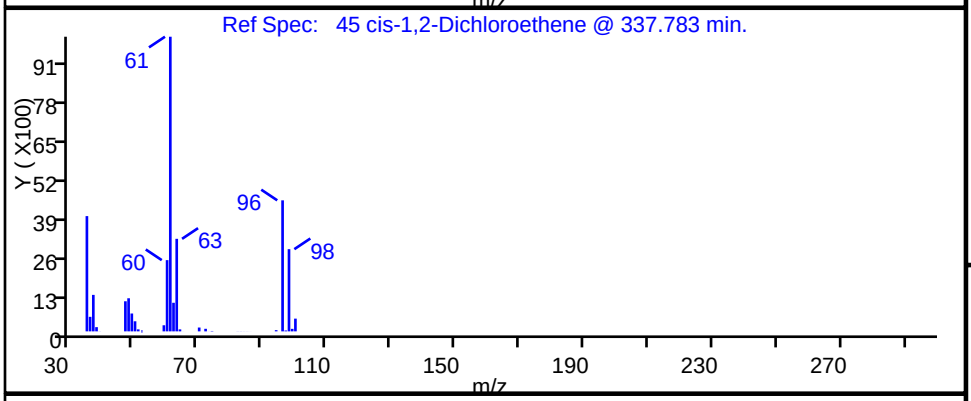
45 cis-1,2-Dichloroethene, CAS: 156-59-2

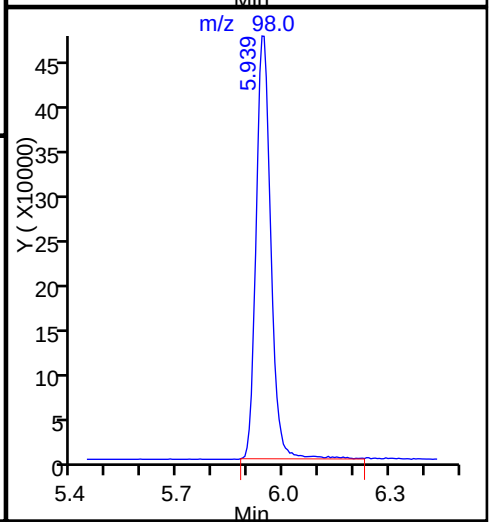


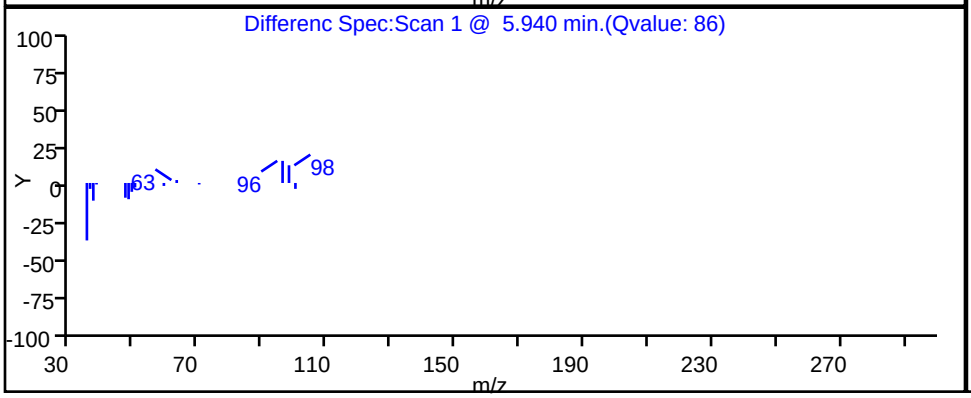










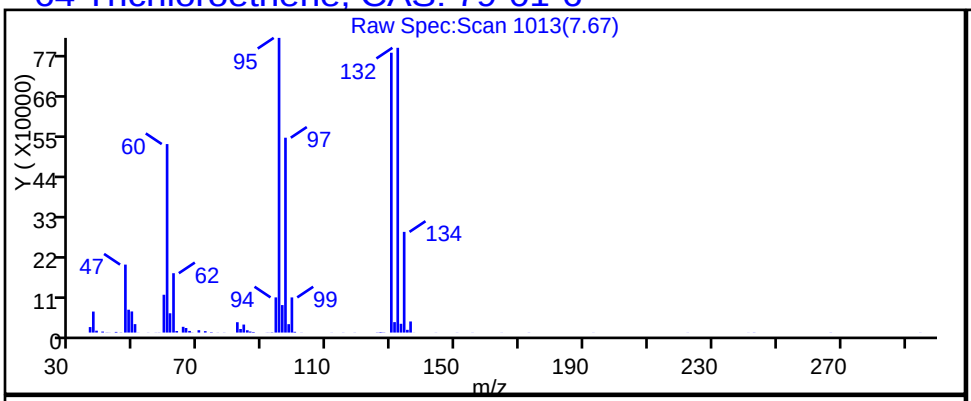


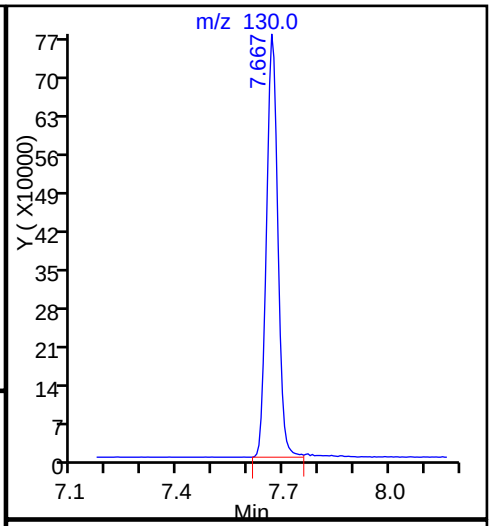
Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

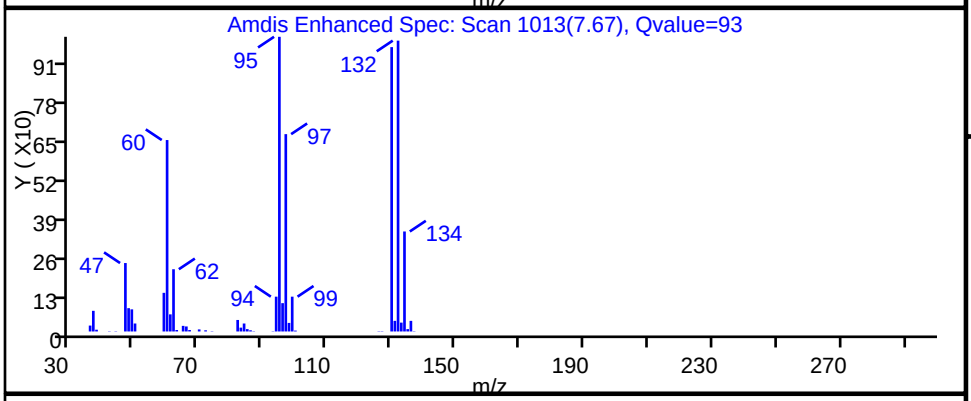
TestAmerica Pittsburgh

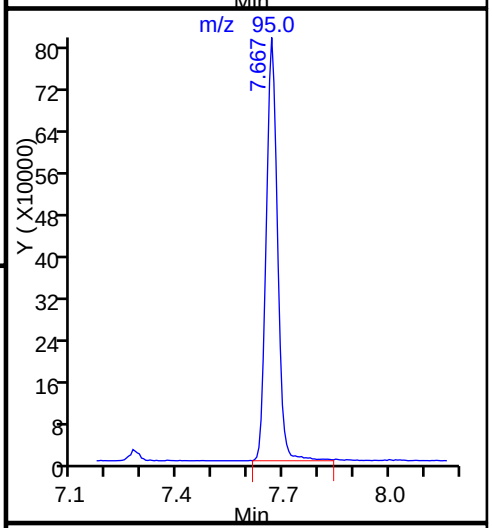
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D				
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	28	Worklist Smp#:	29
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

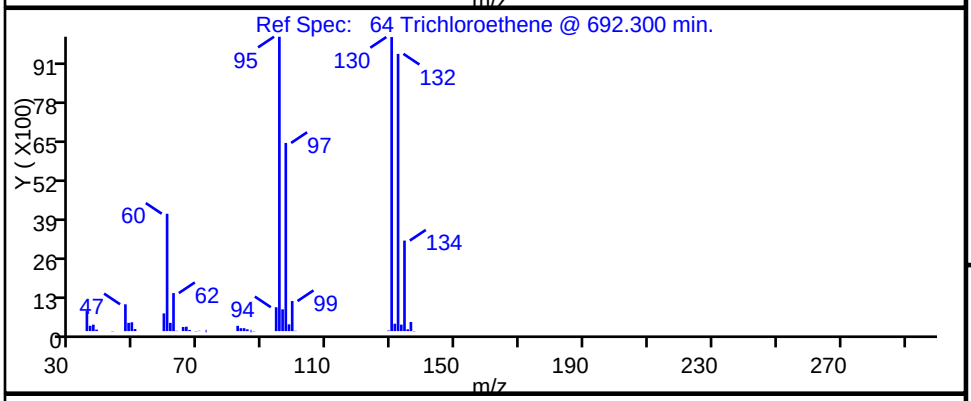
64 Trichloroethene, CAS: 79-01-6

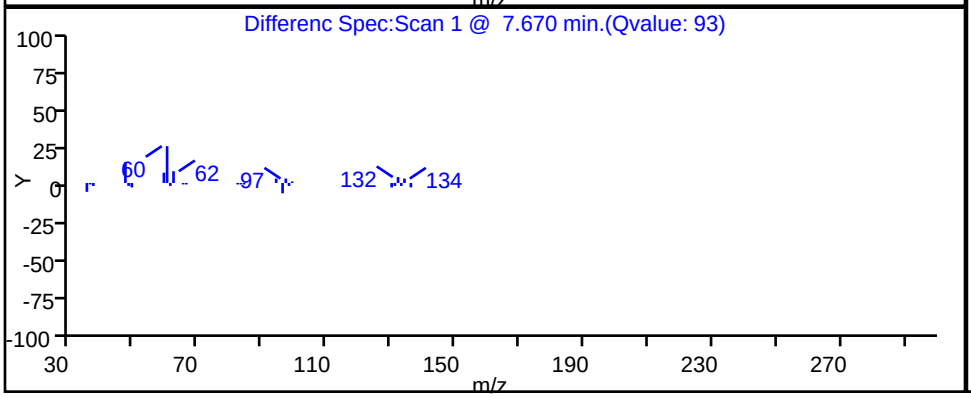


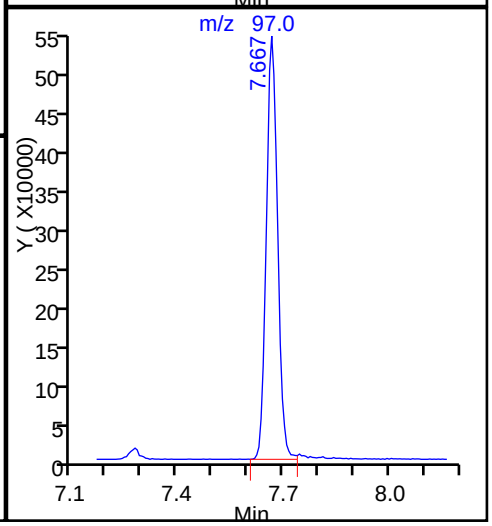










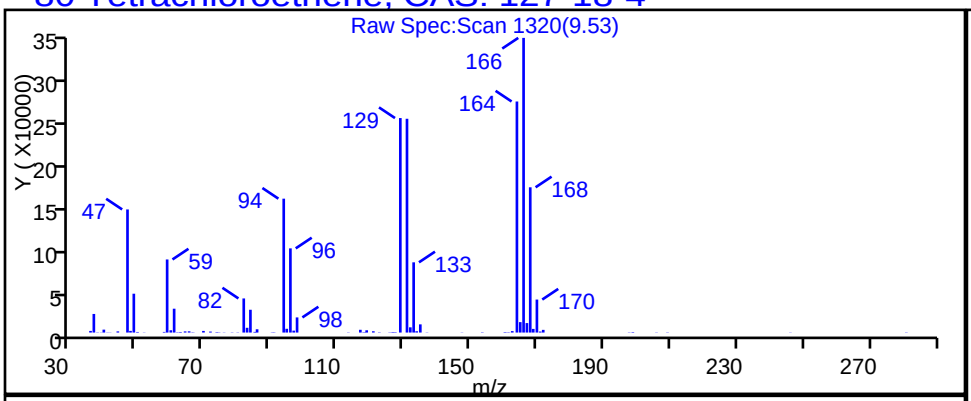


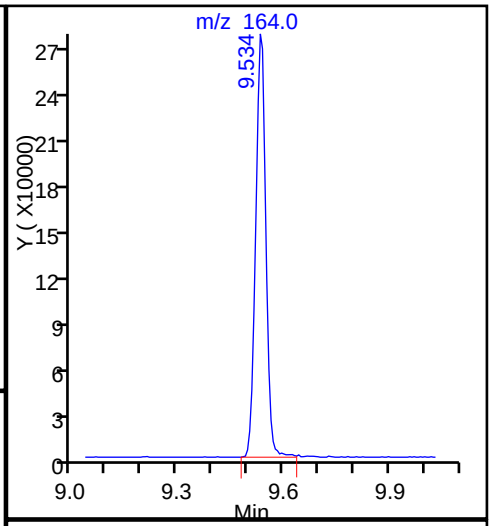
Report Date: 23-Jan-2015 08:46:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

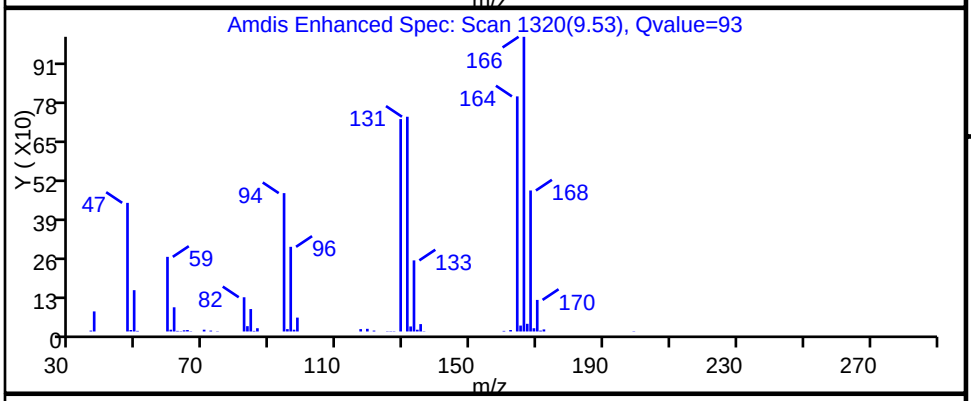
TestAmerica Pittsburgh

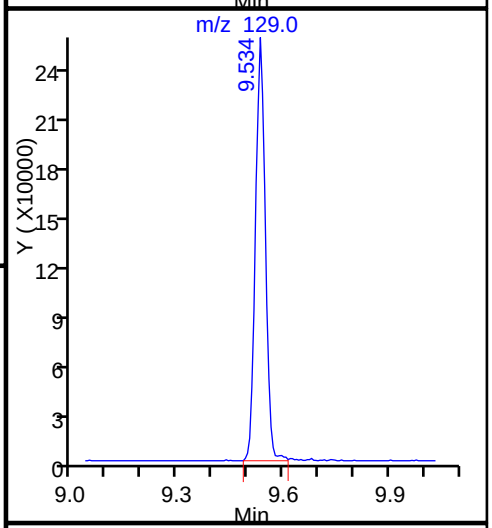
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121029.D		
Injection Date:	22-Jan-2015 21:29:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-2	Lab Sample ID:	180-40541-2
Client ID:	HD-MW-114-0/1-0		
Operator ID:	001562	ALS Bottle#:	28 Worklist Smp#: 29
Purge Vol:	5.000 mL	Dil. Factor:	12.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

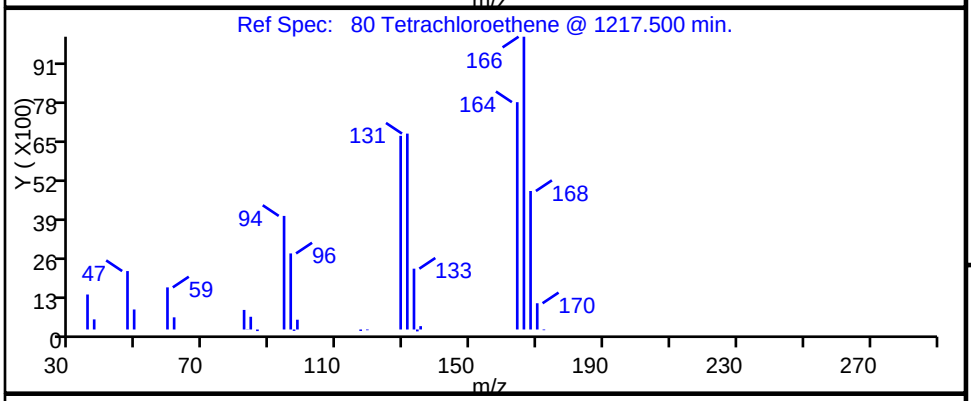
80 Tetrachloroethene, CAS: 127-18-4

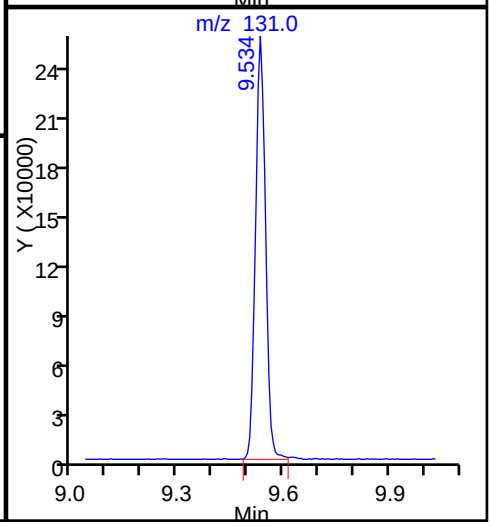


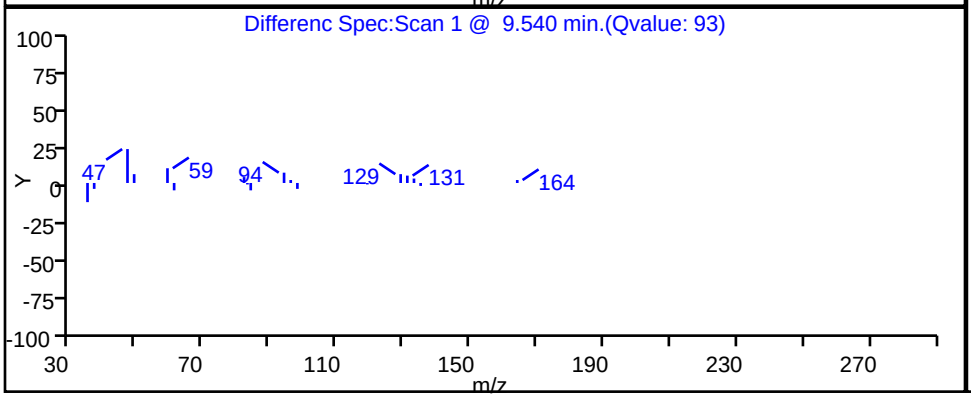












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-114-0/1-0 DL | Lab Sample ID: 180-40541-2 DL

Matrix: Water | Lab File ID: 50121019.D

Analysis Method: 8260C | Date Collected: 01/16/2015 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 17:27

Soil Aliquot Vol: | Dilution Factor: 125

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

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

Analysis Batch No.: 131443 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	130	U	130	35
75-01-4	Vinyl chloride	130	U	130	28
74-83-9	Bromomethane	130	U	130	39
75-00-3	Chloroethane	130	U	130	27
75-35-4	1,1-Dichloroethene	130	U	130	37
67-64-1	Acetone	630	U	630	310
75-15-0	Carbon disulfide	130	U	130	27
75-09-2	Methylene Chloride	130	U	130	16
156-60-5	trans-1,2-Dichloroethene	130	U	130	21
1634-04-4	Methyl tert-butyl ether	130	U	130	23
75-34-3	1,1-Dichloroethane	32	J	130	15
156-59-2	cis-1,2-Dichloroethene	2300		130	30
74-97-5	Bromochloromethane	130	U	130	23
78-93-3	2-Butanone (MEK)	630	U	630	68
67-66-3	Chloroform	130	U	130	21
71-55-6	1,1,1-Trichloroethane	130	U	130	36
56-23-5	Carbon tetrachloride	130	U	130	17
71-43-2	Benzene	130	U	130	13
107-06-2	1,2-Dichloroethane	130	U	130	26
79-01-6	Trichloroethene	2200		130	18
78-87-5	1,2-Dichloropropane	130	U	130	12
75-27-4	Bromodichloromethane	130	U	130	16
10061-01-5	cis-1,3-Dichloropropene	130	U	130	23
108-10-1	4-Methyl-2-pentanone (MIBK)	630	U	630	66
108-88-3	Toluene	130	U	130	19
10061-02-6	trans-1,3-Dichloropropene	130	U	130	19
79-00-5	1,1,2-Trichloroethane	130	U	130	25
127-18-4	Tetrachloroethene	760		130	19
591-78-6	2-Hexanone	630	U	630	20
124-48-1	Dibromochloromethane	130	U	130	17
106-93-4	1,2-Dibromoethane (EDB)	130	U	130	23
108-90-7	Chlorobenzene	130	U	130	17
630-20-6	1,1,1,2-Tetrachloroethane	130	U	130	35
100-41-4	Ethylbenzene	130	U	130	28
1330-20-7	Xylenes, Total	380	U	380	61
100-42-5	Styrene	130	U	130	12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-114-0/1-0 DL Lab Sample ID: 180-40541-2 DL

Matrix: Water Lab File ID: 50121019.D

Analysis Method: 8260C Date Collected: 01/16/2015 11:15

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 17:27

Soil Aliquot Vol: Dilution Factor: 125

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	*Bromoform*	*130*	*U*	*130*	*24*
79-34-5	*1,1,2,2-Tetrachloroethane*	*130*	*U*	*130*	*25*
107-13-1	*Acrylonitrile*	*2500*	*U*	*2500*	*68*
123-91-1	*1,4-Dioxane*	*25000*	*U*	*25000*	*4300*

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		64-135
2037-26-5	Toluene-d8 (Surr)	95		71-118
460-00-4	4-Bromofluorobenzene (Surr)	91		70-118
1868-53-7	Dibromofluoromethane (Surr)	122		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121019.D
Lims ID: 180-40541-E-2 Lab Sample ID: 180-40541-2
Client ID: HD-MW-114-0/1-0
Sample Type: Client
Inject. Date: 22-Jan-2015 17:27:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 125.0000
Sample Info: 180-40541-E-2, 125x
Misc. Info.: 180-0005379-019
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:07:26 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:07:26

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	86	166178	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.277	0.000	100	423917	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.367	-0.006	100	99118	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	138995	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	93	109678	60.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	91	172532	58.2	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	96	389771	47.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	81	142585	45.4	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62	1.905	1.914	-0.009	9	3492	1.01	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.408	3.381	0.027	12	2254	0.9761	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.666				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	4	6923	1.27	
45 cis-1,2-Dichloroethene	96	5.945	5.936	0.009	87	233643	92.5	
46 2-Butanone (MEK)	43		5.978				ND	
49 Chlorobromomethane	128		6.228				ND	
52 Chloroform	83		6.337				ND	
53 1,1,1-Trichloroethane	97		6.532				ND	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.666	7.663	0.003	95	194972	86.9	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.528	9.531	-0.003	93	58803	30.3	
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

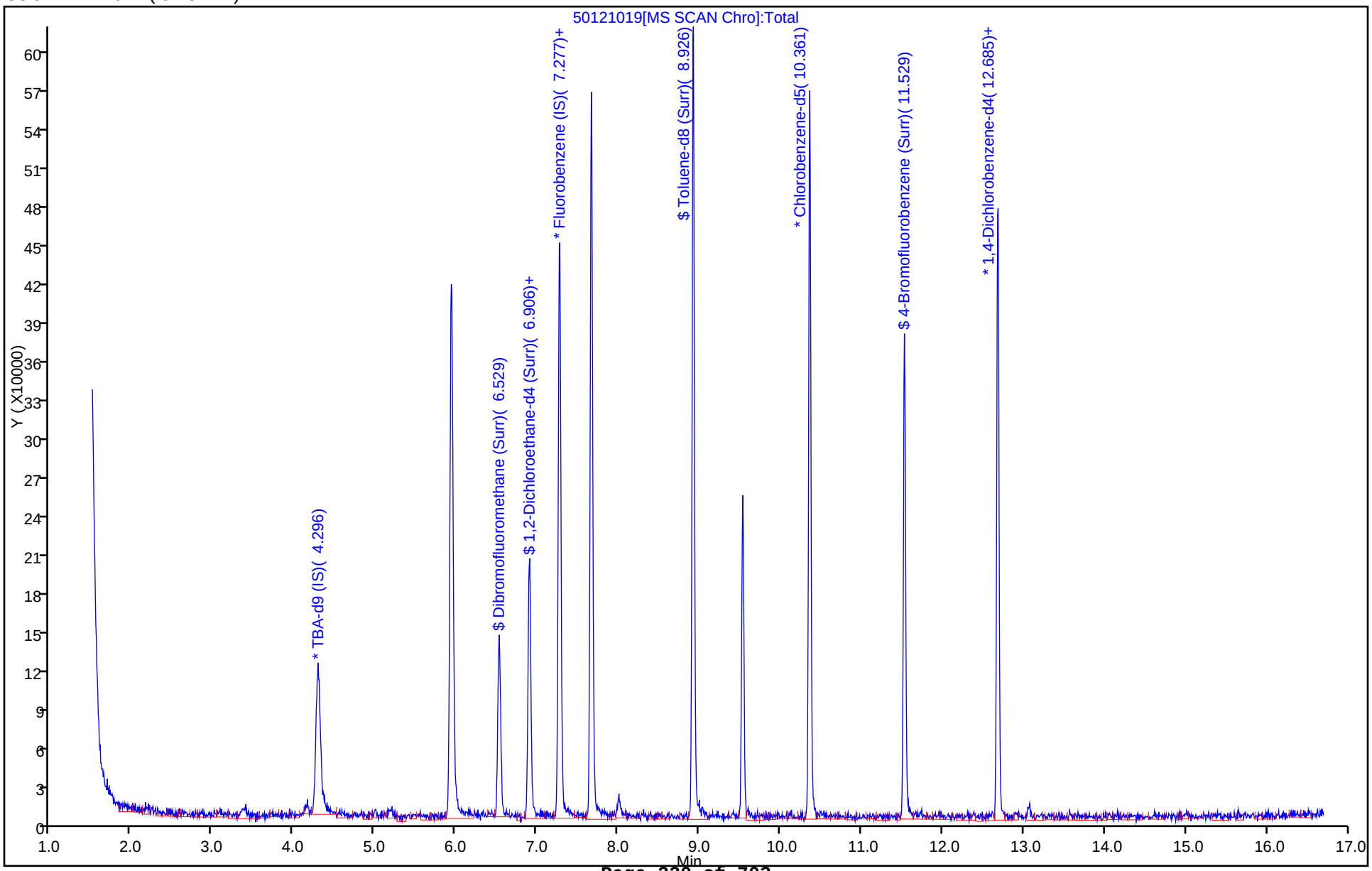
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:07:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121019.D				
Injection Date:	22-Jan-2015 17:27:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-E-2	Lab Sample ID:	180-40541-2	Worklist Smp#:	19
Client ID:	HD-MW-114-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	125.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

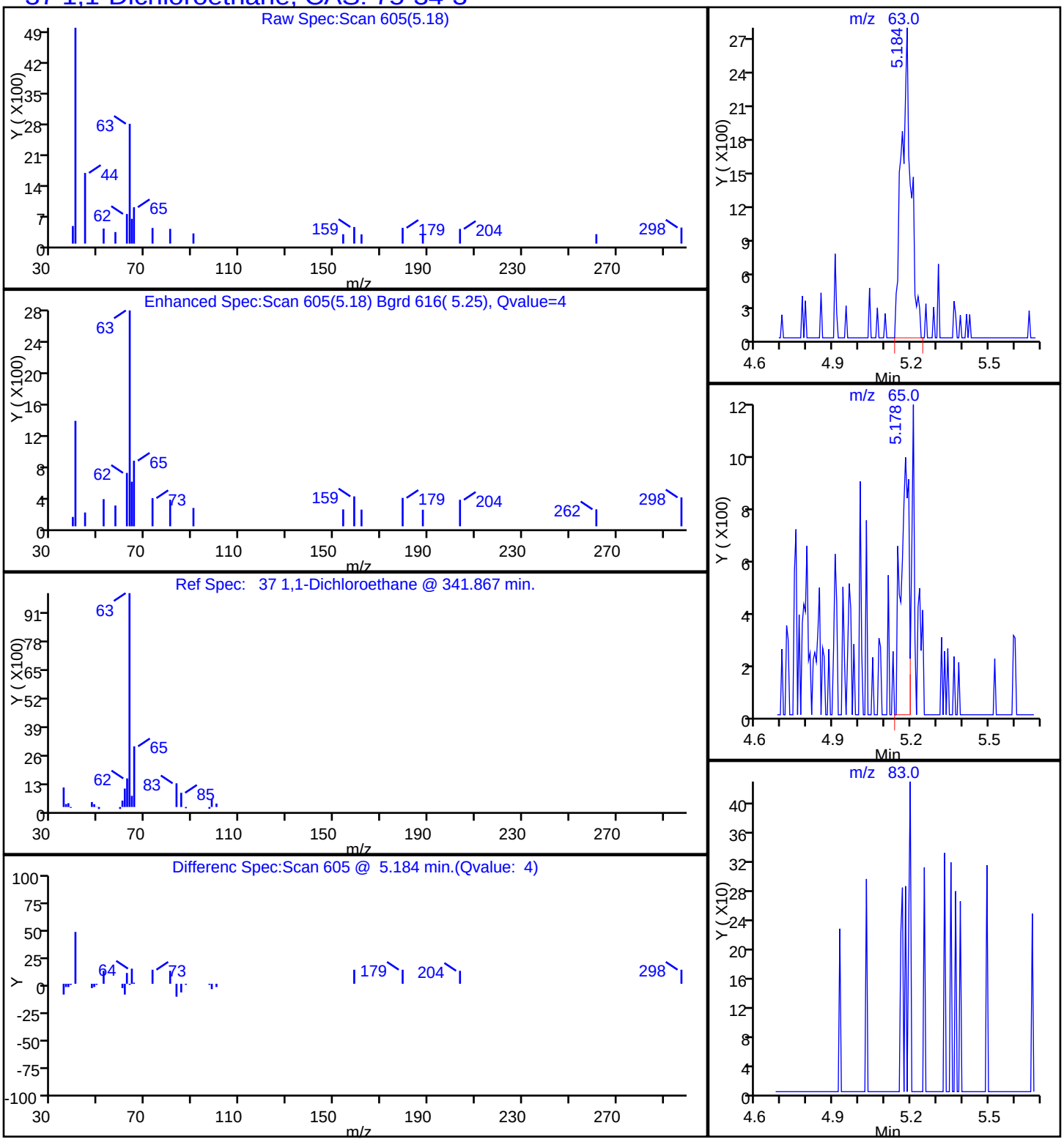


Report Date: 23-Jan-2015 08:07:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121019.D				
Injection Date:	22-Jan-2015 17:27:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	125.0000		
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

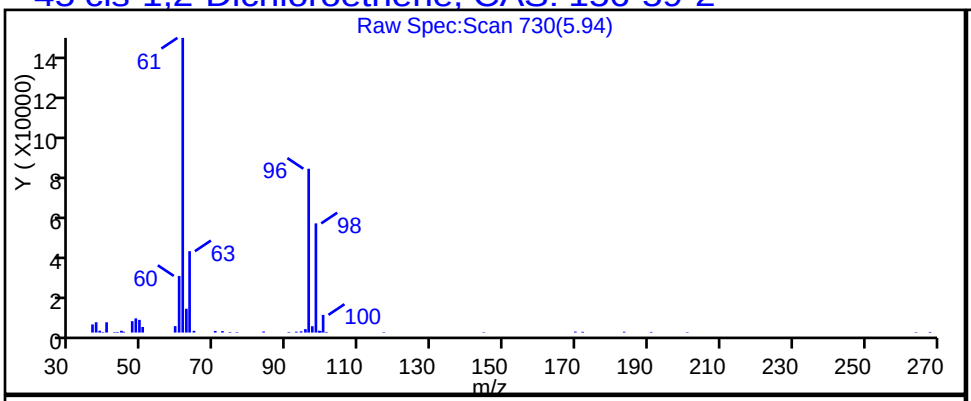


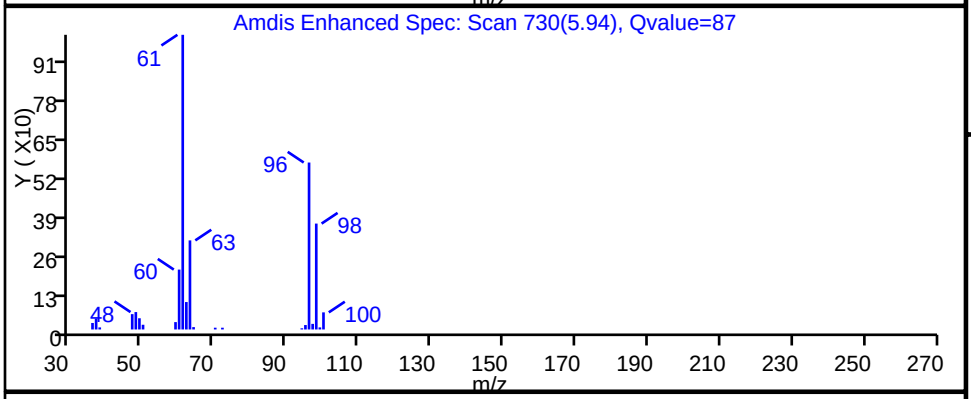
Report Date: 23-Jan-2015 08:07:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

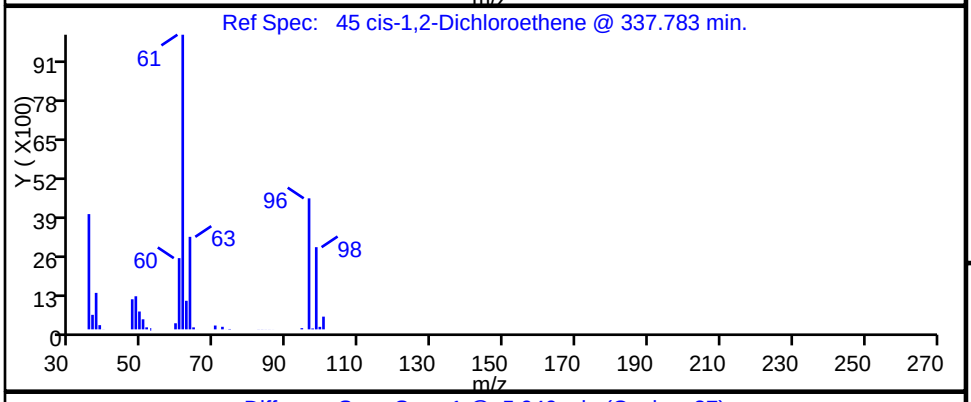
TestAmerica Pittsburgh

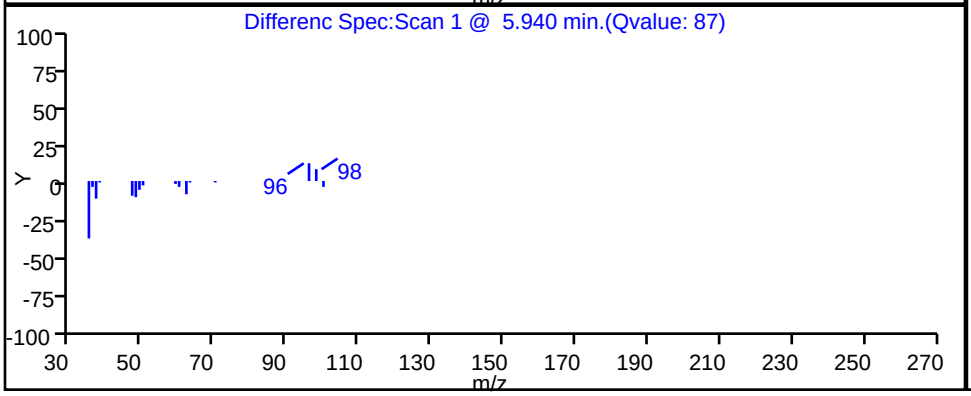
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121019.D				
Injection Date:	22-Jan-2015 17:27:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	125.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

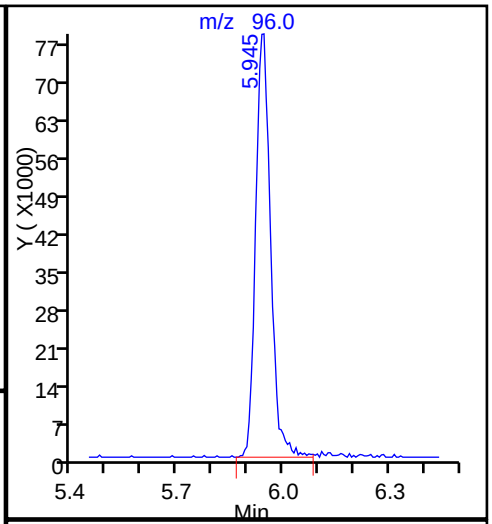
45 cis-1,2-Dichloroethene, CAS: 156-59-2

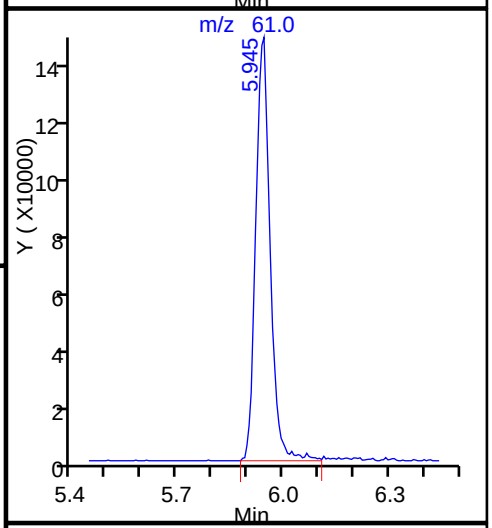


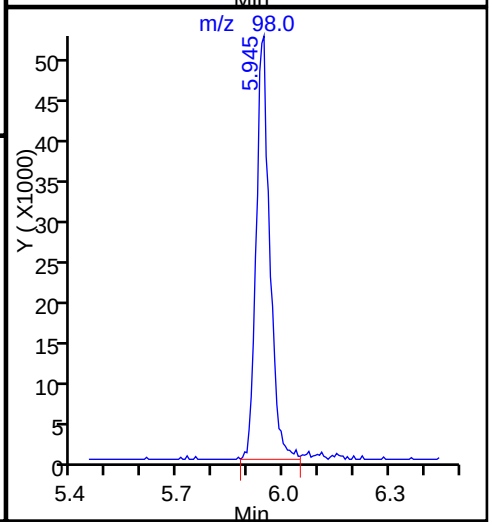










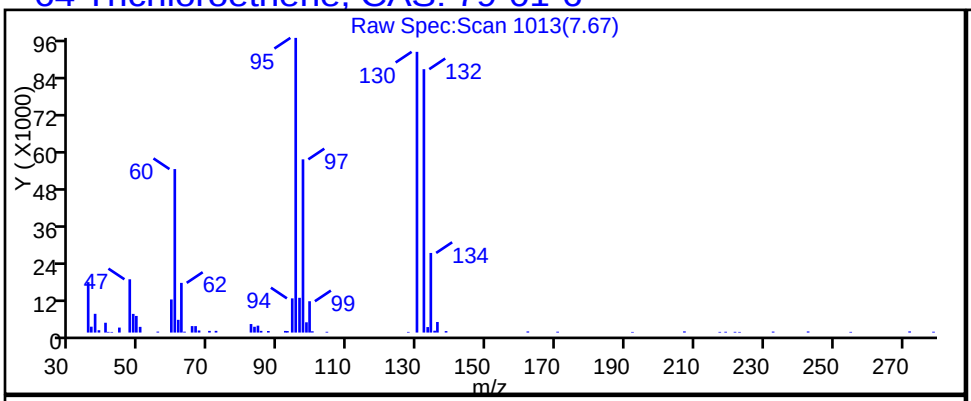


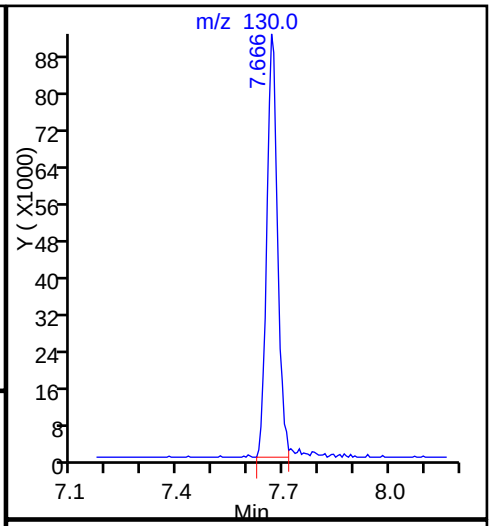
Report Date: 23-Jan-2015 08:07:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

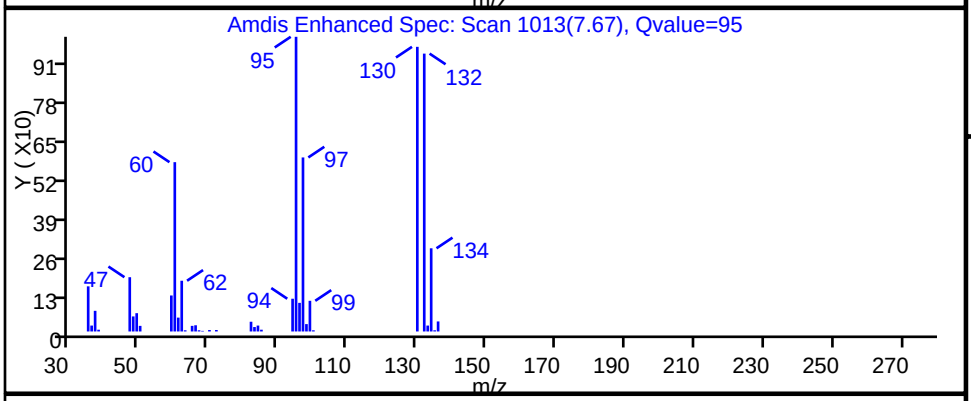
TestAmerica Pittsburgh

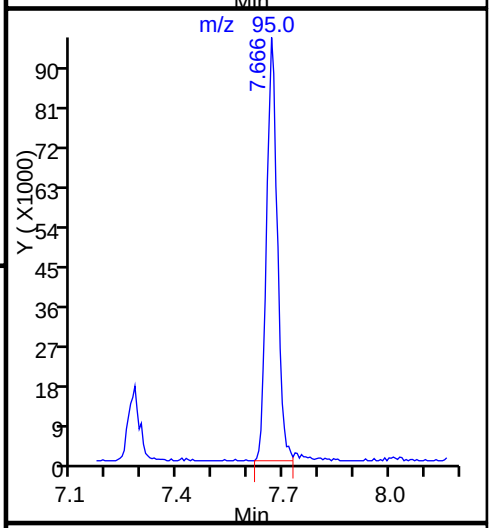
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121019.D				
Injection Date:	22-Jan-2015 17:27:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-2	Lab Sample ID:	180-40541-2		
Client ID:	HD-MW-114-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	125.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

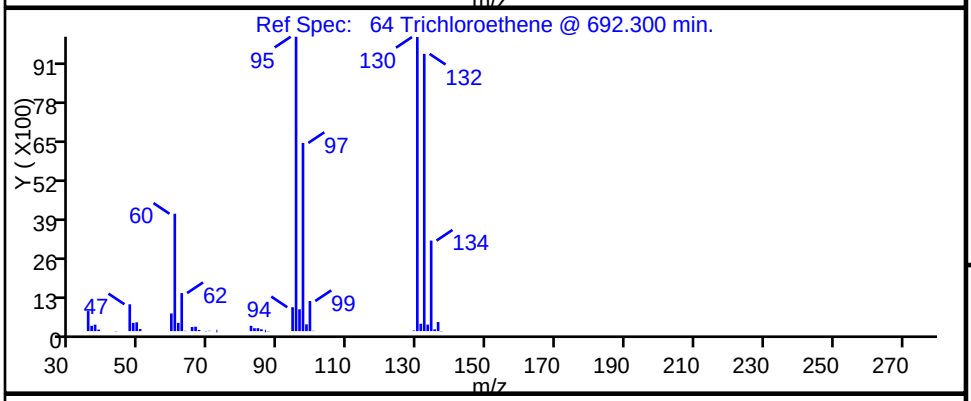
64 Trichloroethene, CAS: 79-01-6

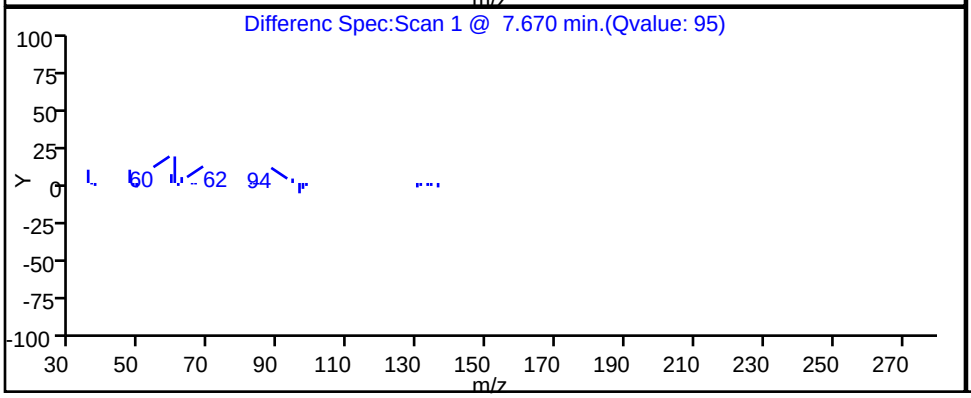


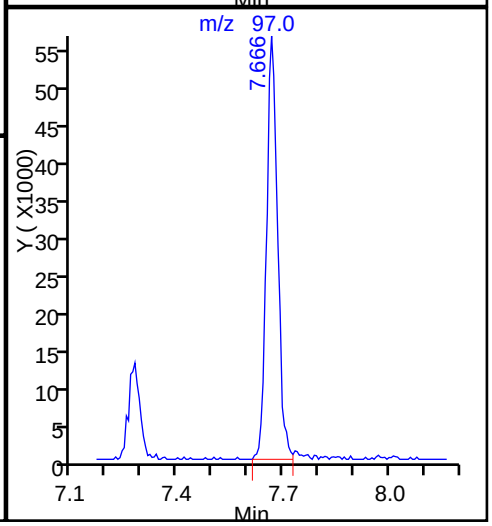












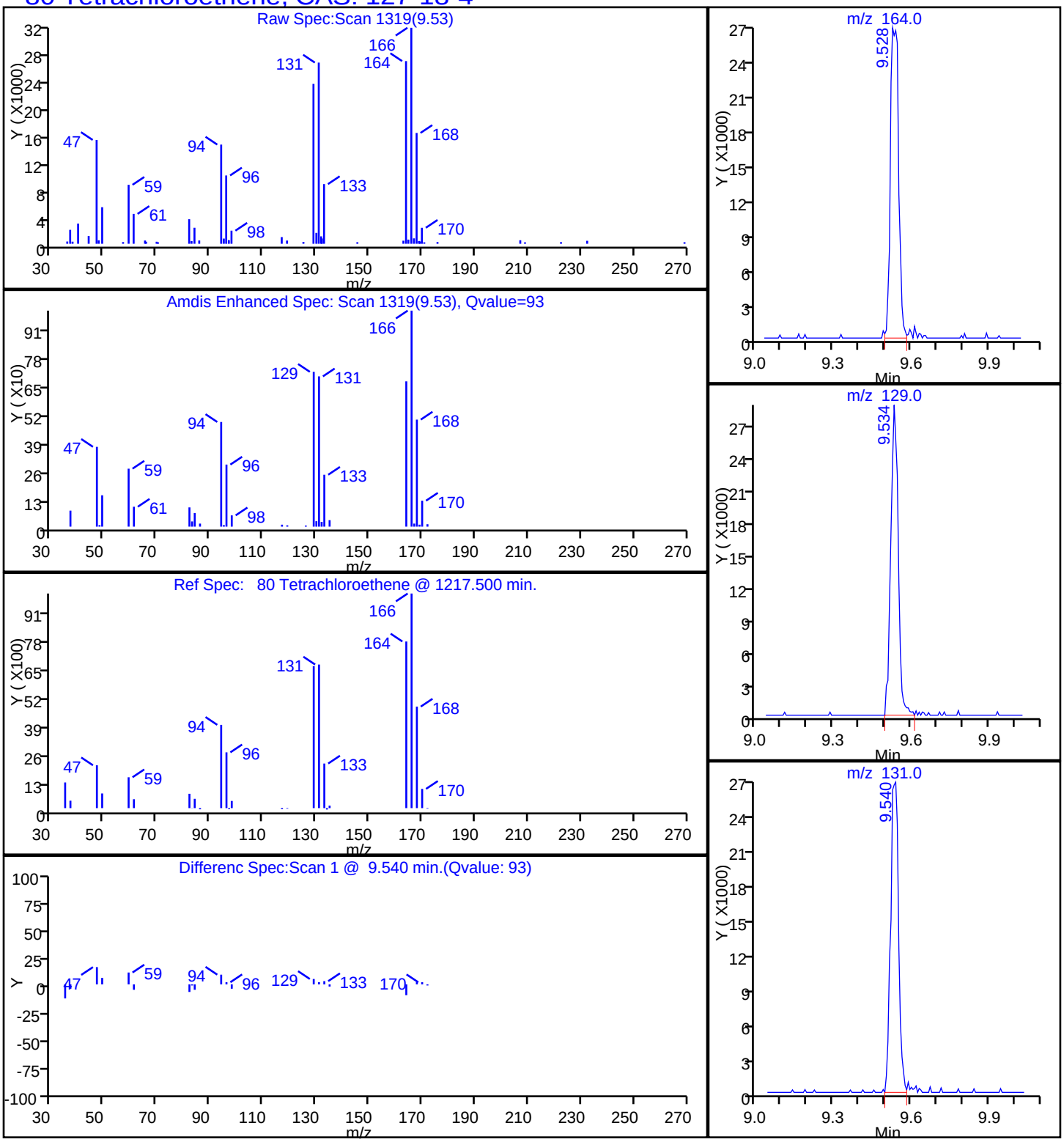
Report Date: 23-Jan-2015 08:07:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121019.D

Injection Date:	22-Jan-2015 17:27:30	Instrument ID:	CHHP5
Lims ID:	180-40541-E-2	Lab Sample ID:	180-40541-2
Client ID:	HD-MW-114-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	125.0000
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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 | Lab Sample ID: 180-40541-3

Matrix: Water | Lab File ID: 50128027.D

Analysis Method: 8260C | Date Collected: 01/16/2015 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 01/28/2015 19:38

Soil Aliquot Vol: | Dilution Factor: 2.5

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

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

Analysis Batch No.: 131906 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	2.5	U	2.5	0.71
75-01-4	Vinyl chloride	2.5	U	2.5	0.57
74-83-9	Bromomethane	2.5	U	2.5	0.78
75-00-3	Chloroethane	2.5	U	2.5	0.54
75-35-4	1,1-Dichloroethene	23		2.5	0.74
67-64-1	Acetone	13	U	13	6.3
75-15-0	Carbon disulfide	2.5	U	2.5	0.53
75-09-2	Methylene Chloride	2.5	U	2.5	0.31
156-60-5	trans-1,2-Dichloroethene	2.8		2.5	0.42
1634-04-4	Methyl tert-butyl ether	2.5	U	2.5	0.46
75-34-3	1,1-Dichloroethane	13		2.5	0.29
156-59-2	*cis-1,2-Dichloroethene*	*590*	*E*	*2.5*	*0.59*
74-97-5	Bromochloromethane	2.5	U	2.5	0.45
78-93-3	2-Butanone (MEK)	13	U	13	1.4
67-66-3	Chloroform	2.5	U	2.5	0.43
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	0.72
56-23-5	Carbon tetrachloride	2.5	U	2.5	0.34
71-43-2	Benzene	2.5	U	2.5	0.26
107-06-2	1,2-Dichloroethane	2.5	U	2.5	0.53
79-01-6	*Trichloroethene*	*500*	*E*	*2.5*	*0.36*
78-87-5	1,2-Dichloropropane	2.5	U	2.5	0.24
75-27-4	Bromodichloromethane	2.5	U	2.5	0.33
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	0.47
108-10-1	4-Methyl-2-pentanone (MIBK)	13	U	13	1.3
108-88-3	Toluene	2.5	U	2.5	0.38
10061-02-6	trans-1,3-Dichloropropene	2.5	U	2.5	0.37
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	0.50
127-18-4	Tetrachloroethene	1.8	J	2.5	0.37
591-78-6	2-Hexanone	13	U	13	0.40
124-48-1	Dibromochloromethane	2.5	U	2.5	0.34
106-93-4	1,2-Dibromoethane (EDB)	2.5	U	2.5	0.45
108-90-7	Chlorobenzene	2.5	U	2.5	0.34
630-20-6	1,1,1,2-Tetrachloroethane	2.5	U	2.5	0.69
100-41-4	Ethylbenzene	2.5	U	2.5	0.57
1330-20-7	Xylenes, Total	7.5	U	7.5	1.2
100-42-5	Styrene	2.5	U	2.5	0.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-40541-3

Matrix: Water Lab File ID: 50128027.D

Analysis Method: 8260C Date Collected: 01/16/2015 09:40

Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 19:38

Soil Aliquot Vol: Dilution Factor: 2.5

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	2.5	U	2.5	0.48
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.50
107-13-1	Acrylonitrile	50	U	50	1.4
123-91-1	1,4-Dioxane	500	U	500	86

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		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)	114		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D
Lims ID: 180-40541-C-3 Lab Sample ID: 180-40541-3
Client ID: HD-MW-132-0/1-0
Sample Type: Client
Inject. Date: 28-Jan-2015 19:38:30 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 5.000 mL Dil. Factor: 2.5000
Sample Info: 180-40541-C-3, 2.5x
Misc. Info.: 180-0005445-027
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 29-Jan-2015 07:57:16 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: XAWRK022

First Level Reviewer: fergusond Date: 29-Jan-2015 07:57:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.291	4.308	-0.017	86	142843	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.276	0.002	99	412494	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	98	94754	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	98	127358	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.534	-0.004	92	100452	57.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.899	0.002	93	135254	46.9	
$ 7 Toluene-d8 (Surr)	98	8.927	8.925	0.002	96	378740	48.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.535	0.001	83	139507	46.5	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62	1.900	1.911	-0.011	18	3559	1.06	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96	3.385	3.383	0.002	93	103593	46.1	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96	4.583	4.563	0.020	91	12548	5.52	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	97	138239	26.1	
45 cis-1,2-Dichloroethene	96	5.940	5.938	0.002	83	2880398	1171.3	E
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83	6.347	6.352	-0.005	1	1695	0.4236	
53 1,1,1-Trichloroethane	97		6.534				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130	7.667	7.666	0.001	94	2192489	1003.9	E
67 1,2-Dichloropropane	63		7.903				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		8.657				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97	9.395	9.400	-0.005	16	1387	0.7026	
80 Tetrachloroethene	164	9.541	9.539	0.002	78	6509	3.51	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				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:

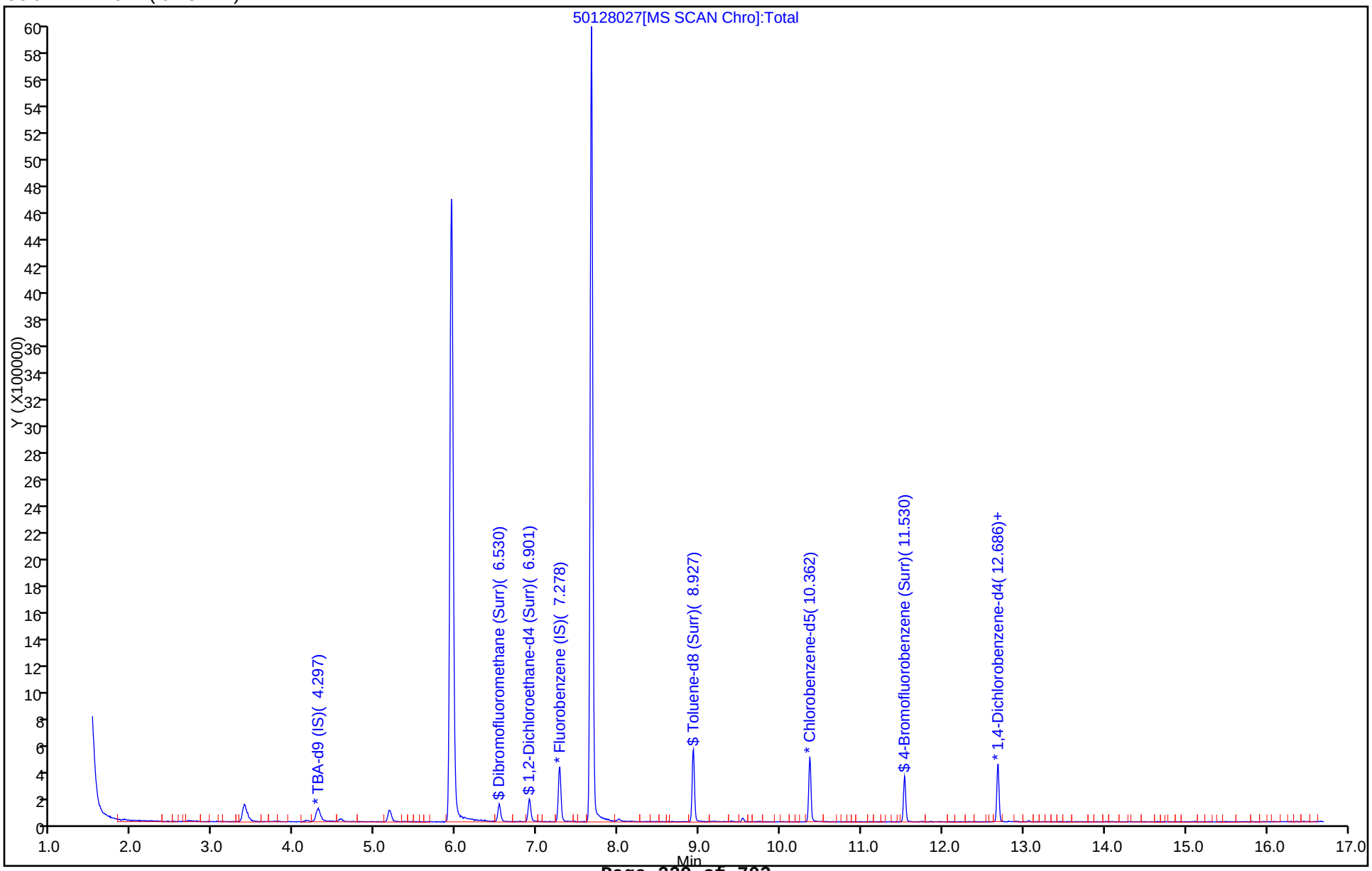
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 29-Jan-2015 07:57:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D				
Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3	Worklist Smp#:	27
Client ID:	HD-MW-132-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	2.5000	ALS Bottle#:	26
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

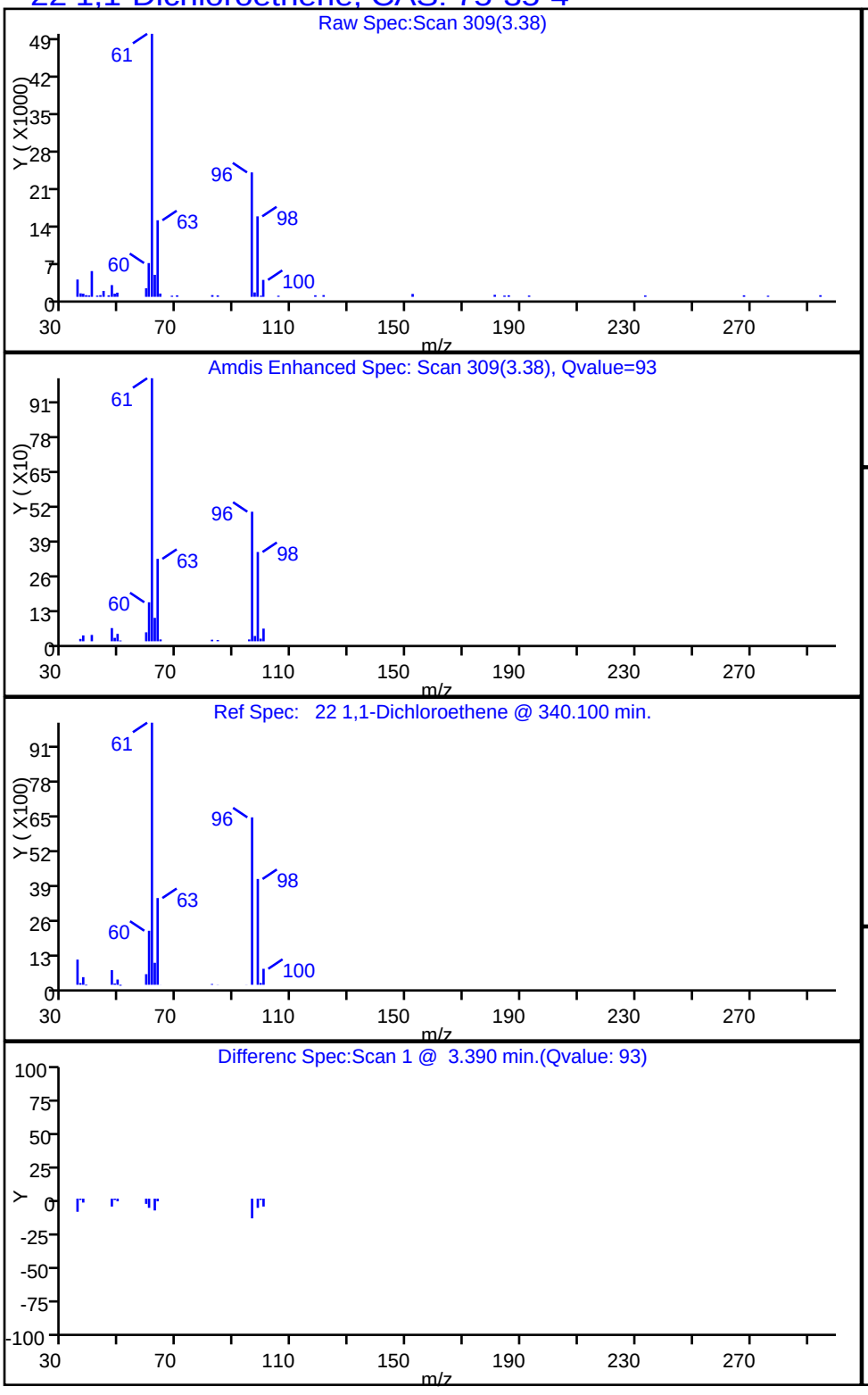


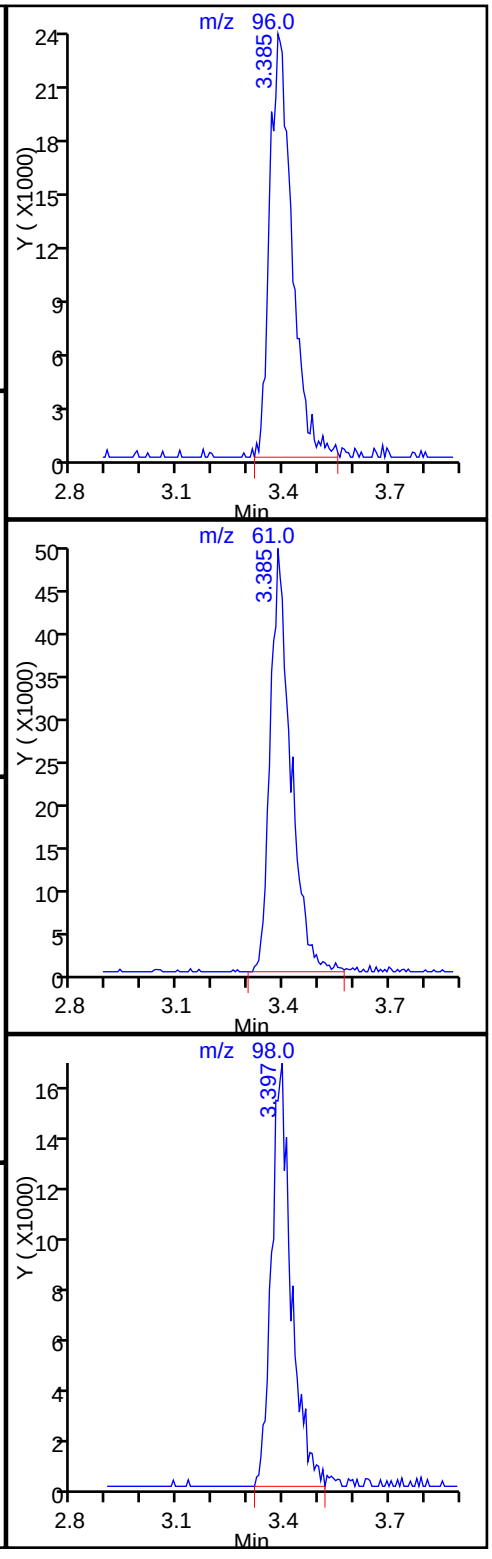
Report Date: 29-Jan-2015 07:57:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D		
Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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





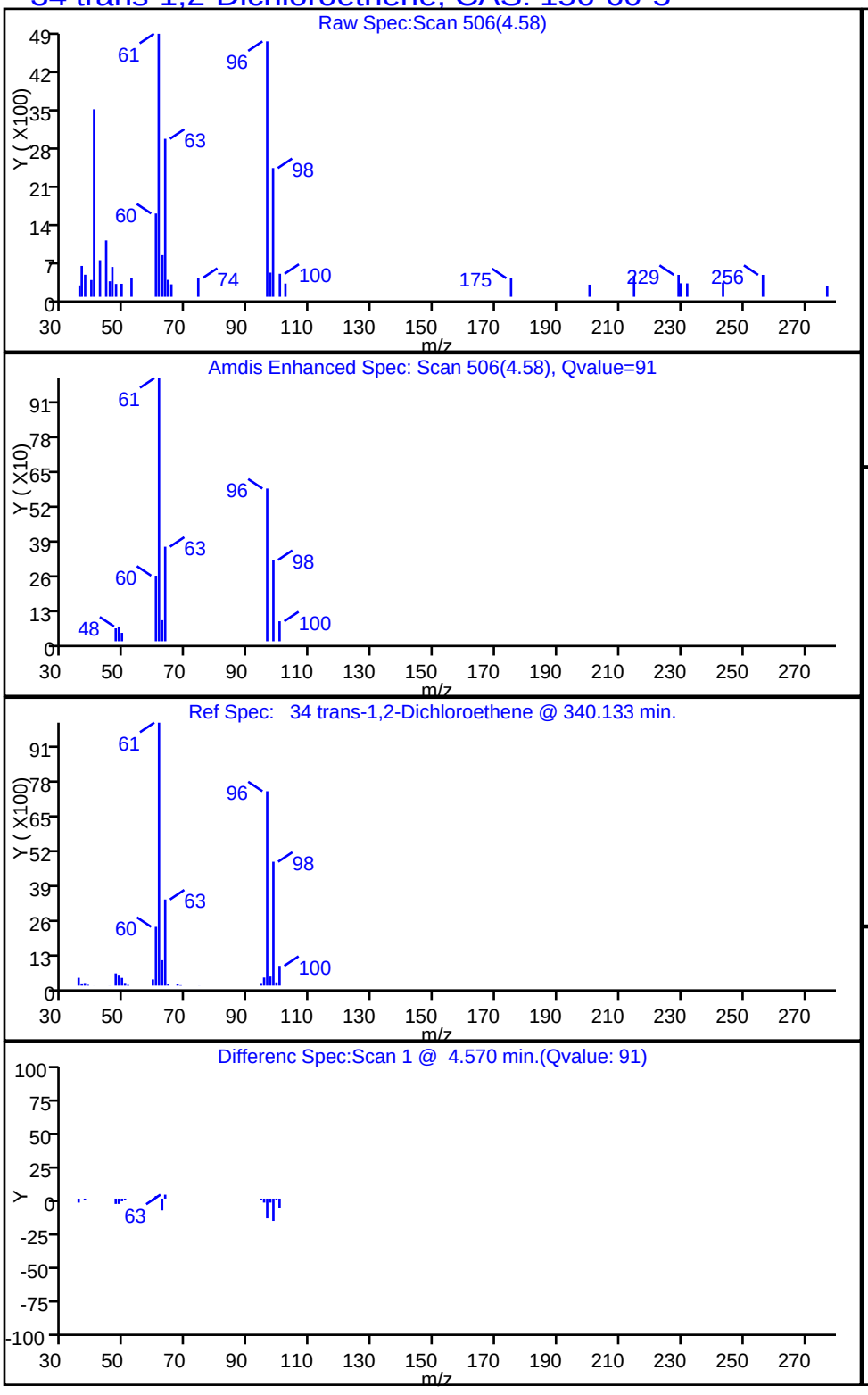
Report Date: 29-Jan-2015 07:57:17 Chrom Revision: 2.2 15-Jan-2015 13:05:58

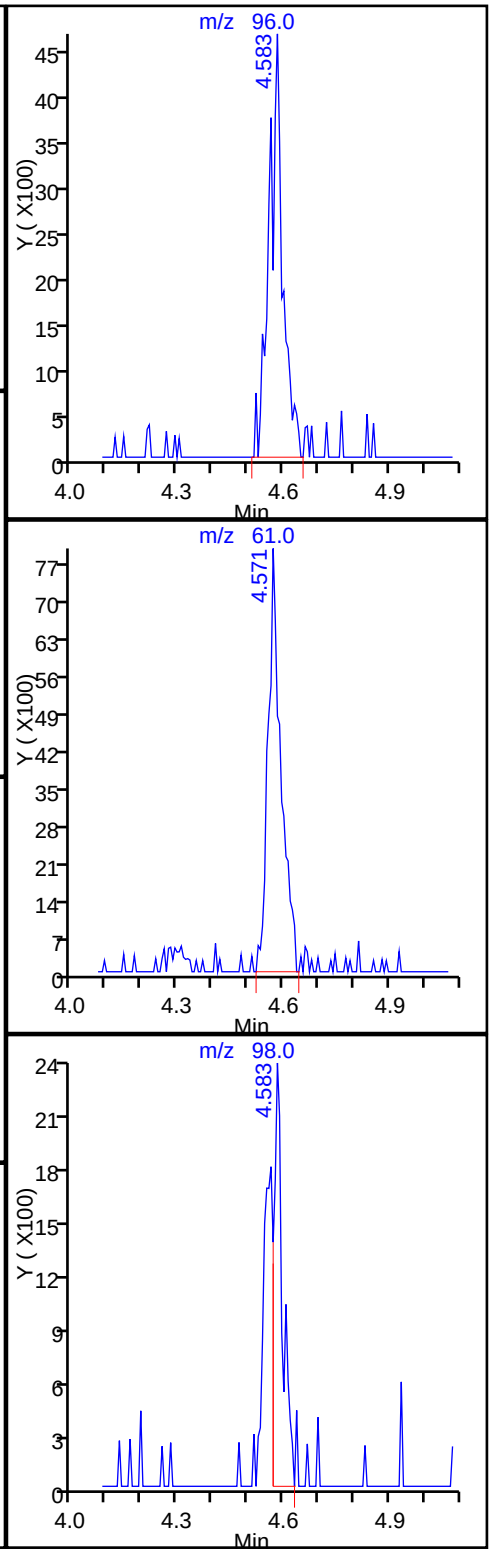
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D

Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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



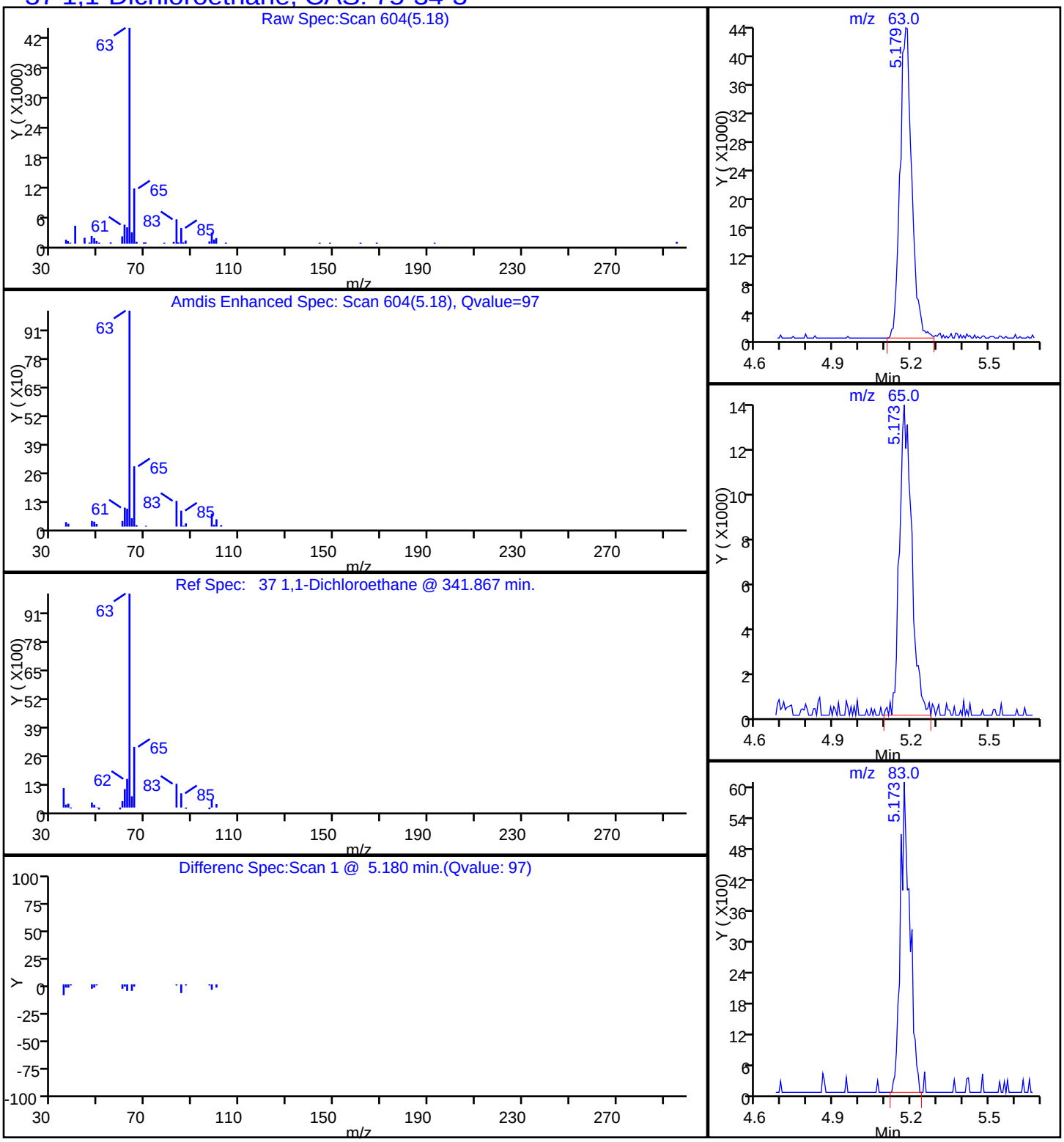


Report Date: 29-Jan-2015 07:57:17 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D		
Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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



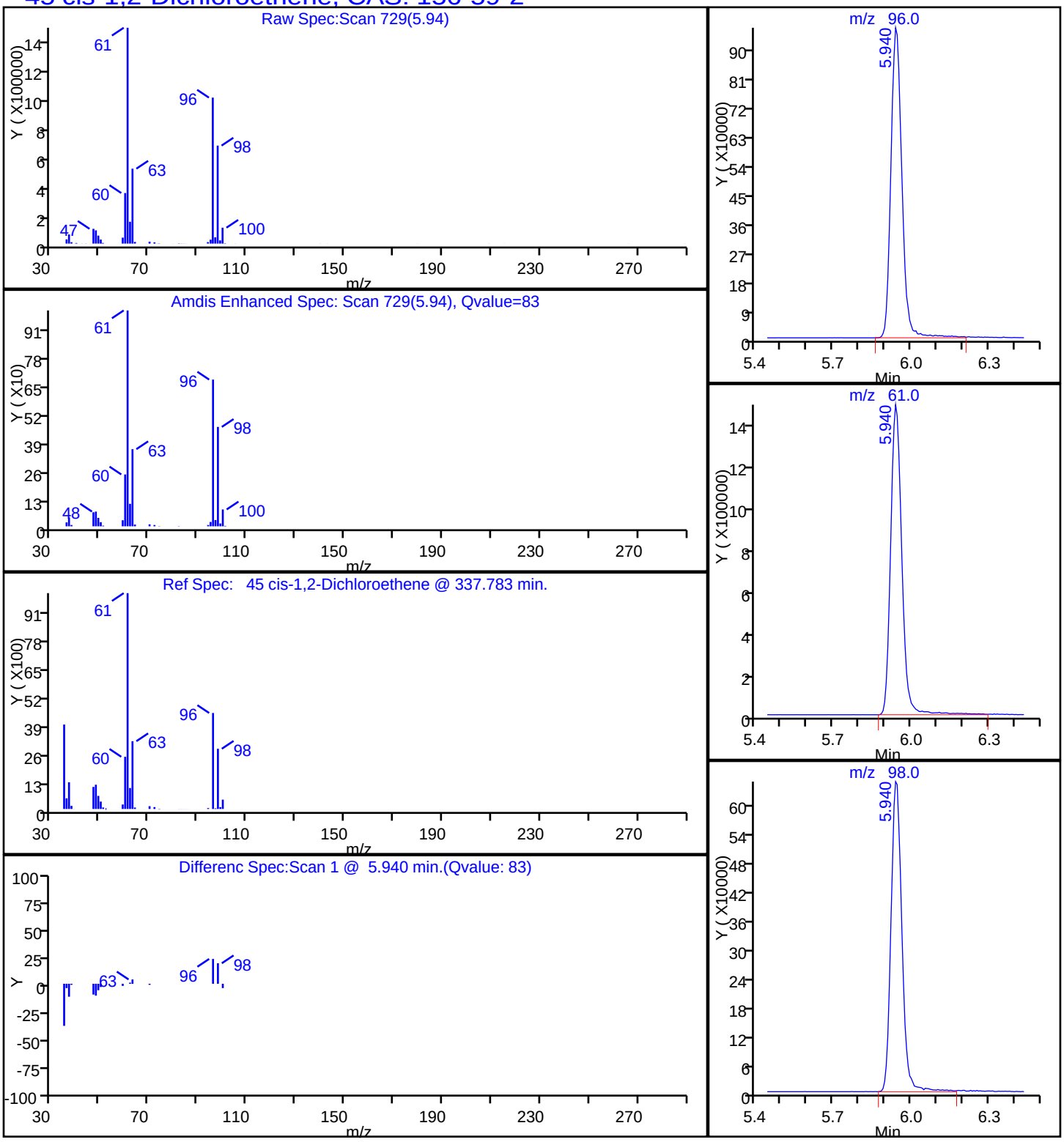
Report Date: 29-Jan-2015 07:57:17 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D

Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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



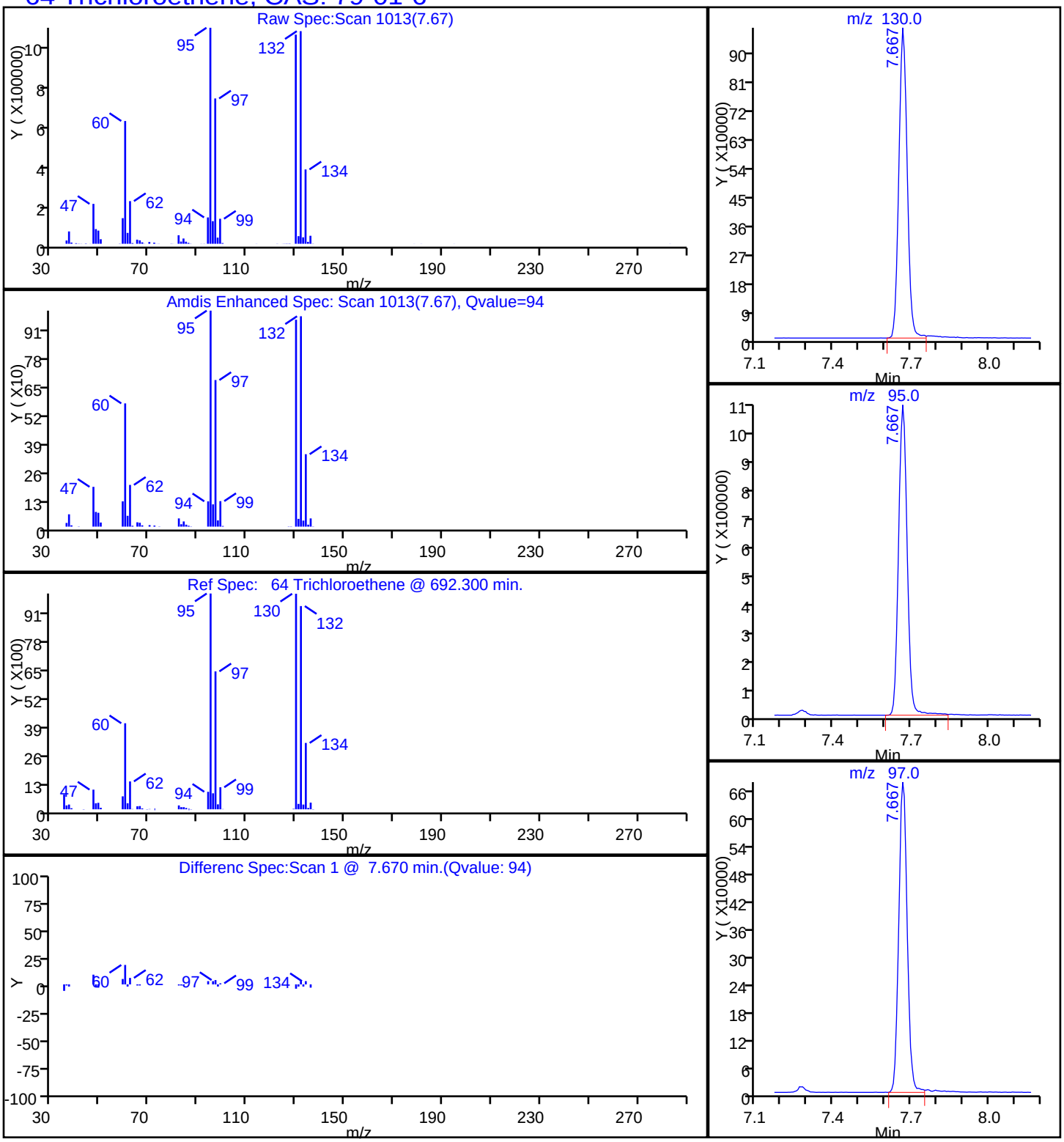
Report Date: 29-Jan-2015 07:57:17 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D

Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

64 Trichloroethene, CAS: 79-01-6

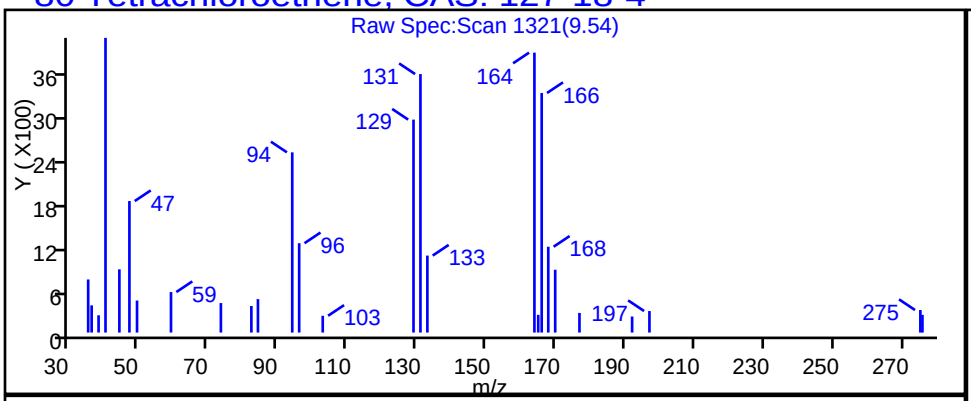


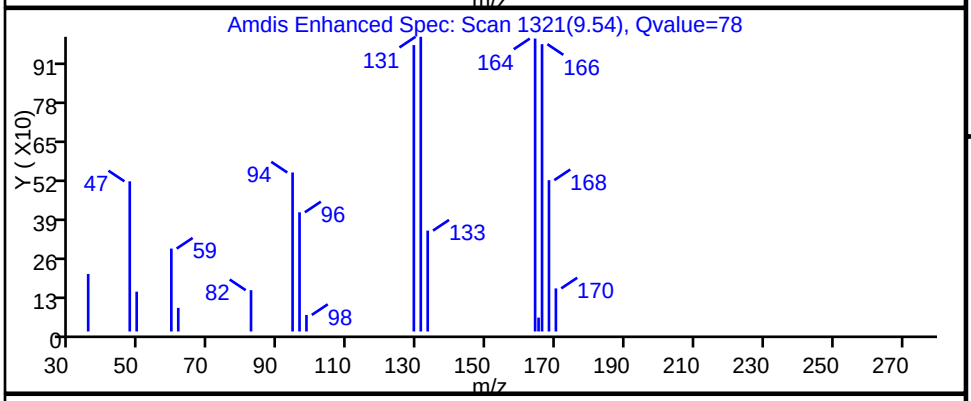
Report Date: 29-Jan-2015 07:57:17 Chrom Revision: 2.2 15-Jan-2015 13:05:58

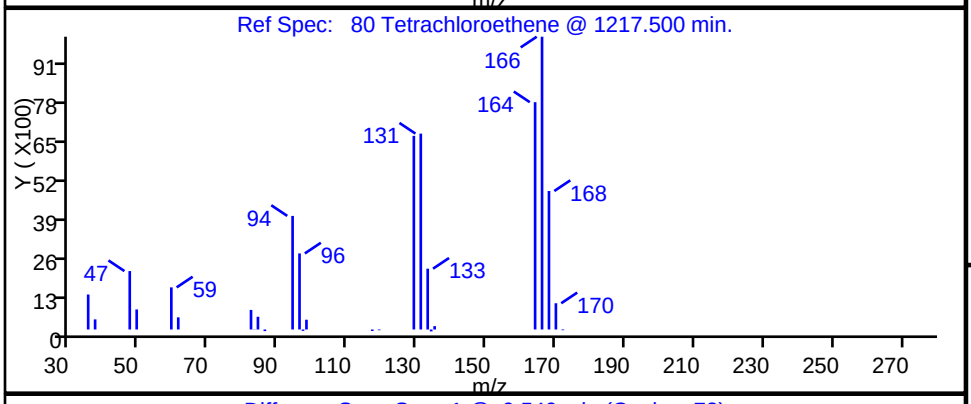
TestAmerica Pittsburgh

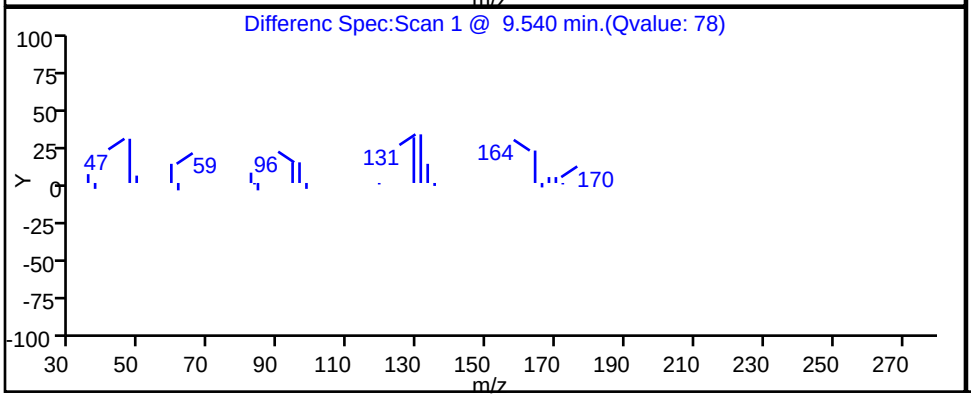
Data File:	\\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128027.D		
Injection Date:	28-Jan-2015 19:38:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	26 Worklist Smp#: 27
Purge Vol:	5.000 mL	Dil. Factor:	2.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

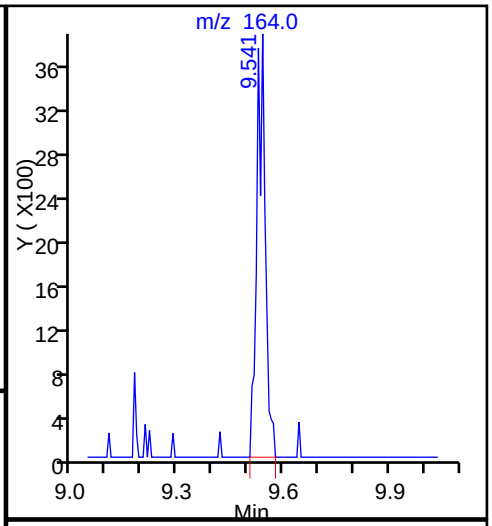
80 Tetrachloroethene, CAS: 127-18-4

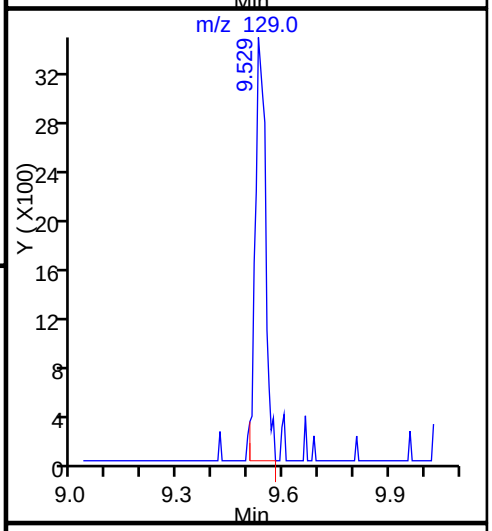


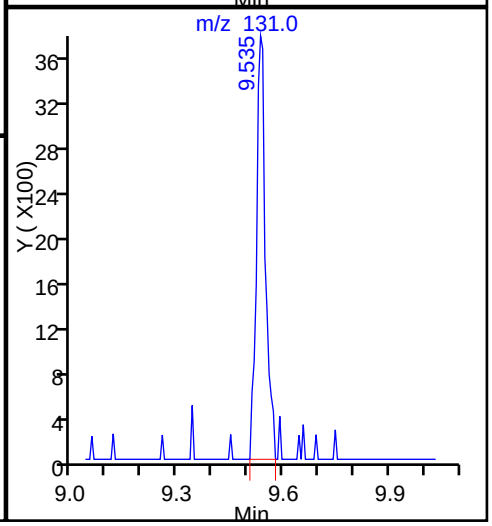












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 DL | Lab Sample ID: 180-40541-3 DL

Matrix: Water | Lab File ID: 50121020.D

Analysis Method: 8260C | Date Collected: 01/16/2015 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 17:52

Soil Aliquot Vol: | Dilution Factor: 25

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

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

Analysis Batch No.: 131443 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	*Chloromethane*	*25*	*U*	*25*	*7.1*
75-01-4	*Vinyl chloride*	*25*	*U*	*25*	*5.7*
74-83-9	*Bromomethane*	*25*	*U*	*25*	*7.8*
75-00-3	*Chloroethane*	*25*	*U*	*25*	*5.4*
75-35-4	*1,1-Dichloroethene*	*24*	*J*	*25*	*7.4*
67-64-1	*Acetone*	*130*	*U*	*130*	*63*
75-15-0	*Carbon disulfide*	*25*	*U*	*25*	*5.3*
75-09-2	*Methylene Chloride*	*25*	*U*	*25*	*3.1*
156-60-5	*trans-1,2-Dichloroethene*	*25*	*U*	*25*	*4.2*
1634-04-4	*Methyl tert-butyl ether*	*25*	*U*	*25*	*4.6*
75-34-3	*1,1-Dichloroethane*	*13*	*J*	*25*	*2.9*
156-59-2	cis-1,2-Dichloroethene	590		25	5.9
74-97-5	*Bromochloromethane*	*25*	*U*	*25*	*4.5*
78-93-3	*2-Butanone (MEK)*	*130*	*U*	*130*	*14*
67-66-3	*Chloroform*	*25*	*U*	*25*	*4.3*
71-55-6	*1,1,1-Trichloroethane*	*25*	*U*	*25*	*7.2*
56-23-5	*Carbon tetrachloride*	*25*	*U*	*25*	*3.4*
71-43-2	*Benzene*	*25*	*U*	*25*	*2.6*
107-06-2	*1,2-Dichloroethane*	*25*	*U*	*25*	*5.3*
79-01-6	Trichloroethene	530		25	3.6
78-87-5	*1,2-Dichloropropane*	*25*	*U*	*25*	*2.4*
75-27-4	*Bromodichloromethane*	*25*	*U*	*25*	*3.3*
10061-01-5	*cis-1,3-Dichloropropene*	*25*	*U*	*25*	*4.7*
108-10-1	*4-Methyl-2-pentanone (MIBK)*	*130*	*U*	*130*	*13*
108-88-3	*Toluene*	*25*	*U*	*25*	*3.8*
10061-02-6	*trans-1,3-Dichloropropene*	*25*	*U*	*25*	*3.7*
79-00-5	*1,1,2-Trichloroethane*	*25*	*U*	*25*	*5.0*
127-18-4	*Tetrachloroethene*	*25*	*U*	*25*	*3.7*
591-78-6	*2-Hexanone*	*130*	*U*	*130*	*4.0*
124-48-1	*Dibromochloromethane*	*25*	*U*	*25*	*3.4*
106-93-4	*1,2-Dibromoethane (EDB)*	*25*	*U*	*25*	*4.5*
108-90-7	*Chlorobenzene*	*25*	*U*	*25*	*3.4*
630-20-6	*1,1,1,2-Tetrachloroethane*	*25*	*U*	*25*	*6.9*
100-41-4	*Ethylbenzene*	*25*	*U*	*25*	*5.7*
1330-20-7	*Xylenes, Total*	*75*	*U*	*75*	*12*
100-42-5	*Styrene*	*25*	*U*	*25*	*2.4*

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 DL | Lab Sample ID: 180-40541-3 DL

Matrix: Water | Lab File ID: 50121020.D

Analysis Method: 8260C | Date Collected: 01/16/2015 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 17:52

Soil Aliquot Vol: | Dilution Factor: 25

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

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

Analysis Batch No.: 131443 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	*Bromoform*	*25*	*U*	*25*	*4.8*
79-34-5	*1,1,2,2-Tetrachloroethane*	*25*	*U*	*25*	*5.0*
107-13-1	*Acrylonitrile*	*500*	*U*	*500*	*14*
123-91-1	*1,4-Dioxane*	*5000*	*U*	*5000*	*860*

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	117		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	119		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121020.D
Lims ID: 180-40541-E-3 Lab Sample ID: 180-40541-3
Client ID: HD-MW-132-0/1-0
Sample Type: Client
Inject. Date: 22-Jan-2015 17:52:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 25.0000
Sample Info: 180-40541-E-3, 25x
Misc. Info.: 180-0005379-020
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:11:20 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:11:20

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	156651	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.277	-0.003	100	431365	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.367	-0.003	98	101073	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.685	-0.003	99	138023	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.525	6.526	-0.001	93	109249	59.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.897	0.006	91	176994	58.7	
$ 7 Toluene-d8 (Surr)	98	8.922	8.923	-0.001	97	409470	48.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	85	144282	45.0	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.914				ND	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.380	3.381	-0.001	91	11242	4.78	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.666				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	5.175	0.000	62	14331	2.59	
45 cis-1,2-Dichloroethene	96	5.941	5.936	0.005	87	305351	118.7	
46 2-Butanone (MEK)	43		5.978				ND	
49 Chlorobromomethane	128		6.228				ND	
52 Chloroform	83		6.337				ND	
53 1,1,1-Trichloroethane	97		6.532				ND	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.663	7.663	0.000	94	244022	106.9	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.537	9.531	0.006	17	1123	0.5675	
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

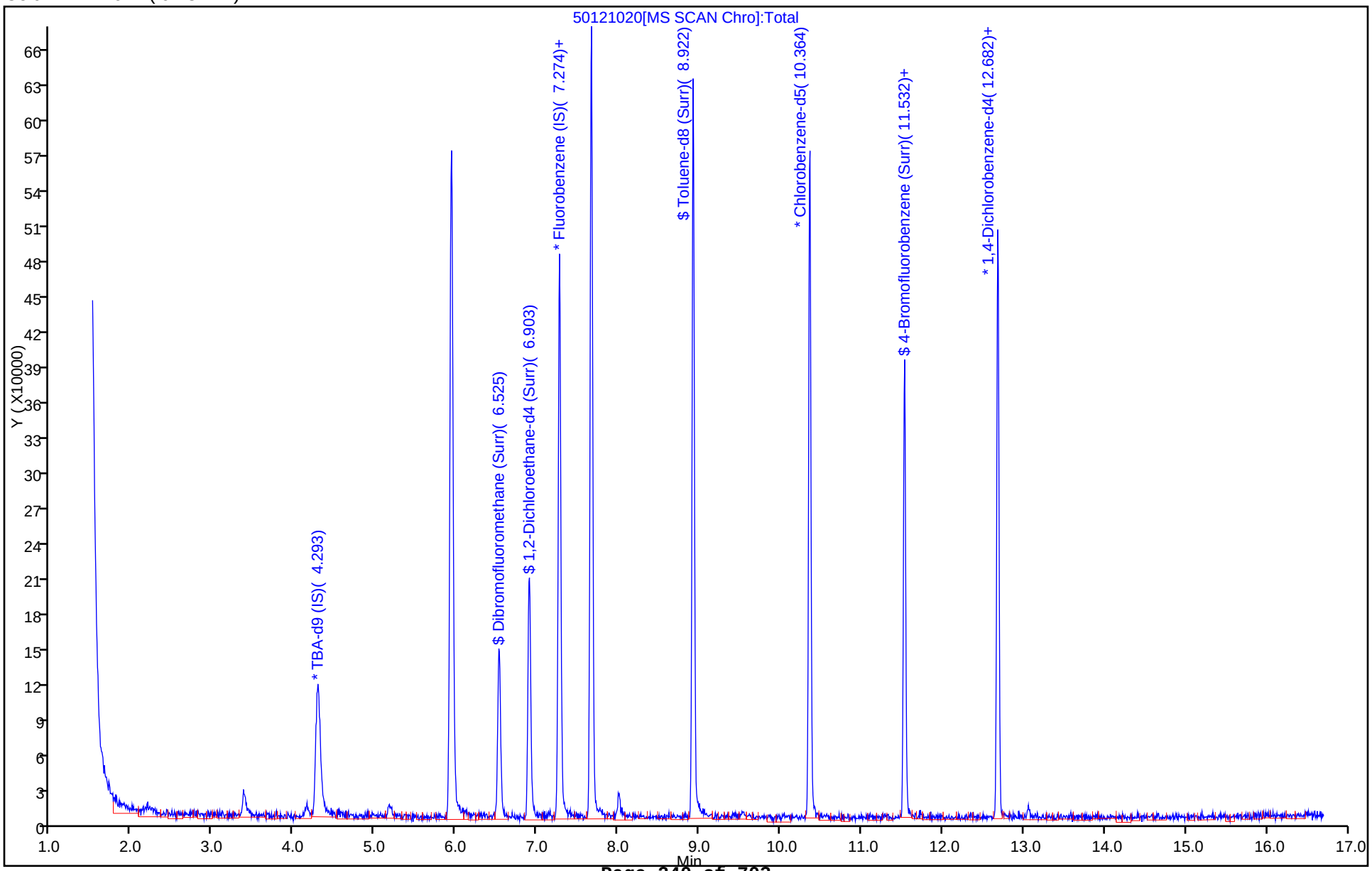
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:11:20 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121020.D				
Injection Date:	22-Jan-2015 17:52:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-E-3	Lab Sample ID:	180-40541-3	Worklist Smp#:	20
Client ID:	HD-MW-132-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	25.0000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

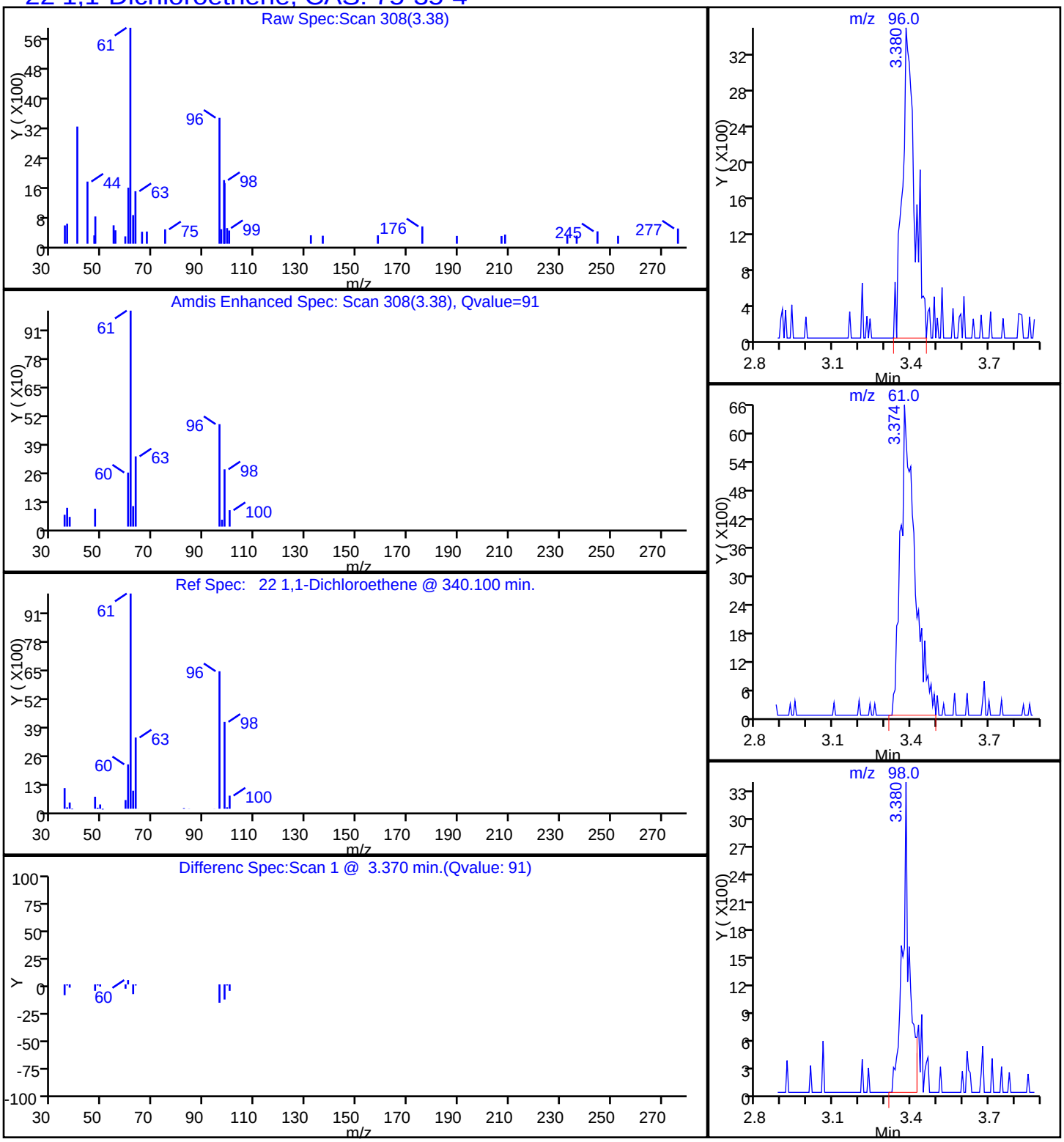


Report Date: 23-Jan-2015 08:11:20 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121020.D				
Injection Date:	22-Jan-2015 17:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-3	Lab Sample ID:	180-40541-3		
Client ID:	HD-MW-132-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	25.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



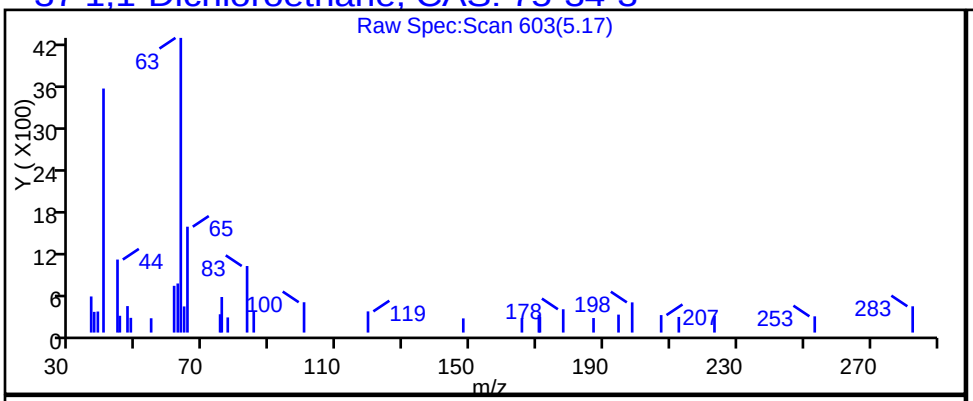
Report Date: 23-Jan-2015 08:11:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

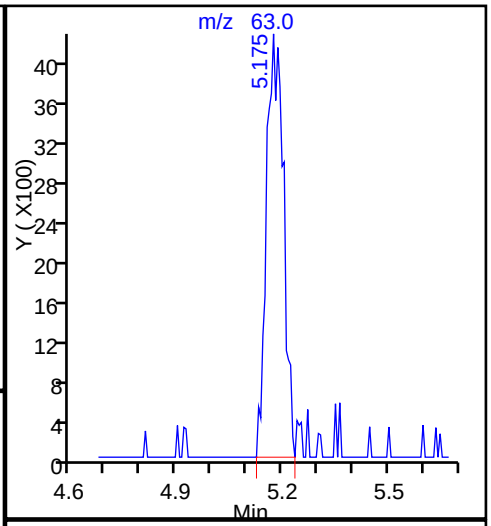
TestAmerica Pittsburgh

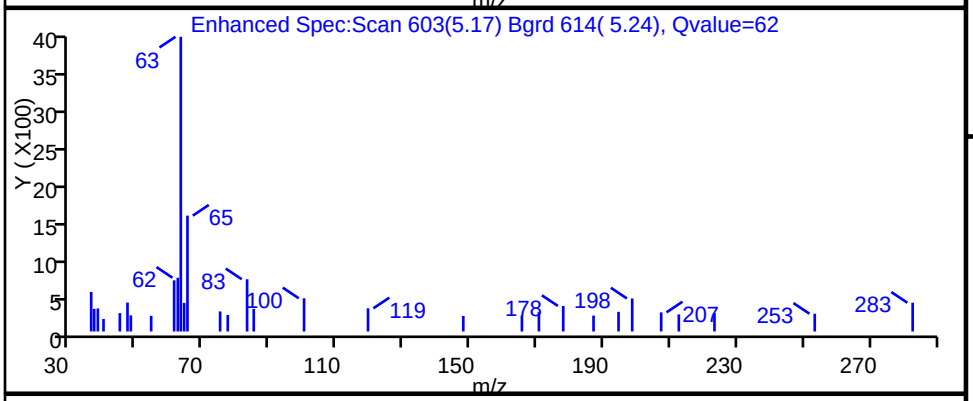
Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121020.D

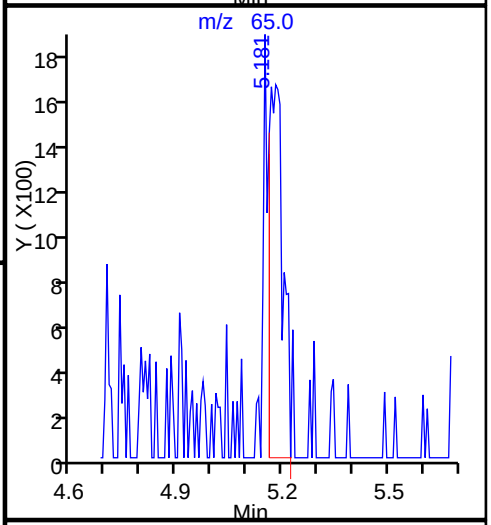
Injection Date:	22-Jan-2015 17:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-3	Lab Sample ID:	180-40541-3		
Client ID:	HD-MW-132-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	25.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

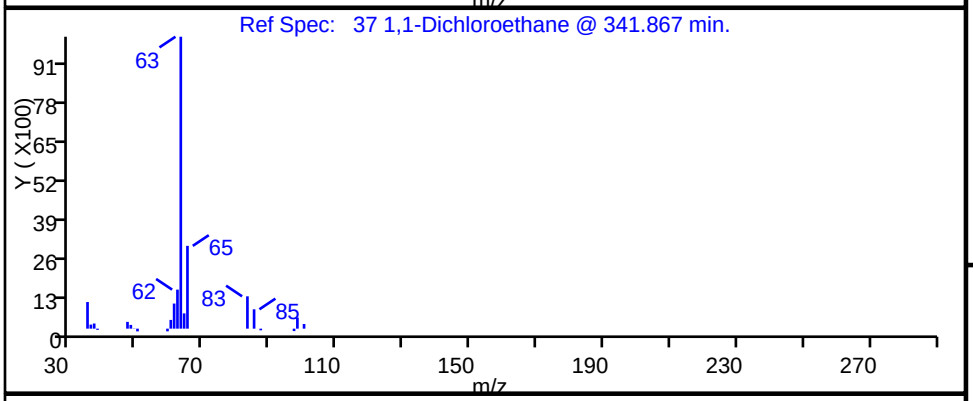
37 1,1-Dichloroethane, CAS: 75-34-3

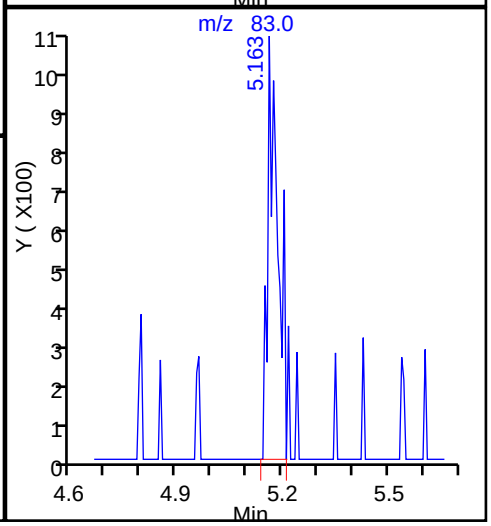


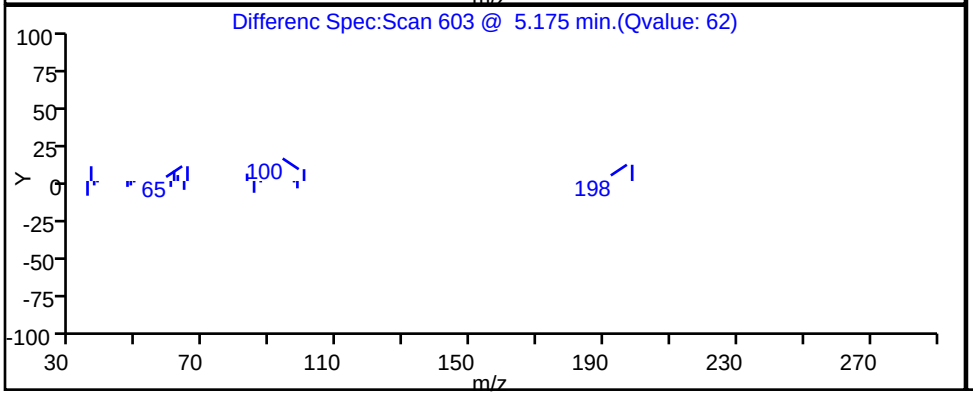










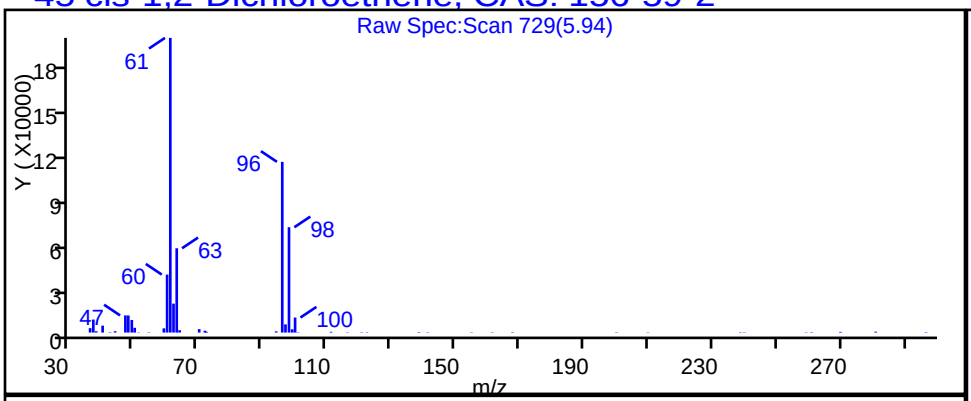


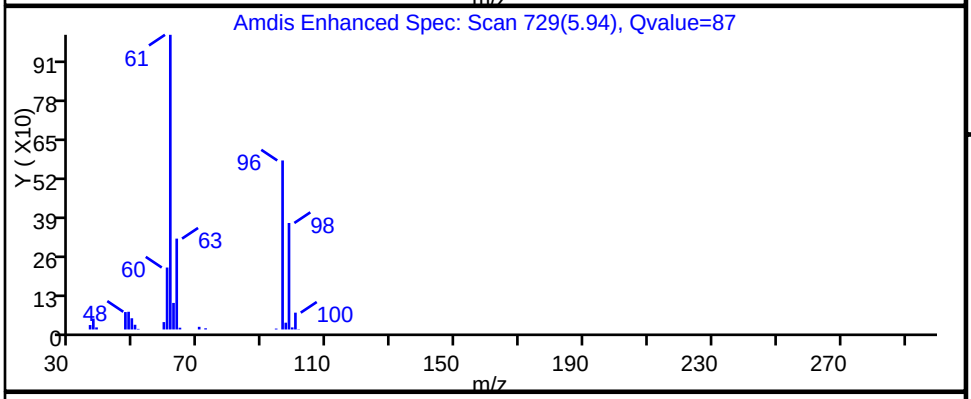
Report Date: 23-Jan-2015 08:11:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

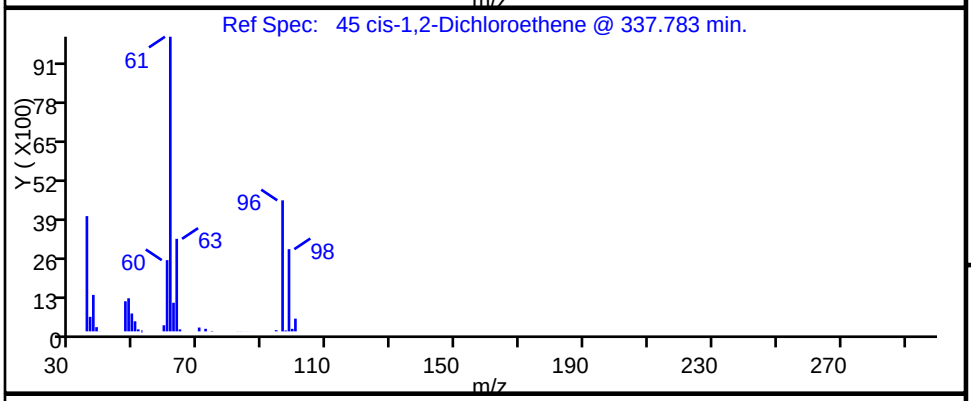
TestAmerica Pittsburgh

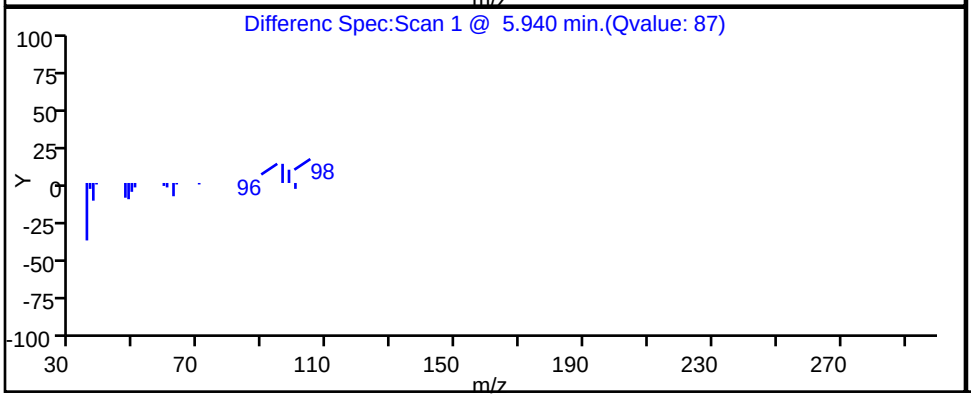
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121020.D		
Injection Date:	22-Jan-2015 17:52:30	Instrument ID:	CHHP5
Lims ID:	180-40541-E-3	Lab Sample ID:	180-40541-3
Client ID:	HD-MW-132-0/1-0		
Operator ID:	001562	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	25.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

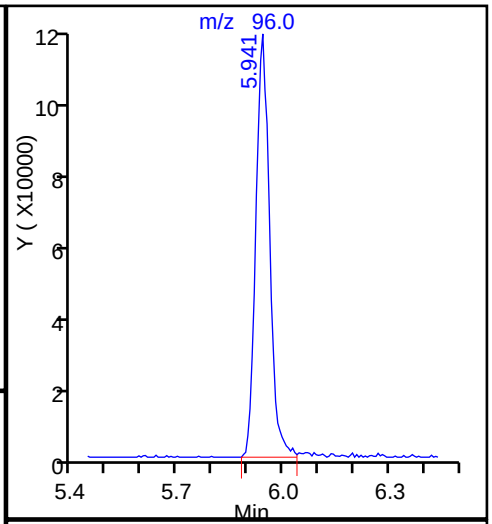
45 cis-1,2-Dichloroethene, CAS: 156-59-2

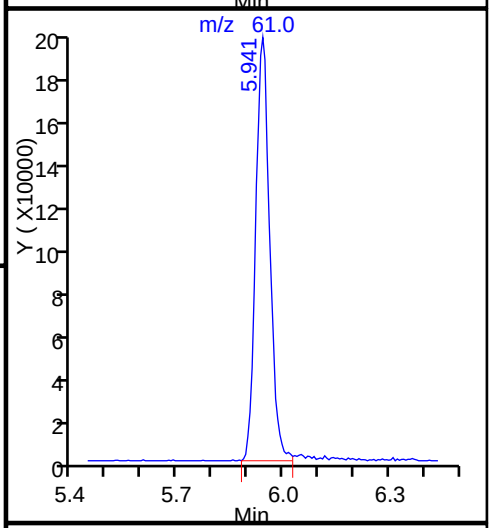


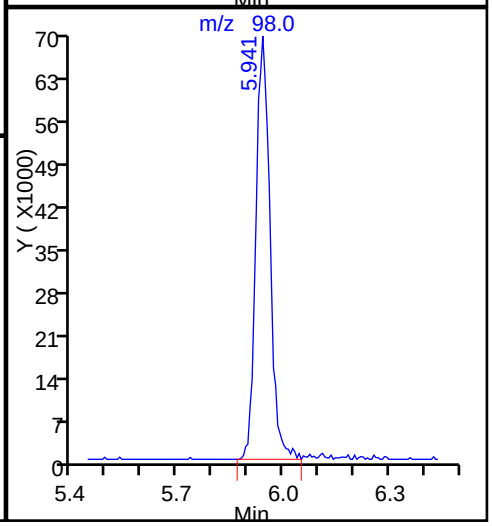










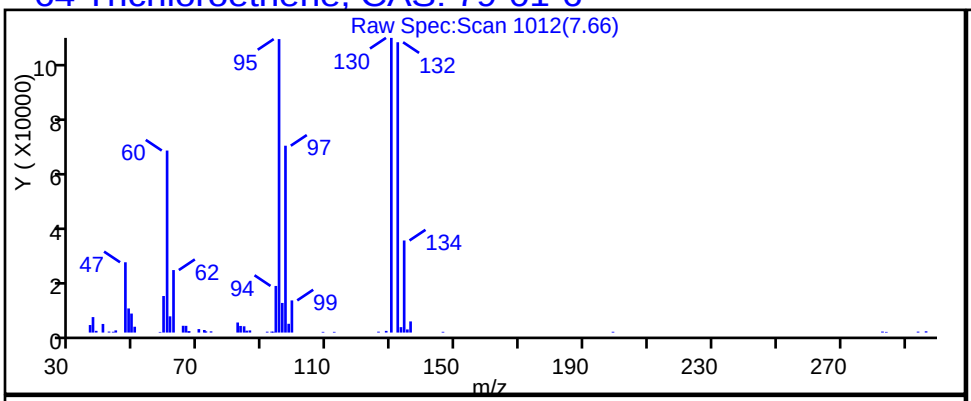


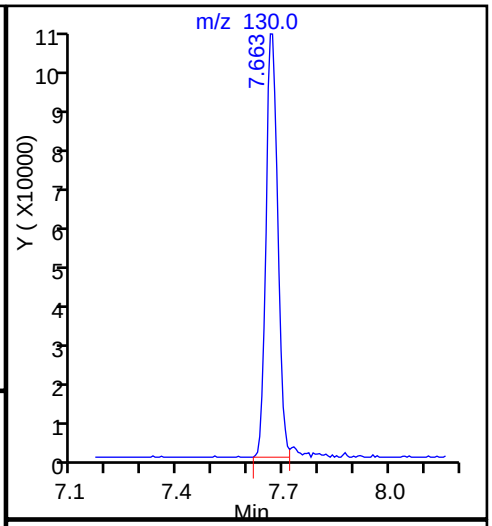
Report Date: 23-Jan-2015 08:11:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

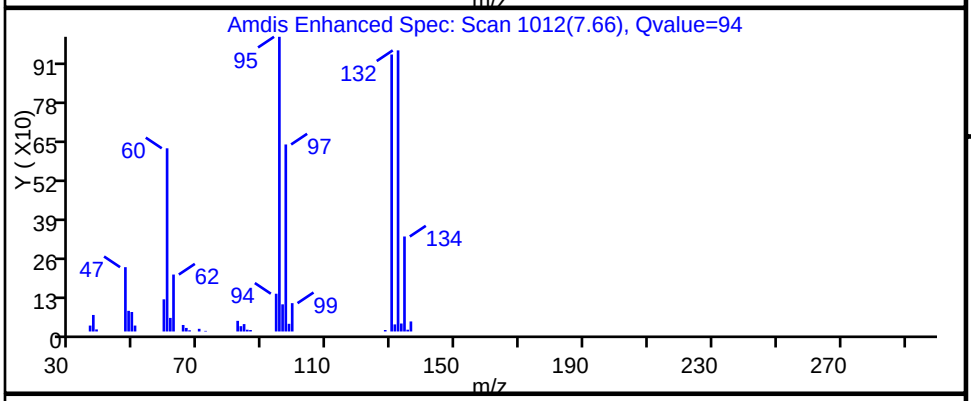
TestAmerica Pittsburgh

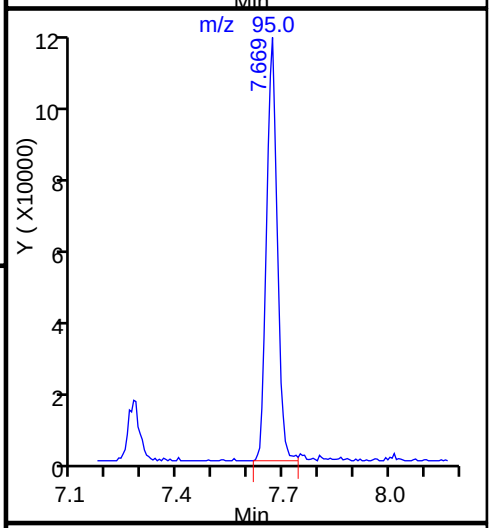
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121020.D				
Injection Date:	22-Jan-2015 17:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-3	Lab Sample ID:	180-40541-3		
Client ID:	HD-MW-132-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	25.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

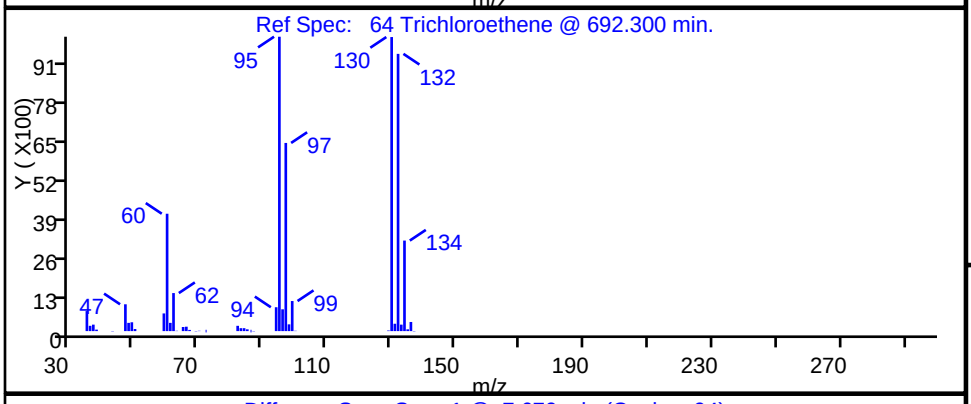
64 Trichloroethene, CAS: 79-01-6

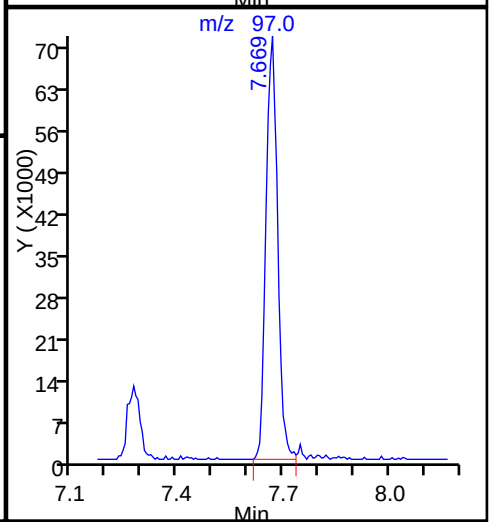


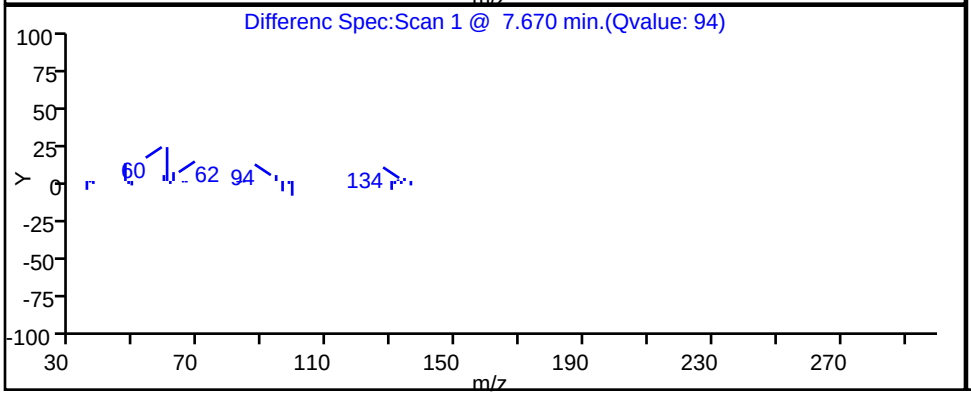












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-CW-18-0/1-0 Lab Sample ID: 180-40541-4

Matrix: Water Lab File ID: 50123012.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:20

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 15:35

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.: 131582 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	0.97	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	1.4		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	29		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	8.3		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U *	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	0.41	J	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.: 180-40541-1

SDG No.:

Client Sample ID: HD-CW-18-0/1-0 Lab Sample ID: 180-40541-4

Matrix: Water Lab File ID: 50123012.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:20

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 15:35

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.: 131582 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)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	109		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D
Lims ID: 180-40541-C-4 Lab Sample ID: 180-40541-4
Client ID: HD-CW-18-0/1-0
Sample Type: Client
Inject. Date: 23-Jan-2015 15:35:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-40541-C-4
Misc. Info.: 180-0005396-012
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 25-Jan-2015 20:25:05 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: XAWRK031

First Level Reviewer: gordonk Date: 25-Jan-2015 20:25:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.297	0.005	88	190637	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.271	0.006	99	477463	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.362	0.006	99	101656	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.680	0.005	99	147568	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.523	0.012	92	110779	54.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.900	0.006	93	176014	52.8	
$ 7 Toluene-d8 (Surr)	98	8.926	8.920	0.006	95	430442	50.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.530	0.006	81	163336	50.7	
12 Chloromethane	50		1.778				ND	
13 Vinyl chloride	62		1.906				ND	
15 Bromomethane	94		2.247				ND	
16 Chloroethane	64		2.411				ND	
22 1,1-Dichloroethene	96	3.408	3.384	0.024	94	12649	4.86	
24 Acetone	43		3.494				ND	
26 Carbon disulfide	76		3.658				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.546				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	
35 Methyl tert-butyl ether	73		4.595				ND	
37 1,1-Dichloroethane	63	5.184	5.173	0.011	96	44091	7.20	
45 cis-1,2-Dichloroethene	96	5.951	5.933	0.018	85	408468	143.5	
46 2-Butanone (MEK)	43		5.982				ND	
49 Chlorobromomethane	128		6.231				ND	
52 Chloroform	83		6.341				ND	
53 1,1,1-Trichloroethane	97		6.529				ND	
56 Carbon tetrachloride	117		6.718				ND	
58 Benzene	78	6.955	6.955	0.000	27	2091	0.1771	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.673	7.661	0.012	94	104472	41.3	
67 1,2-Dichloropropane	63		7.904				ND	
70 1,4-Dioxane	88		8.056				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.652				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.823				ND	
76 Toluene	91		8.987				ND	
77 trans-1,3-Dichloropropene	75		9.218				ND	
79 1,1,2-Trichloroethane	97		9.401				ND	
80 Tetrachloroethene	164	9.534	9.535	0.000	79	4106	2.06	
82 2-Hexanone	43		9.656				ND	
84 Chlorodibromomethane	129		9.796				ND	
85 Ethylene Dibromide	107		9.900				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.496				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.013				ND	
93 Styrene	104		11.025				ND	
94 Bromoform	173		11.214				ND	
99 1,1,2,2-Tetrachloroethane	83		11.670				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

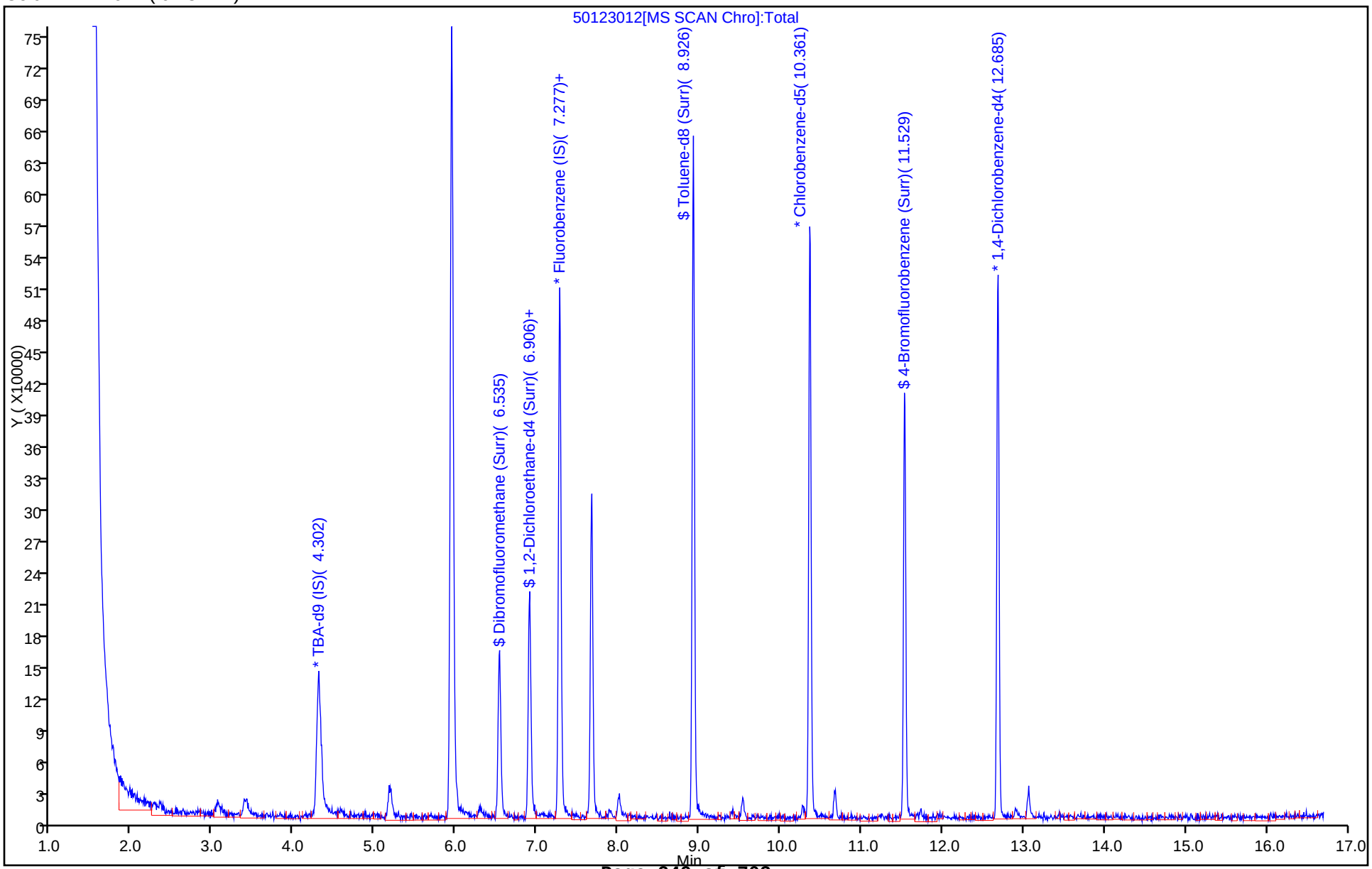
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 25-Jan-2015 20:25:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D				
Injection Date:	23-Jan-2015 15:35:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-C-4	Lab Sample ID:	180-40541-4	Worklist Smp#:	12
Client ID:	HD-CW-18-0/1-0				
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)



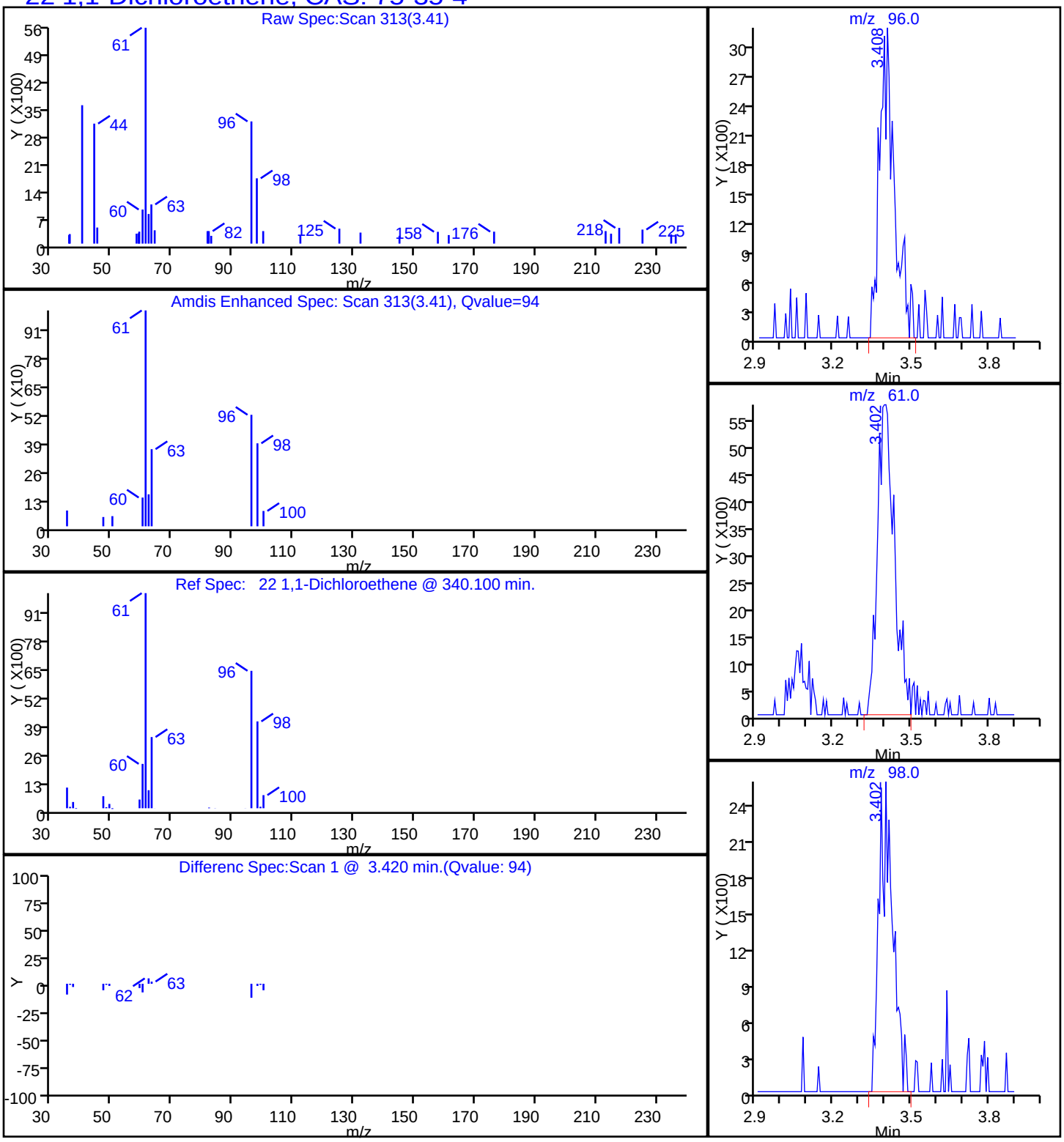
Report Date: 25-Jan-2015 20:25:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D

Injection Date:	23-Jan-2015 15:35:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-4	Lab Sample ID:	180-40541-4
Client ID:	HD-CW-18-0/1-0		
Operator ID:	001562	ALS Bottle#:	12 Worklist Smp#: 12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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

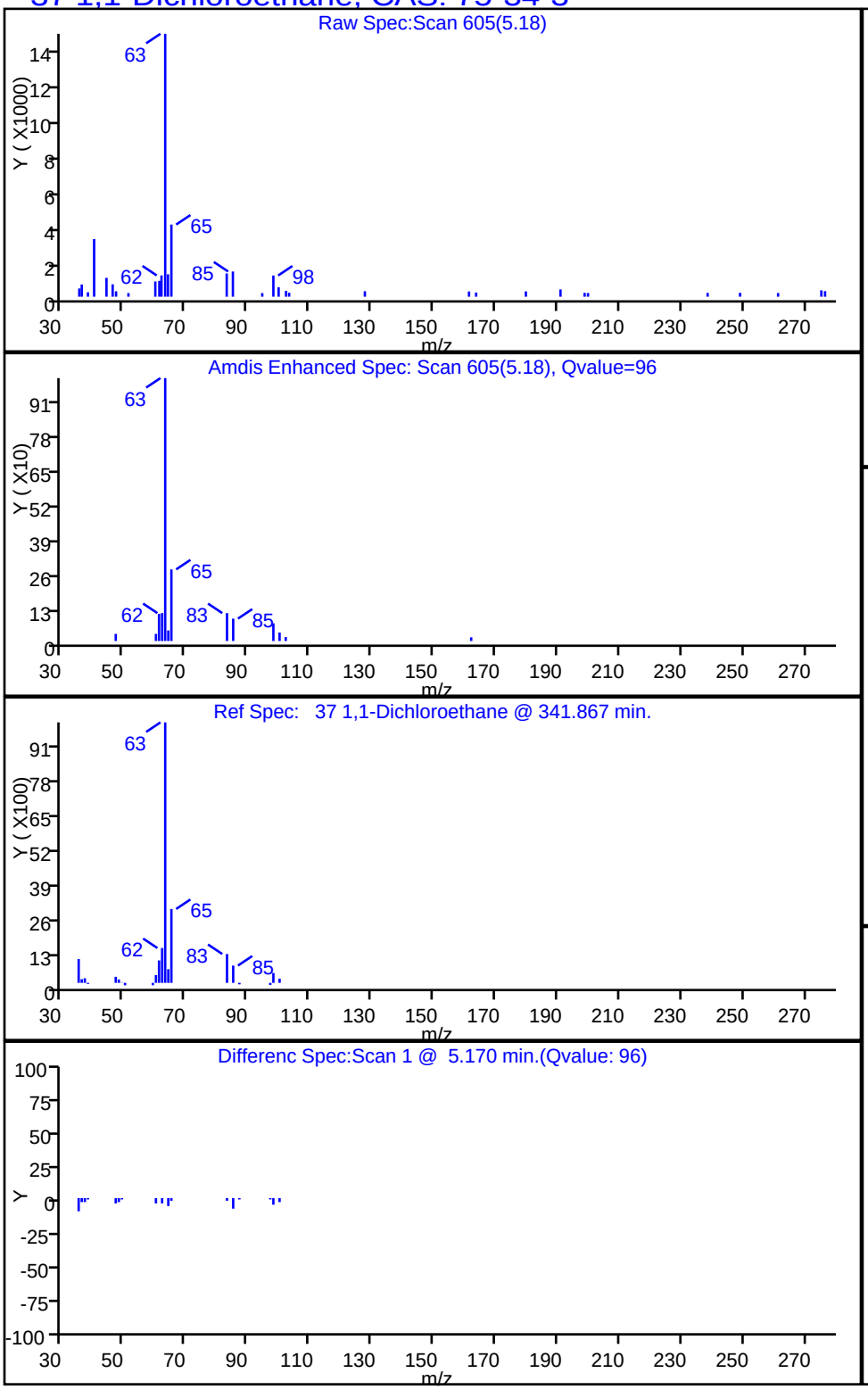


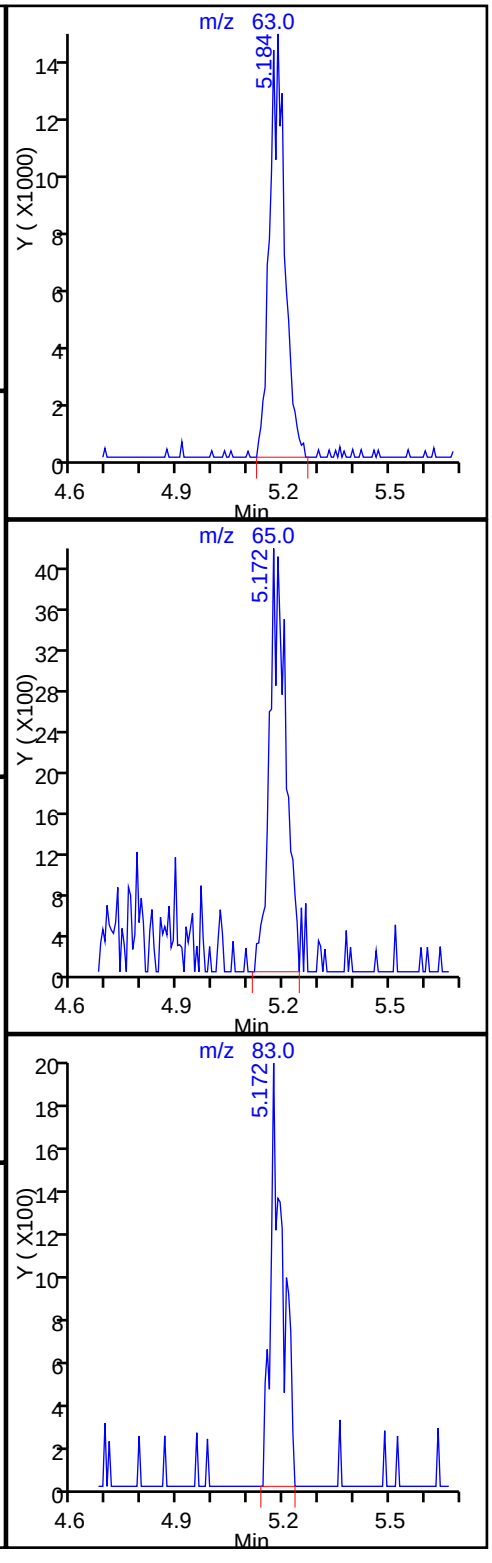
Report Date: 25-Jan-2015 20:25:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D				
Injection Date:	23-Jan-2015 15:35:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-4	Lab Sample ID:	180-40541-4		
Client ID:	HD-CW-18-0/1-0				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



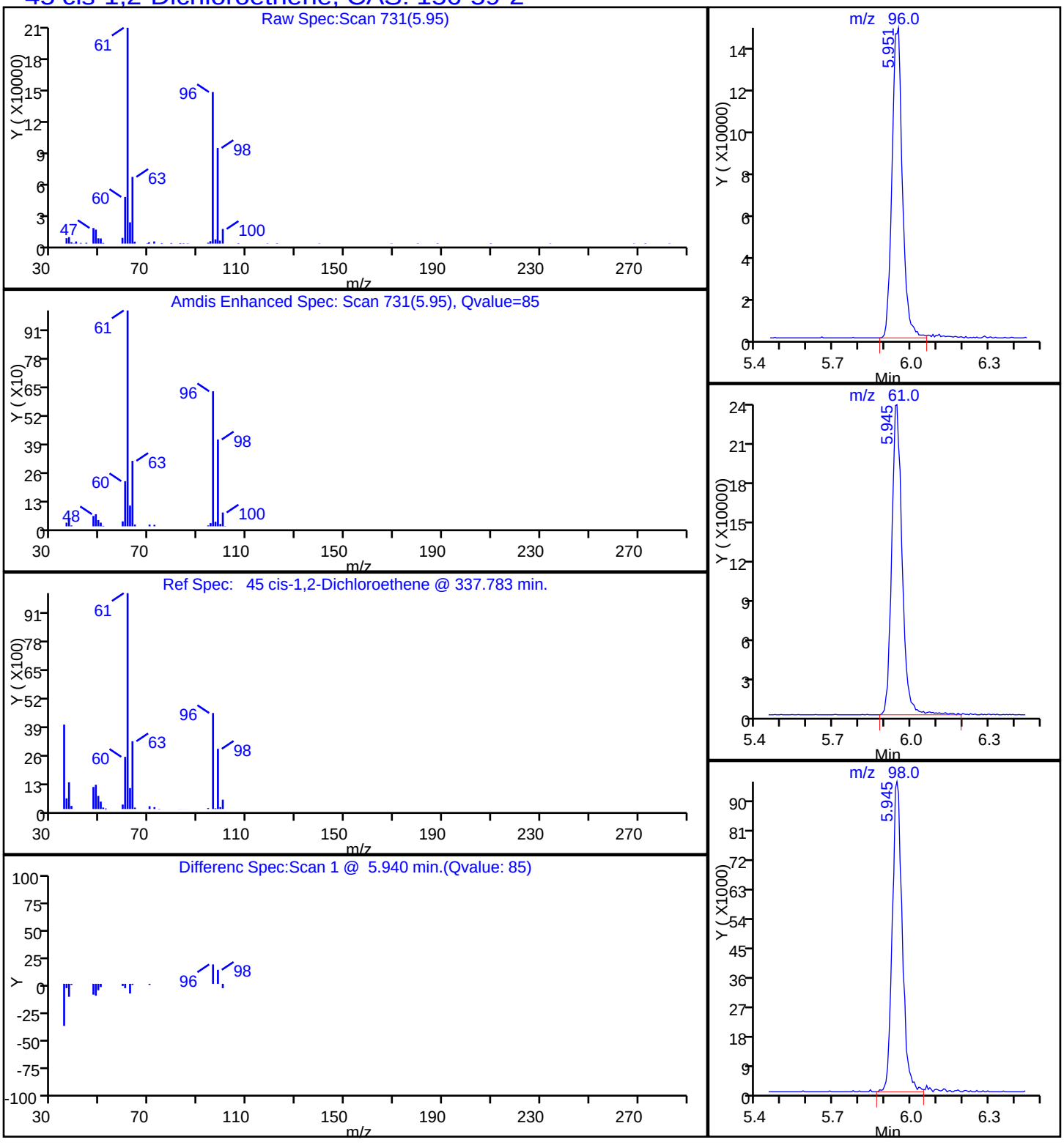


Report Date: 25-Jan-2015 20:25:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D				
Injection Date:	23-Jan-2015 15:35:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-4	Lab Sample ID:	180-40541-4		
Client ID:	HD-CW-18-0/1-0				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



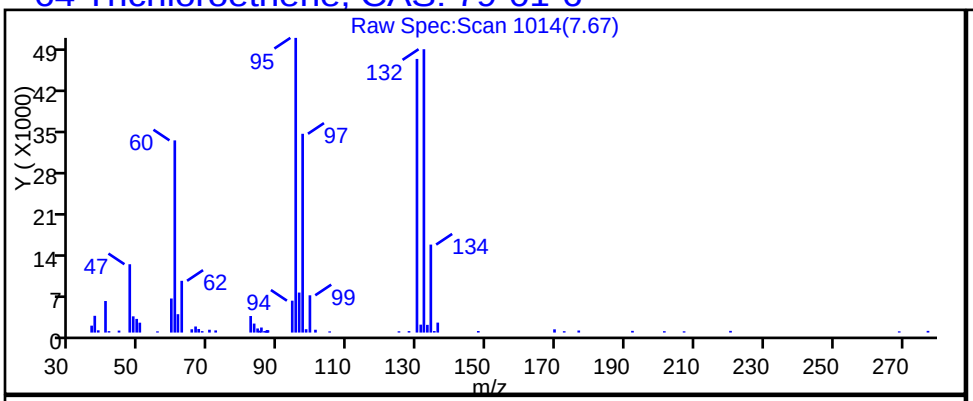
Report Date: 25-Jan-2015 20:25:05 Chrom Revision: 2.2 15-Jan-2015 13:05:58

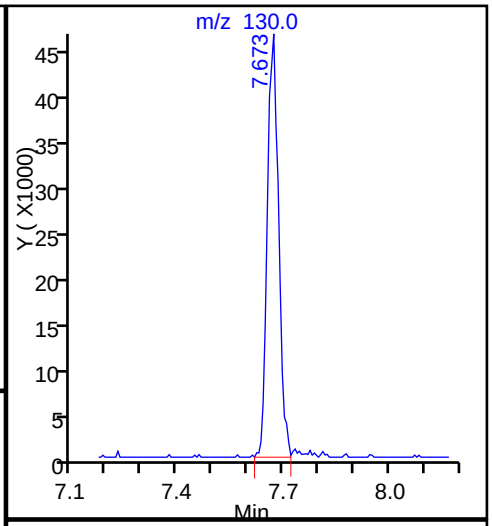
TestAmerica Pittsburgh

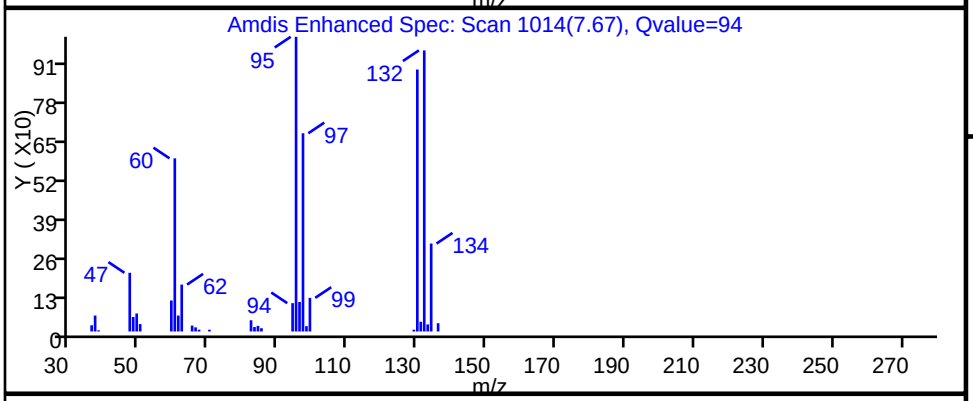
Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D

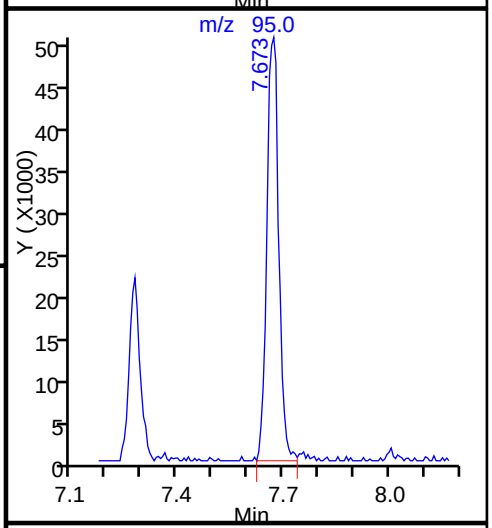
Injection Date:	23-Jan-2015 15:35:30	Instrument ID:	CHHP5
Lims ID:	180-40541-C-4	Lab Sample ID:	180-40541-4
Client ID:	HD-CW-18-0/1-0		
Operator ID:	001562	ALS Bottle#:	12 Worklist Smp#: 12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

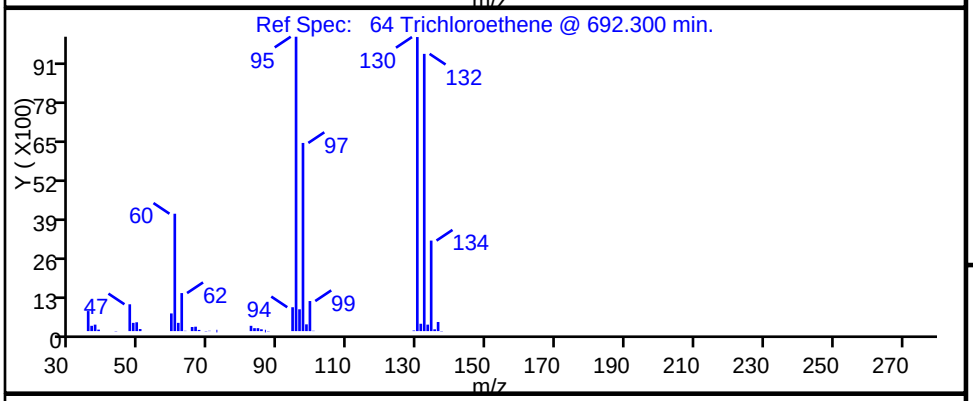
64 Trichloroethene, CAS: 79-01-6

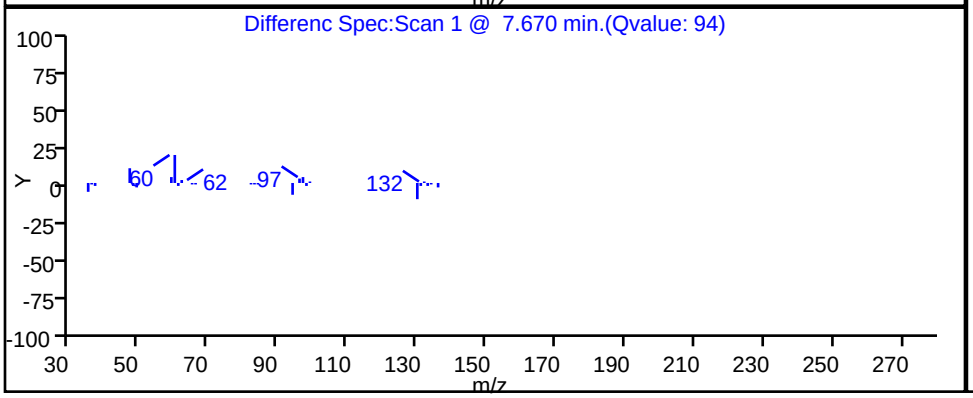


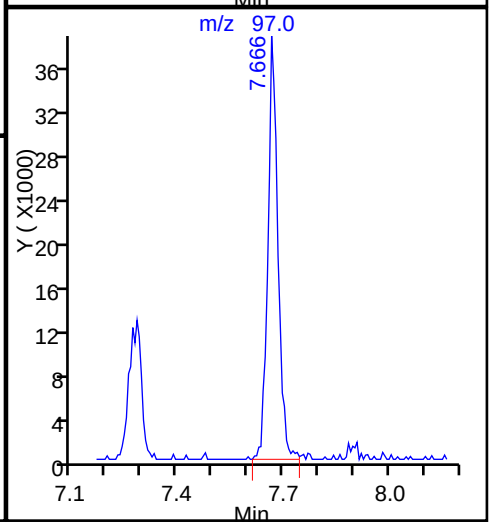










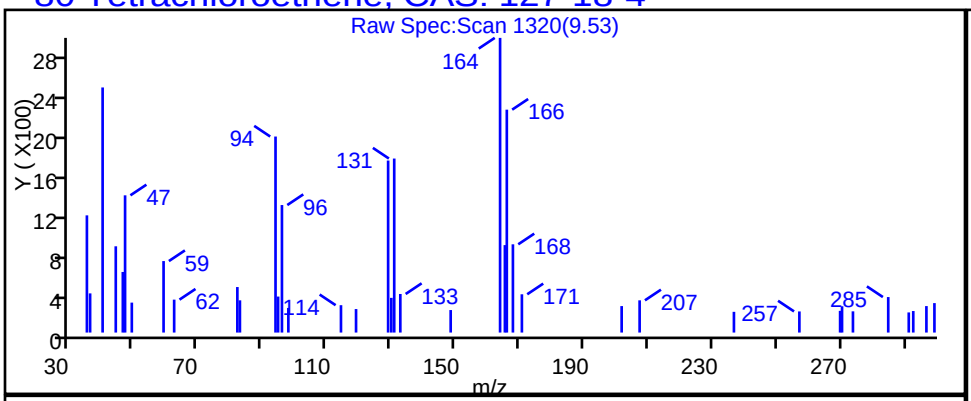


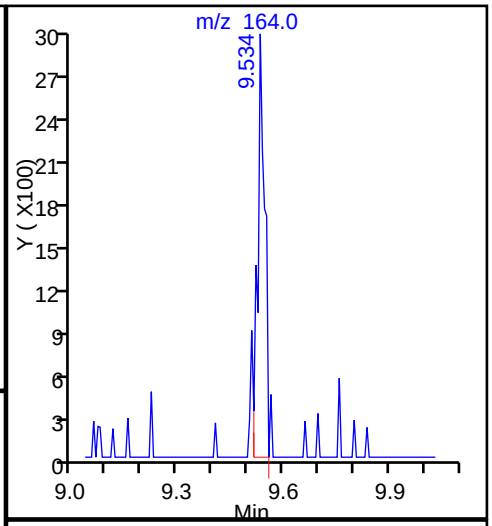
Report Date: 25-Jan-2015 20:25:06 Chrom Revision: 2.2 15-Jan-2015 13:05:58

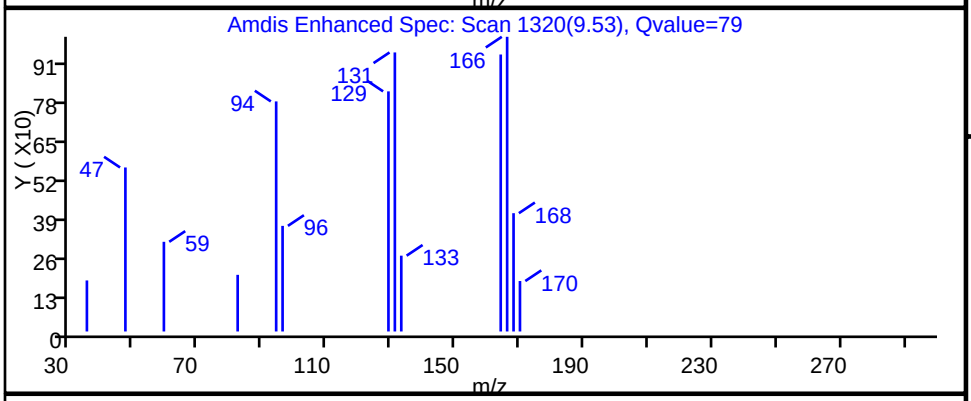
TestAmerica Pittsburgh

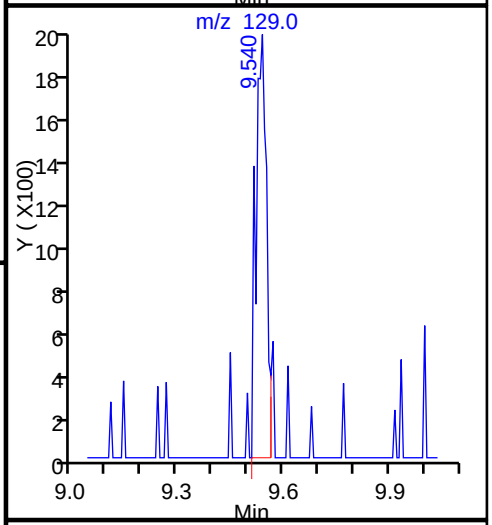
Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123012.D				
Injection Date:	23-Jan-2015 15:35:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-C-4	Lab Sample ID:	180-40541-4		
Client ID:	HD-CW-18-0/1-0				
Operator ID:	001562	ALS Bottle#:	12	Worklist Smp#:	12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

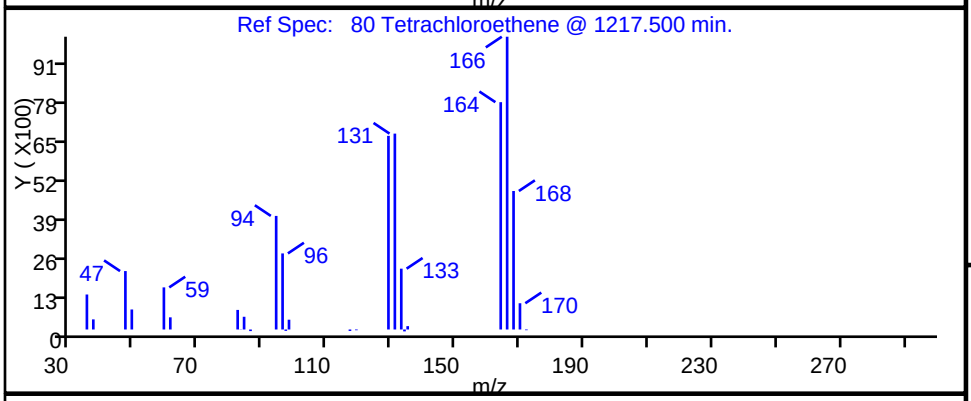
80 Tetrachloroethene, CAS: 127-18-4

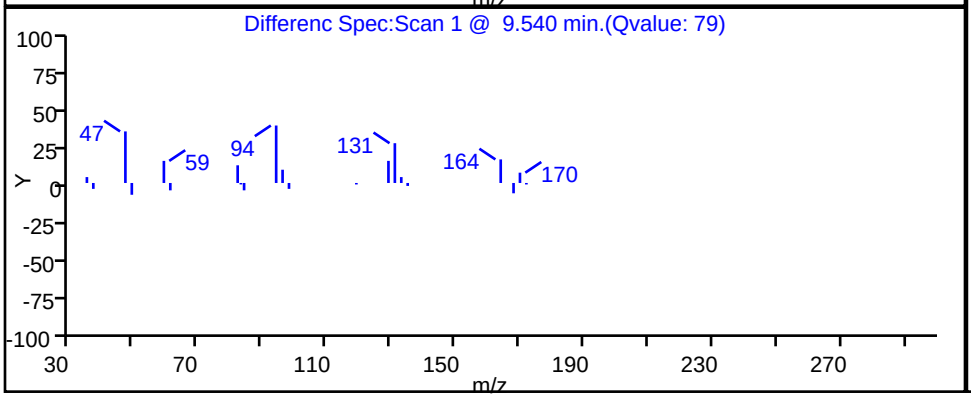


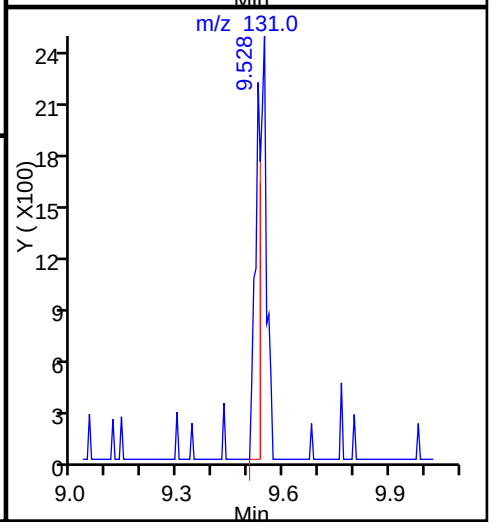












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-74S-0/1-0 | Lab Sample ID: 180-40541-5

Matrix: Water | Lab File ID: 50121022.D

Analysis Method: 8260C | Date Collected: 01/16/2015 09:50

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 18:40

Soil Aliquot Vol: | Dilution Factor: 25

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

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

Analysis Batch No.: 131443 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	25	U	25	7.1
75-01-4	Vinyl chloride	25	U	25	5.7
74-83-9	Bromomethane	25	U	25	7.8
75-00-3	Chloroethane	25	U	25	5.4
75-35-4	1,1-Dichloroethene	66		25	7.4
67-64-1	Acetone	130	U	130	63
75-15-0	Carbon disulfide	25	U	25	5.3
75-09-2	Methylene Chloride	25	U	25	3.1
156-60-5	trans-1,2-Dichloroethene	25	U	25	4.2
1634-04-4	Methyl tert-butyl ether	25	U	25	4.6
75-34-3	1,1-Dichloroethane	15	J	25	2.9
156-59-2	cis-1,2-Dichloroethene	270		25	5.9
74-97-5	Bromochloromethane	25	U	25	4.5
78-93-3	2-Butanone (MEK)	130	U	130	14
67-66-3	Chloroform	25	U	25	4.3
71-55-6	1,1,1-Trichloroethane	210		25	7.2
56-23-5	Carbon tetrachloride	25	U	25	3.4
71-43-2	Benzene	25	U	25	2.6
107-06-2	1,2-Dichloroethane	25	U	25	5.3
79-01-6	Trichloroethene	540		25	3.6
78-87-5	1,2-Dichloropropane	25	U	25	2.4
75-27-4	Bromodichloromethane	25	U	25	3.3
10061-01-5	cis-1,3-Dichloropropene	25	U	25	4.7
108-10-1	4-Methyl-2-pentanone (MIBK)	130	U	130	13
108-88-3	Toluene	25	U	25	3.8
10061-02-6	trans-1,3-Dichloropropene	25	U	25	3.7
79-00-5	1,1,2-Trichloroethane	25	U	25	5.0
127-18-4	Tetrachloroethene	230		25	3.7
591-78-6	2-Hexanone	130	U	130	4.0
124-48-1	Dibromochloromethane	25	U	25	3.4
106-93-4	1,2-Dibromoethane (EDB)	25	U	25	4.5
108-90-7	Chlorobenzene	25	U	25	3.4
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	6.9
100-41-4	Ethylbenzene	25	U	25	5.7
1330-20-7	Xylenes, Total	75	U	75	12
100-42-5	Styrene	25	U	25	2.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-74S-0/1-0 Lab Sample ID: 180-40541-5

Matrix: Water Lab File ID: 50121022.D

Analysis Method: 8260C Date Collected: 01/16/2015 09:50

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 18:40

Soil Aliquot Vol: Dilution Factor: 25

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	25	U	25	4.8
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	5.0
107-13-1	Acrylonitrile	500	U	500	14
123-91-1	1,4-Dioxane	5000	U	5000	860

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	115		64-135
2037-26-5	Toluene-d8 (Surr)	90		71-118
460-00-4	4-Bromofluorobenzene (Surr)	82		70-118
1868-53-7	Dibromofluoromethane (Surr)	110		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D
Lims ID: 180-40541-D-5 Lab Sample ID: 180-40541-5
Client ID: HD-MW-74S-0/1-0
Sample Type: Client
Inject. Date: 22-Jan-2015 18:40:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 25.0000
Sample Info: 180-40541-D-5, 25x
Misc. Info.: 180-0005379-022
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:13:23 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:13:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.299	4.302	-0.003	88	169096	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.277	-0.003	100	418141	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.367	-0.003	99	100642	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.685	0.003	99	128390	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.525	6.526	-0.001	90	98053	55.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.897	0.005	91	168070	57.5	
$ 7 Toluene-d8 (Surr)	98	8.922	8.923	-0.001	95	377837	45.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	85	130764	41.0	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.914				ND	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.398	3.381	0.017	90	29933	13.1	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.666				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	5.187	5.175	0.012	93	16573	3.09	
45 cis-1,2-Dichloroethene	96	5.941	5.936	0.005	88	135769	54.5	
46 2-Butanone (MEK)	43		5.978				ND	
49 Chlorobromomethane	128		6.228				ND	
52 Chloroform	83		6.337				ND	
53 1,1,1-Trichloroethane	97	6.531	6.532	-0.001	88	109184	41.5	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.669	7.663	0.006	94	239428	108.2	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.537	9.531	0.006	95	88874	45.1	
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

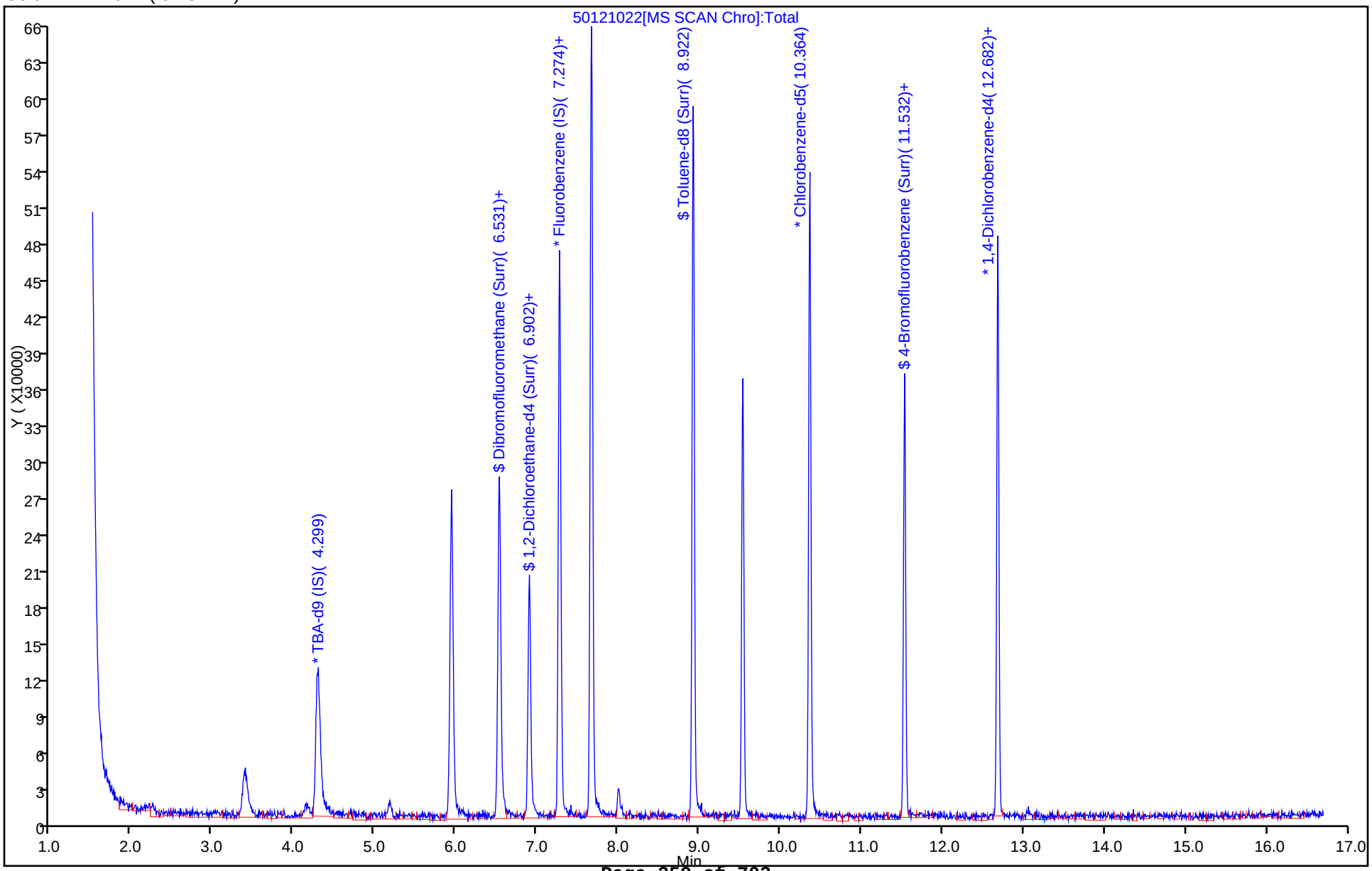
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D				
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5	Worklist Smp#:	22
Client ID:	HD-MW-74S-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	25.0000	ALS Bottle#:	21
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

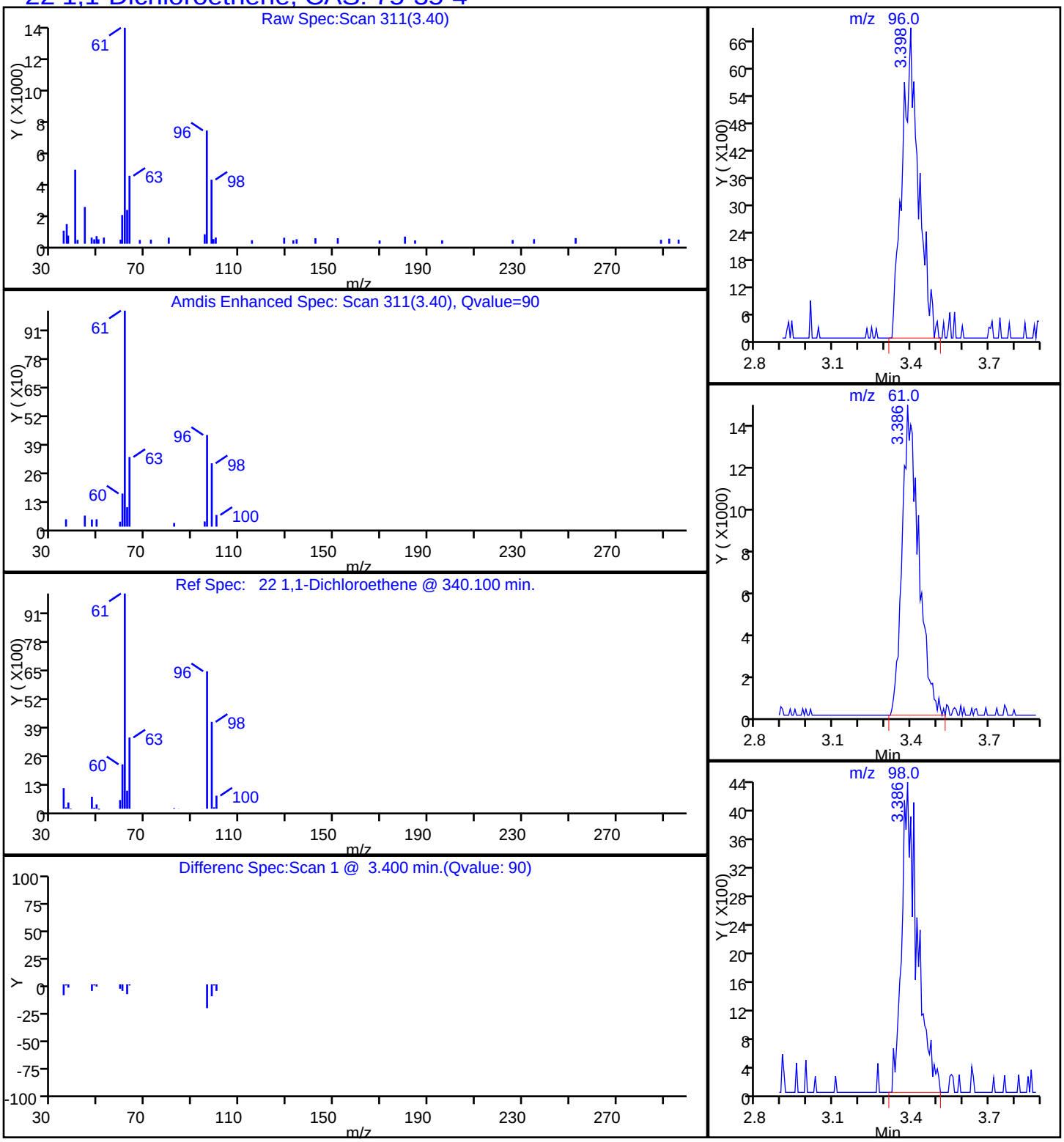


Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D				
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5		
Client ID:	HD-MW-74S-0/1-0				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	25.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

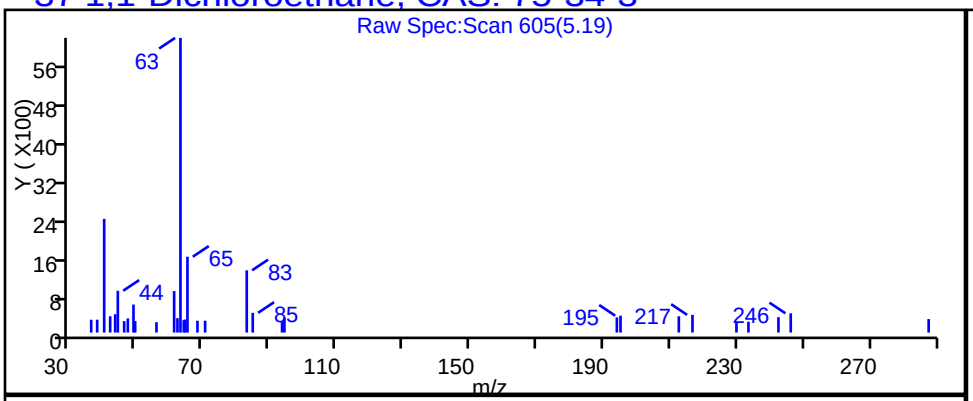


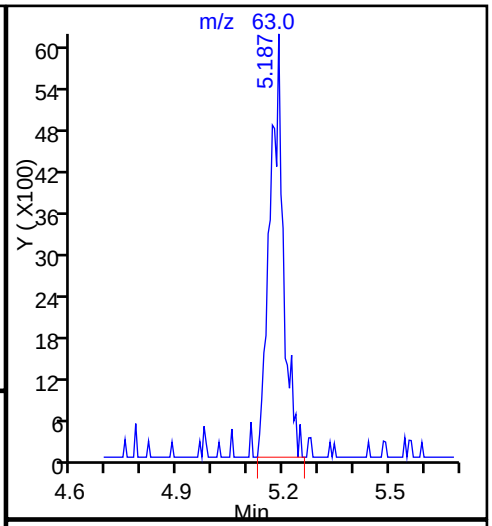
Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

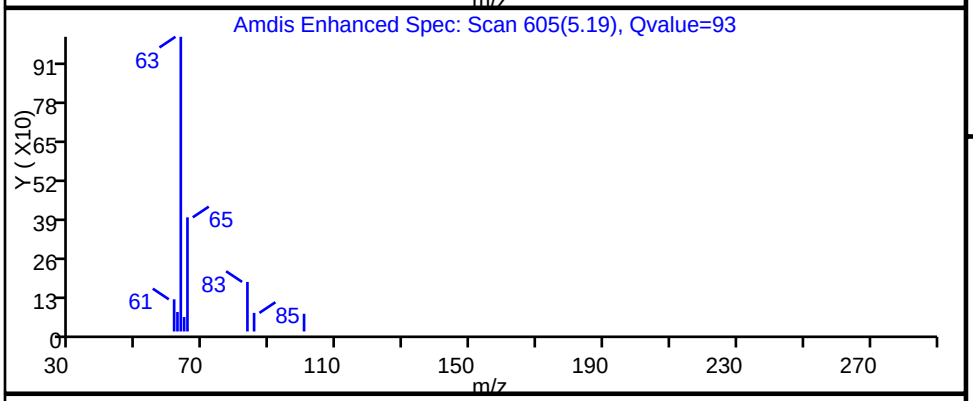
TestAmerica Pittsburgh

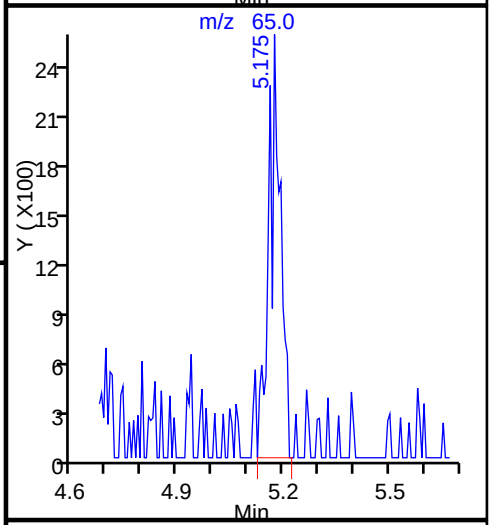
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D		
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5
Client ID:	HD-MW-74S-0/1-0		
Operator ID:	001562	ALS Bottle#:	21 Worklist Smp#: 22
Purge Vol:	5.000 mL	Dil. Factor:	25.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

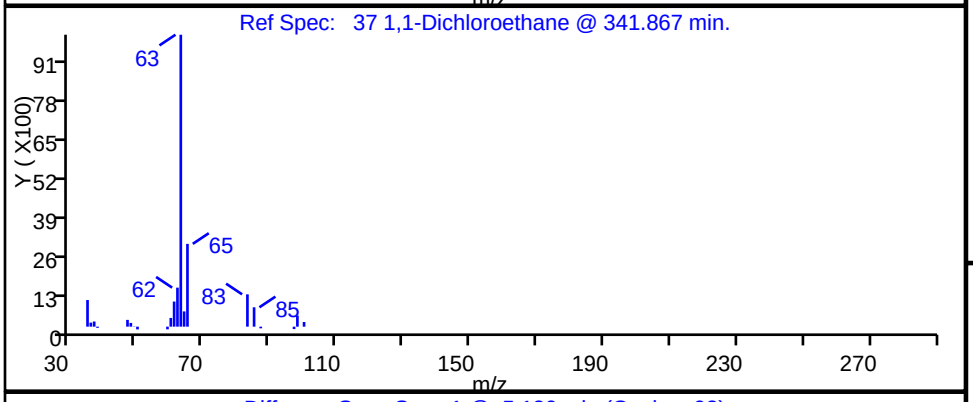
37 1,1-Dichloroethane, CAS: 75-34-3

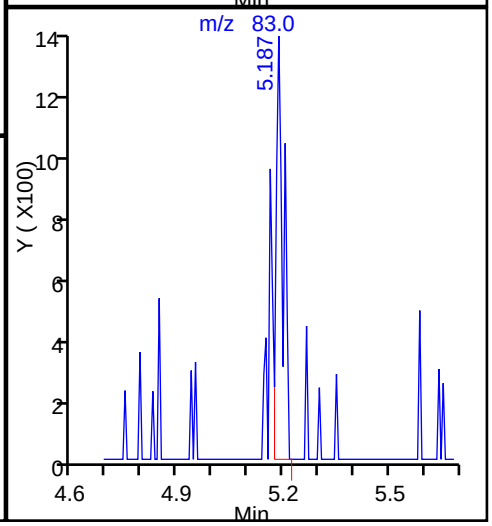


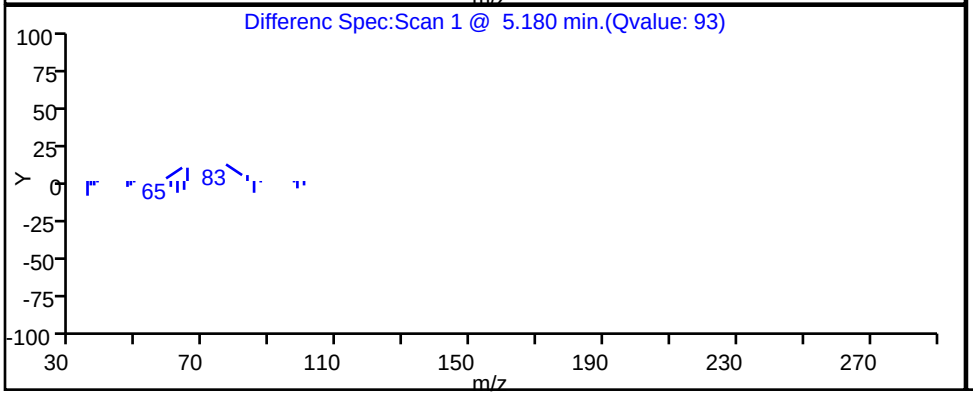










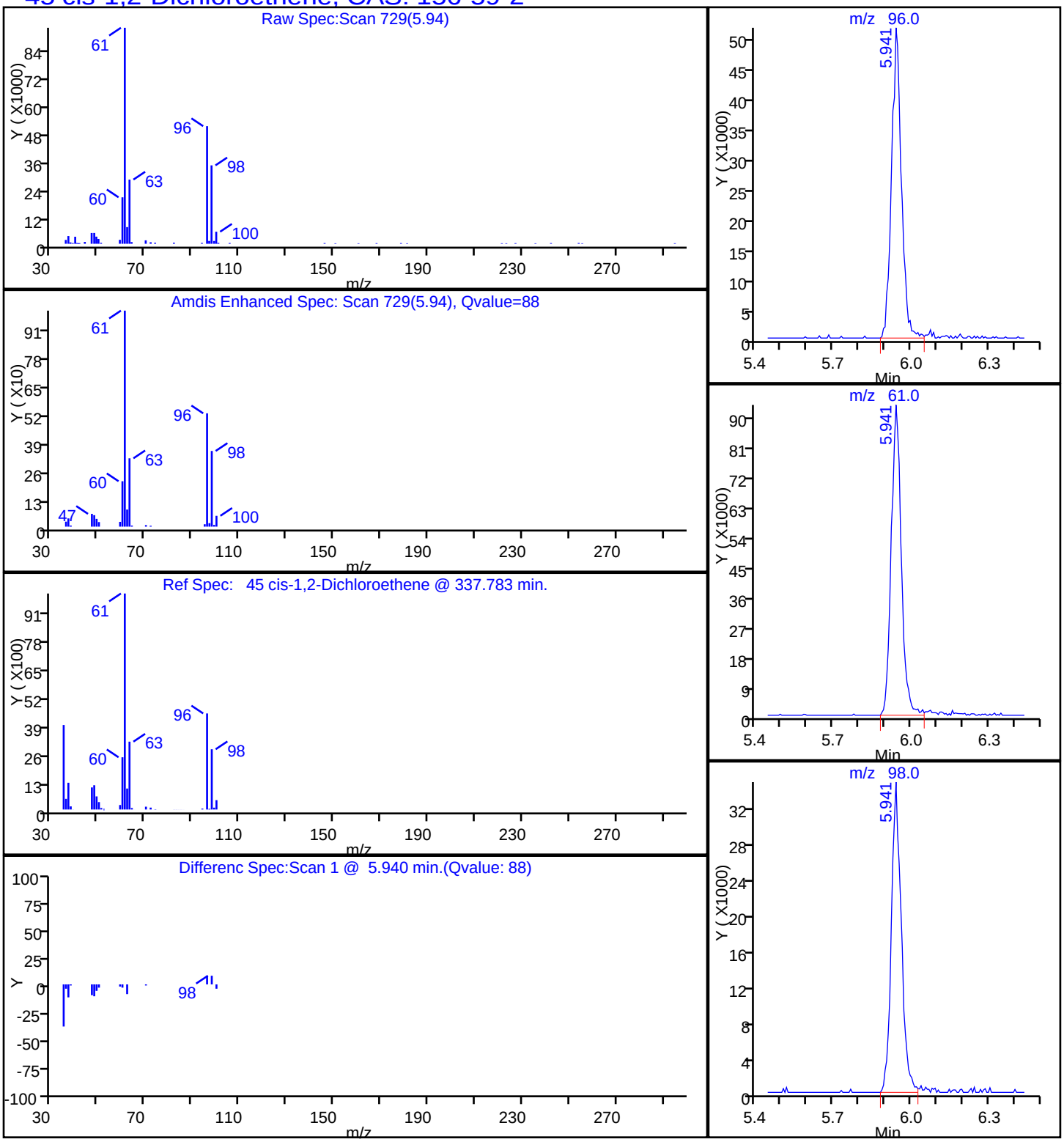


Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D		
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5
Client ID:	HD-MW-74S-0/1-0		
Operator ID:	001562	ALS Bottle#:	21 Worklist Smp#: 22
Purge Vol:	5.000 mL	Dil. Factor:	25.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

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

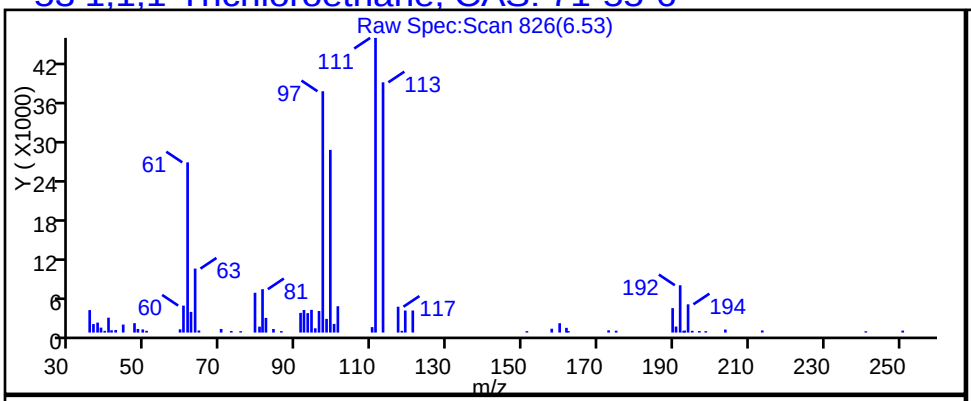


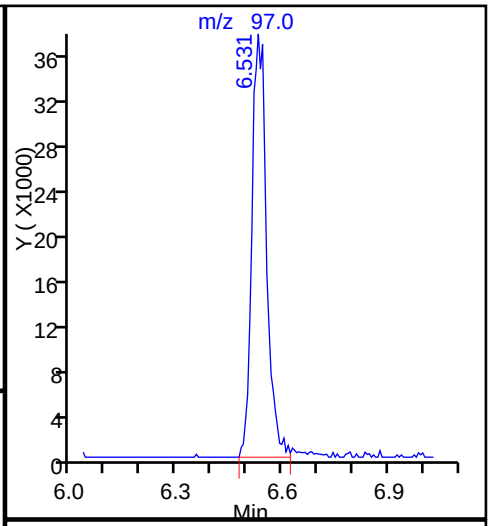
Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

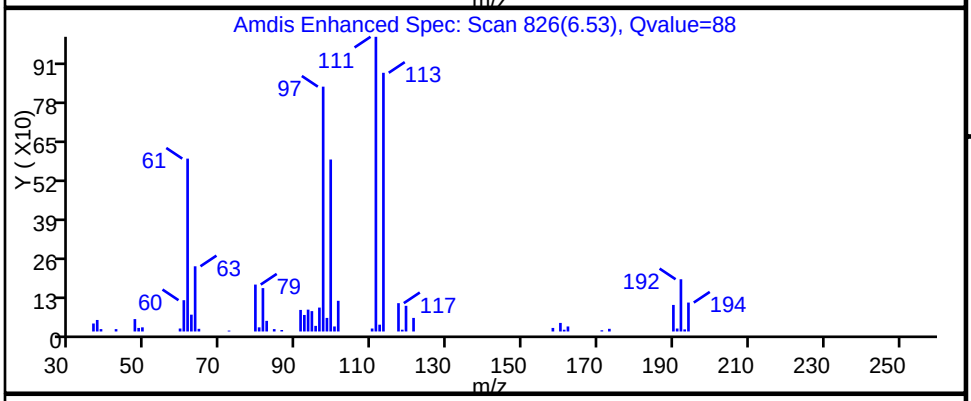
TestAmerica Pittsburgh

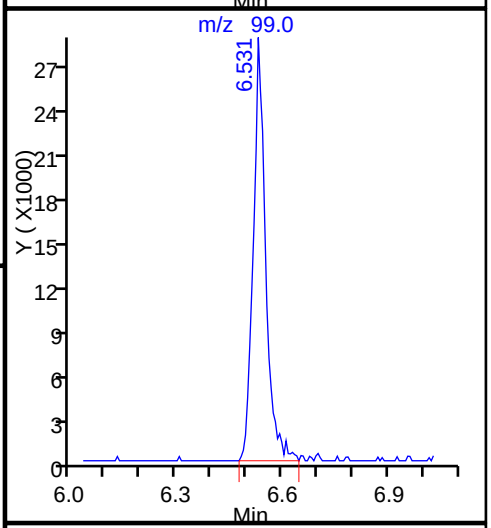
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D				
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5		
Client ID:	HD-MW-74S-0/1-0				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	25.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

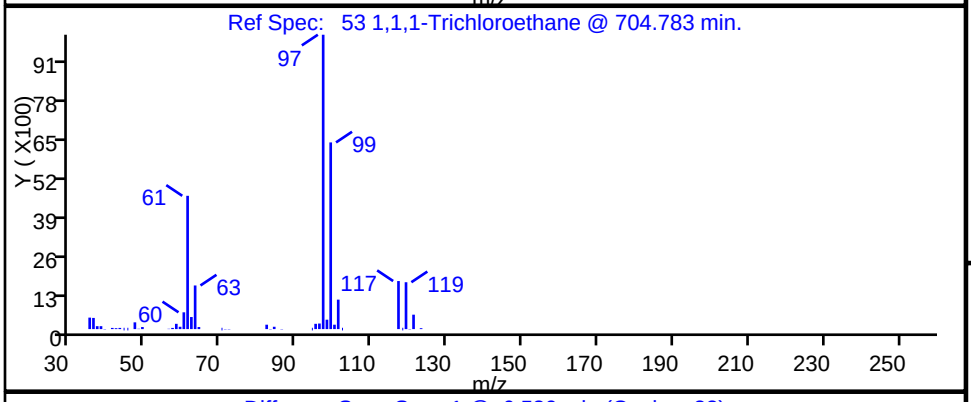
53 1,1,1-Trichloroethane, CAS: 71-55-6

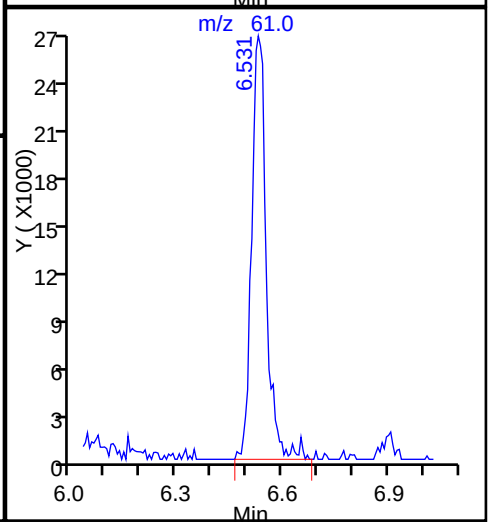


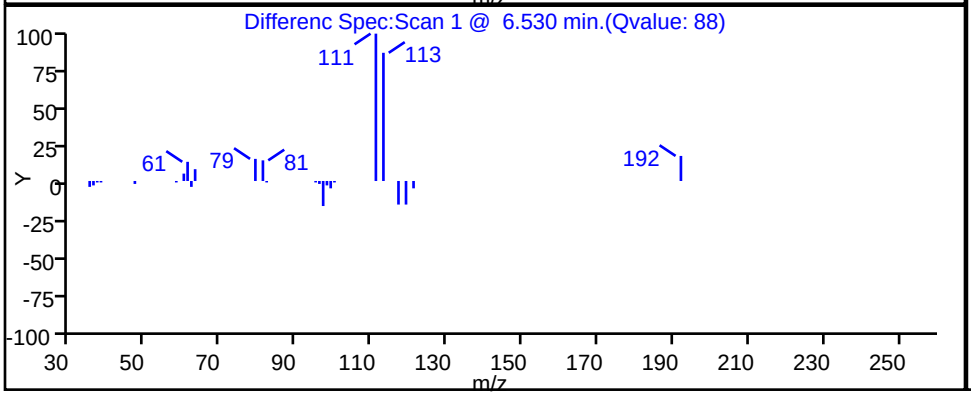










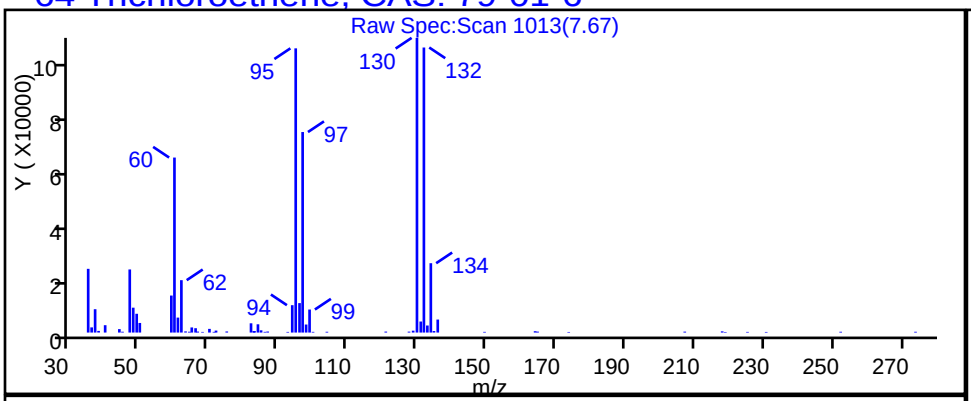


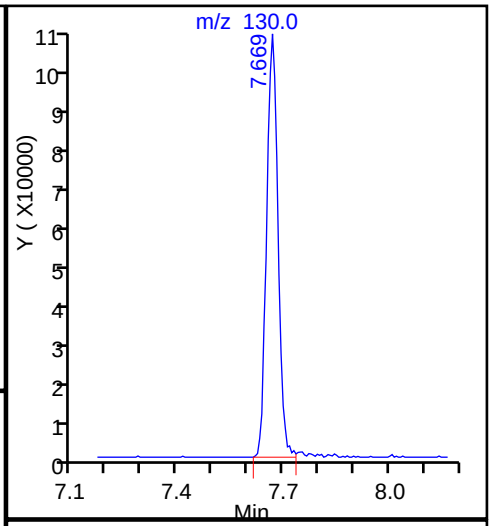
Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

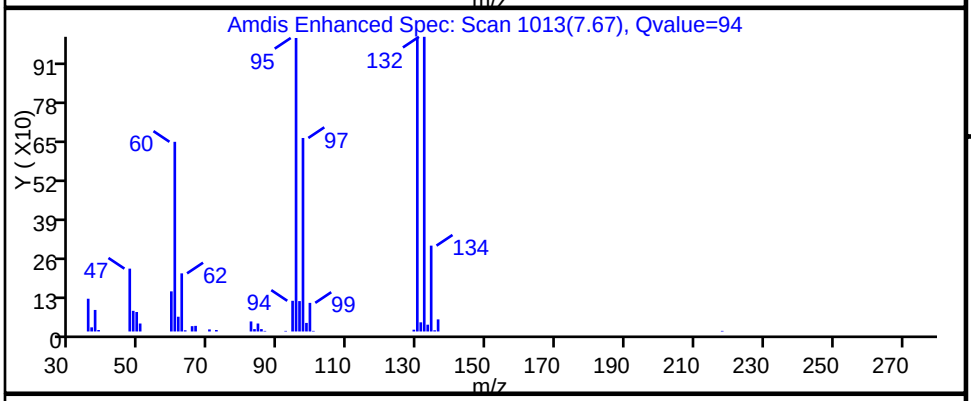
TestAmerica Pittsburgh

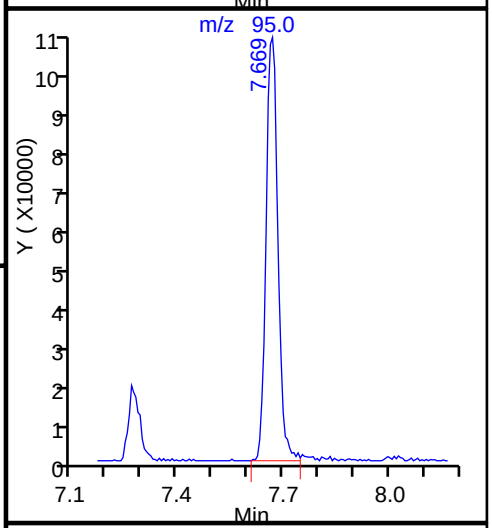
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D		
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5
Client ID:	HD-MW-74S-0/1-0		
Operator ID:	001562	ALS Bottle#:	21 Worklist Smp#: 22
Purge Vol:	5.000 mL	Dil. Factor:	25.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

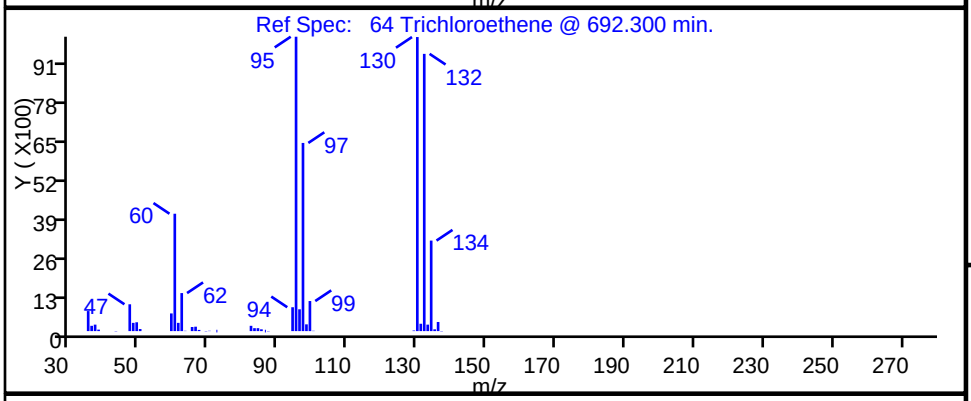
64 Trichloroethene, CAS: 79-01-6

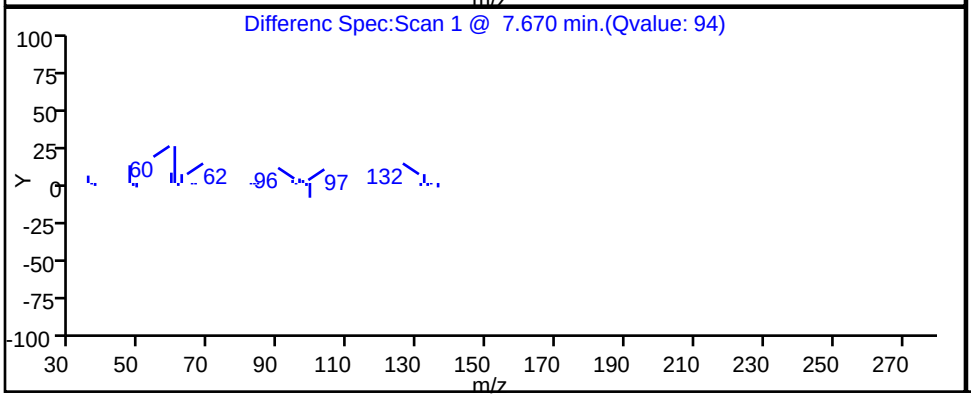


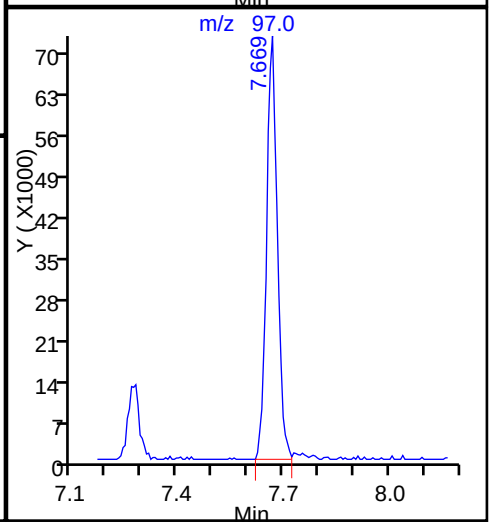










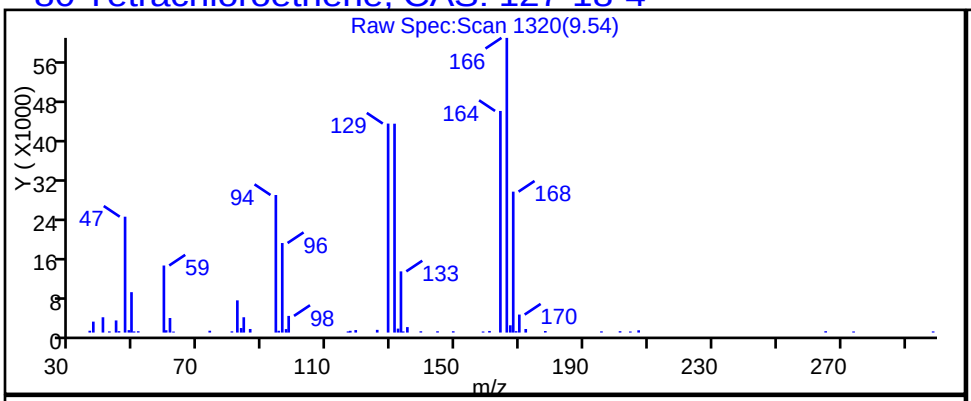


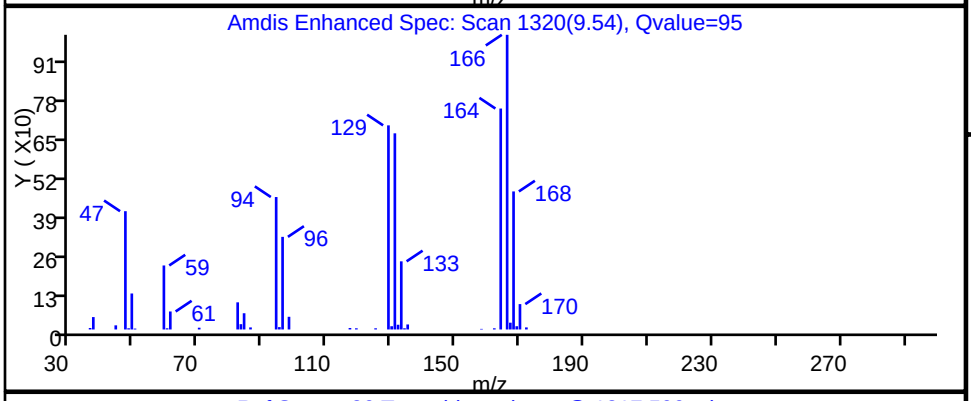
Report Date: 23-Jan-2015 08:13:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

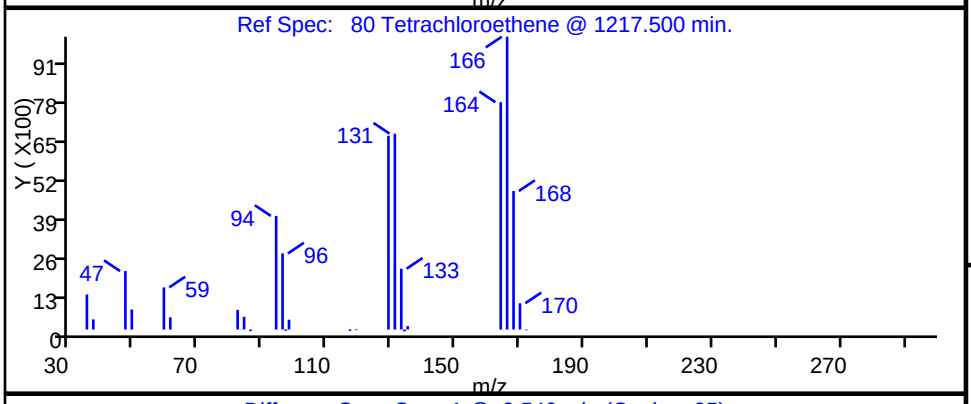
TestAmerica Pittsburgh

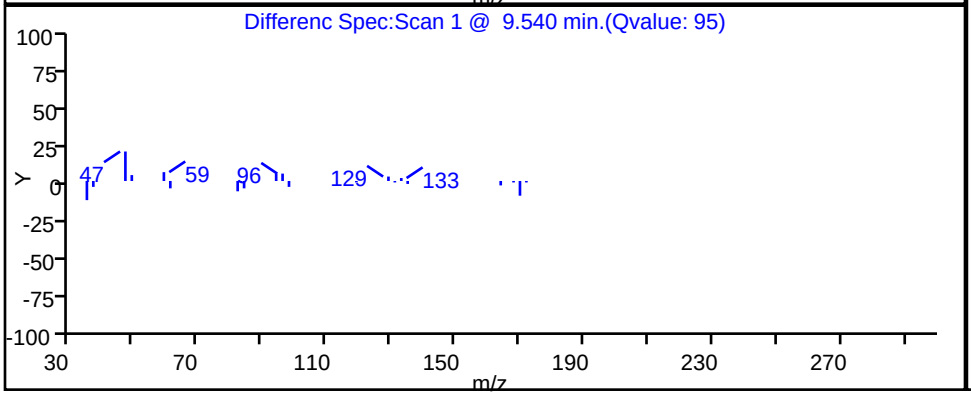
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121022.D		
Injection Date:	22-Jan-2015 18:40:30	Instrument ID:	CHHP5
Lims ID:	180-40541-D-5	Lab Sample ID:	180-40541-5
Client ID:	HD-MW-74S-0/1-0		
Operator ID:	001562	ALS Bottle#:	21 Worklist Smp#: 22
Purge Vol:	5.000 mL	Dil. Factor:	25.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

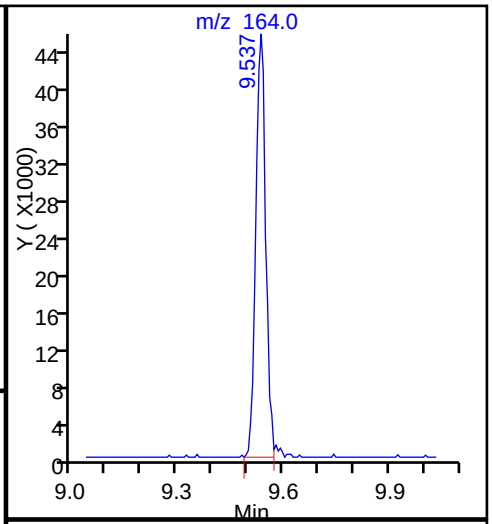
80 Tetrachloroethene, CAS: 127-18-4

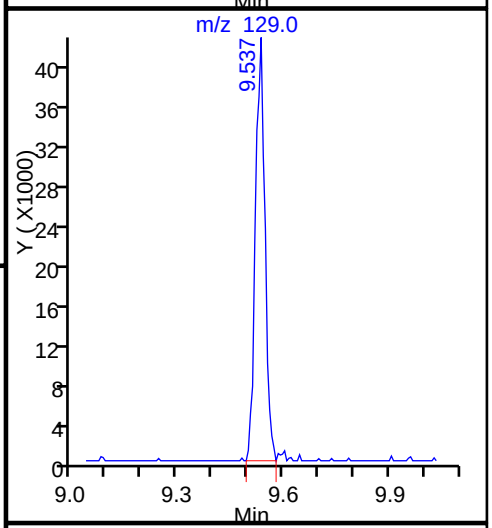


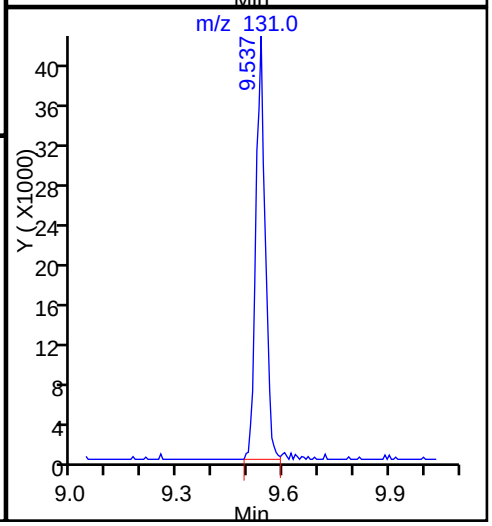












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-39D-0/1-0 Lab Sample ID: 180-40541-6

Matrix: Water Lab File ID: 50121024.D

Analysis Method: 8260C Date Collected: 01/16/2015 10:45

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 19:28

Soil Aliquot Vol: Dilution Factor: 3

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	3.0	U	3.0	0.85
75-01-4	Vinyl chloride	3.0	U	3.0	0.68
74-83-9	Bromomethane	3.0	U	3.0	0.94
75-00-3	Chloroethane	3.0	U	3.0	0.64
75-35-4	1,1-Dichloroethene	2.4	J	3.0	0.89
67-64-1	Acetone	15	U	15	7.5
75-15-0	Carbon disulfide	3.0	U	3.0	0.64
75-09-2	Methylene Chloride	3.0	U	3.0	0.38
156-60-5	trans-1,2-Dichloroethene	0.76	J	3.0	0.51
1634-04-4	Methyl tert-butyl ether	3.0	U	3.0	0.55
75-34-3	1,1-Dichloroethane	1.5	J	3.0	0.35
156-59-2	cis-1,2-Dichloroethene	85		3.0	0.71
74-97-5	Bromochloromethane	3.0	U	3.0	0.54
78-93-3	2-Butanone (MEK)	15	U	15	1.6
67-66-3	Chloroform	3.0	U	3.0	0.51
71-55-6	1,1,1-Trichloroethane	6.7		3.0	0.86
56-23-5	Carbon tetrachloride	3.0	U	3.0	0.41
71-43-2	Benzene	3.0	U	3.0	0.32
107-06-2	1,2-Dichloroethane	3.0	U	3.0	0.64
79-01-6	Trichloroethene	110		3.0	0.43
78-87-5	1,2-Dichloropropane	3.0	U	3.0	0.28
75-27-4	Bromodichloromethane	3.0	U	3.0	0.39
10061-01-5	cis-1,3-Dichloropropene	3.0	U	3.0	0.56
108-10-1	4-Methyl-2-pentanone (MIBK)	15	U	15	1.6
108-88-3	Toluene	3.0	U	3.0	0.45
10061-02-6	trans-1,3-Dichloropropene	3.0	U	3.0	0.44
79-00-5	1,1,2-Trichloroethane	3.0	U	3.0	0.60
127-18-4	Tetrachloroethene	50		3.0	0.45
591-78-6	2-Hexanone	15	U	15	0.48
124-48-1	Dibromochloromethane	3.0	U	3.0	0.41
106-93-4	1,2-Dibromoethane (EDB)	3.0	U	3.0	0.54
108-90-7	Chlorobenzene	3.0	U	3.0	0.41
630-20-6	1,1,1,2-Tetrachloroethane	3.0	U	3.0	0.83
100-41-4	Ethylbenzene	3.0	U	3.0	0.68
1330-20-7	Xylenes, Total	9.0	U	9.0	1.5
100-42-5	Styrene	3.0	U	3.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-39D-0/1-0 Lab Sample ID: 180-40541-6

Matrix: Water Lab File ID: 50121024.D

Analysis Method: 8260C Date Collected: 01/16/2015 10:45

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 19:28

Soil Aliquot Vol: Dilution Factor: 3

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	3.0	U	3.0	0.57
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U	3.0	0.60
107-13-1	Acrylonitrile	60	U	60	1.6
123-91-1	1,4-Dioxane	600	U	600	100

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		64-135
2037-26-5	Toluene-d8 (Surr)	94		71-118
460-00-4	4-Bromofluorobenzene (Surr)	88		70-118
1868-53-7	Dibromofluoromethane (Surr)	117		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D
Lims ID: 180-40541-E-6 Lab Sample ID: 180-40541-6
Client ID: HD-MW-39D-0/1-0
Sample Type: Client
Inject. Date: 22-Jan-2015 19:28:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 3.0000
Sample Info: 180-40541-E-6, 3x
Misc. Info.: 180-0005379-024
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:16:26 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:16:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.291	4.302	-0.011	88	162494	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.277	-0.005	100	427430	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	98	100826	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	98	139479	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.526	0.010	91	106711	58.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.897	0.010	91	170405	57.0	
$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	95	394086	47.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	83	141172	44.2	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.914				ND	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.397	3.381	0.016	74	9220	3.96	
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.666				ND	
31 Methylene Chloride	84		4.141				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96	4.583	4.561	0.022	32	3001	1.27	M
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.179	5.175	0.004	30	13697	2.50	
45 cis-1,2-Dichloroethene	96	5.939	5.936	0.003	87	360133	141.3	
46 2-Butanone (MEK)	43		5.978				ND	
49 Chlorobromomethane	128		6.228				ND	
52 Chloroform	83	6.335	6.337	-0.002	36	2986	0.7202	M
53 1,1,1-Trichloroethane	97	6.530	6.532	-0.002	52	30229	11.2	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.667	7.663	0.004	94	426984	188.7	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.535	9.531	0.004	92	166085	84.1	
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

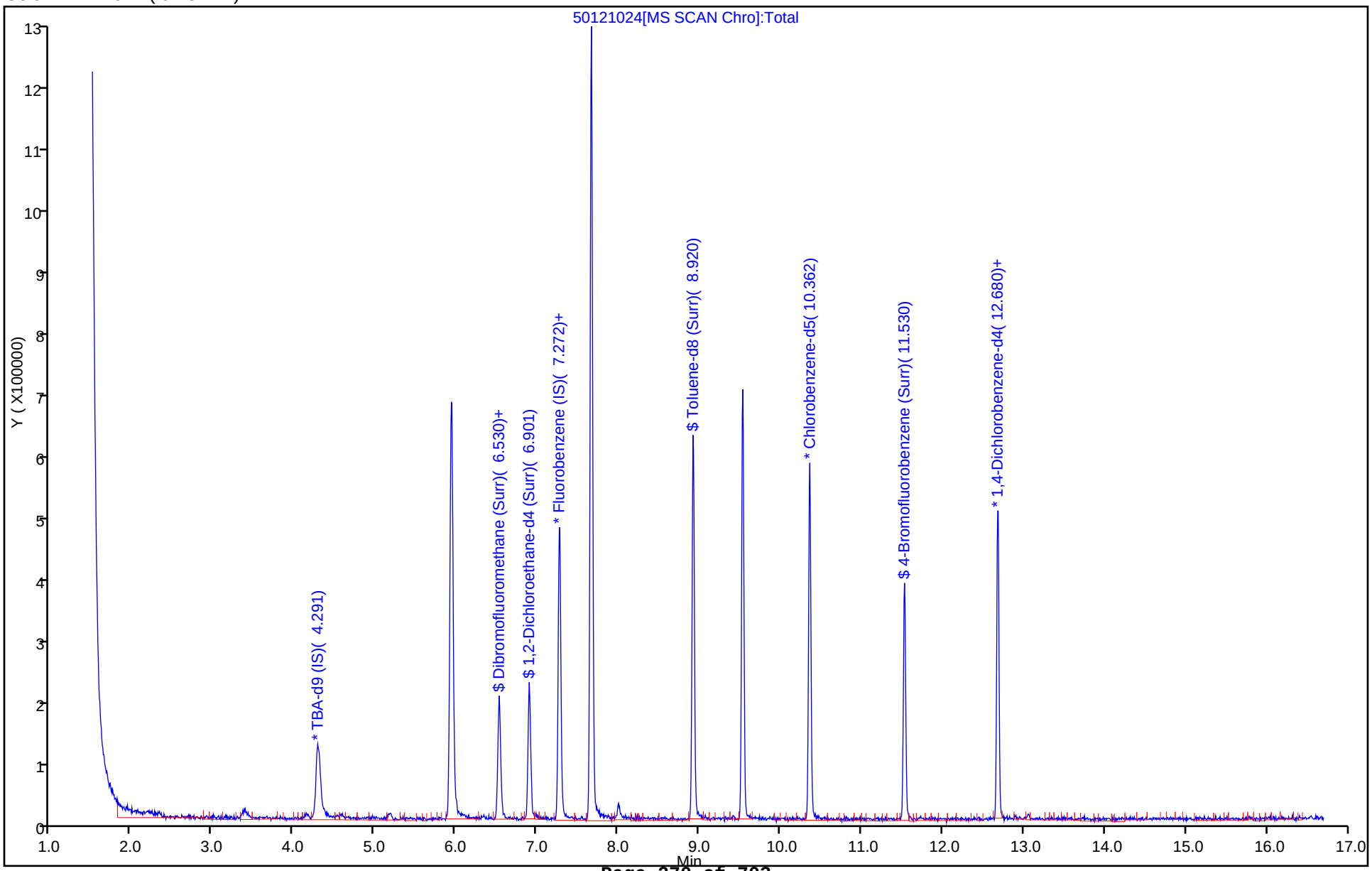
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:16:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6	Worklist Smp#:	24
Client ID:	HD-MW-39D-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	3.0000	ALS Bottle#:	23
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

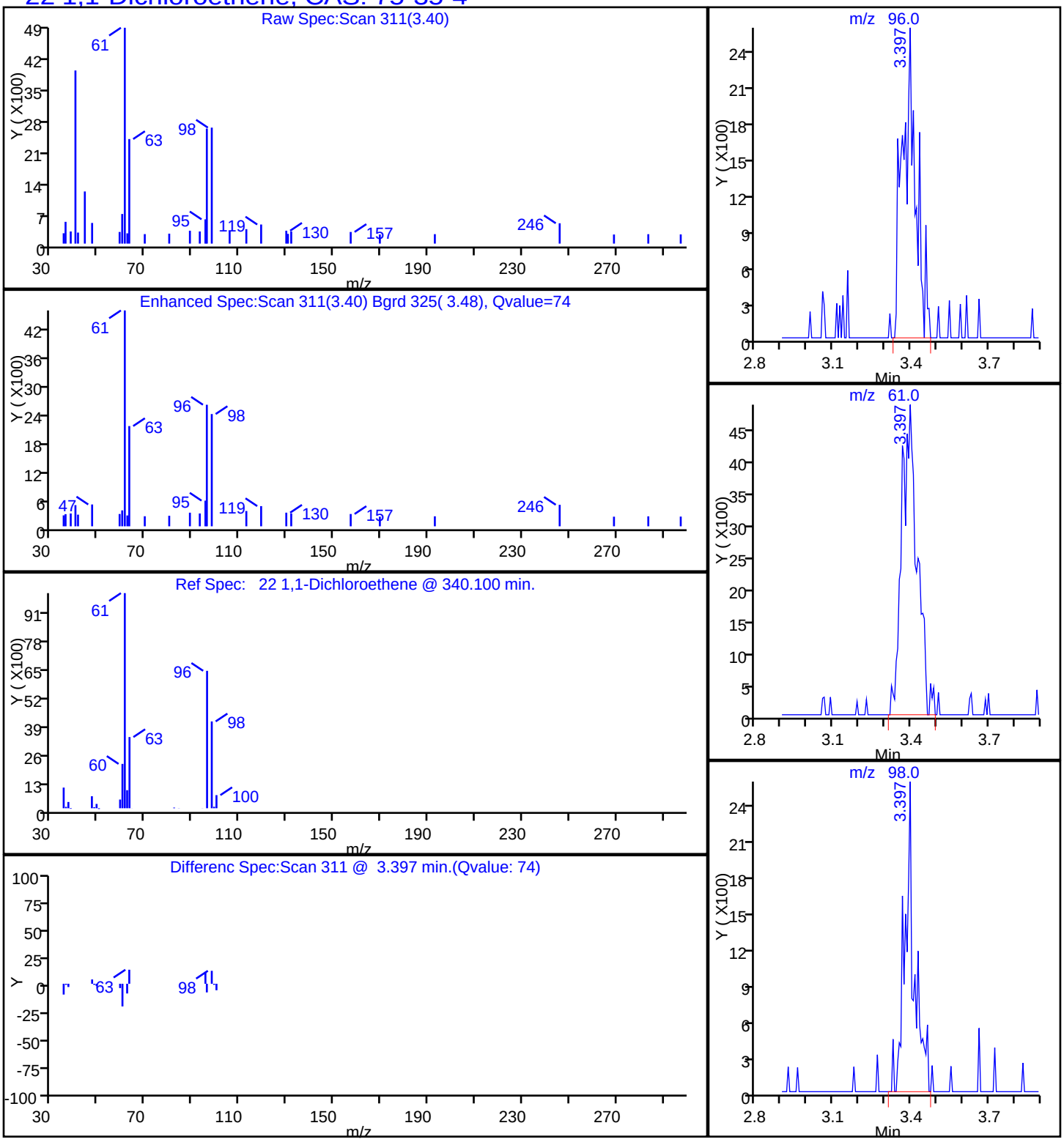


Report Date: 23-Jan-2015 08:16:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
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

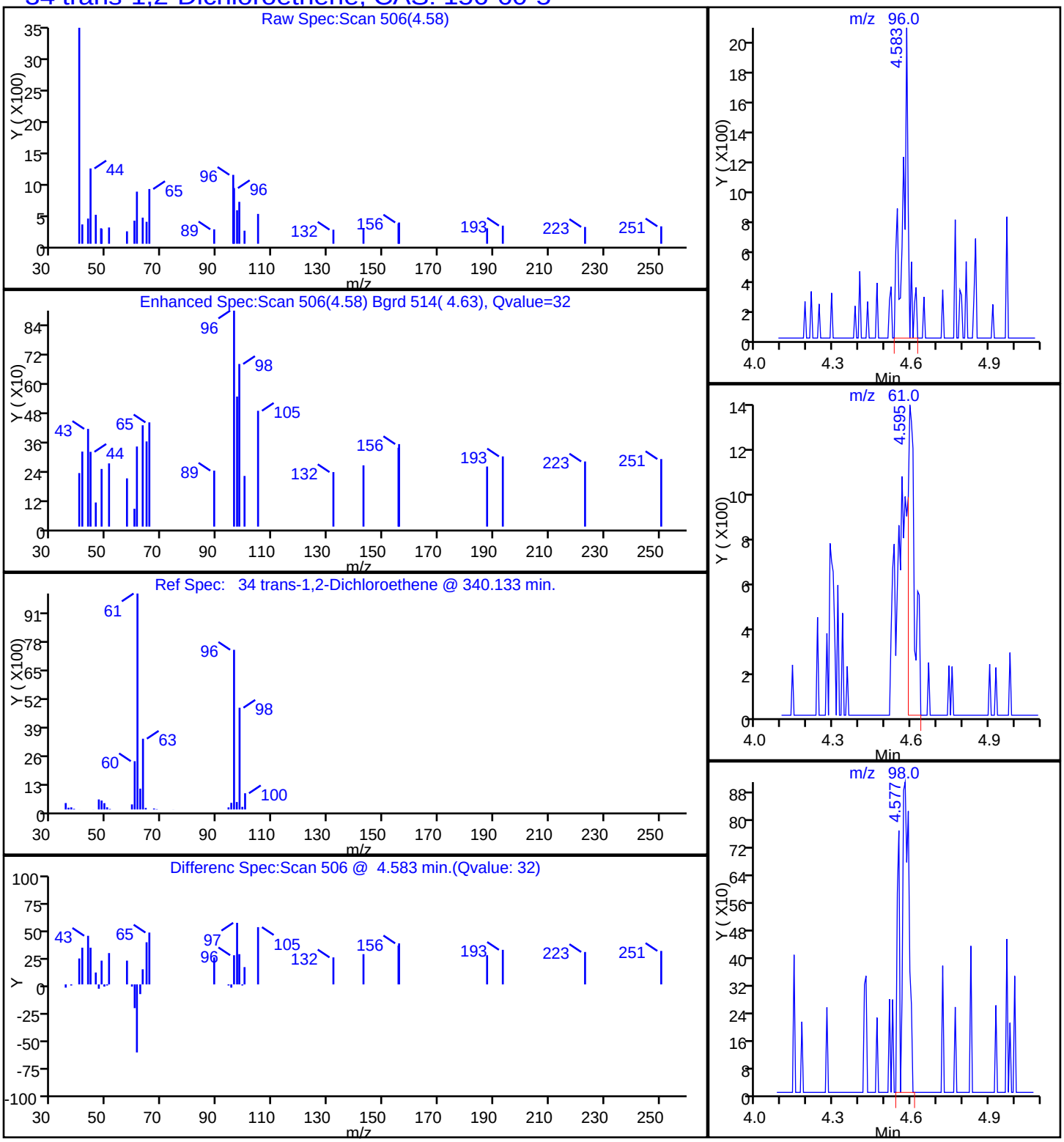


Report Date: 23-Jan-2015 08:16:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

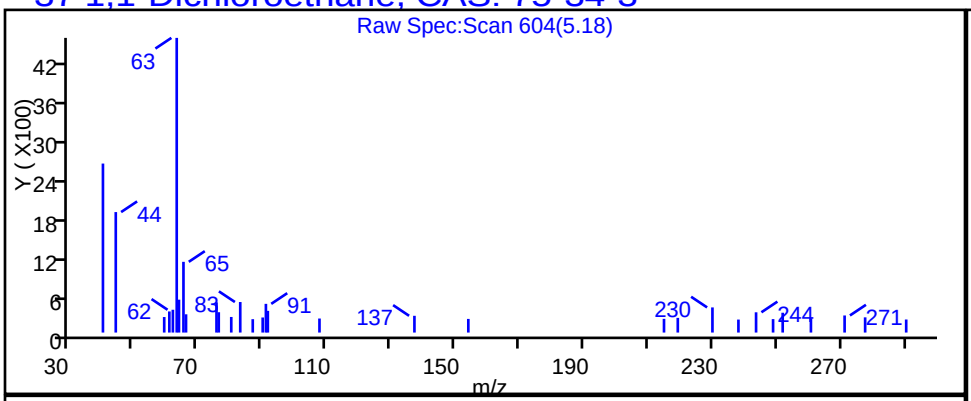


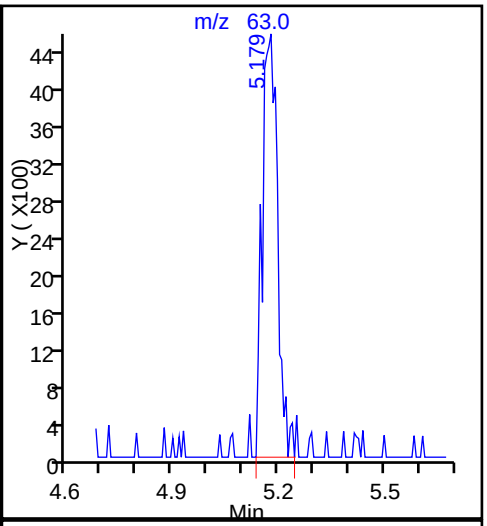
Report Date: 23-Jan-2015 08:16:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

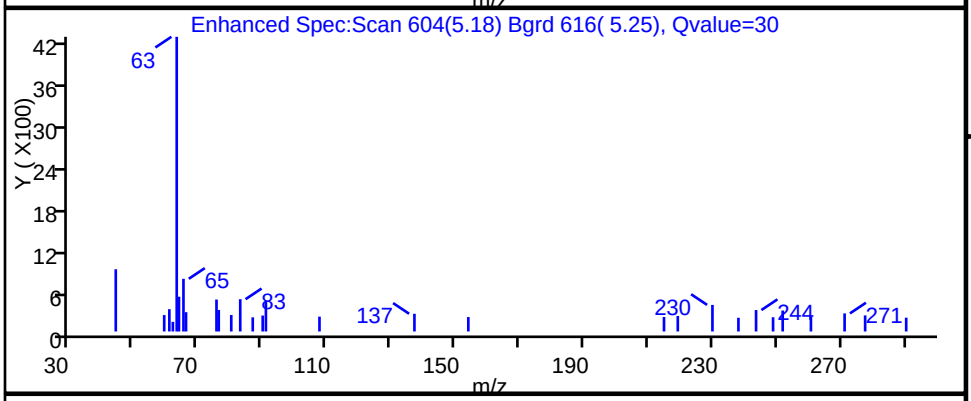
TestAmerica Pittsburgh

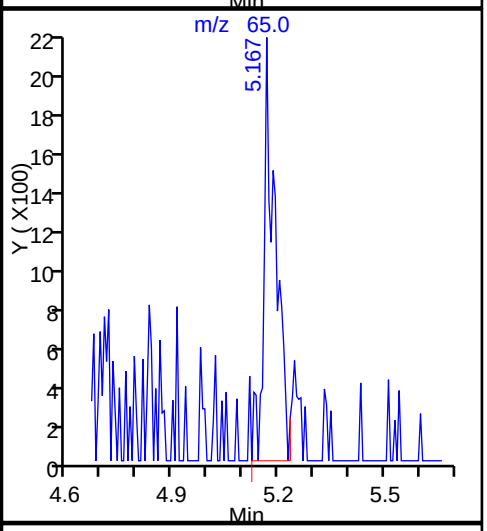
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

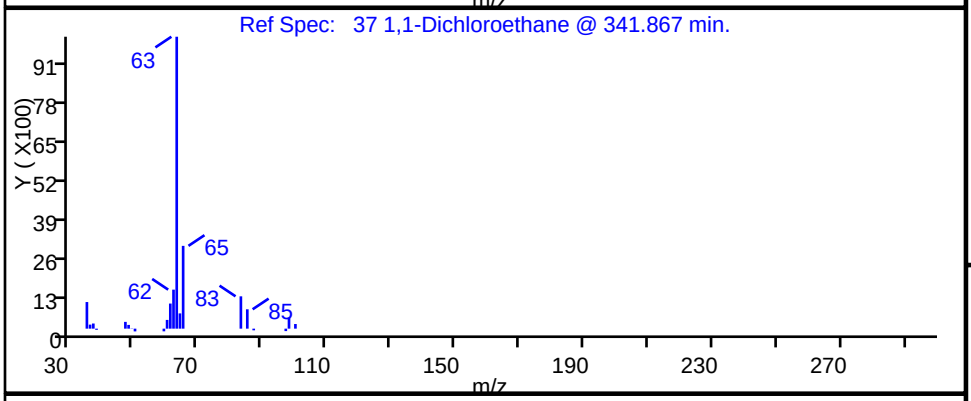
37 1,1-Dichloroethane, CAS: 75-34-3

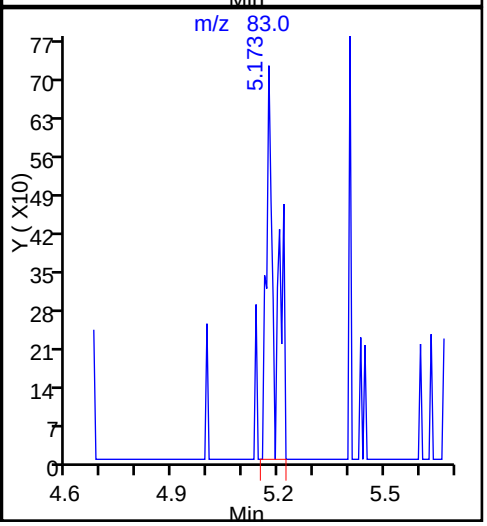


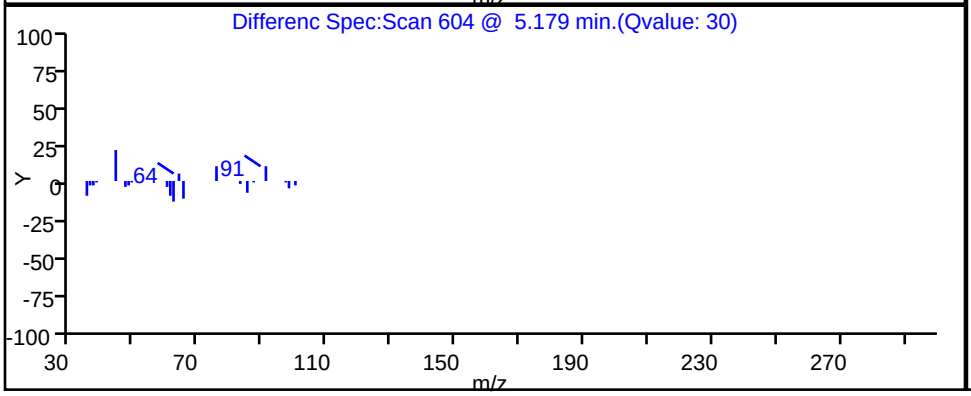










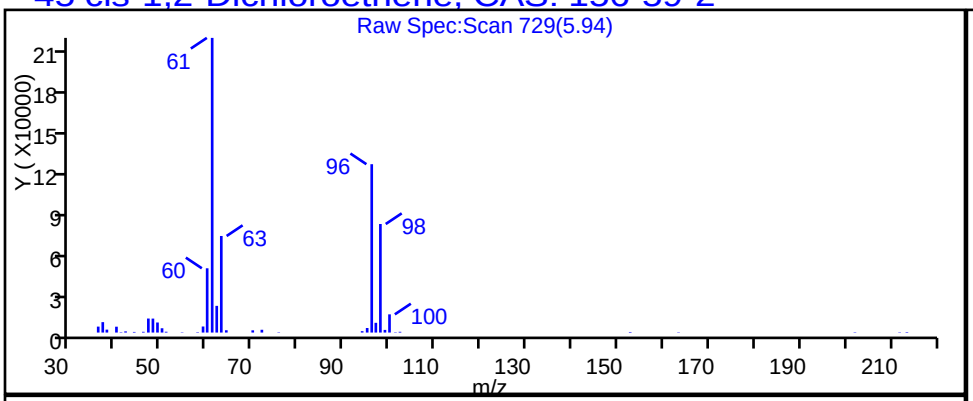


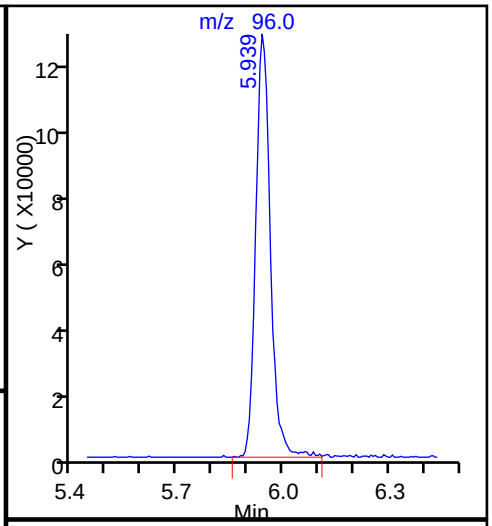
Report Date: 23-Jan-2015 08:16:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

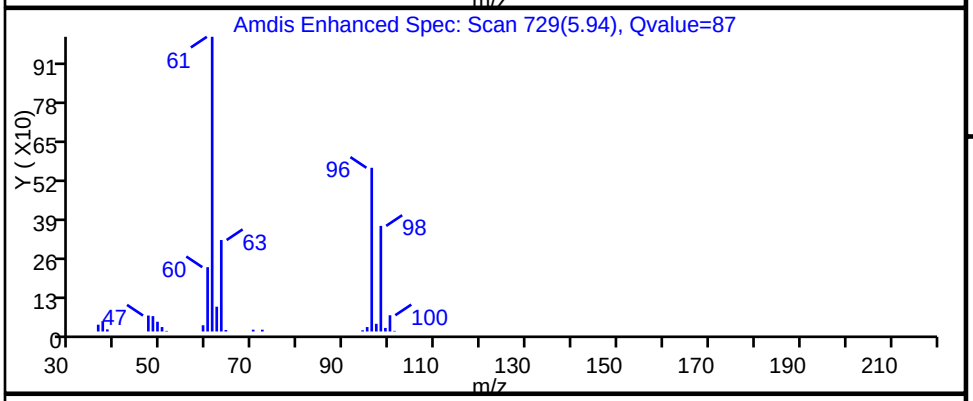
TestAmerica Pittsburgh

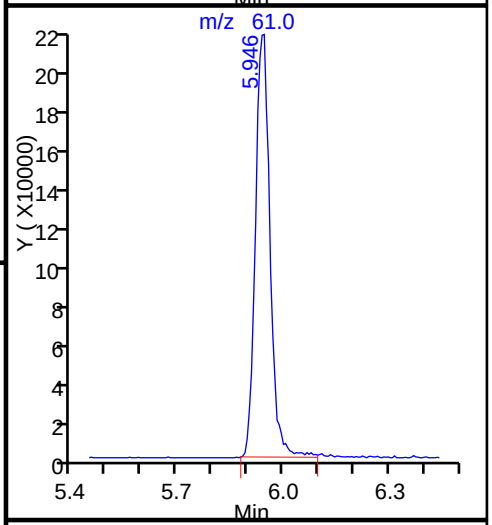
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

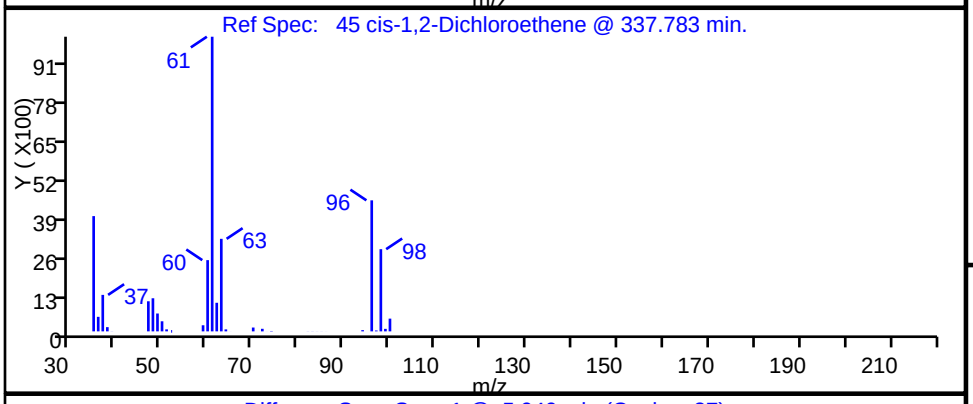
45 cis-1,2-Dichloroethene, CAS: 156-59-2

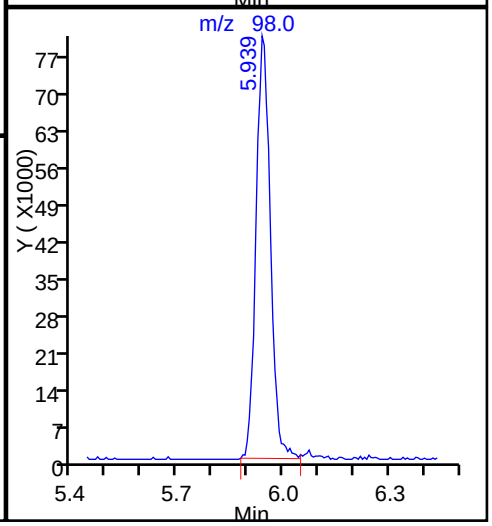


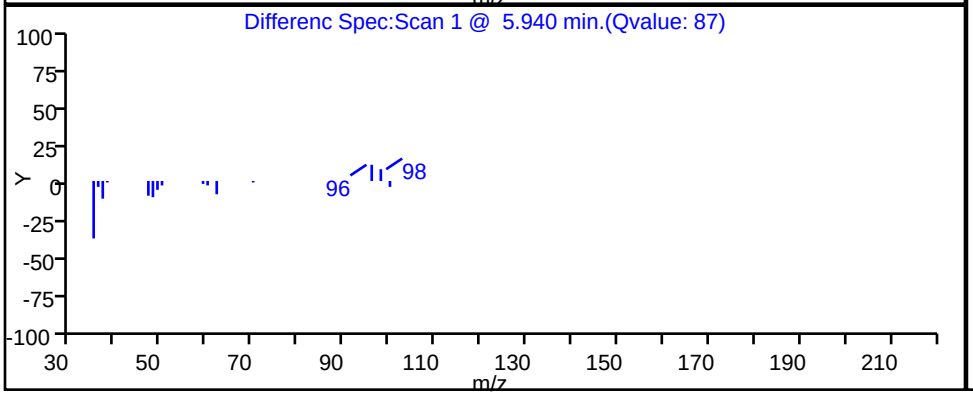










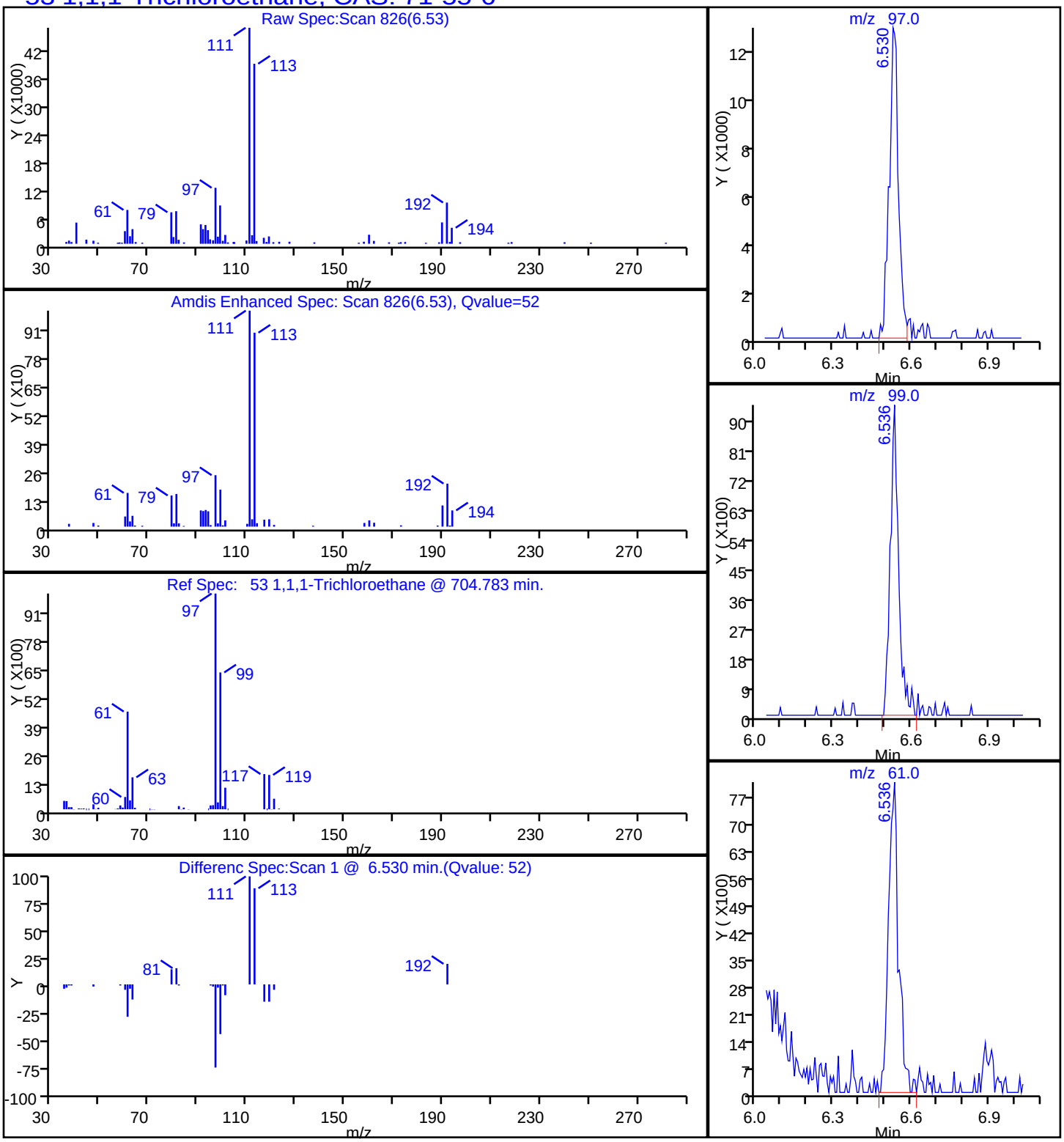


Report Date: 23-Jan-2015 08:16:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
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: 23-Jan-2015 08:16:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D

Injection Date: 22-Jan-2015 19:28:30 Instrument ID: CHHP5

Lims ID: 180-40541-E-6 Lab Sample ID: 180-40541-6

Client ID: HD-MW-39D-0/1-0

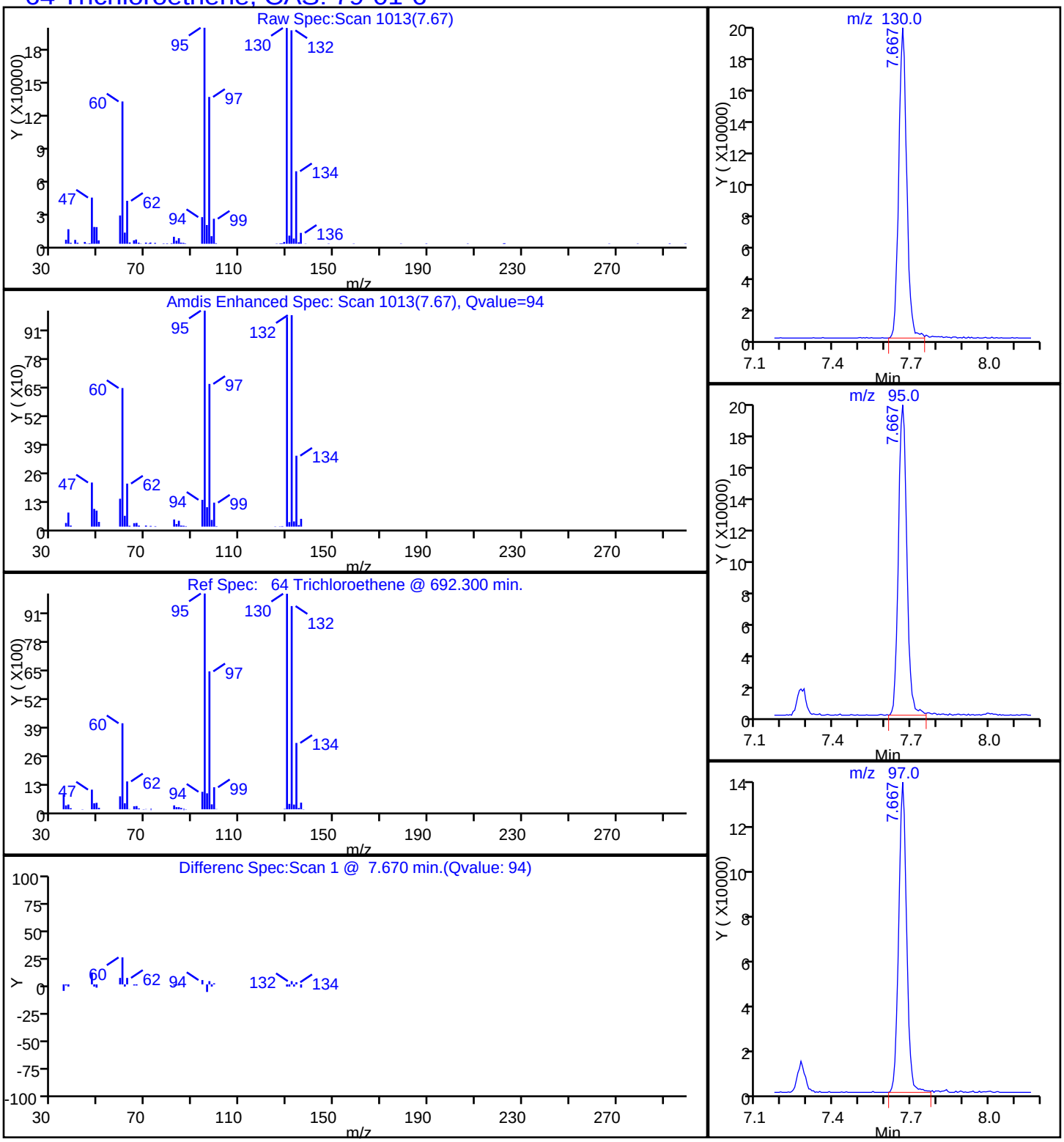
Operator ID: 001562 ALS Bottle#: 23 Worklist Smp#: 24

Purge Vol: 5.000 mL Dil. Factor: 3.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

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

64 Trichloroethene, CAS: 79-01-6

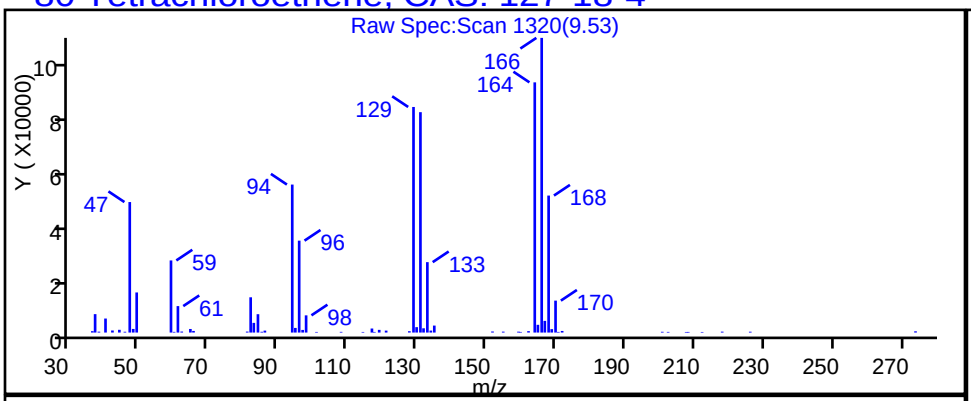


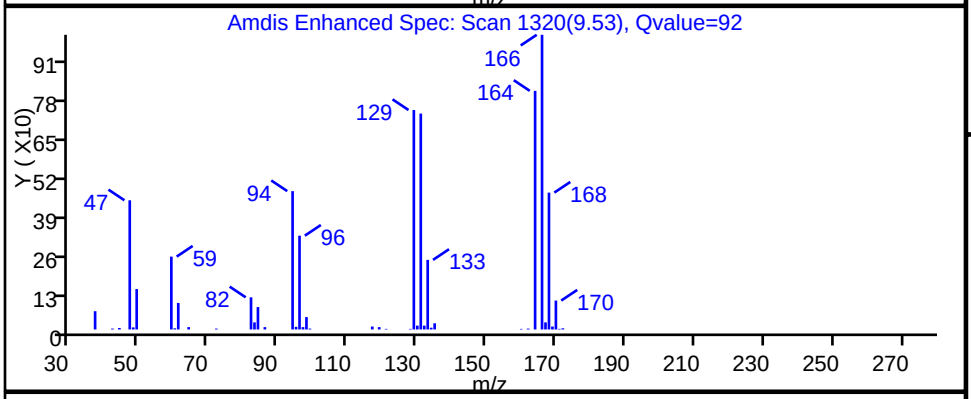
Report Date: 23-Jan-2015 08:16:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

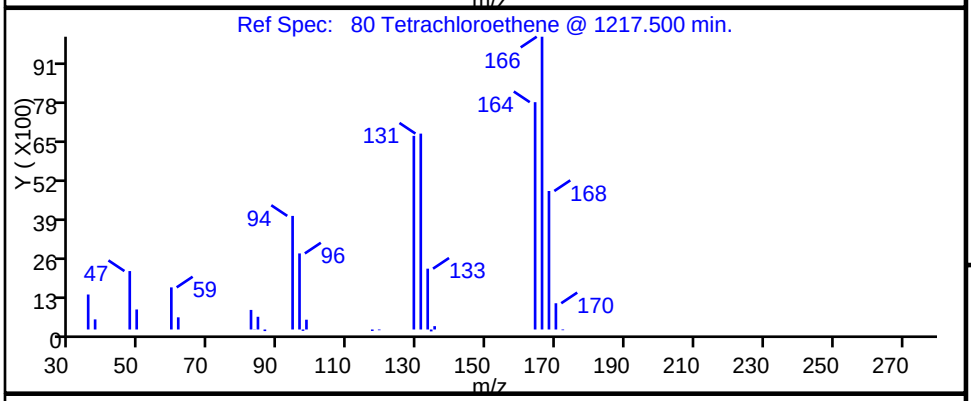
TestAmerica Pittsburgh

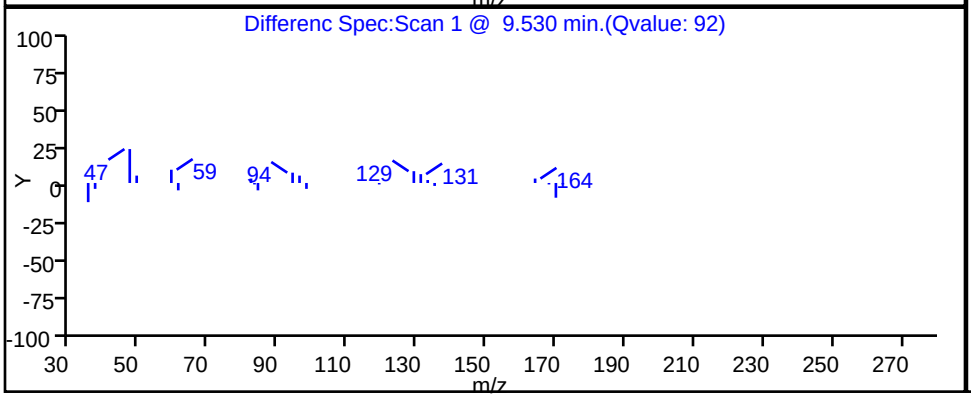
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D		
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6
Client ID:	HD-MW-39D-0/1-0		
Operator ID:	001562	ALS Bottle#:	23 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

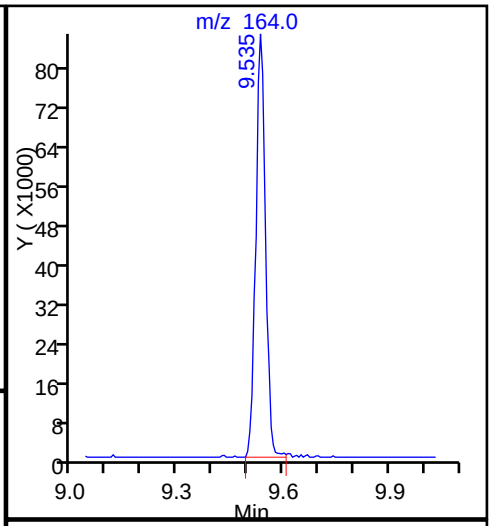
80 Tetrachloroethene, CAS: 127-18-4

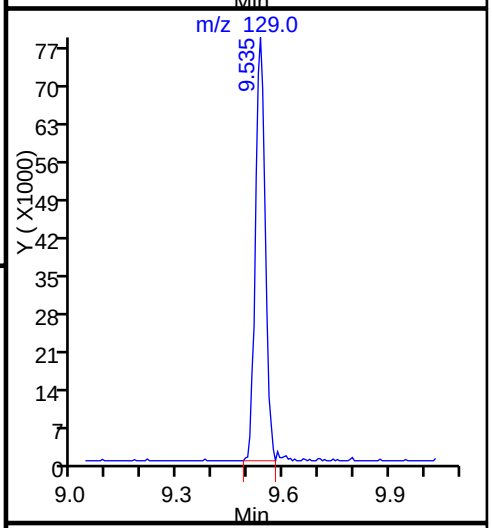


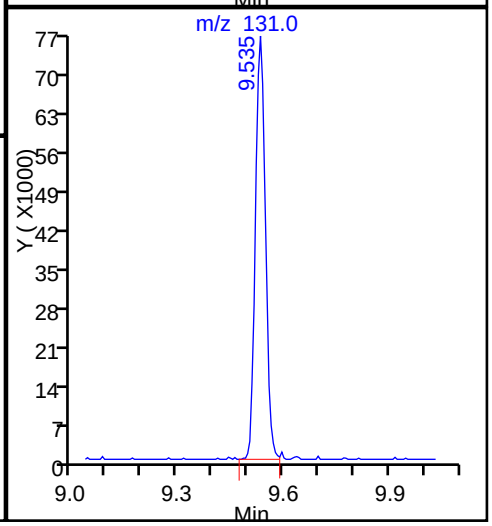












Manual Integration/User Assign Peak Report

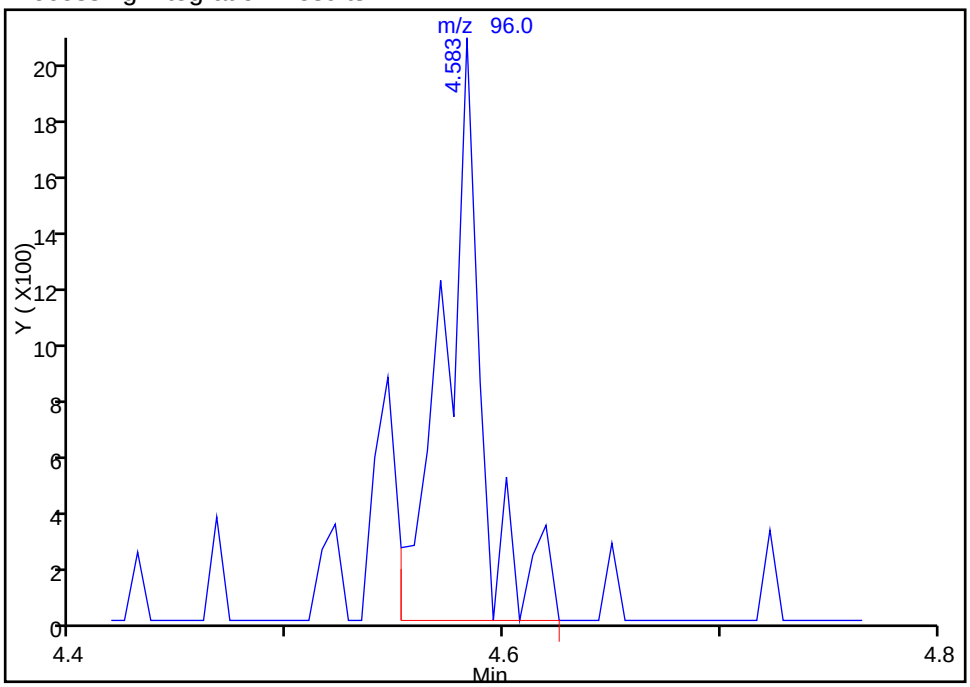
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

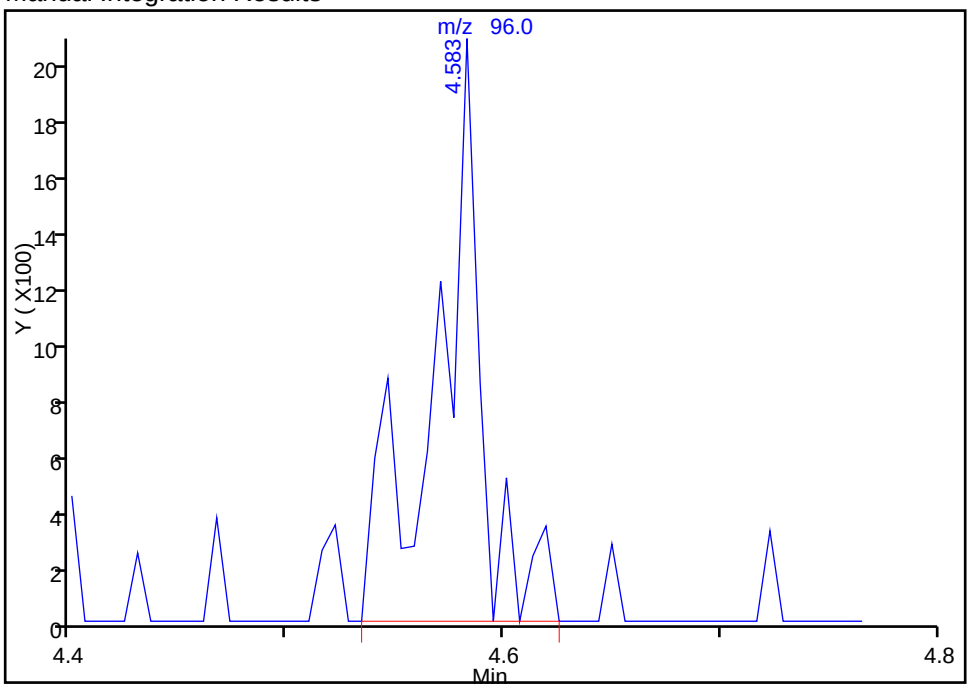
Processing Integration Results

RT: 4.58
Area: 2492
Amount: 1.057185
Amount Units: ng



Manual Integration Results

RT: 4.58
Area: 3001
Amount: 1.273118
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 08:16:26
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

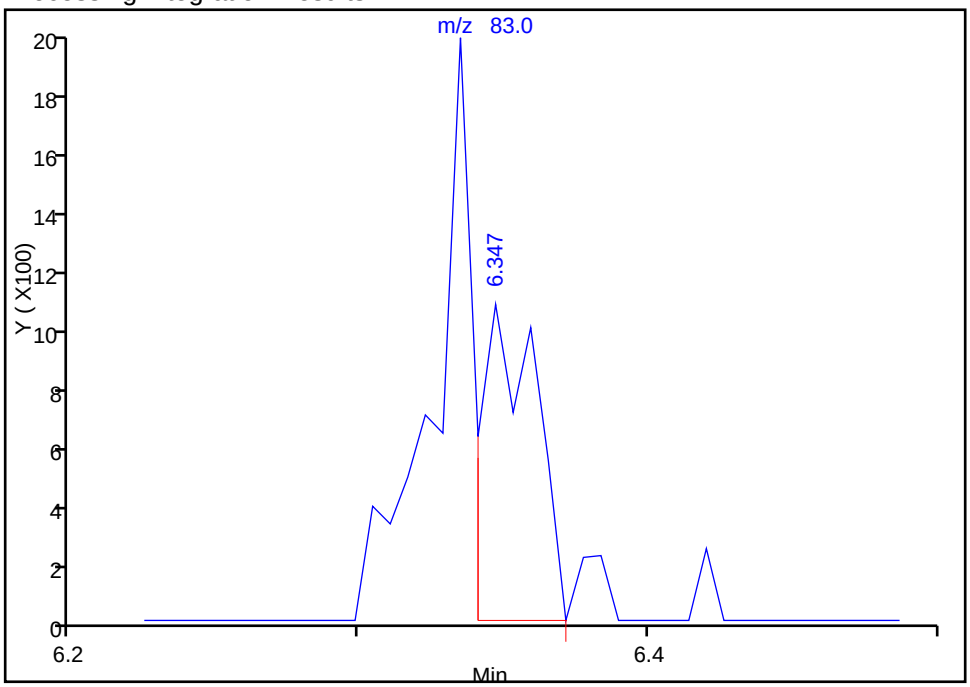
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121024.D				
Injection Date:	22-Jan-2015 19:28:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-6	Lab Sample ID:	180-40541-6		
Client ID:	HD-MW-39D-0/1-0				
Operator ID:	001562	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	3.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

52 Chloroform, CAS: 67-66-3

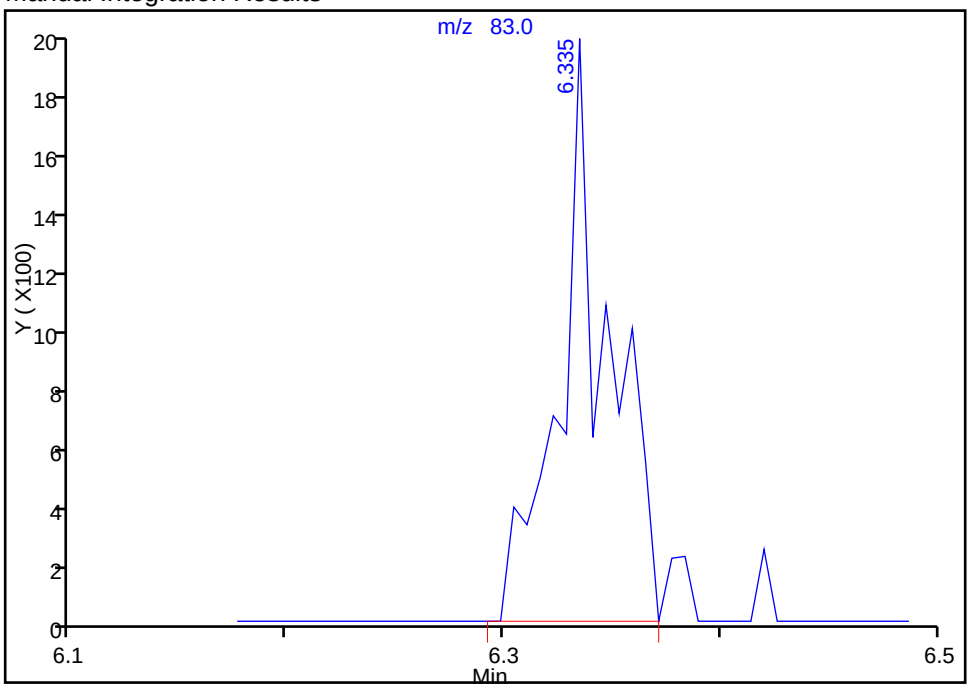
Processing Integration Results

RT: 6.35
Area: 1392
Amount: 0.335756
Amount Units: ng



Manual Integration Results

RT: 6.33
Area: 2986
Amount: 0.720236
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 08:16:26
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-127-0/1-0 | Lab Sample ID: 180-40541-7

Matrix: Water | Lab File ID: 50121025.D

Analysis Method: 8260C | Date Collected: 01/16/2015 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 19:52

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.: 131443 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13	U	13	3.5
75-01-4	Vinyl chloride	13	U	13	2.8
74-83-9	Bromomethane	13	U	13	3.9
75-00-3	Chloroethane	13	U	13	2.7
75-35-4	1,1-Dichloroethene	5.3	J	13	3.7
67-64-1	Acetone	63	U	63	31
75-15-0	Carbon disulfide	13	U	13	2.7
75-09-2	Methylene Chloride	13	U	13	1.6
156-60-5	trans-1,2-Dichloroethene	13	U	13	2.1
1634-04-4	Methyl tert-butyl ether	13	U	13	2.3
75-34-3	1,1-Dichloroethane	3.1	J	13	1.5
156-59-2	cis-1,2-Dichloroethene	310		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	7.9	J	13	3.6
56-23-5	Carbon tetrachloride	13	U	13	1.7
71-43-2	Benzene	13	U	13	1.3
107-06-2	1,2-Dichloroethane	13	U	13	2.6
79-01-6	Trichloroethene	110		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	18		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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-40541-7

Matrix: Water Lab File ID: 50121025.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:20

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 19:52

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.: 131443 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)	117		64-135
2037-26-5	Toluene-d8 (Surr)	101		71-118
460-00-4	4-Bromofluorobenzene (Surr)	94		70-118
1868-53-7	Dibromofluoromethane (Surr)	117		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D
Lims ID: 180-40541-D-7 Lab Sample ID: 180-40541-7
Client ID: HD-MW-127-0/1-0
Sample Type: Client
Inject. Date: 22-Jan-2015 19:52:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 12.5000
Sample Info: 180-40541-D-7, 12.5x
Misc. Info.: 180-0005379-025
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 08:19:39 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 08:19:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.299	4.302	-0.003	87	165923	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.277	-0.003	100	410308	50.0	
* 3 Chlorobenzene-d5	119	10.358	10.367	-0.009	99	90917	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.685	-0.003	99	134458	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.526	0.006	92	102550	58.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.897	0.006	92	167444	58.4	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	95	383239	50.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.532	0.001	82	135400	47.0	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.914				ND	
15 Bromomethane	94		2.261				ND	
16 Chloroethane	64		2.401				ND	
22 1,1-Dichloroethene	96	3.387	3.381	0.006	8	4772	2.14	M
24 Acetone	43		3.496				ND	
26 Carbon disulfide	76		3.666				ND	
31 Methylene Chloride	84		4.141				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96	4.579	4.561	0.018	37	1481	0.6545	M
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63	5.169	5.175	-0.006	6	6527	1.24	
45 cis-1,2-Dichloroethene	96	5.942	5.936	0.006	88	308200	126.0	
46 2-Butanone (MEK)	43		5.978				ND	
49 Chlorobromomethane	128		6.228				ND	
52 Chloroform	83	6.343	6.337	0.006	8	1705	0.4284	M
53 1,1,1-Trichloroethane	97	6.520	6.532	-0.012	11	8122	3.15	
56 Carbon tetrachloride	117		6.708				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.670	7.663	0.007	93	97782	45.0	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.397				ND	
80 Tetrachloroethene	164	9.537	9.531	0.006	85	12695	7.13	
82 2-Hexanone	43		9.653				ND	
84 Chlorodibromomethane	129		9.793				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.389				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.498				ND	
91 m-Xylene & p-Xylene	106		10.614				ND	
92 o-Xylene	106		11.009				ND	
93 Styrene	104		11.027				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

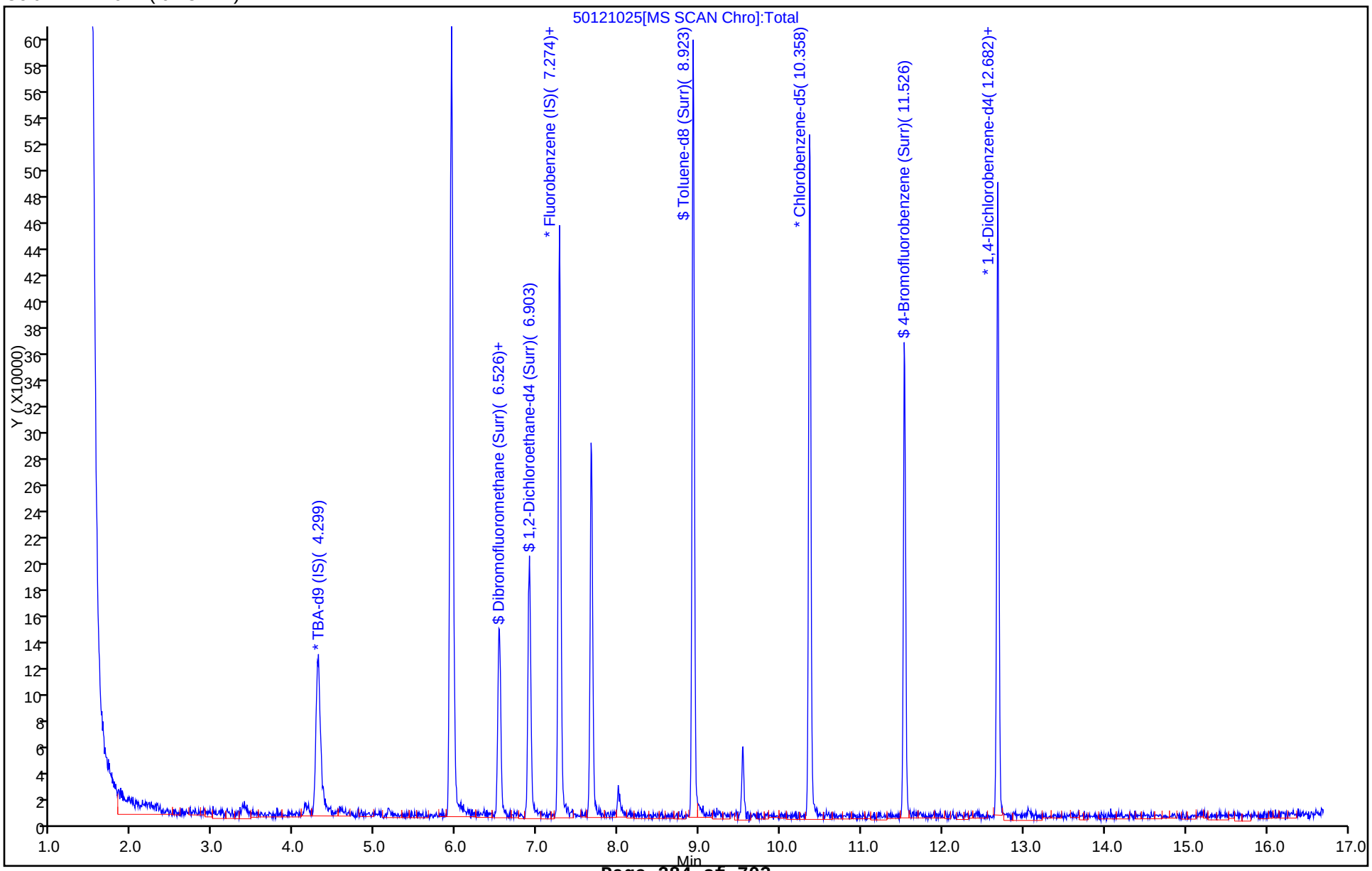
VOA8260INT_00027	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 23-Jan-2015 08:19:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D				
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7	Worklist Smp#:	25
Client ID:	HD-MW-127-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	12.5000	ALS Bottle#:	24
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



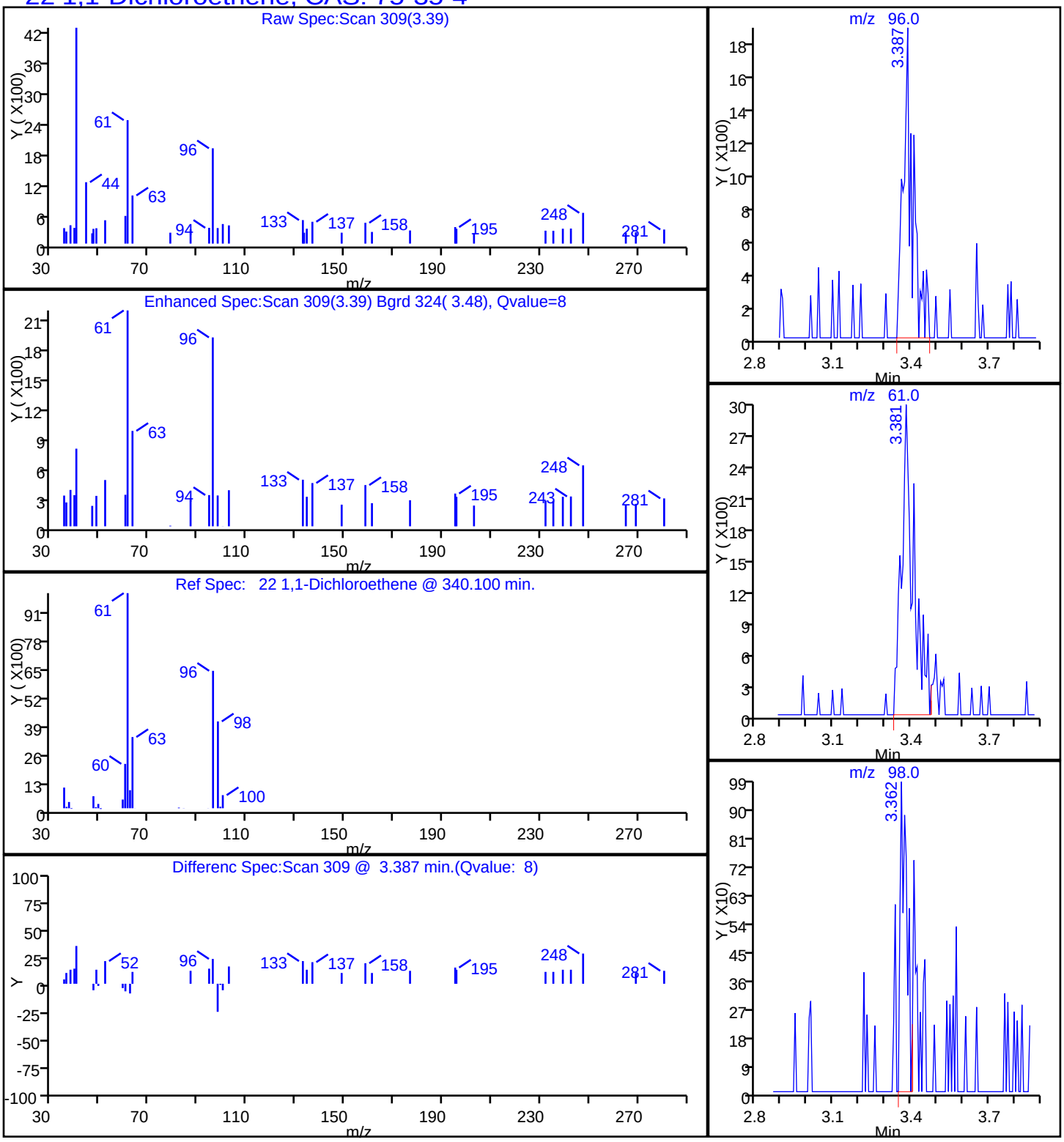
Report Date: 23-Jan-2015 08:19:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D

Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
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



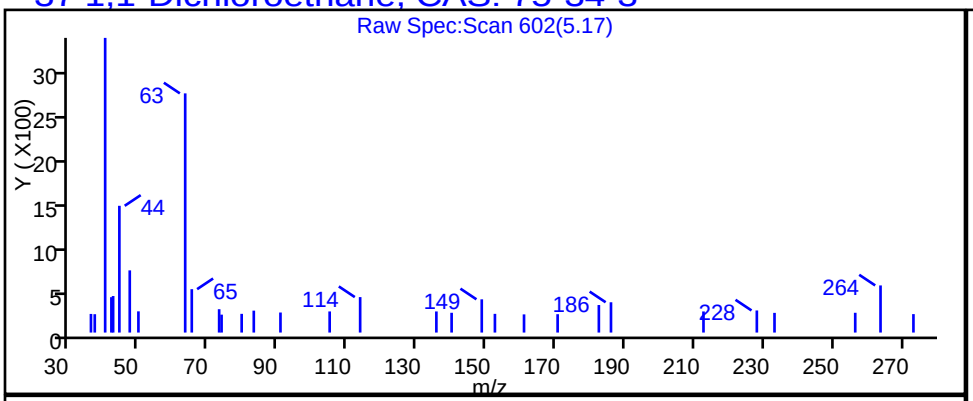
Report Date: 23-Jan-2015 08:19:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

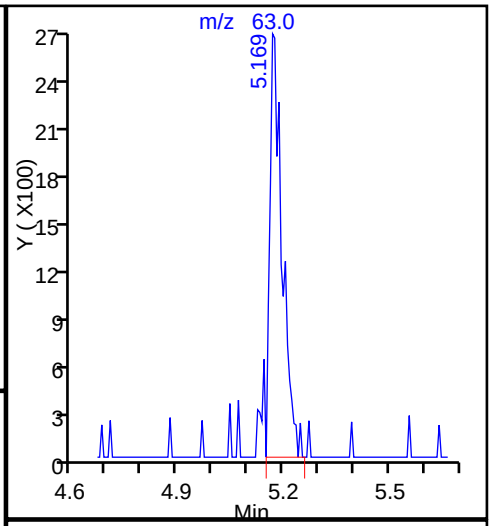
TestAmerica Pittsburgh

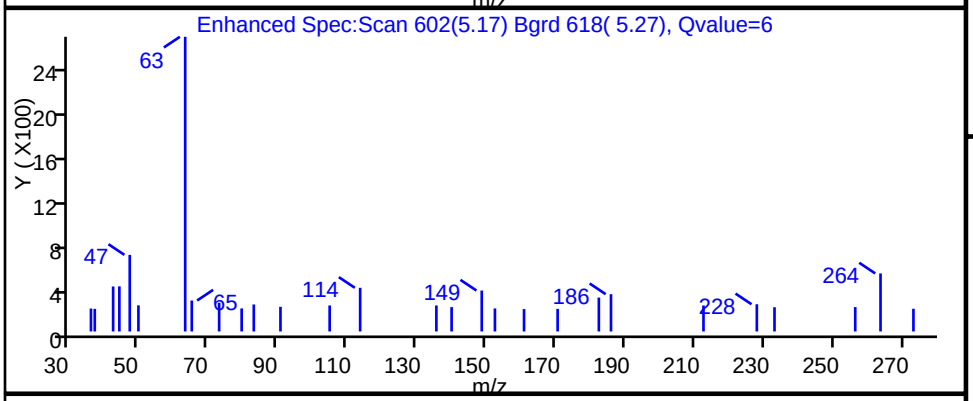
Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D

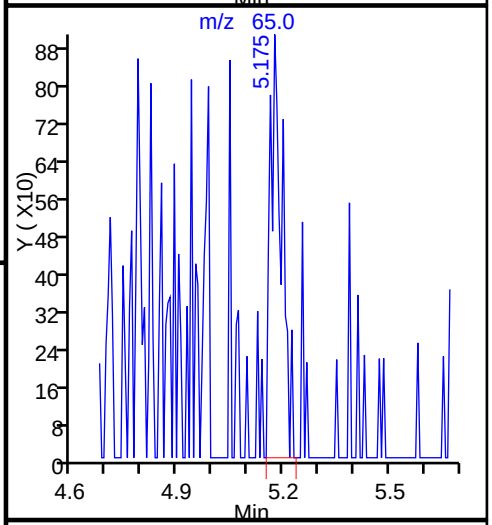
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

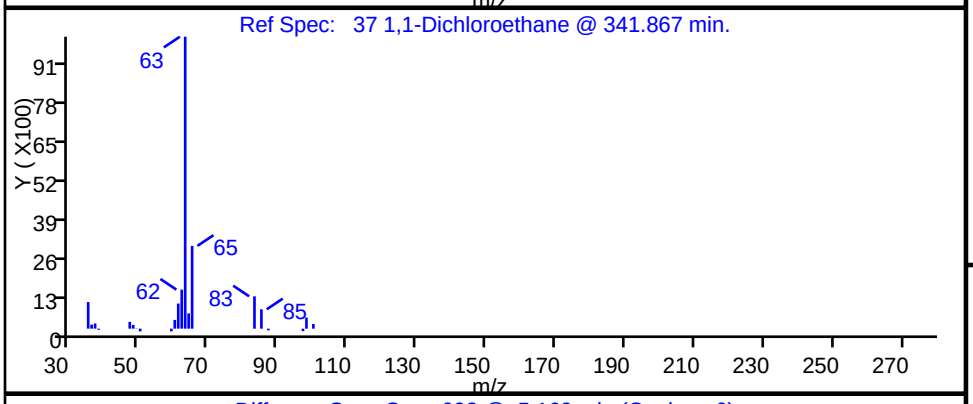
37 1,1-Dichloroethane, CAS: 75-34-3

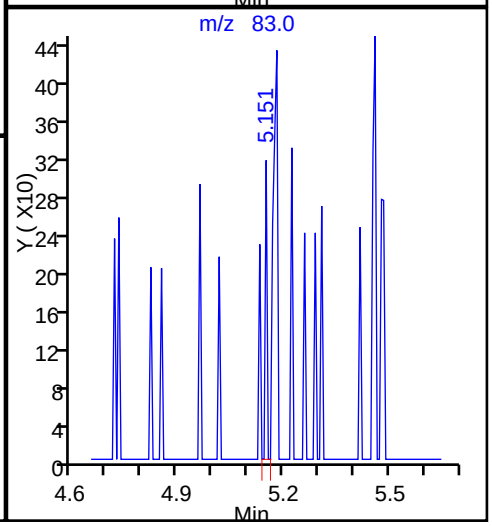


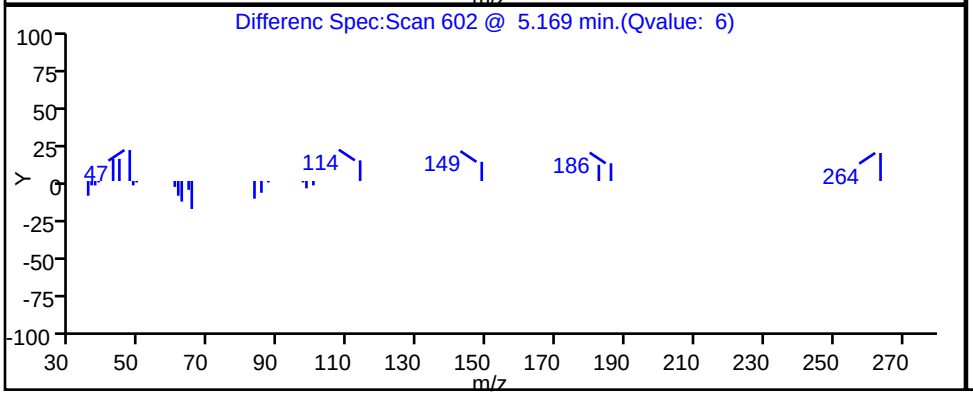












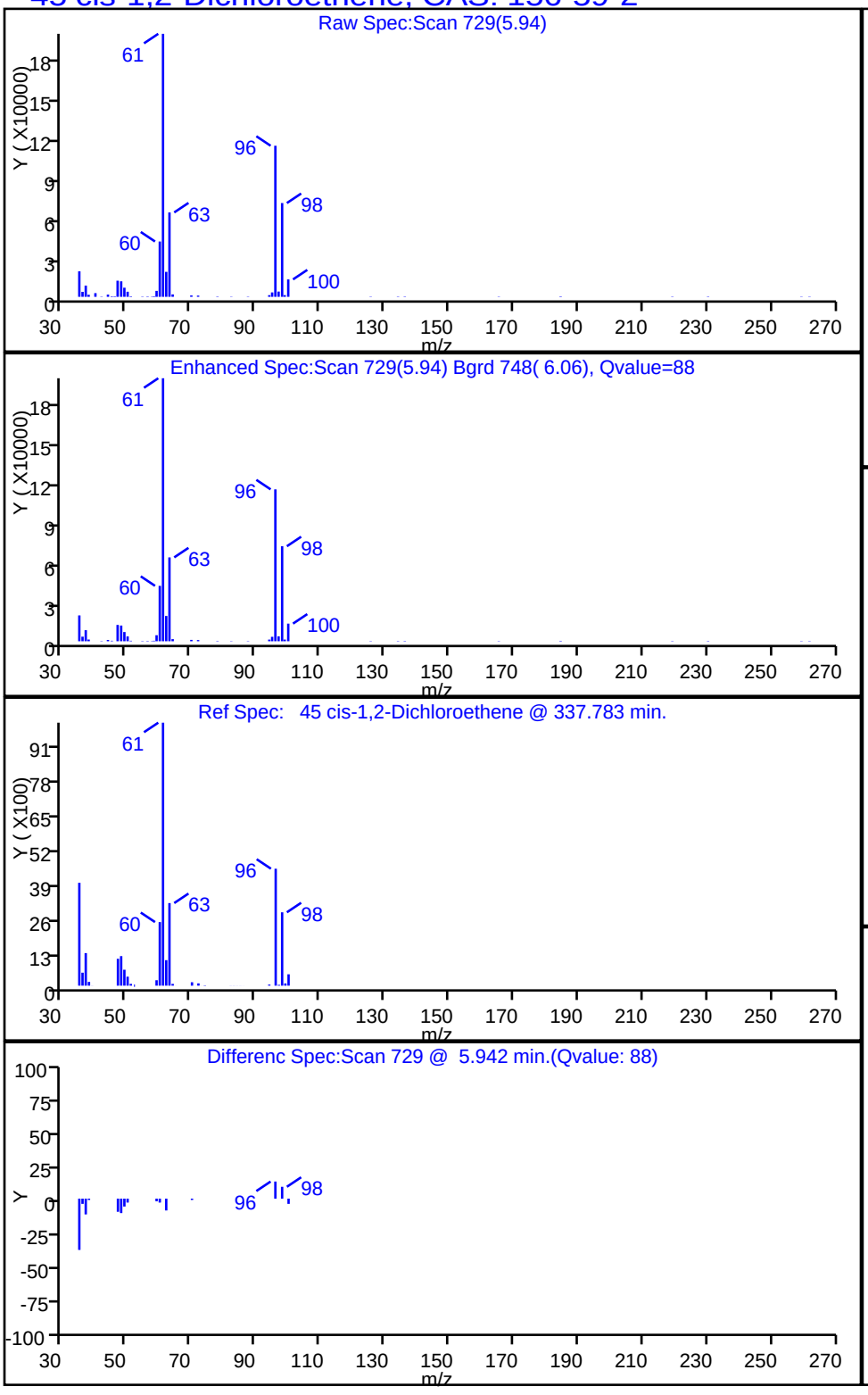
Report Date: 23-Jan-2015 08:19:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

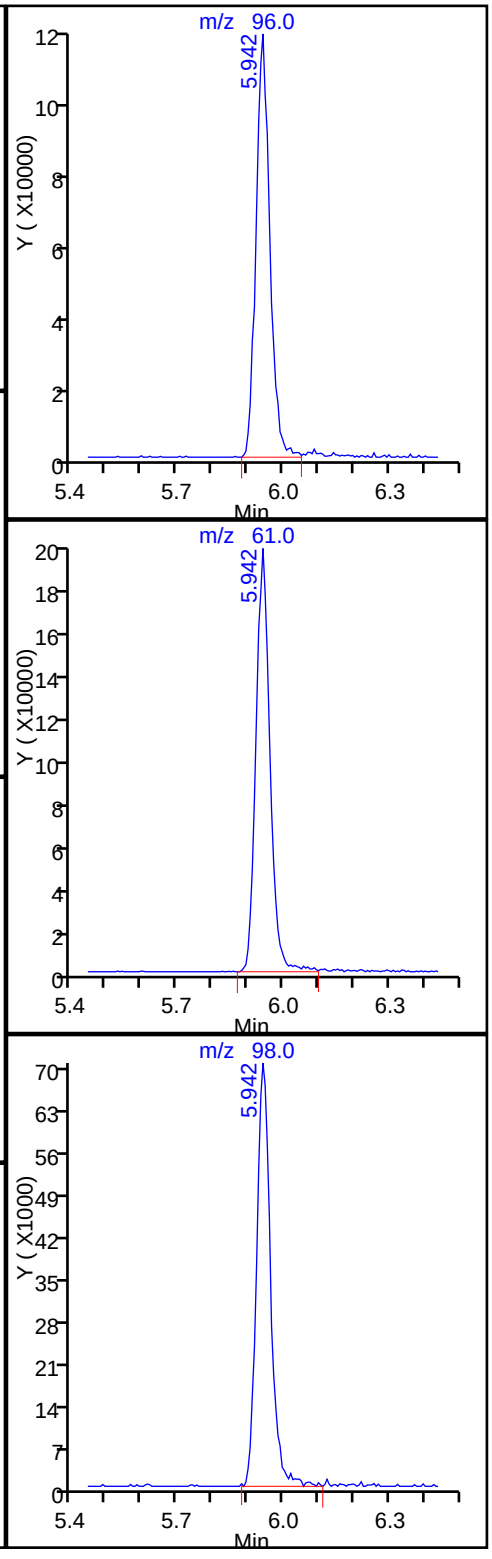
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D

Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
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



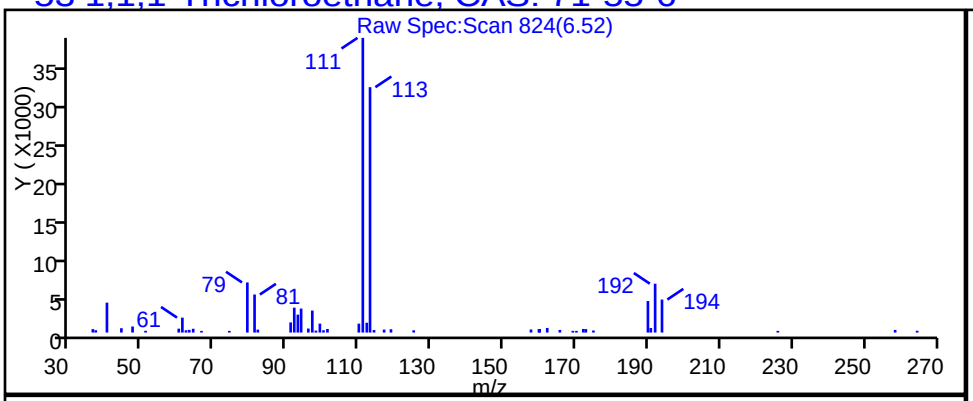


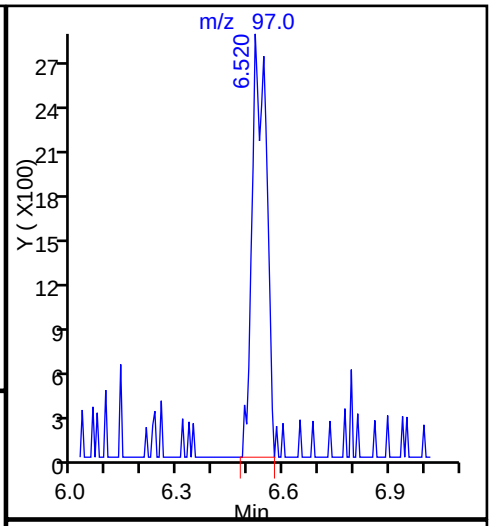
Report Date: 23-Jan-2015 08:19:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

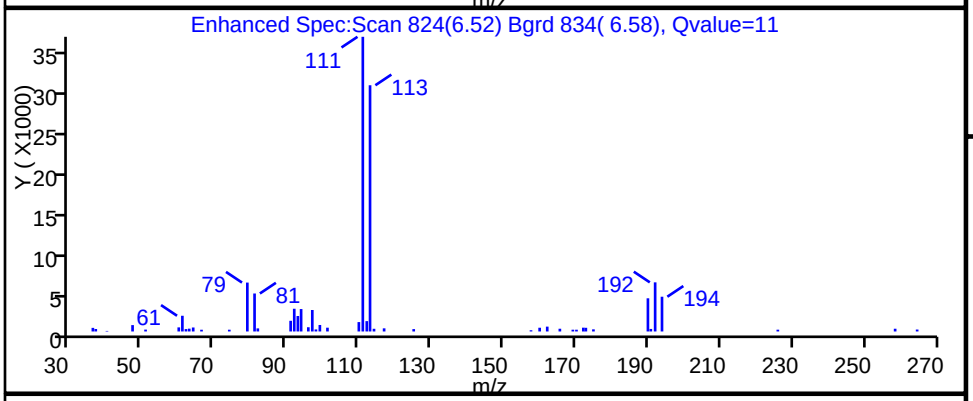
TestAmerica Pittsburgh

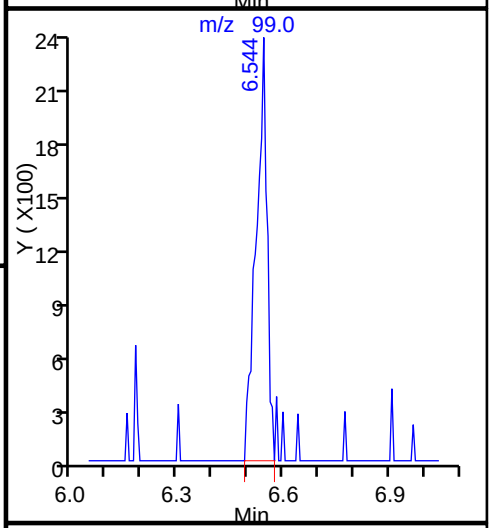
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D				
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	12.5000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

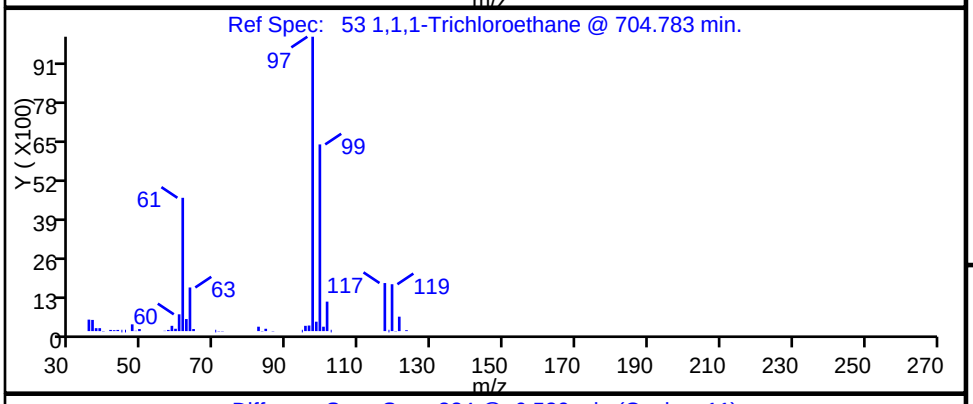
53 1,1,1-Trichloroethane, CAS: 71-55-6

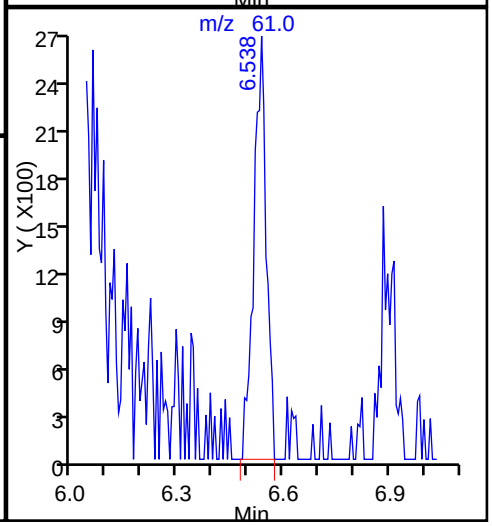


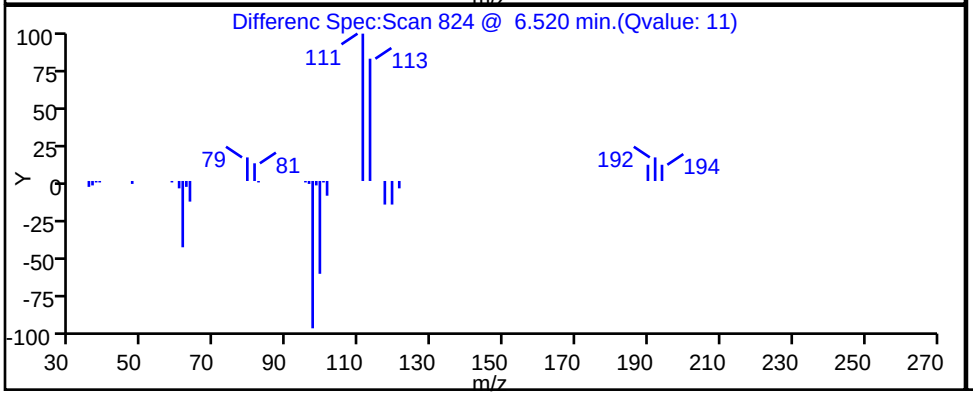










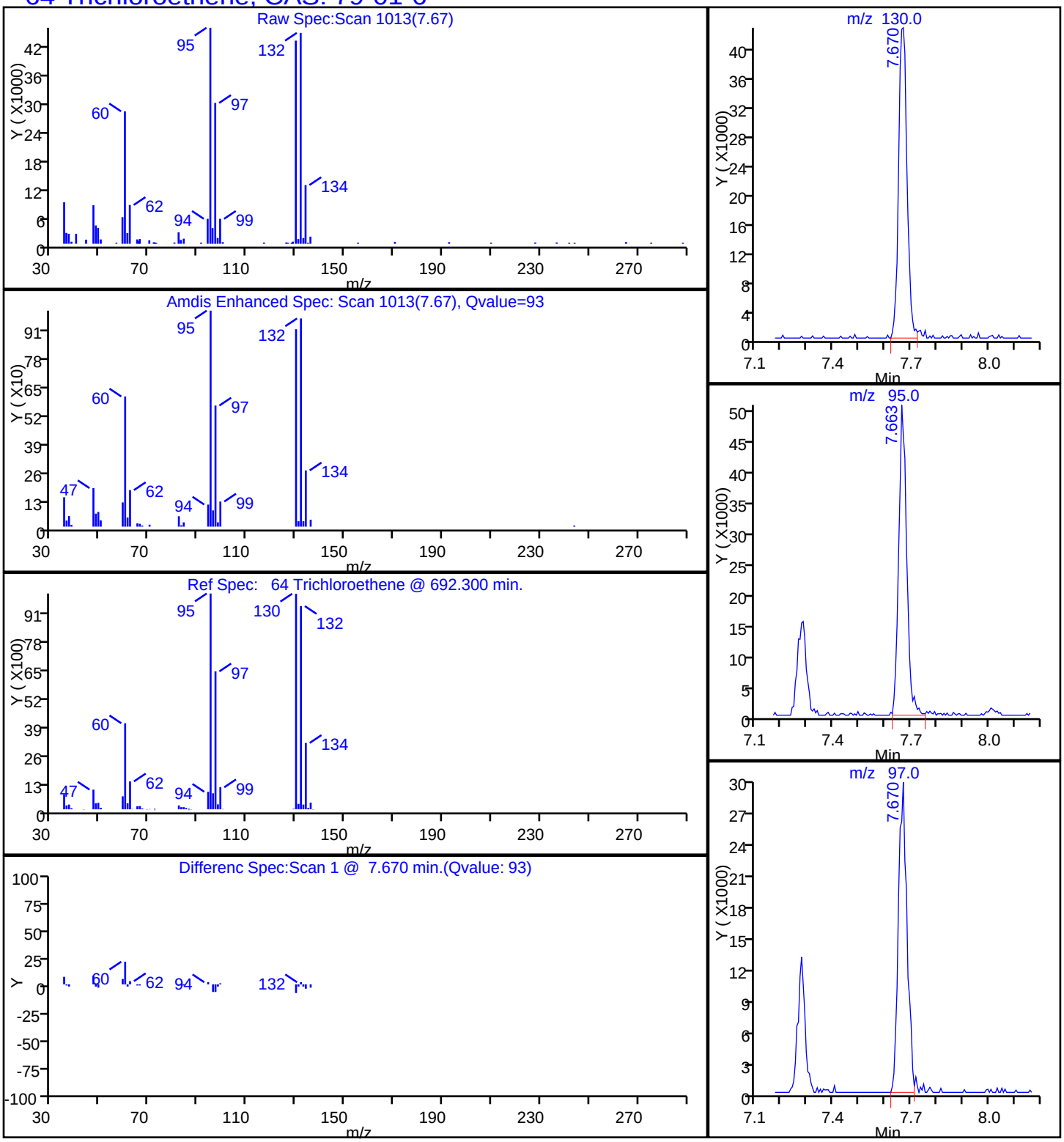


Report Date: 23-Jan-2015 08:19:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D		
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7
Client ID:	HD-MW-127-0/1-0		
Operator ID:	001562	ALS Bottle#:	24 Worklist Smp#: 25
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

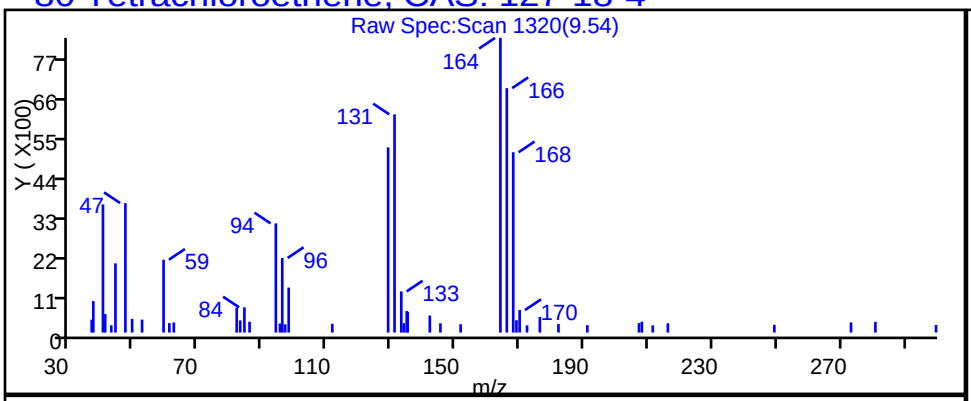


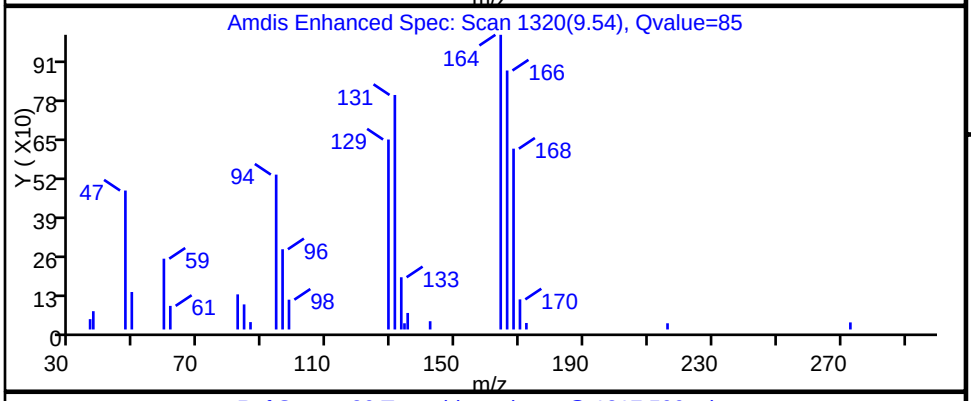
Report Date: 23-Jan-2015 08:19:40 Chrom Revision: 2.2 15-Jan-2015 13:05:58

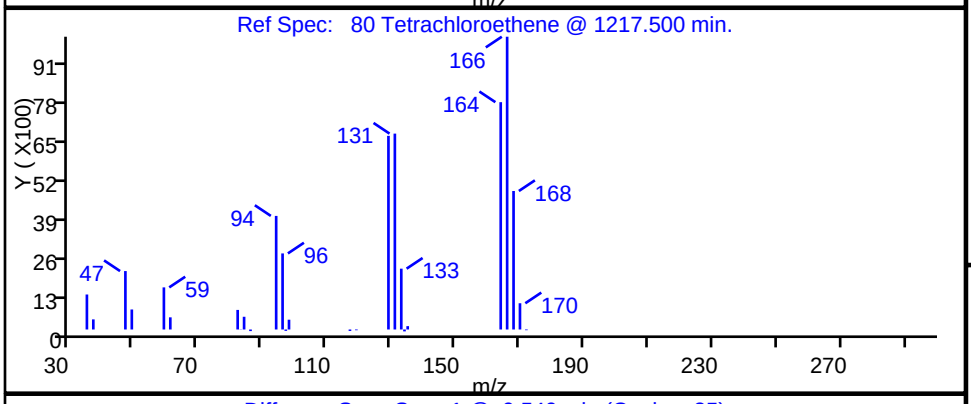
TestAmerica Pittsburgh

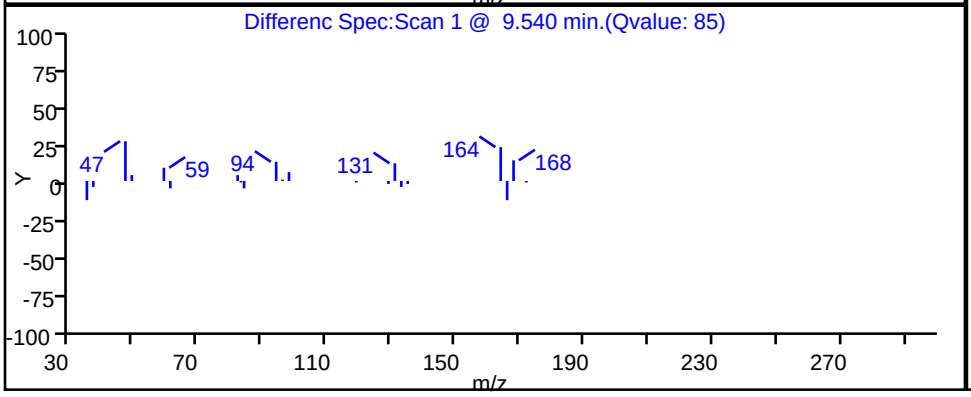
Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D		
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7
Client ID:	HD-MW-127-0/1-0		
Operator ID:	001562	ALS Bottle#:	24 Worklist Smp#: 25
Purge Vol:	5.000 mL	Dil. Factor:	12.5000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

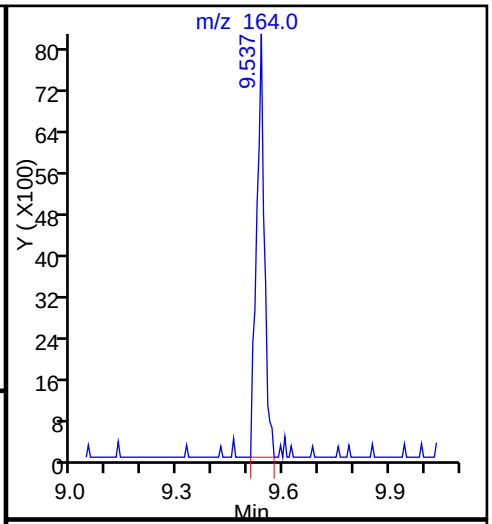
80 Tetrachloroethene, CAS: 127-18-4

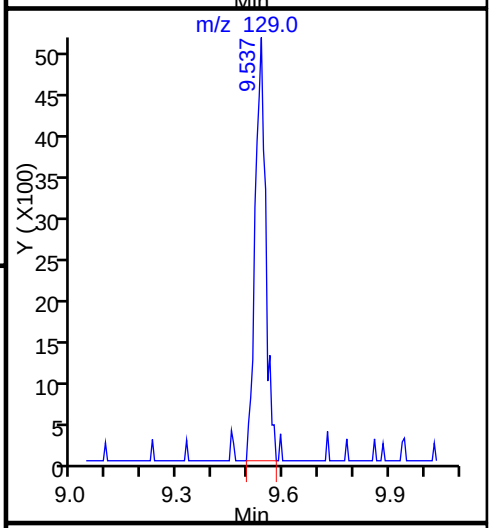


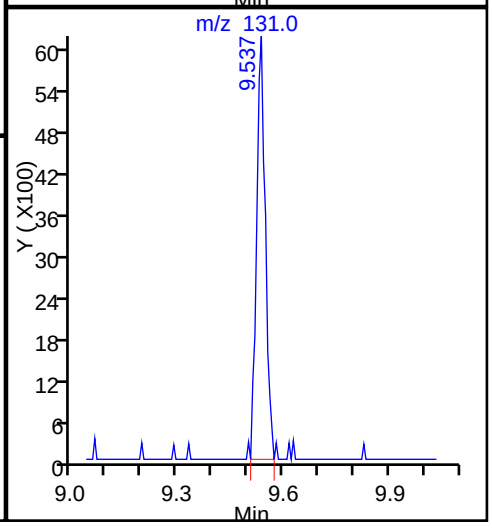












Manual Integration/User Assign Peak Report

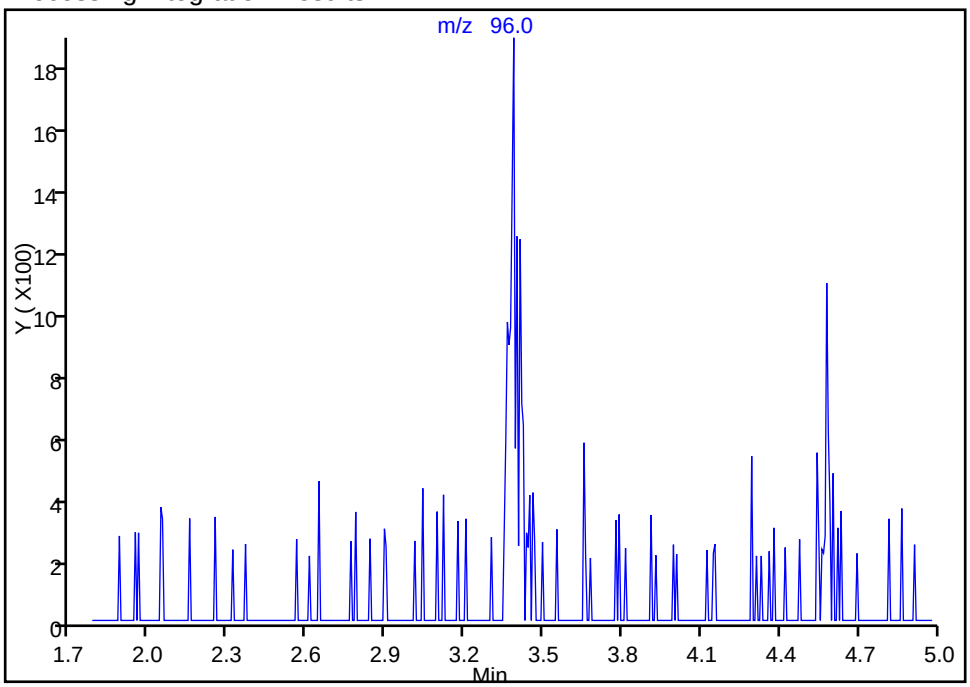
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D				
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
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

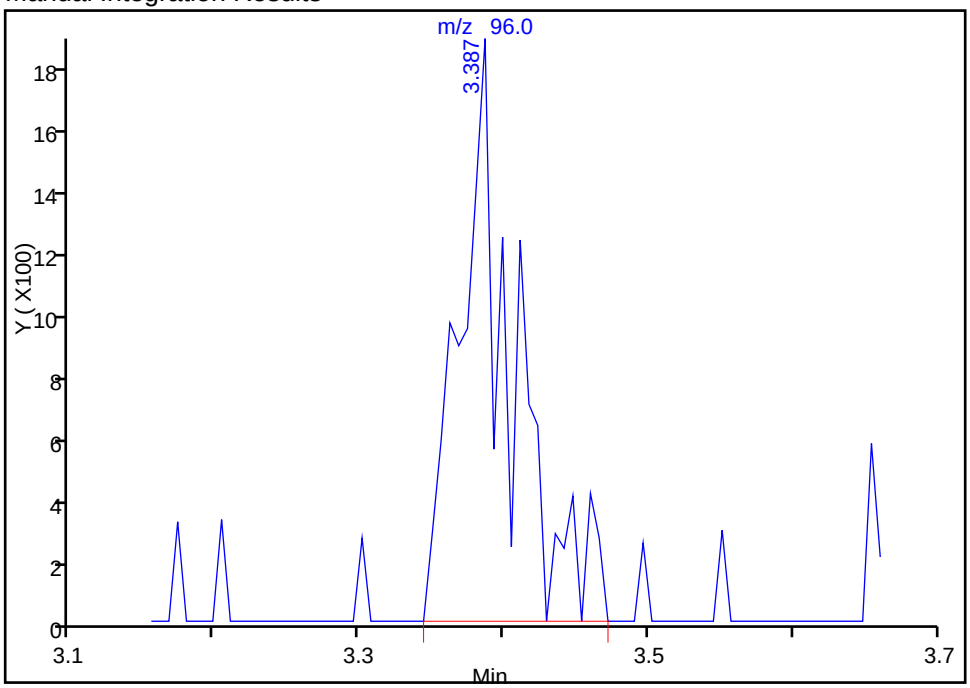
Not Detected
Expected RT: 3.38

Processing Integration Results



Manual Integration Results

RT: 3.39
Area: 4772
Amount: 2.135003
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 08:19:39
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

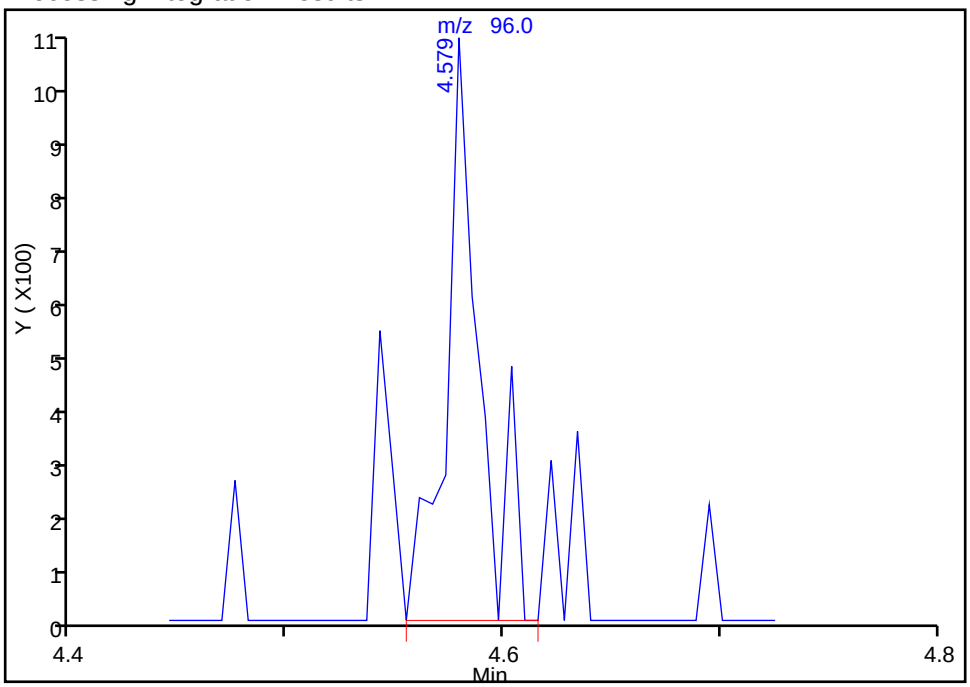
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D				
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
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		

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

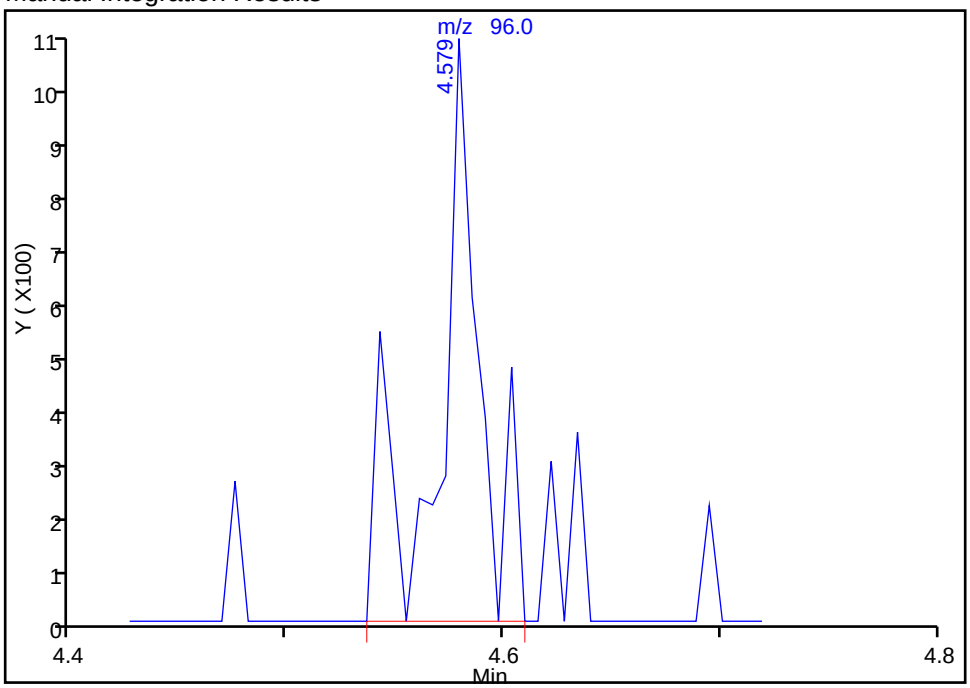
Processing Integration Results

RT: 4.58
Area: 1185
Amount: 0.523692
Amount Units: ng



Manual Integration Results

RT: 4.58
Area: 1481
Amount: 0.654505
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 08:19:39
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

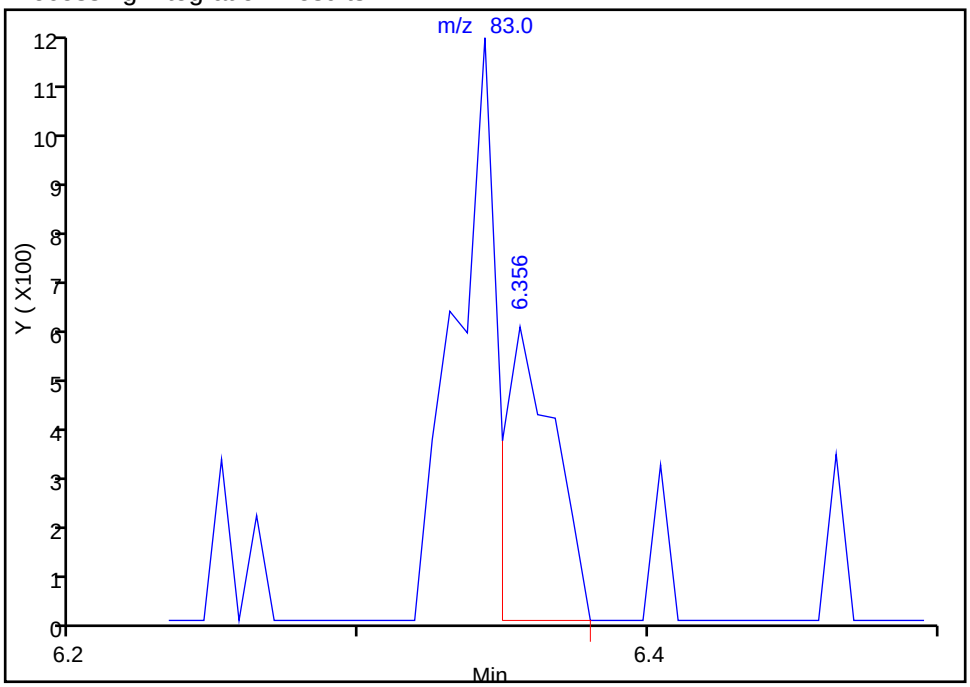
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121025.D				
Injection Date:	22-Jan-2015 19:52:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-D-7	Lab Sample ID:	180-40541-7		
Client ID:	HD-MW-127-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	25
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

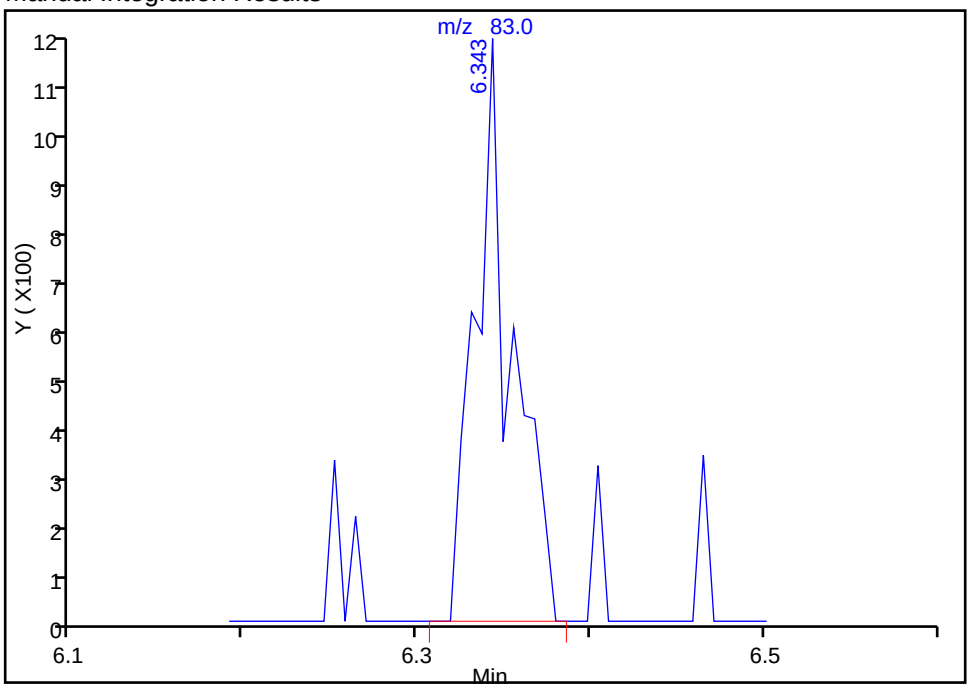
Processing Integration Results

RT: 6.36
Area: 717
Amount: 0.180160
Amount Units: ng



Manual Integration Results

RT: 6.34
Area: 1705
Amount: 0.428415
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 08:19:39
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-40541-8

Matrix: Water Lab File ID: 50123013.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:30

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 15:59

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.: 131582 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	6.6		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	1.7	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	130		5.0	1.2
74-97-5	Bromochloromethane	5.0	U	5.0	0.90
78-93-3	2-Butanone (MEK)	25	U	25	2.7
67-66-3	Chloroform	5.0	U	5.0	0.85
71-55-6	1,1,1-Trichloroethane	29		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	83		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	34		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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-40541-8

Matrix: Water Lab File ID: 50123013.D

Analysis Method: 8260C Date Collected: 01/16/2015 12:30

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 15:59

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.: 131582 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)	103		64-135
2037-26-5	Toluene-d8 (Surr)	101		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\20150123-5396.b\50123013.D
Lims ID: 180-40541-E-8 Lab Sample ID: 180-40541-8
Client ID: HD-MW-50S-0/1-0
Sample Type: Client
Inject. Date: 23-Jan-2015 15:59:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 5.0000
Sample Info: 180-40541-E-8, 5x
Misc. Info.: 180-0005396-013
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 25-Jan-2015 20:27:55 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: XAWRK031

First Level Reviewer: gordonk Date: 25-Jan-2015 20:27:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.303	4.297	0.006	93	195931	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.271	0.007	99	488315	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.362	0.000	98	102089	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.680	0.006	98	142839	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.523	0.013	93	113307	54.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.900	0.007	92	176152	51.6	
$ 7 Toluene-d8 (Surr)	98	8.926	8.920	0.006	96	428271	50.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.530	0.006	82	159846	49.4	
12 Chloromethane	50		1.778				ND	
13 Vinyl chloride	62		1.906				ND	
15 Bromomethane	94		2.247				ND	
16 Chloroethane	64		2.411				ND	
22 1,1-Dichloroethene	96	3.390	3.384	0.006	88	17431	6.55	
24 Acetone	43		3.494				ND	
26 Carbon disulfide	76		3.658				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.546				ND	
34 trans-1,2-Dichloroethene	96		4.570				ND	M
35 Methyl tert-butyl ether	73		4.595				ND	
37 1,1-Dichloroethane	63	5.173	5.173	0.000	40	10674	1.70	
45 cis-1,2-Dichloroethene	96	5.946	5.933	0.013	85	379756	130.5	
46 2-Butanone (MEK)	43		5.982				ND	
49 Chlorobromomethane	128		6.231				ND	
52 Chloroform	83	6.359	6.341	0.018	1	3111	0.6568	M
53 1,1,1-Trichloroethane	97	6.542	6.529	0.013	81	88897	28.9	
56 Carbon tetrachloride	117		6.718				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.667	7.661	0.006	94	213802	82.7	
67 1,2-Dichloropropane	63		7.904				ND	
70 1,4-Dioxane	88		8.056				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.652				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.823				ND	
76 Toluene	91		8.987				ND	
77 trans-1,3-Dichloropropene	75		9.218				ND	
79 1,1,2-Trichloroethane	97		9.401				ND	
80 Tetrachloroethene	164	9.541	9.535	0.007	95	68942	34.5	
82 2-Hexanone	43		9.656				ND	
84 Chlorodibromomethane	129		9.796				ND	
85 Ethylene Dibromide	107		9.900				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.496				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.013				ND	
93 Styrene	104		11.025				ND	
94 Bromoform	173		11.214				ND	
99 1,1,2,2-Tetrachloroethane	83		11.670				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

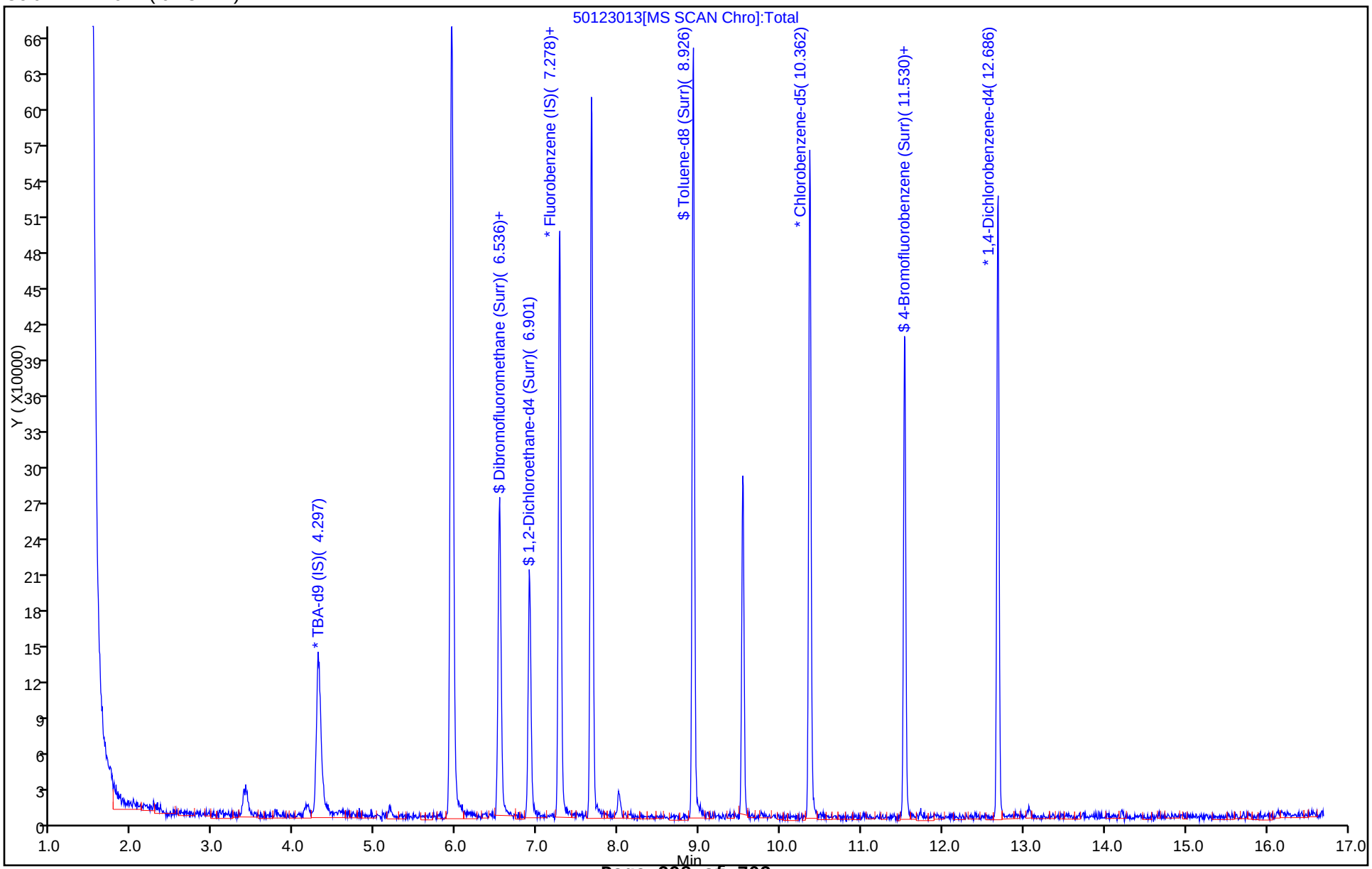
Report Date: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D

Injection Date:	23-Jan-2015 15:59:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-40541-E-8	Lab Sample ID:	180-40541-8	Worklist Smp#:	13
Client ID:	HD-MW-50S-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)



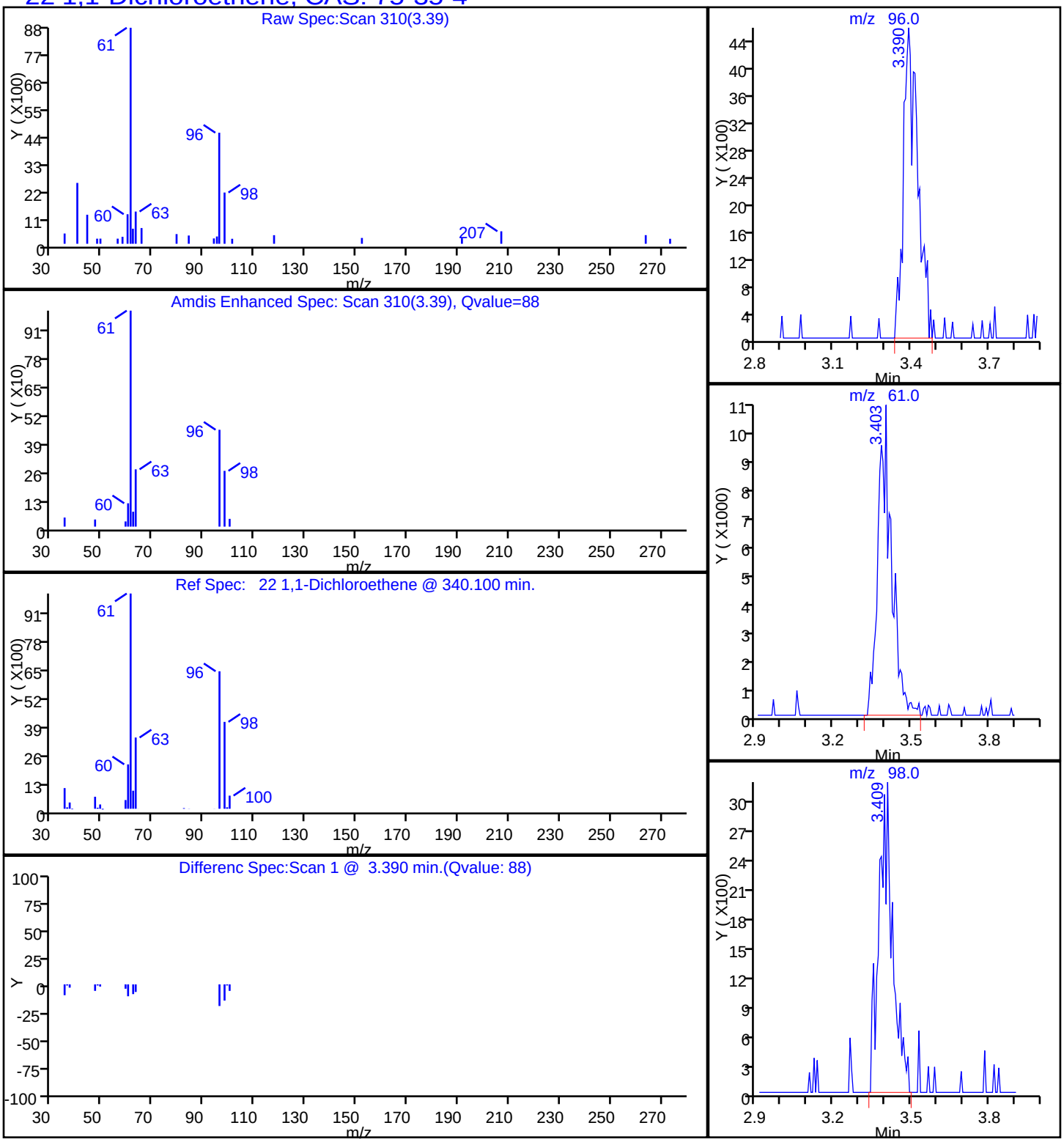
Report Date: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D

Injection Date:	23-Jan-2015 15:59:30	Instrument ID:	CHHP5
Lims ID:	180-40541-E-8	Lab Sample ID:	180-40541-8
Client ID:	HD-MW-50S-0/1-0		
Operator ID:	001562	ALS Bottle#:	13 Worklist Smp#: 13
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

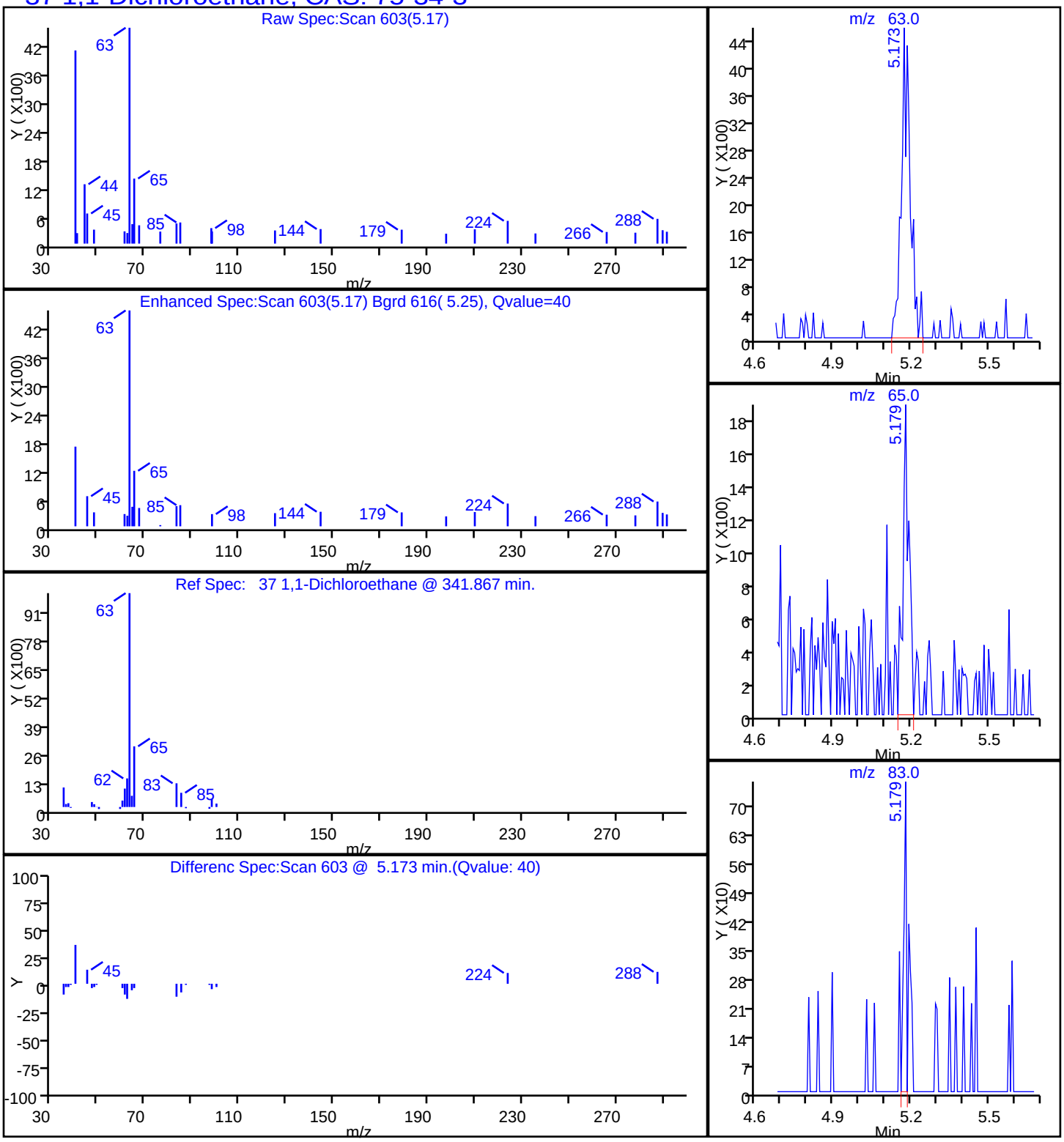


Report Date: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D				
Injection Date:	23-Jan-2015 15:59:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-8	Lab Sample ID:	180-40541-8		
Client ID:	HD-MW-50S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
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

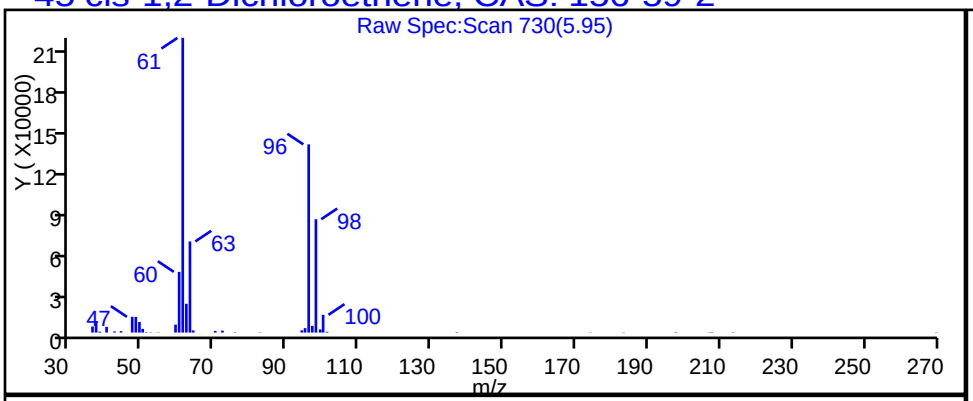


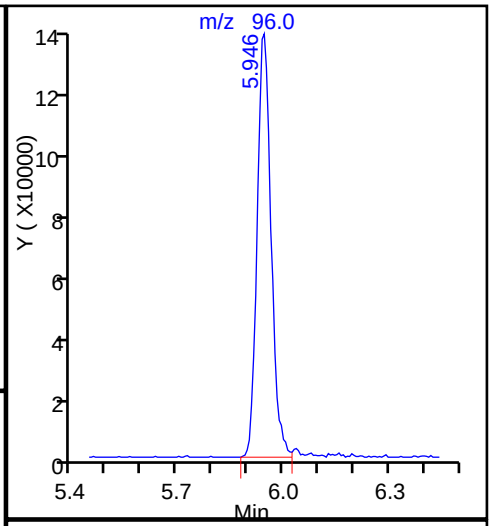
Report Date: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

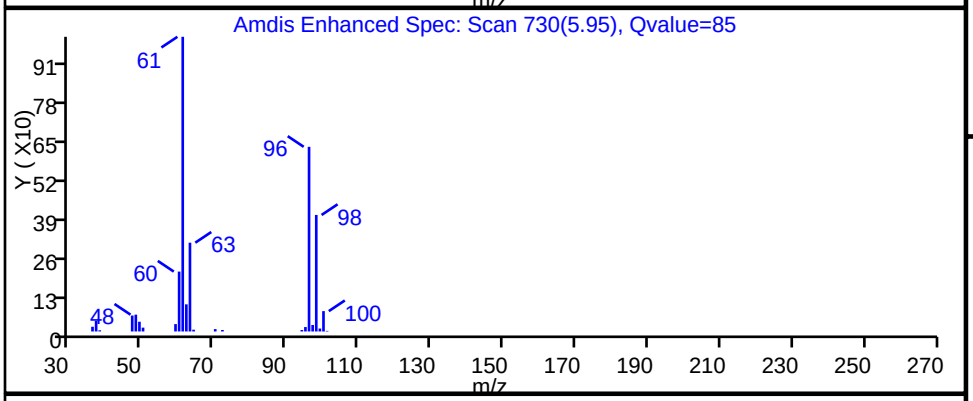
TestAmerica Pittsburgh

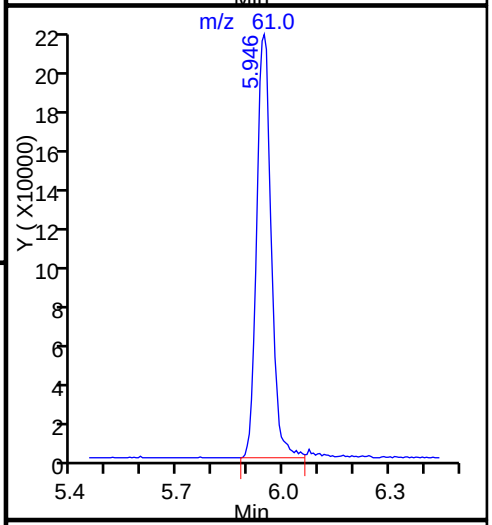
Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D				
Injection Date:	23-Jan-2015 15:59:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-8	Lab Sample ID:	180-40541-8		
Client ID:	HD-MW-50S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

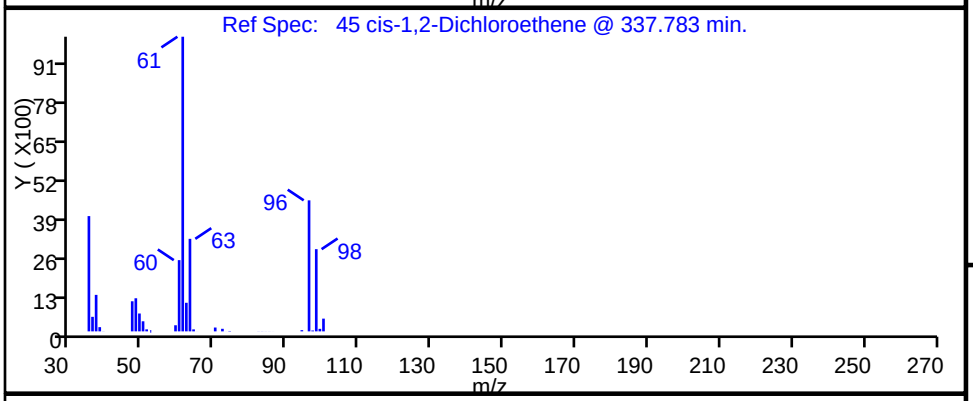
45 cis-1,2-Dichloroethene, CAS: 156-59-2

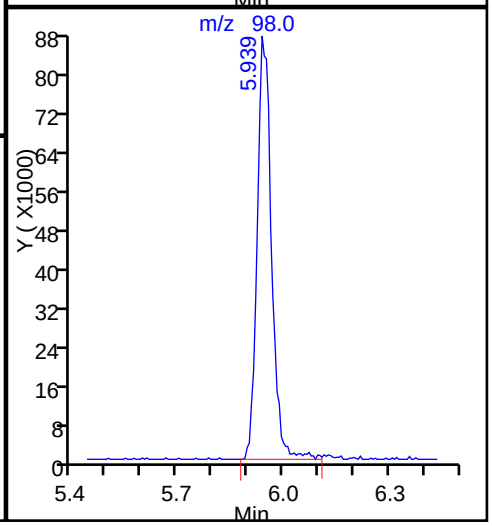


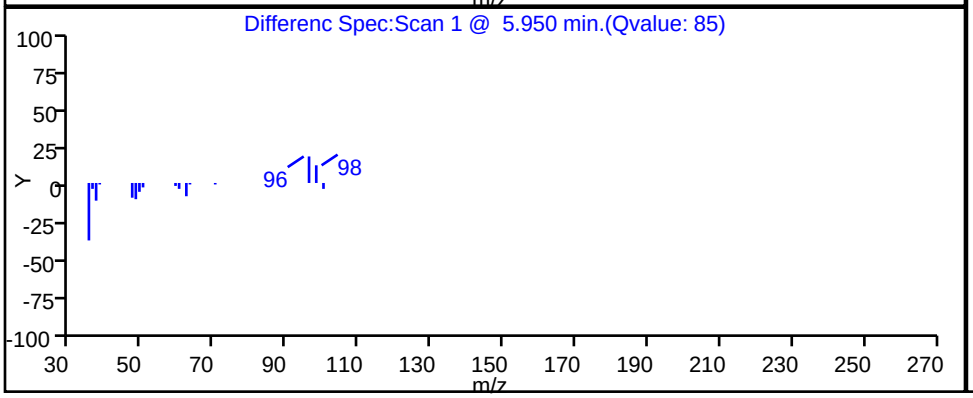










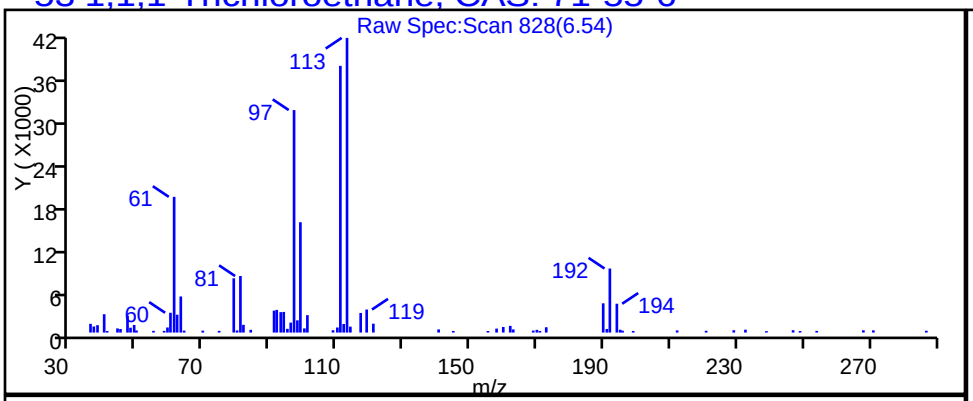


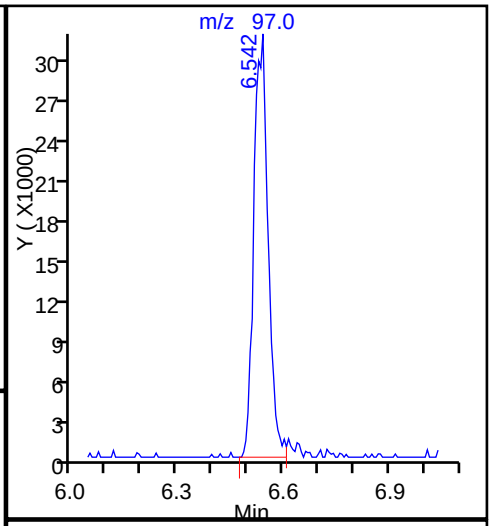
Report Date: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

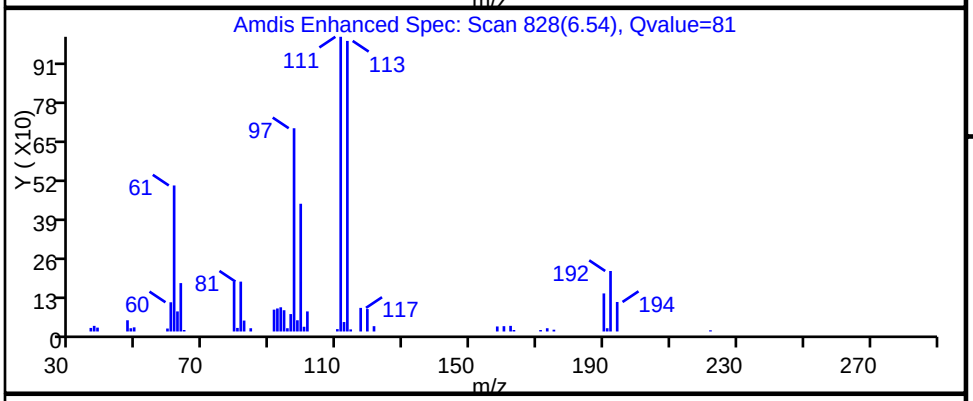
TestAmerica Pittsburgh

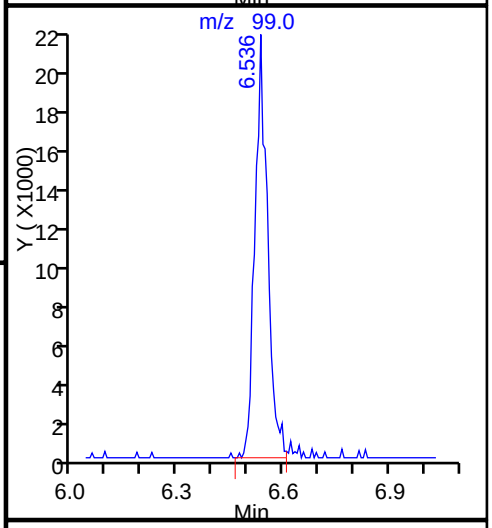
Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D				
Injection Date:	23-Jan-2015 15:59:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-8	Lab Sample ID:	180-40541-8		
Client ID:	HD-MW-50S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	5.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

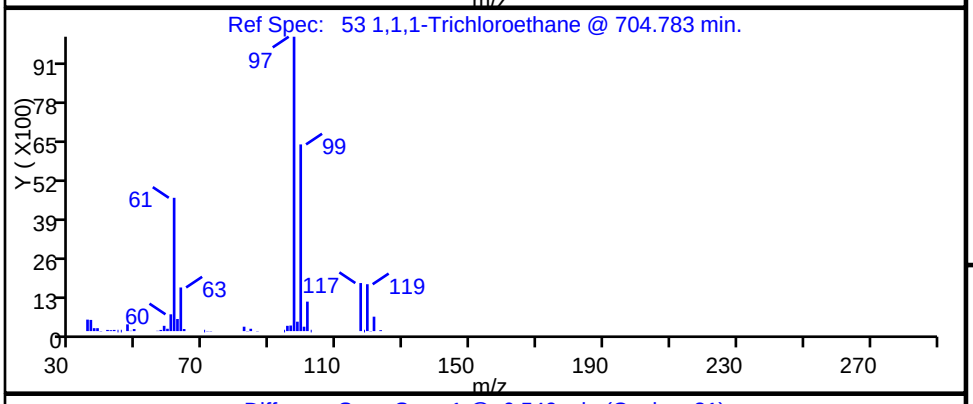
53 1,1,1-Trichloroethane, CAS: 71-55-6

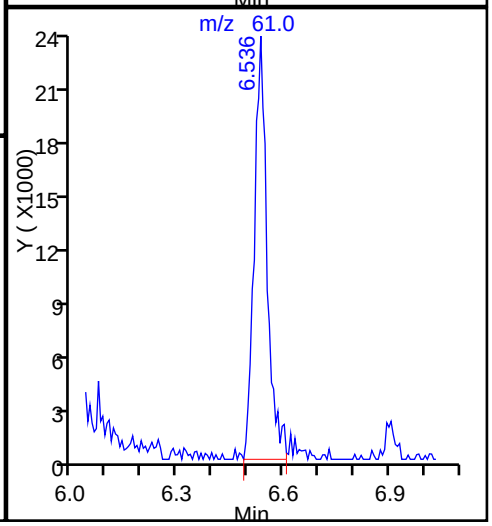


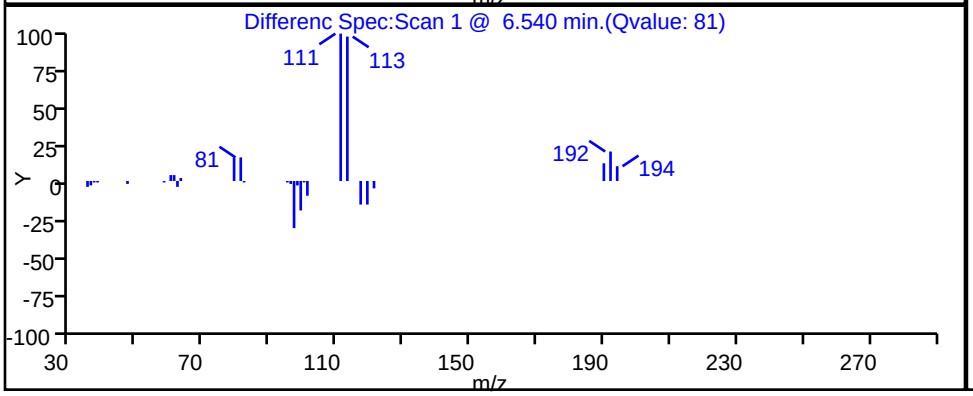












Report Date: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D

Injection Date: 23-Jan-2015 15:59:30 Instrument ID: CHHP5

Lims ID: 180-40541-E-8 Lab Sample ID: 180-40541-8

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

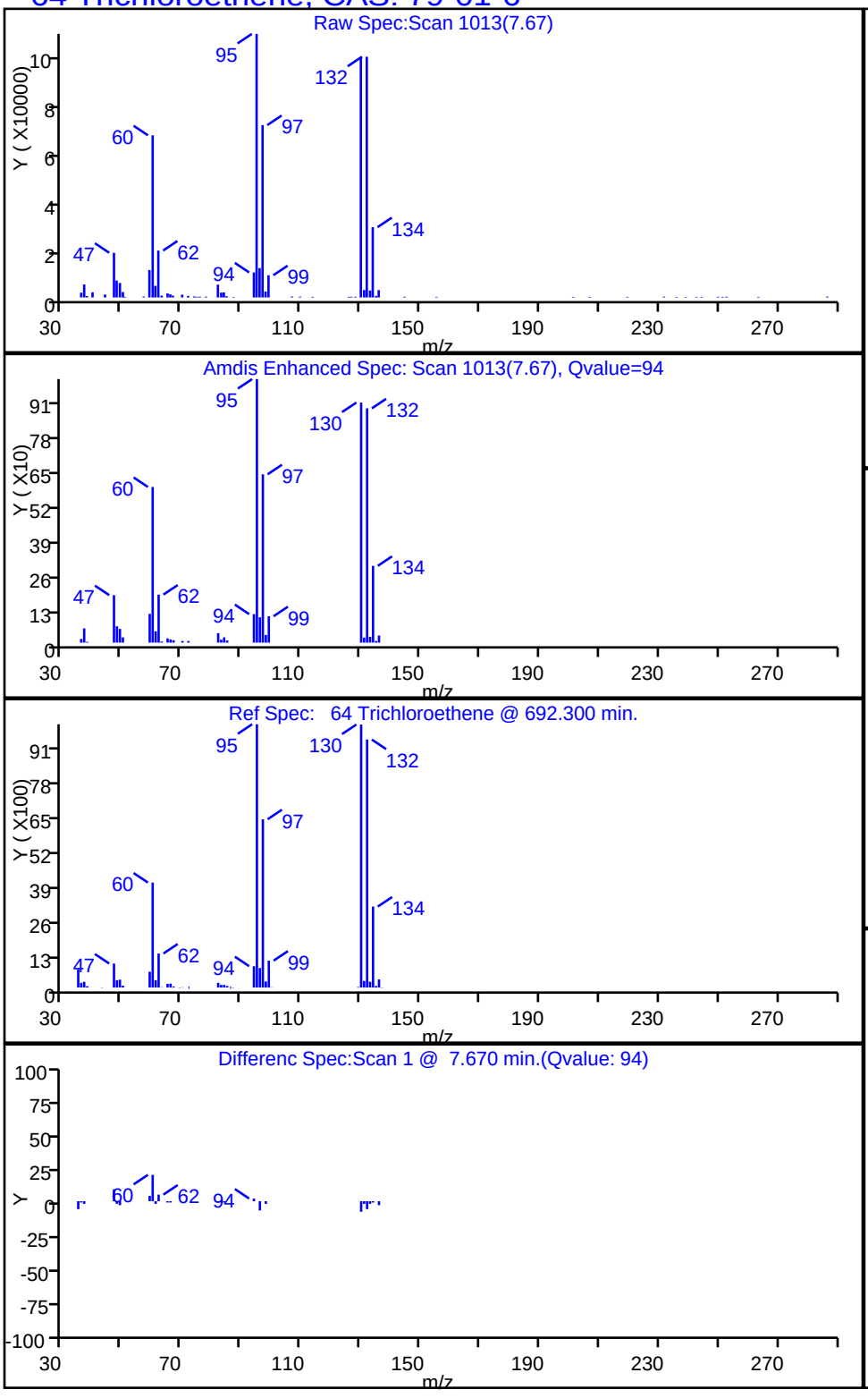
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 13

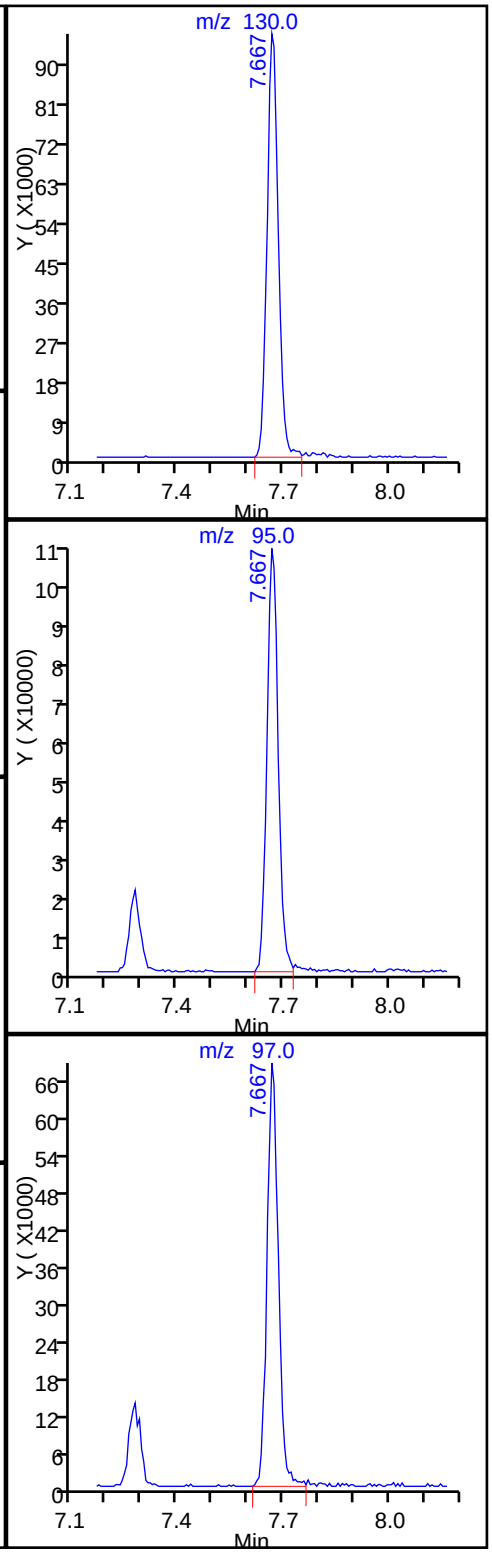
Purge Vol: 5.000 mL Dil. Factor: 5.0000

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: 25-Jan-2015 20:27:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D

Injection Date: 23-Jan-2015 15:59:30 Instrument ID: CHHP5

Lims ID: 180-40541-E-8 Lab Sample ID: 180-40541-8

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

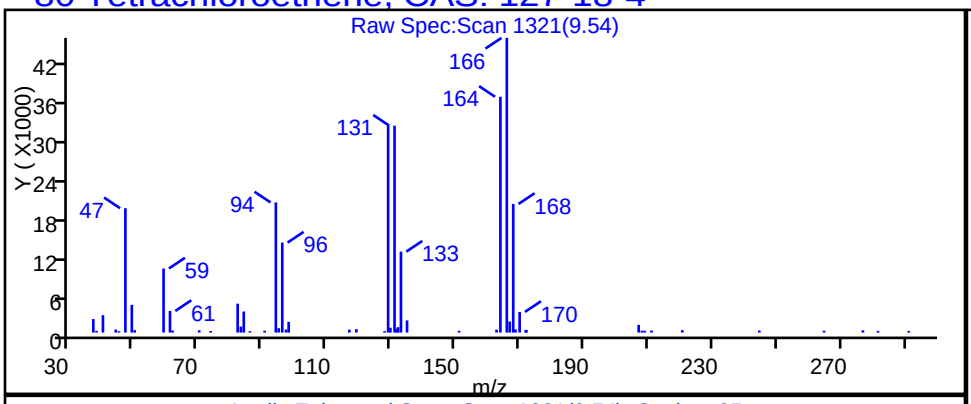
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 13

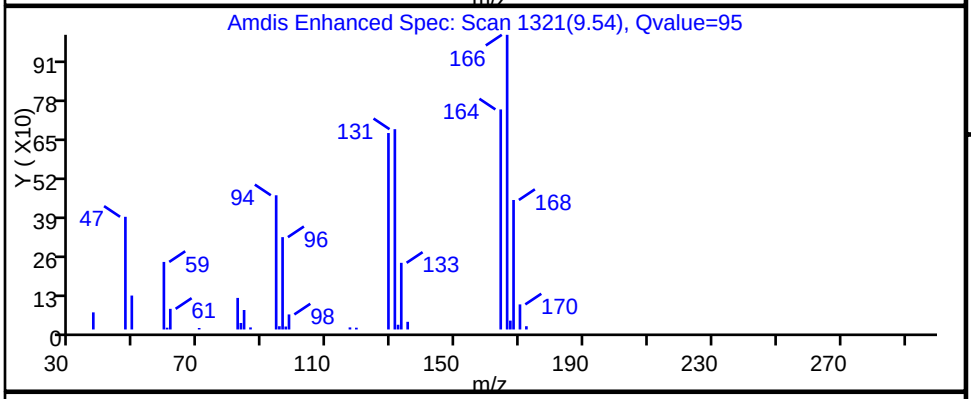
Purge Vol: 5.000 mL Dil. Factor: 5.0000

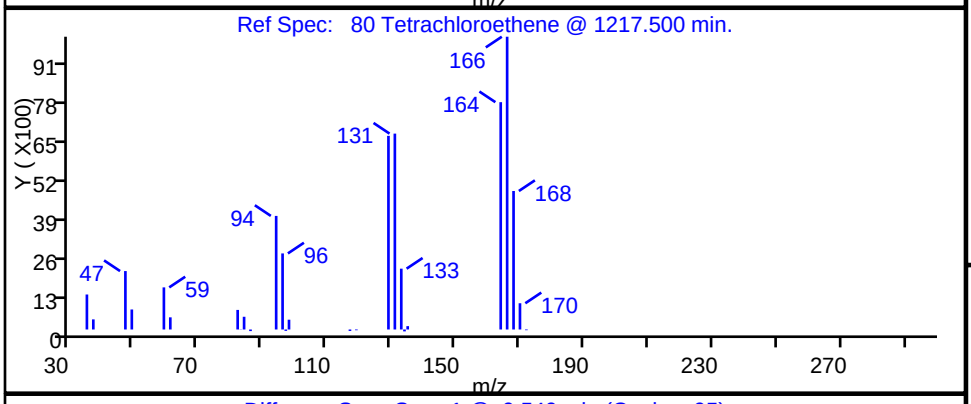
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

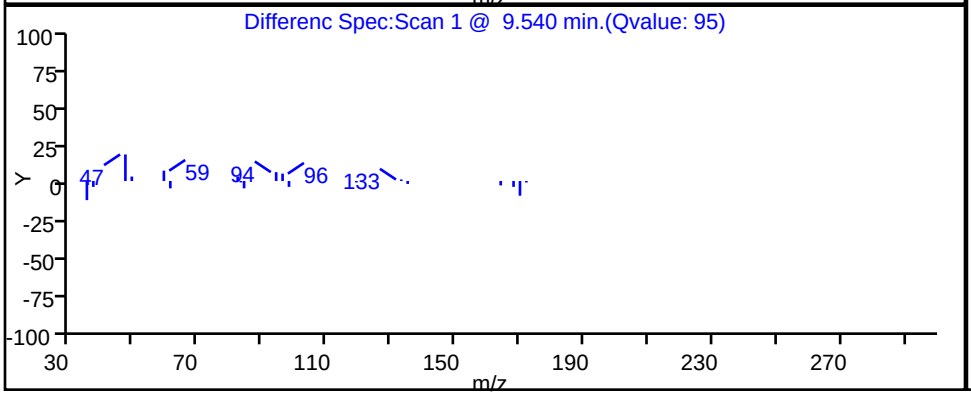
Column: DB-624 (0.18 mm) Detector MS SCAN

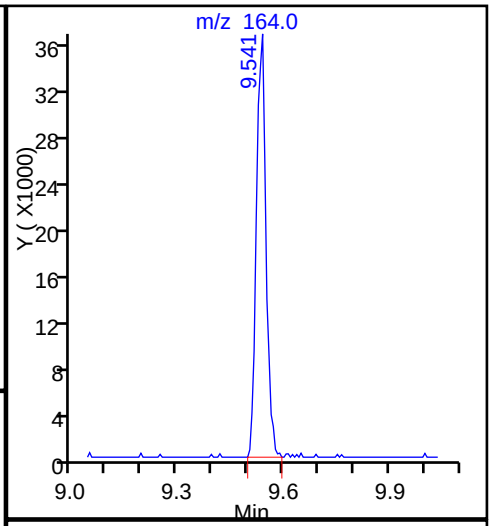
80 Tetrachloroethene, CAS: 127-18-4

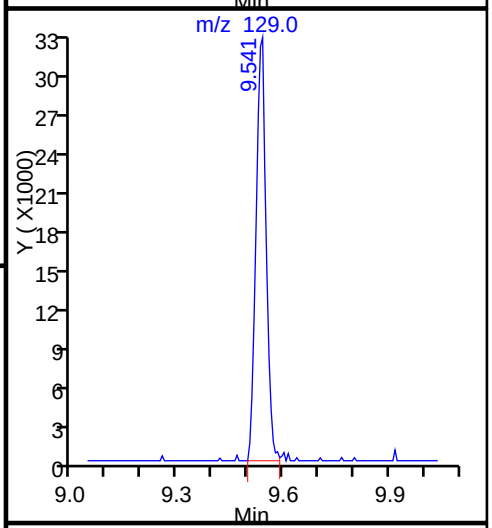


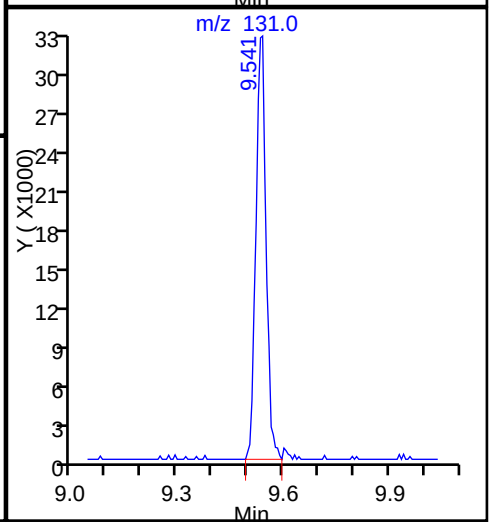












Manual Integration/User Assign Peak Report

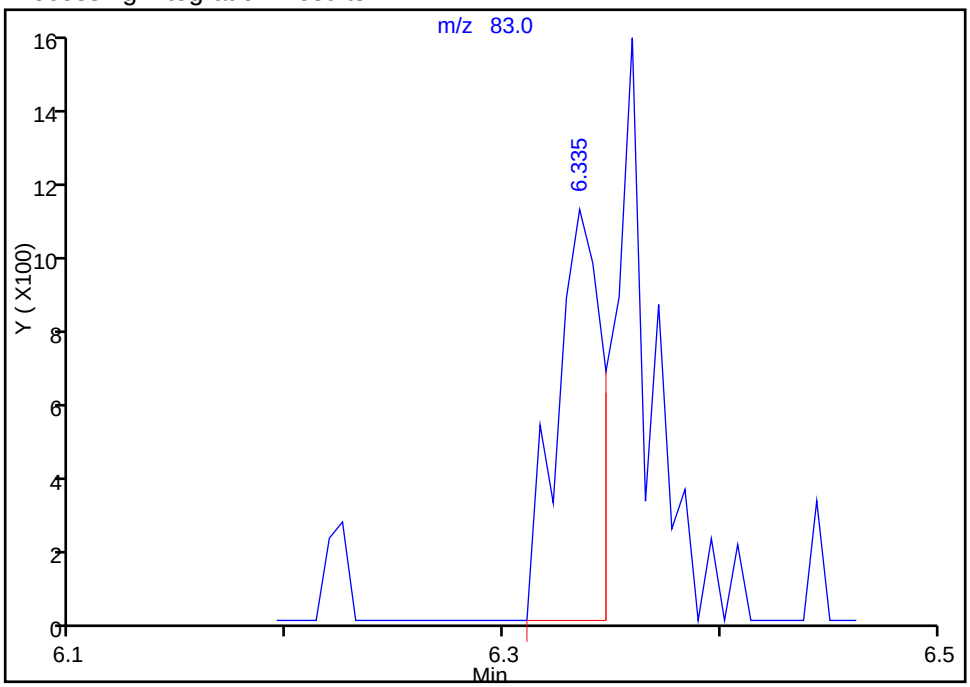
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123013.D				
Injection Date:	23-Jan-2015 15:59:30	Instrument ID:	CHHP5		
Lims ID:	180-40541-E-8	Lab Sample ID:	180-40541-8		
Client ID:	HD-MW-50S-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
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		

52 Chloroform, CAS: 67-66-3

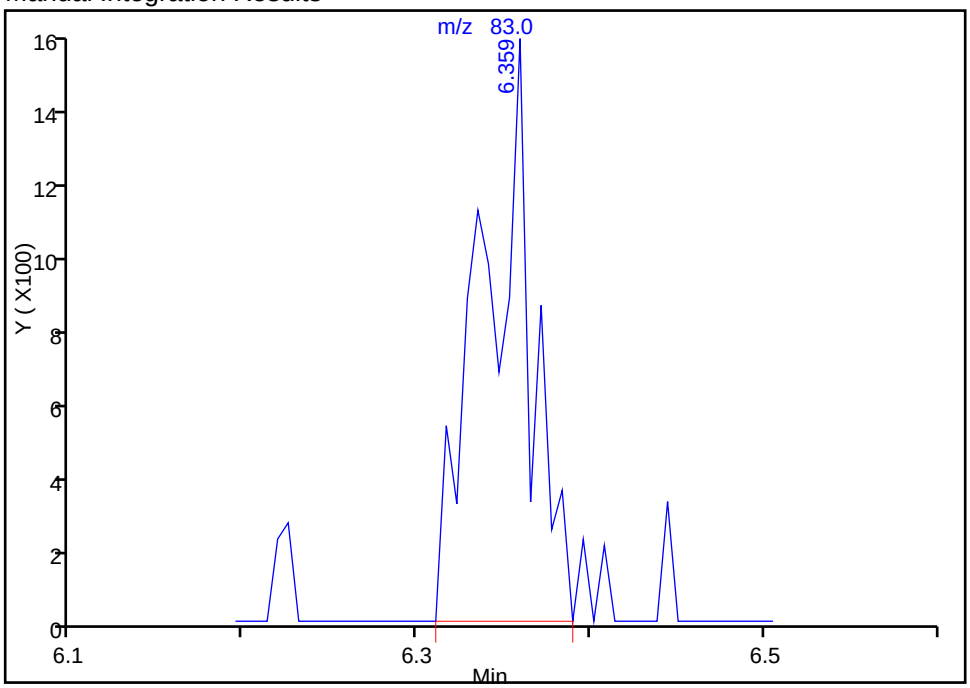
Processing Integration Results

RT: 6.33
Area: 1599
Amount: 0.337597
Amount Units: ng



Manual Integration Results

RT: 6.36
Area: 3111
Amount: 0.656825
Amount Units: ng



Reviewer: gordonk, 25-Jan-2015 20:27:55
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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

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

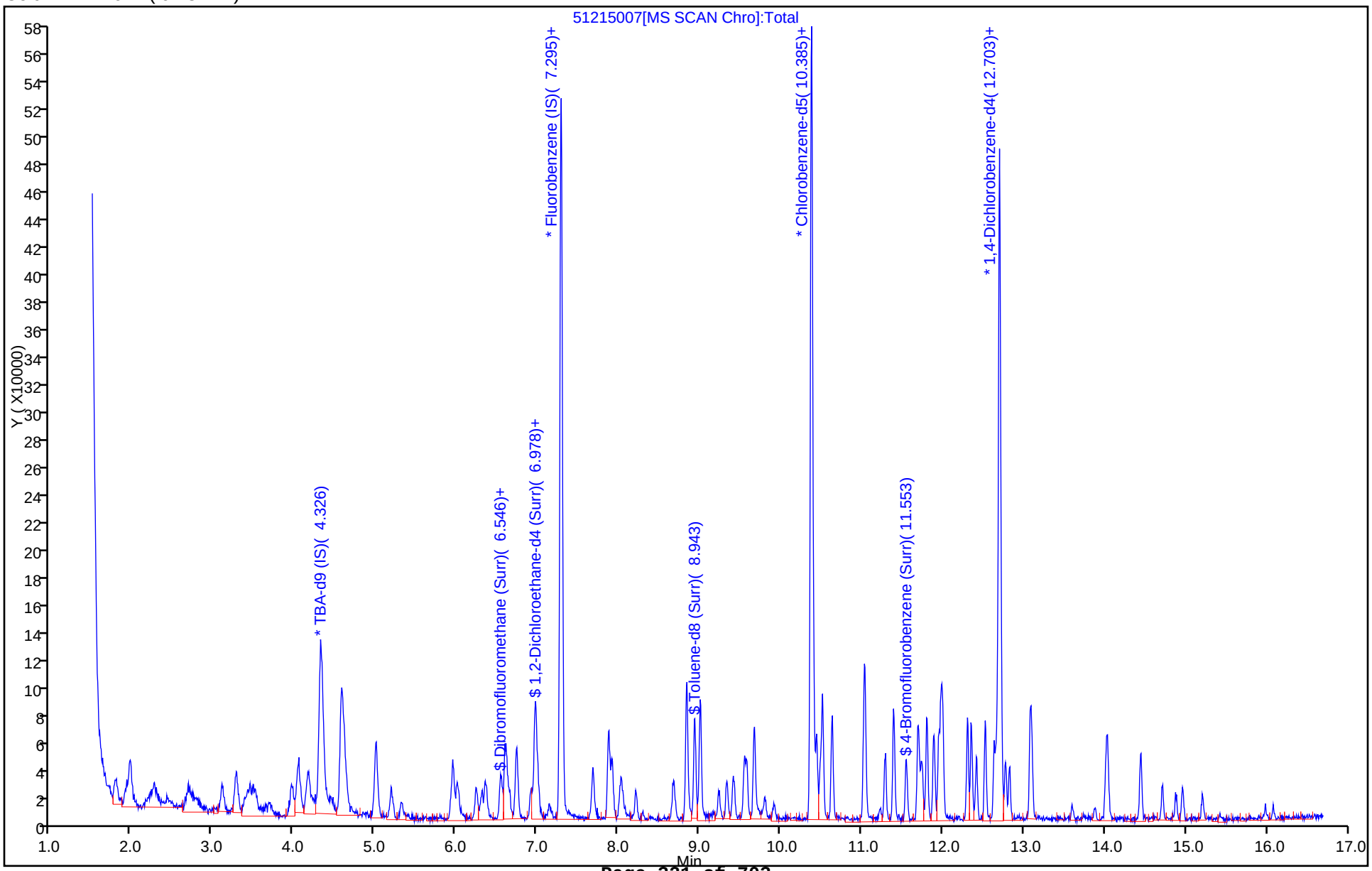
Report Date: 16-Dec-2014 08:51:06 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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

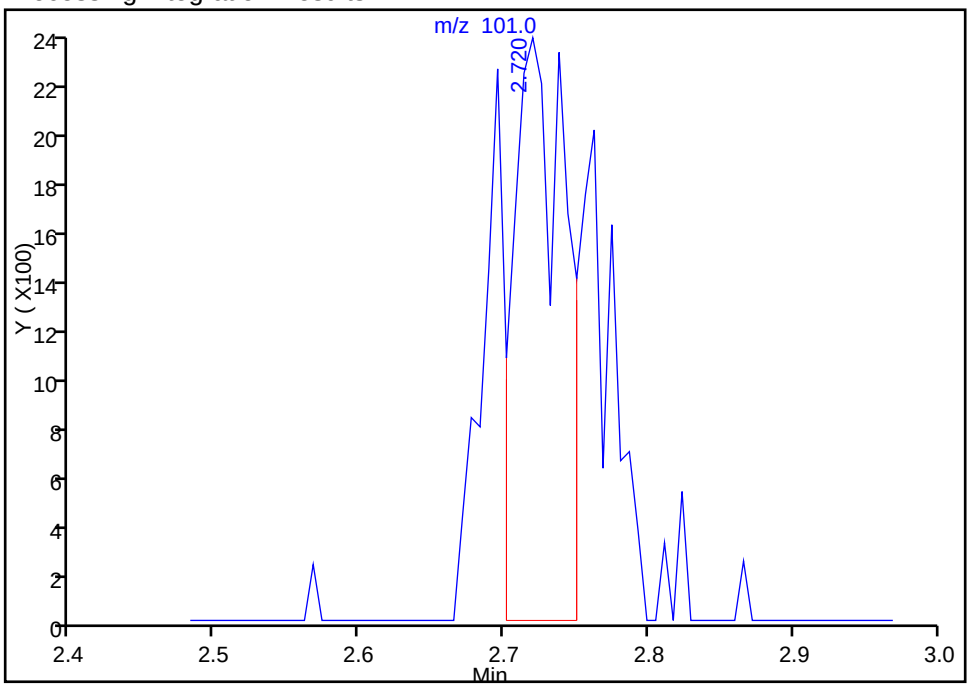
TestAmerica Pittsburgh

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

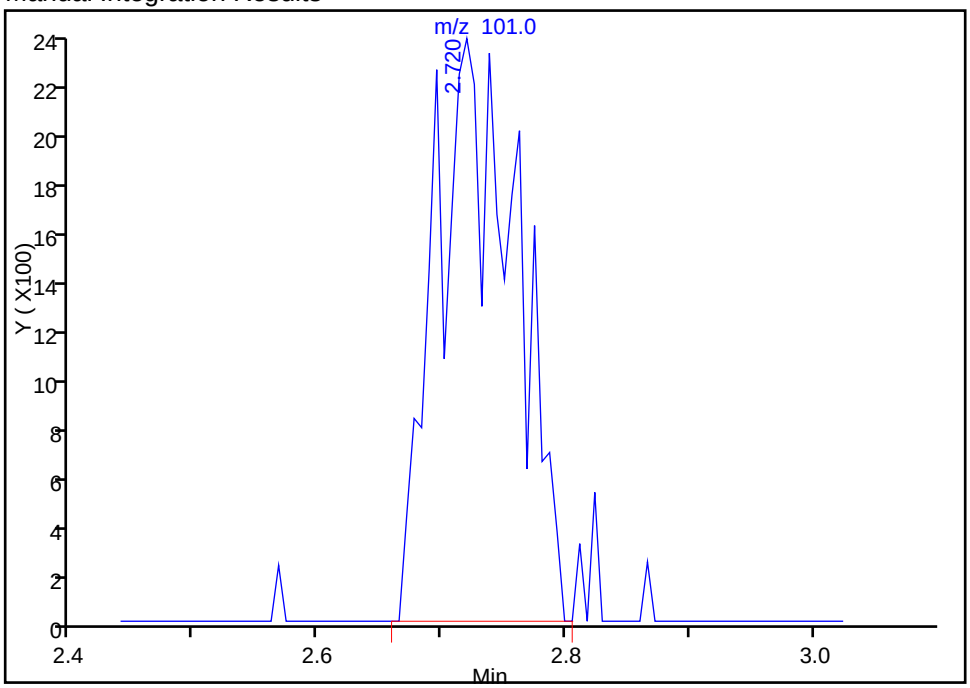
Processing Integration Results

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

Manual Integration/User Assign Peak Report

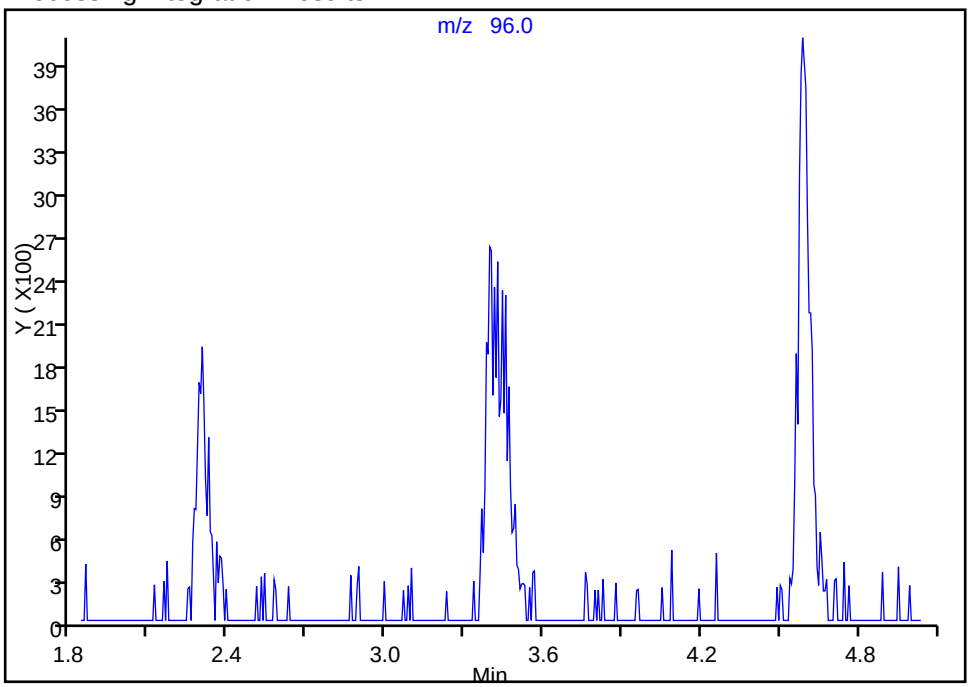
TestAmerica Pittsburgh

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		

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

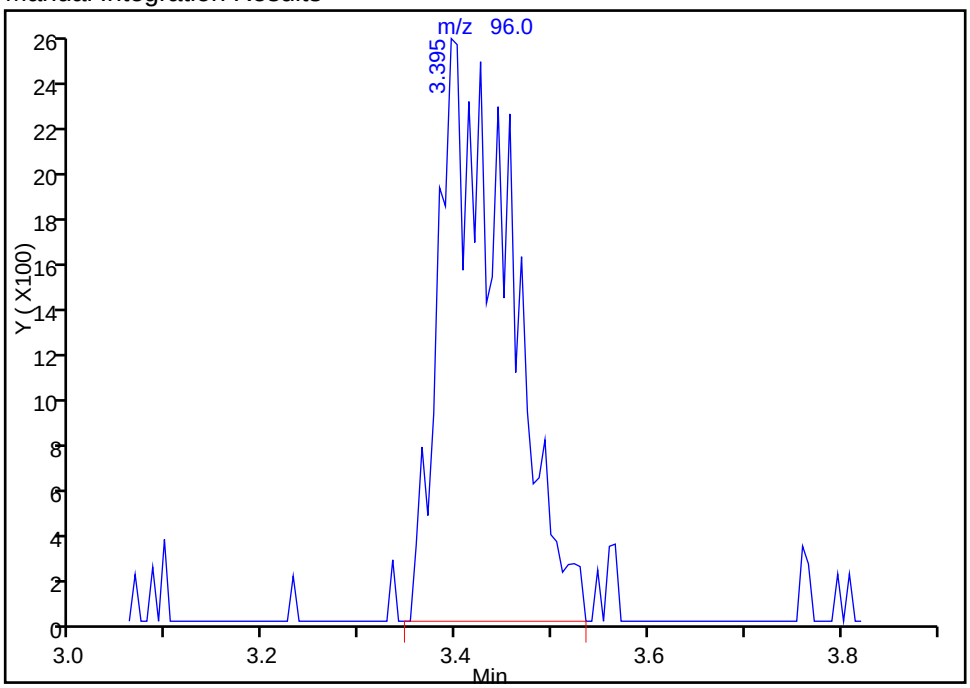
Not Detected
Expected RT: 3.44

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

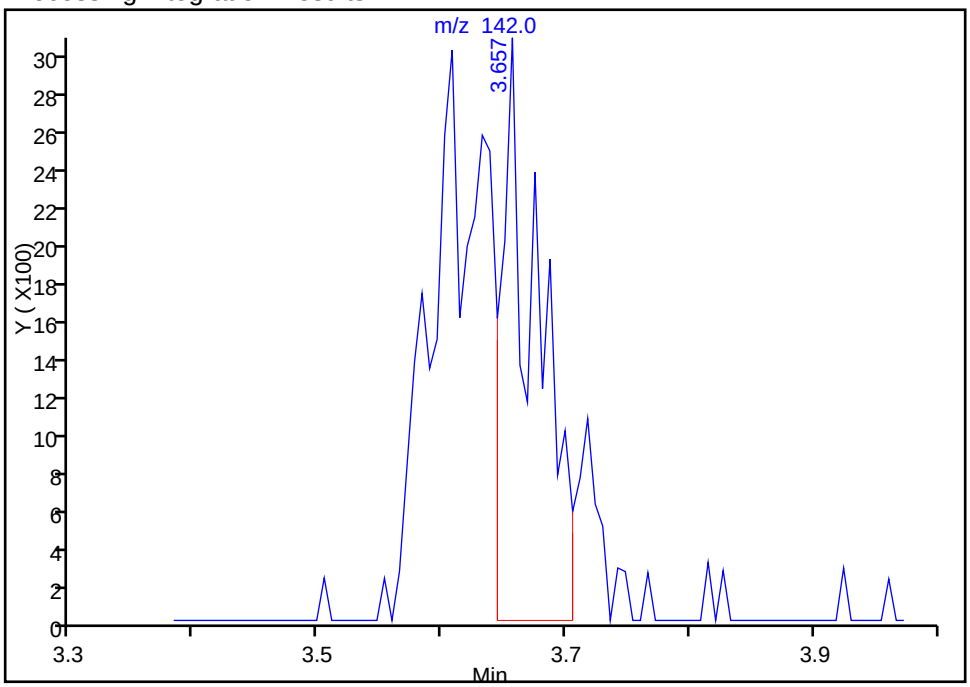
TestAmerica Pittsburgh

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

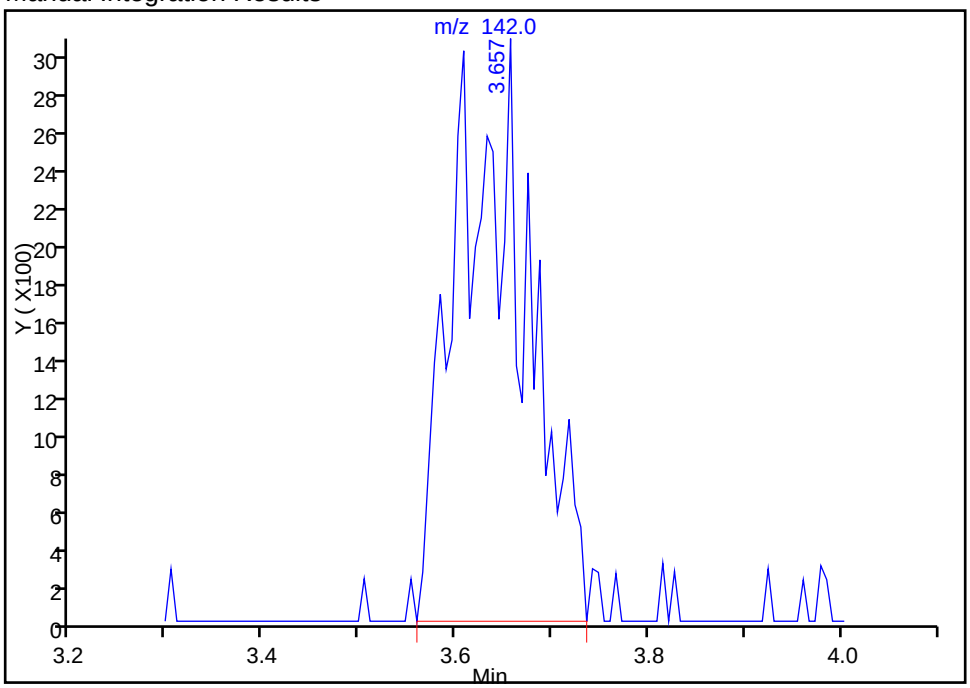
Processing Integration Results

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

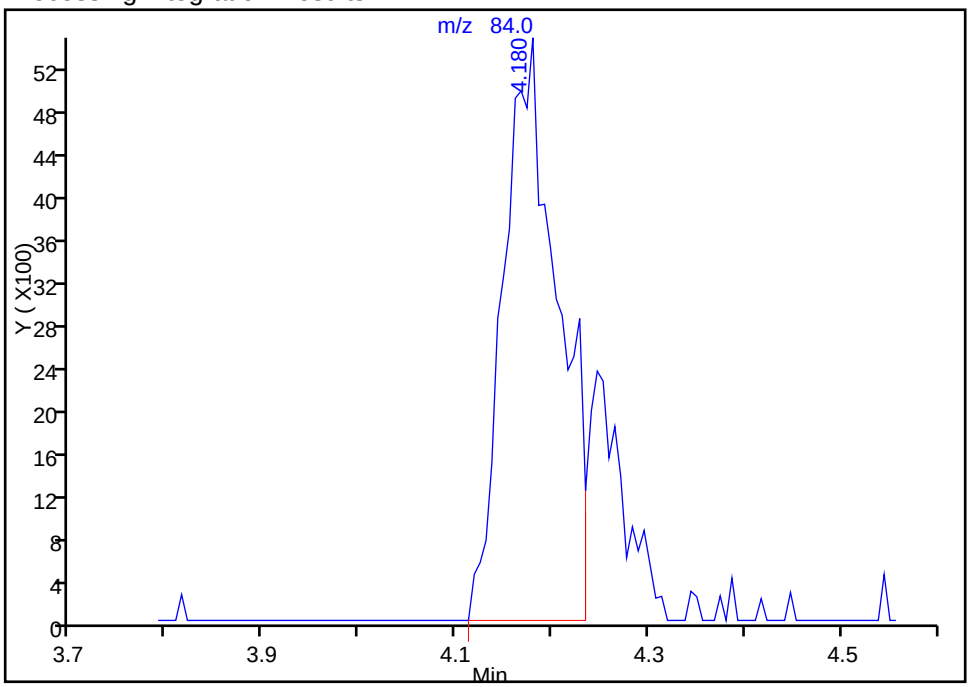
TestAmerica Pittsburgh

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

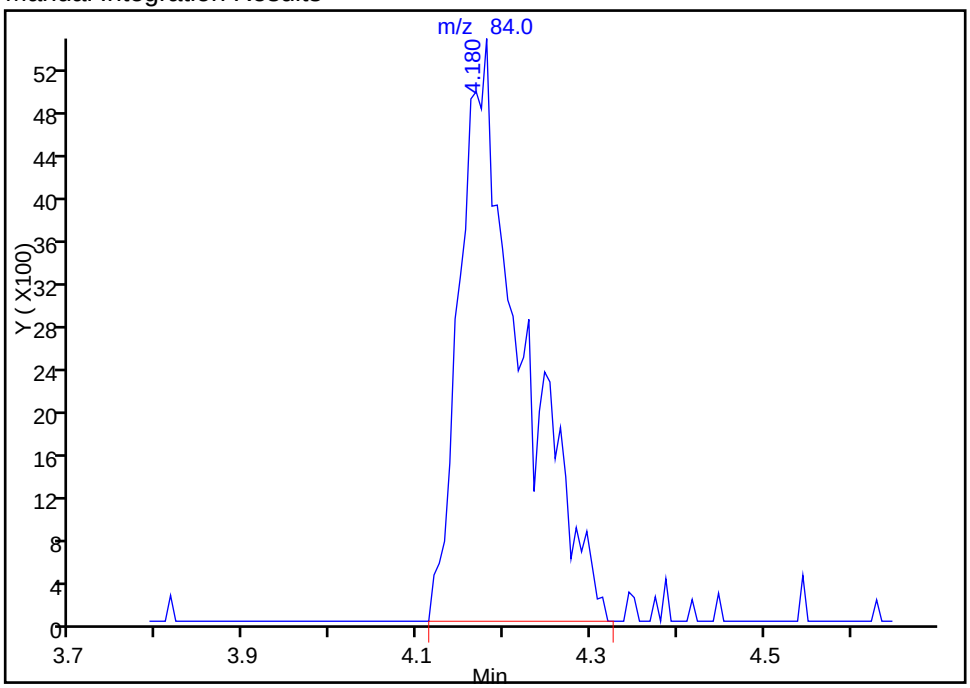
Processing Integration Results

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

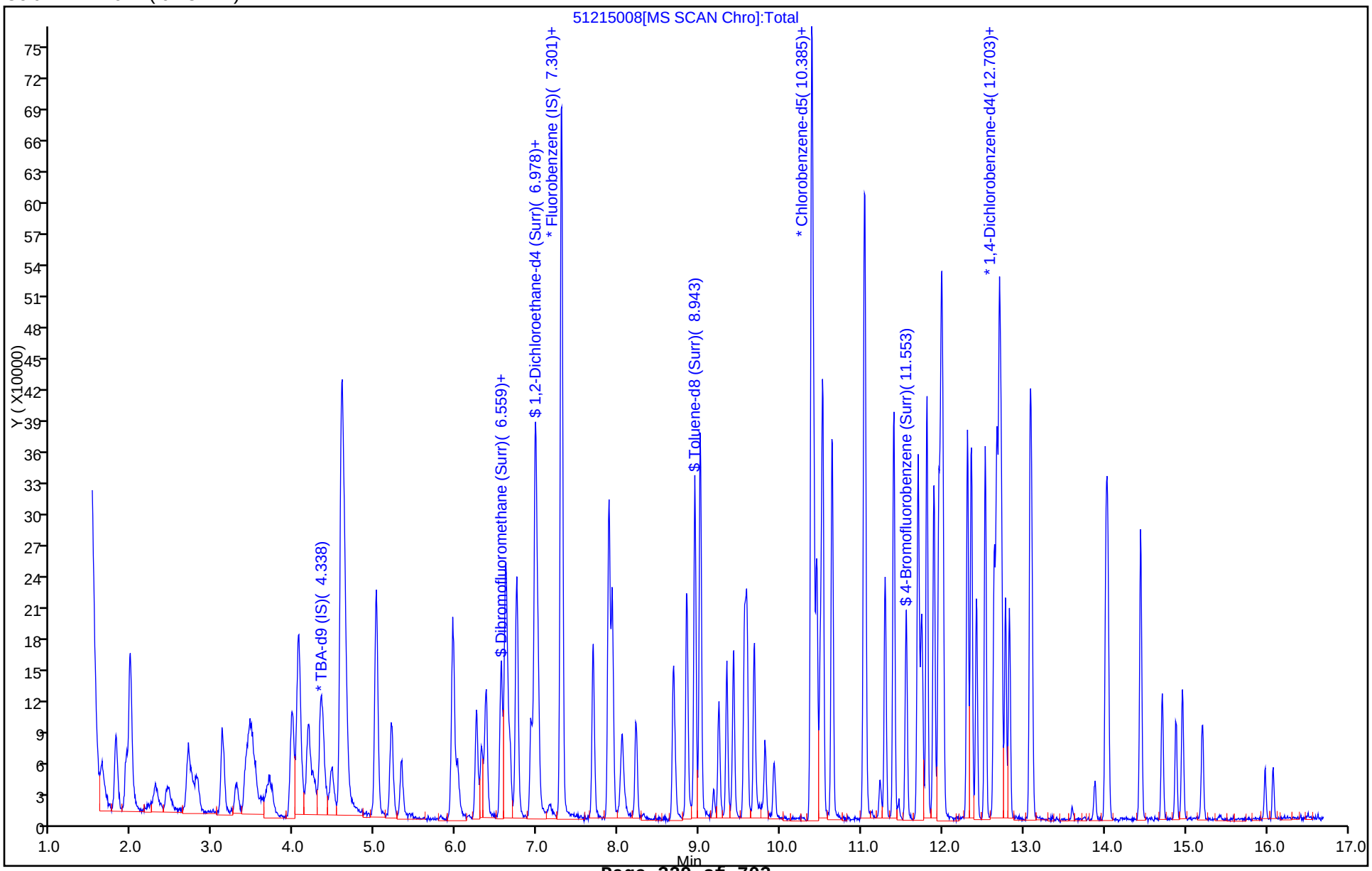
Report Date: 16-Dec-2014 08:51:08 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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

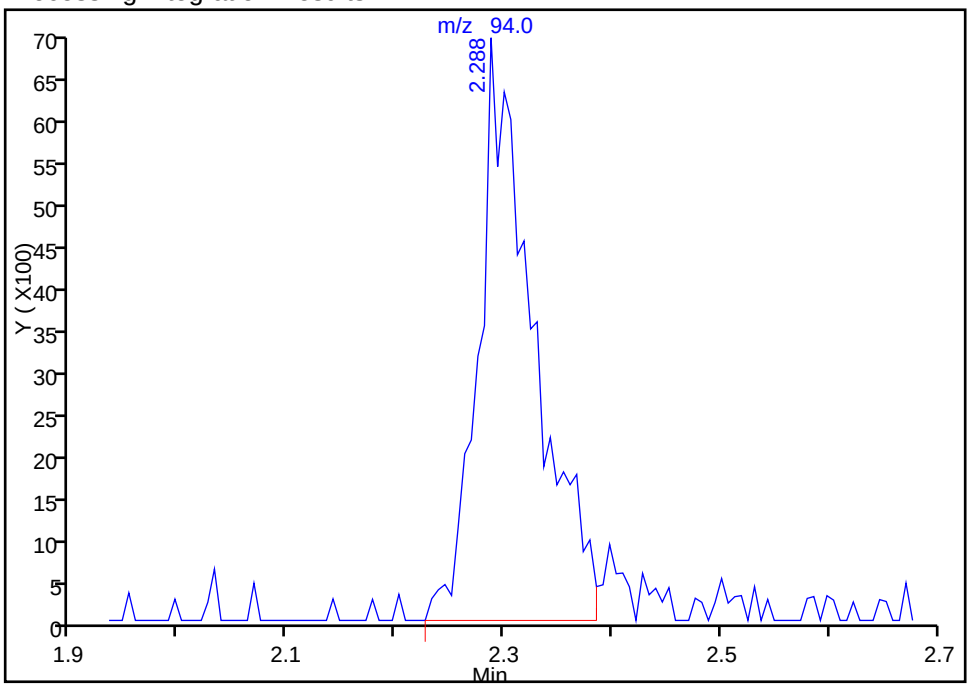
TestAmerica Pittsburgh

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

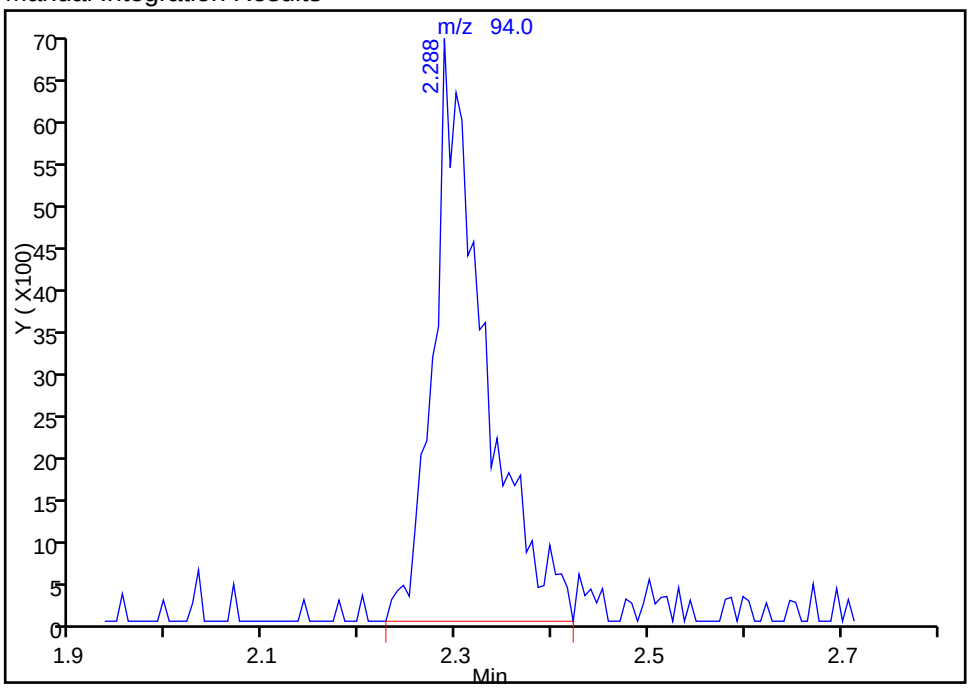
Processing Integration Results

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

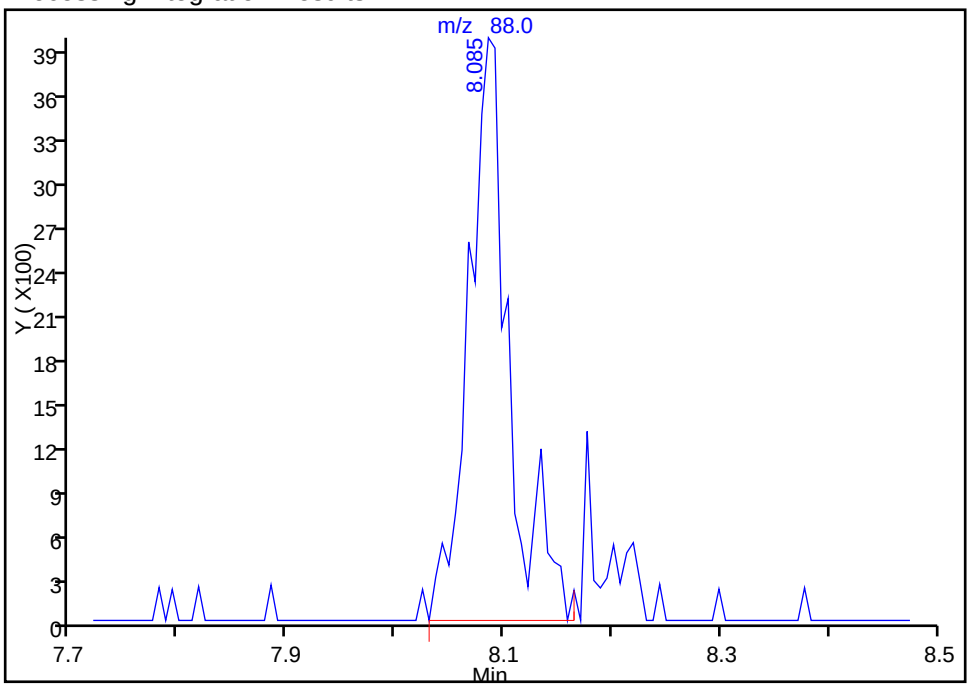
TestAmerica Pittsburgh

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

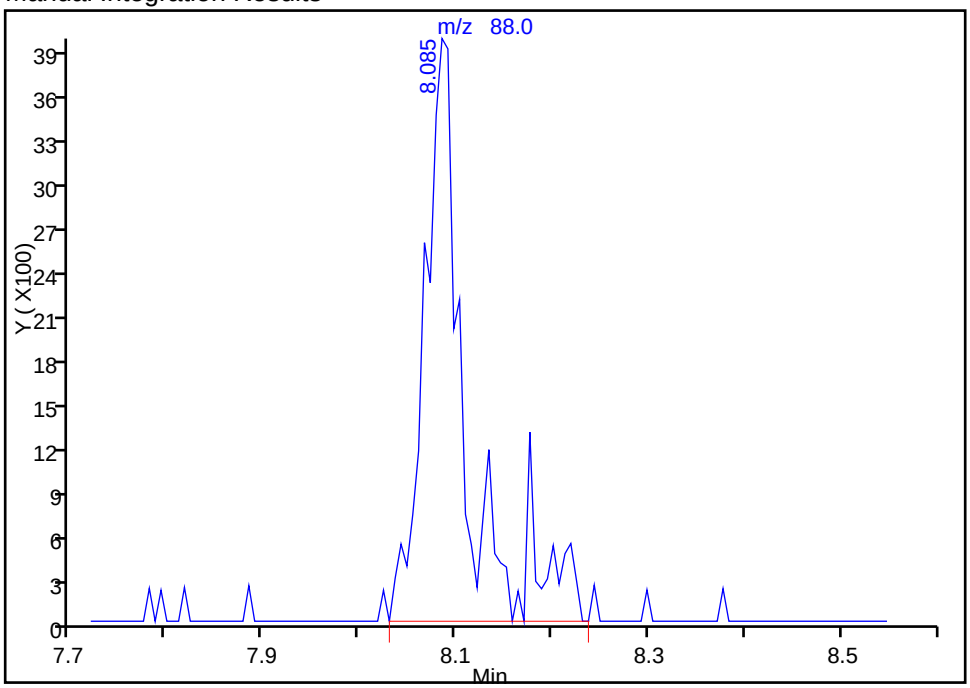
Processing Integration Results

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

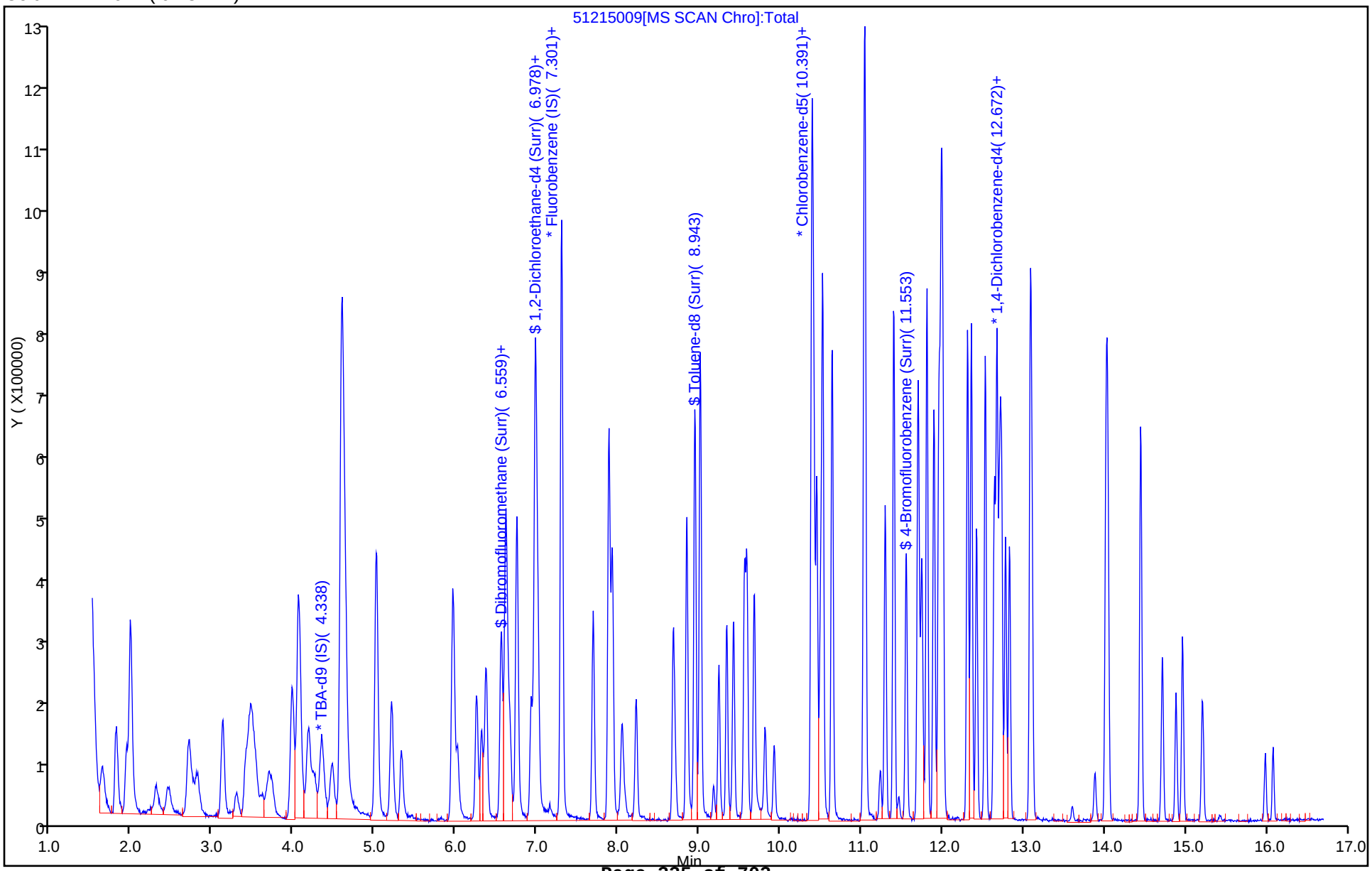
Report Date: 16-Dec-2014 09:09:30 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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

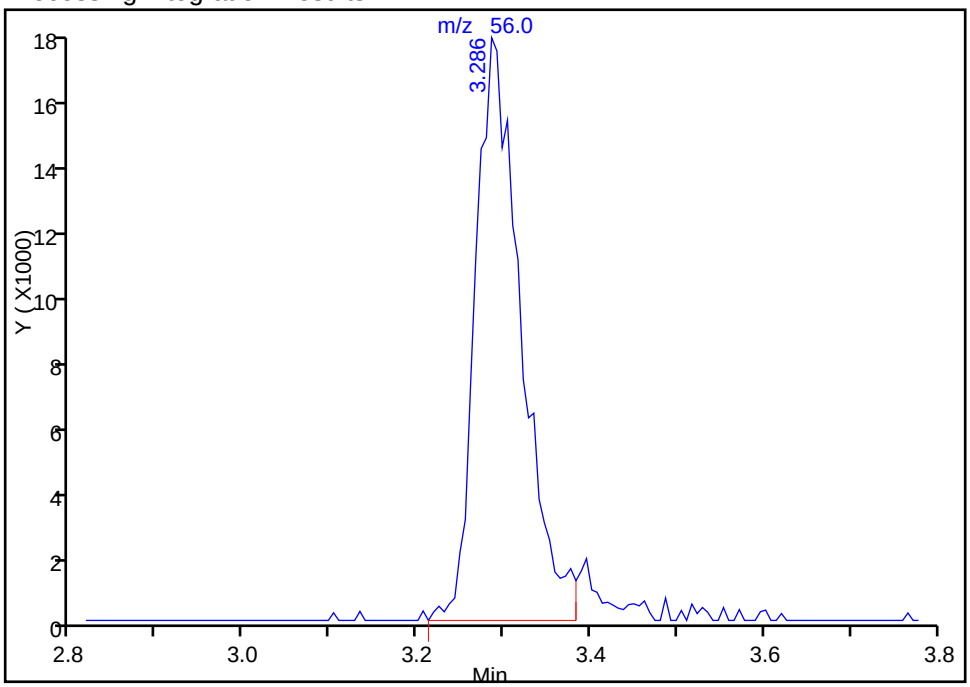
TestAmerica Pittsburgh

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

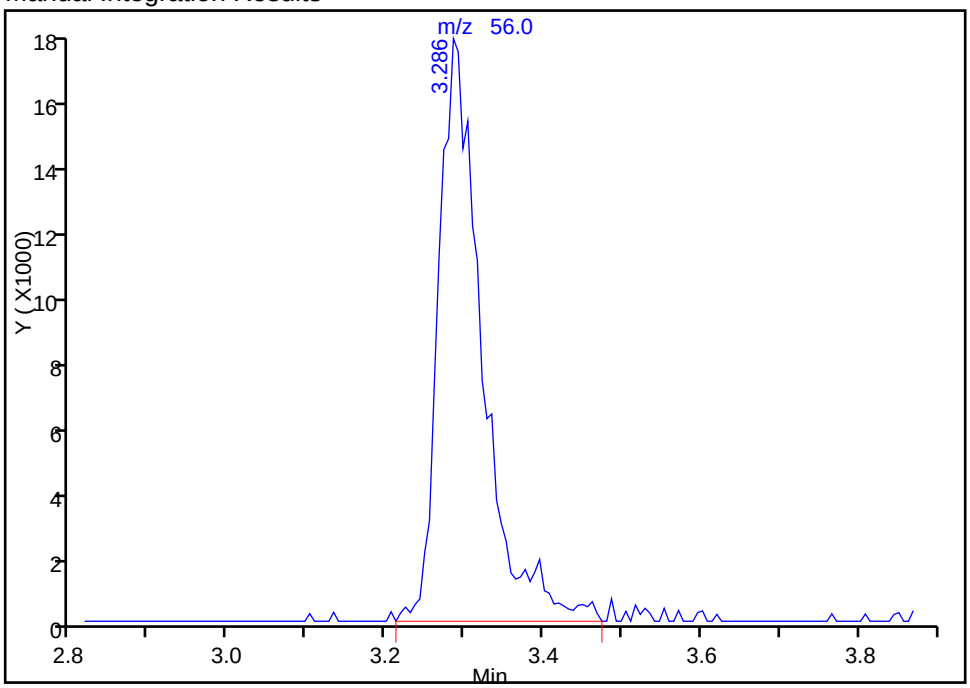
Processing Integration Results

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

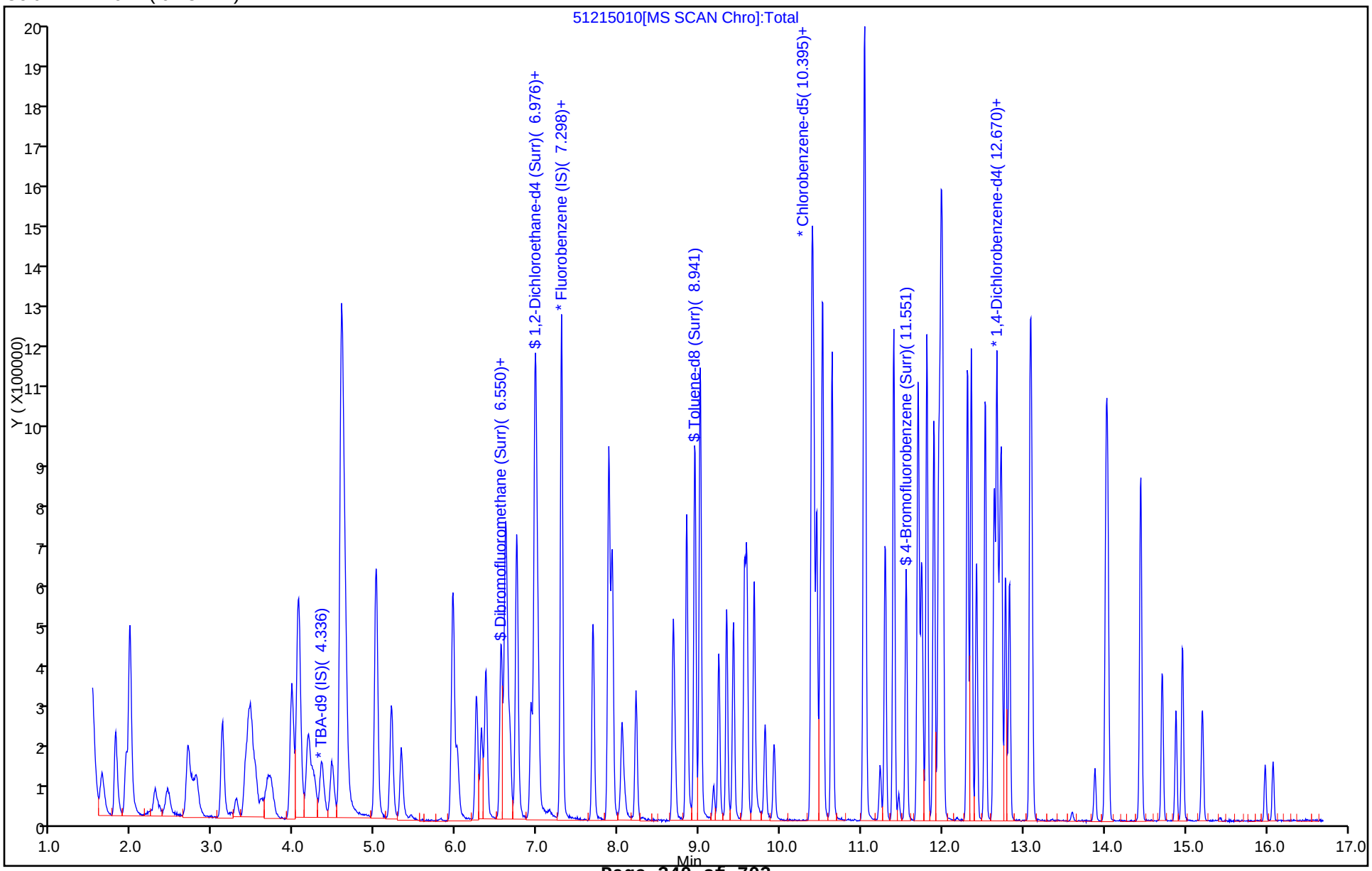
Report Date: 16-Dec-2014 08:51:12 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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

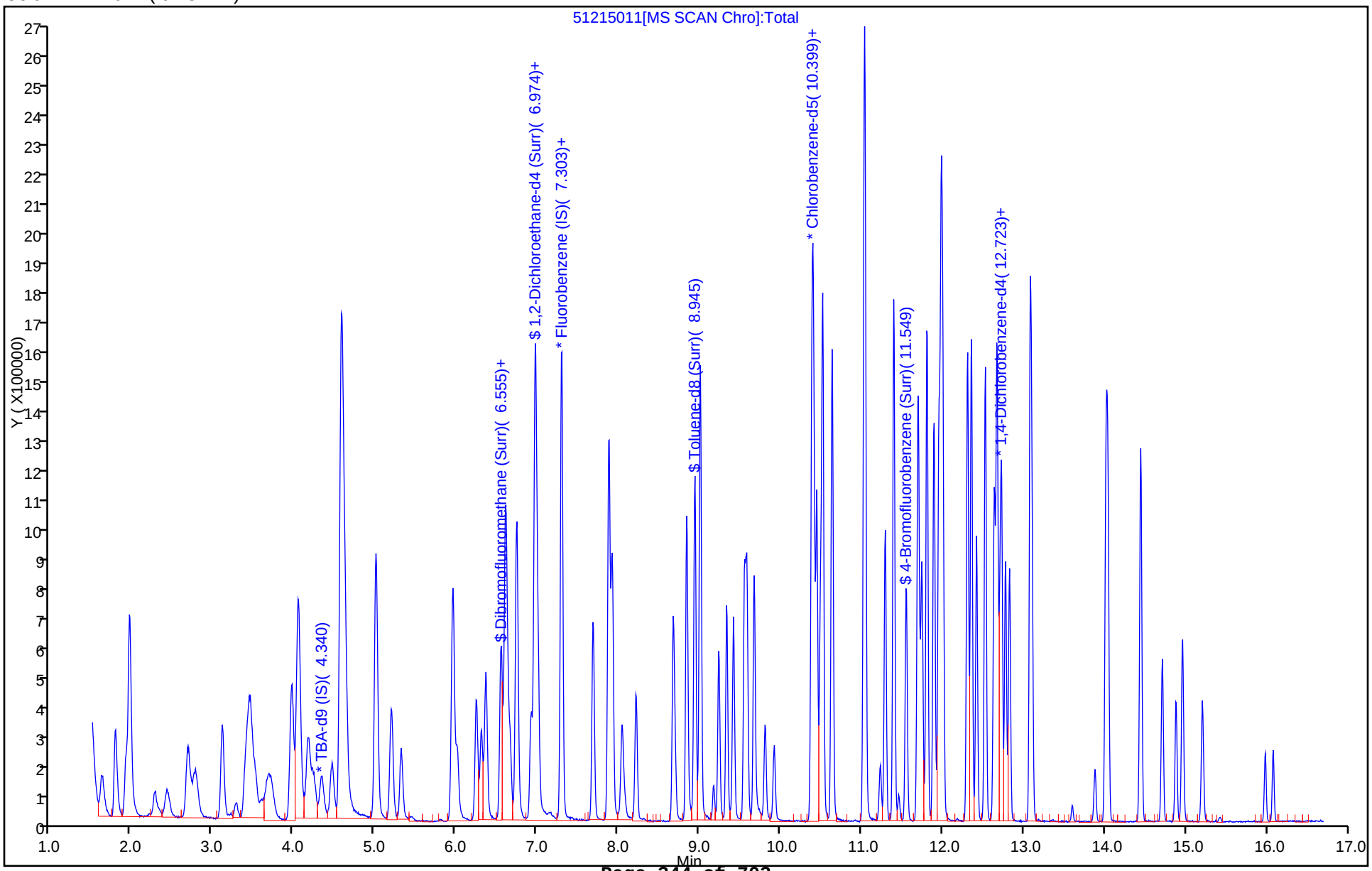
Report Date: 16-Dec-2014 08:51:15 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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

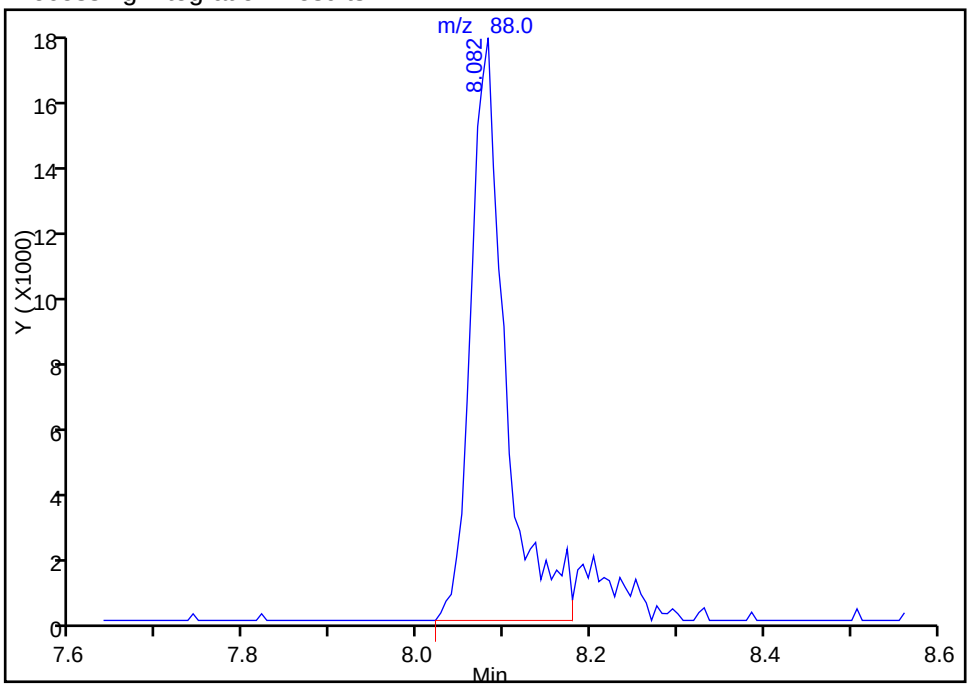
TestAmerica Pittsburgh

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

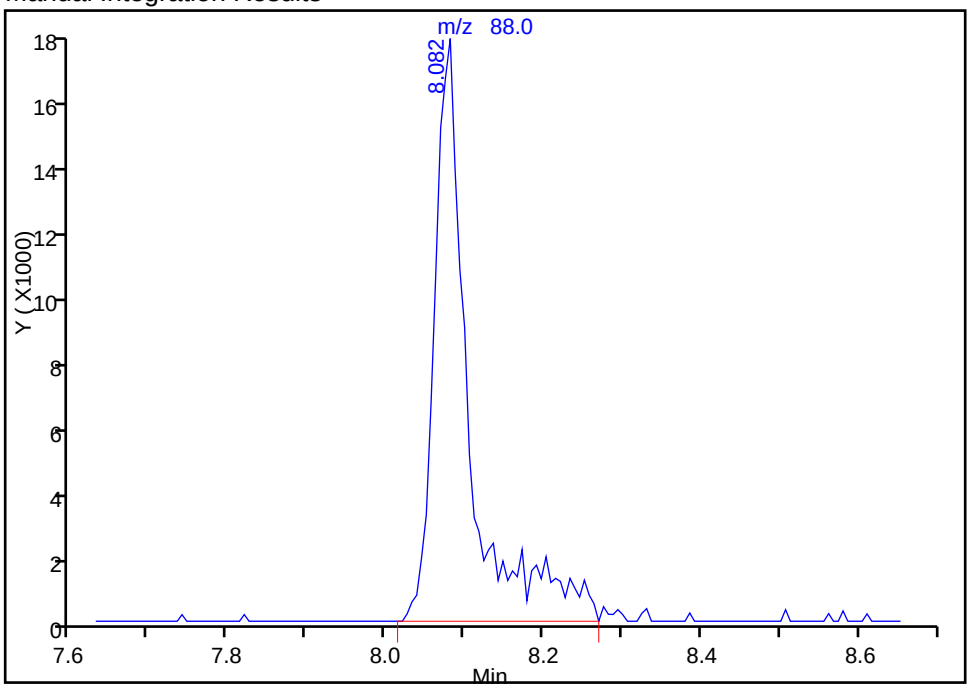
Processing Integration Results

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

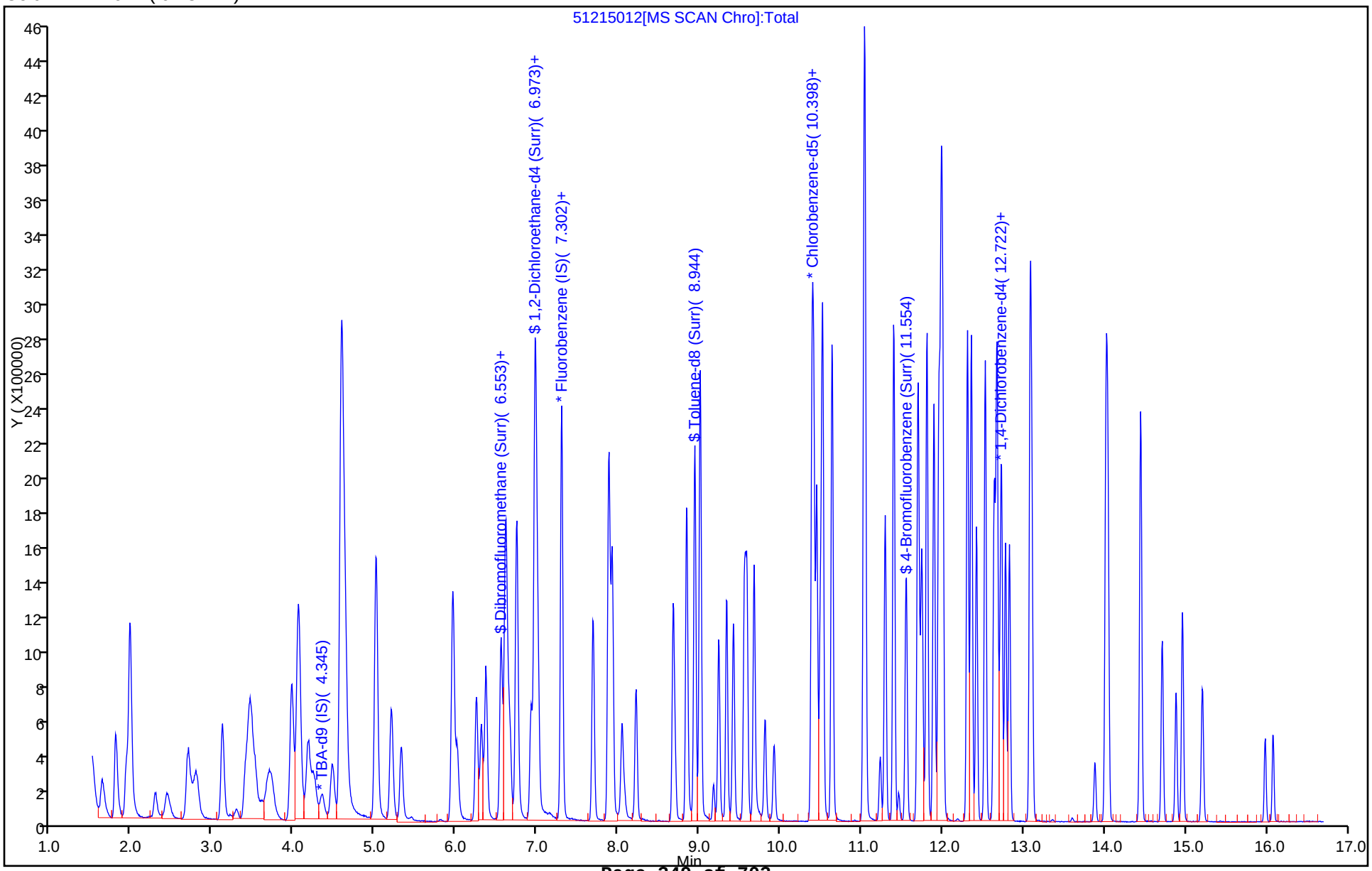
Report Date: 16-Dec-2014 08:51:16 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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

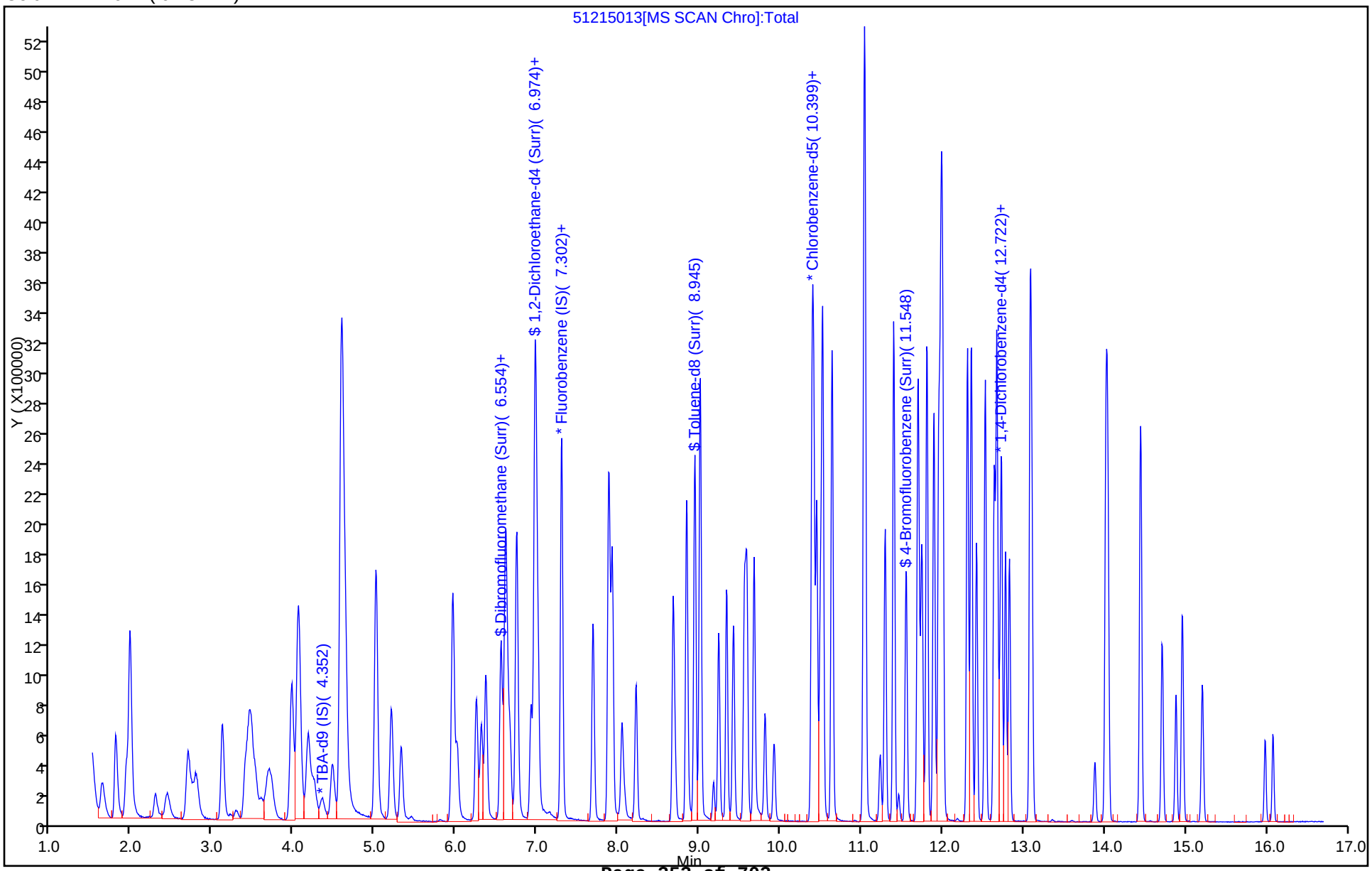
Report Date: 16-Dec-2014 08:51:18 Chrom Revision: 2.2 06-Nov-2014 14:50:32

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.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131443/2 Calibration Date: 01/22/2015 10:50

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: 50121002.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	0.3008	0.1000	10.0	10.0	0.3	20.0
Chloromethane	Ave	0.5915	0.5847	0.1000	9.89	10.0	-1.1	20.0
Vinyl chloride	Ave	0.4061	0.3686	0.1000	9.08	10.0	-9.2	20.0
Bromomethane	Ave	0.1215	0.1214	0.0500	10.0	10.0	-0.0	20.0
Chloroethane	Ave	0.2011	0.1955	0.0500	9.72	10.0	-2.8	20.0
Dichlorofluoromethane	Ave	0.3999	0.4406	0.0100	11.0	10.0	10.2	20.0
Trichlorofluoromethane	Ave	0.2533	0.3385	0.1000	13.4	10.0	33.6*	20.0
Ethyl ether	Ave	0.3601	0.3348	0.0100	9.30	10.0	-7.0	20.0
Acrolein	Ave	0.0539	0.0565	0.0100	31.5	30.0	4.9	20.0
1,1-Dichloroethene	Ave	0.2724	0.2745	0.1000	10.1	10.0	0.8	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2758	0.3104	0.1000	11.3	10.0	12.6	20.0
Acetone	Ave	0.1568	0.1531	0.0500	19.5	20.0	-2.4	20.0
Iodomethane	Ave	0.3488	0.3996	0.0100	11.5	10.0	14.6	20.0
Carbon disulfide	Ave	0.5280	0.5748	0.1000	10.9	10.0	8.9	20.0
Allyl chloride	Ave	0.1537	0.1433	0.0100	9.32	10.0	-6.8	20.0
Methyl acetate	Ave	0.4553	0.4082	0.1000	44.8	50.0	-10.3	20.0
Methylene Chloride	Lin2		0.3110	0.1000	9.38	10.0	-6.2	20.0
tert-Butyl alcohol	Ave	1.337	1.266	0.0100	94.7	100	-5.3	20.0
Acrylonitrile	Ave	0.2098	0.1871	0.0100	89.2	100	-10.8	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.3018	0.1000	10.9	10.0	9.4	20.0
Methyl tert-butyl ether	Ave	0.7145	0.6762	0.1000	9.46	10.0	-5.4	20.0
Hexane	Ave	0.6980	0.6399	0.0100	9.17	10.0	-8.3	20.0
1,1-Dichloroethane	Ave	0.6414	0.6640	0.2000	10.4	10.0	3.5	20.0
Vinyl acetate	Ave	0.6151	0.5670	0.0100	9.22	10.0	-7.8	20.0
2,2-Dichloropropane	Ave	0.1700	0.2333	0.0100	13.7	10.0	37.2*	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.2968	0.1000	9.96	10.0	-0.4	20.0
2-Butanone (MEK)	Ave	0.2466	0.2343	0.0500	19.0	20.0	-5.0	20.0
Bromochloromethane	Ave	0.1243	0.1259	0.0100	10.1	10.0	1.3	20.0
Tetrahydrofuran	Ave	0.1876	0.1368	0.0100	14.6	20.0	-27.0*	20.0
Chloroform	Ave	0.4850	0.5129	0.2000	10.6	10.0	5.8	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3808	0.1000	12.1	10.0	21.0*	20.0
Cyclohexane	Ave	0.8843	0.8406	0.1000	9.50	10.0	-5.0	20.0
Carbon tetrachloride	Ave	0.2733	0.3433	0.1000	12.6	10.0	25.6*	20.0
1,1-Dichloropropene	Ave	0.3970	0.4417	0.0100	11.1	10.0	11.3	20.0
Isobutyl alcohol	Ave	0.0144	0.0120	0.0100	210	250	-16.1	20.0
Benzene	Ave	1.236	1.240	0.5000	10.0	10.0	0.3	20.0
1,2-Dichloroethane	Ave	0.4801	0.5067	0.1000	10.6	10.0	5.5	20.0
n-Heptane	Ave	0.7079	0.6833	0.0100	9.65	10.0	-3.5	20.0
Trichloroethene	Ave	0.2647	0.2867	0.2000	10.8	10.0	8.3	20.0
Methylcyclohexane	Ave	0.5067	0.4923	0.1000	9.72	10.0	-2.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131443/2 Calibration Date: 01/22/2015 10:50

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: 50121002.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	0.3455	0.1000	9.08	10.0	-9.2	20.0
Dibromomethane	Ave	0.1569	0.1523	0.0100	9.71	10.0	-2.9	20.0
1,4-Dioxane	Ave	0.0028	0.0023*	0.0100	162	200	-19.1	20.0
Bromodichloromethane	Ave	0.3238	0.3243	0.2000	10.0	10.0	0.2	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.3609	0.2000	9.77	10.0	-2.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	1.971	0.1000	18.2	20.0	-8.8	20.0
Toluene	Ave	5.309	5.586	0.4000	10.5	10.0	5.2	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.450	0.1000	11.8	10.0	18.0	20.0
Ethyl methacrylate	Ave	1.464	1.344	0.0100	9.18	10.0	-8.2	20.0
1,1,2-Trichloroethane	Ave	1.042	1.021	0.1000	9.80	10.0	-2.0	20.0
Tetrachloroethene	Ave	0.9790	1.092	0.2000	11.2	10.0	11.5	20.0
1,3-Dichloropropane	Ave	2.006	1.915	0.0100	9.55	10.0	-4.5	20.0
2-Hexanone	Ave	1.729	1.602	0.1000	18.5	20.0	-7.3	20.0
Dibromochloromethane	Ave	0.7658	0.8518	0.1000	11.1	10.0	11.2	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	1.030	0.1000	10.7	10.0	6.6	20.0
3-Chlorobenzotrifluoride	Ave	1.745	2.084	0.0100	11.9	10.0	19.4	20.0
Chlorobenzene	Ave	3.229	3.535	0.5000	10.9	10.0	9.5	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.978	0.0100	12.1	10.0	21.3*	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	1.116	0.0100	11.3	10.0	13.3	20.0
Ethylbenzene	Ave	1.828	2.040	0.1000	11.2	10.0	11.6	20.0
m-Xylene & p-Xylene	Ave	2.226	2.377	0.1000	10.7	10.0	6.8	20.0
o-Xylene	Ave	2.164	2.388	0.3000	11.0	10.0	10.3	20.0
Styrene	Ave	3.642	3.755	0.3000	10.3	10.0	3.1	20.0
Bromoform	Ave	0.4840	0.4859	0.1000	10.0	10.0	0.4	20.0
2-Chlorobenzotrifluoride	Ave	1.670	2.052	0.0100	12.3	10.0	22.8*	20.0
Isopropylbenzene	Ave	5.400	6.134	0.1000	11.4	10.0	13.6	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.445	0.3000	9.87	10.0	-1.3	20.0
Bromobenzene	Ave	0.8995	0.8500	0.0100	9.45	10.0	-5.5	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.2979	0.0100	9.11	10.0	-8.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.4210	0.0100	9.37	10.0	-6.3	20.0
N-Propylbenzene	Ave	1.062	1.056	0.0100	9.94	10.0	-0.6	20.0
2-Chlorotoluene	Ave	0.8959	0.8790	0.0100	9.81	10.0	-1.9	20.0
3-Chlorotoluene	Ave	0.9551	1.038	0.0100	10.9	10.0	8.7	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.400	0.0100	10.7	10.0	6.9	20.0
4-Chlorotoluene	Ave	0.996	0.9791	0.0100	9.83	10.0	-1.7	20.0
tert-Butylbenzene	Ave	2.610	2.655	0.0100	10.2	10.0	1.7	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.262	0.0100	9.98	10.0	-0.2	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.9866	0.0100	11.0	10.0	9.5	20.0
sec-Butylbenzene	Ave	3.761	3.835	0.0100	10.2	10.0	2.0	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	3.163	0.0100	10.4	10.0	4.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131443/2 Calibration Date: 01/22/2015 10:50

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: 50121002.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	1.707	0.5000	9.74	10.0	-2.6	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.8696	0.0100	10.3	10.0	2.9	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.996	0.0100	10.8	10.0	8.0	20.0
n-Butylbenzene	Ave	2.768	2.649	0.0100	9.57	10.0	-4.3	20.0
1,2-Dichlorobenzene	Ave	1.576	1.555	0.4000	9.87	10.0	-1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1209	0.0500	8.46	10.0	-15.4	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	1.176	0.0100	35.5	30.0	18.5	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	1.135	0.0100	24.0	20.0	19.9	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.6967	0.2000	10.7	10.0	6.6	20.0
Hexachlorobutadiene	Ave	0.3100	0.3577	0.0100	11.5	10.0	15.4	20.0
Naphthalene	Ave	1.745	1.617	0.0100	9.27	10.0	-7.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.5514	0.0100	10.8	10.0	7.6	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.3087	0.0100	14.2	10.0	41.8*	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.3108	0.0100	15.6	10.0	55.9*	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.2104		9.89	10.0	-1.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.3387		9.69	10.0	-3.1	20.0
Toluene-d8 (Surr)	Ave	4.159	3.940		9.47	10.0	-5.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.556		9.82	10.0	-1.8	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 22-Jan-2015 10:50:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005379-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jan-2015 13:04:23 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: XAWRK012

First Level Reviewer: fergusond Date: 22-Jan-2015 11:20:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.299	4.299	0.000	84	179611	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.268	7.268	0.000	95	487517	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.358	10.358	0.000	98	107895	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	96	167132	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.526	6.526	0.000	86	102562	50.0	49.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	91	165098	50.0	48.5	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	95	425080	50.0	47.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	84	167835	50.0	49.1	
11 Dichlorodifluoromethane	85	1.622	1.622	0.000	98	146622	50.0	50.2	
12 Chloromethane	50	1.781	1.781	0.000	98	285049	50.0	49.4	
13 Vinyl chloride	62	1.914	1.914	0.000	98	179694	50.0	45.4	
14 Butadiene	39	1.951	1.951	0.000	99	283643	50.0	50.3	
15 Bromomethane	94	2.261	2.261	0.000	93	59189	50.0	50.0	M
16 Chloroethane	64	2.401	2.401	0.000	94	95291	50.0	48.6	
17 Dichlorofluoromethane	67	2.669	2.669	0.000	95	214821	50.0	55.1	
18 Trichlorofluoromethane	101	2.736	2.736	0.000	80	165019	50.0	66.8	
20 Ethyl ether	59	3.082	3.082	0.000	94	163203	50.0	46.5	
21 Acrolein	56	3.253	3.253	0.000	97	82643	150.0	157.4	
22 1,1-Dichloroethene	96	3.381	3.381	0.000	95	133827	50.0	50.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.441	3.441	0.000	94	151342	50.0	56.3	
24 Acetone	43	3.496	3.496	0.000	99	149255	100.0	97.6	
25 Iodomethane	142	3.587	3.587	0.000	97	194833	50.0	57.3	
26 Carbon disulfide	76	3.666	3.666	0.000	98	280224	50.0	54.4	
28 3-Chloro-1-propene	76	3.940	3.940	0.000	88	69857	50.0	46.6	
30 Methyl acetate	43	4.019	4.019	0.000	100	995122	250.0	224.2	
31 Methylene Chloride	84	4.141	4.141	0.000	90	151596	50.0	46.9	
32 2-Methyl-2-propanol	59	4.427	4.427	0.000	85	113706	500.0	473.5	
33 Acrylonitrile	53	4.549	4.549	0.000	99	912152	500.0	445.9	
34 trans-1,2-Dichloroethene	96	4.561	4.561	0.000	90	147118	50.0	54.7	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	90	329664	50.0	47.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.993	4.993	0.000	97	311951	50.0	45.8	
37 1,1-Dichloroethane	63	5.175	5.175	0.000	96	323693	50.0	51.8	
38 Vinyl acetate	43	5.291	5.291	0.000	97	276421	50.0	46.1	
44 2,2-Dichloropropane	77	5.930	5.930	0.000	56	113731	50.0	68.6	
45 cis-1,2-Dichloroethene	96	5.936	5.936	0.000	88	144678	50.0	49.8	
46 2-Butanone (MEK)	43	5.978	5.978	0.000	96	228469	100.0	95.0	
49 Chlorobromomethane	128	6.228	6.228	0.000	83	61376	50.0	50.6	
51 Tetrahydrofuran	42	6.282	6.282	0.000	91	133422	100.0	73.0	
52 Chloroform	83	6.337	6.337	0.000	96	250032	50.0	52.9	
53 1,1,1-Trichloroethane	97	6.532	6.532	0.000	92	185660	50.0	60.5	
54 Cyclohexane	56	6.587	6.587	0.000	92	409782	50.0	47.5	
56 Carbon tetrachloride	117	6.708	6.708	0.000	77	167351	50.0	62.8	
55 1,1-Dichloropropene	75	6.720	6.720	0.000	83	215318	50.0	55.6	
57 Isobutyl alcohol	41	6.939	6.939	0.000	94	146800	1250.0	1048.2	
58 Benzene	78	6.952	6.952	0.000	94	604593	50.0	50.2	
59 1,2-Dichloroethane	62	6.982	6.982	0.000	95	247015	50.0	52.8	
62 n-Heptane	43	7.274	7.274	0.000	86	333095	50.0	48.3	
64 Trichloroethene	130	7.663	7.663	0.000	96	139792	50.0	54.2	
66 Methylcyclohexane	83	7.864	7.864	0.000	93	240018	50.0	48.6	
67 1,2-Dichloropropane	63	7.901	7.901	0.000	95	168457	50.0	45.4	
68 Dibromomethane	93	8.022	8.022	0.000	97	74249	50.0	48.5	
70 1,4-Dioxane	88	8.065	8.065	0.000	63	22463	1000.0	809.3	
71 Dichlorobromomethane	83	8.199	8.199	0.000	95	158113	50.0	50.1	
74 cis-1,3-Dichloropropene	75	8.655	8.655	0.000	83	175944	50.0	48.8	
75 4-Methyl-2-pentanone (MIBK	43	8.819	8.819	0.000	97	425227	100.0	91.2	
76 Toluene	91	8.990	8.990	0.000	96	602658	50.0	52.6	
77 trans-1,3-Dichloropropene	75	9.221	9.221	0.000	93	156412	50.0	59.0	
78 Ethyl methacrylate	69	9.318	9.318	0.000	88	145013	50.0	45.9	
79 1,1,2-Trichloroethane	97	9.397	9.397	0.000	95	110179	50.0	49.0	
80 Tetrachloroethene	164	9.531	9.531	0.000	92	117812	50.0	55.8	
81 1,3-Dichloropropane	76	9.561	9.561	0.000	91	206647	50.0	47.7	
82 2-Hexanone	43	9.653	9.653	0.000	96	345775	100.0	92.7	
84 Chlorodibromomethane	129	9.793	9.793	0.000	89	91909	50.0	55.6	
85 Ethylene Dibromide	107	9.902	9.902	0.000	97	111115	50.0	53.3	
86 3-Chlorobenzotrifluoride	180	10.370	10.370	0.000	92	224904	50.0	59.7	
87 Chlorobenzene	112	10.389	10.389	0.000	91	381380	50.0	54.7	
88 4-Chlorobenzotrifluoride	180	10.425	10.425	0.000	94	213411	50.0	60.6	
89 1,1,1,2-Tetrachloroethane	131	10.474	10.474	0.000	93	120432	50.0	56.7	
90 Ethylbenzene	106	10.498	10.498	0.000	98	220137	50.0	55.8	
91 m-Xylene & p-Xylene	106	10.614	10.614	0.000	97	256473	50.0	53.4	
92 o-Xylene	106	11.009	11.009	0.000	98	257672	50.0	55.2	
93 Styrene	104	11.027	11.027	0.000	86	405134	50.0	51.5	
94 Bromoform	173	11.210	11.210	0.000	96	52429	50.0	50.2	
96 2-Chlorobenzotrifluoride	180	11.271	11.271	0.000	93	221350	50.0	61.4	
97 Isopropylbenzene	105	11.380	11.380	0.000	97	661850	50.0	56.8	
99 1,1,2,2-Tetrachloroethane	83	11.672	11.672	0.000	95	155868	50.0	49.3	
100 Bromobenzene	156	11.684	11.684	0.000	95	142062	50.0	47.2	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	89	49795	50.0	45.5	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	76	70358	50.0	46.9	
103 N-Propylbenzene	120	11.788	11.788	0.000	99	176418	50.0	49.7	
104 2-Chlorotoluene	126	11.873	11.873	0.000	94	146901	50.0	49.1	
105 3-Chlorotoluene	126	11.934	11.934	0.000	97	173475	50.0	54.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.958	11.958	0.000	93	568221	50.0	53.4	
107 4-Chlorotoluene	126	11.976	11.976	0.000	99	163637	50.0	49.2	
108 tert-Butylbenzene	119	12.287	12.287	0.000	96	443790	50.0	50.9	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	97	545198	50.0	49.9	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	98	164896	50.0	54.8	
112 sec-Butylbenzene	105	12.506	12.506	0.000	96	640873	50.0	51.0	
113 1,3-Dichlorobenzene	146	12.615	12.615	0.000	96	277401	50.0	48.9	
114 4-Isopropyltoluene	119	12.652	12.652	0.000	96	528689	50.0	52.2	
115 1,4-Dichlorobenzene	146	12.707	12.707	0.000	92	285307	50.0	48.7	
116 2,4-Dichloro-1-(triflourom	214	12.755	12.755	0.000	98	145334	50.0	51.4	
118 2,5-Dichlorobenzotrifluori	214	12.804	12.804	0.000	98	166390	50.0	54.0	
120 n-Butylbenzene	91	13.059	13.059	0.000	97	442690	50.0	47.9	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	94	259831	50.0	49.3	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.862	0.000	71	20198	50.0	42.3	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	98	589879	150.0	177.7	
125 2,3- & 3,4- Dichlorotoluen	125	14.422	14.422	0.000	99	379469	100.0	119.9	
126 1,2,4-Trichlorobenzene	180	14.696	14.696	0.000	94	116443	50.0	53.3	
127 Hexachlorobutadiene	225	14.866	14.866	0.000	94	59790	50.0	57.7	
128 Naphthalene	128	14.939	14.939	0.000	98	270288	50.0	46.4	
129 1,2,3-Trichlorobenzene	180	15.182	15.182	0.000	93	92154	50.0	53.8	
131 2,4,5-Trichlorotoluene	159	15.961	15.961	0.000	97	51590	50.0	70.9	
130 2,3,6-Trichlorotoluene	159	16.065	16.065	0.000	93	51951	50.0	77.9	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	104.5	
S 133 Xylenes, Total	106				0		100.0	108.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	107.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOAPRI_00097	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		
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	

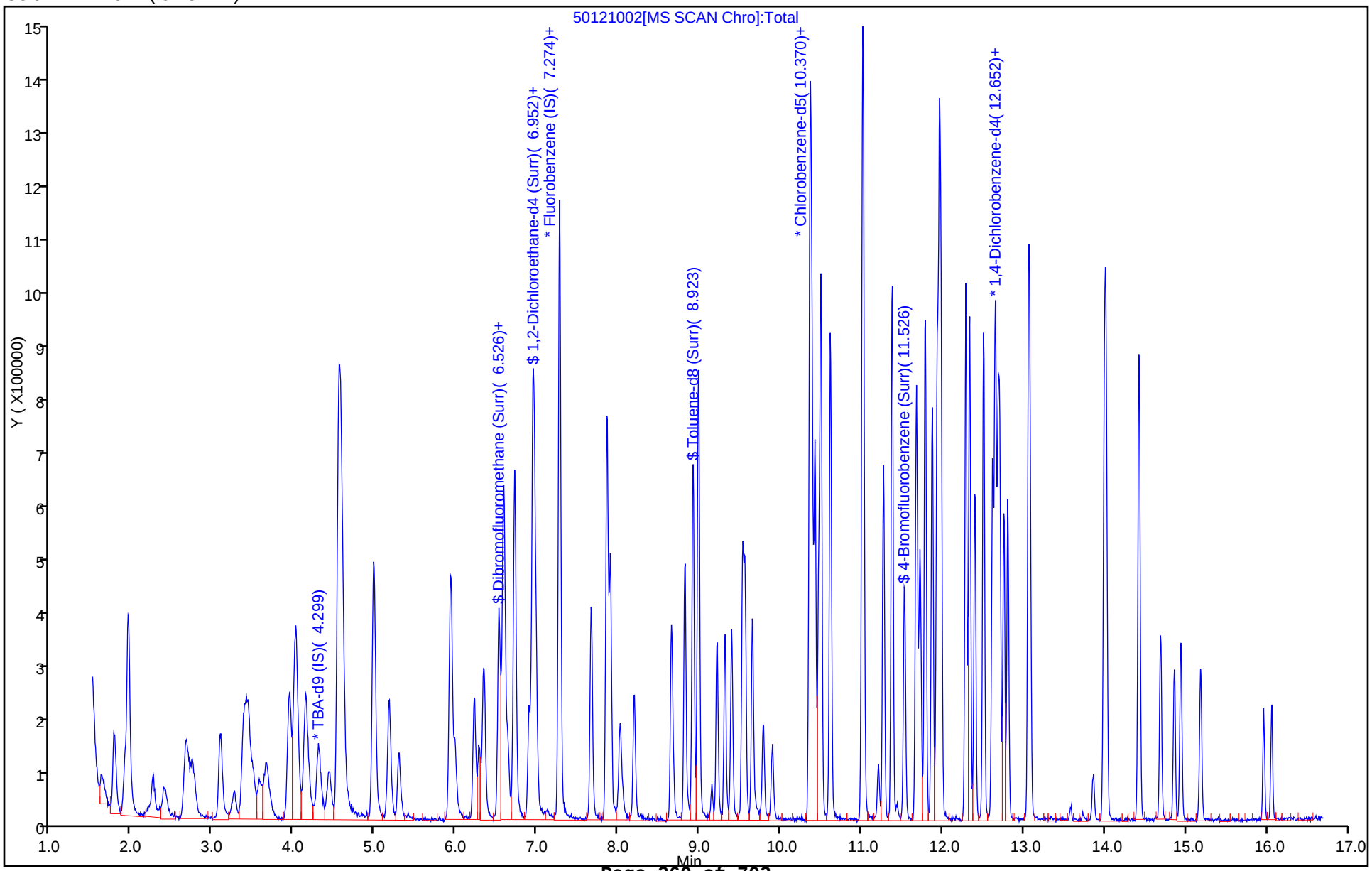
Report Date: 22-Jan-2015 13:04:25 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121002.D

Injection Date:	22-Jan-2015 10:50:30	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

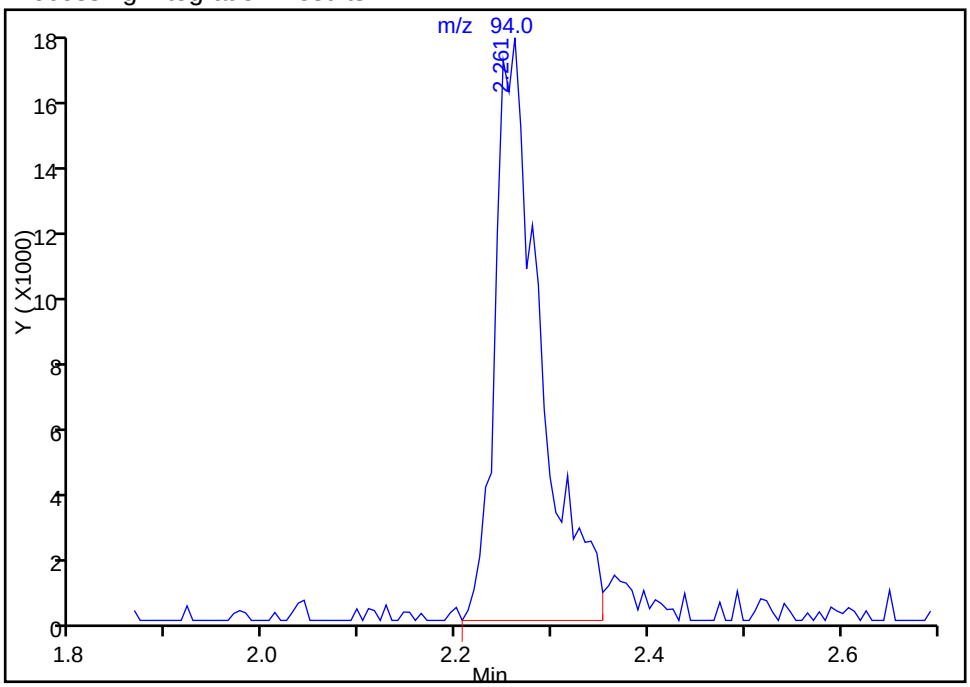
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121002.D				
Injection Date:	22-Jan-2015 10:50:30	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

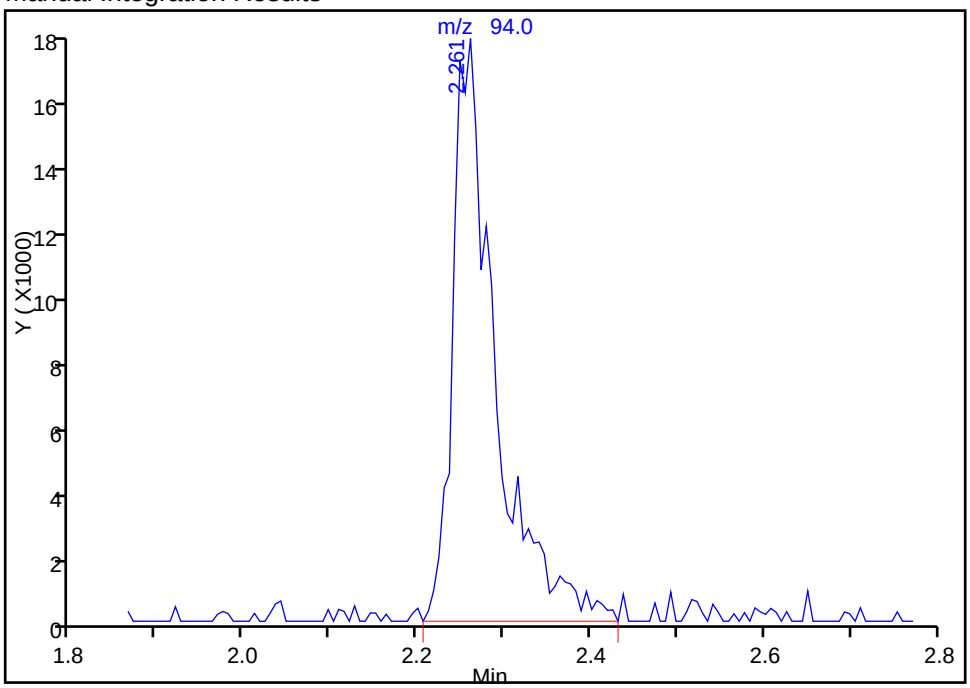
Processing Integration Results

RT: 2.26
Area: 55953
Amount: 47.248985
Amount Units: ng



Manual Integration Results

RT: 2.26
Area: 59189
Amount: 49.981595
Amount Units: ng



Reviewer: fergusond, 22-Jan-2015 11:20:37
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131582/3 Calibration Date: 01/23/2015 11:21

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: 50123003.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	0.1766	0.0100	22.2	20.0	11.2	20.0

Report Date: 23-Jan-2015 14:48:58 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 23-Jan-2015 11:21:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005396-003
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub12

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 14:48:57 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 14:48:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.297	4.297	0.000	88	190658	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	98	536762	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.362	0.000	98	113288	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.680	0.000	97	150622	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.523	6.523	0.000	74	112843	50.0	49.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	93	172135	50.0	45.9	
$ 7 Toluene-d8 (Surr)	98	8.920	8.920	0.000	95	483348	50.0	51.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.530	0.000	82	183264	50.0	51.0	
11 Dichlorodifluoromethane	85	1.626	1.626	0.000	97	139428	50.0	43.3	
12 Chloromethane	50	1.778	1.778	0.000	99	237666	50.0	37.4	
13 Vinyl chloride	62	1.906	1.906	0.000	98	177836	50.0	40.8	
14 Butadiene	39	1.948	1.948	0.000	99	244745	50.0	39.4	
15 Bromomethane	94	2.247	2.247	0.000	93	62251	50.0	47.7	
16 Chloroethane	64	2.411	2.411	0.000	96	96514	50.0	44.7	
17 Dichlorofluoromethane	67	2.660	2.660	0.000	98	204227	50.0	47.6	
18 Trichlorofluoromethane	101	2.709	2.709	0.000	92	155705	50.0	57.3	
20 Ethyl ether	59	3.092	3.092	0.000	95	159438	50.0	41.2	
21 Acrolein	56	3.256	3.256	0.000	99	79567	150.0	137.6	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	91	129823	50.0	44.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.433	3.433	0.000	96	139967	50.0	47.3	
24 Acetone	43	3.494	3.494	0.000	100	152975	100.0	90.9	
25 Iodomethane	142	3.597	3.597	0.000	97	188849	50.0	50.4	
26 Carbon disulfide	76	3.658	3.658	0.000	100	315860	50.0	55.7	
28 3-Chloro-1-propene	76	3.938	3.938	0.000	87	81239	50.0	49.2	
30 Methyl acetate	43	4.023	4.023	0.000	100	961065	250.0	196.6	
31 Methylene Chloride	84	4.138	4.138	0.000	93	172500	50.0	48.6	
32 2-Methyl-2-propanol	59	4.424	4.424	0.000	88	124546	500.0	488.6	
33 Acrylonitrile	53	4.546	4.546	0.000	98	821884	500.0	364.9	
34 trans-1,2-Dichloroethene	96	4.570	4.570	0.000	90	150070	50.0	50.7	
35 Methyl tert-butyl ether	73	4.595	4.595	0.000	93	362551	50.0	47.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	97	301937	50.0	40.3	
37 1,1-Dichloroethane	63	5.173	5.173	0.000	97	319217	50.0	46.4	
38 Vinyl acetate	43	5.294	5.294	0.000	96	273439	50.0	41.4	
44 2,2-Dichloropropane	77	5.927	5.927	0.000	60	125040	50.0	68.5	
45 cis-1,2-Dichloroethene	96	5.933	5.933	0.000	86	160777	50.0	50.2	
46 2-Butanone (MEK)	43	5.982	5.982	0.000	97	208918	100.0	78.9	
49 Chlorobromomethane	128	6.231	6.231	0.000	88	68010	50.0	51.0	
51 Tetrahydrofuran	42	6.280	6.280	0.000	95	138503	100.0	68.8	
52 Chloroform	83	6.341	6.341	0.000	96	270305	50.0	51.9	
53 1,1,1-Trichloroethane	97	6.529	6.529	0.000	94	193995	50.0	57.4	
54 Cyclohexane	56	6.584	6.584	0.000	96	367334	50.0	38.7	
56 Carbon tetrachloride	117	6.718	6.718	0.000	69	165227	50.0	56.3	
55 1,1-Dichloropropene	75	6.724	6.724	0.000	87	221136	50.0	51.9	
57 Isobutyl alcohol	41	6.943	6.943	0.000	93	145852	1250.0	945.9	
58 Benzene	78	6.955	6.955	0.000	97	662510	50.0	49.9	
59 1,2-Dichloroethane	62	6.979	6.979	0.000	96	254059	50.0	49.3	
62 n-Heptane	43	7.278	7.278	0.000	96	290617	50.0	38.2	
64 Trichloroethene	130	7.661	7.661	0.000	95	138217	50.0	48.6	
66 Methylcyclohexane	83	7.862	7.862	0.000	97	255342	50.0	46.9	
67 1,2-Dichloropropane	63	7.904	7.904	0.000	95	176125	50.0	43.1	
68 Dibromomethane	93	8.026	8.026	0.000	92	83442	50.0	49.5	
70 1,4-Dioxane	88	8.056	8.056	0.000	90	29362	1000.0	960.8	
71 Dichlorobromomethane	83	8.196	8.196	0.000	98	181630	50.0	52.2	
73 2-Chloroethyl vinyl ether	63	8.519	8.519	0.000	88	189602	100.0	111.2	
74 cis-1,3-Dichloropropene	75	8.652	8.652	0.000	87	206881	50.0	52.2	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.823	0.000	99	448517	100.0	91.7	
76 Toluene	91	8.987	8.987	0.000	97	638338	50.0	53.1	
77 trans-1,3-Dichloropropene	75	9.218	9.218	0.000	98	176929	50.0	63.5	
78 Ethyl methacrylate	69	9.315	9.315	0.000	92	165115	50.0	49.8	
79 1,1,2-Trichloroethane	97	9.401	9.401	0.000	94	120286	50.0	51.0	
80 Tetrachloroethene	164	9.535	9.535	0.000	93	110414	50.0	49.8	
81 1,3-Dichloropropane	76	9.565	9.565	0.000	94	230811	50.0	50.8	
82 2-Hexanone	43	9.656	9.656	0.000	98	346101	100.0	88.4	
84 Chlorodibromomethane	129	9.796	9.796	0.000	89	97619	50.0	56.3	
85 Ethylene Dibromide	107	9.900	9.900	0.000	97	116977	50.0	53.4	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	93	214170	50.0	54.2	
87 Chlorobenzene	112	10.392	10.392	0.000	90	385163	50.0	52.6	
88 4-Chlorobenzotrifluoride	180	10.429	10.429	0.000	95	211669	50.0	57.3	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	91	120513	50.0	54.0	
90 Ethylbenzene	106	10.496	10.496	0.000	99	214130	50.0	51.7	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	99	272585	50.0	54.0	
92 o-Xylene	106	11.013	11.013	0.000	99	256365	50.0	52.3	
93 Styrene	104	11.025	11.025	0.000	94	428783	50.0	52.0	
94 Bromoform	173	11.214	11.214	0.000	93	58591	50.0	53.4	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	94	204131	50.0	53.9	
97 Isopropylbenzene	105	11.378	11.378	0.000	98	660029	50.0	53.9	
99 1,1,2,2-Tetrachloroethane	83	11.670	11.670	0.000	96	169131	50.0	51.0	
100 Bromobenzene	156	11.688	11.688	0.000	97	152542	50.0	56.3	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	88	49834	50.0	50.6	
102 trans-1,4-Dichloro-2-buten	53	11.731	11.731	0.000	76	64842	50.0	47.9	
103 N-Propylbenzene	120	11.791	11.791	0.000	99	178863	50.0	55.9	
104 2-Chlorotoluene	126	11.871	11.871	0.000	94	146538	50.0	54.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.931	11.931	0.000	97	176463	50.0	61.3	
106 1,3,5-Trimethylbenzene	105	11.962	11.962	0.000	94	542479	50.0	56.6	
107 4-Chlorotoluene	126	11.980	11.980	0.000	99	152065	50.0	50.7	
108 tert-Butylbenzene	119	12.290	12.290	0.000	95	429381	50.0	54.6	
110 1,2,4-Trimethylbenzene	105	12.333	12.333	0.000	96	544966	50.0	55.3	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.400	0.000	97	149764	50.0	55.2	
112 sec-Butylbenzene	105	12.509	12.509	0.000	96	630400	50.0	55.6	
113 1,3-Dichlorobenzene	146	12.619	12.619	0.000	95	261985	50.0	51.2	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	96	506940	50.0	55.6	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	92	278065	50.0	52.7	
116 2,4-Dichloro-1-(triflourom	214	12.759	12.759	0.000	97	139978	50.0	55.0	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	150525	50.0	54.2	
120 n-Butylbenzene	91	13.063	13.063	0.000	99	456023	50.0	54.7	
121 1,2-Dichlorobenzene	146	13.081	13.081	0.000	95	253722	50.0	53.5	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	70	24089	50.0	56.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.006	0.000	99	502367	150.0	168.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.426	0.000	99	323251	100.0	113.3	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	94	101205	50.0	51.4	
127 Hexachlorobutadiene	225	14.864	14.864	0.000	96	49161	50.0	52.6	
128 Naphthalene	128	14.943	14.943	0.000	98	254384	50.0	48.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.186	0.000	94	83078	50.0	53.8	
131 2,4,5-Trichlorotoluene	159	15.965	15.965	0.000	97	34414	50.0	52.5	
130 2,3,6-Trichlorotoluene	159	16.056	16.056	0.000	95	35115	50.0	58.4	
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	106.3	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	115.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOAPRI_00097	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWVApri Res_00001	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	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

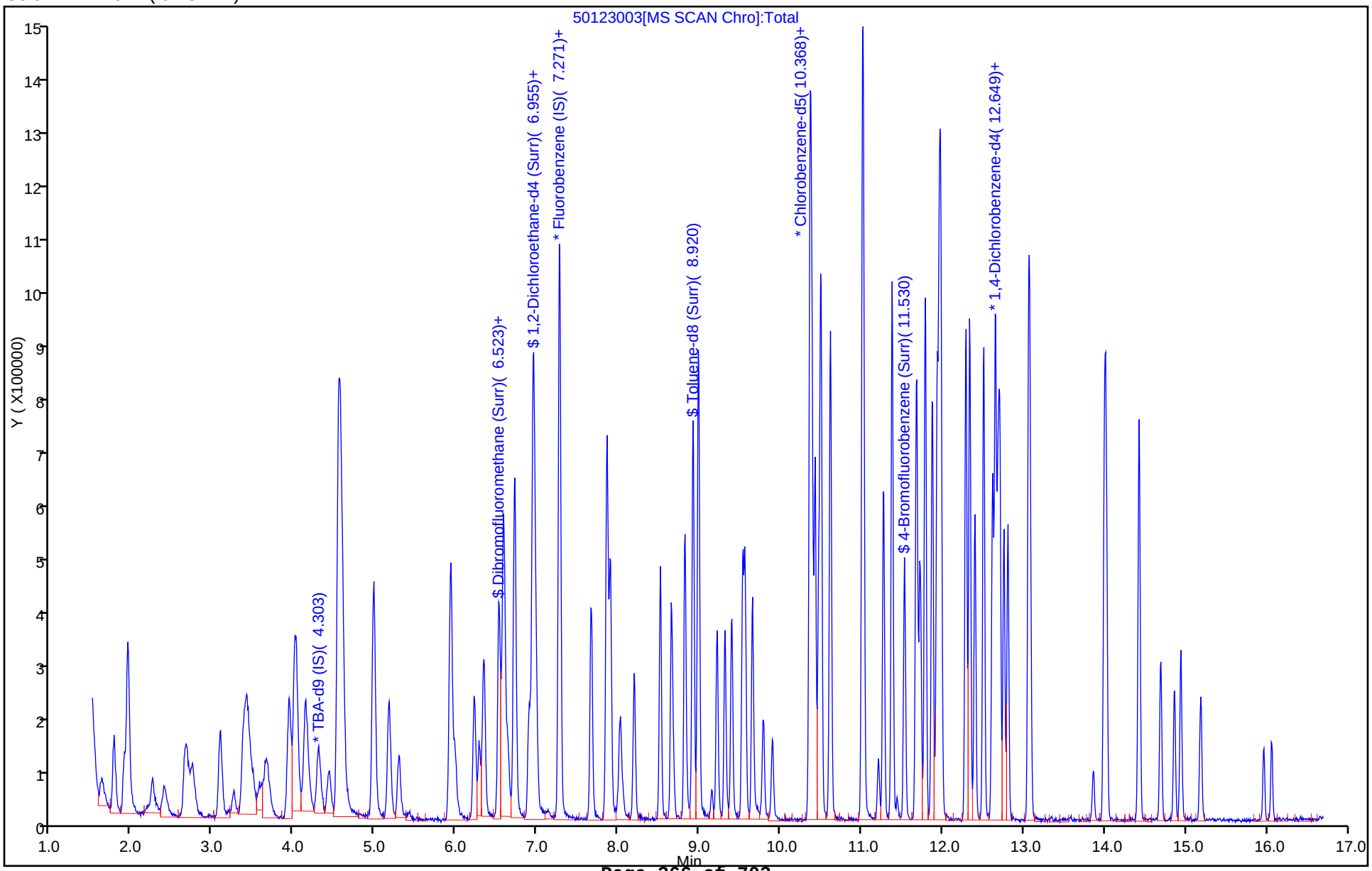
Report Date: 23-Jan-2015 14:48:59 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123003.D

Injection Date:	23-Jan-2015 11:21:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSVOA_LL_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.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131582/3 Calibration Date: 01/23/2015 11:21

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: 50123003.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	0.2598	0.1000	8.66	10.0	-13.4	20.0
Chloromethane	Ave	0.5915	0.4428	0.1000	7.49	10.0	-25.1*	20.0
Vinyl chloride	Ave	0.4061	0.3313	0.1000	8.16	10.0	-18.4	20.0
Bromomethane	Ave	0.1215	0.1160	0.0500	9.55	10.0	-4.5	20.0
Chloroethane	Ave	0.2011	0.1798	0.0500	8.94	10.0	-10.6	20.0
Dichlorofluoromethane	Ave	0.3999	0.3805	0.0100	9.51	10.0	-4.9	20.0
Trichlorofluoromethane	Ave	0.2533	0.2901	0.1000	11.5	10.0	14.5	20.0
Ethyl ether	Ave	0.3601	0.2970	0.0100	8.25	10.0	-17.5	20.0
Acrolein	Ave	0.0539	0.0494	0.0100	27.5	30.0	-8.2	20.0
1,1-Dichloroethene	Ave	0.2724	0.2419	0.1000	8.88	10.0	-11.2	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2758	0.2608	0.1000	9.45	10.0	-5.5	20.0
Acetone	Ave	0.1568	0.1425	0.0500	18.2	20.0	-9.1	20.0
Iodomethane	Ave	0.3488	0.3518	0.0100	10.1	10.0	0.9	20.0
Carbon disulfide	Ave	0.5280	0.5885	0.1000	11.1	10.0	11.5	20.0
Allyl chloride	Ave	0.1537	0.1514	0.0100	9.85	10.0	-1.5	20.0
Methyl acetate	Ave	0.4553	0.3581	0.1000	39.3	50.0	-21.3*	20.0
Methylene Chloride	Lin2		0.3214	0.1000	9.73	10.0	-2.7	20.0
tert-Butyl alcohol	Ave	1.337	1.306	0.0100	97.7	100	-2.3	20.0
Acrylonitrile	Ave	0.2098	0.1531	0.0100	73.0	100	-27.0*	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.2796	0.1000	10.1	10.0	1.4	20.0
Methyl tert-butyl ether	Ave	0.7145	0.6754	0.1000	9.45	10.0	-5.5	20.0
Hexane	Ave	0.6980	0.5625	0.0100	8.06	10.0	-19.4	20.0
1,1-Dichloroethane	Ave	0.6414	0.5947	0.2000	9.27	10.0	-7.3	20.0
Vinyl acetate	Ave	0.6151	0.5094	0.0100	8.28	10.0	-17.2	20.0
2,2-Dichloropropane	Ave	0.1700	0.2330	0.0100	13.7	10.0	37.0*	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.2995	0.1000	10.0	10.0	0.5	20.0
2-Butanone (MEK)	Ave	0.2466	0.1946	0.0500	15.8	20.0	-21.1*	20.0
Bromochloromethane	Ave	0.1243	0.1267	0.0100	10.2	10.0	1.9	20.0
Tetrahydrofuran	Ave	0.1876	0.1290	0.0100	13.8	20.0	-31.2*	20.0
Chloroform	Ave	0.4850	0.5036	0.2000	10.4	10.0	3.8	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3614	0.1000	11.5	10.0	14.8	20.0
Cyclohexane	Ave	0.8843	0.6844	0.1000	7.74	10.0	-22.6*	20.0
Carbon tetrachloride	Ave	0.2733	0.3078	0.1000	11.3	10.0	12.6	20.0
1,1-Dichloropropene	Ave	0.3970	0.4120	0.0100	10.4	10.0	3.8	20.0
Isobutyl alcohol	Ave	0.0144	0.0109	0.0100	189	250	-24.3*	20.0
Benzene	Ave	1.236	1.234	0.5000	9.98	10.0	-0.2	20.0
1,2-Dichloroethane	Ave	0.4801	0.4733	0.1000	9.86	10.0	-1.4	20.0
n-Heptane	Ave	0.7079	0.5414	0.0100	7.65	10.0	-23.5*	20.0
Trichloroethene	Ave	0.2647	0.2575	0.2000	9.73	10.0	-2.7	20.0
Methylcyclohexane	Ave	0.5067	0.4757	0.1000	9.39	10.0	-6.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131582/3 Calibration Date: 01/23/2015 11:21

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: 50123003.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	0.3281	0.1000	8.62	10.0	-13.8	20.0
Dibromomethane	Ave	0.1569	0.1555	0.0100	9.91	10.0	-0.9	20.0
1,4-Dioxane	Ave	0.0028	0.0027*	0.0100	192	200	-3.9	20.0
Bromodichloromethane	Ave	0.3238	0.3384	0.2000	10.4	10.0	4.5	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.3854	0.2000	10.4	10.0	4.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	1.980	0.1000	18.3	20.0	-8.3	20.0
Toluene	Ave	5.309	5.635	0.4000	10.6	10.0	6.1	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.562	0.1000	12.7	10.0	27.1*	20.0
Ethyl methacrylate	Ave	1.464	1.457	0.0100	9.96	10.0	-0.4	20.0
1,1,2-Trichloroethane	Ave	1.042	1.062	0.1000	10.2	10.0	1.9	20.0
Tetrachloroethene	Ave	0.9790	0.9746	0.2000	9.96	10.0	-0.4	20.0
1,3-Dichloropropane	Ave	2.006	2.037	0.0100	10.2	10.0	1.5	20.0
2-Hexanone	Ave	1.729	1.528	0.1000	17.7	20.0	-11.6	20.0
Dibromochloromethane	Ave	0.7658	0.8617	0.1000	11.3	10.0	12.5	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	1.033	0.1000	10.7	10.0	6.9	20.0
3-Chlorobenzotrifluoride	Ave	1.745	1.890	0.0100	10.8	10.0	8.3	20.0
Chlorobenzene	Ave	3.229	3.400	0.5000	10.5	10.0	5.3	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.868	0.0100	11.5	10.0	14.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	1.064	0.0100	10.8	10.0	8.0	20.0
Ethylbenzene	Ave	1.828	1.890	0.1000	10.3	10.0	3.4	20.0
m-Xylene & p-Xylene	Ave	2.226	2.406	0.1000	10.8	10.0	8.1	20.0
o-Xylene	Ave	2.164	2.263	0.3000	10.5	10.0	4.6	20.0
Styrene	Ave	3.642	3.785	0.3000	10.4	10.0	3.9	20.0
Bromoform	Ave	0.4840	0.5172	0.1000	10.7	10.0	6.8	20.0
2-Chlorobenzotrifluoride	Ave	1.670	1.802	0.0100	10.8	10.0	7.9	20.0
Isopropylbenzene	Ave	5.400	5.826	0.1000	10.8	10.0	7.9	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.493	0.3000	10.2	10.0	2.0	20.0
Bromobenzene	Ave	0.8995	1.013	0.0100	11.3	10.0	12.6	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.3309	0.0100	10.1	10.0	1.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.4305	0.0100	9.58	10.0	-4.2	20.0
N-Propylbenzene	Ave	1.062	1.188	0.0100	11.2	10.0	11.8	20.0
2-Chlorotoluene	Ave	0.8959	0.9729	0.0100	10.9	10.0	8.6	20.0
3-Chlorotoluene	Ave	0.9551	1.172	0.0100	12.3	10.0	22.7*	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.602	0.0100	11.3	10.0	13.2	20.0
4-Chlorotoluene	Ave	0.996	1.010	0.0100	10.1	10.0	1.4	20.0
tert-Butylbenzene	Ave	2.610	2.851	0.0100	10.9	10.0	9.2	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.618	0.0100	11.1	10.0	10.7	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.9943	0.0100	11.0	10.0	10.4	20.0
sec-Butylbenzene	Ave	3.761	4.185	0.0100	11.1	10.0	11.3	20.0
1,3-Dichlorobenzene	Ave	1.698	1.739	0.6000	10.2	10.0	2.5	20.0
4-Isopropyltoluene	Ave	3.029	3.366	0.0100	11.1	10.0	11.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131582/3 Calibration Date: 01/23/2015 11:21

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: 50123003.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	1.846	0.5000	10.5	10.0	5.3	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.9293	0.0100	11.0	10.0	10.0	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.999	0.0100	10.8	10.0	8.4	20.0
n-Butylbenzene	Ave	2.768	3.028	0.0100	10.9	10.0	9.4	20.0
1,2-Dichlorobenzene	Ave	1.576	1.684	0.4000	10.7	10.0	6.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1599	0.0500	11.2	10.0	11.9	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	1.112	0.0100	33.6	30.0	12.0	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	1.073	0.0100	22.7	20.0	13.3	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.6719	0.2000	10.3	10.0	2.8	20.0
Hexachlorobutadiene	Ave	0.3100	0.3264	0.0100	10.5	10.0	5.3	20.0
Naphthalene	Ave	1.745	1.689	0.0100	9.68	10.0	-3.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.5516	0.0100	10.8	10.0	7.6	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.2285	0.0100	10.5	10.0	5.0	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.2331	0.0100	11.7	10.0	16.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.2102		9.88	10.0	-1.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.3207		9.18	10.0	-8.2	20.0
Toluene-d8 (Surr)	Ave	4.159	4.267		10.3	10.0	2.6	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.618		10.2	10.0	2.1	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 23-Jan-2015 11:21:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005396-003
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub12

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 14:48:57 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 14:48:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.297	4.297	0.000	88	190658	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	98	536762	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.362	0.000	98	113288	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.680	0.000	97	150622	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.523	6.523	0.000	74	112843	50.0	49.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	93	172135	50.0	45.9	
$ 7 Toluene-d8 (Surr)	98	8.920	8.920	0.000	95	483348	50.0	51.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.530	0.000	82	183264	50.0	51.0	
11 Dichlorodifluoromethane	85	1.626	1.626	0.000	97	139428	50.0	43.3	
12 Chloromethane	50	1.778	1.778	0.000	99	237666	50.0	37.4	
13 Vinyl chloride	62	1.906	1.906	0.000	98	177836	50.0	40.8	
14 Butadiene	39	1.948	1.948	0.000	99	244745	50.0	39.4	
15 Bromomethane	94	2.247	2.247	0.000	93	62251	50.0	47.7	
16 Chloroethane	64	2.411	2.411	0.000	96	96514	50.0	44.7	
17 Dichlorofluoromethane	67	2.660	2.660	0.000	98	204227	50.0	47.6	
18 Trichlorofluoromethane	101	2.709	2.709	0.000	92	155705	50.0	57.3	
20 Ethyl ether	59	3.092	3.092	0.000	95	159438	50.0	41.2	
21 Acrolein	56	3.256	3.256	0.000	99	79567	150.0	137.6	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	91	129823	50.0	44.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.433	3.433	0.000	96	139967	50.0	47.3	
24 Acetone	43	3.494	3.494	0.000	100	152975	100.0	90.9	
25 Iodomethane	142	3.597	3.597	0.000	97	188849	50.0	50.4	
26 Carbon disulfide	76	3.658	3.658	0.000	100	315860	50.0	55.7	
28 3-Chloro-1-propene	76	3.938	3.938	0.000	87	81239	50.0	49.2	
30 Methyl acetate	43	4.023	4.023	0.000	100	961065	250.0	196.6	
31 Methylene Chloride	84	4.138	4.138	0.000	93	172500	50.0	48.6	
32 2-Methyl-2-propanol	59	4.424	4.424	0.000	88	124546	500.0	488.6	
33 Acrylonitrile	53	4.546	4.546	0.000	98	821884	500.0	364.9	
34 trans-1,2-Dichloroethene	96	4.570	4.570	0.000	90	150070	50.0	50.7	
35 Methyl tert-butyl ether	73	4.595	4.595	0.000	93	362551	50.0	47.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	97	301937	50.0	40.3	
37 1,1-Dichloroethane	63	5.173	5.173	0.000	97	319217	50.0	46.4	
38 Vinyl acetate	43	5.294	5.294	0.000	96	273439	50.0	41.4	
44 2,2-Dichloropropane	77	5.927	5.927	0.000	60	125040	50.0	68.5	
45 cis-1,2-Dichloroethene	96	5.933	5.933	0.000	86	160777	50.0	50.2	
46 2-Butanone (MEK)	43	5.982	5.982	0.000	97	208918	100.0	78.9	
49 Chlorobromomethane	128	6.231	6.231	0.000	88	68010	50.0	51.0	
51 Tetrahydrofuran	42	6.280	6.280	0.000	95	138503	100.0	68.8	
52 Chloroform	83	6.341	6.341	0.000	96	270305	50.0	51.9	
53 1,1,1-Trichloroethane	97	6.529	6.529	0.000	94	193995	50.0	57.4	
54 Cyclohexane	56	6.584	6.584	0.000	96	367334	50.0	38.7	
56 Carbon tetrachloride	117	6.718	6.718	0.000	69	165227	50.0	56.3	
55 1,1-Dichloropropene	75	6.724	6.724	0.000	87	221136	50.0	51.9	
57 Isobutyl alcohol	41	6.943	6.943	0.000	93	145852	1250.0	945.9	
58 Benzene	78	6.955	6.955	0.000	97	662510	50.0	49.9	
59 1,2-Dichloroethane	62	6.979	6.979	0.000	96	254059	50.0	49.3	
62 n-Heptane	43	7.278	7.278	0.000	96	290617	50.0	38.2	
64 Trichloroethene	130	7.661	7.661	0.000	95	138217	50.0	48.6	
66 Methylcyclohexane	83	7.862	7.862	0.000	97	255342	50.0	46.9	
67 1,2-Dichloropropane	63	7.904	7.904	0.000	95	176125	50.0	43.1	
68 Dibromomethane	93	8.026	8.026	0.000	92	83442	50.0	49.5	
70 1,4-Dioxane	88	8.056	8.056	0.000	90	29362	1000.0	960.8	
71 Dichlorobromomethane	83	8.196	8.196	0.000	98	181630	50.0	52.2	
73 2-Chloroethyl vinyl ether	63	8.519	8.519	0.000	88	189602	100.0	111.2	
74 cis-1,3-Dichloropropene	75	8.652	8.652	0.000	87	206881	50.0	52.2	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.823	0.000	99	448517	100.0	91.7	
76 Toluene	91	8.987	8.987	0.000	97	638338	50.0	53.1	
77 trans-1,3-Dichloropropene	75	9.218	9.218	0.000	98	176929	50.0	63.5	
78 Ethyl methacrylate	69	9.315	9.315	0.000	92	165115	50.0	49.8	
79 1,1,2-Trichloroethane	97	9.401	9.401	0.000	94	120286	50.0	51.0	
80 Tetrachloroethene	164	9.535	9.535	0.000	93	110414	50.0	49.8	
81 1,3-Dichloropropane	76	9.565	9.565	0.000	94	230811	50.0	50.8	
82 2-Hexanone	43	9.656	9.656	0.000	98	346101	100.0	88.4	
84 Chlorodibromomethane	129	9.796	9.796	0.000	89	97619	50.0	56.3	
85 Ethylene Dibromide	107	9.900	9.900	0.000	97	116977	50.0	53.4	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	93	214170	50.0	54.2	
87 Chlorobenzene	112	10.392	10.392	0.000	90	385163	50.0	52.6	
88 4-Chlorobenzotrifluoride	180	10.429	10.429	0.000	95	211669	50.0	57.3	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	91	120513	50.0	54.0	
90 Ethylbenzene	106	10.496	10.496	0.000	99	214130	50.0	51.7	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	99	272585	50.0	54.0	
92 o-Xylene	106	11.013	11.013	0.000	99	256365	50.0	52.3	
93 Styrene	104	11.025	11.025	0.000	94	428783	50.0	52.0	
94 Bromoform	173	11.214	11.214	0.000	93	58591	50.0	53.4	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	94	204131	50.0	53.9	
97 Isopropylbenzene	105	11.378	11.378	0.000	98	660029	50.0	53.9	
99 1,1,2,2-Tetrachloroethane	83	11.670	11.670	0.000	96	169131	50.0	51.0	
100 Bromobenzene	156	11.688	11.688	0.000	97	152542	50.0	56.3	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	88	49834	50.0	50.6	
102 trans-1,4-Dichloro-2-buten	53	11.731	11.731	0.000	76	64842	50.0	47.9	
103 N-Propylbenzene	120	11.791	11.791	0.000	99	178863	50.0	55.9	
104 2-Chlorotoluene	126	11.871	11.871	0.000	94	146538	50.0	54.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.931	11.931	0.000	97	176463	50.0	61.3	
106 1,3,5-Trimethylbenzene	105	11.962	11.962	0.000	94	542479	50.0	56.6	
107 4-Chlorotoluene	126	11.980	11.980	0.000	99	152065	50.0	50.7	
108 tert-Butylbenzene	119	12.290	12.290	0.000	95	429381	50.0	54.6	
110 1,2,4-Trimethylbenzene	105	12.333	12.333	0.000	96	544966	50.0	55.3	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.400	0.000	97	149764	50.0	55.2	
112 sec-Butylbenzene	105	12.509	12.509	0.000	96	630400	50.0	55.6	
113 1,3-Dichlorobenzene	146	12.619	12.619	0.000	95	261985	50.0	51.2	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	96	506940	50.0	55.6	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	92	278065	50.0	52.7	
116 2,4-Dichloro-1-(triflourom	214	12.759	12.759	0.000	97	139978	50.0	55.0	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	150525	50.0	54.2	
120 n-Butylbenzene	91	13.063	13.063	0.000	99	456023	50.0	54.7	
121 1,2-Dichlorobenzene	146	13.081	13.081	0.000	95	253722	50.0	53.5	
122 1,2-Dibromo-3-Chloropropan	75	13.866	13.866	0.000	70	24089	50.0	56.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.006	0.000	99	502367	150.0	168.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.426	0.000	99	323251	100.0	113.3	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	94	101205	50.0	51.4	
127 Hexachlorobutadiene	225	14.864	14.864	0.000	96	49161	50.0	52.6	
128 Naphthalene	128	14.943	14.943	0.000	98	254384	50.0	48.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.186	0.000	94	83078	50.0	53.8	
131 2,4,5-Trichlorotoluene	159	15.965	15.965	0.000	97	34414	50.0	52.5	
130 2,3,6-Trichlorotoluene	159	16.056	16.056	0.000	95	35115	50.0	58.4	
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	106.3	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	115.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOAPRI_00097	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWVApri Res_00001	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	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

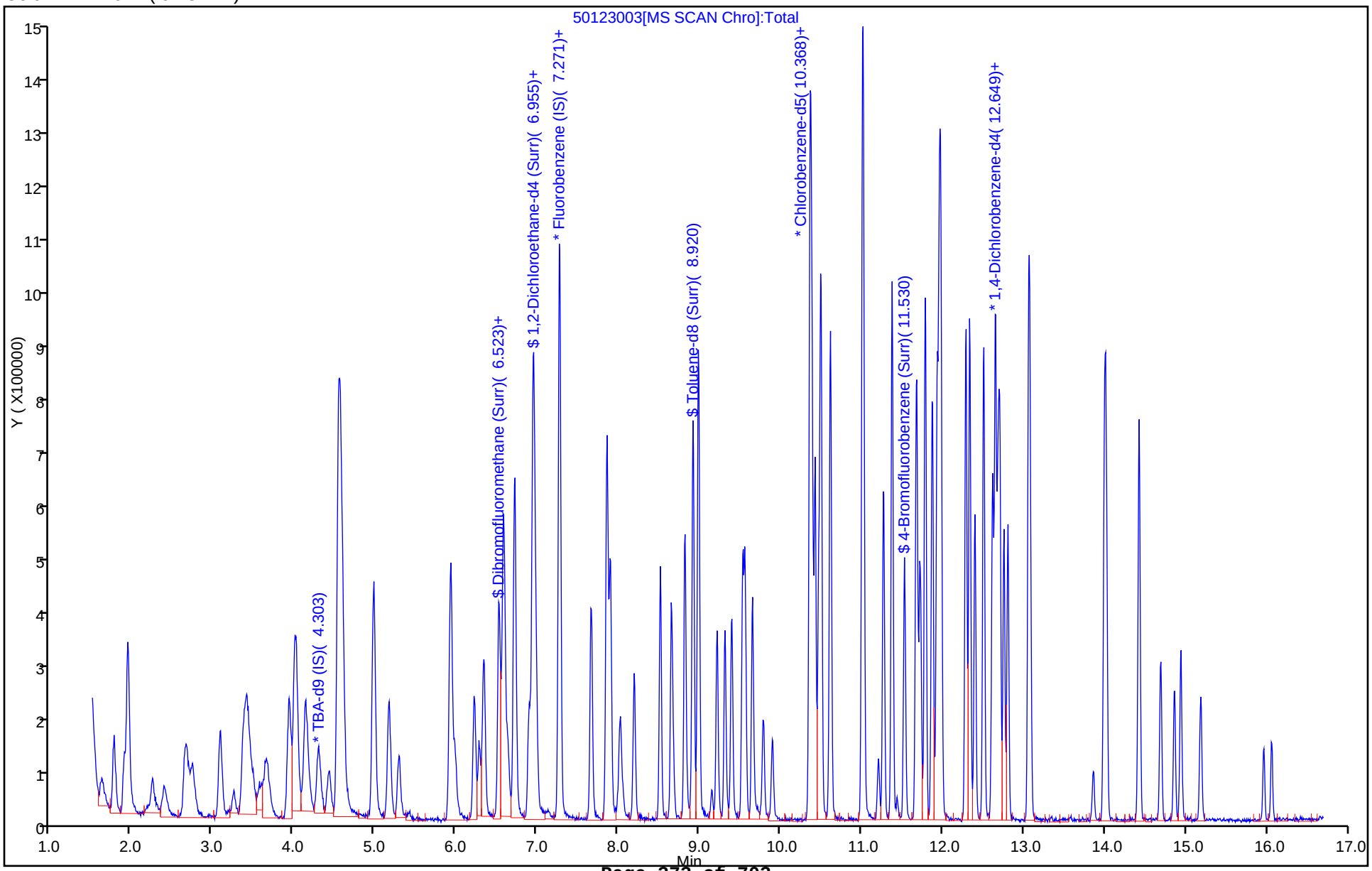
Report Date: 23-Jan-2015 14:48:59 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123003.D

Injection Date:	23-Jan-2015 11:21:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSVOA_LL_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.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13

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: 50128003.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	0.1930	0.0100	24.3	20.0	21.5*	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Jan-2015 09:13:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005445-003
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub20

Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 28-Jan-2015 12:12:10 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: 28-Jan-2015 10:42:38

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	4.308	0.000	91	174016	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.276	0.000	99	474967	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	98	108247	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	94	151657	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	75	112644	50.0	55.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.899	0.000	93	161974	50.0	48.8	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	94	482906	50.0	53.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	85	180192	50.0	52.5	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	94	131073	50.0	46.0	
12 Chloromethane	50	1.783	1.783	0.000	99	232029	50.0	41.3	
13 Vinyl chloride	62	1.911	1.911	0.000	97	179910	50.0	46.6	
14 Butadiene	39	1.959	1.959	0.000	97	222841	50.0	40.6	
15 Bromomethane	94	2.270	2.270	0.000	91	72713	50.0	63.0	
16 Chloroethane	64	2.416	2.416	0.000	97	90560	50.0	47.4	
17 Dichlorofluoromethane	67	2.665	2.665	0.000	96	190553	50.0	50.2	
18 Trichlorofluoromethane	101	2.702	2.702	0.000	95	159702	50.0	66.4	
20 Ethyl ether	59	3.091	3.091	0.000	97	153115	50.0	44.8	
21 Acrolein	56	3.255	3.255	0.000	98	46673	150.0	91.2	
22 1,1-Dichloroethene	96	3.383	3.383	0.000	96	139141	50.0	53.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.444	0.000	93	144955	50.0	55.3	
24 Acetone	43	3.499	3.499	0.000	97	213498	100.0	143.4	
25 Iodomethane	142	3.584	3.584	0.000	99	208103	50.0	62.8	
26 Carbon disulfide	76	3.675	3.675	0.000	99	260647	50.0	52.0	
28 3-Chloro-1-propene	76	3.955	3.955	0.000	90	70957	50.0	48.6	
30 Methyl acetate	43	4.022	4.022	0.000	100	941872	250.0	217.8	
31 Methylene Chloride	84	4.156	4.156	0.000	92	163208	50.0	52.4	
32 2-Methyl-2-propanol	59	4.435	4.435	0.000	91	118968	500.0	511.4	
33 Acrylonitrile	53	4.557	4.557	0.000	97	825806	500.0	414.3	
34 trans-1,2-Dichloroethene	96	4.563	4.563	0.000	93	157807	50.0	60.2	
35 Methyl tert-butyl ether	73	4.588	4.588	0.000	95	361198	50.0	53.2	

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	96	305408	50.0	46.1	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	96	315261	50.0	51.7	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	67	117915	50.0	73.0	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	85	165202	50.0	58.3	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	97	269525	100.0	115.0	
49 Chlorobromomethane	128	6.224	6.224	0.000	86	69102	50.0	58.5	
51 Tetrahydrofuran	42	6.285	6.285	0.000	94	131653	100.0	73.9	
52 Chloroform	83	6.352	6.352	0.000	97	250156	50.0	54.3	
53 1,1,1-Trichloroethane	97	6.534	6.534	0.000	96	185584	50.0	62.1	
54 Cyclohexane	56	6.589	6.589	0.000	96	359760	50.0	42.8	
56 Carbon tetrachloride	117	6.717	6.717	0.000	72	155112	50.0	59.8	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	87	215243	50.0	57.1	
57 Isobutyl alcohol	41	6.942	6.942	0.000	96	135896	1250.0	996.0	
58 Benzene	78	6.954	6.954	0.000	97	627004	50.0	53.4	
59 1,2-Dichloroethane	62	6.990	6.990	0.000	96	233257	50.0	51.1	
62 n-Heptane	43	7.276	7.276	0.000	97	293990	50.0	43.7	
64 Trichloroethene	130	7.666	7.666	0.000	97	147930	50.0	58.8	
66 Methylcyclohexane	83	7.860	7.860	0.000	97	251534	50.0	52.3	
67 1,2-Dichloropropane	63	7.903	7.903	0.000	93	169194	50.0	46.8	
68 Dibromomethane	93	8.031	8.031	0.000	95	82281	50.0	55.2	
70 1,4-Dioxane	88	8.049	8.049	0.000	92	21590	1000.0	798.4	
71 Dichlorobromomethane	83	8.195	8.195	0.000	97	155551	50.0	50.6	
73 2-Chloroethyl vinyl ether	63	8.524	8.524	0.000	88	183352	100.0	121.5	
74 cis-1,3-Dichloropropene	75	8.657	8.657	0.000	87	190381	50.0	54.2	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.822	0.000	99	439174	100.0	93.9	
76 Toluene	91	8.992	8.992	0.000	98	647393	50.0	56.3	
77 trans-1,3-Dichloropropene	75	9.223	9.223	0.000	96	159587	50.0	60.0	
78 Ethyl methacrylate	69	9.320	9.320	0.000	93	155410	50.0	49.0	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	93	121117	50.0	53.7	
80 Tetrachloroethene	164	9.539	9.539	0.000	94	114762	50.0	54.1	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	96	219752	50.0	50.6	
82 2-Hexanone	43	9.655	9.655	0.000	98	342121	100.0	91.4	
84 Chlorodibromomethane	129	9.789	9.789	0.000	90	93851	50.0	56.6	
85 Ethylene Dibromide	107	9.904	9.904	0.000	99	109893	50.0	52.5	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	94	203559	50.0	53.9	
87 Chlorobenzene	112	10.391	10.391	0.000	92	418309	50.0	59.8	
88 4-Chlorobenzotrifluoride	180	10.434	10.434	0.000	95	197046	50.0	55.8	
89 1,1,1,2-Tetrachloroethane	131	10.476	10.476	0.000	92	117497	50.0	55.1	
90 Ethylbenzene	106	10.501	10.501	0.000	99	220317	50.0	55.7	
91 m-Xylene & p-Xylene	106	10.622	10.622	0.000	98	272822	50.0	56.6	
92 o-Xylene	106	11.012	11.012	0.000	99	260333	50.0	55.6	
93 Styrene	104	11.030	11.030	0.000	94	417402	50.0	52.9	
94 Bromoform	173	11.218	11.218	0.000	94	52701	50.0	50.3	
96 2-Chlorobenzotrifluoride	180	11.273	11.273	0.000	94	194286	50.0	53.7	
97 Isopropylbenzene	105	11.383	11.383	0.000	97	669732	50.0	57.3	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	160975	50.0	50.8	
100 Bromobenzene	156	11.687	11.687	0.000	97	153791	50.0	56.4	
101 1,2,3-Trichloropropane	110	11.723	11.723	0.000	89	50583	50.0	51.0	
102 trans-1,4-Dichloro-2-buten	53	11.729	11.729	0.000	71	60824	50.0	44.6	
103 N-Propylbenzene	120	11.790	11.790	0.000	99	194862	50.0	60.5	
104 2-Chlorotoluene	126	11.875	11.875	0.000	95	162980	50.0	60.0	
105 3-Chlorotoluene	126	11.936	11.936	0.000	95	162540	50.0	56.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	94	550536	50.0	57.1	
107 4-Chlorotoluene	126	11.985	11.985	0.000	98	170893	50.0	56.6	
108 tert-Butylbenzene	119	12.289	12.289	0.000	94	455327	50.0	57.5	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	99	548723	50.0	55.3	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	97	142669	50.0	52.2	
112 sec-Butylbenzene	105	12.508	12.508	0.000	96	632866	50.0	55.5	
113 1,3-Dichlorobenzene	146	12.624	12.624	0.000	96	292773	50.0	56.9	
114 4-Isopropyltoluene	119	12.654	12.654	0.000	97	540215	50.0	58.8	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	94	306400	50.0	57.6	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.758	0.000	95	120826	50.0	47.1	
118 2,5-Dichlorobenzotrifluori	214	12.806	12.806	0.000	99	142483	50.0	51.0	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	470490	50.0	56.0	
121 1,2-Dichlorobenzene	146	13.086	13.086	0.000	95	267560	50.0	56.0	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.865	0.000	69	22819	50.0	52.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	98	507716	150.0	168.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	99	313881	100.0	109.3	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	93	101827	50.0	51.4	
127 Hexachlorobutadiene	225	14.862	14.862	0.000	93	54231	50.0	57.7	
128 Naphthalene	128	14.942	14.942	0.000	98	266869	50.0	50.4	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	77937	50.0	50.1	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	97	33948	50.0	51.4	
130 2,3,6-Trichlorotoluene	159	16.061	16.061	0.000	95	33206	50.0	54.9	
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	112.2	
S 134 1,2-Dichloroethene, Total	96				0		100.0	118.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	114.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOAPRI_00097	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	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

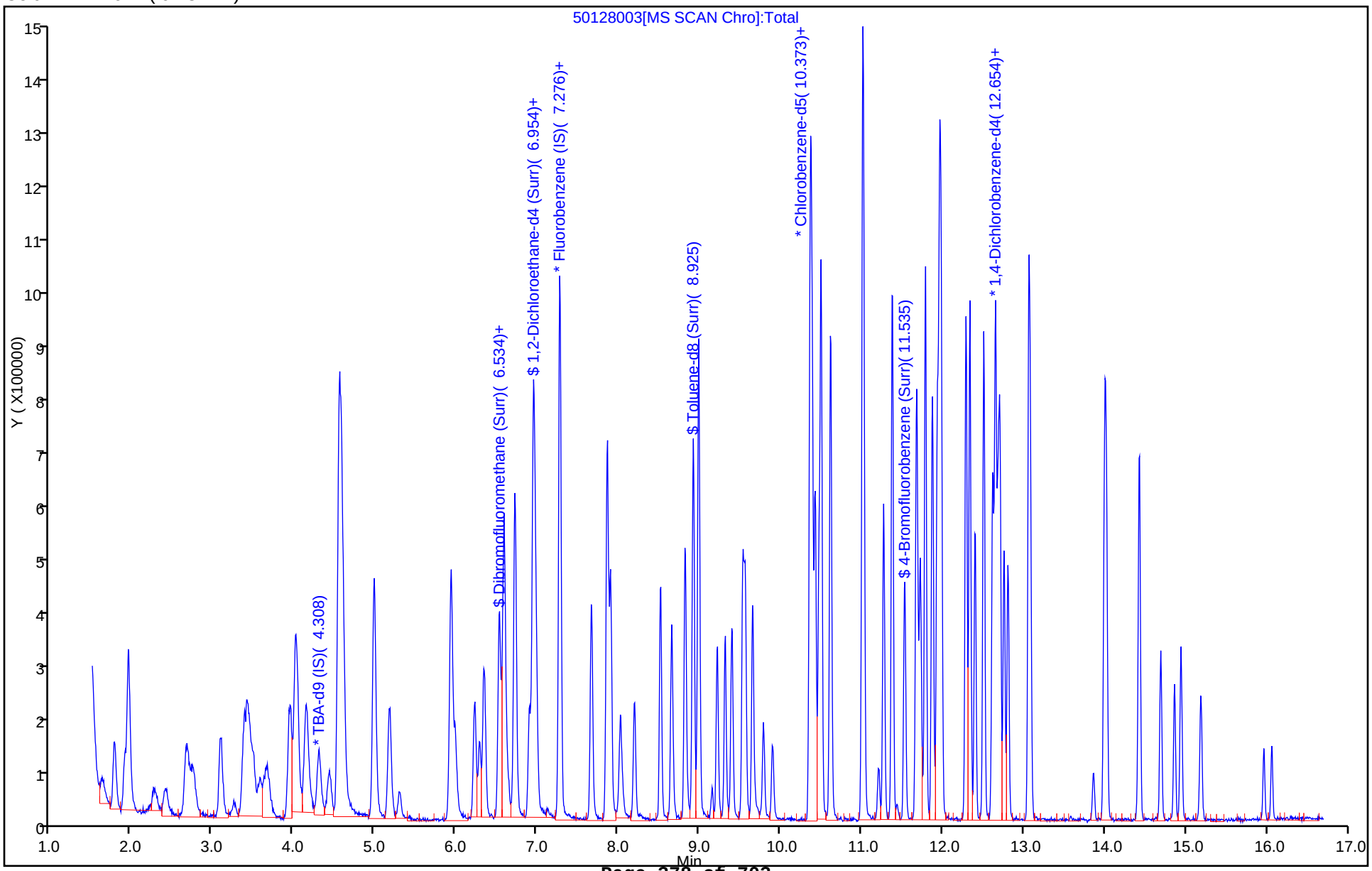
Report Date: 28-Jan-2015 12:12:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D

Injection Date:	28-Jan-2015 09:13:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	3
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.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13

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: 50128003.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	0.2760	0.1000	9.20	10.0	-8.0	20.0
Chloromethane	Ave	0.5915	0.4885	0.1000	8.26	10.0	-17.4	20.0
Vinyl chloride	Ave	0.4061	0.3788	0.1000	9.33	10.0	-6.7	20.0
Bromomethane	Ave	0.1215	0.1531	0.0500	12.6	10.0	26.0*	20.0
Chloroethane	Ave	0.2011	0.1907	0.0500	9.48	10.0	-5.2	20.0
Dichlorofluoromethane	Ave	0.3999	0.4012	0.0100	10.0	10.0	0.3	20.0
Trichlorofluoromethane	Ave	0.2533	0.3362	0.1000	13.3	10.0	32.7*	20.0
Ethyl ether	Ave	0.3601	0.3224	0.0100	8.95	10.0	-10.5	20.0
Acrolein	Ave	0.0539	0.0328	0.0100	18.2	30.0	-39.2*	20.0
1,1-Dichloroethene	Ave	0.2724	0.2930	0.1000	10.8	10.0	7.6	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2758	0.3052	0.1000	11.1	10.0	10.7	20.0
Acetone	Ave	0.1568	0.2248	0.0500	28.7	20.0	43.4*	20.0
Iodomethane	Ave	0.3488	0.4381	0.0100	12.6	10.0	25.6*	20.0
Carbon disulfide	Ave	0.5280	0.5488	0.1000	10.4	10.0	3.9	20.0
Allyl chloride	Ave	0.1537	0.1494	0.0100	9.72	10.0	-2.8	20.0
Methyl acetate	Ave	0.4553	0.3966	0.1000	43.6	50.0	-12.9	20.0
Methylene Chloride	Lin2		0.3436	0.1000	10.5	10.0	4.8	20.0
tert-Butyl alcohol	Ave	1.337	1.367	0.0100	102	100	2.3	20.0
Acrylonitrile	Ave	0.2098	0.1739	0.0100	82.9	100	-17.1	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.3323	0.1000	12.0	10.0	20.5*	20.0
Methyl tert-butyl ether	Ave	0.7145	0.7605	0.1000	10.6	10.0	6.4	20.0
Hexane	Ave	0.6980	0.6430	0.0100	9.21	10.0	-7.9	20.0
1,1-Dichloroethane	Ave	0.6414	0.6638	0.2000	10.3	10.0	3.5	20.0
2,2-Dichloropropane	Ave	0.1700	0.2483	0.0100	14.6	10.0	46.0*	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.3478	0.1000	11.7	10.0	16.7	20.0
2-Butanone (MEK)	Ave	0.2466	0.2837	0.0500	23.0	20.0	15.0	20.0
Bromochloromethane	Ave	0.1243	0.1455	0.0100	11.7	10.0	17.0	20.0
Tetrahydrofuran	Ave	0.1876	0.1386	0.0100	14.8	20.0	-26.1*	20.0
Chloroform	Ave	0.4850	0.5267	0.2000	10.9	10.0	8.6	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3907	0.1000	12.4	10.0	24.2*	20.0
Cyclohexane	Ave	0.8843	0.7574	0.1000	8.57	10.0	-14.3	20.0
Carbon tetrachloride	Ave	0.2733	0.3266	0.1000	12.0	10.0	19.5	20.0
1,1-Dichloropropene	Ave	0.3970	0.4532	0.0100	11.4	10.0	14.2	20.0
Isobutyl alcohol	Ave	0.0144	0.0114	0.0100	199	250	-20.3*	20.0
Benzene	Ave	1.236	1.320	0.5000	10.7	10.0	6.8	20.0
1,2-Dichloroethane	Ave	0.4801	0.4911	0.1000	10.2	10.0	2.3	20.0
n-Heptane	Ave	0.7079	0.6190	0.0100	8.74	10.0	-12.6	20.0
Trichloroethene	Ave	0.2647	0.3115	0.2000	11.8	10.0	17.7	20.0
Methylcyclohexane	Ave	0.5067	0.5296	0.1000	10.5	10.0	4.5	20.0
1,2-Dichloropropane	Ave	0.3804	0.3562	0.1000	9.36	10.0	-6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13

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: 50128003.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
Dibromomethane	Ave	0.1569	0.1732	0.0100	11.0	10.0	10.4	20.0
1,4-Dioxane	Ave	0.0028	0.0023*	0.0100	160	200	-20.2*	20.0
Bromodichloromethane	Ave	0.3238	0.3275	0.2000	10.1	10.0	1.1	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.4008	0.2000	10.8	10.0	8.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	2.029	0.1000	18.8	20.0	-6.1	20.0
Toluene	Ave	5.309	5.981	0.4000	11.3	10.0	12.7	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.474	0.1000	12.0	10.0	20.0	20.0
Ethyl methacrylate	Ave	1.464	1.436	0.0100	9.81	10.0	-1.9	20.0
1,1,2-Trichloroethane	Ave	1.042	1.119	0.1000	10.7	10.0	7.4	20.0
Tetrachloroethene	Ave	0.9790	1.060	0.2000	10.8	10.0	8.3	20.0
1,3-Dichloropropane	Ave	2.006	2.030	0.0100	10.1	10.0	1.2	20.0
2-Hexanone	Ave	1.729	1.580	0.1000	18.3	20.0	-8.6	20.0
Dibromochloromethane	Ave	0.7658	0.8670	0.1000	11.3	10.0	13.2	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	1.015	0.1000	10.5	10.0	5.1	20.0
3-Chlorobenzotrifluoride	Ave	1.745	1.881	0.0100	10.8	10.0	7.8	20.0
Chlorobenzene	Ave	3.229	3.864	0.5000	12.0	10.0	19.7	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.820	0.0100	11.2	10.0	11.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	1.085	0.0100	11.0	10.0	10.2	20.0
Ethylbenzene	Ave	1.828	2.035	0.1000	11.1	10.0	11.3	20.0
m-Xylene & p-Xylene	Ave	2.226	2.520	0.1000	11.3	10.0	13.2	20.0
o-Xylene	Ave	2.164	2.405	0.3000	11.1	10.0	11.1	20.0
Styrene	Ave	3.642	3.856	0.3000	10.6	10.0	5.9	20.0
Bromoform	Ave	0.4840	0.4869	0.1000	10.1	10.0	0.6	20.0
2-Chlorobenzotrifluoride	Ave	1.670	1.795	0.0100	10.7	10.0	7.5	20.0
Isopropylbenzene	Ave	5.400	6.187	0.1000	11.5	10.0	14.6	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.487	0.3000	10.2	10.0	1.6	20.0
Bromobenzene	Ave	0.8995	1.014	0.0100	11.3	10.0	12.7	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.3335	0.0100	10.2	10.0	2.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.4011	0.0100	8.93	10.0	-10.7	20.0
N-Propylbenzene	Ave	1.062	1.285	0.0100	12.1	10.0	21.0*	20.0
2-Chlorotoluene	Ave	0.8959	1.075	0.0100	12.0	10.0	20.0	20.0
3-Chlorotoluene	Ave	0.9551	1.072	0.0100	11.2	10.0	12.2	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.630	0.0100	11.4	10.0	14.1	20.0
4-Chlorotoluene	Ave	0.996	1.127	0.0100	11.3	10.0	13.2	20.0
tert-Butylbenzene	Ave	2.610	3.002	0.0100	11.5	10.0	15.0	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.618	0.0100	11.1	10.0	10.7	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.9407	0.0100	10.4	10.0	4.4	20.0
sec-Butylbenzene	Ave	3.761	4.173	0.0100	11.1	10.0	11.0	20.0
1,3-Dichlorobenzene	Ave	1.698	1.930	0.6000	11.4	10.0	13.7	20.0
4-Isopropyltoluene	Ave	3.029	3.562	0.0100	11.8	10.0	17.6	20.0
1,4-Dichlorobenzene	Ave	1.753	2.020	0.5000	11.5	10.0	15.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13

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: 50128003.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
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.7967	0.0100	9.43	10.0	-5.7	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.9395	0.0100	10.2	10.0	1.9	20.0
n-Butylbenzene	Ave	2.768	3.102	0.0100	11.2	10.0	12.1	20.0
1,2-Dichlorobenzene	Ave	1.576	1.764	0.4000	11.2	10.0	12.0	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1505	0.0500	10.5	10.0	5.3	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	1.116	0.0100	33.7	30.0	12.4	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	1.035	0.0100	21.9	20.0	9.3	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.6714	0.2000	10.3	10.0	2.7	20.0
Hexachlorobutadiene	Ave	0.3100	0.3576	0.0100	11.5	10.0	15.4	20.0
Naphthalene	Ave	1.745	1.760	0.0100	10.1	10.0	0.9	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.5139	0.0100	10.0	10.0	0.3	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.2239	0.0100	10.3	10.0	2.8	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.2190	0.0100	11.0	10.0	9.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.2372		11.1	10.0	11.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.3410		9.76	10.0	-2.4	20.0
Toluene-d8 (Surr)	Ave	4.159	4.461		10.7	10.0	7.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.665		10.5	10.0	5.0	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Jan-2015 09:13:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0005445-003
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub20

Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 28-Jan-2015 12:12:10 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: 28-Jan-2015 10:42:38

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	4.308	0.000	91	174016	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.276	0.000	99	474967	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	98	108247	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	94	151657	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	75	112644	50.0	55.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.899	0.000	93	161974	50.0	48.8	
$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	94	482906	50.0	53.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	85	180192	50.0	52.5	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	94	131073	50.0	46.0	
12 Chloromethane	50	1.783	1.783	0.000	99	232029	50.0	41.3	
13 Vinyl chloride	62	1.911	1.911	0.000	97	179910	50.0	46.6	
14 Butadiene	39	1.959	1.959	0.000	97	222841	50.0	40.6	
15 Bromomethane	94	2.270	2.270	0.000	91	72713	50.0	63.0	
16 Chloroethane	64	2.416	2.416	0.000	97	90560	50.0	47.4	
17 Dichlorofluoromethane	67	2.665	2.665	0.000	96	190553	50.0	50.2	
18 Trichlorofluoromethane	101	2.702	2.702	0.000	95	159702	50.0	66.4	
20 Ethyl ether	59	3.091	3.091	0.000	97	153115	50.0	44.8	
21 Acrolein	56	3.255	3.255	0.000	98	46673	150.0	91.2	
22 1,1-Dichloroethene	96	3.383	3.383	0.000	96	139141	50.0	53.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.444	0.000	93	144955	50.0	55.3	
24 Acetone	43	3.499	3.499	0.000	97	213498	100.0	143.4	
25 Iodomethane	142	3.584	3.584	0.000	99	208103	50.0	62.8	
26 Carbon disulfide	76	3.675	3.675	0.000	99	260647	50.0	52.0	
28 3-Chloro-1-propene	76	3.955	3.955	0.000	90	70957	50.0	48.6	
30 Methyl acetate	43	4.022	4.022	0.000	100	941872	250.0	217.8	
31 Methylene Chloride	84	4.156	4.156	0.000	92	163208	50.0	52.4	
32 2-Methyl-2-propanol	59	4.435	4.435	0.000	91	118968	500.0	511.4	
33 Acrylonitrile	53	4.557	4.557	0.000	97	825806	500.0	414.3	
34 trans-1,2-Dichloroethene	96	4.563	4.563	0.000	93	157807	50.0	60.2	
35 Methyl tert-butyl ether	73	4.588	4.588	0.000	95	361198	50.0	53.2	

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	96	305408	50.0	46.1	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	96	315261	50.0	51.7	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	67	117915	50.0	73.0	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	85	165202	50.0	58.3	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	97	269525	100.0	115.0	
49 Chlorobromomethane	128	6.224	6.224	0.000	86	69102	50.0	58.5	
51 Tetrahydrofuran	42	6.285	6.285	0.000	94	131653	100.0	73.9	
52 Chloroform	83	6.352	6.352	0.000	97	250156	50.0	54.3	
53 1,1,1-Trichloroethane	97	6.534	6.534	0.000	96	185584	50.0	62.1	
54 Cyclohexane	56	6.589	6.589	0.000	96	359760	50.0	42.8	
56 Carbon tetrachloride	117	6.717	6.717	0.000	72	155112	50.0	59.8	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	87	215243	50.0	57.1	
57 Isobutyl alcohol	41	6.942	6.942	0.000	96	135896	1250.0	996.0	
58 Benzene	78	6.954	6.954	0.000	97	627004	50.0	53.4	
59 1,2-Dichloroethane	62	6.990	6.990	0.000	96	233257	50.0	51.1	
62 n-Heptane	43	7.276	7.276	0.000	97	293990	50.0	43.7	
64 Trichloroethene	130	7.666	7.666	0.000	97	147930	50.0	58.8	
66 Methylcyclohexane	83	7.860	7.860	0.000	97	251534	50.0	52.3	
67 1,2-Dichloropropane	63	7.903	7.903	0.000	93	169194	50.0	46.8	
68 Dibromomethane	93	8.031	8.031	0.000	95	82281	50.0	55.2	
70 1,4-Dioxane	88	8.049	8.049	0.000	92	21590	1000.0	798.4	
71 Dichlorobromomethane	83	8.195	8.195	0.000	97	155551	50.0	50.6	
73 2-Chloroethyl vinyl ether	63	8.524	8.524	0.000	88	183352	100.0	121.5	
74 cis-1,3-Dichloropropene	75	8.657	8.657	0.000	87	190381	50.0	54.2	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.822	0.000	99	439174	100.0	93.9	
76 Toluene	91	8.992	8.992	0.000	98	647393	50.0	56.3	
77 trans-1,3-Dichloropropene	75	9.223	9.223	0.000	96	159587	50.0	60.0	
78 Ethyl methacrylate	69	9.320	9.320	0.000	93	155410	50.0	49.0	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	93	121117	50.0	53.7	
80 Tetrachloroethene	164	9.539	9.539	0.000	94	114762	50.0	54.1	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	96	219752	50.0	50.6	
82 2-Hexanone	43	9.655	9.655	0.000	98	342121	100.0	91.4	
84 Chlorodibromomethane	129	9.789	9.789	0.000	90	93851	50.0	56.6	
85 Ethylene Dibromide	107	9.904	9.904	0.000	99	109893	50.0	52.5	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	94	203559	50.0	53.9	
87 Chlorobenzene	112	10.391	10.391	0.000	92	418309	50.0	59.8	
88 4-Chlorobenzotrifluoride	180	10.434	10.434	0.000	95	197046	50.0	55.8	
89 1,1,1,2-Tetrachloroethane	131	10.476	10.476	0.000	92	117497	50.0	55.1	
90 Ethylbenzene	106	10.501	10.501	0.000	99	220317	50.0	55.7	
91 m-Xylene & p-Xylene	106	10.622	10.622	0.000	98	272822	50.0	56.6	
92 o-Xylene	106	11.012	11.012	0.000	99	260333	50.0	55.6	
93 Styrene	104	11.030	11.030	0.000	94	417402	50.0	52.9	
94 Bromoform	173	11.218	11.218	0.000	94	52701	50.0	50.3	
96 2-Chlorobenzotrifluoride	180	11.273	11.273	0.000	94	194286	50.0	53.7	
97 Isopropylbenzene	105	11.383	11.383	0.000	97	669732	50.0	57.3	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	160975	50.0	50.8	
100 Bromobenzene	156	11.687	11.687	0.000	97	153791	50.0	56.4	
101 1,2,3-Trichloropropane	110	11.723	11.723	0.000	89	50583	50.0	51.0	
102 trans-1,4-Dichloro-2-buten	53	11.729	11.729	0.000	71	60824	50.0	44.6	
103 N-Propylbenzene	120	11.790	11.790	0.000	99	194862	50.0	60.5	
104 2-Chlorotoluene	126	11.875	11.875	0.000	95	162980	50.0	60.0	
105 3-Chlorotoluene	126	11.936	11.936	0.000	95	162540	50.0	56.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	94	550536	50.0	57.1	
107 4-Chlorotoluene	126	11.985	11.985	0.000	98	170893	50.0	56.6	
108 tert-Butylbenzene	119	12.289	12.289	0.000	94	455327	50.0	57.5	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	99	548723	50.0	55.3	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	97	142669	50.0	52.2	
112 sec-Butylbenzene	105	12.508	12.508	0.000	96	632866	50.0	55.5	
113 1,3-Dichlorobenzene	146	12.624	12.624	0.000	96	292773	50.0	56.9	
114 4-Isopropyltoluene	119	12.654	12.654	0.000	97	540215	50.0	58.8	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	94	306400	50.0	57.6	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.758	0.000	95	120826	50.0	47.1	
118 2,5-Dichlorobenzotrifluori	214	12.806	12.806	0.000	99	142483	50.0	51.0	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	470490	50.0	56.0	
121 1,2-Dichlorobenzene	146	13.086	13.086	0.000	95	267560	50.0	56.0	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.865	0.000	69	22819	50.0	52.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	98	507716	150.0	168.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	99	313881	100.0	109.3	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	93	101827	50.0	51.4	
127 Hexachlorobutadiene	225	14.862	14.862	0.000	93	54231	50.0	57.7	
128 Naphthalene	128	14.942	14.942	0.000	98	266869	50.0	50.4	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	77937	50.0	50.1	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	97	33948	50.0	51.4	
130 2,3,6-Trichlorotoluene	159	16.061	16.061	0.000	95	33206	50.0	54.9	
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	112.2	
S 134 1,2-Dichloroethene, Total	96				0		100.0	118.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	114.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOAPRI_00097	Amount Added:	2.00	Units: uL	
voaWeemixpri_00001	Amount Added:	2.00	Units: uL	
voaWket2nd Re_00001	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added:	2.00	Units: uL	
voaWAcropri R_00006	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

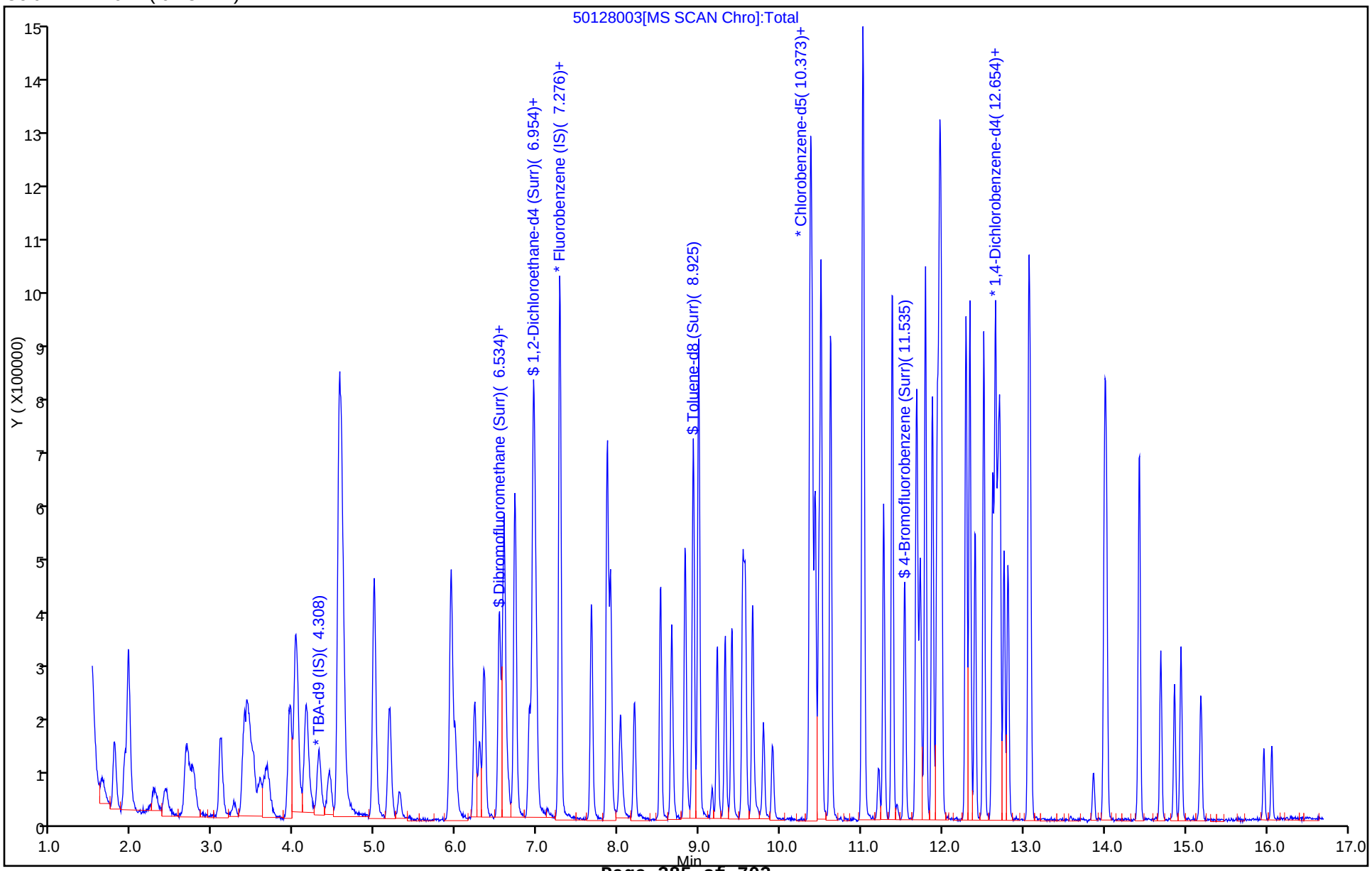
Report Date: 28-Jan-2015 12:12:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D

Injection Date:	28-Jan-2015 09:13:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\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:

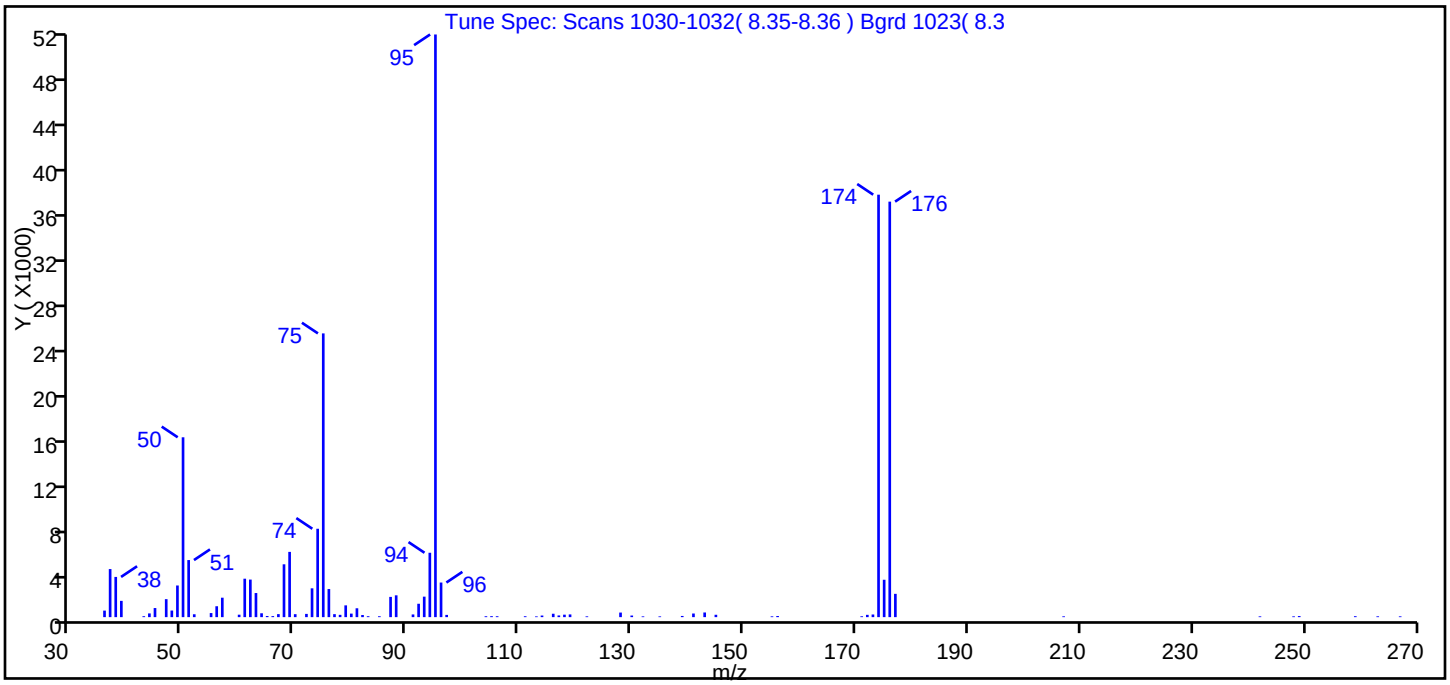
VOABFB25_00056 Amount Added: 1.00 Units: uL

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\20150122-5379.b\50121004.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 22-Jan-2015 10:12:30 ALS Bottle#: 1 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005379-004
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jan-2015 14:16:57 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: XAWRK012

First Level Reviewer: fergusond Date: 22-Jan-2015 10:27:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.337	8.337	0.000	0	134970	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

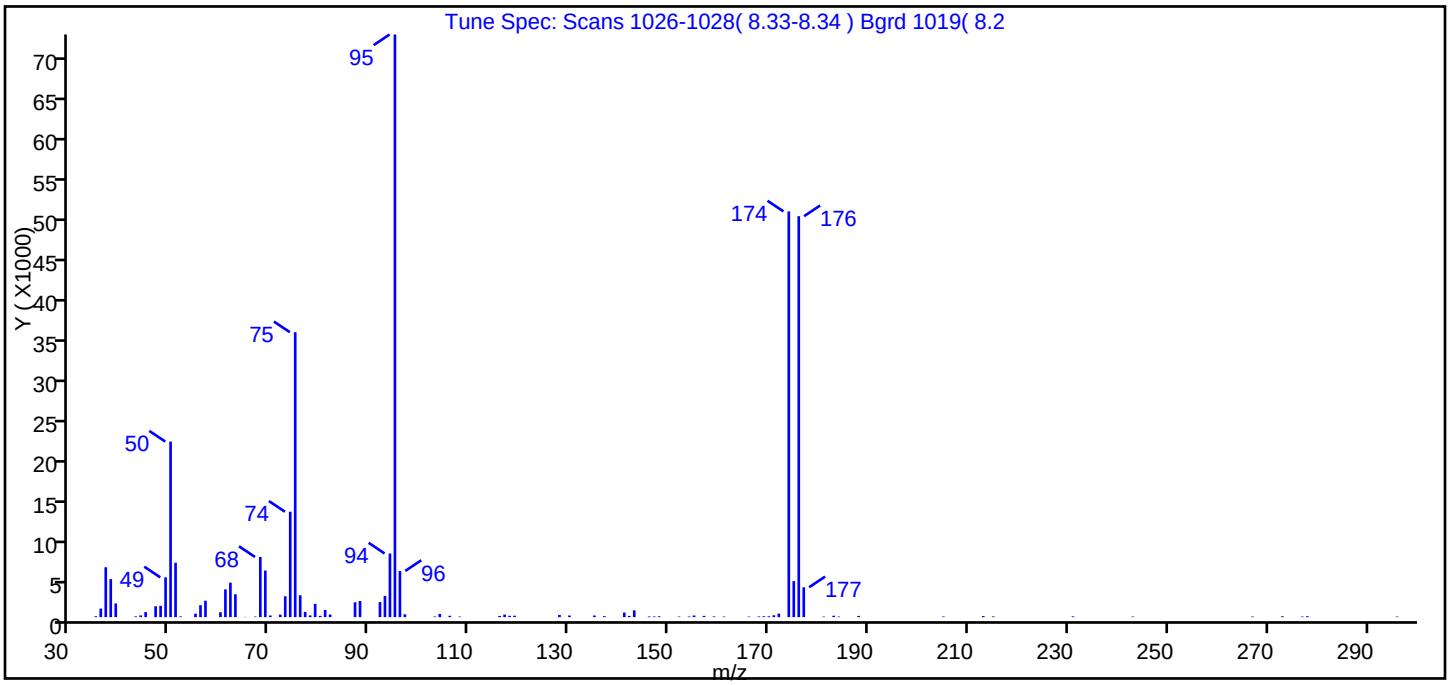
VOABFB25_00058 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121004.D				
Injection Date:	22-Jan-2015 10:12:30	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	30.1
75	30 to 60% of m/z 95	48.9
96	5 to 9% of m/z 95	7.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.6
175	5 to 9% of m/z 174	6.2 (8.9)
176	Greater than 95% but less than 101% of m/z 174	68.8 (98.8)
177	5 to 9% of m/z 176	5.1 (7.4)

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121004.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 22-Jan-2015 10:12:30
Spectrum: Tune Spec: Scans 1026-1028(8.33-8.34) Bgrd 1019(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	114	69.00	5801	108.00	72	170.00	104
36.00	1061	70.00	206	116.00	148	171.00	232
37.00	6214	72.00	318	117.00	311	172.00	434
38.00	4740	73.00	2594	118.00	164	174.00	50520
39.00	1710	74.00	13129	119.00	179	175.00	4484
43.00	92	75.00	35480	128.00	276	176.00	49928
44.00	215	76.00	2725	130.00	204	177.00	3719
45.00	626	77.00	650	135.00	205	181.00	68
47.00	1358	78.00	218	137.00	125	183.00	176
48.00	1409	79.00	1650	141.00	574	184.00	70
49.00	4954	80.00	160	142.00	154	188.00	154
50.00	21864	81.00	902	143.00	846	205.00	74
51.00	6774	82.00	327	146.00	85	213.00	141
52.00	93	87.00	1850	147.00	85	215.00	91
55.00	432	88.00	2011	148.00	107	231.00	97
56.00	1487	92.00	1877	152.00	69	243.00	72
57.00	2045	93.00	2644	154.00	77	267.00	77
60.00	608	94.00	7927	155.00	207	273.00	111
61.00	3456	95.00	72552	157.00	154	277.00	73
62.00	4292	96.00	5754	159.00	89	278.00	114
63.00	2850	97.00	354	161.00	74	296.00	72
65.00	32	103.00	80	166.00	69		
67.00	73	104.00	403	168.00	84		
68.00	7493	106.00	171	169.00	108		

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123001.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	23-Jan-2015 09:59:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Misc. Info.:	180-0005396-001				
Operator ID:	001562	Instrument ID:	CHHP5		
Method:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m				
Limit Group:	VOA 8260C ICAL				
Last Update:	23-Jan-2015 12:43:14	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:	XAWRK030				
First Level Reviewer: fergusond		Date:	23-Jan-2015 10:15:13		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.342	8.342	0.000	0	102547	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

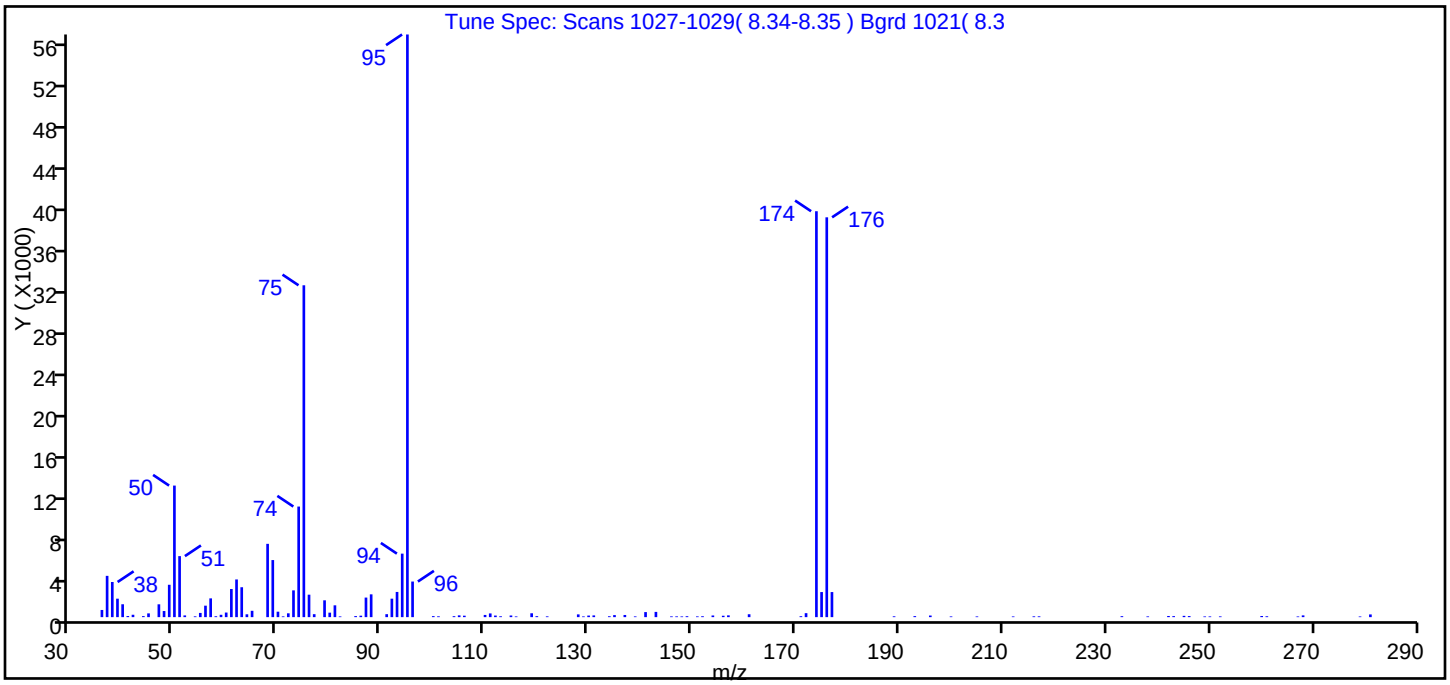
VOABFB25_00058 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123001.D				
Injection Date:	23-Jan-2015 09:59:30	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	22.6
75	30 to 60% of m/z 95	57.0
96	5 to 9% of m/z 95	6.1
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	69.7
175	5 to 9% of m/z 174	4.3 (6.2)
176	Greater than 95% but less than 101% of m/z 174	68.6 (98.5)
177	5 to 9% of m/z 176	4.3 (6.3)

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 23-Jan-2015 09:59:30
Spectrum: Tune Spec: Scans 1027-1029(8.34-8.35) Bgrd 1021(8.3
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 114

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	698	70.00	530	112.00	155	174.00	39464
37.00	4014	71.00	73	113.00	84	175.00	2439
38.00	3417	72.00	373	115.00	160	176.00	38872
39.00	1795	73.00	2604	116.00	69	177.00	2438
40.00	1253	74.00	10752	119.00	377	189.00	80
41.00	107	75.00	32264	120.00	94	193.00	99
42.00	232	76.00	2184	122.00	76	196.00	156
44.00	100	77.00	289	128.00	268	200.00	70
45.00	366	79.00	1636	129.00	70	205.00	70
47.00	1248	80.00	436	130.00	154	212.00	68
48.00	595	81.00	1149	131.00	169	216.00	78
49.00	3147	82.00	69	134.00	87	217.00	79
50.00	12791	85.00	103	135.00	199	233.00	93
51.00	5933	86.00	141	137.00	210	238.00	72
52.00	168	87.00	1902	139.00	72	242.00	112
54.00	77	88.00	2217	141.00	491	243.00	99
55.00	410	91.00	289	143.00	510	245.00	125
56.00	1115	92.00	1796	146.00	74	246.00	104
57.00	1825	93.00	2450	147.00	75	249.00	69
58.00	87	94.00	6175	148.00	69	250.00	70
59.00	229	95.00	56648	149.00	91	252.00	73
60.00	447	96.00	3461	151.00	73	260.00	111
61.00	2733	100.00	98	152.00	87	261.00	85
62.00	3665	101.00	80	154.00	161	267.00	67
63.00	2908	104.00	93	156.00	136	268.00	171
64.00	277	105.00	173	157.00	174	279.00	66
65.00	617	106.00	141	161.00	282	281.00	264
68.00	7127	110.00	214	171.00	91		
69.00	5549	111.00	362	172.00	388		

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 28-Jan-2015 07:58:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0005445-001
Operator ID: 034635 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 28-Jan-2015 12:12:05 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

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.330	8.330	0.000	0	1313459	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

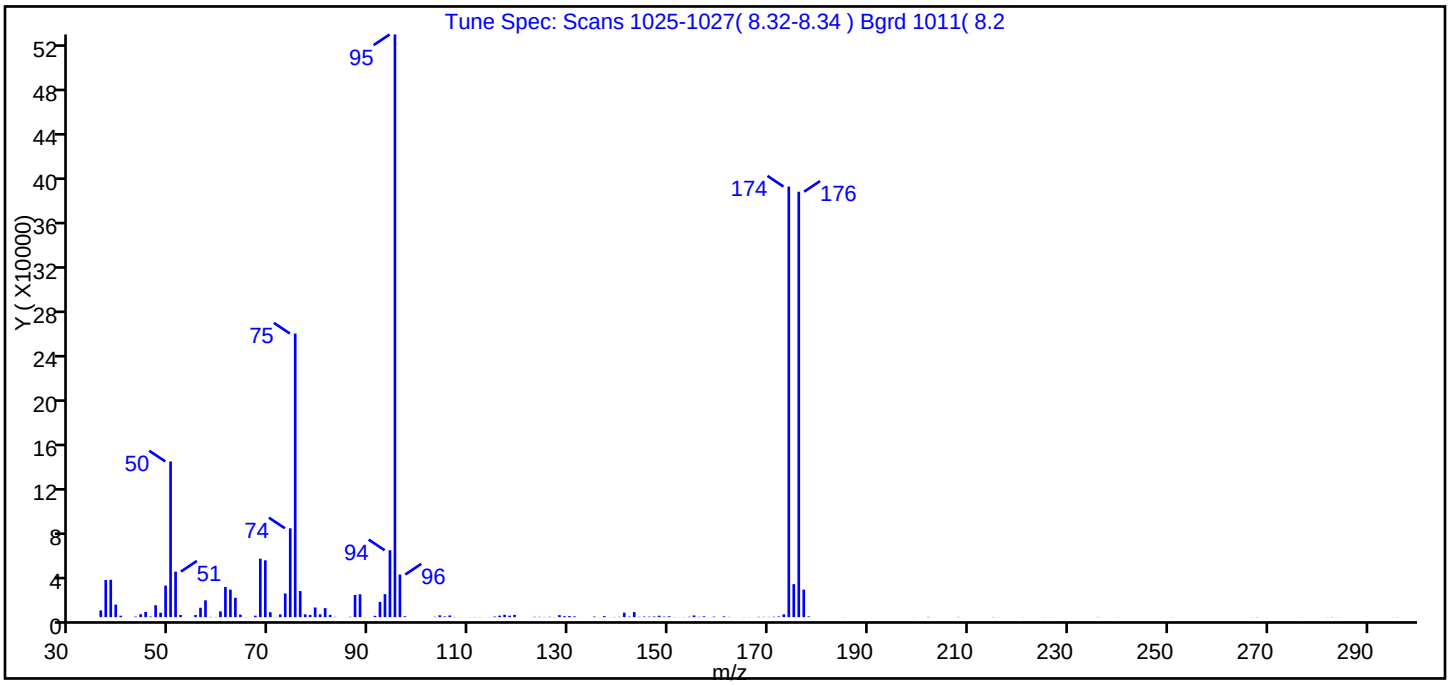
VOABFB25_00058 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D				
Injection Date:	28-Jan-2015 07:58:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	034635	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	26.7
75	30 to 60% of m/z 95	48.7
96	5 to 9% of m/z 95	7.3
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	73.9
175	5 to 9% of m/z 174	5.7 (7.7)
176	Greater than 95% but less than 101% of m/z 174	73.0 (98.8)
177	5 to 9% of m/z 176	4.7 (6.5)

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 28-Jan-2015 07:58:30
Spectrum: Tune Spec: Scans 1025-1027(8.32-8.34) Bgrd 1011(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	6065	76.00	23464	124.00	277	166.00	66
37.00	33408	77.00	2490	125.00	165	168.00	266
38.00	33608	78.00	1914	126.00	337	169.00	255
39.00	11272	79.00	8686	127.00	92	170.00	231
40.00	1280	80.00	2493	128.00	1821	171.00	378
43.00	512	81.00	8115	129.00	859	172.00	628
44.00	2596	82.00	2037	130.00	961	173.00	2482
45.00	4767	83.00	266	131.00	682	174.00	387008
46.00	505	85.00	70	135.00	537	175.00	29672
47.00	10695	86.00	322	136.00	82	176.00	382400
48.00	3934	87.00	19904	137.00	935	177.00	24728
49.00	28416	88.00	20576	138.00	70	178.00	672
50.00	139968	89.00	112	139.00	179	185.00	89
51.00	40920	91.00	1170	140.00	261	199.00	67
52.00	1937	92.00	13759	141.00	4004	202.00	238
53.00	72	93.00	20648	142.00	480	208.00	218
55.00	1874	94.00	60136	143.00	4529	215.00	182
56.00	8422	95.00	523712	144.00	318	216.00	66
57.00	15119	96.00	38304	145.00	524	221.00	92
58.00	251	97.00	782	146.00	460	225.00	67
59.00	155	103.00	307	147.00	574	227.00	71
60.00	5196	104.00	1667	148.00	1281	236.00	162
61.00	27104	105.00	600	149.00	445	240.00	114
62.00	24720	106.00	1524	150.00	770	251.00	110
63.00	17384	107.00	155	151.00	148	267.00	96
64.00	2255	108.00	69	152.00	79	268.00	148
65.00	107	110.00	128	153.00	158	270.00	71
67.00	1286	111.00	177	154.00	348	277.00	75
68.00	52520	112.00	129	155.00	1554	281.00	2
69.00	51072	114.00	121	156.00	300	282.00	102
70.00	4402	115.00	557	157.00	749	283.00	168
71.00	154	116.00	1347	158.00	73	284.00	80
72.00	2426	117.00	2105	159.00	452	295.00	67

Report Date: 28-Jan-2015 12:12:07 Chrom Revision: 2.2 15-Jan-2015 13:05:58
Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 28-Jan-2015 07:58:30
Spectrum: Tune Spec: Scans 1025-1027(8.32-8.34) Bgrd 1011(8.2
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	21264	118.00	1315	161.00	670	296.00	106
74.00	79856	119.00	2014	162.00	230		
75.00	254912	123.00	312	165.00	124		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131443/6

Matrix: Water Lab File ID: 50121006.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 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.: 131443 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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131443/6

Matrix: Water Lab File ID: 50121006.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 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.: 131443 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	118		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121006.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 22-Jan-2015 12:02:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005379-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jan-2015 13:04:27 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: XAWRK012

First Level Reviewer: fergusond Date: 22-Jan-2015 12:27:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.309	4.302	0.007	92	181013	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.277	0.001	100	452864	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	98	99926	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	99	151947	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.524	6.526	-0.002	93	113305	50.0	58.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.897	0.004	92	178963	50.0	56.6	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	96	416401	50.0	50.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	83	151720	50.0	47.9	
11 Dichlorodifluoromethane	85		1.622					ND	
12 Chloromethane	50		1.781					ND	
13 Vinyl chloride	62		1.914					ND	
14 Butadiene	39		1.951					ND	
15 Bromomethane	94		2.261					ND	
16 Chloroethane	64		2.401					ND	
17 Dichlorofluoromethane	67		2.669					ND	
18 Trichlorofluoromethane	101		2.736					ND	
19 Ethanol	45		3.007					ND	
20 Ethyl ether	59		3.082					ND	
21 Acrolein	56		3.253					ND	
22 1,1-Dichloroethene	96		3.381					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.441					ND	
24 Acetone	43		3.496					ND	
25 Iodomethane	142		3.587					ND	
26 Carbon disulfide	76		3.666					ND	
27 Isopropyl alcohol	45		3.767					ND	
29 Acetonitrile	40		3.925					ND	
28 3-Chloro-1-propene	76		3.940					ND	
30 Methyl acetate	43		4.019					ND	
31 Methylene Chloride	84		4.141					ND	
32 2-Methyl-2-propanol	59		4.427					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		4.993					ND	
37 1,1-Dichloroethane	63		5.175					ND	
38 Vinyl acetate	43		5.291					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
41 Isopropyl ether	45		5.324					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.930					ND	
45 cis-1,2-Dichloroethene	96		5.936					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.978					ND	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43		6.079					ND	
49 Chlorobromomethane	128		6.228					ND	
50 Methacrylonitrile	41		6.237					ND	
51 Tetrahydrofuran	42		6.282					ND	
52 Chloroform	83		6.337					ND	
53 1,1,1-Trichloroethane	97		6.532					ND	
54 Cyclohexane	56		6.587					ND	
56 Carbon tetrachloride	117		6.708					ND	
55 1,1-Dichloropropene	75		6.720					ND	
57 Isobutyl alcohol	41		6.939					ND	
58 Benzene	78		6.952					ND	
59 1,2-Dichloroethane	62		6.982					ND	
61 Tert-amyl methyl ether	73		7.107					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.274					ND	
63 n-Butanol	56		7.648					ND	
64 Trichloroethene	130		7.663					ND	
65 Ethyl acrylate	55		7.819					ND	
66 Methylcyclohexane	83		7.864					ND	
67 1,2-Dichloropropane	63		7.901					ND	
68 Dibromomethane	93		8.022					ND	
69 Methyl methacrylate	69		8.050					ND	
70 1,4-Dioxane	88		8.065					ND	
71 Dichlorobromomethane	83		8.199					ND	
72 2-Nitropropane	41		8.433					ND	
73 2-Chloroethyl vinyl ether	63		8.518					ND	
74 cis-1,3-Dichloropropene	75		8.655					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.819					ND	
76 Toluene	91		8.990					ND	
77 trans-1,3-Dichloropropene	75		9.221					ND	
78 Ethyl methacrylate	69		9.318					ND	
79 1,1,2-Trichloroethane	97		9.397					ND	
80 Tetrachloroethene	164		9.531					ND	
81 1,3-Dichloropropane	76		9.561					ND	
82 2-Hexanone	43		9.653					ND	
83 n-Butyl acetate	43		9.784					ND	
84 Chlorodibromomethane	129		9.793					ND	
85 Ethylene Dibromide	107		9.902					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.370					ND	
87 Chlorobenzene	112		10.389					ND	
88 4-Chlorobenzotrifluoride	180		10.425					ND	
89 1,1,1,2-Tetrachloroethane	131		10.474					ND	
90 Ethylbenzene	106		10.498					ND	
91 m-Xylene & p-Xylene	106		10.614					ND	
92 o-Xylene	106		11.009					ND	
93 Styrene	104		11.027					ND	
94 Bromoform	173		11.210					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.271					ND	
97 Isopropylbenzene	105		11.380					ND	
98 Cyclohexanone	55		11.475					ND	
99 1,1,2,2-Tetrachloroethane	83		11.672					ND	
100 Bromobenzene	156		11.684					ND	
101 1,2,3-Trichloropropane	110		11.721					ND	
102 trans-1,4-Dichloro-2-buten	53		11.733					ND	
103 N-Propylbenzene	120		11.788					ND	
104 2-Chlorotoluene	126		11.873					ND	
105 3-Chlorotoluene	126		11.934					ND	
106 1,3,5-Trimethylbenzene	105		11.958					ND	
107 4-Chlorotoluene	126		11.976					ND	
108 tert-Butylbenzene	119		12.287					ND	
109 Pentachloroethane	167		12.308					ND	
110 1,2,4-Trimethylbenzene	105		12.335					ND	
111 1,2-dichloro-4-(trifluorom	214		12.402					ND	
112 sec-Butylbenzene	105		12.506					ND	
113 1,3-Dichlorobenzene	146		12.615					ND	
114 4-Isopropyltoluene	119		12.652					ND	
115 1,4-Dichlorobenzene	146		12.707					ND	
116 2,4-Dichloro-1-(triflourom	214		12.755					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
118 2,5-Dichlorobenzotrifluori	214		12.804					ND	
119 Benzyl chloride	91		12.844					ND	
120 n-Butylbenzene	91		13.059					ND	
121 1,2-Dichlorobenzene	146		13.084					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.862					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.008					ND	
124 1,3,5-Trichlorobenzene	180		14.072					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.422					ND	
126 1,2,4-Trichlorobenzene	180		14.696					ND	
127 Hexachlorobutadiene	225		14.866					ND	
128 Naphthalene	128		14.939					ND	
129 1,2,3-Trichlorobenzene	180		15.182					ND	
131 2,4,5-Trichlorotoluene	159		15.961					ND	
130 2,3,6-Trichlorotoluene	159		16.065					ND	
132 2-Methylnaphthalene	142		16.080					ND	
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

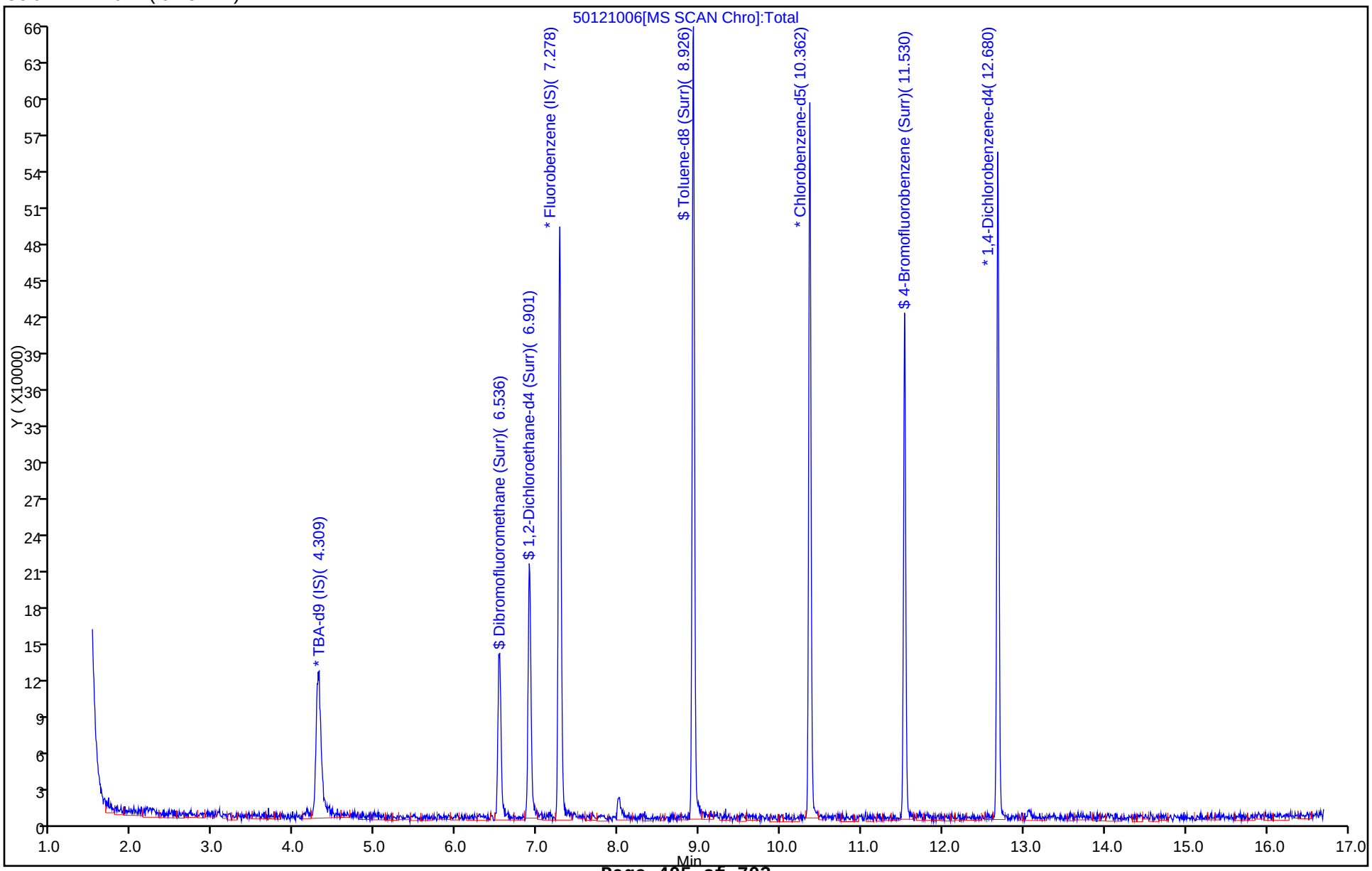
Report Date: 22-Jan-2015 13:04:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121006.D

Injection Date:	22-Jan-2015 12:02:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131582/5

Matrix: Water Lab File ID: 50123005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 12:13

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131582 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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131582/5

Matrix: Water Lab File ID: 50123005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 12:13

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131582 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	105		71-118
460-00-4	4-Bromofluorobenzene (Surr)	99		70-118
1868-53-7	Dibromofluoromethane (Surr)	104		70-128

Report Date: 23-Jan-2015 14:34:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123005.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 23-Jan-2015 12:13:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005396-005
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 12:17:42 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 12:43:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.300	4.297	0.003	92	216671	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.271	0.003	99	542614	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.365	10.362	0.003	98	114807	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.683	12.680	0.003	98	161221	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.523	0.009	91	119986	50.0	52.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.900	-0.003	92	190965	50.0	50.4	
$ 7 Toluene-d8 (Surr)	98	8.923	8.920	0.003	95	502716	50.0	52.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.530	0.003	85	179925	50.0	49.4	
11 Dichlorodifluoromethane	85		1.626					ND	
12 Chloromethane	50		1.778					ND	
13 Vinyl chloride	62		1.906					ND	
14 Butadiene	39	1.811	1.948	-0.137	1	246		0.0392	
15 Bromomethane	94		2.247					ND	
16 Chloroethane	64		2.411					ND	
17 Dichlorofluoromethane	67		2.660					ND	
18 Trichlorofluoromethane	101		2.709					ND	
19 Ethanol	45		3.007					ND	
20 Ethyl ether	59		3.092					ND	
21 Acrolein	56		3.256					ND	
22 1,1-Dichloroethene	96		3.384					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.433					ND	
24 Acetone	43		3.494					ND	
25 Iodomethane	142		3.597					ND	
26 Carbon disulfide	76		3.658					ND	
27 Isopropyl alcohol	45		3.767					ND	
29 Acetonitrile	40		3.925					ND	
28 3-Chloro-1-propene	76		3.938					ND	
30 Methyl acetate	43		4.023					ND	
31 Methylene Chloride	84	4.160	4.138	0.022	59	3012		-4.42	
32 2-Methyl-2-propanol	59		4.424					ND	
33 Acrylonitrile	53		4.546					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		4.595					ND	
36 Hexane	57		4.990					ND	
37 1,1-Dichloroethane	63		5.173					ND	
38 Vinyl acetate	43		5.294					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
41 Isopropyl ether	45		5.324					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.927					ND	
45 cis-1,2-Dichloroethene	96		5.933					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.982					ND	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43		6.079					ND	
49 Chlorobromomethane	128		6.231					ND	
50 Methacrylonitrile	41		6.237					ND	
51 Tetrahydrofuran	42		6.280					ND	
52 Chloroform	83		6.341					ND	
53 1,1,1-Trichloroethane	97		6.529					ND	
54 Cyclohexane	56		6.584					ND	
56 Carbon tetrachloride	117		6.718					ND	
55 1,1-Dichloropropene	75		6.724					ND	
57 Isobutyl alcohol	41		6.943					ND	
58 Benzene	78		6.955					ND	
59 1,2-Dichloroethane	62		6.979					ND	
61 Tert-amyl methyl ether	73		7.107					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43	7.280	7.278	0.002	36	209		0.0272	
63 n-Butanol	56		7.648					ND	
64 Trichloroethene	130		7.661					ND	
65 Ethyl acrylate	55		7.819					ND	
66 Methylcyclohexane	83		7.862					ND	
67 1,2-Dichloropropane	63		7.904					ND	
68 Dibromomethane	93		8.026					ND	
69 Methyl methacrylate	69		8.050					ND	
70 1,4-Dioxane	88		8.056					ND	
71 Dichlorobromomethane	83		8.196					ND	
72 2-Nitropropane	41		8.433					ND	
73 2-Chloroethyl vinyl ether	63		8.519					ND	
74 cis-1,3-Dichloropropene	75		8.652					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.823					ND	
76 Toluene	91		8.987					ND	
77 trans-1,3-Dichloropropene	75		9.218					ND	
78 Ethyl methacrylate	69		9.315					ND	
79 1,1,2-Trichloroethane	97		9.401					ND	
80 Tetrachloroethene	164		9.535					ND	
81 1,3-Dichloropropane	76		9.565					ND	
82 2-Hexanone	43		9.656					ND	
83 n-Butyl acetate	43		9.784					ND	
84 Chlorodibromomethane	129		9.796					ND	
85 Ethylene Dibromide	107		9.900					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.374					ND	
87 Chlorobenzene	112		10.392					ND	
88 4-Chlorobenzotrifluoride	180		10.429					ND	
89 1,1,1,2-Tetrachloroethane	131		10.471					ND	
90 Ethylbenzene	106		10.496					ND	
91 m-Xylene & p-Xylene	106		10.617					ND	
92 o-Xylene	106		11.013					ND	
93 Styrene	104		11.025					ND	
94 Bromoform	173		11.214					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.274					ND	
97 Isopropylbenzene	105		11.378					ND	
98 Cyclohexanone	55		11.475					ND	
99 1,1,2,2-Tetrachloroethane	83		11.670					ND	
100 Bromobenzene	156		11.688					ND	
101 1,2,3-Trichloropropane	110		11.718					ND	
102 trans-1,4-Dichloro-2-buten	53		11.731					ND	
103 N-Propylbenzene	120		11.791					ND	
104 2-Chlorotoluene	126		11.871					ND	
105 3-Chlorotoluene	126		11.931					ND	
106 1,3,5-Trimethylbenzene	105		11.962					ND	
107 4-Chlorotoluene	126		11.980					ND	
108 tert-Butylbenzene	119		12.290					ND	
109 Pentachloroethane	167		12.308					ND	
110 1,2,4-Trimethylbenzene	105		12.333					ND	
111 1,2-dichloro-4-(trifluorom	214		12.400					ND	
112 sec-Butylbenzene	105		12.509					ND	
113 1,3-Dichlorobenzene	146		12.619					ND	
114 4-Isopropyltoluene	119		12.655					ND	
115 1,4-Dichlorobenzene	146		12.710					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
116 2,4-Dichloro-1-(triflourom	214		12.759					ND	
118 2,5-Dichlorobenzotrifluori	214		12.807					ND	
119 Benzyl chloride	91		12.844					ND	
120 n-Butylbenzene	91		13.063					ND	
121 1,2-Dichlorobenzene	146		13.081					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.866					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.006					ND	
124 1,3,5-Trichlorobenzene	180		14.072					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.426					ND	
126 1,2,4-Trichlorobenzene	180		14.693					ND	
127 Hexachlorobutadiene	225		14.864					ND	
128 Naphthalene	128		14.943					ND	
129 1,2,3-Trichlorobenzene	180		15.186					ND	
131 2,4,5-Trichlorotoluene	159		15.965					ND	
130 2,3,6-Trichlorotoluene	159		16.056					ND	
132 2-Methylnaphthalene	142		16.080					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
150 2,6-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
151 Isooctane	57		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

Reagents:

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

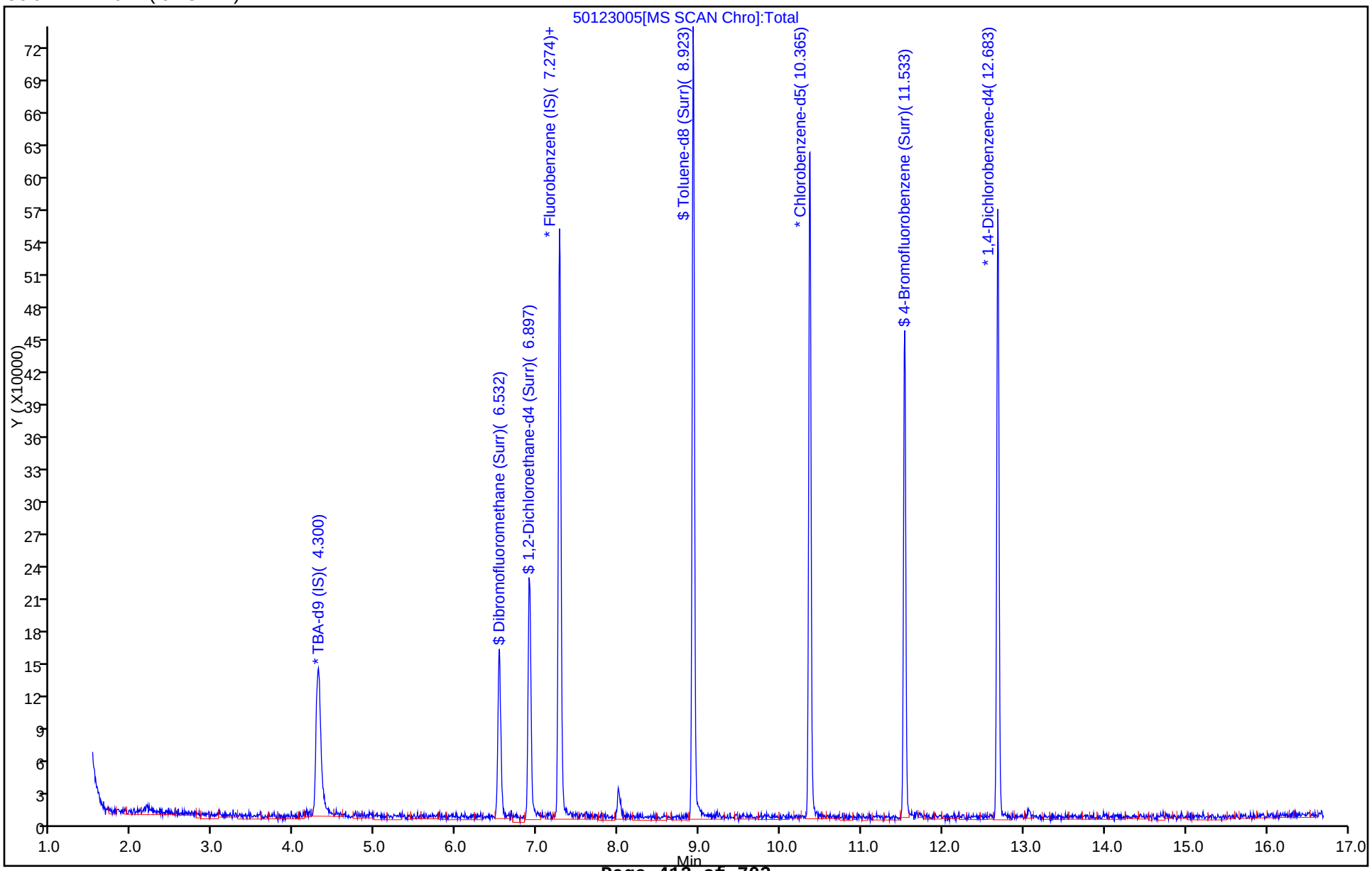
Report Date: 23-Jan-2015 14:34:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123005.D

Injection Date:	23-Jan-2015 12:13:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131906/5

Matrix: Water Lab File ID: 50128005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 10:35

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.: 131906 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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131906/5

Matrix: Water Lab File ID: 50128005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 10:35

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.: 131906 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)	90		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128

Report Date: 28-Jan-2015 12:29:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128005.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 28-Jan-2015 10:35:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0005445-005
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 28-Jan-2015 12:29:09 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: 28-Jan-2015 12:29:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.308	-0.012	93	196224	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.276	0.001	99	520134	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	98	113079	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	167894	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	93	117625	50.0	53.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.899	0.001	94	164395	50.0	45.2	
$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	477779	50.0	50.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.535	-0.005	84	180414	50.0	50.3	
11 Dichlorodifluoromethane	85		1.631					ND	
12 Chloromethane	50		1.783					ND	
13 Vinyl chloride	62		1.911					ND	
14 Butadiene	39		1.959					ND	
15 Bromomethane	94		2.270					ND	
16 Chloroethane	64		2.416					ND	
17 Dichlorofluoromethane	67		2.665					ND	
18 Trichlorofluoromethane	101		2.702					ND	
19 Ethanol	45		3.007					ND	
20 Ethyl ether	59		3.091					ND	
21 Acrolein	56		3.255					ND	
22 1,1-Dichloroethene	96		3.383					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.444					ND	
24 Acetone	43		3.499					ND	
25 Iodomethane	142		3.584					ND	
26 Carbon disulfide	76		3.675					ND	
27 Isopropyl alcohol	45		3.767					ND	
29 Acetonitrile	40		3.925					ND	
28 3-Chloro-1-propene	76		3.955					ND	
30 Methyl acetate	43		4.022					ND	
31 Methylene Chloride	84		4.156					ND	
32 2-Methyl-2-propanol	59		4.435					ND	
33 Acrylonitrile	53		4.557					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		4.563					ND	
35 Methyl tert-butyl ether	73		4.588					ND	
36 Hexane	57		4.983					ND	
37 1,1-Dichloroethane	63		5.178					ND	
38 Vinyl acetate	43		5.290					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
41 Isopropyl ether	45		5.324					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.926					ND	
45 cis-1,2-Dichloroethene	96		5.938					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.987					ND	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43		6.079					ND	
49 Chlorobromomethane	128		6.224					ND	
50 Methacrylonitrile	41		6.237					ND	
51 Tetrahydrofuran	42		6.285					ND	
52 Chloroform	83		6.352					ND	
53 1,1,1-Trichloroethane	97		6.534					ND	
54 Cyclohexane	56		6.589					ND	
56 Carbon tetrachloride	117		6.717					ND	
55 1,1-Dichloropropene	75		6.723					ND	
57 Isobutyl alcohol	41		6.942					ND	
58 Benzene	78		6.954					ND	
59 1,2-Dichloroethane	62		6.990					ND	
61 Tert-amyl methyl ether	73		7.107					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.276					ND	
63 n-Butanol	56		7.648					ND	
64 Trichloroethene	130		7.666					ND	
65 Ethyl acrylate	55		7.819					ND	
66 Methylcyclohexane	83		7.860					ND	
67 1,2-Dichloropropane	63		7.903					ND	
68 Dibromomethane	93		8.031					ND	
70 1,4-Dioxane	88		8.049					ND	
69 Methyl methacrylate	69		8.050					ND	
71 Dichlorobromomethane	83		8.195					ND	
72 2-Nitropropane	41		8.433					ND	
73 2-Chloroethyl vinyl ether	63		8.524					ND	
74 cis-1,3-Dichloropropene	75		8.657					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822					ND	
76 Toluene	91		8.992					ND	
77 trans-1,3-Dichloropropene	75		9.223					ND	
78 Ethyl methacrylate	69		9.320					ND	
79 1,1,2-Trichloroethane	97		9.400					ND	
80 Tetrachloroethene	164		9.539					ND	
81 1,3-Dichloropropane	76		9.564					ND	
82 2-Hexanone	43		9.655					ND	
83 n-Butyl acetate	43		9.784					ND	
84 Chlorodibromomethane	129		9.789					ND	
85 Ethylene Dibromide	107		9.904					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.373					ND	
87 Chlorobenzene	112		10.391					ND	
88 4-Chlorobenzotrifluoride	180		10.434					ND	
89 1,1,1,2-Tetrachloroethane	131		10.476					ND	
90 Ethylbenzene	106		10.501					ND	
91 m-Xylene & p-Xylene	106		10.622					ND	
92 o-Xylene	106		11.012					ND	
93 Styrene	104		11.030					ND	
94 Bromoform	173		11.218					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.273					ND	
97 Isopropylbenzene	105		11.383					ND	
98 Cyclohexanone	55		11.475					ND	
99 1,1,2,2-Tetrachloroethane	83		11.675					ND	
100 Bromobenzene	156		11.687					ND	
101 1,2,3-Trichloropropane	110		11.723					ND	
102 trans-1,4-Dichloro-2-buten	53		11.729					ND	
103 N-Propylbenzene	120		11.790					ND	
104 2-Chlorotoluene	126		11.875					ND	
105 3-Chlorotoluene	126		11.936					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		12.308					ND	
110 1,2,4-Trimethylbenzene	105		12.338					ND	
111 1,2-dichloro-4-(trifluorom	214		12.405					ND	
112 sec-Butylbenzene	105		12.508					ND	
113 1,3-Dichlorobenzene	146		12.624					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		12.758					ND	
118 2,5-Dichlorobenzotrifluori	214		12.806					ND	
119 Benzyl chloride	91		12.844					ND	
120 n-Butylbenzene	91		13.062					ND	
121 1,2-Dichlorobenzene	146		13.086					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.865					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		14.431					ND	
126 1,2,4-Trichlorobenzene	180		14.692					ND	
127 Hexachlorobutadiene	225		14.862					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		16.080					ND	
151 Isooctane	57		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
146 2,5-Dichlorotoluene	1		0.000					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

Reagents:

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

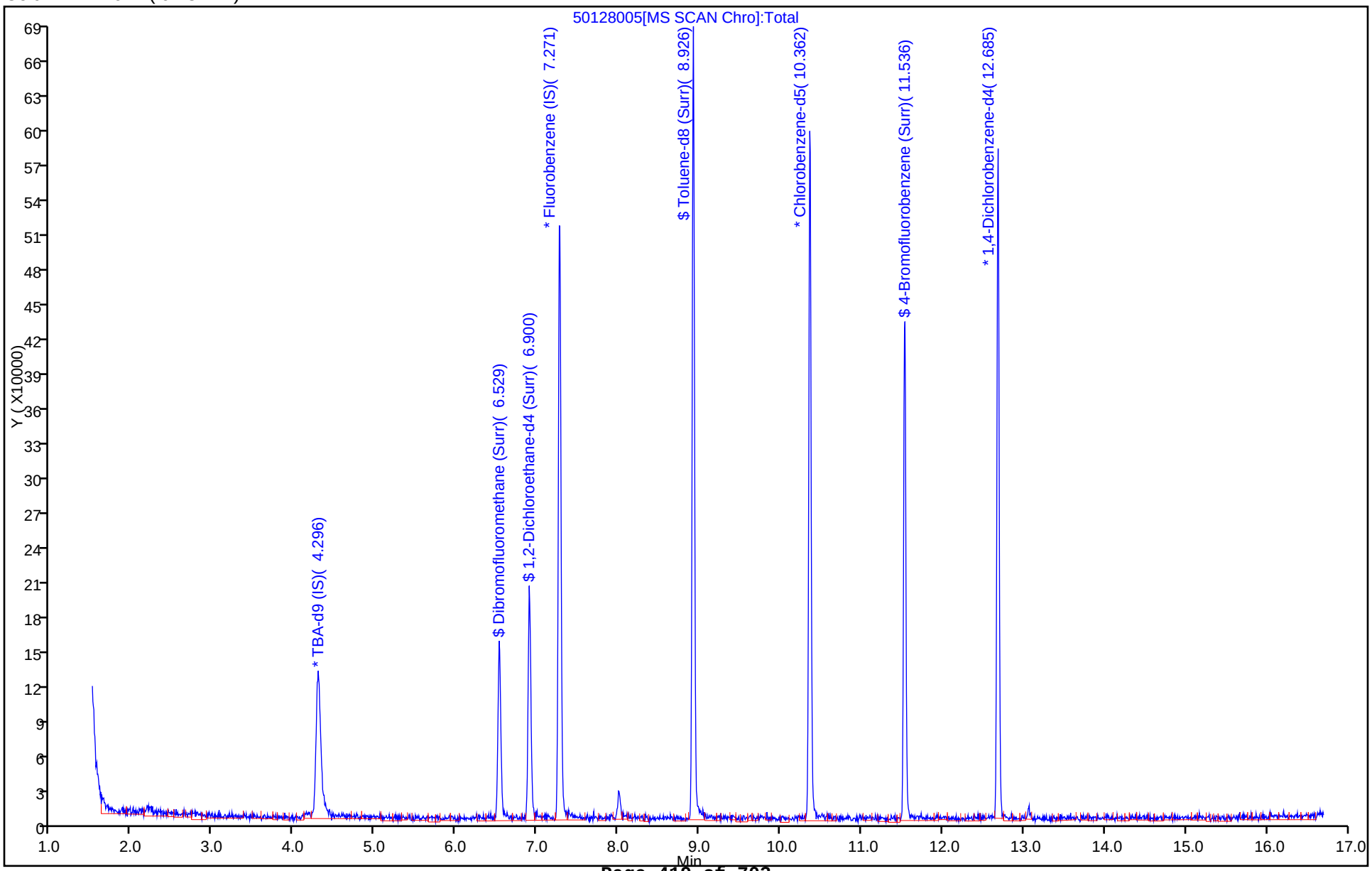
Report Date: 28-Jan-2015 12:29:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128005.D

Injection Date:	28-Jan-2015 10:35:30	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.: 180-40541-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-131443/9

Matrix: Water | Lab File ID: 50121009.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/22/2015 13:26

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.: 131443 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	8.76		1.0	0.28
75-01-4	Vinyl chloride	8.35		1.0	0.23
74-83-9	Bromomethane	10.8		1.0	0.31
75-00-3	Chloroethane	9.08		1.0	0.21
75-35-4	1,1-Dichloroethene	9.72		1.0	0.30
67-64-1	Acetone	20.3		5.0	2.5
75-15-0	Carbon disulfide	10.5		1.0	0.21
75-09-2	Methylene Chloride	9.90		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.1		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.51		1.0	0.18
75-34-3	1,1-Dichloroethane	10.3		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.61		1.0	0.24
74-97-5	Bromochloromethane	9.66		1.0	0.18
78-93-3	2-Butanone (MEK)	18.2		5.0	0.55
67-66-3	Chloroform	10.6		1.0	0.17
71-55-6	1,1,1-Trichloroethane	11.3		1.0	0.29
56-23-5	Carbon tetrachloride	12.2		1.0	0.14
71-43-2	Benzene	9.63		1.0	0.11
107-06-2	1,2-Dichloroethane	10.1		1.0	0.21
79-01-6	Trichloroethene	10.3		1.0	0.14
78-87-5	1,2-Dichloropropane	8.63		1.0	0.095
75-27-4	Bromodichloromethane	9.76		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.69		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.6		5.0	0.53
108-88-3	Toluene	10.3		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	11.0		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.36		1.0	0.20
127-18-4	Tetrachloroethene	11.0		1.0	0.15
591-78-6	2-Hexanone	14.5		5.0	0.16
124-48-1	Dibromochloromethane	10.7		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.1		1.0	0.18
108-90-7	Chlorobenzene	10.7		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.2		1.0	0.28
100-41-4	Ethylbenzene	10.4		1.0	0.23
1330-20-7	Xylenes, Total	21.2		3.0	0.49
100-42-5	Styrene	10.0		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131443/9

Matrix: Water Lab File ID: 50121009.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/22/2015 13:26

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.: 131443 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.89		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.48		1.0	0.20
107-13-1	Acrylonitrile	84.3		20	0.55
123-91-1	1,4-Dioxane	153	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)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	105		70-128

Report Date: 22-Jan-2015 14:16:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121009.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 22-Jan-2015 13:26:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005379-009
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 22-Jan-2015 14:16:33 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: XAWRK012

First Level Reviewer: fergusond Date: 22-Jan-2015 14:16:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.315	4.302	0.013	59	165405	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.277	-0.005	95	464214	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.356	10.367	-0.011	88	101442	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	92	165509	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.526	0.004	45	103925	50.0	52.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.897	0.004	60	159490	50.0	49.2	
$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	86	434239	50.0	51.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	82	154498	50.0	48.1	
11 Dichlorodifluoromethane	85	1.626	1.622	0.004	70	119949	50.0	43.1	
12 Chloromethane	50	1.785	1.781	0.003	95	240648	50.0	43.8	
13 Vinyl chloride	62	1.918	1.914	0.004	82	157398	50.0	41.7	
14 Butadiene	39	1.961	1.951	0.010	99	246305	50.0	45.9	
15 Bromomethane	94	2.265	2.261	0.004	82	60903	50.0	54.0	
16 Chloroethane	64	2.411	2.401	0.010	90	84715	50.0	45.4	
17 Dichlorofluoromethane	67	2.667	2.669	-0.002	91	182722	50.0	49.2	
18 Trichlorofluoromethane	101	2.715	2.736	-0.021	95	136230	50.0	57.9	
20 Ethyl ether	59	3.092	3.082	0.010	98	147305	50.0	44.1	
21 Acrolein	56	3.269	3.253	0.016	88	69532	150.0	139.1	
22 1,1-Dichloroethene	96	3.378	3.381	-0.003	93	122836	50.0	48.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.445	3.441	0.004	82	146139	50.0	57.1	
24 Acetone	43	3.506	3.496	0.010	92	148049	100.0	101.7	
25 Iodomethane	142	3.585	3.587	-0.002	93	180094	50.0	55.6	
26 Carbon disulfide	76	3.658	3.666	-0.008	99	257321	50.0	52.5	
28 3-Chloro-1-propene	76	3.950	3.940	0.010	79	69518	50.0	48.7	
30 Methyl acetate	43	4.023	4.019	0.004	99	928356	250.0	219.6	
31 Methylene Chloride	84	4.151	4.141	0.010	83	151531	50.0	49.5	
32 2-Methyl-2-propanol	59	4.425	4.427	-0.002	88	99224	500.0	448.7	
33 Acrylonitrile	53	4.559	4.549	0.010	99	820959	500.0	421.4	
34 trans-1,2-Dichloroethene	96	4.577	4.561	0.016	57	129687	50.0	50.7	
35 Methyl tert-butyl ether	73	4.595	4.597	-0.002	79	282350	50.0	42.6	
36 Hexane	57	4.991	4.993	-0.003	93	284209	50.0	43.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.179	5.175	0.004	85	306933	50.0	51.5	
38 Vinyl acetate	43	5.301	5.291	0.010	96	235493	50.0	41.2	
44 2,2-Dichloropropane	77	5.921	5.930	-0.009	66	105872	50.0	67.1	
45 cis-1,2-Dichloroethene	96	5.940	5.936	0.004	89	132957	50.0	48.0	
46 2-Butanone (MEK)	43	5.994	5.978	0.016	94	208253	100.0	91.0	
49 Chlorobromomethane	128	6.232	6.228	0.004	84	55749	50.0	48.3	
51 Tetrahydrofuran	42	6.298	6.282	0.016	98	125842	100.0	72.3	
52 Chloroform	83	6.341	6.337	0.004	84	238645	50.0	53.0	
53 1,1,1-Trichloroethane	97	6.536	6.532	0.004	86	165480	50.0	56.6	
54 Cyclohexane	56	6.584	6.587	-0.003	73	370295	50.0	45.1	
56 Carbon tetrachloride	117	6.718	6.708	0.010	63	155129	50.0	61.1	
55 1,1-Dichloropropene	75	6.718	6.720	-0.002	77	190498	50.0	51.7	
57 Isobutyl alcohol	41	6.943	6.939	0.004	59	136378	1250.0	1022.7	
58 Benzene	78	6.962	6.952	0.010	95	552940	50.0	48.2	
59 1,2-Dichloroethane	62	6.980	6.982	-0.002	86	225809	50.0	50.7	
62 n-Heptane	43	7.284	7.274	0.010	89	287680	50.0	43.8	
64 Trichloroethene	130	7.667	7.663	0.004	90	126637	50.0	51.5	
66 Methylcyclohexane	83	7.868	7.864	0.004	91	218820	50.0	46.5	
67 1,2-Dichloropropane	63	7.904	7.901	0.003	83	152335	50.0	43.1	
68 Dibromomethane	93	8.026	8.022	0.004	88	66614	50.0	45.7	
70 1,4-Dioxane	88	8.057	8.065	-0.008	89	20171	1000.0	763.2	M
71 Dichlorobromomethane	83	8.196	8.199	-0.003	88	146787	50.0	48.8	
73 2-Chloroethyl vinyl ether	63	8.519	8.518	0.001	82	166780	100.0	113.1	
74 cis-1,3-Dichloropropene	75	8.659	8.655	0.004	82	166178	50.0	48.4	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.819	0.004	97	386215	100.0	88.1	
76 Toluene	91	8.993	8.990	0.003	95	553390	50.0	51.4	
77 trans-1,3-Dichloropropene	75	9.219	9.221	-0.003	82	137512	50.0	55.1	
78 Ethyl methacrylate	69	9.316	9.318	-0.002	86	127074	50.0	42.8	
79 1,1,2-Trichloroethane	97	9.401	9.397	0.004	94	98913	50.0	46.8	
80 Tetrachloroethene	164	9.535	9.531	0.004	87	109574	50.0	55.2	
81 1,3-Dichloropropane	76	9.565	9.561	0.004	90	188150	50.0	46.2	
82 2-Hexanone	43	9.657	9.653	0.004	96	254197	100.0	72.5	
84 Chlorodibromomethane	129	9.790	9.793	-0.003	85	82823	50.0	53.3	
85 Ethylene Dibromide	107	9.900	9.902	-0.002	96	98575	50.0	50.3	
86 3-Chlorobenzotrifluoride	180	10.368	10.370	-0.002	77	186996	50.0	52.8	
87 Chlorobenzene	112	10.393	10.389	0.004	87	350872	50.0	53.6	
88 4-Chlorobenzotrifluoride	180	10.429	10.425	0.004	79	182695	50.0	55.2	
89 1,1,1,2-Tetrachloroethane	131	10.472	10.474	-0.002	85	101657	50.0	50.9	
90 Ethylbenzene	106	10.502	10.498	0.004	98	193061	50.0	52.1	
91 m-Xylene & p-Xylene	106	10.618	10.614	0.004	98	244228	50.0	54.1	
92 o-Xylene	106	11.013	11.009	0.004	89	227592	50.0	51.8	
93 Styrene	104	11.025	11.027	-0.002	86	369591	50.0	50.0	
94 Bromoform	173	11.208	11.210	-0.002	92	48554	50.0	49.4	
96 2-Chlorobenzotrifluoride	180	11.269	11.271	-0.002	92	180964	50.0	53.4	
97 Isopropylbenzene	105	11.378	11.380	-0.002	97	603875	50.0	55.1	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.672	0.004	70	140780	50.0	47.4	
100 Bromobenzene	156	11.682	11.684	-0.002	94	127370	50.0	42.8	
101 1,2,3-Trichloropropane	110	11.713	11.721	-0.008	82	42873	50.0	39.6	
102 trans-1,4-Dichloro-2-buten	53	11.731	11.733	-0.002	50	63089	50.0	42.4	
103 N-Propylbenzene	120	11.786	11.788	-0.002	85	163742	50.0	46.6	
104 2-Chlorotoluene	126	11.871	11.873	-0.002	94	140426	50.0	47.4	
105 3-Chlorotoluene	126	11.932	11.934	-0.002	67	143181	50.0	45.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.962	11.958	0.004	90	517522	50.0	49.1	
107 4-Chlorotoluene	126	11.980	11.976	0.004	98	154364	50.0	46.8	
108 tert-Butylbenzene	119	12.285	12.287	-0.002	58	401394	50.0	46.5	
110 1,2,4-Trimethylbenzene	105	12.333	12.335	-0.002	96	506895	50.0	46.8	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.402	-0.002	95	134860	50.0	45.2	
112 sec-Butylbenzene	105	12.510	12.506	0.004	92	591792	50.0	47.5	
113 1,3-Dichlorobenzene	146	12.619	12.615	0.004	80	254492	50.0	45.3	
114 4-Isopropyltoluene	119	12.650	12.652	-0.002	89	480417	50.0	47.9	
115 1,4-Dichlorobenzene	146	12.704	12.707	-0.003	87	257520	50.0	44.4	
116 2,4-Dichloro-1-(triflourom	214	12.759	12.755	0.004	87	122525	50.0	43.8	
118 2,5-Dichlorobenzotrifluori	214	12.808	12.804	0.004	96	139911	50.0	45.8	
120 n-Butylbenzene	91	13.063	13.059	0.004	94	401485	50.0	43.8	
121 1,2-Dichlorobenzene	146	13.082	13.084	-0.002	92	230214	50.0	44.1	
122 1,2-Dibromo-3-Chloropropan	75	13.854	13.862	-0.008	50	20916	50.0	44.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.008	-0.002	98	486517	150.0	148.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.426	14.422	0.004	97	314639	100.0	100.4	
126 1,2,4-Trichlorobenzene	180	14.694	14.696	-0.002	94	107974	50.0	49.9	
127 Hexachlorobutadiene	225	14.858	14.866	-0.008	86	55630	50.0	54.2	
128 Naphthalene	128	14.937	14.939	-0.002	96	258607	50.0	44.8	
129 1,2,3-Trichlorobenzene	180	15.186	15.182	0.004	93	87286	50.0	51.5	
131 2,4,5-Trichlorotoluene	159	15.959	15.961	-0.002	87	42509	50.0	59.0	
130 2,3,6-Trichlorotoluene	159	16.062	16.065	-0.003	92	39593	50.0	60.0	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	98.7	
S 133 Xylenes, Total	106				0		100.0	105.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	103.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA2CEVE2ND_00005	Amount Added:	2.00	Units: uL		
VOA8260VOA2ND_00099	Amount Added:	2.00	Units: uL		
VOAKETONEPRI_00003	Amount Added:	2.00	Units: uL		
voaEEmix2ndRe_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	

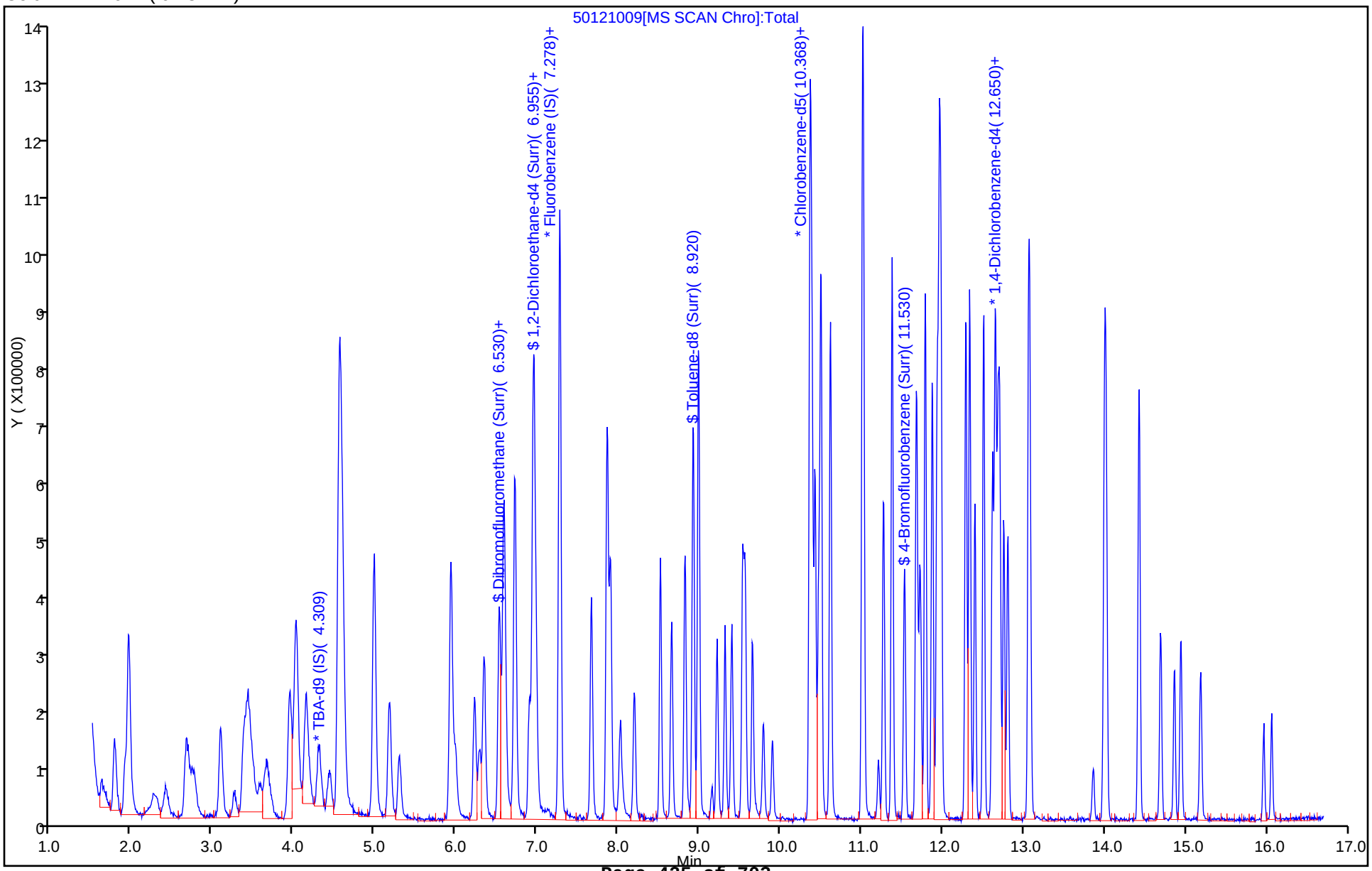
Report Date: 22-Jan-2015 14:16:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121009.D

Injection Date:	22-Jan-2015 13:26:30	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#:	8
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

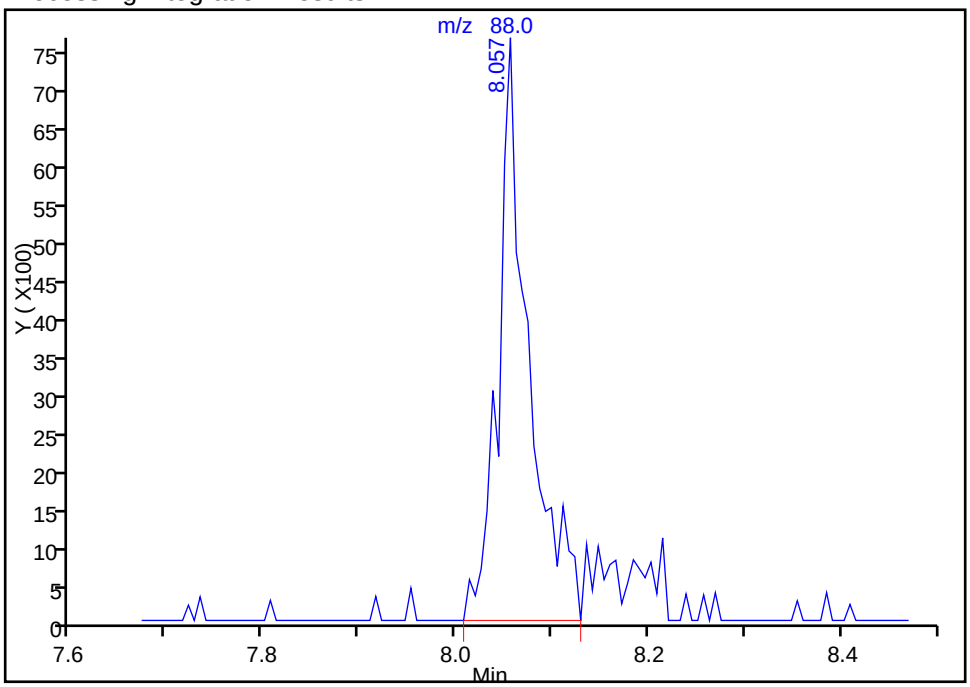
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150122-5379.b\50121009.D
Injection Date: 22-Jan-2015 13:26:30 Instrument ID: CHHP5
Lims ID: LCS
Client ID:
Operator ID: 001562 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

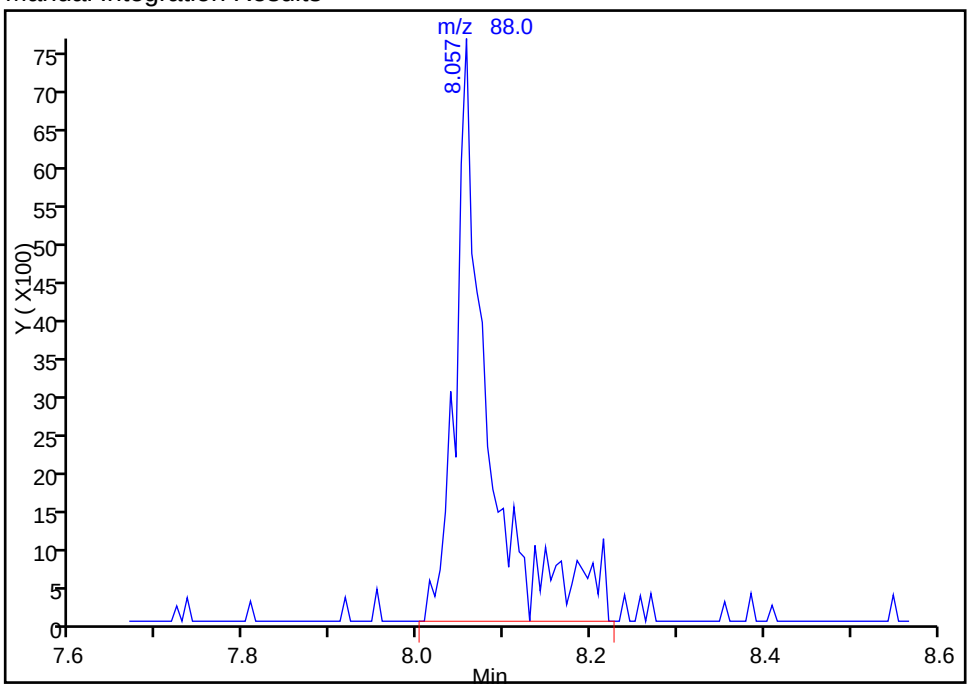
Processing Integration Results

RT: 8.06
Area: 16745
Amount: 619.2543
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 20171
Amount: 763.2317
Amount Units: ng



Reviewer: fergusond, 22-Jan-2015 14:16:33
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-131582/6

Matrix: Water | Lab File ID: 50123006.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/23/2015 12:56

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.: 131582 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.43		1.0	0.28
75-01-4	Vinyl chloride	8.18		1.0	0.23
74-83-9	Bromomethane	9.26		1.0	0.31
75-00-3	Chloroethane	8.60		1.0	0.21
75-35-4	1,1-Dichloroethene	9.50		1.0	0.30
67-64-1	Acetone	18.1		5.0	2.5
75-15-0	Carbon disulfide	10.4		1.0	0.21
75-09-2	Methylene Chloride	9.95		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.7		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.41		1.0	0.18
75-34-3	1,1-Dichloroethane	9.45		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.98		1.0	0.24
74-97-5	Bromochloromethane	9.32		1.0	0.18
78-93-3	2-Butanone (MEK)	17.3		5.0	0.55
67-66-3	Chloroform	10.0		1.0	0.17
71-55-6	1,1,1-Trichloroethane	10.9		1.0	0.29
56-23-5	Carbon tetrachloride	11.2		1.0	0.14
71-43-2	Benzene	9.83		1.0	0.11
107-06-2	1,2-Dichloroethane	9.74		1.0	0.21
79-01-6	Trichloroethene	9.73		1.0	0.14
78-87-5	1,2-Dichloropropane	9.01		1.0	0.095
75-27-4	Bromodichloromethane	10.4		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)	18.4		5.0	0.53
108-88-3	Toluene	10.9		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	13.1		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.8		1.0	0.20
127-18-4	Tetrachloroethene	9.76		1.0	0.15
591-78-6	2-Hexanone	16.7		5.0	0.16
124-48-1	Dibromochloromethane	11.4		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.6		1.0	0.18
108-90-7	Chlorobenzene	10.8		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.9		1.0	0.28
100-41-4	Ethylbenzene	10.5		1.0	0.23
1330-20-7	Xylenes, Total	21.8		3.0	0.49
100-42-5	Styrene	10.5		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131582/6

Matrix: Water Lab File ID: 50123006.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 12:56

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.: 131582 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	11.0		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.7		1.0	0.20
107-13-1	Acrylonitrile	75.5		20	0.55
123-91-1	1,4-Dioxane	172	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	95		70-128

Report Date: 23-Jan-2015 14:34:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123006.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 23-Jan-2015 12:56:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005396-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 12:17:42 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 13:39:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.304	4.297	0.007	91	193155	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	97	523683	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.357	10.362	-0.005	97	109183	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.680	0.001	96	162532	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.523	0.008	73	106093	50.0	47.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	92	166879	50.0	45.6	
$ 7 Toluene-d8 (Surr)	98	8.921	8.920	0.001	95	451909	50.0	49.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.530	0.001	82	174371	50.0	50.4	
11 Dichlorodifluoromethane	85	1.633	1.626	0.007	99	131400	50.0	41.8	
12 Chloromethane	50	1.779	1.778	0.001	99	230164	50.0	37.2	
13 Vinyl chloride	62	1.907	1.906	0.001	97	173987	50.0	40.9	
14 Butadiene	39	1.956	1.948	0.008	99	219168	50.0	36.2	
15 Bromomethane	94	2.266	2.247	0.020	91	58918	50.0	46.3	
16 Chloroethane	64	2.406	2.411	-0.005	95	90574	50.0	43.0	
17 Dichlorofluoromethane	67	2.674	2.660	0.014	97	189825	50.0	45.3	
18 Trichlorofluoromethane	101	2.710	2.709	0.001	93	134056	50.0	50.5	
20 Ethyl ether	59	3.094	3.092	0.002	97	156316	50.0	41.4	
21 Acrolein	56	3.258	3.256	0.002	99	71335	150.0	126.5	
22 1,1-Dichloroethene	96	3.373	3.384	-0.011	96	135523	50.0	47.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.434	3.433	0.001	95	142464	50.0	49.3	
24 Acetone	43	3.489	3.494	-0.005	98	148440	100.0	90.4	
25 Iodomethane	142	3.574	3.597	-0.023	98	182087	50.0	49.8	
26 Carbon disulfide	76	3.659	3.658	0.001	100	287700	50.0	52.0	
28 3-Chloro-1-propene	76	3.945	3.938	0.007	88	76995	50.0	47.8	
30 Methyl acetate	43	4.018	4.023	-0.005	100	923937	250.0	193.8	
31 Methylene Chloride	84	4.152	4.138	0.014	93	171734	50.0	49.7	
32 2-Methyl-2-propanol	59	4.432	4.424	0.008	85	119178	500.0	461.5	
33 Acrylonitrile	53	4.554	4.546	0.008	98	829799	500.0	377.6	
34 trans-1,2-Dichloroethene	96	4.566	4.570	-0.004	54	154009	50.0	53.3	
35 Methyl tert-butyl ether	73	4.602	4.595	0.007	91	352138	50.0	47.1	
36 Hexane	57	4.979	4.990	-0.011	95	295348	50.0	40.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.174	5.173	0.001	97	317510	50.0	47.3	
38 Vinyl acetate	43	5.296	5.294	0.002	97	250295	50.0	38.9	
44 2,2-Dichloropropane	77	5.922	5.927	-0.005	63	104982	50.0	58.9	
45 cis-1,2-Dichloroethene	96	5.935	5.933	0.001	88	155775	50.0	49.9	
46 2-Butanone (MEK)	43	5.983	5.982	0.001	99	223899	100.0	86.7	
49 Chlorobromomethane	128	6.220	6.231	-0.011	84	60684	50.0	46.6	
51 Tetrahydrofuran	42	6.287	6.280	0.007	94	123904	100.0	63.1	
52 Chloroform	83	6.342	6.341	0.001	96	254047	50.0	50.0	
53 1,1,1-Trichloroethane	97	6.525	6.529	-0.004	94	180025	50.0	54.6	
54 Cyclohexane	56	6.592	6.584	0.008	92	373023	50.0	40.3	
56 Carbon tetrachloride	117	6.719	6.718	0.001	70	160230	50.0	56.0	
55 1,1-Dichloropropene	75	6.725	6.724	0.001	86	216824	50.0	52.1	
57 Isobutyl alcohol	41	6.938	6.943	-0.005	92	136599	1250.0	908.0	
58 Benzene	78	6.957	6.955	0.002	97	636223	50.0	49.1	
59 1,2-Dichloroethane	62	6.981	6.979	0.002	96	244842	50.0	48.7	
62 n-Heptane	43	7.279	7.278	0.001	97	272562	50.0	36.8	
64 Trichloroethene	130	7.662	7.661	0.001	92	134872	50.0	48.6	
66 Methylcyclohexane	83	7.863	7.862	0.001	97	240043	50.0	45.2	
67 1,2-Dichloropropane	63	7.899	7.904	-0.005	93	179445	50.0	45.0	
68 Dibromomethane	93	8.021	8.026	-0.005	93	75511	50.0	46.0	
70 1,4-Dioxane	88	8.058	8.056	0.002	93	25638	1000.0	859.9	
71 Dichlorobromomethane	83	8.198	8.196	0.002	96	175738	50.0	51.8	
73 2-Chloroethyl vinyl ether	63	8.520	8.519	0.001	90	184453	100.0	110.9	
74 cis-1,3-Dichloropropene	75	8.654	8.652	0.002	87	205252	50.0	53.0	
75 4-Methyl-2-pentanone (MIBK	43	8.818	8.823	-0.005	99	434366	100.0	92.1	
76 Toluene	91	8.988	8.987	0.001	97	630374	50.0	54.4	
77 trans-1,3-Dichloropropene	75	9.220	9.218	0.002	97	176158	50.0	65.6	
78 Ethyl methacrylate	69	9.317	9.315	0.002	94	165404	50.0	51.8	
79 1,1,2-Trichloroethane	97	9.396	9.401	-0.005	93	123268	50.0	54.2	
80 Tetrachloroethene	164	9.536	9.535	0.002	94	104283	50.0	48.8	
81 1,3-Dichloropropane	76	9.566	9.565	0.001	98	227613	50.0	51.9	
82 2-Hexanone	43	9.651	9.656	-0.005	98	316067	100.0	83.7	
84 Chlorodibromomethane	129	9.791	9.796	-0.005	89	95183	50.0	56.9	
85 Ethylene Dibromide	107	9.901	9.900	0.001	99	112096	50.0	53.1	
86 3-Chlorobenzotrifluoride	180	10.369	10.374	-0.005	92	200036	50.0	52.5	
87 Chlorobenzene	112	10.388	10.392	-0.004	90	381051	50.0	54.0	
88 4-Chlorobenzotrifluoride	180	10.430	10.429	0.001	96	190898	50.0	53.6	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.471	0.002	92	117175	50.0	54.5	
90 Ethylbenzene	106	10.497	10.496	0.001	99	209451	50.0	52.5	
91 m-Xylene & p-Xylene	106	10.613	10.617	-0.004	98	266110	50.0	54.7	
92 o-Xylene	106	11.014	11.013	0.001	98	257561	50.0	54.5	
93 Styrene	104	11.020	11.025	-0.005	93	415762	50.0	52.3	
94 Bromoform	173	11.215	11.214	0.001	93	58150	50.0	55.0	
96 2-Chlorobenzotrifluoride	180	11.276	11.274	0.002	96	191403	50.0	52.5	
97 Isopropylbenzene	105	11.379	11.378	0.001	98	643173	50.0	54.5	
99 1,1,2,2-Tetrachloroethane	83	11.671	11.670	0.001	94	171592	50.0	53.7	
100 Bromobenzene	156	11.683	11.688	-0.005	97	145032	50.0	49.6	
101 1,2,3-Trichloropropane	110	11.714	11.718	-0.004	87	49755	50.0	46.8	
102 trans-1,4-Dichloro-2-buten	53	11.732	11.731	0.001	77	66508	50.0	45.6	
103 N-Propylbenzene	120	11.787	11.791	-0.004	99	166950	50.0	48.4	
104 2-Chlorotoluene	126	11.878	11.871	0.007	94	145088	50.0	49.8	
105 3-Chlorotoluene	126	11.933	11.931	0.002	97	161465	50.0	52.0	

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	11.963	11.962	0.001	95	535106	50.0	51.7	
107 4-Chlorotoluene	126	11.981	11.980	0.001	98	151805	50.0	46.9	
108 tert-Butylbenzene	119	12.286	12.290	-0.004	94	414230	50.0	48.8	
110 1,2,4-Trimethylbenzene	105	12.334	12.333	0.001	99	526985	50.0	49.6	
111 1,2-dichloro-4-(trifluorom	214	12.401	12.400	0.001	97	138506	50.0	47.3	
112 sec-Butylbenzene	105	12.505	12.509	-0.004	96	604729	50.0	49.5	
113 1,3-Dichlorobenzene	146	12.614	12.619	-0.005	94	260079	50.0	47.1	
114 4-Isopropyltoluene	119	12.651	12.655	-0.004	96	492625	50.0	50.0	
115 1,4-Dichlorobenzene	146	12.705	12.710	-0.005	93	269661	50.0	47.3	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.759	0.001	98	126105	50.0	45.9	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.807	0.002	97	142112	50.0	47.4	
120 n-Butylbenzene	91	13.064	13.063	0.001	99	445948	50.0	49.6	
121 1,2-Dichlorobenzene	146	13.083	13.081	0.002	92	244762	50.0	47.8	
122 1,2-Dibromo-3-Chloropropan	75	13.855	13.866	-0.011	70	23809	50.0	51.3	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.006	0.001	98	452736	150.0	140.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.426	0.001	98	284664	100.0	92.5	
126 1,2,4-Trichlorobenzene	180	14.695	14.693	0.002	94	103260	50.0	48.6	
127 Hexachlorobutadiene	225	14.859	14.864	-0.005	95	48379	50.0	48.0	
128 Naphthalene	128	14.938	14.943	-0.005	98	233421	50.0	41.2	
129 1,2,3-Trichlorobenzene	180	15.181	15.186	-0.005	94	76467	50.0	45.9	
131 2,4,5-Trichlorotoluene	159	15.966	15.965	0.001	96	28101	50.0	39.7	
130 2,3,6-Trichlorotoluene	159	16.057	16.056	0.001	92	30766	50.0	47.5	
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	109.2	
S 134 1,2-Dichloroethene, Total	96				0		100.0	103.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	118.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00099	Amount Added:	2.00	Units: uL	
VOAKETONEPRI_00003	Amount Added:	2.00	Units: uL	
voaEEmix2ndRe_00001	Amount Added:	2.00	Units: uL	
voaWVA 2nd Re_00008	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00005	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

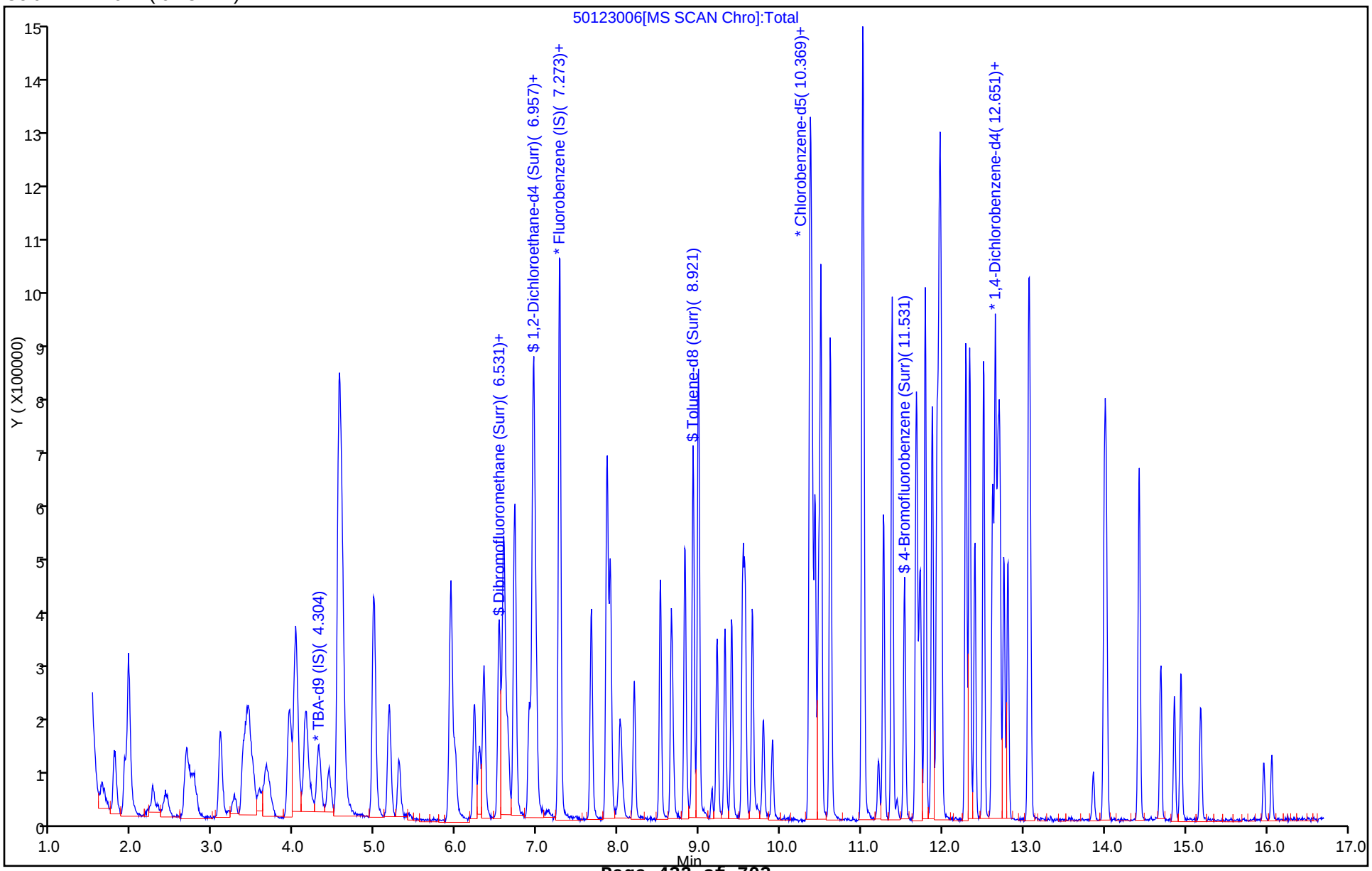
Report Date: 23-Jan-2015 14:34:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123006.D

Injection Date:	23-Jan-2015 12:56:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCS			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131906/8

Matrix: Water Lab File ID: 50128008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 12:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.25		1.0	0.28
75-01-4	Vinyl chloride	8.63		1.0	0.23
74-83-9	Bromomethane	10.7		1.0	0.31
75-00-3	Chloroethane	8.87		1.0	0.21
75-35-4	1,1-Dichloroethene	9.30		1.0	0.30
67-64-1	Acetone	16.9		5.0	2.5
75-15-0	Carbon disulfide	10.3		1.0	0.21
75-09-2	Methylene Chloride	9.00		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	11.0		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.14		1.0	0.18
75-34-3	1,1-Dichloroethane	9.56		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.96		1.0	0.24
74-97-5	Bromochloromethane	9.94		1.0	0.18
78-93-3	2-Butanone (MEK)	15.7		5.0	0.55
67-66-3	Chloroform	9.92		1.0	0.17
71-55-6	1,1,1-Trichloroethane	11.6		1.0	0.29
56-23-5	Carbon tetrachloride	12.3		1.0	0.14
71-43-2	Benzene	9.83		1.0	0.11
107-06-2	1,2-Dichloroethane	9.32		1.0	0.21
79-01-6	Trichloroethene	10.9		1.0	0.14
78-87-5	1,2-Dichloropropane	8.59		1.0	0.095
75-27-4	Bromodichloromethane	9.52		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.78		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	15.3		5.0	0.53
108-88-3	Toluene	10.2		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	10.3		1.0	0.15
79-00-5	1,1,2-Trichloroethane	8.96		1.0	0.20
127-18-4	Tetrachloroethene	10.2		1.0	0.15
591-78-6	2-Hexanone	12.4		5.0	0.16
124-48-1	Dibromochloromethane	10.1		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.41		1.0	0.18
108-90-7	Chlorobenzene	10.6		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	9.82		1.0	0.23
1330-20-7	Xylenes, Total	19.6		3.0	0.49
100-42-5	Styrene	9.44		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131906/8

Matrix: Water Lab File ID: 50128008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 12:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.13		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	8.62		1.0	0.20
107-13-1	Acrylonitrile	72.7		20	0.55
123-91-1	1,4-Dioxane	140	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	94		70-118
1868-53-7	Dibromofluoromethane (Surr)	102		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128008.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 28-Jan-2015 12:00:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0005445-008
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 28-Jan-2015 12:42:33 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: 28-Jan-2015 12:42:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.308	-0.012	92	154775	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.276	0.001	99	470504	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.367	-0.006	97	109410	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	97	158029	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	76	101752	50.0	50.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.899	0.007	93	148418	50.0	45.1	
$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	435493	50.0	47.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.535	-0.006	83	162840	50.0	47.0	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	98	122180	50.0	43.3	
12 Chloromethane	50	1.784	1.783	0.001	99	201773	50.0	36.3	
13 Vinyl chloride	62	1.911	1.911	0.000	98	164894	50.0	43.1	
14 Butadiene	39	1.960	1.959	0.001	98	215260	50.0	39.6	
15 Bromomethane	94	2.264	2.270	-0.006	90	61302	50.0	53.6	
16 Chloroethane	64	2.428	2.416	0.012	98	83883	50.0	44.3	
17 Dichlorofluoromethane	67	2.672	2.665	0.007	97	176246	50.0	46.8	
18 Trichlorofluoromethane	101	2.720	2.702	0.018	95	145107	50.0	60.9	
20 Ethyl ether	59	3.104	3.091	0.013	96	137078	50.0	40.5	
21 Acrolein	56	3.268	3.255	0.013	92	62892	150.0	124.1	
22 1,1-Dichloroethene	96	3.384	3.383	0.001	93	119191	50.0	46.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.444	0.000	95	131935	50.0	50.8	
24 Acetone	43	3.493	3.499	-0.006	96	124907	100.0	84.7	
25 Iodomethane	142	3.590	3.584	0.006	98	180679	50.0	55.0	
26 Carbon disulfide	76	3.676	3.675	0.001	100	255068	50.0	51.3	
28 3-Chloro-1-propene	76	3.961	3.955	0.006	88	65696	50.0	45.4	
30 Methyl acetate	43	4.022	4.022	0.000	100	769095	250.0	179.5	
31 Methylene Chloride	84	4.156	4.156	0.000	92	140993	50.0	45.0	
32 2-Methyl-2-propanol	59	4.424	4.435	-0.011	89	94154	500.0	455.0	
33 Acrylonitrile	53	4.558	4.557	0.001	98	717243	500.0	363.3	
34 trans-1,2-Dichloroethene	96	4.576	4.563	0.013	93	142716	50.0	55.0	
35 Methyl tert-butyl ether	73	4.600	4.588	0.012	94	307178	50.0	45.7	
36 Hexane	57	4.996	4.983	0.013	95	274394	50.0	41.8	

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	5.178	-0.006	97	288616	50.0	47.8	
38 Vinyl acetate	43	5.306	5.290	0.016	97	216274	50.0	37.4	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	67	108669	50.0	67.9	
45 cis-1,2-Dichloroethene	96	5.939	5.938	0.001	87	139725	50.0	49.8	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	98	182297	100.0	78.6	
49 Chlorobromomethane	128	6.231	6.224	0.007	87	58124	50.0	49.7	
51 Tetrahydrofuran	42	6.291	6.285	0.006	93	117536	100.0	66.6	
52 Chloroform	83	6.346	6.352	-0.006	97	226365	50.0	49.6	
53 1,1,1-Trichloroethane	97	6.541	6.534	0.007	94	171634	50.0	58.0	
54 Cyclohexane	56	6.589	6.589	0.000	97	329175	50.0	39.6	
56 Carbon tetrachloride	117	6.723	6.717	0.006	71	158515	50.0	61.6	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	87	206032	50.0	55.2	
57 Isobutyl alcohol	41	6.948	6.942	0.006	91	113299	1250.0	838.2	
58 Benzene	78	6.961	6.954	0.007	97	572002	50.0	49.2	
59 1,2-Dichloroethane	62	6.991	6.990	0.001	95	210508	50.0	46.6	
62 n-Heptane	43	7.283	7.276	0.007	95	249742	50.0	37.5	
64 Trichloroethene	130	7.666	7.666	0.000	95	136265	50.0	54.7	
66 Methylcyclohexane	83	7.867	7.860	0.007	95	218543	50.0	45.8	
67 1,2-Dichloropropane	63	7.904	7.903	0.001	95	153716	50.0	42.9	
68 Dibromomethane	93	8.031	8.031	0.000	97	70727	50.0	47.9	
70 1,4-Dioxane	88	8.062	8.049	0.013	91	18808	1000.0	702.1	M
71 Dichlorobromomethane	83	8.202	8.195	0.007	96	145031	50.0	47.6	
73 2-Chloroethyl vinyl ether	63	8.518	8.524	-0.006	88	139903	100.0	93.6	
74 cis-1,3-Dichloropropene	75	8.658	8.657	0.001	87	169969	50.0	48.9	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.822	0.000	98	361175	100.0	76.4	
76 Toluene	91	8.992	8.992	0.000	97	590483	50.0	50.8	
77 trans-1,3-Dichloropropene	75	9.224	9.223	0.001	95	138658	50.0	51.6	
78 Ethyl methacrylate	69	9.321	9.320	0.001	92	134138	50.0	41.9	
79 1,1,2-Trichloroethane	97	9.406	9.400	0.006	94	102143	50.0	44.8	
80 Tetrachloroethene	164	9.534	9.539	-0.005	95	108922	50.0	50.8	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	95	192537	50.0	43.9	
82 2-Hexanone	43	9.656	9.655	0.001	97	234852	100.0	62.1	
84 Chlorodibromomethane	129	9.789	9.789	0.000	89	84785	50.0	50.6	
85 Ethylene Dibromide	107	9.905	9.904	0.001	99	99484	50.0	47.1	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	92	190800	50.0	50.0	
87 Chlorobenzene	112	10.392	10.391	0.001	92	372772	50.0	52.8	
88 4-Chlorobenzotrifluoride	180	10.428	10.434	-0.006	95	180812	50.0	50.7	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.476	0.001	92	110686	50.0	51.4	
90 Ethylbenzene	106	10.501	10.501	0.000	99	196370	50.0	49.1	
91 m-Xylene & p-Xylene	106	10.617	10.622	-0.005	98	235613	50.0	48.4	
92 o-Xylene	106	11.012	11.012	0.000	98	236023	50.0	49.8	
93 Styrene	104	11.024	11.030	-0.006	93	376195	50.0	47.2	
94 Bromoform	173	11.213	11.218	-0.005	93	48334	50.0	45.6	
96 2-Chlorobenzotrifluoride	180	11.274	11.273	0.001	92	181844	50.0	49.8	
97 Isopropylbenzene	105	11.377	11.383	-0.006	97	588998	50.0	49.8	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	138121	50.0	43.1	
100 Bromobenzene	156	11.681	11.687	-0.006	96	131665	50.0	46.3	
101 1,2,3-Trichloropropane	110	11.718	11.723	-0.005	90	47692	50.0	46.1	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.729	0.001	72	55374	50.0	39.0	
103 N-Propylbenzene	120	11.791	11.790	0.001	99	173397	50.0	51.7	
104 2-Chlorotoluene	126	11.870	11.875	-0.005	95	141240	50.0	49.9	
105 3-Chlorotoluene	126	11.937	11.936	0.001	95	154953	50.0	51.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	95	505607	50.0	50.3	
107 4-Chlorotoluene	126	11.986	11.985	0.001	98	147747	50.0	47.0	
108 tert-Butylbenzene	119	12.290	12.289	0.001	94	414389	50.0	50.2	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	97	494139	50.0	47.8	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.405	-0.006	96	130801	50.0	45.9	
112 sec-Butylbenzene	105	12.509	12.508	0.001	95	579209	50.0	48.7	
113 1,3-Dichlorobenzene	146	12.618	12.624	-0.006	97	264837	50.0	49.4	
114 4-Isopropyltoluene	119	12.655	12.654	0.001	97	494910	50.0	51.7	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	93	265611	50.0	47.9	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.758	0.000	96	119623	50.0	44.8	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.806	0.007	99	136410	50.0	46.8	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	421005	50.0	48.1	
121 1,2-Dichlorobenzene	146	13.081	13.086	-0.005	95	243551	50.0	48.9	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.865	-0.006	75	19907	50.0	44.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	98	456577	150.0	145.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.431	-0.006	99	277787	100.0	92.8	
126 1,2,4-Trichlorobenzene	180	14.693	14.692	0.001	95	89444	50.0	43.3	
127 Hexachlorobutadiene	225	14.863	14.862	0.001	97	45545	50.0	46.5	
128 Naphthalene	128	14.942	14.942	0.000	97	230485	50.0	41.8	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	67581	50.0	41.7	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	95	28858	50.0	42.0	
130 2,3,6-Trichlorotoluene	159	16.068	16.061	0.007	95	26554	50.0	42.1	
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	104.8	
S 133 Xylenes, Total	106				0		100.0	98.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	100.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOA2ND_00099	Amount Added:	2.00	Units: uL		
VOAKETONEPRI_00003	Amount Added:	2.00	Units: uL		
voaEEmix2ndRe_00001	Amount Added:	2.00	Units: uL		
voaWVA 2nd Re_00008	Amount Added:	2.00	Units: uL		
VOA2CEVE2ND_00005	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	

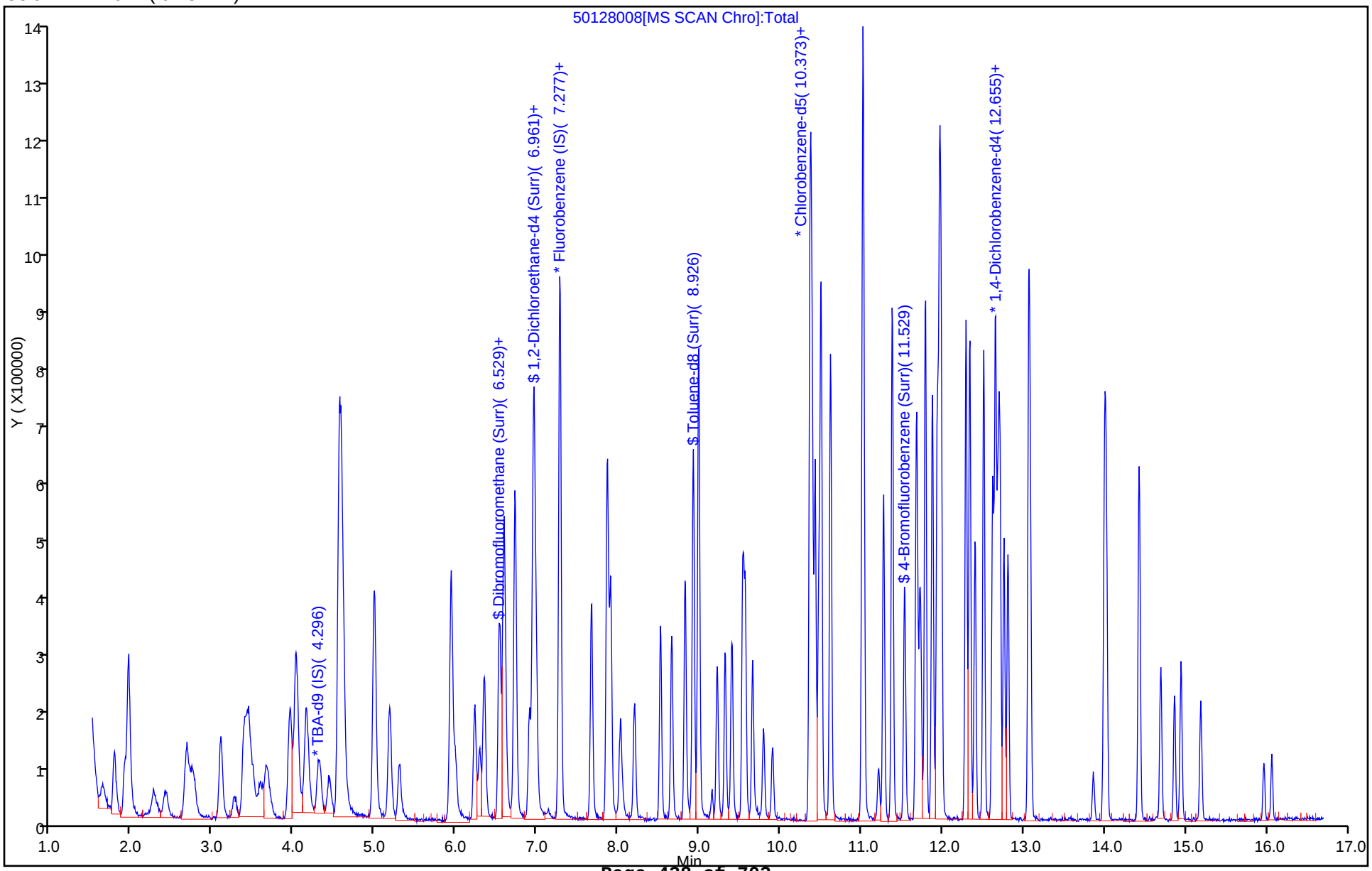
Report Date: 28-Jan-2015 12:42:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128008.D

Injection Date:	28-Jan-2015 12:00:30	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

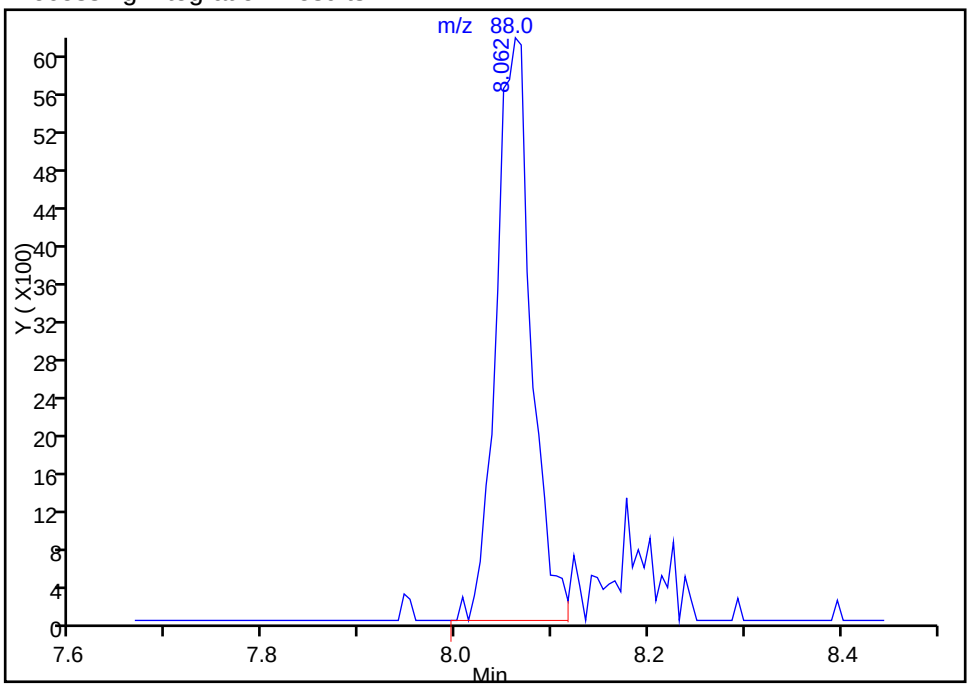
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128008.D
Injection Date: 28-Jan-2015 12:00:30 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

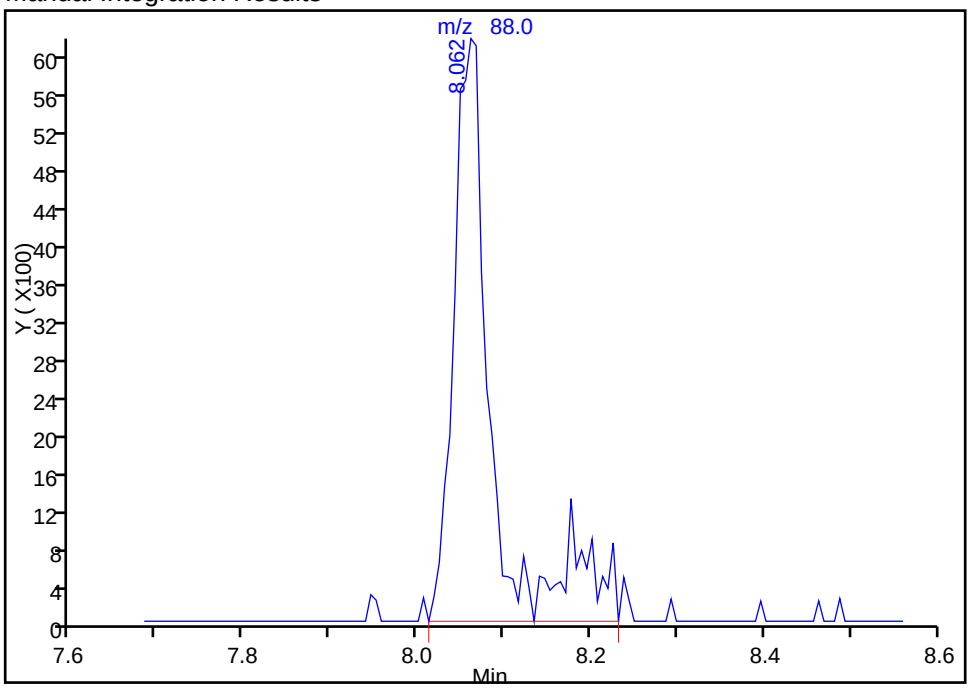
Processing Integration Results

RT: 8.06
Area: 15512
Amount: 569.7174
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 18808
Amount: 702.1445
Amount Units: ng



Reviewer: fergusond, 28-Jan-2015 12:42:33
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-40541-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 180-131582/7

Matrix: Water | Lab File ID: 50123007.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/23/2015 13:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 131582 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.12		1.0	0.28
75-01-4	Vinyl chloride	7.93		1.0	0.23
74-83-9	Bromomethane	9.90		1.0	0.31
75-00-3	Chloroethane	8.17		1.0	0.21
75-35-4	1,1-Dichloroethene	9.34		1.0	0.30
67-64-1	Acetone	16.6		5.0	2.5
75-15-0	Carbon disulfide	9.88		1.0	0.21
75-09-2	Methylene Chloride	9.38		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.69		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.26		1.0	0.18
75-34-3	1,1-Dichloroethane	9.38		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.81		1.0	0.24
74-97-5	Bromochloromethane	9.45		1.0	0.18
78-93-3	2-Butanone (MEK)	15.0		5.0	0.55
67-66-3	Chloroform	9.63		1.0	0.17
71-55-6	1,1,1-Trichloroethane	10.8		1.0	0.29
56-23-5	Carbon tetrachloride	10.5		1.0	0.14
71-43-2	Benzene	9.48		1.0	0.11
107-06-2	1,2-Dichloroethane	9.29		1.0	0.21
79-01-6	Trichloroethene	9.65		1.0	0.14
78-87-5	1,2-Dichloropropane	8.36		1.0	0.095
75-27-4	Bromodichloromethane	9.47		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	10.3		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.7		5.0	0.53
108-88-3	Toluene	10.3		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	12.0		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.75		1.0	0.20
127-18-4	Tetrachloroethene	8.96		1.0	0.15
591-78-6	2-Hexanone	16.1		5.0	0.16
124-48-1	Dibromochloromethane	10.1		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.70		1.0	0.18
108-90-7	Chlorobenzene	10.1		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	10.0		1.0	0.23
1330-20-7	Xylenes, Total	20.4		3.0	0.49
100-42-5	Styrene	9.80		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 180-131582/7

Matrix: Water Lab File ID: 50123007.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/23/2015 13:20

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 131582 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.46		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.54		1.0	0.20
107-13-1	Acrylonitrile	72.2		20	0.55
123-91-1	1,4-Dioxane	179	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

Report Date: 23-Jan-2015 14:34:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123007.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 23-Jan-2015 13:20:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 180-0005396-007
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 23-Jan-2015 12:17:42 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: XAWRK030

First Level Reviewer: fergusond Date: 23-Jan-2015 13:43:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.297	0.005	90	181141	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.271	0.006	97	520617	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.362	-0.001	97	112998	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.680	0.005	96	158871	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.523	0.005	78	111096	50.0	50.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.900	0.006	93	157644	50.0	43.3	
$ 7 Toluene-d8 (Surr)	98	8.925	8.920	0.005	95	454951	50.0	48.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.530	-0.001	83	172107	50.0	48.1	
11 Dichlorodifluoromethane	85	1.631	1.626	0.005	96	130442	50.0	41.8	
12 Chloromethane	50	1.783	1.778	0.005	99	219316	50.0	35.6	
13 Vinyl chloride	62	1.911	1.906	0.005	97	167771	50.0	39.7	
14 Butadiene	39	1.960	1.948	0.012	99	226838	50.0	37.7	
15 Bromomethane	94	2.258	2.247	0.012	78	62625	50.0	49.5	
16 Chloroethane	64	2.416	2.411	0.005	99	85574	50.0	40.9	
17 Dichlorofluoromethane	67	2.665	2.660	0.005	97	188119	50.0	45.2	
18 Trichlorofluoromethane	101	2.732	2.709	0.023	97	127021	50.0	48.2	
20 Ethyl ether	59	3.091	3.092	-0.001	97	151078	50.0	40.3	
21 Acrolein	56	3.268	3.256	0.012	97	71605	150.0	127.7	
22 1,1-Dichloroethene	96	3.395	3.384	0.011	92	132479	50.0	46.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.433	0.011	97	133982	50.0	46.7	
24 Acetone	43	3.511	3.494	0.017	98	135517	100.0	83.0	
25 Iodomethane	142	3.608	3.597	0.011	92	180324	50.0	49.6	
26 Carbon disulfide	76	3.669	3.658	0.011	99	271511	50.0	49.4	
28 3-Chloro-1-propene	76	3.949	3.938	0.011	87	75769	50.0	47.3	
30 Methyl acetate	43	4.022	4.023	-0.001	100	924251	250.0	195.0	
31 Methylene Chloride	84	4.156	4.138	0.018	93	161873	50.0	46.9	
32 2-Methyl-2-propanol	59	4.436	4.424	0.012	90	110606	500.0	456.7	
33 Acrylonitrile	53	4.557	4.546	0.011	98	788806	500.0	361.0	
34 trans-1,2-Dichloroethene	96	4.570	4.570	0.000	93	139167	50.0	48.5	
35 Methyl tert-butyl ether	73	4.600	4.595	0.005	94	344339	50.0	46.3	
36 Hexane	57	4.995	4.990	0.005	97	290171	50.0	39.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.178	5.173	0.005	97	313096	50.0	46.9	
38 Vinyl acetate	43	5.300	5.294	0.006	97	240605	50.0	37.6	
44 2,2-Dichloropropane	77	5.932	5.927	0.005	59	106568	50.0	60.2	
45 cis-1,2-Dichloroethene	96	5.938	5.933	0.005	88	152286	50.0	49.1	
46 2-Butanone (MEK)	43	5.987	5.982	0.005	97	192199	100.0	74.8	
49 Chlorobromomethane	128	6.230	6.231	-0.001	86	61188	50.0	47.3	
51 Tetrahydrofuran	42	6.297	6.280	0.017	95	123724	100.0	63.3	
52 Chloroform	83	6.346	6.341	0.005	95	243136	50.0	48.1	
53 1,1,1-Trichloroethane	97	6.535	6.529	0.006	94	177113	50.0	54.1	
54 Cyclohexane	56	6.589	6.584	0.005	92	356375	50.0	38.7	
56 Carbon tetrachloride	117	6.723	6.718	0.005	97	149172	50.0	52.4	
55 1,1-Dichloropropene	75	6.729	6.724	0.005	89	211973	50.0	51.3	
57 Isobutyl alcohol	41	6.936	6.943	-0.007	67	132867	1250.0	888.4	
58 Benzene	78	6.954	6.955	-0.001	97	610072	50.0	47.4	
59 1,2-Dichloroethane	62	6.985	6.979	0.006	95	232310	50.0	46.5	
62 n-Heptane	43	7.283	7.278	0.005	96	267752	50.0	36.3	
64 Trichloroethene	130	7.666	7.661	0.005	96	133030	50.0	48.3	
66 Methylcyclohexane	83	7.867	7.862	0.005	97	246597	50.0	46.7	
67 1,2-Dichloropropane	63	7.903	7.904	-0.001	93	165583	50.0	41.8	
68 Dibromomethane	93	8.025	8.026	-0.001	95	77027	50.0	47.2	
70 1,4-Dioxane	88	8.055	8.056	-0.001	97	26524	1000.0	894.9	M
71 Dichlorobromomethane	83	8.201	8.196	0.005	95	159646	50.0	47.3	
73 2-Chloroethyl vinyl ether	63	8.524	8.519	0.005	86	169769	100.0	102.7	
74 cis-1,3-Dichloropropene	75	8.658	8.652	0.006	88	198215	50.0	51.5	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.823	-0.001	99	431209	100.0	88.4	
76 Toluene	91	8.992	8.987	0.005	98	619816	50.0	51.7	
77 trans-1,3-Dichloropropene	75	9.217	9.218	-0.001	98	166409	50.0	59.9	
78 Ethyl methacrylate	69	9.315	9.315	0.000	93	156680	50.0	47.4	
79 1,1,2-Trichloroethane	97	9.400	9.401	-0.001	94	114790	50.0	48.8	
80 Tetrachloroethene	164	9.534	9.535	0.000	94	99069	50.0	44.8	
81 1,3-Dichloropropane	76	9.564	9.565	-0.001	96	224416	50.0	49.5	
82 2-Hexanone	43	9.655	9.656	-0.001	98	315225	100.0	80.7	
84 Chlorodibromomethane	129	9.789	9.796	-0.007	88	87678	50.0	50.7	
85 Ethylene Dibromide	107	9.899	9.900	-0.001	98	105879	50.0	48.5	
86 3-Chlorobenzotrifluoride	180	10.367	10.374	-0.007	93	198038	50.0	50.2	
87 Chlorobenzene	112	10.385	10.392	-0.007	90	367669	50.0	50.4	
88 4-Chlorobenzotrifluoride	180	10.428	10.429	-0.001	96	187541	50.0	50.9	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	91	114396	50.0	51.4	
90 Ethylbenzene	106	10.501	10.496	0.005	98	206576	50.0	50.0	
91 m-Xylene & p-Xylene	106	10.623	10.617	0.006	98	258501	50.0	51.4	
92 o-Xylene	106	11.012	11.013	-0.001	94	246420	50.0	50.4	
93 Styrene	104	11.024	11.025	-0.001	85	403243	50.0	49.0	
94 Bromoform	173	11.207	11.214	-0.007	94	51763	50.0	47.3	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	96	195683	50.0	51.8	
97 Isopropylbenzene	105	11.383	11.378	0.005	98	631539	50.0	51.7	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.670	0.005	94	157887	50.0	47.7	
100 Bromobenzene	156	11.681	11.688	-0.007	98	139879	50.0	48.9	
101 1,2,3-Trichloropropane	110	11.712	11.718	-0.006	87	49304	50.0	47.4	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.731	-0.001	70	58488	50.0	41.0	
103 N-Propylbenzene	120	11.791	11.791	0.000	100	165427	50.0	49.0	
104 2-Chlorotoluene	126	11.876	11.871	0.005	94	143483	50.0	50.4	
105 3-Chlorotoluene	126	11.937	11.931	0.006	97	154732	50.0	51.0	

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	11.961	11.962	-0.001	94	525898	50.0	52.0	
107 4-Chlorotoluene	126	11.979	11.980	-0.001	99	151136	50.0	47.8	
108 tert-Butylbenzene	119	12.290	12.290	0.000	94	404480	50.0	48.8	
110 1,2,4-Trimethylbenzene	105	12.338	12.333	0.005	99	522760	50.0	50.3	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.400	-0.001	96	137715	50.0	48.1	
112 sec-Butylbenzene	105	12.509	12.509	0.000	96	605437	50.0	50.7	
113 1,3-Dichlorobenzene	146	12.618	12.619	-0.001	96	255712	50.0	47.4	
114 4-Isopropyltoluene	119	12.655	12.655	0.000	96	468512	50.0	48.7	
115 1,4-Dichlorobenzene	146	12.709	12.710	-0.001	90	258190	50.0	46.4	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.759	-0.001	96	118149	50.0	44.0	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	97	135545	50.0	46.3	
120 n-Butylbenzene	91	13.062	13.063	-0.001	98	433046	50.0	49.2	
121 1,2-Dichlorobenzene	146	13.080	13.081	-0.001	93	232381	50.0	46.4	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.866	-0.001	73	22589	50.0	49.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.006	-0.001	99	452655	150.0	143.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.426	-0.001	97	270289	100.0	89.8	
126 1,2,4-Trichlorobenzene	180	14.692	14.693	-0.001	91	95230	50.0	45.9	
127 Hexachlorobutadiene	225	14.863	14.864	-0.001	97	46543	50.0	47.3	
128 Naphthalene	128	14.942	14.943	-0.001	98	232702	50.0	42.0	
129 1,2,3-Trichlorobenzene	180	15.185	15.186	-0.001	94	78057	50.0	47.9	
131 2,4,5-Trichlorotoluene	159	15.964	15.965	-0.001	96	28923	50.0	41.8	
130 2,3,6-Trichlorotoluene	159	16.061	16.056	0.005	94	28505	50.0	45.0	
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	101.8	
S 134 1,2-Dichloroethene, Total	96				0		100.0	97.5	
S 135 1,3-Dichloropropene, Total	1				0		100.0	111.4	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRO2ND_00004	Amount Added:	6.00	Units: uL	
voaWVA 2nd Re_00008	Amount Added:	2.00	Units: uL	
voaEEmix2ndRe_00001	Amount Added:	2.00	Units: uL	
VOAKETONEPRI_00003	Amount Added:	2.00	Units: uL	
VOA8260VOA2ND_00099	Amount Added:	2.00	Units: uL	
VOA2CEVE2ND_00005	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

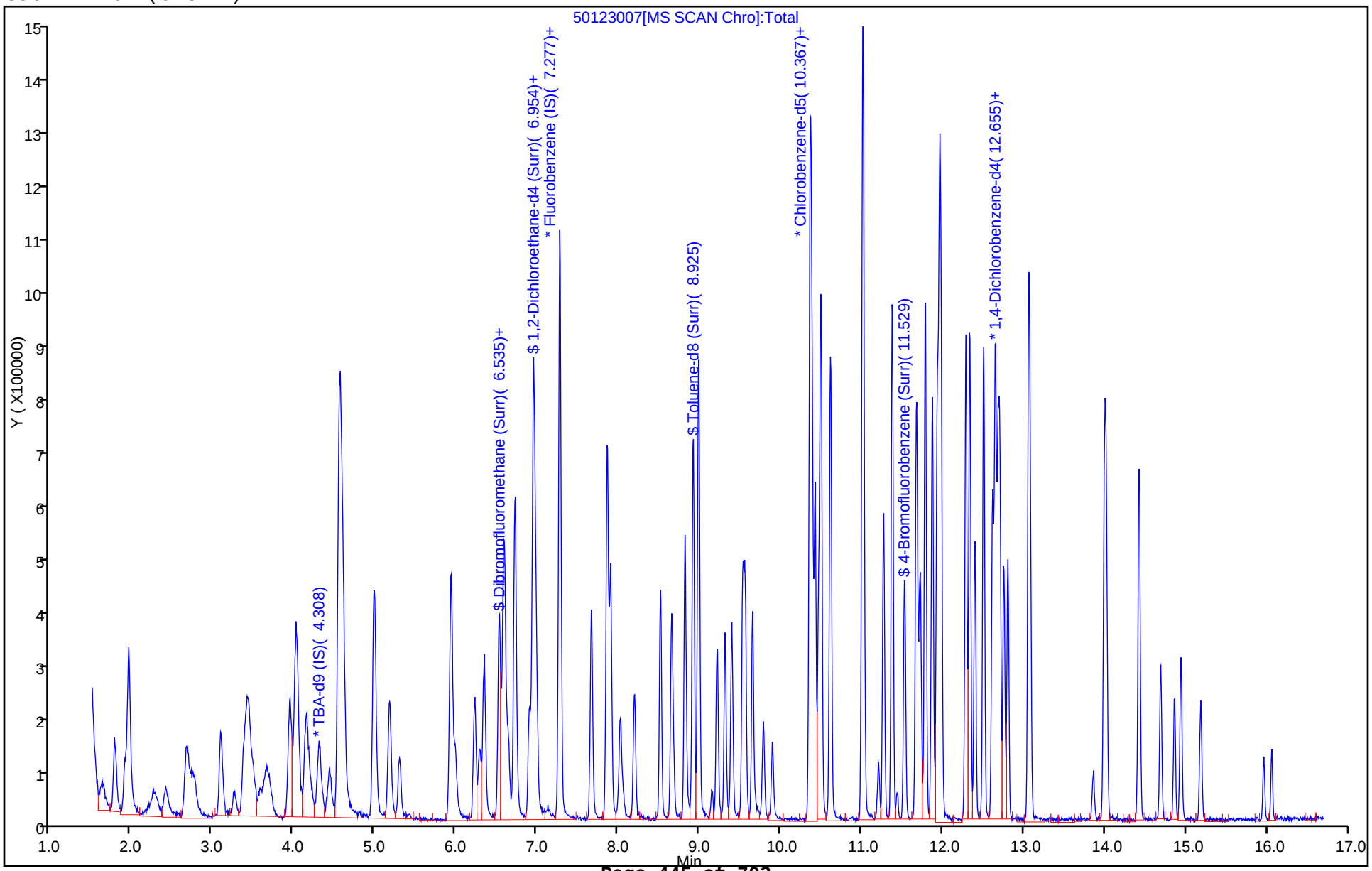
Report Date: 23-Jan-2015 14:34:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123007.D

Injection Date:	23-Jan-2015 13:20:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCSD			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

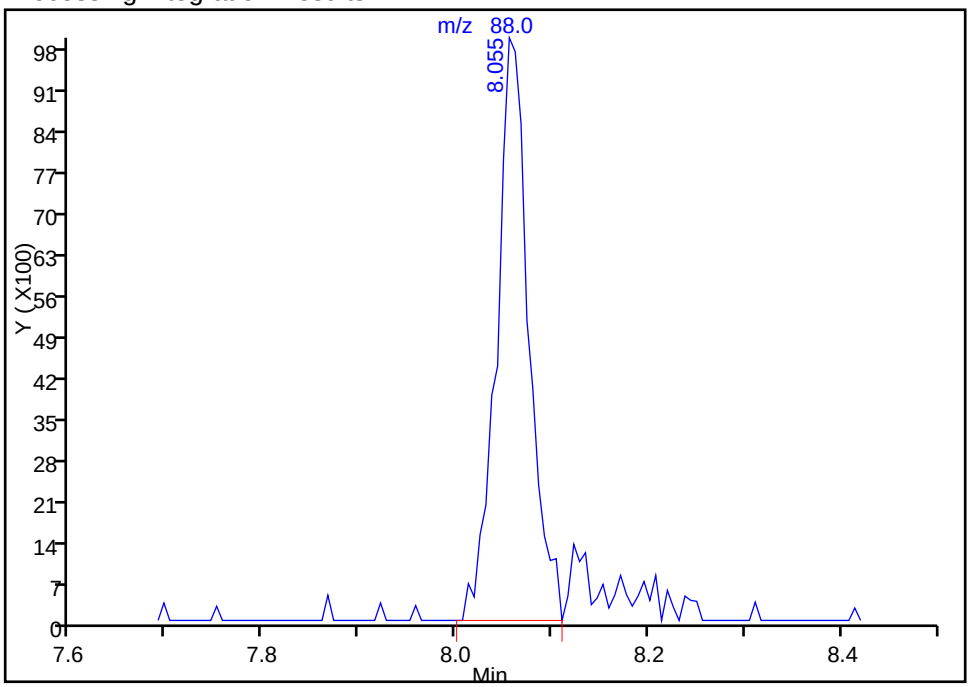
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150123-5396.b\50123007.D
Injection Date: 23-Jan-2015 13:20:30 Instrument ID: CHHP5
Lims ID: LCSD
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

70 1,4-Dioxane, CAS: 123-91-1

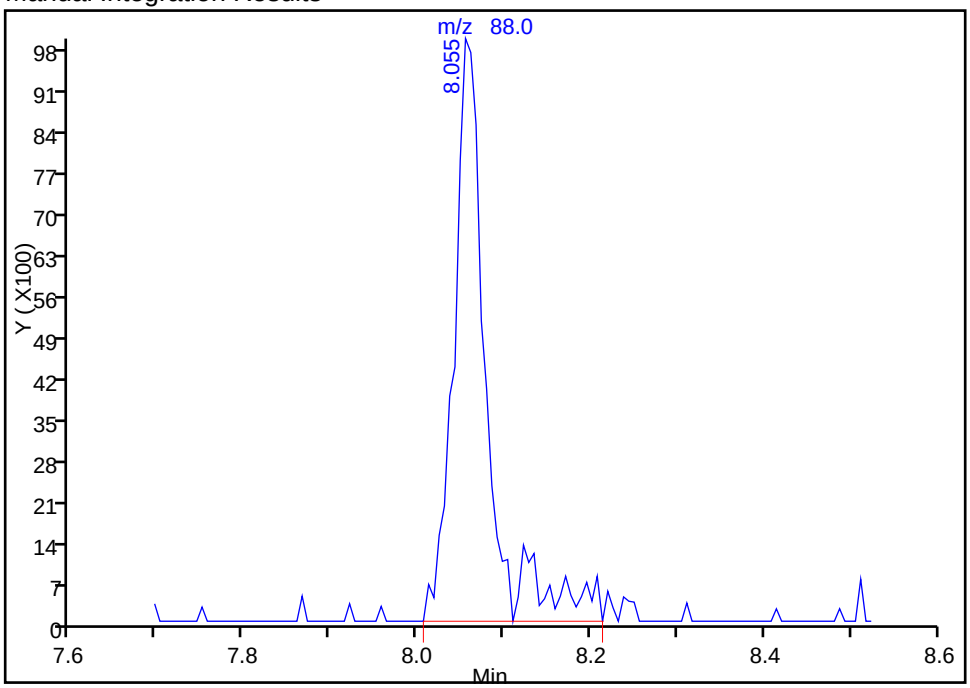
Processing Integration Results

RT: 8.06
Area: 23098
Amount: 751.6826
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 26524
Amount: 894.8863
Amount Units: ng



Reviewer: fergusond, 23-Jan-2015 13:43:48
Audit Action: Manually Integrated
Audit Reason: Split Peak

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

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.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Start Date: 01/22/2015 10:12

Analysis Batch Number: 131443 End Date: 01/22/2015 21:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-131443/4		01/22/2015 10:12	1	50121004.D	DB-624 0.18(mm)
CCVIS 180-131443/2		01/22/2015 10:50	1	50121002.D	DB-624 0.18(mm)
ZZZZZ		01/22/2015 10:50	1		DB-624 0.18(mm)
CCV 180-131443/5		01/22/2015 11:38	1	50121005.D	DB-624 0.18(mm)
MB 180-131443/6		01/22/2015 12:02	1	50121006.D	DB-624 0.18(mm)
LCS 180-131443/9		01/22/2015 13:26	1	50121009.D	DB-624 0.18(mm)
ZZZZZ		01/22/2015 15:51	1		DB-624 0.18(mm)
ZZZZZ		01/22/2015 16:15	1		DB-624 0.18(mm)
ZZZZZ		01/22/2015 16:39	1		DB-624 0.18(mm)
180-40541-1	HD-QC5-0/1-2	01/22/2015 17:03	1	50121018.D	DB-624 0.18(mm)
180-40541-2 DL	HD-MW-114-0/1-0 DL	01/22/2015 17:27	125	50121019.D	DB-624 0.18(mm)
180-40541-3 DL	HD-MW-132-0/1-0 DL	01/22/2015 17:52	25	50121020.D	DB-624 0.18(mm)
180-40541-5	HD-MW-74S-0/1-0	01/22/2015 18:40	25	50121022.D	DB-624 0.18(mm)
180-40541-6	HD-MW-39D-0/1-0	01/22/2015 19:28	3	50121024.D	DB-624 0.18(mm)
180-40541-7	HD-MW-127-0/1-0	01/22/2015 19:52	12.5	50121025.D	DB-624 0.18(mm)
ZZZZZ		01/22/2015 21:05	2.5		DB-624 0.18(mm)
180-40541-2	HD-MW-114-0/1-0	01/22/2015 21:29	12.5	50121029.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Start Date: 01/23/2015 09:59

Analysis Batch Number: 131582 End Date: 01/23/2015 15:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-131582/1		01/23/2015 09:59	1	50123001.D	DB-624 0.18(mm)
CCVIS 180-131582/3		01/23/2015 11:21	1	50123003.D	DB-624 0.18(mm)
ZZZZZ		01/23/2015 11:21	1		DB-624 0.18(mm)
MB 180-131582/5		01/23/2015 12:13	1	50123005.D	DB-624 0.18(mm)
LCS 180-131582/6		01/23/2015 12:56	1	50123006.D	DB-624 0.18(mm)
LCSD 180-131582/7		01/23/2015 13:20	1	50123007.D	DB-624 0.18(mm)
180-40541-4	HD-CW-18-0/1-0	01/23/2015 15:35	1	50123012.D	DB-624 0.18(mm)
180-40541-8	HD-MW-50S-0/1-0	01/23/2015 15:59	5	50123013.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: CHHP5 Start Date: 01/28/2015 07:58

Analysis Batch Number: 131906 End Date: 01/28/2015 19:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-131906/1		01/28/2015 07:58	1	50127001.D	DB-624 0.18(mm)
CCV 180-131906/2		01/28/2015 08:28	1		DB-624 0.18(mm)
ZZZZZ		01/28/2015 08:28	1		DB-624 0.18(mm)
CCVIS 180-131906/3		01/28/2015 09:13	1	50128003.D	DB-624 0.18(mm)
ZZZZZ		01/28/2015 09:13	1		DB-624 0.18(mm)
MB 180-131906/5		01/28/2015 10:35	1	50128005.D	DB-624 0.18(mm)
LCS 180-131906/8		01/28/2015 12:00	1	50128008.D	DB-624 0.18(mm)
ZZZZZ		01/28/2015 14:00	12.5		DB-624 0.18(mm)
ZZZZZ		01/28/2015 14:24	25		DB-624 0.18(mm)
ZZZZZ		01/28/2015 14:49	1		DB-624 0.18(mm)
ZZZZZ		01/28/2015 15:13	500		DB-624 0.18(mm)
ZZZZZ		01/28/2015 15:37	5		DB-624 0.18(mm)
ZZZZZ		01/28/2015 16:25	50		DB-624 0.18(mm)
180-40541-3	HD-MW-132-0/1-0	01/28/2015 19:38	2.5	50128027.D	DB-624 0.18(mm)

300_ORGFMS

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-17-2015-14.d

Lab ID: LCS 180-131000/5 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.61	104	90-110	
Chloride	50.0	52.3	105	90-110	
Sulfate	50.0	52.4	105	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.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-17-2015-38.d

Lab ID: 180-40541-3 MS Client ID: HD-MW-132-0/1-0 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Nitrate as N	1.25	4.8	6.05	96	80-120	
Chloride	25.0	11	37.1	103	80-120	
Sulfate	25.0	3.7	29.8	104	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.: 180-40541-1

SDG No.:

Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-17-2015-39.d

Lab ID: 180-40541-3 MSD Client ID: HD-MW-132-0/1-0 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Nitrate as N	1.25	6.03	94	0	20	80-120	
Chloride	25.0	37.2	103	0	20	80-120	
Sulfate	25.0	29.9	105	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.: 180-40541-1

SDG No.:

Lab File ID: A-ICS2100 A 01-17-2015-15.d Lab Sample ID: MB 180-131000/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 01/17/2015 10:53

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-131000/4	A-ICS2100 A 01-17-2015-13.d	01/17/2015 10:22
	LCS 180-131000/5	A-ICS2100 A 01-17-2015-14.d	01/17/2015 10:37
HD-MW-114-0/1-0	180-40541-2	A-ICS2100 A 01-17-2015-16.d	01/17/2015 11:08
HD-MW-132-0/1-0	180-40541-3	A-ICS2100 A 01-17-2015-17.d	01/17/2015 11:23
HD-CW-18-0/1-0	180-40541-4	A-ICS2100 A 01-17-2015-18.d	01/17/2015 11:39
HD-MW-74S-0/1-0	180-40541-5	A-ICS2100 A 01-17-2015-19.d	01/17/2015 11:54
HD-MW-39D-0/1-0	180-40541-6	A-ICS2100 A 01-17-2015-20.d	01/17/2015 12:12
	CCB 180-131000/16	A-ICS2100 A 01-17-2015-25.d	01/17/2015 13:32
	CCB 180-131000/28	A-ICS2100 A 01-17-2015-37.d	01/17/2015 16:35
HD-MW-132-0/1-0 MS	180-40541-3 MS	A-ICS2100 A 01-17-2015-38.d	01/17/2015 16:51
HD-MW-132-0/1-0 MSD	180-40541-3 MSD	A-ICS2100 A 01-17-2015-39.d	01/17/2015 17:06
HD-MW-127-0/1-0	180-40541-7	A-ICS2100 A 01-17-2015-40.d	01/17/2015 17:21
HD-MW-50S-0/1-0	180-40541-8	A-ICS2100 A 01-17-2015-42.d	01/17/2015 17:52
	CCB 180-131000/40	A-ICS2100 A 01-17-2015-49.d	01/17/2015 19:39
HD-CW-18-0/1-0	180-40541-4	A-ICS2100 A 01-17-2015-50.d	01/17/2015 19:54

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab File ID: A-ICS2100 A 01-17-2015-15.d Lab Sample ID: MB 180-131000/6

Matrix: Water Date Extracted:

Instrument ID: CHIC2100A Date Analyzed: 01/17/2015 10:53

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-131000/51	A-ICS2100 A 01-17-2015-60.d	01/17/2015 22:27

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-114-0/1-0 Lab Sample ID: 180-40541-2

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-16.d

Analysis Method: 300.0 Date Collected: 01/16/2015 11:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 11:08

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.61	B	0.10	0.0062
16887-00-6	Chloride	160		1.0	0.20
14808-79-8	Sulfate	77		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-16.d
Lims ID: 180-40541-A-2 Lab Sample ID: 180-40541-2
Client ID: HD-MW-114-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 11:08:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-007
Misc. Info.: 16 180-40541-a-2
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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

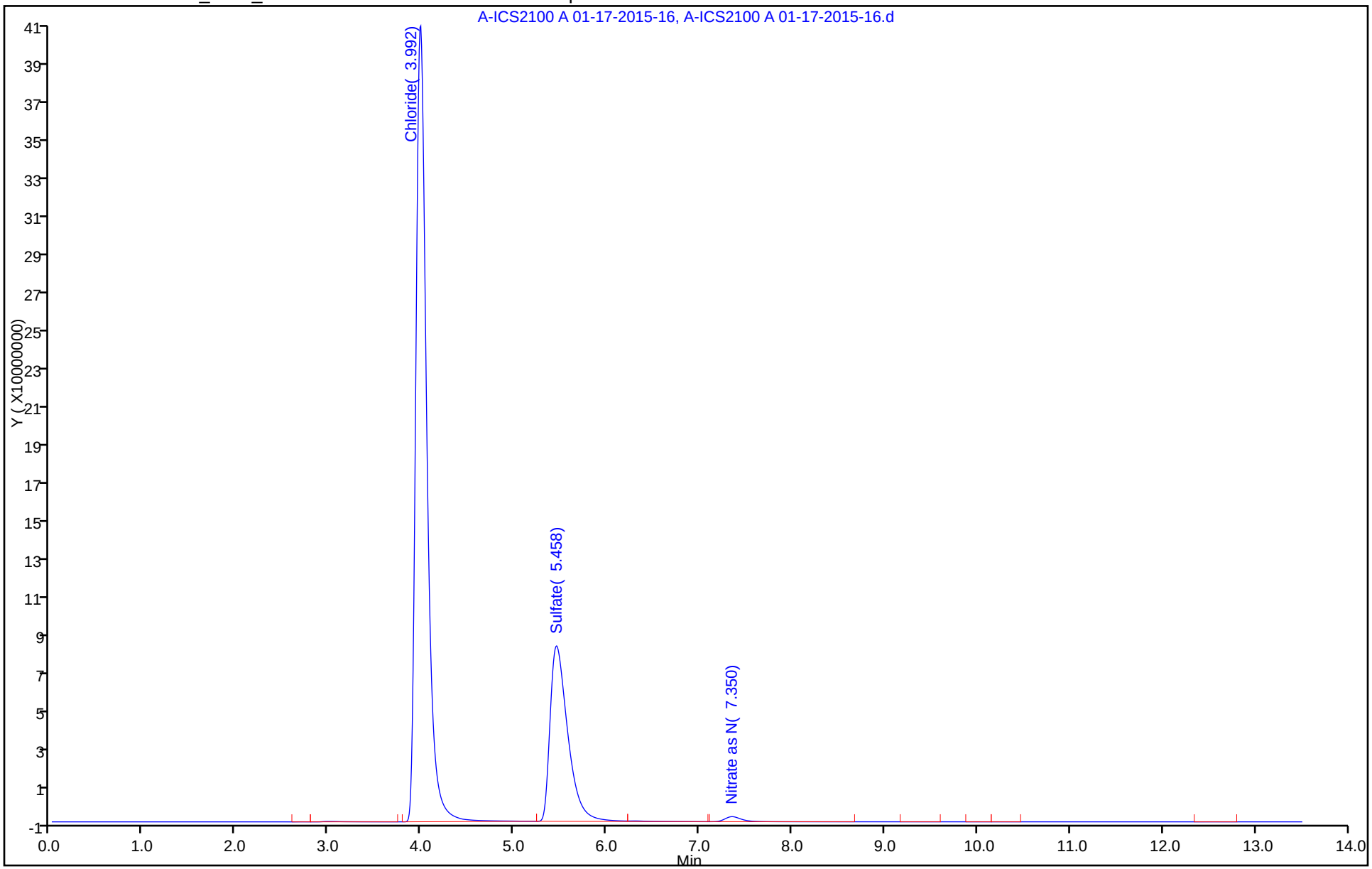
Column 1 : Det: 0008
Process Host: XAWRK027

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.000	-0.008	3348621622	157.3	
3 Sulfate	5.458	5.500	-0.042	1187800759	77.0	
5 Nitrate as N	7.350	7.300	0.050	31669321	0.6060	

Report Date: 17-Jan-2015 13:34:24 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-16.d				
Injection Date:	17-Jan-2015 11:08:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-2	Lab Sample ID:	180-40541-2	Worklist Smp#:	7
Client ID:	HD-MW-114-0/1-0				
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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-40541-3

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-17.d

Analysis Method: 300.0 Date Collected: 01/16/2015 09:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 11:23

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.8	B	0.10	0.0062
16887-00-6	Chloride	11		1.0	0.20
14808-79-8	Sulfate	3.7		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-17.d
Lims ID: 180-40541-A-3 Lab Sample ID: 180-40541-3
Client ID: HD-MW-132-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 11:23:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-008
Misc. Info.: 17 180-40541-a-3
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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

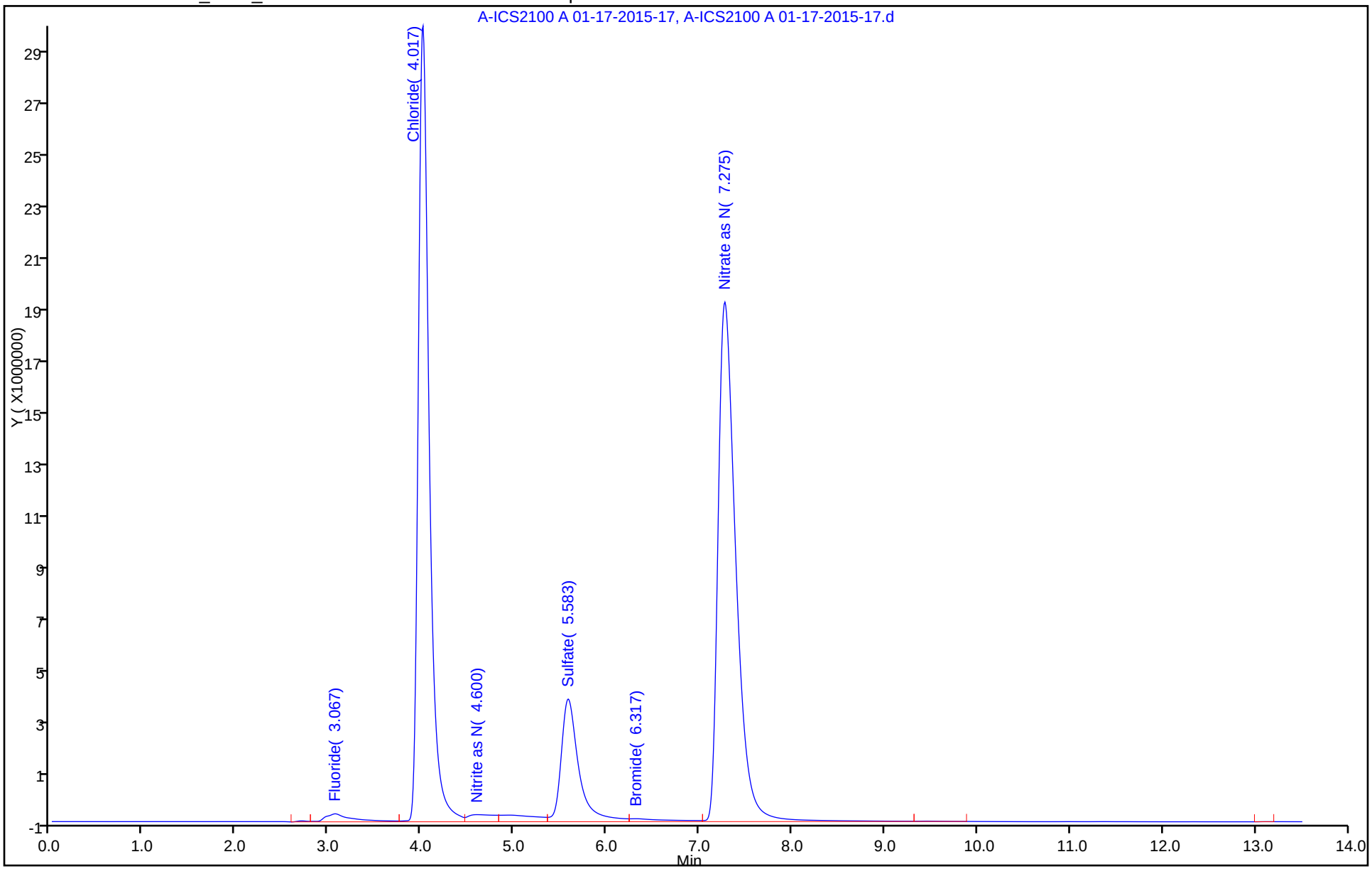
Column 1 : Det: 0008
Process Host: XAWRK027

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.067	2.983	0.084	295843H	0.1038	
2 Chloride	4.017	4.000	0.017	242203614	11.3	
7 Nitrite as N	4.600	4.708	-0.108	5271110	0.0689	
3 Sulfate	5.583	5.500	0.083	59981068	3.73	
4 Bromide	6.317	6.300	0.017	3102771	0.3207	
5 Nitrate as N	7.275	7.300	-0.025	256407985	4.85	
6 Orthophosphate as P		10.308			ND	

Report Date: 17-Jan-2015 13:34:24 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-17.d				
Injection Date:	17-Jan-2015 11:23:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-3	Lab Sample ID:	180-40541-3	Worklist Smp#:	8
Client ID:	HD-MW-132-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-CW-18-0/1-0 Lab Sample ID: 180-40541-4

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-18.d

Analysis Method: 300.0 Date Collected: 01/16/2015 12:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 11:39

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.037	J B	0.10	0.0062

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-18.d
Lims ID: 180-40541-A-4 Lab Sample ID: 180-40541-4
Client ID: HD-CW-18-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 11:39:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-009
Misc. Info.: 18 180-40541-a-4
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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: XAWRK027

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.983	4.000	-0.017	4798767064	225.4	E
3 Sulfate	5.333	5.500	-0.167	3723788702	241.9	E
5 Nitrate as N	7.375	7.300	0.075	1550033	0.0374	

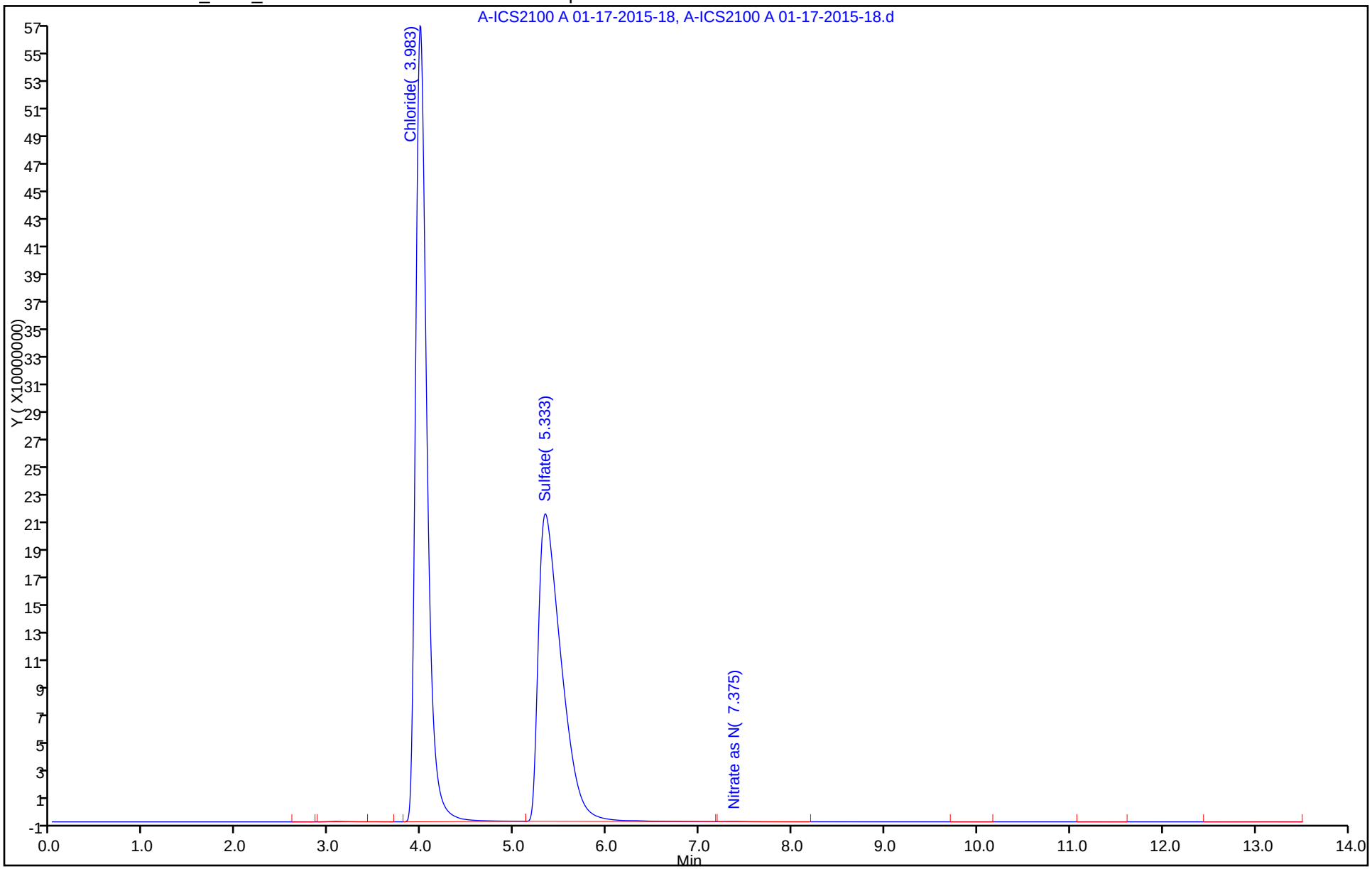
QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 17-Jan-2015 13:34:24 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-18.d				
Injection Date:	17-Jan-2015 11:39:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-4	Lab Sample ID:	180-40541-4	Worklist Smp#:	9
Client ID:	HD-CW-18-0/1-0				
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.: 180-40541-1

SDG No.:

Client Sample ID: HD-CW-18-0/1-0 Lab Sample ID: 180-40541-4

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-50.d

Analysis Method: 300.0 Date Collected: 01/16/2015 12:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 19:54

Con. Extract Vol.: Dilution Factor: 5

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	230		5.0	0.98
14808-79-8	Sulfate	250		5.0	1.1

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-50.d
Lims ID: 180-40541-A-4 Lab Sample ID: 180-40541-4
Client ID: HD-CW-18-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 19:54:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 10.0 ul Dil. Factor: 5.0000
Sample Info: 180-0005313-041
Misc. Info.: 3541 180-40541-a-4 5
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:56:36 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

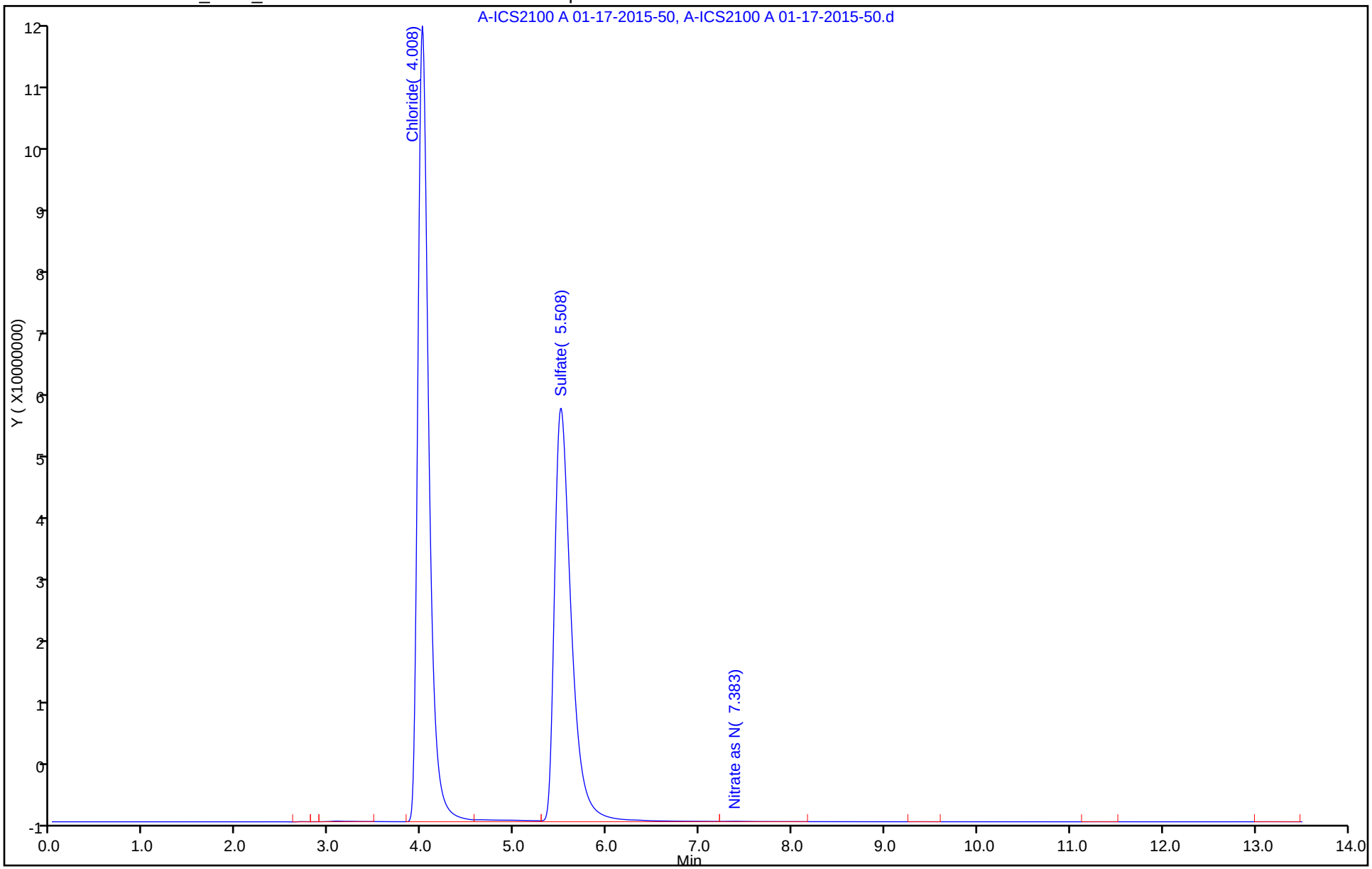
Column 1 : Det: 0008
Process Host: XAWRK001

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.008	4.000	0.008	971342403	45.6	
3 Sulfate	5.508	5.500	0.008	775164117	50.2	
5 Nitrate as N	7.383	7.300	0.083	1242053	0.0316	

Report Date: 19-Jan-2015 10:56:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-50.d				
Injection Date:	17-Jan-2015 19:54:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-4	Lab Sample ID:	180-40541-4	Worklist Smp#:	41
Client ID:	HD-CW-18-0/1-0				
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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-74S-0/1-0 Lab Sample ID: 180-40541-5

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-19.d

Analysis Method: 300.0 Date Collected: 01/16/2015 09:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 11:54

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.7	B	0.10	0.0062
16887-00-6	Chloride	160		1.0	0.20
14808-79-8	Sulfate	54		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

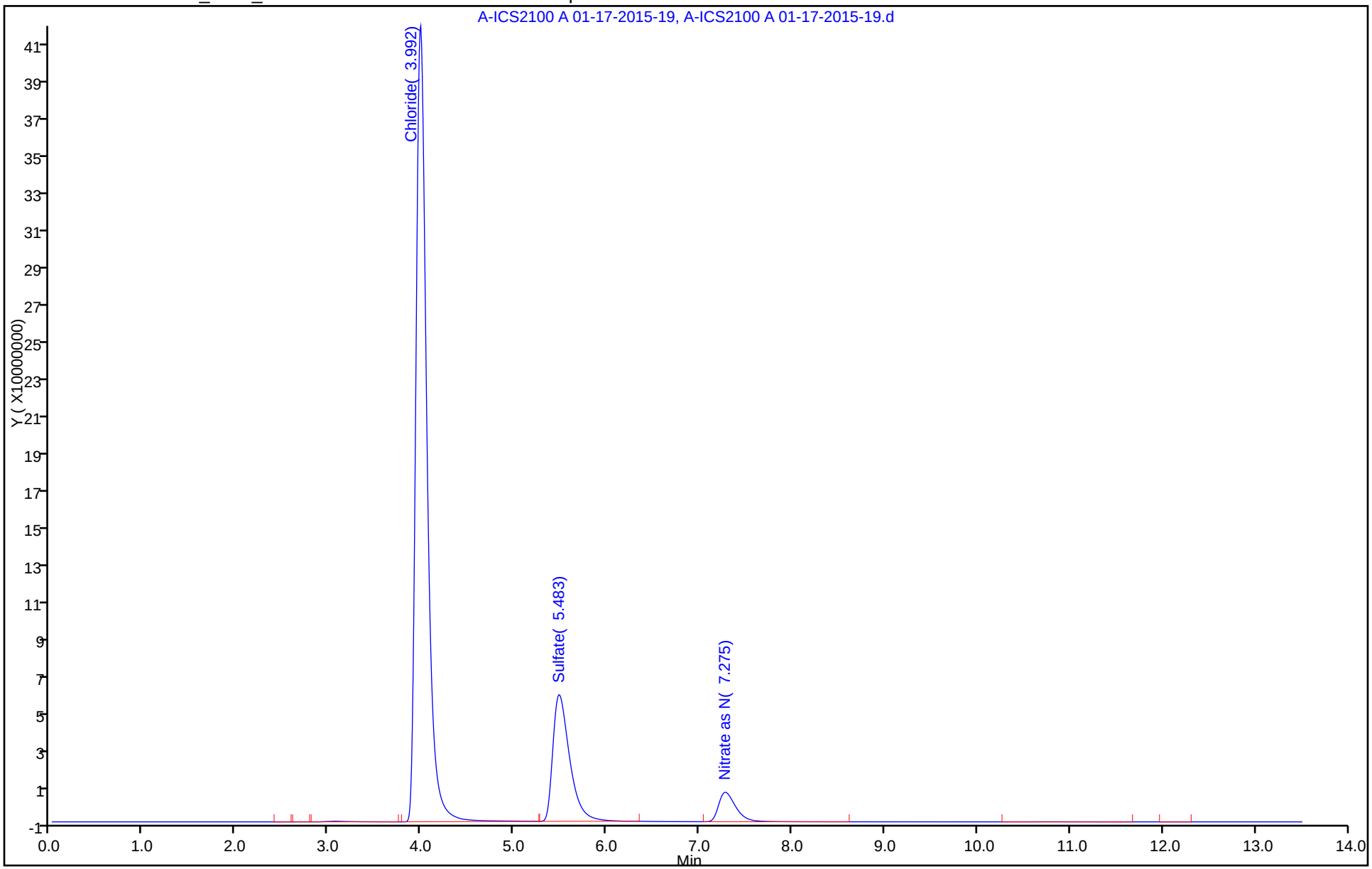
Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-19.d				
Lims ID:	180-40541-A-5	Lab Sample ID:	180-40541-5		
Client ID:	HD-MW-74S-0/1-0				
Sample Type:	Client				
Inject. Date:	17-Jan-2015 11:54:00	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	10.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005313-010				
Misc. Info.:	19 180-40541-a-5				
Operator ID:		Instrument ID:	CHIC2100A		
Method:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m				
Limit Group:	GC Anions ICAL				
Last Update:	17-Jan-2015 13:34:22	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:	XAWRK027				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.000	-0.008	3394897435	159.4	
3 Sulfate	5.483	5.500	-0.017	826213731	53.5	
5 Nitrate as N	7.275	7.300	-0.025	195581706	3.70	

Report Date: 17-Jan-2015 13:34:24 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-19.d				
Injection Date:	17-Jan-2015 11:54:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-5	Lab Sample ID:	180-40541-5	Worklist Smp#:	10
Client ID:	HD-MW-74S-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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-39D-0/1-0 Lab Sample ID: 180-40541-6

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-20.d

Analysis Method: 300.0 Date Collected: 01/16/2015 10:45

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 12:12

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	4.2	B	0.10	0.0062
16887-00-6	Chloride	120		1.0	0.20
14808-79-8	Sulfate	36		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-20.d
Lims ID: 180-40541-A-6 Lab Sample ID: 180-40541-6
Client ID: HD-MW-39D-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 12:12:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-011
Misc. Info.: 20 180-40541-a-6
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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

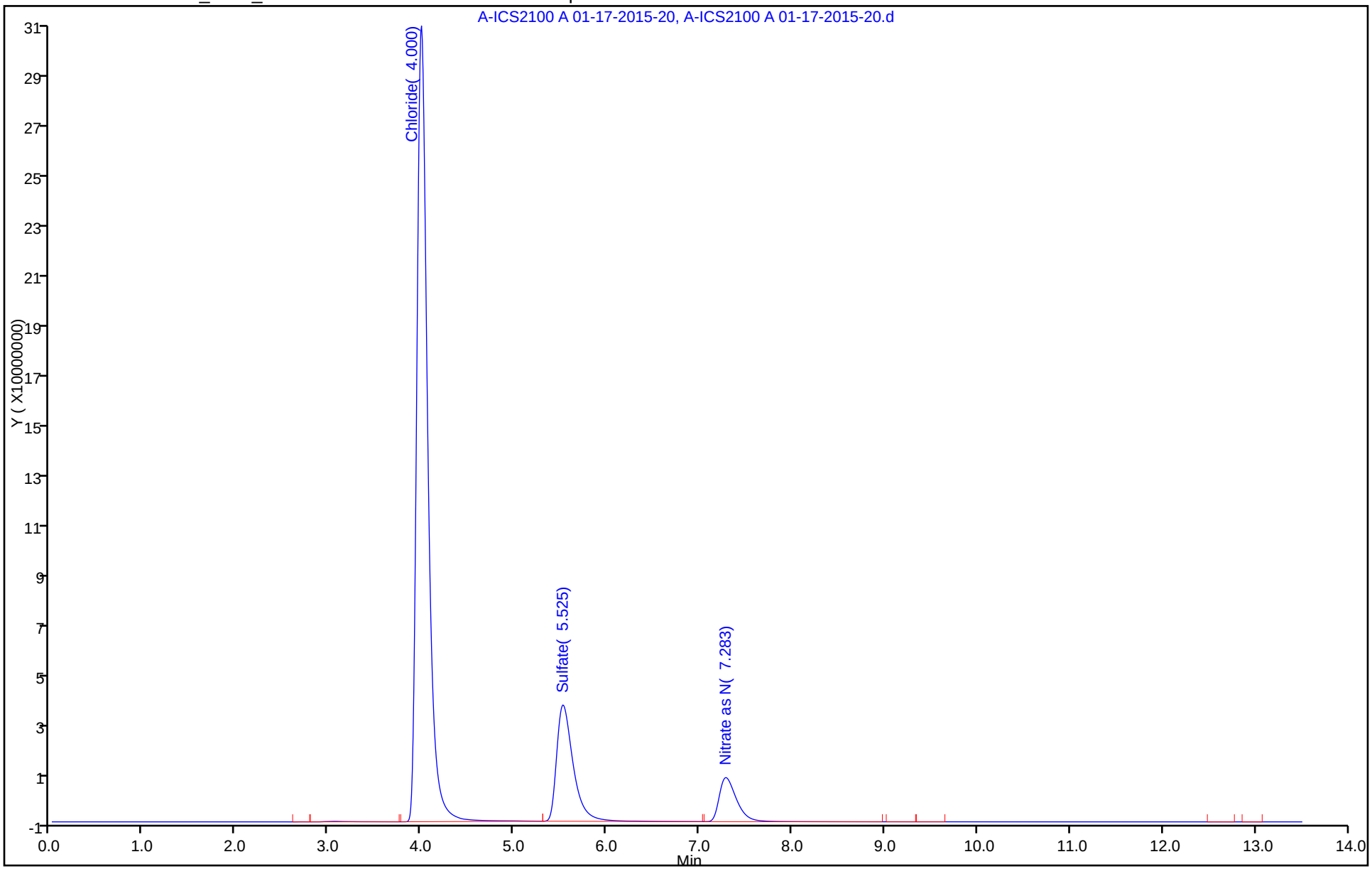
Column 1 : Det: 0008
Process Host: XAWRK027

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.000	0.000	2539119276	119.2	
3 Sulfate	5.525	5.500	0.025	562004008	36.4	
5 Nitrate as N	7.283	7.300	-0.017	222612848	4.21	

Report Date: 17-Jan-2015 13:34:23 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-20.d				
Injection Date:	17-Jan-2015 12:12:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-6	Lab Sample ID:	180-40541-6	Worklist Smp#:	11
Client ID:	HD-MW-39D-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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-40541-7

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-40.d

Analysis Method: 300.0 Date Collected: 01/16/2015 12:20

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 17:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.3	B	0.10	0.0062
16887-00-6	Chloride	100		1.0	0.20
14808-79-8	Sulfate	7.7		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-40.d
Lims ID: 180-40541-A-7 Lab Sample ID: 180-40541-7
Client ID: HD-MW-127-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 17:21:00 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-031
Misc. Info.: 38 180-40541-a-7
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:55:23 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

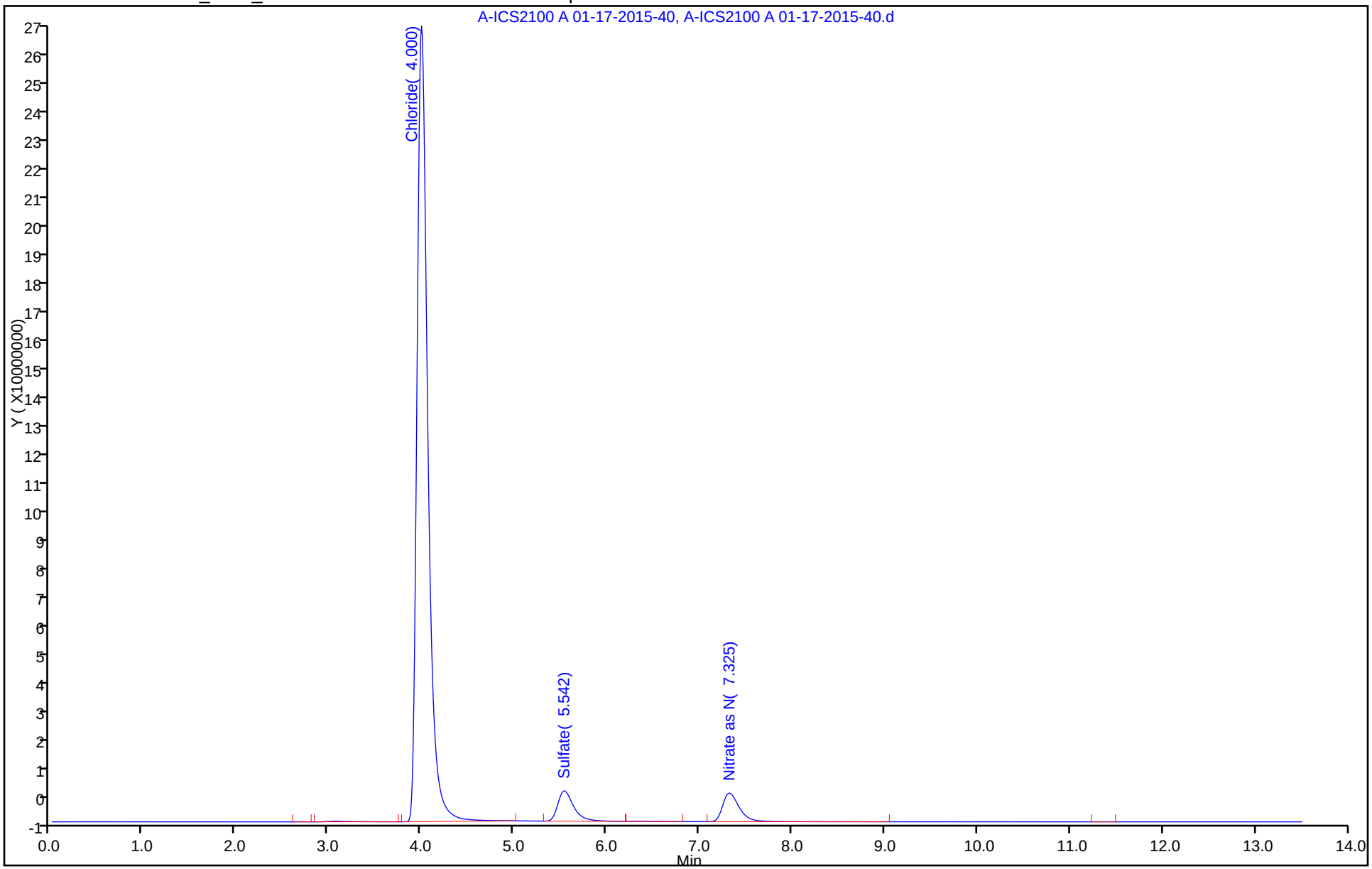
Column 1 : Det: 0008
Process Host: XAWRK001

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.000	0.000	2168965569	101.8	
3 Sulfate	5.542	5.500	0.042	120799484	7.68	
5 Nitrate as N	7.325	7.300	0.025	119383430	2.26	

Report Date: 19-Jan-2015 10:56:34 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-40.d				
Injection Date:	17-Jan-2015 17:21:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-7	Lab Sample ID:	180-40541-7	Worklist Smp#:	31
Client ID:	HD-MW-127-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-40541-8

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-42.d

Analysis Method: 300.0 Date Collected: 01/16/2015 12:30

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 17:52

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.8	B	0.10	0.0062
16887-00-6	Chloride	170		1.0	0.20
14808-79-8	Sulfate	68		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-42.d
Lims ID: 180-40541-A-8 Lab Sample ID: 180-40541-8
Client ID: HD-MW-50S-0/1-0
Sample Type: Client
Inject. Date: 17-Jan-2015 17:52:00 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-033
Misc. Info.: 40 180-40541-a-8
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:55:23 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

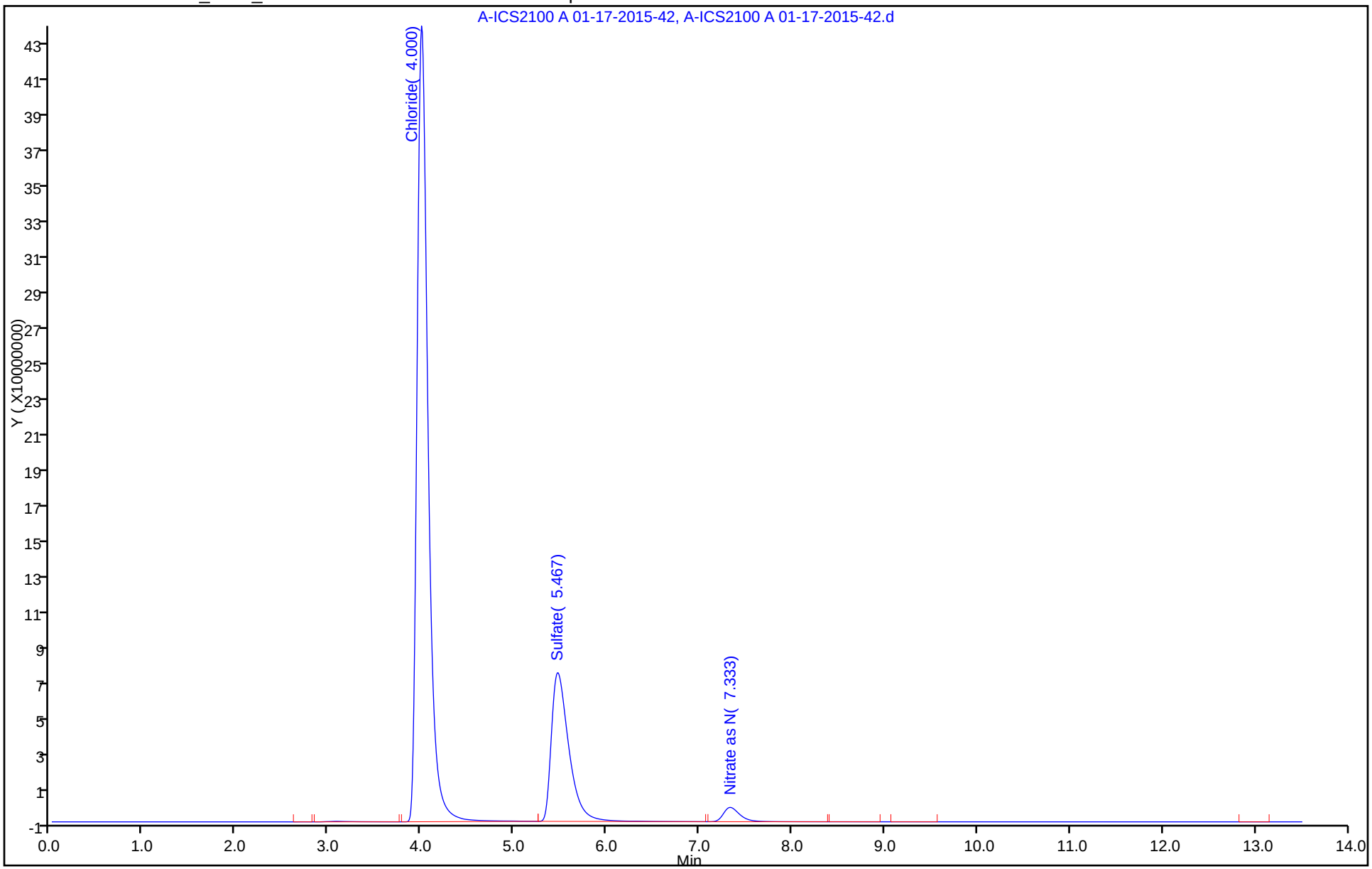
Column 1 : Det: 0008
Process Host: XAWRK001

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.000	0.000	3581393471	168.2	
3 Sulfate	5.467	5.500	-0.033	1055939903	68.5	
5 Nitrate as N	7.333	7.300	0.033	95694492	1.81	

Report Date: 19-Jan-2015 10:56:35 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-42.d				
Injection Date:	17-Jan-2015 17:52:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-8	Lab Sample ID:	180-40541-8	Worklist Smp#:	33
Client ID:	HD-MW-50S-0/1-0				
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1 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.: 180-40541-1 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.: 180-40541-1 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

Report Date: 13-Jan-2015 18:17:33 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-2015-2.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	

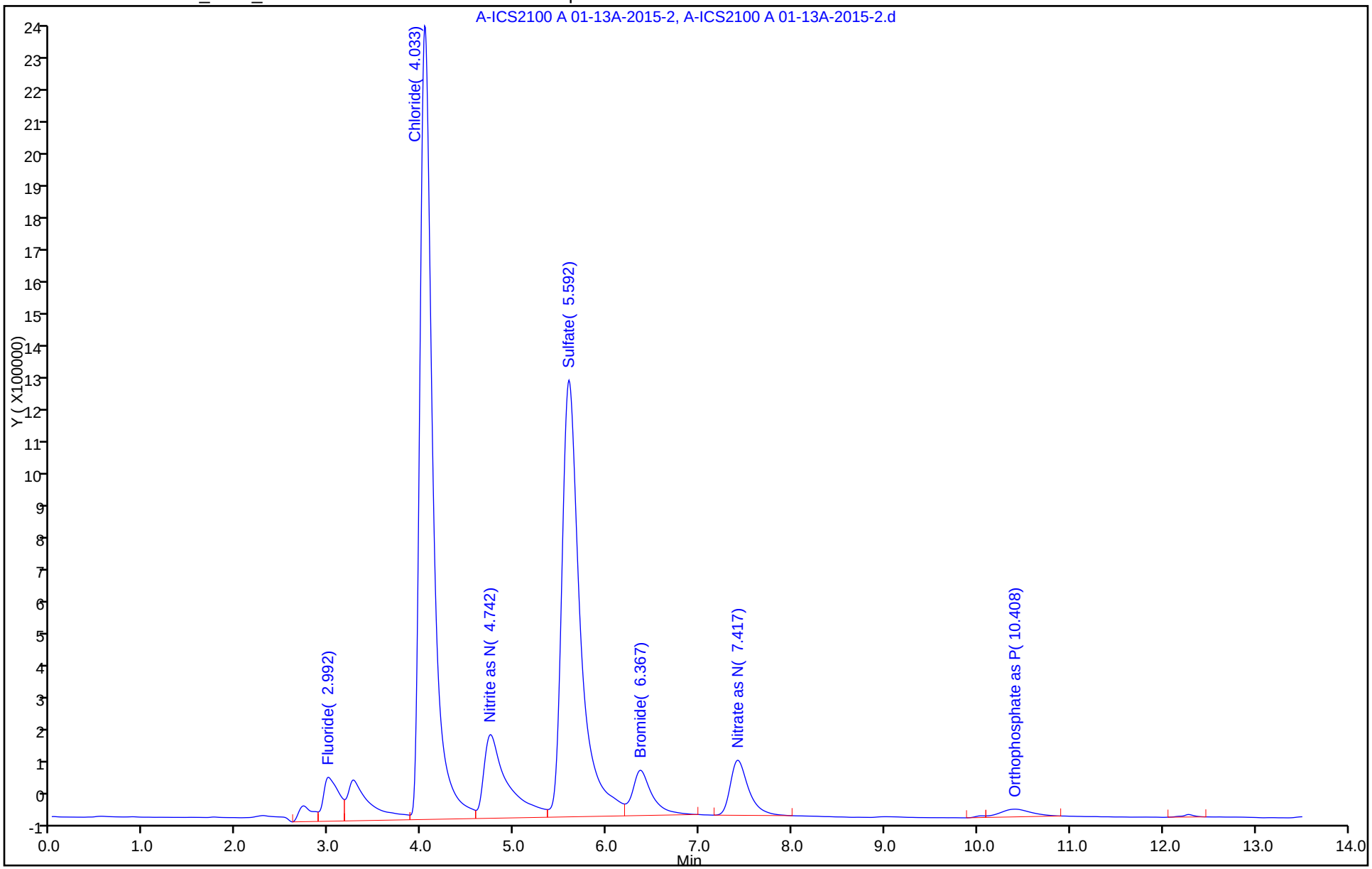
Reagents:

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	

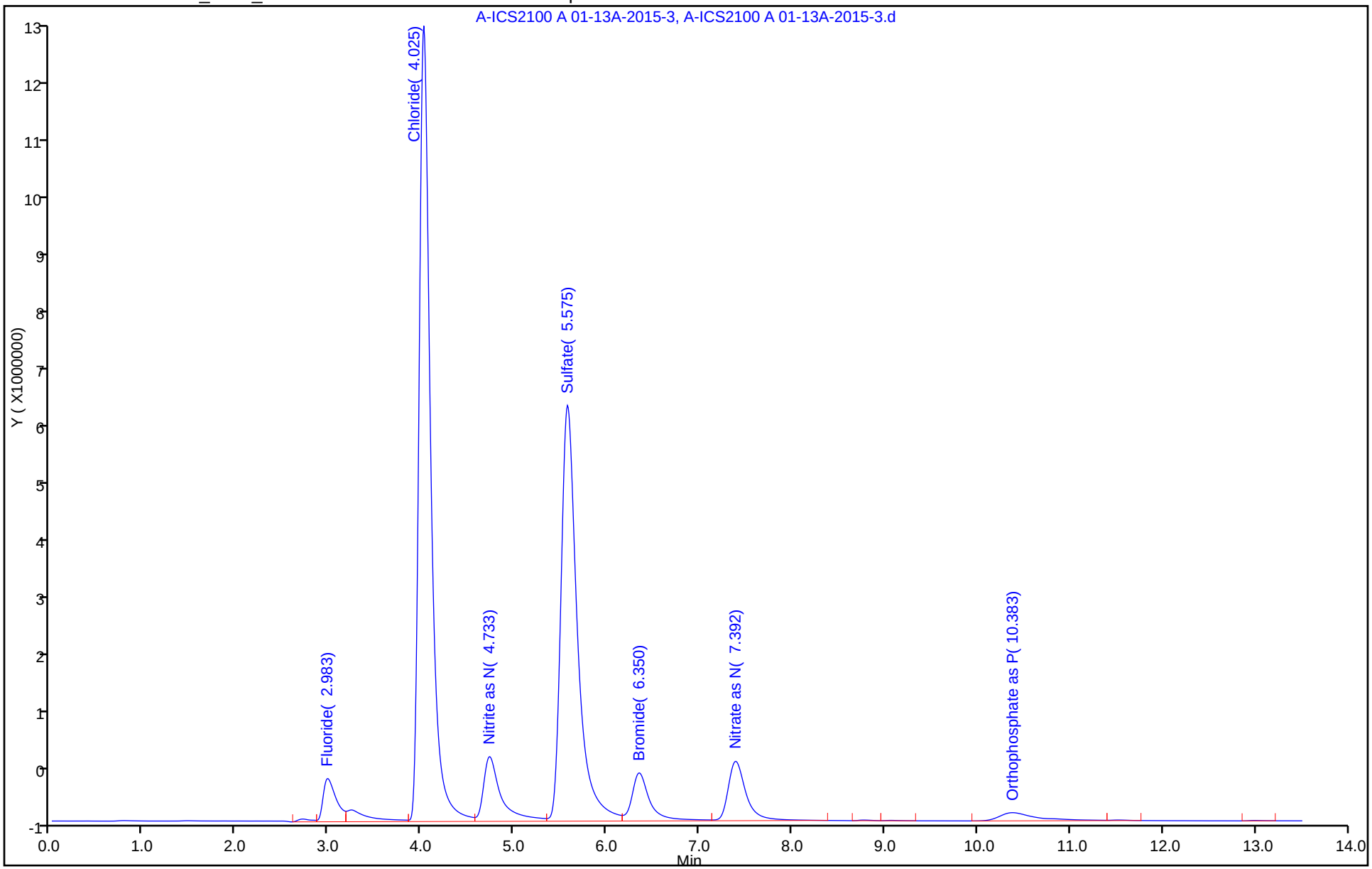
Reagents:

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		



Report Date: 13-Jan-2015 18:17:34 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-2015-4.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:

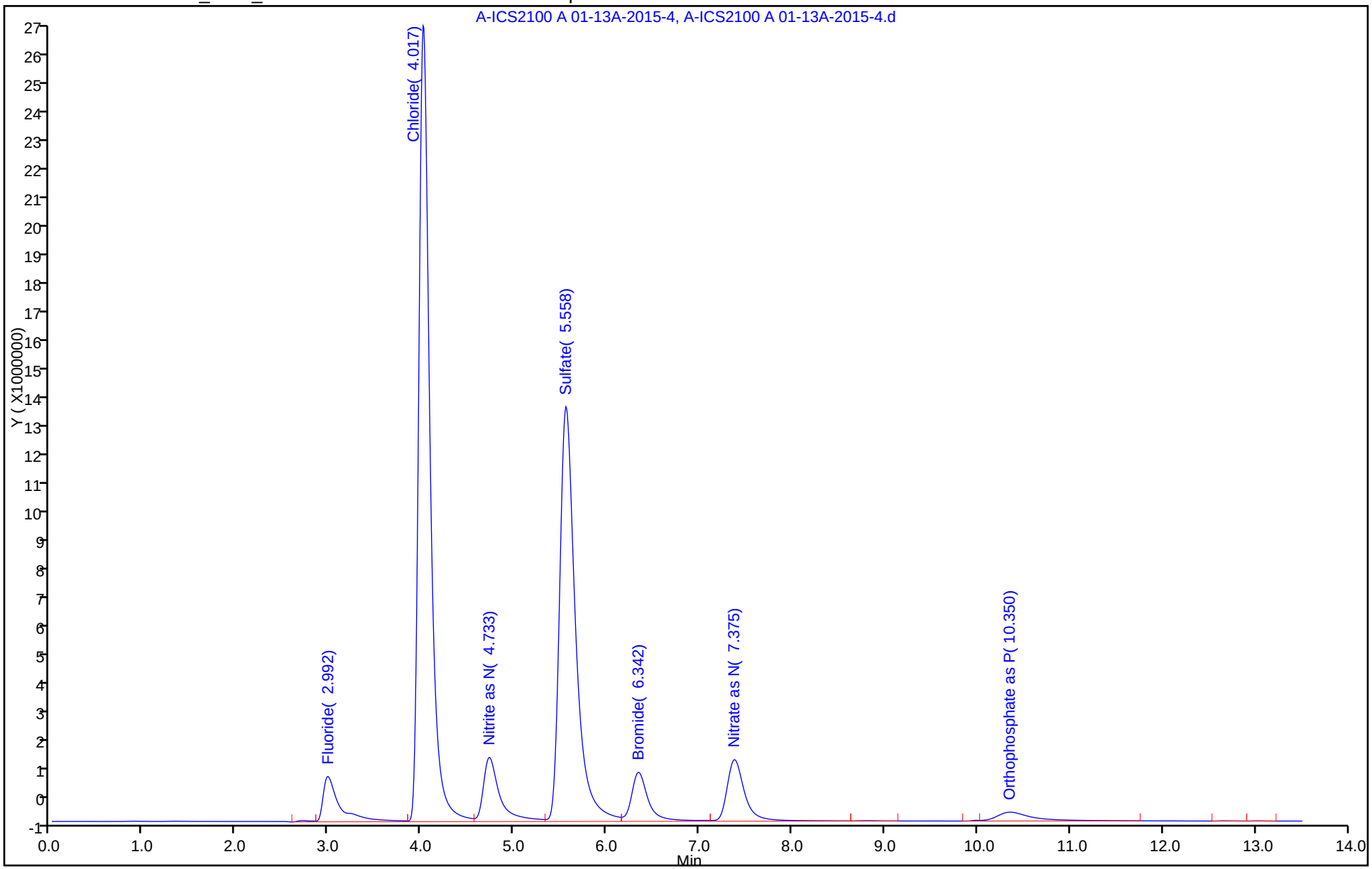
ICSTDL4_00121 Amount Added: 1.00 Units: mL

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:

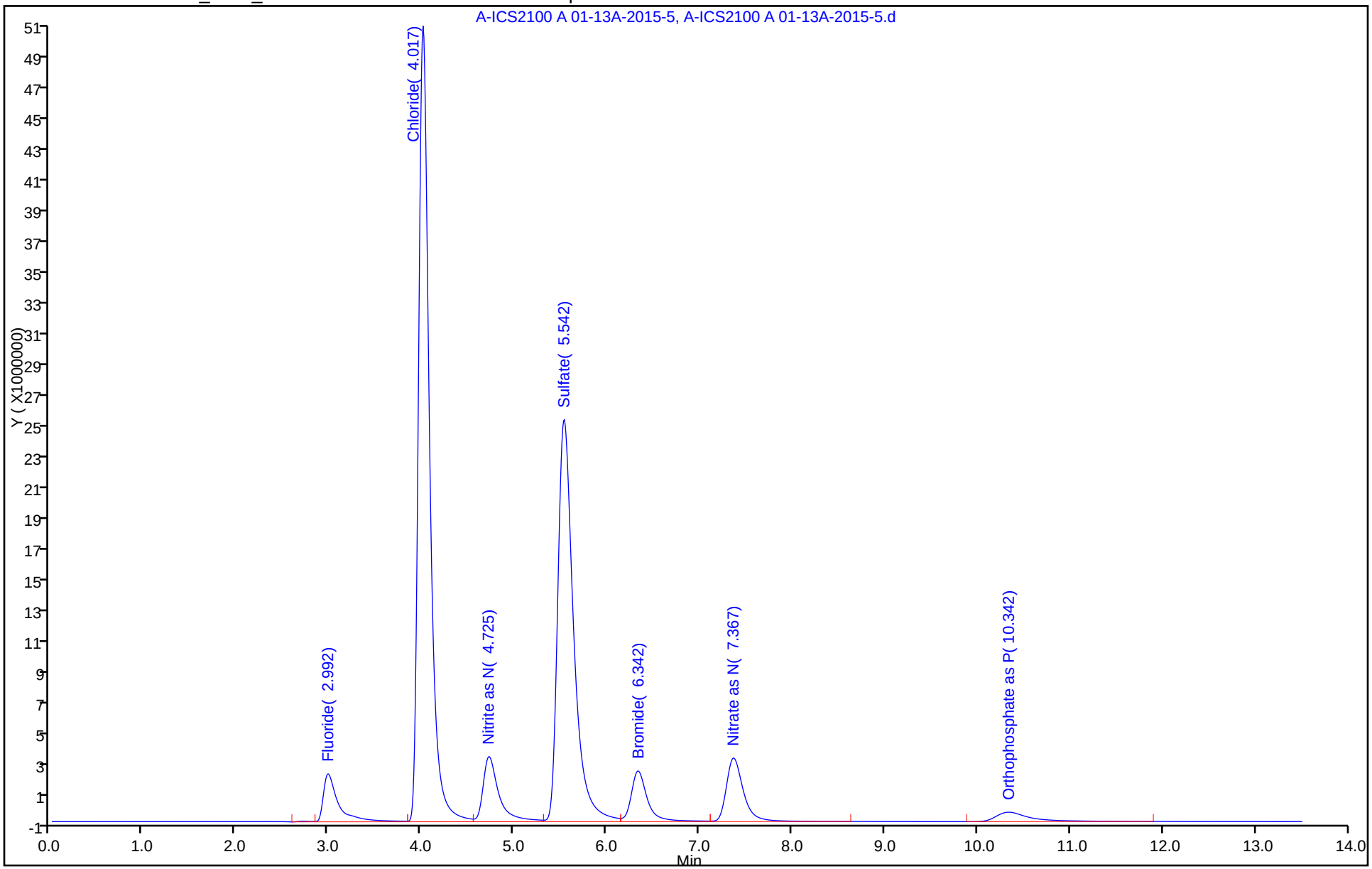
ICSTDL5_00120 Amount Added: 1.00 Units: mL

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		



Report Date: 13-Jan-2015 18:17:34 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-2015-6.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:

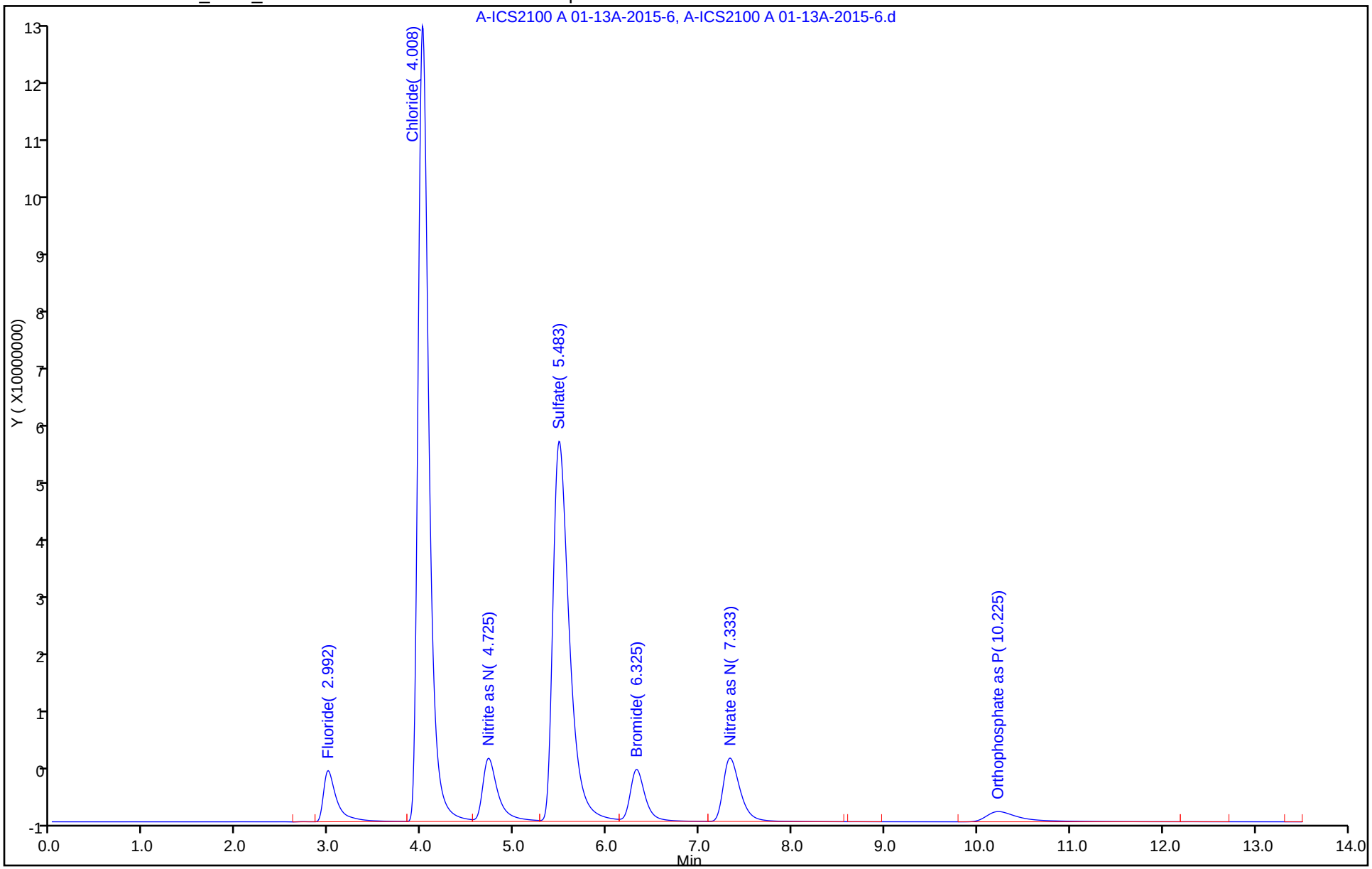
ICSTDL6_00189 Amount Added: 1.00 Units: mL

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		



Report Date: 13-Jan-2015 18:17:35 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-2015-7.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	

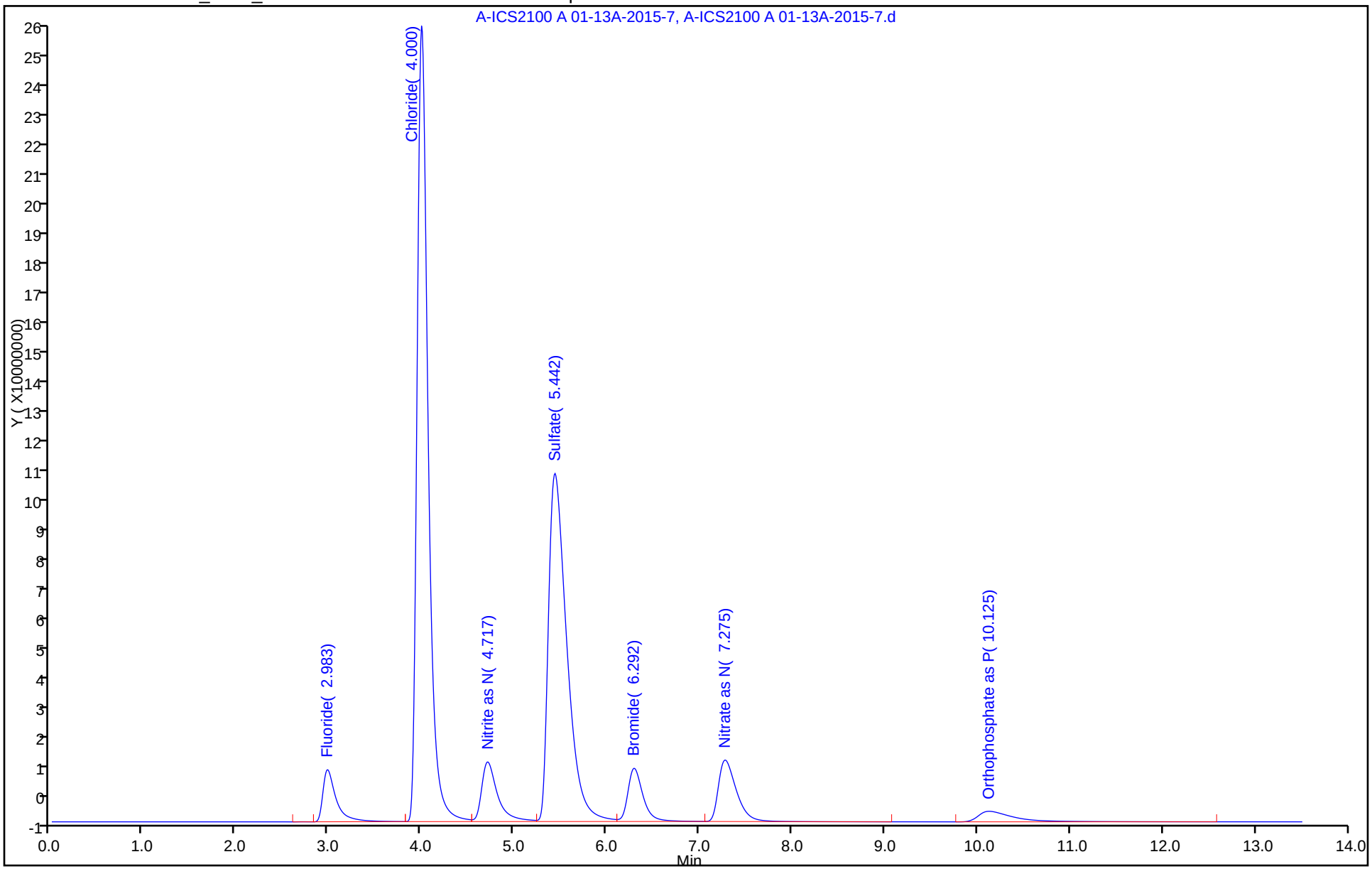
Reagents:

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	

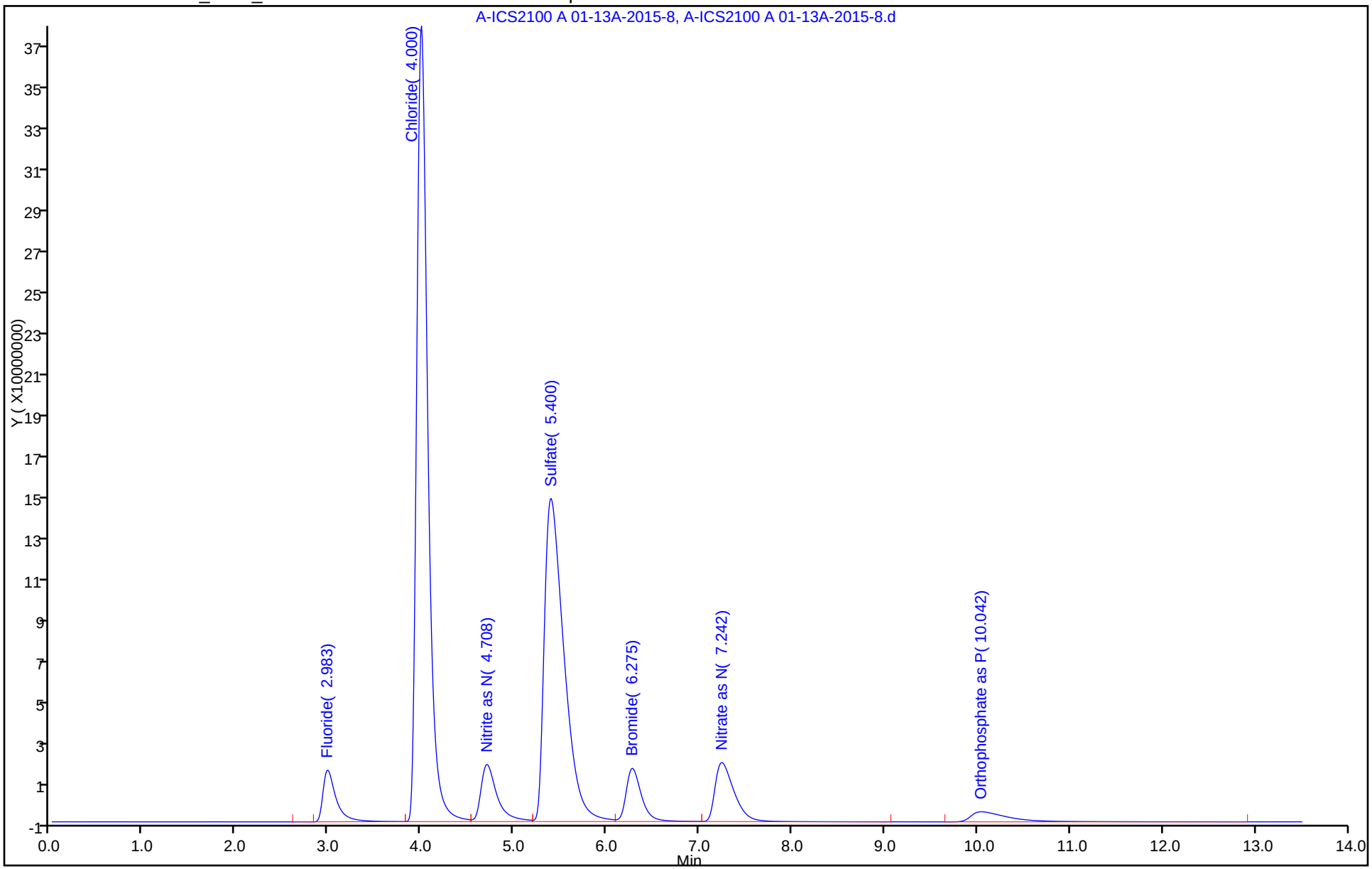
Reagents:

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	

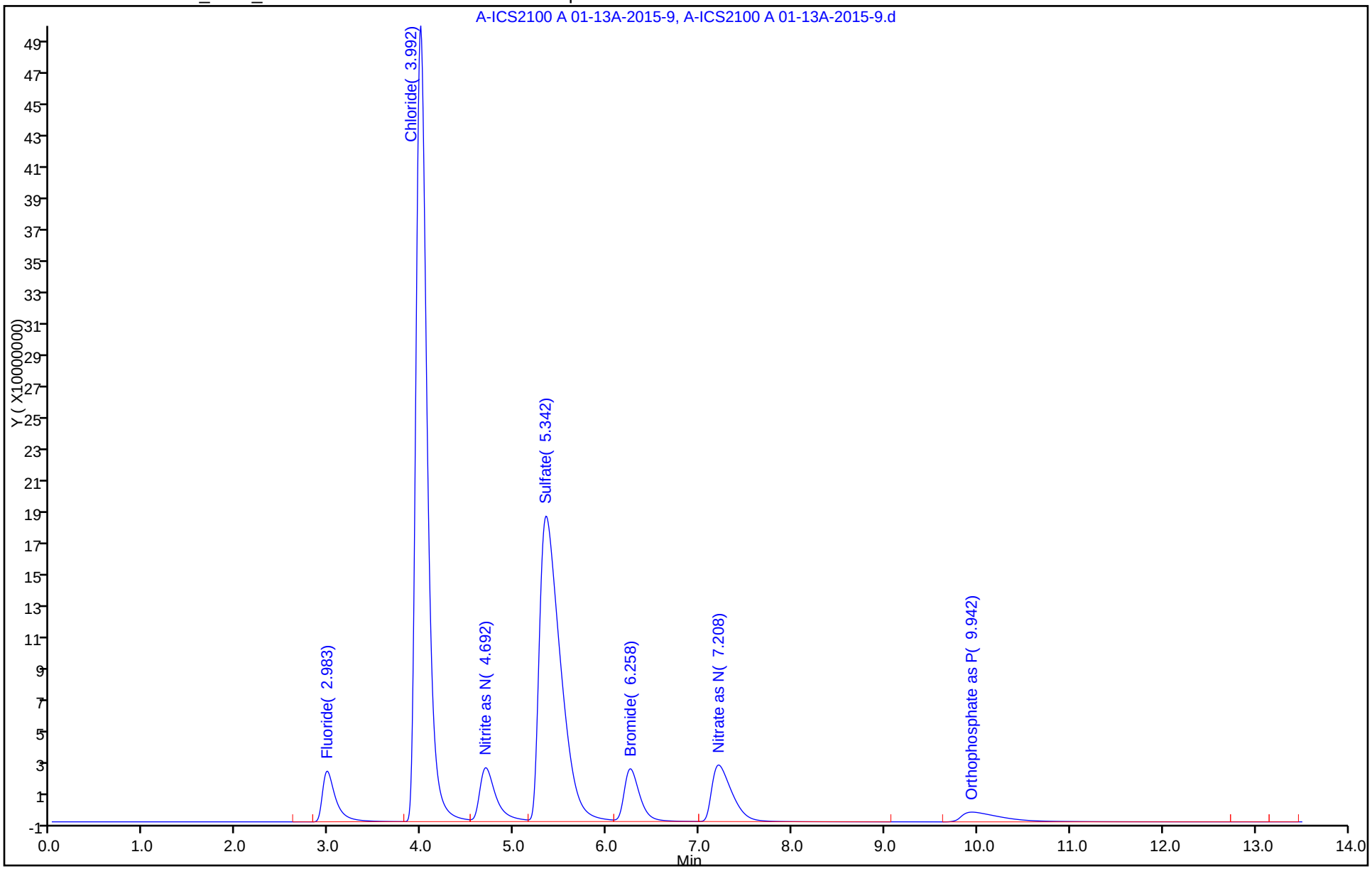
Reagents:

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.: 180-40541-1

SDG No.:

Lab Sample ID: ICV 180-131000/2 Calibration Date: 01/17/2015 09:51

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 01-17-2015-11.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3421198		3.26	3.00	8.5	10.0
Chloride	Lin2		22071728		62.1	60.0	3.6	10.0
Nitrite as N	Lin2		49154852		3.20	3.00	6.6	10.0
Sulfate	Lin2		16165700		62.9	60.0	4.8	10.0
Bromide	LinF		10163344		12.6	12.0	5.0	10.0
Nitrate as N	Lin2		53863329		3.06	3.00	2.0	10.0
Orthophosphate as P	Lin2		15739779		2.76	3.00	-8.0	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: ICV 180-131000/2 Calibration Date: 01/17/2015 09:51

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 01-17-2015-11.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.63	3.33
Chloride	4.00	3.65	4.35
Nitrite as N	4.71	4.46	4.96
Sulfate	5.47	5.15	5.85
Bromide	6.30	5.95	6.65
Nitrate as N	7.30	7.05	7.55
Orthophosphate as P	10.23	10.06	10.56

Report Date: 17-Jan-2015 13:53:41 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-11.d
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 17-Jan-2015 09:51:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-002
Misc. Info.: 11 icv
Operator ID: Instrument ID: CHIC2100A
Sublist:

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:53:26 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: XAWRK027

First Level Reviewer: hartmanm Date: 17-Jan-2015 13:53:41

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.983	0.009	10263593H	3.00	3.26	
2 Chloride	4.000	4.000	0.000	1324303660	60.0	62.1	
7 Nitrite as N	4.708	4.708	0.000	147523543	3.00	3.20	
3 Sulfate	5.467	5.500	-0.033	969941973	60.0	62.9	
4 Bromide	6.300	6.300	0.000	121960123	12.0	12.6	
5 Nitrate as N	7.300	7.300	0.000	161589988	3.00	3.06	
6 Orthophosphate as P	10.225	10.308	-0.083	47219338	3.00	2.76	

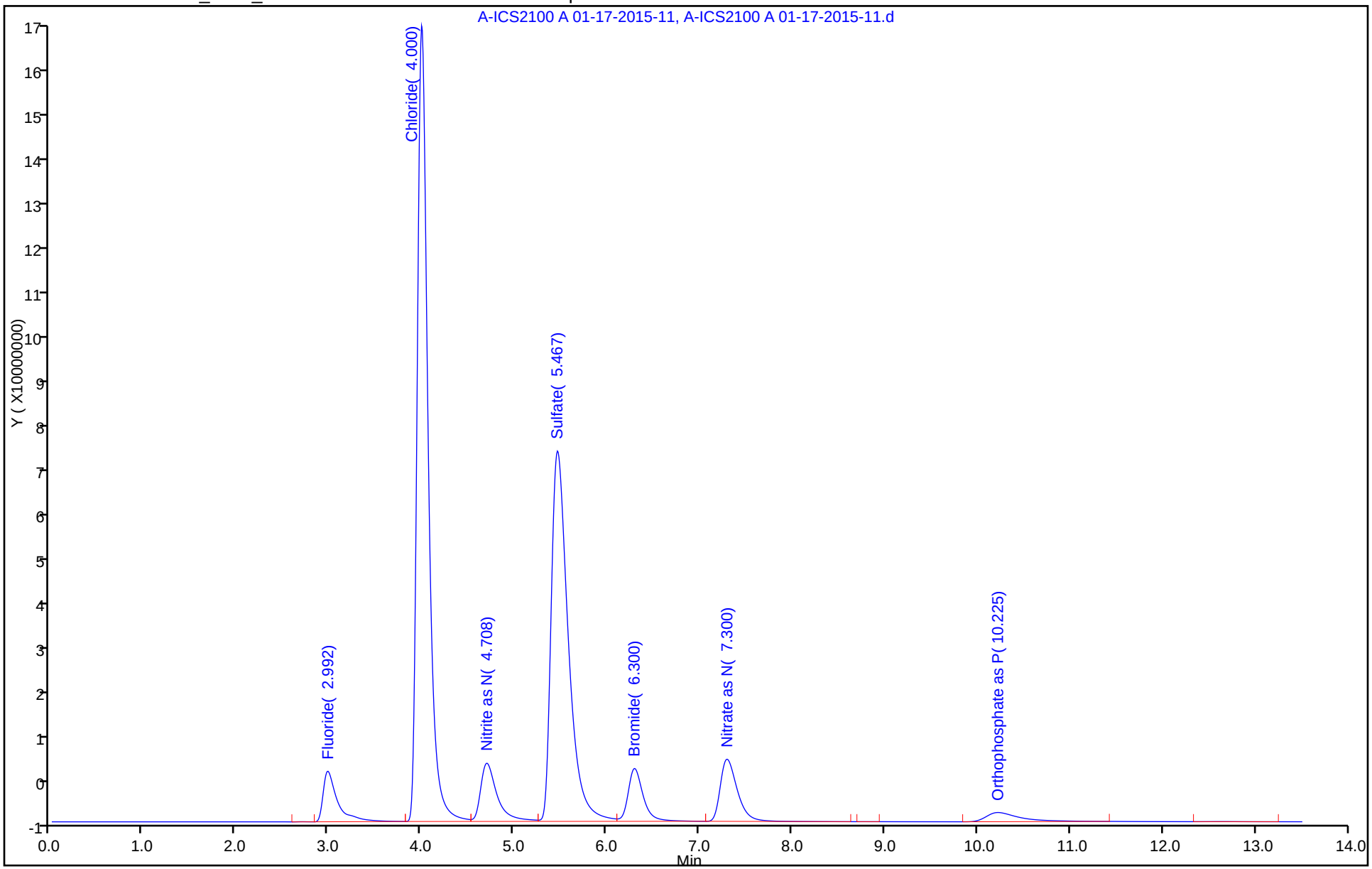
Reagents:

icicv_01176 Amount Added: 1.00 Units: mL

Report Date: 17-Jan-2015 13:53:41 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-11.d				
Injection Date:	17-Jan-2015 09:51:00	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.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/3 Calibration Date: 01/17/2015 10:07

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 01-17-2015-12.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3530836		2.80	2.50	12.0*	10.0
Chloride	Lin2		22260573		52.2	50.0	4.4	10.0
Nitrite as N	Lin2		49324625		2.67	2.50	6.6	10.0
Sulfate	Lin2		16171506		52.4	50.0	4.8	10.0
Bromide	LinF		10208957		10.6	10.0	5.5	10.0
Nitrate as N	Lin2		54938954		2.60	2.50	4.0	10.0
Orthophosphate as P	Lin2		17265588		2.53	2.50	1.0	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/3 Calibration Date: 01/17/2015 10:07

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 01-17-2015-12.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	5.49	5.14	5.84
Bromide	6.31	5.96	6.66
Nitrate as N	7.31	7.06	7.56
Orthophosphate as P	10.28	10.03	10.53

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-12.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Jan-2015 10:07:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-003
Misc. Info.: 12 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:25 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: XAWRK027

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	8827091H	2.50	2.80	
2 Chloride	4.008	4.008	0.000	1113028636	50.0	52.2	
7 Nitrite as N	4.717	4.717	0.000	123311562	2.50	2.67	
3 Sulfate	5.492	5.492	0.000	808575302	50.0	52.4	
4 Bromide	6.308	6.308	0.000	102089574	10.0	10.6	
5 Nitrate as N	7.308	7.308	0.000	137347386	2.50	2.60	
6 Orthophosphate as P	10.275	10.275	0.000	43163969	2.50	2.53	

Reagents:

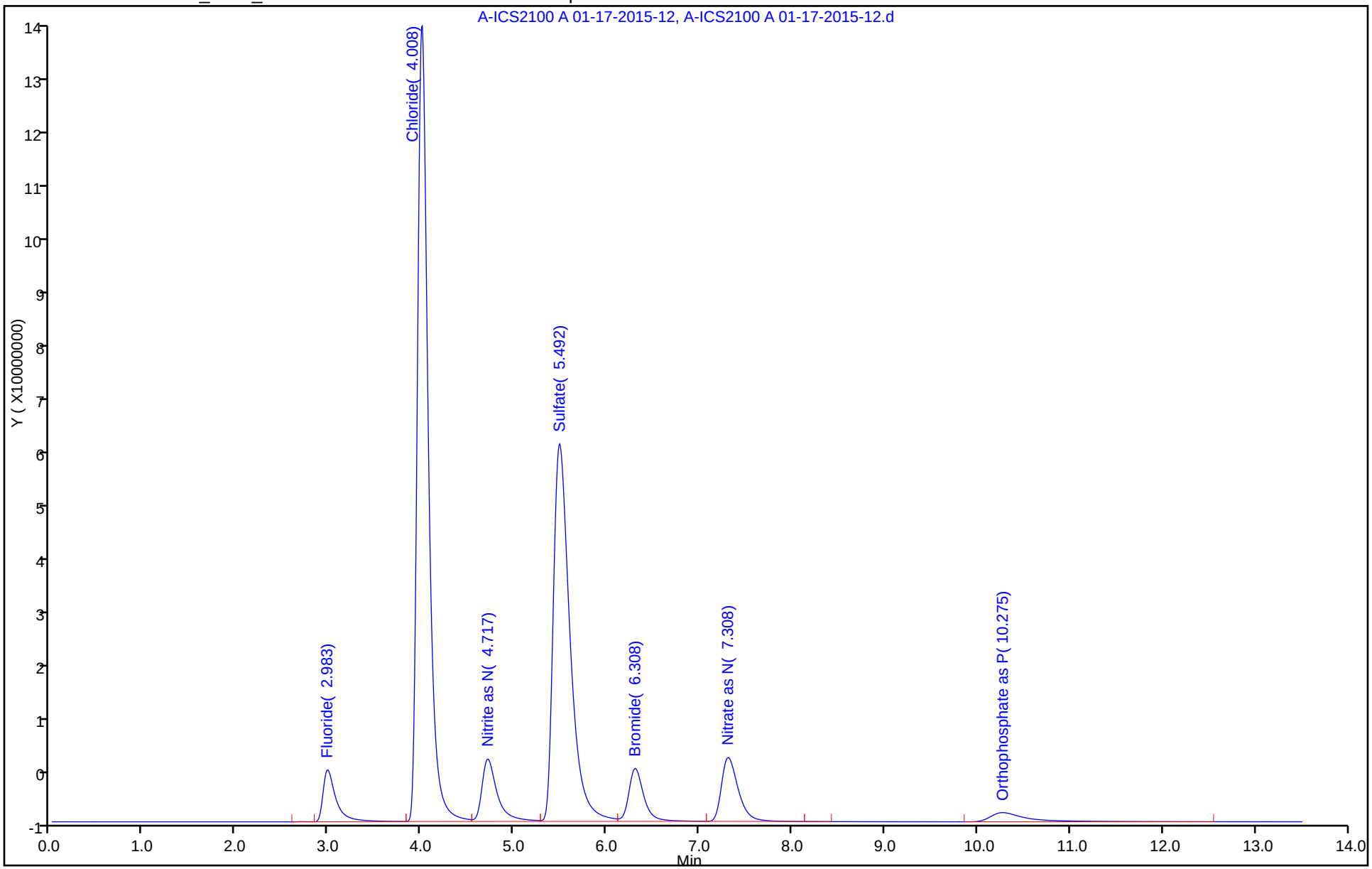
icccv_01144 Amount Added: 1.00 Units: mL

Report Date: 17-Jan-2015 13:34:26 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-12.d

Injection Date:	17-Jan-2015 10:07:00	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.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/15 Calibration Date: 01/17/2015 13:16

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 01-17-2015-24.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3522216		2.79	2.50	11.8*	10.0
Chloride	Lin2		22210585		52.1	50.0	4.2	10.0
Nitrite as N	Lin2		49103465		2.65	2.50	6.1	10.0
Sulfate	Lin2		16100509		52.2	50.0	4.3	10.0
Bromide	LinF		10210692		10.6	10.0	5.5	10.0
Nitrate as N	Lin2		54899134		2.60	2.50	4.0	10.0
Orthophosphate as P	Lin2		15504752		2.27	2.50	-9.2	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/15 Calibration Date: 01/17/2015 13:16

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 01-17-2015-24.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.98	2.63	3.33
Chloride	4.00	3.65	4.35
Nitrite as N	4.71	4.46	4.96
Sulfate	5.50	5.15	5.85
Bromide	6.30	5.95	6.65
Nitrate as N	7.30	7.05	7.55
Orthophosphate as P	10.31	10.06	10.56

Report Date: 17-Jan-2015 13:53:41 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-24.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Jan-2015 13:16:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-015
Misc. Info.: 24 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:53:41 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: XAWRK027

First Level Reviewer: hartmanm Date: 17-Jan-2015 13:34:22

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	8805540H	2.50	2.79	
2 Chloride	4.000	4.000	0.000	1110529267	50.0	52.1	
7 Nitrite as N	4.708	4.708	0.000	122758663	2.50	2.65	
3 Sulfate	5.500	5.500	0.000	805025426	50.0	52.2	
4 Bromide	6.300	6.300	0.000	102106924	10.0	10.6	
5 Nitrate as N	7.300	7.300	0.000	137247834	2.50	2.60	
6 Orthophosphate as P	10.308	10.308	0.000	38761879	2.50	2.27	

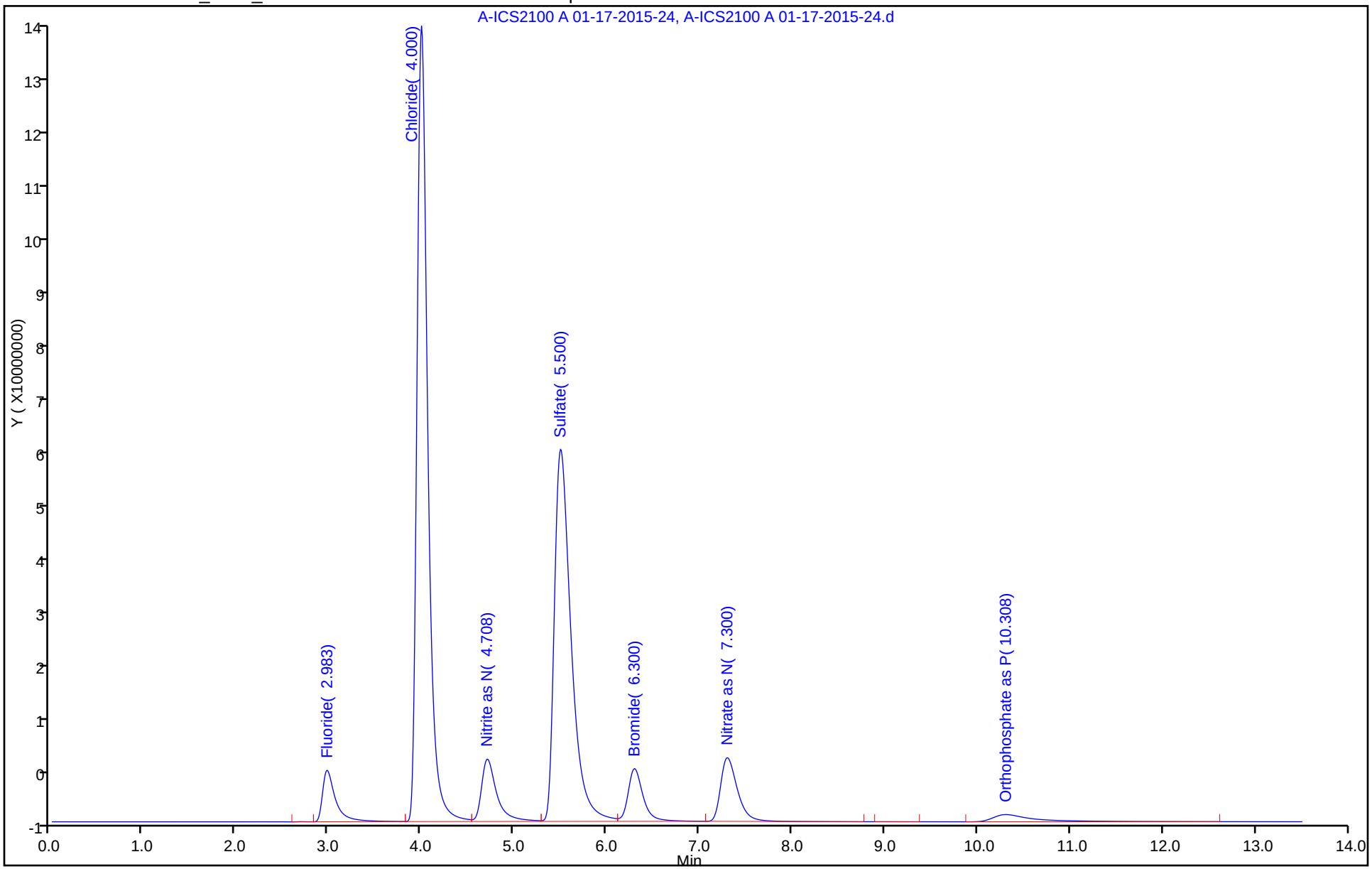
Reagents:

icccv_01144 Amount Added: 1.00 Units: mL

Report Date: 17-Jan-2015 13:53:41 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-24.d				
Injection Date:	17-Jan-2015 13:16:00	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.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/27 Calibration Date: 01/17/2015 16:20

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 01-17-2015-36.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3538073		2.81	2.50	12.3*	10.0
Chloride	Lin2		22288831		52.3	50.0	4.6	10.0
Nitrite as N	Lin2		49318503		2.67	2.50	6.6	10.0
Sulfate	Lin2		16208277		52.5	50.0	5.0	10.0
Bromide	LinF		10155556		10.5	10.0	5.0	10.0
Nitrate as N	Lin2		55169808		2.61	2.50	4.5	10.0
Orthophosphate as P	Lin2		16501593		2.41	2.50	-3.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/27 Calibration Date: 01/17/2015 16:20

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 01-17-2015-36.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	5.48	5.13	5.83
Bromide	6.32	5.97	6.67
Nitrate as N	7.33	7.08	7.58
Orthophosphate as P	10.23	9.98	10.48

Report Date: 17-Jan-2015 16:57:08 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-36.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Jan-2015 16:20:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-027
Misc. Info.: 36 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 16:57:08 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: XAWRK027

First Level Reviewer: hartmanm Date: 17-Jan-2015 16:49:06

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	8845182H	2.50	2.81	
2 Chloride	4.008	4.008	0.000	1114441565	50.0	52.3	
7 Nitrite as N	4.717	4.717	0.000	123296257	2.50	2.67	
3 Sulfate	5.483	5.483	0.000	810413868	50.0	52.5	
4 Bromide	6.317	6.317	0.000	101555557	10.0	10.5	
5 Nitrate as N	7.325	7.325	0.000	137924519	2.50	2.61	
6 Orthophosphate as P	10.233	10.233	0.000	41253983	2.50	2.41	

Reagents:

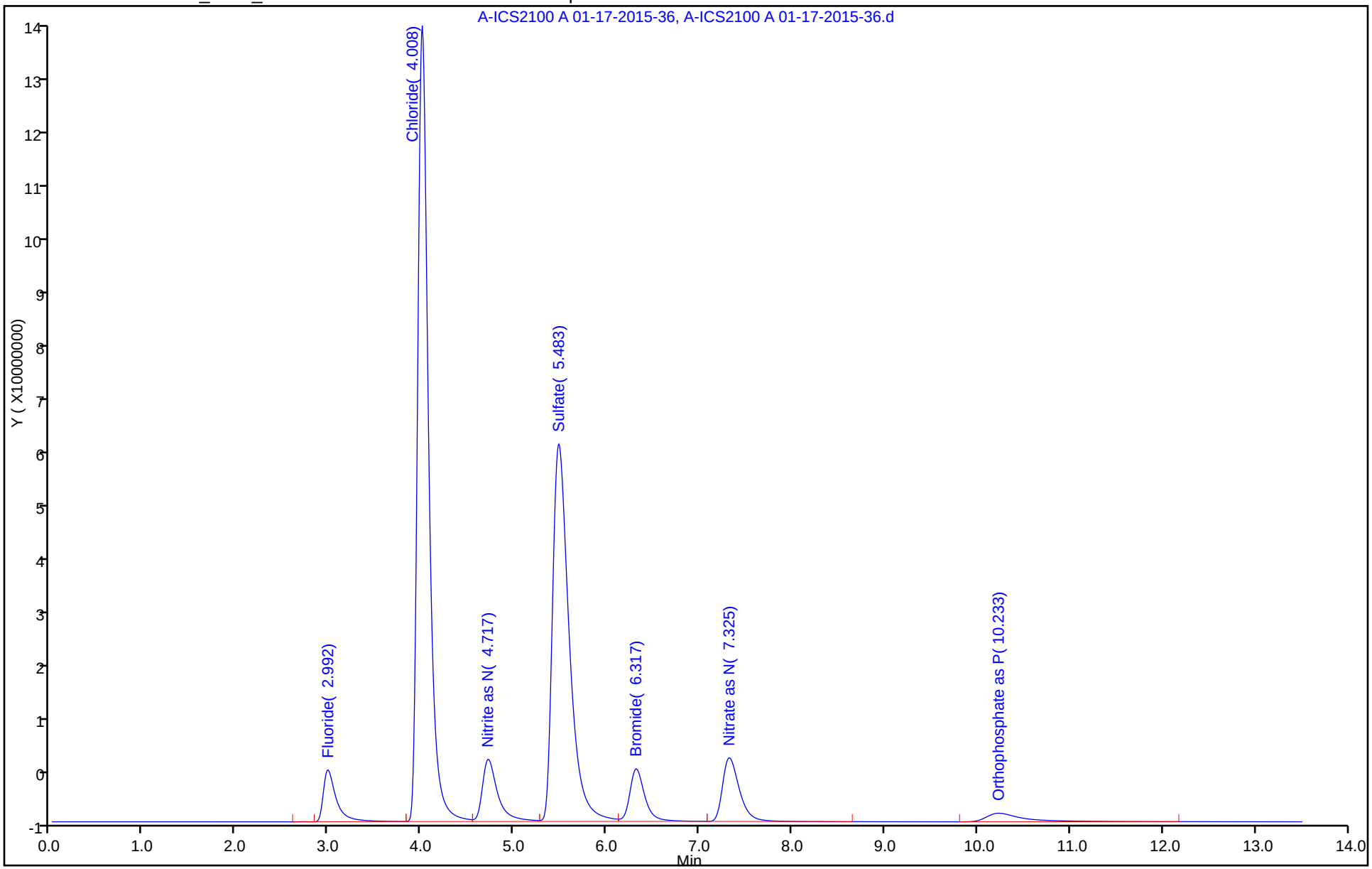
icccv_01144 Amount Added: 1.00 Units: mL

Report Date: 17-Jan-2015 16:57:08 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-36.d

Injection Date:	17-Jan-2015 16:20:00	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.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/39 Calibration Date: 01/17/2015 19:24

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 01-17-2015-48.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3545512		2.81	2.50	12.5*	10.0
Chloride	Lin2		22276897		52.3	50.0	4.5	10.0
Nitrite as N	Lin2		49325077		2.67	2.50	6.6	10.0
Sulfate	Lin2		16195548		52.5	50.0	4.9	10.0
Bromide	LinF		10194850		10.5	10.0	5.4	10.0
Nitrate as N	Lin2		55044800		2.61	2.50	4.2	10.0
Orthophosphate as P	Lin2		16391265		2.40	2.50	-4.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/39 Calibration Date: 01/17/2015 19:24

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 01-17-2015-48.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.98	2.63	3.33
Chloride	4.00	3.65	4.35
Nitrite as N	4.71	4.46	4.96
Sulfate	5.50	5.15	5.85
Bromide	6.30	5.95	6.65
Nitrate as N	7.30	7.05	7.55
Orthophosphate as P	10.31	10.06	10.56

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-48.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Jan-2015 19:24:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-039
Misc. Info.: 48 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:56:36 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: XAWRK001

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	8863781	H	2.50	2.81
2 Chloride	4.000	4.000	0.000	1113844840		50.0	52.3
7 Nitrite as N	4.708	4.708	0.000	123312692		2.50	2.67
3 Sulfate	5.500	5.500	0.000	809777423		50.0	52.5
4 Bromide	6.300	6.300	0.000	101948497		10.0	10.5
5 Nitrate as N	7.300	7.300	0.000	137612000		2.50	2.61
6 Orthophosphate as P	10.308	10.308	0.000	40978163		2.50	2.40

Reagents:

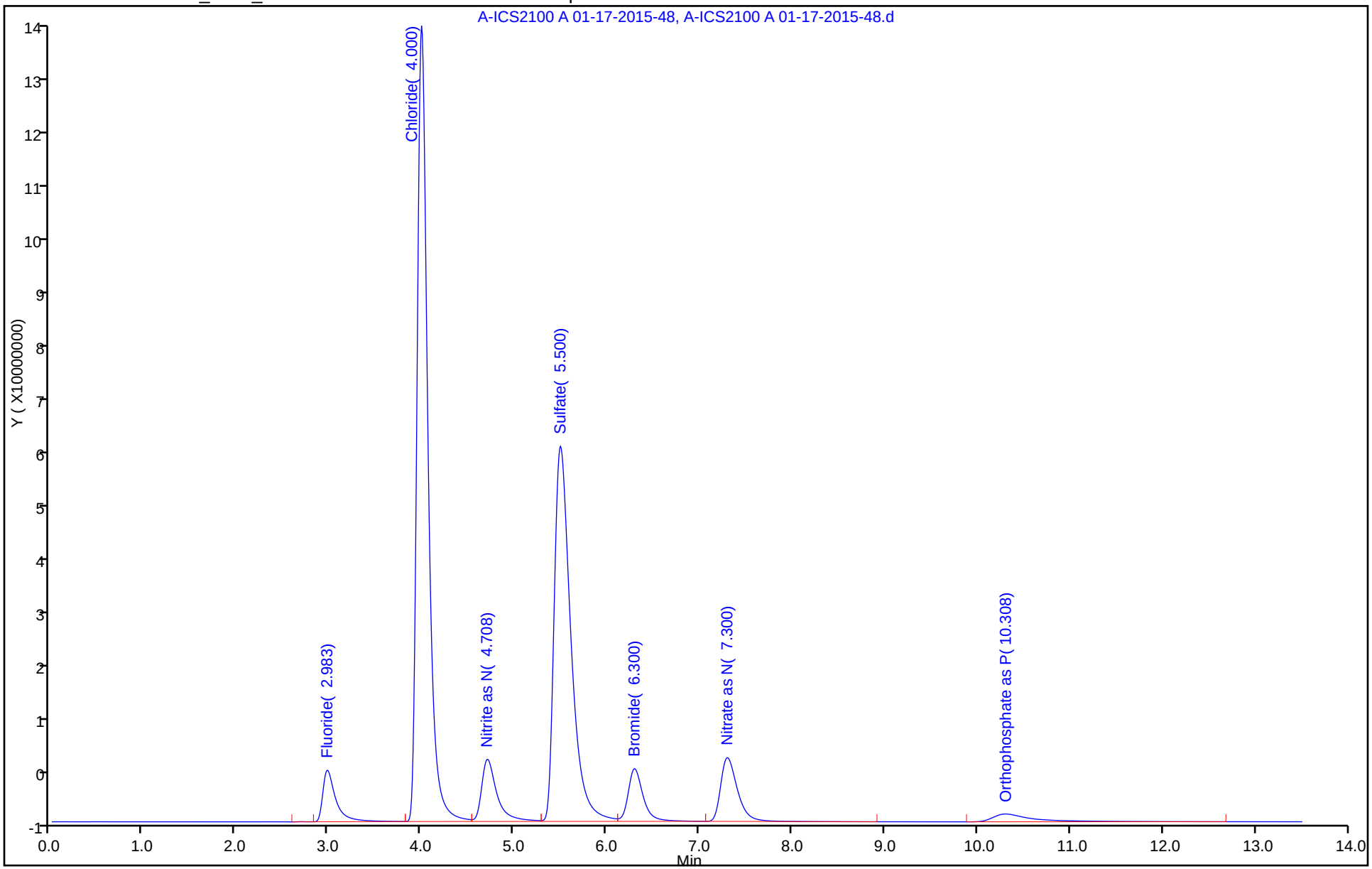
icccv_01144 Amount Added: 1.00 Units: mL

Report Date: 19-Jan-2015 10:56:36 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-48.d

Injection Date:	17-Jan-2015 19:24:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	39
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/50 Calibration Date: 01/17/2015 22:12

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 01-17-2015-59.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3524230		2.80	2.50	11.8*	10.0
Chloride	Lin2		22160969		52.0	50.0	4.0	10.0
Nitrite as N	Lin2		48999858		2.65	2.50	5.9	10.0
Sulfate	Lin2		16102470		52.2	50.0	4.3	10.0
Bromide	LinF		10204633		10.5	10.0	5.5	10.0
Nitrate as N	Lin2		54816331		2.60	2.50	3.8	10.0
Orthophosphate as P	Lin2		15515564		2.27	2.50	-9.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: CCV 180-131000/50 Calibration Date: 01/17/2015 22:12

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 01-17-2015-59.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.98	2.63	3.33
Chloride	4.00	3.65	4.35
Nitrite as N	4.72	4.47	4.97
Sulfate	5.50	5.15	5.85
Bromide	6.30	5.95	6.65
Nitrate as N	7.30	7.05	7.55
Orthophosphate as P	10.33	10.08	10.58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-59.d
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 17-Jan-2015 22:12:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-050
Misc. Info.: 57 ccv
Operator ID: Instrument ID: CHIC2100A
Sublist: chrom-300_9056_CHIC2100A*sub3

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:56:39 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: XAWRK001

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	8810575H	2.50	2.80	
2 Chloride	4.000	4.000	0.000	1108048456	50.0	52.0	
7 Nitrite as N	4.717	4.717	0.000	122499645	2.50	2.65	
3 Sulfate	5.500	5.500	0.000	805123514	50.0	52.2	
4 Bromide	6.300	6.300	0.000	102046328	10.0	10.5	
5 Nitrate as N	7.300	7.300	0.000	137040828	2.50	2.60	
6 Orthophosphate as P	10.333	10.333	0.000	38788910	2.50	2.27	

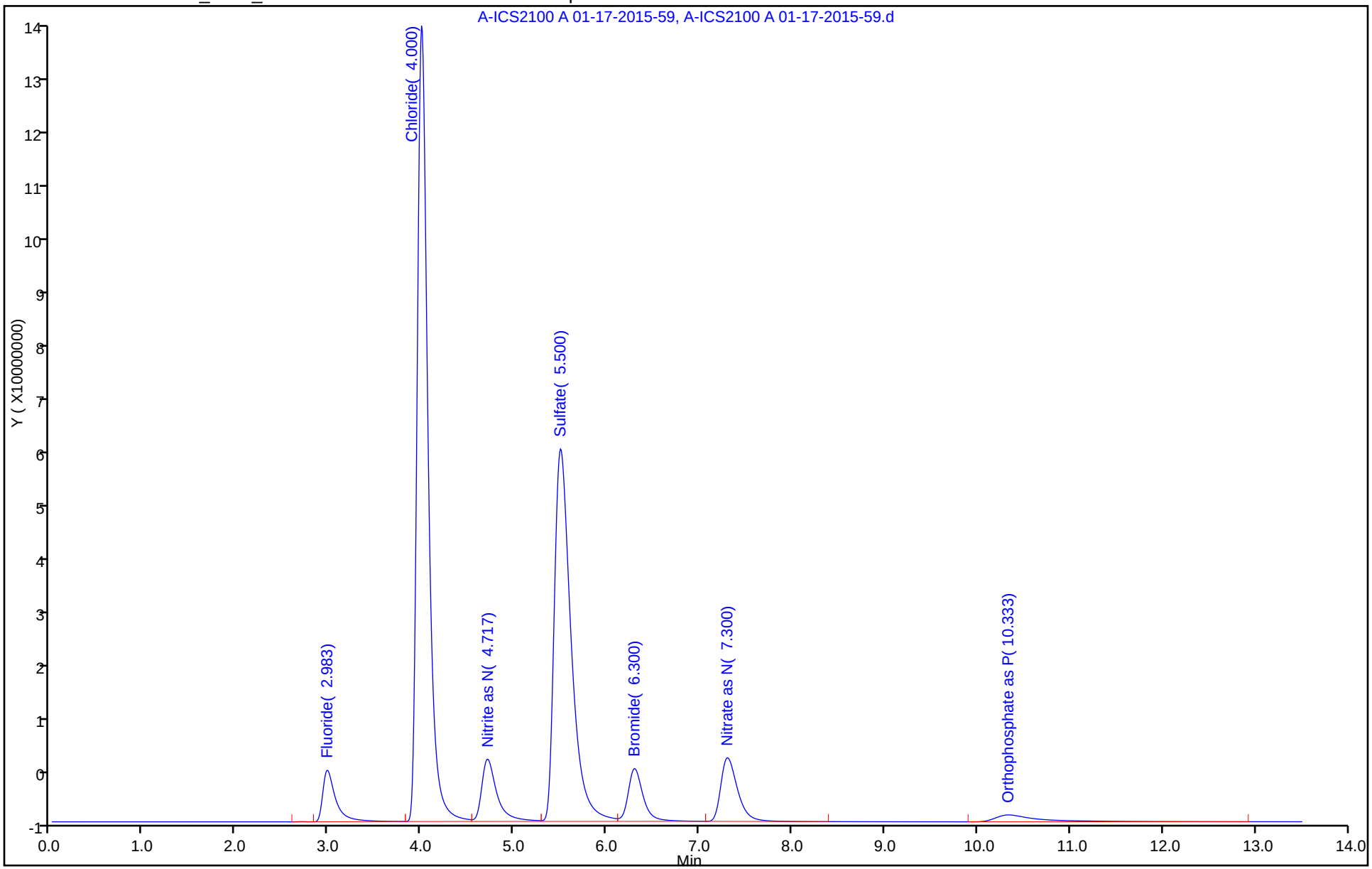
Reagents:

icccv_01144 Amount Added: 1.00 Units: mL

Report Date: 19-Jan-2015 10:56:39 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-59.d				
Injection Date:	17-Jan-2015 22:12:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccv			Worklist Smp#:	50
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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-131000/6

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-15.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 10:53

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00944	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\20150117-5313.b\A-ICS2100 A 01-17-2015-15.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 17-Jan-2015 10:53:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-006
Misc. Info.: 15 mb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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: XAWRK027

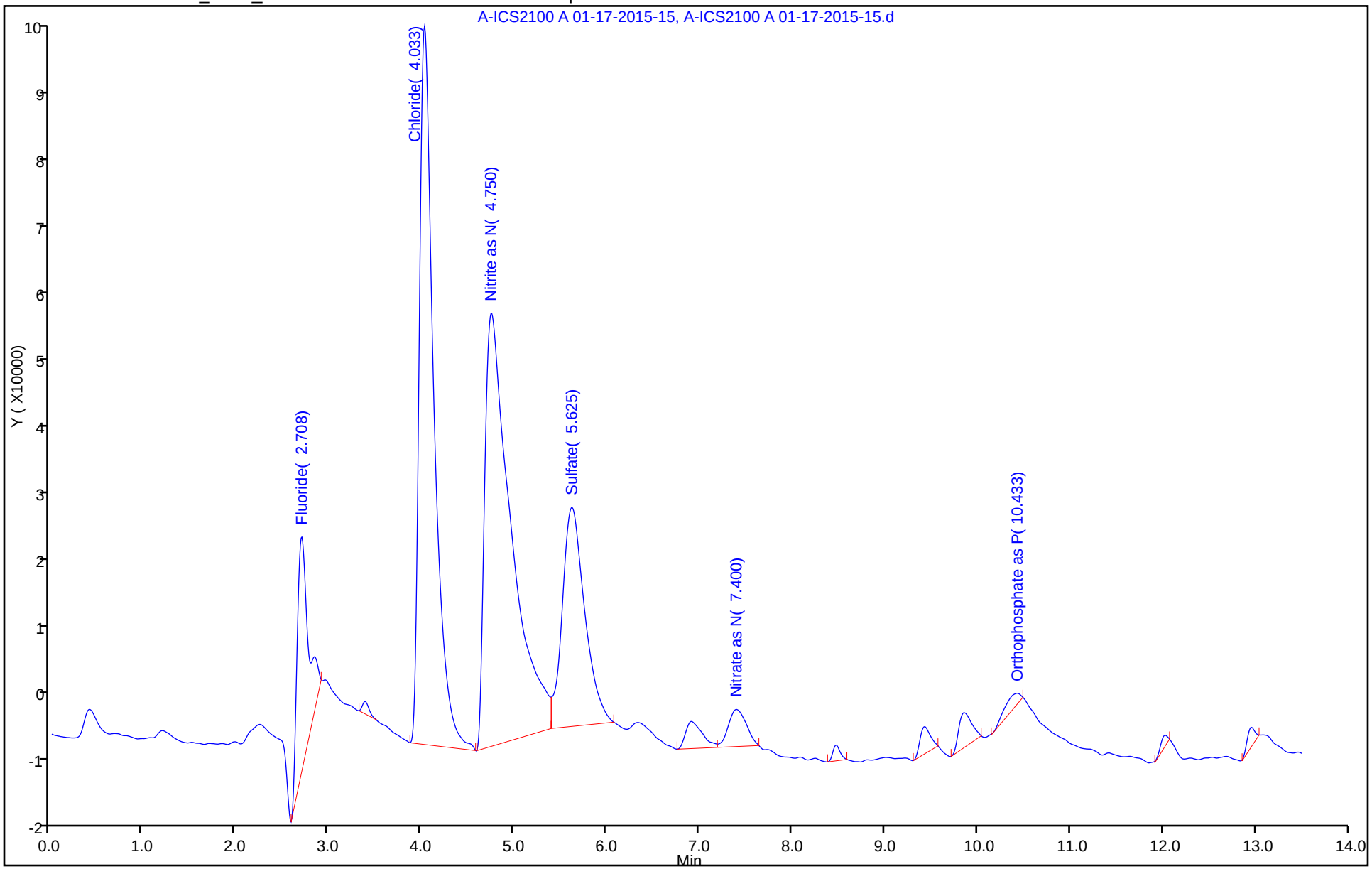
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.708	2.983	-0.275	32892H		0.0206	
2 Chloride	4.033	4.000	0.033	1112472		-0.0197	
7 Nitrite as N	4.750	4.708	0.042	1207691		-0.0204	
3 Sulfate	5.625	5.500	0.125	520982		-0.1370	
4 Bromide		6.300				ND	
5 Nitrate as N	7.400	7.300	0.100	70745		0.009439	
6 Orthophosphate as P	10.433	10.308	0.125	23404		0.0216	

Report Date: 17-Jan-2015 13:34:25 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-15.d

Injection Date:	17-Jan-2015 10:53:00	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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-131000/4

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-13.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 10:22

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00949	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\20150117-5313.b\A-ICS2100 A 01-17-2015-13.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Jan-2015 10:22:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-004
Misc. Info.: 13 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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: XAWRK027

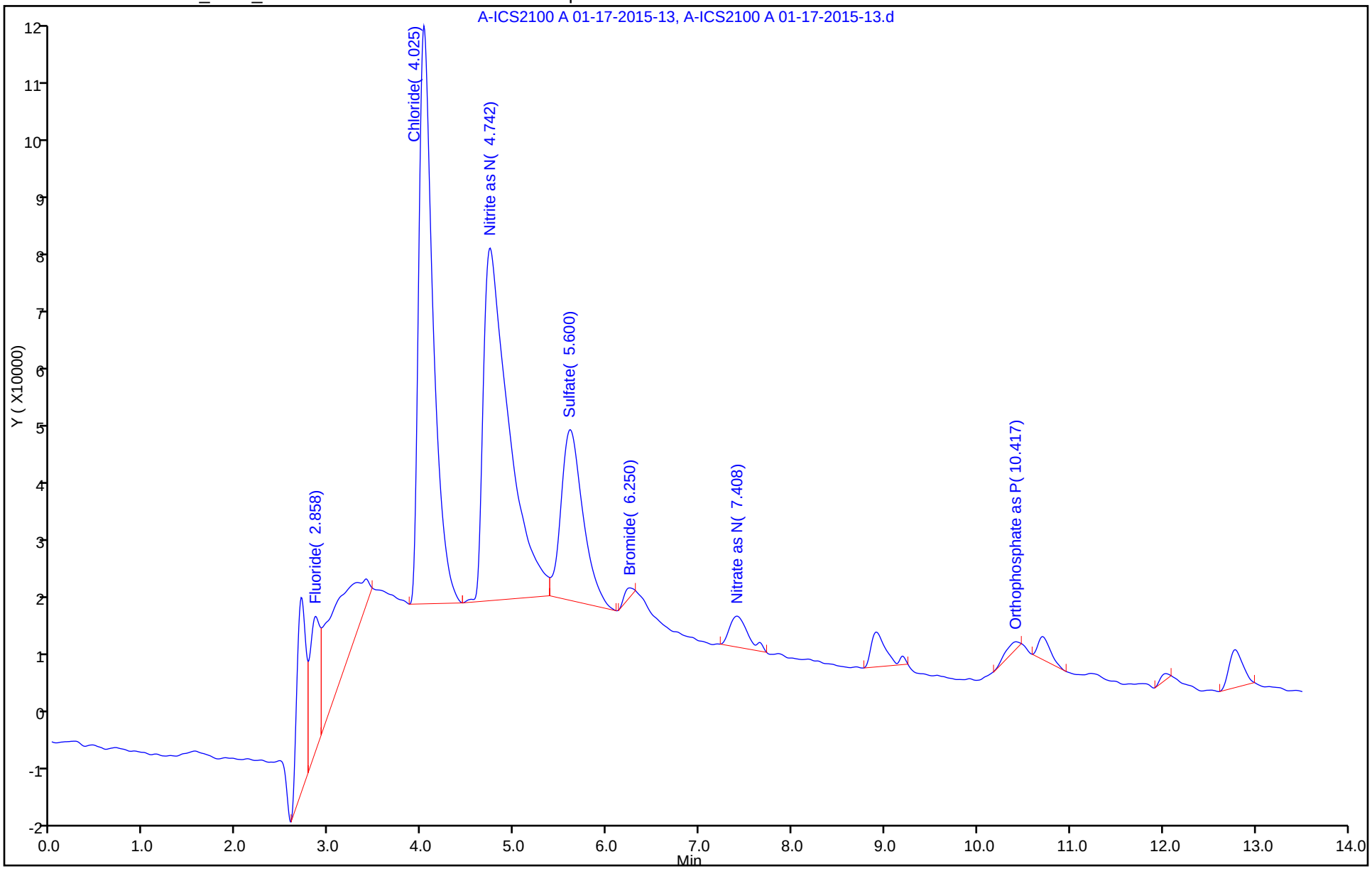
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.858	2.983	-0.125	23037H		0.0175	
2 Chloride	4.025	4.000	0.025	1075288		-0.0215	
7 Nitrite as N	4.742	4.708	0.034	1169347		-0.0213	
3 Sulfate	5.600	5.500	0.100	487392		-0.1392	
4 Bromide	6.250	6.300	-0.050	11522		0.001191	
5 Nitrate as N	7.408	7.300	0.108	73448		0.009490	
6 Orthophosphate as P	10.417	10.308	0.109	17208		0.0213	

Report Date: 17-Jan-2015 13:34:25 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-13.d

Injection Date:	17-Jan-2015 10:22:00	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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-131000/16

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-25.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 13:32

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00940	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\20150117-5313.b\A-ICS2100 A 01-17-2015-25.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Jan-2015 13:32:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-016
Misc. Info.: 25 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 16:49:06 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: XAWRK027

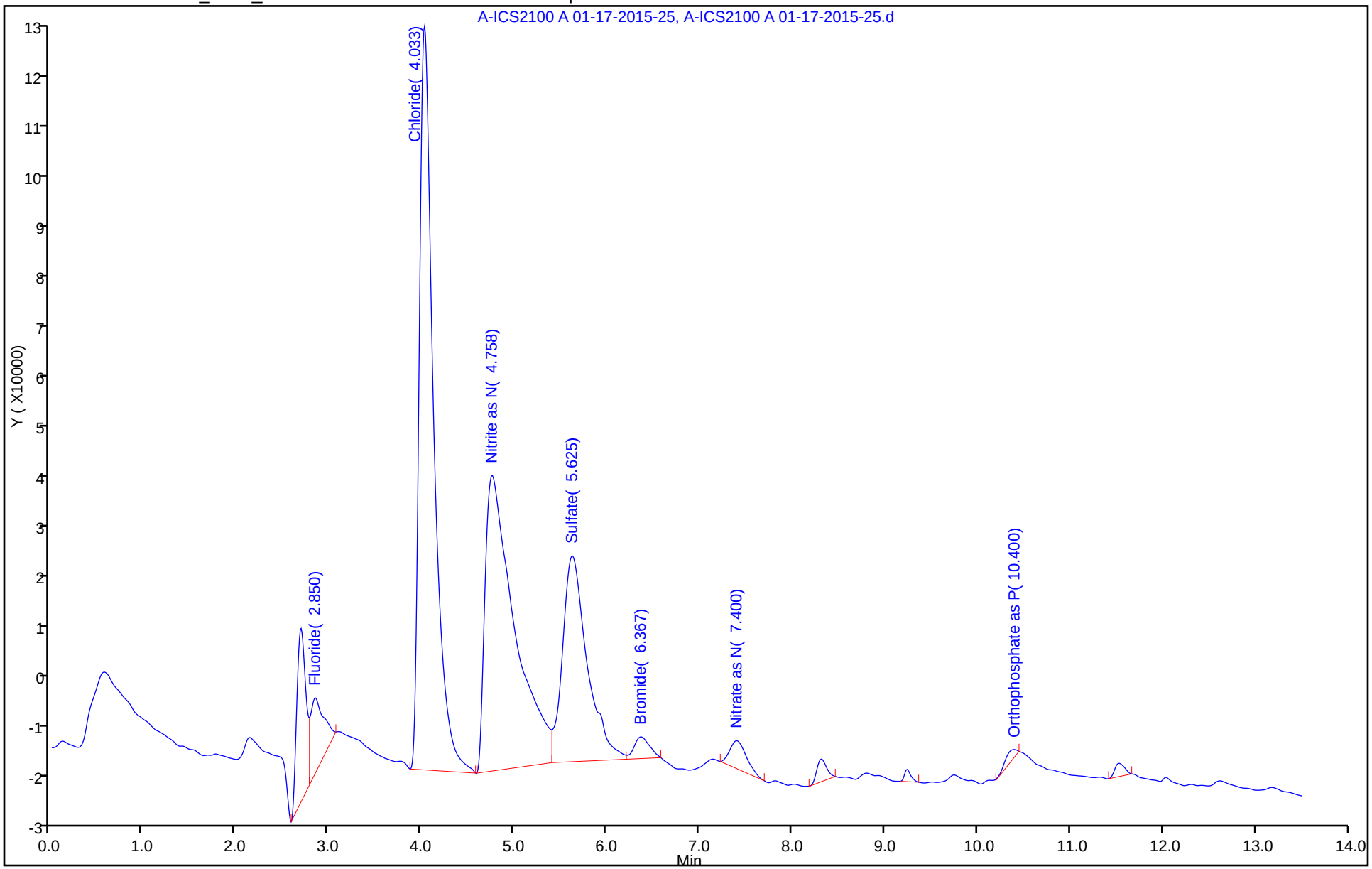
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.850	2.992	-0.142	14693H		0.0149	
2 Chloride	4.033	4.008	0.025	1556354		0.001152	
7 Nitrite as N	4.758	4.717	0.041	1260191		-0.0193	
3 Sulfate	5.625	5.483	0.142	740192		-0.1228	
4 Bromide	6.367	6.317	0.050	49072		0.005072	
5 Nitrate as N	7.400	7.325	0.075	68515		0.009397	
6 Orthophosphate as P	10.400	10.233	0.167	17524		0.0213	

Report Date: 17-Jan-2015 16:49:09 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-25.d

Injection Date:	17-Jan-2015 13:32:00	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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-131000/28

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-37.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 16:35

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00942	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\20150117-5313.b\A-ICS2100 A 01-17-2015-37.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Jan-2015 16:35:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-028
Misc. Info.: 37 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 16:57:08 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: XAWRK027

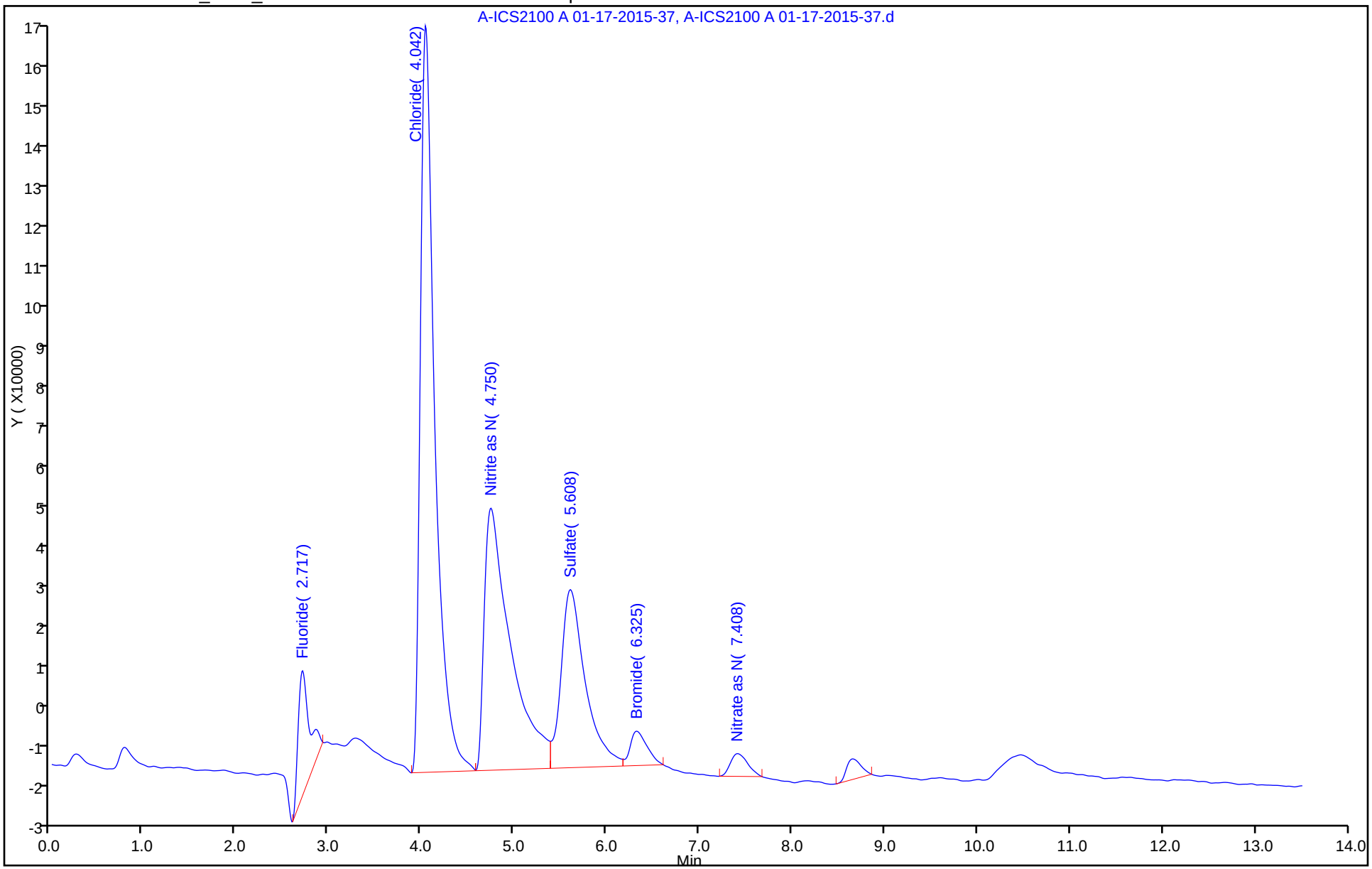
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.717	2.992	-0.275	29249H		0.0195	
2 Chloride	4.042	4.008	0.034	1918932		0.0182	
7 Nitrite as N	4.750	4.717	0.033	1225295		-0.0201	
3 Sulfate	5.608	5.483	0.125	766181		-0.1211	
4 Bromide	6.325	6.317	0.008	102940		0.0106	
5 Nitrate as N	7.408	7.325	0.083	69517		0.009416	
6 Orthophosphate as P		10.233				ND	

Report Date: 17-Jan-2015 16:57:08 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-37.d

Injection Date:	17-Jan-2015 16:35:00	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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-131000/40

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-49.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 19:39

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0100	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\20150117-5313.b\A-ICS2100 A 01-17-2015-49.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Jan-2015 19:39:00 ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-040
Misc. Info.: 49 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:56:36 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: XAWRK001

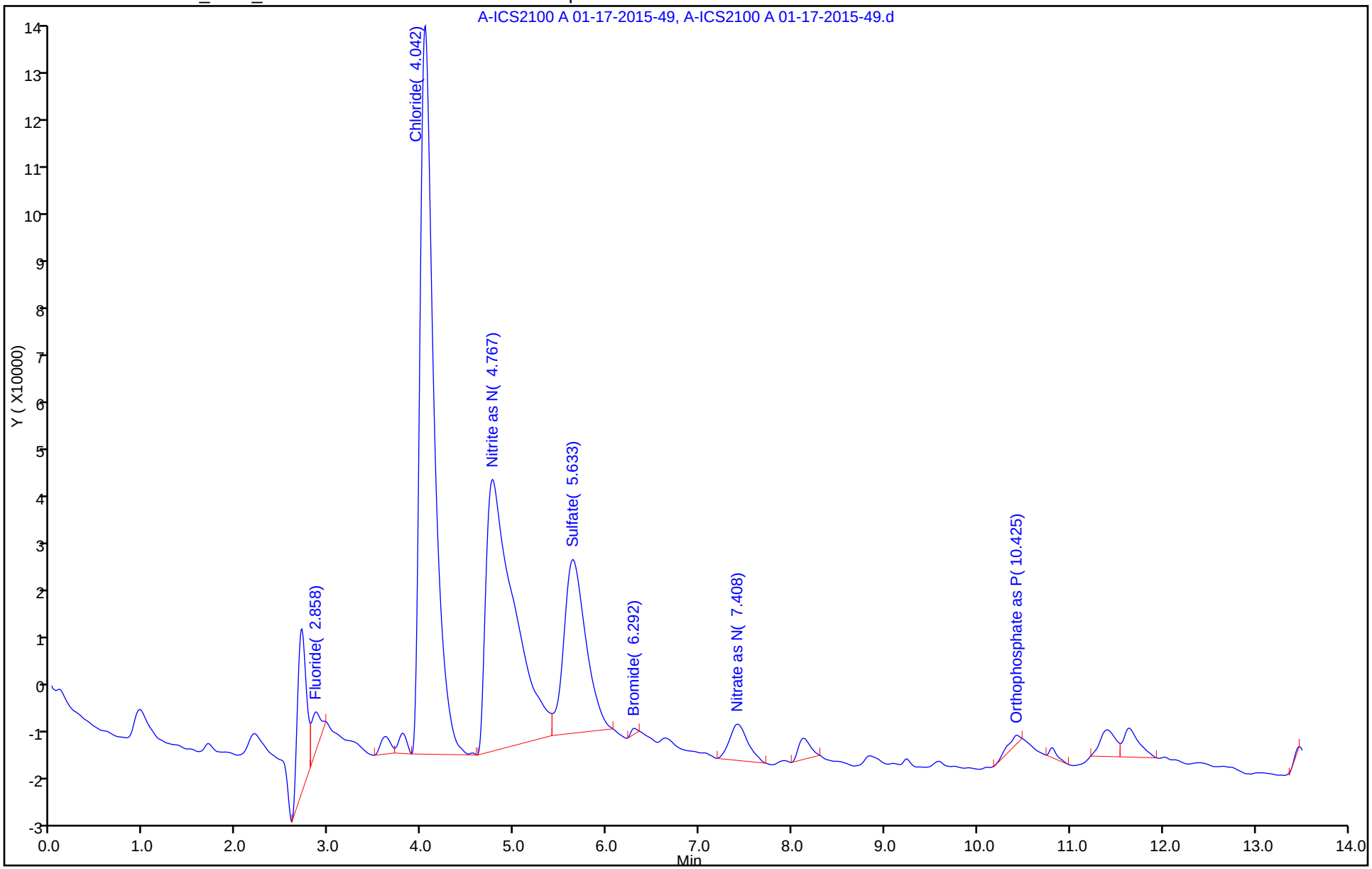
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.858	2.983	-0.125	7914H		0.0127	
2 Chloride	4.042	4.000	0.042	1549936		0.000850	
7 Nitrite as N	4.767	4.708	0.059	1163758		-0.0214	
3 Sulfate	5.633	5.500	0.133	584271		-0.1329	
4 Bromide	6.292	6.300	-0.008	5116		0.000529	
5 Nitrate as N	7.408	7.300	0.108	101030		0.0100	
6 Orthophosphate as P	10.425	10.308	0.117	18554		0.0213	

Report Date: 19-Jan-2015 10:56:37 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-49.d

Injection Date:	17-Jan-2015 19:39:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	40
Client ID:					
Injection Vol:	10.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC2100A	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-131000/51

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-60.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 22:27

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00906	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\20150117-5313.b\A-ICS2100 A 01-17-2015-60.d
Lims ID: ccb
Client ID:
Sample Type: CCB
Inject. Date: 17-Jan-2015 22:27:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-051
Misc. Info.: 58 ccb
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:56:39 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: XAWRK001

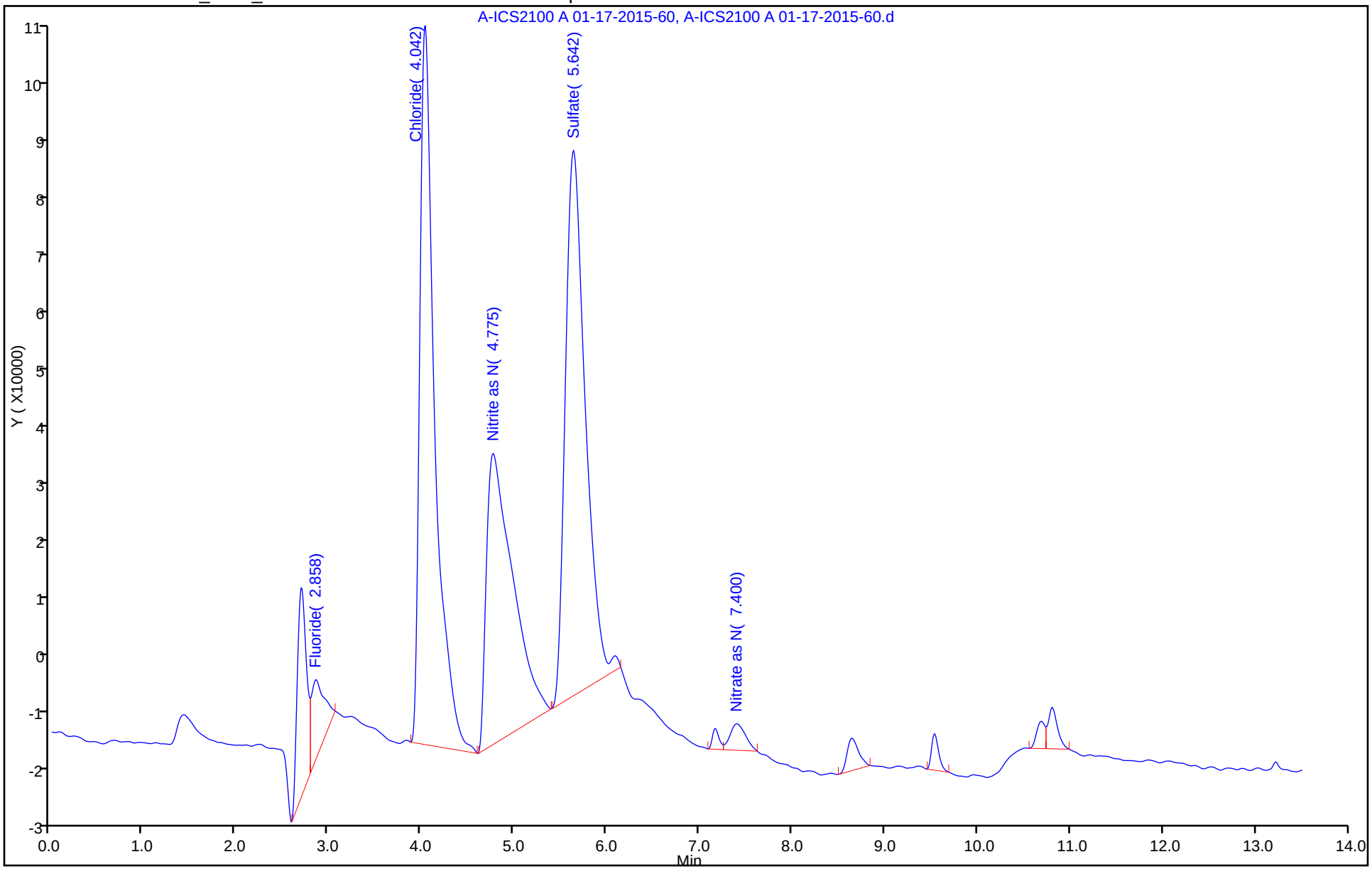
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.858	2.983	-0.125	13204H		0.0144	
2 Chloride	4.042	4.000	0.042	1345035		-0.008777	
7 Nitrite as N	4.775	4.717	0.058	951715		-0.0261	
3 Sulfate	5.642	5.500	0.142	1355831		-0.0827	
4 Bromide		6.300				ND	
5 Nitrate as N	7.400	7.300	0.100	50810		0.009063	
6 Orthophosphate as P		10.333				ND	

Report Date: 19-Jan-2015 10:56:40 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-60.d

Injection Date:	17-Jan-2015 22:27:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	ccb			Worklist Smp#:	51
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.: 180-40541-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-131000/5

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-14.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 10:37

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.61		0.10	0.0062
16887-00-6	Chloride	52.3		1.0	0.20
14808-79-8	Sulfate	52.4		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-14.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 17-Jan-2015 10:37:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-005
Misc. Info.: 14 lcs
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 17-Jan-2015 13:34:22 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: XAWRK027

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	8931183	H	2.50	2.83
2 Chloride	4.000	4.000	0.000	1114696467		50.0	52.3
7 Nitrite as N	4.708	4.708	0.000	123468392		2.50	2.67
3 Sulfate	5.483	5.500	-0.017	809396301		50.0	52.4
4 Bromide	6.300	6.300	0.000	102024278		10.0	10.5
5 Nitrate as N	7.308	7.300	0.008	137883191		2.50	2.61
6 Orthophosphate as P	10.275	10.308	-0.033	42312991		2.50	2.48

Reagents:

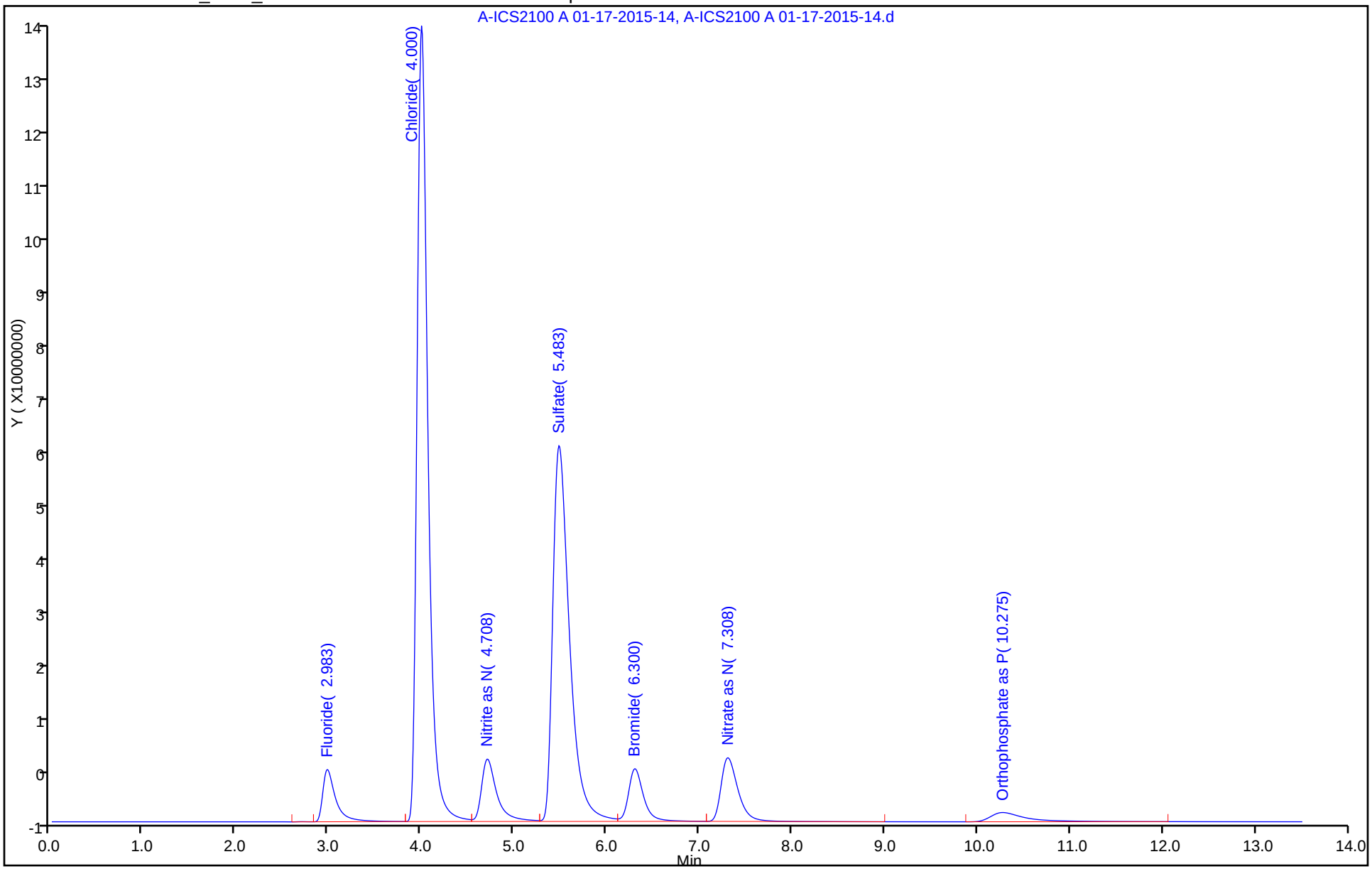
icccv_01144 Amount Added: 1.00 Units: mL

Report Date: 17-Jan-2015 13:34:25 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-14.d

Injection Date:	17-Jan-2015 10:37:00	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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 MS Lab Sample ID: 180-40541-3 MS

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-38.d

Analysis Method: 300.0 Date Collected: 01/16/2015 09:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 16:51

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	6.05		0.10	0.0062
16887-00-6	Chloride	37.1		1.0	0.20
14808-79-8	Sulfate	29.8		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-38.d
Lims ID: 180-40541-A-3 MS
Client ID:
Sample Type: MS
Inject. Date: 17-Jan-2015 16:51:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-029
Misc. Info.: 22803 180-40541-a-3 MS
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:55:23 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: XAWRK001

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.983	0.009	4320754H	1.25	1.38	
2 Chloride	4.008	4.000	0.008	790778541	25.0	37.1	
7 Nitrite as N	4.533	4.717	-0.184	13472746		0.2494	
3 Sulfate	5.508	5.500	0.008	461531269	25.0	29.8	
4 Bromide	6.325	6.300	0.025	52991571	5.00	5.48	
5 Nitrate as N	7.258	7.300	-0.042	320238404	1.25	6.05	
6 Orthophosphate as P		10.333			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

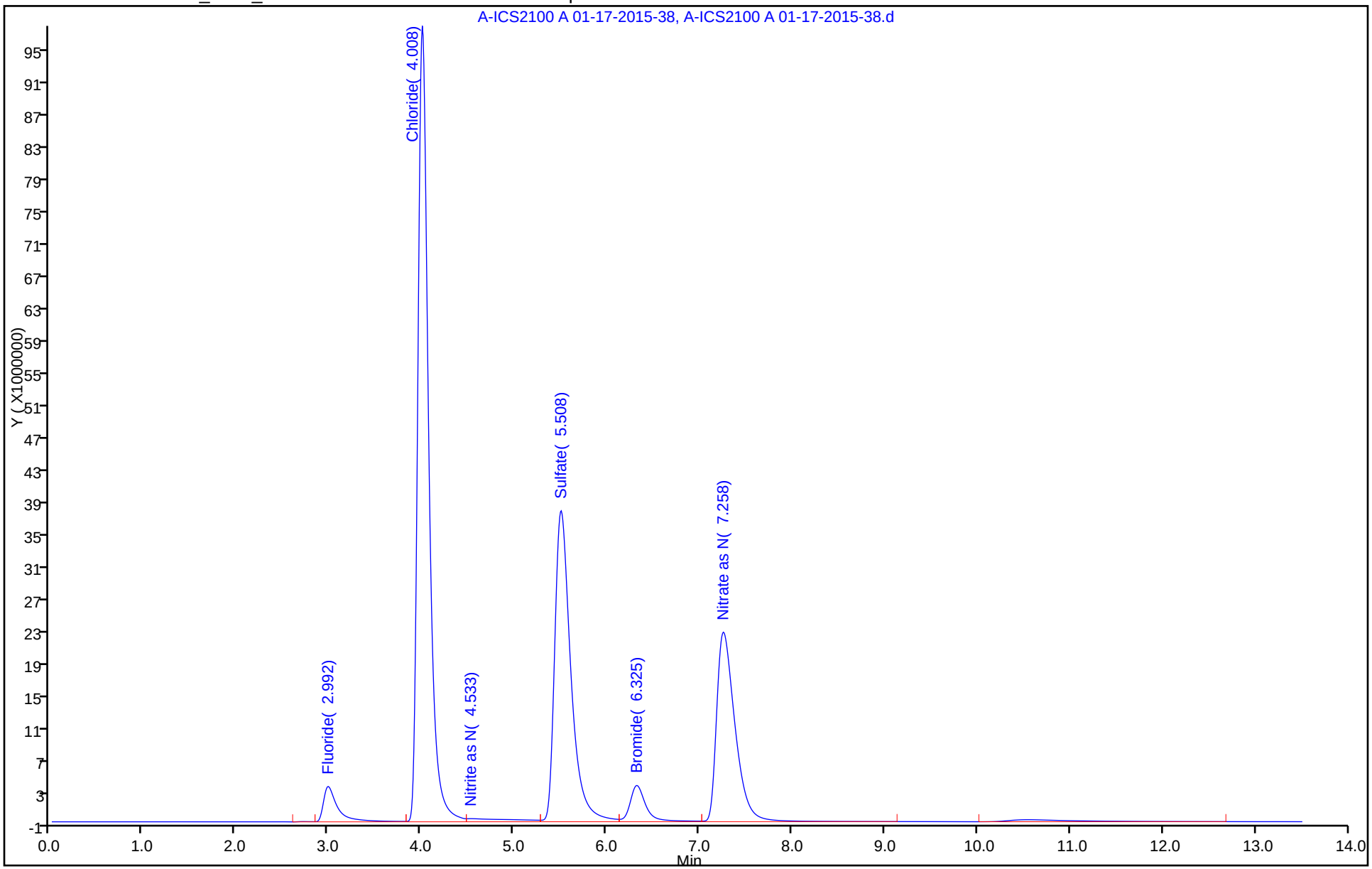
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 19-Jan-2015 10:56:33 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-38.d				
Injection Date:	17-Jan-2015 16:51:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-3 MS			Worklist Smp#:	29
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.: 180-40541-1

SDG No.:

Client Sample ID: HD-MW-132-0/1-0 MSD Lab Sample ID: 180-40541-3 MSD

Matrix: Water Lab File ID: A-ICS2100 A 01-17-2015-39.d

Analysis Method: 300.0 Date Collected: 01/16/2015 09:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 01/17/2015 17:06

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 10(uL) GC Column: AS-18 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 131000 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	6.03		0.10	0.0062
16887-00-6	Chloride	37.2		1.0	0.20
14808-79-8	Sulfate	29.9		1.0	0.21

Report Date: 19-Jan-2015 10:56:34 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-39.d
Lims ID: 180-40541-A-3 MSD
Client ID:
Sample Type: MSD
Inject. Date: 17-Jan-2015 17:06:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 10.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005313-030
Misc. Info.: 18906 180-40541-a-3 MSD
Operator ID: Instrument ID: CHIC2100A

Method: \\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\300_9056_CHIC2100A.m
Limit Group: GC Anions ICAL
Last Update: 19-Jan-2015 10:55:23 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: XAWRK001

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.000	2.983	0.017	4293584	H	1.25	1.37	
2 Chloride	4.017	4.000	0.017	792423386		25.0	37.2	
7 Nitrite as N	4.533	4.717	-0.184	12760635			0.2337	
3 Sulfate	5.500	5.500	0.000	462347574		25.0	29.9	
4 Bromide	6.325	6.300	0.025	52148954		5.00	5.39	
5 Nitrate as N	7.258	7.300	-0.042	318764938		1.25	6.03	
6 Orthophosphate as P		10.333				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND
H - Response Measured by Height

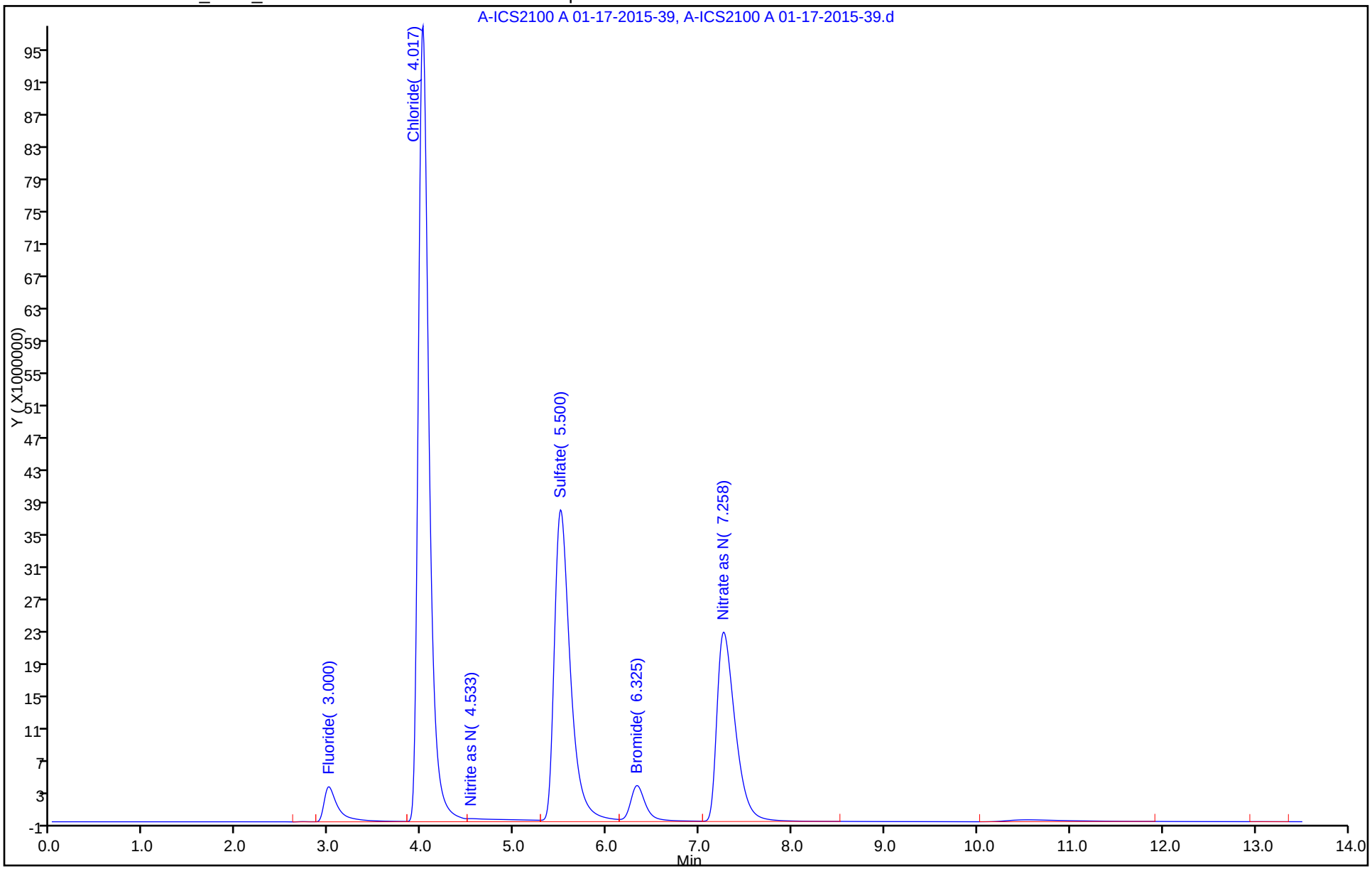
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 19-Jan-2015 10:56:34 Chrom Revision: 2.2 06-Nov-2014 14:50:32

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC2100A\20150117-5313.b\A-ICS2100 A 01-17-2015-39.d				
Injection Date:	17-Jan-2015 17:06:00	Instrument ID:	CHIC2100A	Operator ID:	
Lims ID:	180-40541-A-3 MSD			Worklist Smp#:	30
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.: 180-40541-1

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.: 180-40541-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 01/17/2015 09:36

Analysis Batch Number: 131000 End Date: 01/17/2015 22:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		01/17/2015 09:36	1		AS-18
ICV 180-131000/2		01/17/2015 09:51	1	A-ICS2100 A 01-17-2015-11.d	AS-18
CCV 180-131000/3		01/17/2015 10:07	1	A-ICS2100 A 01-17-2015-12.d	AS-18
CCB 180-131000/4		01/17/2015 10:22	1	A-ICS2100 A 01-17-2015-13.d	AS-18
LCS 180-131000/5		01/17/2015 10:37	1	A-ICS2100 A 01-17-2015-14.d	AS-18
MB 180-131000/6		01/17/2015 10:53	1	A-ICS2100 A 01-17-2015-15.d	AS-18
180-40541-2	HD-MW-114-0/1-0	01/17/2015 11:08	1	A-ICS2100 A 01-17-2015-16.d	AS-18
180-40541-3	HD-MW-132-0/1-0	01/17/2015 11:23	1	A-ICS2100 A 01-17-2015-17.d	AS-18
180-40541-4	HD-CW-18-0/1-0	01/17/2015 11:39	1	A-ICS2100 A 01-17-2015-18.d	AS-18
180-40541-5	HD-MW-74S-0/1-0	01/17/2015 11:54	1	A-ICS2100 A 01-17-2015-19.d	AS-18
180-40541-6	HD-MW-39D-0/1-0	01/17/2015 12:12	1	A-ICS2100 A 01-17-2015-20.d	AS-18
ZZZZZ		01/17/2015 12:30	1		AS-18
ZZZZZ		01/17/2015 12:46	1		AS-18
ZZZZZ		01/17/2015 13:01	1		AS-18
CCV 180-131000/15		01/17/2015 13:16	1	A-ICS2100 A 01-17-2015-24.d	AS-18
CCB 180-131000/16		01/17/2015 13:32	1	A-ICS2100 A 01-17-2015-25.d	AS-18
ZZZZZ		01/17/2015 13:47	1		AS-18
ZZZZZ		01/17/2015 14:02	1		AS-18
ZZZZZ		01/17/2015 14:18	1		AS-18
ZZZZZ		01/17/2015 14:33	1		AS-18
ZZZZZ		01/17/2015 14:48	1		AS-18
ZZZZZ		01/17/2015 15:03	1		AS-18
ZZZZZ		01/17/2015 15:19	5		AS-18
ZZZZZ		01/17/2015 15:34	5		AS-18
ZZZZZ		01/17/2015 15:50	5		AS-18
ZZZZZ		01/17/2015 16:05	1		AS-18
CCV 180-131000/27		01/17/2015 16:20	1	A-ICS2100 A 01-17-2015-36.d	AS-18
CCB 180-131000/28		01/17/2015 16:35	1	A-ICS2100 A 01-17-2015-37.d	AS-18
180-40541-3 MS	HD-MW-132-0/1-0 MS	01/17/2015 16:51	1	A-ICS2100 A 01-17-2015-38.d	AS-18
180-40541-3 MSD	HD-MW-132-0/1-0 MSD	01/17/2015 17:06	1	A-ICS2100 A 01-17-2015-39.d	AS-18
180-40541-7	HD-MW-127-0/1-0	01/17/2015 17:21	1	A-ICS2100 A 01-17-2015-40.d	AS-18
180-40541-7	HD-MW-127-0/1-0	01/17/2015 17:37	5	A-ICS2100 A 01-17-2015-41.d	AS-18
180-40541-8	HD-MW-50S-0/1-0	01/17/2015 17:52	1	A-ICS2100 A 01-17-2015-42.d	AS-18
180-40541-8	HD-MW-50S-0/1-0	01/17/2015 18:07	5	A-ICS2100 A 01-17-2015-43.d	AS-18
ZZZZZ		01/17/2015 18:23	5		AS-18
ZZZZZ		01/17/2015 18:38	5		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: CHIC2100A Start Date: 01/17/2015 09:36

Analysis Batch Number: 131000 End Date: 01/17/2015 22:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		01/17/2015 18:53	5		AS-18
ZZZZZ		01/17/2015 19:08	5		AS-18
CCV 180-131000/39		01/17/2015 19:24	1	A-ICS2100 A 01-17-2015-48.d	AS-18
CCB 180-131000/40		01/17/2015 19:39	1	A-ICS2100 A 01-17-2015-49.d	AS-18
180-40541-4	HD-CW-18-0/1-0	01/17/2015 19:54	5	A-ICS2100 A 01-17-2015-50.d	AS-18
ZZZZZ		01/17/2015 20:10	1		AS-18
ZZZZZ		01/17/2015 20:25	10		AS-18
ZZZZZ		01/17/2015 20:40	1		AS-18
ZZZZZ		01/17/2015 20:56	5		AS-18
ZZZZZ		01/17/2015 21:11	1		AS-18
ZZZZZ		01/17/2015 21:26	5		AS-18
ZZZZZ		01/17/2015 21:42	25		AS-18
ZZZZZ		01/17/2015 21:57	25		AS-18
CCV 180-131000/50		01/17/2015 22:12	1	A-ICS2100 A 01-17-2015-59.d	AS-18
CCB 180-131000/51		01/17/2015 22:27	1	A-ICS2100 A 01-17-2015-60.d	AS-18

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40541-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-MW-114-0/1-0	180-40541-2
HD-MW-132-0/1-0	180-40541-3
HD-CW-18-0/1-0	180-40541-4
HD-MW-74S-0/1-0	180-40541-5
HD-MW-39D-0/1-0	180-40541-6
HD-MW-127-0/1-0	180-40541-7
HD-MW-50S-0/1-0	180-40541-8

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-114-0/1-0 Lab Sample ID: 180-40541-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 11:15

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	120000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	8100	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	20000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	35000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-132-0/1-0 Lab Sample ID: 180-40541-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 09:40

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	56000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	1900	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	3600	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	4800	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-CW-18-0/1-0 Lab Sample ID: 180-40541-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 12:20

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	80000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	11000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	40000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	140000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-74S-0/1-0 Lab Sample ID: 180-40541-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 09:50

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	130000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	9700	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	14000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	52000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-39D-0/1-0 Lab Sample ID: 180-40541-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 10:45

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	130000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	7700	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	14000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	30000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-127-0/1-0 Lab Sample ID: 180-40541-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 12:20

Reporting Basis: WET Date Received: 01/17/2015 09:30

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	4700	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	19000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	25000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-MW-50S-0/1-0 Lab Sample ID: 180-40541-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 12:30

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	110000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	9900	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	11000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	76000	100	3.8	ug/L			1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

ICV Source: MICVX_00029 Concentration Units: ug/L

CCV Source: MCCV1X_00072

Analyte	ICV 180-131802/5 01/26/2015 13:37				CCV 180-131802/10 01/26/2015 14:04				CCV 180-131802/22 01/26/2015 14:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	37800		40000	95	47200		50000	94	48200		50000	96
Magnesium	38700		40000	97	45600		50000	91	45400		50000	91
Potassium	40000		40000	100	49100		50000	98	49600		50000	99
Sodium	39500		40000	99	46900		50000	94	46900		50000	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

ICV Source: MICVX_00029 Concentration Units: ug/L

CCV Source: MCCV1X_00072

Analyte	CCV 180-131802/34 01/26/2015 15:57				CCV 180-131802/46 01/26/2015 16:51							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	47600		50000	95	47400		50000	95				
Magnesium	45500		50000	91	46600		50000	93				
Potassium	49000		50000	98	49500		50000	99				
Sodium	47100		50000	94	48400		50000	97				

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.: 180-40541-1

SDG No.:

Method: 6020A Instrument ID: X

Lab Sample ID: CRI 180-131802/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	93.8	J	94	70-130
Potassium	100	102		102	70-130
Magnesium	100	89.3	J	89	70-130
Sodium	100	97.7	J	98	70-130

Lab Sample ID: CRI 180-131802/60 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	98.0	J	98	70-130
Potassium	100	78.0	J	78	70-130
Magnesium	100	82.8	J	83	70-130
Sodium	100	81.9	J	82	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.: 180-40541-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-131802/6 01/26/2015 13:44		CCB1 180-131802/11 01/26/2015 14:12		CCB2 180-131802/23 01/26/2015 15:06		CCB3 180-131802/35 01/26/2015 16:04	
		Found	C	Found	C	Found	C	Found	C
Calcium	100	100	U	100	U			12.4	J
Magnesium	100	2.36	J	5.36	J	5.14	J	9.25	J
Potassium	100	8.53	J	15.8	J	100	U	6.76	J
Sodium	100	11.4	J	32.5	J	100	U	7.75	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB4 180-131802/47 01/26/2015 16:59							
		Found	C	Found	C	Found	C	Found	C
Calcium	100	14.0	J						
Magnesium	100	11.4	J						
Potassium	100	100	U						
Sodium	100	13.4	J						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 180-131320/1-A

Instrument Code: X Batch No.: 131802

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	15.4	J		6020A
7440-09-7	Potassium	100	U		6020A
7439-95-4	Magnesium	3.25	J		6020A
7440-23-5	Sodium	100	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Lab Sample ID: ICSA 180-131802/8 Instrument ID: X

Lab File ID: X50126B.xml ICS Source: MICSAX_00062

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**100000**	**104000**	**104**
Magnesium	**100000**	**99700**	**100**
Potassium	**100000**	**103200**	**103**
Sodium	**100000**	**102200**	**102**
Aluminum	*100000*	*103000*	*103*
Antimony		*0.0990*	
Arsenic		*0.300*	
Barium		*0.124*	
Beryllium		*0.0710*	
Boron		*0.590*	
Cadmium		*0.370*	
Chromium		*-0.0650*	
Cobalt		*0.136*	
Copper		*2.11*	
Iron	*100000*	*103000*	*103*
Lead		*0.219*	
Manganese		*0.641*	
Molybdenum	*2000*	*2360*	*118*
Nickel		*0.546*	
Selenium		*-0.284*	
Silicon		*29.0*	
Silver		*0.0750*	
Strontium		*0.722*	
Thallium		*0.0160*	
Tin		*0.187*	
Titanium	*2000*	*2200*	*110*
Vanadium		*-0.493*	
Zinc		*2.89*	

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.: 180-40541-1

SDG No.:

Lab Sample ID: ICSAB 180-131802/9 Instrument ID: X

Lab File ID: X50126B.xml ICS Source: MICSABX_00066

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**100000**	**106333**	**106**
Magnesium	**100000**	**97937**	**98**
Potassium	**100000**	**103500**	**104**
Sodium	**100000**	**100353**	**100**
Aluminum	*100000*	*101233*	*101*
Antimony	*20.0*	*20.9*	*105*
Arsenic	*20.0*	*20.2*	*101*
Barium	*20.0*	*20.0*	*100*
Beryllium	*20.0*	*20.5*	*103*
Boron	*50.0*	*48.8*	*98*
Cadmium	*20.0*	*21.1*	*105*
Chromium	*20.0*	*20.0*	*100*
Cobalt	*20.0*	*20.1*	*100*
Copper	*20.0*	*22.8*	*114*
Iron	*100000*	*102967*	*103*
Lead	*20.0*	*20.7*	*104*
Manganese	*22.5*	*19.0*	*84*
Molybdenum	*2000*	*2394*	*120*
Nickel	*20.0*	*20.1*	*101*
Selenium	*50.0*	*51.7*	*103*
Silicon	*500*	*496*	*99*
Silver	*20.0*	*20.5*	*103*
Strontium	*25.0*	*20.6*	*83*
Thallium	*20.0*	*19.6*	*98*
Tin	*100*	*104*	*104*
Titanium	*2000*	*2226*	*111*
Vanadium	*20.0*	*18.9*	*94*
Zinc	*25.0*	*23.9*	*96*

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

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-MW-114-0/1-0 MS Lab ID: 180-40541-2 MS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	170000		120000		50000	95	75-125		6020A
Potassium	55200		8100		50000	94	75-125		6020A
Magnesium	60600		20000		50000	81	75-125		6020A
Sodium	79300		35000		50000	88	75-125		6020A

SSR = Spiked Sample Result

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

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: HD-MW-114-0/1-0 MSD Lab ID: 180-40541-2 MSD

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	173000		50000	100	75-125	2	20		6020A
Potassium	55900		50000	96	75-125	1	20		6020A
Magnesium	61400		50000	83	75-125	1	20		6020A
Sodium	80100		50000	89	75-125	1	20		6020A

SDR = Sample Duplicate Result

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

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-MW-114-0/1-0 PDS Lab ID: 180-40541-2 PDS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	163000		120000		50000	80	75-125		6020A
Potassium	53900		8100		50000	91	75-125		6020A
Magnesium	58900		20000		50000	78	75-125		6020A
Sodium	76800		35000		50000	83	75-125		6020A

SSR = Spiked Sample Result

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

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-131320/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

Sample Matrix: Water LCS Source: MTAPITTMSA_00023

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	44900		90	80	120		6020A
Potassium	50000	46800		94	80	120		6020A
Magnesium	50000	40600		81	80	120		6020A
Sodium	50000	42900		86	80	120		6020A

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

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 180-40541-2

SDG No:

Lab Name: TestAmerica Pittsburgh Job No: 180-40541-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	120000		112000		8.7		6020A
Potassium	8100		8380		2.9		6020A
Magnesium	20000		19500		3.2		6020A
Sodium	35000		37100		5.0		6020A

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

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40541-1

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: 180-40541-1

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: 180-40541-1

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.: 180-40541-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-131320/1-A	01/21/2015 09:57	131320		50	50
LCS 180-131320/2-A	01/21/2015 09:57	131320		50	50
180-40541-2	01/21/2015 09:57	131320		50	50
180-40541-2 MS	01/21/2015 09:57	131320		50	50
180-40541-2 MSD	01/21/2015 09:57	131320		50	50
180-40541-3	01/21/2015 09:57	131320		50	50
180-40541-4	01/21/2015 09:57	131320		50	50
180-40541-5	01/21/2015 09:57	131320		50	50
180-40541-6	01/21/2015 09:57	131320		50	50
180-40541-7	01/21/2015 09:57	131320		50	50
180-40541-8	01/21/2015 09:57	131320		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: X Method: 6020A

Start Date: 01/26/2015 07:46 End Date: 01/26/2015 20:33

Lab Sample ID	D/F	Type	Time	Analytes																			
				Ca	K	Mg	Na																
ITUNE 180-131802/1			07:46																				
STD1 180-131802/2 IC	1		13:24	X	X	X	X																
STD2 180-131802/3 IC	1		13:28	X	X	X	X																
STD3 180-131802/4 IC	1		13:32	X	X	X	X																
ICV 180-131802/5	1		13:37	X	X	X	X																
ICB 180-131802/6	1		13:44	X	X	X	X																
CRI 180-131802/7	1		13:48	X	X	X	X																
ICSA 180-131802/8	1		13:53	X	X	X	X																
ICSAB 180-131802/9	1		13:57	X	X	X	X																
CCV 180-131802/10	1		14:04	X	X	X	X																
CCB1 180-131802/11	1		14:12	X	X	X	X																
ZZZZZZ			14:16																				
ZZZZZZ			14:20																				
ZZZZZZ			14:25																				
ZZZZZZ			14:29																				
ZZZZZZ			14:33																				
ZZZZZZ			14:37																				
ZZZZZZ			14:42																				
ZZZZZZ			14:46																				
ZZZZZZ			14:50																				
ZZZZZZ			14:55																				
CCV 180-131802/22	1		14:59	X	X	X	X																
CCB2 180-131802/23	1		15:06		X	X	X																
ZZZZZZ			15:11																				
ZZZZZZ			15:15																				
ZZZZZZ			15:19																				
MB 180-131320/1-A	1	R	15:27	X	X	X	X																
ZZZZZZ			15:31																				
LCS 180-131320/2-A	1	R	15:35	X	X	X	X																
180-40541-2	1	T	15:39	X	X	X	X																
180-40541-2 SD	5	T	15:44	X	X	X	X																
180-40541-2 MS	1	T	15:48	X	X	X	X																
180-40541-2 MSD	1	T	15:52	X	X	X	X																
CCV 180-131802/34	1		15:57	X	X	X	X																
CCB3 180-131802/35	1		16:04	X	X	X	X																
180-40541-2 PDS	1	T	16:08	X	X	X	X																
180-40541-3	1	T	16:13	X	X	X	X																
180-40541-4	1	T	16:17	X	X	X	X																
180-40541-5	1	T	16:21	X	X	X	X																
180-40541-6	1	T	16:26	X	X	X	X																
180-40541-7	1	T	16:30	X	X	X	X																
180-40541-8	1	T	16:34	X	X	X	X																

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: X Method: 6020A

Start Date: 01/26/2015 07:46 End Date: 01/26/2015 20:33

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ca	K	Mg	Na																
ZZZZZZ			16:38																				
ZZZZZZ			16:42																				
ZZZZZZ			16:47																				
CCV 180-131802/46	1		16:51	X	X	X	X																
CCB4 180-131802/47	1		16:59	X	X	X	X																
ZZZZZZ			17:03																				
ZZZZZZ			17:07																				
ZZZZZZ			17:11																				
ZZZZZZ			17:16																				
ZZZZZZ			17:20																				
ZZZZZZ			17:24																				
ZZZZZZ			17:29																				
ZZZZZZ			17:33																				
ZZZZZZ			17:37																				
ZZZZZZ			17:41																				
CCV 180-131802/58			17:46																				
CCB5 180-131802/59			17:53																				
CRI 180-131802/60	1		17:58	X	X	X	X																
ZZZZZZ			18:02																				
ZZZZZZ			18:06																				
ZZZZZZ			18:10																				
ZZZZZZ			18:15																				
ZZZZZZ			18:19																				
ZZZZZZ			18:23																				
ZZZZZZ			18:27																				
ZZZZZZ			18:32																				
ZZZZZZ			18:36																				
CCV 180-131802/70			18:40																				
CCB6 180-131802/71			18:48																				
ZZZZZZ			18:52																				
ZZZZZZ			18:56																				
ZZZZZZ			19:00																				
ZZZZZZ			19:05																				
ZZZZZZ			19:09																				
ZZZZZZ			19:13																				
ZZZZZZ			19:18																				
ZZZZZZ			19:22																				
ZZZZZZ			19:26																				
CCV 180-131802/81			19:30																				
CCB7 180-131802/82			19:38																				
ZZZZZZ			19:42																				
ZZZZZZ			19:47																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Instrument ID: X Method: 6020A

Start Date: 01/26/2015 07:46 End Date: 01/26/2015 20:33

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ca	K	Mg	Na																
ZZZZZZ			19:51																				
ZZZZZZ			19:55																				
ZZZZZZ			19:59																				
ZZZZZZ			20:04																				
ZZZZZZ			20:08																				
ZZZZZZ			20:12																				
CRI 180-131802/91			20:21																				
CCV 180-131802/92			20:25																				
CCB8 180-131802/93			20:33																				

Prep Types

R = Total Recoverable

T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 01/26/2015 End Date: 01/26/2015

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 180-131802/2 IC	13:24	100		100		100		100		100	
STD2 180-131802/3 IC	13:28	91		98		97		92		96	
STD3 180-131802/4 IC	13:32	94		99		98		97		99	
ICV 180-131802/5	13:37	92		95		96		92		95	
ICB 180-131802/6	13:44	96		99		99		98		100	
CRI 180-131802/7	13:48	97		98		99		98		100	
ICSA 180-131802/8	13:53	86		88		90		82		89	
ICSAB 180-131802/9	13:57	87		87		90		81		88	
CCV 180-131802/10	14:04	91		94		95		90		95	
CCB1 180-131802/11	14:12	96		95		96		95		98	
CCV 180-131802/22	14:59	97		94		97		91		96	
CCB2 180-131802/23	15:06	103		102		102		101		104	
MB 180-131320/1-A	15:27	103		98		99		97		100	
LCS 180-131320/2-A	15:35	98		89		91		85		90	
180-40541-2	15:39	103		91		94		86		93	
180-40541-2 SD	15:44	103		96		97		93		99	
180-40541-2 MS	15:48	96		88		89		81		86	
180-40541-2 MSD	15:52	96		87		90		81		87	
CCV 180-131802/34	15:57	93		94		96		90		96	
CCB3 180-131802/35	16:04	95		94		96		94		97	
180-40541-2 PDS	16:08	94		86		92		81		86	
180-40541-3	16:13	102		91		93		87		93	
180-40541-4	16:17	96		95		91		84		89	
180-40541-5	16:21	99		91		94		86		93	
180-40541-6	16:26	102		92		96		88		95	
180-40541-7	16:30	104		93		96		88		95	
180-40541-8	16:34	101		92		95		87		93	
CCV 180-131802/46	16:51	89		93		94		90		94	
CCB4 180-131802/47	16:59	95		99		99		98		100	
CRI 180-131802/60	17:58	102		101		95		100		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

ICP-MS Instrument ID: X Start Date: 01/26/2015 End Date: 01/26/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-131802/2 IC	13:24	100		100		100					
STD2 180-131802/3 IC	13:28	97		98		100					
STD3 180-131802/4 IC	13:32	98		98		98					
ICV 180-131802/5	13:37	97		96		97					
ICB 180-131802/6	13:44	98		98		102					
CRI 180-131802/7	13:48	98		98		104					
ICSA 180-131802/8	13:53	93		93		102					
ICSAB 180-131802/9	13:57	94		95		94					
CCV 180-131802/10	14:04	100		99		98					
CCB1 180-131802/11	14:12	99		99		103					
CCV 180-131802/22	14:59	102		102		93					
CCB2 180-131802/23	15:06	105		106		111					
MB 180-131320/1-A	15:27	104		104		110					
LCS 180-131320/2-A	15:35	99		101		98					
180-40541-2	15:39	101		102		100					
180-40541-2 SD	15:44	103		104		104					
180-40541-2 MS	15:48	97		98		93					
180-40541-2 MSD	15:52	97		98		95					
CCV 180-131802/34	15:57	101		102		96					
CCB3 180-131802/35	16:04	99		99		103					
180-40541-2 PDS	16:08	95		98		94					
180-40541-3	16:13	101		101		102					
180-40541-4	16:17	99		99		96					
180-40541-5	16:21	101		102		101					
180-40541-6	16:26	103		104		103					
180-40541-7	16:30	103		104		103					
180-40541-8	16:34	102		102		100					
CCV 180-131802/46	16:51	99		100		96					
CCB4 180-131802/47	16:59	102		102		107					
CRI 180-131802/60	17:58	106		107		114					

Dilution Corrected Concentrations

STD1 1456094 1/26/2015 1:24:37 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	95.859%	-0.037	0.227	-0.066	0.000	0.381	-0.235	0.315
2	13:25:31	102.079%	0.019	-0.173	-0.088	0.000	-0.537	-0.080	-0.257
3	13:25:58	102.062%	0.018	-0.054	0.154	0.000	0.157	0.315	-0.058
x		100.000%	-0.000	-0.000	0.000	0.000	-0.000	0.000	0.000
σ		3.586%	0.032	0.206	0.133	0.000	0.479	0.284	0.291
%RSD		3.586	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	-0.015	0.674	0.000	1.878	-6.098	0.614	98.622%	0.100
2	13:25:31	0.005	0.138	0.000	1.480	-1.548	-0.003	100.140%	-0.073
3	13:25:58	0.009	-0.812	0.000	-3.358	7.647	-0.610	101.238%	-0.027
x		0.000	-0.000	0.000	0.000	0.000	0.000	100.000%	-0.000
σ		0.013	0.752	0.000	2.915	7.002	0.612	1.314%	0.090
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	1.314	0.000

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	-0.017	0.059	-0.008	1.064	4.028	0.001	0.016	-0.004
2	13:25:31	-0.015	-0.012	0.023	-0.231	-2.520	-0.001	0.012	0.008
3	13:25:58	0.032	-0.047	-0.015	-0.833	-1.507	0.000	-0.028	-0.004
x		-0.000	0.000	0.000	0.000	-0.000	0.000	-0.000	0.000
σ		0.027	0.054	0.020	0.969	3.525	0.001	0.024	0.007
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	-0.023	-0.028	0.024	0.196	-1.193	1.128	0.000	-0.006
2	13:25:31	-0.007	-0.040	-0.027	-0.412	0.582	-2.791	0.000	-0.000
3	13:25:58	0.030	0.069	0.003	0.216	0.611	1.663	0.000	0.006
x		0.000	0.000	0.000	0.000	-0.000	-0.000	0.000	-0.000
σ		0.027	0.060	0.026	0.357	1.034	2.432	0.000	0.006
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	98.209%	-0.001	-0.011	98.665%	0.000	-0.013	-0.024	-0.012
2	13:25:31	100.976%	0.003	0.015	100.141%	-0.012	-0.001	-0.025	-0.020
3	13:25:58	100.815%	-0.002	-0.004	101.195%	0.012	0.014	0.049	0.032
x		100.000%	0.000	0.000	100.000%	-0.000	-0.000	-0.000	-0.000
σ		1.553%	0.003	0.014	1.271%	0.012	0.014	0.043	0.028
%RSD		1.553	0.000	0.000	1.271	0.000	0.000	0.000	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	98.744%	0.017	-0.002	0.010	0.003	-0.006	98.800%	98.956%
2	13:25:31	100.679%	-0.027	-0.001	0.002	0.016	-0.014	100.649%	100.405%
3	13:25:58	100.577%	0.010	0.003	-0.011	-0.018	0.020	100.551%	100.639%
x		100.000%	0.000	0.000	0.000	0.000	-0.000	100.000%	100.000%
σ		1.089%	0.024	0.002	0.011	0.017	0.018	1.040%	0.911%
%RSD		1.089	0.000	0.000	0.000	0.000	0.000	1.040	0.911

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:04	-0.001	0.001	0.000	0.001	0.001	98.807%
2	13:25:31	0.003	0.000	-0.004	0.007	0.001	100.972%
3	13:25:58	-0.002	-0.001	0.004	-0.007	-0.002	100.221%
x		-0.000	-0.000	0.000	-0.000	-0.000	100.000%
σ		0.003	0.001	0.004	0.007	0.002	1.100%
%RSD		0.000	0.000	0.000	0.000	0.000	1.100

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:03	88.961%	198.300	0.550	0.963	0.000	100000.000	99890.000	99290.000
2	13:29:29	93.679%	196.700	0.504	0.817	0.000	98650.000	98390.000	99480.000
3	13:29:55	89.376%	205.100	0.142	0.655	0.000	101300.000	101700.000	101200.000
x		90.672%	200.000	0.398	0.812	0.000	100000.000	100000.000	100000.000
σ		2.613%	4.443	0.223	0.154	0.000	1349.000	1662.000	1066.000
%RSD		2.881	2.221	56.020	18.940	0.000	1.349	1.662	1.066
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:03	994.700	9.717	0.000	98670.000	97240.000	96610.000	99.417%	-0.047
2	13:29:29	989.000	10.970	0.000	101000.000	103300.000	103600.000	96.377%	0.084
3	13:29:55	1016.000	10.510	0.000	100300.000	99480.000	99770.000	98.827%	-0.022
x		1000.000	10.400	0.000	100000.000	100000.000	100000.000	98.207%	0.005
σ		14.420	0.635	0.000	1212.000	3053.000	3510.000	1.612%	0.069
%RSD		1.442	6.101	0.000	1.212	3.053	3.510	1.641	1383.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:03	195.300	195.300	976.500	48970.000	48910.000	196.000	196.200	195.000
2	13:29:29	202.700	204.200	1016.000	50650.000	50490.000	204.000	201.400	203.400
3	13:29:55	202.000	200.500	1008.000	50390.000	50600.000	200.000	202.400	201.500
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		4.067	4.451	20.750	904.200	947.200	4.013	3.327	4.398
%RSD		2.034	2.226	2.075	1.808	1.894	2.006	1.664	2.199
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:03	195.100	197.200	195.600	199.800	199.800	198.500	0.000	197.500
2	13:29:29	201.500	201.600	205.200	200.700	200.800	200.600	0.000	199.700
3	13:29:55	203.300	201.200	199.300	199.500	199.400	200.900	0.000	202.800
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		4.315	2.428	4.826	0.655	0.730	1.331	0.000	2.624
%RSD		2.158	1.214	2.413	0.328	0.365	0.666	0.000	1.312
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:03	96.998%	0.129	0.142	91.544%	198.600	198.700	198.600	198.000
2	13:29:29	97.821%	0.101	0.104	92.509%	200.100	200.500	199.700	202.500
3	13:29:55	97.328%	0.123	0.131	91.820%	201.300	200.800	201.800	199.600
x		97.382%	0.118	0.126	91.958%	200.000	200.000	200.000	200.000
σ		0.414%	0.015	0.019	0.497%	1.347	1.107	1.623	2.270
%RSD		0.425	12.570	15.450	0.540	0.674	0.553	0.811	1.135
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:03	95.752%	0.050	0.167	0.153	199.800	201.700	95.809%	97.792%
2	13:29:29	96.081%	0.056	0.165	0.196	198.200	198.600	99.327%	97.677%
3	13:29:55	97.367%	0.063	0.160	0.192	202.000	199.800	95.470%	97.501%
x		96.400%	0.056	0.164	0.180	200.000	200.000	96.869%	97.656%
σ		0.853%	0.007	0.004	0.024	1.910	1.557	2.136%	0.146%
%RSD		0.885	12.320	2.219	13.210	0.955	0.778	2.205	0.150
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:29:03	195.100	193.800	193.200	193.300	192.000	103.479%		
2	13:29:29	198.900	200.100	200.500	201.400	201.800	99.995%		
3	13:29:55	206.000	206.100	206.300	205.300	206.200	97.108%		
x		200.000	200.000	200.000	200.000	200.000	100.194%		
σ		5.538	6.116	6.596	6.146	7.307	3.190%		
%RSD		2.769	3.058	3.298	3.073	3.653	3.184		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:33:17	92.432%	0.212	197.200	197.400	0.000	92.040	65.000	65.240
2	13:33:44	93.073%	0.375	206.600	203.600	0.000	88.800	59.780	61.910
3	13:34:10	96.669%	0.181	196.200	199.000	0.000	88.080	59.910	61.160
x		94.058%	0.256	200.000	200.000	0.000	89.640	61.560	62.770
σ		2.284%	0.104	5.729	3.204	0.000	2.108	2.975	2.169
%RSD		2.428	40.570	2.865	1.602	0.000	2.351	4.832	3.456
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:33:17	4.820	10090.000	0.000	71.440	74.500	137.000	97.267%	201.000
2	13:33:44	5.003	10010.000	0.000	63.860	99.120	145.900	99.204%	198.600
3	13:34:10	5.009	9906.000	0.000	62.680	82.100	136.700	99.280%	200.400
x		4.944	10000.000	0.000	65.990	85.240	139.900	98.584%	200.000
σ		0.107	90.000	0.000	4.752	12.600	5.182	1.141%	1.208
%RSD		2.166	0.900	0.000	7.201	14.790	3.705	1.157	0.604
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:33:17	0.223	0.118	1.292	109.300	104.100	0.127	0.519	0.284
2	13:33:44	0.131	0.102	1.248	75.720	74.580	0.132	0.356	0.343
3	13:34:10	0.090	0.098	1.174	55.690	52.820	0.159	0.216	0.348
x		0.148	0.106	1.238	80.250	77.150	0.139	0.364	0.325
σ		0.068	0.011	0.060	27.120	25.720	0.018	0.152	0.035
%RSD		46.000	10.340	4.833	33.790	33.330	12.600	41.680	10.890
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:33:17	0.374	0.960	0.747	-0.324	0.377	-3.035	0.000	0.211
2	13:33:44	0.367	1.109	0.900	-0.170	-0.746	-1.610	0.000	0.215
3	13:34:10	0.309	0.955	0.994	0.215	0.687	0.909	0.000	0.187
x		0.350	1.008	0.880	-0.093	0.106	-1.245	0.000	0.204
σ		0.036	0.088	0.125	0.278	0.754	1.997	0.000	0.015
%RSD		10.190	8.708	14.180	298.800	710.000	160.300	0.000	7.341
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:33:17	96.826%	193.800	193.100	95.622%	0.189	0.137	0.193	-0.715
2	13:33:44	97.545%	201.200	201.300	97.028%	0.184	0.187	0.204	-0.347
3	13:34:10	98.143%	205.000	205.600	97.057%	0.164	0.154	0.088	-0.315
x		97.505%	200.000	200.000	96.569%	0.179	0.159	0.162	-0.459
σ		0.659%	5.688	6.389	0.820%	0.013	0.026	0.064	0.222
%RSD		0.676	2.844	3.194	0.850	7.238	16.060	39.430	48.370
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:33:17	96.884%	199.100	197.500	198.300	0.202	0.463	96.947%	96.078%
2	13:33:44	99.022%	199.300	201.600	201.800	0.227	0.403	96.868%	98.657%
3	13:34:10	99.614%	201.600	201.000	200.000	0.155	0.436	98.963%	99.173%
x		98.507%	200.000	200.000	200.000	0.195	0.434	97.592%	97.969%
σ		1.436%	1.364	2.191	1.748	0.037	0.030	1.187%	1.658%
%RSD		1.458	0.682	1.095	0.874	18.930	6.938	1.217	1.693
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:33:17	0.151	0.143	0.179	0.191	0.172	96.956%		
2	13:33:44	0.172	0.139	0.144	0.134	0.154	98.252%		
3	13:34:10	0.145	0.121	0.184	0.166	0.173	98.027%		
x		0.156	0.134	0.169	0.164	0.166	97.745%		
σ		0.014	0.012	0.022	0.029	0.011	0.692%		
%RSD		8.879	8.861	12.810	17.600	6.473	0.708		

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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	13:37:33	90.031%	77.410	85.270	89.710	0.000	39230.000	38260.000	38690.000
2	13:37:59	93.062%	78.470	90.560	85.510	0.000	39820.000	39270.000	38590.000
3	13:38:26	93.588%	79.480	80.530	87.580	0.000	39560.000	38990.000	38730.000
x		92.227%	98.066%	106.818%	109.498%	0.000	98.841%	97.096%	96.669%
σ		1.920%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.082	1.319	5.873	2.397	0.000	0.750	1.344	0.184
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:33	387.000	4409.000	0.000	40950.000	39060.000	37540.000	92.884%	82.590
2	13:37:59	395.200	4476.000	0.000	39180.000	38960.000	37720.000	95.745%	80.230
3	13:38:26	391.400	4605.000	0.000	39980.000	40020.000	38180.000	97.164%	84.760
x		97.803%	112.425%	0.000	100.093%	98.371%	94.538%	95.264%	103.156%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.180%	n/a
%RSD		1.050	2.211	0.000	2.203	1.488	0.881	2.288	2.746
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:33	78.080	79.600	369.900	19810.000	18380.000	79.510	79.830	80.830
2	13:37:59	79.680	79.850	378.300	19980.000	18820.000	79.830	82.550	79.580
3	13:38:26	79.840	81.650	376.900	20030.000	18540.000	79.840	81.290	79.490
x		98.996%	100.460%	93.759%	99.704%	92.916%	99.658%	101.533%	99.958%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.231	1.390	1.210	0.586	1.203	0.232	1.677	0.935
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:33	78.170	78.310	79.200	78.960	77.310	79.560	0.000	75.670
2	13:37:59	78.990	77.530	80.060	78.950	82.130	81.480	0.000	78.710
3	13:38:26	80.190	79.640	79.470	79.900	81.520	78.000	0.000	79.210
x		98.896%	98.113%	99.470%	99.089%	100.396%	99.602%	0.000	97.328%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.281	1.358	0.552	0.687	3.269	2.187	0.000	2.464
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:33	93.700%	81.360	81.520	90.198%	78.480	77.720	78.220	78.550
2	13:37:59	96.090%	83.550	84.020	91.830%	77.370	77.720	78.280	76.560
3	13:38:26	96.677%	84.450	85.400	92.934%	78.760	77.760	80.480	78.600
x		95.489%	103.903%	104.556%	91.654%	97.758%	97.169%	98.746%	97.379%
σ		1.577%	n/a	n/a	1.376%	n/a	n/a	n/a	n/a
%RSD		1.652	1.912	2.348	1.502	0.938	0.032	1.628	1.490
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:33	92.201%	80.390	81.590	81.890	77.410	77.590	95.269%	94.081%
2	13:37:59	97.116%	79.590	79.020	79.310	77.920	77.610	96.119%	96.528%
3	13:38:26	96.150%	80.750	80.750	80.150	79.730	78.400	98.109%	97.127%
x		95.156%	100.306%	100.566%	100.560%	97.939%	97.333%	96.499%	95.912%
σ		2.604%	n/a	n/a	n/a	n/a	n/a	1.458%	1.613%
%RSD		2.737	0.745	1.627	1.638	1.556	0.590	1.511	1.682
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:37:33	82.350	79.580	81.050	77.130	78.730	94.808%		
2	13:37:59	80.700	79.380	78.690	78.150	77.870	98.209%		
3	13:38:26	83.070	80.920	83.950	80.610	81.420	96.413%		
x		102.549%	99.948%	101.538%	98.288%	99.178%	96.477%		
σ		n/a	n/a	n/a	n/a	n/a	1.702%		
%RSD		1.481	1.052	3.243	2.276	2.335	1.764		

ICB 1/26/2015 1:44:35 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	13:45:01	94.150%	0.025	1.012	0.752	0.000	12.370	2.525	3.514
2	13:45:28	94.882%	0.064	0.106	0.654	0.000	11.860	2.176	2.539
3	13:45:54	98.030%	0.100	0.211	0.651	0.000	9.956	0.932	1.028
x		95.687%	0.063	0.443	0.686	0.000	11.390	1.878	2.360
σ		2.062%	0.038	0.495	0.058	0.000	1.271	0.838	1.253
%RSD		2.155	59.900	111.800	8.395	0.000	11.150	44.610	53.080

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:01	0.119	6.975	0.000	13.950	3.769	1.704	97.323%	-0.116
2	13:45:28	0.057	4.334	0.000	5.493	10.470	0.268	99.657%	-0.096
3	13:45:54	0.102	1.408	0.000	6.152	0.914	0.886	99.703%	0.096
x		0.093	4.239	0.000	8.531	5.050	0.953	98.895%	-0.039
σ		0.032	2.785	0.000	4.702	4.904	0.720	1.361%	0.117
%RSD		34.290	65.690	0.000	55.120	97.100	75.630	1.376	303.500

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:01	0.047	0.040	0.012	7.913	8.525	-0.000	-0.014	-0.029
2	13:45:28	-0.018	-0.007	0.018	5.269	7.382	-0.007	-0.069	0.010
3	13:45:54	-0.024	-0.022	0.012	4.710	5.915	-0.001	-0.085	-0.014
x		0.002	0.003	0.014	5.964	7.274	-0.003	-0.056	-0.011
σ		0.039	0.032	0.003	1.711	1.309	0.004	0.037	0.020
%RSD		2300.000	927.000	24.510	28.690	17.990	129.700	65.900	175.900

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:01	0.023	0.073	0.067	-0.571	-0.583	-3.268	0.000	0.011
2	13:45:28	0.001	0.067	0.119	-0.236	1.121	-0.940	0.000	-0.001
3	13:45:54	0.001	0.058	0.064	-0.074	-0.127	-0.082	0.000	0.014
x		0.008	0.066	0.083	-0.294	0.137	-1.430	0.000	0.008
σ		0.013	0.008	0.031	0.254	0.882	1.649	0.000	0.008
%RSD		155.700	11.620	36.970	86.310	645.400	115.300	0.000	95.300

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:01	97.158%	0.146	0.246	96.235%	0.011	-0.008	0.017	0.004
2	13:45:28	98.911%	0.300	0.218	98.385%	0.011	-0.000	0.031	0.024
3	13:45:54	99.691%	0.196	0.176	99.476%	0.018	0.007	-0.048	-0.034
x		98.586%	0.214	0.214	98.032%	0.013	-0.000	-0.000	-0.002
σ		1.297%	0.079	0.036	1.649%	0.005	0.007	0.042	0.029
%RSD		1.316	36.830	16.670	1.682	34.850	1590.000	29420.000	1458.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:01	98.682%	0.088	0.031	0.044	0.010	0.010	95.896%	95.880%
2	13:45:28	100.436%	0.052	0.030	0.037	-0.025	0.021	98.117%	98.491%
3	13:45:54	101.605%	0.086	0.044	0.048	-0.025	-0.010	99.315%	99.076%
x		100.241%	0.075	0.035	0.043	-0.013	0.007	97.776%	97.816%
σ		1.471%	0.020	0.008	0.005	0.021	0.016	1.735%	1.702%
%RSD		1.468	26.540	22.070	12.480	154.500	230.700	1.774	1.740

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:01	0.010	0.004	0.002	0.012	0.007	101.908%
2	13:45:28	0.002	0.004	-0.010	0.007	0.004	102.824%
3	13:45:54	0.005	0.003	0.003	0.004	0.006	101.980%
x		0.005	0.004	-0.002	0.008	0.006	102.237%
σ		0.004	0.001	0.007	0.004	0.002	0.510%
%RSD		72.220	20.720	448.600	51.130	32.750	0.499

CRI 1470869 1/26/2015 1:48:55 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	13:49:21	96.131%	0.862	3.882	4.280	0.000	96.800	86.660	88.120
2	13:49:48	97.590%	0.750	6.185	4.974	0.000	98.260	92.180	89.050
3	13:50:14	96.477%	0.978	5.748	5.223	0.000	98.130	90.930	90.750
x		96.733%	86.317%	105.430%	96.511%	0.000	122.162%	89.921%	89.309%
σ		0.762%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.788	13.150	23.200	10.130	0.000	0.823	3.218	1.493
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:21	26.510	447.000	0.000	94.990	90.530	90.530	98.054%	5.228
2	13:49:48	27.340	447.000	0.000	106.600	80.650	102.000	98.214%	4.900
3	13:50:14	27.420	455.400	0.000	104.900	109.000	88.950	98.768%	4.753
x		90.298%	89.958%	0.000	102.142%	93.382%	93.823%	98.345%	99.210%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.375%	n/a
%RSD		1.863	1.073	0.000	6.122	15.390	7.586	0.381	4.908
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:21	0.893	1.826	4.259	46.970	42.130	0.481	1.330	1.929
2	13:49:48	0.843	1.852	4.400	47.420	50.780	0.491	1.262	1.941
3	13:50:14	1.062	1.906	4.524	47.920	48.120	0.490	0.989	2.022
x		93.267%	93.064%	87.883%	94.872%	94.024%	97.460%	119.353%	98.197%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		12.300	2.175	3.019	0.994	9.420	1.128	15.120	2.564
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:21	2.100	4.728	4.799	1.063	4.049	4.806	0.000	4.517
2	13:49:48	1.898	5.200	4.993	0.542	4.524	3.673	0.000	4.629
3	13:50:14	2.129	5.085	5.109	0.503	4.286	5.294	0.000	4.588
x		102.120%	100.086%	99.346%	70.294%	85.728%	91.824%	0.000	91.562%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		6.158	4.925	3.154	44.500	5.535	18.110	0.000	1.242
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:21	98.134%	4.633	4.812	96.700%	0.862	0.892	1.013	0.906
2	13:49:48	99.254%	4.839	4.909	98.598%	0.959	0.968	1.012	0.911
3	13:50:14	98.713%	5.013	4.902	98.328%	0.912	0.977	0.955	0.886
x		98.700%	96.570%	97.488%	97.875%	91.086%	94.553%	99.297%	90.088%
σ		0.560%	n/a	n/a	1.027%	n/a	n/a	n/a	n/a
%RSD		0.567	3.938	1.110	1.049	5.341	4.947	3.345	1.479
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:21	99.343%	5.253	1.737	1.747	9.669	9.226	97.557%	97.177%
2	13:49:48	100.410%	5.322	1.728	1.678	9.492	9.610	97.166%	99.202%
3	13:50:14	98.828%	5.247	1.766	1.757	9.545	9.278	99.539%	98.565%
x		99.527%	105.478%	87.181%	86.366%	95.684%	93.712%	98.087%	98.315%
σ		0.807%	n/a	n/a	n/a	n/a	n/a	1.272%	1.036%
%RSD		0.811	0.800	1.152	2.502	0.948	2.224	1.297	1.054
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:49:21	0.932	0.919	0.924	0.913	0.901	106.074%		
2	13:49:48	0.938	0.878	1.008	0.960	0.964	103.529%		
3	13:50:14	0.977	0.894	1.069	0.908	1.001	101.583%		
x		94.893%	89.690%	100.035%	92.700%	95.519%	103.729%		
σ		n/a	n/a	n/a	n/a	n/a	2.252%		
%RSD		2.576	2.305	7.271	3.128	5.285	2.171		

ICSA 1462866 1/26/2015 1:53:12 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	13:53:39	83.254%	0.058	0.486	0.647	0.000	102500.000	100100.000	98380.000
2	13:54:05	85.146%	0.146	0.607	0.561	0.000	102500.000	101700.000	100900.000
3	13:54:32	87.988%	0.009	0.021	0.562	0.000	101800.000	100700.000	99770.000
x		85.463%	0.071	0.371	0.590	0.000	102200.000	100800.000	99700.000
σ		2.383%	0.070	0.309	0.050	0.000	395.700	833.500	1276.000
%RSD		2.788	98.140	83.320	8.426	0.000	0.387	0.827	1.280

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:39	101700.000	31.190	0.000	101400.000	100100.000	100800.000	87.213%	2151.000
2	13:54:05	104000.000	28.330	0.000	104300.000	105400.000	105200.000	87.668%	2223.000
3	13:54:32	103300.000	27.350	0.000	104000.000	104900.000	106000.000	88.678%	2227.000
x		103000.000	28.950	0.000	103200.000	103400.000	104000.000	87.853%	2200.000
σ		1179.000	1.994	0.000	1596.000	2935.000	2768.000	0.750%	42.490
%RSD		1.145	6.888	0.000	1.546	2.838	2.662	0.853	1.931

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:39	-0.571	-0.098	0.674	100700.000	94680.000	0.117	0.004	1.225
2	13:54:05	-0.508	0.021	0.608	104400.000	97920.000	0.139	0.930	1.238
3	13:54:32	-0.402	-0.119	0.641	103800.000	97660.000	0.153	0.704	1.242
x		-0.493	-0.065	0.641	103000.000	96750.000	0.136	0.546	1.235
σ		0.085	0.076	0.033	1963.000	1800.000	0.018	0.483	0.009
%RSD		17.260	116.100	5.203	1.906	1.861	13.090	88.390	0.722

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:39	2.103	2.861	2.178	0.083	-0.464	0.298	0.000	0.723
2	13:54:05	2.084	2.660	2.286	0.158	-0.041	0.497	0.000	0.736
3	13:54:32	2.129	3.147	2.080	0.659	-0.347	1.072	0.000	0.708
x		2.105	2.889	2.181	0.300	-0.284	0.623	0.000	0.722
σ		0.022	0.245	0.103	0.313	0.218	0.402	0.000	0.014
%RSD		1.056	8.464	4.714	104.300	76.790	64.570	0.000	1.917

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:39	86.975%	2178.000	2275.000	80.731%	0.102	0.118	0.120	0.312
2	13:54:05	90.562%	2276.000	2374.000	82.659%	0.077	0.078	0.490	0.269
3	13:54:32	91.555%	2316.000	2430.000	82.663%	0.047	0.086	0.499	0.461
x		89.697%	2257.000	2360.000	82.018%	0.075	0.094	0.370	0.347
σ		2.409%	71.440	78.420	1.114%	0.028	0.021	0.216	0.101
%RSD		2.686	3.166	3.324	1.358	36.800	22.240	58.470	29.080

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:39	88.261%	0.203	0.090	0.095	0.114	0.116	91.096%	91.799%
2	13:54:05	88.516%	0.182	0.126	0.081	0.105	0.127	93.128%	93.486%
3	13:54:32	90.013%	0.177	0.082	0.127	0.110	0.129	94.441%	94.785%
x		88.930%	0.187	0.099	0.101	0.110	0.124	92.888%	93.356%
σ		0.947%	0.014	0.024	0.024	0.005	0.007	1.685%	1.498%
%RSD		1.065	7.256	23.850	23.400	4.248	5.597	1.814	1.604

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:39	0.020	0.016	0.226	0.222	0.208	107.264%
2	13:54:05	0.013	0.014	0.252	0.201	0.219	100.535%
3	13:54:32	0.015	0.018	0.227	0.217	0.229	97.663%
x		0.016	0.016	0.235	0.213	0.219	101.820%
σ		0.004	0.002	0.015	0.011	0.010	4.928%
%RSD		24.270	12.480	6.248	5.114	4.773	4.840

ICSAB 1462867 1/26/2015 1:57:32 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:59	84.068%	20.600	52.340	48.740	0.000	100600.000	98350.000	97370.000
2	13:58:25	87.511%	19.520	52.890	48.100	0.000	100900.000	99060.000	98360.000
3	13:58:52	89.581%	21.390	50.600	49.470	0.000	99560.000	99060.000	98080.000
x		87.053%	102.525%	103.885%	97.538%	0.000	100.367%	98.820%	97.936%
σ		2.785%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.199	4.590	2.300	1.407	0.000	0.711	0.416	0.525
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:59	100300.000	499.400	0.000	102900.000	103000.000	104900.000	86.487%	2173.000
2	13:58:25	102200.000	496.800	0.000	103100.000	104600.000	105900.000	87.650%	2254.000
3	13:58:52	101200.000	492.200	0.000	104500.000	107200.000	108200.000	86.984%	2251.000
x		101.234%	99.229%	0.000	103.508%	104.910%	106.339%	87.041%	111.294%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.583%	n/a
%RSD		0.958	0.728	0.000	0.809	2.012	1.612	0.670	2.074
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:59	18.630	19.500	18.770	100900.000	95230.000	19.840	19.490	21.200
2	13:58:25	19.050	19.950	18.950	103100.000	96340.000	20.050	20.750	21.510
3	13:58:52	18.870	20.450	19.300	104900.000	99060.000	20.360	20.190	21.890
x		94.253%	99.827%	95.031%	102.946%	96.876%	100.398%	100.715%	107.665%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.107	2.392	1.431	1.929	2.031	1.299	3.131	1.590
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:59	22.440	22.730	22.330	20.680	51.440	49.550	0.000	20.400
2	13:58:25	23.290	24.810	22.660	19.140	53.120	49.830	0.000	20.610
3	13:58:52	22.520	24.290	23.390	20.900	50.680	53.810	0.000	20.880
x		113.742%	95.784%	91.171%	101.202%	103.493%	102.127%	0.000	103.151%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.075	4.515	2.383	4.732	2.415	4.666	0.000	1.159
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:59	88.273%	2233.000	2334.000	80.106%	20.070	20.310	21.330	20.790
2	13:58:25	90.749%	2314.000	2409.000	81.225%	20.680	20.300	20.760	20.750
3	13:58:52	90.929%	2324.000	2438.000	82.221%	20.750	20.470	21.110	20.650
x		89.984%	114.527%	119.688%	81.184%	102.508%	101.805%	105.327%	103.665%
σ		1.484%	n/a	n/a	1.058%	n/a	n/a	n/a	n/a
%RSD		1.650	2.192	2.239	1.303	1.822	0.468	1.365	0.343
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:59	86.586%	102.000	20.600	20.600	19.790	19.930	93.223%	93.472%
2	13:58:25	89.108%	103.200	20.890	20.480	21.620	20.240	93.959%	94.850%
3	13:58:52	89.064%	105.900	21.290	21.020	20.590	19.740	96.006%	95.691%
x		88.253%	103.714%	104.629%	103.494%	103.333%	99.851%	94.396%	94.671%
σ		1.444%	n/a	n/a	n/a	n/a	n/a	1.442%	1.120%
%RSD		1.636	1.919	1.649	1.355	4.421	1.247	1.528	1.183
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:57:59	19.620	18.860	20.480	20.250	19.950	93.781%		
2	13:58:25	20.420	19.530	21.160	21.050	20.860	93.938%		
3	13:58:52	20.820	20.280	21.610	21.610	21.390	92.896%		
x		101.441%	97.769%	105.421%	104.860%	103.659%	93.538%		
σ		n/a	n/a	n/a	n/a	n/a	0.562%		
%RSD		3.021	3.643	2.684	3.262	3.500	0.600		

CCV 1467888 1/26/2015 2:04:59 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:25	88.162%	92.180	97.080	91.230	0.000	46910.000	45660.000	45320.000
2	14:05:51	94.386%	98.010	97.550	90.700	0.000	46460.000	45520.000	45150.000
3	14:06:18	91.698%	98.010	100.300	94.220	0.000	47340.000	46630.000	46360.000
x		91.415%	96.068%	98.294%	92.051%	0.000	93.815%	91.870%	91.220%
σ		3.122%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.415	3.502	1.742	2.058	0.000	0.939	1.317	1.432
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:25	449.200	4822.000	0.000	48930.000	47980.000	45790.000	92.554%	96.630
2	14:05:51	445.800	4795.000	0.000	48480.000	48790.000	47960.000	94.179%	101.400
3	14:06:18	459.100	4871.000	0.000	50030.000	50060.000	47890.000	94.241%	98.810
x		90.276%	96.589%	0.000	98.294%	97.890%	94.425%	93.658%	98.934%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.956%	n/a
%RSD		1.530	0.803	0.000	1.616	2.138	2.614	1.021	2.394
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:25	89.320	90.660	445.900	23530.000	21840.000	91.680	93.310	93.690
2	14:05:51	91.730	93.390	456.600	24080.000	22630.000	95.510	94.710	96.150
3	14:06:18	94.330	94.270	452.700	24290.000	22830.000	95.340	95.360	97.240
x		91.792%	92.773%	90.342%	95.865%	89.728%	94.176%	94.459%	95.693%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.728	2.031	1.197	1.638	2.325	2.302	1.113	1.899
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:25	91.410	96.110	94.910	93.590	98.120	92.240	0.000	93.750
2	14:05:51	93.960	99.580	98.690	97.970	98.530	95.980	0.000	94.760
3	14:06:18	96.050	98.050	95.990	97.130	100.500	92.780	0.000	96.600
x		93.806%	97.914%	96.529%	96.229%	99.038%	93.668%	0.000	95.036%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.479	1.779	2.018	2.420	1.271	2.157	0.000	1.519
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:25	93.335%	93.280	93.700	88.990%	96.440	95.650	95.210	95.950
2	14:05:51	96.818%	99.310	99.410	90.387%	96.950	97.350	98.310	97.570
3	14:06:18	95.618%	102.300	101.100	91.348%	97.090	96.140	97.490	97.610
x		95.257%	98.302%	98.081%	90.242%	96.827%	96.380%	97.005%	97.044%
σ		1.769%	n/a	n/a	1.186%	n/a	n/a	n/a	n/a
%RSD		1.858	4.683	3.969	1.314	0.350	0.906	1.659	0.974
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:25	92.997%	94.860	95.610	95.130	93.940	94.420	97.085%	97.196%
2	14:05:51	96.757%	95.510	96.710	95.230	95.380	96.550	101.035%	100.080%
3	14:06:18	95.542%	98.310	96.930	98.160	95.780	95.810	101.054%	100.591%
x		95.099%	96.224%	96.418%	96.173%	95.037%	95.594%	99.724%	99.289%
σ		1.919%	n/a	n/a	n/a	n/a	n/a	2.286%	1.830%
%RSD		2.018	1.905	0.731	1.790	1.019	1.129	2.292	1.844
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:05:25	100.600	97.280	99.860	98.970	99.060	96.576%		
2	14:05:51	99.740	98.640	100.700	101.200	100.800	99.260%		
3	14:06:18	102.900	100.300	104.200	102.700	103.500	96.717%		
x		101.058%	98.728%	101.611%	100.955%	101.093%	97.518%		
σ		n/a	n/a	n/a	n/a	n/a	1.511%		
%RSD		1.610	1.510	2.287	1.855	2.200	1.549		

CCB1 1/26/2015 2:12:25 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	94.507%	0.085	0.755	0.666	0.000	33.790	7.781	6.327
2	14:13:17	98.831%	-0.018	0.086	0.231	0.000	31.890	5.055	4.988
3	14:13:44	94.288%	-0.016	0.498	0.231	0.000	31.810	4.362	4.768
x		95.875%	0.017	0.446	0.376	0.000	32.500	5.733	5.361
σ		2.562%	0.059	0.338	0.251	0.000	1.120	1.807	0.844
%RSD		2.672	346.300	75.640	66.740	0.000	3.447	31.530	15.740

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	3.144	0.832	0.000	17.500	14.410	0.934	94.231%	0.092
2	14:13:17	1.310	-2.085	0.000	14.960	8.958	1.777	95.741%	0.136
3	14:13:44	0.795	-0.582	0.000	14.930	8.959	-0.399	95.977%	0.534
x		1.750	-0.612	0.000	15.800	10.780	0.771	95.317%	0.254
σ		1.235	1.458	0.000	1.473	3.146	1.097	0.947%	0.243
%RSD		70.580	238.400	0.000	9.324	29.200	142.400	0.994	95.860

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	0.015	0.022	-0.019	12.020	0.154	0.010	0.821	0.015
2	14:13:17	-0.040	-0.052	-0.012	9.246	0.347	0.003	0.813	-0.030
3	14:13:44	0.003	-0.050	-0.020	7.423	2.632	0.009	0.601	-0.001
x		-0.007	-0.027	-0.017	9.563	1.045	0.007	0.745	-0.005
σ		0.029	0.042	0.005	2.315	1.378	0.004	0.125	0.023
%RSD		390.100	156.900	27.140	24.210	132.000	51.220	16.710	442.100

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	0.015	0.139	0.077	-0.307	-1.821	-1.433	0.000	0.009
2	14:13:17	0.038	0.125	0.128	-0.104	-0.120	0.046	0.000	0.003
3	14:13:44	-0.015	0.098	0.080	-0.060	-0.387	-0.115	0.000	0.003
x		0.013	0.121	0.095	-0.157	-0.776	-0.501	0.000	0.005
σ		0.026	0.021	0.028	0.132	0.915	0.812	0.000	0.004
%RSD		209.400	17.230	29.830	84.140	117.900	162.100	0.000	68.030

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	93.940%	0.898	0.828	93.475%	0.014	0.014	-0.009	-0.016
2	14:13:17	95.825%	0.906	0.821	95.231%	-0.007	0.011	-0.040	-0.030
3	14:13:44	97.472%	0.931	0.880	95.716%	0.023	0.024	-0.034	-0.023
x		95.746%	0.912	0.843	94.808%	0.010	0.016	-0.028	-0.023
σ		1.768%	0.017	0.032	1.179%	0.015	0.007	0.016	0.007
%RSD		1.846	1.900	3.794	1.244	156.100	44.040	57.810	30.060

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	97.189%	0.195	0.164	0.144	-0.032	0.010	96.542%	97.173%
2	14:13:17	98.407%	0.115	0.115	0.129	0.003	0.002	99.460%	98.671%
3	14:13:44	98.992%	0.199	0.130	0.124	-0.018	0.001	100.761%	101.289%
x		98.196%	0.170	0.136	0.132	-0.016	0.004	98.921%	99.044%
σ		0.920%	0.047	0.025	0.010	0.017	0.005	2.161%	2.083%
%RSD		0.937	27.760	18.120	7.675	110.300	114.600	2.184	2.103

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:51	0.013	0.012	0.013	0.003	0.006	104.211%
2	14:13:17	0.007	0.007	0.001	-0.003	0.002	102.444%
3	14:13:44	0.008	0.004	0.003	-0.003	0.005	102.955%
x		0.009	0.008	0.006	-0.001	0.004	103.203%
σ		0.003	0.004	0.007	0.003	0.002	0.909%
%RSD		35.510	48.840	120.000	459.800	50.580	0.881

MB 180-131398/1-A 1/26/2015 2:16:42 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	87.893%	0.008	-0.119	0.556	0.000	30.890	4.904	4.256
2	14:17:35	93.398%	0.087	0.509	0.268	0.000	29.610	4.524	4.877
3	14:18:02	98.038%	0.041	0.215	0.041	0.000	28.920	4.425	4.255
x		93.110%	0.046	0.202	0.288	0.000	29.810	4.618	4.463
σ		5.078%	0.040	0.314	0.258	0.000	0.999	0.253	0.359
%RSD		5.454	86.660	155.600	89.590	0.000	3.350	5.478	8.040

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	1.585	1.863	0.000	27.840	2.083	-0.204	93.367%	-0.033
2	14:17:35	1.153	-0.333	0.000	4.881	-5.644	4.129	94.069%	0.041
3	14:18:02	1.239	-0.154	0.000	9.833	-3.252	1.463	94.797%	0.190
x		1.326	0.459	0.000	14.180	-2.271	1.796	94.078%	0.066
σ		0.228	1.219	0.000	12.080	3.956	2.185	0.715%	0.114
%RSD		17.230	265.700	0.000	85.180	174.200	121.700	0.760	172.300

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	-0.074	-0.051	-0.005	5.093	1.556	0.000	2.550	0.004
2	14:17:35	-0.021	0.004	-0.003	4.935	-3.006	0.005	1.773	-0.023
3	14:18:02	0.008	-0.082	-0.005	3.763	-4.902	-0.006	1.324	0.055
x		-0.029	-0.043	-0.004	4.597	-2.117	-0.000	1.883	0.012
σ		0.041	0.044	0.001	0.726	3.320	0.006	0.620	0.040
%RSD		143.000	101.500	26.090	15.800	156.800	1403.000	32.950	330.200

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	0.109	0.230	0.171	-0.339	0.857	-1.128	0.000	0.009
2	14:17:35	-0.013	0.127	0.096	-0.305	-0.314	-1.446	0.000	0.004
3	14:18:02	0.018	0.069	0.170	-0.456	-1.864	-2.446	0.000	0.014
x		0.038	0.142	0.146	-0.367	-0.441	-1.673	0.000	0.009
σ		0.063	0.081	0.043	0.079	1.365	0.688	0.000	0.005
%RSD		166.500	57.120	29.690	21.610	309.900	41.110	0.000	58.720

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	93.374%	0.364	0.345	92.525%	-0.005	-0.003	-0.084	-0.062
2	14:17:35	96.464%	0.428	0.397	94.142%	-0.019	-0.008	0.081	0.051
3	14:18:02	97.584%	0.427	0.400	95.522%	0.013	0.022	-0.001	-0.013
x		95.807%	0.406	0.380	94.063%	-0.004	0.004	-0.001	-0.008
σ		2.181%	0.036	0.031	1.500%	0.016	0.016	0.082	0.057
%RSD		2.276	8.904	8.204	1.595	408.300	403.900	5947.000	698.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	93.623%	0.078	0.054	0.075	0.012	-0.001	95.370%	96.603%
2	14:17:35	98.762%	0.061	0.047	0.035	0.010	0.006	98.215%	99.961%
3	14:18:02	98.229%	0.116	0.052	0.051	-0.011	0.017	99.536%	100.518%
x		96.871%	0.085	0.051	0.053	0.004	0.007	97.707%	99.027%
σ		2.826%	0.028	0.003	0.020	0.013	0.009	2.129%	2.118%
%RSD		2.917	32.690	6.095	37.370	357.200	128.800	2.179	2.139

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:09	0.009	0.005	0.002	0.010	0.010	102.549%
2	14:17:35	0.008	0.006	0.015	-0.001	0.008	105.771%
3	14:18:02	0.005	0.006	0.015	0.015	0.012	105.312%
x		0.007	0.006	0.011	0.008	0.010	104.544%
σ		0.002	0.001	0.008	0.008	0.002	1.743%
%RSD		22.750	13.030	71.370	101.500	19.140	1.667

LCS 180-131398/2-A 1/26/2015 2:20:57 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:24	93.116%	42.350	919.200	919.600	0.000	45270.000	43700.000	43680.000
2	14:21:50	94.971%	46.900	969.000	938.900	0.000	46620.000	45490.000	45350.000
3	14:22:17	96.181%	46.560	989.500	943.400	0.000	46150.000	44830.000	44640.000
x		94.756%	45.270	959.300	934.000	0.000	46010.000	44670.000	44560.000
σ		1.544%	2.534	36.140	12.640	0.000	684.000	907.700	838.100
%RSD		1.629	5.598	3.767	1.353	0.000	1.487	2.032	1.881
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:24	1807.000	9287.000	0.000	48580.000	48400.000	47090.000	79.827%	1002.000
2	14:21:50	1883.000	9523.000	0.000	49960.000	50140.000	49190.000	82.670%	1053.000
3	14:22:17	1852.000	9322.000	0.000	49010.000	50260.000	48530.000	85.562%	1027.000
x		1847.000	9378.000	0.000	49180.000	49600.000	48270.000	82.686%	1027.000
σ		38.390	127.400	0.000	707.300	1038.000	1075.000	2.867%	25.150
%RSD		2.078	1.358	0.000	1.438	2.093	2.226	3.468	2.448
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:24	501.700	197.600	457.800	1002.000	1105.000	496.900	499.900	248.700
2	14:21:50	517.800	204.500	473.700	1043.000	1135.000	516.900	513.300	257.800
3	14:22:17	511.200	200.300	468.800	1027.000	1132.000	506.800	493.200	254.900
x		510.200	200.800	466.800	1024.000	1124.000	506.900	502.100	253.800
σ		8.105	3.469	8.135	20.260	16.330	10.010	10.210	4.657
%RSD		1.589	1.728	1.743	1.979	1.453	1.975	2.034	1.835
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:24	249.500	486.000	491.600	37.940	9.337	6.893	0.000	1058.000
2	14:21:50	253.500	500.100	496.600	41.390	8.984	8.651	0.000	1062.000
3	14:22:17	252.800	493.900	489.700	36.430	8.062	9.098	0.000	1060.000
x		251.900	493.300	492.700	38.590	8.794	8.214	0.000	1060.000
σ		2.150	7.059	3.565	2.542	0.659	1.166	0.000	2.283
%RSD		0.854	1.431	0.724	6.587	7.490	14.200	0.000	0.215
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:24	79.870%	1073.000	1090.000	75.636%	51.170	51.080	50.150	39.050
2	14:21:50	82.570%	1121.000	1149.000	77.282%	51.790	51.660	51.660	37.720
3	14:22:17	84.611%	1110.000	1126.000	80.857%	51.170	51.110	51.810	39.440
x		82.350%	1101.000	1122.000	77.925%	51.380	51.280	51.210	38.740
σ		2.378%	25.260	30.000	2.669%	0.358	0.326	0.918	0.905
%RSD		2.887	2.294	2.675	3.426	0.697	0.635	1.793	2.335
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:21:24	79.155%	2152.000	519.800	518.100	1990.000	2033.000	84.572%	85.519%
2	14:21:50	81.865%	2272.000	540.000	530.000	2068.000	2100.000	87.644%	88.392%
3	14:22:17	82.980%	2267.000	537.700	535.800	2053.000	2101.000	88.952%	90.432%
x		81.333%	2230.000	532.500	528.000	2037.000	2078.000	87.056%	88.114%
σ		1.967%	67.950	11.040	9.013	41.340	39.170	2.249%	2.468%
%RSD		2.419	3.047	2.074	1.707	2.029	1.885	2.583	2.801
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:21:24	49.610	48.710	20.860	20.880	20.560	84.402%		
2	14:21:50	53.100	51.450	21.910	21.570	21.360	85.945%		
3	14:22:17	52.560	51.380	21.740	21.440	21.370	87.190%		
x		51.760	50.510	21.500	21.300	21.090	85.846%		
σ		1.877	1.559	0.567	0.366	0.463	1.397%		
%RSD		3.627	3.087	2.639	1.718	2.194	1.627		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	93.311%	0.171	19.040	19.480	0.000	6406.000	5967.000	5984.000
2	14:26:05	97.733%	0.082	16.320	15.830	0.000	6333.000	5996.000	6001.000
3	14:26:31	97.499%	0.082	14.200	17.020	0.000	6492.000	6150.000	6093.000
x		96.181%	0.112	16.520	17.440	0.000	6410.000	6038.000	6026.000
σ		2.488%	0.051	2.424	1.865	0.000	79.670	98.050	58.620
%RSD		2.587	46.030	14.670	10.690	0.000	1.243	1.624	0.973

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	1261.000	5161.000	0.000	2352.000	48080.000	46130.000	85.631%	18.130
2	14:26:05	1266.000	5131.000	0.000	2344.000	48570.000	47970.000	87.652%	16.060
3	14:26:31	1291.000	5173.000	0.000	2333.000	49840.000	48540.000	87.972%	14.830
x		1273.000	5155.000	0.000	2343.000	48830.000	47540.000	87.085%	16.340
σ		16.110	21.950	0.000	9.230	909.500	1261.000	1.269%	1.666
%RSD		1.265	0.426	0.000	0.394	1.862	2.652	1.457	10.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	3.101	5.447	22.040	1182.000	1236.000	0.773	2.337	1.969
2	14:26:05	3.913	5.125	22.670	1191.000	1241.000	0.749	2.307	2.033
3	14:26:31	2.329	5.258	22.910	1222.000	1255.000	0.734	2.272	2.061
x		3.114	5.277	22.540	1198.000	1244.000	0.752	2.305	2.021
σ		0.792	0.162	0.450	20.650	9.693	0.020	0.033	0.047
%RSD		25.440	3.069	1.995	1.724	0.779	2.595	1.420	2.323

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	2.300	5.183	5.355	1.424	-1.467	-1.288	0.000	139.400
2	14:26:05	2.413	5.183	4.941	2.252	0.040	-1.738	0.000	142.300
3	14:26:31	2.136	5.452	4.833	0.802	0.457	-1.501	0.000	144.200
x		2.283	5.273	5.043	1.493	-0.323	-1.509	0.000	142.000
σ		0.139	0.156	0.276	0.727	1.012	0.225	0.000	2.424
%RSD		6.107	2.949	5.469	48.720	313.200	14.930	0.000	1.707

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	86.200%	8.218	8.239	81.048%	0.026	0.047	0.017	0.037
2	14:26:05	88.283%	5.967	6.166	82.646%	0.082	0.058	0.002	-0.024
3	14:26:31	89.321%	4.944	4.829	83.252%	0.032	0.061	0.089	0.046
x		87.935%	6.376	6.411	82.316%	0.046	0.055	0.036	0.020
σ		1.589%	1.675	1.718	1.139%	0.031	0.008	0.047	0.038
%RSD		1.808	26.270	26.790	1.383	66.060	13.660	128.300	192.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	84.226%	9.026	0.495	0.523	73.060	74.410	90.154%	89.997%
2	14:26:05	86.615%	6.250	0.495	0.573	73.800	76.780	92.762%	92.502%
3	14:26:31	87.836%	4.658	0.493	0.526	76.160	76.210	93.059%	94.240%
x		86.226%	6.644	0.494	0.541	74.340	75.800	91.992%	92.246%
σ		1.836%	2.211	0.001	0.028	1.616	1.239	1.598%	2.133%
%RSD		2.129	33.270	0.262	5.155	2.174	1.635	1.738	2.312

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:25:38	0.258	0.221	0.685	0.665	0.683	86.840%
2	14:26:05	0.152	0.139	0.752	0.675	0.699	88.946%
3	14:26:31	0.135	0.133	0.740	0.625	0.707	90.346%
x		0.182	0.164	0.726	0.655	0.696	88.711%
σ		0.067	0.049	0.036	0.026	0.012	1.765%
%RSD		36.790	29.750	4.910	4.033	1.771	1.989

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:53	94.561%	0.106	5.775	4.441	0.000	1305.000	1215.000	1203.000
2	14:30:20	97.369%	0.042	3.603	5.302	0.000	1328.000	1246.000	1229.000
3	14:30:46	99.329%	0.099	3.042	4.490	0.000	1323.000	1240.000	1229.000
x		97.086%	0.082	4.140	4.744	0.000	1319.000	1234.000	1220.000
σ		2.396%	0.035	1.443	0.484	0.000	11.930	16.430	14.910
%RSD		2.468	42.520	34.860	10.200	0.000	0.904	1.332	1.222
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:53	278.800	1028.000	0.000	474.900	9785.000	8853.000	92.765%	4.845
2	14:30:20	252.300	1126.000	0.000	478.600	9814.000	9158.000	93.500%	3.395
3	14:30:46	248.600	1015.000	0.000	492.400	9677.000	9280.000	92.333%	2.947
x		259.900	1056.000	0.000	481.900	9758.000	9097.000	92.866%	3.729
σ		16.450	60.550	0.000	9.214	72.370	220.000	0.590%	0.992
%RSD		6.331	5.734	0.000	1.912	0.742	2.419	0.635	26.600
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:53	1.123	1.149	4.363	224.500	246.200	0.237	1.489	0.474
2	14:30:20	1.269	1.241	4.730	235.200	234.700	0.244	1.458	0.483
3	14:30:46	1.217	1.183	4.777	233.500	248.300	0.284	1.321	0.455
x		1.203	1.191	4.624	231.100	243.100	0.255	1.423	0.470
σ		0.074	0.046	0.227	5.729	7.336	0.025	0.090	0.014
%RSD		6.161	3.903	4.914	2.480	3.018	9.855	6.311	3.021
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:53	0.484	0.992	1.124	0.228	-1.819	-3.181	0.000	27.940
2	14:30:20	0.450	1.553	1.619	-1.443	-1.302	-0.970	0.000	28.580
3	14:30:46	0.566	1.561	1.728	0.667	-0.196	-1.485	0.000	28.930
x		0.500	1.369	1.490	-0.183	-1.106	-1.879	0.000	28.490
σ		0.059	0.327	0.322	1.113	0.829	1.157	0.000	0.505
%RSD		11.890	23.870	21.610	608.800	74.990	61.570	0.000	1.773
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:53	92.855%	0.978	0.740	90.462%	-0.003	0.001	-0.068	-0.053
2	14:30:20	94.365%	1.038	1.006	91.811%	0.027	-0.005	0.083	0.052
3	14:30:46	94.804%	1.034	0.914	92.988%	0.027	0.010	0.019	0.011
x		94.008%	1.017	0.887	91.754%	0.017	0.002	0.011	0.003
σ		1.023%	0.033	0.135	1.264%	0.017	0.007	0.076	0.053
%RSD		1.088	3.291	15.200	1.378	99.580	355.100	669.400	1594.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:29:53	93.539%	0.676	0.146	0.076	15.010	15.330	96.354%	97.589%
2	14:30:20	97.205%	0.820	0.149	0.172	15.630	14.940	98.666%	99.492%
3	14:30:46	95.383%	1.010	0.211	0.241	15.250	16.120	100.660%	99.126%
x		95.376%	0.835	0.169	0.163	15.300	15.460	98.560%	98.735%
σ		1.833%	0.168	0.037	0.083	0.311	0.604	2.155%	1.010%
%RSD		1.922	20.070	21.710	50.630	2.031	3.908	2.186	1.023
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:29:53	0.042	0.026	0.128	0.126	0.136	96.158%		
2	14:30:20	0.044	0.032	0.143	0.125	0.134	100.946%		
3	14:30:46	0.040	0.039	0.144	0.149	0.139	94.176%		
x		0.042	0.032	0.138	0.133	0.136	97.093%		
σ		0.002	0.007	0.009	0.013	0.003	3.481%		
%RSD		5.070	20.890	6.828	10.100	2.012	3.585		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:08	91.006%	48.520	1011.000	983.000	0.000	52680.000	50720.000	50070.000
2	14:34:35	95.851%	48.740	1006.000	966.200	0.000	52580.000	50930.000	50420.000
3	14:35:02	99.546%	48.650	991.800	966.000	0.000	51940.000	50610.000	50220.000
x		95.468%	48.640	1003.000	971.700	0.000	52400.000	50750.000	50240.000
σ		4.283%	0.111	9.768	9.722	0.000	399.900	164.700	176.100
%RSD		4.486	0.228	0.974	1.000	0.000	0.763	0.325	0.351
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:08	4077.000	15640.000	0.000	50630.000	96040.000	98740.000	84.728%	990.100
2	14:34:35	4106.000	15590.000	0.000	52010.000	101400.000	102100.000	85.579%	1023.000
3	14:35:02	4080.000	15300.000	0.000	51930.000	101200.000	103100.000	87.500%	1022.000
x		4088.000	15510.000	0.000	51520.000	99550.000	101300.000	85.936%	1012.000
σ		15.890	182.600	0.000	771.500	3041.000	2289.000	1.420%	18.730
%RSD		0.389	1.178	0.000	1.497	3.055	2.259	1.652	1.851
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:08	479.800	189.500	468.400	2178.000	2366.000	477.800	473.400	240.200
2	14:34:35	492.400	193.900	477.500	2235.000	2392.000	488.700	481.900	246.800
3	14:35:02	493.900	196.000	482.300	2261.000	2403.000	490.700	485.200	248.100
x		488.700	193.100	476.100	2225.000	2387.000	485.700	480.100	245.100
σ		7.713	3.291	7.067	42.110	18.840	6.924	6.092	4.226
%RSD		1.578	1.704	1.484	1.893	0.789	1.425	1.269	1.724
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:08	240.200	483.200	473.800	36.860	9.600	9.474	0.000	1166.000
2	14:34:35	244.600	494.600	481.900	40.170	9.886	5.970	0.000	1188.000
3	14:35:02	244.000	494.800	491.200	38.600	9.921	7.314	0.000	1202.000
x		242.900	490.900	482.300	38.540	9.802	7.586	0.000	1185.000
σ		2.398	6.667	8.712	1.656	0.176	1.768	0.000	18.650
%RSD		0.987	1.358	1.806	4.295	1.795	23.300	0.000	1.573
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:08	84.017%	1066.000	1084.000	77.445%	50.730	50.980	51.050	37.890
2	14:34:35	86.741%	1096.000	1121.000	79.541%	51.170	50.830	51.320	38.450
3	14:35:02	88.367%	1112.000	1129.000	81.590%	50.350	50.090	50.650	38.610
x		86.375%	1091.000	1111.000	79.525%	50.750	50.630	51.010	38.320
σ		2.198%	23.020	24.140	2.073%	0.413	0.476	0.336	0.375
%RSD		2.544	2.110	2.173	2.606	0.814	0.941	0.659	0.980
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:08	80.875%	2204.000	529.700	525.100	2064.000	2108.000	89.609%	90.863%
2	14:34:35	82.946%	2236.000	535.500	535.400	2079.000	2160.000	92.245%	92.439%
3	14:35:02	85.970%	2239.000	531.000	527.500	2100.000	2154.000	95.092%	94.762%
x		83.264%	2226.000	532.100	529.300	2081.000	2141.000	92.316%	92.688%
σ		2.562%	19.160	3.008	5.373	17.940	28.460	2.742%	1.962%
%RSD		3.077	0.861	0.565	1.015	0.862	1.329	2.970	2.116
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:34:08	50.770	48.690	21.610	21.130	21.180	88.004%		
2	14:34:35	53.100	51.420	22.390	22.070	22.000	87.825%		
3	14:35:02	52.900	51.370	22.370	21.770	21.930	90.893%		
x		52.250	50.490	22.120	21.660	21.700	88.907%		
σ		1.293	1.562	0.444	0.478	0.457	1.722%		
%RSD		2.474	3.094	2.009	2.207	2.104	1.936		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:26	92.337%	46.920	1029.000	971.000	0.000	52870.000	50600.000	50100.000
2	14:38:52	92.969%	51.630	1042.000	998.900	0.000	53700.000	52210.000	51720.000
3	14:39:19	96.243%	50.750	1026.000	980.600	0.000	53500.000	51910.000	51400.000
x		93.850%	49.770	1032.000	983.500	0.000	53360.000	51570.000	51070.000
σ		2.097%	2.503	8.580	14.180	0.000	434.300	853.800	855.300
%RSD		2.234	5.029	0.831	1.442	0.000	0.814	1.656	1.675
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:26	4079.000	15730.000	0.000	52640.000	98990.000	99980.000	84.423%	1010.000
2	14:38:52	4206.000	15910.000	0.000	53550.000	103100.000	104100.000	85.322%	1028.000
3	14:39:19	4211.000	15770.000	0.000	52560.000	103100.000	105500.000	85.793%	1043.000
x		4165.000	15800.000	0.000	52920.000	101700.000	103200.000	85.180%	1027.000
σ		74.840	93.770	0.000	549.300	2374.000	2874.000	0.696%	16.310
%RSD		1.797	0.593	0.000	1.038	2.333	2.785	0.817	1.589
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:26	483.500	193.100	473.400	2214.000	2373.000	480.400	473.600	244.100
2	14:38:52	498.700	198.200	484.800	2291.000	2422.000	495.100	488.400	249.200
3	14:39:19	500.900	198.700	490.400	2309.000	2448.000	493.400	490.000	251.700
x		494.400	196.700	482.900	2271.000	2414.000	489.600	484.000	248.400
σ		9.453	3.112	8.632	50.320	38.090	8.049	9.022	3.914
%RSD		1.912	1.582	1.788	2.215	1.577	1.644	1.864	1.576
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:26	241.000	489.100	477.900	35.780	10.590	8.456	0.000	1183.000
2	14:38:52	241.500	498.000	490.200	39.610	11.230	6.660	0.000	1188.000
3	14:39:19	250.000	503.700	496.200	41.970	10.660	6.045	0.000	1204.000
x		244.200	496.900	488.100	39.120	10.830	7.053	0.000	1192.000
σ		5.068	7.321	9.331	3.123	0.351	1.253	0.000	11.170
%RSD		2.075	1.473	1.912	7.984	3.238	17.760	0.000	0.937
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:26	84.885%	1074.000	1097.000	78.239%	51.390	50.670	50.960	40.100
2	14:38:52	87.517%	1115.000	1129.000	80.000%	51.590	51.350	52.850	40.110
3	14:39:19	88.236%	1113.000	1148.000	80.208%	51.850	50.950	51.350	40.770
x		86.879%	1101.000	1125.000	79.482%	51.610	50.990	51.720	40.320
σ		1.764%	22.890	25.740	1.082%	0.228	0.343	0.998	0.386
%RSD		2.031	2.079	2.288	1.361	0.441	0.672	1.930	0.956
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:26	82.173%	2191.000	524.600	515.900	2029.000	2127.000	90.405%	92.198%
2	14:38:52	83.170%	2283.000	540.300	537.100	2131.000	2193.000	92.976%	94.742%
3	14:39:19	85.685%	2230.000	536.100	524.400	2099.000	2171.000	94.286%	94.948%
x		83.676%	2234.000	533.700	525.800	2086.000	2164.000	92.556%	93.963%
σ		1.810%	45.910	8.086	10.670	52.410	33.390	1.974%	1.532%
%RSD		2.163	2.055	1.515	2.029	2.512	1.543	2.133	1.630
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:38:26	51.200	50.150	22.470	21.790	21.950	88.007%		
2	14:38:52	54.470	51.620	22.750	22.770	22.590	88.550%		
3	14:39:19	53.250	51.910	22.200	22.090	22.090	92.061%		
x		52.970	51.230	22.480	22.220	22.210	89.539%		
σ		1.651	0.946	0.272	0.504	0.333	2.200%		
%RSD		3.116	1.846	1.209	2.268	1.501	2.457		

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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	14:42:44	93.745%	47.240	990.200	958.200	0.000	51280.000	49200.000	48530.000
2	14:43:10	95.554%	48.580	1018.000	968.900	0.000	51430.000	49890.000	49140.000
3	14:43:37	95.934%	50.410	995.800	984.400	0.000	51860.000	50400.000	49390.000
x		95.078%	48.740	1001.000	970.500	0.000	51520.000	49830.000	49020.000
σ		1.169%	1.593	14.920	13.190	0.000	301.300	600.800	444.600
%RSD		1.230	3.268	1.490	1.359	0.000	0.585	1.206	0.907
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:44	3005.000	13840.000	0.000	50660.000	95760.000	95970.000	83.418%	989.400
2	14:43:10	3049.000	13860.000	0.000	50580.000	95590.000	97500.000	86.234%	1004.000
3	14:43:37	3089.000	13910.000	0.000	51350.000	97920.000	99200.000	87.019%	1012.000
x		3048.000	13870.000	0.000	50860.000	96420.000	97560.000	85.557%	1002.000
σ		42.190	39.210	0.000	424.900	1301.000	1617.000	1.894%	11.630
%RSD		1.384	0.283	0.000	0.835	1.349	1.658	2.213	1.161
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:44	471.000	187.300	456.800	1979.000	2138.000	463.400	455.700	230.700
2	14:43:10	484.300	192.800	471.100	2044.000	2237.000	483.300	480.800	241.900
3	14:43:37	489.900	194.600	475.100	2067.000	2253.000	486.100	481.700	243.200
x		481.700	191.600	467.700	2030.000	2209.000	477.600	472.700	238.600
σ		9.677	3.762	9.631	46.000	62.130	12.360	14.760	6.892
%RSD		2.009	1.964	2.059	2.266	2.812	2.588	3.122	2.888
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:44	224.900	459.400	451.900	34.240	8.849	3.403	0.000	1033.000
2	14:43:10	241.100	486.600	484.200	37.040	9.392	7.597	0.000	1166.000
3	14:43:37	244.100	491.900	488.700	40.290	10.370	7.446	0.000	1170.000
x		236.700	479.300	474.900	37.190	9.536	6.149	0.000	1123.000
σ		10.330	17.390	20.070	3.026	0.769	2.379	0.000	77.820
%RSD		4.365	3.629	4.227	8.137	8.066	38.690	0.000	6.928
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:44	93.567%	1008.000	1048.000	76.947%	49.240	48.380	49.130	39.580
2	14:43:10	86.011%	1098.000	1116.000	78.845%	48.330	47.710	50.200	38.410
3	14:43:37	88.939%	1099.000	1116.000	80.151%	48.660	48.520	51.260	38.860
x		89.506%	1068.000	1093.000	78.648%	48.740	48.200	50.200	38.950
σ		3.810%	52.210	39.380	1.611%	0.459	0.434	1.068	0.588
%RSD		4.257	4.887	3.602	2.049	0.942	0.901	2.127	1.510
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:44	81.175%	2165.000	520.300	513.100	2004.000	2073.000	90.032%	90.811%
2	14:43:10	82.682%	2231.000	530.400	526.800	2070.000	2134.000	92.685%	92.105%
3	14:43:37	84.055%	2229.000	533.700	526.800	2086.000	2147.000	94.439%	95.025%
x		82.637%	2208.000	528.100	522.200	2053.000	2118.000	92.385%	92.647%
σ		1.440%	37.620	6.985	7.906	43.470	39.460	2.219%	2.159%
%RSD		1.743	1.704	1.323	1.514	2.117	1.864	2.402	2.330
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:42:44	49.770	48.960	21.630	20.990	21.010	87.056%		
2	14:43:10	51.300	49.960	21.820	21.410	21.400	89.518%		
3	14:43:37	52.210	51.040	22.180	22.090	21.820	90.737%		
x		51.090	49.990	21.880	21.500	21.410	89.104%		
σ		1.236	1.043	0.279	0.558	0.409	1.875%		
%RSD		2.420	2.086	1.277	2.598	1.911	2.105		

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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	14:47:01	98.975%	0.120	20.130	20.460	0.000	5755.000	5790.000	5666.000
2	14:47:27	102.360%	0.076	16.580	19.120	0.000	5733.000	5851.000	5768.000
3	14:47:54	104.434%	0.074	17.690	19.890	0.000	5746.000	5842.000	5823.000
x		101.923%	0.090	18.130	19.830	0.000	5745.000	5828.000	5752.000
σ		2.756%	0.026	1.816	0.672	0.000	11.040	33.290	79.640
%RSD		2.704	28.920	10.010	3.388	0.000	0.192	0.571	1.384

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:01	481.000	4158.000	0.000	2043.000	38500.000	37830.000	86.738%	8.420
2	14:47:27	540.600	4183.000	0.000	2099.000	41610.000	39150.000	88.624%	8.829
3	14:47:54	538.300	4127.000	0.000	2084.000	41630.000	39280.000	89.451%	10.100
x		519.900	4156.000	0.000	2075.000	40580.000	38750.000	88.271%	9.117
σ		33.770	27.860	0.000	29.370	1800.000	801.100	1.390%	0.878
%RSD		6.495	0.670	0.000	1.415	4.437	2.067	1.575	9.631

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:01	4.147	4.457	10.720	514.100	624.500	0.593	2.416	1.314
2	14:47:27	1.038	4.136	10.890	526.600	628.500	0.609	2.073	1.454
3	14:47:54	2.960	3.954	10.930	532.200	625.300	0.544	2.010	1.345
x		2.715	4.182	10.850	524.300	626.100	0.582	2.166	1.371
σ		1.569	0.254	0.110	9.263	2.120	0.034	0.219	0.073
%RSD		57.780	6.080	1.016	1.767	0.339	5.842	10.090	5.345

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:01	1.410	3.439	3.266	-1.230	0.021	-1.621	0.000	122.300
2	14:47:27	1.572	3.561	3.571	2.521	-0.730	-3.896	0.000	125.000
3	14:47:54	1.289	3.270	3.838	1.176	-1.329	-4.406	0.000	124.500
x		1.423	3.423	3.558	0.822	-0.679	-3.308	0.000	124.000
σ		0.142	0.146	0.287	1.900	0.676	1.483	0.000	1.429
%RSD		9.984	4.275	8.052	231.000	99.570	44.820	0.000	1.153

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:01	88.837%	6.833	6.595	83.329%	0.021	0.027	-0.049	-0.090
2	14:47:27	90.652%	5.171	5.168	85.451%	0.044	0.007	0.081	0.063
3	14:47:54	92.516%	4.231	4.198	86.071%	0.038	0.026	0.008	0.021
x		90.668%	5.412	5.320	84.950%	0.034	0.020	0.013	-0.002
σ		1.840%	1.318	1.206	1.438%	0.012	0.011	0.065	0.079
%RSD		2.029	24.350	22.660	1.693	35.060	54.330	492.300	3417.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:01	88.997%	8.021	0.478	0.517	54.120	54.600	93.552%	94.760%
2	14:47:27	91.151%	6.139	0.461	0.551	55.550	56.400	96.516%	97.458%
3	14:47:54	91.320%	4.812	0.488	0.550	57.150	55.710	99.586%	99.061%
x		90.489%	6.324	0.475	0.539	55.610	55.570	96.551%	97.093%
σ		1.295%	1.612	0.014	0.019	1.515	0.905	3.017%	2.174%
%RSD		1.431	25.500	2.869	3.553	2.724	1.629	3.125	2.239

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:47:01	0.238	0.221	0.355	0.330	0.350	94.821%
2	14:47:27	0.155	0.136	0.342	0.330	0.337	97.293%
3	14:47:54	0.142	0.127	0.344	0.339	0.348	98.366%
x		0.178	0.161	0.347	0.333	0.345	96.827%
σ		0.052	0.052	0.007	0.005	0.007	1.818%
%RSD		29.170	32.140	2.086	1.643	2.147	1.878

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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	14:51:18	101.362%	0.077	15.390	14.220	0.000	4838.000	4595.000	4589.000
2	14:51:44	102.958%	0.037	16.680	13.870	0.000	4889.000	4707.000	4674.000
3	14:52:11	103.491%	0.168	15.880	13.660	0.000	4898.000	4760.000	4697.000
x		102.603%	0.094	15.990	13.920	0.000	4875.000	4687.000	4653.000
σ		1.108%	0.067	0.652	0.284	0.000	32.360	84.110	57.020
%RSD		1.080	71.140	4.079	2.043	0.000	0.664	1.794	1.225

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:18	252.200	3851.000	0.000	1608.000	27930.000	27130.000	88.813%	5.205
2	14:51:44	251.500	3882.000	0.000	1655.000	29320.000	27750.000	91.007%	3.939
3	14:52:11	255.000	3922.000	0.000	1674.000	29410.000	28020.000	91.480%	4.728
x		252.900	3885.000	0.000	1645.000	28880.000	27630.000	90.434%	4.624
σ		1.857	35.780	0.000	34.210	831.100	455.700	1.423%	0.640
%RSD		0.734	0.921	0.000	2.079	2.878	1.649	1.574	13.830

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:18	2.304	3.771	16.850	244.200	329.400	0.275	1.277	0.857
2	14:51:44	2.706	3.636	17.340	243.700	324.300	0.265	1.227	0.828
3	14:52:11	2.849	3.597	17.730	246.400	333.400	0.280	1.093	0.992
x		2.620	3.668	17.310	244.700	329.000	0.273	1.199	0.892
σ		0.283	0.092	0.438	1.454	4.571	0.008	0.096	0.087
%RSD		10.780	2.497	2.530	0.594	1.389	2.891	7.966	9.806

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:18	1.058	2.715	2.647	2.949	-0.851	-5.230	0.000	90.530
2	14:51:44	1.180	2.607	3.056	0.869	-0.270	-5.273	0.000	91.530
3	14:52:11	0.948	2.814	3.402	1.724	-0.680	-4.187	0.000	93.260
x		1.062	2.712	3.035	1.847	-0.600	-4.897	0.000	91.770
σ		0.116	0.104	0.378	1.045	0.298	0.615	0.000	1.379
%RSD		10.930	3.818	12.460	56.580	49.720	12.560	0.000	1.503

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:18	89.485%	1.134	1.133	84.751%	0.001	-0.014	0.052	-0.005
2	14:51:44	93.658%	1.130	1.154	86.931%	0.001	-0.020	-0.065	-0.022
3	14:52:11	93.763%	1.073	1.191	88.031%	0.018	-0.009	0.029	0.005
x		92.302%	1.112	1.159	86.571%	0.007	-0.015	0.005	-0.007
σ		2.440%	0.034	0.029	1.669%	0.010	0.006	0.062	0.014
%RSD		2.644	3.060	2.523	1.928	149.700	38.560	1174.000	186.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:18	90.471%	1.590	0.184	0.197	42.970	42.580	96.346%	96.631%
2	14:51:44	92.345%	1.431	0.199	0.198	43.800	44.660	97.997%	99.578%
3	14:52:11	92.887%	1.437	0.190	0.196	44.230	44.070	100.020%	100.046%
x		91.901%	1.486	0.191	0.197	43.670	43.770	98.121%	98.751%
σ		1.268%	0.090	0.008	0.001	0.640	1.073	1.840%	1.851%
%RSD		1.380	6.084	3.991	0.519	1.466	2.450	1.875	1.875

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:18	0.051	0.048	0.169	0.165	0.161	97.543%
2	14:51:44	0.052	0.043	0.158	0.143	0.160	99.292%
3	14:52:11	0.044	0.049	0.182	0.155	0.163	101.253%
x		0.049	0.047	0.170	0.154	0.161	99.363%
σ		0.004	0.003	0.012	0.011	0.002	1.856%
%RSD		8.530	7.446	7.106	7.116	1.023	1.868

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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	14:55:36	103.804%	0.037	11.110	13.170	0.000	4382.000	4420.000	4359.000
2	14:56:03	103.512%	-0.001	13.620	12.690	0.000	4498.000	4596.000	4539.000
3	14:56:29	106.499%	0.071	13.610	12.440	0.000	4470.000	4559.000	4497.000
x		104.605%	0.036	12.780	12.770	0.000	4450.000	4525.000	4465.000
σ		1.647%	0.036	1.445	0.368	0.000	60.420	92.660	94.180
%RSD		1.574	100.400	11.310	2.882	0.000	1.358	2.048	2.109
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:36	235.400	3575.000	0.000	1594.000	27810.000	26320.000	90.295%	4.031
2	14:56:03	242.500	3675.000	0.000	1680.000	29210.000	27420.000	91.341%	4.686
3	14:56:29	241.000	3706.000	0.000	1684.000	29760.000	27730.000	91.980%	3.609
x		239.600	3652.000	0.000	1653.000	28930.000	27160.000	91.205%	4.109
σ		3.719	68.100	0.000	51.380	1002.000	742.900	0.851%	0.543
%RSD		1.552	1.865	0.000	3.109	3.465	2.735	0.933	13.210
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:36	0.363	3.799	63.910	325.700	416.000	0.276	1.806	0.867
2	14:56:03	2.753	3.556	65.460	336.000	412.400	0.290	1.826	1.028
3	14:56:29	3.360	3.755	65.850	333.600	409.500	0.320	1.799	1.099
x		2.158	3.703	65.070	331.800	412.600	0.295	1.811	0.998
σ		1.585	0.130	1.028	5.360	3.233	0.022	0.014	0.119
%RSD		73.420	3.499	1.579	1.616	0.784	7.490	0.783	11.940
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:36	1.071	3.171	2.975	3.188	-0.638	-3.348	0.000	90.650
2	14:56:03	1.097	3.078	3.331	0.972	-1.469	-3.494	0.000	93.320
3	14:56:29	0.983	3.245	3.293	0.329	-1.304	-3.135	0.000	92.760
x		1.050	3.165	3.200	1.496	-1.137	-3.326	0.000	92.240
σ		0.060	0.083	0.195	1.500	0.440	0.181	0.000	1.407
%RSD		5.720	2.631	6.108	100.200	38.690	5.432	0.000	1.525
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:36	90.207%	0.683	0.628	86.006%	-0.000	0.016	0.127	0.076
2	14:56:03	92.467%	0.580	0.757	86.777%	0.018	0.015	-0.002	-0.008
3	14:56:29	94.196%	0.684	0.715	88.303%	0.008	-0.013	-0.015	-0.008
x		92.290%	0.649	0.700	87.029%	0.009	0.006	0.037	0.020
σ		2.000%	0.060	0.065	1.169%	0.009	0.016	0.079	0.049
%RSD		2.167	9.186	9.353	1.343	103.200	273.000	214.500	242.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:55:36	91.778%	0.955	0.125	0.136	38.400	38.500	96.382%	97.518%
2	14:56:03	92.414%	0.940	0.122	0.174	39.890	39.250	98.835%	99.099%
3	14:56:29	93.405%	0.959	0.132	0.163	39.320	39.780	99.872%	100.059%
x		92.533%	0.951	0.126	0.158	39.200	39.180	98.363%	98.892%
σ		0.820%	0.010	0.006	0.019	0.752	0.642	1.792%	1.283%
%RSD		0.886	1.091	4.412	12.270	1.918	1.638	1.822	1.297
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:55:36	0.046	0.025	0.221	0.193	0.199	98.594%		
2	14:56:03	0.018	0.036	0.249	0.209	0.217	98.982%		
3	14:56:29	0.044	0.032	0.227	0.233	0.219	98.811%		
x		0.036	0.031	0.232	0.212	0.212	98.796%		
σ		0.016	0.005	0.015	0.020	0.011	0.195%		
%RSD		44.270	17.210	6.338	9.560	5.283	0.197		

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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	14:59:51	97.257%	95.230	94.370	93.450	0.000	46500.000	45420.000	44980.000
2	15:00:18	96.564%	97.670	99.200	91.770	0.000	47550.000	46600.000	45840.000
3	15:00:45	98.348%	94.920	100.100	91.010	0.000	46570.000	45740.000	45340.000
x		97.390%	95.939%	97.878%	92.077%	0.000	93.743%	91.839%	90.773%
σ		0.899%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.923	1.571	3.135	1.358	0.000	1.253	1.320	0.954

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:51	444.000	4765.000	0.000	48970.000	48050.000	47540.000	93.748%	98.110
2	15:00:18	461.500	4874.000	0.000	50200.000	49810.000	48770.000	94.363%	100.000
3	15:00:45	451.300	4780.000	0.000	49530.000	49500.000	48290.000	94.353%	97.740
x		90.457%	96.126%	0.000	99.135%	98.240%	96.400%	94.155%	98.621%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.352%	n/a
%RSD		1.937	1.232	0.000	1.241	1.918	1.290	0.374	1.236

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:51	90.780	91.800	449.200	23710.000	22290.000	93.280	96.250	94.540
2	15:00:18	94.700	94.790	461.000	24640.000	23020.000	95.660	97.450	96.640
3	15:00:45	94.430	95.510	460.200	24510.000	22960.000	94.790	95.340	95.190
x		93.303%	94.033%	91.363%	97.149%	91.021%	94.575%	96.350%	95.458%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.343	2.093	1.438	2.070	1.764	1.275	1.098	1.128

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:51	93.890	98.000	97.670	95.390	95.700	94.040	0.000	94.850
2	15:00:18	96.270	100.600	100.000	96.430	97.900	95.160	0.000	95.900
3	15:00:45	95.150	98.880	98.160	96.240	99.130	94.150	0.000	96.390
x		95.102%	99.161%	98.610%	96.019%	97.575%	94.452%	0.000	95.712%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.252	1.339	1.246	0.579	1.782	0.654	0.000	0.818

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:51	95.568%	89.890	90.730	90.395%	93.410	93.590	94.080	92.690
2	15:00:18	97.739%	94.430	95.710	91.559%	95.820	94.880	97.560	96.280
3	15:00:45	97.733%	98.970	98.510	92.193%	96.270	94.770	96.880	97.800
x		97.013%	94.430%	94.985%	91.382%	95.166%	94.413%	96.174%	95.590%
σ		1.252%	n/a	n/a	0.912%	n/a	n/a	n/a	n/a
%RSD		1.291	4.805	4.150	0.998	1.613	0.759	1.919	2.743

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:51	95.983%	93.440	93.540	93.320	92.470	93.650	101.501%	100.808%
2	15:00:18	96.156%	97.310	96.470	95.960	95.360	95.910	102.187%	103.394%
3	15:00:45	96.284%	97.190	96.290	97.190	96.450	95.180	102.151%	102.938%
x		96.141%	95.980%	95.434%	95.490%	94.760%	94.916%	101.946%	102.380%
σ		0.151%	n/a	n/a	n/a	n/a	n/a	0.386%	1.380%
%RSD		0.157	2.295	1.719	2.071	2.172	1.219	0.379	1.348

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:59:51	105.800	102.800	105.400	105.200	104.500	91.930%
2	15:00:18	107.500	104.900	107.600	108.600	107.700	93.069%
3	15:00:45	106.500	105.700	108.300	108.900	108.700	92.963%
x		106.573%	104.471%	107.136%	107.574%	106.975%	92.654%
σ		n/a	n/a	n/a	n/a	n/a	0.629%
%RSD		0.794	1.434	1.406	1.943	2.046	0.679

CCB2 1/26/2015 3:06:50 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	15:07:17	102.292%	0.018	1.132	0.795	0.000	-0.280	3.923	5.981
2	15:07:43	102.946%	0.037	1.478	0.975	0.000	-1.454	4.891	4.764
3	15:08:10	103.327%	0.018	0.763	0.597	0.000	-1.465	5.941	4.663
x		102.855%	0.024	1.125	0.789	0.000	-1.066	4.918	5.136
σ		0.523%	0.011	0.358	0.189	0.000	0.681	1.010	0.733
%RSD		0.509	44.710	31.790	23.990	0.000	63.900	20.530	14.270
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:07:17	0.961	2.255	0.000	-3.346	26.110	3.837	101.778%	0.042
2	15:07:43	0.825	-1.393	0.000	5.132	-1.684	2.083	101.118%	0.044
3	15:08:10	0.732	-1.008	0.000	4.792	9.690	4.311	102.395%	0.063
x		0.840	-0.048	0.000	2.193	11.370	3.410	101.764%	0.050
σ		0.115	2.004	0.000	4.799	13.970	1.174	0.638%	0.012
%RSD		13.740	4141.000	0.000	218.900	122.900	34.420	0.627	23.780
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:07:17	0.108	-0.009	0.017	1.577	0.935	0.009	0.532	-0.025
2	15:07:43	-0.134	0.003	-0.001	0.739	-2.006	0.009	0.599	0.040
3	15:08:10	0.063	0.026	0.021	-0.415	-6.027	0.009	0.286	0.004
x		0.012	0.007	0.012	0.634	-2.366	0.009	0.472	0.007
σ		0.129	0.018	0.011	1.000	3.495	0.000	0.165	0.033
%RSD		1034.000	255.500	91.920	157.800	147.700	2.468	34.960	488.600
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:07:17	0.060	0.047	0.056	-0.453	-0.539	-2.320	0.000	0.025
2	15:07:43	-0.002	0.110	0.053	-0.209	-0.379	-1.762	0.000	0.023
3	15:08:10	0.009	0.041	0.144	-0.250	-0.110	-1.392	0.000	0.017
x		0.022	0.066	0.085	-0.304	-0.342	-1.824	0.000	0.022
σ		0.033	0.038	0.051	0.131	0.217	0.467	0.000	0.004
%RSD		149.500	57.880	60.850	43.080	63.350	25.610	0.000	18.350
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:07:17	100.361%	0.447	0.369	99.194%	0.007	0.001	0.036	0.011
2	15:07:43	102.834%	0.356	0.407	101.616%	0.004	0.001	0.050	0.016
3	15:08:10	103.630%	0.325	0.355	101.749%	-0.005	-0.018	-0.036	-0.017
x		102.275%	0.376	0.377	100.853%	0.002	-0.006	0.017	0.003
σ		1.705%	0.063	0.027	1.438%	0.006	0.011	0.046	0.018
%RSD		1.667	16.850	7.185	1.426	324.700	202.200	280.400	554.400
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:07:17	102.750%	0.270	0.143	0.166	0.054	0.030	103.222%	103.797%
2	15:07:43	102.754%	0.201	0.155	0.144	0.014	0.030	105.999%	106.704%
3	15:08:10	104.903%	0.242	0.156	0.115	0.013	0.066	105.185%	107.760%
x		103.469%	0.238	0.151	0.141	0.027	0.042	104.802%	106.087%
σ		1.242%	0.035	0.007	0.025	0.024	0.021	1.428%	2.053%
%RSD		1.200	14.640	4.671	17.920	86.710	49.330	1.363	1.935
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:07:17	0.019	0.019	0.007	0.017	0.009	111.620%		
2	15:07:43	0.013	0.012	0.009	0.022	0.013	108.985%		
3	15:08:10	0.023	0.013	0.016	0.006	0.007	111.196%		
x		0.018	0.015	0.011	0.015	0.010	110.601%		
σ		0.005	0.003	0.005	0.008	0.003	1.415%		
%RSD		25.810	22.650	42.510	54.870	33.720	1.279		

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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	15:11:34	100.266%	0.001	17.770	17.710	0.000	14700.000	8305.000	8260.000
2	15:12:00	103.516%	0.056	17.800	18.200	0.000	14950.000	8558.000	8446.000
3	15:12:27	104.106%	0.074	20.530	18.790	0.000	15070.000	8694.000	8569.000
x		102.629%	0.044	18.700	18.230	0.000	14910.000	8519.000	8425.000
σ		2.068%	0.038	1.586	0.540	0.000	189.800	197.300	155.500
%RSD		2.015	86.770	8.480	2.962	0.000	1.273	2.316	1.846
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:34	90.130	3492.000	0.000	1508.000	48210.000	47030.000	88.288%	1.661
2	15:12:00	95.690	3584.000	0.000	1574.000	50470.000	49550.000	90.553%	2.219
3	15:12:27	97.130	3543.000	0.000	1538.000	51200.000	49850.000	91.348%	2.722
x		94.320	3539.000	0.000	1540.000	49960.000	48810.000	90.063%	2.201
σ		3.696	46.290	0.000	33.190	1558.000	1547.000	1.588%	0.531
%RSD		3.919	1.308	0.000	2.156	3.119	3.169	1.763	24.110
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:34	2.858	3.095	50.930	118.400	314.400	0.128	0.274	0.752
2	15:12:00	0.743	3.004	51.880	120.100	310.800	0.149	0.365	0.836
3	15:12:27	1.291	2.966	53.320	119.200	301.700	0.161	0.375	0.876
x		1.631	3.022	52.040	119.200	309.000	0.146	0.338	0.821
σ		1.097	0.066	1.201	0.844	6.532	0.017	0.056	0.064
%RSD		67.300	2.187	2.308	0.708	2.114	11.370	16.520	7.756
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:34	0.917	9.295	9.755	0.571	-0.879	-2.740	0.000	248.500
2	15:12:00	0.741	9.820	8.861	-0.369	-2.288	-5.479	0.000	254.300
3	15:12:27	0.903	9.811	9.595	0.941	-1.695	-3.565	0.000	258.300
x		0.854	9.642	9.404	0.381	-1.621	-3.928	0.000	253.700
σ		0.098	0.300	0.477	0.675	0.707	1.405	0.000	4.904
%RSD		11.470	3.117	5.069	177.100	43.650	35.770	0.000	1.933
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:34	87.973%	0.817	0.716	82.887%	0.013	0.026	-0.022	-0.009
2	15:12:00	91.617%	0.670	0.713	84.560%	0.006	0.046	0.018	-0.003
3	15:12:27	92.151%	0.719	0.613	86.046%	0.022	0.014	-0.039	-0.024
x		90.580%	0.735	0.681	84.498%	0.014	0.029	-0.014	-0.012
σ		2.274%	0.075	0.059	1.580%	0.008	0.016	0.029	0.011
%RSD		2.510	10.140	8.671	1.870	57.020	57.340	202.600	90.350
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:34	87.559%	0.994	0.337	0.354	44.860	45.450	94.022%	94.683%
2	15:12:00	89.831%	0.965	0.299	0.323	44.900	44.860	97.909%	97.904%
3	15:12:27	91.559%	0.819	0.247	0.264	46.280	46.380	99.310%	99.013%
x		89.649%	0.926	0.294	0.314	45.350	45.560	97.080%	97.200%
σ		2.006%	0.094	0.045	0.046	0.807	0.768	2.739%	2.249%
%RSD		2.238	10.130	15.220	14.610	1.780	1.686	2.822	2.314
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:11:34	0.030	0.015	0.112	0.122	0.101	94.007%		
2	15:12:00	0.019	0.015	0.082	0.117	0.097	96.037%		
3	15:12:27	0.024	0.013	0.099	0.071	0.086	98.643%		
x		0.024	0.015	0.098	0.103	0.095	96.229%		
σ		0.005	0.001	0.015	0.028	0.008	2.324%		
%RSD		22.360	6.923	15.040	27.120	8.036	2.415		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	100.644%	0.059	11.090	11.320	0.000	2387.000	2703.000	2670.000
2	15:16:16	104.731%	0.017	11.850	10.240	0.000	2388.000	2727.000	2695.000
3	15:16:43	106.054%	-0.002	11.810	10.390	0.000	2376.000	2714.000	2708.000
x		103.810%	0.025	11.580	10.650	0.000	2384.000	2715.000	2691.000
σ		2.820%	0.031	0.428	0.586	0.000	6.946	12.110	19.530
%RSD		2.717	125.300	3.693	5.504	0.000	0.291	0.446	0.726

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	222.200	3968.000	0.000	964.500	18000.000	17120.000	89.030%	4.413
2	15:16:16	245.500	3994.000	0.000	1019.000	19360.000	18010.000	90.194%	4.614
3	15:16:43	220.500	3995.000	0.000	994.300	19630.000	18060.000	91.505%	4.700
x		229.400	3985.000	0.000	992.700	19000.000	17730.000	90.243%	4.576
σ		13.980	15.310	0.000	27.380	870.200	531.700	1.238%	0.147
%RSD		6.095	0.384	0.000	2.758	4.581	2.999	1.372	3.216

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	1.158	3.379	23.220	243.000	301.100	0.155	1.830	0.783
2	15:16:16	3.188	3.273	23.880	248.800	298.300	0.164	1.632	0.781
3	15:16:43	0.273	3.503	23.670	250.500	290.600	0.171	1.410	0.835
x		1.540	3.385	23.590	247.400	296.700	0.163	1.624	0.800
σ		1.495	0.115	0.339	3.922	5.413	0.008	0.210	0.030
%RSD		97.090	3.400	1.438	1.585	1.825	4.731	12.940	3.787

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	0.890	2.195	2.636	2.584	-0.910	-6.128	0.000	51.160
2	15:16:16	0.958	2.543	2.527	-0.107	-0.786	-4.600	0.000	52.670
3	15:16:43	0.859	2.606	2.639	2.680	-0.521	-6.224	0.000	53.060
x		0.902	2.448	2.601	1.719	-0.739	-5.651	0.000	52.300
σ		0.051	0.221	0.063	1.582	0.199	0.911	0.000	1.002
%RSD		5.608	9.033	2.439	92.050	26.920	16.120	0.000	1.915

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	89.522%	0.319	0.286	83.538%	-0.028	-0.005	-0.009	-0.032
2	15:16:16	92.255%	0.278	0.252	86.938%	-0.016	-0.011	0.034	-0.036
3	15:16:43	94.244%	0.173	0.295	88.256%	-0.016	-0.039	-0.018	-0.033
x		92.007%	0.257	0.278	86.244%	-0.020	-0.018	0.002	-0.034
σ		2.370%	0.075	0.022	2.434%	0.007	0.018	0.028	0.002
%RSD		2.576	29.240	7.997	2.823	33.890	99.640	1328.000	6.905

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	90.148%	4.966	0.127	0.121	27.650	26.440	95.943%	96.887%
2	15:16:16	92.830%	6.562	0.128	0.146	26.680	27.000	99.518%	99.138%
3	15:16:43	93.508%	6.456	0.147	0.132	27.130	27.680	102.707%	101.669%
x		92.162%	5.995	0.134	0.133	27.150	27.040	99.389%	99.231%
σ		1.777%	0.892	0.011	0.013	0.483	0.621	3.384%	2.392%
%RSD		1.928	14.890	8.304	9.600	1.778	2.295	3.405	2.411

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:50	0.018	0.015	0.180	0.221	0.201	98.570%
2	15:16:16	0.006	0.015	0.231	0.173	0.207	102.180%
3	15:16:43	0.010	0.012	0.218	0.217	0.201	102.520%
x		0.011	0.014	0.210	0.203	0.203	101.090%
σ		0.006	0.002	0.026	0.027	0.003	2.189%
%RSD		54.030	11.740	12.590	13.100	1.647	2.165

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	101.347%	0.001	21.820	21.160	0.000	17920.000	10070.000	9974.000
2	15:20:31	104.545%	0.148	20.090	19.450	0.000	18020.000	10290.000	10220.000
3	15:20:58	106.868%	0.016	22.010	20.630	0.000	18000.000	10370.000	10290.000
x		104.253%	0.055	21.310	20.410	0.000	17980.000	10240.000	10160.000
σ		2.772%	0.081	1.056	0.874	0.000	49.540	151.900	166.900
%RSD		2.659	147.800	4.955	4.282	0.000	0.276	1.483	1.643

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	48.080	3515.000	0.000	1369.000	57600.000	55540.000	89.417%	1.342
2	15:20:31	48.190	3554.000	0.000	1392.000	58420.000	58390.000	91.652%	1.432
3	15:20:58	48.250	3524.000	0.000	1404.000	60410.000	59610.000	91.682%	1.144
x		48.170	3531.000	0.000	1388.000	58810.000	57840.000	90.917%	1.306
σ		0.088	20.170	0.000	18.000	1446.000	2090.000	1.299%	0.147
%RSD		0.183	0.571	0.000	1.297	2.459	3.613	1.429	11.270

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	-0.386	3.334	61.200	80.580	291.100	0.141	0.796	0.678
2	15:20:31	2.811	3.148	62.170	79.760	291.600	0.133	1.121	0.660
3	15:20:58	1.358	3.184	62.760	80.960	280.200	0.126	1.138	0.645
x		1.261	3.222	62.040	80.430	287.600	0.133	1.018	0.661
σ		1.601	0.099	0.786	0.611	6.423	0.007	0.192	0.016
%RSD		127.000	3.074	1.267	0.760	2.233	5.576	18.890	2.495

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	0.781	1.786	1.751	1.162	-1.615	-2.922	0.000	315.200
2	15:20:31	0.694	1.869	1.971	2.394	-1.689	-3.408	0.000	323.700
3	15:20:58	0.918	2.005	2.051	2.524	-1.005	-2.758	0.000	326.500
x		0.798	1.887	1.924	2.026	-1.436	-3.029	0.000	321.800
σ		0.113	0.111	0.155	0.752	0.376	0.338	0.000	5.888
%RSD		14.170	5.865	8.077	37.100	26.160	11.160	0.000	1.830

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	90.075%	0.534	0.509	84.523%	-0.021	-0.009	0.018	0.004
2	15:20:31	93.495%	0.438	0.629	86.320%	-0.010	-0.015	0.043	0.024
3	15:20:58	94.169%	0.516	0.514	87.757%	-0.018	0.006	0.145	0.066
x		92.580%	0.496	0.551	86.200%	-0.016	-0.006	0.069	0.031
σ		2.195%	0.051	0.068	1.620%	0.005	0.011	0.067	0.031
%RSD		2.371	10.210	12.300	1.880	33.190	177.000	97.710	100.400

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	89.603%	0.364	0.077	0.088	47.300	48.580	96.948%	97.167%
2	15:20:31	92.513%	0.391	0.107	0.107	47.130	48.870	98.761%	99.690%
3	15:20:58	93.175%	0.394	0.096	0.145	46.530	47.510	101.351%	101.036%
x		91.764%	0.383	0.094	0.113	46.990	48.320	99.020%	99.298%
σ		1.900%	0.016	0.015	0.029	0.402	0.715	2.213%	1.964%
%RSD		2.070	4.270	16.250	25.510	0.856	1.479	2.235	1.978

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:20:04	0.015	0.013	0.150	0.149	0.138	96.415%
2	15:20:31	0.020	0.008	0.153	0.147	0.139	99.657%
3	15:20:58	0.007	0.010	0.155	0.121	0.138	101.682%
x		0.014	0.010	0.152	0.139	0.138	99.251%
σ		0.007	0.003	0.003	0.016	0.001	2.657%
%RSD		49.370	24.410	1.772	11.380	0.616	2.677

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	101.671%	-0.057	0.549	0.537	0.000	-3.775	2.878	2.677
2	15:27:57	101.539%	0.114	0.670	0.457	0.000	-2.000	3.357	3.438
3	15:28:24	105.879%	0.034	-0.184	0.397	0.000	-2.212	2.992	3.646
x		103.029%	0.030	0.345	0.464	0.000	-2.662	3.076	3.254
σ		2.468%	0.086	0.462	0.070	0.000	0.969	0.250	0.510
%RSD		2.396	280.800	133.900	15.150	0.000	36.400	8.127	15.680

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	0.700	0.290	0.000	0.326	27.730	13.120	97.824%	0.005
2	15:27:57	0.568	-0.980	0.000	4.995	25.380	16.470	97.660%	-0.044
3	15:28:24	0.625	-1.717	0.000	-1.696	24.880	16.690	98.712%	-0.143
x		0.631	-0.802	0.000	1.208	26.000	15.430	98.065%	-0.060
σ		0.066	1.016	0.000	3.431	1.519	2.002	0.566%	0.075
%RSD		10.460	126.600	0.000	284.000	5.841	12.970	0.577	124.900

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	0.159	0.390	0.017	-0.563	-13.810	-0.005	0.968	0.033
2	15:27:57	0.086	0.420	0.019	-1.820	-12.310	0.007	0.965	0.091
3	15:28:24	0.627	0.385	0.057	-2.016	-14.280	0.005	0.927	0.116
x		0.291	0.398	0.031	-1.466	-13.470	0.002	0.953	0.080
σ		0.294	0.019	0.022	0.788	1.032	0.007	0.023	0.043
%RSD		101.100	4.803	72.780	53.770	7.664	280.400	2.397	53.110

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	0.028	0.678	0.754	-0.293	-0.865	-2.679	0.000	0.048
2	15:27:57	0.077	0.654	0.904	-0.725	-1.612	-5.436	0.000	0.071
3	15:28:24	0.101	0.800	0.893	-0.527	-1.383	-3.339	0.000	0.091
x		0.069	0.711	0.851	-0.515	-1.287	-3.818	0.000	0.070
σ		0.037	0.078	0.084	0.216	0.383	1.439	0.000	0.021
%RSD		53.850	11.000	9.862	41.970	29.740	37.700	0.000	30.450

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	97.707%	0.052	0.022	95.282%	-0.018	-0.017	0.012	-0.009
2	15:27:57	100.108%	0.014	0.011	97.151%	-0.004	-0.023	-0.019	-0.014
3	15:28:24	99.720%	0.014	0.013	97.879%	-0.016	-0.012	-0.025	-0.036
x		99.178%	0.027	0.015	96.771%	-0.013	-0.017	-0.011	-0.020
σ		1.289%	0.022	0.006	1.340%	0.008	0.005	0.020	0.015
%RSD		1.299	81.710	37.800	1.384	60.340	30.820	184.600	76.080

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	97.972%	0.053	-0.008	-0.013	0.174	0.186	102.617%	102.245%
2	15:27:57	100.750%	0.091	-0.014	-0.003	0.243	0.226	104.182%	104.664%
3	15:28:24	100.195%	0.127	-0.006	0.002	0.228	0.258	106.269%	105.038%
x		99.639%	0.090	-0.010	-0.005	0.215	0.223	104.356%	103.982%
σ		1.470%	0.037	0.004	0.007	0.036	0.036	1.832%	1.516%
%RSD		1.476	40.840	42.570	150.500	16.930	16.260	1.756	1.458

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:30	0.008	0.007	0.005	0.008	0.005	110.629%
2	15:27:57	0.003	0.007	-0.004	-0.002	-0.001	109.833%
3	15:28:24	0.005	0.006	0.014	0.003	0.004	108.091%
x		0.006	0.007	0.005	0.003	0.002	109.518%
σ		0.002	0.000	0.009	0.005	0.003	1.298%
%RSD		40.300	1.830	181.400	155.500	136.600	1.185

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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	15:31:45	100.660%	0.038	0.312	0.404	0.000	-5.933	1.850	1.435
2	15:32:12	102.782%	-0.038	-0.295	0.387	0.000	-5.513	1.022	1.377
3	15:32:38	106.700%	0.105	0.381	0.358	0.000	-5.828	0.965	1.233
x		103.381%	0.035	0.133	0.383	0.000	-5.758	1.279	1.348
σ		3.064%	0.072	0.372	0.023	0.000	0.219	0.495	0.104
%RSD		2.964	204.400	279.800	6.058	0.000	3.802	38.710	7.726
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:31:45	0.541	-0.559	0.000	-14.170	9.645	6.755	102.734%	-0.077
2	15:32:12	0.566	-2.923	0.000	-17.630	7.107	8.093	103.725%	-0.125
3	15:32:38	0.474	-2.275	0.000	-22.420	2.212	7.938	105.543%	-0.082
x		0.527	-1.919	0.000	-18.080	6.321	7.595	104.001%	-0.094
σ		0.048	1.221	0.000	4.142	3.778	0.732	1.424%	0.027
%RSD		9.023	63.640	0.000	22.920	59.770	9.635	1.370	28.100
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:31:45	-0.114	0.400	0.018	-2.844	-14.010	0.002	0.895	0.092
2	15:32:12	0.051	0.469	-0.023	-4.141	-15.570	0.003	1.034	0.057
3	15:32:38	-0.188	0.474	-0.024	-5.129	-17.530	0.000	1.067	0.007
x		-0.084	0.447	-0.010	-4.038	-15.700	0.002	0.999	0.052
σ		0.122	0.041	0.024	1.146	1.760	0.002	0.091	0.043
%RSD		146.400	9.168	241.700	28.390	11.210	91.320	9.104	83.060
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:31:45	0.042	0.348	0.323	-1.362	-0.935	-3.644	0.000	0.037
2	15:32:12	0.058	0.519	0.521	-0.955	-1.327	-2.736	0.000	0.042
3	15:32:38	0.103	0.408	0.441	-0.600	-0.494	-1.394	0.000	0.038
x		0.068	0.425	0.428	-0.972	-0.918	-2.591	0.000	0.039
σ		0.032	0.087	0.100	0.381	0.417	1.132	0.000	0.003
%RSD		47.350	20.450	23.250	39.230	45.380	43.680	0.000	6.794
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:31:45	91.844%	0.024	0.008	93.355%	-0.014	-0.023	0.008	-0.002
2	15:32:12	93.763%	0.018	-0.006	94.103%	-0.035	-0.014	-0.065	-0.053
3	15:32:38	96.015%	0.011	0.025	95.309%	-0.018	-0.007	-0.050	-0.045
x		93.874%	0.018	0.009	94.256%	-0.022	-0.014	-0.036	-0.033
σ		2.088%	0.007	0.016	0.986%	0.011	0.008	0.039	0.027
%RSD		2.224	37.070	173.000	1.046	49.420	54.840	108.000	81.490
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:31:45	96.189%	0.069	-0.009	-0.005	0.024	0.030	99.446%	100.738%
2	15:32:12	99.875%	0.044	-0.011	-0.001	0.008	0.008	104.420%	104.770%
3	15:32:38	100.235%	0.041	-0.021	-0.015	-0.005	0.019	105.153%	104.760%
x		98.766%	0.051	-0.014	-0.007	0.009	0.019	103.006%	103.422%
σ		2.239%	0.016	0.006	0.007	0.015	0.011	3.105%	2.325%
%RSD		2.267	30.340	45.350	98.080	164.200	55.590	3.015	2.248
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:31:45	0.004	0.005	0.027	0.018	0.028	106.951%		
2	15:32:12	0.005	0.004	0.038	0.030	0.032	107.242%		
3	15:32:38	0.004	0.002	0.029	0.023	0.029	107.657%		
x		0.004	0.004	0.031	0.024	0.030	107.284%		
σ		0.001	0.002	0.006	0.006	0.002	0.355%		
%RSD		20.010	41.500	18.970	25.340	7.264	0.331		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:00	96.205%	44.650	878.100	867.800	0.000	42490.000	40160.000	39870.000
2	15:36:27	100.871%	46.410	895.300	862.700	0.000	42780.000	41220.000	40530.000
3	15:36:54	97.443%	46.760	934.000	902.000	0.000	43440.000	42120.000	41490.000
x		98.173%	45.940	902.500	877.500	0.000	42900.000	41170.000	40630.000
σ		2.417%	1.133	28.640	21.370	0.000	489.600	979.700	811.900
%RSD		2.462	2.466	3.173	2.435	0.000	1.141	2.380	1.998
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:00	1639.000	8058.000	0.000	46110.000	45380.000	43320.000	89.489%	882.400
2	15:36:27	1694.000	8110.000	0.000	46820.000	46980.000	45220.000	89.073%	924.500
3	15:36:54	1737.000	8296.000	0.000	47500.000	47840.000	46290.000	89.712%	934.000
x		1690.000	8155.000	0.000	46810.000	46730.000	44940.000	89.425%	913.600
σ		48.740	125.000	0.000	696.100	1247.000	1506.000	0.324%	27.450
%RSD		2.884	1.533	0.000	1.487	2.668	3.352	0.363	3.005
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:00	435.300	171.700	415.300	883.100	953.200	439.300	435.000	220.700
2	15:36:27	448.200	177.400	427.900	920.200	971.400	452.300	446.500	228.600
3	15:36:54	455.200	178.700	433.900	928.100	985.400	453.700	451.900	228.500
x		446.200	175.900	425.700	910.500	970.000	448.500	444.500	225.900
σ		10.110	3.739	9.487	24.030	16.160	7.926	8.668	4.521
%RSD		2.265	2.125	2.228	2.639	1.666	1.767	1.950	2.001
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:00	221.400	456.200	449.800	34.730	10.410	5.793	0.000	995.800
2	15:36:27	228.100	469.200	460.600	37.050	8.736	5.619	0.000	1004.000
3	15:36:54	225.900	474.200	462.300	36.050	8.349	4.873	0.000	1009.000
x		225.100	466.600	457.600	35.940	9.165	5.428	0.000	1003.000
σ		3.411	9.302	6.806	1.162	1.094	0.489	0.000	6.463
%RSD		1.515	1.994	1.487	3.233	11.940	9.008	0.000	0.645
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:00	88.767%	970.600	983.100	83.767%	46.960	46.560	47.210	36.400
2	15:36:27	91.481%	997.900	1014.000	85.049%	47.760	47.320	47.770	37.700
3	15:36:54	93.221%	1009.000	1025.000	85.121%	47.110	47.490	48.540	35.120
x		91.156%	992.500	1007.000	84.646%	47.280	47.120	47.840	36.410
σ		2.245%	19.760	21.520	0.762%	0.426	0.497	0.668	1.293
%RSD		2.462	1.991	2.137	0.900	0.902	1.055	1.396	3.551
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:00	88.824%	1992.000	480.900	473.100	1816.000	1875.000	98.745%	99.556%
2	15:36:27	90.189%	2050.000	497.100	488.600	1867.000	1922.000	99.176%	101.038%
3	15:36:54	90.863%	2082.000	496.900	492.000	1884.000	1931.000	100.421%	101.974%
x		89.959%	2041.000	491.600	484.600	1856.000	1909.000	99.447%	100.856%
σ		1.039%	45.590	9.272	10.090	35.200	30.030	0.871%	1.220%
%RSD		1.155	2.233	1.886	2.082	1.897	1.573	0.876	1.209
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:36:00	47.290	45.720	19.580	19.610	19.350	96.697%		
2	15:36:27	49.120	47.630	19.890	20.470	19.860	97.683%		
3	15:36:54	49.070	48.160	20.430	20.230	20.040	98.614%		
x		48.490	47.170	19.970	20.100	19.750	97.664%		
σ		1.045	1.281	0.430	0.446	0.361	0.959%		
%RSD		2.155	2.715	2.153	2.217	1.828	0.982		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:17	98.524%	0.041	136.900	122.300	0.000	35360.000	20070.000	19980.000
2	15:40:44	104.297%	0.074	133.800	126.400	0.000	35340.000	20200.000	20120.000
3	15:41:11	104.785%	0.054	131.600	126.100	0.000	35310.000	20370.000	20230.000
x		102.535%	0.056	134.100	124.900	0.000	35340.000	20210.000	20110.000
σ		3.483%	0.016	2.670	2.293	0.000	26.500	149.000	124.200
%RSD		3.397	28.740	1.991	1.836	0.000	0.075	0.737	0.618
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:17	3.308	4202.000	0.000	8002.000	118800.000	120600.000	89.868%	1.412
2	15:40:44	3.577	4217.000	0.000	8206.000	121400.000	123700.000	90.835%	1.157
3	15:41:11	3.564	4195.000	0.000	8215.000	120400.000	123100.000	92.058%	1.008
x		3.483	4205.000	0.000	8141.000	120200.000	122500.000	90.920%	1.192
σ		0.152	11.610	0.000	120.500	1321.000	1660.000	1.098%	0.205
%RSD		4.355	0.276	0.000	1.480	1.099	1.355	1.207	17.160
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:17	0.871	3.073	118.100	475.100	868.700	1.142	2.587	0.572
2	15:40:44	0.575	2.844	120.300	490.200	896.700	1.210	2.884	0.554
3	15:41:11	1.758	2.817	121.500	487.900	877.000	1.244	2.747	0.546
x		1.068	2.911	120.000	484.400	880.800	1.199	2.739	0.558
σ		0.616	0.141	1.712	8.135	14.400	0.052	0.148	0.013
%RSD		57.660	4.839	1.427	1.679	1.635	4.326	5.410	2.304
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:17	0.824	4.469	4.005	-0.770	-1.704	-3.556	0.000	300.200
2	15:40:44	0.749	4.056	3.974	1.316	-2.196	-1.770	0.000	307.500
3	15:41:11	0.775	3.987	3.724	0.909	-2.137	-2.709	0.000	307.800
x		0.783	4.171	3.901	0.485	-2.012	-2.678	0.000	305.100
σ		0.038	0.261	0.154	1.106	0.269	0.893	0.000	4.311
%RSD		4.891	6.246	3.955	227.900	13.350	33.350	0.000	1.413
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:17	92.036%	8.282	7.853	84.110%	0.016	0.025	-0.024	-0.060
2	15:40:44	94.099%	5.743	5.543	86.252%	-0.010	-0.002	0.024	0.048
3	15:41:11	95.952%	4.101	4.291	87.867%	0.016	0.022	0.013	-0.005
x		94.029%	6.042	5.896	86.076%	0.007	0.015	0.005	-0.006
σ		1.959%	2.106	1.807	1.885%	0.015	0.015	0.025	0.054
%RSD		2.084	34.860	30.640	2.190	209.500	97.600	553.400	978.500
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:17	92.278%	7.478	0.417	0.391	46.110	46.280	99.854%	99.289%
2	15:40:44	92.585%	5.309	0.391	0.403	46.970	47.010	101.038%	102.140%
3	15:41:11	94.847%	3.969	0.377	0.391	47.950	47.610	102.264%	103.492%
x		93.236%	5.585	0.395	0.395	47.010	46.960	101.052%	101.640%
σ		1.403%	1.771	0.020	0.007	0.920	0.664	1.205%	2.145%
%RSD		1.505	31.700	5.090	1.735	1.957	1.415	1.193	2.111
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:40:17	0.400	0.340	0.158	0.110	0.120	98.913%		
2	15:40:44	0.257	0.259	0.122	0.095	0.107	99.838%		
3	15:41:11	0.216	0.205	0.128	0.092	0.103	101.014%		
x		0.291	0.268	0.136	0.099	0.110	99.922%		
σ		0.097	0.068	0.019	0.010	0.009	1.053%		
%RSD		33.170	25.390	13.960	10.070	8.059	1.054		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:35	101.468%	0.095	26.110	27.070	0.000	7372.000	3875.000	3837.000
2	15:45:02	103.181%	0.037	26.140	26.760	0.000	7401.000	3989.000	3912.000
3	15:45:28	103.107%	0.093	28.770	28.370	0.000	7482.000	4016.000	3927.000
x		102.585%	0.075	27.010	27.400	0.000	7418.000	3960.000	3892.000
σ		0.968%	0.033	1.529	0.855	0.000	57.320	74.770	48.190
%RSD		0.944	44.290	5.662	3.121	0.000	0.773	1.888	1.238
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:35	1.627	815.100	0.000	1668.000	24060.000	22360.000	94.792%	0.342
2	15:45:02	1.805	807.200	0.000	1650.000	23710.000	22220.000	96.639%	0.355
3	15:45:28	1.798	819.500	0.000	1705.000	23950.000	22520.000	96.338%	0.232
x		1.744	814.000	0.000	1675.000	23910.000	22370.000	95.923%	0.310
σ		0.101	6.268	0.000	28.040	177.900	150.900	0.991%	0.067
%RSD		5.794	0.770	0.000	1.674	0.744	0.675	1.033	21.720
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:35	0.395	0.643	24.160	96.540	168.900	0.273	1.478	0.200
2	15:45:02	-0.138	0.753	24.730	96.780	169.100	0.319	1.601	0.137
3	15:45:28	-0.145	0.615	25.040	98.070	169.100	0.329	1.770	0.205
x		0.037	0.671	24.640	97.130	169.000	0.307	1.616	0.181
σ		0.310	0.073	0.448	0.823	0.101	0.030	0.146	0.038
%RSD		835.300	10.890	1.818	0.847	0.060	9.659	9.060	20.870
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:35	0.181	1.166	1.077	0.578	-1.647	-3.897	0.000	60.030
2	15:45:02	0.177	1.245	1.389	0.045	-1.369	-4.303	0.000	61.870
3	15:45:28	0.283	1.267	1.262	-0.102	-0.994	-3.543	0.000	60.750
x		0.214	1.226	1.243	0.174	-1.337	-3.914	0.000	60.880
σ		0.060	0.053	0.157	0.358	0.328	0.380	0.000	0.929
%RSD		28.190	4.327	12.610	206.000	24.510	9.713	0.000	1.526
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:35	96.328%	0.625	0.712	91.938%	-0.004	0.000	-0.024	-0.007
2	15:45:02	97.262%	0.684	0.684	93.675%	-0.004	-0.011	0.078	0.035
3	15:45:28	98.760%	0.604	0.723	93.992%	0.010	-0.009	-0.029	-0.004
x		97.450%	0.638	0.707	93.202%	0.001	-0.007	0.009	0.008
σ		1.227%	0.042	0.020	1.106%	0.008	0.006	0.060	0.023
%RSD		1.259	6.525	2.864	1.187	1056.000	88.000	707.400	288.400
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:35	96.463%	0.681	0.124	0.125	9.660	9.775	102.818%	101.268%
2	15:45:02	100.245%	0.786	0.136	0.107	9.741	9.692	101.656%	105.149%
3	15:45:28	99.796%	0.690	0.132	0.106	9.559	9.682	103.161%	105.645%
x		98.834%	0.719	0.131	0.113	9.653	9.716	102.545%	104.021%
σ		2.066%	0.058	0.006	0.011	0.091	0.051	0.789%	2.397%
%RSD		2.091	8.127	4.589	9.776	0.947	0.528	0.770	2.304
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:44:35	0.051	0.052	0.036	0.024	0.030	99.739%		
2	15:45:02	0.046	0.052	0.029	0.023	0.028	104.703%		
3	15:45:28	0.072	0.046	0.020	0.047	0.028	106.817%		
x		0.056	0.050	0.028	0.031	0.028	103.753%		
σ		0.014	0.004	0.008	0.013	0.001	3.633%		
%RSD		24.350	7.416	28.840	42.620	4.099	3.502		

180-40541-B-2-B MS 1/26/2015 3:48:26 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:53	96.755%	45.840	1015.000	972.900	0.000	77250.000	59210.000	58740.000
2	15:49:19	95.773%	51.270	1080.000	1027.000	0.000	80770.000	62480.000	61640.000
3	15:49:46	96.769%	47.340	1075.000	1018.000	0.000	79780.000	62280.000	61450.000
x		96.433%	48.150	1057.000	1006.000	0.000	79270.000	61320.000	60610.000
σ		0.571%	2.805	36.530	29.170	0.000	1819.000	1829.000	1623.000
%RSD		0.592	5.826	3.457	2.899	0.000	2.295	2.983	2.678
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:53	1641.000	12150.000	0.000	54240.000	163500.000	165600.000	87.957%	887.500
2	15:49:19	1740.000	12570.000	0.000	55700.000	170900.000	172600.000	86.646%	936.000
3	15:49:46	1735.000	12500.000	0.000	55550.000	171200.000	172200.000	87.852%	934.700
x		1705.000	12410.000	0.000	55160.000	168500.000	170100.000	87.485%	919.400
σ		55.660	224.600	0.000	803.700	4374.000	3925.000	0.728%	27.670
%RSD		3.264	1.811	0.000	1.457	2.595	2.307	0.833	3.009
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:53	441.100	172.400	541.100	1455.000	1871.000	442.100	435.800	218.800
2	15:49:19	456.300	180.300	565.900	1539.000	1933.000	464.500	454.500	230.100
3	15:49:46	457.200	180.400	566.200	1473.000	1938.000	458.300	452.300	226.800
x		451.500	177.700	557.700	1489.000	1914.000	455.000	447.500	225.200
σ		9.005	4.587	14.390	44.380	37.030	11.570	10.200	5.822
%RSD		1.994	2.582	2.580	2.980	1.935	2.543	2.279	2.585
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:53	218.700	461.900	449.500	35.650	7.897	6.661	0.000	1274.000
2	15:49:19	228.500	471.600	475.700	36.650	7.522	6.931	0.000	1316.000
3	15:49:46	225.900	476.900	466.500	36.230	8.795	8.150	0.000	1312.000
x		224.400	470.200	463.900	36.180	8.071	7.247	0.000	1301.000
σ		5.095	7.611	13.330	0.503	0.654	0.794	0.000	22.970
%RSD		2.271	1.619	2.873	1.390	8.105	10.950	0.000	1.766
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:53	88.668%	967.400	980.800	81.232%	47.330	47.080	47.860	35.990
2	15:49:19	88.164%	1010.000	1024.000	80.305%	47.720	47.160	47.910	38.770
3	15:49:46	91.191%	1015.000	1044.000	82.405%	47.980	46.830	49.480	37.140
x		89.341%	997.300	1016.000	81.314%	47.680	47.030	48.420	37.300
σ		1.622%	25.980	32.240	1.053%	0.330	0.174	0.922	1.393
%RSD		1.816	2.605	3.173	1.295	0.691	0.371	1.903	3.735
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:53	84.719%	2057.000	494.800	488.200	1930.000	1966.000	96.345%	97.059%
2	15:49:19	86.113%	2087.000	499.100	498.100	1958.000	2004.000	96.074%	96.939%
3	15:49:46	88.224%	2094.000	498.900	495.000	1934.000	2002.000	98.674%	100.028%
x		86.352%	2079.000	497.600	493.700	1941.000	1991.000	97.031%	98.008%
σ		1.765%	19.680	2.386	5.094	14.730	21.490	1.429%	1.750%
%RSD		2.044	0.947	0.480	1.032	0.759	1.080	1.473	1.785
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:48:53	47.060	45.580	19.840	19.720	19.560	93.225%		
2	15:49:19	49.010	47.850	20.130	20.280	20.110	92.872%		
3	15:49:46	50.330	48.420	20.660	20.330	20.270	94.238%		
x		48.800	47.280	20.210	20.110	19.980	93.445%		
σ		1.645	1.504	0.414	0.340	0.374	0.709%		
%RSD		3.372	3.181	2.047	1.692	1.870	0.759		

180-40541-B-2-C MSD 1/26/2015 3:52:44 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:10	94.977%	44.820	1048.000	1011.000	0.000	79580.000	61430.000	60360.000
2	15:53:37	95.524%	47.530	1086.000	1015.000	0.000	80610.000	62490.000	61810.000
3	15:54:04	97.735%	45.890	1069.000	1022.000	0.000	80050.000	62550.000	61920.000
x		96.079%	46.080	1067.000	1016.000	0.000	80080.000	62150.000	61360.000
σ		1.460%	1.367	19.010	5.215	0.000	511.600	626.700	870.900
%RSD		1.520	2.967	1.781	0.513	0.000	0.639	1.008	1.419
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:10	1676.000	12490.000	0.000	54990.000	165500.000	168000.000	85.958%	907.900
2	15:53:37	1730.000	12640.000	0.000	56580.000	169800.000	173200.000	87.680%	933.000
3	15:54:04	1741.000	12640.000	0.000	56170.000	172200.000	176800.000	88.229%	947.000
x		1716.000	12590.000	0.000	55920.000	169100.000	172700.000	87.289%	929.300
σ		34.770	87.570	0.000	823.900	3381.000	4409.000	1.185%	19.810
%RSD		2.026	0.696	0.000	1.474	1.999	2.553	1.357	2.132
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:10	444.700	174.200	547.200	1466.000	1882.000	443.700	436.900	219.100
2	15:53:37	452.100	179.800	563.700	1512.000	1917.000	456.500	447.200	225.600
3	15:54:04	456.400	182.400	563.700	1522.000	1901.000	454.500	450.200	227.800
x		451.100	178.800	558.200	1500.000	1900.000	451.600	444.800	224.200
σ		5.938	4.197	9.512	29.580	17.880	6.863	6.953	4.514
%RSD		1.317	2.348	1.704	1.972	0.941	1.520	1.563	2.014
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:10	221.600	454.000	446.200	37.930	10.170	6.136	0.000	1275.000
2	15:53:37	226.300	467.100	468.400	37.820	10.520	4.904	0.000	1306.000
3	15:54:04	224.400	471.700	463.800	37.950	8.593	5.438	0.000	1297.000
x		224.100	464.200	459.500	37.900	9.763	5.493	0.000	1293.000
σ		2.355	9.173	11.730	0.070	1.028	0.618	0.000	15.740
%RSD		1.051	1.976	2.553	0.185	10.530	11.250	0.000	1.218
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:10	88.013%	1005.000	1028.000	79.638%	47.370	46.850	47.830	35.280
2	15:53:37	90.509%	1039.000	1051.000	82.249%	47.810	46.650	50.700	35.650
3	15:54:04	91.737%	1041.000	1077.000	81.694%	48.480	47.520	50.680	37.270
x		90.086%	1028.000	1052.000	81.194%	47.890	47.010	49.740	36.070
σ		1.898%	20.040	24.320	1.376%	0.561	0.453	1.649	1.059
%RSD		2.107	1.948	2.311	1.695	1.172	0.964	3.316	2.935
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:10	85.783%	2072.000	496.300	487.400	1898.000	1964.000	94.592%	95.327%
2	15:53:37	87.078%	2132.000	506.800	503.000	1973.000	2013.000	97.355%	98.306%
3	15:54:04	88.073%	2122.000	509.900	502.000	1948.000	2010.000	100.121%	100.211%
x		86.978%	2109.000	504.300	497.500	1940.000	1995.000	97.356%	97.948%
σ		1.148%	32.040	7.096	8.766	37.980	27.440	2.765%	2.462%
%RSD		1.320	1.519	1.407	1.762	1.958	1.375	2.840	2.513
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:53:10	48.510	46.880	20.170	20.040	19.950	91.836%		
2	15:53:37	49.840	47.960	20.410	20.180	20.220	95.793%		
3	15:54:04	50.000	48.880	20.580	20.470	20.370	96.675%		
x		49.450	47.910	20.390	20.230	20.180	94.768%		
σ		0.821	1.000	0.206	0.217	0.210	2.578%		
%RSD		1.660	2.088	1.012	1.070	1.039	2.720		

CCV 1467888 1/26/2015 3:57:04 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	91.670%	93.080	105.700	96.600	0.000	46970.000	45730.000	45210.000
2	15:57:57	94.034%	97.920	107.400	99.160	0.000	47100.000	46090.000	45340.000
3	15:58:23	93.081%	100.200	100.700	97.440	0.000	47290.000	46350.000	45960.000
x		92.928%	97.052%	104.585%	97.737%	0.000	94.235%	92.111%	91.003%
σ		1.189%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.280	3.724	3.331	1.336	0.000	0.342	0.677	0.877

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	447.100	4729.000	0.000	48660.000	47530.000	47250.000	93.496%	95.800
2	15:57:57	451.200	4712.000	0.000	49010.000	48210.000	47200.000	94.388%	99.600
3	15:58:23	454.900	4784.000	0.000	49450.000	49110.000	48210.000	94.583%	97.480
x		90.219%	94.830%	0.000	98.082%	96.571%	95.112%	94.156%	97.625%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.580%	n/a
%RSD		0.866	0.792	0.000	0.812	1.648	1.199	0.616	1.954

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	90.550	90.410	443.900	23560.000	21940.000	91.800	91.970	92.430
2	15:57:57	92.550	92.080	450.000	24160.000	22590.000	93.240	94.550	94.900
3	15:58:23	93.300	93.430	457.300	24400.000	22920.000	94.610	96.460	95.370
x		92.133%	91.973%	90.083%	96.159%	89.938%	93.216%	94.327%	94.235%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.546	1.648	1.498	1.804	2.203	1.505	2.390	1.681

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	92.090	97.690	98.230	95.720	96.660	96.630	0.000	94.320
2	15:57:57	93.960	100.200	100.600	95.240	95.990	92.350	0.000	96.530
3	15:58:23	95.670	99.410	98.730	96.100	97.770	92.550	0.000	97.820
x		93.906%	99.109%	99.173%	95.689%	96.807%	93.845%	0.000	96.224%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.903	1.304	1.240	0.452	0.932	2.576	0.000	1.843

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	94.550%	96.680	98.520	88.921%	95.420	94.790	96.270	95.740
2	15:57:57	96.152%	101.400	101.900	90.695%	96.120	94.500	97.820	96.120
3	15:58:23	95.707%	106.000	104.700	90.914%	96.960	96.310	97.770	97.350
x		95.470%	101.362%	101.693%	90.176%	96.168%	95.200%	97.289%	96.404%
σ		0.827%	n/a	n/a	1.093%	n/a	n/a	n/a	n/a
%RSD		0.866	4.594	3.028	1.212	0.801	1.018	0.907	0.871

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	94.512%	99.740	95.320	94.500	95.350	91.840	100.867%	100.739%
2	15:57:57	96.442%	101.000	96.720	96.640	98.430	95.960	101.066%	102.272%
3	15:58:23	97.025%	100.400	96.620	97.630	97.800	97.640	102.016%	103.033%
x		95.993%	100.373%	96.220%	96.257%	97.197%	95.146%	101.316%	102.015%
σ		1.315%	n/a	n/a	n/a	n/a	n/a	0.614%	1.168%
%RSD		1.370	0.605	0.813	1.666	1.675	3.137	0.606	1.145

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:30	105.600	103.900	106.200	106.600	105.500	95.074%
2	15:57:57	107.600	105.300	108.200	108.500	107.900	95.225%
3	15:58:23	107.300	105.000	107.700	108.900	107.800	96.420%
x		106.860%	104.727%	107.345%	107.966%	107.040%	95.573%
σ		n/a	n/a	n/a	n/a	n/a	0.737%
%RSD		1.026	0.661	0.993	1.151	1.278	0.772

CCB3 1/26/2015 4:04:35 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	16:05:03	92.810%	0.005	2.218	2.309	0.000	10.090	11.390	10.620
2	16:05:29	95.787%	0.064	1.374	2.228	0.000	6.629	8.737	8.537
3	16:05:56	95.836%	0.023	2.640	2.252	0.000	6.533	9.725	8.580
x		94.811%	0.031	2.077	2.263	0.000	7.751	9.951	9.245
σ		1.733%	0.030	0.644	0.042	0.000	2.027	1.342	1.190
%RSD		1.828	97.330	31.030	1.854	0.000	26.150	13.480	12.870

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:03	1.123	3.556	0.000	6.674	32.790	18.140	92.650%	-0.083
2	16:05:29	0.970	1.028	0.000	10.250	9.325	10.290	94.419%	0.116
3	16:05:56	0.916	0.992	0.000	3.347	4.172	8.837	95.154%	-0.138
x		1.003	1.859	0.000	6.756	15.430	12.420	94.074%	-0.035
σ		0.107	1.470	0.000	3.451	15.260	5.003	1.287%	0.134
%RSD		10.710	79.070	0.000	51.080	98.870	40.270	1.368	379.800

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:03	-0.031	-0.007	0.052	3.628	9.124	0.033	0.327	0.049
2	16:05:29	-0.002	0.012	0.054	1.962	0.044	0.019	0.313	-0.024
3	16:05:56	0.040	-0.061	0.060	0.117	5.695	0.024	0.299	-0.028
x		0.002	-0.019	0.055	1.902	4.954	0.025	0.313	-0.001
σ		0.036	0.038	0.004	1.756	4.585	0.007	0.014	0.043
%RSD		1592.000	205.600	6.904	92.300	92.550	28.490	4.512	4640.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:03	0.076	0.191	0.275	-1.174	-0.111	-5.929	0.000	0.068
2	16:05:29	0.032	0.172	0.128	-0.642	-0.277	-3.439	0.000	0.077
3	16:05:56	-0.002	0.084	0.139	-0.456	0.344	-2.838	0.000	0.030
x		0.035	0.149	0.181	-0.758	-0.015	-4.069	0.000	0.058
σ		0.039	0.057	0.082	0.373	0.321	1.639	0.000	0.025
%RSD		110.000	38.530	45.500	49.220	2182.000	40.270	0.000	42.520

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:03	93.559%	0.912	0.881	92.069%	0.007	0.010	0.034	0.004
2	16:05:29	97.135%	0.826	0.734	95.170%	-0.005	-0.006	-0.003	-0.007
3	16:05:56	97.990%	0.738	0.805	95.174%	-0.004	0.003	-0.021	-0.032
x		96.228%	0.825	0.807	94.138%	-0.001	0.002	0.003	-0.012
σ		2.351%	0.087	0.074	1.792%	0.007	0.008	0.028	0.018
%RSD		2.443	10.510	9.114	1.903	936.100	335.200	857.900	157.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:03	95.663%	0.710	0.183	0.151	0.082	0.030	96.816%	97.824%
2	16:05:29	97.047%	0.682	0.175	0.173	0.045	0.033	100.542%	99.799%
3	16:05:56	98.656%	0.668	0.169	0.169	0.037	0.017	100.903%	100.626%
x		97.122%	0.687	0.176	0.164	0.055	0.027	99.420%	99.417%
σ		1.498%	0.022	0.007	0.012	0.024	0.009	2.263%	1.440%
%RSD		1.542	3.151	3.938	7.114	44.610	32.350	2.276	1.448

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:03	0.035	0.038	0.011	0.007	0.009	103.797%
2	16:05:29	0.042	0.037	0.014	0.004	0.013	102.361%
3	16:05:56	0.050	0.036	0.003	-0.001	0.007	103.932%
x		0.042	0.037	0.009	0.003	0.009	103.364%
σ		0.007	0.001	0.006	0.004	0.003	0.871%
%RSD		17.610	1.710	63.400	111.000	32.930	0.842

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	92.563%	42.650	930.400	908.300	0.000	75870.000	58360.000	57430.000
2	16:09:48	94.204%	42.490	962.800	933.300	0.000	77170.000	60120.000	59280.000
3	16:10:15	95.458%	42.800	972.200	929.000	0.000	77270.000	60470.000	59910.000
x		94.075%	42.650	955.100	923.500	0.000	76770.000	59650.000	58870.000
σ		1.452%	0.153	21.910	13.360	0.000	780.300	1132.000	1293.000
%RSD		1.543	0.358	2.294	1.446	0.000	1.016	1.899	2.196
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	1519.000	12210.000	0.000	52360.000	152400.000	157000.000	84.967%	900.600
2	16:09:48	1573.000	12400.000	0.000	54450.000	159400.000	162300.000	86.697%	921.800
3	16:10:15	1592.000	12560.000	0.000	54850.000	166600.000	168100.000	87.054%	939.100
x		1561.000	12390.000	0.000	53890.000	159500.000	162500.000	86.239%	920.500
σ		37.710	175.500	0.000	1340.000	7111.000	5564.000	1.116%	19.280
%RSD		2.415	1.416	0.000	2.487	4.459	3.425	1.294	2.094
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	411.400	160.900	499.600	1318.000	1736.000	408.400	407.000	203.000
2	16:09:48	415.700	161.800	502.100	1329.000	1743.000	404.800	405.100	201.000
3	16:10:15	423.600	167.900	520.900	1381.000	1789.000	423.100	416.700	208.800
x		416.900	163.600	507.500	1343.000	1756.000	412.100	409.600	204.200
σ		6.188	3.812	11.660	33.620	28.540	9.666	6.187	4.087
%RSD		1.484	2.331	2.298	2.504	1.626	2.345	1.511	2.001
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	204.800	414.800	414.100	35.310	8.206	5.842	0.000	1184.000
2	16:09:48	196.900	404.900	402.300	31.220	4.064	2.088	0.000	1099.000
3	16:10:15	206.500	436.600	426.000	33.820	5.509	5.085	0.000	1195.000
x		202.700	418.800	414.100	33.450	5.926	4.338	0.000	1159.000
σ		5.135	16.260	11.810	2.068	2.103	1.986	0.000	52.300
%RSD		2.533	3.883	2.853	6.183	35.480	45.770	0.000	4.511
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	85.585%	999.000	1007.000	79.199%	41.940	41.360	43.860	31.650
2	16:09:48	98.178%	975.000	1004.000	81.981%	42.610	40.970	45.540	31.630
3	16:10:15	91.238%	1024.000	1058.000	82.106%	42.160	42.780	45.040	33.520
x		91.667%	999.200	1023.000	81.095%	42.240	41.700	44.820	32.270
σ		6.307%	24.340	30.440	1.643%	0.339	0.951	0.860	1.085
%RSD		6.881	2.436	2.977	2.026	0.803	2.280	1.919	3.364
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:09:22	84.485%	2002.000	480.500	477.700	1728.000	1775.000	92.297%	95.193%
2	16:09:48	85.521%	2120.000	496.400	494.400	1809.000	1859.000	95.434%	97.468%
3	16:10:15	86.353%	2115.000	503.900	499.000	1795.000	1844.000	98.547%	99.715%
x		85.453%	2079.000	493.600	490.300	1777.000	1826.000	95.426%	97.459%
σ		0.936%	66.470	11.940	11.210	42.850	44.680	3.125%	2.261%
%RSD		1.095	3.197	2.419	2.286	2.411	2.447	3.275	2.320
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:09:22	44.530	42.900	17.900	18.400	17.870	93.012%		
2	16:09:48	46.640	44.440	18.910	18.750	18.560	93.601%		
3	16:10:15	46.250	44.830	18.980	18.700	18.680	94.934%		
x		45.810	44.060	18.600	18.620	18.370	93.849%		
σ		1.124	1.019	0.600	0.190	0.440	0.985%		
%RSD		2.454	2.314	3.228	1.021	2.392	1.049		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:39	96.197%	0.104	11.040	10.080	0.000	4820.000	3603.000	3529.000
2	16:14:06	106.458%	0.126	8.408	8.551	0.000	4769.000	3632.000	3544.000
3	16:14:32	103.652%	0.168	8.492	8.156	0.000	4803.000	3710.000	3605.000
x		102.102%	0.133	9.314	8.929	0.000	4797.000	3648.000	3559.000
σ		5.303%	0.033	1.498	1.016	0.000	25.500	55.460	40.150
%RSD		5.194	24.520	16.080	11.370	0.000	0.532	1.520	1.128
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:39	115.500	4530.000	0.000	1848.000	55840.000	54420.000	89.652%	3.498
2	16:14:06	116.000	4478.000	0.000	1871.000	57260.000	56810.000	90.865%	3.656
3	16:14:32	120.800	4509.000	0.000	1865.000	58490.000	57680.000	91.747%	3.202
x		117.400	4505.000	0.000	1861.000	57190.000	56300.000	90.755%	3.452
σ		2.950	26.080	0.000	12.080	1325.000	1688.000	1.052%	0.230
%RSD		2.512	0.579	0.000	0.649	2.316	2.998	1.159	6.668
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:39	-0.162	3.243	16.120	318.600	505.000	0.419	1.950	0.902
2	16:14:06	0.949	3.037	16.650	330.700	511.200	0.436	2.051	0.864
3	16:14:32	1.430	3.083	16.580	331.000	512.400	0.401	2.081	0.980
x		0.739	3.121	16.450	326.700	509.500	0.419	2.028	0.915
σ		0.816	0.108	0.285	7.037	3.979	0.017	0.069	0.059
%RSD		110.400	3.471	1.734	2.154	0.781	4.154	3.386	6.463
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:39	0.761	3.691	3.649	1.824	-0.098	-3.922	0.000	110.400
2	16:14:06	0.994	3.738	3.529	1.078	-1.526	-3.985	0.000	113.100
3	16:14:32	0.879	3.616	3.877	-1.576	-0.835	-4.334	0.000	113.700
x		0.878	3.682	3.685	0.442	-0.820	-4.080	0.000	112.400
σ		0.116	0.061	0.177	1.787	0.715	0.222	0.000	1.720
%RSD		13.260	1.669	4.803	404.500	87.180	5.438	0.000	1.531
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:39	91.222%	6.395	6.398	86.156%	0.012	0.016	-0.030	-0.070
2	16:14:06	93.517%	4.825	4.494	87.832%	0.015	0.004	0.100	0.047
3	16:14:32	93.798%	3.635	3.391	87.873%	-0.002	-0.001	0.045	-0.002
x		92.846%	4.952	4.761	87.287%	0.008	0.006	0.038	-0.008
σ		1.413%	1.384	1.521	0.980%	0.009	0.009	0.065	0.059
%RSD		1.522	27.960	31.960	1.122	104.100	139.600	169.500	701.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:13:39	91.068%	7.652	1.220	1.246	18.860	19.430	98.648%	99.388%
2	16:14:06	93.601%	5.662	0.892	0.966	20.110	19.920	102.269%	102.129%
3	16:14:32	94.139%	4.288	0.706	0.765	19.990	19.480	101.826%	100.806%
x		92.936%	5.867	0.940	0.992	19.650	19.610	100.915%	100.774%
σ		1.640%	1.692	0.260	0.242	0.689	0.273	1.975%	1.371%
%RSD		1.765	28.830	27.670	24.350	3.505	1.394	1.957	1.360
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:13:39	0.089	0.099	0.275	0.223	0.238	100.338%		
2	16:14:06	0.082	0.062	0.238	0.246	0.229	103.120%		
3	16:14:32	0.063	0.057	0.234	0.238	0.223	103.585%		
x		0.078	0.073	0.249	0.236	0.230	102.348%		
σ		0.014	0.023	0.023	0.011	0.007	1.756%		
%RSD		17.320	31.900	9.204	4.857	3.200	1.716		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	94.231%	0.045	5930.000	5834.000	0.000	137900.000	40370.000	39570.000
2	16:18:26	95.742%	0.023	6038.000	6018.000	0.000	138200.000	40950.000	40550.000
3	16:18:52	97.739%	0.121	6025.000	5941.000	0.000	138900.000	41120.000	40560.000
x		95.904%	0.063	5998.000	5931.000	0.000	138300.000	40810.000	40230.000
σ		1.760%	0.051	59.110	92.540	0.000	543.700	397.000	572.800
%RSD		1.835	80.830	0.986	1.560	0.000	0.393	0.973	1.424

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	62.820	3339.000	0.000	11410.000	77200.000	77880.000	93.695%	1.784
2	16:18:26	63.970	3395.000	0.000	11440.000	79940.000	81410.000	94.718%	2.344
3	16:18:52	65.770	3395.000	0.000	11610.000	80110.000	81080.000	95.099%	2.432
x		64.190	3376.000	0.000	11490.000	79080.000	80120.000	94.504%	2.186
σ		1.490	32.550	0.000	106.000	1636.000	1952.000	0.726%	0.352
%RSD		2.321	0.964	0.000	0.923	2.069	2.437	0.768	16.080

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	1.639	3.658	2494.000	5473.000	5177.000	1.589	405.900	1.564
2	16:18:26	1.122	3.837	2585.000	5662.000	5373.000	1.835	415.200	1.770
3	16:18:52	0.875	3.804	2602.000	5760.000	5362.000	1.747	415.900	1.706
x		1.212	3.767	2560.000	5632.000	5304.000	1.724	412.300	1.680
σ		0.390	0.095	58.320	146.200	110.300	0.125	5.597	0.106
%RSD		32.180	2.528	2.278	2.596	2.081	7.239	1.358	6.288

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	1.818	8.333	7.889	1.131	-2.189	-4.478	0.000	120.000
2	16:18:26	1.970	7.668	7.719	-0.256	-1.585	-1.676	0.000	121.900
3	16:18:52	1.876	8.803	8.604	1.069	-1.111	-1.539	0.000	124.600
x		1.888	8.268	8.070	0.648	-1.628	-2.564	0.000	122.200
σ		0.076	0.570	0.470	0.784	0.540	1.659	0.000	2.337
%RSD		4.042	6.898	5.819	120.900	33.180	64.700	0.000	1.913

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	89.800%	1.180	1.167	82.558%	0.027	0.010	0.110	0.116
2	16:18:26	90.903%	1.003	1.152	83.917%	-0.004	0.029	0.056	0.000
3	16:18:52	93.160%	0.936	0.944	85.392%	0.026	-0.004	-0.058	-0.040
x		91.288%	1.040	1.088	83.955%	0.016	0.012	0.036	0.025
σ		1.712%	0.127	0.125	1.417%	0.017	0.017	0.086	0.081
%RSD		1.876	12.170	11.460	1.688	106.500	144.100	236.900	318.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	87.898%	1.084	0.431	0.395	59.350	60.550	95.075%	96.632%
2	16:18:26	90.102%	1.017	0.362	0.385	59.940	60.560	100.030%	99.343%
3	16:18:52	90.053%	0.953	0.376	0.409	61.710	61.490	101.346%	101.301%
x		89.351%	1.018	0.389	0.396	60.330	60.870	98.817%	99.092%
σ		1.259%	0.065	0.037	0.012	1.229	0.535	3.307%	2.345%
%RSD		1.409	6.403	9.380	3.138	2.038	0.879	3.346	2.366

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:59	0.035	0.025	2.253	1.935	2.071	95.079%
2	16:18:26	0.036	0.032	2.285	1.927	2.028	96.105%
3	16:18:52	0.033	0.037	2.369	1.953	2.122	96.372%
x		0.035	0.031	2.302	1.938	2.074	95.852%
σ		0.002	0.006	0.060	0.013	0.047	0.683%
%RSD		4.599	19.580	2.589	0.680	2.267	0.712

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:22:15	94.794%	0.126	106.700	98.190	0.000	51800.000	14010.000	13920.000
2	16:22:40	100.602%	0.097	101.400	91.460	0.000	51390.000	14180.000	14070.000
3	16:23:07	100.479%	0.136	98.800	92.050	0.000	52170.000	14510.000	14330.000
x		98.625%	0.120	102.300	93.900	0.000	51790.000	14230.000	14110.000
σ		3.318%	0.020	4.003	3.724	0.000	390.500	254.200	207.700
%RSD		3.365	16.900	3.914	3.966	0.000	0.754	1.786	1.472
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:22:15	524.700	5043.000	0.000	9690.000	123700.000	125100.000	89.991%	11.220
2	16:22:40	529.200	5054.000	0.000	9666.000	127100.000	130100.000	91.699%	11.650
3	16:23:07	542.800	5065.000	0.000	9689.000	128200.000	131700.000	90.986%	12.450
x		532.200	5054.000	0.000	9682.000	126300.000	129000.000	90.892%	11.770
σ		9.425	11.210	0.000	13.570	2356.000	3437.000	0.858%	0.625
%RSD		1.771	0.222	0.000	0.140	1.865	2.665	0.944	5.308
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:22:15	2.009	24.170	33.820	1421.000	1693.000	1.095	2.327	1.448
2	16:22:40	1.073	24.840	35.010	1434.000	1732.000	1.148	2.312	1.394
3	16:23:07	1.034	25.340	35.750	1447.000	1740.000	1.145	2.157	1.571
x		1.372	24.780	34.860	1434.000	1722.000	1.130	2.265	1.471
σ		0.552	0.591	0.972	12.770	25.030	0.030	0.094	0.091
%RSD		40.220	2.383	2.788	0.891	1.454	2.620	4.152	6.171
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:22:15	1.566	7.603	7.918	-0.670	-1.908	-3.651	0.000	242.400
2	16:22:40	1.829	7.737	7.979	-0.896	-0.933	-5.179	0.000	248.600
3	16:23:07	1.782	8.235	8.182	-1.475	-1.177	-3.356	0.000	251.200
x		1.726	7.858	8.026	-1.013	-1.339	-4.062	0.000	247.400
σ		0.140	0.333	0.138	0.415	0.507	0.979	0.000	4.516
%RSD		8.122	4.234	1.725	40.990	37.890	24.090	0.000	1.826
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:22:15	92.078%	1.909	2.004	84.735%	0.001	-0.014	-0.001	-0.008
2	16:22:40	95.235%	2.065	1.864	86.455%	-0.026	-0.007	-0.008	-0.016
3	16:23:07	94.813%	1.891	2.007	86.709%	0.004	-0.021	-0.019	-0.009
x		94.042%	1.955	1.958	85.966%	-0.007	-0.014	-0.009	-0.011
σ		1.714%	0.096	0.082	1.074%	0.016	0.007	0.009	0.004
%RSD		1.822	4.902	4.163	1.250	232.200	47.340	93.950	36.840
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:22:15	90.449%	0.619	0.158	0.201	61.850	63.080	99.086%	99.556%
2	16:22:40	94.486%	0.622	0.185	0.185	62.810	63.410	102.092%	102.584%
3	16:23:07	94.928%	0.610	0.165	0.175	62.800	62.980	101.828%	102.421%
x		93.287%	0.617	0.169	0.187	62.490	63.160	101.002%	101.520%
σ		2.469%	0.006	0.014	0.013	0.553	0.224	1.665%	1.703%
%RSD		2.646	1.030	8.390	7.153	0.885	0.355	1.648	1.678
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:22:15	0.042	0.036	0.817	0.725	0.751	98.086%		
2	16:22:40	0.042	0.028	0.830	0.728	0.773	101.623%		
3	16:23:07	0.038	0.039	0.756	0.711	0.716	102.860%		
x		0.040	0.034	0.801	0.721	0.747	100.856%		
σ		0.002	0.006	0.040	0.009	0.029	2.478%		
%RSD		5.756	16.690	4.945	1.281	3.838	2.457		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	98.062%	0.042	41.000	38.830	0.000	30210.000	13990.000	13800.000
2	16:26:54	104.360%	0.073	37.310	39.620	0.000	30160.000	14110.000	14090.000
3	16:27:20	103.386%	0.056	37.630	37.680	0.000	30490.000	14530.000	14270.000
x		101.936%	0.057	38.640	38.710	0.000	30290.000	14210.000	14050.000
σ		3.390%	0.016	2.042	0.974	0.000	178.800	282.600	235.000
%RSD		3.325	27.940	5.285	2.517	0.000	0.590	1.989	1.672

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	90.910	4627.000	0.000	7569.000	120300.000	123700.000	91.862%	2.884
2	16:26:54	93.430	4741.000	0.000	7675.000	125700.000	129800.000	92.595%	3.659
3	16:27:20	108.100	4787.000	0.000	7826.000	128700.000	130200.000	92.635%	3.706
x		97.470	4718.000	0.000	7690.000	124900.000	127900.000	92.364%	3.416
σ		9.271	82.110	0.000	129.300	4258.000	3639.000	0.435%	0.461
%RSD		9.511	1.740	0.000	1.681	3.408	2.845	0.471	13.500

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	1.041	3.193	24.530	305.000	751.700	0.354	0.704	0.780
2	16:26:54	1.124	3.166	25.720	317.000	756.600	0.368	0.881	0.814
3	16:27:20	1.064	3.042	25.500	319.500	746.200	0.340	0.996	0.653
x		1.076	3.134	25.250	313.800	751.500	0.354	0.860	0.749
σ		0.043	0.080	0.635	7.734	5.206	0.014	0.147	0.085
%RSD		3.981	2.565	2.516	2.464	0.693	3.961	17.100	11.320

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	0.847	145.600	147.200	-0.315	-1.726	-4.783	0.000	245.000
2	16:26:54	0.903	152.400	151.600	-0.743	-1.865	-1.773	0.000	253.900
3	16:27:20	0.928	153.400	151.400	-0.429	-0.220	-2.062	0.000	255.300
x		0.893	150.500	150.100	-0.496	-1.270	-2.873	0.000	251.400
σ		0.041	4.229	2.513	0.222	0.912	1.661	0.000	5.557
%RSD		4.638	2.811	1.674	44.770	71.810	57.810	0.000	2.210

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	94.786%	0.679	0.640	87.462%	-0.018	-0.022	0.067	0.034
2	16:26:54	96.003%	0.722	0.655	87.921%	-0.015	-0.005	0.001	-0.004
3	16:27:20	97.643%	0.810	0.676	89.514%	-0.032	-0.006	-0.003	-0.047
x		96.144%	0.737	0.657	88.299%	-0.021	-0.011	0.022	-0.006
σ		1.434%	0.067	0.018	1.077%	0.009	0.010	0.039	0.041
%RSD		1.491	9.042	2.724	1.220	42.290	91.870	182.000	697.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	93.145%	0.394	0.141	0.188	50.200	50.880	101.212%	101.505%
2	16:26:54	94.975%	0.433	0.167	0.190	50.310	51.100	104.771%	105.651%
3	16:27:20	96.083%	0.446	0.151	0.120	50.970	51.290	104.325%	105.235%
x		94.734%	0.424	0.153	0.166	50.490	51.090	103.436%	104.130%
σ		1.484%	0.027	0.013	0.039	0.418	0.205	1.939%	2.283%
%RSD		1.566	6.335	8.569	23.760	0.828	0.402	1.875	2.193

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:27	0.013	0.011	0.224	0.204	0.199	101.113%
2	16:26:54	0.010	0.020	0.243	0.207	0.218	103.866%
3	16:27:20	0.020	0.019	0.210	0.186	0.203	104.362%
x		0.015	0.017	0.226	0.199	0.207	103.114%
σ		0.005	0.005	0.016	0.011	0.010	1.750%
%RSD		35.470	30.040	7.188	5.768	4.904	1.697

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:30:29	102.455%	0.038	21.160	20.700	0.000	24360.000	18760.000	18680.000
2	16:30:55	104.195%	0.073	20.460	19.300	0.000	24860.000	19380.000	19390.000
3	16:31:23	105.712%	-0.020	20.450	20.790	0.000	24810.000	19600.000	19490.000
x		104.121%	0.030	20.690	20.260	0.000	24670.000	19240.000	19180.000
σ		1.630%	0.047	0.408	0.837	0.000	276.100	434.300	443.200
%RSD		1.565	155.900	1.973	4.130	0.000	1.119	2.257	2.310
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:30:29	35.310	5439.000	0.000	4648.000	99810.000	100000.000	92.419%	1.418
2	16:30:55	37.930	5543.000	0.000	4715.000	102100.000	104000.000	93.360%	1.656
3	16:31:23	36.980	5581.000	0.000	4805.000	104900.000	106000.000	92.598%	2.212
x		36.740	5521.000	0.000	4723.000	102300.000	103300.000	92.792%	1.762
σ		1.328	73.530	0.000	78.900	2566.000	3032.000	0.500%	0.408
%RSD		3.615	1.332	0.000	1.671	2.509	2.935	0.539	23.150
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:30:29	0.437	2.981	14.290	167.700	528.600	0.259	0.990	0.576
2	16:30:55	0.292	3.030	15.050	173.700	522.200	0.307	0.695	0.577
3	16:31:23	-0.074	3.011	15.050	178.000	535.700	0.328	0.949	0.575
x		0.218	3.008	14.800	173.100	528.800	0.298	0.878	0.576
σ		0.264	0.025	0.441	5.149	6.723	0.035	0.160	0.001
%RSD		120.800	0.815	2.980	2.974	1.271	11.900	18.230	0.130
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:30:29	0.698	12.330	13.590	-2.177	-0.926	-7.096	0.000	153.900
2	16:30:55	0.753	13.350	13.620	-2.100	-0.813	-5.685	0.000	158.600
3	16:31:23	0.617	13.230	13.140	1.620	-2.730	-5.264	0.000	159.500
x		0.689	12.970	13.450	-0.886	-1.490	-6.015	0.000	157.300
σ		0.069	0.558	0.272	2.170	1.076	0.960	0.000	3.003
%RSD		9.941	4.304	2.021	245.000	72.210	15.950	0.000	1.909
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:30:29	94.888%	0.213	0.198	86.820%	0.011	-0.017	0.022	0.017
2	16:30:55	96.387%	0.230	0.225	88.077%	-0.010	-0.007	-0.026	-0.006
3	16:31:23	97.026%	0.244	0.258	89.478%	-0.012	-0.004	0.001	-0.003
x		96.100%	0.229	0.227	88.125%	-0.004	-0.009	-0.001	0.003
σ		1.098%	0.015	0.030	1.330%	0.013	0.007	0.024	0.012
%RSD		1.142	6.768	13.150	1.509	331.800	77.870	2780.000	478.300
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:30:29	93.237%	0.382	0.069	0.095	33.350	33.450	100.458%	102.558%
2	16:30:55	95.532%	0.417	0.094	0.149	34.540	34.240	103.329%	105.052%
3	16:31:23	95.475%	0.401	0.075	0.087	33.820	34.570	103.812%	105.553%
x		94.748%	0.400	0.079	0.110	33.900	34.090	102.533%	104.388%
σ		1.309%	0.017	0.013	0.034	0.601	0.575	1.813%	1.604%
%RSD		1.382	4.334	16.840	30.610	1.774	1.687	1.768	1.536
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:30:29	0.012	0.015	0.150	0.097	0.112	100.873%		
2	16:30:55	0.011	0.009	0.102	0.118	0.106	103.500%		
3	16:31:23	0.018	0.013	0.120	0.100	0.111	104.244%		
x		0.013	0.013	0.124	0.105	0.109	102.872%		
σ		0.004	0.003	0.025	0.011	0.003	1.771%		
%RSD		26.900	22.910	19.770	10.890	2.838	1.722		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:46	97.891%	-0.037	114.600	110.800	0.000	75440.000	10530.000	10490.000
2	16:35:13	102.415%	0.038	111.400	107.500	0.000	75580.000	10660.000	10580.000
3	16:35:40	101.778%	0.057	112.200	109.400	0.000	76410.000	10830.000	10820.000
x		100.695%	0.019	112.700	109.200	0.000	75810.000	10670.000	10630.000
σ		2.449%	0.050	1.678	1.621	0.000	525.000	151.600	173.900
%RSD		2.432	258.900	1.488	1.484	0.000	0.693	1.420	1.636
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:46	23.600	4044.000	0.000	9845.000	104800.000	106300.000	90.350%	0.927
2	16:35:13	35.600	4063.000	0.000	9789.000	109400.000	111600.000	92.252%	0.747
3	16:35:40	23.670	4098.000	0.000	10020.000	110100.000	112800.000	92.571%	1.233
x		27.620	4068.000	0.000	9884.000	108100.000	110200.000	91.724%	0.969
σ		6.908	27.660	0.000	119.200	2871.000	3449.000	1.201%	0.246
%RSD		25.010	0.680	0.000	1.206	2.655	3.129	1.310	25.340
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:46	-0.079	35.350	2.587	109.400	488.200	0.390	1.266	1.297
2	16:35:13	-1.444	36.280	2.705	109.000	476.300	0.453	0.716	1.408
3	16:35:40	1.275	36.980	2.568	112.000	494.100	0.443	2.281	1.308
x		-0.083	36.200	2.620	110.100	486.200	0.429	1.421	1.338
σ		1.360	0.818	0.074	1.618	9.050	0.034	0.794	0.061
%RSD		1648.000	2.260	2.832	1.470	1.862	7.878	55.850	4.546
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:46	1.264	3.023	2.758	0.833	-0.379	-2.990	0.000	197.800
2	16:35:13	1.470	2.762	3.154	1.405	-0.377	-4.907	0.000	204.300
3	16:35:40	1.350	2.784	3.201	-0.440	-0.986	-4.491	0.000	204.900
x		1.361	2.856	3.038	0.599	-0.581	-4.129	0.000	202.300
σ		0.104	0.145	0.244	0.944	0.351	1.009	0.000	3.940
%RSD		7.602	5.069	8.015	157.600	60.410	24.430	0.000	1.947
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:46	92.063%	0.281	0.190	85.506%	-0.015	0.001	0.075	0.036
2	16:35:13	94.669%	0.218	0.233	86.964%	-0.026	-0.011	0.088	0.047
3	16:35:40	97.132%	0.180	0.243	88.793%	-0.005	0.009	0.028	0.019
x		94.621%	0.226	0.222	87.088%	-0.015	-0.000	0.064	0.034
σ		2.535%	0.051	0.028	1.647%	0.010	0.010	0.032	0.014
%RSD		2.679	22.590	12.700	1.892	68.250	2424.000	49.370	41.940
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:46	89.869%	0.498	0.327	0.426	38.920	38.330	99.883%	99.615%
2	16:35:13	94.148%	0.417	0.303	0.377	38.840	38.470	100.875%	101.860%
3	16:35:40	93.612%	0.498	0.321	0.338	39.320	38.790	104.439%	103.755%
x		92.543%	0.471	0.317	0.381	39.030	38.530	101.732%	101.743%
σ		2.331%	0.047	0.012	0.044	0.256	0.234	2.396%	2.072%
%RSD		2.519	9.936	3.875	11.530	0.655	0.608	2.355	2.037
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:34:46	0.010	0.013	0.196	0.213	0.188	96.347%		
2	16:35:13	0.008	0.012	0.213	0.204	0.196	101.749%		
3	16:35:40	0.005	0.009	0.209	0.171	0.202	100.668%		
x		0.008	0.012	0.206	0.196	0.196	99.588%		
σ		0.003	0.002	0.009	0.022	0.007	2.859%		
%RSD		35.440	18.050	4.388	11.130	3.590	2.870		

180-40536-B-11-A @10 1/26/2015 4:38:40 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:06	97.026%	0.181	17.420	16.500	0.000	6605.000	3267.000	3213.000
2	16:39:33	99.348%	0.098	14.820	16.750	0.000	6519.000	3265.000	3222.000
3	16:39:59	100.720%	0.039	16.330	16.820	0.000	6561.000	3279.000	3237.000
x		99.031%	0.106	16.190	16.690	0.000	6562.000	3270.000	3224.000
σ		1.867%	0.072	1.306	0.169	0.000	43.150	7.249	12.040
%RSD		1.885	67.340	8.065	1.010	0.000	0.658	0.222	0.373
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:06	958.400	2791.000	0.000	1299.000	44490.000	42680.000	94.367%	65.360
2	16:39:33	968.300	2780.000	0.000	1303.000	45940.000	44280.000	95.082%	68.420
3	16:39:59	968.200	2749.000	0.000	1253.000	45150.000	44210.000	94.995%	66.920
x		964.900	2773.000	0.000	1285.000	45190.000	43720.000	94.815%	66.900
σ		5.678	21.810	0.000	28.080	727.000	907.500	0.390%	1.528
%RSD		0.588	0.787	0.000	2.185	1.609	2.075	0.412	2.284
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:06	5.041	3.399	211.200	8780.000	7933.000	1.076	3.097	27.790
2	16:39:33	5.514	3.314	217.300	8969.000	8210.000	1.090	2.886	28.890
3	16:39:59	5.055	3.516	218.600	9034.000	8166.000	1.082	2.979	28.450
x		5.203	3.409	215.700	8928.000	8103.000	1.082	2.987	28.380
σ		0.269	0.101	3.953	131.600	148.700	0.007	0.106	0.551
%RSD		5.169	2.971	1.833	1.475	1.835	0.641	3.542	1.942
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:06	27.850	29.190	28.550	971.700	-1.452	-5.406	0.000	113.200
2	16:39:33	28.460	30.540	30.230	986.100	-1.694	-3.306	0.000	116.000
3	16:39:59	28.720	30.840	30.140	991.000	-0.430	-5.322	0.000	116.500
x		28.340	30.190	29.640	982.900	-1.192	-4.678	0.000	115.200
σ		0.446	0.874	0.947	10.060	0.671	1.189	0.000	1.803
%RSD		1.574	2.895	3.195	1.023	56.270	25.410	0.000	1.565
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:06	97.886%	0.375	0.422	92.589%	0.094	0.087	0.201	0.186
2	16:39:33	97.762%	0.395	0.356	93.223%	0.097	0.099	0.252	0.175
3	16:39:59	98.437%	0.412	0.372	93.863%	0.142	0.101	0.137	0.142
x		98.028%	0.394	0.383	93.225%	0.111	0.096	0.197	0.168
σ		0.359%	0.019	0.035	0.637%	0.027	0.008	0.058	0.023
%RSD		0.366	4.808	9.049	0.683	24.250	7.974	29.270	13.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:06	97.157%	2.234	3.789	3.771	77.060	76.800	103.785%	103.965%
2	16:39:33	99.305%	2.252	3.858	3.870	77.060	77.880	104.904%	104.179%
3	16:39:59	101.923%	2.148	3.730	3.731	79.210	76.980	104.976%	104.320%
x		99.461%	2.211	3.792	3.791	77.770	77.220	104.555%	104.155%
σ		2.387%	0.055	0.064	0.072	1.239	0.582	0.668%	0.179%
%RSD		2.400	2.507	1.679	1.889	1.593	0.754	0.639	0.172
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:39:06	0.213	0.221	81.360	75.600	77.810	103.392%		
2	16:39:33	0.239	0.214	82.610	76.260	79.280	103.580%		
3	16:39:59	0.223	0.219	80.610	75.980	77.160	107.422%		
x		0.225	0.218	81.530	75.950	78.080	104.798%		
σ		0.013	0.003	1.009	0.330	1.089	2.274%		
%RSD		5.784	1.595	1.238	0.435	1.395	2.170		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:22	88.278%	0.725	27.720	24.590	0.000	18880.000	20860.000	20770.000
2	16:43:48	89.984%	0.733	24.830	24.110	0.000	19100.000	21630.000	21600.000
3	16:44:14	90.926%	0.684	26.900	24.800	0.000	19030.000	21540.000	21480.000
x		89.729%	0.714	26.480	24.500	0.000	19010.000	21340.000	21290.000
σ		1.342%	0.026	1.489	0.353	0.000	111.300	417.300	448.900
%RSD		1.496	3.700	5.622	1.440	0.000	0.585	1.955	2.109
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:22	9449.000	5008.000	0.000	829.400	48280.000	47050.000	91.015%	93.640
2	16:43:48	9875.000	5161.000	0.000	850.300	51290.000	50250.000	90.361%	103.400
3	16:44:14	9820.000	5144.000	0.000	853.600	51580.000	51150.000	89.417%	104.000
x		9714.000	5104.000	0.000	844.400	50380.000	49480.000	90.264%	100.300
σ		231.900	83.940	0.000	13.090	1826.000	2157.000	0.803%	5.814
%RSD		2.387	1.645	0.000	1.551	3.623	4.358	0.890	5.794
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:22	13.310	7.937	3214.000	24310.000	22690.000	15.360	35.110	35.150
2	16:43:48	13.490	7.873	3331.000	25420.000	23840.000	16.080	36.880	36.640
3	16:44:14	13.350	8.095	3369.000	25580.000	24020.000	16.250	38.140	37.100
x		13.380	7.968	3305.000	25110.000	23520.000	15.900	36.710	36.300
σ		0.093	0.114	80.750	693.300	723.700	0.473	1.518	1.016
%RSD		0.698	1.432	2.443	2.762	3.077	2.973	4.136	2.800
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:22	34.650	511.400	510.700	1447.000	-0.230	-3.141	0.000	271.900
2	16:43:48	37.040	528.000	524.900	1497.000	-1.230	-4.732	0.000	279.200
3	16:44:14	36.890	530.100	527.500	1500.000	-2.403	-4.585	0.000	278.100
x		36.190	523.200	521.000	1482.000	-1.288	-4.153	0.000	276.400
σ		1.340	10.220	9.067	29.750	1.088	0.879	0.000	3.923
%RSD		3.703	1.954	1.740	2.008	84.480	21.170	0.000	1.419
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:22	97.062%	0.495	0.414	87.816%	0.097	0.137	0.973	0.828
2	16:43:48	98.852%	0.520	0.502	88.350%	0.149	0.128	0.901	0.901
3	16:44:14	100.095%	0.546	0.553	89.009%	0.156	0.119	0.790	0.851
x		98.670%	0.521	0.490	88.391%	0.134	0.128	0.888	0.860
σ		1.524%	0.026	0.071	0.597%	0.032	0.009	0.092	0.037
%RSD		1.545	4.913	14.440	0.676	23.970	7.067	10.380	4.328
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:22	93.547%	2.919	7.865	7.921	85.240	86.450	99.048%	100.524%
2	16:43:48	95.657%	2.974	8.177	8.275	88.410	88.120	100.166%	102.104%
3	16:44:14	95.577%	2.948	8.359	8.176	88.560	88.960	100.531%	102.047%
x		94.927%	2.947	8.134	8.124	87.400	87.840	99.915%	101.558%
σ		1.196%	0.028	0.250	0.182	1.875	1.276	0.773%	0.896%
%RSD		1.260	0.940	3.070	2.244	2.145	1.453	0.773	0.883
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:43:22	0.251	0.256	111.000	104.600	106.700	104.828%		
2	16:43:48	0.260	0.286	116.400	109.500	111.100	105.561%		
3	16:44:14	0.286	0.260	117.000	110.800	113.100	104.566%		
x		0.265	0.267	114.800	108.300	110.300	104.985%		
σ		0.018	0.016	3.275	3.288	3.308	0.516%		
%RSD		6.935	6.038	2.853	3.036	2.999	0.491		

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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	16:47:38	90.440%	0.177	14.810	14.370	0.000	13560.000	7399.000	7308.000
2	16:48:05	91.975%	0.194	14.430	14.410	0.000	13680.000	7596.000	7467.000
3	16:48:31	94.407%	0.168	13.530	12.520	0.000	13330.000	7415.000	7313.000
x		92.274%	0.180	14.260	13.770	0.000	13520.000	7470.000	7363.000
σ		2.001%	0.014	0.652	1.079	0.000	176.800	109.400	90.340
%RSD		2.168	7.547	4.575	7.840	0.000	1.307	1.465	1.227
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:38	2753.000	3873.000	0.000	1315.000	55300.000	53880.000	88.851%	98.620
2	16:48:05	2835.000	3915.000	0.000	1297.000	55640.000	55400.000	89.737%	102.600
3	16:48:31	2783.000	3854.000	0.000	1305.000	56360.000	55650.000	91.581%	99.410
x		2790.000	3880.000	0.000	1306.000	55770.000	54980.000	90.056%	100.200
σ		41.250	31.470	0.000	9.005	541.500	956.300	1.393%	2.113
%RSD		1.478	0.811	0.000	0.690	0.971	1.739	1.546	2.108
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:38	9.646	4.777	589.400	7113.000	6515.000	2.145	10.910	91.890
2	16:48:05	10.070	5.109	601.300	7354.000	6775.000	2.182	11.600	95.310
3	16:48:31	9.418	4.743	598.200	7257.000	6659.000	2.089	11.200	94.080
x		9.712	4.876	596.300	7241.000	6650.000	2.139	11.240	93.760
σ		0.332	0.202	6.162	120.900	130.300	0.047	0.346	1.735
%RSD		3.420	4.149	1.033	1.669	1.959	2.189	3.075	1.850
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:38	92.040	170.400	166.700	781.000	-1.201	1.320	0.000	204.200
2	16:48:05	94.330	173.300	171.600	793.500	-0.669	-2.179	0.000	209.800
3	16:48:31	93.230	170.200	170.100	788.800	-0.942	0.399	0.000	207.700
x		93.200	171.300	169.500	787.800	-0.937	-0.153	0.000	207.200
σ		1.148	1.740	2.476	6.347	0.266	1.814	0.000	2.839
%RSD		1.231	1.016	1.461	0.806	28.390	1183.000	0.000	1.370
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:38	93.029%	0.522	0.462	86.858%	0.059	0.070	0.618	0.462
2	16:48:05	94.928%	0.378	0.456	89.158%	0.062	0.084	0.475	0.434
3	16:48:31	97.550%	0.478	0.479	89.722%	0.097	0.066	0.473	0.423
x		95.169%	0.459	0.466	88.579%	0.073	0.073	0.522	0.440
σ		2.270%	0.074	0.012	1.517%	0.021	0.009	0.083	0.020
%RSD		2.385	16.020	2.572	1.713	28.910	12.470	15.970	4.581
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:38	92.876%	2.347	3.922	3.902	72.610	74.580	96.778%	98.152%
2	16:48:05	94.397%	2.392	3.990	3.922	74.500	75.500	98.500%	99.850%
3	16:48:31	95.210%	2.355	4.082	4.064	75.020	77.060	100.377%	99.711%
x		94.161%	2.365	3.998	3.963	74.040	75.710	98.552%	99.237%
σ		1.184%	0.024	0.081	0.089	1.268	1.252	1.800%	0.943%
%RSD		1.258	1.004	2.020	2.237	1.712	1.654	1.827	0.950
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:47:38	0.165	0.143	94.500	87.860	90.460	101.885%		
2	16:48:05	0.171	0.143	97.220	91.510	94.130	101.549%		
3	16:48:31	0.147	0.168	98.270	92.580	94.080	102.144%		
x		0.161	0.151	96.670	90.650	92.890	101.859%		
σ		0.012	0.015	1.946	2.474	2.107	0.299%		
%RSD		7.692	9.756	2.014	2.729	2.268	0.293		

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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	16:51:56	86.343%	101.200	107.500	94.420	0.000	48330.000	46900.000	46270.000
2	16:52:22	90.899%	99.220	98.810	96.330	0.000	48030.000	46920.000	46330.000
3	16:52:48	89.419%	97.770	102.000	100.200	0.000	48880.000	47900.000	47270.000
x		88.887%	99.392%	102.778%	96.968%	0.000	96.827%	94.478%	93.248%
σ		2.324%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.615	1.724	4.306	3.013	0.000	0.888	1.217	1.207

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:56	458.500	4862.000	0.000	48890.000	47240.000	46120.000	92.981%	96.030
2	16:52:22	456.300	4895.000	0.000	50250.000	49750.000	48000.000	92.792%	98.490
3	16:52:48	467.200	4962.000	0.000	49390.000	49300.000	48130.000	93.398%	98.320
x		92.137%	98.127%	0.000	99.020%	97.528%	94.832%	93.057%	97.613%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.310%	n/a
%RSD		1.247	1.042	0.000	1.383	2.742	2.373	0.333	1.411

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:56	89.910	89.580	441.800	23660.000	22060.000	92.080	94.860	92.660
2	16:52:22	92.660	94.360	459.700	24770.000	22960.000	96.060	94.540	96.680
3	16:52:48	93.180	94.590	460.700	24590.000	22980.000	94.910	97.120	94.210
x		91.917%	92.843%	90.811%	97.359%	90.671%	94.349%	95.507%	94.517%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.907	3.050	2.346	2.455	2.319	2.171	1.475	2.141

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:56	93.120	97.350	97.020	95.260	96.570	93.180	0.000	95.860
2	16:52:22	96.470	100.800	97.670	98.340	94.690	97.740	0.000	97.180
3	16:52:48	95.680	100.600	99.750	98.060	97.510	95.430	0.000	97.040
x		95.089%	99.588%	98.148%	97.219%	96.258%	95.451%	0.000	96.694%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.843	1.946	1.455	1.755	1.490	2.389	0.000	0.751

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:56	92.777%	93.050	92.760	88.204%	95.500	95.330	96.840	95.480
2	16:52:22	94.314%	96.980	97.150	90.120%	97.720	96.420	98.070	97.090
3	16:52:48	95.859%	100.100	101.200	90.088%	97.600	96.750	98.510	99.760
x		94.317%	96.697%	97.048%	89.471%	96.938%	96.166%	97.810%	97.442%
σ		1.541%	n/a	n/a	1.097%	n/a	n/a	n/a	n/a
%RSD		1.634	3.636	4.369	1.226	1.291	0.774	0.885	2.217

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:56	92.786%	96.280	95.360	95.450	92.860	95.640	98.857%	98.804%
2	16:52:22	94.442%	97.790	97.300	97.560	97.670	97.710	98.194%	100.747%
3	16:52:48	94.638%	98.300	98.970	98.500	97.060	96.980	99.311%	98.902%
x		93.956%	97.458%	97.211%	97.168%	95.863%	96.773%	98.787%	99.484%
σ		1.018%	n/a	n/a	n/a	n/a	n/a	0.562%	1.095%
%RSD		1.083	1.077	1.855	1.609	2.733	1.084	0.569	1.101

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:56	103.200	100.100	102.400	103.000	102.200	95.860%
2	16:52:22	105.100	102.000	107.300	106.200	106.000	96.110%
3	16:52:48	105.200	102.700	105.400	106.000	105.000	96.765%
x		104.501%	101.602%	105.025%	105.081%	104.398%	96.245%
σ		n/a	n/a	n/a	n/a	n/a	0.467%
%RSD		1.106	1.324	2.329	1.709	1.906	0.485

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:27	91.553%	0.089	1.052	1.851	0.000	15.700	13.870	11.910
2	16:59:53	95.173%	0.064	1.375	0.823	0.000	12.600	12.450	11.900
3	17:00:20	98.153%	0.041	1.816	1.234	0.000	11.960	9.285	10.420
x		94.959%	0.065	1.414	1.303	0.000	13.420	11.870	11.410
σ		3.305%	0.024	0.384	0.517	0.000	1.998	2.347	0.860
%RSD		3.481	37.520	27.140	39.710	0.000	14.890	19.770	7.539
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:27	0.852	4.799	0.000	6.276	35.530	12.220	97.243%	-0.092
2	16:59:53	0.924	1.920	0.000	1.723	15.310	14.470	99.364%	0.146
3	17:00:20	1.073	0.767	0.000	1.374	12.750	15.320	99.831%	-0.048
x		0.949	2.495	0.000	3.124	21.200	14.000	98.813%	0.002
σ		0.113	2.077	0.000	2.735	12.480	1.600	1.379%	0.126
%RSD		11.880	83.230	0.000	87.540	58.880	11.430	1.396	6663.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:27	0.037	-0.016	0.164	5.700	5.985	0.037	-0.192	0.040
2	16:59:53	0.035	-0.019	0.098	4.246	4.691	0.050	-0.149	0.054
3	17:00:20	-0.049	-0.074	0.120	2.344	2.890	0.016	0.062	0.057
x		0.008	-0.036	0.128	4.097	4.522	0.034	-0.093	0.050
σ		0.049	0.033	0.033	1.683	1.554	0.017	0.136	0.009
%RSD		617.300	90.470	26.110	41.090	34.370	50.460	146.300	17.950
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:27	0.010	0.165	0.122	-0.910	-0.304	-4.430	0.000	0.088
2	16:59:53	0.063	0.253	0.233	-0.550	0.218	-2.354	0.000	0.072
3	17:00:20	0.043	0.181	0.177	-0.079	-0.703	-0.843	0.000	0.091
x		0.039	0.200	0.178	-0.513	-0.263	-2.542	0.000	0.084
σ		0.027	0.047	0.055	0.417	0.462	1.801	0.000	0.011
%RSD		69.270	23.500	31.100	81.290	175.500	70.840	0.000	12.540
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:27	97.193%	0.438	0.403	95.773%	0.021	0.012	0.131	0.088
2	16:59:53	99.448%	0.339	0.372	98.597%	-0.003	-0.004	0.028	0.019
3	17:00:20	101.446%	0.304	0.354	98.768%	0.013	0.003	0.067	0.036
x		99.362%	0.360	0.376	97.713%	0.011	0.004	0.075	0.048
σ		2.128%	0.069	0.025	1.682%	0.013	0.008	0.052	0.036
%RSD		2.142	19.220	6.663	1.721	119.300	203.600	69.100	74.920
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:59:27	98.593%	0.207	0.212	0.215	0.044	0.118	99.785%	100.186%
2	16:59:53	102.051%	0.195	0.179	0.175	0.109	0.087	102.487%	102.746%
3	17:00:20	99.783%	0.278	0.184	0.179	0.056	0.093	102.323%	103.406%
x		100.142%	0.226	0.192	0.190	0.070	0.099	101.532%	102.113%
σ		1.757%	0.045	0.018	0.022	0.034	0.016	1.515%	1.701%
%RSD		1.754	19.860	9.278	11.460	49.220	16.550	1.492	1.665
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:59:27	0.026	0.024	0.021	0.019	0.023	105.465%		
2	16:59:53	0.023	0.024	0.030	0.017	0.022	108.308%		
3	17:00:20	0.031	0.025	0.014	0.016	0.018	107.401%		
x		0.027	0.025	0.021	0.017	0.021	107.058%		
σ		0.004	0.001	0.008	0.002	0.002	1.452%		
%RSD		14.160	3.336	36.000	9.867	10.580	1.356		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	83.169%	0.703	6.729	6.858	0.000	4070.000	2571.000	2501.000
2	17:04:15	87.274%	0.689	7.914	6.612	0.000	4027.000	2553.000	2506.000
3	17:04:41	87.406%	0.668	8.483	6.630	0.000	4027.000	2572.000	2533.000
x		85.950%	0.687	7.709	6.700	0.000	4041.000	2565.000	2513.000
σ		2.409%	0.018	0.895	0.137	0.000	24.510	10.360	17.230
%RSD		2.803	2.555	11.610	2.050	0.000	0.606	0.404	0.686

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	7807.000	4264.000	0.000	933.500	41240.000	39400.000	87.954%	253.900
2	17:04:15	7784.000	4235.000	0.000	919.800	41790.000	40310.000	91.811%	264.700
3	17:04:41	7945.000	4270.000	0.000	954.100	43600.000	41190.000	89.017%	264.700
x		7845.000	4257.000	0.000	935.800	42210.000	40300.000	89.594%	261.100
σ		86.950	18.510	0.000	17.280	1233.000	897.100	1.992%	6.212
%RSD		1.108	0.435	0.000	1.846	2.922	2.226	2.224	2.379

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	17.330	15.220	3433.000	61040.000	60580.000	7.015	42.850	105.700
2	17:04:15	17.850	15.490	3498.000	62300.000	58290.000	7.133	43.280	108.100
3	17:04:41	17.600	15.700	3553.000	63460.000	63390.000	7.241	42.530	108.300
x		17.590	15.470	3495.000	62270.000	60750.000	7.130	42.890	107.400
σ		0.260	0.240	59.780	1213.000	2552.000	0.113	0.376	1.420
%RSD		1.475	1.549	1.711	1.947	4.200	1.584	0.877	1.323

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	105.900	1472.000	1448.000	1251.000	-0.734	-6.381	0.000	100.200
2	17:04:15	107.400	1518.000	1497.000	1274.000	0.680	-5.474	0.000	101.900
3	17:04:41	106.400	1533.000	1524.000	1291.000	-1.601	-6.892	0.000	102.700
x		106.600	1508.000	1490.000	1272.000	-0.551	-6.249	0.000	101.600
σ		0.756	31.730	38.630	20.240	1.152	0.718	0.000	1.247
%RSD		0.709	2.105	2.594	1.591	208.900	11.490	0.000	1.228

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	97.273%	0.904	0.950	85.909%	0.535	0.579	1.749	2.040
2	17:04:15	101.549%	1.079	0.950	90.594%	0.530	0.573	2.013	1.844
3	17:04:41	100.119%	0.943	0.947	88.065%	0.555	0.554	1.857	1.884
x		99.647%	0.975	0.949	88.190%	0.540	0.569	1.873	1.923
σ		2.177%	0.092	0.002	2.345%	0.013	0.013	0.133	0.104
%RSD		2.184	9.395	0.158	2.659	2.425	2.247	7.086	5.388

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	89.900%	9.556	8.401	8.496	205.900	205.700	94.006%	95.894%
2	17:04:15	95.726%	9.526	8.696	8.355	206.200	204.800	99.251%	100.431%
3	17:04:41	93.937%	9.951	8.510	8.720	205.700	209.200	97.705%	97.936%
x		93.188%	9.678	8.536	8.524	205.900	206.600	96.988%	98.087%
σ		2.985%	0.237	0.149	0.184	0.236	2.315	2.695%	2.272%
%RSD		3.203	2.452	1.748	2.158	0.115	1.121	2.779	2.316

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:03:48	0.343	0.318	308.800	280.600	294.700	110.927%
2	17:04:15	0.313	0.337	331.100	304.800	318.700	110.559%
3	17:04:41	0.379	0.359	346.700	315.900	333.000	104.556%
x		0.345	0.338	328.900	300.400	315.500	108.681%
σ		0.033	0.021	19.030	18.080	19.350	3.577%
%RSD		9.612	6.075	5.785	6.019	6.132	3.291

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	86.299%	0.321	9.705	7.905	0.000	9452.000	3098.000	3001.000
2	17:08:32	89.877%	0.349	9.446	8.589	0.000	9467.000	3103.000	3071.000
3	17:08:58	90.137%	0.347	11.550	8.459	0.000	9510.000	3128.000	3109.000
x		88.771%	0.339	10.240	8.318	0.000	9476.000	3110.000	3060.000
σ		2.145%	0.016	1.150	0.363	0.000	30.270	16.460	54.980
%RSD		2.416	4.656	11.240	4.365	0.000	0.319	0.529	1.796

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	5069.000	6282.000	0.000	1122.000	63980.000	63080.000	89.441%	115.100
2	17:08:32	5166.000	6269.000	0.000	1141.000	66060.000	65800.000	91.849%	119.800
3	17:08:58	5226.000	6308.000	0.000	1135.000	65120.000	65970.000	93.148%	121.900
x		5154.000	6286.000	0.000	1133.000	65050.000	64950.000	91.479%	118.900
σ		78.950	19.640	0.000	9.600	1041.000	1624.000	1.881%	3.477
%RSD		1.532	0.312	0.000	0.847	1.601	2.500	2.056	2.923

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	18.660	10.810	555.900	15100.000	14090.000	3.566	8.225	16.810
2	17:08:32	19.410	11.470	568.900	15480.000	14250.000	3.429	8.826	16.550
3	17:08:58	19.220	10.970	572.100	15500.000	14390.000	3.623	8.284	16.680
x		19.100	11.090	565.600	15360.000	14240.000	3.539	8.445	16.680
σ		0.389	0.343	8.545	223.200	148.400	0.100	0.331	0.130
%RSD		2.037	3.095	1.511	1.453	1.042	2.817	3.922	0.780

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	17.260	56.580	56.870	1305.000	-0.700	-4.884	0.000	151.300
2	17:08:32	16.760	58.590	57.510	1325.000	-1.022	-3.713	0.000	156.300
3	17:08:58	16.800	59.810	58.250	1330.000	-1.118	-3.405	0.000	155.500
x		16.940	58.330	57.550	1320.000	-0.947	-4.001	0.000	154.300
σ		0.276	1.631	0.692	13.000	0.219	0.780	0.000	2.695
%RSD		1.630	2.796	1.202	0.985	23.110	19.500	0.000	1.746

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	93.399%	0.744	0.640	88.083%	0.079	0.111	0.250	0.212
2	17:08:32	97.235%	0.653	0.612	90.481%	0.098	0.091	0.103	0.182
3	17:08:58	98.954%	0.573	0.546	91.911%	0.092	0.085	0.244	0.272
x		96.529%	0.657	0.600	90.158%	0.090	0.096	0.199	0.222
σ		2.844%	0.085	0.048	1.934%	0.010	0.014	0.083	0.046
%RSD		2.946	13.020	8.072	2.145	10.900	14.300	41.890	20.640

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	92.863%	3.065	3.355	3.457	101.700	102.300	96.781%	96.957%
2	17:08:32	94.312%	3.124	3.457	3.366	102.500	102.700	99.504%	99.915%
3	17:08:58	96.755%	3.043	3.488	3.556	104.700	104.600	101.855%	101.917%
x		94.643%	3.077	3.433	3.460	103.000	103.200	99.380%	99.596%
σ		1.967%	0.042	0.070	0.095	1.523	1.220	2.539%	2.496%
%RSD		2.078	1.354	2.037	2.750	1.478	1.183	2.555	2.506

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:08:05	0.171	0.176	176.000	161.900	168.600	102.195%
2	17:08:32	0.181	0.187	183.600	171.500	177.100	104.064%
3	17:08:58	0.190	0.183	187.700	172.800	179.600	103.712%
x		0.181	0.182	182.400	168.700	175.100	103.324%
σ		0.009	0.006	5.912	5.994	5.746	0.993%
%RSD		5.045	3.260	3.241	3.553	3.281	0.961

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:22	85.587%	1.125	12.960	11.350	0.000	7350.000	4659.000	4611.000
2	17:12:49	89.669%	1.185	11.230	12.700	0.000	7453.000	4817.000	4748.000
3	17:13:15	87.176%	1.525	10.280	11.710	0.000	7656.000	4920.000	4869.000
x		87.477%	1.279	11.490	11.920	0.000	7486.000	4799.000	4743.000
σ		2.057%	0.216	1.355	0.698	0.000	155.700	131.200	129.100
%RSD		2.352	16.890	11.790	5.853	0.000	2.079	2.733	2.723
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:22	13530.000	7389.000	0.000	2768.000	86430.000	87140.000	94.649%	415.400
2	17:12:49	14110.000	7517.000	0.000	2905.000	93640.000	94360.000	91.031%	447.000
3	17:13:15	14440.000	7587.000	0.000	2921.000	94250.000	94780.000	91.271%	453.200
x		14030.000	7498.000	0.000	2865.000	91440.000	92090.000	92.317%	438.500
σ		458.000	100.400	0.000	84.400	4346.000	4297.000	2.023%	20.280
%RSD		3.265	1.339	0.000	2.946	4.752	4.666	2.191	4.625
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:22	39.870	40.080	1984.000	36800.000	35100.000	9.983	36.440	133.700
2	17:12:49	42.840	44.200	2145.000	40040.000	37900.000	10.570	37.720	141.100
3	17:13:15	44.910	44.570	2153.000	40100.000	38380.000	10.380	38.160	140.900
x		42.540	42.950	2094.000	38980.000	37130.000	10.310	37.440	138.600
σ		2.537	2.490	95.340	1888.000	1771.000	0.300	0.891	4.211
%RSD		5.965	5.797	4.552	4.844	4.770	2.908	2.380	3.039
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:22	131.200	442.100	437.000	3711.000	-0.288	-7.500	0.000	383.400
2	17:12:49	138.600	466.100	462.300	3843.000	0.286	-6.036	0.000	392.400
3	17:13:15	141.400	476.200	473.200	3902.000	1.509	-6.130	0.000	399.000
x		137.100	461.500	457.500	3819.000	0.502	-6.556	0.000	391.600
σ		5.247	17.490	18.580	97.670	0.918	0.820	0.000	7.801
%RSD		3.828	3.789	4.061	2.558	182.800	12.500	0.000	1.992
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:22	101.184%	1.976	2.022	86.410%	0.611	0.676	1.788	1.669
2	17:12:49	104.873%	2.180	2.130	88.048%	0.683	0.666	2.022	1.766
3	17:13:15	104.633%	2.037	2.161	88.999%	0.725	0.638	1.676	1.700
x		103.564%	2.064	2.104	87.819%	0.673	0.660	1.829	1.712
σ		2.064%	0.105	0.073	1.309%	0.058	0.020	0.176	0.050
%RSD		1.993	5.071	3.464	1.491	8.571	2.972	9.643	2.898
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:12:22	90.890%	15.630	9.841	10.070	162.400	162.300	97.237%	96.528%
2	17:12:49	94.314%	16.380	9.954	10.190	164.400	162.600	99.177%	98.790%
3	17:13:15	94.517%	16.010	9.909	10.370	165.800	165.200	99.572%	101.268%
x		93.240%	16.010	9.901	10.210	164.200	163.400	98.662%	98.862%
σ		2.038%	0.374	0.056	0.153	1.693	1.622	1.250%	2.371%
%RSD		2.186	2.335	0.570	1.498	1.031	0.993	1.267	2.398
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:12:22	0.711	0.675	717.800	656.300	680.500	101.624%		
2	17:12:49	0.722	0.725	752.200	694.700	714.600	101.526%		
3	17:13:15	0.743	0.701	757.100	697.400	713.400	102.287%		
x		0.725	0.701	742.300	682.800	702.800	101.812%		
σ		0.016	0.025	21.410	22.970	19.330	0.414%		
%RSD		2.257	3.518	2.885	3.364	2.751	0.406		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:40	89.048%	0.680	13.310	11.810	0.000	8930.000	126000.000	124300.000
2	17:17:07	91.013%	0.452	11.660	11.960	0.000	9271.000	132200.000	128800.000
3	17:17:33	93.438%	0.523	11.410	12.610	0.000	9397.000	134900.000	133600.000
x		91.166%	0.551	12.130	12.130	0.000	9200.000	131000.000	128900.000
σ		2.199%	0.117	1.031	0.424	0.000	241.500	4548.000	4630.000
%RSD		2.412	21.150	8.506	3.496	0.000	2.625	3.471	3.592
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:40	423.900	8000.000	0.000	28640.000	281700.000	282900.000	85.176%	1.369
2	17:17:07	443.600	8206.000	0.000	28920.000	292100.000	302100.000	87.553%	1.215
3	17:17:33	467.900	8434.000	0.000	30580.000	313200.000	319100.000	85.556%	1.417
x		445.100	8213.000	0.000	29380.000	295700.000	301400.000	86.095%	1.334
σ		22.070	217.100	0.000	1046.000	16070.000	18140.000	1.277%	0.105
%RSD		4.958	2.643	0.000	3.559	5.436	6.018	1.483	7.890
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:40	0.819	1.570	27050.000	211600.000	200200.000	240.300	47.890	220.400
2	17:17:07	-0.162	1.487	28350.000	220600.000	211100.000	248.800	48.000	230.400
3	17:17:33	0.300	1.360	30000.000	234200.000	224000.000	267.600	49.580	244.000
x		0.319	1.472	28460.000	222200.000	211800.000	252.200	48.490	231.600
σ		0.491	0.106	1479.000	11380.000	11920.000	13.940	0.944	11.830
%RSD		153.800	7.169	5.197	5.123	5.631	5.528	1.946	5.110
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:40	223.500	5415.000	5246.000	3.258	0.976	1.165	0.000	1350.000
2	17:17:07	234.400	5724.000	5651.000	3.026	2.475	4.855	0.000	1432.000
3	17:17:33	245.300	6033.000	5862.000	3.866	0.391	4.655	0.000	1496.000
x		234.400	5724.000	5586.000	3.383	1.281	3.559	0.000	1426.000
σ		10.920	309.100	313.000	0.434	1.075	2.075	0.000	73.110
%RSD		4.659	5.401	5.603	12.830	83.920	58.310	0.000	5.128
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:40	0.000	0.305	0.186	81.290%	-0.014	-0.012	4.931	4.381
2	17:17:07	0.000	0.148	0.126	82.569%	0.014	-0.014	4.654	4.275
3	17:17:33	0.000	0.088	0.087	82.319%	-0.013	-0.002	5.135	4.433
x		0.000	0.180	0.133	82.060%	-0.004	-0.009	4.907	4.363
σ		0.000	0.112	0.050	0.678%	0.016	0.006	0.241	0.081
%RSD		0.000	62.230	37.600	0.826	384.100	66.600	4.919	1.853
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:40	86.379%	0.687	0.192	0.280	32.600	32.960	105.673%	109.566%
2	17:17:07	89.617%	0.628	0.208	0.244	35.610	34.820	110.625%	114.944%
3	17:17:33	87.099%	0.565	0.188	0.249	36.350	35.630	110.574%	114.312%
x		87.698%	0.626	0.196	0.258	34.850	34.470	108.957%	112.941%
σ		1.700%	0.061	0.010	0.019	1.989	1.367	2.844%	2.940%
%RSD		1.938	9.792	5.321	7.455	5.708	3.964	2.611	2.603
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:16:40	0.119	0.153	0.410	0.362	0.374	93.324%		
2	17:17:07	0.162	0.149	0.341	0.350	0.340	98.051%		
3	17:17:33	0.158	0.143	0.386	0.383	0.364	95.398%		
x		0.147	0.148	0.379	0.365	0.359	95.591%		
σ		0.024	0.005	0.035	0.017	0.018	2.369%		
%RSD		16.120	3.373	9.163	4.605	4.962	2.479		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	93.591%	0.046	11.100	9.508	0.000	7284.000	84900.000	84140.000
2	17:21:27	92.729%	-0.015	9.092	8.882	0.000	7492.000	88800.000	88100.000
3	17:21:54	98.324%	0.061	8.974	9.039	0.000	7248.000	85570.000	84810.000
x		94.881%	0.031	9.721	9.143	0.000	7341.000	86430.000	85680.000
σ		3.012%	0.041	1.193	0.326	0.000	131.400	2082.000	2119.000
%RSD		3.175	131.900	12.270	3.561	0.000	1.790	2.409	2.473

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	3.897	1160.000	0.000	21590.000	360400.000	361100.000	87.749%	0.471
2	17:21:27	4.240	1185.000	0.000	21950.000	377300.000	379700.000	87.200%	0.257
3	17:21:54	4.077	1140.000	0.000	21750.000	380600.000	384600.000	87.601%	0.445
x		4.071	1161.000	0.000	21760.000	372700.000	375100.000	87.517%	0.391
σ		0.171	22.230	0.000	180.300	10830.000	12410.000	0.284%	0.117
%RSD		4.209	1.914	0.000	0.829	2.906	3.308	0.325	29.940

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	0.411	1.560	10060.000	78.480	1416.000	4.045	0.678	1.067
2	17:21:27	1.163	1.635	10380.000	42.770	1405.000	4.251	0.802	0.989
3	17:21:54	2.021	1.542	10450.000	28.550	1335.000	4.162	1.453	0.998
x		1.198	1.579	10300.000	49.930	1385.000	4.153	0.977	1.018
σ		0.806	0.049	209.200	25.730	43.620	0.103	0.416	0.043
%RSD		67.250	3.106	2.031	51.520	3.149	2.485	42.580	4.237

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	4.407	7.456	6.273	1.049	-1.175	-1.541	0.000	947.200
2	17:21:27	4.013	6.647	5.677	1.093	0.425	-2.421	0.000	993.100
3	17:21:54	4.119	7.347	5.951	1.377	-0.401	0.518	0.000	984.300
x		4.180	7.150	5.967	1.173	-0.384	-1.148	0.000	974.900
σ		0.204	0.439	0.299	0.178	0.800	1.508	0.000	24.330
%RSD		4.877	6.136	5.005	15.190	208.500	131.400	0.000	2.496

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	91.581%	0.050	0.072	85.225%	-0.028	-0.002	-0.012	0.018
2	17:21:27	91.203%	0.062	0.062	84.563%	-0.016	-0.015	0.094	0.089
3	17:21:54	92.669%	0.038	0.071	85.188%	-0.008	-0.018	0.020	0.066
x		91.818%	0.050	0.068	84.992%	-0.017	-0.012	0.034	0.058
σ		0.761%	0.012	0.005	0.372%	0.010	0.008	0.055	0.036
%RSD		0.829	23.860	8.048	0.438	57.720	69.880	160.800	62.460

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	90.378%	0.266	0.088	0.120	25.780	26.060	97.177%	99.040%
2	17:21:27	92.120%	0.262	0.087	0.163	25.830	26.150	96.438%	100.111%
3	17:21:54	91.481%	0.249	0.082	0.145	26.900	26.190	99.537%	100.286%
x		91.326%	0.259	0.086	0.143	26.170	26.130	97.717%	99.813%
σ		0.881%	0.009	0.003	0.021	0.630	0.068	1.619%	0.674%
%RSD		0.965	3.338	3.867	15.080	2.409	0.259	1.657	0.676

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:21:01	0.090	0.082	0.040	0.038	0.041	96.459%
2	17:21:27	0.091	0.089	0.037	0.033	0.032	100.160%
3	17:21:54	0.088	0.067	0.042	0.045	0.036	101.634%
x		0.090	0.080	0.040	0.039	0.036	99.417%
σ		0.002	0.011	0.003	0.006	0.005	2.666%
%RSD		1.794	14.310	6.436	15.670	13.070	2.682

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:18	95.783%	0.105	4.330	3.870	0.000	2357.000	3655.000	3586.000
2	17:25:44	97.850%	-0.017	3.736	3.224	0.000	2397.000	3716.000	3689.000
3	17:26:11	100.895%	0.039	3.252	3.014	0.000	2402.000	3815.000	3682.000
x		98.176%	0.042	3.773	3.369	0.000	2385.000	3728.000	3652.000
σ		2.572%	0.061	0.539	0.446	0.000	24.370	81.030	57.800
%RSD		2.619	144.600	14.300	13.250	0.000	1.022	2.173	1.582
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:18	10.830	4119.000	0.000	1916.000	14380.000	13250.000	88.213%	0.738
2	17:25:44	10.830	4232.000	0.000	2040.000	15470.000	13780.000	88.284%	0.250
3	17:26:11	11.160	4231.000	0.000	1978.000	15410.000	14410.000	88.866%	0.621
x		10.940	4194.000	0.000	1978.000	15080.000	13810.000	88.454%	0.536
σ		0.194	65.160	0.000	61.750	610.800	578.100	0.358%	0.255
%RSD		1.774	1.554	0.000	3.121	4.049	4.185	0.405	47.560
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:18	0.590	1.652	359.700	178.000	203.300	4.866	2.324	2.974
2	17:25:44	0.138	1.568	375.700	183.900	217.600	5.086	3.009	3.153
3	17:26:11	0.206	1.683	380.800	184.700	215.500	5.112	2.355	3.194
x		0.312	1.634	372.100	182.200	212.100	5.021	2.563	3.107
σ		0.244	0.060	11.000	3.669	7.716	0.135	0.387	0.117
%RSD		78.250	3.647	2.958	2.014	3.637	2.693	15.090	3.773
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:18	3.435	122.000	121.000	1.595	-1.585	-4.987	0.000	40.970
2	17:25:44	3.924	127.100	125.600	-3.326	-1.394	-2.530	0.000	41.930
3	17:26:11	3.743	128.200	125.100	0.043	-1.209	-2.445	0.000	42.500
x		3.701	125.700	123.900	-0.563	-1.396	-3.321	0.000	41.800
σ		0.247	3.327	2.543	2.516	0.188	1.444	0.000	0.775
%RSD		6.673	2.646	2.052	446.900	13.460	43.480	0.000	1.855
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:18	93.087%	0.066	0.108	85.975%	-0.025	-0.027	0.176	0.205
2	17:25:44	95.447%	0.113	0.071	87.186%	-0.024	-0.024	0.207	0.232
3	17:26:11	97.603%	0.099	0.079	88.252%	-0.026	-0.021	0.308	0.215
x		95.379%	0.092	0.086	87.138%	-0.025	-0.024	0.230	0.217
σ		2.259%	0.024	0.019	1.139%	0.001	0.003	0.069	0.013
%RSD		2.368	26.200	22.540	1.307	5.081	11.190	30.160	6.109
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:25:18	89.829%	0.212	0.061	0.080	18.900	19.110	96.272%	98.362%
2	17:25:44	90.619%	0.213	0.074	0.093	19.040	20.150	99.948%	99.921%
3	17:26:11	94.879%	0.240	0.054	0.065	18.970	19.080	102.446%	103.227%
x		91.776%	0.222	0.063	0.080	18.970	19.450	99.555%	100.503%
σ		2.716%	0.016	0.010	0.014	0.070	0.607	3.106%	2.484%
%RSD		2.960	7.095	16.040	17.820	0.369	3.121	3.120	2.472
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:25:18	0.027	0.025	0.035	0.043	0.035	103.061%		
2	17:25:44	0.034	0.031	0.026	0.040	0.035	100.722%		
3	17:26:11	0.023	0.032	0.032	0.016	0.032	107.188%		
x		0.028	0.030	0.031	0.033	0.034	103.657%		
σ		0.006	0.004	0.004	0.015	0.002	3.274%		
%RSD		19.940	13.140	13.970	45.310	5.469	3.158		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	96.470%	3.447	22.520	23.940	0.000	17350.000	80140.000	78960.000
2	17:29:59	98.976%	3.144	24.790	23.470	0.000	17720.000	82570.000	81590.000
3	17:30:26	101.468%	3.434	24.710	25.460	0.000	17790.000	82670.000	82320.000
x		98.972%	3.342	24.010	24.290	0.000	17620.000	81790.000	80950.000
σ		2.499%	0.171	1.284	1.041	0.000	234.400	1436.000	1769.000
%RSD		2.525	5.119	5.350	4.288	0.000	1.330	1.755	2.185

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	8376.000	11500.000	0.000	17760.000	163100.000	166600.000	90.943%	1.582
2	17:29:59	8759.000	11740.000	0.000	18270.000	169100.000	174600.000	93.056%	1.952
3	17:30:26	8788.000	11730.000	0.000	18280.000	172400.000	176800.000	93.362%	1.713
x		8641.000	11660.000	0.000	18100.000	168200.000	172600.000	92.454%	1.749
σ		230.000	137.600	0.000	294.700	4705.000	5371.000	1.317%	0.187
%RSD		2.662	1.181	0.000	1.628	2.797	3.111	1.424	10.710

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	-0.215	2.120	25180.000	177100.000	167600.000	636.800	76.810	912.100
2	17:29:59	1.541	1.980	25910.000	182500.000	173800.000	652.100	76.090	942.400
3	17:30:26	0.857	2.120	26410.000	185200.000	177000.000	665.600	78.860	954.900
x		0.728	2.073	25830.000	181600.000	172800.000	651.500	77.250	936.500
σ		0.885	0.081	619.200	4140.000	4770.000	14.410	1.441	22.010
%RSD		121.700	3.896	2.397	2.279	2.760	2.211	1.866	2.351

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	900.000	25470.000	25300.000	2.114	2.725	5.291	0.000	793.700
2	17:29:59	929.500	26100.000	26060.000	2.373	0.316	7.109	0.000	834.000
3	17:30:26	944.900	26580.000	26030.000	1.094	1.064	8.181	0.000	833.000
x		924.800	26050.000	25800.000	1.860	1.368	6.860	0.000	820.200
σ		22.820	559.000	432.500	0.676	1.233	1.461	0.000	22.980
%RSD		2.468	2.146	1.677	36.330	90.120	21.300	0.000	2.802

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	0.000	0.122	0.091	86.016%	-0.012	-0.029	11.320	10.910
2	17:29:59	0.000	0.083	0.089	88.994%	0.001	-0.018	11.510	11.030
3	17:30:26	0.000	0.082	0.085	89.525%	-0.014	-0.025	12.250	10.990
x		0.000	0.096	0.088	88.178%	-0.008	-0.024	11.690	10.980
σ		0.000	0.023	0.003	1.892%	0.008	0.005	0.492	0.062
%RSD		0.000	23.930	3.341	2.145	96.210	21.910	4.208	0.563

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	92.289%	0.293	0.165	0.224	19.460	20.460	0.000	0.000
2	17:29:59	95.735%	0.208	0.164	0.232	19.500	19.630	0.000	0.000
3	17:30:26	96.697%	0.303	0.157	0.210	19.550	19.540	0.000	0.000
x		94.907%	0.268	0.162	0.222	19.500	19.880	0.000	0.000
σ		2.318%	0.052	0.005	0.011	0.045	0.507	0.000	0.000
%RSD		2.442	19.440	2.836	5.016	0.228	2.552	0.000	0.000

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:29:32	0.257	0.236	9.309	8.504	8.663	99.638%
2	17:29:59	0.221	0.256	9.488	8.573	8.873	103.064%
3	17:30:26	0.249	0.251	9.214	8.527	8.687	105.566%
x		0.242	0.248	9.337	8.534	8.741	102.756%
σ		0.019	0.011	0.139	0.035	0.115	2.976%
%RSD		7.845	4.307	1.489	0.409	1.315	2.896

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:50	97.915%	0.002	22.960	19.910	0.000	18140.000	73370.000	72240.000
2	17:34:17	98.944%	0.061	22.280	19.960	0.000	18740.000	76790.000	75760.000
3	17:34:42	101.216%	0.020	20.130	20.200	0.000	18650.000	76530.000	75770.000
x		99.359%	0.028	21.790	20.030	0.000	18510.000	75560.000	74590.000
σ		1.689%	0.030	1.478	0.157	0.000	325.500	1901.000	2036.000
%RSD		1.700	108.600	6.784	0.782	0.000	1.759	2.516	2.730
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:50	21.080	625.700	0.000	19490.000	383100.000	383200.000	91.310%	0.050
2	17:34:17	22.610	639.400	0.000	20010.000	403200.000	403800.000	90.239%	0.345
3	17:34:42	22.280	630.300	0.000	19860.000	404300.000	407100.000	89.996%	0.161
x		21.990	631.800	0.000	19790.000	396900.000	398000.000	90.515%	0.185
σ		0.806	6.947	0.000	270.000	11930.000	12950.000	0.699%	0.149
%RSD		3.665	1.099	0.000	1.365	3.005	3.254	0.772	80.380
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:50	0.544	1.776	9421.000	84.240	1401.000	14.750	1.359	0.953
2	17:34:17	-0.284	1.780	9838.000	51.450	1389.000	15.390	0.482	1.110
3	17:34:42	1.518	1.805	9908.000	41.690	1390.000	15.320	0.225	1.080
x		0.593	1.787	9722.000	59.130	1394.000	15.150	0.689	1.048
σ		0.902	0.016	263.100	22.290	6.877	0.351	0.595	0.084
%RSD		152.100	0.875	2.706	37.700	0.494	2.319	86.350	7.979
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:50	3.971	39.210	38.210	0.314	1.038	0.950	0.000	866.500
2	17:34:17	4.241	40.140	40.030	2.841	1.267	0.421	0.000	913.100
3	17:34:42	4.121	40.320	40.100	0.870	0.642	0.024	0.000	912.100
x		4.111	39.890	39.450	1.342	0.982	0.465	0.000	897.200
σ		0.135	0.598	1.071	1.328	0.316	0.465	0.000	26.650
%RSD		3.287	1.499	2.714	98.960	32.190	99.910	0.000	2.971
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:50	94.236%	0.204	0.270	85.806%	-0.025	-0.030	0.133	0.191
2	17:34:17	94.222%	0.181	0.107	86.623%	-0.024	-0.024	0.123	0.141
3	17:34:42	94.813%	0.198	0.142	85.510%	-0.017	-0.026	0.154	0.199
x		94.423%	0.194	0.173	85.980%	-0.022	-0.026	0.136	0.177
σ		0.337%	0.012	0.086	0.577%	0.004	0.003	0.016	0.031
%RSD		0.357	6.209	49.660	0.671	19.790	12.640	11.610	17.670
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:50	91.008%	0.217	0.151	0.188	13.370	14.130	97.770%	99.160%
2	17:34:17	91.948%	0.169	0.133	0.208	14.790	14.530	100.635%	100.726%
3	17:34:42	93.772%	0.206	0.161	0.215	14.080	14.060	100.722%	101.197%
x		92.242%	0.198	0.148	0.204	14.080	14.240	99.709%	100.361%
σ		1.406%	0.026	0.014	0.014	0.707	0.255	1.680%	1.066%
%RSD		1.524	12.920	9.391	6.851	5.022	1.788	1.685	1.062
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:33:50	0.138	0.123	0.022	0.010	0.018	101.220%		
2	17:34:17	0.149	0.137	0.014	0.017	0.016	98.888%		
3	17:34:42	0.152	0.138	0.009	0.017	0.015	100.657%		
x		0.146	0.133	0.015	0.015	0.016	100.255%		
σ		0.008	0.008	0.007	0.004	0.002	1.217%		
%RSD		5.278	6.290	43.780	24.990	9.980	1.214		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	98.244%	-0.018	23.410	22.080	0.000	18850.000	7925.000	7829.000
2	17:38:35	99.283%	0.080	20.450	21.070	0.000	19090.000	8215.000	8137.000
3	17:39:02	99.863%	-0.018	24.990	21.490	0.000	19200.000	8295.000	8202.000
x		99.130%	0.015	22.950	21.540	0.000	19050.000	8145.000	8056.000
σ		0.820%	0.056	2.302	0.507	0.000	178.700	194.800	199.400
%RSD		0.827	385.400	10.030	2.353	0.000	0.938	2.392	2.475

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	4.513	2316.000	0.000	2765.000	24710.000	22800.000	90.505%	0.344
2	17:38:35	4.843	2354.000	0.000	2802.000	31430.000	23700.000	91.238%	0.417
3	17:39:02	4.734	2353.000	0.000	2837.000	25500.000	23650.000	92.030%	0.411
x		4.697	2341.000	0.000	2802.000	27210.000	23380.000	91.258%	0.390
σ		0.168	21.990	0.000	36.040	3674.000	507.200	0.762%	0.041
%RSD		3.579	0.939	0.000	1.286	13.500	2.169	0.835	10.430

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	2.074	1.912	985.600	12.480	83.360	1.627	2.436	3.195
2	17:38:35	1.954	1.921	1014.000	9.899	89.080	1.670	2.436	3.354
3	17:39:02	1.690	1.782	1019.000	8.795	79.470	1.690	2.749	3.321
x		1.906	1.872	1006.000	10.390	83.970	1.662	2.540	3.290
σ		0.196	0.078	17.930	1.889	4.834	0.032	0.181	0.084
%RSD		10.300	4.141	1.783	18.180	5.757	1.915	7.122	2.547

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	3.599	9.304	9.146	1.898	0.070	-3.712	0.000	98.320
2	17:38:35	3.586	8.658	8.972	-0.460	-0.947	-3.084	0.000	102.200
3	17:39:02	4.000	9.030	9.093	0.490	-1.106	-0.079	0.000	101.100
x		3.728	8.997	9.070	0.642	-0.661	-2.292	0.000	100.500
σ		0.235	0.325	0.089	1.186	0.638	1.942	0.000	2.000
%RSD		6.307	3.606	0.985	184.700	96.520	84.720	0.000	1.989

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	93.223%	2.286	2.158	86.827%	-0.035	-0.029	0.013	0.015
2	17:38:35	94.896%	2.187	2.357	88.173%	-0.015	-0.023	0.047	0.036
3	17:39:02	97.007%	2.228	2.317	89.373%	-0.018	-0.008	0.113	0.056
x		95.042%	2.234	2.277	88.124%	-0.023	-0.020	0.058	0.036
σ		1.896%	0.050	0.105	1.274%	0.011	0.010	0.051	0.020
%RSD		1.995	2.228	4.605	1.445	48.250	52.330	87.910	56.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	91.505%	0.184	0.817	0.794	41.970	42.290	100.234%	99.787%
2	17:38:35	93.782%	0.162	0.832	0.866	42.520	43.780	100.767%	101.184%
3	17:39:02	94.827%	0.180	0.747	0.783	42.360	42.980	103.358%	103.456%
x		93.372%	0.175	0.798	0.814	42.280	43.020	101.453%	101.475%
σ		1.699%	0.012	0.045	0.045	0.281	0.747	1.671%	1.852%
%RSD		1.819	6.796	5.695	5.576	0.664	1.735	1.647	1.825

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:38:09	0.012	0.009	0.052	0.038	0.041	100.484%
2	17:38:35	0.012	0.010	0.048	0.035	0.042	101.481%
3	17:39:02	0.009	0.007	0.038	0.027	0.038	104.470%
x		0.011	0.008	0.046	0.033	0.040	102.145%
σ		0.002	0.002	0.007	0.006	0.002	2.074%
%RSD		14.940	18.040	15.060	17.310	4.107	2.031

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	95.089%	0.024	101.200	100.400	0.000	34270.000	35750.000	35480.000
2	17:42:52	96.316%	0.023	105.200	103.200	0.000	35310.000	37100.000	36600.000
3	17:43:18	99.378%	-0.018	101.400	98.620	0.000	34890.000	37010.000	36420.000
x		96.928%	0.010	102.600	100.700	0.000	34820.000	36620.000	36170.000
σ		2.209%	0.024	2.238	2.292	0.000	525.000	758.600	605.000
%RSD		2.279	245.200	2.182	2.276	0.000	1.508	2.072	1.673

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	20.910	10530.000	0.000	11540.000	72410.000	72170.000	89.497%	1.873
2	17:42:52	21.470	10700.000	0.000	11700.000	74950.000	76470.000	91.827%	2.625
3	17:43:18	21.510	10630.000	0.000	11580.000	76150.000	78120.000	91.427%	1.461
x		21.300	10620.000	0.000	11610.000	74500.000	75590.000	90.917%	1.986
σ		0.338	89.560	0.000	82.300	1908.000	3072.000	1.246%	0.590
%RSD		1.585	0.843	0.000	0.709	2.562	4.064	1.370	29.720

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	1.176	1.897	75.190	61.340	313.600	0.458	5.023	5.784
2	17:42:52	1.760	2.079	78.090	62.590	317.300	0.490	5.594	5.486
3	17:43:18	1.960	2.088	79.490	62.990	311.300	0.557	5.347	5.745
x		1.632	2.021	77.590	62.310	314.100	0.502	5.321	5.672
σ		0.408	0.108	2.192	0.862	2.993	0.051	0.287	0.162
%RSD		24.980	5.326	2.825	1.383	0.953	10.080	5.387	2.854

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	6.166	18.460	17.380	1.364	-1.763	-1.797	0.000	380.600
2	17:42:52	6.455	17.470	18.040	1.404	-0.378	-0.246	0.000	393.400
3	17:43:18	6.245	18.420	17.750	2.050	-0.189	-2.459	0.000	395.800
x		6.288	18.120	17.720	1.606	-0.776	-1.501	0.000	389.900
σ		0.149	0.559	0.333	0.385	0.859	1.136	0.000	8.145
%RSD		2.377	3.087	1.876	23.960	110.700	75.710	0.000	2.089

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	92.309%	1.408	1.342	84.782%	-0.035	-0.019	0.076	0.035
2	17:42:52	94.834%	1.313	1.425	86.420%	-0.026	-0.014	0.067	0.060
3	17:43:18	95.025%	1.490	1.326	86.910%	-0.023	-0.023	0.049	-0.016
x		94.056%	1.404	1.364	86.037%	-0.028	-0.019	0.064	0.026
σ		1.516%	0.088	0.053	1.114%	0.006	0.004	0.014	0.039
%RSD		1.612	6.301	3.894	1.295	22.930	23.420	21.400	146.500

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	89.419%	0.129	0.495	0.569	64.220	64.500	99.103%	100.257%
2	17:42:52	93.836%	0.134	0.528	0.532	66.180	65.660	100.644%	103.860%
3	17:43:18	94.671%	0.150	0.502	0.550	65.090	65.550	103.225%	103.270%
x		92.642%	0.138	0.508	0.550	65.170	65.240	100.991%	102.462%
σ		2.822%	0.011	0.018	0.018	0.981	0.642	2.083%	1.933%
%RSD		3.046	7.965	3.488	3.283	1.506	0.984	2.062	1.886

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:25	0.012	0.010	0.138	0.098	0.106	98.906%
2	17:42:52	0.015	0.010	0.117	0.081	0.098	105.070%
3	17:43:18	0.007	0.011	0.115	0.084	0.092	103.378%
x		0.011	0.010	0.123	0.088	0.099	102.451%
σ		0.004	0.001	0.013	0.009	0.007	3.184%
%RSD		32.270	8.033	10.330	10.380	7.061	3.108

CCV 1467888 1/26/2015 5:46:16 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	17:46:43	93.874%	101.000	99.070	94.680	0.000	47170.000	45790.000	45330.000
2	17:47:10	96.210%	98.760	101.200	93.700	0.000	47980.000	46810.000	46010.000
3	17:47:36	98.289%	97.360	103.700	93.720	0.000	47510.000	46540.000	46000.000
x		96.124%	99.026%	101.308%	94.036%	0.000	95.106%	92.760%	91.560%
σ		2.209%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.298	1.825	2.270	0.595	0.000	0.864	1.137	0.845

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:46:43	450.200	4735.000	0.000	53190.000	52210.000	49470.000	94.084%	94.840
2	17:47:10	456.100	4829.000	0.000	52650.000	52320.000	52090.000	93.170%	103.900
3	17:47:36	456.600	4770.000	0.000	52700.000	51510.000	51550.000	95.853%	102.100
x		90.859%	95.560%	0.000	105.699%	104.033%	102.077%	94.369%	100.268%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.364%	n/a
%RSD		0.792	1.002	0.000	0.567	0.845	2.719	1.445	4.768

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:46:43	93.490	92.760	456.400	24540.000	22490.000	95.070	93.830	95.970
2	17:47:10	95.920	96.660	479.200	25340.000	23580.000	97.040	96.600	98.940
3	17:47:36	95.530	95.230	477.600	25360.000	23600.000	96.110	98.730	96.660
x		94.980%	94.883%	94.217%	100.312%	92.886%	96.072%	96.384%	97.191%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.377	2.079	2.700	1.868	2.727	1.025	2.549	1.601

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:46:43	95.140	99.700	99.150	95.930	98.890	95.050	0.000	96.800
2	17:47:10	99.890	105.100	105.700	102.500	97.580	95.430	0.000	98.620
3	17:47:36	97.620	105.700	105.500	101.300	103.500	95.100	0.000	101.500
x		97.547%	103.516%	103.446%	99.918%	99.975%	95.194%	0.000	98.968%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.435	3.207	3.593	3.512	3.085	0.217	0.000	2.389

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:46:43	98.634%	93.060	94.230	92.119%	98.590	96.800	99.320	99.420
2	17:47:10	98.917%	99.390	100.400	91.564%	98.550	96.370	99.920	98.760
3	17:47:36	101.445%	101.400	102.600	94.878%	98.410	96.910	99.730	97.610
x		99.665%	97.942%	99.093%	92.854%	98.513%	96.695%	99.655%	98.599%
σ		1.547%	n/a	n/a	1.775%	n/a	n/a	n/a	n/a
%RSD		1.553	4.433	4.392	1.911	0.096	0.295	0.308	0.929

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:46:43	96.361%	97.440	97.610	98.980	96.740	97.700	103.582%	103.421%
2	17:47:10	99.512%	97.170	99.940	97.560	97.940	96.910	104.832%	105.128%
3	17:47:36	101.624%	98.280	99.130	98.900	98.490	97.520	106.673%	108.636%
x		99.166%	97.632%	98.891%	98.478%	97.722%	97.376%	105.029%	105.729%
σ		2.648%	n/a	n/a	n/a	n/a	n/a	1.555%	2.659%
%RSD		2.671	0.590	1.197	0.813	0.914	0.426	1.480	2.515

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	17:46:43	109.700	106.100	110.400	109.200	109.000	97.148%
2	17:47:10	105.400	105.000	106.800	107.700	107.200	100.778%
3	17:47:36	107.100	106.300	108.100	108.900	107.700	102.937%
x		107.420%	105.823%	108.441%	108.591%	107.996%	100.288%
σ		n/a	n/a	n/a	n/a	n/a	2.926%
%RSD		1.992	0.652	1.684	0.711	0.877	2.917

CCB5 1/26/2015 5:53:48 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	17:54:14	100.014%	0.001	1.167	0.575	0.000	11.090	16.240	14.480
2	17:54:41	101.153%	0.114	1.030	0.456	0.000	11.160	14.160	14.590
3	17:55:08	105.076%	-0.002	0.397	0.373	0.000	10.770	13.350	14.680
x		102.081%	0.038	0.865	0.468	0.000	11.010	14.580	14.580
σ		2.655%	0.066	0.411	0.102	0.000	0.208	1.489	0.103
%RSD		2.601	176.200	47.550	21.710	0.000	1.887	10.210	0.703
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:14	1.050	2.250	0.000	1.415	28.770	20.330	101.088%	-0.051
2	17:54:41	0.960	-0.007	0.000	5.061	24.010	22.560	101.227%	0.043
3	17:55:08	1.220	-0.210	0.000	10.180	37.420	22.840	102.247%	-0.077
x		1.077	0.678	0.000	5.552	30.070	21.910	101.521%	-0.028
σ		0.132	1.366	0.000	4.402	6.797	1.373	0.633%	0.063
%RSD		12.270	201.500	0.000	79.300	22.600	6.268	0.624	223.100
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:14	0.023	-0.058	0.392	8.158	5.528	0.047	0.179	0.013
2	17:54:41	-0.056	-0.029	0.384	7.424	-3.988	0.028	-0.035	0.056
3	17:55:08	0.067	-0.028	0.310	4.662	-9.421	0.057	0.043	0.051
x		0.011	-0.038	0.362	6.748	-2.627	0.044	0.062	0.040
σ		0.062	0.017	0.045	1.843	7.566	0.015	0.108	0.023
%RSD		558.300	45.730	12.460	27.320	288.000	33.200	174.000	58.960
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:14	0.042	0.274	0.183	-0.277	-0.397	-1.418	0.000	0.084
2	17:54:41	0.051	0.243	0.209	-0.540	-0.311	-2.512	0.000	0.093
3	17:55:08	0.007	0.038	0.173	-0.605	-1.244	-2.268	0.000	0.085
x		0.033	0.185	0.188	-0.474	-0.651	-2.066	0.000	0.087
σ		0.023	0.128	0.019	0.173	0.516	0.574	0.000	0.005
%RSD		69.230	69.430	9.836	36.590	79.280	27.790	0.000	5.423
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:14	101.145%	0.366	0.420	98.340%	-0.009	0.002	-0.030	0.001
2	17:54:41	105.080%	0.318	0.387	101.179%	-0.000	0.003	-0.004	0.001
3	17:55:08	106.487%	0.357	0.347	101.974%	-0.001	0.003	-0.047	-0.042
x		104.237%	0.347	0.385	100.498%	-0.003	0.003	-0.027	-0.013
σ		2.769%	0.026	0.036	1.911%	0.005	0.001	0.021	0.025
%RSD		2.656	7.372	9.467	1.901	145.000	19.900	78.580	185.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:14	102.533%	0.182	0.183	0.175	0.087	0.078	105.294%	106.158%
2	17:54:41	103.650%	0.236	0.171	0.164	0.084	0.094	108.347%	108.080%
3	17:55:08	105.035%	0.253	0.166	0.212	0.019	0.093	108.868%	109.521%
x		103.739%	0.224	0.173	0.184	0.063	0.089	107.503%	107.920%
σ		1.253%	0.037	0.009	0.025	0.038	0.009	1.930%	1.687%
%RSD		1.208	16.560	4.983	13.780	60.720	10.200	1.796	1.563
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:54:14	0.032	0.024	0.030	0.017	0.026	115.682%		
2	17:54:41	0.034	0.028	0.044	0.031	0.033	112.826%		
3	17:55:08	0.030	0.031	0.031	0.017	0.027	114.010%		
x		0.032	0.028	0.035	0.022	0.028	114.173%		
σ		0.002	0.003	0.008	0.008	0.004	1.435%		
%RSD		7.285	12.070	22.520	37.300	12.690	1.257		

CRI 1470869 1/26/2015 5:58:08 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	17:58:34	102.401%	0.920	5.047	3.764	0.000	82.670	83.840	79.400
2	17:59:01	102.745%	0.880	5.746	4.611	0.000	79.770	84.950	84.430
3	17:59:27	101.579%	0.851	4.848	4.224	0.000	83.200	89.000	84.540
x		102.241%	88.378%	104.273%	83.994%	0.000	102.350%	85.929%	82.789%
σ		0.599%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.586	3.889	9.045	10.100	0.000	2.252	3.163	3.550
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:34	24.270	403.500	0.000	84.220	128.400	100.800	101.736%	4.384
2	17:59:01	25.300	412.100	0.000	75.890	82.720	102.200	100.824%	5.118
3	17:59:27	25.340	411.800	0.000	73.990	79.590	91.080	101.770%	5.044
x		83.232%	81.826%	0.000	78.033%	96.895%	98.034%	101.443%	96.974%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.537%	n/a
%RSD		2.431	1.203	0.000	6.973	28.190	6.179	0.529	8.331
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:34	0.919	1.666	4.370	42.910	29.890	0.457	0.983	2.050
2	17:59:01	0.759	1.675	4.590	44.080	32.510	0.512	0.985	2.050
3	17:59:27	0.765	1.817	4.698	44.240	33.640	0.496	0.920	2.027
x		81.434%	85.956%	91.048%	87.489%	64.025%	97.672%	96.234%	102.118%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		11.100	4.916	3.675	1.665	6.017	5.730	3.821	0.656
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:34	2.125	4.783	4.923	0.604	7.125	3.262	0.000	4.998
2	17:59:01	2.105	5.339	4.999	1.244	4.870	8.059	0.000	5.043
3	17:59:27	2.223	5.303	5.791	1.160	6.096	6.464	0.000	5.143
x		107.561%	102.839%	104.757%	100.251%	120.612%	118.568%	0.000	101.228%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.928	6.055	9.182	34.720	18.720	41.210	0.000	1.467
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:34	95.729%	5.305	4.502	100.447%	0.903	0.916	0.836	0.825
2	17:59:01	94.499%	5.378	4.894	98.788%	0.926	0.965	0.944	0.939
3	17:59:27	95.358%	5.244	4.962	101.439%	0.869	0.838	0.917	0.919
x		95.195%	106.173%	95.721%	100.225%	89.930%	90.612%	89.879%	89.418%
σ		0.631%	n/a	n/a	1.339%	n/a	n/a	n/a	n/a
%RSD		0.663	1.264	5.191	1.336	3.227	7.082	6.241	6.828
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:34	104.389%	5.801	1.755	1.808	8.900	9.300	105.906%	106.966%
2	17:59:01	102.741%	5.247	1.736	1.896	9.408	8.957	106.726%	105.532%
3	17:59:27	102.701%	5.198	1.860	1.953	9.740	9.207	106.527%	107.876%
x		103.277%	108.309%	89.177%	94.276%	93.493%	91.548%	106.386%	106.791%
σ		0.963%	n/a	n/a	n/a	n/a	n/a	0.428%	1.182%
%RSD		0.933	6.177	3.754	3.869	4.525	1.938	0.402	1.106
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:58:34	0.932	0.867	0.918	0.797	0.874	118.270%		
2	17:59:01	0.896	0.910	0.988	0.958	0.946	112.886%		
3	17:59:27	0.949	0.913	0.986	0.867	0.929	112.183%		
x		92.578%	89.650%	96.393%	87.358%	91.637%	114.446%		
σ		n/a	n/a	n/a	n/a	n/a	3.330%		
%RSD		2.947	2.865	4.154	9.233	4.123	2.909		

MB 180-131398/1-A 1/26/2015 6:02:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:02:50	97.356%	0.002	0.217	0.350	0.000	-2.154	3.201	3.360
2	18:03:16	99.042%	0.079	0.571	-0.133	0.000	-1.526	5.440	4.243
3	18:03:42	102.451%	-0.001	0.182	0.178	0.000	-1.751	2.357	4.110
x		99.617%	0.027	0.323	0.132	0.000	-1.810	3.666	3.905
σ		2.596%	0.045	0.216	0.245	0.000	0.318	1.594	0.476
%RSD		2.606	168.000	66.680	185.800	0.000	17.570	43.470	12.190
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:02:50	0.923	2.742	0.000	-6.804	8.334	4.439	98.441%	-0.142
2	18:03:16	1.062	0.428	0.000	-3.275	19.670	5.490	100.354%	-0.121
3	18:03:42	1.184	-1.039	0.000	-8.595	17.040	9.242	101.033%	-0.075
x		1.056	0.711	0.000	-6.225	15.020	6.391	99.943%	-0.113
σ		0.130	1.906	0.000	2.707	5.934	2.525	1.344%	0.035
%RSD		12.330	268.200	0.000	43.490	39.520	39.510	1.345	30.760
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:02:50	-0.026	-0.043	0.196	-1.078	-10.340	0.013	0.008	0.041
2	18:03:16	0.069	-0.071	0.174	-2.503	-8.518	0.009	0.001	-0.016
3	18:03:42	0.078	-0.119	0.228	-3.637	-13.230	0.005	0.061	0.054
x		0.041	-0.078	0.199	-2.406	-10.700	0.009	0.023	0.026
σ		0.058	0.038	0.027	1.282	2.378	0.004	0.033	0.037
%RSD		142.800	49.510	13.440	53.290	22.230	47.520	140.200	142.200
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:02:50	0.034	0.243	0.270	-0.493	-0.284	-1.983	0.000	0.035
2	18:03:16	0.005	0.221	0.314	-0.611	-0.165	-3.160	0.000	0.023
3	18:03:42	0.016	0.196	0.262	-0.464	-0.236	-1.919	0.000	0.039
x		0.018	0.220	0.282	-0.522	-0.229	-2.354	0.000	0.032
σ		0.015	0.023	0.028	0.078	0.060	0.699	0.000	0.008
%RSD		80.820	10.620	10.050	14.890	26.190	29.700	0.000	25.370
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:02:50	98.464%	0.123	0.062	96.338%	-0.018	0.002	-0.045	-0.016
2	18:03:16	102.576%	0.117	0.082	99.749%	-0.027	-0.005	-0.086	-0.053
3	18:03:42	103.366%	0.105	0.047	101.005%	-0.010	-0.005	-0.022	-0.030
x		101.469%	0.115	0.064	99.030%	-0.019	-0.003	-0.051	-0.033
σ		2.632%	0.009	0.017	2.415%	0.008	0.004	0.032	0.019
%RSD		2.593	7.934	27.330	2.439	45.440	161.000	62.770	56.680
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:02:50	100.198%	0.164	0.032	0.054	-0.032	0.001	102.002%	102.554%
2	18:03:16	101.942%	0.173	0.047	0.058	-0.019	0.012	105.370%	106.035%
3	18:03:42	103.146%	0.147	0.046	0.028	0.034	0.011	105.359%	104.998%
x		101.762%	0.161	0.041	0.047	-0.006	0.008	104.244%	104.529%
σ		1.482%	0.013	0.009	0.016	0.035	0.006	1.941%	1.787%
%RSD		1.456	8.314	20.610	34.730	595.400	75.450	1.862	1.709
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:02:50	0.011	0.007	0.003	-0.004	0.002	112.882%		
2	18:03:16	0.010	0.008	0.008	0.006	0.003	112.135%		
3	18:03:42	0.011	0.006	0.012	0.005	0.007	112.145%		
x		0.011	0.007	0.008	0.002	0.004	112.387%		
σ		0.001	0.001	0.004	0.005	0.003	0.428%		
%RSD		4.655	17.140	58.910	221.900	68.750	0.381		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	98.142%	0.022	0.339	0.630	0.000	4.213	2.389	2.335
2	18:07:31	102.535%	-0.019	0.663	0.264	0.000	1.328	1.402	2.487
3	18:07:58	101.227%	0.000	-0.169	0.325	0.000	1.265	1.883	1.971
x		100.635%	0.001	0.278	0.406	0.000	2.268	1.892	2.264
σ		2.256%	0.020	0.419	0.196	0.000	1.684	0.494	0.265
%RSD		2.241	2293.000	150.900	48.230	0.000	74.240	26.110	11.710

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	0.385	0.740	0.000	-4.499	34.420	0.382	94.165%	-0.112
2	18:07:31	0.356	-1.912	0.000	-3.559	26.300	10.340	95.375%	-0.139
3	18:07:58	0.441	-1.496	0.000	-0.282	16.150	8.855	96.271%	-0.190
x		0.394	-0.889	0.000	-2.780	25.620	6.524	95.271%	-0.147
σ		0.043	1.426	0.000	2.214	9.154	5.371	1.057%	0.040
%RSD		11.020	160.400	0.000	79.650	35.730	82.320	1.109	26.980

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	0.508	0.506	0.224	-2.029	-10.690	0.005	0.119	0.020
2	18:07:31	-0.618	0.377	0.220	-2.662	-15.210	0.008	0.264	0.068
3	18:07:58	0.615	0.428	0.226	-2.416	-13.110	-0.004	0.122	0.039
x		0.168	0.437	0.223	-2.369	-13.000	0.003	0.168	0.042
σ		0.683	0.065	0.003	0.319	2.265	0.006	0.083	0.024
%RSD		405.700	14.860	1.365	13.480	17.420	201.500	49.330	58.090

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	0.104	1.602	1.581	-1.240	-1.338	-4.411	0.000	0.031
2	18:07:31	0.157	2.012	1.844	-0.401	-0.583	-2.068	0.000	0.035
3	18:07:58	0.135	1.908	1.741	0.047	-0.173	-2.924	0.000	0.026
x		0.132	1.841	1.722	-0.531	-0.698	-3.134	0.000	0.031
σ		0.027	0.213	0.133	0.653	0.591	1.186	0.000	0.005
%RSD		20.380	11.580	7.714	122.900	84.690	37.830	0.000	15.190

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	96.899%	0.053	0.032	93.804%	0.009	0.009	-0.038	-0.036
2	18:07:31	99.183%	0.066	0.039	97.158%	-0.011	-0.001	-0.123	-0.082
3	18:07:58	100.888%	0.019	0.047	98.336%	0.002	-0.011	-0.039	-0.032
x		98.990%	0.046	0.039	96.433%	-0.000	-0.001	-0.067	-0.050
σ		2.001%	0.024	0.007	2.351%	0.010	0.010	0.049	0.028
%RSD		2.022	53.230	18.540	2.438	12690.000	1073.000	73.000	55.500

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	97.048%	0.147	0.054	0.063	0.017	0.005	101.406%	101.495%
2	18:07:31	99.288%	0.118	0.032	0.073	-0.005	0.035	103.329%	104.694%
3	18:07:58	100.158%	0.142	0.062	0.030	0.061	0.030	106.676%	105.560%
x		98.832%	0.136	0.049	0.055	0.024	0.024	103.804%	103.916%
σ		1.605%	0.016	0.016	0.023	0.034	0.016	2.667%	2.141%
%RSD		1.624	11.610	31.620	40.820	139.000	67.540	2.569	2.060

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:04	0.002	0.004	0.005	0.018	0.006	119.867%
2	18:07:31	-0.000	0.004	0.010	0.017	0.008	114.721%
3	18:07:58	0.004	0.003	0.005	0.003	0.005	115.510%
x		0.002	0.003	0.007	0.013	0.007	116.700%
σ		0.002	0.000	0.003	0.009	0.002	2.771%
%RSD		106.000	12.980	37.140	68.170	22.920	2.375

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	98.578%	0.021	-0.283	0.233	0.000	-3.288	2.025	1.786
2	18:11:49	104.056%	0.036	-0.413	-0.013	0.000	-4.108	1.374	1.754
3	18:12:14	104.357%	-0.020	0.055	0.038	0.000	-4.661	1.662	1.691
x		102.330%	0.012	-0.214	0.086	0.000	-4.019	1.687	1.744
σ		3.253%	0.029	0.242	0.130	0.000	0.691	0.326	0.048
%RSD		3.179	233.200	113.000	150.800	0.000	17.200	19.340	2.778

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	1.146	1.604	0.000	-4.143	1.636	5.798	95.305%	-0.214
2	18:11:49	1.113	-2.677	0.000	-1.541	15.690	4.743	97.605%	-0.068
3	18:12:14	1.269	-2.175	0.000	-7.180	8.293	1.824	98.255%	-0.021
x		1.176	-1.083	0.000	-4.288	8.542	4.122	97.055%	-0.101
σ		0.082	2.340	0.000	2.822	7.033	2.058	1.550%	0.101
%RSD		6.978	216.200	0.000	65.810	82.330	49.940	1.597	99.920

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	-0.155	0.573	0.177	-0.488	-12.040	0.006	11.180	0.033
2	18:11:49	0.308	0.550	0.145	-2.455	-17.730	0.005	31.770	0.091
3	18:12:14	0.131	0.531	0.167	-1.413	-15.620	0.005	24.950	0.057
x		0.095	0.551	0.163	-1.452	-15.130	0.006	22.630	0.060
σ		0.233	0.021	0.016	0.984	2.876	0.000	10.490	0.029
%RSD		246.300	3.753	10.010	67.780	19.010	7.509	46.330	48.280

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	0.043	0.599	0.748	-0.720	-0.437	-4.872	0.000	0.017
2	18:11:49	0.090	0.609	0.620	-1.021	-1.250	-4.477	0.000	0.029
3	18:12:14	0.057	0.581	0.822	-0.892	0.062	-2.420	0.000	0.023
x		0.063	0.596	0.730	-0.878	-0.541	-3.923	0.000	0.023
σ		0.024	0.014	0.102	0.151	0.662	1.316	0.000	0.006
%RSD		37.450	2.341	14.020	17.210	122.300	33.560	0.000	26.510

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	97.758%	-0.010	-0.010	94.263%	-0.005	-0.020	-0.056	-0.041
2	18:11:49	100.163%	0.014	0.014	96.244%	0.001	0.001	-0.130	-0.104
3	18:12:14	100.708%	0.014	-0.009	97.892%	-0.021	-0.006	-0.102	-0.078
x		99.543%	0.006	-0.002	96.133%	-0.008	-0.008	-0.096	-0.074
σ		1.570%	0.014	0.013	1.817%	0.011	0.010	0.037	0.032
%RSD		1.577	232.900	892.500	1.890	139.300	121.600	39.010	42.810

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	95.781%	0.058	0.022	0.024	0.017	0.002	101.774%	101.378%
2	18:11:49	100.336%	0.105	0.029	0.023	0.008	0.012	104.431%	104.783%
3	18:12:14	101.977%	0.071	0.022	0.021	-0.026	-0.011	105.087%	106.560%
x		99.365%	0.078	0.024	0.023	-0.000	0.001	103.764%	104.240%
σ		3.211%	0.024	0.004	0.002	0.022	0.011	1.754%	2.633%
%RSD		3.231	30.560	14.710	8.443	11030.000	1177.000	1.690	2.526

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:22	0.001	0.000	0.004	0.000	0.002	106.191%
2	18:11:49	0.003	0.000	-0.003	-0.000	-0.002	114.438%
3	18:12:14	0.002	0.001	0.003	-0.013	-0.004	111.972%
x		0.002	0.001	0.001	-0.004	-0.002	110.867%
σ		0.001	0.001	0.004	0.007	0.003	4.233%
%RSD		65.550	117.200	267.000	168.400	187.700	3.818

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:40	103.791%	44.970	886.400	856.100	0.000	42620.000	40670.000	40190.000
2	18:16:06	98.729%	48.730	949.800	922.300	0.000	44540.000	42880.000	42440.000
3	18:16:33	99.670%	49.340	957.600	916.700	0.000	44760.000	43200.000	42410.000
x		100.730%	47.680	931.300	898.400	0.000	43980.000	42250.000	41680.000
σ		2.693%	2.363	39.030	36.670	0.000	1178.000	1378.000	1291.000
%RSD		2.673	4.956	4.191	4.081	0.000	2.679	3.261	3.098
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:40	1657.000	8373.000	0.000	49340.000	48060.000	46470.000	88.629%	934.000
2	18:16:06	1746.000	8680.000	0.000	50200.000	49570.000	47870.000	89.457%	964.400
3	18:16:33	1755.000	8584.000	0.000	50110.000	50100.000	47590.000	89.991%	972.100
x		1719.000	8545.000	0.000	49880.000	49240.000	47310.000	89.359%	956.800
σ		54.200	156.900	0.000	473.000	1058.000	737.700	0.686%	20.170
%RSD		3.153	1.836	0.000	0.948	2.148	1.559	0.768	2.108
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:40	460.500	179.400	428.500	920.800	990.500	457.900	458.200	234.100
2	18:16:06	471.300	185.200	443.900	952.100	1031.000	468.600	465.700	237.400
3	18:16:33	476.900	185.500	444.000	962.600	1019.000	473.000	464.900	238.600
x		469.600	183.400	438.800	945.200	1014.000	466.500	462.900	236.700
σ		8.370	3.417	8.882	21.740	20.980	7.791	4.130	2.360
%RSD		1.782	1.864	2.024	2.300	2.070	1.670	0.892	0.997
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:40	231.600	485.500	478.000	36.510	10.680	6.939	0.000	999.400
2	18:16:06	238.400	499.600	493.900	38.030	8.175	5.518	0.000	1028.000
3	18:16:33	236.800	498.700	494.900	38.170	10.410	6.414	0.000	1034.000
x		235.600	494.600	488.900	37.570	9.753	6.290	0.000	1020.000
σ		3.537	7.915	9.472	0.918	1.373	0.718	0.000	18.450
%RSD		1.501	1.600	1.937	2.445	14.080	11.420	0.000	1.808
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:40	90.476%	1032.000	1047.000	83.193%	49.600	48.460	49.460	38.430
2	18:16:06	90.745%	1069.000	1071.000	83.897%	49.780	48.900	49.310	38.110
3	18:16:33	92.542%	1073.000	1079.000	85.913%	49.190	48.710	51.570	36.980
x		91.254%	1058.000	1066.000	84.334%	49.520	48.690	50.110	37.840
σ		1.123%	22.670	16.940	1.412%	0.303	0.224	1.263	0.761
%RSD		1.231	2.143	1.589	1.674	0.612	0.459	2.521	2.011
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:40	87.792%	2065.000	505.800	498.800	1883.000	1949.000	96.572%	96.472%
2	18:16:06	88.069%	2147.000	516.400	509.600	1943.000	2004.000	97.622%	97.975%
3	18:16:33	88.750%	2167.000	515.900	511.800	1951.000	2018.000	98.506%	101.158%
x		88.204%	2126.000	512.700	506.800	1926.000	1990.000	97.567%	98.535%
σ		0.493%	54.190	5.980	6.934	37.300	36.460	0.969%	2.393%
%RSD		0.559	2.549	1.166	1.368	1.937	1.832	0.993	2.428
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:15:40	48.970	46.560	20.110	19.760	19.720	96.371%		
2	18:16:06	50.820	49.160	20.770	20.610	20.430	96.691%		
3	18:16:33	50.860	48.730	20.630	20.150	20.210	99.167%		
x		50.220	48.150	20.500	20.170	20.120	97.410%		
σ		1.083	1.395	0.348	0.426	0.366	1.530%		
%RSD		2.157	2.897	1.696	2.114	1.818	1.571		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:54	102.413%	0.038	48.480	42.040	0.000	50.840	3.989	4.021
2	18:20:21	104.127%	0.055	46.710	44.500	0.000	47.440	3.442	4.449
3	18:20:47	106.247%	0.016	42.330	42.160	0.000	46.740	2.560	2.877
x		104.262%	0.036	45.840	42.900	0.000	48.340	3.330	3.782
σ		1.920%	0.019	3.163	1.388	0.000	2.193	0.721	0.813
%RSD		1.842	53.470	6.901	3.235	0.000	4.536	21.650	21.490
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:54	2.010	111.000	0.000	25.130	30.830	19.040	90.951%	0.972
2	18:20:21	1.858	108.200	0.000	25.140	27.390	19.360	92.775%	0.664
3	18:20:47	1.731	108.000	0.000	19.380	39.370	17.220	93.909%	0.423
x		1.866	109.100	0.000	23.220	32.530	18.540	92.545%	0.686
σ		0.140	1.682	0.000	3.325	6.169	1.155	1.492%	0.275
%RSD		7.510	1.542	0.000	14.320	18.960	6.229	1.612	40.090
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:54	1.309	2.980	0.478	2.652	-1.856	0.093	0.483	0.326
2	18:20:21	1.350	2.999	0.555	0.486	-13.120	0.054	0.474	0.320
3	18:20:47	0.600	2.834	0.508	-0.210	-13.740	0.059	0.582	0.278
x		1.086	2.938	0.514	0.976	-9.572	0.069	0.513	0.308
σ		0.422	0.090	0.039	1.493	6.690	0.021	0.060	0.027
%RSD		38.820	3.080	7.576	153.000	69.890	30.350	11.670	8.614
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:54	0.465	3.791	3.303	0.666	-1.210	-3.516	0.000	0.175
2	18:20:21	0.285	3.574	3.679	0.547	-0.270	-3.175	0.000	0.129
3	18:20:47	0.429	3.743	3.513	-1.019	-0.112	-3.017	0.000	0.123
x		0.393	3.702	3.498	0.065	-0.531	-3.236	0.000	0.143
σ		0.095	0.114	0.189	0.941	0.593	0.255	0.000	0.028
%RSD		24.270	3.075	5.395	1455.000	111.800	7.881	0.000	19.830
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:54	92.411%	5.643	5.472	90.388%	-0.035	-0.013	0.012	-0.026
2	18:20:21	95.652%	3.650	3.568	91.385%	-0.021	-0.024	-0.022	-0.060
3	18:20:47	96.992%	2.493	2.744	93.589%	-0.028	-0.031	-0.022	-0.019
x		95.018%	3.929	3.928	91.787%	-0.028	-0.023	-0.011	-0.035
σ		2.356%	1.594	1.399	1.638%	0.007	0.009	0.020	0.022
%RSD		2.479	40.570	35.610	1.784	25.180	38.820	187.200	62.640
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:54	93.576%	7.219	0.157	0.143	0.182	0.238	99.439%	99.665%
2	18:20:21	94.583%	4.871	0.129	0.167	0.249	0.171	101.967%	102.880%
3	18:20:47	96.688%	3.408	0.087	0.147	0.153	0.208	104.429%	104.097%
x		94.949%	5.166	0.124	0.152	0.195	0.206	101.945%	102.214%
σ		1.588%	1.923	0.035	0.013	0.049	0.034	2.495%	2.289%
%RSD		1.672	37.220	28.250	8.405	25.170	16.430	2.448	2.240
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:19:54	0.207	0.193	0.011	0.020	0.016	107.282%		
2	18:20:21	0.114	0.116	0.020	0.010	0.016	107.711%		
3	18:20:47	0.068	0.081	0.035	0.011	0.019	109.201%		
x		0.130	0.130	0.022	0.014	0.017	108.064%		
σ		0.071	0.057	0.012	0.005	0.002	1.007%		
%RSD		54.500	44.170	55.150	39.070	9.646	0.932		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:09	103.014%	0.037	8.738	10.620	0.000	1.532	1.545	1.670
2	18:24:35	102.485%	0.037	10.080	10.200	0.000	3.583	2.315	2.496
3	18:25:01	103.642%	0.018	8.804	8.666	0.000	5.005	3.669	2.172
x		103.047%	0.031	9.208	9.828	0.000	3.373	2.509	2.113
σ		0.579%	0.011	0.757	1.029	0.000	1.746	1.075	0.416
%RSD		0.562	36.530	8.220	10.470	0.000	51.760	42.850	19.710
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:09	2.454	24.780	0.000	-3.751	16.340	10.940	95.589%	-0.089
2	18:24:35	2.527	20.800	0.000	-1.669	16.010	10.190	96.654%	0.107
3	18:25:01	2.730	21.590	0.000	1.792	21.210	16.930	95.736%	0.160
x		2.571	22.390	0.000	-1.209	17.850	12.680	95.993%	0.060
σ		0.143	2.106	0.000	2.800	2.908	3.691	0.577%	0.131
%RSD		5.569	9.407	0.000	231.500	16.290	29.100	0.601	220.500
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:09	0.292	0.628	0.219	-1.558	-19.130	0.014	0.385	0.053
2	18:24:35	0.377	0.538	0.240	-2.036	-15.930	0.028	0.412	0.045
3	18:25:01	0.309	0.624	0.195	-1.617	-18.910	0.014	0.393	0.094
x		0.326	0.597	0.218	-1.737	-17.990	0.018	0.397	0.064
σ		0.045	0.051	0.023	0.261	1.792	0.008	0.014	0.026
%RSD		13.750	8.550	10.430	15.010	9.958	43.320	3.512	40.400
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:09	0.113	1.307	1.356	0.129	0.216	-3.725	0.000	0.041
2	18:24:35	0.161	1.428	1.711	-1.241	-1.446	-5.668	0.000	0.050
3	18:25:01	0.117	1.604	1.605	0.090	-0.701	-3.532	0.000	0.073
x		0.131	1.446	1.557	-0.341	-0.643	-4.308	0.000	0.055
σ		0.027	0.149	0.182	0.780	0.832	1.182	0.000	0.016
%RSD		20.460	10.310	11.690	229.000	129.400	27.430	0.000	29.740
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:09	98.291%	0.489	0.428	94.533%	-0.028	-0.026	-0.001	-0.007
2	18:24:35	99.223%	0.471	0.409	96.853%	-0.031	-0.024	-0.050	-0.047
3	18:25:01	100.119%	0.416	0.325	97.404%	-0.017	-0.001	-0.058	-0.053
x		99.211%	0.459	0.387	96.263%	-0.025	-0.017	-0.036	-0.036
σ		0.914%	0.038	0.055	1.523%	0.007	0.014	0.031	0.025
%RSD		0.921	8.334	14.140	1.583	29.040	83.930	85.020	69.980
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:24:09	97.097%	0.352	0.023	0.008	0.050	0.017	104.109%	103.970%
2	18:24:35	101.900%	0.365	0.024	0.037	0.054	0.112	104.605%	105.816%
3	18:25:01	97.983%	0.454	0.030	0.043	0.098	0.162	103.348%	104.623%
x		98.993%	0.391	0.026	0.030	0.067	0.097	104.021%	104.803%
σ		2.556%	0.055	0.004	0.019	0.026	0.074	0.633%	0.936%
%RSD		2.582	14.200	15.840	63.780	39.200	76.260	0.609	0.893
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:24:09	0.023	0.026	0.012	0.006	0.008	107.672%		
2	18:24:35	0.029	0.021	0.009	0.019	0.010	112.399%		
3	18:25:01	0.027	0.026	0.016	-0.000	0.010	108.126%		
x		0.026	0.024	0.012	0.008	0.009	109.399%		
σ		0.003	0.003	0.003	0.010	0.001	2.608%		
%RSD		13.280	11.840	27.910	119.000	13.970	2.384		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:24	96.951%	44.550	939.000	892.600	0.000	42790.000	40540.000	39890.000
2	18:28:51	97.214%	47.610	955.700	937.600	0.000	44140.000	42270.000	41930.000
3	18:29:17	99.425%	48.630	968.500	915.300	0.000	43920.000	42230.000	41740.000
x		97.864%	46.930	954.400	915.200	0.000	43620.000	41680.000	41190.000
σ		1.358%	2.126	14.760	22.470	0.000	724.300	986.100	1128.000
%RSD		1.388	4.529	1.547	2.455	0.000	1.660	2.366	2.738
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:24	1646.000	8399.000	0.000	48680.000	47270.000	45410.000	89.090%	923.900
2	18:28:51	1725.000	8690.000	0.000	49970.000	48370.000	47590.000	88.596%	959.900
3	18:29:17	1724.000	8647.000	0.000	49710.000	49320.000	48480.000	89.405%	976.300
x		1699.000	8579.000	0.000	49450.000	48320.000	47160.000	89.030%	953.400
σ		45.600	157.000	0.000	681.800	1026.000	1579.000	0.408%	26.800
%RSD		2.684	1.831	0.000	1.379	2.123	3.349	0.458	2.811
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:24	438.900	171.700	417.800	897.500	970.800	446.500	439.700	223.200
2	18:28:51	461.600	182.200	435.900	941.900	1014.000	468.100	460.100	232.900
3	18:29:17	463.700	181.900	438.200	950.300	995.000	468.800	460.400	235.000
x		454.700	178.600	430.700	929.900	993.400	461.100	453.400	230.400
σ		13.750	5.975	11.160	28.420	21.730	12.660	11.880	6.311
%RSD		3.025	3.346	2.591	3.056	2.188	2.746	2.620	2.740
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:24	221.500	460.000	453.400	35.000	7.679	4.198	0.000	1011.000
2	18:28:51	232.600	480.900	471.000	38.030	8.118	7.224	0.000	1022.000
3	18:29:17	234.800	481.300	475.500	36.960	10.420	6.232	0.000	1023.000
x		229.600	474.100	466.600	36.660	8.738	5.885	0.000	1019.000
σ		7.176	12.190	11.670	1.538	1.470	1.543	0.000	6.758
%RSD		3.125	2.572	2.502	4.196	16.830	26.210	0.000	0.663
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:24	89.777%	1013.000	1035.000	83.474%	48.540	47.430	49.300	37.250
2	18:28:51	91.438%	1048.000	1064.000	84.377%	49.040	48.170	49.900	39.520
3	18:29:17	93.008%	1061.000	1072.000	86.232%	48.660	47.690	49.420	36.560
x		91.408%	1041.000	1057.000	84.694%	48.750	47.760	49.540	37.770
σ		1.616%	24.750	19.410	1.406%	0.265	0.376	0.313	1.551
%RSD		1.768	2.378	1.837	1.660	0.543	0.788	0.632	4.107
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:24	87.792%	2083.000	505.400	504.000	1894.000	1935.000	98.246%	98.589%
2	18:28:51	88.282%	2148.000	515.500	511.600	1937.000	1990.000	99.472%	100.197%
3	18:29:17	90.340%	2177.000	517.000	514.100	1906.000	1996.000	100.957%	101.455%
x		88.805%	2136.000	512.600	509.900	1912.000	1974.000	99.559%	100.080%
σ		1.352%	47.900	6.320	5.291	22.310	33.650	1.358%	1.437%
%RSD		1.523	2.243	1.233	1.038	1.167	1.705	1.364	1.435
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:28:24	47.620	46.140	19.700	19.460	19.510	98.497%		
2	18:28:51	50.040	48.340	20.680	20.960	20.280	98.953%		
3	18:29:17	50.050	48.350	20.200	20.390	20.140	101.936%		
x		49.240	47.610	20.190	20.270	19.980	99.795%		
σ		1.400	1.274	0.490	0.761	0.412	1.868%		
%RSD		2.844	2.677	2.429	3.754	2.062	1.872		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:42	98.801%	44.420	948.900	907.400	0.000	42360.000	39750.000	39420.000
2	18:33:08	101.896%	44.580	956.200	930.300	0.000	42820.000	40910.000	40530.000
3	18:33:35	102.020%	47.650	1000.000	951.500	0.000	43420.000	41520.000	41090.000
x		100.906%	45.550	968.500	929.700	0.000	42870.000	40730.000	40350.000
σ		1.824%	1.818	27.860	22.060	0.000	530.400	896.900	848.100
%RSD		1.807	3.992	2.877	2.372	0.000	1.237	2.202	2.102
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:42	1619.000	8277.000	0.000	47540.000	46310.000	44260.000	87.582%	919.900
2	18:33:08	1669.000	8467.000	0.000	49650.000	48760.000	48020.000	88.350%	955.600
3	18:33:35	1698.000	8512.000	0.000	49400.000	50280.000	47820.000	89.980%	961.800
x		1662.000	8419.000	0.000	48860.000	48450.000	46700.000	88.637%	945.800
σ		39.960	124.900	0.000	1149.000	2004.000	2116.000	1.224%	22.620
%RSD		2.404	1.484	0.000	2.352	4.136	4.531	1.381	2.392
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:42	444.000	173.900	417.100	884.700	958.000	444.000	439.300	224.300
2	18:33:08	457.100	179.900	431.800	930.000	994.700	463.400	456.300	233.500
3	18:33:35	458.600	181.600	434.900	938.500	988.100	459.800	451.500	233.800
x		453.200	178.500	427.900	917.700	980.300	455.800	449.000	230.600
σ		8.052	4.052	9.545	28.920	19.560	10.330	8.780	5.404
%RSD		1.777	2.270	2.230	3.151	1.995	2.266	1.955	2.344
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:42	223.900	462.000	451.500	36.750	9.202	3.776	0.000	992.100
2	18:33:08	230.700	478.900	470.800	35.210	9.745	4.389	0.000	1009.000
3	18:33:35	226.800	477.400	464.800	34.730	9.229	4.055	0.000	1004.000
x		227.100	472.800	462.300	35.560	9.392	4.073	0.000	1002.000
σ		3.401	9.361	9.900	1.056	0.306	0.307	0.000	8.885
%RSD		1.497	1.980	2.141	2.970	3.259	7.538	0.000	0.887
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:42	88.975%	1021.000	1023.000	82.852%	47.640	47.850	47.390	35.770
2	18:33:08	91.994%	1041.000	1061.000	84.876%	48.600	47.680	50.520	38.020
3	18:33:35	93.815%	1042.000	1073.000	85.556%	48.360	48.470	48.610	36.620
x		91.595%	1034.000	1052.000	84.428%	48.200	48.000	48.840	36.800
σ		2.445%	12.070	25.700	1.407%	0.498	0.415	1.578	1.133
%RSD		2.669	1.166	2.443	1.666	1.033	0.864	3.230	3.080
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:42	88.280%	2020.000	487.700	482.300	1823.000	1874.000	96.906%	99.268%
2	18:33:08	88.636%	2103.000	508.000	502.100	1906.000	1941.000	100.850%	100.707%
3	18:33:35	90.536%	2105.000	510.600	497.200	1908.000	1968.000	100.764%	101.959%
x		89.151%	2076.000	502.100	493.900	1879.000	1928.000	99.507%	100.645%
σ		1.213%	48.970	12.560	10.300	48.700	48.250	2.253%	1.346%
%RSD		1.361	2.359	2.501	2.086	2.592	2.503	2.264	1.338
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:32:42	47.690	46.780	19.610	19.660	19.340	98.744%		
2	18:33:08	49.740	47.870	20.200	20.180	20.080	100.076%		
3	18:33:35	48.750	47.670	19.800	19.680	19.670	101.953%		
x		48.730	47.440	19.870	19.840	19.700	100.258%		
σ		1.027	0.581	0.303	0.296	0.372	1.612%		
%RSD		2.108	1.225	1.526	1.494	1.888	1.608		

180-40595-D-2-A PDS 1/26/2015 6:36:33 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	18:36:59	95.754%	43.270	953.300	908.300	0.000	42680.000	40350.000	40060.000
2	18:37:25	96.127%	47.900	980.300	951.800	0.000	43790.000	41950.000	41830.000
3	18:37:52	98.122%	46.870	977.100	954.100	0.000	43840.000	42460.000	41860.000
x		96.668%	46.010	970.200	938.100	0.000	43430.000	41590.000	41250.000
σ		1.273%	2.432	14.770	25.810	0.000	657.400	1101.000	1032.000
%RSD		1.317	5.285	1.522	2.751	0.000	1.514	2.648	2.501
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:59	1635.000	8468.000	0.000	48170.000	46960.000	45400.000	87.935%	921.500
2	18:37:25	1715.000	8676.000	0.000	49930.000	49310.000	47520.000	88.255%	950.500
3	18:37:52	1730.000	8689.000	0.000	50360.000	48770.000	47520.000	88.590%	955.900
x		1693.000	8611.000	0.000	49490.000	48350.000	46810.000	88.260%	942.600
σ		50.990	124.100	0.000	1162.000	1229.000	1225.000	0.328%	18.470
%RSD		3.011	1.441	0.000	2.349	2.543	2.617	0.371	1.960
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:59	447.400	172.900	417.300	888.500	947.600	443.400	433.300	223.400
2	18:37:25	456.700	179.200	435.800	935.600	1002.000	462.200	456.800	231.400
3	18:37:52	462.500	182.100	436.000	945.000	1005.000	460.600	455.700	231.300
x		455.500	178.100	429.700	923.100	984.900	455.400	448.600	228.700
σ		7.624	4.676	10.760	30.280	32.360	10.410	13.280	4.561
%RSD		1.674	2.626	2.503	3.280	3.285	2.287	2.960	1.995
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:59	221.300	467.300	452.000	36.570	8.728	6.193	0.000	985.400
2	18:37:25	228.200	477.900	472.900	35.640	8.183	5.730	0.000	1003.000
3	18:37:52	227.300	478.900	474.200	36.130	8.980	5.789	0.000	1012.000
x		225.600	474.700	466.300	36.120	8.630	5.904	0.000	999.900
σ		3.774	6.412	12.460	0.466	0.407	0.252	0.000	13.310
%RSD		1.673	1.351	2.673	1.289	4.720	4.271	0.000	1.331
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:59	88.936%	1014.000	1035.000	82.618%	46.030	45.290	48.260	37.900
2	18:37:25	91.454%	1039.000	1052.000	84.870%	46.630	45.380	48.650	37.010
3	18:37:52	93.021%	1046.000	1070.000	85.762%	46.990	45.640	48.050	36.460
x		91.137%	1033.000	1052.000	84.417%	46.550	45.440	48.320	37.130
σ		2.061%	16.690	17.740	1.620%	0.484	0.182	0.306	0.730
%RSD		2.261	1.615	1.686	1.919	1.040	0.401	0.633	1.966
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:59	86.889%	2057.000	496.700	492.000	1826.000	1897.000	96.609%	97.543%
2	18:37:25	89.143%	2128.000	508.000	506.400	1880.000	1955.000	100.295%	100.294%
3	18:37:52	88.963%	2130.000	509.400	505.000	1904.000	1995.000	100.921%	102.632%
x		88.332%	2105.000	504.700	501.100	1870.000	1949.000	99.275%	100.156%
σ		1.253%	41.820	6.978	7.962	40.120	49.090	2.330%	2.547%
%RSD		1.418	1.987	1.383	1.589	2.145	2.518	2.347	2.543
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:36:59	48.470	47.020	19.770	19.820	19.530	97.182%		
2	18:37:25	49.620	47.940	20.320	20.130	19.990	99.055%		
3	18:37:52	50.110	48.710	20.320	20.260	20.030	100.297%		
x		49.400	47.890	20.140	20.070	19.850	98.845%		
σ		0.843	0.845	0.319	0.228	0.275	1.568%		
%RSD		1.706	1.763	1.582	1.134	1.386	1.586		

CCV 1467888 1/26/2015 6:40:48 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	92.961%	99.410	98.910	99.870	0.000	47030.000	45490.000	44870.000
2	18:41:41	92.935%	103.200	109.500	101.500	0.000	48100.000	46950.000	46450.000
3	18:42:07	94.665%	100.700	102.600	99.480	0.000	48280.000	47440.000	46720.000
x		93.520%	101.099%	103.669%	100.268%	0.000	95.609%	93.260%	92.028%
σ		0.991%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.060	1.904	5.214	1.042	0.000	1.423	2.176	2.176

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	443.800	4694.000	0.000	51700.000	49870.000	47650.000	95.289%	98.210
2	18:41:41	460.900	4793.000	0.000	52720.000	52550.000	50060.000	94.857%	102.000
3	18:42:07	463.500	4802.000	0.000	53190.000	52440.000	51290.000	94.202%	102.300
x		91.217%	95.255%	0.000	105.071%	103.233%	99.339%	94.783%	100.813%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.547%	n/a
%RSD		2.348	1.255	0.000	1.457	2.939	3.726	0.577	2.237

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	91.440	90.400	446.800	24000.000	22060.000	92.680	92.950	94.020
2	18:41:41	93.750	93.560	464.900	25010.000	23180.000	96.090	95.090	96.740
3	18:42:07	96.170	95.060	473.300	25360.000	23660.000	97.670	96.610	98.680
x		93.787%	93.006%	92.333%	99.154%	91.874%	95.479%	94.881%	96.480%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.520	2.557	2.938	2.851	3.573	2.672	1.938	2.427

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	93.730	100.600	98.300	96.500	101.700	95.000	0.000	98.860
2	18:41:41	96.580	102.800	104.500	100.600	101.800	98.550	0.000	99.880
3	18:42:07	98.420	106.700	101.000	97.790	104.700	92.890	0.000	100.800
x		96.244%	103.354%	101.291%	98.297%	102.758%	95.484%	0.000	99.842%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.455	2.966	3.087	2.137	1.630	2.995	0.000	0.966

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	96.370%	98.580	98.320	91.411%	96.960	97.520	97.920	98.320
2	18:41:41	98.118%	102.300	102.500	91.997%	100.700	100.800	101.500	102.000
3	18:42:07	98.455%	106.600	107.700	91.929%	99.110	99.000	101.400	100.200
x		97.648%	102.475%	102.847%	91.779%	98.933%	99.112%	100.287%	100.180%
σ		1.119%	n/a	n/a	0.320%	n/a	n/a	n/a	n/a
%RSD		1.146	3.920	4.561	0.349	1.911	1.663	2.049	1.840

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	95.820%	104.800	98.600	98.850	94.900	98.380	102.290%	103.518%
2	18:41:41	96.171%	107.600	102.400	103.100	101.700	102.800	103.986%	104.812%
3	18:42:07	97.908%	105.200	101.600	102.300	101.200	101.400	103.404%	105.363%
x		96.633%	105.869%	100.860%	101.410%	99.265%	100.881%	103.226%	104.564%
σ		1.118%	n/a	n/a	n/a	n/a	n/a	0.862%	0.947%
%RSD		1.157	1.454	1.987	2.225	3.815	2.252	0.835	0.906

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:14	108.000	105.200	109.000	107.600	108.200	98.823%
2	18:41:41	110.600	107.800	112.200	110.800	111.000	99.457%
3	18:42:07	109.600	107.100	111.000	109.800	110.100	101.543%
x		109.414%	106.672%	110.724%	109.386%	109.760%	99.941%
σ		n/a	n/a	n/a	n/a	n/a	1.423%
%RSD		1.210	1.230	1.471	1.486	1.293	1.424

CCB6 1/26/2015 6:48:11 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	96.337%	0.063	4.007	3.543	0.000	22.360	26.300	24.720
2	18:49:03	99.236%	0.059	2.531	2.519	0.000	25.600	30.000	28.780
3	18:49:30	99.563%	0.078	3.367	3.324	0.000	28.330	31.560	30.260
x		98.379%	0.067	3.302	3.128	0.000	25.430	29.290	27.920
σ		1.776%	0.010	0.740	0.539	0.000	2.992	2.698	2.868
%RSD		1.805	14.920	22.410	17.240	0.000	11.760	9.214	10.270

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	1.685	5.895	0.000	26.540	35.840	37.740	96.364%	0.158
2	18:49:03	1.550	3.017	0.000	20.150	39.560	41.760	98.376%	0.028
3	18:49:30	1.571	3.591	0.000	23.680	66.340	37.870	100.969%	0.328
x		1.602	4.168	0.000	23.460	47.250	39.120	98.570%	0.171
σ		0.073	1.523	0.000	3.205	16.640	2.281	2.309%	0.151
%RSD		4.537	36.540	0.000	13.660	35.220	5.830	2.342	87.950

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	0.232	0.071	0.515	6.756	1.185	0.126	-0.012	0.107
2	18:49:03	0.175	0.012	0.543	6.209	0.521	0.139	-0.054	0.145
3	18:49:30	0.200	0.072	0.611	4.401	-2.164	0.151	-0.093	0.145
x		0.202	0.052	0.556	5.789	-0.153	0.139	-0.053	0.132
σ		0.028	0.034	0.049	1.233	1.773	0.012	0.041	0.022
%RSD		13.940	66.160	8.884	21.290	1160.000	9.024	76.520	16.480

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	0.106	0.334	0.189	-0.471	-0.685	-2.699	0.000	0.260
2	18:49:03	0.120	0.305	0.354	-0.203	1.207	-0.579	0.000	0.303
3	18:49:30	0.114	0.308	0.454	-0.441	-0.906	-2.160	0.000	0.356
x		0.113	0.316	0.332	-0.372	-0.128	-1.812	0.000	0.306
σ		0.007	0.016	0.134	0.147	1.161	1.102	0.000	0.048
%RSD		5.822	5.077	40.260	39.450	904.300	60.790	0.000	15.820

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	97.609%	0.928	0.899	95.115%	0.043	0.041	0.022	0.051
2	18:49:03	100.532%	0.928	0.901	97.154%	0.021	0.014	-0.013	-0.002
3	18:49:30	102.127%	0.999	0.901	100.722%	0.054	0.033	-0.033	-0.012
x		100.089%	0.952	0.901	97.664%	0.039	0.029	-0.008	0.013
σ		2.291%	0.041	0.001	2.838%	0.017	0.014	0.028	0.034
%RSD		2.289	4.280	0.132	2.906	42.000	47.930	346.000	270.600

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	98.228%	0.894	0.352	0.351	0.337	0.308	102.953%	103.038%
2	18:49:03	101.717%	1.004	0.367	0.345	0.486	0.421	105.148%	105.923%
3	18:49:30	102.865%	1.054	0.432	0.390	0.613	0.650	105.771%	107.701%
x		100.936%	0.984	0.384	0.362	0.479	0.460	104.624%	105.554%
σ		2.415%	0.082	0.042	0.024	0.138	0.175	1.481%	2.353%
%RSD		2.393	8.334	11.000	6.694	28.840	37.950	1.415	2.229

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:48:37	0.082	0.054	0.043	0.040	0.040	109.411%
2	18:49:03	0.070	0.072	0.062	0.041	0.043	112.826%
3	18:49:30	0.084	0.073	0.051	0.063	0.052	112.565%
x		0.079	0.067	0.052	0.048	0.045	111.601%
σ		0.008	0.011	0.009	0.013	0.006	1.901%
%RSD		9.567	16.400	17.710	27.010	14.180	1.703

180-40595-D-3-A 1/26/2015 6:52:29 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	102.044%	0.153	37.390	36.410	0.000	64570.000	12550.000	12440.000
2	18:53:21	101.541%	0.077	37.510	39.280	0.000	67080.000	13240.000	13170.000
3	18:53:48	103.069%	0.094	33.390	38.200	0.000	67150.000	13460.000	13260.000
x		102.218%	0.108	36.100	37.960	0.000	66270.000	13080.000	12960.000
σ		0.779%	0.040	2.348	1.451	0.000	1466.000	473.600	453.600
%RSD		0.762	36.880	6.505	3.821	0.000	2.212	3.620	3.501

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	936.200	4296.000	0.000	3079.000	113100.000	115200.000	89.174%	14.880
2	18:53:21	993.400	4484.000	0.000	3203.000	118800.000	121500.000	90.099%	16.470
3	18:53:48	934.800	4480.000	0.000	3192.000	118400.000	122000.000	91.011%	14.370
x		954.800	4420.000	0.000	3158.000	116700.000	119600.000	90.094%	15.240
σ		33.460	107.600	0.000	68.710	3193.000	3774.000	0.918%	1.092
%RSD		3.504	2.435	0.000	2.176	2.736	3.156	1.019	7.168

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	2.178	5.629	96.790	1303.000	1544.000	1.285	2.047	24.060
2	18:53:21	5.118	5.589	101.700	1378.000	1587.000	1.333	2.111	23.650
3	18:53:48	4.492	5.532	102.000	1385.000	1602.000	1.329	2.078	24.150
x		3.929	5.584	100.200	1355.000	1578.000	1.316	2.078	23.950
σ		1.549	0.049	2.944	45.390	29.920	0.026	0.032	0.268
%RSD		39.420	0.872	2.939	3.349	1.896	2.006	1.542	1.118

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	22.780	39.230	39.450	0.847	-0.128	-2.426	0.000	373.500
2	18:53:21	24.020	41.420	40.080	3.121	-1.411	-2.652	0.000	387.600
3	18:53:48	24.820	39.940	40.690	-0.187	-0.912	-3.136	0.000	390.600
x		23.870	40.200	40.070	1.260	-0.817	-2.738	0.000	383.900
σ		1.027	1.119	0.620	1.692	0.647	0.363	0.000	9.119
%RSD		4.302	2.783	1.546	134.300	79.180	13.250	0.000	2.376

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	92.423%	1.292	1.221	83.430%	0.643	0.653	0.262	0.237
2	18:53:21	94.265%	1.156	1.271	85.624%	0.672	0.689	0.169	0.174
3	18:53:48	96.604%	1.171	1.123	85.982%	0.727	0.658	0.296	0.281
x		94.431%	1.206	1.205	85.012%	0.681	0.666	0.242	0.231
σ		2.096%	0.075	0.075	1.382%	0.043	0.020	0.065	0.054
%RSD		2.219	6.178	6.252	1.625	6.278	2.947	27.010	23.480

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	89.596%	3.544	1.120	1.151	56.890	56.780	97.989%	98.137%
2	18:53:21	92.382%	3.037	1.104	1.091	58.700	58.200	100.440%	101.121%
3	18:53:48	93.544%	2.299	0.948	1.016	59.210	59.900	102.215%	101.247%
x		91.841%	2.960	1.058	1.086	58.270	58.290	100.215%	100.168%
σ		2.029%	0.626	0.095	0.068	1.216	1.560	2.122%	1.760%
%RSD		2.209	21.150	8.993	6.226	2.088	2.677	2.118	1.757

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:55	0.080	0.073	6.569	5.959	6.142	98.832%
2	18:53:21	0.078	0.079	6.854	6.072	6.286	101.429%
3	18:53:48	0.064	0.065	6.568	6.224	6.358	101.288%
x		0.074	0.072	6.664	6.085	6.262	100.516%
σ		0.008	0.007	0.165	0.133	0.110	1.460%
%RSD		11.360	9.918	2.475	2.188	1.753	1.453

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:10	95.958%	0.910	30.310	31.490	0.000	38540.000	13190.000	13100.000
2	18:57:37	97.002%	0.780	31.510	30.910	0.000	39780.000	13730.000	13730.000
3	18:58:03	100.891%	0.884	28.270	31.480	0.000	39140.000	13780.000	13570.000
x		97.950%	0.858	30.030	31.290	0.000	39150.000	13570.000	13470.000
σ		2.599%	0.069	1.638	0.332	0.000	621.500	325.000	323.100
%RSD		2.654	7.987	5.453	1.061	0.000	1.587	2.396	2.399
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:10	8455.000	15080.000	0.000	5200.000	103800.000	105600.000	89.809%	94.090
2	18:57:37	8932.000	15700.000	0.000	5356.000	108900.000	112100.000	90.359%	96.180
3	18:58:03	8830.000	15440.000	0.000	5321.000	108300.000	111600.000	92.284%	93.310
x		8739.000	15400.000	0.000	5292.000	107000.000	109800.000	90.817%	94.530
σ		251.000	311.600	0.000	81.420	2764.000	3635.000	1.300%	1.480
%RSD		2.872	2.023	0.000	1.539	2.584	3.312	1.431	1.566
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:10	19.430	15.030	132.300	9828.000	9017.000	4.138	14.850	13.100
2	18:57:37	22.000	15.750	139.600	10360.000	9519.000	4.366	16.220	14.340
3	18:58:03	18.700	15.380	139.900	10280.000	9499.000	4.193	12.750	13.560
x		20.050	15.390	137.300	10160.000	9345.000	4.233	14.600	13.660
σ		1.733	0.358	4.281	288.100	284.000	0.119	1.751	0.627
%RSD		8.644	2.328	3.119	2.836	3.039	2.810	11.990	4.585
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:10	13.640	36.670	36.230	0.250	-0.913	-6.953	0.000	307.900
2	18:57:37	14.410	38.460	37.500	3.728	-0.238	-5.433	0.000	325.100
3	18:58:03	13.710	37.830	36.560	3.123	-0.702	-5.624	0.000	319.800
x		13.920	37.650	36.760	2.367	-0.618	-6.003	0.000	317.600
σ		0.424	0.907	0.659	1.858	0.345	0.828	0.000	8.813
%RSD		3.045	2.410	1.792	78.520	55.910	13.790	0.000	2.775
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:10	99.988%	1.003	1.044	84.190%	0.099	0.060	0.220	0.240
2	18:57:37	101.486%	1.114	1.054	84.014%	0.110	0.121	0.314	0.226
3	18:58:03	104.319%	0.878	1.060	85.300%	0.093	0.074	0.176	0.158
x		101.931%	0.998	1.053	84.501%	0.101	0.085	0.237	0.208
σ		2.199%	0.118	0.008	0.697%	0.008	0.032	0.071	0.044
%RSD		2.158	11.840	0.766	0.825	8.394	37.550	29.810	20.970
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:57:10	88.437%	1.500	1.892	2.080	73.250	75.240	98.723%	100.551%
2	18:57:37	88.959%	1.670	2.096	2.139	76.650	76.490	99.859%	101.222%
3	18:58:03	91.478%	1.596	2.128	2.025	74.550	75.390	102.181%	103.019%
x		89.625%	1.589	2.039	2.082	74.820	75.710	100.254%	101.597%
σ		1.626%	0.085	0.128	0.057	1.718	0.685	1.763%	1.276%
%RSD		1.815	5.357	6.280	2.742	2.296	0.904	1.758	1.256
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:57:10	0.255	0.233	10.900	10.270	10.380	98.652%		
2	18:57:37	0.242	0.238	11.690	10.200	10.710	99.471%		
3	18:58:03	0.284	0.231	11.440	10.190	10.580	100.354%		
x		0.260	0.234	11.340	10.220	10.560	99.492%		
σ		0.022	0.003	0.406	0.044	0.168	0.851%		
%RSD		8.411	1.450	3.577	0.428	1.588	0.855		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:01:25	96.885%	1.798	47.160	44.130	0.000	44530.000	12560.000	12330.000
2	19:01:51	97.911%	1.895	47.970	45.030	0.000	45700.000	13070.000	12910.000
3	19:02:18	100.363%	1.715	42.980	47.840	0.000	45270.000	12920.000	12790.000
x		98.386%	1.802	46.040	45.670	0.000	45170.000	12850.000	12680.000
σ		1.787%	0.090	2.677	1.931	0.000	588.000	263.100	304.300
%RSD		1.816	4.987	5.814	4.228	0.000	1.302	2.048	2.401
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:01:25	18540.000	27810.000	0.000	5345.000	118200.000	121500.000	91.091%	160.400
2	19:01:51	19460.000	28500.000	0.000	5500.000	123700.000	125700.000	93.150%	166.500
3	19:02:18	19270.000	28240.000	0.000	5445.000	123300.000	128600.000	93.696%	169.600
x		19090.000	28180.000	0.000	5430.000	121700.000	125300.000	92.645%	165.500
σ		482.100	350.100	0.000	79.010	3053.000	3603.000	1.374%	4.663
%RSD		2.526	1.242	0.000	1.455	2.508	2.876	1.483	2.817
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:01:25	30.740	23.190	288.800	19860.000	18580.000	6.588	26.500	24.950
2	19:01:51	35.340	23.900	298.900	20530.000	19180.000	6.872	27.600	25.230
3	19:02:18	32.920	23.950	303.800	20800.000	19220.000	6.619	27.500	25.400
x		33.000	23.680	297.200	20400.000	18990.000	6.693	27.200	25.190
σ		2.302	0.426	7.646	485.900	360.300	0.156	0.607	0.231
%RSD		6.977	1.800	2.573	2.382	1.897	2.326	2.233	0.916
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:01:25	24.290	133.900	132.300	10.100	-0.216	-3.140	0.000	419.000
2	19:01:51	25.660	137.300	134.600	8.986	-1.466	0.929	0.000	436.700
3	19:02:18	25.260	135.400	138.900	8.070	-0.880	0.780	0.000	442.700
x		25.070	135.500	135.300	9.053	-0.854	-0.477	0.000	432.800
σ		0.702	1.710	3.344	1.019	0.626	2.308	0.000	12.300
%RSD		2.800	1.262	2.472	11.250	73.270	483.500	0.000	2.843
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:01:25	0.000	1.114	1.194	83.587%	0.120	0.100	22.570	21.230
2	19:01:51	0.000	1.298	1.129	86.721%	0.120	0.150	21.930	21.400
3	19:02:18	0.000	1.181	1.114	85.901%	0.142	0.114	21.960	21.660
x		0.000	1.198	1.145	85.403%	0.127	0.121	22.150	21.430
σ		0.000	0.093	0.042	1.625%	0.012	0.026	0.365	0.216
%RSD		0.000	7.777	3.706	1.903	9.771	21.630	1.647	1.006
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:01:25	89.174%	1.606	1.064	1.000	103.800	103.400	101.148%	103.630%
2	19:01:51	93.231%	1.676	1.083	1.038	104.200	105.800	104.604%	105.682%
3	19:02:18	92.347%	1.837	1.002	1.049	106.300	105.700	106.020%	106.537%
x		91.584%	1.706	1.050	1.029	104.700	105.000	103.924%	105.283%
σ		2.133%	0.119	0.042	0.026	1.339	1.396	2.506%	1.494%
%RSD		2.329	6.964	4.004	2.494	1.278	1.330	2.411	1.419
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:01:25	0.547	0.494	13.410	11.870	12.190	100.861%		
2	19:01:51	0.555	0.513	13.410	11.880	12.440	104.539%		
3	19:02:18	0.562	0.524	13.570	11.940	12.570	103.841%		
x		0.554	0.510	13.460	11.900	12.400	103.080%		
σ		0.008	0.016	0.092	0.036	0.195	1.954%		
%RSD		1.368	3.038	0.681	0.303	1.569	1.895		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:42	100.714%	0.577	26.580	25.740	0.000	35050.000	13580.000	13490.000
2	19:06:08	99.938%	0.543	28.610	28.770	0.000	36850.000	14520.000	14420.000
3	19:06:34	102.803%	0.545	32.460	26.900	0.000	36250.000	14430.000	14470.000
x		101.152%	0.555	29.220	27.140	0.000	36050.000	14170.000	14130.000
σ		1.482%	0.019	2.988	1.527	0.000	918.500	518.500	548.400
%RSD		1.465	3.431	10.230	5.628	0.000	2.548	3.659	3.882
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:42	7067.000	12360.000	0.000	4311.000	143600.000	149200.000	93.249%	68.530
2	19:06:08	7543.000	12870.000	0.000	4452.000	154100.000	156300.000	93.167%	69.200
3	19:06:34	7536.000	12860.000	0.000	4486.000	154600.000	157700.000	95.171%	71.950
x		7382.000	12700.000	0.000	4416.000	150800.000	154400.000	93.862%	69.900
σ		272.800	286.600	0.000	92.550	6216.000	4550.000	1.134%	1.812
%RSD		3.696	2.257	0.000	2.096	4.123	2.947	1.208	2.593
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:42	16.350	11.810	112.800	5899.000	5659.000	3.252	7.266	8.449
2	19:06:08	11.560	12.290	119.000	6189.000	5920.000	3.401	7.359	8.642
3	19:06:34	11.870	12.180	119.000	6208.000	6040.000	3.389	7.793	8.807
x		13.260	12.100	116.900	6098.000	5873.000	3.347	7.473	8.633
σ		2.682	0.249	3.593	173.200	194.400	0.082	0.281	0.179
%RSD		20.220	2.061	3.072	2.841	3.310	2.464	3.766	2.076
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:42	8.392	20.240	19.960	2.823	-1.142	-6.984	0.000	357.700
2	19:06:08	8.636	21.780	21.090	2.166	-0.745	-5.260	0.000	370.500
3	19:06:34	8.794	21.360	20.980	0.166	-1.087	-6.094	0.000	376.700
x		8.607	21.130	20.680	1.718	-0.991	-6.113	0.000	368.300
σ		0.203	0.796	0.625	1.384	0.215	0.862	0.000	9.699
%RSD		2.355	3.769	3.024	80.560	21.680	14.100	0.000	2.634
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:42	103.761%	0.629	0.614	86.085%	0.060	0.034	0.084	0.063
2	19:06:08	106.826%	0.593	0.678	88.742%	0.030	0.054	0.270	0.139
3	19:06:34	108.806%	0.619	0.659	89.647%	0.044	0.040	0.076	0.122
x		106.465%	0.614	0.650	88.158%	0.044	0.043	0.143	0.108
σ		2.542%	0.018	0.033	1.851%	0.015	0.010	0.110	0.040
%RSD		2.387	2.983	5.097	2.100	33.450	23.890	76.660	37.250
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:42	92.372%	1.315	0.733	0.746	70.290	70.250	101.758%	102.701%
2	19:06:08	95.795%	1.348	0.741	0.801	68.870	71.860	105.099%	106.129%
3	19:06:34	95.863%	1.275	0.797	0.888	72.910	71.880	106.362%	108.236%
x		94.677%	1.313	0.757	0.812	70.690	71.330	104.407%	105.689%
σ		1.996%	0.036	0.035	0.072	2.048	0.935	2.379%	2.794%
%RSD		2.109	2.778	4.622	8.833	2.897	1.311	2.278	2.643
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:05:42	0.169	0.180	6.919	6.306	6.433	103.491%		
2	19:06:08	0.199	0.178	7.080	6.239	6.506	106.330%		
3	19:06:34	0.193	0.176	7.129	6.572	6.648	107.063%		
x		0.187	0.178	7.043	6.372	6.529	105.628%		
σ		0.016	0.002	0.110	0.176	0.109	1.887%		
%RSD		8.472	0.891	1.561	2.769	1.676	1.786		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	99.697%	0.448	22.950	22.990	0.000	25190.000	11570.000	11480.000
2	19:10:23	102.552%	0.492	22.590	24.240	0.000	25850.000	11950.000	11990.000
3	19:10:50	101.311%	0.306	23.780	24.000	0.000	26170.000	12250.000	12160.000
x		101.187%	0.415	23.110	23.740	0.000	25740.000	11920.000	11880.000
σ		1.432%	0.097	0.610	0.668	0.000	502.000	337.000	354.300
%RSD		1.415	23.360	2.640	2.812	0.000	1.950	2.826	2.984

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	3500.000	8042.000	0.000	3229.000	100300.000	103400.000	91.433%	41.590
2	19:10:23	3625.000	8226.000	0.000	3363.000	105800.000	108200.000	92.035%	44.320
3	19:10:50	3698.000	8256.000	0.000	3362.000	106300.000	109400.000	93.088%	44.200
x		3608.000	8175.000	0.000	3318.000	104100.000	107000.000	92.185%	43.370
σ		99.970	116.200	0.000	76.990	3317.000	3176.000	0.838%	1.544
%RSD		2.771	1.422	0.000	2.320	3.185	2.969	0.909	3.560

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	9.269	7.942	108.700	4132.000	3943.000	1.981	4.360	5.002
2	19:10:23	9.972	8.331	114.300	4355.000	4220.000	2.002	4.633	5.064
3	19:10:50	8.780	8.158	114.100	4377.000	4172.000	2.109	4.537	4.944
x		9.340	8.144	112.400	4288.000	4112.000	2.031	4.510	5.003
σ		0.600	0.195	3.167	135.600	148.000	0.069	0.139	0.060
%RSD		6.418	2.397	2.819	3.162	3.599	3.377	3.071	1.207

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	4.851	13.820	13.560	1.258	-0.826	-6.039	0.000	275.700
2	19:10:23	5.201	14.970	13.760	1.174	-1.675	-5.695	0.000	287.500
3	19:10:50	5.085	14.060	14.410	3.624	-1.091	-5.034	0.000	289.300
x		5.046	14.280	13.910	2.019	-1.197	-5.589	0.000	284.200
σ		0.178	0.608	0.442	1.391	0.434	0.511	0.000	7.400
%RSD		3.535	4.260	3.181	68.910	36.280	9.135	0.000	2.604

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	97.996%	0.481	0.470	84.235%	0.089	0.090	0.113	0.079
2	19:10:23	100.144%	0.480	0.581	88.030%	0.105	0.057	0.093	0.089
3	19:10:50	101.503%	0.483	0.465	87.489%	0.084	0.116	-0.066	-0.033
x		99.881%	0.481	0.505	86.585%	0.093	0.088	0.047	0.045
σ		1.768%	0.002	0.066	2.053%	0.011	0.030	0.098	0.068
%RSD		1.770	0.318	13.010	2.371	11.400	33.850	208.900	150.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	91.400%	0.752	0.510	0.482	44.590	45.890	100.888%	101.263%
2	19:10:23	93.881%	0.726	0.538	0.531	46.500	47.120	102.185%	103.738%
3	19:10:50	93.108%	0.725	0.525	0.562	47.400	48.060	103.405%	104.506%
x		92.796%	0.735	0.524	0.525	46.160	47.020	102.159%	103.169%
σ		1.269%	0.015	0.014	0.040	1.434	1.088	1.259%	1.695%
%RSD		1.368	2.103	2.644	7.691	3.106	2.313	1.232	1.642

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:09:57	0.133	0.124	3.211	2.838	2.950	100.925%
2	19:10:23	0.139	0.142	3.253	2.882	3.020	103.990%
3	19:10:50	0.123	0.131	3.171	3.037	3.036	103.040%
x		0.132	0.132	3.212	2.919	3.002	102.651%
σ		0.008	0.009	0.041	0.105	0.046	1.569%
%RSD		6.096	6.567	1.282	3.593	1.524	1.529

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:12	98.525%	0.002	21.340	21.550	0.000	100400.000	13530.000	13500.000
2	19:14:39	101.549%	0.038	17.590	21.800	0.000	101600.000	13970.000	13880.000
3	19:15:06	103.697%	0.055	23.050	22.580	0.000	102000.000	14150.000	14120.000
x		101.257%	0.032	20.660	21.980	0.000	101300.000	13880.000	13830.000
σ		2.598%	0.027	2.791	0.537	0.000	803.100	318.700	310.600
%RSD		2.566	85.470	13.510	2.445	0.000	0.793	2.296	2.245
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:12	11.150	3580.000	0.000	2680.000	129000.000	129600.000	91.139%	0.785
2	19:14:39	10.890	3610.000	0.000	2785.000	155500.000	133500.000	92.235%	0.850
3	19:15:06	11.150	3622.000	0.000	2764.000	133600.000	135600.000	93.014%	0.378
x		11.060	3604.000	0.000	2743.000	139400.000	132900.000	92.129%	0.671
σ		0.148	21.270	0.000	55.410	14190.000	3044.000	0.942%	0.256
%RSD		1.336	0.590	0.000	2.020	10.180	2.290	1.022	38.110
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:12	1.393	3.145	344.900	6361.000	6014.000	0.547	0.137	0.996
2	19:14:39	2.147	2.895	354.400	6549.000	6250.000	0.614	-0.422	1.090
3	19:15:06	1.130	2.970	364.700	6656.000	6275.000	0.595	0.336	1.171
x		1.557	3.003	354.700	6522.000	6180.000	0.585	0.017	1.086
σ		0.528	0.129	9.910	149.400	143.700	0.035	0.393	0.088
%RSD		33.900	4.279	2.794	2.291	2.326	5.906	2323.000	8.071
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:12	1.040	3.703	2.991	1.596	-1.424	-5.129	0.000	382.300
2	19:14:39	0.931	3.483	2.845	3.166	-1.052	-3.026	0.000	394.600
3	19:15:06	0.758	3.417	3.427	6.088	-0.381	-3.242	0.000	399.500
x		0.910	3.534	3.088	3.617	-0.953	-3.799	0.000	392.100
σ		0.142	0.150	0.302	2.279	0.529	1.157	0.000	8.844
%RSD		15.600	4.238	9.798	63.020	55.500	30.450	0.000	2.255
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:12	93.354%	0.127	0.272	85.472%	-0.016	-0.027	-0.061	-0.046
2	19:14:39	96.104%	0.237	0.236	87.959%	-0.028	-0.016	-0.050	-0.055
3	19:15:06	97.116%	0.261	0.260	88.663%	-0.017	-0.016	-0.017	-0.007
x		95.525%	0.208	0.256	87.364%	-0.020	-0.020	-0.043	-0.036
σ		1.947%	0.071	0.019	1.676%	0.006	0.006	0.023	0.026
%RSD		2.038	34.150	7.239	1.919	31.970	30.380	53.190	71.870
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:14:12	90.185%	0.360	0.102	0.134	89.190	89.560	100.605%	100.425%
2	19:14:39	93.867%	0.355	0.083	0.119	89.370	90.910	101.928%	104.664%
3	19:15:06	94.681%	0.375	0.099	0.179	91.410	92.860	103.052%	104.429%
x		92.911%	0.363	0.095	0.144	89.990	91.110	101.862%	103.173%
σ		2.395%	0.010	0.010	0.031	1.235	1.661	1.225%	2.382%
%RSD		2.578	2.758	10.940	21.570	1.372	1.823	1.203	2.309
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:14:12	0.010	0.009	0.123	0.096	0.103	99.679%		
2	19:14:39	0.007	0.007	0.094	0.085	0.102	101.510%		
3	19:15:06	0.006	0.009	0.104	0.068	0.099	103.515%		
x		0.008	0.008	0.107	0.083	0.101	101.568%		
σ		0.002	0.001	0.015	0.014	0.002	1.918%		
%RSD		24.040	11.610	13.770	17.310	2.005	1.889		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:18:30	98.851%	0.021	21.990	23.010	0.000	105300.000	14200.000	14120.000
2	19:18:57	100.008%	0.021	22.150	21.900	0.000	107100.000	14670.000	14560.000
3	19:19:23	99.305%	0.041	24.640	22.620	0.000	108700.000	15000.000	14910.000
x		99.388%	0.027	22.930	22.510	0.000	107000.000	14630.000	14530.000
σ		0.583%	0.011	1.484	0.564	0.000	1663.000	402.000	396.300
%RSD		0.587	41.300	6.473	2.505	0.000	1.553	2.749	2.727
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:18:30	5.727	3695.000	0.000	2773.000	131000.000	134400.000	92.347%	0.875
2	19:18:57	6.113	3786.000	0.000	2894.000	140000.000	140600.000	91.279%	0.390
3	19:19:23	6.037	3796.000	0.000	2907.000	139200.000	140400.000	91.375%	0.677
x		5.959	3759.000	0.000	2858.000	136700.000	138500.000	91.667%	0.648
σ		0.204	55.410	0.000	73.730	4968.000	3522.000	0.591%	0.244
%RSD		3.429	1.474	0.000	2.580	3.634	2.543	0.644	37.660
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:18:30	-0.305	2.982	360.600	6565.000	6269.000	0.600	0.132	1.161
2	19:18:57	-0.142	2.763	372.300	6833.000	6471.000	0.602	0.128	1.067
3	19:19:23	0.999	2.768	378.200	6927.000	6581.000	0.627	-0.314	1.247
x		0.184	2.838	370.400	6775.000	6440.000	0.610	-0.018	1.158
σ		0.711	0.125	8.974	188.000	158.300	0.015	0.257	0.090
%RSD		386.700	4.407	2.423	2.775	2.458	2.494	1414.000	7.744
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:18:30	1.099	3.576	3.781	0.198	-1.904	-4.070	0.000	399.900
2	19:18:57	1.075	3.534	3.717	1.852	-0.496	-3.586	0.000	407.800
3	19:19:23	1.089	3.832	3.297	2.148	-0.658	-1.404	0.000	417.600
x		1.087	3.647	3.598	1.399	-1.019	-3.020	0.000	408.400
σ		0.012	0.161	0.263	1.051	0.770	1.420	0.000	8.883
%RSD		1.125	4.420	7.315	75.090	75.590	47.020	0.000	2.175
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:18:30	94.356%	0.192	0.120	86.643%	-0.020	-0.032	-0.034	-0.034
2	19:18:57	95.330%	0.163	0.114	86.026%	-0.040	-0.013	0.058	0.034
3	19:19:23	96.237%	0.154	0.242	88.235%	-0.034	-0.023	-0.004	-0.009
x		95.307%	0.170	0.159	86.968%	-0.032	-0.023	0.007	-0.003
σ		0.941%	0.019	0.072	1.140%	0.010	0.009	0.047	0.034
%RSD		0.987	11.430	45.430	1.310	32.060	41.380	669.000	1096.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:18:30	92.308%	0.248	0.051	0.098	91.370	93.300	102.070%	102.792%
2	19:18:57	91.911%	0.293	0.059	0.147	97.430	96.500	100.513%	102.044%
3	19:19:23	93.120%	0.299	0.059	0.095	98.090	97.110	102.525%	104.928%
x		92.446%	0.280	0.056	0.113	95.630	95.630	101.703%	103.255%
σ		0.616%	0.028	0.004	0.029	3.701	2.043	1.055%	1.497%
%RSD		0.666	9.950	7.793	25.900	3.870	2.136	1.038	1.450
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:18:30	0.011	0.006	0.036	0.044	0.041	101.821%		
2	19:18:57	0.006	0.005	0.074	0.034	0.054	100.886%		
3	19:19:23	0.008	0.007	0.055	0.042	0.047	102.368%		
x		0.008	0.006	0.055	0.040	0.047	101.692%		
σ		0.003	0.001	0.019	0.005	0.006	0.749%		
%RSD		35.110	18.190	34.220	13.050	13.660	0.737		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:47	99.556%	0.176	15.960	16.750	0.000	67980.000	20410.000	20290.000
2	19:23:14	101.643%	0.000	17.820	18.260	0.000	69640.000	21360.000	21350.000
3	19:23:40	103.789%	0.018	18.290	16.740	0.000	69330.000	21400.000	21320.000
x		101.663%	0.065	17.360	17.250	0.000	68980.000	21050.000	20990.000
σ		2.117%	0.097	1.232	0.874	0.000	882.600	560.800	605.600
%RSD		2.082	149.700	7.097	5.065	0.000	1.279	2.663	2.886
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:47	108.100	4563.000	0.000	2231.000	167800.000	172200.000	91.665%	2.629
2	19:23:14	109.600	4667.000	0.000	2290.000	204300.000	178900.000	92.186%	2.690
3	19:23:40	111.700	4584.000	0.000	2333.000	207200.000	181000.000	93.326%	2.296
x		109.800	4605.000	0.000	2285.000	193100.000	177400.000	92.392%	2.538
σ		1.843	54.880	0.000	51.170	21970.000	4625.000	0.849%	0.213
%RSD		1.679	1.192	0.000	2.240	11.380	2.608	0.919	8.371
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:47	2.617	2.775	2057.000	23600.000	22200.000	0.434	-0.184	1.223
2	19:23:14	2.340	2.933	2159.000	24700.000	23310.000	0.441	-0.855	1.397
3	19:23:40	0.016	2.578	2164.000	24920.000	23590.000	0.456	-0.704	1.291
x		1.658	2.762	2126.000	24410.000	23040.000	0.443	-0.581	1.304
σ		1.429	0.178	60.370	710.300	738.500	0.011	0.352	0.088
%RSD		86.180	6.429	2.839	2.910	3.206	2.514	60.560	6.751
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:47	1.389	10.150	9.166	2.926	-0.666	-6.789	0.000	551.200
2	19:23:14	1.366	10.310	10.510	4.042	-0.446	-3.260	0.000	577.200
3	19:23:40	1.287	10.460	10.340	4.449	-1.516	-3.453	0.000	588.000
x		1.347	10.300	10.010	3.806	-0.876	-4.501	0.000	572.200
σ		0.053	0.156	0.732	0.789	0.565	1.984	0.000	18.910
%RSD		3.956	1.516	7.316	20.720	64.470	44.080	0.000	3.306
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:47	95.563%	0.176	0.202	84.678%	-0.023	-0.020	-0.019	-0.008
2	19:23:14	96.326%	0.246	0.156	84.848%	-0.030	-0.029	0.054	0.047
3	19:23:40	97.780%	0.181	0.094	87.233%	-0.024	-0.023	0.033	0.056
x		96.556%	0.201	0.151	85.586%	-0.026	-0.024	0.023	0.032
σ		1.126%	0.039	0.054	1.429%	0.004	0.004	0.037	0.035
%RSD		1.167	19.620	36.080	1.669	14.260	18.690	163.800	108.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:47	92.172%	0.299	0.079	0.186	112.700	111.300	100.613%	101.425%
2	19:23:14	93.093%	0.290	0.061	0.173	114.000	113.500	102.059%	103.044%
3	19:23:40	95.221%	0.232	0.084	0.129	113.400	113.800	103.864%	104.653%
x		93.495%	0.274	0.075	0.163	113.300	112.800	102.179%	103.041%
σ		1.564%	0.037	0.012	0.030	0.683	1.388	1.629%	1.614%
%RSD		1.673	13.430	15.750	18.570	0.602	1.230	1.594	1.566
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:22:47	0.006	0.005	0.646	0.602	0.618	102.260%		
2	19:23:14	0.017	0.009	0.673	0.611	0.629	103.046%		
3	19:23:40	0.003	0.012	0.701	0.638	0.660	102.465%		
x		0.008	0.008	0.673	0.617	0.636	102.591%		
σ		0.007	0.003	0.027	0.019	0.022	0.408%		
%RSD		88.200	39.300	4.078	3.051	3.421	0.398		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:05	103.372%	0.055	40.290	41.660	0.000	33.740	3.999	3.397
2	19:27:31	106.970%	0.034	40.510	40.350	0.000	32.290	3.553	2.096
3	19:27:58	104.781%	0.035	43.140	42.450	0.000	33.830	1.715	2.202
x		105.041%	0.041	41.310	41.490	0.000	33.290	3.089	2.565
σ		1.813%	0.012	1.583	1.061	0.000	0.863	1.211	0.722
%RSD		1.726	29.400	3.831	2.558	0.000	2.591	39.190	28.150
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:05	1.576	133.800	0.000	17.470	54.360	57.610	94.084%	0.371
2	19:27:31	1.836	129.500	0.000	4.057	44.540	55.880	97.699%	0.274
3	19:27:58	1.620	131.600	0.000	1.398	54.200	61.520	97.776%	0.273
x		1.677	131.600	0.000	7.640	51.030	58.340	96.519%	0.306
σ		0.139	2.142	0.000	8.613	5.620	2.887	2.110%	0.056
%RSD		8.293	1.628	0.000	112.700	11.010	4.948	2.186	18.290
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:05	2.506	2.169	0.449	14.860	10.460	0.024	-0.013	0.457
2	19:27:31	0.345	2.092	0.447	-0.550	-8.180	0.041	0.020	0.488
3	19:27:58	1.925	2.201	0.387	-3.405	-15.680	0.048	0.082	0.474
x		1.592	2.154	0.428	3.634	-4.467	0.038	0.030	0.473
σ		1.118	0.056	0.035	9.824	13.460	0.012	0.048	0.015
%RSD		70.230	2.591	8.268	270.300	301.400	33.140	161.500	3.208
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:05	0.560	8.997	9.018	-1.567	-1.573	-2.987	0.000	0.140
2	19:27:31	0.513	8.409	8.375	0.228	-1.311	-5.231	0.000	0.118
3	19:27:58	0.360	8.908	9.085	-1.253	-1.462	-5.680	0.000	0.141
x		0.478	8.771	8.826	-0.864	-1.449	-4.633	0.000	0.133
σ		0.105	0.317	0.392	0.959	0.131	1.442	0.000	0.013
%RSD		21.990	3.615	4.444	110.900	9.070	31.140	0.000	9.592
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:05	98.443%	0.005	-0.013	93.730%	-0.042	-0.036	0.002	0.005
2	19:27:31	101.129%	0.044	0.004	96.661%	-0.034	-0.035	0.004	-0.002
3	19:27:58	102.854%	0.038	0.031	97.600%	-0.035	-0.017	-0.045	-0.049
x		100.809%	0.029	0.007	95.997%	-0.037	-0.029	-0.013	-0.015
σ		2.223%	0.021	0.022	2.019%	0.004	0.011	0.028	0.029
%RSD		2.205	71.340	300.800	2.103	11.940	36.560	215.900	193.400
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:05	97.311%	0.137	0.119	0.129	0.536	0.480	104.109%	104.946%
2	19:27:31	99.897%	0.208	0.122	0.149	0.472	0.446	108.031%	106.104%
3	19:27:58	101.362%	0.230	0.147	0.178	0.422	0.519	108.057%	108.909%
x		99.524%	0.192	0.129	0.152	0.477	0.482	106.732%	106.653%
σ		2.051%	0.049	0.015	0.025	0.057	0.037	2.272%	2.038%
%RSD		2.061	25.340	11.930	16.170	12.010	7.663	2.128	1.911
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:27:05	0.004	0.001	0.001	0.003	0.001	110.283%		
2	19:27:31	0.002	0.003	0.003	0.002	0.000	112.963%		
3	19:27:58	0.007	0.003	0.012	0.004	0.002	115.312%		
x		0.004	0.002	0.005	0.003	0.001	112.853%		
σ		0.003	0.001	0.006	0.001	0.001	2.516%		
%RSD		60.960	60.130	110.200	29.090	72.900	2.230		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	98.411%	95.550	95.970	90.790	0.000	47280.000	45630.000	44900.000
2	19:31:47	98.458%	100.400	102.900	91.950	0.000	48650.000	47470.000	46920.000
3	19:32:13	99.274%	101.400	95.410	91.940	0.000	48290.000	47300.000	46460.000
x		98.714%	99.133%	98.090%	91.556%	0.000	96.149%	93.603%	92.194%
σ		0.485%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.492	3.176	4.248	0.727	0.000	1.475	2.177	2.295

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	442.500	4718.000	0.000	51590.000	50380.000	48760.000	101.116%	96.340
2	19:31:47	468.000	4884.000	0.000	53800.000	52640.000	51580.000	100.373%	99.610
3	19:32:13	460.100	4837.000	0.000	53070.000	50600.000	50150.000	102.839%	99.670
x		91.379%	96.260%	0.000	105.642%	102.417%	100.327%	101.443%	98.540%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.265%	n/a
%RSD		2.859	1.776	0.000	2.128	2.439	2.808	1.247	1.936

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	90.730	90.180	448.800	23770.000	22060.000	91.230	92.370	92.940
2	19:31:47	93.760	93.880	466.400	25060.000	23170.000	96.370	96.070	96.260
3	19:32:13	93.170	94.480	465.800	25020.000	23230.000	94.770	95.750	96.410
x		92.556%	92.843%	92.069%	98.468%	91.276%	94.121%	94.728%	95.204%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.734	2.509	2.179	2.991	2.868	2.795	2.161	2.063

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	91.730	98.220	95.500	94.030	98.900	96.550	0.000	97.320
2	19:31:47	94.610	101.900	100.800	97.220	102.800	96.670	0.000	97.150
3	19:32:13	95.340	100.500	102.800	97.190	104.500	96.760	0.000	99.630
x		93.896%	100.217%	99.670%	96.149%	102.050%	96.660%	0.000	98.032%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.032	1.866	3.761	1.906	2.805	0.113	0.000	1.415

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	104.967%	89.250	90.210	98.598%	94.650	93.980	96.240	94.580
2	19:31:47	106.361%	96.600	97.890	98.447%	97.420	97.900	99.720	98.410
3	19:32:13	106.355%	99.470	98.970	100.897%	96.270	95.270	101.100	97.230
x		105.894%	95.106%	95.689%	99.314%	96.114%	95.716%	99.023%	96.743%
σ		0.803%	n/a	n/a	1.373%	n/a	n/a	n/a	n/a
%RSD		0.758	5.543	4.990	1.382	1.449	2.088	2.529	2.027

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	104.500%	95.910	96.220	95.100	94.260	94.590	108.558%	110.595%
2	19:31:47	103.784%	98.830	99.320	98.970	95.210	98.560	111.978%	110.862%
3	19:32:13	106.125%	99.870	99.400	98.490	98.760	99.400	109.411%	112.499%
x		104.803%	98.202%	98.313%	97.519%	96.077%	97.518%	109.982%	111.319%
σ		1.199%	n/a	n/a	n/a	n/a	n/a	1.780%	1.031%
%RSD		1.144	2.090	1.847	2.165	2.470	2.636	1.619	0.926

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:20	104.600	103.100	103.500	104.700	103.600	106.163%
2	19:31:47	109.100	107.600	111.300	109.800	110.200	103.187%
3	19:32:13	107.200	105.800	108.500	109.000	108.600	106.225%
x		106.969%	105.474%	107.804%	107.836%	107.466%	105.192%
σ		n/a	n/a	n/a	n/a	n/a	1.736%
%RSD		2.117	2.148	3.666	2.555	3.187	1.650

CCB7 1/26/2015 7:38:22 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:48	98.409%	0.079	1.067	0.837	0.000	21.230	23.900	22.370
2	19:39:15	99.042%	0.001	0.203	0.609	0.000	24.310	25.210	25.090
3	19:39:41	102.011%	0.056	0.300	0.285	0.000	24.440	23.540	23.810
x		99.820%	0.045	0.523	0.577	0.000	23.330	24.220	23.760
σ		1.923%	0.040	0.473	0.277	0.000	1.817	0.880	1.358
%RSD		1.927	88.300	90.450	48.070	0.000	7.788	3.635	5.718
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:48	1.421	6.040	0.000	12.500	56.000	44.990	102.456%	0.040
2	19:39:15	1.583	3.316	0.000	12.870	49.070	41.230	102.403%	0.086
3	19:39:41	1.625	3.145	0.000	19.260	47.660	48.740	104.653%	-0.036
x		1.543	4.167	0.000	14.880	50.910	44.990	103.171%	0.030
σ		0.108	1.624	0.000	3.803	4.467	3.756	1.284%	0.061
%RSD		6.969	38.980	0.000	25.560	8.774	8.350	1.244	203.800
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:48	0.138	-0.033	0.493	7.735	0.239	0.077	-0.197	0.062
2	19:39:15	-0.028	-0.018	0.508	7.754	4.072	0.102	-0.151	0.023
3	19:39:41	0.086	0.015	0.510	6.020	1.230	0.081	-0.221	0.033
x		0.065	-0.012	0.504	7.170	1.847	0.087	-0.190	0.039
σ		0.085	0.025	0.009	0.995	1.989	0.013	0.036	0.020
%RSD		130.300	205.300	1.872	13.880	107.700	14.890	18.740	51.810
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:48	0.130	0.267	0.302	-0.870	-0.781	-5.336	0.000	0.202
2	19:39:15	0.151	0.352	0.315	-0.784	-0.809	-4.180	0.000	0.191
3	19:39:41	0.045	0.248	0.432	-0.813	-0.347	-4.545	0.000	0.184
x		0.109	0.289	0.350	-0.822	-0.646	-4.687	0.000	0.192
σ		0.056	0.056	0.072	0.044	0.259	0.591	0.000	0.009
%RSD		51.400	19.240	20.490	5.326	40.120	12.620	0.000	4.786
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:48	102.437%	0.353	0.395	101.014%	0.042	0.011	0.039	0.023
2	19:39:15	105.661%	0.476	0.382	103.609%	0.021	0.033	0.058	0.050
3	19:39:41	108.382%	0.479	0.365	105.185%	0.006	0.026	0.044	0.027
x		105.493%	0.436	0.381	103.269%	0.023	0.023	0.047	0.033
σ		2.976%	0.072	0.015	2.106%	0.018	0.011	0.010	0.015
%RSD		2.821	16.500	3.828	2.040	79.060	46.350	20.900	44.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:38:48	103.793%	0.281	0.207	0.232	0.157	0.208	107.178%	107.158%
2	19:39:15	106.415%	0.365	0.200	0.219	0.178	0.178	109.044%	109.100%
3	19:39:41	106.783%	0.334	0.219	0.208	0.213	0.211	111.378%	111.468%
x		105.664%	0.327	0.209	0.219	0.183	0.199	109.200%	109.242%
σ		1.631%	0.043	0.010	0.012	0.029	0.018	2.105%	2.159%
%RSD		1.543	13.060	4.678	5.416	15.690	9.133	1.927	1.976
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:38:48	0.044	0.051	0.047	0.047	0.045	115.059%		
2	19:39:15	0.040	0.043	0.049	0.054	0.042	115.514%		
3	19:39:41	0.059	0.037	0.040	0.031	0.043	114.434%		
x		0.047	0.044	0.046	0.044	0.043	115.003%		
σ		0.010	0.007	0.005	0.011	0.001	0.542%		
%RSD		20.880	15.640	10.420	25.910	2.891	0.472		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:06	101.055%	0.039	30.540	27.660	0.000	76390.000	12740.000	12560.000
2	19:43:33	102.312%	-0.000	29.320	29.370	0.000	79030.000	13390.000	13290.000
3	19:43:59	104.373%	0.017	28.740	30.580	0.000	78270.000	13410.000	13260.000
x		102.580%	0.019	29.530	29.200	0.000	77900.000	13180.000	13040.000
σ		1.675%	0.020	0.921	1.465	0.000	1359.000	377.800	409.800
%RSD		1.633	104.800	3.117	5.019	0.000	1.745	2.867	3.144
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:06	2.758	3155.000	0.000	3107.000	118200.000	123600.000	92.050%	0.541
2	19:43:33	3.010	3279.000	0.000	3295.000	126200.000	130000.000	93.356%	0.376
3	19:43:59	2.954	3248.000	0.000	3231.000	128200.000	130700.000	94.829%	0.517
x		2.907	3227.000	0.000	3211.000	124200.000	128100.000	93.412%	0.478
σ		0.133	64.650	0.000	95.220	5250.000	3917.000	1.390%	0.089
%RSD		4.562	2.003	0.000	2.966	4.227	3.058	1.489	18.670
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:06	0.021	1.982	1.180	0.077	433.700	0.273	-0.097	1.931
2	19:43:33	0.969	2.023	1.314	-1.415	416.900	0.290	-0.106	1.970
3	19:43:59	0.598	2.009	1.351	-3.194	416.400	0.243	-0.042	1.927
x		0.529	2.005	1.282	-1.511	422.400	0.269	-0.082	1.942
σ		0.478	0.021	0.090	1.638	9.820	0.024	0.035	0.024
%RSD		90.230	1.037	7.029	108.400	2.325	9.007	42.850	1.228
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:06	1.897	7.872	7.381	0.248	0.307	-3.049	0.000	404.600
2	19:43:33	1.814	8.522	8.460	0.174	-0.052	-4.217	0.000	417.000
3	19:43:59	2.174	7.942	8.104	0.042	-0.258	-4.208	0.000	424.000
x		1.962	8.112	7.982	0.155	-0.001	-3.824	0.000	415.200
σ		0.189	0.357	0.550	0.105	0.286	0.671	0.000	9.854
%RSD		9.610	4.397	6.888	67.580	22460.000	17.560	0.000	2.373
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:06	94.636%	0.514	0.542	85.896%	0.006	0.003	0.040	0.042
2	19:43:33	97.017%	0.461	0.532	88.555%	-0.004	-0.011	0.035	0.064
3	19:43:59	98.695%	0.389	0.474	89.662%	-0.008	-0.011	0.033	0.041
x		96.783%	0.455	0.516	88.038%	-0.002	-0.007	0.036	0.049
σ		2.039%	0.062	0.037	1.935%	0.007	0.008	0.003	0.013
%RSD		2.107	13.740	7.107	2.198	388.600	124.000	9.467	26.680
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:06	94.379%	0.669	0.588	0.566	51.560	52.470	101.624%	101.814%
2	19:43:33	94.799%	0.485	0.477	0.507	54.850	54.350	104.068%	104.081%
3	19:43:59	98.376%	0.460	0.440	0.468	53.410	54.060	106.296%	107.181%
x		95.851%	0.538	0.502	0.514	53.270	53.630	103.996%	104.359%
σ		2.196%	0.114	0.077	0.049	1.652	1.013	2.337%	2.694%
%RSD		2.291	21.250	15.390	9.549	3.101	1.888	2.247	2.582
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:43:06	0.021	0.030	0.021	0.013	0.022	103.983%		
2	19:43:33	0.029	0.028	0.030	0.016	0.022	104.069%		
3	19:43:59	0.037	0.027	0.038	0.016	0.018	106.656%		
x		0.029	0.028	0.030	0.015	0.021	104.903%		
σ		0.008	0.001	0.008	0.001	0.002	1.519%		
%RSD		26.940	4.855	28.300	9.824	9.882	1.448		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:26	100.145%	0.059	26.570	25.290	0.000	40940.000	11600.000	11420.000
2	19:47:52	102.686%	0.113	25.350	23.730	0.000	41380.000	11830.000	11740.000
3	19:48:18	103.543%	0.036	28.560	24.810	0.000	41890.000	12110.000	11920.000
x		102.125%	0.069	26.830	24.610	0.000	41400.000	11850.000	11690.000
σ		1.767%	0.039	1.623	0.801	0.000	476.700	255.100	253.900
%RSD		1.730	56.470	6.051	3.254	0.000	1.151	2.153	2.172
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:26	1.984	3316.000	0.000	3179.000	105200.000	109700.000	93.897%	0.526
2	19:47:52	1.610	3358.000	0.000	3218.000	111700.000	115900.000	95.046%	0.339
3	19:48:18	1.598	3374.000	0.000	3260.000	111300.000	115300.000	95.792%	0.584
x		1.731	3349.000	0.000	3219.000	109400.000	113600.000	94.912%	0.483
σ		0.219	29.780	0.000	40.360	3623.000	3387.000	0.955%	0.128
%RSD		12.660	0.889	0.000	1.254	3.312	2.980	1.006	26.470
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:26	0.446	2.094	0.434	-0.298	377.200	0.213	-0.110	0.527
2	19:47:52	1.105	1.913	0.489	-2.074	376.600	0.233	0.062	0.541
3	19:48:18	1.139	1.932	0.444	-1.006	375.300	0.216	-0.074	0.557
x		0.897	1.980	0.456	-1.126	376.400	0.221	-0.041	0.541
σ		0.391	0.100	0.029	0.894	0.937	0.011	0.091	0.015
%RSD		43.550	5.043	6.470	79.400	0.249	5.006	224.200	2.788
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:26	0.478	2.891	2.779	-0.062	0.269	-3.365	0.000	351.400
2	19:47:52	0.693	2.568	2.549	-1.075	0.080	-5.086	0.000	360.300
3	19:48:18	0.548	2.585	3.171	-0.035	-0.310	-5.431	0.000	366.800
x		0.573	2.681	2.833	-0.391	0.013	-4.628	0.000	359.500
σ		0.110	0.182	0.315	0.593	0.295	1.107	0.000	7.728
%RSD		19.140	6.792	11.100	151.700	2230.000	23.920	0.000	2.150
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:26	95.707%	0.192	0.227	89.258%	-0.038	-0.035	-0.048	-0.024
2	19:47:52	99.705%	0.284	0.255	91.036%	-0.021	-0.029	0.057	0.045
3	19:48:18	100.408%	0.238	0.208	93.069%	-0.025	-0.031	0.011	0.023
x		98.607%	0.238	0.230	91.121%	-0.028	-0.032	0.006	0.015
σ		2.536%	0.046	0.024	1.907%	0.009	0.003	0.053	0.035
%RSD		2.571	19.380	10.290	2.093	30.980	9.075	827.400	238.800
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:47:26	95.503%	0.208	0.197	0.220	40.100	40.010	104.320%	104.550%
2	19:47:52	99.210%	0.204	0.195	0.184	40.830	40.940	106.427%	106.523%
3	19:48:18	100.110%	0.173	0.176	0.180	41.460	41.140	107.373%	108.061%
x		98.274%	0.195	0.190	0.195	40.800	40.700	106.040%	106.378%
σ		2.442%	0.019	0.012	0.022	0.676	0.604	1.563%	1.760%
%RSD		2.485	9.856	6.091	11.190	1.657	1.484	1.474	1.655
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:47:26	0.021	0.020	0.013	0.017	0.014	106.254%		
2	19:47:52	0.025	0.019	0.016	0.006	0.010	108.688%		
3	19:48:18	0.027	0.025	0.010	0.001	0.006	112.364%		
x		0.024	0.021	0.013	0.008	0.010	109.102%		
σ		0.003	0.003	0.003	0.008	0.004	3.076%		
%RSD		12.200	14.410	21.130	104.700	40.360	2.819		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:43	101.217%	0.058	40.700	41.790	0.000	48690.000	10220.000	10140.000
2	19:52:10	103.719%	0.036	42.620	42.770	0.000	50030.000	10600.000	10520.000
3	19:52:36	103.401%	-0.001	44.780	46.860	0.000	50400.000	10720.000	10650.000
x		102.779%	0.031	42.700	43.810	0.000	49700.000	10510.000	10440.000
σ		1.362%	0.030	2.042	2.689	0.000	898.800	264.800	264.600
%RSD		1.325	95.080	4.783	6.138	0.000	1.808	2.519	2.535
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:43	1.237	3374.000	0.000	2657.000	134000.000	116900.000	94.213%	0.396
2	19:52:10	1.817	3457.000	0.000	2714.000	138300.000	120300.000	94.843%	0.567
3	19:52:36	1.748	3469.000	0.000	2736.000	119300.000	121900.000	94.334%	0.394
x		1.600	3433.000	0.000	2702.000	130600.000	119700.000	94.463%	0.452
σ		0.317	51.810	0.000	40.780	9963.000	2556.000	0.334%	0.099
%RSD		19.810	1.509	0.000	1.509	7.630	2.135	0.354	21.970
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:43	0.848	2.917	4.827	12.570	403.300	0.294	1.443	0.928
2	19:52:10	2.744	2.884	4.921	13.120	403.400	0.320	1.254	1.099
3	19:52:36	0.412	2.842	4.996	13.440	405.800	0.335	1.545	1.009
x		1.334	2.881	4.914	13.040	404.200	0.316	1.414	1.012
σ		1.240	0.037	0.085	0.442	1.438	0.021	0.148	0.085
%RSD		92.930	1.296	1.721	3.391	0.356	6.510	10.450	8.429
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:43	1.035	36.360	37.430	0.795	-1.359	-3.500	0.000	357.500
2	19:52:10	1.105	37.970	37.180	1.783	-0.858	-0.991	0.000	364.200
3	19:52:36	1.079	37.930	37.760	0.281	-0.245	-4.265	0.000	370.400
x		1.073	37.420	37.460	0.953	-0.821	-2.919	0.000	364.000
σ		0.036	0.919	0.291	0.763	0.558	1.713	0.000	6.481
%RSD		3.316	2.454	0.776	80.100	67.990	58.680	0.000	1.780
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:43	96.462%	0.304	0.319	89.351%	-0.022	-0.023	6.257	5.995
2	19:52:10	99.342%	0.395	0.336	91.340%	-0.017	-0.016	6.342	5.871
3	19:52:36	100.007%	0.215	0.309	91.477%	-0.032	-0.021	5.998	6.300
x		98.604%	0.304	0.321	90.723%	-0.024	-0.020	6.199	6.055
σ		1.884%	0.090	0.014	1.190%	0.008	0.004	0.179	0.221
%RSD		1.911	29.530	4.283	1.311	33.490	17.580	2.887	3.645
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:51:43	96.272%	0.167	0.315	0.380	43.110	43.390	103.120%	104.120%
2	19:52:10	99.145%	0.233	0.353	0.347	45.170	45.440	105.031%	107.008%
3	19:52:36	97.524%	0.294	0.308	0.363	46.010	45.700	103.749%	106.699%
x		97.647%	0.231	0.325	0.363	44.760	44.840	103.967%	105.943%
σ		1.441%	0.064	0.025	0.017	1.494	1.264	0.974%	1.586%
%RSD		1.475	27.550	7.557	4.573	3.337	2.819	0.937	1.497
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:51:43	0.022	0.023	0.122	0.089	0.120	105.720%		
2	19:52:10	0.025	0.028	0.140	0.129	0.125	108.931%		
3	19:52:36	0.029	0.019	0.131	0.125	0.134	108.140%		
x		0.025	0.023	0.131	0.115	0.126	107.597%		
σ		0.003	0.004	0.009	0.022	0.007	1.673%		
%RSD		13.260	18.780	6.828	19.190	5.514	1.554		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	101.565%	0.076	23.220	23.310	0.000	36210.000	10890.000	10800.000
2	19:56:25	100.865%	-0.019	21.900	21.970	0.000	38060.000	11620.000	11480.000
3	19:56:51	104.978%	0.017	20.860	23.020	0.000	37130.000	11400.000	11280.000
x		102.469%	0.025	21.990	22.770	0.000	37130.000	11310.000	11190.000
σ		2.201%	0.048	1.184	0.707	0.000	924.800	376.900	351.400
%RSD		2.148	193.000	5.382	3.106	0.000	2.491	3.334	3.141

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	1.719	3150.000	0.000	3109.000	106300.000	109700.000	94.069%	0.651
2	19:56:25	2.025	3276.000	0.000	3243.000	113700.000	114200.000	94.287%	0.420
3	19:56:51	1.908	3199.000	0.000	3192.000	112100.000	115200.000	95.489%	0.786
x		1.884	3208.000	0.000	3181.000	110700.000	113000.000	94.615%	0.619
σ		0.155	63.410	0.000	67.890	3897.000	2921.000	0.765%	0.185
%RSD		8.199	1.977	0.000	2.134	3.520	2.584	0.808	29.870

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	0.065	2.120	1.113	-1.163	370.700	0.213	-0.372	0.557
2	19:56:25	-0.014	1.928	1.275	-0.876	385.900	0.265	-0.102	0.637
3	19:56:51	0.502	1.999	1.238	-1.309	370.500	0.220	-0.302	0.561
x		0.184	2.016	1.209	-1.116	375.700	0.233	-0.259	0.585
σ		0.278	0.097	0.085	0.221	8.861	0.028	0.140	0.045
%RSD		150.800	4.817	7.004	19.760	2.359	12.120	54.040	7.755

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	0.569	2.229	2.282	0.132	-0.881	-3.998	0.000	323.500
2	19:56:25	0.645	2.108	2.122	-0.301	-0.059	-3.730	0.000	345.700
3	19:56:51	0.533	2.409	2.619	-1.060	0.395	-4.044	0.000	341.500
x		0.582	2.249	2.341	-0.410	-0.182	-3.924	0.000	336.900
σ		0.057	0.152	0.254	0.604	0.647	0.170	0.000	11.820
%RSD		9.799	6.747	10.850	147.300	356.300	4.329	0.000	3.508

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	97.852%	0.157	0.172	88.966%	-0.023	-0.030	0.019	0.006
2	19:56:25	98.057%	0.171	0.139	90.952%	-0.032	-0.035	-0.006	-0.013
3	19:56:51	101.504%	0.243	0.183	92.368%	-0.026	-0.029	-0.068	-0.056
x		99.138%	0.190	0.164	90.762%	-0.027	-0.031	-0.018	-0.021
σ		2.052%	0.046	0.023	1.709%	0.004	0.003	0.044	0.032
%RSD		2.070	24.130	13.910	1.883	16.030	10.330	243.300	151.700

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	95.703%	0.077	0.193	0.263	38.370	39.640	103.272%	103.076%
2	19:56:25	95.553%	0.115	0.233	0.248	40.890	41.420	106.546%	106.433%
3	19:56:51	97.483%	0.101	0.261	0.228	40.720	40.920	106.502%	107.584%
x		96.246%	0.097	0.229	0.246	39.990	40.660	105.440%	105.698%
σ		1.074%	0.020	0.034	0.018	1.408	0.917	1.878%	2.342%
%RSD		1.116	20.110	14.990	7.134	3.520	2.254	1.781	2.216

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	19:55:58	0.012	0.014	0.020	0.010	0.012	105.144%
2	19:56:25	0.022	0.022	0.014	0.008	0.004	103.987%
3	19:56:51	0.021	0.023	0.013	0.005	0.005	107.508%
x		0.018	0.020	0.015	0.008	0.007	105.547%
σ		0.006	0.005	0.004	0.003	0.004	1.795%
%RSD		30.310	24.070	22.800	36.960	59.530	1.700

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:00:13	101.208%	0.058	20.990	22.240	0.000	26350.000	11800.000	11600.000
2	20:00:40	104.525%	0.054	25.750	22.630	0.000	26530.000	12050.000	11960.000
3	20:01:06	106.450%	0.016	20.370	20.970	0.000	26770.000	12230.000	12150.000
x		104.061%	0.043	22.370	21.950	0.000	26550.000	12030.000	11900.000
σ		2.652%	0.023	2.941	0.866	0.000	208.100	215.700	280.400
%RSD		2.548	54.360	13.150	3.948	0.000	0.784	1.794	2.356
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:00:13	1.572	3306.000	0.000	2536.000	98790.000	100100.000	94.048%	0.549
2	20:00:40	1.661	3365.000	0.000	2612.000	100700.000	103800.000	95.532%	0.336
3	20:01:06	1.976	3371.000	0.000	2599.000	102100.000	105100.000	95.287%	0.363
x		1.737	3347.000	0.000	2582.000	100500.000	103000.000	94.956%	0.416
σ		0.213	36.030	0.000	40.690	1644.000	2609.000	0.795%	0.116
%RSD		12.240	1.076	0.000	1.576	1.636	2.533	0.838	27.920
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:00:13	1.266	2.820	0.516	2.653	357.800	0.205	-0.575	0.556
2	20:00:40	0.270	2.797	0.456	2.895	345.100	0.152	-0.387	0.508
3	20:01:06	1.636	2.505	0.518	2.715	342.100	0.207	-0.305	0.550
x		1.057	2.707	0.497	2.754	348.400	0.188	-0.422	0.538
σ		0.706	0.176	0.035	0.126	8.335	0.031	0.138	0.026
%RSD		66.810	6.484	7.110	4.581	2.393	16.620	32.790	4.829
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:00:13	0.681	1.741	1.246	-1.686	-0.741	-4.922	0.000	295.200
2	20:00:40	0.696	1.546	1.392	-0.172	-1.700	-5.095	0.000	301.000
3	20:01:06	0.645	1.795	1.754	1.466	-0.805	-3.575	0.000	302.500
x		0.674	1.694	1.464	-0.131	-1.082	-4.531	0.000	299.500
σ		0.026	0.131	0.261	1.576	0.536	0.832	0.000	3.865
%RSD		3.915	7.740	17.860	1205.000	49.550	18.370	0.000	1.290
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:00:13	97.175%	0.211	0.141	89.697%	-0.019	-0.031	-0.017	-0.023
2	20:00:40	100.029%	0.099	0.116	92.299%	-0.028	-0.007	-0.033	-0.014
3	20:01:06	100.467%	0.135	0.164	92.721%	-0.031	-0.018	-0.019	-0.041
x		99.224%	0.148	0.140	91.572%	-0.026	-0.019	-0.023	-0.026
σ		1.788%	0.057	0.024	1.638%	0.006	0.012	0.009	0.014
%RSD		1.802	38.480	16.910	1.789	24.960	65.370	37.980	52.430
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:00:13	94.977%	0.167	0.141	0.155	32.790	33.310	105.033%	104.724%
2	20:00:40	97.786%	0.172	0.110	0.147	33.820	34.990	105.348%	107.543%
3	20:01:06	99.078%	0.133	0.110	0.181	33.690	34.940	106.886%	107.935%
x		97.280%	0.157	0.120	0.161	33.430	34.420	105.756%	106.734%
σ		2.097%	0.021	0.018	0.018	0.562	0.955	0.991%	1.751%
%RSD		2.155	13.480	14.830	11.120	1.681	2.775	0.937	1.641
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:00:13	0.030	0.028	0.001	-0.002	-0.000	105.679%		
2	20:00:40	0.027	0.029	0.004	-0.003	-0.002	108.035%		
3	20:01:06	0.025	0.027	0.002	0.005	-0.001	110.649%		
x		0.027	0.028	0.002	0.000	-0.001	108.121%		
σ		0.003	0.001	0.001	0.004	0.001	2.486%		
%RSD		9.143	4.962	61.700	7702.000	57.780	2.299		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:31	100.620%	-0.038	22.340	21.520	0.000	107000.000	14630.000	14560.000
2	20:04:57	100.857%	0.039	25.570	23.560	0.000	111600.000	15380.000	15280.000
3	20:05:24	102.433%	0.019	26.140	22.670	0.000	111800.000	15630.000	15400.000
x		101.303%	0.007	24.680	22.580	0.000	110100.000	15210.000	15080.000
σ		0.985%	0.040	2.049	1.021	0.000	2737.000	518.700	455.400
%RSD		0.973	601.100	8.301	4.519	0.000	2.485	3.410	3.020
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:31	0.930	3638.000	0.000	2869.000	135100.000	139700.000	93.396%	0.786
2	20:04:57	1.049	3742.000	0.000	2977.000	141700.000	146500.000	93.530%	0.324
3	20:05:24	1.111	3752.000	0.000	2927.000	143600.000	148100.000	94.325%	0.243
x		1.030	3711.000	0.000	2924.000	140200.000	144800.000	93.750%	0.451
σ		0.092	62.970	0.000	53.950	4484.000	4491.000	0.502%	0.293
%RSD		8.931	1.697	0.000	1.845	3.200	3.102	0.536	65.020
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:31	1.497	2.630	356.400	210.500	669.700	0.515	-0.190	0.562
2	20:04:57	0.526	2.522	372.400	219.200	687.200	0.599	0.082	0.537
3	20:05:24	0.459	2.469	378.700	225.200	703.700	0.576	-0.037	0.589
x		0.828	2.540	369.100	218.300	686.900	0.563	-0.048	0.563
σ		0.581	0.082	11.500	7.406	17.040	0.044	0.136	0.026
%RSD		70.220	3.230	3.115	3.393	2.481	7.755	281.800	4.630
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:31	0.374	1.939	2.029	2.227	-1.073	-4.432	0.000	407.900
2	20:04:57	0.460	1.940	2.093	0.534	-1.393	-3.346	0.000	420.500
3	20:05:24	0.449	2.138	1.797	0.873	-0.624	-1.850	0.000	429.300
x		0.428	2.006	1.973	1.211	-1.030	-3.209	0.000	419.300
σ		0.047	0.114	0.156	0.896	0.387	1.297	0.000	10.770
%RSD		10.920	5.693	7.895	73.940	37.530	40.400	0.000	2.569
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:31	96.011%	0.166	0.152	87.778%	-0.029	-0.029	-0.001	-0.020
2	20:04:57	98.001%	0.087	0.125	88.860%	-0.012	-0.025	-0.076	-0.049
3	20:05:24	98.790%	0.097	0.111	89.226%	-0.021	-0.025	-0.005	-0.008
x		97.601%	0.117	0.129	88.622%	-0.020	-0.026	-0.028	-0.025
σ		1.432%	0.043	0.021	0.753%	0.009	0.002	0.042	0.021
%RSD		1.467	36.690	15.980	0.850	41.850	8.873	152.500	83.270
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:31	92.522%	0.134	0.117	0.165	83.020	82.050	101.857%	102.452%
2	20:04:57	95.279%	0.144	0.113	0.179	84.070	85.550	104.390%	104.948%
3	20:05:24	98.131%	0.135	0.115	0.173	84.400	84.450	105.803%	106.768%
x		95.310%	0.138	0.115	0.172	83.830	84.020	104.016%	104.723%
σ		2.805%	0.005	0.002	0.007	0.723	1.789	1.999%	2.167%
%RSD		2.943	3.903	1.401	3.834	0.862	2.129	1.922	2.069
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:04:31	0.003	0.003	0.007	0.004	0.001	102.162%		
2	20:04:57	0.002	0.006	0.005	0.001	0.000	102.856%		
3	20:05:24	0.010	0.002	0.007	0.003	-0.003	105.828%		
x		0.005	0.004	0.006	0.002	-0.000	103.615%		
σ		0.004	0.002	0.001	0.001	0.002	1.948%		
%RSD		91.160	51.730	13.680	56.570	460.300	1.880		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:08:48	101.345%	-0.019	23.970	20.990	0.000	103000.000	14130.000	14020.000
2	20:09:15	101.074%	0.038	20.580	22.490	0.000	105300.000	14720.000	14660.000
3	20:09:41	103.325%	-0.001	21.950	20.860	0.000	105600.000	14880.000	14630.000
x		101.915%	0.006	22.170	21.450	0.000	104600.000	14580.000	14440.000
σ		1.229%	0.029	1.701	0.910	0.000	1387.000	399.200	361.600
%RSD		1.206	467.700	7.675	4.242	0.000	1.325	2.738	2.505
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:08:48	0.817	3522.000	0.000	2768.000	127400.000	130300.000	94.861%	0.719
2	20:09:15	0.915	3609.000	0.000	2768.000	131700.000	136000.000	97.095%	0.352
3	20:09:41	0.967	3609.000	0.000	2837.000	134200.000	136100.000	97.079%	0.622
x		0.900	3580.000	0.000	2791.000	131100.000	134100.000	96.345%	0.564
σ		0.076	50.140	0.000	39.990	3454.000	3299.000	1.285%	0.190
%RSD		8.456	1.401	0.000	1.433	2.634	2.459	1.334	33.740
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:08:48	0.238	2.648	346.600	599.000	992.800	0.489	0.242	0.713
2	20:09:15	-0.598	2.542	358.000	611.700	1004.000	0.572	0.087	0.669
3	20:09:41	1.577	2.732	363.400	623.300	1008.000	0.646	-0.160	0.719
x		0.406	2.640	356.000	611.300	1002.000	0.569	0.056	0.700
σ		1.097	0.095	8.598	12.120	7.772	0.079	0.203	0.027
%RSD		270.200	3.615	2.415	1.982	0.776	13.810	359.300	3.844
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:08:48	0.496	2.076	2.081	-0.487	-2.936	-2.646	0.000	391.500
2	20:09:15	0.620	1.895	1.803	-0.913	-0.613	-4.458	0.000	403.400
3	20:09:41	0.491	2.055	2.067	-1.104	-0.923	-4.700	0.000	406.200
x		0.536	2.009	1.983	-0.835	-1.491	-3.935	0.000	400.300
σ		0.073	0.099	0.157	0.316	1.261	1.123	0.000	7.819
%RSD		13.700	4.931	7.900	37.850	84.590	28.530	0.000	1.953
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:08:48	97.448%	0.157	0.131	89.692%	-0.014	-0.032	0.077	0.029
2	20:09:15	99.690%	0.116	0.114	91.517%	-0.023	-0.021	0.013	-0.001
3	20:09:41	100.945%	0.160	0.172	92.967%	-0.005	-0.028	0.022	0.005
x		99.361%	0.144	0.139	91.392%	-0.014	-0.027	0.037	0.011
σ		1.772%	0.025	0.030	1.641%	0.009	0.005	0.035	0.016
%RSD		1.783	17.120	21.570	1.796	63.640	20.030	92.870	144.000
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:08:48	95.761%	0.134	0.094	0.137	78.840	79.950	102.233%	104.097%
2	20:09:15	97.988%	0.145	0.098	0.155	82.910	82.460	105.152%	105.483%
3	20:09:41	100.423%	0.168	0.083	0.159	81.340	82.510	105.717%	108.772%
x		98.057%	0.149	0.092	0.150	81.030	81.640	104.367%	106.117%
σ		2.332%	0.017	0.008	0.012	2.052	1.461	1.870%	2.401%
%RSD		2.378	11.630	8.416	7.732	2.532	1.790	1.792	2.262
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:08:48	0.004	0.001	0.006	0.002	0.004	104.187%		
2	20:09:15	0.002	0.001	0.006	0.007	0.003	107.500%		
3	20:09:41	0.003	0.002	-0.001	0.017	0.007	109.008%		
x		0.003	0.002	0.004	0.009	0.005	106.898%		
σ		0.001	0.001	0.004	0.008	0.002	2.466%		
%RSD		37.670	37.690	107.200	89.500	38.400	2.307		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:06	100.120%	0.020	14.720	15.240	0.000	68490.000	20480.000	20320.000
2	20:13:32	101.554%	0.000	15.800	16.280	0.000	70020.000	21080.000	20210.000
3	20:13:59	105.418%	0.090	16.920	17.020	0.000	69020.000	21050.000	20340.000
x		102.364%	0.037	15.810	16.180	0.000	69180.000	20870.000	20290.000
σ		2.740%	0.047	1.097	0.892	0.000	779.400	334.300	68.230
%RSD		2.677	128.500	6.936	5.514	0.000	1.127	1.602	0.336
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:06	2.558	3957.000	0.000	2187.000	163900.000	168800.000	94.590%	0.570
2	20:13:32	2.501	4015.000	0.000	2240.000	196000.000	172100.000	97.630%	0.618
3	20:13:59	2.570	4018.000	0.000	2246.000	201900.000	178300.000	96.378%	0.603
x		2.543	3997.000	0.000	2224.000	187300.000	173100.000	96.199%	0.597
σ		0.037	34.260	0.000	32.640	20480.000	4816.000	1.528%	0.024
%RSD		1.445	0.857	0.000	1.468	10.940	2.783	1.588	4.063
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:06	0.988	2.215	1948.000	2528.000	2792.000	0.379	0.073	0.454
2	20:13:32	2.591	2.177	1983.000	2587.000	2828.000	0.360	-0.557	0.426
3	20:13:59	0.039	1.975	2043.000	2657.000	2939.000	0.355	-0.309	0.552
x		1.206	2.122	1991.000	2591.000	2853.000	0.365	-0.264	0.477
σ		1.290	0.129	48.180	64.690	76.320	0.013	0.317	0.066
%RSD		107.000	6.064	2.420	2.497	2.675	3.535	120.100	13.870
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:06	0.441	3.199	3.050	-0.149	-1.045	-3.956	0.000	545.000
2	20:13:32	0.504	3.373	3.171	-1.850	0.361	-2.590	0.000	564.000
3	20:13:59	0.490	3.126	3.511	0.605	-0.279	-4.188	0.000	557.600
x		0.478	3.233	3.244	-0.465	-0.321	-3.578	0.000	555.500
σ		0.033	0.127	0.239	1.258	0.704	0.864	0.000	9.651
%RSD		6.943	3.934	7.374	270.700	219.200	24.140	0.000	1.737
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:06	96.601%	0.061	0.072	89.559%	-0.030	-0.022	-0.095	-0.080
2	20:13:32	99.959%	0.088	0.115	93.368%	-0.021	-0.023	-0.038	-0.031
3	20:13:59	102.400%	0.081	0.047	93.171%	-0.025	-0.028	0.028	0.007
x		99.653%	0.077	0.078	92.033%	-0.025	-0.024	-0.035	-0.035
σ		2.912%	0.014	0.034	2.144%	0.005	0.003	0.061	0.044
%RSD		2.922	18.250	44.190	2.330	18.750	12.930	175.100	126.600
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:06	97.286%	0.144	0.076	0.104	77.330	76.310	102.269%	104.899%
2	20:13:32	100.429%	0.139	0.065	0.115	77.170	79.230	106.817%	109.156%
3	20:13:59	100.712%	0.138	0.078	0.161	77.840	76.980	108.744%	110.833%
x		99.476%	0.141	0.073	0.127	77.450	77.510	105.944%	108.296%
σ		1.902%	0.003	0.007	0.030	0.353	1.528	3.325%	3.059%
%RSD		1.912	2.296	10.100	23.680	0.456	1.972	3.138	2.825
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:13:06	0.001	0.002	0.309	0.333	0.313	105.775%		
2	20:13:32	0.001	0.004	0.339	0.314	0.329	111.256%		
3	20:13:59	0.002	0.000	0.366	0.330	0.338	111.926%		
x		0.001	0.002	0.338	0.326	0.327	109.652%		
σ		0.001	0.002	0.029	0.010	0.013	3.375%		
%RSD		72.970	101.000	8.463	3.134	3.841	3.078		

CRI 1470869 1/26/2015 8:21:15 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	102.137%	0.826	4.922	4.129	0.000	116.600	92.220	92.040
2	20:22:08	102.388%	0.823	5.024	4.887	0.000	127.400	96.000	97.440
3	20:22:34	103.073%	0.911	5.224	4.298	0.000	127.300	100.100	97.950
x		102.533%	85.327%	101.141%	88.763%	0.000	154.684%	96.094%	95.809%
σ		0.484%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.472	5.833	3.037	8.963	0.000	5.007	4.074	3.421

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	25.310	412.200	0.000	87.340	148.700	144.900	105.176%	4.463
2	20:22:08	26.010	426.100	0.000	83.440	187.700	166.900	105.998%	5.489
3	20:22:34	26.330	419.500	0.000	84.400	193.700	154.300	106.316%	4.656
x		86.278%	83.850%	0.000	85.061%	176.718%	155.389%	105.830%	97.384%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.588%	n/a
%RSD		2.014	1.654	0.000	2.385	13.840	7.102	0.556	11.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	0.833	1.797	5.056	46.750	39.020	0.430	0.790	1.878
2	20:22:08	0.806	1.832	5.100	48.440	35.330	0.503	0.686	2.046
3	20:22:34	0.778	1.837	5.202	48.470	38.790	0.487	0.774	2.103
x		80.542%	91.097%	102.391%	95.772%	75.426%	94.625%	74.984%	100.454%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.379	1.197	1.467	2.054	5.478	8.123	7.488	5.817

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	2.098	5.188	5.440	1.437	4.828	7.144	0.000	5.356
2	20:22:08	1.995	5.250	5.442	0.685	5.493	4.749	0.000	5.385
3	20:22:34	2.295	5.335	4.962	1.006	5.684	5.803	0.000	5.370
x		106.465%	105.157%	105.628%	104.275%	106.699%	117.977%	0.000	107.410%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		7.158	1.398	5.230	36.230	8.427	20.350	0.000	0.277

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	98.045%	4.871	4.774	104.692%	0.859	0.900	0.896	0.846
2	20:22:08	99.496%	4.994	5.102	106.068%	0.832	0.827	0.849	0.937
3	20:22:34	100.843%	4.875	4.893	106.893%	0.896	0.954	1.081	0.951
x		99.461%	98.268%	98.465%	105.884%	86.213%	89.384%	94.185%	91.128%
σ		1.399%	n/a	n/a	1.112%	n/a	n/a	n/a	n/a
%RSD		1.407	1.426	3.371	1.050	3.752	7.114	13.060	6.234

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	110.101%	6.556	1.639	1.655	8.921	9.166	107.473%	108.596%
2	20:22:08	113.288%	4.969	1.793	1.712	9.369	9.355	111.499%	112.300%
3	20:22:34	113.621%	7.956	1.709	1.722	9.299	9.314	111.334%	112.810%
x		112.337%	129.879%	85.692%	84.815%	91.963%	92.783%	110.102%	111.235%
σ		1.943%	n/a	n/a	n/a	n/a	n/a	2.279%	2.300%
%RSD		1.729	23.010	4.491	2.111	2.621	1.067	2.070	2.067

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:41	0.905	0.900	1.006	0.921	0.934	118.510%
2	20:22:08	0.928	0.934	1.017	0.971	0.973	118.525%
3	20:22:34	0.972	0.940	1.003	0.969	1.003	119.072%
x		93.510%	92.482%	100.849%	95.333%	97.037%	118.702%
σ		n/a	n/a	n/a	n/a	n/a	0.320%
%RSD		3.681	2.335	0.722	2.976	3.565	0.270

CCV 1467888 1/26/2015 8:25:32 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:59	94.170%	93.200	100.200	92.840	0.000	48530.000	46760.000	46130.000
2	20:26:25	93.415%	99.430	96.190	97.630	0.000	48990.000	47820.000	47420.000
3	20:26:52	98.030%	98.440	96.050	92.920	0.000	48170.000	47330.000	46480.000
x		95.205%	97.021%	97.486%	94.463%	0.000	97.125%	94.606%	93.350%
σ		2.476%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.601	3.451	2.429	2.901	0.000	0.841	1.121	1.425
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:59	450.200	4855.000	0.000	50270.000	48530.000	46680.000	100.208%	94.010
2	20:26:25	464.000	4948.000	0.000	51410.000	49230.000	48970.000	101.511%	96.910
3	20:26:52	458.300	4839.000	0.000	49580.000	48280.000	48590.000	102.448%	97.490
x		91.497%	97.618%	0.000	100.838%	97.364%	96.159%	101.389%	96.134%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.125%	n/a
%RSD		1.523	1.207	0.000	1.841	1.016	2.545	1.110	1.939
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:59	92.400	91.790	452.800	23970.000	22100.000	91.560	91.190	93.090
2	20:26:25	92.970	93.680	460.000	24620.000	22700.000	93.540	92.760	95.620
3	20:26:52	93.240	92.850	459.000	24630.000	22880.000	93.930	93.050	96.380
x		92.869%	92.775%	91.455%	97.617%	90.239%	93.012%	92.330%	95.030%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.460	1.018	0.854	1.553	1.795	1.368	1.081	1.809
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:59	92.450	97.330	98.330	94.950	97.770	96.520	0.000	95.440
2	20:26:25	95.290	99.520	98.740	97.480	97.940	94.290	0.000	97.440
3	20:26:52	94.470	99.430	100.600	98.090	99.990	94.790	0.000	98.700
x		94.068%	98.758%	99.232%	96.838%	98.568%	95.201%	0.000	97.192%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.554	1.252	1.234	1.722	1.254	1.233	0.000	1.695
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:59	101.786%	90.510	91.210	96.598%	97.120	96.670	95.540	97.300
2	20:26:25	102.486%	97.190	96.330	97.865%	97.840	97.210	98.970	98.850
3	20:26:52	103.602%	99.550	101.700	97.105%	96.790	96.030	98.880	96.150
x		102.625%	95.749%	96.415%	97.189%	97.250%	96.637%	97.799%	97.433%
σ		0.916%	n/a	n/a	0.638%	n/a	n/a	n/a	n/a
%RSD		0.892	4.899	5.441	0.656	0.549	0.610	1.997	1.394
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:25:59	100.358%	97.320	97.440	95.750	94.430	96.340	105.262%	105.644%
2	20:26:25	101.060%	99.190	98.360	98.920	99.020	98.020	106.656%	106.922%
3	20:26:52	103.928%	97.170	97.820	96.220	98.340	96.950	107.512%	108.257%
x		101.782%	97.893%	97.875%	96.963%	97.262%	97.104%	106.477%	106.941%
σ		1.891%	n/a	n/a	n/a	n/a	n/a	1.135%	1.307%
%RSD		1.858	1.152	0.474	1.768	2.543	0.880	1.066	1.222
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:25:59	97.240	95.100	96.250	95.600	95.340	111.928%		
2	20:26:25	101.000	97.790	102.400	100.500	100.700	109.207%		
3	20:26:52	99.890	97.750	99.330	100.200	98.920	111.235%		
x		99.393%	96.882%	99.335%	98.778%	98.332%	110.790%		
σ		n/a	n/a	n/a	n/a	n/a	1.414%		
%RSD		1.964	1.594	3.107	2.791	2.797	1.276		

CCB8 1/26/2015 8:33:04 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

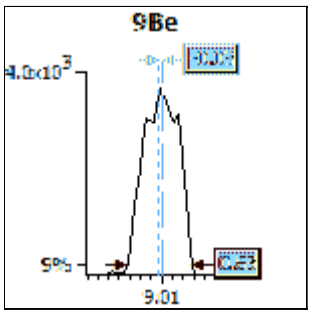
Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:30	93.270%	-0.016	0.374	0.408	0.000	18.100	20.920	20.980
2	20:33:56	97.455%	-0.018	0.462	0.485	0.000	18.200	23.250	20.150
3	20:34:23	97.540%	0.041	0.583	0.483	0.000	16.230	21.760	21.560
x		96.088%	0.003	0.473	0.459	0.000	17.510	21.980	20.900
σ		2.441%	0.033	0.105	0.044	0.000	1.110	1.177	0.707
%RSD		2.541	1327.000	22.220	9.571	0.000	6.340	5.356	3.383
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:30	1.509	7.894	0.000	10.320	33.860	28.310	100.607%	0.164
2	20:33:56	1.579	2.987	0.000	7.052	23.780	34.250	102.083%	-0.100
3	20:34:23	1.510	2.258	0.000	5.969	30.120	31.730	103.553%	-0.102
x		1.533	4.380	0.000	7.781	29.250	31.430	102.081%	-0.013
σ		0.040	3.065	0.000	2.266	5.098	2.982	1.473%	0.153
%RSD		2.607	69.990	0.000	29.120	17.430	9.487	1.443	1219.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:30	0.048	0.010	0.422	7.727	7.612	0.065	-0.254	0.040
2	20:33:56	0.030	-0.009	0.414	6.853	5.860	0.057	-0.147	0.053
3	20:34:23	0.091	0.005	0.458	4.809	8.739	0.077	-0.146	0.037
x		0.056	0.002	0.431	6.463	7.404	0.067	-0.182	0.043
σ		0.032	0.010	0.023	1.498	1.450	0.010	0.062	0.009
%RSD		56.560	431.300	5.402	23.170	19.590	15.770	34.190	20.730
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:30	0.166	0.313	0.291	-0.424	-1.748	-2.505	0.000	0.164
2	20:33:56	0.021	0.281	0.385	-0.821	0.156	-3.673	0.000	0.178
3	20:34:23	0.073	0.174	0.291	-0.386	-0.375	-1.693	0.000	0.157
x		0.087	0.256	0.322	-0.543	-0.655	-2.624	0.000	0.166
σ		0.073	0.073	0.054	0.241	0.982	0.996	0.000	0.011
%RSD		84.470	28.560	16.880	44.370	149.900	37.940	0.000	6.650
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:30	100.618%	0.385	0.344	99.345%	0.029	0.017	-0.051	-0.054
2	20:33:56	103.080%	0.449	0.380	101.483%	0.014	0.019	-0.016	-0.019
3	20:34:23	104.578%	0.292	0.385	103.152%	0.001	0.007	-0.007	0.015
x		102.759%	0.375	0.370	101.327%	0.015	0.014	-0.025	-0.019
σ		1.999%	0.079	0.022	1.909%	0.014	0.006	0.023	0.035
%RSD		1.946	21.120	6.075	1.884	93.140	43.480	94.750	179.900
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:30	102.010%	0.311	0.253	0.180	0.229	0.230	103.093%	102.642%
2	20:33:56	103.479%	0.305	0.205	0.183	0.178	0.125	105.774%	105.553%
3	20:34:23	105.676%	0.295	0.223	0.234	0.155	0.162	107.422%	106.814%
x		103.722%	0.304	0.227	0.199	0.187	0.173	105.430%	105.003%
σ		1.845%	0.008	0.025	0.030	0.038	0.053	2.185%	2.140%
%RSD		1.779	2.651	10.860	15.200	20.350	30.700	2.072	2.038
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:33:30	0.035	0.040	0.038	0.030	0.034	113.788%		
2	20:33:56	0.044	0.032	0.043	0.028	0.033	114.547%		
3	20:34:23	0.050	0.038	0.033	0.032	0.039	114.271%		
x		0.043	0.036	0.038	0.030	0.035	114.202%		
σ		0.007	0.004	0.005	0.002	0.004	0.384%		
%RSD		16.700	11.200	12.490	5.934	10.420	0.337		

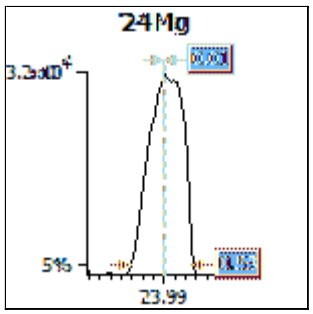
Performance Report

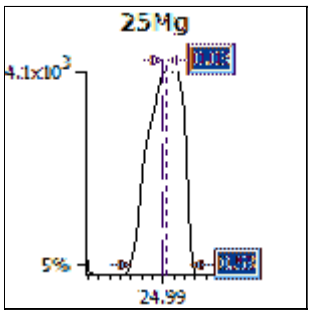
Sample details
Sample name : ITUNE
Acquired at : 1/26/2015 7:46:22 AM
Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

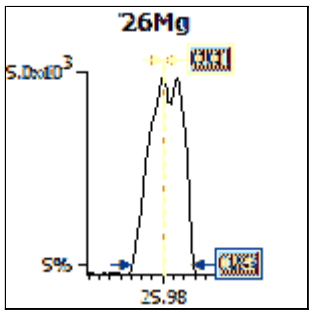
Mass Calibration verification

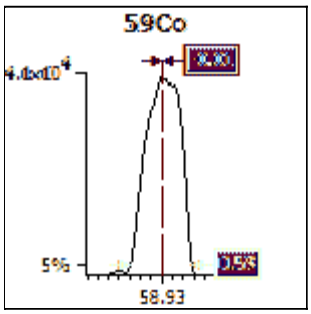
Acquisition parameters
Sweeps : 50
Dwell : 1.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

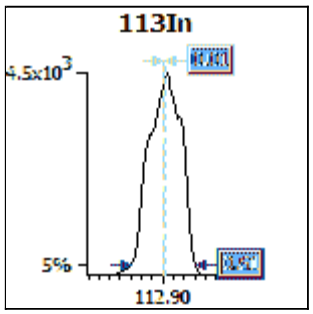


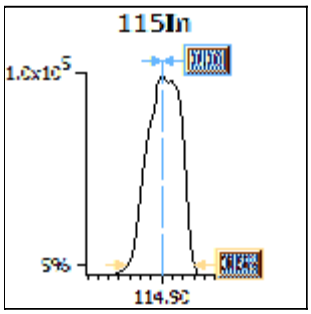


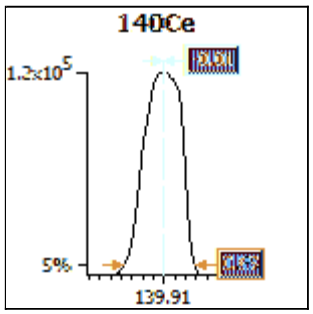


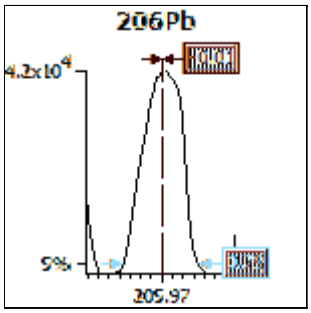


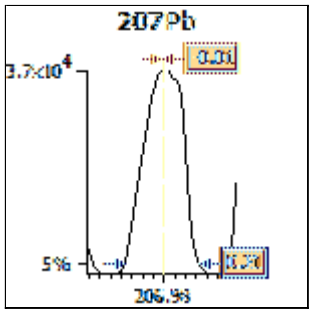


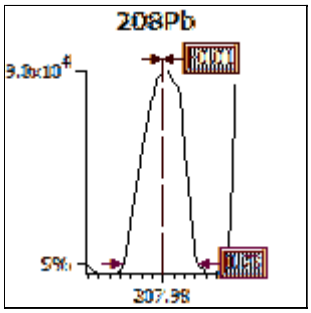












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.40	0.10	0.63	-0.03
24Mg	0.90	0.40	0.10	0.59	0.01
25Mg	0.90	0.40	0.10	0.59	0.03
26Mg	0.90	0.40	0.10	0.59	0.01
59Co	0.90	0.40	0.10	0.59	-0.01
113In	0.90	0.40	0.10	0.61	0.01
115In	0.90	0.40	0.10	0.65	0.01
140Ce	0.90	0.40	0.10	0.69	-0.01
206Pb	0.90	0.40	0.10	0.75	-0.01
207Pb	0.90	0.40	0.10	0.71	-0.01
208Pb	0.90	0.40	0.10	0.73	-0.01

Sample details
Sample name : ITUNE
Acquired at : 1/26/2015 7:46:22 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	7:47:09 AM	0	3070	30179	4067	4722	42399	4176	98959
2	7:48:22 AM	0	3098	30114	4029	4787	42573	4202	99157
3	7:49:34 AM	0	3132	29763	3888	4598	42936	4238	99795
4	7:50:46 AM	1	3114	29155	3855	4629	43214	4319	100898
5	7:51:58 AM	0	3274	28904	3895	4605	43773	4243	101967
x		0	3138	29623	3947	4668	42979	4235	100155
σ		0.19	79.29	571.30	94.56	82.87	545.25	54.04	1263.94
%RSD		49.215	2.527	1.929	2.396	1.775	1.269	1.276	1.262

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	7:47:09 AM	121328	1952	41689	38208	89670	0
2	7:48:22 AM	121507	1904	41633	38408	89402	0
3	7:49:34 AM	121816	1894	41844	38060	90280	0
4	7:50:46 AM	123506	1962	42325	38515	91032	0
5	7:51:58 AM	124757	1931	42203	39268	91546	0
x		122583	1929	41939	38492	90386	0
σ		1491.85	29.59	309.77	468.32	902.11	0.12
%RSD		1.217	1.534	0.739	1.217	0.998	60.990

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0600
1	7:47:09 AM	0
2	7:48:22 AM	0
3	7:49:34 AM	0
4	7:50:46 AM	0
5	7:51:58 AM	0
x		0.0157
σ		0.00
%RSD		1.6089

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Batch Number: 131320 Batch Start Date: 01/21/15 13:25 Batch Analyst: Baikadi, Ashwin

Batch Method: 3005A Batch End Date: 01/21/15 17:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTICPMS 00018	MTAPITTMSA 00023	MTAPITTMSC 00029	
MB 180-131320/1		3005A, 6020A		50 mL	50 mL				
LCS 180-131320/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-40541-B-2	HD-MW-114-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40541-B-2 MS	HD-MW-114-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-40541-B-2 MSD	HD-MW-114-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-40541-B-3	HD-MW-132-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40541-B-4	HD-CW-18-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40541-B-5	HD-MW-74S-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40541-B-6	HD-MW-39D-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40541-B-7	HD-MW-127-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40541-B-8	HD-MW-50S-0/1-0	3005A, 6020A	T	50 mL	50 mL				

Batch Notes	
Batch Comment	Metals B5
First End time	17:25
Lot # of hydrochloric acid	2.5 ml 1452455
Lot # of Nitric Acid	1.0 ml 1459660
Hot Block ID number	#3
Oven, Bath or Block Temperature 1	95
Pipette ID	L1201611U
Person who witnessed spiking	AB
First Start time	13:25
ID number of the thermometer	IP2-14 CF=0.0 E3
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: 180-40541-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-MW-114-0/1-0	180-40541-2
HD-MW-132-0/1-0	180-40541-3
HD-CW-18-0/1-0	180-40541-4
HD-MW-74S-0/1-0	180-40541-5
HD-MW-39D-0/1-0	180-40541-6
HD-MW-127-0/1-0	180-40541-7
HD-MW-50S-0/1-0	180-40541-8

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-MW-114-0/1-0 Lab Sample ID: 180-40541-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 11:15

Reporting Basis: WET Date Received: 01/17/2015 09:30

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-132-0/1-0 Lab Sample ID: 180-40541-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 09:40

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	160	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	160	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-CW-18-0/1-0 Lab Sample ID: 180-40541-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 12:20

Reporting Basis: WET Date Received: 01/17/2015 09:30

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-74S-0/1-0 Lab Sample ID: 180-40541-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 09:50

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	280	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	280	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-39D-0/1-0 Lab Sample ID: 180-40541-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 10:45

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	310	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	310	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-127-0/1-0 Lab Sample ID: 180-40541-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 12:20

Reporting Basis: WET Date Received: 01/17/2015 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	330	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	330	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-50S-0/1-0 Lab Sample ID: 180-40541-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG ID.:

Matrix: Water Date Sampled: 01/16/2015 12:30

Reporting Basis: WET Date Received: 01/17/2015 09:30

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

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Analyst: CLL Batch Start Date: 01/26/2015

Reporting Units: mg/L Analytical Batch No.: 131669

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
11	CCV	06:02	Total Alkalinity as CaCO3 to pH 4.5	135	125	108	80-120		WALK125PPMCCV_00080
12	CCB	06:02	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	

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.: 180-40541-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 131669 Date: 01/26/2015 06:02							
SM 2320B	MB 180-131669/2	Total Alkalinity as CaCO3 to pH 4.5	3.96	J	mg/L	5.0	1
SM 2320B	MB 180-131669/2	Bicarbonate Alkalinity as CaCO3	3.96	J	mg/L	5.0	1
SM 2320B	MB 180-131669/2	Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 131669 Date: 01/26/2015 06:02								
SM 2320B	HD-MW-114-0/1-0	180-40541-2	Total Alkalinity as CaCO3 to pH 4.5	240	mg/L			
SM 2320B	HD-MW-114-0/1-0	180-40541-2 DU	Total Alkalinity as CaCO3 to pH 4.5	251	mg/L	3	20	
SM 2320B	HD-MW-114-0/1-0	180-40541-2	Bicarbonate Alkalinity as CaCO3	240	mg/L			
SM 2320B	HD-MW-114-0/1-0	180-40541-2 DU	Bicarbonate Alkalinity as CaCO3	251	mg/L	3	20	
SM 2320B	HD-MW-114-0/1-0	180-40541-2	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	HD-MW-114-0/1-0	180-40541-2 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.: 180-40541-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 131669 Date: 01/26/2015 06:02											
						LCS Source: WALK250PPMPi_00089					
SM 2320B	LCS 180-131669/1	Total Alkalinity as CaCO3 to pH 4.5	269		mg/L	250	108	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: 180-40541-1

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: 180-40541-1

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.: 180-40541-1

SDG No.:

Instrument ID: NOEQUIP Method: SM 2320B

Start Date: 01/26/2015 06:02 End Date: 01/26/2015 06:02

Lab Sample ID	D / F	Type	Time	Analytes																				
				Alk	BALKCC	CarAlk																		
ZZZZZZ			06:02																					
ZZZZZZ			06:02																					
CCV 180-131669/18			06:02																					
CCB 180-131669/19			06:02																					
LCS 180-131669/1	1	T	06:02	X																				
MB 180-131669/2	1	T	06:02	X	X	X																		
180-40541-2	1	T	06:02	X	X	X																		
180-40541-2 DU	1	T	06:02	X	X	X																		
180-40541-3	1	T	06:02	X	X	X																		
180-40541-4	1	T	06:02	X	X	X																		
180-40541-5	1	T	06:02	X	X	X																		
180-40541-6	1	T	06:02	X	X	X																		
180-40541-7	1	T	06:02	X	X	X																		
180-40541-8	1	T	06:02	X	X	X																		
CCV 180-131669/11	1		06:02	X																				
CCB 180-131669/12	1		06:02	X	X	X																		
ZZZZZZ			06:02																					
ZZZZZZ			06:02																					
ZZZZZZ			06:02																					

Prep Types

T = Total/NA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PITTSBURGH
ALKALINITY LOGSHEET
Method 2320B

Lab # 012615 AK

Analyst: CA Lahuck
Date: 1-26-15
Reviewed By: See DRC
Date: ~~01/26/15~~
pH Meter ID: Accumet XL 3/#9410213
AD Batch: 131669
pH 4 Start: 4.01
pH 4 End: 4.03

Job Number(s): 40541

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	10.93	50	6.7	13.6	.0198	269.28				
MB	5.52		0	0.2		3.96				
180-40544-2	6.99		0	12.3		243.54				
-2X	7.07		0	12.7		251.46				
3	7.20		0	8.1		160.38				
4	7.15		0	13.2		261.36				
5	2.02		0	14.0		277.2				
6	7.04		0	15.5		306.9				
7	2.19		0	16.6		328.68				
8	7.36		0	12.0		237.6				
CCV	10.77		3.4	6.8		134.64				
CCB	5.45		0	0.2		3.96				
~~180-40661-1~~	~~4.96~~		~~0~~			CCV 1-26-15				
1X	4.94		0							
~~2~~	~~6.50~~		~~0~~	~~0.4~~						
~~3~~	~~6.43~~		~~0~~	~~0.4~~						
~~4~~	~~6.40~~		~~0~~	~~0.6~~		1-26-15				
CCV	10.81		3.4	6.8		134.64				
CCB	5.57		0	0.2		3.96				

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40541-1

SDG No.:

Batch Number: 131669 Batch Start Date: 01/26/15 06:02 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
LCS 180-131669/1		SM 2320B		50 mL	10.93 SU	0 mL	6.7 mL	6.7 mL	0 mL
MB 180-131669/2		SM 2320B		50 mL	5.52 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-2	HD-MW-114-0/1-0	SM 2320B	T	50 mL	6.99 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-2 DU	HD-MW-114-0/1-0	SM 2320B	T	50 mL	7.07 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-3	HD-MW-132-0/1-0	SM 2320B	T	50 mL	7.20 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-4	HD-CW-18-0/1-0	SM 2320B	T	50 mL	7.15 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-5	HD-MW-74S-0/1-0	SM 2320B	T	50 mL	7.02 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-6	HD-MW-39D-0/1-0	SM 2320B	T	50 mL	7.04 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-7	HD-MW-127-0/1-0	SM 2320B	T	50 mL	7.19 SU	0 mL	0 mL	0 mL	0 mL
180-40541-A-8	HD-MW-50S-0/1-0	SM 2320B	T	50 mL	7.36 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-131669/11		SM 2320B		50 mL	10.77 SU	0 mL	3.4 mL	3.4 mL	0 mL
CCB 180-131669/12		SM 2320B		50 mL	5.45 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 180-131669/1		SM 2320B		6.9 mL	6.9 mL	Case 2	265.32 mg/L	0 mg/L	3.9599999999999 8 mg/L
MB 180-131669/2		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L
180-40541-A-2	HD-MW-114-0/1-0	SM 2320B	T	12.3 mL	12.3 mL	Case 1	0 mg/L	0 mg/L	243.54 mg/L
180-40541-A-2 DU	HD-MW-114-0/1-0	SM 2320B	T	12.7 mL	12.7 mL	Case 1	0 mg/L	0 mg/L	251.46 mg/L
180-40541-A-3	HD-MW-132-0/1-0	SM 2320B	T	8.1 mL	8.1 mL	Case 1	0 mg/L	0 mg/L	160.38 mg/L
180-40541-A-4	HD-CW-18-0/1-0	SM 2320B	T	13.2 mL	13.2 mL	Case 1	0 mg/L	0 mg/L	261.36 mg/L
180-40541-A-5	HD-MW-74S-0/1-0	SM 2320B	T	14.0 mL	14 mL	Case 1	0 mg/L	0 mg/L	277.2 mg/L
180-40541-A-6	HD-MW-39D-0/1-0	SM 2320B	T	15.5 mL	15.5 mL	Case 1	0 mg/L	0 mg/L	306.9 mg/L
180-40541-A-7	HD-MW-127-0/1-0	SM 2320B	T	16.6 mL	16.6 mL	Case 1	0 mg/L	0 mg/L	328.68 mg/L
180-40541-A-8	HD-MW-50S-0/1-0	SM 2320B	T	12.0 mL	12 mL	Case 1	0 mg/L	0 mg/L	237.6 mg/L
CCV 180-131669/11		SM 2320B		3.4 mL	3.4 mL	Case 3	134.64 mg/L	0 mg/L	0 mg/L
CCB 180-131669/12		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 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.: 180-40541-1

SDG No.:

Batch Number: 131669 Batch Start Date: 01/26/15 06:02 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00080	WALK250PPMPi 00089	
LCS 180-131669/1		SM 2320B		132.66 mg/L	269.28 mg/L	50 mL		50 mL	
MB 180-131669/2		SM 2320B		0 mg/L	3.96 mg/L	50 mL			
180-40541-A-2	HD-MW-114-0/1-0	SM 2320B	T	0 mg/L	243.54 mg/L	50 mL			
180-40541-A-2 DU	HD-MW-114-0/1-0	SM 2320B	T	0 mg/L	251.46 mg/L	50 mL			
180-40541-A-3	HD-MW-132-0/1-0	SM 2320B	T	0 mg/L	160.38 mg/L	50 mL			
180-40541-A-4	HD-CW-18-0/1-0	SM 2320B	T	0 mg/L	261.36 mg/L	50 mL			
180-40541-A-5	HD-MW-74S-0/1-0	SM 2320B	T	0 mg/L	277.2 mg/L	50 mL			
180-40541-A-6	HD-MW-39D-0/1-0	SM 2320B	T	0 mg/L	306.9 mg/L	50 mL			
180-40541-A-7	HD-MW-127-0/1-0	SM 2320B	T	0 mg/L	328.68 mg/L	50 mL			
180-40541-A-8	HD-MW-50S-0/1-0	SM 2320B	T	0 mg/L	237.6 mg/L	50 mL			
CCV 180-131669/11		SM 2320B		67.32 mg/L	134.64 mg/L	50 mL	50 mL		
CCB 180-131669/12		SM 2320B		0 mg/L	3.96 mg/L	50 mL			

Batch Notes	
Batch Comment	PH 4 START: 4.01 PH 4 END: 4.03
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	1443293
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: 1/16/2015	COC No: TAP201501601
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			12.16.004
Harrisburg, PA 17110	Calendar (C) or Work Days (W) _____			
(717) 901-8180 Phone	TAT if different from Below: Standard			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			

180-40541 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO4, CL, NO3 2320B/300.0	Total Na, Ca, K, and Mg (SW846 6020A)	Sample Specific Notes:
HD-QC5-0/1-2	1/16/15	12:00	Trip Blank	Water	2	X			
HD-MW-114-0/1-0	1/16/15	11:15	Groundwater	Water	5	X	X	X	
HD-MW-132-0/1-0	1/16/15	9:40	Groundwater	Water	5	X	X	X	
HD-CW-18-0/1-0	1/16/15	12:20	Groundwater	Water	5	X	X	X	
HD-MW-74S-0/1-0	1/16/15	9:50	Groundwater	Water	5	X	X	X	
HD-MW-39D-0/1-0	1/16/15	10:45	Groundwater	Water	5	X	X	X	
HD-MW-127-0/1-0	1/16/15	12:20	Groundwater	Water	5	X	X	X	
HD-MW-50S-0/1-0	1/16/15	12:30	Groundwater	Water	5	X	X	X	
Number of Containers						3	1	1	
Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Unpreserved 7=Na2S2O3						2	1	4	
Field Filter						N	N	N	

Possible Hazard Identification
■ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: **CLP Like Deliverables**

Relinquished by (Print and Sign):	Company: GSC	Date/Time: 1/16/15 1925	Received by:	Company:	Date/Time: 1/16/15 1925
Relinquished by:	Company: TAP	Date/Time: 1/16/15 1620	Received by:	Company:	Date/Time: 1-17-15 9:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

180-40541 Waybill

Short Hold

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-40541-1

Login Number: 40541

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	