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## Technical Report for

**Arcadis**

**National Grid, Philly Coke, Philadelphia, PA**

**B0036790.0001.00002**

**SGS Job Number: JC95555**

**Sampling Dates: 09/23/19 - 09/24/19**

### Report to:

**Arcadis**

**Lawrence.Healy@arcadis-us.com**

**ATTN: Lawrence Healy**

**Total number of pages in report: 1210**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Laura Degenhardt".

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**General Manager**

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Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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## Sample Summary

**Arcadis**

**Job No: JC95555**

**National Grid, Philly Coke, Philadelphia, PA**  
**Project No: B0036790.0001.00002**

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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**This report contains results reported as ND = Not detected. The following applies:**  
**Organics ND = Not detected above the MDL**

JC95555-1	09/23/19	08:45	CO	09/24/19	SO	Soil	MW-111(11-13)
JC95555-2	09/23/19	08:55	CO	09/24/19	SO	Soil	MW-111(13-15)
JC95555-3	09/24/19	11:15	CO	09/24/19	SO	Soil	MW-108(5-7)
JC95555-4	09/24/19	11:30	CO	09/24/19	SO	Soil	MW-108(10-12)
JC95555-5	09/24/19	11:30	CO	09/24/19	AQ	Trip Blank Soil	TRIP BLANK

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Arcadis

**Job No** JC95555

**Site:** National Grid, Philly Coke, Philadelphia, PA

**Report Date** 10/10/2019 8:48:39 A

On 09/24/2019, 4 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC95555 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

### MS Volatiles By Method SW846 8260C

**Matrix:** AQ

**Batch ID:** VA9835

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC95745-5MS, JC95745-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Methylene chloride are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Recovery(s) for 1,2,4-Trichlorobenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JC95555-5 for Bromomethane: Associated CCV outside of control limits high, sample was ND.
- JC95555-5 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC95555-5 for Bromoform: Associated CCV outside of control limits high, sample was ND.
- JC95555-5 for Freon 113: Associated CCV outside of control limits high, sample was ND.

**Matrix:** SO

**Batch ID:** VIC7331

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC95641-12MS, JC95641-15DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Duplicate for Tetrachloroethene are outside control limits for sample JC95641-15DUP. Outside control limits due to sample non-homogeneity.
- JC95555-4: Confirmation run.
- JC95555-4 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.
- JC95555-4 for Toluene-D8: Outside control limits due to matrix interference.
- JC95555-4 for Bromomethane: Associated CCV outside of control limits high, sample was ND.
- JC95555-4 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.

**Matrix:** SO

**Batch ID:** VD10747

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC95555-2MS, JC95555-2MSD were used as the QC samples indicated.
- JC95555-2: Diluted due to high concentration of non-target compound.
- JC95555-1: Diluted due to high concentration of non-target compound.
- JC95555-3: Diluted due to high concentration of non-target compound.
- JC95555-4: Confirmation run.

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## MS Semi-volatiles By Method SW846 8270D

**Matrix:** SO

**Batch ID:** OP23015

- All samples were extracted within the recommended method holding time.
- Sample(s) JC95509-2MS, JC95509-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC95555-1: Dilution required due to viscosity of the extract matrix. Elevated detection limit due to high final volume of viscous extract.
- JC95555-1 for Nitrobenzene-d5: Outside control limits due to matrix interference.
- JC95555-3 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC95555-3 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC95555-3 for 2-Fluorophenol: Outside control limits due to dilution.
- JC95555-3 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC95555-3 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC95555-3 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC95555-3 for Terphenyl-d14: Outside control limits due to dilution.
- JC95555-3 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC95555-3 for Phenol-d5: Outside control limits due to dilution.
- JC95555-3 for Phenol-d5: Outside control limits due to dilution.
- JC95555-3 for 2-Fluorophenol: Outside control limits due to dilution.
- JC95555-3 for Terphenyl-d14: Outside control limits due to dilution.
- JC95555-1 for Phenol-d5: Outside control limits due to dilution.
- JC95555-1 for Nitrobenzene-d5: Outside control limits due to dilution.
- JC95555-1 for 2-Fluorophenol: Outside control limits due to dilution.
- JC95555-1 for 2-Fluorobiphenyl: Outside control limits due to dilution.
- JC95555-1 for 2,4,6-Tribromophenol: Outside control limits due to dilution.
- JC95555-3 for Nitrobenzene-d5: Outside control limits due to matrix interference.
- JC95555-3 for 2,4-Dimethylphenol: Estimated value, due to corresponding internal standard failing low.
- JC95555-1 for Terphenyl-d14: Outside control limits due to dilution.

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## Metals Analysis By Method SW846 6010D

**Matrix:** SO

**Batch ID:** MP17592

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC95495-2PS, JC95495-2SDL, JC95495-2MS, JC95495-2MSD were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Antimony, Potassium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony, Potassium, Nickel are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Recovery(s) for Calcium, Magnesium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for MSD for Iron, Nickel are outside control limits for sample MP17592-S2. High rpd due to possible sample nonhomogeneity.
- RPD(s) for Serial Dilution for Antimony, Cadmium, Selenium are outside control limits for sample MP17592-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JC95555-3 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC95555-3 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Silver: Elevated detection limit due to dilution required for high interfering element.
- JC95555-3 for Selenium: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC95555-3 for Cadmium: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC95555-3 for Manganese: Elevated detection limit due to dilution required for high interfering element.
- JC95555-3 for Silver: Elevated detection limit due to dilution required for high interfering element.
- MP17592-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- JC95555-3 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Cadmium: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Copper: Elevated detection limit due to dilution required for high interfering element.
- JC95555-4 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC95555-3 for Lead: Elevated detection limit due to dilution required for high interfering element.

## Metals Analysis By Method SW846 7471B

**Matrix:** SO

**Batch ID:** MP17543

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC95565-7MS, JC95565-7MSD were used as the QC samples for metals.

## General Chemistry By Method SM2540 G 18TH ED MOD

**Matrix:** SO

**Batch ID:** GN705

- Sample(s) JC95396-8DUP were used as the QC samples for Solids, Percent.

## General Chemistry By Method SW846 9012B/LACHAT

**Matrix:** SO

**Batch ID:** GP24094

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC95958-1DUP, JC95958-1MS were used as the QC samples for Cyanide.
- Matrix Spike Recovery(s) for Cyanide are outside control limits. Spike recovery indicates possible matrix interference.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

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# Summary of Hits

Job Number: JC95555  
 Account: Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Collected: 09/23/19 thru 09/24/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JC95555-1 MW-111(11-13)

Benzene <sup>a</sup>	131000	3100	2800	ug/kg	SW846 8260C
Ethylbenzene <sup>a</sup>	21300	6200	3400	ug/kg	SW846 8260C
Styrene <sup>a</sup>	29500	12000	3500	ug/kg	SW846 8260C
Toluene <sup>a</sup>	99200	6200	3200	ug/kg	SW846 8260C
m,p-Xylene <sup>a</sup>	127000	6200	5500	ug/kg	SW846 8260C
o-Xylene <sup>a</sup>	42600	6200	3600	ug/kg	SW846 8260C
Xylene (total) <sup>a</sup>	170000	6200	3600	ug/kg	SW846 8260C
2,4-Dimethylphenol <sup>b</sup>	64600	4500	1600	ug/kg	SW846 8270D
2-Methylphenol <sup>b</sup>	27700	1800	580	ug/kg	SW846 8270D
3&4-Methylphenol <sup>b</sup>	79300	1800	740	ug/kg	SW846 8270D
Phenol <sup>b</sup>	31300	1800	470	ug/kg	SW846 8270D
Acenaphthene	274000	36000	12000	ug/kg	SW846 8270D
Acenaphthylene	770000	36000	18000	ug/kg	SW846 8270D
Acetophenone <sup>b</sup>	374 J	4500	190	ug/kg	SW846 8270D
Anthracene	421000	36000	22000	ug/kg	SW846 8270D
Benzo(a)anthracene	592000	36000	10000	ug/kg	SW846 8270D
Benzo(a)pyrene	469000	36000	16000	ug/kg	SW846 8270D
Benzo(b)fluoranthene	581000	36000	16000	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	242000	36000	18000	ug/kg	SW846 8270D
Benzo(k)fluoranthene	194000	36000	17000	ug/kg	SW846 8270D
1,1'-Biphenyl	158000	72000	5000	ug/kg	SW846 8270D
Carbazole	296000	72000	5200	ug/kg	SW846 8270D
Chrysene	437000	36000	11000	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene <sup>b</sup>	65400	900	400	ug/kg	SW846 8270D
Dibenzofuran	663000	72000	15000	ug/kg	SW846 8270D
Fluoranthene	1600000	36000	16000	ug/kg	SW846 8270D
Fluorene	983000	36000	17000	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	261000	36000	17000	ug/kg	SW846 8270D
2-Methylnaphthalene	761000	36000	8200	ug/kg	SW846 8270D
Naphthalene	3190000	36000	10000	ug/kg	SW846 8270D
Phenanthrene	2380000	36000	12000	ug/kg	SW846 8270D
Pyrene	1080000	36000	12000	ug/kg	SW846 8270D
Aluminum	4410	55		mg/kg	SW846 6010D
Arsenic	6.2	2.2		mg/kg	SW846 6010D
Barium	32.8	22		mg/kg	SW846 6010D
Beryllium	0.30	0.22		mg/kg	SW846 6010D
Calcium	893	550		mg/kg	SW846 6010D
Chromium	12.5	1.1		mg/kg	SW846 6010D
Copper	25.0	2.8		mg/kg	SW846 6010D
Iron	11100	55		mg/kg	SW846 6010D
Lead	55.4	2.2		mg/kg	SW846 6010D
Magnesium	1460	550		mg/kg	SW846 6010D
Manganese	168	1.7		mg/kg	SW846 6010D

## Summary of Hits

Job Number: JC95555  
 Account: Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Collected: 09/23/19 thru 09/24/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Mercury		0.15	0.037		mg/kg	SW846 7471B
Nickel		9.5	4.4		mg/kg	SW846 6010D
Vanadium		8.7	5.5		mg/kg	SW846 6010D
Zinc		74.0	5.5		mg/kg	SW846 6010D

JC95555-2 MW-111(13-15)

Benzene <sup>a</sup>		13200	110	97	ug/kg	SW846 8260C
Carbon disulfide <sup>a</sup>		400 J	420	200	ug/kg	SW846 8260C
Ethylbenzene <sup>a</sup>		190 J	210	120	ug/kg	SW846 8260C
Isopropylbenzene <sup>a</sup>		192 J	420	150	ug/kg	SW846 8260C
Toluene <sup>a</sup>		1500	210	110	ug/kg	SW846 8260C
m,p-Xylene <sup>a</sup>		346	210	190	ug/kg	SW846 8260C
o-Xylene <sup>a</sup>		368	210	120	ug/kg	SW846 8260C
Xylene (total) <sup>a</sup>		714	210	120	ug/kg	SW846 8260C
Acenaphthene		2630	53	18	ug/kg	SW846 8270D
Acenaphthylene		411	53	27	ug/kg	SW846 8270D
Anthracene		1170	53	32	ug/kg	SW846 8270D
Benzo(a)anthracene		2090	53	15	ug/kg	SW846 8270D
Benzo(a)pyrene		1710	53	24	ug/kg	SW846 8270D
Benzo(b)fluoranthene		1910	53	23	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		975	53	26	ug/kg	SW846 8270D
Benzo(k)fluoranthene		803	53	25	ug/kg	SW846 8270D
1,1'-Biphenyl		357	110	7.2	ug/kg	SW846 8270D
Carbazole		820	110	7.6	ug/kg	SW846 8270D
Chrysene		1580	53	17	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		333	53	23	ug/kg	SW846 8270D
Dibenzofuran		1660	110	21	ug/kg	SW846 8270D
Fluoranthene		4220	53	23	ug/kg	SW846 8270D
Fluorene		2490	53	24	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		1040	53	25	ug/kg	SW846 8270D
2-Methylnaphthalene		1270	53	12	ug/kg	SW846 8270D
Naphthalene		4500	53	15	ug/kg	SW846 8270D
Phenanthrene		7070	110	35	ug/kg	SW846 8270D
Pyrene		3720	53	17	ug/kg	SW846 8270D
Aluminum		17500	76		mg/kg	SW846 6010D
Arsenic		34.7	3.0		mg/kg	SW846 6010D
Barium		170	30		mg/kg	SW846 6010D
Beryllium		1.2	0.30		mg/kg	SW846 6010D
Cadmium		1.5	0.76		mg/kg	SW846 6010D
Calcium		3580	760		mg/kg	SW846 6010D
Chromium		162	1.5		mg/kg	SW846 6010D
Cobalt		15.1	7.6		mg/kg	SW846 6010D
Copper		88.8	3.8		mg/kg	SW846 6010D
Iron		28200	76		mg/kg	SW846 6010D

## Summary of Hits

Job Number: JC95555  
 Account: Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Collected: 09/23/19 thru 09/24/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead		185	3.0		mg/kg	SW846 6010D
Magnesium		4760	760		mg/kg	SW846 6010D
Manganese		860	2.3		mg/kg	SW846 6010D
Mercury		1.4	0.094		mg/kg	SW846 7471B
Nickel		30.6	6.1		mg/kg	SW846 6010D
Potassium		1950	1500		mg/kg	SW846 6010D
Silver		1.2	0.76		mg/kg	SW846 6010D
Vanadium		32.6	7.6		mg/kg	SW846 6010D
Zinc		504	7.6		mg/kg	SW846 6010D
Cyanide		0.87	0.36		mg/kg	SW846 9012B/LACHAT
JC95555-3	MW-108(5-7)					
Benzene <sup>a</sup>		9980	4300	3900	ug/kg	SW846 8260C
Carbon disulfide <sup>a</sup>		8420 J	17000	7900	ug/kg	SW846 8260C
Toluene <sup>a</sup>		12500	8500	4500	ug/kg	SW846 8260C
m,p-Xylene <sup>a</sup>		36900	8500	7600	ug/kg	SW846 8260C
o-Xylene <sup>a</sup>		14400	8500	5000	ug/kg	SW846 8260C
Xylene (total) <sup>a</sup>		51300	8500	5000	ug/kg	SW846 8260C
2,4-Dimethylphenol <sup>c</sup>		94900	5200	1800	ug/kg	SW846 8270D
2-Methylphenol		37300	2100	660	ug/kg	SW846 8270D
3&4-Methylphenol		75800	2100	850	ug/kg	SW846 8270D
Phenol		24800	2100	540	ug/kg	SW846 8270D
Acenaphthene		160000	41000	14000	ug/kg	SW846 8270D
Acenaphthylene		305000	41000	21000	ug/kg	SW846 8270D
Acetophenone		6880	5200	220	ug/kg	SW846 8270D
Anthracene		1010000	41000	25000	ug/kg	SW846 8270D
Benzo(a)anthracene		1050000	41000	12000	ug/kg	SW846 8270D
Benzo(a)pyrene		681000	41000	19000	ug/kg	SW846 8270D
Benzo(b)fluoranthene		903000	41000	18000	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		321000	41000	21000	ug/kg	SW846 8270D
Benzo(k)fluoranthene		320000	41000	19000	ug/kg	SW846 8270D
1,1'-Biphenyl		310000	83000	5700	ug/kg	SW846 8270D
Carbazole		594000	83000	6000	ug/kg	SW846 8270D
Chrysene		927000	41000	13000	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene		119000	41000	18000	ug/kg	SW846 8270D
Dibenzofuran		1270000	83000	17000	ug/kg	SW846 8270D
Fluoranthene		2470000	41000	18000	ug/kg	SW846 8270D
Fluorene		1940000	41000	19000	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		377000	41000	19000	ug/kg	SW846 8270D
2-Methylnaphthalene		1610000	41000	9300	ug/kg	SW846 8270D
Naphthalene		8500000	410000	120000	ug/kg	SW846 8270D
Phenanthrene		5220000	410000	140000	ug/kg	SW846 8270D
Pyrene		1760000	41000	13000	ug/kg	SW846 8270D
Aluminum		1100	63		mg/kg	SW846 6010D

## Summary of Hits

Job Number: JC95555  
 Account: Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Collected: 09/23/19 thru 09/24/19



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		2.6	2.5		mg/kg	SW846 6010D
Antimony		16.0	5.0		mg/kg	SW846 6010D
Arsenic <sup>d</sup>		194	25		mg/kg	SW846 6010D
Barium		2190	630		mg/kg	SW846 6010D
Calcium		185	1.3		mg/kg	SW846 6010D
Chromium		92.4	6.3		mg/kg	SW846 6010D
Copper <sup>d</sup>		28400	130		mg/kg	SW846 6010D
Iron		145	5.0		mg/kg	SW846 6010D
Lead <sup>d</sup>		116	3.8		mg/kg	SW846 6010D
Manganese <sup>d</sup>		3.5	0.40		mg/kg	SW846 7471B
Mercury		32.6	5.0		mg/kg	SW846 6010D
Nickel		8.7	6.3		mg/kg	SW846 6010D
Vanadium		94.0	6.3		mg/kg	SW846 6010D
Zinc		12.8	0.30		mg/kg	SW846 9012B/LACHAT
Cyanide						

JC95555-4      MW-108(10-12)

Acetone		16.3 J	24	9.5	ug/kg	SW846 8260C
Cyclohexane		5.4	4.7	1.6	ug/kg	SW846 8260C
Methylcyclohexane		14.8	4.7	2.1	ug/kg	SW846 8260C
m,p-Xylene		2.4	2.4	2.1	ug/kg	SW846 8260C
o-Xylene		1.6 J	2.4	1.4	ug/kg	SW846 8260C
Xylene (total)		4.0	2.4	1.4	ug/kg	SW846 8260C
Acenaphthene		48.5	45	16	ug/kg	SW846 8270D
Acenaphthylene		36.3 J	45	23	ug/kg	SW846 8270D
Anthracene		76.6	45	28	ug/kg	SW846 8270D
Benzo(a)anthracene		118	45	13	ug/kg	SW846 8270D
Benzo(a)pyrene		108	45	20	ug/kg	SW846 8270D
Benzo(b)fluoranthene		140	45	20	ug/kg	SW846 8270D
Benzo(g,h,i)perylene		79.8	45	23	ug/kg	SW846 8270D
Benzo(k)fluoranthene		53.6	45	21	ug/kg	SW846 8270D
1,1'-Biphenyl		43.9 J	90	6.2	ug/kg	SW846 8270D
Carbazole		43.6 J	90	6.5	ug/kg	SW846 8270D
Chrysene		148	45	14	ug/kg	SW846 8270D
Dibenzofuran		103	90	18	ug/kg	SW846 8270D
Fluoranthene		241	45	20	ug/kg	SW846 8270D
Fluorene		127	45	21	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		71.8	45	21	ug/kg	SW846 8270D
2-Methylnaphthalene		270	45	10	ug/kg	SW846 8270D
Naphthalene		1060	45	13	ug/kg	SW846 8270D
Phenanthrene		363	45	15	ug/kg	SW846 8270D
Pyrene		254	45	14	ug/kg	SW846 8270D
Aluminum		20600	67		mg/kg	SW846 6010D
Arsenic <sup>d</sup>		18.4	5.3		mg/kg	SW846 6010D
Barium		189	27		mg/kg	SW846 6010D



## Summary of Hits

Job Number: JC95555  
Account: Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA  
Collected: 09/23/19 thru 09/24/19

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Beryllium		1.2	0.27		mg/kg	SW846 6010D
Calcium		3280	670		mg/kg	SW846 6010D
Chromium		107	1.3		mg/kg	SW846 6010D
Cobalt		13.2	6.7		mg/kg	SW846 6010D
Copper <sup>d</sup>		80.9	6.7		mg/kg	SW846 6010D
Iron		42200	130		mg/kg	SW846 6010D
Lead <sup>d</sup>		150	5.3		mg/kg	SW846 6010D
Magnesium		5470	670		mg/kg	SW846 6010D
Manganese <sup>d</sup>		640	4.0		mg/kg	SW846 6010D
Mercury		0.50	0.042		mg/kg	SW846 7471B
Nickel		33.2	5.3		mg/kg	SW846 6010D
Potassium		2770	1300		mg/kg	SW846 6010D
Silver <sup>d</sup>		1.4	1.3		mg/kg	SW846 6010D
Vanadium		37.9	6.7		mg/kg	SW846 6010D
Zinc		445	6.7		mg/kg	SW846 6010D
Cyanide		0.40	0.39		mg/kg	SW846 9012B/LACHAT

JC95555-5      TRIP BLANK

No hits reported in this sample.

- (a) Diluted due to high concentration of non-target compound.
- (b) Dilution required due to viscosity of the extract matrix. Elevated detection limit due to high final volume of viscous extract.
- (c) Estimated value, due to corresponding internal standard failing low.
- (d) Elevated detection limit due to dilution required for high interfering element.

**Sample Results**

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**Report of Analysis**

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## Report of Analysis

Page 1 of 2

Client Sample ID:	MW-111(11-13)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-1	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	87.7
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	D266689.D	1	10/03/19 17:39	TDN	n/a	n/a	VD10747
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.9 g	10.0 ml	2.0 ul
Run #2			

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	62000	25000	ug/kg	
71-43-2	Benzene	131000	3100	2800	ug/kg	
74-97-5	Bromochloromethane	ND	31000	3500	ug/kg	
75-27-4	Bromodichloromethane	ND	12000	2700	ug/kg	
75-25-2	Bromoform	ND	31000	3600	ug/kg	
74-83-9	Bromomethane	ND	31000	6100	ug/kg	
78-93-3	2-Butanone (MEK)	ND	62000	23000	ug/kg	
75-15-0	Carbon disulfide	ND	12000	5700	ug/kg	
56-23-5	Carbon tetrachloride	ND	12000	3800	ug/kg	
108-90-7	Chlorobenzene	ND	12000	2800	ug/kg	
75-00-3	Chloroethane	ND	31000	3600	ug/kg	
67-66-3	Chloroform	ND	12000	3000	ug/kg	
74-87-3	Chloromethane	ND	31000	12000	ug/kg	
110-82-7	Cyclohexane	ND	12000	4100	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	12000	5200	ug/kg	
124-48-1	Dibromochloromethane	ND	12000	3500	ug/kg	
106-93-4	1,2-Dibromoethane	ND	6200	2600	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	6200	3400	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	6200	3100	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	6200	3000	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	31000	4500	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6200	3100	ug/kg	
107-06-2	1,2-Dichloroethane	ND	6200	2900	ug/kg	
75-35-4	1,1-Dichloroethene	ND	6200	4000	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	6200	5200	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	6200	3800	ug/kg	
78-87-5	1,2-Dichloropropane	ND	12000	2900	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	12000	2900	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	12000	2800	ug/kg	
100-41-4	Ethylbenzene	21300	6200	3400	ug/kg	
76-13-1	Freon 113	ND	31000	6200	ug/kg	
591-78-6	2-Hexanone	ND	31000	13000	ug/kg	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-111(11-13)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-1	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	87.7
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	12000	4300	ug/kg	
79-20-9	Methyl Acetate	ND	31000	8600	ug/kg	
108-87-2	Methylcyclohexane	ND	12000	5400	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	6200	2900	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	31000	14000	ug/kg	
75-09-2	Methylene chloride	ND	31000	6100	ug/kg	
100-42-5	Styrene	29500	12000	3500	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	12000	3700	ug/kg	
127-18-4	Tetrachloroethene	ND	12000	3600	ug/kg	
108-88-3	Toluene	99200	6200	3200	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	31000	12000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	31000	9400	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	12000	3000	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	12000	3400	ug/kg	
79-01-6	Trichloroethene	ND	6200	4700	ug/kg	
75-69-4	Trichlorofluoromethane	ND	31000	4200	ug/kg	
75-01-4	Vinyl chloride	ND	12000	3000	ug/kg	
	m,p-Xylene	127000	6200	5500	ug/kg	
95-47-6	o-Xylene	42600	6200	3600	ug/kg	
1330-20-7	Xylene (total)	170000	6200	3600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		75-127%
17060-07-0	1,2-Dichloroethane-D4	98%		75-130%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	88%		79-127%

(a) Diluted due to high concentration of non-target compound.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

Page 1 of 3

Client Sample ID:	MW-111(11-13)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-1	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	87.7
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	5P63459.D	5	10/01/19 11:01	CS	09/28/19 22:45	OP23015	E5P2977
Run #2	5P63492.D	200	10/02/19 00:21	HSS	09/28/19 22:45	OP23015	E5P2978

Run #	Initial Weight	Final Volume
Run #1	31.5 g	5.0 ml
Run #2	31.5 g	5.0 ml

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	1800	450	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	4500	550	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	4500	770	ug/kg	
105-67-9	2,4-Dimethylphenol	64600	4500	1600	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	4500	3400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	4500	970	ug/kg	
95-48-7	2-Methylphenol	27700	1800	580	ug/kg	
	3&4-Methylphenol	79300	1800	740	ug/kg	
88-75-5	2-Nitrophenol	ND	4500	600	ug/kg	
100-02-7	4-Nitrophenol	ND	9000	2400	ug/kg	
87-86-5	Pentachlorophenol	ND	3600	850	ug/kg	
108-95-2	Phenol	31300	1800	470	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	4500	600	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	4500	680	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	4500	540	ug/kg	
83-32-9	Acenaphthene	274000 <sup>b</sup>	36000	12000	ug/kg	
208-96-8	Acenaphthylene	770000 <sup>b</sup>	36000	18000	ug/kg	
98-86-2	Acetophenone	374	4500	190	ug/kg	J
120-12-7	Anthracene	421000 <sup>b</sup>	36000	22000	ug/kg	
1912-24-9	Atrazine	ND	1800	390	ug/kg	
56-55-3	Benzo(a)anthracene	592000 <sup>b</sup>	36000	10000	ug/kg	
50-32-8	Benzo(a)pyrene	469000 <sup>b</sup>	36000	16000	ug/kg	
205-99-2	Benzo(b)fluoranthene	581000 <sup>b</sup>	36000	16000	ug/kg	
191-24-2	Benzo(g,h,i)perylene	242000 <sup>b</sup>	36000	18000	ug/kg	
207-08-9	Benzo(k)fluoranthene	194000 <sup>b</sup>	36000	17000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1800	350	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1800	220	ug/kg	
92-52-4	1,1'-Biphenyl	158000 <sup>b</sup>	72000	5000	ug/kg	
100-52-7	Benzaldehyde	ND	4500	220	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1800	220	ug/kg	
106-47-8	4-Chloroaniline	ND	4500	330	ug/kg	
86-74-8	Carbazole	296000 <sup>b</sup>	72000	5200	ug/kg	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-111(11-13)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-1	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	87.7
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	1800	360	ug/kg	
218-01-9	Chrysene	437000 <sup>b</sup>	36000	11000	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1800	190	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1800	390	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	1800	320	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1800	290	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	900	280	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	900	450	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1800	750	ug/kg	
123-91-1	1,4-Dioxane	ND	900	600	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	65400	900	400	ug/kg	
132-64-9	Dibenzofuran	663000 <sup>b</sup>	72000	15000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1800	150	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1800	230	ug/kg	
84-66-2	Diethyl phthalate	ND	1800	190	ug/kg	
131-11-3	Dimethyl phthalate	ND	1800	160	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1800	210	ug/kg	
206-44-0	Fluoranthene	1600000 <sup>b</sup>	36000	16000	ug/kg	
86-73-7	Fluorene	983000 <sup>b</sup>	36000	17000	ug/kg	
118-74-1	Hexachlorobenzene	ND	1800	230	ug/kg	
87-68-3	Hexachlorobutadiene	ND	900	360	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	9000	360	ug/kg	
67-72-1	Hexachloroethane	ND	4500	450	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	261000 <sup>b</sup>	36000	17000	ug/kg	
78-59-1	Isophorone	ND	1800	190	ug/kg	
91-57-6	2-Methylnaphthalene	761000 <sup>b</sup>	36000	8200	ug/kg	
88-74-4	2-Nitroaniline	ND	4500	210	ug/kg	
99-09-2	3-Nitroaniline	ND	4500	230	ug/kg	
100-01-6	4-Nitroaniline	ND	4500	230	ug/kg	
91-20-3	Naphthalene	3190000 <sup>b</sup>	36000	10000	ug/kg	
98-95-3	Nitrobenzene	ND	1800	350	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	1800	260	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	4500	330	ug/kg	
85-01-8	Phenanthrene	2380000 <sup>b</sup>	36000	12000	ug/kg	
129-00-0	Pyrene	1080000 <sup>b</sup>	36000	12000	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	4500	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%	0% <sup>c</sup>	23-115%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-111(11-13)	<b>Date Sampled:</b> 09/23/19
<b>Lab Sample ID:</b> JC95555-1	<b>Date Received:</b> 09/24/19
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 87.7
<b>Method:</b> SW846 8270D SW846 3546	
<b>Project:</b> National Grid, Philly Coke, Philadelphia, PA	

**ABN TCL List (SOM0 2.0)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	85%	0% <sup>c</sup>	27-114%
118-79-6	2,4,6-Tribromophenol	79%	0% <sup>c</sup>	19-152%
4165-60-0	Nitrobenzene-d5	146% <sup>d</sup>	0% <sup>c</sup>	26-134%
321-60-8	2-Fluorobiphenyl	98%	0% <sup>c</sup>	39-124%
1718-51-0	Terphenyl-d14	88%	0% <sup>c</sup>	36-134%

- (a) Dilution required due to viscosity of the extract matrix. Elevated detection limit due to high final volume of viscous extract.
- (b) Result is from Run# 2
- (c) Outside control limits due to dilution.
- (d) Outside control limits due to matrix interference.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.1  
4

## Report of Analysis

Client Sample ID:	MW-111(11-13)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-1	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	87.7
Project:	National Grid, Philly Coke, Philadelphia, PA		

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method	
Aluminum	4410	55	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Antimony	< 2.2	2.2	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Arsenic	6.2	2.2	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium	32.8	22	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Beryllium	0.30	0.22	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium	< 0.55	0.55	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Calcium	893	550	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium	12.5	1.1	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Cobalt	< 5.5	5.5	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Copper	25.0	2.8	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Iron	11100	55	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead	55.4	2.2	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Magnesium	1460	550	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Manganese	168	1.7	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	0.15	0.037	mg/kg	1	09/27/19	09/27/19	CH	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Nickel	9.5	4.4	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Potassium	< 1100	1100	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Selenium	< 2.2	2.2	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver	< 0.55	0.55	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Sodium	< 1100	1100	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Thallium	< 1.1	1.1	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Vanadium	8.7	5.5	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Zinc	74.0	5.5	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>

(1) Instrument QC Batch: MA47516

(2) Instrument QC Batch: MA47539

(3) Prep QC Batch: MP17543

(4) Prep QC Batch: MP17592

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> MW-111(11-13)	<b>Date Sampled:</b> 09/23/19
<b>Lab Sample ID:</b> JC95555-1	<b>Date Received:</b> 09/24/19
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 87.7
<b>Project:</b> National Grid, Philly Coke, Philadelphia, PA	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.29	0.29	mg/kg	1	10/03/19 16:25	KI	SW846 9012B/LACHAT
Solids, Percent	87.7		%	1	10/02/19 17:05	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit

4.1  
4

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## Report of Analysis

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Client Sample ID:	MW-111(13-15)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-2	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	63.4
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	D266676.D	1	10/03/19 11:28	TDN	n/a	n/a	VD10747
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.3 g	10.0 ml	100 ul
Run #2			

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	2100	850	ug/kg	
71-43-2	Benzene	13200	110	97	ug/kg	
74-97-5	Bromochloromethane	ND	1100	120	ug/kg	
75-27-4	Bromodichloromethane	ND	420	94	ug/kg	
75-25-2	Bromoform	ND	1100	120	ug/kg	
74-83-9	Bromomethane	ND	1100	210	ug/kg	
78-93-3	2-Butanone (MEK)	ND	2100	790	ug/kg	
75-15-0	Carbon disulfide	400	420	200	ug/kg	J
56-23-5	Carbon tetrachloride	ND	420	130	ug/kg	
108-90-7	Chlorobenzene	ND	420	97	ug/kg	
75-00-3	Chloroethane	ND	1100	130	ug/kg	
67-66-3	Chloroform	ND	420	100	ug/kg	
74-87-3	Chloromethane	ND	1100	420	ug/kg	
110-82-7	Cyclohexane	ND	420	140	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	420	180	ug/kg	
124-48-1	Dibromochloromethane	ND	420	120	ug/kg	
106-93-4	1,2-Dibromoethane	ND	210	89	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	120	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	110	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	100	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	1100	150	ug/kg	
75-34-3	1,1-Dichloroethane	ND	210	110	ug/kg	
107-06-2	1,2-Dichloroethane	ND	210	100	ug/kg	
75-35-4	1,1-Dichloroethene	ND	210	140	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	210	180	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	210	130	ug/kg	
78-87-5	1,2-Dichloropropane	ND	420	100	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	420	100	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	420	97	ug/kg	
100-41-4	Ethylbenzene	190	210	120	ug/kg	J
76-13-1	Freon 113	ND	1100	210	ug/kg	
591-78-6	2-Hexanone	ND	1100	450	ug/kg	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-111(13-15)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-2	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	63.4
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	192	420	150	ug/kg	J
79-20-9	Methyl Acetate	ND	1100	300	ug/kg	
108-87-2	Methylcyclohexane	ND	420	190	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	210	100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	1100	480	ug/kg	
75-09-2	Methylene chloride	ND	1100	210	ug/kg	
100-42-5	Styrene	ND	420	120	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	420	130	ug/kg	
127-18-4	Tetrachloroethene	ND	420	120	ug/kg	
108-88-3	Toluene	1500	210	110	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	1100	410	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1100	320	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	420	100	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	420	120	ug/kg	
79-01-6	Trichloroethene	ND	210	160	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1100	150	ug/kg	
75-01-4	Vinyl chloride	ND	420	100	ug/kg	
	m,p-Xylene	346	210	190	ug/kg	
95-47-6	o-Xylene	368	210	120	ug/kg	
1330-20-7	Xylene (total)	714	210	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-127%
17060-07-0	1,2-Dichloroethane-D4	97%		75-130%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	90%		79-127%

(a) Diluted due to high concentration of non-target compound.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	MW-111(13-15)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-2	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	63.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P63452.D	1	10/01/19 08:10	CS	09/28/19 22:45	OP23015	E5P2977
Run #2	5P63493.D	2	10/02/19 00:45	HSS	09/28/19 22:45	OP23015	E5P2978

Run #	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2	30.0 g	1.0 ml

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	110	26	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	260	32	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	260	45	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	260	94	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	260	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	260	56	ug/kg	
95-48-7	2-Methylphenol	ND	110	34	ug/kg	
	3&4-Methylphenol	ND	110	43	ug/kg	
88-75-5	2-Nitrophenol	ND	260	35	ug/kg	
100-02-7	4-Nitrophenol	ND	530	140	ug/kg	
87-86-5	Pentachlorophenol	ND	210	49	ug/kg	
108-95-2	Phenol	ND	110	27	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	260	35	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	260	39	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	260	31	ug/kg	
83-32-9	Acenaphthene	2630	53	18	ug/kg	
208-96-8	Acenaphthylene	411	53	27	ug/kg	
98-86-2	Acetophenone	ND	260	11	ug/kg	
120-12-7	Anthracene	1170	53	32	ug/kg	
1912-24-9	Atrazine	ND	110	23	ug/kg	
56-55-3	Benzo(a)anthracene	2090	53	15	ug/kg	
50-32-8	Benzo(a)pyrene	1710	53	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	1910	53	23	ug/kg	
191-24-2	Benzo(g,h,i)perylene	975	53	26	ug/kg	
207-08-9	Benzo(k)fluoranthene	803	53	25	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	110	20	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	110	13	ug/kg	
92-52-4	1,1'-Biphenyl	357	110	7.2	ug/kg	
100-52-7	Benzaldehyde	ND	260	13	ug/kg	
91-58-7	2-Chloronaphthalene	ND	110	13	ug/kg	
106-47-8	4-Chloroaniline	ND	260	19	ug/kg	
86-74-8	Carbazole	820	110	7.6	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-111(13-15)	Date Sampled:	09/23/19
Lab Sample ID:	JC95555-2	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	63.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	110	21	ug/kg	
218-01-9	Chrysene	1580	53	17	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	110	11	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	110	23	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	110	19	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	110	17	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	53	16	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	53	26	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	110	44	ug/kg	
123-91-1	1,4-Dioxane	ND	53	35	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	333	53	23	ug/kg	
132-64-9	Dibenzofuran	1660	110	21	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	110	8.6	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	110	13	ug/kg	
84-66-2	Diethyl phthalate	ND	110	11	ug/kg	
131-11-3	Dimethyl phthalate	ND	110	9.4	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	110	12	ug/kg	
206-44-0	Fluoranthene	4220	53	23	ug/kg	
86-73-7	Fluorene	2490	53	24	ug/kg	
118-74-1	Hexachlorobenzene	ND	110	13	ug/kg	
87-68-3	Hexachlorobutadiene	ND	53	21	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	530	21	ug/kg	
67-72-1	Hexachloroethane	ND	260	26	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1040	53	25	ug/kg	
78-59-1	Isophorone	ND	110	11	ug/kg	
91-57-6	2-Methylnaphthalene	1270	53	12	ug/kg	
88-74-4	2-Nitroaniline	ND	260	12	ug/kg	
99-09-2	3-Nitroaniline	ND	260	13	ug/kg	
100-01-6	4-Nitroaniline	ND	260	14	ug/kg	
91-20-3	Naphthalene	4500	53	15	ug/kg	
98-95-3	Nitrobenzene	ND	110	20	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	110	15	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	260	19	ug/kg	
85-01-8	Phenanthrene	7070 <sup>a</sup>	110	35	ug/kg	
129-00-0	Pyrene	3720	53	17	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	260	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%	54%	23-115%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-111(13-15) <b>Lab Sample ID:</b> JC95555-2 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8270D SW846 3546 <b>Project:</b> National Grid, Philly Coke, Philadelphia, PA	<b>Date Sampled:</b> 09/23/19 <b>Date Received:</b> 09/24/19 <b>Percent Solids:</b> 63.4
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**ABN TCL List (SOM0 2.0)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	61%	59%	27-114%
118-79-6	2,4,6-Tribromophenol	62%	63%	19-152%
4165-60-0	Nitrobenzene-d5	66%	66%	26-134%
321-60-8	2-Fluorobiphenyl	61%	61%	39-124%
1718-51-0	Terphenyl-d14	77%	73%	36-134%

(a) Result is from Run# 2

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ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.2  
4

## Report of Analysis

Client Sample ID: MW-111(13-15)

Lab Sample ID: JC95555-2

Matrix: SO - Soil

Date Sampled: 09/23/19

Date Received: 09/24/19

Percent Solids: 63.4

Project: National Grid, Philly Coke, Philadelphia, PA

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	17500	76	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Antimony	< 3.0	3.0	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Arsenic	34.7	3.0	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium	170	30	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Beryllium	1.2	0.30	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium	1.5	0.76	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Calcium	3580	760	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium	162	1.5	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Cobalt	15.1	7.6	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Copper	88.8	3.8	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Iron	28200	76	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead	185	3.0	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Magnesium	4760	760	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Manganese	860	2.3	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	1.4	0.094	mg/kg	2	09/27/19	09/27/19	CH SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Nickel	30.6	6.1	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Potassium	1950	1500	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Selenium	< 3.0	3.0	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver	1.2	0.76	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Sodium	< 1500	1500	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Thallium	< 1.5	1.5	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Vanadium	32.6	7.6	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>
Zinc	504	7.6	mg/kg	1	09/29/19	09/30/19	ND SW846 6010D <sup>2</sup>	SW846 3050B <sup>4</sup>

(1) Instrument QC Batch: MA47516

(2) Instrument QC Batch: MA47539

(3) Prep QC Batch: MP17543

(4) Prep QC Batch: MP17592

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-111(13-15)	<b>Date Sampled:</b> 09/23/19
<b>Lab Sample ID:</b> JC95555-2	<b>Date Received:</b> 09/24/19
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 63.4
<b>Project:</b> National Grid, Philly Coke, Philadelphia, PA	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.87	0.36	mg/kg	1	10/03/19 16:26	KI	SW846 9012B/LACHAT
Solids, Percent	63.4		%	1	10/02/19 17:05	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit

4.2  
4



SGS LabLink@1054774 16:29 15-Oct-2019

## Report of Analysis

Page 1 of 2

Client Sample ID:	MW-108(5-7)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-3	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	79.4
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	D266690.D	1	10/03/19 18:08	TDN	n/a	n/a	VD10747
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.0 g	10.0 ml	2.0 ul
Run #2			

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	85000	34000	ug/kg	
71-43-2	Benzene	9980	4300	3900	ug/kg	
74-97-5	Bromochloromethane	ND	43000	4800	ug/kg	
75-27-4	Bromodichloromethane	ND	17000	3800	ug/kg	
75-25-2	Bromoform	ND	43000	4900	ug/kg	
74-83-9	Bromomethane	ND	43000	8500	ug/kg	
78-93-3	2-Butanone (MEK)	ND	85000	32000	ug/kg	
75-15-0	Carbon disulfide	8420	17000	7900	ug/kg	J
56-23-5	Carbon tetrachloride	ND	17000	5300	ug/kg	
108-90-7	Chlorobenzene	ND	17000	3900	ug/kg	
75-00-3	Chloroethane	ND	43000	5000	ug/kg	
67-66-3	Chloroform	ND	17000	4200	ug/kg	
74-87-3	Chloromethane	ND	43000	17000	ug/kg	
110-82-7	Cyclohexane	ND	17000	5600	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17000	7100	ug/kg	
124-48-1	Dibromochloromethane	ND	17000	4800	ug/kg	
106-93-4	1,2-Dibromoethane	ND	8500	3600	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	8500	4700	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	8500	4200	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	8500	4200	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	43000	6200	ug/kg	
75-34-3	1,1-Dichloroethane	ND	8500	4200	ug/kg	
107-06-2	1,2-Dichloroethane	ND	8500	4000	ug/kg	
75-35-4	1,1-Dichloroethene	ND	8500	5600	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	8500	7200	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	8500	5200	ug/kg	
78-87-5	1,2-Dichloropropane	ND	17000	4000	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	17000	4000	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	17000	3900	ug/kg	
100-41-4	Ethylbenzene	ND	8500	4700	ug/kg	
76-13-1	Freon 113	ND	43000	8600	ug/kg	
591-78-6	2-Hexanone	ND	43000	18000	ug/kg	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-108(5-7)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-3	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	79.4
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	17000	5900	ug/kg	
79-20-9	Methyl Acetate	ND	43000	12000	ug/kg	
108-87-2	Methylcyclohexane	ND	17000	7500	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	8500	4000	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	43000	19000	ug/kg	
75-09-2	Methylene chloride	ND	43000	8500	ug/kg	
100-42-5	Styrene	ND	17000	4900	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	17000	5100	ug/kg	
127-18-4	Tetrachloroethene	ND	17000	4900	ug/kg	
108-88-3	Toluene	12500	8500	4500	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	43000	16000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	43000	13000	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	17000	4100	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	17000	4700	ug/kg	
79-01-6	Trichloroethene	ND	8500	6500	ug/kg	
75-69-4	Trichlorofluoromethane	ND	43000	5800	ug/kg	
75-01-4	Vinyl chloride	ND	17000	4100	ug/kg	
	m,p-Xylene	36900	8500	7600	ug/kg	
95-47-6	o-Xylene	14400	8500	5000	ug/kg	
1330-20-7	Xylene (total)	51300	8500	5000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		75-127%
17060-07-0	1,2-Dichloroethane-D4	101%		75-130%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	91%		79-127%

(a) Diluted due to high concentration of non-target compound.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

Client Sample ID: MW-108(5-7)	
Lab Sample ID: JC95555-3	Date Sampled: 09/24/19
Matrix: SO - Soil	Date Received: 09/24/19
Method: SW846 8270D SW846 3546	Percent Solids: 79.4
Project: National Grid, Philly Coke, Philadelphia, PA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P63460.D	5	10/01/19 11:25	CS	09/28/19 22:45	OP23015	E5P2977
Run #2	5P63494.D	200	10/02/19 01:10	HSS	09/28/19 22:45	OP23015	E5P2978
Run #3	5P63684.D	2000	10/07/19 12:29	HSS	09/28/19 22:45	OP23015	E5P2987

Run #	Initial Weight	Final Volume
Run #1	30.5 g	5.0 ml
Run #2	30.5 g	5.0 ml
Run #3	30.5 g	5.0 ml

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	2100	510	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	5200	630	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	5200	880	ug/kg	
105-67-9	2,4-Dimethylphenol <sup>a</sup>	94900	5200	1800	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5200	3900	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	5200	1100	ug/kg	
95-48-7	2-Methylphenol	37300	2100	660	ug/kg	
	3&4-Methylphenol	75800	2100	850	ug/kg	
88-75-5	2-Nitrophenol	ND	5200	680	ug/kg	
100-02-7	4-Nitrophenol	ND	10000	2800	ug/kg	
87-86-5	Pentachlorophenol	ND	4100	970	ug/kg	
108-95-2	Phenol	24800	2100	540	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5200	680	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	5200	770	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	5200	620	ug/kg	
83-32-9	Acenaphthene	160000 <sup>b</sup>	41000	14000	ug/kg	
208-96-8	Acenaphthylene	305000 <sup>b</sup>	41000	21000	ug/kg	
98-86-2	Acetophenone	6880	5200	220	ug/kg	
120-12-7	Anthracene	1010000 <sup>b</sup>	41000	25000	ug/kg	
1912-24-9	Atrazine	ND	2100	440	ug/kg	
56-55-3	Benzo(a)anthracene	1050000 <sup>b</sup>	41000	12000	ug/kg	
50-32-8	Benzo(a)pyrene	681000 <sup>b</sup>	41000	19000	ug/kg	
205-99-2	Benzo(b)fluoranthene	903000 <sup>b</sup>	41000	18000	ug/kg	
191-24-2	Benzo(g,h,i)perylene	321000 <sup>b</sup>	41000	21000	ug/kg	
207-08-9	Benzo(k)fluoranthene	320000 <sup>b</sup>	41000	19000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	2100	400	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	2100	250	ug/kg	
92-52-4	1,1'-Biphenyl	310000 <sup>b</sup>	83000	5700	ug/kg	
100-52-7	Benzaldehyde	ND	5200	260	ug/kg	
91-58-7	2-Chloronaphthalene	ND	2100	250	ug/kg	

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.3  
4

## Report of Analysis

Client Sample ID:	MW-108(5-7)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-3	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	79.4
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
106-47-8	4-Chloroaniline	ND	5200	370	ug/kg	
86-74-8	Carbazole	594000 <sup>b</sup>	83000	6000	ug/kg	
105-60-2	Caprolactam	ND	2100	410	ug/kg	
218-01-9	Chrysene	927000 <sup>b</sup>	41000	13000	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	2100	220	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	2100	440	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	2100	370	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2100	330	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1000	320	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	1000	520	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2100	860	ug/kg	
123-91-1	1,4-Dioxane	ND	1000	680	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	119000 <sup>b</sup>	41000	18000	ug/kg	
132-64-9	Dibenzofuran	1270000 <sup>b</sup>	83000	17000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	2100	170	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	2100	260	ug/kg	
84-66-2	Diethyl phthalate	ND	2100	220	ug/kg	
131-11-3	Dimethyl phthalate	ND	2100	180	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2100	240	ug/kg	
206-44-0	Fluoranthene	2470000 <sup>b</sup>	41000	18000	ug/kg	
86-73-7	Fluorene	1940000 <sup>b</sup>	41000	19000	ug/kg	
118-74-1	Hexachlorobenzene	ND	2100	260	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1000	410	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	10000	410	ug/kg	
67-72-1	Hexachloroethane	ND	5200	510	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	377000 <sup>b</sup>	41000	19000	ug/kg	
78-59-1	Isophorone	ND	2100	220	ug/kg	
91-57-6	2-Methylnaphthalene	1610000 <sup>b</sup>	41000	9300	ug/kg	
88-74-4	2-Nitroaniline	ND	5200	240	ug/kg	
99-09-2	3-Nitroaniline	ND	5200	260	ug/kg	
100-01-6	4-Nitroaniline	ND	5200	270	ug/kg	
91-20-3	Naphthalene	8500000 <sup>c</sup>	410000	120000	ug/kg	
98-95-3	Nitrobenzene	ND	2100	400	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	2100	300	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	5200	380	ug/kg	
85-01-8	Phenanthrene	5220000 <sup>c</sup>	410000	140000	ug/kg	
129-00-0	Pyrene	1760000 <sup>b</sup>	41000	13000	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5200	260	ug/kg	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: MW-108(5-7)		Date Sampled: 09/24/19
Lab Sample ID: JC95555-3		Date Received: 09/24/19
Matrix: SO - Soil		Percent Solids: 79.4
Method: SW846 8270D SW846 3546		
Project: National Grid, Philly Coke, Philadelphia, PA		

**ABN TCL List (SOM0 2.0)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
367-12-4	2-Fluorophenol	79%	0% <sup>d</sup>	0% <sup>d</sup>	23-115%
4165-62-2	Phenol-d5	86%	0% <sup>d</sup>	0% <sup>d</sup>	27-114%
118-79-6	2,4,6-Tribromophenol	97%	0% <sup>d</sup>	0% <sup>d</sup>	19-152%
4165-60-0	Nitrobenzene-d5	145% <sup>e</sup>	0% <sup>d</sup>	0% <sup>d</sup>	26-134%
321-60-8	2-Fluorobiphenyl	72%	0% <sup>d</sup>	0% <sup>d</sup>	39-124%
1718-51-0	Terphenyl-d14	71%	0% <sup>d</sup>	0% <sup>d</sup>	36-134%

(a) Estimated value, due to corresponding internal standard failing low.

(b) Result is from Run# 2

(c) Result is from Run# 3

(d) Outside control limits due to dilution.

(e) Outside control limits due to matrix interference.

ND = Not detected      MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-108(5-7)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-3	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	79.4
Project:	National Grid, Philly Coke, Philadelphia, PA		

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	1100	63	mg/kg	1	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Antimony	2.6	2.5	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Arsenic <sup>a</sup>	16.0	5.0	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Barium	194	25	mg/kg	1	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Beryllium	< 0.25	0.25	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Cadmium <sup>a</sup>	< 1.3	1.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Calcium	2190	630	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Chromium	185	1.3	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Cobalt	< 6.3	6.3	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Copper <sup>a</sup>	92.4	6.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Iron	28400	130	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Lead <sup>a</sup>	145	5.0	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Magnesium	< 630	630	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Manganese <sup>a</sup>	116	3.8	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Mercury	3.5	0.40	mg/kg	10	09/27/19	09/27/19	CH	SW846 7471B <sup>1</sup> SW846 7471B <sup>4</sup>
Nickel	32.6	5.0	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Potassium	< 1300	1300	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Selenium <sup>a</sup>	< 5.0	5.0	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Silver <sup>a</sup>	< 1.3	1.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Sodium	< 1300	1300	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Thallium <sup>a</sup>	< 2.5	2.5	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup> SW846 3050B <sup>5</sup>
Vanadium	8.7	6.3	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>
Zinc	94.0	6.3	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup> SW846 3050B <sup>5</sup>

(1) Instrument QC Batch: MA47516

(2) Instrument QC Batch: MA47539

(3) Instrument QC Batch: MA47552

(4) Prep QC Batch: MP17543

(5) Prep QC Batch: MP17592

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-108(5-7)		<b>Date Sampled:</b> 09/24/19
<b>Lab Sample ID:</b> JC95555-3		<b>Date Received:</b> 09/24/19
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> 79.4
<b>Project:</b> National Grid, Philly Coke, Philadelphia, PA		

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	12.8	0.30	mg/kg	1	10/03/19 16:30	KI	SW846 9012B/LACHAT
Solids, Percent	79.4		%	1	10/02/19 17:05	BG	SM2540 G 18TH ED MOD

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RL = Reporting Limit

4.3  
4

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## Report of Analysis

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Client Sample ID:	MW-108(10-12)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-4	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	72.6
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1C167581.D	1	10/04/19 14:13	PS	n/a	n/a	V1C7331
Run #2 <sup>a</sup>	D266675.D	1	10/03/19 10:59	TDN	n/a	n/a	VD10747
Run #3 <sup>a</sup>	1C167585.D	1	10/04/19 15:59	PS	n/a	n/a	V1C7331

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	2.9 g		
Run #2	3.8 g	10.0 ml	100 ul
Run #3	2.8 g		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	16.3	24	9.5	ug/kg	J
71-43-2	Benzene	ND	1.2	1.1	ug/kg	
74-97-5	Bromochloromethane	ND	12	1.3	ug/kg	
75-27-4	Bromodichloromethane	ND	4.7	1.1	ug/kg	
75-25-2	Bromoform	ND	12	1.4	ug/kg	
74-83-9	Bromomethane <sup>b</sup>	ND	12	2.4	ug/kg	
78-93-3	2-Butanone (MEK)	ND	24	8.9	ug/kg	
75-15-0	Carbon disulfide	ND	4.7	2.2	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.7	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	4.7	1.1	ug/kg	
75-00-3	Chloroethane	ND	12	1.4	ug/kg	
67-66-3	Chloroform	ND	4.7	1.2	ug/kg	
74-87-3	Chloromethane	ND	12	4.7	ug/kg	
110-82-7	Cyclohexane	5.4	4.7	1.6	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.7	2.0	ug/kg	
124-48-1	Dibromochloromethane	ND	4.7	1.3	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.4	1.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.4	1.3	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.4	1.2	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.4	1.2	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	12	1.7	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.4	1.2	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.4	1.1	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.4	1.6	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.4	2.0	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.4	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.7	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.7	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.7	1.1	ug/kg	
100-41-4	Ethylbenzene	ND	2.4	1.3	ug/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



## Report of Analysis

Client Sample ID:	MW-108(10-12)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-4	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	72.6
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	12	2.4	ug/kg	
591-78-6	2-Hexanone	ND	12	5.0	ug/kg	
98-82-8	Isopropylbenzene	ND	4.7	1.7	ug/kg	
79-20-9	Methyl Acetate	ND	12	3.3	ug/kg	
108-87-2	Methylcyclohexane	14.8	4.7	2.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.4	1.1	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	12	5.4	ug/kg	
75-09-2	Methylene chloride	ND	12	2.4	ug/kg	
100-42-5	Styrene	ND	4.7	1.4	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.7	1.4	ug/kg	
127-18-4	Tetrachloroethene	ND	4.7	1.4	ug/kg	
108-88-3	Toluene	ND	2.4	1.2	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	12	4.6	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	12	3.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.7	1.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.7	1.3	ug/kg	
79-01-6	Trichloroethene	ND	2.4	1.8	ug/kg	
75-69-4	Trichlorofluoromethane	ND	12	1.6	ug/kg	
75-01-4	Vinyl chloride	ND	4.7	1.1	ug/kg	
	m,p-Xylene	2.4	2.4	2.1	ug/kg	
95-47-6	o-Xylene	1.6	2.4	1.4	ug/kg	J
1330-20-7	Xylene (total)	4.0	2.4	1.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	97%	102%	94%	75-127%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	98%	75-130%
2037-26-5	Toluene-D8	167% <sup>c</sup>	97%	143% <sup>c</sup>	80-120%
460-00-4	4-Bromofluorobenzene	138% <sup>c</sup>	88%	140% <sup>c</sup>	79-127%

(a) Confirmation run.

(b) Associated CCV outside of control limits high, sample was ND.

(c) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	MW-108(10-12)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-4	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	72.6
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5P63449.D	1	10/01/19 06:58	CS	09/28/19 22:45	OP23015	E5P2977
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.6 g	1.0 ml
Run #2		

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	90	22	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	230	28	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	230	38	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	230	80	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	230	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	230	48	ug/kg	
95-48-7	2-Methylphenol	ND	90	29	ug/kg	
	3&4-Methylphenol	ND	90	37	ug/kg	
88-75-5	2-Nitrophenol	ND	230	30	ug/kg	
100-02-7	4-Nitrophenol	ND	450	120	ug/kg	
87-86-5	Pentachlorophenol	ND	180	42	ug/kg	
108-95-2	Phenol	ND	90	23	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	230	30	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	34	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	27	ug/kg	
83-32-9	Acenaphthene	48.5	45	16	ug/kg	
208-96-8	Acenaphthylene	36.3	45	23	ug/kg	J
98-86-2	Acetophenone	ND	230	9.7	ug/kg	
120-12-7	Anthracene	76.6	45	28	ug/kg	
1912-24-9	Atrazine	ND	90	19	ug/kg	
56-55-3	Benzo(a)anthracene	118	45	13	ug/kg	
50-32-8	Benzo(a)pyrene	108	45	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	140	45	20	ug/kg	
191-24-2	Benzo(g,h,i)perylene	79.8	45	23	ug/kg	
207-08-9	Benzo(k)fluoranthene	53.6	45	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	90	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	90	11	ug/kg	
92-52-4	1,1'-Biphenyl	43.9	90	6.2	ug/kg	J
100-52-7	Benzaldehyde	ND	230	11	ug/kg	
91-58-7	2-Chloronaphthalene	ND	90	11	ug/kg	
106-47-8	4-Chloroaniline	ND	230	16	ug/kg	
86-74-8	Carbazole	43.6	90	6.5	ug/kg	J

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	MW-108(10-12)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-4	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	72.6
Method:	SW846 8270D SW846 3546		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	90	18	ug/kg	
218-01-9	Chrysene	148	45	14	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	90	9.6	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	90	19	ug/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	90	16	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	90	15	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	45	14	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	45	23	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	90	38	ug/kg	
123-91-1	1,4-Dioxane	ND	45	30	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	45	20	ug/kg	
132-64-9	Dibenzofuran	103	90	18	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	90	7.3	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	90	11	ug/kg	
84-66-2	Diethyl phthalate	ND	90	9.6	ug/kg	
131-11-3	Dimethyl phthalate	ND	90	8.0	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	90	11	ug/kg	
206-44-0	Fluoranthene	241	45	20	ug/kg	
86-73-7	Fluorene	127	45	21	ug/kg	
118-74-1	Hexachlorobenzene	ND	90	11	ug/kg	
87-68-3	Hexachlorobutadiene	ND	45	18	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	450	18	ug/kg	
67-72-1	Hexachloroethane	ND	230	22	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	71.8	45	21	ug/kg	
78-59-1	Isophorone	ND	90	9.6	ug/kg	
91-57-6	2-Methylnaphthalene	270	45	10	ug/kg	
88-74-4	2-Nitroaniline	ND	230	11	ug/kg	
99-09-2	3-Nitroaniline	ND	230	11	ug/kg	
100-01-6	4-Nitroaniline	ND	230	12	ug/kg	
91-20-3	Naphthalene	1060	45	13	ug/kg	
98-95-3	Nitrobenzene	ND	90	17	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	90	13	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	16	ug/kg	
85-01-8	Phenanthrene	363	45	15	ug/kg	
129-00-0	Pyrene	254	45	14	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	230	11	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		23-115%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> MW-108(10-12) <b>Lab Sample ID:</b> JC95555-4 <b>Matrix:</b> SO - Soil <b>Method:</b> SW846 8270D SW846 3546 <b>Project:</b> National Grid, Philly Coke, Philadelphia, PA	<b>Date Sampled:</b> 09/24/19 <b>Date Received:</b> 09/24/19 <b>Percent Solids:</b> 72.6
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**ABN TCL List (SOM0 2.0)**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	61%		27-114%
118-79-6	2,4,6-Tribromophenol	60%		19-152%
4165-60-0	Nitrobenzene-d5	67%		26-134%
321-60-8	2-Fluorobiphenyl	62%		39-124%
1718-51-0	Terphenyl-d14	66%		36-134%

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ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

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## Report of Analysis

Client Sample ID:	MW-108(10-12)	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-4	Date Received:	09/24/19
Matrix:	SO - Soil	Percent Solids:	72.6
Project:	National Grid, Philly Coke, Philadelphia, PA		

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method	
Aluminum	20600	67	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Antimony	< 2.7	2.7	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Arsenic <sup>a</sup>	18.4	5.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Barium	189	27	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Beryllium	1.2	0.27	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Cadmium <sup>a</sup>	< 1.3	1.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Calcium	3280	670	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Chromium	107	1.3	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Cobalt	13.2	6.7	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Copper <sup>a</sup>	80.9	6.7	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Iron	42200	130	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Lead <sup>a</sup>	150	5.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Magnesium	5470	670	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Manganese <sup>a</sup>	640	4.0	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Mercury	0.50	0.042	mg/kg	1	09/27/19	09/27/19	CH	SW846 7471B <sup>1</sup>	SW846 7471B <sup>4</sup>
Nickel	33.2	5.3	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Potassium	2770	1300	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Selenium <sup>a</sup>	< 5.3	5.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Silver <sup>a</sup>	1.4	1.3	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Sodium	< 1300	1300	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Thallium <sup>a</sup>	< 2.7	2.7	mg/kg	2	09/29/19	10/01/19	RP	SW846 6010D <sup>3</sup>	SW846 3050B <sup>5</sup>
Vanadium	37.9	6.7	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>
Zinc	445	6.7	mg/kg	1	09/29/19	09/30/19	ND	SW846 6010D <sup>2</sup>	SW846 3050B <sup>5</sup>

(1) Instrument QC Batch: MA47516

(2) Instrument QC Batch: MA47539

(3) Instrument QC Batch: MA47552

(4) Prep QC Batch: MP17543

(5) Prep QC Batch: MP17592

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> MW-108(10-12)	<b>Date Sampled:</b> 09/24/19
<b>Lab Sample ID:</b> JC95555-4	<b>Date Received:</b> 09/24/19
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 72.6
<b>Project:</b> National Grid, Philly Coke, Philadelphia, PA	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	0.40	0.39	mg/kg	1	10/03/19 16:31	KI	SW846 9012B/LACHAT
Solids, Percent	72.6		%	1	10/02/19 17:05	BG	SM2540 G 18TH ED MOD

RL = Reporting Limit

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## Report of Analysis

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Client Sample ID:	TRIP BLANK	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-5	Date Received:	09/24/19
Matrix:	AQ - Trip Blank Soil	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A253704.D	1	10/04/19 09:48	KC	n/a	n/a	VA9835
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform <sup>a</sup>	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane <sup>a</sup>	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113 <sup>a</sup>	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	TRIP BLANK	Date Sampled:	09/24/19
Lab Sample ID:	JC95555-5	Date Received:	09/24/19
Matrix:	AQ - Trip Blank Soil	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	National Grid, Philly Coke, Philadelphia, PA		

## VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride <sup>a</sup>	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
17060-07-0	1,2-Dichloroethane-D4	93%		81-124%
2037-26-5	Toluene-D8	85%		80-120%
460-00-4	4-Bromofluorobenzene	83%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Misc. Forms

### Custody Documents and Other Forms

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**Includes the following where applicable:**

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



SLC  
STR

### CHAIN OF CUSTODY

SGS North America Inc. - Dayton  
2235 Route 130, Dayton, NJ 08810  
TEL: 732-329-0200 FAX: 732-329-3499/3480  
www.sgs.com/shsusa

FED-EX Tracking #		Bottle Order Control #	
SGS Quote #		SGS Job #	
RC-04619-173		JC95555	
Client / Reporting Information		Project Information	
Company Name: <b>ARCADIS</b>		Project Name: <b>PHILLY COKE - NATIONAL GRID</b>	
Street Address: <b>1 LINCOLN CENTER</b>		Street: <b>Richmond St</b>	
City: <b>Syracuse NY</b> State: <b>NY</b> Zip: <b>13202</b>		City: <b>PHILA</b> State: <b>PA</b>	
Project Contact: <b>CAREY HEALY</b>		Billing Information (if different from Report to)	
Phone #: <b>315-671-9338</b>		Company Name	
Samplers Name(s): <b>CHARLIS ORTOLEDO</b>		Street Address	
Project Manager		City	
Attention:		State	
Zip		Requested Analysis	
		TEL VOCs TEL SVOCs TEL INORGANICS	
Matrix Codes			
DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank			
LAB USE ONLY			
C-13 P50 LURS 40109 V1076			
Turn Around Time (Business Days)		Deliverable	
<input checked="" type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input checked="" type="checkbox"/> Full Tier I (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKQP	
Approved By (SGS PM) / Date:		<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> MA MCP Criteria <input type="checkbox"/> CT RCP Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format	
Approval needed for 1-3 Business Day TAT		Commercial "A" = Results only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data	
Sample Custody must be documented below each time samples change possession, including courier delivery.			
1	Date / Time: 9/24/19 13:00	Received By: [Signature]	Date / Time: 9-24-19
2	Date / Time:	Received By:	Date / Time:
3	Date / Time:	Received By:	Date / Time:
4	Date / Time:	Received By:	Date / Time:
5	Date / Time:	Received By:	Date / Time:
Custody Seal #		Intact <input type="checkbox"/> Not Intact <input type="checkbox"/>	
		Preserved where applicable <input type="checkbox"/> Absent <input type="checkbox"/>	
		Therm: ID: 2.6C 19	

INITIAL ASSESSMENT 2 Atk  
LABEL VERIFICATION \_\_\_\_\_



5.1  
5

# SGS Sample Receipt Summary

Job Number: JC95555

Client: ARCADIS U.S.

Project: NATIONAL GRID, PHILLY COKE, PHILADELPHI

Date / Time Received: 9/24/2019 4:20:00 PM

Delivery Method: \_\_\_\_\_

Airbill #'s: \_\_\_\_\_

Cooler Temps (Raw Measured) °C: Cooler 1: (2.3);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Test Strip Lot #s:	pH 1-12: 229517	pH 12+: 208717	Other: (Specify) _____
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Comments

SM089-03  
Rev. Date 12/7/17

### Internal Sample Tracking Chronicle

Arcadis

Job No: JC95555

National Grid, Philly Coke, Philadelphia, PA  
 Project No: B0036790.0001.00002

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
<b>JC95555-1 Collected: 23-SEP-19 08:45 By: CO Received: 24-SEP-19 By: AS</b> MW-111(11-13)						
JC95555-1	SW846 7471B	27-SEP-19 12:28	CH	27-SEP-19	CH	HG
JC95555-1	SW846 6010D	30-SEP-19 23:12	ND	29-SEP-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC95555-1	SW846 8270D	01-OCT-19 11:01	CS	28-SEP-19	NT	AB8270TCL20
JC95555-1	SW846 8270D	02-OCT-19 00:21	HSS	28-SEP-19	NT	AB8270TCL20
JC95555-1	SM2540 G 18TH ED M	02-OCT-19 17:05	BG			SOL104
JC95555-1	SW846 9012B/LACHAT	03-OCT-19 16:25	KI	03-OCT-19	JW	CN
JC95555-1	SW846 8260C	03-OCT-19 17:39	TDN			V8260TCL20
<b>JC95555-2 Collected: 23-SEP-19 08:55 By: CO Received: 24-SEP-19 By: AS</b> MW-111(13-15)						
JC95555-2	SW846 7471B	27-SEP-19 14:39	CH	27-SEP-19	CH	HG
JC95555-2	SW846 6010D	30-SEP-19 23:17	ND	29-SEP-19	MR	AG,AL,AS,BA,BE,CA,CD,CO,CR, CU,FE,K,MG,MN,NA,NI,PB,SB, SE,TL,V,ZN
JC95555-2	SW846 8270D	01-OCT-19 08:10	CS	28-SEP-19	NT	AB8270TCL20
JC95555-2	SW846 8270D	02-OCT-19 00:45	HSS	28-SEP-19	NT	AB8270TCL20
JC95555-2	SM2540 G 18TH ED M	02-OCT-19 17:05	BG			SOL104
JC95555-2	SW846 8260C	03-OCT-19 11:28	TDN			V8260TCL20
JC95555-2	SW846 9012B/LACHAT	03-OCT-19 16:26	KI	03-OCT-19	JW	CN
<b>JC95555-3 Collected: 24-SEP-19 11:15 By: CO Received: 24-SEP-19 By: AS</b> MW-108(5-7)						
JC95555-3	SW846 7471B	27-SEP-19 14:22	CH	27-SEP-19	CH	HG
JC95555-3	SW846 6010D	30-SEP-19 23:22	ND	29-SEP-19	MR	BE,CA,CO,CR,K,MG,NA,NI,SB, V,ZN
JC95555-3	SW846 8270D	01-OCT-19 11:25	CS	28-SEP-19	NT	AB8270TCL20
JC95555-3	SW846 6010D	01-OCT-19 17:03	RP	29-SEP-19	MR	AL,BA
JC95555-3	SW846 6010D	01-OCT-19 17:08	RP	29-SEP-19	MR	AG,AS,CD,CU,FE,MN,PB,SE,TL
JC95555-3	SW846 8270D	02-OCT-19 01:10	HSS	28-SEP-19	NT	AB8270TCL20
JC95555-3	SM2540 G 18TH ED M	02-OCT-19 17:05	BG			SOL104
JC95555-3	SW846 9012B/LACHAT	03-OCT-19 16:30	KI	03-OCT-19	JW	CN
JC95555-3	SW846 8260C	03-OCT-19 18:08	TDN			V8260TCL20
JC95555-3	SW846 8270D	07-OCT-19 12:29	HSS	28-SEP-19	NT	AB8270TCL20

### Internal Sample Tracking Chronicle

Arcadis

Job No: JC95555

National Grid, Philly Coke, Philadelphia, PA  
 Project No: B0036790.0001.00002

5.2  
5

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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JC95555-4 Collected: 24-SEP-19 11:30 By: CO Received: 24-SEP-19 By: AS  
 MW-108(10-12)

JC95555-4	SW846 7471B	27-SEP-19 12:33	CH	27-SEP-19	CH	HG
JC95555-4	SW846 6010D	30-SEP-19 23:27	ND	29-SEP-19	MR	AL,BA,BE,CA,CO,CR,K,MG,NA,NI,SB,V,ZN
JC95555-4	SW846 8270D	01-OCT-19 06:58	CS	28-SEP-19	NT	AB8270TCL20
JC95555-4	SW846 6010D	01-OCT-19 18:32	RP	29-SEP-19	MR	AG,AS,CD,CU,FE,MN,PB,SE,TL
JC95555-4	SM2540 G 18TH ED MOD	01-OCT-19 17:05	BG			SOL104
JC95555-4	SW846 8260C	03-OCT-19 10:59	TDN			V8260TCL20
JC95555-4	SW846 9012B/LACHAT	03-OCT-19 16:31	KI	03-OCT-19	JW	CN
JC95555-4	SW846 8260C	04-OCT-19 14:13	PS			V8260TCL20
JC95555-4	SW846 8260C	04-OCT-19 15:59	PS			V8260TCL20

JC95555-5 Collected: 24-SEP-19 11:30 By: CO Received: 24-SEP-19 By: AS  
 TRIP BLANK

JC95555-5	SW846 8260C	04-OCT-19 09:48	KC			V8260TCL20
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# SGS Internal Chain of Custody

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Received: 09/24/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC95555-1.1	Secured Storage	Dwayne Johnson	09/26/19 11:58	Retrieve from Storage
JC95555-1.1	Dwayne Johnson	Secured Staging Area	09/26/19 11:58	Return to Storage
JC95555-1.1	Secured Staging Area	Colleen Hill	09/26/19 14:45	Retrieve from Storage
JC95555-1.1	Colleen Hill	Secured Storage	09/26/19 14:46	Return to Storage
JC95555-1.1	Secured Storage	Sahara Feliciano	09/28/19 09:51	Retrieve from Storage
JC95555-1.1	Sahara Feliciano	Secured Staging Area	09/28/19 09:51	Return to Storage
JC95555-1.1	Secured Staging Area	Chadiyah Canaday	09/28/19 20:31	Retrieve from Storage
JC95555-1.1	Chadiyah Canaday	Secured Storage	09/29/19 01:10	Return to Storage
JC95555-1.1	Secured Storage	Benjamin Gaines	10/02/19 10:55	Retrieve from Storage
JC95555-1.1	Benjamin Gaines	Secured Staging Area	10/02/19 10:55	Return to Storage
JC95555-1.1	Secured Staging Area	Benjamin Gaines	10/02/19 14:44	Retrieve from Storage
JC95555-1.1	Benjamin Gaines	Secured Storage	10/02/19 16:34	Return to Storage
JC95555-1.1	Secured Storage	Sahara Feliciano	10/02/19 18:27	Retrieve from Storage
JC95555-1.1	Sahara Feliciano	Secured Staging Area	10/02/19 18:27	Return to Storage
JC95555-1.1	Secured Staging Area	Jennell Webber	10/03/19 09:59	Retrieve from Storage
JC95555-1.1	Jennell Webber	Secured Storage	10/03/19 12:48	Return to Storage
JC95555-1.1.1	Chadiyah Canaday	Organics Prep	09/28/19 20:45	Extract from JC95555-1.1
JC95555-1.1.1	Organics Prep	Natasha Torres	09/30/19 07:16	Extract from JC95555-1.1
JC95555-1.1.1	Natasha Torres	Extract Storage	09/30/19 07:16	Return to Storage
JC95555-1.1.1	Extract Storage	Christopher Sowa	10/01/19 02:35	Retrieve from Storage
JC95555-1.1.1	Christopher Sowa	GCMS5P	10/01/19 02:35	Load on Instrument
JC95555-1.1.1	GCMS5P	Henny Salim	10/04/19 08:24	Unload from Instrument
JC95555-1.1.1	Henny Salim	Extract Freezer	10/04/19 08:24	Return to Storage
JC95555-1.2	Secured Storage	Sahara Feliciano	09/28/19 11:23	Retrieve from Storage
JC95555-1.2	Sahara Feliciano	Secured Staging Area	09/28/19 11:23	Return to Storage
JC95555-1.2	Secured Staging Area	Moustafa Ramadan	09/29/19 06:08	Retrieve from Storage
JC95555-1.2	Moustafa Ramadan	Secured Storage	09/30/19 05:20	Return to Storage
JC95555-1.2.1	Moustafa Ramadan	Metals Digestion	09/29/19 06:12	Digestate from JC95555-1.2
JC95555-1.2.1	Metals Digestion	Moustafa Ramadan	09/29/19 06:13	Digestate from JC95555-1.2
JC95555-1.2.1	Moustafa Ramadan	Metals Digestate Storage	09/29/19 06:13	Return to Storage
JC95555-1.3	Secured Storage	Thien Nguyen	10/03/19 08:16	Retrieve from Storage
JC95555-1.3	Thien Nguyen	Secured Storage	10/03/19 08:16	Return to Storage
JC95555-2.1	Secured Storage	Dwayne Johnson	09/26/19 11:58	Retrieve from Storage
JC95555-2.1	Dwayne Johnson	Secured Staging Area	09/26/19 11:58	Return to Storage
JC95555-2.1	Secured Staging Area	Colleen Hill	09/26/19 14:45	Retrieve from Storage
JC95555-2.1	Colleen Hill	Secured Storage	09/26/19 14:46	Return to Storage
JC95555-2.1	Secured Storage	Sahara Feliciano	09/28/19 09:51	Retrieve from Storage
JC95555-2.1	Sahara Feliciano	Secured Staging Area	09/28/19 09:51	Return to Storage
JC95555-2.1	Secured Staging Area	Chadiyah Canaday	09/28/19 20:31	Retrieve from Storage

5.3  
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# SGS Internal Chain of Custody

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Received: 09/24/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC95555-2.1	Chatiyah Canaday	Secured Storage	09/29/19 01:10	Return to Storage
JC95555-2.1	Secured Storage	Benjamin Gaines	10/02/19 10:55	Retrieve from Storage
JC95555-2.1	Benjamin Gaines	Secured Staging Area	10/02/19 10:55	Return to Storage
JC95555-2.1	Secured Staging Area	Benjamin Gaines	10/02/19 14:44	Retrieve from Storage
JC95555-2.1	Benjamin Gaines	Secured Storage	10/02/19 16:34	Return to Storage
JC95555-2.1	Secured Storage	Sahara Feliciano	10/02/19 18:27	Retrieve from Storage
JC95555-2.1	Sahara Feliciano	Secured Staging Area	10/02/19 18:27	Return to Storage
JC95555-2.1	Secured Staging Area	Jennell Webber	10/03/19 09:59	Retrieve from Storage
JC95555-2.1	Jennell Webber	Secured Storage	10/03/19 12:48	Return to Storage
JC95555-2.1.1	Chatiyah Canaday	Organics Prep	09/28/19 20:45	Extract from JC95555-2.1
JC95555-2.1.1	Organics Prep	Natasha Torres	09/30/19 07:16	Extract from JC95555-2.1
JC95555-2.1.1	Natasha Torres	Extract Storage	09/30/19 07:16	Return to Storage
JC95555-2.1.1	Extract Storage	Christopher Sowa	10/01/19 02:35	Retrieve from Storage
JC95555-2.1.1	Christopher Sowa	GCMS5P	10/01/19 02:35	Load on Instrument
JC95555-2.1.1	GCMS5P	Henny Salim	10/04/19 08:24	Unload from Instrument
JC95555-2.1.1	Henny Salim	Extract Freezer	10/04/19 08:24	Return to Storage
JC95555-2.2	Secured Storage	Sahara Feliciano	09/28/19 11:23	Retrieve from Storage
JC95555-2.2	Sahara Feliciano	Secured Staging Area	09/28/19 11:23	Return to Storage
JC95555-2.2	Secured Staging Area	Moustafa Ramadan	09/29/19 06:08	Retrieve from Storage
JC95555-2.2	Moustafa Ramadan	Secured Storage	09/30/19 05:20	Return to Storage
JC95555-2.2.1	Moustafa Ramadan	Metals Digestion	09/29/19 06:12	Digestate from JC95555-2.2
JC95555-2.2.1	Metals Digestion	Moustafa Ramadan	09/29/19 06:13	Digestate from JC95555-2.2
JC95555-2.2.1	Moustafa Ramadan	Metals Digestate Storage	09/29/19 06:13	Return to Storage
JC95555-2.3	Secured Storage	Thien Nguyen	10/03/19 08:16	Retrieve from Storage
JC95555-2.3	Thien Nguyen	Secured Storage	10/03/19 08:16	Return to Storage
JC95555-3.1	Secured Storage	Dwayne Johnson	09/26/19 11:58	Retrieve from Storage
JC95555-3.1	Dwayne Johnson	Secured Staging Area	09/26/19 11:58	Return to Storage
JC95555-3.1	Secured Staging Area	Colleen Hill	09/26/19 14:45	Retrieve from Storage
JC95555-3.1	Colleen Hill	Secured Storage	09/26/19 14:46	Return to Storage
JC95555-3.1	Secured Storage	Sahara Feliciano	09/28/19 09:51	Retrieve from Storage
JC95555-3.1	Sahara Feliciano	Secured Staging Area	09/28/19 09:51	Return to Storage
JC95555-3.1	Secured Staging Area	Chatiyah Canaday	09/28/19 20:31	Retrieve from Storage
JC95555-3.1	Chatiyah Canaday	Secured Storage	09/29/19 01:10	Return to Storage
JC95555-3.1	Secured Storage	Benjamin Gaines	10/02/19 10:55	Retrieve from Storage
JC95555-3.1	Benjamin Gaines	Secured Staging Area	10/02/19 10:55	Return to Storage
JC95555-3.1	Secured Staging Area	Benjamin Gaines	10/02/19 14:44	Retrieve from Storage
JC95555-3.1	Benjamin Gaines	Secured Storage	10/02/19 16:34	Return to Storage
JC95555-3.1	Secured Storage	Sahara Feliciano	10/02/19 18:27	Retrieve from Storage
JC95555-3.1	Sahara Feliciano	Secured Staging Area	10/02/19 18:27	Return to Storage

5.3  
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# SGS Internal Chain of Custody

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Received: 09/24/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC95555-3.1	Secured Staging Area	Jennell Webber	10/03/19 09:59	Retrieve from Storage
JC95555-3.1	Jennell Webber	Secured Storage	10/03/19 12:48	Return to Storage
JC95555-3.1.1	Chadiyah Canaday	Organics Prep	09/28/19 20:45	Extract from JC95555-3.1
JC95555-3.1.1	Organics Prep	Natasha Torres	09/30/19 07:16	Extract from JC95555-3.1
JC95555-3.1.1	Natasha Torres	Extract Storage	09/30/19 07:16	Return to Storage
JC95555-3.1.1	Extract Storage	Christopher Sowa	10/01/19 02:35	Retrieve from Storage
JC95555-3.1.1	Christopher Sowa	GCMS5P	10/01/19 02:35	Load on Instrument
JC95555-3.1.1	GCMS5P	Henny Salim	10/04/19 08:24	Unload from Instrument
JC95555-3.1.1	Henny Salim	Extract Freezer	10/04/19 08:24	Return to Storage
JC95555-3.1.1	Extract Freezer	Henny Salim	10/07/19 12:01	Retrieve from Storage
JC95555-3.1.1	Henny Salim	GCMS5P	10/07/19 12:01	Load on Instrument
JC95555-3.1.1	GCMS5P	Angela Rastelli	10/09/19 16:30	Unload from Instrument
JC95555-3.1.1	Angela Rastelli	Extract Freezer	10/09/19 16:30	Return to Storage
JC95555-3.2	Secured Storage	Sahara Feliciano	09/28/19 11:23	Retrieve from Storage
JC95555-3.2	Sahara Feliciano	Secured Staging Area	09/28/19 11:23	Return to Storage
JC95555-3.2	Secured Staging Area	Moustafa Ramadan	09/29/19 06:08	Retrieve from Storage
JC95555-3.2	Moustafa Ramadan	Secured Storage	09/30/19 05:20	Return to Storage
JC95555-3.2.1	Moustafa Ramadan	Metals Digestion	09/29/19 06:12	Digestate from JC95555-3.2
JC95555-3.2.1	Metals Digestion	Moustafa Ramadan	09/29/19 06:13	Digestate from JC95555-3.2
JC95555-3.2.1	Moustafa Ramadan	Metals Digestate Storage	09/29/19 06:13	Return to Storage
JC95555-3.3	Secured Storage	Thien Nguyen	10/03/19 08:16	Retrieve from Storage
JC95555-3.3	Thien Nguyen	Secured Storage	10/03/19 08:16	Return to Storage
JC95555-4.1	Secured Storage	Dwayne Johnson	09/26/19 11:58	Retrieve from Storage
JC95555-4.1	Dwayne Johnson	Secured Staging Area	09/26/19 11:58	Return to Storage
JC95555-4.1	Secured Staging Area	Colleen Hill	09/26/19 14:45	Retrieve from Storage
JC95555-4.1	Colleen Hill	Secured Storage	09/26/19 14:46	Return to Storage
JC95555-4.1	Secured Storage	Sahara Feliciano	09/28/19 09:51	Retrieve from Storage
JC95555-4.1	Sahara Feliciano	Secured Staging Area	09/28/19 09:51	Return to Storage
JC95555-4.1	Secured Staging Area	Chadiyah Canaday	09/28/19 20:31	Retrieve from Storage
JC95555-4.1	Chadiyah Canaday	Secured Storage	09/29/19 01:10	Return to Storage
JC95555-4.1	Secured Storage	Benjamin Gaines	10/02/19 10:55	Retrieve from Storage
JC95555-4.1	Benjamin Gaines	Secured Staging Area	10/02/19 10:55	Return to Storage
JC95555-4.1	Secured Staging Area	Benjamin Gaines	10/02/19 14:44	Retrieve from Storage
JC95555-4.1	Benjamin Gaines	Secured Storage	10/02/19 16:34	Return to Storage
JC95555-4.1	Secured Storage	Sahara Feliciano	10/02/19 18:27	Retrieve from Storage
JC95555-4.1	Sahara Feliciano	Secured Staging Area	10/02/19 18:27	Return to Storage
JC95555-4.1	Secured Staging Area	Jennell Webber	10/03/19 09:59	Retrieve from Storage
JC95555-4.1	Jennell Webber	Secured Storage	10/03/19 12:48	Return to Storage

5.3  
5



# SGS Internal Chain of Custody

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA  
 Received: 09/24/19

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC95555-4.1.1	Chatiyah Canaday	Organics Prep	09/28/19 20:45	Extract from JC95555-4.1
JC95555-4.1.1	Organics Prep	Natasha Torres	09/30/19 07:16	Extract from JC95555-4.1
JC95555-4.1.1	Natasha Torres	Extract Storage	09/30/19 07:16	Return to Storage
JC95555-4.1.1	Extract Storage	Christopher Sowa	10/01/19 02:35	Retrieve from Storage
JC95555-4.1.1	Christopher Sowa	GCMS5P	10/01/19 02:35	Load on Instrument
JC95555-4.1.1	GCMS5P	Henny Salim	10/01/19 13:03	Unload from Instrument
JC95555-4.1.1	Henny Salim	Extract Freezer	10/01/19 13:03	Return to Storage
JC95555-4.2	Secured Storage	Sahara Feliciano	09/28/19 11:23	Retrieve from Storage
JC95555-4.2	Sahara Feliciano	Secured Staging Area	09/28/19 11:23	Return to Storage
JC95555-4.2	Secured Staging Area	Moustafa Ramadan	09/29/19 06:08	Retrieve from Storage
JC95555-4.2	Moustafa Ramadan	Secured Storage	09/30/19 05:20	Return to Storage
JC95555-4.2.1	Moustafa Ramadan	Metals Digestion	09/29/19 06:12	Digestate from JC95555-4.2
JC95555-4.2.1	Metals Digestion	Moustafa Ramadan	09/29/19 06:13	Digestate from JC95555-4.2
JC95555-4.2.1	Moustafa Ramadan	Metals Digestate Storage	09/29/19 06:13	Return to Storage
JC95555-4.3	Secured Storage	Thien Nguyen	10/03/19 08:16	Retrieve from Storage
JC95555-4.3	Thien Nguyen	Secured Storage	10/03/19 08:16	Return to Storage
JC95555-4.4	Secured Storage	Thien Nguyen	10/04/19 14:35	Retrieve from Storage
JC95555-4.4	Thien Nguyen	GCMS1C	10/04/19 14:35	Load on Instrument
JC95555-4.4	GCMS1C	Prashant Shukla	10/05/19 11:41	Unload from Instrument
JC95555-4.4	Prashant Shukla		10/05/19 11:42	Depleted
JC95555-4.5	Secured Storage	Thien Nguyen	10/04/19 09:54	Retrieve from Storage
JC95555-4.5	Thien Nguyen	GCMS1C	10/04/19 09:54	Load on Instrument
JC95555-4.5	GCMS1C	Prashant Shukla	10/05/19 11:41	Unload from Instrument
JC95555-4.5	Prashant Shukla		10/05/19 11:42	Depleted
JC95555-5.1	Secured Storage	Krizhka Cuenta	10/03/19 15:49	Retrieve from Storage
JC95555-5.1	Krizhka Cuenta	GCMS2A	10/03/19 15:49	Load on Instrument
JC95555-5.1	GCMS2A	Krizhka Cuenta	10/04/19 08:51	Unload from Instrument
JC95555-5.1	Krizhka Cuenta	Secured Storage	10/04/19 08:51	Return to Storage
JC95555-5.2	Secured Storage	Krizhka Cuenta	10/04/19 09:06	Retrieve from Storage
JC95555-5.2	Krizhka Cuenta	GCMSA	10/04/19 09:06	Load on Instrument
JC95555-5.2	GCMSA	Krizhka Cuenta	10/07/19 08:25	Unload from Instrument
JC95555-5.2	Krizhka Cuenta	Secured Storage	10/07/19 08:25	Return to Storage

5.3  
5

## MS Volatiles

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## QC Data Summaries

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### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

## Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10747-MB	D266673.D	1	10/03/19	TDN	n/a	n/a	VD10747

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-1, JC95555-2, JC95555-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	200	ug/kg	
71-43-2	Benzene	ND	25	23	ug/kg	
74-97-5	Bromochloromethane	ND	250	28	ug/kg	
75-27-4	Bromodichloromethane	ND	100	22	ug/kg	
75-25-2	Bromoform	ND	250	29	ug/kg	
74-83-9	Bromomethane	ND	250	50	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	190	ug/kg	
75-15-0	Carbon disulfide	ND	100	46	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	31	ug/kg	
108-90-7	Chlorobenzene	ND	100	23	ug/kg	
75-00-3	Chloroethane	ND	250	30	ug/kg	
67-66-3	Chloroform	ND	100	24	ug/kg	
74-87-3	Chloromethane	ND	250	98	ug/kg	
110-82-7	Cyclohexane	ND	100	33	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	42	ug/kg	
124-48-1	Dibromochloromethane	ND	100	28	ug/kg	
106-93-4	1,2-Dibromoethane	ND	50	21	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	50	27	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	50	25	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	50	25	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	250	36	ug/kg	
75-34-3	1,1-Dichloroethane	ND	50	25	ug/kg	
107-06-2	1,2-Dichloroethane	ND	50	24	ug/kg	
75-35-4	1,1-Dichloroethene	ND	50	33	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	50	42	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	50	31	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	24	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	100	24	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	23	ug/kg	
100-41-4	Ethylbenzene	ND	50	28	ug/kg	
76-13-1	Freon 113	ND	250	51	ug/kg	
591-78-6	2-Hexanone	ND	250	110	ug/kg	
98-82-8	Isopropylbenzene	ND	100	35	ug/kg	
79-20-9	Methyl Acetate	ND	250	70	ug/kg	
108-87-2	Methylcyclohexane	ND	100	44	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	23	ug/kg	

# Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10747-MB	D266673.D	1	10/03/19	TDN	n/a	n/a	VD10747

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-1, JC95555-2, JC95555-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	110	ug/kg	
75-09-2	Methylene chloride	ND	250	50	ug/kg	
100-42-5	Styrene	ND	100	29	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	30	ug/kg	
127-18-4	Tetrachloroethene	ND	100	29	ug/kg	
108-88-3	Toluene	ND	50	26	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	97	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	77	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	24	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	28	ug/kg	
79-01-6	Trichloroethene	ND	50	38	ug/kg	
75-69-4	Trichlorofluoromethane	ND	250	34	ug/kg	
75-01-4	Vinyl chloride	ND	100	24	ug/kg	
	m,p-Xylene	ND	50	45	ug/kg	
95-47-6	o-Xylene	ND	50	29	ug/kg	
1330-20-7	Xylene (total)	ND	50	29	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	97% 75-127%
17060-07-0	1,2-Dichloroethane-D4	97% 75-130%
2037-26-5	Toluene-D8	95% 80-120%
460-00-4	4-Bromofluorobenzene	89% 79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

## Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9835-MB	A253702.D	1	10/04/19	KC	n/a	n/a	VA9835

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

# Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9835-MB	A253702.D	1	10/04/19	KC	n/a	n/a	VA9835

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-5

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	91% 80-120%
17060-07-0	1,2-Dichloroethane-D4	92% 81-124%
2037-26-5	Toluene-D8	86% 80-120%
460-00-4	4-Bromofluorobenzene	81% 80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2  
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## Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7331-MB	1C167571.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	4.0	ug/kg	
71-43-2	Benzene	ND	0.50	0.46	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.56	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.44	ug/kg	
75-25-2	Bromoform	ND	5.0	0.58	ug/kg	
74-83-9	Bromomethane	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.7	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.93	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.62	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.46	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.59	ug/kg	
67-66-3	Chloroform	ND	2.0	0.49	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.84	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.56	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.55	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.49	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.73	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.61	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.47	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.46	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.55	ug/kg	
76-13-1	Freon 113	ND	5.0	1.0	ug/kg	
591-78-6	2-Hexanone	ND	5.0	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.70	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.88	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.47	ug/kg	

# Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7331-MB	1C167571.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	2.3	ug/kg	
75-09-2	Methylene chloride	ND	5.0	0.99	ug/kg	
100-42-5	Styrene	ND	2.0	0.58	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.60	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.58	ug/kg	
108-88-3	Toluene	ND	1.0	0.53	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.55	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.48	ug/kg	
	m,p-Xylene	ND	1.0	0.90	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.58	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.58	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	98% 75-127%
17060-07-0	1,2-Dichloroethane-D4	97% 75-130%
2037-26-5	Toluene-D8	101% 80-120%
460-00-4	4-Bromofluorobenzene	92% 79-127%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	



**Blank Spike Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10747-BS	D266671.D	1	10/03/19	TDN	n/a	n/a	VD10747

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-1, JC95555-2, JC95555-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	10000	9920	99	48-149
71-43-2	Benzene	2500	2400	96	74-117
74-97-5	Bromochloromethane	2500	2460	98	82-121
75-27-4	Bromodichloromethane	2500	2400	96	78-119
75-25-2	Bromoform	2500	2640	106	76-130
74-83-9	Bromomethane	2500	2770	111	58-137
78-93-3	2-Butanone (MEK)	10000	9060	91	65-143
75-15-0	Carbon disulfide	2500	2570	103	66-140
56-23-5	Carbon tetrachloride	2500	2590	104	69-136
108-90-7	Chlorobenzene	2500	2400	96	79-117
75-00-3	Chloroethane	2500	2630	105	62-139
67-66-3	Chloroform	2500	2360	94	76-119
74-87-3	Chloromethane	2500	2580	103	52-144
110-82-7	Cyclohexane	2500	2420	97	64-136
96-12-8	1,2-Dibromo-3-chloropropane	2500	2390	96	72-124
124-48-1	Dibromochloromethane	2500	2530	101	78-122
106-93-4	1,2-Dibromoethane	2500	2310	92	80-116
95-50-1	1,2-Dichlorobenzene	2500	2480	99	77-117
541-73-1	1,3-Dichlorobenzene	2500	2390	96	75-117
106-46-7	1,4-Dichlorobenzene	2500	2380	95	76-115
75-71-8	Dichlorodifluoromethane	2500	2420	97	43-156
75-34-3	1,1-Dichloroethane	2500	2440	98	75-124
107-06-2	1,2-Dichloroethane	2500	2230	89	74-124
75-35-4	1,1-Dichloroethene	2500	2080	83	64-129
156-59-2	cis-1,2-Dichloroethene	2500	2310	92	74-118
156-60-5	trans-1,2-Dichloroethene	2500	2220	89	71-125
78-87-5	1,2-Dichloropropane	2500	2360	94	80-119
10061-01-5	cis-1,3-Dichloropropene	2500	2280	91	80-119
10061-02-6	trans-1,3-Dichloropropene	2500	2400	96	78-119
100-41-4	Ethylbenzene	2500	2410	96	75-118
76-13-1	Freon 113	2500	2690	108	60-181
591-78-6	2-Hexanone	10000	9090	91	63-138
98-82-8	Isopropylbenzene	2500	2520	101	74-122
79-20-9	Methyl Acetate	2500	2630	105	61-140
108-87-2	Methylcyclohexane	2500	2540	102	67-136
1634-04-4	Methyl Tert Butyl Ether	2500	2350	94	75-123

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD10747-BS	D266671.D	1	10/03/19	TDN	n/a	n/a	VD10747

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-1, JC95555-2, JC95555-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	10000	9420	94	73-136
75-09-2	Methylene chloride	2500	2370	95	73-120
100-42-5	Styrene	2500	2390	96	78-120
79-34-5	1,1,2,2-Tetrachloroethane	2500	2310	92	72-120
127-18-4	Tetrachloroethene	2500	2580	103	69-128
108-88-3	Toluene	2500	2440	98	74-117
87-61-6	1,2,3-Trichlorobenzene	2500	2740	110	72-133
120-82-1	1,2,4-Trichlorobenzene	2500	2670	107	73-132
71-55-6	1,1,1-Trichloroethane	2500	2460	98	73-131
79-00-5	1,1,2-Trichloroethane	2500	2340	94	79-117
79-01-6	Trichloroethene	2500	2420	97	80-120
75-69-4	Trichlorofluoromethane	2500	2700	108	63-141
75-01-4	Vinyl chloride	2500	2620	105	55-145
	m,p-Xylene	5000	4840	97	75-120
95-47-6	o-Xylene	2500	2450	98	75-119
1330-20-7	Xylene (total)	7500	7290	97	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	75-127%
17060-07-0	1,2-Dichloroethane-D4	94%	75-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	92%	79-127%

\* = Outside of Control Limits.

**Blank Spike Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9835-BS	A253700.D	1	10/04/19	KC	n/a	n/a	VA9835

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	193	97	42-150
71-43-2	Benzene	50	48.5	97	80-120
74-97-5	Bromochloromethane	50	52.2	104	84-121
75-27-4	Bromodichloromethane	50	47.9	96	83-120
75-25-2	Bromoform	50	59.0	118	76-129
74-83-9	Bromomethane	50	51.6	103	57-138
78-93-3	2-Butanone (MEK)	200	194	97	64-137
75-15-0	Carbon disulfide	50	37.3	75	64-137
56-23-5	Carbon tetrachloride	50	47.4	95	75-135
108-90-7	Chlorobenzene	50	50.8	102	84-117
75-00-3	Chloroethane	50	49.3	99	63-132
67-66-3	Chloroform	50	43.9	88	80-119
74-87-3	Chloromethane	50	44.7	89	46-136
110-82-7	Cyclohexane	50	44.2	88	64-137
96-12-8	1,2-Dibromo-3-chloropropane	50	55.8	112	72-127
124-48-1	Dibromochloromethane	50	51.1	102	80-123
106-93-4	1,2-Dibromoethane	50	50.8	102	84-117
95-50-1	1,2-Dichlorobenzene	50	51.5	103	84-119
541-73-1	1,3-Dichlorobenzene	50	50.8	102	81-117
106-46-7	1,4-Dichlorobenzene	50	50.4	101	82-117
75-71-8	Dichlorodifluoromethane	50	44.5	89	36-149
75-34-3	1,1-Dichloroethane	50	46.1	92	79-120
107-06-2	1,2-Dichloroethane	50	45.5	91	78-126
75-35-4	1,1-Dichloroethene	50	37.4	75	69-126
156-59-2	cis-1,2-Dichloroethene	50	47.5	95	80-120
156-60-5	trans-1,2-Dichloroethene	50	46.3	93	76-120
78-87-5	1,2-Dichloropropane	50	48.5	97	82-121
10061-01-5	cis-1,3-Dichloropropene	50	50.7	101	83-120
10061-02-6	trans-1,3-Dichloropropene	50	46.8	94	82-121
100-41-4	Ethylbenzene	50	48.8	98	80-120
76-13-1	Freon 113	50	51.4	103	62-182
591-78-6	2-Hexanone	200	198	99	65-132
98-82-8	Isopropylbenzene	50	49.8	100	83-120
79-20-9	Methyl Acetate	50	49.4	99	67-129
108-87-2	Methylcyclohexane	50	48.8	98	71-134
1634-04-4	Methyl Tert Butyl Ether	50	50.0	100	80-119

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9835-BS	A253700.D	1	10/04/19	KC	n/a	n/a	VA9835

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	226	113	71-131
75-09-2	Methylene chloride	50	39.2	78	77-120
100-42-5	Styrene	50	52.3	105	82-122
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	76-119
127-18-4	Tetrachloroethene	50	51.1	102	70-131
108-88-3	Toluene	50	45.9	92	80-120
87-61-6	1,2,3-Trichlorobenzene	50	53.0	106	76-134
120-82-1	1,2,4-Trichlorobenzene	50	53.1	106	79-132
71-55-6	1,1,1-Trichloroethane	50	48.6	97	81-128
79-00-5	1,1,2-Trichloroethane	50	48.3	97	83-118
79-01-6	Trichloroethene	50	46.5	93	80-120
75-69-4	Trichlorofluoromethane	50	45.0	90	64-136
75-01-4	Vinyl chloride	50	55.1	110	51-135
	m,p-Xylene	100	101	101	80-120
95-47-6	o-Xylene	50	52.5	105	80-120
1330-20-7	Xylene (total)	150	154	103	80-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	81-124%
2037-26-5	Toluene-D8	90%	80-120%
460-00-4	4-Bromofluorobenzene	88%	80-120%

\* = Outside of Control Limits.

**Blank Spike Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7331-BS	1C167569.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	164	82	48-149
71-43-2	Benzene	50	45.4	91	74-117
74-97-5	Bromochloromethane	50	45.5	91	82-121
75-27-4	Bromodichloromethane	50	45.4	91	78-119
75-25-2	Bromoform	50	52.0	104	76-130
74-83-9	Bromomethane	50	64.0	128	58-137
78-93-3	2-Butanone (MEK)	200	186	93	65-143
75-15-0	Carbon disulfide	50	44.0	88	66-140
56-23-5	Carbon tetrachloride	50	46.7	93	69-136
108-90-7	Chlorobenzene	50	43.9	88	79-117
75-00-3	Chloroethane	50	47.6	95	62-139
67-66-3	Chloroform	50	43.5	87	76-119
74-87-3	Chloromethane	50	52.1	104	52-144
110-82-7	Cyclohexane	50	45.0	90	64-136
96-12-8	1,2-Dibromo-3-chloropropane	50	45.5	91	72-124
124-48-1	Dibromochloromethane	50	50.0	100	78-122
106-93-4	1,2-Dibromoethane	50	45.8	92	80-116
95-50-1	1,2-Dichlorobenzene	50	43.6	87	77-117
541-73-1	1,3-Dichlorobenzene	50	44.3	89	75-117
106-46-7	1,4-Dichlorobenzene	50	42.6	85	76-115
75-71-8	Dichlorodifluoromethane	50	42.8	86	43-156
75-34-3	1,1-Dichloroethane	50	47.2	94	75-124
107-06-2	1,2-Dichloroethane	50	43.1	86	74-124
75-35-4	1,1-Dichloroethene	50	43.4	87	64-129
156-59-2	cis-1,2-Dichloroethene	50	43.1	86	74-118
156-60-5	trans-1,2-Dichloroethene	50	42.5	85	71-125
78-87-5	1,2-Dichloropropane	50	47.9	96	80-119
10061-01-5	cis-1,3-Dichloropropene	50	47.6	95	80-119
10061-02-6	trans-1,3-Dichloropropene	50	52.5	105	78-119
100-41-4	Ethylbenzene	50	43.7	87	75-118
76-13-1	Freon 113	50	47.5	95	60-181
591-78-6	2-Hexanone	200	188	94	63-138
98-82-8	Isopropylbenzene	50	44.5	89	74-122
79-20-9	Methyl Acetate	50	51.1	102	61-140
108-87-2	Methylcyclohexane	50	45.9	92	67-136
1634-04-4	Methyl Tert Butyl Ether	50	53.9	108	75-123

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C7331-BS	1C167569.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	185	93	73-136
75-09-2	Methylene chloride	50	45.8	92	73-120
100-42-5	Styrene	50	44.1	88	78-120
79-34-5	1,1,2,2-Tetrachloroethane	50	42.8	86	72-120
127-18-4	Tetrachloroethene	50	47.8	96	69-128
108-88-3	Toluene	50	46.2	92	74-117
87-61-6	1,2,3-Trichlorobenzene	50	46.0	92	72-133
120-82-1	1,2,4-Trichlorobenzene	50	48.3	97	73-132
71-55-6	1,1,1-Trichloroethane	50	45.3	91	73-131
79-00-5	1,1,2-Trichloroethane	50	46.3	93	79-117
79-01-6	Trichloroethene	50	46.3	93	80-120
75-69-4	Trichlorofluoromethane	50	42.4	85	63-141
75-01-4	Vinyl chloride	50	51.1	102	55-145
	m,p-Xylene	100	87.0	87	75-120
95-47-6	o-Xylene	50	44.7	89	75-119
1330-20-7	Xylene (total)	150	132	88	76-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	75-127%
17060-07-0	1,2-Dichloroethane-D4	96%	75-130%
2037-26-5	Toluene-D8	102%	80-120%
460-00-4	4-Bromofluorobenzene	93%	79-127%

\* = Outside of Control Limits.

## Matrix Spike Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95641-12MS	1C167577.D	1	10/04/19	PS	n/a	n/a	V1C7331
JC95641-12	1C167572.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	JC95641-12 ug/kg	Spike Q	MS ug/kg	MS %	Limits
67-64-1	Acetone	8.5	J	185	134	68 10-157
71-43-2	Benzene	ND		46.4	44.2	95 58-125
74-97-5	Bromochloromethane	ND		46.4	44.1	95 60-127
75-27-4	Bromodichloromethane	ND		46.4	43.8	94 57-128
75-25-2	Bromoform	ND		46.4	45.2	97 48-133
74-83-9	Bromomethane	ND		46.4	61.9	134 31-141
78-93-3	2-Butanone (MEK)	ND		185	148	80 29-146
75-15-0	Carbon disulfide	ND		46.4	43.2	93 47-145
56-23-5	Carbon tetrachloride	ND		46.4	46.1	99 51-143
108-90-7	Chlorobenzene	ND		46.4	42.3	91 54-130
75-00-3	Chloroethane	ND		46.4	46.1	99 22-153
67-66-3	Chloroform	ND		46.4	43.0	93 61-125
74-87-3	Chloromethane	ND		46.4	51.4	111 43-142
110-82-7	Cyclohexane	ND		46.4	42.9	93 37-148
96-12-8	1,2-Dibromo-3-chloropropane	ND		46.4	37.6	81 41-127
124-48-1	Dibromochloromethane	ND		46.4	47.1	102 56-127
106-93-4	1,2-Dibromoethane	ND		46.4	41.5	90 54-121
95-50-1	1,2-Dichlorobenzene	ND		46.4	41.4	89 41-134
541-73-1	1,3-Dichlorobenzene	ND		46.4	42.2	91 41-135
106-46-7	1,4-Dichlorobenzene	ND		46.4	41.0	88 41-133
75-71-8	Dichlorodifluoromethane	ND		46.4	41.9	90 30-153
75-34-3	1,1-Dichloroethane	ND		46.4	46.3	100 61-131
107-06-2	1,2-Dichloroethane	ND		46.4	40.9	88 56-126
75-35-4	1,1-Dichloroethene	ND		46.4	42.9	93 53-132
156-59-2	cis-1,2-Dichloroethene	ND		46.4	42.8	92 57-125
156-60-5	trans-1,2-Dichloroethene	ND		46.4	42.4	91 56-130
78-87-5	1,2-Dichloropropane	ND		46.4	45.8	99 63-126
10061-01-5	cis-1,3-Dichloropropene	ND		46.4	44.0	95 55-126
10061-02-6	trans-1,3-Dichloropropene	ND		46.4	48.4	104 51-126
100-41-4	Ethylbenzene	ND		46.4	41.9	90 49-132
76-13-1	Freon 113	ND		46.4	45.5	98 42-179
591-78-6	2-Hexanone	ND		185	149	80 25-150
98-82-8	Isopropylbenzene	ND		46.4	42.4	91 43-141
79-20-9	Methyl Acetate	ND		46.4	42.2	91 32-158
108-87-2	Methylcyclohexane	ND		46.4	41.8	90 22-158
1634-04-4	Methyl Tert Butyl Ether	ND		46.4	49.9	108 58-123

\* = Outside of Control Limits.

# Matrix Spike Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95641-12MS	1C167577.D	1	10/04/19	PS	n/a	n/a	V1C7331
JC95641-12	1C167572.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	JC95641-12 ug/kg	Spike Q	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		185	149	80 40-140
75-09-2	Methylene chloride	2.3	J	46.4	45.2	93 57-123
100-42-5	Styrene	ND		46.4	41.7	90 46-139
79-34-5	1,1,2,2-Tetrachloroethane	ND		46.4	37.4	81 44-127
127-18-4	Tetrachloroethene	0.63	J	46.4	45.7	97 39-154
108-88-3	Toluene	ND		46.4	44.0	95 54-127
87-61-6	1,2,3-Trichlorobenzene	ND		46.4	41.5	90 17-151
120-82-1	1,2,4-Trichlorobenzene	ND		46.4	43.8	94 19-153
71-55-6	1,1,1-Trichloroethane	4.5		46.4	44.6	86 57-138
79-00-5	1,1,2-Trichloroethane	ND		46.4	42.6	92 53-127
79-01-6	Trichloroethene	1.9		46.4	45.8	95 52-140
75-69-4	Trichlorofluoromethane	ND		46.4	41.3	89 46-142
75-01-4	Vinyl chloride	ND		46.4	50.3	108 43-146
	m,p-Xylene	ND		92.7	83.8	90 45-137
95-47-6	o-Xylene	ND		46.4	42.8	92 48-135
1330-20-7	Xylene (total)	ND		139	127	91 46-137

CAS No.	Surrogate Recoveries	MS	JC95641-12	Limits
1868-53-7	Dibromofluoromethane	98%	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	94%	99%	75-130%
2037-26-5	Toluene-D8	102%	103%	80-120%
460-00-4	4-Bromofluorobenzene	94%	93%	79-127%

\* = Outside of Control Limits.



## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95555-2MS	D266680.D	1	10/03/19	TDN	n/a	n/a	VD10747
JC95555-2MSD	D266681.D	1	10/03/19	TDN	n/a	n/a	VD10747
JC95555-2 <sup>a</sup>	D266676.D	1	10/03/19	TDN	n/a	n/a	VD10747

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-1, JC95555-2, JC95555-3

CAS No.	Compound	JC95555-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		42500	101	42500	41500	98	3	10-157/31
71-43-2	Benzene	13200		10600	102	10600	24300	105	1	58-125/22
74-97-5	Bromochloromethane	ND		10600	99	10600	10600	100	1	60-127/22
75-27-4	Bromodichloromethane	ND		10600	94	10600	10300	97	4	57-128/22
75-25-2	Bromoform	ND		10600	113	10600	12000	113	0	48-133/21
74-83-9	Bromomethane	ND		10600	74	10600	8040	76	2	31-141/28
78-93-3	2-Butanone (MEK)	ND		42500	86	42500	36600	86	1	29-146/27
75-15-0	Carbon disulfide	400	J	10600	93	10600	10800	98	5	47-145/24
56-23-5	Carbon tetrachloride	ND		10600	103	10600	11200	106	3	51-143/25
108-90-7	Chlorobenzene	ND		10600	95	10600	10500	99	4	54-130/22
75-00-3	Chloroethane	ND		10600	65	10600	7180	68	5	22-153/32
67-66-3	Chloroform	ND		10600	91	10600	9930	94	2	61-125/22
74-87-3	Chloromethane	ND		10600	95	10600	10600	100	5	43-142/27
110-82-7	Cyclohexane	ND		10600	98	10600	10700	101	3	37-148/26
96-12-8	1,2-Dibromo-3-chloropropane	ND		10600	92	10600	9730	92	0	41-127/23
124-48-1	Dibromochloromethane	ND		10600	102	10600	11100	105	3	56-127/21
106-93-4	1,2-Dibromoethane	ND		10600	95	10600	10300	97	2	54-121/21
95-50-1	1,2-Dichlorobenzene	ND		10600	97	10600	10500	99	2	41-134/22
541-73-1	1,3-Dichlorobenzene	ND		10600	92	10600	10100	95	3	41-135/22
106-46-7	1,4-Dichlorobenzene	ND		10600	94	10600	10100	95	1	41-133/22
75-71-8	Dichlorodifluoromethane	ND		10600	91	10600	10100	95	5	30-153/29
75-34-3	1,1-Dichloroethane	ND		10600	94	10600	10300	97	3	61-131/23
107-06-2	1,2-Dichloroethane	ND		10600	95	10600	10200	96	1	56-126/21
75-35-4	1,1-Dichloroethene	ND		10600	88	10600	9660	91	3	53-132/23
156-59-2	cis-1,2-Dichloroethene	ND		10600	92	10600	9840	93	1	57-125/22
156-60-5	trans-1,2-Dichloroethene	ND		10600	90	10600	9860	93	3	56-130/23
78-87-5	1,2-Dichloropropane	ND		10600	95	10600	10300	97	2	63-126/22
10061-01-5	cis-1,3-Dichloropropene	ND		10600	81	10600	8930	84	4	55-126/21
10061-02-6	trans-1,3-Dichloropropene	ND		10600	87	10600	9480	89	3	51-126/21
100-41-4	Ethylbenzene	190	J	10600	96	10600	10900	101	5	49-132/23
76-13-1	Freon 113	ND		10600	106	10600	11700	110	3	42-179/25
591-78-6	2-Hexanone	ND		42500	96	42500	40500	95	1	25-150/25
98-82-8	Isopropylbenzene	192	J	10600	105	10600	11500	107	2	43-141/25
79-20-9	Methyl Acetate	ND		10600	116	10600	12000	113	2	32-158/26
108-87-2	Methylcyclohexane	ND		10600	109	10600	11800	111	2	22-158/30
1634-04-4	Methyl Tert Butyl Ether	ND		10600	89	10600	9570	90	1	58-123/23

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95555-2MS	D266680.D	1	10/03/19	TDN	n/a	n/a	VD10747
JC95555-2MSD	D266681.D	1	10/03/19	TDN	n/a	n/a	VD10747
JC95555-2 <sup>a</sup>	D266676.D	1	10/03/19	TDN	n/a	n/a	VD10747

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-1, JC95555-2, JC95555-3

CAS No.	Compound	JC95555-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	42500	42600	100	42500	42000	99	1	40-140/24
75-09-2	Methylene chloride	ND	10600	9630	91	10600	9910	93	3	57-123/23
100-42-5	Styrene	ND	10600	10500	99	10600	10800	102	3	46-139/22
79-34-5	1,1,2,2-Tetrachloroethane	ND	10600	9380	88	10600	9000	85	4	44-127/26
127-18-4	Tetrachloroethene	ND	10600	10800	102	10600	11100	105	3	39-154/26
108-88-3	Toluene	1500	10600	11700	96	10600	12200	101	4	54-127/22
87-61-6	1,2,3-Trichlorobenzene	ND	10600	8910	84	10600	9560	90	7	17-151/32
120-82-1	1,2,4-Trichlorobenzene	ND	10600	9390	88	10600	9970	94	6	19-153/32
71-55-6	1,1,1-Trichloroethane	ND	10600	9960	94	10600	10400	98	4	57-138/24
79-00-5	1,1,2-Trichloroethane	ND	10600	9860	93	10600	9990	94	1	53-127/22
79-01-6	Trichloroethene	ND	10600	10500	99	10600	11200	106	6	52-140/24
75-69-4	Trichlorofluoromethane	ND	10600	9600	90	10600	10000	94	4	46-142/27
75-01-4	Vinyl chloride	ND	10600	11000	104	10600	11500	108	4	43-146/26
	m,p-Xylene	346	21200	21200	98	21200	21800	101	3	45-137/23
95-47-6	o-Xylene	368	10600	10900	99	10600	11300	103	4	48-135/22
1330-20-7	Xylene (total)	714	31800	32100	99	31800	33100	102	3	46-137/23

CAS No.	Surrogate Recoveries	MS	MSD	JC95555-2	Limits
1868-53-7	Dibromofluoromethane	97%	96%	100%	75-127%
17060-07-0	1,2-Dichloroethane-D4	103%	95%	97%	75-130%
2037-26-5	Toluene-D8	96%	98%	96%	80-120%
460-00-4	4-Bromofluorobenzene	87%	88%	90%	79-127%

(a) Diluted due to high concentration of non-target compound.

\* = Outside of Control Limits.

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95745-5MS	A253712.D	1	10/04/19	KC	n/a	n/a	VA9835
JC95745-5MSD	A253713.D	1	10/04/19	KC	n/a	n/a	VA9835
JC95745-5	A253706.D	1	10/04/19	KC	n/a	n/a	VA9835
JC95745-5	A253715.D	10	10/04/19	KC	n/a	n/a	VA9835

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-5

CAS No.	Compound	JC95745-5		Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q								
67-64-1	Acetone	ND		200	162	81	200	163	82	1	34-149/17
71-43-2	Benzene	ND		50	45.7	91	50	47.4	95	4	54-136/10
74-97-5	Bromochloromethane	ND		50	44.7	89	50	47.8	96	7	79-124/11
75-27-4	Bromodichloromethane	ND		50	42.4	85	50	43.6	87	3	79-124/11
75-25-2	Bromoform	ND		50	49.3	99	50	52.4	105	6	71-130/11
74-83-9	Bromomethane	ND		50	53.0	106	50	55.2	110	4	53-142/14
78-93-3	2-Butanone (MEK)	ND		200	160	80	200	160	80	0	54-142/15
75-15-0	Carbon disulfide	ND		50	40.4	81	50	41.2	82	2	59-145/17
56-23-5	Carbon tetrachloride	ND		50	46.2	92	50	48.3	97	4	70-143/12
108-90-7	Chlorobenzene	16.7		50	61.6	90	50	64.8	96	5	78-123/10
75-00-3	Chloroethane	ND		50	48.8	98	50	49.1	98	1	57-141/14
67-66-3	Chloroform	ND		50	39.7	79	50	41.2	82	4	76-123/11
74-87-3	Chloromethane	ND		50	46.5	93	50	48.4	97	4	43-141/16
110-82-7	Cyclohexane	ND		50	50.4	101	50	52.8	106	5	51-155/16
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	45.4	91	50	47.2	94	4	66-130/13
124-48-1	Dibromochloromethane	ND		50	43.7	87	50	45.0	90	3	76-125/11
106-93-4	1,2-Dibromoethane	ND		50	43.9	88	50	46.9	94	7	78-119/11
95-50-1	1,2-Dichlorobenzene	3.1		50	47.9	90	50	49.1	92	2	77-123/11
541-73-1	1,3-Dichlorobenzene	131		50	171	80	50	175	88	2	76-122/11
106-46-7	1,4-Dichlorobenzene	90.8		50	134	86	50	137	92	2	76-122/11
75-71-8	Dichlorodifluoromethane	ND		50	53.0	106	50	53.6	107	1	31-159/16
75-34-3	1,1-Dichloroethane	ND		50	42.6	85	50	45.0	90	5	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	39.9	80	50	41.6	83	4	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	38.8	78	50	42.1	84	8	63-136/14
156-59-2	cis-1,2-Dichloroethene	5.2		50	47.7	85	50	50.8	91	6	60-136/11
156-60-5	trans-1,2-Dichloroethene	0.63	J	50	46.0	91	50	48.1	95	4	70-126/11
78-87-5	1,2-Dichloropropane	ND		50	43.9	88	50	45.2	90	3	78-124/10
10061-01-5	cis-1,3-Dichloropropene	ND		50	44.1	88	50	45.0	90	2	79-123/11
10061-02-6	trans-1,3-Dichloropropene	ND		50	40.1	80	50	41.5	83	3	77-123/11
100-41-4	Ethylbenzene	ND		50	44.6	89	50	47.2	94	6	51-140/20
76-13-1	Freon 113	ND		50	57.9	116	50	59.8	120	3	60-192/14
591-78-6	2-Hexanone	ND		200	168	84	200	176	88	5	56-139/14
98-82-8	Isopropylbenzene	ND		50	45.5	91	50	48.4	97	6	75-129/11
79-20-9	Methyl Acetate	ND		50	40.6	81	50	40.6	81	0	55-131/15
108-87-2	Methylcyclohexane	ND		50	51.2	102	50	55.0	110	7	57-155/13
1634-04-4	Methyl Tert Butyl Ether	ND		50	42.7	85	50	44.7	89	5	72-123/11

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95745-5MS	A253712.D	1	10/04/19	KC	n/a	n/a	VA9835
JC95745-5MSD	A253713.D	1	10/04/19	KC	n/a	n/a	VA9835
JC95745-5	A253706.D	1	10/04/19	KC	n/a	n/a	VA9835
JC95745-5	A253715.D	10	10/04/19	KC	n/a	n/a	VA9835

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-5

CAS No.	Compound	JC95745-5 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	200	195	98	200	195	98	0	66-136/13
75-09-2	Methylene chloride	ND	50	34.8	70* a	50	37.0	74	6	73-125/13
100-42-5	Styrene	ND	50	46.4	93	50	48.7	97	5	75-129/11
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	41.9	84	50	41.6	83	1	71-122/11
127-18-4	Tetrachloroethene	ND	50	47.9	96	50	50.5	101	5	61-139/11
108-88-3	Toluene	ND	50	42.2	84	50	44.1	88	4	60-135/10
87-61-6	1,2,3-Trichlorobenzene	ND	50	46.2	92	50	49.0	98	6	70-138/13
120-82-1	1,2,4-Trichlorobenzene	841 c	50	693	-296* b	50	721	-240* b	4	72-137/13
71-55-6	1,1,1-Trichloroethane	ND	50	46.0	92	50	47.7	95	4	74-138/12
79-00-5	1,1,2-Trichloroethane	ND	50	40.8	82	50	42.0	84	3	78-121/11
79-01-6	Trichloroethene	0.78	J 50	44.5	87	50	45.8	90	3	62-141/10
75-69-4	Trichlorofluoromethane	ND	50	46.3	93	50	47.5	95	3	57-149/14
75-01-4	Vinyl chloride	ND	50	63.2	126	50	64.4	129	2	43-146/15
	m,p-Xylene	ND	100	92.5	93	100	97.4	97	5	50-144/20
95-47-6	o-Xylene	ND	50	47.1	94	50	49.3	99	5	63-134/10
1330-20-7	Xylene (total)	ND	150	140	93	150	147	98	5	56-139/20

CAS No.	Surrogate Recoveries	MS	MSD	JC95745-5	JC95745-5	Limits
1868-53-7	Dibromofluoromethane	91%	93%	91%	92%	80-120%
17060-07-0	1,2-Dichloroethane-D4	92%	91%	93%	92%	81-124%
2037-26-5	Toluene-D8	90%	91%	88%	87%	80-120%
460-00-4	4-Bromofluorobenzene	87%	85%	85%	84%	80-120%

(a) Outside control limits due to matrix interference.

(b) Outside control limits due to high level in sample relative to spike amount.

(c) Result is from Run #2.

\* = Outside of Control Limits.

**Duplicate Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95641-15DUP	1C167579.D	1	10/04/19	PS	n/a	n/a	V1C7331
JC95641-15	1C167573.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	JC95641-15 DUP		Q	RPD	Limits
		ug/kg	ug/kg			
67-64-1	Acetone	ND	ND		nc	40
71-43-2	Benzene	ND	ND		nc	30
74-97-5	Bromochloromethane	ND	ND		nc	30
75-27-4	Bromodichloromethane	ND	ND		nc	30
75-25-2	Bromoform	ND	ND		nc	30
74-83-9	Bromomethane	ND	ND		nc	30
78-93-3	2-Butanone (MEK)	ND	ND		nc	30
75-15-0	Carbon disulfide	ND	ND		nc	30
56-23-5	Carbon tetrachloride	ND	ND		nc	30
108-90-7	Chlorobenzene	ND	ND		nc	30
75-00-3	Chloroethane	ND	ND		nc	30
67-66-3	Chloroform	ND	ND		nc	30
74-87-3	Chloromethane	ND	ND		nc	30
110-82-7	Cyclohexane	ND	ND		nc	30
96-12-8	1,2-Dibromo-3-chloropropane	ND	ND		nc	30
124-48-1	Dibromochloromethane	ND	ND		nc	30
106-93-4	1,2-Dibromoethane	ND	ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND	ND		nc	30
541-73-1	1,3-Dichlorobenzene	ND	ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND	ND		nc	30
75-71-8	Dichlorodifluoromethane	ND	ND		nc	30
75-34-3	1,1-Dichloroethane	ND	ND		nc	30
107-06-2	1,2-Dichloroethane	ND	ND		nc	30
75-35-4	1,1-Dichloroethene	ND	ND		nc	30
156-59-2	cis-1,2-Dichloroethene	ND	ND		nc	30
156-60-5	trans-1,2-Dichloroethene	ND	ND		nc	30
78-87-5	1,2-Dichloropropane	ND	ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND	ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND	ND		nc	30
100-41-4	Ethylbenzene	ND	ND		nc	30
76-13-1	Freon 113	ND	ND		nc	30
591-78-6	2-Hexanone	ND	ND		nc	30
98-82-8	Isopropylbenzene	ND	ND		nc	30
79-20-9	Methyl Acetate	ND	ND		nc	30
108-87-2	Methylcyclohexane	ND	ND		nc	30
1634-04-4	Methyl Tert Butyl Ether	ND	ND		nc	30

\* = Outside of Control Limits.

# Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC95641-15DUP	1C167579.D	1	10/04/19	PS	n/a	n/a	V1C7331
JC95641-15	1C167573.D	1	10/04/19	PS	n/a	n/a	V1C7331

The QC reported here applies to the following samples:

Method: SW846 8260C

JC95555-4

CAS No.	Compound	JC95641-15		Q	RPD	Limits
		DUP ug/kg	Q ug/kg			
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	ND		nc	30
75-09-2	Methylene chloride	3.2	J 3.7	J	14	36
100-42-5	Styrene	ND	ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND		nc	30
127-18-4	Tetrachloroethene	33.4	60.7		58* a	30
108-88-3	Toluene	ND	ND		nc	24
87-61-6	1,2,3-Trichlorobenzene	ND	ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND	ND		nc	30
71-55-6	1,1,1-Trichloroethane	ND	ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND	ND		nc	30
79-01-6	Trichloroethene	2.0	2.4		18	30
75-69-4	Trichlorofluoromethane	ND	ND		nc	30
75-01-4	Vinyl chloride	ND	ND		nc	30
	m,p-Xylene	ND	ND		nc	32
95-47-6	o-Xylene	ND	ND		nc	30
1330-20-7	Xylene (total)	ND	ND		nc	33

CAS No.	Surrogate Recoveries	DUP	JC95641-15	Limits
1868-53-7	Dibromofluoromethane	103%	101%	75-127%
17060-07-0	1,2-Dichloroethane-D4	106%	106%	75-130%
2037-26-5	Toluene-D8	102%	101%	80-120%
460-00-4	4-Bromofluorobenzene	95%	92%	79-127%

(a) Outside control limits due to sample non-homogeneity.

\* = Outside of Control Limits.

**Instrument Performance Check (BFB)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-BFB	Injection Date: 07/13/19
Lab File ID: 1C165729.D	Injection Time: 14:16
Instrument ID: GCMS1C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	10861	16.3	Pass
75	30.0 - 60.0% of mass 95	30410	45.7	Pass
95	Base peak, 100% relative abundance	66488	100.0	Pass
96	5.0 - 9.0% of mass 95	4521	6.80	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	54138	81.4	Pass
175	5.0 - 9.0% of mass 174	4115	6.19 (7.60) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	52229	78.6 (96.5) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	3567	5.36 (6.83) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1C7262-IC7262	1C165730.D	07/13/19	14:47	00:31	Initial cal 0.2
V1C7262-IC7262	1C165731.D	07/13/19	15:14	00:58	Initial cal 0.5
V1C7262-IC7262	1C165732.D	07/13/19	15:41	01:25	Initial cal 1
V1C7262-IC7262	1C165733.D	07/13/19	16:08	01:52	Initial cal 2
V1C7262-IC7262	1C165734.D	07/13/19	16:35	02:19	Initial cal 4
V1C7262-IC7262	1C165735.D	07/13/19	17:02	02:46	Initial cal 8
V1C7262-IC7262	1C165736.D	07/13/19	17:30	03:14	Initial cal 20
V1C7262-ICC7262	1C165737.D	07/13/19	17:57	03:41	Initial cal 50
V1C7262-IC7262	1C165738.D	07/13/19	18:25	04:09	Initial cal 100
V1C7262-IC7262	1C165739.D	07/13/19	18:52	04:36	Initial cal 200
V1C7262-ICV7262	1C165742.D	07/13/19	20:14	05:58	Initial cal verification 50
V1C7262-ICV7262	1C165743.D	07/13/19	20:41	06:25	Initial cal verification 50

**Instrument Performance Check (BFB)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-BFB2	Injection Date: 07/15/19
Lab File ID: 1C165746.D	Injection Time: 12:53
Instrument ID: GCMS1C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	11203	16.4	Pass
75	30.0 - 60.0% of mass 95	31200	45.8	Pass
95	Base peak, 100% relative abundance	68104	100.0	Pass
96	5.0 - 9.0% of mass 95	4565	6.70	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	56568	83.1	Pass
175	5.0 - 9.0% of mass 174	4315	6.34 (7.63) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	54453	80.0 (96.3) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	3677	5.40 (6.75) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1C7262-ICV7262	1C165747.D	07/15/19	13:23	00:30	Initial cal verification 50



## Instrument Performance Check (BFB)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7331-BFB	Injection Date: 10/04/19
Lab File ID: 1C167568.D	Injection Time: 07:59
Instrument ID: GCMS1C	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.99 - 40.0% of mass 95	9856	17.7	Pass
75	30.0 - 60.0% of mass 95	26501	47.7	Pass
95	Base peak, 100% relative abundance	55571	100.0	Pass
96	5.0 - 9.0% of mass 95	3555	6.40	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	52600	94.7	Pass
175	5.0 - 9.0% of mass 174	3865	6.96 (7.35) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	50635	91.1 (96.3) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	3365	6.06 (6.65) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1C7331-CC7262	1C167568.D	10/04/19	07:59	00:00	Continuing cal 50
V1C7331-BS	1C167569.D	10/04/19	08:37	00:38	Blank Spike
V1C7331-MB	1C167571.D	10/04/19	09:30	01:31	Method Blank
JC95641-12	1C167572.D	10/04/19	10:14	02:15	(used for QC only; not part of job JC95555)
JC95641-15	1C167573.D	10/04/19	10:41	02:42	(used for QC only; not part of job JC95555)
ZZZZZZ	1C167574.D	10/04/19	11:08	03:09	(unrelated sample)
ZZZZZZ	1C167575.D	10/04/19	11:34	03:35	(unrelated sample)
ZZZZZZ	1C167576.D	10/04/19	12:01	04:02	(unrelated sample)
JC95641-12MS	1C167577.D	10/04/19	12:27	04:28	Matrix Spike
JC95641-15DUP	1C167579.D	10/04/19	13:21	05:22	Duplicate
ZZZZZZ	1C167580.D	10/04/19	13:47	05:48	(unrelated sample)
JC95555-4	1C167581.D	10/04/19	14:13	06:14	MW-108(10-12)
ZZZZZZ	1C167582.D	10/04/19	14:40	06:41	(unrelated sample)
ZZZZZZ	1C167583.D	10/04/19	15:06	07:07	(unrelated sample)
JC95555-4	1C167585.D	10/04/19	15:59	08:00	MW-108(10-12)
ZZZZZZ	1C167586.D	10/04/19	16:25	08:26	(unrelated sample)
ZZZZZZ	1C167587.D	10/04/19	16:52	08:53	(unrelated sample)
ZZZZZZ	1C167589.D	10/04/19	17:44	09:45	(unrelated sample)
ZZZZZZ	1C167590.D	10/04/19	18:11	10:12	(unrelated sample)
ZZZZZZ	1C167591.D	10/04/19	18:37	10:38	(unrelated sample)
ZZZZZZ	1C167592.D	10/04/19	19:03	11:04	(unrelated sample)

**Instrument Performance Check (BFB)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-BFB	Injection Date: 07/29/19
Lab File ID: A251984.D	Injection Time: 17:24
Instrument ID: GCMSA	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	13974	17.6	Pass
75	30.0 - 60.0% of mass 95	36626	46.2	Pass
95	Base peak, 100% relative abundance	79333	100.0	Pass
96	5.0 - 9.0% of mass 95	5472	6.90	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	62256	78.5	Pass
175	5.0 - 9.0% of mass 174	4702	5.93 (7.55) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	61994	78.1 (99.6) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	4061	5.12 (6.55) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9755-IC9755	A251985.D	07/29/19	18:10	00:46	Initial cal 0.2
VA9755-IC9755	A251986.D	07/29/19	18:40	01:16	Initial cal 0.5
VA9755-IC9755	A251987.D	07/29/19	19:09	01:45	Initial cal 1
VA9755-IC9755	A251988.D	07/29/19	19:39	02:15	Initial cal 2
VA9755-IC9755	A251989.D	07/29/19	20:08	02:44	Initial cal 4
VA9755-IC9755	A251990.D	07/29/19	20:37	03:13	Initial cal 8
VA9755-IC9755	A251991.D	07/29/19	21:07	03:43	Initial cal 20
VA9755-ICC9755	A251992.D	07/29/19	21:36	04:12	Initial cal 50
VA9755-IC9755	A251993.D	07/29/19	22:06	04:42	Initial cal 100
VA9755-IC9755	A251994.D	07/29/19	22:36	05:12	Initial cal 200
VA9755-ICV9755	A251997.D	07/30/19	00:04	06:40	Initial cal verification 50
VA9755-ICV9755	A251998.D	07/30/19	00:33	07:09	Initial cal verification 50

## Instrument Performance Check (BFB)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9835-BFB	Injection Date: 10/04/19
Lab File ID: A253699.D	Injection Time: 06:46
Instrument ID: GCMSA	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	17083	17.2	Pass
75	30.0 - 60.0% of mass 95	45789	46.0	Pass
95	Base peak, 100% relative abundance	99571	100.0	Pass
96	5.0 - 9.0% of mass 95	6427	6.45	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	86035	86.4	Pass
175	5.0 - 9.0% of mass 174	7169	7.20 (8.33) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	83645	84.0 (97.2) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	5637	5.66 (6.74) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9835-CC9755	A253699.D	10/04/19	06:46	00:00	Continuing cal 20
VA9835-BS	A253700.D	10/04/19	07:45	00:59	Blank Spike
VA9835-MB	A253702.D	10/04/19	08:43	01:57	Method Blank
ZZZZZZ	A253703.D	10/04/19	09:19	02:33	(unrelated sample)
JC95555-5	A253704.D	10/04/19	09:48	03:02	TRIP BLANK
ZZZZZZ	A253705.D	10/04/19	10:17	03:31	(unrelated sample)
JC95745-5	A253706.D	10/04/19	10:46	04:00	(used for QC only; not part of job JC95555)
ZZZZZZ	A253707.D	10/04/19	11:14	04:28	(unrelated sample)
ZZZZZZ	A253708.D	10/04/19	11:44	04:58	(unrelated sample)
ZZZZZZ	A253709.D	10/04/19	12:13	05:27	(unrelated sample)
ZZZZZZ	A253710.D	10/04/19	12:41	05:55	(unrelated sample)
JC95745-5MS	A253712.D	10/04/19	13:48	07:02	Matrix Spike
JC95745-5MSD	A253713.D	10/04/19	14:17	07:31	Matrix Spike Duplicate
JC95745-5	A253715.D	10/04/19	15:15	08:29	(used for QC only; not part of job JC95555)
ZZZZZZ	A253718.D	10/04/19	16:42	09:56	(unrelated sample)
ZZZZZZ	A253722.D	10/04/19	18:38	11:52	(unrelated sample)

**Instrument Performance Check (BFB)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-BFB	Injection Date: 09/06/19
Lab File ID: D266053.D	Injection Time: 18:16
Instrument ID: GCMSD	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	22285	18.7	Pass
75	30.0 - 60.0% of mass 95	57512	48.3	Pass
95	Base peak, 100% relative abundance	119128	100.0	Pass
96	5.0 - 9.0% of mass 95	7876	6.61	Pass
173	Less than 2.0% of mass 174	197	0.17 (0.22) <sup>a</sup>	Pass
174	50.0 - 150.0% of mass 95	89608	75.2	Pass
175	5.0 - 9.0% of mass 174	6210	5.21 (6.93) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	87442	73.4 (97.6) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	5774	4.85 (6.60) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD10725-IC10725	D266054.D	09/06/19	18:57	00:41	Initial cal 0.2
VD10725-IC10725	D266055.D	09/06/19	19:26	01:10	Initial cal 0.5
VD10725-IC10725	D266056.D	09/06/19	19:54	01:38	Initial cal 1
VD10725-IC10725	D266057.D	09/06/19	20:23	02:07	Initial cal 2
VD10725-IC10725	D266058.D	09/06/19	20:52	02:36	Initial cal 4
VD10725-IC10725	D266059.D	09/06/19	21:20	03:04	Initial cal 8
VD10725-IC10725	D266060.D	09/06/19	21:49	03:33	Initial cal 20
VD10725-ICC10725	D266061.D	09/06/19	22:17	04:01	Initial cal 50
VD10725-IC10725	D266062.D	09/06/19	22:46	04:30	Initial cal 100
VD10725-IC10725	D266063.D	09/06/19	23:14	04:58	Initial cal 200
VD10725-ICV10725	D266066.D	09/07/19	00:40	06:24	Initial cal verification 50
VD10725-ICV10725	D266067.D	09/07/19	01:08	06:52	Initial cal verification 50

## Instrument Performance Check (BFB)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10747-BFB	Injection Date: 10/03/19
Lab File ID: D266670.D	Injection Time: 07:38
Instrument ID: GCMSD	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	17555	17.8	Pass
75	30.0 - 60.0% of mass 95	46485	47.2	Pass
95	Base peak, 100% relative abundance	98541	100.0	Pass
96	5.0 - 9.0% of mass 95	6793	6.89	Pass
173	Less than 2.0% of mass 174	175	0.18 (0.23) <sup>a</sup>	Pass
174	50.0 - 150.0% of mass 95	74845	76.0	Pass
175	5.0 - 9.0% of mass 174	5604	5.69 (7.49) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	72941	74.0 (97.5) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	5045	5.12 (6.92) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD10747-CC10725	D266670.D	10/03/19	07:38	00:00	Continuing cal 20
VD10747-BS	D266671.D	10/03/19	08:28	00:50	Blank Spike
ZZZZZZ	D266673A.D	10/03/19	09:25	01:47	(unrelated sample)
VD10747-MB	D266673.D	10/03/19	09:25	01:47	Method Blank
ZZZZZZ	D266674.D	10/03/19	09:54	02:16	(unrelated sample)
JC95555-4	D266675.D	10/03/19	10:59	03:21	MW-108(10-12)
JC95555-2	D266676.D	10/03/19	11:28	03:50	MW-111(13-15)
ZZZZZZ	D266677.D	10/03/19	11:56	04:18	(unrelated sample)
ZZZZZZ	D266678.D	10/03/19	12:25	04:47	(unrelated sample)
JC95555-2MS	D266680.D	10/03/19	13:22	05:44	Matrix Spike
JC95555-2MSD	D266681.D	10/03/19	13:51	06:13	Matrix Spike Duplicate
ZZZZZZ	D266683.D	10/03/19	14:48	07:10	(unrelated sample)
ZZZZZZ	D266684.D	10/03/19	15:16	07:38	(unrelated sample)
ZZZZZZ	D266685.D	10/03/19	15:45	08:07	(unrelated sample)
ZZZZZZ	D266686.D	10/03/19	16:14	08:36	(unrelated sample)
ZZZZZZ	D266687.D	10/03/19	16:42	09:04	(unrelated sample)
JC95555-1	D266689.D	10/03/19	17:39	10:01	MW-111(11-13)
JC95555-3	D266690.D	10/03/19	18:08	10:30	MW-108(5-7)
ZZZZZZ	D266691.D	10/03/19	18:37	10:59	(unrelated sample)
ZZZZZZ	D266692.D	10/03/19	19:05	11:27	(unrelated sample)

# Internal Standard Area Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	V1C7331-CC7262	Injection Date:	10/04/19
Lab File ID:	1C167568.D	Injection Time:	07:59
Instrument ID:	GCMS1C	Method:	SW846 8260C

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
	AREA		AREA		AREA		AREA		AREA	
Check Std	61732	7.29	188425	9.53	292061	10.45	211715	13.59	106042	15.90
Upper Limit <sup>a</sup>	123464	7.79	376850	10.03	584122	10.95	423430	14.09	212084	16.40
Lower Limit <sup>b</sup>	30866	6.79	94213	9.03	146031	9.95	105858	13.09	53021	15.40

Lab	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT	IS 5	RT
Sample ID	AREA		AREA		AREA		AREA		AREA	
V1C7331-BS	67942	7.28	201245	9.53	310383	10.45	226578	13.59	112779	15.90
V1C7331-MB	61232	7.28	199337	9.53	298104	10.45	226967	13.59	111701	15.90
JC95641-12	50803	7.29	192943	9.53	290096	10.44	214294	13.59	105334	15.90
JC95641-15	66883	7.29	186501	9.53	280171	10.45	212415	13.59	103933	15.90
ZZZZZZ	61462	7.29	186423	9.53	282425	10.45	214260	13.59	104812	15.90
ZZZZZZ	60508	7.29	175801	9.53	267117	10.45	201710	13.59	98148	15.90
ZZZZZZ	63077	7.28	176292	9.53	265503	10.45	202445	13.59	99840	15.90
JC95641-12MS	42958	7.29	171981	9.53	268911	10.45	193671	13.59	94815	15.90
JC95641-15DUP	58216	7.30	176931	9.53	269079	10.45	200151	13.59	96153	15.90
ZZZZZZ	43769	7.29	174026	9.53	264263	10.45	195791	13.59	96595	15.90
JC95555-4	49412	7.29	116743	9.53	148458	10.45	57585 <sup>c</sup>	13.59	11632 <sup>c</sup>	15.90
ZZZZZZ	55395	7.29	173759	9.53	265297	10.45	197981	13.59	99781	15.90
ZZZZZZ	53791	7.29	176450	9.53	267379	10.45	201042	13.59	100328	15.90
JC95555-4 <sup>d</sup>	53337	7.29	144694	9.53	194896	10.45	97909 <sup>c</sup>	13.59	23586 <sup>c</sup>	15.90
ZZZZZZ	52502	7.29	165083	9.53	251458	10.45	184101	13.59	86432	15.90
ZZZZZZ	57143	7.29	171284	9.53	260202	10.45	193856	13.59	95137	15.90
ZZZZZZ	53156	7.29	172828	9.53	261678	10.45	192804	13.59	90526	15.90
ZZZZZZ	52648	7.29	173180	9.53	264055	10.45	194331	13.59	95156	15.90
ZZZZZZ	50152	7.29	162887	9.53	246978	10.45	176003	13.59	78127	15.90
ZZZZZZ	64401	7.29	190084	9.53	287076	10.45	226474	13.59	109578	15.91

- IS 1 = Tert Butyl Alcohol-D9
- IS 2 = Pentafluorobenzene
- IS 3 = 1,4-Difluorobenzene
- IS 4 = Chlorobenzene-D5
- IS 5 = 1,4-Dichlorobenzene-d4

- (a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Outside control limits due to matrix interference.
- (d) Confirmation run.

6.7.1

6

# Internal Standard Area Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VA9835-CC9755	Injection Date:	10/04/19
Lab File ID:	A253699.D	Injection Time:	06:46
Instrument ID:	GCMSA	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	529270	8.15	306033	10.52	456047	11.49	412007	14.88	230829	17.50
Upper Limit <sup>a</sup>	1058540	8.65	612066	11.02	912094	11.99	824014	15.38	461658	18.00
Lower Limit <sup>b</sup>	264635	7.65	153017	10.02	228024	10.99	206004	14.38	115415	17.00

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VA9835-BS	578645	8.15	322919	10.53	493073	11.49	431709	14.89	235310	17.51
VA9835-MB	523203	8.15	304793	10.53	445438	11.49	408319	14.89	259013	17.50
ZZZZZZ	562776	8.15	322572	10.53	473775	11.49	415122	14.89	251206	17.51
JC95555-5	520179	8.14	295397	10.53	435760	11.49	408548	14.89	253514	17.50
ZZZZZZ	475364	8.14	282707	10.52	420558	11.49	396668	14.88	246779	17.50
JC95745-5	515936	8.14	287935	10.52	421039	11.49	383339	14.88	223866	17.50
ZZZZZZ	496101	8.14	287703	10.52	427800	11.49	391463	14.88	240256	17.50
ZZZZZZ	506106	8.14	289927	10.53	425439	11.49	408987	14.88	300126	17.51
ZZZZZZ	506293	8.14	280061	10.52	417797	11.49	399070	14.88	272412	17.51
ZZZZZZ	503931	8.14	288103	10.53	423617	11.49	406023	14.89	277186	17.51
JC95745-5MS	548908	8.14	307344	10.53	467556	11.49	410153	14.88	225724	17.50
JC95745-5MSD	529675	8.16	306220	10.52	457479	11.49	398100	14.88	232992	17.50
JC95745-5	497705	8.14	287070	10.53	429903	11.49	393619	14.88	235358	17.50
ZZZZZZ	514426	8.14	282750	10.52	421928	11.49	393256	14.88	234541	17.51
ZZZZZZ	495750	8.13	279913	10.52	417705	11.49	393959	14.88	243688	17.50

- IS 1 = Tert Butyl Alcohol-D9
- IS 2 = Pentafluorobenzene
- IS 3 = 1,4-Difluorobenzene
- IS 4 = Chlorobenzene-D5
- IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.7.2  
6

# Internal Standard Area Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	VD10747-CC10725	Injection Date:	10/03/19
Lab File ID:	D266670.D	Injection Time:	07:38
Instrument ID:	GCMUSD	Method:	SW846 8260C

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	129473	7.50	215302	9.71	352496	10.67	322463	14.07	218569	16.72
Upper Limit <sup>a</sup>	258946	8.00	430604	10.21	704992	11.17	644926	14.57	437138	17.22
Lower Limit <sup>b</sup>	64737	7.00	107651	9.21	176248	10.17	161232	13.57	109285	16.22

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VD10747-BS	120601	7.48	184113	9.71	301074	10.67	265819	14.07	165316	16.72
ZZZZZZ	126073	7.45	198383	9.71	325109	10.66	293984	14.07	199864	16.72
VD10747-MB	126073	7.45	198383	9.71	325109	10.66	293984	14.07	199864	16.72
ZZZZZZ	125384	7.45	200988	9.72	329906	10.67	305715	14.07	209903	16.72
JC95555-4 <sup>c</sup>	125241	7.47	169801	9.71	260495	10.67	239570	14.07	168503	16.72
JC95555-2 <sup>d</sup>	120620	7.45	198755	9.71	317931	10.66	295716	14.07	197063	16.72
ZZZZZZ	110873	7.45	199680	9.71	320839	10.66	306822	14.07	212960	16.72
ZZZZZZ	122715	7.46	218795	9.71	372014	10.67	396401	14.07	249285	16.72
JC95555-2MS	120230	7.54	211509	9.71	318403	10.66	286273	14.07	193058	16.72
JC95555-2MSD	109096	7.53	207350	9.71	317416	10.66	282171	14.07	189271	16.72
ZZZZZZ	100356	7.48	209933	9.71	329823	10.66	310656	14.07	204164	16.72
ZZZZZZ	100254	7.48	199353	9.71	310944	10.66	290407	14.08	196178	16.73
ZZZZZZ	105596	7.49	199652	9.72	313621	10.67	291327	14.08	193598	16.72
ZZZZZZ	110192	7.48	199141	9.72	313558	10.67	294320	14.07	197100	16.72
ZZZZZZ	107890	7.52	203766	9.71	329401	10.67	336455	14.07	237469	16.72
JC95555-1 <sup>d</sup>	99952	7.48	198227	9.72	309655	10.67	282659	14.07	189785	16.72
JC95555-3 <sup>d</sup>	105252	7.48	196693	9.72	311675	10.67	287086	14.07	187866	16.72
ZZZZZZ	107363	7.49	202100	9.72	321069	10.67	290512	14.07	194099	16.72
ZZZZZZ	109945	7.48	196967	9.72	317940	10.67	290953	14.07	190648	16.72

- IS 1 = Tert Butyl Alcohol-D9
- IS 2 = Pentafluorobenzene
- IS 3 = 1,4-Difluorobenzene
- IS 4 = Chlorobenzene-D5
- IS 5 = 1,4-Dichlorobenzene-d4

- (a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Confirmation run.
- (d) Diluted due to high concentration of non-target compound.

6.7.3  
6



# Surrogate Recovery Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC95555-5	A253704.D	94	93	85	83
JC95745-5MS	A253712.D	91	92	90	87
JC95745-5MSD	A253713.D	93	91	91	85
VA9835-BS	A253700.D	94	92	90	88
VA9835-MB	A253702.D	91	92	86	81

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	81-124%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	80-120%

6.8.1  
6

# Surrogate Recovery Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8260C	Matrix: SO
---------------------	------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC95555-1	D266689.D	97	98	95	88
JC95555-2	D266676.D	100	97	96	90
JC95555-3	D266690.D	101	101	97	91
JC95555-4	1C167581.D	97	103	167* a	138* a
JC95555-4	1C167585.D	94	98	143* a	140* a
JC95555-4	D266675.D	102	102	97	88
JC95555-2MS	D266680.D	97	103	96	87
JC95555-2MSD	D266681.D	96	95	98	88
JC95641-12MS	1C167577.D	98	94	102	94
JC95641-15DUP	1C167579.D	103	106	102	95
V1C7331-BS	1C167569.D	97	96	102	93
V1C7331-MB	1C167571.D	98	97	101	92
VD10747-BS	D266671.D	99	94	99	92
VD10747-MB	D266673.D	97	97	95	89

**Surrogate Compounds**                      **Recovery Limits**

S1 = Dibromofluoromethane	75-127%
S2 = 1,2-Dichloroethane-D4	75-130%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	79-127%

(a) Outside control limits due to matrix interference.

6.8.2  
6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICC7262  
 Lab FileID: 1C165737.D

## Response Factor Report GCMS1C

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)  
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 Last Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

### Calibration Files

1 =1C165732.D 0.5 =1C165731.D 100 =1C165738.D 50 =1C165737.D  
 20 =1C165736.D 200 =1C165739.D 4 =1C165734.D 2 =1C165733.D  
 8 =1C165735.D 0.2 =1C165730.D = =

Compound	1	0.5	100	50	20	200	4	2	8	0.2	Avg	%RSD	
1) tert butyl alcohol-d9	-----ISTD-----												
2) tertiary butyl alcohol													
		1.429	1.459	1.407	1.458	1.360	1.321	1.377			1.402	3.69	
3) ethanol													
		0.119	0.123	0.118	0.119	0.107	0.114	0.113			0.116	4.44	
4) 1,4-dioxane													
		0.133	0.136	0.133	0.135	0.133	0.115	0.125			0.130	5.72	
5) I pentafluorobenzene	-----ISTD-----												
6) chlorodifluoromethane													
		0.614	0.605	0.585	0.593	0.584	0.588	0.597	0.623	0.553	0.594	3.42	
7) dichlorodifluoromethane													
		0.827	0.749	0.767	0.763	0.764	0.771	0.818	0.806	0.728	0.777	4.26	
8) chloromethane													
		0.664	0.550	0.524	0.563	0.565	0.616	0.591	0.545		0.577	7.78	
9) vinyl chloride													
		0.622	0.590	0.597	0.598	0.609	0.584	0.632	0.620	0.586	0.538	0.598	4.45
10) 1,3-butadiene													
		0.414	0.437	0.398	0.419	0.412	0.396	0.419	0.415	0.378	0.410	4.15	
11) bromomethane													
		0.314	0.279	0.253	0.301	0.255		0.233			0.273	11.28	
12) chloroethane													
		0.309	0.307	0.298	0.301	0.303	0.314	0.294	0.296		0.303	2.26	
13) trichlorofluoromethane													
		0.804	0.773	0.773	0.773	0.779	0.784	0.817	0.787	0.740	0.781	2.77	
14) vinyl bromide													
		0.392	0.324	0.432	0.416	0.425	0.431	0.438	0.412	0.397	0.408	8.59	
15) ethyl ether													
		0.180	0.222	0.215	0.213	0.219	0.203	0.207	0.192		0.206	6.92	
16) acrolein													
		0.064	0.061	0.059	0.063			0.048			0.059	10.42	
17) freon 113													
		0.331	0.294	0.354	0.358	0.352	0.362	0.365	0.374	0.326	0.346	7.18	
18) 1,1-dichloroethene													
		0.449	0.456	0.413	0.421	0.414	0.418	0.463	0.449	0.399	0.431	5.29	
19) acetone													
		0.112	0.103	0.105	0.105	0.099	0.110	0.121	0.101		0.107	6.56	
20) acetonitrile													
		0.043	0.042	0.043	0.041	0.045	0.043	0.044			0.043	2.93	
21) iodomethane													
		0.454	0.437	0.391	0.437	0.321	0.304	0.305			0.378	17.74	
22) carbon disulfide													
		1.242	1.252	1.228	1.254	1.319	1.407	1.163			1.266	6.10	
23) methylene chloride													

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICC7262  
 Lab FileID: 1C165737.D

24)	methyl acetate	0.446	0.441	0.446	0.444	0.480	0.430	0.448	3.78
25)	methyl tert butyl ether	0.256	0.260	0.260	0.246	0.222	0.224	0.221	7.52
26)	trans-1,2-dichloroethene	0.933	0.903	1.035	0.966	0.972	1.004	0.932	9.93
27)	di-isopropyl ether	0.491	0.577	0.445	0.447	0.451	0.441	0.459	9.69
28)	2-butanone	1.233	1.217	1.378	1.344	1.319	1.341	1.276	4.56
29)	1,1-dichloroethane	0.044	0.043	0.042	0.043	0.036	0.034	0.037	9.95
30)	chloroprene	0.756	0.746	0.748	0.758	0.759	0.730	0.777	2.84
31)	acrylonitrile	0.602	0.568	0.636	0.642	0.627	0.634	0.640	4.27
32)	hexane	0.119	0.114	0.112	0.115			0.087	11.74
33)	vinyl acetate	0.670	0.714	0.731	0.713	0.731	0.725	0.720	3.96
34)	ethyl tert-butyl ether	0.075	0.068	0.069	0.072	0.056		0.054	13.26
35)	ethyl acetate	0.880	0.923	1.059	0.944	0.950	1.026	0.954	6.75
36)	2,2-dichloropropane	0.054	0.051	0.049	0.050	0.042		0.041	10.47
37)	cis-1,2-dichloroethene	0.480	0.609	0.599	0.576	0.604	0.569	0.545	8.48
38)	methyl acrylate	0.515	0.530	0.490	0.493	0.491	0.478	0.510	4.28
39)	propionitrile	0.059	0.057	0.054	0.058	0.035		0.043	18.69
40)	bromochloromethane	0.040	0.051	0.050	0.051	0.050	0.045	0.047	8.18
41)	tetrahydrofuran	0.201	0.218	0.218	0.224	0.209	0.217	0.216	3.52
42)	chloroform	0.107	0.103	0.108	0.102	0.099		0.090	6.34
43)	t-butyl formate	0.595	0.513	0.515	0.521	0.506	0.540	0.560	6.71
44)	dibromofluoromethane (s)	0.190	0.155	0.163	0.172	0.142		0.135	12.51
45)	methacrylonitrile	0.474	0.473	0.467	0.473	0.475	0.466	0.472	0.66
46)	1,1,1-trichloroethane	0.152	0.146	0.143	0.152	0.128	0.129	0.127	8.09
47)	cyclohexane	0.702	0.693	0.715	0.716	0.707	0.720	0.726	2.92
48)	1,1-dichloropropene	0.695	0.585	0.652	0.650	0.665	0.645	0.695	5.14
49)	iso-butyl alcohol	0.560	0.621	0.598	0.604	0.598	0.594	0.614	3.99
50)	carbon tetrachloride	0.017	0.016	0.017	0.016	0.015		0.015	4.29
51)	tert amyl alcohol	0.585	0.603	0.621	0.633	0.622	0.620	0.634	3.08
		0.015	0.014	0.014	0.014	0.012		0.014	7.12
52)	I 1,4-difluorobenzene	-----ISTD-----							
53)	1,2-dichloroethane-d4 (s)								

6.9.1  
6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VIC7262-ICC7262  
 Lab FileID: 1C165737.D

54)	n-butyl alcohol	0.302	0.305	0.288	0.290	0.301	0.284	0.300	0.303	0.298	0.298	0.297	2.34
				0.008	0.008	0.007	0.008	0.006	0.006	0.006		0.007#	10.28
55)	2,2,4-trimethylpentane	1.028	1.099	0.995	1.006	1.014	1.005	1.039	1.038	0.940	0.873	1.004	6.07
56)	benzene	1.117	1.096	1.083	1.104	1.112	1.049	1.144	1.181	1.053	1.078	1.102	3.64
57)	tert-amyl methyl ether			0.145	0.129	0.135	0.137	0.132	0.132	0.121		0.133	5.47
58)	heptane	0.255		0.265	0.266	0.266	0.270	0.274	0.263	0.245		0.263	3.43
59)	isopropyl acetate			0.052	0.051	0.049	0.051	0.041		0.042		0.048	10.81
60)	1,2-dichloroethane	0.399		0.330	0.334	0.342	0.315	0.356	0.390	0.332		0.349	8.61
61)	trichloroethene	0.284	0.279	0.306	0.308	0.309	0.301	0.310	0.322	0.284		0.300	4.88
62)	ethyl acrylate			0.300	0.291	0.283	0.287	0.263	0.272	0.257		0.279	5.60
63)	2-nitropropane											0.000#	-1.00
64)	2-chloroethyl vinyl ether	0.086		0.110	0.095	0.100	0.105	0.094	0.102	0.088		0.097	8.34
65)	methyl methacrylate			0.062	0.060	0.059	0.060	0.055	0.050	0.054		0.057	7.86
66)	1,2-dichloropropane	0.260	0.260	0.275	0.277	0.275	0.271	0.279	0.287	0.260		0.272	3.60
67)	dibromomethane	0.154	0.143	0.172	0.169	0.169	0.166	0.167	0.170	0.160		0.163	5.69
68)	methylcyclohexane	0.513	0.485	0.510	0.530	0.519	0.521	0.517	0.538	0.478	0.454	0.507	5.19
69)	bromodichloromethane	0.384	0.354	0.399	0.394	0.386	0.393	0.393	0.395	0.365		0.385	3.96
70)	epichlorohydrin			0.023	0.022	0.022	0.022	0.020	0.021	0.019		0.021	6.30
71)	cis-1,3-dichloropropene	0.407	0.390	0.457	0.450	0.444	0.447	0.445	0.435	0.405		0.431	5.56
72)	4-methyl-2-pentanone	0.074	0.074	0.087	0.087	0.086	0.083	0.083	0.083	0.079		0.082	6.29
73)	3-methyl-1-butanol	0.009		0.012	0.012	0.012	0.011	0.010	0.010	0.010		0.011	9.43
74)	I chlorobenzene-d5												
75)	toluene-d8 (s)	1.373	1.352	1.370	1.362	1.364	1.375	1.363	1.357	1.366	1.361	1.364	0.52
76)	toluene	0.864	0.878	0.857	0.846	0.848	0.845	0.846	0.896	0.800	0.801	0.848	3.56
77)	trans-1,3-dichloropropene	0.411	0.409	0.491	0.476	0.465	0.481	0.435	0.423	0.421		0.446	7.23
78)	ethyl methacrylate	0.326	0.288	0.388	0.365	0.370	0.379	0.355	0.346	0.336		0.350	8.78
79)	1,1,2-trichloroethane	0.252		0.257	0.251	0.249	0.254	0.231	0.243	0.234		0.246	3.88
80)	tetrachloroethene	0.300	0.285	0.300	0.305	0.301	0.297	0.321	0.313	0.282		0.300	4.10
81)	1,3-dichloropropane	0.443	0.421	0.447	0.444	0.443	0.429	0.444	0.472	0.420		0.440	3.58
82)	2-hexanone	0.098	0.083	0.107	0.107	0.108	0.099	0.099	0.103	0.099		0.100	7.48
83)	butyl acetate												

6.9.1

6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VIC7262-ICC7262  
 Lab FileID: 1C165737.D

84)	dibromochloromethane	0.145	0.189	0.182	0.186	0.183	0.177	0.166	0.164	0.174	8.52		
85)	1,2-dibromoethane	0.314	0.298	0.372	0.358	0.343	0.373	0.331	0.329	0.318	7.76		
86)	n-butyl ether	0.317	0.285	0.357	0.344	0.341	0.353	0.335	0.329	0.323	6.54		
87)	chlorobenzene	1.307	1.325	1.359	1.349	1.358	1.340	1.317	1.324	1.250	1.220	1.315	3.50
88)	1,1,1,2-tetrachloroethane	0.929	0.924	0.889	0.874	0.880	0.870	0.905	0.915	0.838	0.913	0.894	3.22
89)	ethylbenzene	0.301	0.269	0.330	0.325	0.319	0.323	0.322	0.314	0.300	0.312	6.05	
90)	m,p-xylene	1.591	1.658	1.509	1.524	1.555	1.454	1.624	1.607	1.485	1.645	1.565	4.50
91)	o-xylene	0.608	0.612	0.567	0.576	0.592	0.535	0.615	0.635	0.568	0.595	0.590	4.96
92)	styrene	0.584	0.542	0.566	0.572	0.582	0.531	0.587	0.601	0.541	0.492	0.560	5.87
93)	bromoform	0.977	0.978	0.929	0.953	0.967	0.861	0.976	0.983	0.911	0.901	0.944	4.38
94)	butyl acrylate	0.230	0.213	0.201	0.235	0.184	0.186	0.183	0.204	10.70			
95)	isopropylbenzene	0.518	0.497	0.614	0.582	0.585	0.595	0.547	0.549	0.528	0.557	7.03	
96)	cis-1,4-dichloro-2-butene	1.565	1.514	1.481	1.503	1.500	1.432	1.567	1.545	1.417	1.503	3.55	
97)	I 1,4-dichlorobenzene-d	0.130	0.120	0.115	0.130	0.103	0.098	0.116	11.69				
98)	4-bromofluorobenzene (s)	-----ISTD-----											
99)	bromobenzene	1.004	1.008	0.988	0.981	0.990	1.006	1.002	0.995	0.998	0.987	0.996	0.92
100)	1,1,2,2-tetrachloroethane	0.798	0.732	0.763	0.755	0.775	0.722	0.790	0.833	0.735	0.767	4.71	
101)	trans-1,4-dichloro-2-butene	0.673	0.665	0.763	0.729	0.710	0.748	0.688	0.693	0.677	0.705	4.91	
102)	1,2,3-trichloropropane	0.168	0.152	0.150	0.166	0.129	0.129	0.149	11.57				
103)	n-propylbenzene	0.174	0.171	0.176	0.161	0.161	0.165	0.161	0.167	3.97			
104)	2-chlorotoluene	3.742	3.994	3.544	3.644	3.728	3.305	3.861	3.909	3.490	3.984	3.720	6.10
105)	4-chlorotoluene	0.776	0.703	0.706	0.714	0.741	0.665	0.762	0.769	0.683	0.724	5.47	
106)	1,3,5-trimethylbenzene	2.332	2.389	2.158	2.136	2.187	2.083	2.262	2.254	2.061	2.229	2.209	4.75
107)	tert-butylbenzene	2.445	2.639	2.481	2.475	2.507	2.378	2.618	2.627	2.353	2.863	2.539	5.96
108)	1,2,4-trimethylbenzene	0.469	0.467	0.476	0.463	0.488	0.466	0.436	0.467	3.42			
109)	sec-butylbenzene	2.626	2.751	2.492	2.470	2.503	2.387	2.553	2.624	2.359	3.187	2.595	9.19
110)	1,3-dichlorobenzene	3.325	3.779	3.313	3.354	3.381	3.187	3.488	3.491	3.164	3.108	3.359	5.83
111)	p-isopropyltoluene	1.524	1.557	1.455	1.444	1.480	1.415	1.517	1.525	1.361	1.401	1.468	4.34
112)	1,4-dichlorobenzene	2.798	3.026	2.716	2.732	2.768	2.640	2.849	2.852	2.596	3.185	2.816	6.28
113)	benzyl chloride	1.496	1.606	1.457	1.437	1.441	1.397	1.501	1.547	1.366	1.631	1.488	5.81

6.9.1  
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# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICC7262  
 Lab FileID: 1C165737.D

*This compound does not meet initial calibration criteria*													
		1.237	1.122	1.034	1.222	0.899	0.943	0.876		1.048	14.29		
114)	1,2-dichlorobenzene	1.482	1.518	1.426	1.412	1.397	1.373	1.431	1.456	1.301	1.360	1.416	4.42
115)	n-butylbenzene	1.508	1.568	1.451	1.483	1.513	1.391	1.510	1.535	1.352	1.491	1.480	4.44
116)	1,2-dibromo-3-chloropropane	0.135	0.133	0.132	0.132	0.123	0.120	0.118				0.128	5.42
117)	1,3,5-trichlorobenzene	1.127	1.087	1.072	1.057	1.086	1.015	1.090	1.108	0.967	1.169	1.078	5.23
118)	2-ethylhexyl acrylate	0.692	0.647	0.557	0.675	0.659			0.512			0.624	11.55
119)	1,2,4-trichlorobenzene	0.942	0.931	0.892	0.875	0.912	0.827	0.915	0.966	0.819	0.838	0.892	5.67
120)	hexachlorobutadiene	0.548	0.549	0.554	0.551	0.574	0.526	0.578	0.576	0.534		0.555	3.34
121)	naphthalene	2.046	2.016	1.902	1.907	1.998	1.767	1.927	2.024	1.840	1.919	1.935	4.57
122)	1,2,3-trichlorobenzene	0.878	0.911	0.841	0.836	0.861	0.785	0.872	0.884	0.781	0.787	0.844	5.46
123)	hexachloroethane	0.510	0.472	0.442	0.520	0.422	0.411	0.390				0.452	11.02
124)	2-methylnaphthalene	1.304	1.225	1.228	1.208	1.108	1.075	1.048				1.171	8.06
125)	bis(chloromethyl)ether											0.000#	-1.00
126)	ethylenimine											0.000#	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

M1CS7262.M Tue Jul 16 09:11:09 2019

6.9.1  
6

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
 Lab FileID: 1C165742.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V1C7262\1C165742.D Vial: 14  
 Acq On : 13 Jul 2019 8:14 pm Operator: PrashanS  
 Sample : ICV7262-50 Inst : GCMS1C  
 Misc : MS35874,V1C7262,5.0,,,,,1 Multiplr: 1.00  
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)  
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 Last Update : Tue Jul 16 09:07:34 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	97	0.00	7.30
2 M	tertiary butyl alcohol	1.402	1.521	-8.5	101	0.00	7.41
3	ethanol	0.116	0.140	-20.7	111	0.00	6.06
4 M	1,4-dioxane	0.130	0.142	-9.2	101	0.00	11.18
5 I	pentafluorobenzene	1.000	1.000	0.0	101	0.00	9.53
6 M	chlorodifluoromethane	0.594	0.555	6.6	95	0.00	3.85
7 M	dichlorodifluoromethane	0.777	0.629	19.0	84	0.00	3.81
8 M	chloromethane	0.577	0.513	11.1	99	0.00	4.23
9 M	vinyl chloride	0.598	0.575	3.8	98	0.00	4.46
10	1,3-butadiene	0.410	0.462	-12.7	112	0.00	4.53
11 M	bromomethane	0.273	0.355	-30.0#	129	0.01	5.13
12 M	chloroethane	0.303	0.258	14.9	88	0.00	5.31
13 M	trichlorofluoromethane	0.781	0.761	2.6	100	0.00	5.75
14	vinyl bromide	0.408	0.408	0.0	99	0.00	5.66
15 M	ethyl ether	0.206	0.215	-4.4	101	0.00	6.19
16 M	acrolein	0.059	0.062	-5.1	104	0.00	6.47
17	freon 113	0.346	0.409	-18.2	116	0.00	6.55
18 M	1,1-dichloroethene	0.431	0.399	7.4	96	0.00	6.61
19 M	acetone	0.107	0.109	-1.9	105	0.00	6.68
20 M	acetonitrile			-----NA-----			
21 M	iodomethane	0.378	0.440	-16.4	102	0.00	6.90
22 M	carbon disulfide	1.266	1.383	-9.2	112	0.00	7.01
23 M	methylene chloride	0.448	0.444	0.9	102	0.00	7.35
24 M	methyl acetate	0.241	0.250	-3.7	97	0.00	7.14
25 M	methyl tert butyl ether	0.930	0.990	-6.5	104	0.00	7.64
26 M	trans-1,2-dichloroethene	0.469	0.452	3.6	103	0.00	7.71
27 M	di-isopropyl ether	1.294	1.298	-0.3	98	0.00	8.23
28 M	2-butanone	0.040	0.044	-10.0	103	0.00	8.99
29 M	1,1-dichloroethane	0.753	0.772	-2.5	103	0.00	8.29
30 M	chloroprene	0.618	0.685	-10.8	108	0.00	8.39
31 M	acrylonitrile			-----NA-----			
32	hexane	0.708	0.747	-5.5	104	0.00	7.99
33 M	vinyl acetate	0.066	0.064	3.0	95	0.00	8.27
34 M	ethyl tert-butyl ether	0.954	0.985	-3.2	106	0.00	8.70
35 M	ethyl acetate	0.048	0.050	-4.2	99	0.00	9.01
36 M	2,2-dichloropropane	0.561	0.614	-9.4	104	0.00	9.01
37 M	cis-1,2-dichloroethene	0.501	0.492	1.8	101	0.00	9.03
38	methyl acrylate	0.051	0.056	-9.8	99	0.00	9.09
39 M	propionitrile	0.047	0.050	-6.4	101	0.00	9.12
40 M	bromochloromethane	0.214	0.226	-5.6	105	0.00	9.35
41 M	tetrahydrofuran	0.102	0.102	0.0	101	0.00	9.38



# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
 Lab FileID: 1C165742.D

42 M	chloroform	0.529	0.530	-0.2	104	0.00	9.40
43 M	t-butyl formate	0.159	0.154	3.1	101	0.00	9.41
44 S	dibromofluoromethane (s)	0.471	0.471	0.0	101	0.00	9.60
45 M	methacrylonitrile	0.140	0.149	-6.4	104	0.00	9.29
46 M	1,1,1-trichloroethane	0.706	0.729	-3.3	103	0.00	9.63
47	cyclohexane	0.652	0.692	-6.1	108	0.00	9.69
48	1,1-dichloropropene	0.595	0.620	-4.2	104	0.00	9.81
49	iso-butyl alcohol	0.016	0.016	0.0	101	0.00	9.83
50	carbon tetrachloride	0.613	0.657	-7.2	105	0.00	9.83
51	tert amyl alcohol	0.014	0.015	-7.1	109	0.00	9.95
52 I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	10.45
53 S	1,2-dichloroethane-d4 (s)	0.297	0.288	3.0	101	0.00	10.02
54 M	n-butyl alcohol	0.007	0.007#	0.0	99	0.00	10.59
55	2,2,4-trimethylpentane	1.004	1.128	-12.4	114	0.00	10.04
56 M	benzene	1.102	1.138	-3.3	104	0.00	10.08
57 M	tert-amyl methyl ether	0.133	0.140	-5.3	110	0.00	10.09
58 M	heptane	0.263	0.317	-20.5	121	0.00	10.22
59 M	isopropyl acetate	0.048	0.049	-2.1	97	0.00	9.99
60 M	1,2-dichloroethane	0.349	0.330	5.4	100	0.00	10.11
61 M	trichloroethene	0.300	0.327	-9.0	108	0.00	10.79
62	ethyl acrylate	0.279	0.290	-3.9	101	0.00	10.79
63 M	2-nitropropane			-----NA-----			
64 M	2-chloroethyl vinyl ether	0.097	0.109	-12.4	116	0.00	11.58
65 M	methyl methacrylate	0.057	0.061	-7.0	103	0.00	11.06
66 M	1,2-dichloropropane	0.272	0.280	-2.9	102	0.00	11.07
67 M	dibromomethane	0.163	0.167	-2.5	100	0.00	11.23
68 M	methylcyclohexane	0.507	0.532	-4.9	102	0.00	10.99
69 M	bromodichloromethane	0.385	0.396	-2.9	102	0.00	11.36
70	epichlorohydrin	0.021	0.023	-9.5	105	0.00	11.73
71 M	cis-1,3-dichloropropene	0.431	0.460	-6.7	103	0.00	11.80
72 M	4-methyl-2-pentanone	0.082	0.086	-4.9	100	0.00	11.89
73 M	3-methyl-1-butanol	0.011	0.012	-9.1	101	0.00	11.92
74 I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00	13.59
75 S	toluene-d8 (s)	1.364	1.380	-1.2	101	0.00	12.09
76	toluene	0.848	0.891	-5.1	105	0.00	12.16
77	trans-1,3-dichloropropene	0.446	0.500	-12.1	104	0.00	12.37
78	ethyl methacrylate	0.350	0.383	-9.4	104	0.00	12.34
79	1,1,2-trichloroethane	0.246	0.258	-4.9	102	0.00	12.58
80 M	tetrachloroethene			-----NA-----			
81 M	1,3-dichloropropane	0.440	0.460	-4.5	103	0.00	12.77
82	2-hexanone	0.100	0.107	-7.0	100	0.00	12.74
83 M	butyl acetate	0.174	0.184	-5.7	100	0.00	12.81
84 M	dibromochloromethane	0.337	0.381	-13.1	106	0.00	13.03
85 M	1,2-dibromoethane	0.332	0.353	-6.3	102	0.00	13.18
86	n-butyl ether	1.315	1.465	-11.4	108	0.00	13.51
87 M	chlorobenzene	0.894	0.934	-4.5	106	0.00	13.62
88 M	1,1,1,2-tetrachloroethane	0.312	0.344	-10.3	105	0.00	13.69
89 M	ethylbenzene	1.565	1.604	-2.5	104	0.00	13.67
90 M	m,p-xylene	0.590	0.607	-2.9	105	0.00	13.78
91 M	o-xylene	0.560	0.593	-5.9	103	0.00	14.19
92 M	styrene	0.944	0.995	-5.4	104	0.00	14.21
93 M	bromoform	0.204	0.240	-17.6	112	0.00	14.49
94	butyl acrylate	0.557	0.584	-4.8	99	0.00	14.02
95	isopropylbenzene	1.503	1.585	-5.5	105	0.00	14.53
96	cis-1,4-dichloro-2-butene	0.116	0.121	-4.3	100	0.00	14.62
97 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	100	0.00	15.91
98 S	4-bromofluorobenzene (s)	0.996	0.977	1.9	100	0.00	14.74

6.9.2  
6

**Initial Calibration Verification**

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
Lab FileID: 1C165742.D

99 M	bromobenzene	0.767	0.785	-2.3	104	0.00	14.94
100 M	1,1,2,2-tetrachloroethane	0.705	0.734	-4.1	101	0.00	14.86
101 M	trans-1,4-dichloro-2-bute	0.149	0.173	-16.1	114	0.00	14.89
102 M	1,2,3-trichloropropane	0.167	0.172	-3.0	100	0.00	14.93
103 M	n-propylbenzene	3.720	3.824	-2.8	105	0.00	14.94
104 M	2-chlorotoluene	0.724	0.731	-1.0	102	0.00	15.09
105 M	4-chlorotoluene	2.209	2.240	-1.4	105	0.00	15.19
106 M	1,3,5-trimethylbenzene	2.539	2.577	-1.5	104	0.00	15.08
107 M	tert-butylbenzene	0.467	0.500	-7.1	107	0.00	15.43
108 M	1,2,4-trimethylbenzene	2.595	2.608	-0.5	106	0.00	15.48
109 M	sec-butylbenzene	3.359	3.530	-5.1	105	0.00	15.65
110 M	1,3-dichlorobenzene	1.468	1.525	-3.9	106	0.00	15.85
111 M	p-isopropyltoluene	2.816	2.903	-3.1	106	0.00	15.77
112 M	1,4-dichlorobenzene	1.488	1.495	-0.5	104	0.00	15.94
113	benzyl chloride	1.048	1.432	-36.6#	128	0.00	16.06
114 M	1,2-dichlorobenzene	1.416	1.460	-3.1	103	0.00	16.34
115 M	n-butylbenzene	1.480	1.529	-3.3	103	0.00	16.19
116 M	1,2-dibromo-3-chloropropa	0.128	0.129	-0.8	97	0.00	17.13
117	1,3,5-trichlorobenzene	1.078	1.102	-2.2	104	0.00	17.29
118	2-ethylhexyl acrylate	0.624	0.702	-12.5	109	0.00	17.82
119 M	1,2,4-trichlorobenzene	0.892	0.892	0.0	102	0.00	17.87
120 M	hexachlorobutadiene	0.555	0.568	-2.3	103	0.00	17.95
121 M	naphthalene	1.935	1.922	0.7	101	0.00	18.11
122 M	1,2,3-trichlorobenzene	0.844	0.845	-0.1	101	0.00	18.32
123 m	hexachloroethane	0.452	0.514	-13.7	109	0.00	16.59
124	2-methylnaphthalene	1.171	1.297	-10.8	106	0.00	19.07
125	bis(chloromethyl)ether			-----NA-----			
126	ethylenimine			-----NA-----			

(#) = Out of Range  
1C165737.D M1CS7262.M

SPCC's out = 0 CCC's out = 0  
Tue Jul 16 09:10:46 2019

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
 Lab FileID: 1C165743.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V1C7262\1C165743.D Vial: 15  
 Acq On : 13 Jul 2019 8:41 pm Operator: PrashanS  
 Sample : ICV7262-50 Inst : GCMS1C  
 Misc : MS35874,V1C7262,5.0,,,,,1 Multiplr: 1.00  
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)  
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 Last Update : Tue Jul 16 09:07:34 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	97	0.00	7.30
2 M	tertiary butyl alcohol			NA			
3	ethanol			NA			
4 M	1,4-dioxane			NA			
5 I	pentafluorobenzene	1.000	1.000	0.0	99	0.00	9.53
6 M	chlorodifluoromethane			NA			
7 M	dichlorodifluoromethane			NA			
8 M	chloromethane			NA			
9 M	vinyl chloride			NA			
10	1,3-butadiene			NA			
11 M	bromomethane			NA			
12 M	chloroethane			NA			
13 M	trichlorofluoromethane			NA			
14	vinyl bromide			NA			
15 M	ethyl ether			NA			
16 M	acrolein			NA			
17	freon 113			NA			
18 M	1,1-dichloroethene			NA			
19 M	acetone			NA			
20 M	acetonitrile	0.043	0.044	-2.3	105	0.00	7.14
21 M	iodomethane			NA			
22 M	carbon disulfide			NA			
23 M	methylene chloride			NA			
24 M	methyl acetate			NA			
25 M	methyl tert butyl ether			NA			
26 M	trans-1,2-dichloroethene			NA			
27 M	di-isopropyl ether			NA			
28 M	2-butanone			NA			
29 M	1,1-dichloroethane			NA			
30 M	chloroprene			NA			
31 M	acrylonitrile	0.109	0.113	-3.7	99	0.00	7.70
32	hexane			NA			
33 M	vinyl acetate			NA			
34 M	ethyl tert-butyl ether			NA			
35 M	ethyl acetate			NA			
36 M	2,2-dichloropropane			NA			
37 M	cis-1,2-dichloroethene			NA			
38	methyl acrylate			NA			
39 M	propionitrile			NA			
40 M	bromochloromethane			NA			
41 M	tetrahydrofuran			NA			

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
 Lab FileID: 1C165743.D

42	M	chloroform			-----NA-----				
43	M	t-butyl formate			-----NA-----				
44	S	dibromofluoromethane (s)	0.471	0.474	-0.6	100	0.00	9.60	
45	M	methacrylonitrile			-----NA-----				
46	M	1,1,1-trichloroethane			-----NA-----				
47		cyclohexane			-----NA-----				
48		1,1-dichloropropene			-----NA-----				
49		iso-butyl alcohol			-----NA-----				
50		carbon tetrachloride			-----NA-----				
51		tert amyl alcohol			-----NA-----				
52	I	1,4-difluorobenzene	1.000	1.000	0.0	97	0.00	10.45	
53	S	1,2-dichloroethane-d4 (s)	0.297	0.299	-0.7	100	0.00	10.02	
54	M	n-butyl alcohol			-----NA-----				
55		2,2,4-trimethylpentane			-----NA-----				
56	M	benzene			-----NA-----				
57	M	tert-amyl methyl ether			-----NA-----				
58	M	heptane			-----NA-----				
59	M	isopropyl acetate			-----NA-----				
60	M	1,2-dichloroethane			-----NA-----				
61	M	trichloroethene			-----NA-----				
62		ethyl acrylate			-----NA-----				
63	M	2-nitropropane			-----NA-----				
64	M	2-chloroethyl vinyl ether			-----NA-----				
65	M	methyl methacrylate			-----NA-----				
66	M	1,2-dichloropropane			-----NA-----				
67	M	dibromomethane			-----NA-----				
68	M	methylcyclohexane			-----NA-----				
69	M	bromodichloromethane			-----NA-----				
70		epichlorohydrin			-----NA-----				
71	M	cis-1,3-dichloropropene			-----NA-----				
72	M	4-methyl-2-pentanone			-----NA-----				
73	M	3-methyl-1-butanol			-----NA-----				
74	I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00	13.60	
75	S	toluene-d8 (s)	1.364	1.356	0.6	98	0.00	12.09	
76		toluene			-----NA-----				
77		trans-1,3-dichloropropene			-----NA-----				
78		ethyl methacrylate			-----NA-----				
79		1,1,2-trichloroethane			-----NA-----				
80	M	tetrachloroethene	0.300	0.348	-16.0	113	0.00	12.73	
81	M	1,3-dichloropropane			-----NA-----				
82		2-hexanone			-----NA-----				
83	M	butyl acetate			-----NA-----				
84	M	dibromochloromethane			-----NA-----				
85	M	1,2-dibromoethane			-----NA-----				
86		n-butyl ether			-----NA-----				
87	M	chlorobenzene			-----NA-----				
88	M	1,1,1,2-tetrachloroethane			-----NA-----				
89	M	ethylbenzene			-----NA-----				
90	M	m,p-xylene			-----NA-----				
91	M	o-xylene			-----NA-----				
92	M	styrene			-----NA-----				
93	M	bromoform			-----NA-----				
94		butyl acrylate			-----NA-----				
95		isopropylbenzene			-----NA-----				
96		cis-1,4-dichloro-2-butene			-----NA-----				
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	15.91	
98	S	4-bromofluorobenzene (s)	0.996	0.999	-0.3	101	0.00	14.74	

6.9.3

6

# Initial Calibration Verification

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
Lab FileID: 1C165743.D

---

99 M	bromobenzene	-----NA-----
100 M	1,1,2,2-tetrachloroethane	-----NA-----
101 M	trans-1,4-dichloro-2-bute	-----NA-----
102 M	1,2,3-trichloropropane	-----NA-----
103 M	n-propylbenzene	-----NA-----
104 M	2-chlorotoluene	-----NA-----
105 M	4-chlorotoluene	-----NA-----
106 M	1,3,5-trimethylbenzene	-----NA-----
107 M	tert-butylbenzene	-----NA-----
108 M	1,2,4-trimethylbenzene	-----NA-----
109 M	sec-butylbenzene	-----NA-----
110 M	1,3-dichlorobenzene	-----NA-----
111 M	p-isopropyltoluene	-----NA-----
112 M	1,4-dichlorobenzene	-----NA-----
113	benzyl chloride	-----NA-----
114 M	1,2-dichlorobenzene	-----NA-----
115 M	n-butylbenzene	-----NA-----
116 M	1,2-dibromo-3-chloropropa	-----NA-----
117	1,3,5-trichlorobenzene	-----NA-----
118	2-ethylhexyl acrylate	-----NA-----
119 M	1,2,4-trichlorobenzene	-----NA-----
120 M	hexachlorobutadiene	-----NA-----
121 M	naphthalene	-----NA-----
122 M	1,2,3-trichlorobenzene	-----NA-----
123 m	hexachloroethane	-----NA-----
124	2-methylnaphthalene	-----NA-----
125	bis(chloromethyl)ether	-----NA-----
126	ethylenimine	-----NA-----

---

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(#) = Out of Range  
1C165737.D M1CS7262.M

SPCC's out = 0 CCC's out = 0  
Tue Jul 16 09:10:49 2019

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
 Lab FileID: 1C165747.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V1C7262\1C165747.D Vial: 19  
 Acq On : 15 Jul 2019 1:23 pm Operator: PrashanS  
 Sample : ICV7262-50 Inst : GCMS1C  
 Misc : MS35874,V1C7262,5.0,,,,,1 Multiplr: 1.00  
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)  
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 Last Update : Tue Jul 16 09:07:34 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	92	-0.01	7.29
2 M	tertiary butyl alcohol			-----NA-----			
3	ethanol			-----NA-----			
4 M	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	9.53
6 M	chlorodifluoromethane			-----NA-----			
7 M	dichlorodifluoromethane	0.777	0.678	12.7	89	0.00	3.81
8 M	chloromethane	0.577	0.529	8.3	101	0.00	4.23
9 M	vinyl chloride	0.598	0.629	-5.2	105	0.00	4.46
10	1,3-butadiene			-----NA-----			
11 M	bromomethane	0.273	0.352	-28.9	126	0.02	5.14
12 M	chloroethane	0.303	0.278	8.3	93	0.00	5.31
13 M	trichlorofluoromethane	0.781	0.807	-3.3	105	0.00	5.75
14	vinyl bromide	0.408	0.429	-5.1	103	0.00	5.66
15 M	ethyl ether			-----NA-----			
16 M	acrolein			-----NA-----			
17	freon 113			-----NA-----			
18 M	1,1-dichloroethene			-----NA-----			
19 M	acetone			-----NA-----			
20 M	acetonitrile			-----NA-----			
21 M	iodomethane			-----NA-----			
22 M	carbon disulfide			-----NA-----			
23 M	methylene chloride			-----NA-----			
24 M	methyl acetate			-----NA-----			
25 M	methyl tert butyl ether			-----NA-----			
26 M	trans-1,2-dichloroethene			-----NA-----			
27 M	di-isopropyl ether			-----NA-----			
28 M	2-butanone			-----NA-----			
29 M	1,1-dichloroethane			-----NA-----			
30 M	chloroprene			-----NA-----			
31 M	acrylonitrile			-----NA-----			
32	hexane	0.708	0.745	-5.2	102	0.00	7.99
33 M	vinyl acetate			-----NA-----			
34 M	ethyl tert-butyl ether			-----NA-----			
35 M	ethyl acetate			-----NA-----			
36 M	2,2-dichloropropane			-----NA-----			
37 M	cis-1,2-dichloroethene			-----NA-----			
38	methyl acrylate			-----NA-----			
39 M	propionitrile			-----NA-----			
40 M	bromochloromethane			-----NA-----			
41 M	tetrahydrofuran			-----NA-----			

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
 Lab FileID: 1C165747.D

42	M	chloroform										
43	M	t-butyl formate										
44	S	dibromofluoromethane (s)	0.471	0.480	-1.9	102	0.00	9.60				
45	M	methacrylonitrile										
46	M	1,1,1-trichloroethane										
47		cyclohexane	0.652	0.707	-8.4	109	0.00	9.69				
48		1,1-dichloropropene										
49		iso-butyl alcohol										
50		carbon tetrachloride										
51		tert amyl alcohol										
52	I	1,4-difluorobenzene	1.000	1.000	0.0	99	0.00	10.45				
53	S	1,2-dichloroethane-d4 (s)	0.297	0.296	0.3	101	0.00	10.02				
54	M	n-butyl alcohol										
55		2,2,4-trimethylpentane										
56	M	benzene										
57	M	tert-amyl methyl ether										
58	M	heptane										
59	M	isopropyl acetate										
60	M	1,2-dichloroethane										
61	M	trichloroethene										
62		ethyl acrylate										
63	M	2-nitropropane										
64	M	2-chloroethyl vinyl ether										
65	M	methyl methacrylate										
66	M	1,2-dichloropropane										
67	M	dibromomethane										
68	M	methylcyclohexane										
69	M	bromodichloromethane										
70		epichlorohydrin										
71	M	cis-1,3-dichloropropene										
72	M	4-methyl-2-pentanone										
73	M	3-methyl-1-butanol										
74	I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	13.59				
75	S	toluene-d8 (s)	1.364	1.333	2.3	100	0.00	12.08				
76		toluene										
77		trans-1,3-dichloropropene										
78		ethyl methacrylate										
79		1,1,2-trichloroethane										
80	M	tetrachloroethene										
81	M	1,3-dichloropropane										
82		2-hexanone										
83	M	butyl acetate										
84	M	dibromochloromethane										
85	M	1,2-dibromoethane										
86		n-butyl ether										
87	M	chlorobenzene										
88	M	1,1,1,2-tetrachloroethane										
89	M	ethylbenzene										
90	M	m,p-xylene										
91	M	o-xylene										
92	M	styrene										
93	M	bromoform										
94		butyl acrylate										
95		isopropylbenzene										
96		cis-1,4-dichloro-2-butene										
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	15.91				
98	S	4-bromofluorobenzene (s)	0.996	0.975	2.1	103	0.00	14.74				

6.9.4  
6

# Initial Calibration Verification

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7262-ICV7262  
Lab FileID: 1C165747.D

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99 M	bromobenzene	-----NA-----
100 M	1,1,2,2-tetrachloroethane	-----NA-----
101 M	trans-1,4-dichloro-2-bute	-----NA-----
102 M	1,2,3-trichloropropane	-----NA-----
103 M	n-propylbenzene	-----NA-----
104 M	2-chlorotoluene	-----NA-----
105 M	4-chlorotoluene	-----NA-----
106 M	1,3,5-trimethylbenzene	-----NA-----
107 M	tert-butylbenzene	-----NA-----
108 M	1,2,4-trimethylbenzene	-----NA-----
109 M	sec-butylbenzene	-----NA-----
110 M	1,3-dichlorobenzene	-----NA-----
111 M	p-isopropyltoluene	-----NA-----
112 M	1,4-dichlorobenzene	-----NA-----
113	benzyl chloride	-----NA-----
114 M	1,2-dichlorobenzene	-----NA-----
115 M	n-butylbenzene	-----NA-----
116 M	1,2-dibromo-3-chloropropa	-----NA-----
117	1,3,5-trichlorobenzene	-----NA-----
118	2-ethylhexyl acrylate	-----NA-----
119 M	1,2,4-trichlorobenzene	-----NA-----
120 M	hexachlorobutadiene	-----NA-----
121 M	naphthalene	-----NA-----
122 M	1,2,3-trichlorobenzene	-----NA-----
123 m	hexachloroethane	-----NA-----
124	2-methylnaphthalene	-----NA-----
125	bis(chloromethyl)ether	-----NA-----
126	ethylenimine	-----NA-----

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(#) = Out of Range  
1C165737.D M1CS7262.M

SPCC's out = 0 CCC's out = 0  
Tue Jul 16 09:10:51 2019



## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7331-CC7262  
 Lab FileID: 1C167568.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...19\v1c7331\1c167568.d Vial: 3  
 Acq On : 4 Oct 2019 7:59 am Operator: PrashanS  
 Sample : cc7262-50 Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1 Multiplr: 1.00  
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)  
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 Last Update : Tue Jul 16 09:07:34 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	tert butyl alcohol-d9	1.000	1.000	0.0	94	-0.01	7.29
2 M	tertiary butyl alcohol	1.402	1.267	9.6	81	-0.01	7.41
3	ethanol	0.116	0.143	-23.3#	109	-0.02	6.05
4 M	1,4-dioxane	0.130	0.132	-1.5	91	0.00	11.18
5 I	pentafluorobenzene	1.000	1.000	0.0	97	0.00	9.53
6 M	chlorodifluoromethane	0.594	0.577	2.9	94	0.00	3.84
7 M	dichlorodifluoromethane	0.777	0.672	13.5	85	0.00	3.81
8 M	chloromethane	0.577	0.606	-5.0	112	0.00	4.23
9 M	vinyl chloride	0.598	0.620	-3.7	101	0.00	4.46
10	1,3-butadiene	0.410	0.387	5.6	90	0.00	4.52
11 M	bromomethane	0.273	0.350	-28.2#	121	0.01	5.13
12 M	chloroethane	0.303	0.291	4.0	95	0.00	5.31
13 M	trichlorofluoromethane	0.781	0.671	14.1	84	0.00	5.74
14	vinyl bromide	0.408	0.405	0.7	94	0.00	5.66
15 M	ethyl ether	0.206	0.199	3.4	90	0.00	6.19
16 M	acrolein	0.059	0.057	3.4	91	0.00	6.46
17	freon 113	0.346	0.330	4.6	89	0.00	6.55
18 M	1,1-dichloroethene	0.431	0.382	11.4	88	0.00	6.60
19 M	acetone	0.107	0.088	17.8	81	0.00	6.68
20 M	acetonitrile	0.043	0.044	-2.3	102	-0.01	7.13
21 M	iodomethane	0.378	0.348	7.9	77	0.00	6.90
22 M	carbon disulfide	1.266	1.131	10.7	88	0.00	7.01
23 M	methylene chloride	0.448	0.406	9.4	89	0.00	7.35
24 M	methyl acetate	0.241	0.243	-0.8	91	0.00	7.14
25 M	methyl tert butyl ether	0.930	1.003	-7.8	101	0.00	7.64
26 M	trans-1,2-dichloroethene	0.469	0.409	12.8	89	0.00	7.71
27 M	di-isopropyl ether	1.294	1.254	3.1	90	0.00	8.23
28 M	2-butanone	0.040	0.037	7.5	83	0.00	8.99
29 M	1,1-dichloroethane	0.753	0.714	5.2	91	0.00	8.28
30 M	chloroprene	0.618	0.599	3.1	90	0.00	8.38
31 M	acrylonitrile	0.109	0.113	-3.7	96	0.00	7.69
32	hexane	0.708	0.674	4.8	89	0.00	7.99
33 M	vinyl acetate	0.066	0.061	7.6	87	0.00	8.27
34 M	ethyl tert-butyl ether	0.954	1.123	-17.7	115	0.00	8.70
35 M	ethyl acetate	0.048	0.052	-8.3	98	0.00	9.00
36 M	2,2-dichloropropane	0.561	0.620	-10.5	100	0.00	9.01
37 M	cis-1,2-dichloroethene	0.501	0.439	12.4	86	0.00	9.02
38	methyl acrylate	0.051	0.048	5.9	82	0.00	9.08
39 M	propionitrile	0.047	0.048	-2.1	92	0.00	9.11
40 M	bromochloromethane	0.214	0.195	8.9	87	0.00	9.34
41 M	tetrahydrofuran	0.102	0.108	-5.9	102	0.00	9.37

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7331-CC7262  
 Lab FileID: 1C167568.D

42	M	chloroform	0.529	0.461	12.9	87	0.00	9.39
43	M	t-butyl formate	0.159	0.297	-86.8#	185	0.00	9.41
44	S	dibromofluoromethane (s)	0.471	0.461	2.1	94	0.00	9.59
45	M	methacrylonitrile	0.140	0.134	4.3	89	0.00	9.28
46	M	1,1,1-trichloroethane	0.706	0.649	8.1	88	0.00	9.63
47		cyclohexane	0.652	0.586	10.1	87	0.00	9.69
48		1,1-dichloropropene	0.595	0.560	5.9	90	0.00	9.81
49		iso-butyl alcohol	0.016	0.015	6.3	91	-0.01	9.83
50		carbon tetrachloride	0.613	0.578	5.7	88	0.00	9.83
51		tert amyl alcohol	0.014	0.014	0.0	99	0.00	9.95
52	I	1,4-difluorobenzene	1.000	1.000	0.0	97	0.00	10.45
53	S	1,2-dichloroethane-d4 (s)	0.297	0.284	4.4	95	0.00	10.02
54	M	n-butyl alcohol	0.007	0.007#	0.0	91	0.00	10.58
55		2,2,4-trimethylpentane	1.004	0.857	14.6	83	0.00	10.04
56	M	benzene	1.102	1.008	8.5	88	0.00	10.07
57	M	tert-amyl methyl ether	0.133	0.151	-13.5	113	0.00	10.08
58	M	heptane	0.263	0.229	12.9	84	0.00	10.22
59	M	isopropyl acetate	0.048	0.046	4.2	88	0.00	9.99
60	M	1,2-dichloroethane	0.349	0.301	13.8	87	0.00	10.10
61	M	trichloroethene	0.300	0.281	6.3	89	0.00	10.79
62		ethyl acrylate	0.279	0.267	4.3	89	0.00	10.79
63	M	2-nitropropane			-----NA-----			
64	M	2-chloroethyl vinyl ether	0.097	0.123	-26.8#	125	0.00	11.58
65	M	methyl methacrylate	0.057	0.051	10.5	83	0.00	11.06
66	M	1,2-dichloropropane	0.272	0.258	5.1	90	0.00	11.06
67	M	dibromomethane	0.163	0.147	9.8	84	0.00	11.23
68	M	methylcyclohexane	0.507	0.460	9.3	84	0.00	10.98
69	M	bromodichloromethane	0.385	0.345	10.4	85	0.00	11.35
70		epichlorohydrin	0.021	0.021	0.0	90	0.00	11.72
71	M	cis-1,3-dichloropropene	0.431	0.406	5.8	87	0.00	11.80
72	M	4-methyl-2-pentanone	0.082	0.074	9.8	83	0.00	11.89
73	M	3-methyl-1-butanol	0.011	0.010	9.1	86	0.00	11.91
74	I	chlorobenzene-d5	1.000	1.000	0.0	89	0.00	13.59
75	S	toluene-d8 (s)	1.364	1.396	-2.3	91	0.00	12.08
76		toluene	0.848	0.772	9.0	81	0.00	12.15
77		trans-1,3-dichloropropene	0.446	0.467	-4.7	87	0.00	12.36
78		ethyl methacrylate	0.350	0.325	7.1	79	0.00	12.34
79		1,1,2-trichloroethane	0.246	0.226	8.1	80	0.00	12.58
80	M	tetrachloroethene	0.300	0.288	4.0	84	0.00	12.73
81	M	1,3-dichloropropane	0.440	0.401	8.9	80	0.00	12.76
82		2-hexanone	0.100	0.096	4.0	80	0.00	12.73
83	M	butyl acetate	0.174	0.166	4.6	81	0.00	12.80
84	M	dibromochloromethane	0.337	0.336	0.3	84	0.00	13.03
85	M	1,2-dibromoethane	0.332	0.304	8.4	79	0.00	13.17
86		n-butyl ether	1.315	1.226	6.8	81	0.00	13.51
87	M	chlorobenzene	0.894	0.793	11.3	81	0.00	13.62
88	M	1,1,1,2-tetrachloroethane	0.312	0.298	4.5	81	0.00	13.68
89	M	ethylbenzene	1.565	1.362	13.0	79	0.00	13.67
90	M	m,p-xylene	0.590	0.519	12.0	80	0.00	13.77
91	M	o-xylene	0.560	0.507	9.5	79	0.00	14.19
92	M	styrene	0.944	0.834	11.7	78	0.00	14.20
93	M	bromoform	0.204	0.209	-2.5	88	0.00	14.48
94		butyl acrylate	0.557	0.501	10.1	76	0.00	14.01
95		isopropylbenzene	1.503	1.342	10.7	79	0.00	14.52
96		cis-1,4-dichloro-2-butene	0.116	0.120	-3.4	89	0.00	14.62
97	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	91	0.00	15.90
98	S	4-bromofluorobenzene (s)	0.996	0.919	7.7	85	0.00	14.74

6.9.5

6

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: V1C7331-CC7262  
 Lab FileID: 1C167568.D

99 M	bromobenzene	0.767	0.686	10.6	82	0.00	14.94
100 M	1,1,2,2-tetrachloroethane	0.705	0.594	15.7	74	0.00	14.85
101 M	trans-1,4-dichloro-2-bute	0.149	0.171	-14.8	102	0.00	14.89
102 M	1,2,3-trichloropropane	0.167	0.146	12.6	77	0.00	14.93
103 M	n-propylbenzene	3.720	3.173	14.7	79	0.00	14.93
104 M	2-chlorotoluene	0.724	0.631	12.8	80	0.00	15.09
105 M	4-chlorotoluene	2.209	1.850	16.3	79	0.00	15.19
106 M	1,3,5-trimethylbenzene	2.539	2.129	16.1	78	0.00	15.08
107 M	tert-butylbenzene	0.467	0.405	13.3	79	0.00	15.43
108 M	1,2,4-trimethylbenzene	2.595	2.144	17.4	79	0.00	15.48
109 M	sec-butylbenzene	3.359	2.853	15.1	77	0.00	15.64
110 M	1,3-dichlorobenzene	1.468	1.301	11.4	82	0.00	15.85
111 M	p-isopropyltoluene	2.816	2.371	15.8	79	0.00	15.76
112 M	1,4-dichlorobenzene	1.488	1.271	14.6	80	0.00	15.93
113	benzyl chloride	1.048	1.301	-24.1#	105	0.00	16.05
114 M	1,2-dichlorobenzene	1.416	1.240	12.4	80	0.00	16.33
115 M	n-butylbenzene	1.480	1.277	13.7	78	0.00	16.19
116 M	1,2-dibromo-3-chloropropa	0.128	0.119	7.0	82	0.00	17.13
117	1,3,5-trichlorobenzene	1.078	1.045	3.1	90	0.00	17.29
118	2-ethylhexyl acrylate	0.624	0.452	27.6#	63	0.00	17.82
119 M	1,2,4-trichlorobenzene	0.892	0.869	2.6	90	0.00	17.86
120 M	hexachlorobutadiene	0.555	0.571	-2.9	94	0.00	17.95
121 M	naphthalene	1.935	1.596	17.5	76	0.00	18.11
122 M	1,2,3-trichlorobenzene	0.844	0.775	8.2	84	0.00	18.32
123 m	hexachloroethane	0.452	0.482	-6.6	93	0.00	16.59
124	2-methylnaphthalene	1.171	1.035	11.6	77	0.00	19.07
125	bis(chloromethyl)ether			-----NA-----			
126	ethylenimine			-----NA-----			

(#) = Out of Range  
 1C165737.D M1CS7262.M

SPCC's out = 0 CCC's out = 0  
 Mon Oct 07 05:00:04 2019

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICC9755  
 Lab FileID: A251992.D

## Response Factor Report MSA

Method : C:\MSDCHEM\1\METHODS\MA9755.M (RTE Integrator)  
 Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 Last Update : Tue Jul 30 12:20:13 2019  
 Response via : Initial Calibration

### Calibration Files

4 =A251989.D 2 =A251988.D 20 =A251991.D 50 =A251992.D  
 100 =A251993.D 1 =A251987.D 200 =A251994.D 0.5 =A251986.D  
 8 =A251990.D 0.2 =A251985.D = =

Compound	4	2	20	50	100	1	200	0.5	8	0.2	Avg	%RSD
1) I Tert Butyl Alcohol-d9 -----ISTD-----												
2) ethanol											0.000#	-1.00
3) tertiary butyl alcohol	1.048	1.102	1.031	1.062	1.110	1.021	1.068		1.052		1.062	2.95
4) 1,4-dioxane	0.058		0.055	0.062	0.064		0.063		0.048		0.058	10.80
5) I pentafluorobenzene -----ISTD-----												
6) chlorodifluoromethane	1.355	1.362	1.309	1.300	1.304	1.333	1.210	1.479	1.278		1.326	5.52
7) dichlorodifluoromethane	1.257	1.431	1.307	1.329	1.320	1.300	1.246	1.231	1.272		1.299	4.60
8) chloromethane	1.378	1.667	1.722	1.695	1.646	1.525	1.595		1.374		1.575	8.70
9) vinyl chloride	1.283	1.370	1.334	1.323	1.319	1.279	1.255	1.218	1.259	0.989	1.263	8.40
10) 1,3-butadiene	0.947	0.974	0.902	0.906	0.932	0.888	0.864		0.888		0.913	3.94
11) bromomethane	0.868	0.946	0.849	0.834	0.817	0.877		0.928	0.844	0.988	0.883	6.54
12) chloroethane	0.776	0.838	0.751	0.748	0.749	0.757	0.680	0.879	0.744		0.769	7.53
13) vinyl bromide	0.788	0.835	0.797	0.806	0.809	0.785	0.772		0.785		0.797	2.46
14) trichlorofluoromethane	1.316	1.439	1.301	1.305	1.331	1.325	1.273	1.231	1.259		1.309	4.49
15) ethyl ether	0.363	0.350	0.354	0.348	0.368	0.321	0.352	0.255	0.351		0.340	10.18
16) acrolein	0.182	0.164	0.184	0.183	0.192		0.188		0.183		0.182	4.88
17) freon 113	0.602	0.577	0.588	0.581	0.603	0.588	0.573	0.506	0.577		0.577	5.00
18) 1,1-dichloroethene	0.806	0.820	0.771	0.743	0.803	0.835	0.776	0.854	0.754		0.796	4.69
19) acetone	0.102	0.117	0.105	0.106	0.108	0.109	0.105		0.101		0.107	4.56
20) acetonitrile	0.169		0.152	0.153	0.156		0.151		0.152		0.155	4.34
21) iodomethane	1.185	1.160	1.133	1.134	1.201	1.095	1.158	1.171	1.118		1.151	2.93
22) carbon disulfide	2.573	2.654	2.397	2.363	2.476	2.856	2.325	3.031	2.380		2.562	9.55
23) methylene chloride												

6.9.6  
6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICC9755  
 Lab FileID: A251992.D

24)	0.990	1.022	0.868	0.827	0.886	1.161	0.856	0.876	0.936	12.13		
	methyl acetate											
	0.776	0.830	0.700	0.666	0.716		0.680	0.655	0.717	8.87		
25)	methyl tert butyl ether											
	2.333	2.307	2.233	2.172	2.229	2.254	2.120	2.333	2.194	2.049	2.222	4.16
26)	trans-1,2-dichloroethene											
	0.643	0.671	0.612	0.578	0.620	0.638	0.591	0.746	0.609	0.563	0.627	8.38
27)	hexane											
	0.949	1.019	0.956	0.928	0.958	0.992	0.883	0.991	0.940		0.957	4.19
28)	di-isopropyl ether											
	2.527	2.535	2.441	2.352	2.432	2.445	2.276	2.677	2.386	2.134	2.421	6.17
29)	ethyl tert-butyl ether											
	2.316	2.366	2.257	2.193	2.275	2.323	2.132	2.364	2.177	2.035	2.244	4.82
30)	2-butanone											
	0.112	0.111	0.115	0.117	0.119	0.099	0.117		0.108		0.112	5.76
31)	1,1-dichloroethane											
	1.152	1.186	1.157	1.115	1.170	1.203	1.089	1.254	1.160	1.011	1.150	5.78
32)	chloroprene											
	0.919	0.968	0.933	0.901	0.953	0.932	0.887	1.047	0.887		0.936	5.34
33)	acrylonitrile											
	0.400	0.340	0.384	0.369	0.393		0.374		0.378		0.377	5.19
34)	vinyl acetate											
	0.135		0.140	0.144	0.142		0.143		0.126		0.139	4.85
35)	ethyl acetate											
	0.123		0.152	0.142	0.148		0.143		0.134		0.140	7.55
36)	2,2-dichloropropane											
	1.061	1.183	1.003	0.963	0.995	1.131	0.916	1.408	1.011		1.075	13.93
37)	cis-1,2-dichloroethene											
	0.692	0.722	0.690	0.649	0.694	0.775	0.653	0.770	0.686	0.731	0.706	6.11
38)	methyl acrylate											
	0.106	0.108	0.123	0.122	0.129		0.127		0.120		0.119	7.64
39)	propionitrile											
	0.165	0.168	0.168	0.163	0.165	0.149	0.159	0.163	0.162		0.163	3.57
40)	bromochloromethane											
	0.322	0.328	0.329	0.310	0.327	0.308	0.315	0.335	0.313		0.321	2.99
41)	tetrahydrofuran											
	0.325	0.369	0.331	0.317	0.328	0.363	0.323		0.319		0.334	6.03
42)	chloroform											
	1.107	1.139	1.063	1.001	1.064	1.185	1.004	1.306	1.060		1.103	8.75
43)	tert-butyl formate											
	0.553	0.569	0.568	0.566	0.604	0.495	0.590	0.541	0.535		0.558	5.75
44)	dibromofluoromethane (s)											
	0.543	0.554	0.565	0.537	0.551	0.555	0.568	0.546	0.556	0.559	0.553	1.74
45)	methacrylonitrile											
	0.347	0.350	0.348	0.339	0.356	0.290	0.349		0.337		0.339	6.16
46)	cyclohexane											
	1.184	1.349	1.247	1.214	1.252	1.304	1.213	1.278	1.212		1.250	4.19
47)	1,1,1-trichloroethane											
	1.031	1.110	1.034	1.027	1.092	1.006	1.039	1.088	1.032	0.863	1.032	6.65
48)	iso-butyl alcohol											
	0.123		0.120	0.119	0.122		0.118		0.119		0.120	1.52
49)	1,1-dichloropropene											
	0.825	0.826	0.823	0.796	0.838	0.846	0.802	0.860	0.790	0.770	0.818	3.39
50)	carbon tetrachloride											
	0.889	0.835	0.870	0.855	0.912	0.874	0.882	0.890	0.854		0.873	2.65
51)	tert-amyl alcohol											
	0.100	0.098	0.098	0.098	0.103		0.101		0.095		0.099	2.81
52) I	1,4-difluorobenzene -----ISTD-----											
53)	1,2-dichloroethane-d4 (s)											

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICC9755  
 Lab FileID: A251992.D

54)	benzene	0.368	0.378	0.370	0.360	0.359	0.372	0.353	0.382	0.375	0.378	0.370	2.56
55)	iso-octane	1.507	1.519	1.435	1.391	1.429	1.503	1.322	1.657	1.435	1.575	1.477	6.50
56)	tert-amyl methyl ether	1.481	1.503	1.439	1.425	1.487	1.465	1.355	1.650	1.393	1.539	1.474	5.57
57)	heptane	1.358	1.355	1.291	1.246	1.277	1.361	1.169	1.492	1.273	1.268	1.309	6.66
58)	isopropyl acetate	0.272	0.285	0.283	0.276	0.286	0.283	0.265	0.292	0.270		0.279	3.14
59)	1,2-dichloroethane	0.094	0.095	0.104	0.103	0.106		0.101		0.094		0.099	5.03
60)	n-butyl alcohol	0.483	0.500	0.459	0.434	0.455	0.547	0.424		0.463		0.471	8.34
61)	ethyl acrylate	0.020	0.020	0.018	0.018	0.019	0.019	0.017		0.018		0.019	5.01
62)	trichloroethene	0.514	0.507	0.500	0.530	0.549	0.448	0.528		0.484		0.508	6.14
63)	2-nitropropane	0.341	0.348	0.332	0.326	0.336	0.341	0.316	0.366	0.323	0.419	0.345	8.59
64)	methylcyclohexane	0.133		0.126	0.130	0.138		0.133		0.128		0.131	3.37
65)	2-chloroethyl vinyl ether	0.777	0.798	0.768	0.744	0.779	0.823	0.721	0.848	0.756	0.746	0.776	4.96
66)	methyl methacrylate	0.127	0.123	0.128	0.136	0.149	0.113	0.151	0.117	0.118		0.129	10.64
67)	1,2-dichloropropane	0.099	0.085	0.102	0.103	0.111		0.109		0.095		0.101	8.57
68)	dibromomethane	0.379	0.380	0.379	0.374	0.385	0.388	0.362	0.416	0.376		0.382	3.84
69)	bromodichloromethane	0.233	0.214	0.223	0.218	0.225	0.215	0.216	0.205	0.211		0.218	3.72
70)	epichlorohydrin	0.443	0.473	0.452	0.450	0.474	0.458	0.446	0.516	0.445	0.441	0.460	4.98
71)	cis-1,3-dichloropropene	0.055	0.054	0.053	0.055	0.057	0.052	0.055		0.051		0.054	3.84
72)	4-methyl-2-pentanone	0.526	0.545	0.535	0.552	0.573	0.511	0.549	0.527	0.513	0.523	0.535	3.60
73)	3-methyl-1-butanol	0.220	0.234	0.220	0.218	0.221	0.204	0.207	0.220	0.209	0.167	0.212	8.47
74)	I chlorobenzene-d5	0.044	0.047	0.043	0.043	0.043	0.041	0.040		0.042		0.043	4.78
75)	toluene-d8 (s)												
76)	toluene	1.401	1.394	1.439	1.443	1.441	1.419	1.376	1.368	1.435	1.408	1.412	1.95
77)	trans-1,3-dichloropropene	0.975	1.027	0.971	0.987	1.008	1.038	0.900	1.063	0.966	1.048	0.998	4.87
78)	ethyl methacrylate	0.573	0.593	0.568	0.582	0.592	0.566	0.536	0.621	0.568	0.568	0.577	3.88
79)	1,1,2-trichloroethane	0.586	0.586	0.581	0.584	0.592	0.507	0.532	0.582	0.565	0.546	0.566	5.06
80)	2-hexanone	0.318	0.321	0.310	0.314	0.321	0.335	0.291	0.307	0.297	0.314	0.313	4.04
81)	tetrachloroethene	0.274	0.270	0.248	0.238	0.237	0.259	0.210	0.262	0.261		0.251	7.99
82)	1,3-dichloropropane	0.380	0.391	0.374	0.375	0.386	0.387	0.344	0.383	0.377	0.325	0.372	5.62
83)	butyl acetate	0.610	0.644	0.594	0.595	0.623	0.629	0.569	0.617	0.595	0.539	0.602	5.11

6.9.6

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# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICC9755  
 Lab FileID: A251992.D

	0.414	0.417	0.376	0.365	0.354	0.372	0.319		0.386		0.375	8.45
84)	dibromochloromethane											
	0.383	0.355	0.373	0.378	0.401	0.360	0.367	0.398	0.360	0.325	0.370	5.98
85)	1,2-dibromoethane											
	0.404	0.413	0.386	0.384	0.405	0.386	0.371	0.381	0.385	0.412	0.393	3.71
86)	n-butyl ether											
	1.893	1.942	1.873	1.781	1.736	1.978	1.506	2.044	1.881		1.848	8.60
87)	chlorobenzene											
	0.967	0.979	0.954	0.959	0.993	1.033	0.924	1.004	0.944	1.012	0.977	3.46
88)	1,1,1,2-tetrachloroethane											
	0.448	0.417	0.461	0.453	0.466	0.465	0.413	0.411	0.459	0.397	0.439	6.04
89)	ethylbenzene											
	1.750	1.839	1.746	1.724	1.750	1.832	1.554	1.855	1.772	1.805	1.763	4.88
90)	m,p-xylene											
	0.668	0.699	0.657	0.648	0.666	0.687	0.607	0.695	0.654	0.776	0.676	6.51
91)	o-xylene											
	0.729	0.730	0.716	0.711	0.728	0.705	0.656	0.776	0.714	0.766	0.723	4.57
92)	styrene											
	1.096	1.098	1.061	1.027	1.039	1.084	0.942	1.171	1.065	1.166	1.075	6.20
93)	butyl acrylate											
	1.051	1.061	1.001	0.943	0.899	1.010	0.765		1.017		0.968	10.15
94)	n-amyl acetate											
	0.454	0.460	0.410	0.374	0.357	0.406	0.310		0.412		0.398	12.55
95)	bromoform											
	0.255	0.253	0.247	0.252	0.258	0.253	0.234	0.263	0.247		0.251	3.33
96)	isopropylbenzene											
	2.006	2.021	2.039	1.980	1.992	2.022	1.744	2.256	2.013	2.084	2.016	6.16
97)	cis-1,4-dichloro-2-butene											
	0.236	0.218	0.229	0.227	0.225		0.199		0.218		0.222	5.39
98) I	1,4-dichlorobenzene-d -----ISTD-----											
99)	4-bromofluorobenzene (s)											
	0.944	0.940	0.961	0.971	1.009	0.929	1.009	0.934	0.946	0.943	0.959	3.04
100)	bromobenzene											
	0.792	0.757	0.767	0.775	0.842	0.723	0.791	0.818	0.747	0.914	0.793	6.92
101)	1,1,2,2-tetrachloroethane											
	1.181	1.252	1.235	1.224	1.300	1.232	1.186	1.241	1.190	1.251	1.229	2.95
102)	trans-1,4-dichloro-2-butene											
	0.269	0.284	0.261	0.276	0.286		0.249		0.264		0.270	4.81
103)	1,2,3-trichloropropane											
	0.302	0.314	0.320	0.305	0.330	0.318	0.301	0.239	0.302		0.304	8.58
104)	n-propylbenzene											
	4.142	4.167	4.247	4.145	4.382	4.128	3.932	4.333	4.115	4.376	4.197	3.33
105)	2-chlorotoluene											
	0.805	0.818	0.848	0.848	0.918	0.793	0.873	0.860	0.792	0.725	0.828	6.44
106)	4-chlorotoluene											
	2.329	2.300	2.297	2.285	2.406	2.298	2.211	2.447	2.277	2.737	2.359	6.31
107)	1,3,5-trimethylbenzene											
	3.038	3.081	3.246	3.267	3.543	2.958	3.277	3.171	3.098	3.127	3.180	5.16
108)	tert-butylbenzene											
	2.602	2.621	2.901	3.075	3.357	2.553	3.065		2.675		2.856	10.15
109)	1,2,4-trimethylbenzene											
	2.988	3.101	3.165	3.103	3.327	3.072	3.076	3.390	3.081	3.419	3.172	4.74
110)	sec-butylbenzene											
	4.096	4.106	4.404	4.528	4.847	3.930	4.380	4.275	4.137	4.250	4.295	6.08
111)	1,3-dichlorobenzene											
	1.525	1.560	1.492	1.465	1.556	1.531	1.419	1.685	1.480	1.670	1.538	5.52
112)	p-isopropyltoluene											
	3.403	3.398	3.524	3.579	3.838	3.442	3.519	3.626	3.410	3.703	3.544	4.11
113)	1,4-dichlorobenzene											

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICC9755  
 Lab FileID: A251992.D

114)	1,2-dichlorobenzene	1.517	1.564	1.513	1.482	1.551	1.565	1.428	1.786	1.462	1.899	1.577	9.47
115)	n-butylbenzene	1.613	1.715	1.622	1.570	1.647	1.647	1.531	1.730	1.586	1.806	1.647	5.03
116)	1,2-dibromo-3-chloropropane	1.795	1.862	1.844	1.785	1.869	1.785	1.715	1.967	1.822	2.039	1.848	5.12
117)	1,3,5-trichlorobenzene	0.376	0.393	0.362	0.353	0.380	0.334	0.351	0.318	0.351		0.358	6.56
118)	2-ethylhexyl acrylate	1.466	1.512	1.434	1.387	1.469	1.462	1.416	1.568	1.403	1.668	1.479	5.78
		0.880	1.055	1.230				1.286		0.766		1.043	21.28
		----- Linear regression ----- Coefficient = 0.9966											
		Response Ratio = -0.02288 + 1.28364 *A											
119)	1,2,4-trichlorobenzene	1.400	1.468	1.408	1.318	1.416	1.423	1.359	1.501	1.402		1.411	3.80
120)	hexachlorobutadiene	0.555	0.576	0.559	0.575	0.641	0.570	0.636	0.617	0.530		0.584	6.56
121)	naphthalene	4.857	4.934	4.765	4.541	4.709	4.817	4.307	5.213	4.742		4.765	5.27
122)	1,2,3-trichlorobenzene	1.530	1.614	1.516	1.455	1.563	1.447	1.493	1.715	1.492		1.536	5.52
123)	hexachloroethane	0.479	0.448	0.560	0.601	0.690		0.661		0.503		0.563	16.35
124)	2-methylnaphthalene	2.443		2.859	3.018	3.294		3.149		2.514		2.880	11.91
125)	ethylenimine											0.000#	-1.00
126)	bis(chloromethyl)ether											0.000#	-1.00

-----  
 (#) = Out of Range ### Number of calibration levels exceeded format ###

MA9755.M

Tue Jul 30 12:23:39 2019

RPT1



## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICV9755  
 Lab FileID: A251997.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9755\A251997.D Vial: 14  
 Acq On : 30 Jul 2019 12:04 am Operator: edwardd  
 Sample : icv9755-50 Inst : MSA  
 Misc : MS36311,VA9755,5,,,,,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9755.M (RTE Integrator)  
 Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmxl.4um  
 Last Update : Tue Jul 30 12:20:13 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	112	0.00	8.16
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol	1.062	1.064	-0.2	112	0.01	8.29
4	1,4-dioxane	0.058	0.061	-5.2	109	0.00	12.17
5 I	pentafluorobenzene	1.000	1.000	0.0	112	0.00	10.54
6 M	chlorodifluoromethane	1.326	1.240	6.5	106	0.00	4.59
7 M	dichlorodifluoromethane	1.299	1.297	0.2	109	0.00	4.56
8 M	chloromethane	1.575	1.293	17.9	85	0.01	5.01
9 M	vinyl chloride	1.263	1.351	-7.0	114	0.00	5.27
10	1,3-butadiene	0.913	1.095	-19.9	135	0.00	5.28
11 M	bromomethane	0.883	1.054	-19.4	141	0.00	5.94
12 M	chloroethane	0.769	0.659	14.3	98	0.00	6.11
13	vinyl bromide	0.797	0.883	-10.8	122	0.01	6.51
14 M	trichlorofluoromethane	1.309	1.239	5.3	106	0.00	6.64
15 M	ethyl ether	0.340	0.352	-3.5	113	0.00	7.01
16 M	acrolein	0.182	0.198	-8.8	121	0.01	7.26
17	freon 113	0.577	0.655	-13.5	126	0.00	7.50
18 M	1,1-dichloroethene	0.796	0.700	12.1	105	0.00	7.49
19 M	acetone	0.107	0.103	3.7	108	0.00	7.47
20 M	acetonitrile			-----NA-----			
21 M	iodomethane	1.151	1.280	-11.2	126	0.01	7.77
22 M	carbon disulfide	2.562	2.625	-2.5	124	0.00	7.93
23 M	methylene chloride	0.936	0.810	13.5	109	0.00	8.23
24 M	methyl acetate	0.717	0.679	5.3	114	0.00	7.96
25 M	methyl tert butyl ether	2.222	2.111	5.0	109	0.00	8.60
26 M	trans-1,2-dichloroethene	0.627	0.587	6.4	113	0.00	8.63
27	hexane	0.957	0.977	-2.1	118	0.00	9.01
28 M	di-isopropyl ether	2.421	2.257	6.8	107	0.00	9.23
29 M	ethyl tert-butyl ether	2.244	2.180	2.9	111	0.00	9.71
30 M	2-butanone	0.112	0.118	-5.4	113	0.00	9.91
31 M	1,1-dichloroethane	1.150	1.128	1.9	113	0.00	9.24
32 M	chloroprene	0.936	0.959	-2.5	119	0.00	9.35
33 M	acrylonitrile			-----NA-----			
34 M	vinyl acetate	0.139	0.130	6.5	101	0.00	9.17
35 M	ethyl acetate	0.140	0.136	2.9	107	0.00	9.92
36 M	2,2-dichloropropane	1.075	0.863	19.7	100	0.00	10.03
37 M	cis-1,2-dichloroethene	0.706	0.647	8.4	111	0.00	9.99
38	methyl acrylate	0.119	0.123	-3.4	112	0.00	10.01
39 M	propionitrile	0.163	0.163	0.0	112	0.00	9.99
40 M	bromochloromethane	0.321	0.317	1.2	114	0.00	10.29
41 M	tetrahydrofuran	0.334	0.323	3.3	114	0.00	10.31

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICV9755  
 Lab FileID: A251997.D

42	M	chloroform	1.103	1.025	7.1	114	0.00	10.38
43		tert-butyl formate	0.558	0.531	4.8	105	0.00	10.42
44	S	dibromofluoromethane (s)	0.553	0.555	-0.4	115	0.00	10.57
45	M	methacrylonitrile	0.339	0.339	0.0	112	0.00	10.20
46		cyclohexane	1.250	1.222	2.2	112	0.00	10.78
47	M	1,1,1-trichloroethane	1.032	1.005	2.6	109	0.00	10.66
48		iso-butyl alcohol	0.120	0.119	0.8	112	0.00	10.78
49		1,1-dichloropropene	0.818	0.794	2.9	111	0.00	10.83
50		carbon tetrachloride	0.873	0.869	0.5	113	0.00	10.86
51		tert-amyl alcohol	0.099	0.101	-2.0	116	0.00	10.95
52	I	1,4-difluorobenzene	1.000	1.000	0.0	112	0.00	11.50
53	S	1,2-dichloroethane-d4 (s)	0.370	0.360	2.7	112	0.00	11.01
54	M	benzene	1.477	1.378	6.7	111	0.00	11.09
55	M	iso-octane	1.474	1.573	-6.7	124	0.00	11.18
56		tert-amyl methyl ether	1.309	1.239	5.3	112	0.00	11.16
57	M	heptane	0.279	0.318	-14.0	129	0.00	11.34
58	M	isopropyl acetate	0.099	0.096	3.0	105	0.00	10.98
59	M	1,2-dichloroethane	0.471	0.424	10.0	110	0.00	11.11
60		n-butyl alcohol	0.019	0.018	5.3	108	0.00	11.55
61		ethyl acrylate	0.508	0.516	-1.6	109	0.00	11.80
62	M	trichloroethene	0.345	0.330	4.3	114	0.00	11.83
63	M	2-nitropropane	0.131	0.135	-3.1	117	0.00	12.61
64	m	methylcyclohexane	0.776	0.729	6.1	110	0.00	12.15
65	M	2-chloroethyl vinyl ether	0.129	0.151	-17.1	125	0.00	12.64
66	M	methyl methacrylate	0.101	0.103	-2.0	112	0.00	12.08
67	M	1,2-dichloropropane	0.382	0.366	4.2	110	0.00	12.13
68	M	dibromomethane	0.218	0.215	1.4	111	0.00	12.25
69	M	bromodichloromethane	0.460	0.431	6.3	108	0.00	12.40
70		epichlorohydrin	0.054	0.056	-3.7	113	0.00	12.74
71	M	cis-1,3-dichloropropene	0.535	0.527	1.5	107	0.00	12.89
72	M	4-methyl-2-pentanone	0.212	0.216	-1.9	111	0.00	12.99
73	M	3-methyl-1-butanol	0.043	0.043	0.0	112	0.00	12.99
74	I	chlorobenzene-d5	1.000	1.000	0.0	111	0.00	14.89
75	S	toluene-d8 (s)	1.412	1.446	-2.4	111	0.00	13.22
76		toluene	0.998	0.959	3.9	108	0.00	13.31
77		trans-1,3-dichloropropene	0.577	0.564	2.3	108	0.00	13.50
78		ethyl methacrylate	0.566	0.575	-1.6	109	0.00	13.48
79		1,1,2-trichloroethane	0.313	0.305	2.6	108	0.00	13.74
80		2-hexanone	0.251	0.229	8.8	107	0.00	13.91
81	M	tetrachloroethene			-----NA-----			
82	M	1,3-dichloropropane	0.602	0.584	3.0	109	0.00	13.94
83	M	butyl acetate	0.375	0.350	6.7	106	0.00	14.00
84	M	dibromochloromethane	0.370	0.385	-4.1	113	0.00	14.22
85	M	1,2-dibromoethane	0.393	0.391	0.5	113	0.00	14.39
86	M	n-butyl ether	1.848	1.826	1.2	114	0.00	14.87
87	M	chlorobenzene	0.977	0.954	2.4	110	0.00	14.93
88	M	1,1,1,2-tetrachloroethane	0.439	0.454	-3.4	111	0.00	15.00
89	M	ethylbenzene	1.763	1.692	4.0	109	0.00	14.99
90	M	m,p-xylene	0.676	0.639	5.5	109	0.00	15.12
91	M	o-xylene	0.723	0.709	1.9	111	0.00	15.58
92	M	styrene	1.075	1.012	5.9	109	0.00	15.59
93		butyl acrylate	0.968	0.887	8.4	104	0.00	15.37
94		n-amyl acetate	0.398	0.344	13.6	102	0.00	15.60
95	M	bromoform	0.251	0.266	-6.0	117	0.00	15.85
96		isopropylbenzene	2.016	1.976	2.0	111	0.00	15.97
97		cis-1,4-dichloro-2-butene	0.222	0.213	4.1	104	0.00	16.00
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	17.51

6.9.7  
6

**Initial Calibration Verification**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICV9755  
 Lab FileID: A251997.D

99 S	4-bromofluorobenzene (s)	0.959	0.984	-2.6	111	0.00	16.20
100 M	bromobenzene	0.793	0.764	3.7	108	0.00	16.41
101 M	1,1,2,2-tetrachloroethane	1.229	1.234	-0.4	110	0.00	16.28
102 M	trans-1,4-dichloro-2-bute	0.270	0.276	-2.2	109	0.00	16.31
103 M	1,2,3-trichloropropane	0.304	0.306	-0.7	110	0.00	16.38
104 M	n-propylbenzene	4.197	4.201	-0.1	111	0.00	16.43
105 M	2-chlorotoluene	0.828	0.847	-2.3	109	0.00	16.59
106 M	4-chlorotoluene	2.359	2.280	3.3	109	0.00	16.72
107 M	1,3,5-trimethylbenzene	3.180	3.297	-3.7	110	0.00	16.61
108 M	tert-butylbenzene	2.856	3.066	-7.4	109	0.00	16.99
109 M	1,2,4-trimethylbenzene	3.172	3.216	-1.4	113	0.00	17.05
110 M	sec-butylbenzene	4.295	4.560	-6.2	110	0.00	17.24
111 M	1,3-dichlorobenzene	1.538	1.472	4.3	110	0.00	17.44
112 M	p-isopropyltoluene	3.544	3.663	-3.4	112	0.00	17.38
113 M	1,4-dichlorobenzene	1.577	1.474	6.5	109	0.00	17.54
114 M	1,2-dichlorobenzene	1.647	1.590	3.5	111	0.00	17.96
115 M	n-butylbenzene	1.848	1.793	3.0	110	0.00	17.84
116 M	1,2-dibromo-3-chloropropa	0.358	0.352	1.7	109	0.00	18.81
117 M	1,3,5-trichlorobenzene	1.479	1.420	4.0	112	0.00	19.02
----- True		Calc.	% Drift	-----			
118	2-ethylhexyl acrylate	10.000	9.242	7.6	111	0.00	19.74
----- AvgRF		CCRF	% Dev	-----			
119 M	1,2,4-trichlorobenzene	1.411	1.329	5.8	110	0.00	19.77
120 M	hexachlorobutadiene	0.584	0.548	6.2	104	0.00	19.89
121 M	naphthalene	4.765	4.602	3.4	111	0.00	20.10
122 M	1,2,3-trichlorobenzene	1.536	1.470	4.3	110	0.00	20.34
123 M	hexachloroethane	0.563	0.620	-10.1	113	0.00	18.29
124	2-methylnaphthalene	2.880	3.166	-9.9	115	0.00	21.41
125	ethylenimine			-----NA-----			
126	bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range  
 A251992.D MA9755.M

SPCC's out = 0 CCC's out = 0  
 Tue Jul 30 12:24:02 2019 RPT1

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICV9755  
 Lab FileID: A251998.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9755\A251998.D Vial: 15  
 Acq On : 30 Jul 2019 12:33 am Operator: edwardd  
 Sample : icv9755-50 Inst : MSA  
 Misc : MS36311,VA9755,5,,,,,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9755.M (RTE Integrator)  
 Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 Last Update : Tue Jul 30 12:20:13 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	112	0.00	8.15
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.53
6 M	chlorodifluoromethane			-----NA-----			
7 M	dichlorodifluoromethane			-----NA-----			
8 M	chloromethane			-----NA-----			
9 M	vinyl chloride			-----NA-----			
10	1,3-butadiene			-----NA-----			
11 M	bromomethane			-----NA-----			
12 M	chloroethane			-----NA-----			
13	vinyl bromide			-----NA-----			
14 M	trichlorofluoromethane			-----NA-----			
15 M	ethyl ether			-----NA-----			
16 M	acrolein			-----NA-----			
17	freon 113			-----NA-----			
18 M	1,1-dichloroethene			-----NA-----			
19 M	acetone			-----NA-----			
20 M	acetonitrile	0.155	0.153	1.3	106	0.00	7.91
21 M	iodomethane			-----NA-----			
22 M	carbon disulfide			-----NA-----			
23 M	methylene chloride			-----NA-----			
24 M	methyl acetate			-----NA-----			
25 M	methyl tert butyl ether			-----NA-----			
26 M	trans-1,2-dichloroethene			-----NA-----			
27	hexane			-----NA-----			
28 M	di-isopropyl ether			-----NA-----			
29 M	ethyl tert-butyl ether			-----NA-----			
30 M	2-butanone			-----NA-----			
31 M	1,1-dichloroethane			-----NA-----			
32 M	chloroprene			-----NA-----			
33 M	acrylonitrile	0.377	0.363	3.7	105	0.00	8.52
34 M	vinyl acetate			-----NA-----			
35 M	ethyl acetate			-----NA-----			
36 M	2,2-dichloropropane			-----NA-----			
37 M	cis-1,2-dichloroethene			-----NA-----			
38	methyl acrylate			-----NA-----			
39 M	propionitrile			-----NA-----			
40 M	bromochloromethane			-----NA-----			
41 M	tetrahydrofuran			-----NA-----			

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICV9755  
 Lab FileID: A251998.D

42	M	chloroform								
43		tert-butyl formate								
44	S	dibromofluoromethane (s)	0.553	0.552	0.2	110	0.00	10.57		
45	M	methacrylonitrile								
46		cyclohexane								
47	M	1,1,1-trichloroethane								
48		iso-butyl alcohol								
49		1,1-dichloropropene								
50		carbon tetrachloride								
51		tert-amyl alcohol								
52	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	11.50		
53	S	1,2-dichloroethane-d4 (s)	0.370	0.376	-1.6	108	0.00	11.01		
54	M	benzene								
55	M	iso-octane								
56		tert-amyl methyl ether								
57	M	heptane								
58	M	isopropyl acetate								
59	M	1,2-dichloroethane								
60		n-butyl alcohol								
61		ethyl acrylate								
62	M	trichloroethene								
63	M	2-nitropropane								
64	m	methylcyclohexane								
65	M	2-chloroethyl vinyl ether								
66	M	methyl methacrylate								
67	M	1,2-dichloropropane								
68	M	dibromomethane								
69	M	bromodichloromethane								
70		epichlorohydrin								
71	M	cis-1,3-dichloropropene								
72	M	4-methyl-2-pentanone								
73	M	3-methyl-1-butanol								
74	I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	14.89		
75	S	toluene-d8 (s)	1.412	1.375	2.6	98	0.00	13.22		
76		toluene								
77		trans-1,3-dichloropropene								
78		ethyl methacrylate								
79		1,1,2-trichloroethane								
80		2-hexanone								
81	M	tetrachloroethene	0.372	0.402	-8.1	110	0.00	13.91		
82	M	1,3-dichloropropane								
83	M	butyl acetate								
84	M	dibromochloromethane								
85	M	1,2-dibromoethane								
86	M	n-butyl ether								
87	M	chlorobenzene								
88	M	1,1,1,2-tetrachloroethane								
89	M	ethylbenzene								
90	M	m,p-xylene								
91	M	o-xylene								
92	M	styrene								
93		butyl acrylate								
94		n-amyl acetate								
95	M	bromoform								
96		isopropylbenzene								
97		cis-1,4-dichloro-2-butene								
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	116	0.00	17.51		

6.9.8

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# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9755-ICV9755  
 Lab FileID: A251998.D

99	S	4-bromofluorobenzene (s)	0.959	0.913	4.8	109	0.00	16.20
100	M	bromobenzene					-----NA-----	
101	M	1,1,2,2-tetrachloroethane					-----NA-----	
102	M	trans-1,4-dichloro-2-bute					-----NA-----	
103	M	1,2,3-trichloropropane					-----NA-----	
104	M	n-propylbenzene					-----NA-----	
105	M	2-chlorotoluene					-----NA-----	
106	M	4-chlorotoluene					-----NA-----	
107	M	1,3,5-trimethylbenzene					-----NA-----	
108	M	tert-butylbenzene					-----NA-----	
109	M	1,2,4-trimethylbenzene					-----NA-----	
110	M	sec-butylbenzene					-----NA-----	
111	M	1,3-dichlorobenzene					-----NA-----	
112	M	p-isopropyltoluene					-----NA-----	
113	M	1,4-dichlorobenzene					-----NA-----	
114	M	1,2-dichlorobenzene					-----NA-----	
115	M	n-butylbenzene					-----NA-----	
116	M	1,2-dibromo-3-chloropropa					-----NA-----	
117	M	1,3,5-trichlorobenzene					-----NA-----	
			True	Calc.	% Drift		-----	
118		2-ethylhexyl acrylate					-----NA-----	
			AvgRF	CCRF	% Dev		-----	
119	M	1,2,4-trichlorobenzene					-----NA-----	
120	M	hexachlorobutadiene					-----NA-----	
121	M	naphthalene					-----NA-----	
122	M	1,2,3-trichlorobenzene					-----NA-----	
123	M	hexachloroethane					-----NA-----	
124		2-methylnaphthalene					-----NA-----	
125		ethylenimine					-----NA-----	
126		bis(chloromethyl)ether					-----NA-----	

(#) = Out of Range  
 A251992.D MA9755.M

SPPC's out = 0 CCC's out = 0  
 Tue Jul 30 12:24:03 2019 RPT1

## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9835-CC9755  
 Lab FileID: A253699.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...7-19\va9835\a253699.d Vial: 2  
 Acq On : 4 Oct 2019 6:46 am Operator: krizhkac  
 Sample : cc9755-20 Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9755.M (RTE Integrator)  
 Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmxl.4um  
 Last Update : Tue Jul 30 12:20:13 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	126	0.00	8.15
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol	1.062	1.186	-11.7	144	-0.01	8.26
4	1,4-dioxane	0.058	0.083	-43.1#	190	0.00	12.17
5 I	pentafluorobenzene	1.000	1.000	0.0	136	0.00	10.52
6 M	chlorodifluoromethane	1.326	1.543	-16.4	160	0.00	4.59
7 M	dichlorodifluoromethane	1.299	1.385	-6.6	144	0.00	4.55
8 M	chloromethane	1.575	1.712	-8.7	135	0.00	4.99
9 M	vinyl chloride	1.263	1.733	-37.2#	176	0.00	5.26
10	1,3-butadiene	0.913	1.141	-25.0#	171	0.00	5.27
11 M	bromomethane	0.883	1.106	-25.3#	177	0.00	5.92
12 M	chloroethane	0.769	0.879	-14.3	159	0.00	6.11
13	vinyl bromide	0.797	0.968	-21.5#	165	0.00	6.48
14 M	trichlorofluoromethane	1.309	1.296	1.0	135	0.00	6.62
15 M	ethyl ether	0.340	0.393	-15.6	150	0.00	7.01
16 M	acrolein	0.182	0.220	-20.9#	162	0.00	7.25
17	freon 113	0.577	0.718	-24.4#	166	0.00	7.50
18 M	1,1-dichloroethene	0.796	0.760	4.5	134	-0.03	7.47
19 M	acetone	0.107	0.103	3.7	132	-0.01	7.45
20 M	acetonitrile	0.155	0.183	-18.1	163	-0.01	7.89
21 M	iodomethane	1.151	1.192	-3.6	143	-0.02	7.74
22 M	carbon disulfide	2.562	2.419	5.6	137	-0.04	7.89
23 M	methylene chloride	0.936	0.845	9.7	132	-0.02	8.21
24 M	methyl acetate	0.717	0.717	0.0	139	0.00	7.95
25 M	methyl tert butyl ether	2.222	2.412	-8.6	146	0.00	8.59
26 M	trans-1,2-dichloroethene	0.627	0.675	-7.7	149	0.00	8.62
27	hexane	0.957	0.925	3.3	131	0.00	9.00
28 M	di-isopropyl ether	2.421	2.460	-1.6	137	0.00	9.22
29 M	ethyl tert-butyl ether	2.244	2.289	-2.0	138	0.00	9.70
30 M	2-butanone	0.112	0.102	8.9	121	-0.01	9.89
31 M	1,1-dichloroethane	1.150	1.207	-5.0	142	0.00	9.23
32 M	chloroprene	0.936	0.898	4.1	130	0.00	9.33
33 M	acrylonitrile	0.377	0.384	-1.9	136	0.00	8.51
34 M	vinyl acetate	0.139	0.122	12.2	118	0.00	9.15
35 M	ethyl acetate	0.140	0.126	10.0	112	-0.01	9.91
36 M	2,2-dichloropropane	1.075	1.179	-9.7	159	0.00	10.01
37 M	cis-1,2-dichloroethene	0.706	0.741	-5.0	146	0.00	9.98
38	methyl acrylate	0.119	0.111	6.7	121	0.00	10.00
39 M	propionitrile	0.163	0.149	8.6	121	-0.01	9.97
40 M	bromochloromethane	0.321	0.350	-9.0	145	0.00	10.28
41 M	tetrahydrofuran	0.334	0.309	7.5	127	0.00	10.30

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9835-CC9755  
 Lab FileID: A253699.D

42	M	chloroform	1.103	1.062	3.7	135	0.00	10.37
43		tert-butyl formate	0.558	0.814	-45.9#	194	0.00	10.41
44	S	dibromofluoromethane (s)	0.553	0.506	8.5	121	0.00	10.57
45	M	methacrylonitrile	0.339	0.304	10.3	119	0.00	10.18
46		cyclohexane	1.250	1.364	-9.1	148	0.00	10.77
47	M	1,1,1-trichloroethane	1.032	1.110	-7.6	146	0.00	10.65
48		iso-butyl alcohol	0.120	0.114	5.0	129	0.00	10.76
49		1,1-dichloropropene	0.818	0.779	4.8	128	0.00	10.82
50		carbon tetrachloride	0.873	0.912	-4.5	142	0.00	10.85
51		tert-amyl alcohol	0.099	0.103	-4.0	143	0.00	10.94
52	I	1,4-difluorobenzene	1.000	1.000	0.0	118	0.00	11.49
53	S	1,2-dichloroethane-d4 (s)	0.370	0.336	9.2	107	-0.01	10.99
54	M	benzene	1.477	1.584	-7.2	130	-0.01	11.07
55	M	iso-octane	1.474	1.460	0.9	120	0.00	11.18
56		tert-amyl methyl ether	1.309	1.524	-16.4	139	0.00	11.15
57	M	heptane	0.279	0.283	-1.4	118	0.00	11.33
58	M	isopropyl acetate	0.099	0.115	-16.2	131	0.00	10.96
59	M	1,2-dichloroethane	0.471	0.469	0.4	120	-0.01	11.09
60		n-butyl alcohol	0.019	0.021	-10.5	136	0.00	11.53
61		ethyl acrylate	0.508	0.570	-12.2	134	0.00	11.79
62	M	trichloroethene	0.345	0.348	-0.9	123	0.00	11.82
63	M	2-nitropropane	0.131	0.150	-14.5	140	0.00	12.61
64	m	methylcyclohexane	0.776	0.880	-13.4	135	0.00	12.14
65	M	2-chloroethyl vinyl ether	0.129	0.234	-81.4#	215#	0.00	12.64
66	M	methyl methacrylate	0.101	0.117	-15.8	135	0.00	12.07
67	M	1,2-dichloropropane	0.382	0.401	-5.0	125	0.00	12.12
68	M	dibromomethane	0.218	0.233	-6.9	123	0.00	12.23
69	M	bromodichloromethane	0.460	0.471	-2.4	123	-0.01	12.39
70		epichlorohydrin	0.054	0.059	-9.3	132	0.00	12.73
71	M	cis-1,3-dichloropropene	0.535	0.575	-7.5	127	0.00	12.88
72	M	4-methyl-2-pentanone	0.212	0.247	-16.5	132	0.00	12.98
73	M	3-methyl-1-butanol	0.043	0.052	-20.9#	142	0.00	12.98
74	I	chlorobenzene-d5	1.000	1.000	0.0	141	0.00	14.88
75	S	toluene-d8 (s)	1.412	1.263	10.6	123	0.00	13.22
76		toluene	0.998	0.972	2.6	141	0.00	13.30
77		trans-1,3-dichloropropene	0.577	0.577	0.0	143	0.00	13.49
78		ethyl methacrylate	0.566	0.577	-1.9	140	0.00	13.47
79		1,1,2-trichloroethane	0.313	0.315	-0.6	143	-0.01	13.73
80		2-hexanone	0.251	0.259	-3.2	147	0.00	13.91
81	M	tetrachloroethene	0.372	0.404	-8.6	152	0.00	13.91
82	M	1,3-dichloropropane	0.602	0.599	0.5	142	0.00	13.93
83	M	butyl acetate	0.375	0.387	-3.2	145	0.00	13.99
84	M	dibromochloromethane	0.370	0.382	-3.2	144	0.00	14.21
85	M	1,2-dibromoethane	0.393	0.427	-8.7	155	0.00	14.38
86	M	n-butyl ether	1.848	1.894	-2.5	142	0.00	14.86
87	M	chlorobenzene	0.977	1.061	-8.6	156	0.00	14.92
88	M	1,1,1,2-tetrachloroethane	0.439	0.469	-6.8	143	0.00	14.99
89	M	ethylbenzene	1.763	1.852	-5.0	149	0.00	14.98
90	M	m,p-xylene	0.676	0.723	-7.0	155	0.00	15.12
91	M	o-xylene	0.723	0.780	-7.9	153	0.00	15.57
92	M	styrene	1.075	1.162	-8.1	154	0.00	15.58
93		butyl acrylate	0.968	0.961	0.7	135	0.00	15.36
94		n-amyl acetate	0.398	0.429	-7.8	147	0.00	15.60
95	M	bromoform	0.251	0.308	-22.7#	176	0.00	15.84
96		isopropylbenzene	2.016	2.101	-4.2	145	0.00	15.96
97		cis-1,4-dichloro-2-butene	0.222	0.230	-3.6	141	0.00	15.99
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	153	0.00	17.50



# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VA9835-CC9755  
 Lab FileID: A253699.D

99 S	4-bromofluorobenzene (s)	0.959	0.824	14.1	131	0.00	16.19
100 M	bromobenzene	0.793	0.838	-5.7	167	0.00	16.40
101 M	1,1,2,2-tetrachloroethane	1.229	1.224	0.4	151	0.00	16.27
102 M	trans-1,4-dichloro-2-bute	0.270	0.273	-1.1	159	0.00	16.31
103 M	1,2,3-trichloropropane	0.304	0.321	-5.6	153	0.00	16.37
104 M	n-propylbenzene	4.197	4.163	0.8	150	0.00	16.43
105 M	2-chlorotoluene	0.828	0.883	-6.6	159	0.00	16.58
106 M	4-chlorotoluene	2.359	2.259	4.2	150	0.00	16.71
107 M	1,3,5-trimethylbenzene	3.180	3.131	1.5	147	0.00	16.60
108 M	tert-butylbenzene	2.856	2.663	6.8	140	0.00	16.99
109 M	1,2,4-trimethylbenzene	3.172	3.124	1.5	151	0.00	17.04
110 M	sec-butylbenzene	4.295	4.298	-0.1	149	0.00	17.23
111 M	1,3-dichlorobenzene	1.538	1.658	-7.8	170	0.00	17.43
112 M	p-isopropyltoluene	3.544	3.584	-1.1	155	0.00	17.37
113 M	1,4-dichlorobenzene	1.577	1.694	-7.4	171	0.00	17.53
114 M	1,2-dichlorobenzene	1.647	1.772	-7.6	167	0.00	17.95
115 M	n-butylbenzene	1.848	1.805	2.3	149	0.00	17.83
116 M	1,2-dibromo-3-chloropropa	0.358	0.389	-8.7	164	0.00	18.80
117 M	1,3,5-trichlorobenzene	1.479	1.617	-9.3	172	0.00	19.01
----- True		Calc.	% Drift	-----			
118	2-ethylhexyl acrylate	4.000	3.589	10.3	150	0.00	19.74
----- AvgRF		CCRF	% Dev	-----			
119 M	1,2,4-trichlorobenzene	1.411	1.611	-14.2	175	0.00	19.76
120 M	hexachlorobutadiene	0.584	0.605	-3.6	165	0.00	19.89
121 M	naphthalene	4.765	5.218	-9.5	167	0.00	20.09
122 M	1,2,3-trichlorobenzene	1.536	1.724	-12.2	173	0.00	20.34
123 M	hexachloroethane	0.563	0.569	-1.1	155	0.00	18.28
124	2-methylnaphthalene	2.880	2.891	-0.4	154	0.00	21.40
125	ethylenimine			-----NA-----			
126	bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range  
 A251991.D MA9755.M

SPCC's out = 0 CCC's out = 0  
 Mon Oct 07 02:41:13 2019

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICC10725  
 Lab FileID: D266061.D

## Response Factor Report MSD

Method : C:\MSDCHEM\1\METHODS\MD10725.M (RTE Integrator)  
 Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 Last Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

### Calibration Files

1	=d266056.D	4	=d266058.D	100	=d266062.D	50	=d266061.D
20	=d266060.D	200	=d266063.D	8	=d266059.D	0.5	=d266055.D
2	=d266057.D	0.2	=d266054.D	=	=	=	=

Compound	1	4	100	50	20	200	8	0.5	2	0.2	Avg	%RSD
-----												
1) I tert butyl alcohol-d9	-----ISTD-----											
2) ethanol											0.000	-1.00
3) tertiary butyl alcohol												
	1.209	1.250	1.358	1.353	1.310	1.431	1.289		1.296		1.312	5.24
4) 1,4-dioxane												
	0.113	0.133	0.134	0.126	0.131	0.120					0.126	6.59
5) I pentafluorobenzene	-----ISTD-----											
6) chlorodifluoromethane												
	1.592	1.602	1.553	1.605	1.627	1.508	1.578	1.466	1.510		1.560	3.49
7) dichlorodifluoromethane												
	1.036	1.337	1.273	1.335	1.357	1.243	1.335		1.318		1.279	8.24
8) chloromethane												
	1.531	1.531	1.535	1.573	1.549	1.519	1.522	1.580	1.464		1.534	2.21
9) 1,3-butadiene												
	0.702	0.838	0.929	0.922	0.872	0.912	0.773	0.812	0.799		0.840	9.13
10) vinyl chloride												
	1.456	1.515	1.436	1.505	1.543	1.397	1.491	1.340	1.480		1.463	4.36
11) bromomethane												
	0.734	0.760	0.741	0.781	0.792	0.669	0.752	0.670	0.745		0.738	5.84
12) chloroethane												
	0.722	0.707	0.652	0.688	0.703	0.607	0.682	0.705	0.714		0.687	5.31
13) trichlorofluoromethane												
	0.853	1.010	1.039	1.073	1.098	1.018	1.035		0.973		1.012	7.41
14) vinyl bromide												
	0.661	0.685	0.679	0.687	0.699	0.657	0.663	0.650	0.665		0.672	2.40
15) ethyl ether												
	0.303	0.349	0.339	0.345	0.332	0.322	0.327	0.278	0.308		0.323	7.10
16) 2-chloropropane												
	1.559	1.287	1.312	1.336	1.236	1.275			1.424		1.347	8.19
17) acrolein												
	0.117	0.113	0.115	0.110	0.108	0.114			0.094		0.110	6.90
18) freon 113												
	0.472	0.633	0.604	0.609	0.594	0.595	0.556		0.535		0.575	8.97
19) 1,1-dichloroethene												
	0.903	0.792	0.659	0.679	0.702	0.639	0.668		0.740		0.723	12.14
20) acetone												
	0.041	0.049	0.055	0.056	0.056	0.054	0.055		0.048		0.052	10.01
21) acetonitrile												
	0.118	0.103	0.108	0.106	0.103	0.110					0.108	5.13
22) iodomethane												
	0.976	1.054	0.977	0.999	0.994	0.954	0.951	0.929	0.977		0.979	3.67
23) carbon disulfide												

6.9.10  
6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICC10725  
 Lab FileID: D266061.D

	2.209	2.385	2.188	2.222	2.256	2.103	2.107	2.180	2.222	2.456	2.233	4.99
24)	methylene chloride											
	0.768	0.836	0.756	0.782	0.792	0.736	0.743	0.848	0.799		0.784	4.98
25)	methyl acetate											
	0.062	0.091	0.094	0.089	0.090	0.082					0.085	14.13
26)	methyl tert butyl ether											
	2.451	2.536	2.353	2.393	2.349	2.273	2.286	2.597	2.388		2.403	4.51
27)	trans-1,2-dichloroethene											
	0.874	0.782	0.653	0.682	0.698	0.629	0.682		0.769		0.721	11.25
28)	hexane											
	0.428	0.503	0.477	0.495	0.481	0.459	0.459		0.463		0.470	5.04
29)	di-isopropyl ether											
	3.042	3.105	2.850	2.917	2.922	2.752	2.818	3.290	3.038		2.970	5.59
30)	2-butanone											
	0.056	0.061	0.063	0.059	0.061	0.057		0.049			0.058	7.87
31)	1,1-dichloroethane											
	1.264	1.294	1.226	1.277	1.282	1.176	1.221	1.250	1.274	1.209	1.247	3.04
32)	chloroprene											
	1.102	1.115	1.069	1.111	1.115	1.037	1.035	1.049	1.064		1.077	3.12
33)	acrylonitrile											
	0.195	0.212	0.216	0.206	0.211	0.234					0.212	5.96
34)	vinyl acetate											
	0.113	0.135	0.135	0.126	0.129	0.115					0.126	7.74
35)	ethyl tert-butyl ether											
	2.682	2.834	2.800	2.835	2.759	2.744	2.623	2.718	2.718	2.855	2.757	2.72
36)	ethyl acetate											
	0.115	0.089	0.101	0.098	0.089	0.101					0.099	9.86
37)	2,2-dichloropropane											
	1.338	1.332	1.205	1.228	1.240	1.173	1.187		1.301		1.250	5.20
38)	cis-1,2-dichloroethene											
	0.950	0.824	0.735	0.775	0.754	0.709	0.739		0.848		0.792	10.01
39)	propionitrile											
	0.088	0.095	0.095	0.099	0.095	0.093	0.093		0.091		0.094	3.49
40)	methyl acrylate											
	0.056	0.080	0.079	0.074	0.079	0.066					0.072	13.51
41)	methacrylonitrile											
	0.194	0.223	0.233	0.237	0.229	0.232	0.216		0.200		0.220	7.31
42)	bromochloromethane											
	0.335	0.329	0.319	0.328	0.323	0.314	0.308	0.332	0.303		0.321	3.47
43)	tetrahydrofuran											
	0.209	0.175	0.179	0.181	0.174	0.186		0.211			0.188	8.35
44)	chloroform											
	1.227	1.217	1.124	1.156	1.158	1.090	1.098	1.336	1.207		1.179	6.54
45)	tert-butyl formate											
	0.633	0.676	0.731	0.720	0.684	0.727	0.644		0.632		0.681	6.15
46)	dibromofluoromethane (s)											
	0.536	0.531	0.530	0.536	0.533	0.535	0.525	0.530	0.535	0.545	0.534	1.00
47)	1,1,1-trichloroethane											
	1.201	1.229	1.198	1.192	1.183	1.181	1.119	1.192	1.186	1.197	1.188	2.33
48)	cyclohexane											
	1.309	1.305	1.276	1.307	1.326	1.269	1.275	1.129	1.349	1.207	1.275	5.04
49)	isobutyl alcohol											
											0.000	-1.00
50)	1,1-dichloropropene											
	0.860	0.898	0.856	0.895	0.888	0.837	0.847	0.885	0.883	0.875	0.872	2.41
51)	carbon tetrachloride											
	0.873	0.962	0.955	0.950	0.926	0.950	0.863	0.861	0.893	0.803	0.904	5.89
52)	tert-amyl alcohol											
	0.054	0.042	0.040	0.037	0.043	0.046					0.044	13.55
53)	isopropyl acetate											

6.9.10  
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# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICC10725  
 Lab FileID: D266061.D

	0.132	0.147	0.143	0.131	0.148	0.125		0.138	6.96			
54) I 1,4-difluorobenzene	-----ISTD-----											
55) 1,2-dichloroethane-d4 (s)	0.362	0.363	0.350	0.351	0.367	0.352	0.361	0.363	0.372	0.360	2.03	
56) n-butyl alcohol	0.010	0.009	0.009	0.009	0.009	0.010		0.010		0.010	7.09	
57) 2,2,4-trimethylpentane	1.211	1.438	1.613	1.557	1.430	1.597	1.353	1.250		1.431	10.70	
58) benzene	1.645	1.658	1.561	1.608	1.600	1.488	1.562	1.664	1.616	1.810	1.621	5.24
59) tert-amyl methyl ether	1.603	1.535	1.470	1.467	1.449	1.419	1.418	1.794	1.517		1.519	7.84
60) heptane	0.269	0.305	0.284	0.294	0.284	0.276	0.281		0.272		0.283	4.21
61) 1,2-dichloroethane	0.535	0.502	0.475	0.487	0.477	0.461	0.471		0.514		0.490	5.09
62) ethyl acrylate	0.412	0.399	0.404	0.418	0.409	0.399	0.409		0.410		0.407	1.60
63) trichloroethene	0.357	0.357	0.364	0.371	0.360	0.359	0.345	0.375	0.365		0.361	2.43
64) 2-chloroethyl vinyl ether	0.208	0.216	0.212	0.218	0.212	0.201	0.207	0.216	0.211		0.211	2.50
65) methyl methacrylate	0.076	0.088	0.087	0.082	0.086	0.075					0.082	6.65
66) methylcyclohexane	0.679	0.813	0.776	0.788	0.764	0.757	0.728		0.687		0.749	6.34
67) 1,2-dichloropropane	0.420	0.423	0.414	0.420	0.409	0.403	0.404	0.392	0.412		0.411	2.40
68) dibromomethane	0.201	0.218	0.210	0.214	0.208	0.207	0.206	0.205	0.200		0.208	2.81
69) bromodichloromethane	0.465	0.498	0.500	0.505	0.490	0.493	0.460	0.487	0.456		0.484	3.82
70) 2-nitropropane	0.095	0.074	0.072	0.070	0.075	0.082					0.078	12.18
71) epichlorohydrin	0.041	0.039	0.039	0.039	0.038	0.038	0.039		0.038		0.039	2.50
72) cis-1,3-dichloropropene	0.561	0.600	0.608	0.613	0.585	0.600	0.567	0.627	0.589	0.607	0.596	3.46
73) 4-methyl-2-pentanone	0.130	0.153	0.146	0.147	0.148	0.142	0.146	0.143	0.144	0.136	0.144	4.42
74) isoamyl alcohol	0.012	0.013	0.013	0.013	0.012	0.013		0.011			0.012	3.88
75) I chlorobenzene-d5	-----ISTD-----											
76) toluene-d8 (s)	1.295	1.296	1.297	1.303	1.298	1.289	1.306	1.293	1.288	1.318	1.298	0.68
77) toluene	1.002	1.009	0.996	1.024	1.013	0.955	0.976	1.023	1.004	0.986	0.999	2.16
78) ethyl methacrylate	0.483	0.506	0.497	0.508	0.505	0.472	0.492	0.512	0.484		0.496	2.75
79) trans-1,3-dichloropropene	0.523	0.547	0.548	0.567	0.538	0.526	0.530	0.576	0.531	0.513	0.540	3.69
80) 1,1,2-trichloroethane	0.258	0.277	0.267	0.279	0.266	0.258	0.260	0.295	0.263		0.269	4.62
81) tetrachloroethene	0.274	0.300	0.289	0.298	0.292	0.285	0.280	0.277	0.296		0.288	3.36
82) 2-hexanone	0.117	0.148	0.129	0.134	0.141	0.125	0.138	0.115	0.133		0.131	8.26
83) 1,3-dichloropropane												

6.9.10  
6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICC10725  
 Lab FileID: D266061.D

84)	butyl acetate	0.565	0.571	0.545	0.572	0.558	0.516	0.555	0.571	0.544	0.555	3.28	
85)	dibromochloromethane	0.242	0.284	0.260	0.266	0.274	0.253	0.272	0.216	0.265	0.259	7.83	
86)	1,2-dibromoethane	0.302	0.336	0.346	0.352	0.333	0.343	0.320	0.316	0.307	0.328	5.45	
87)	n-butyl ether	0.330	0.354	0.345	0.359	0.344	0.336	0.340	0.347	0.338	0.328	2.89	
88)	chlorobenzene	2.201	2.211	1.927	2.040	2.105	1.773	2.063	2.306	2.129	2.374	8.37	
89)	1,1,1,2-tetrachloroethane	1.007	1.070	1.025	1.052	1.045	0.997	1.020	1.090	1.040	1.218	6.00	
90)	ethylbenzene	0.423	0.431	0.448	0.453	0.445	0.436	0.417	0.437	0.428	0.444	2.63	
91)	m,p-xylene	1.969	2.024	1.885	1.957	1.982	1.775	1.908	2.018	1.982	2.155	5.05	
92)	o-xylene	0.748	0.768	0.731	0.750	0.751	0.703	0.721	0.781	0.722	0.808	4.16	
93)	styrene	1.694	1.833	1.708	1.778	1.786	1.619	1.722	1.879	1.745	1.950	5.45	
94)	butyl acrylate	1.204	1.282	1.224	1.270	1.261	1.171	1.244	1.217	1.259	1.216	2.78	
95)	n-amyl acetate	1.016	1.022	0.883	0.918	0.950	0.862	0.953	1.057	0.981	0.960	6.82	
96)	isopropylbenzene	0.348	0.379	0.343	0.353	0.376	0.341	0.380	0.355	0.360	0.360	4.53	
97)	bromoform	2.171	2.302	2.179	2.237	2.242	2.062	2.152	2.279	2.120	2.563	6.18	
98)	cis-1,4-dichloro-2-butene	0.180	0.206	0.224	0.223	0.212	0.229	0.198	0.194	0.208	0.208	8.11	
		0.119	0.140	0.143	0.132	0.142	0.122	0.119	0.119	0.131	0.131	8.32	
99)	I 1,4-dichlorobenzene-d	-----ISTD-----											
100)	4-bromofluorobenzene (s)	0.914	0.917	0.931	0.928	0.915	0.884	0.930	0.914	0.923	0.904	0.916	1.53
101)	1,1,2,2-tetrachloroethane	0.847	0.831	0.816	0.843	0.815	0.740	0.805	0.810	0.772	0.909	0.819	5.53
102)	trans-1,4-dichloro-2-butene	0.171	0.189	0.197	0.184	0.174	0.173	0.165	0.179	0.179	0.179	6.31	
103)	1,2,3-trichloropropane	0.195	0.222	0.218	0.225	0.217	0.199	0.212	0.213	0.213	0.213	4.90	
104)	bromobenzene	0.752	0.793	0.811	0.818	0.810	0.751	0.765	0.777	0.765	0.599	0.764	8.25
105)	n-propylbenzene	4.113	4.273	4.147	4.279	4.278	3.627	4.087	4.289	4.109	4.644	4.185	6.07
106)	2-chlorotoluene	0.812	0.816	0.859	0.860	0.838	0.791	0.785	0.841	0.781	0.737	0.812	4.81
107)	4-chlorotoluene	2.477	2.541	2.471	2.529	2.517	2.271	2.432	2.663	2.511	2.513	2.493	3.95
108)	1,3,5-trimethylbenzene	3.283	3.296	3.411	3.469	3.347	3.044	3.202	3.314	3.143	3.419	3.293	4.02
109)	tert-butylbenzene	2.508	2.498	2.848	2.860	2.702	2.597	2.472	2.556	2.402	2.536	2.598	6.01
110)	1,2,4-trimethylbenzene	3.234	3.413	3.400	3.476	3.390	3.050	3.248	3.350	3.294	3.693	3.355	5.05
111)	sec-butylbenzene	3.973	4.166	4.394	4.464	4.342	3.847	4.095	4.221	4.011	4.607	4.212	5.68
112)	p-isopropyltoluene	3.515	3.585	3.688	3.722	3.630	3.271	3.453	3.503	3.424	3.601	3.539	3.82
113)	1,3-dichlorobenzene												

6.9.10  
6

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICC10725  
 Lab FileID: D266061.D

114)	1.673	1.682	1.661	1.690	1.659	1.572	1.625	1.700	1.681	1.849	1.679	4.20
	1,4-dichlorobenzene											
115)	1.729	1.719	1.686	1.722	1.701	1.601	1.635	1.764	1.657	1.869	1.708	4.35
	1,2-dichlorobenzene											
116)	1.711	1.836	1.761	1.805	1.752	1.635	1.729	1.678	1.758	1.812	1.748	3.56
	benzyl chloride											
117)	1.626	1.638	1.633	1.696	1.634	1.531	1.558	1.657	1.571	1.788	1.633	4.50
	n-butylbenzene											
118)	1.833	1.909	1.959	1.997	1.970	1.799	1.892	1.852	1.832	1.890	1.893	3.48
	2-ethylhexyl acrylate											
119)	1.428	1.369	1.240	1.269	1.168						1.295	8.00
	hexachloroethane											
120)	0.415	0.589	0.560	0.495	0.579	0.432					0.512	14.81
	1,2-dibromo-3-chloropropane											
121)	0.197	0.180	0.194	0.192	0.178	0.177	0.178		0.181		0.185	4.34
	1,3,5-trichlorobenzene											
122)	1.485	1.580	1.676	1.701	1.637	1.446	1.582	1.614	1.552	1.742	1.602	5.81
	1,2,4-trichlorobenzene											
123)	1.366	1.365	1.504	1.526	1.451	1.284	1.417	1.374	1.355		1.405	5.51
	hexachlorobutadiene											
124)	0.569	0.626	0.687	0.689	0.648	0.604	0.622	0.593	0.611	0.562	0.621	7.02
	naphthalene											
125)	3.053	3.067	3.197	3.280	3.116	2.690	3.050		2.998		3.056	5.68
	1,2,3-trichlorobenzene											
126)	1.069	1.161	1.259	1.278	1.201	1.085	1.175	1.117	1.127		1.164	6.26
	2-methylnaphthalene											
	1.102	1.384	1.324	1.192	1.240	1.124		1.097			1.209	9.33

(#) = Out of Range ### Number of calibration levels exceeded format ###

MD10725.M

Mon Sep 09 11:02:19 2019

RPT1

6.9.10  
6

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICV10725  
 Lab FileID: D266066.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VD10725\d266066.D Vial: 14  
 Acq On : 7 Sep 2019 12:40 am Operator: thienn  
 Sample : ICV10725-50 Inst : MSD  
 Misc : ms37297,vd10725,5,,100,5,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10725.M (RTE Integrator)  
 Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 Last Update : Mon Sep 09 11:00:30 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	98	0.00	7.48
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.312	1.414	-7.8	103	0.02	7.60
4	1,4-dioxane	0.126	0.135	-7.1	99	0.00	11.34
5 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	9.72
6	chlorodifluoromethane	1.560	1.210	22.4	78	0.00	4.42
7	dichlorodifluoromethane	1.279	0.987	22.8	76	0.00	4.42
8	chloromethane	1.534	1.223	20.3	80	0.00	4.71
9	1,3-butadiene	0.840	0.851	-1.3	95	0.01	4.98
10	vinyl chloride	1.463	1.263	13.7	86	0.00	4.96
11	bromomethane	0.738	0.841	-14.0	111	0.00	5.52
12	chloroethane	0.687	0.523	23.9	78	0.00	5.66
13	trichlorofluoromethane	1.012	0.877	13.3	84	0.00	6.09
14	vinyl bromide	0.672	0.674	-0.3	101	0.00	6.00
15	ethyl ether	0.323	0.353	-9.3	105	0.00	6.46
16	2-chloropropane	1.347	1.273	5.5	100	0.00	6.67
17	acrolein	0.110	0.109	0.9	98	0.00	6.65
18	freon 113	0.575	0.547	4.9	92	0.00	6.91
19	1,1-dichloroethene	0.723	0.598	17.3	91	0.00	6.88
20	acetone	0.052	0.057	-9.6	105	0.00	6.84
21	acetonitrile			-----NA-----			
22	iodomethane	0.979	1.107	-13.1	114	0.00	7.12
23	carbon disulfide	2.233	2.225	0.4	103	0.00	7.29
24	methylene chloride	0.784	0.759	3.2	100	0.00	7.53
25	methyl acetate	0.085	0.093	-9.4	102	0.00	7.29
26	methyl tert butyl ether	2.403	2.365	1.6	102	0.00	7.90
27	trans-1,2-dichloroethene	0.721	0.653	9.4	99	0.00	7.93
28	hexane	0.470	0.409	13.0	85	0.00	8.30
29	di-isopropyl ether	2.970	2.787	6.2	98	0.00	8.49
30	2-butanone	0.058	0.066	-13.8	108	0.00	9.09
31	1,1-dichloroethane	1.247	1.262	-1.2	102	0.00	8.48
32	chloroprene	1.077	1.116	-3.6	103	0.00	8.59
33	acrylonitrile			-----NA-----			
34	vinyl acetate	0.126	0.122	3.2	93	0.00	8.40
35	ethyl tert-butyl ether	2.757	2.731	0.9	99	0.00	8.95
36	ethyl acetate	0.099	0.100	-1.0	102	0.00	9.13
37	2,2-dichloropropane	1.250	1.123	10.2	94	0.00	9.24
38	cis-1,2-dichloroethene	0.792	0.746	5.8	99	0.00	9.18
39	propionitrile	0.094	0.100	-6.4	104	0.00	9.13
40	methyl acrylate	0.072	0.080	-11.1	104	0.00	9.21
41	methacrylonitrile	0.220	0.244	-10.9	106	0.00	9.35

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICV10725  
 Lab FileID: D266066.D

42	bromochloromethane	0.321	0.335	-4.4	105	0.00	9.48
43	tetrahydrofuran	0.188	0.182	3.2	105	0.00	9.52
44	chloroform	1.179	1.177	0.2	105	0.00	9.55
45	tert-butyl formate	0.681	0.639	6.2	91	0.00	9.61
46 S	dibromofluoromethane (s)	0.534	0.533	0.2	102	0.00	9.75
47	1,1,1-trichloroethane	1.188	1.152	3.0	100	0.00	9.86
48	cyclohexane	1.275	1.117	12.4	88	0.00	10.00
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.872	0.877	-0.6	101	0.00	10.03
51	carbon tetrachloride	0.904	0.927	-2.5	100	0.00	10.08
52	tert-amyl alcohol	0.044	0.041	6.8	106	0.00	10.11
53	isopropyl acetate	0.138	0.138	0.0	100	0.00	10.16
54 I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	10.67
55 S	1,2-dichloroethane-d4 (s)	0.360	0.353	1.9	103	0.00	10.17
56	n-butyl alcohol	0.010	0.009	10.0	102	0.00	10.69
57	2,2,4-trimethylpentane	1.431	1.454	-1.6	96	0.00	10.40
58	benzene	1.621	1.601	1.2	102	0.00	10.27
59	tert-amyl methyl ether	1.519	1.441	5.1	101	0.00	10.37
60	heptane	0.283	0.294	-3.9	102	0.00	10.56
61	1,2-dichloroethane	0.490	0.480	2.0	101	0.00	10.27
62	ethyl acrylate	0.407	0.407	0.0	100	0.00	10.97
63	trichloroethene	0.361	0.379	-5.0	105	0.00	11.01
64	2-chloroethyl vinyl ether	0.211	0.230	-9.0	108	0.00	11.81
65	methyl methacrylate	0.082	0.090	-9.8	105	0.00	11.25
66	methylcyclohexane	0.749	0.744	0.7	97	0.00	11.36
67	1,2-dichloropropane	0.411	0.421	-2.4	103	0.00	11.29
68	dibromomethane	0.208	0.212	-1.9	102	0.00	11.40
69	bromodichloromethane	0.484	0.496	-2.5	101	0.00	11.56
70	2-nitropropane	0.078	0.080	-2.6	113	0.00	11.73
71	epichlorohydrin	0.039	0.040	-2.6	106	0.00	11.88
72	cis-1,3-dichloropropene	0.596	0.613	-2.9	102	0.00	12.05
73	4-methyl-2-pentanone	0.144	0.148	-2.8	103	0.00	12.15
74	isoamyl alcohol	0.012	0.013	-8.3	102	0.00	12.14
75 I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	14.08
76 S	toluene-d8 (s)	1.298	1.305	-0.5	100	0.00	12.41
77	toluene	0.999	1.039	-4.0	102	0.00	12.49
78	ethyl methacrylate	0.496	0.528	-6.5	104	0.00	12.67
79	trans-1,3-dichloropropene	0.540	0.580	-7.4	103	0.00	12.66
80	1,1,2-trichloroethane	0.269	0.282	-4.8	101	0.00	12.91
81	tetrachloroethene			-----NA-----			
82	2-hexanone	0.131	0.135	-3.1	101	0.00	13.09
83	1,3-dichloropropane	0.555	0.578	-4.1	101	0.00	13.11
84	butyl acetate	0.259	0.267	-3.1	101	0.00	13.20
85	dibromochloromethane	0.328	0.370	-12.8	105	0.00	13.39
86	1,2-dibromoethane	0.342	0.364	-6.4	102	0.00	13.57
87	n-butyl ether	2.113	2.150	-1.8	106	0.00	14.10
88	chlorobenzene	1.057	1.089	-3.0	104	0.00	14.12
89	1,1,1,2-tetrachloroethane	0.436	0.462	-6.0	102	0.00	14.19
90	ethylbenzene	1.965	1.992	-1.4	102	0.00	14.20
91	m,p-xylene	0.748	0.767	-2.5	103	0.00	14.34
92	o-xylene	1.772	1.796	-1.4	101	0.00	14.79
93	styrene	1.235	1.302	-5.4	103	0.00	14.80
94	butyl acrylate	0.960	0.894	6.9	98	0.00	14.59
95	n-amyl acetate	0.360	0.338	6.1	96	0.00	14.83
96	isopropylbenzene	2.231	2.268	-1.7	102	0.00	15.19
97	bromoform	0.208	0.244	-17.3	110	0.00	15.04
98	cis-1,4-dichloro-2-butene	0.131	0.141	-7.6	99	0.00	15.19

6.9.11

6



# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICV10725  
 Lab FileID: D266066.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	16.73
100	S	4-bromofluorobenzene (s)	0.916	0.913	0.3	100	0.00	15.41
101		1,1,2,2-tetrachloroethane	0.819	0.834	-1.8	100	0.00	15.46
102		trans-1,4-dichloro-2-bute	0.179	0.219	-22.3	112	0.00	15.50
103		1,2,3-trichloropropane	0.213	0.220	-3.3	99	0.00	15.56
104		bromobenzene	0.764	0.836	-9.4	104	0.00	15.62
105		n-propylbenzene	4.185	4.317	-3.2	102	0.00	15.66
106		2-chlorotoluene	0.812	0.859	-5.8	101	0.00	15.80
107		4-chlorotoluene	2.493	2.629	-5.5	105	0.00	15.93
108		1,3,5-trimethylbenzene	3.293	3.460	-5.1	101	0.00	15.84
109		tert-butylbenzene	2.598	2.876	-10.7	102	0.00	16.22
110		1,2,4-trimethylbenzene	3.355	3.516	-4.8	102	0.00	16.28
111		sec-butylbenzene	4.212	4.482	-6.4	102	0.00	16.47
112		p-isopropyltoluene	3.539	3.785	-7.0	103	0.00	16.62
113		1,3-dichlorobenzene	1.679	1.745	-3.9	105	0.00	16.65
114		1,4-dichlorobenzene	1.708	1.769	-3.6	104	0.00	16.76
115		1,2-dichlorobenzene	1.748	1.818	-4.0	102	0.00	17.18
116		benzyl chloride	1.633	2.040	-24.9	122	0.00	16.85
117		n-butylbenzene	1.893	1.999	-5.6	101	0.00	17.08
118		2-ethylhexyl acrylate	1.295	1.417	-9.4	105	0.00	18.98
119		hexachloroethane	0.512	0.593	-15.8	107	0.00	17.53
120		1,2-dibromo-3-chloropropa	0.185	0.186	-0.5	98	0.00	18.01
121		1,3,5-trichlorobenzene	1.602	1.767	-10.3	105	0.00	18.25
122		1,2,4-trichlorobenzene	1.405	1.502	-6.9	100	0.00	18.97
123		hexachlorobutadiene	0.621	0.664	-6.9	98	0.00	19.13
124		naphthalene	3.056	3.244	-6.2	100	0.00	19.31
125		1,2,3-trichlorobenzene	1.164	1.250	-7.4	99	0.00	19.58
126		2-methylnaphthalene	1.209	1.359	-12.4	104	0.00	20.73

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 (#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
 d266061.D    MD10725.M                      Mon Sep 09 11:02:29 2019    RPT1

6.9.11  
**6**

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICV10725  
 Lab FileID: D266067.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VD10725\d266067.D Vial: 15  
 Acq On : 7 Sep 2019 1:08 am Operator: thienn  
 Sample : ICV10725-50 Inst : MSD  
 Misc : ms37297,vd10725,5,,100,5,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10725.M (RTE Integrator)  
 Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 Last Update : Mon Sep 09 11:00:30 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	102	0.02	7.50
2	ethanol			-----NA-----			
3	tertiary butyl alcohol			-----NA-----			
4	1,4-dioxane			-----NA-----			
5 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	9.72
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane			-----NA-----			
8	chloromethane			-----NA-----			
9	1,3-butadiene			-----NA-----			
10	vinyl chloride			-----NA-----			
11	bromomethane			-----NA-----			
12	chloroethane			-----NA-----			
13	trichlorofluoromethane			-----NA-----			
14	vinyl bromide			-----NA-----			
15	ethyl ether			-----NA-----			
16	2-chloropropane			-----NA-----			
17	acrolein			-----NA-----			
18	freon 113			-----NA-----			
19	1,1-dichloroethene			-----NA-----			
20	acetone			-----NA-----			
21	acetonitrile	0.108	0.120	-11.1	106	0.00	7.20
22	iodomethane			-----NA-----			
23	carbon disulfide			-----NA-----			
24	methylene chloride			-----NA-----			
25	methyl acetate			-----NA-----			
26	methyl tert butyl ether			-----NA-----			
27	trans-1,2-dichloroethene			-----NA-----			
28	hexane			-----NA-----			
29	di-isopropyl ether			-----NA-----			
30	2-butanone			-----NA-----			
31	1,1-dichloroethane			-----NA-----			
32	chloroprene			-----NA-----			
33	acrylonitrile	0.212	0.273	-28.8	120	0.00	7.77
34	vinyl acetate			-----NA-----			
35	ethyl tert-butyl ether			-----NA-----			
36	ethyl acetate			-----NA-----			
37	2,2-dichloropropane			-----NA-----			
38	cis-1,2-dichloroethene			-----NA-----			
39	propionitrile			-----NA-----			
40	methyl acrylate			-----NA-----			
41	methacrylonitrile			-----NA-----			

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICV10725  
 Lab FileID: D266067.D

42	bromochloromethane							
43	tetrahydrofuran							
44	chloroform							
45	tert-butyl formate							
46 S	dibromofluoromethane (s)	0.534	0.524	1.9	93	0.00	9.75	
47	1,1,1-trichloroethane							
48	cyclohexane							
49	isobutyl alcohol							
50	1,1-dichloropropene							
51	carbon tetrachloride							
52	tert-amyl alcohol							
53	isopropyl acetate							
54 I	1,4-difluorobenzene	1.000	1.000	0.0	90	0.00	10.67	
55 S	1,2-dichloroethane-d4 (s)	0.360	0.359	0.3	92	0.00	10.17	
56	n-butyl alcohol							
57	2,2,4-trimethylpentane							
58	benzene							
59	tert-amyl methyl ether							
60	heptane							
61	1,2-dichloroethane							
62	ethyl acrylate							
63	trichloroethene							
64	2-chloroethyl vinyl ether							
65	methyl methacrylate							
66	methylcyclohexane							
67	1,2-dichloropropane							
68	dibromomethane							
69	bromodichloromethane							
70	2-nitropropane							
71	epichlorohydrin							
72	cis-1,3-dichloropropene							
73	4-methyl-2-pentanone							
74	isoamyl alcohol							
75 I	chlorobenzene-d5	1.000	1.000	0.0	91	0.00	14.08	
76 S	toluene-d8 (s)	1.298	1.292	0.5	90	0.00	12.41	
77	toluene							
78	ethyl methacrylate							
79	trans-1,3-dichloropropene							
80	1,1,2-trichloroethane							
81	tetrachloroethene	0.288	0.353	-22.6	107	0.00	13.12	
82	2-hexanone							
83	1,3-dichloropropane							
84	butyl acetate							
85	dibromochloromethane							
86	1,2-dibromoethane							
87	n-butyl ether							
88	chlorobenzene							
89	1,1,1,2-tetrachloroethane							
90	ethylbenzene							
91	m,p-xylene							
92	o-xylene							
93	styrene							
94	butyl acrylate							
95	n-amyl acetate							
96	isopropylbenzene							
97	bromoform							
98	cis-1,4-dichloro-2-butene							

6.9.12  
6

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10725-ICV10725  
 Lab FileID: D266067.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	16.73
100	S	4-bromofluorobenzene (s)	0.916	0.888	3.1	94	0.00	15.41
101		1,1,2,2-tetrachloroethane						
102		trans-1,4-dichloro-2-bute						
103		1,2,3-trichloropropane						
104		bromobenzene						
105		n-propylbenzene						
106		2-chlorotoluene						
107		4-chlorotoluene						
108		1,3,5-trimethylbenzene						
109		tert-butylbenzene						
110		1,2,4-trimethylbenzene						
111		sec-butylbenzene						
112		p-isopropyltoluene						
113		1,3-dichlorobenzene						
114		1,4-dichlorobenzene						
115		1,2-dichlorobenzene						
116		benzyl chloride						
117		n-butylbenzene						
118		2-ethylhexyl acrylate						
119		hexachloroethane						
120		1,2-dibromo-3-chloropropa						
121		1,3,5-trichlorobenzene						
122		1,2,4-trichlorobenzene						
123		hexachlorobutadiene						
124		naphthalene						
125		1,2,3-trichlorobenzene						
126		2-methylnaphthalene						

(#) = Out of Range  
 d266061.D MD10725.M

SPCC's out = 0 CCC's out = 0  
 Mon Sep 09 11:02:30 2019 RPT1

6.9.12  
 6

## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10747-CC10725  
 Lab FileID: D266670.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kr...719\vd10747\d266670.d Vial: 2  
 Acq On : 3 Oct 2019 7:38 am Operator: thienn  
 Sample : cc10725-20 Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10725.M (RTE Integrator)  
 Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 Last Update : Mon Sep 09 11:00:30 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	92	0.02	7.50
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.312	1.253	4.5	88	0.01	7.60
4	1,4-dioxane	0.126	0.185	-46.8#	135	0.00	11.34
5 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	9.71
6	chlorodifluoromethane	1.560	1.600	-2.6	99	0.00	4.41
7	dichlorodifluoromethane	1.279	1.287	-0.6	95	-0.03	4.40
8	chloromethane	1.534	1.688	-10.0	109	0.00	4.71
9	1,3-butadiene	0.840	0.973	-15.8	112	0.00	4.98
10	vinyl chloride	1.463	1.677	-14.6	109	0.01	4.97
11	bromomethane	0.738	0.849	-15.0	108	0.00	5.52
12	chloroethane	0.687	0.707	-2.9	101	0.00	5.66
13	trichlorofluoromethane	1.012	1.033	-2.1	94	-0.02	6.07
14	vinyl bromide	0.672	0.751	-11.8	108	0.00	6.00
15	ethyl ether	0.323	0.355	-9.9	107	0.00	6.46
16	2-chloropropane	1.347	1.303	3.3	98	0.00	6.67
17	acrolein	0.110	0.116	-5.5	105	0.00	6.65
18	freon 113	0.575	0.647	-12.5	109	0.00	6.92
19	1,1-dichloroethene	0.723	0.662	8.4	95	0.00	6.88
20	acetone	0.052	0.050	3.8	90	0.00	6.83
21	acetonitrile	0.108	0.098	9.3	92	0.00	7.20
22	iodomethane	0.979	0.904	7.7	91	0.00	7.12
23	carbon disulfide	2.233	2.227	0.3	99	0.00	7.29
24	methylene chloride	0.784	0.747	4.7	95	0.00	7.53
25	methyl acetate	0.085	0.086	-1.2	97	0.00	7.28
26	methyl tert butyl ether	2.403	2.217	7.7	95	0.00	7.90
27	trans-1,2-dichloroethene	0.721	0.676	6.2	97	0.00	7.93
28	hexane	0.470	0.487	-3.6	102	0.00	8.30
29	di-isopropyl ether	2.970	2.694	9.3	93	0.00	8.49
30	2-butanone	0.058	0.054	6.9	93	0.00	9.09
31	1,1-dichloroethane	1.247	1.258	-0.9	99	0.00	8.48
32	chloroprene	1.077	1.005	6.7	90	0.00	8.59
33	acrylonitrile	0.212	0.222	-4.7	108	0.01	7.77
34	vinyl acetate	0.126	0.118	6.3	94	0.01	8.41
35	ethyl tert-butyl ether	2.757	2.420	12.2	88	0.00	8.95
36	ethyl acetate	0.099	0.079	20.2#	81	0.00	9.12
37	2,2-dichloropropane	1.250	1.271	-1.7	103	0.00	9.24
38	cis-1,2-dichloroethene	0.792	0.739	6.7	98	0.00	9.18
39	propionitrile	0.094	0.087	7.4	93	0.00	9.13
40	methyl acrylate	0.072	0.064	11.1	86	0.00	9.21
41	methacrylonitrile	0.220	0.202	8.2	88	0.00	9.35

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10747-CC10725  
 Lab FileID: D266670.D

42	bromochloromethane	0.321	0.319	0.6	99	0.00	9.47
43	tetrahydrofuran	0.188	0.155	17.6	86	-0.01	9.52
44	chloroform	1.179	1.123	4.7	97	0.00	9.55
45	tert-butyl formate	0.681	0.773	-13.5	113	0.00	9.61
46 S	dibromofluoromethane (s)	0.534	0.514	3.7	97	0.00	9.74
47	1,1,1-trichloroethane	1.188	1.167	1.8	99	0.00	9.86
48	cyclohexane	1.275	1.386	-8.7	105	0.00	10.00
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.872	0.870	0.2	98	0.00	10.02
51	carbon tetrachloride	0.904	0.930	-2.9	101	0.00	10.07
52	tert-amyl alcohol	0.044	0.033	25.0#	91	-0.02	10.10
53	isopropyl acetate	0.138	0.120	13.0	92	0.00	10.15
54 I	1,4-difluorobenzene	1.000	1.000	0.0	95	0.00	10.67
55 S	1,2-dichloroethane-d4 (s)	0.360	0.361	-0.3	93	0.00	10.17
56	n-butyl alcohol	0.010	0.008	20.0	90	0.00	10.69
57	2,2,4-trimethylpentane	1.431	1.108	22.6#	74	0.00	10.40
58	benzene	1.621	1.647	-1.6	98	0.00	10.27
59	tert-amyl methyl ether	1.519	1.369	9.9	90	-0.01	10.35
60	heptane	0.283	0.242	14.5	81	0.00	10.55
61	1,2-dichloroethane	0.490	0.470	4.1	94	0.00	10.26
62	ethyl acrylate	0.407	0.344	15.5	80	0.00	10.97
63	trichloroethene	0.361	0.364	-0.8	96	0.00	11.01
64	2-chloroethyl vinyl ether	0.211	0.190	10.0	85	-0.01	11.80
65	methyl methacrylate	0.082	0.069	15.9	80	0.00	11.25
66	methylcyclohexane	0.749	0.770	-2.8	96	0.00	11.35
67	1,2-dichloropropane	0.411	0.401	2.4	93	0.00	11.29
68	dibromomethane	0.208	0.201	3.4	91	-0.01	11.39
69	bromodichloromethane	0.484	0.471	2.7	91	-0.01	11.55
70	2-nitropropane	0.078	0.069	11.5	94	-0.02	11.72
71	epichlorohydrin	0.039	0.034	12.8	84	-0.01	11.88
72	cis-1,3-dichloropropene	0.596	0.575	3.5	93	-0.01	12.04
73	4-methyl-2-pentanone	0.144	0.135	6.2	87	-0.01	12.14
74	isoamyl alcohol	0.012	0.012	0.0	87	-0.01	12.14
75 I	chlorobenzene-d5	1.000	1.000	0.0	94	-0.01	14.07
76 S	toluene-d8 (s)	1.298	1.249	3.8	90	-0.01	12.40
77	toluene	0.999	0.989	1.0	92	-0.01	12.48
78	ethyl methacrylate	0.496	0.428	13.7	80	-0.01	12.66
79	trans-1,3-dichloropropene	0.540	0.539	0.2	94	-0.01	12.65
80	1,1,2-trichloroethane	0.269	0.258	4.1	91	-0.01	12.90
81	tetrachloroethene	0.288	0.303	-5.2	97	-0.01	13.11
82	2-hexanone	0.131	0.127	3.1	85	0.00	13.08
83	1,3-dichloropropane	0.555	0.546	1.6	92	-0.01	13.10
84	butyl acetate	0.259	0.248	4.2	85	0.00	13.19
85	dibromochloromethane	0.328	0.327	0.3	92	-0.01	13.38
86	1,2-dibromoethane	0.342	0.334	2.3	91	-0.01	13.56
87	n-butyl ether	2.113	2.056	2.7	92	-0.01	14.09
88	chlorobenzene	1.057	1.061	-0.4	95	-0.01	14.11
89	1,1,1,2-tetrachloroethane	0.436	0.447	-2.5	95	-0.01	14.18
90	ethylbenzene	1.965	1.983	-0.9	94	-0.01	14.19
91	m,p-xylene	0.748	0.757	-1.2	95	-0.01	14.32
92	o-xylene	1.772	1.769	0.2	93	-0.02	14.77
93	styrene	1.235	1.260	-2.0	94	-0.01	14.78
94	butyl acrylate	0.960	0.796	17.1	79	-0.01	14.58
95	n-amyl acetate	0.360	0.345	4.2	86	-0.01	14.82
96	isopropylbenzene	2.231	2.215	0.7	93	-0.01	15.18
97	bromoform	0.208	0.230	-10.6	102	-0.01	15.03
98	cis-1,4-dichloro-2-butene	0.131	0.151	-15.3	108	-0.01	15.18

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: VD10747-CC10725  
 Lab FileID: D266670.D

99	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	107	-0.01	16.72
100	S	4-bromofluorobenzene (s)	0.916	0.836	8.7	98	-0.02	15.39
101		1,1,2,2-tetrachloroethane	0.819	0.730	10.9	96	-0.01	15.45
102		trans-1,4-dichloro-2-bute	0.179	0.196	-9.5	114	-0.01	15.49
103		1,2,3-trichloropropane	0.213	0.200	6.1	99	-0.01	15.55
104		bromobenzene	0.764	0.770	-0.8	102	-0.02	15.60
105		n-propylbenzene	4.185	3.803	9.1	95	-0.01	15.65
106		2-chlorotoluene	0.812	0.763	6.0	97	-0.01	15.79
107		4-chlorotoluene	2.493	2.366	5.1	101	-0.01	15.92
108		1,3,5-trimethylbenzene	3.293	2.939	10.8	94	-0.02	15.83
109		tert-butylbenzene	2.598	2.263	12.9	90	-0.01	16.21
110		1,2,4-trimethylbenzene	3.355	3.031	9.7	96	-0.02	16.26
111		sec-butylbenzene	4.212	3.610	14.3	89	-0.02	16.46
112		p-isopropyltoluene	3.539	3.109	12.2	92	-0.02	16.60
113		1,3-dichlorobenzene	1.679	1.622	3.4	105	-0.01	16.64
114		1,4-dichlorobenzene	1.708	1.667	2.4	105	-0.02	16.75
115		1,2-dichlorobenzene	1.748	1.701	2.7	104	-0.02	17.16
116		benzyl chloride	1.633	1.814	-11.1	119	-0.01	16.83
117		n-butylbenzene	1.893	1.669	11.8	91	-0.02	17.06
118		2-ethylhexyl acrylate	1.295	0.688	46.9#	59	-0.01	18.97
119		hexachloroethane	0.512	0.462	9.8	100	-0.02	17.51
120		1,2-dibromo-3-chloropropa	0.185	0.155	16.2	93	-0.01	18.00
121		1,3,5-trichlorobenzene	1.602	1.383	13.7	90	-0.01	18.24
122		1,2,4-trichlorobenzene	1.405	1.170	16.7	86	-0.01	18.96
123		hexachlorobutadiene	0.621	0.536	13.7	88	-0.01	19.12
124		naphthalene	3.056	2.473	19.1	85	-0.02	19.30
125		1,2,3-trichlorobenzene	1.164	0.946	18.7	84	-0.01	19.57
126		2-methylnaphthalene	1.209	0.747	38.2#	67	-0.02	20.72

(#) = Out of Range  
 d266060.D MD10725.M

SPCC's out = 0 CCC's out = 0  
 Mon Oct 07 00:39:47 2019

**Run Sequence Report**

Job Number: JC95555

Account: BBLNYS Arcadis

Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: V1C7262	Method: SW846 8260C	Instrument ID: GCMS1C
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V1C7262-BFB	1C165729.D	07/13/19 14:16	n/a	BFB Tune
V1C7262-IC7262	1C165730.D	07/13/19 14:47	n/a	Initial cal 0.2
V1C7262-IC7262	1C165731.D	07/13/19 15:14	n/a	Initial cal 0.5
V1C7262-IC7262	1C165732.D	07/13/19 15:41	n/a	Initial cal 1
V1C7262-IC7262	1C165733.D	07/13/19 16:08	n/a	Initial cal 2
V1C7262-IC7262	1C165734.D	07/13/19 16:35	n/a	Initial cal 4
V1C7262-IC7262	1C165735.D	07/13/19 17:02	n/a	Initial cal 8
V1C7262-IC7262	1C165736.D	07/13/19 17:30	n/a	Initial cal 20
V1C7262-ICC7262	1C165737.D	07/13/19 17:57	n/a	Initial cal 50
V1C7262-IC7262	1C165738.D	07/13/19 18:25	n/a	Initial cal 100
V1C7262-IC7262	1C165739.D	07/13/19 18:52	n/a	Initial cal 200
V1C7262-ICV7262	1C165742.D	07/13/19 20:14	n/a	Initial cal verification 50
V1C7262-ICV7262	1C165743.D	07/13/19 20:41	n/a	Initial cal verification 50
V1C7262-BFB2	1C165746.D	07/15/19 12:53	n/a	BFB Tune
V1C7262-ICV7262	1C165747.D	07/15/19 13:23	n/a	Initial cal verification 50



## Run Sequence Report

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: V1C7331	Method: SW846 8260C	Instrument ID: GCMS1C
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V1C7331-BFB	1C167568.D	10/04/19 07:59	n/a	BFB Tune
V1C7331-CC7262	1C167568.D	10/04/19 07:59	n/a	Continuing cal 50
V1C7331-BS	1C167569.D	10/04/19 08:37	n/a	Blank Spike
V1C7331-MB	1C167571.D	10/04/19 09:30	n/a	Method Blank
JC95641-12	1C167572.D	10/04/19 10:14	n/a	(used for QC only; not part of job JC95555)
JC95641-15	1C167573.D	10/04/19 10:41	n/a	(used for QC only; not part of job JC95555)
ZZZZZZ	1C167574.D	10/04/19 11:08	n/a	(unrelated sample)
ZZZZZZ	1C167575.D	10/04/19 11:34	n/a	(unrelated sample)
ZZZZZZ	1C167576.D	10/04/19 12:01	n/a	(unrelated sample)
JC95641-12MS	1C167577.D	10/04/19 12:27	n/a	Matrix Spike
JC95641-15DUP	1C167579.D	10/04/19 13:21	n/a	Duplicate
ZZZZZZ	1C167580.D	10/04/19 13:47	n/a	(unrelated sample)
JC95555-4	1C167581.D	10/04/19 14:13	n/a	MW-108(10-12)
ZZZZZZ	1C167582.D	10/04/19 14:40	n/a	(unrelated sample)
ZZZZZZ	1C167583.D	10/04/19 15:06	n/a	(unrelated sample)
JC95555-4	1C167585.D	10/04/19 15:59	n/a	MW-108(10-12)
ZZZZZZ	1C167586.D	10/04/19 16:25	n/a	(unrelated sample)
ZZZZZZ	1C167587.D	10/04/19 16:52	n/a	(unrelated sample)
ZZZZZZ	1C167589.D	10/04/19 17:44	n/a	(unrelated sample)
ZZZZZZ	1C167590.D	10/04/19 18:11	n/a	(unrelated sample)
ZZZZZZ	1C167591.D	10/04/19 18:37	n/a	(unrelated sample)
ZZZZZZ	1C167592.D	10/04/19 19:03	n/a	(unrelated sample)

**Run Sequence Report**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: VA9755	Method: SW846 8260C	Instrument ID: GCMSA
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VA9755-BFB	A251984.D	07/29/19 17:24	n/a	BFB Tune
VA9755-IC9755	A251985.D	07/29/19 18:10	n/a	Initial cal 0.2
VA9755-IC9755	A251986.D	07/29/19 18:40	n/a	Initial cal 0.5
VA9755-IC9755	A251987.D	07/29/19 19:09	n/a	Initial cal 1
VA9755-IC9755	A251988.D	07/29/19 19:39	n/a	Initial cal 2
VA9755-IC9755	A251989.D	07/29/19 20:08	n/a	Initial cal 4
VA9755-IC9755	A251990.D	07/29/19 20:37	n/a	Initial cal 8
VA9755-IC9755	A251991.D	07/29/19 21:07	n/a	Initial cal 20
VA9755-ICC9755	A251992.D	07/29/19 21:36	n/a	Initial cal 50
VA9755-IC9755	A251993.D	07/29/19 22:06	n/a	Initial cal 100
VA9755-IC9755	A251994.D	07/29/19 22:36	n/a	Initial cal 200
VA9755-ICV9755	A251997.D	07/30/19 00:04	n/a	Initial cal verification 50
VA9755-ICV9755	A251998.D	07/30/19 00:33	n/a	Initial cal verification 50

**Run Sequence Report**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: VA9835	Method: SW846 8260C	Instrument ID: GCMSA
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VA9835-BFB	A253699.D	10/04/19 06:46	n/a	BFB Tune
VA9835-CC9755	A253699.D	10/04/19 06:46	n/a	Continuing cal 20
VA9835-BS	A253700.D	10/04/19 07:45	n/a	Blank Spike
VA9835-MB	A253702.D	10/04/19 08:43	n/a	Method Blank
ZZZZZZ	A253703.D	10/04/19 09:19	n/a	(unrelated sample)
JC95555-5	A253704.D	10/04/19 09:48	n/a	TRIP BLANK
ZZZZZZ	A253705.D	10/04/19 10:17	n/a	(unrelated sample)
JC95745-5	A253706.D	10/04/19 10:46	n/a	(used for QC only; not part of job JC95555)
ZZZZZZ	A253707.D	10/04/19 11:14	n/a	(unrelated sample)
ZZZZZZ	A253708.D	10/04/19 11:44	n/a	(unrelated sample)
ZZZZZZ	A253709.D	10/04/19 12:13	n/a	(unrelated sample)
ZZZZZZ	A253710.D	10/04/19 12:41	n/a	(unrelated sample)
JC95745-5MS	A253712.D	10/04/19 13:48	n/a	Matrix Spike
JC95745-5MSD	A253713.D	10/04/19 14:17	n/a	Matrix Spike Duplicate
JC95745-5	A253715.D	10/04/19 15:15	n/a	(used for QC only; not part of job JC95555)
ZZZZZZ	A253718.D	10/04/19 16:42	n/a	(unrelated sample)
ZZZZZZ	A253722.D	10/04/19 18:38	n/a	(unrelated sample)

**Run Sequence Report**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: VD10725	Method: SW846 8260C	Instrument ID: GCMSD		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VD10725-BFB	D266053.D	09/06/19 18:16	n/a	BFB Tune
VD10725-IC10725	D266054.D	09/06/19 18:57	n/a	Initial cal 0.2
VD10725-IC10725	D266055.D	09/06/19 19:26	n/a	Initial cal 0.5
VD10725-IC10725	D266056.D	09/06/19 19:54	n/a	Initial cal 1
VD10725-IC10725	D266057.D	09/06/19 20:23	n/a	Initial cal 2
VD10725-IC10725	D266058.D	09/06/19 20:52	n/a	Initial cal 4
VD10725-IC10725	D266059.D	09/06/19 21:20	n/a	Initial cal 8
VD10725-IC10725	D266060.D	09/06/19 21:49	n/a	Initial cal 20
VD10725-ICC10725	D266061.D	09/06/19 22:17	n/a	Initial cal 50
VD10725-IC10725	D266062.D	09/06/19 22:46	n/a	Initial cal 100
VD10725-IC10725	D266063.D	09/06/19 23:14	n/a	Initial cal 200
VD10725-ICV10725	D266066.D	09/07/19 00:40	n/a	Initial cal verification 50
VD10725-ICV10725	D266067.D	09/07/19 01:08	n/a	Initial cal verification 50

## Run Sequence Report

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: VD10747	Method: SW846 8260C	Instrument ID: GCMSD		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VD10747-BFB	D266670.D	10/03/19 07:38	n/a	BFB Tune
VD10747-CC10725	D266670.D	10/03/19 07:38	n/a	Continuing cal 20
VD10747-BS	D266671.D	10/03/19 08:28	n/a	Blank Spike
ZZZZZZ	D266673A.D	10/03/19 09:25	n/a	(unrelated sample)
VD10747-MB	D266673.D	10/03/19 09:25	n/a	Method Blank
ZZZZZZ	D266674.D	10/03/19 09:54	n/a	(unrelated sample)
JC95555-4	D266675.D	10/03/19 10:59	n/a	MW-108(10-12)
JC95555-2	D266676.D	10/03/19 11:28	n/a	MW-111(13-15)
ZZZZZZ	D266677.D	10/03/19 11:56	n/a	(unrelated sample)
ZZZZZZ	D266678.D	10/03/19 12:25	n/a	(unrelated sample)
JC95555-2MS	D266680.D	10/03/19 13:22	n/a	Matrix Spike
JC95555-2MSD	D266681.D	10/03/19 13:51	n/a	Matrix Spike Duplicate
ZZZZZZ	D266683.D	10/03/19 14:48	n/a	(unrelated sample)
ZZZZZZ	D266684.D	10/03/19 15:16	n/a	(unrelated sample)
ZZZZZZ	D266685.D	10/03/19 15:45	n/a	(unrelated sample)
ZZZZZZ	D266686.D	10/03/19 16:14	n/a	(unrelated sample)
ZZZZZZ	D266687.D	10/03/19 16:42	n/a	(unrelated sample)
JC95555-1	D266689.D	10/03/19 17:39	n/a	MW-111(11-13)
JC95555-3	D266690.D	10/03/19 18:08	n/a	MW-108(5-7)
ZZZZZZ	D266691.D	10/03/19 18:37	n/a	(unrelated sample)
ZZZZZZ	D266692.D	10/03/19 19:05	n/a	(unrelated sample)

**MS Volatiles**

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**Raw Data**

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\
Data File : d266689.d
Acq On : 3 Oct 2019 5:39 pm
Operator : thienn
Sample : jc95555-1 Inst : MSD
Misc : ms37920,vd10747,4.9,,2,10,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M
Quant Results File: MD10725.RES
Quant Time: Oct 07 00:31:53 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Sep 09 11:00:30 2019
Response via : Initial Calibration

Table with 7 columns: Compound, R.T., QIon, Response, Conc, Units, Dev(Min). Rows include Internal Standards (tert butyl alcohol-d9, pentafluorobenzene, etc.), System Monitoring Compounds (dibromofluoromethane, 1,2-dichloroethane, etc.), and Target Compounds (benzene, toluene, ethylbenzene, etc.).

(#) = qualifier out of range (m) = manual integration (+) = signals summed

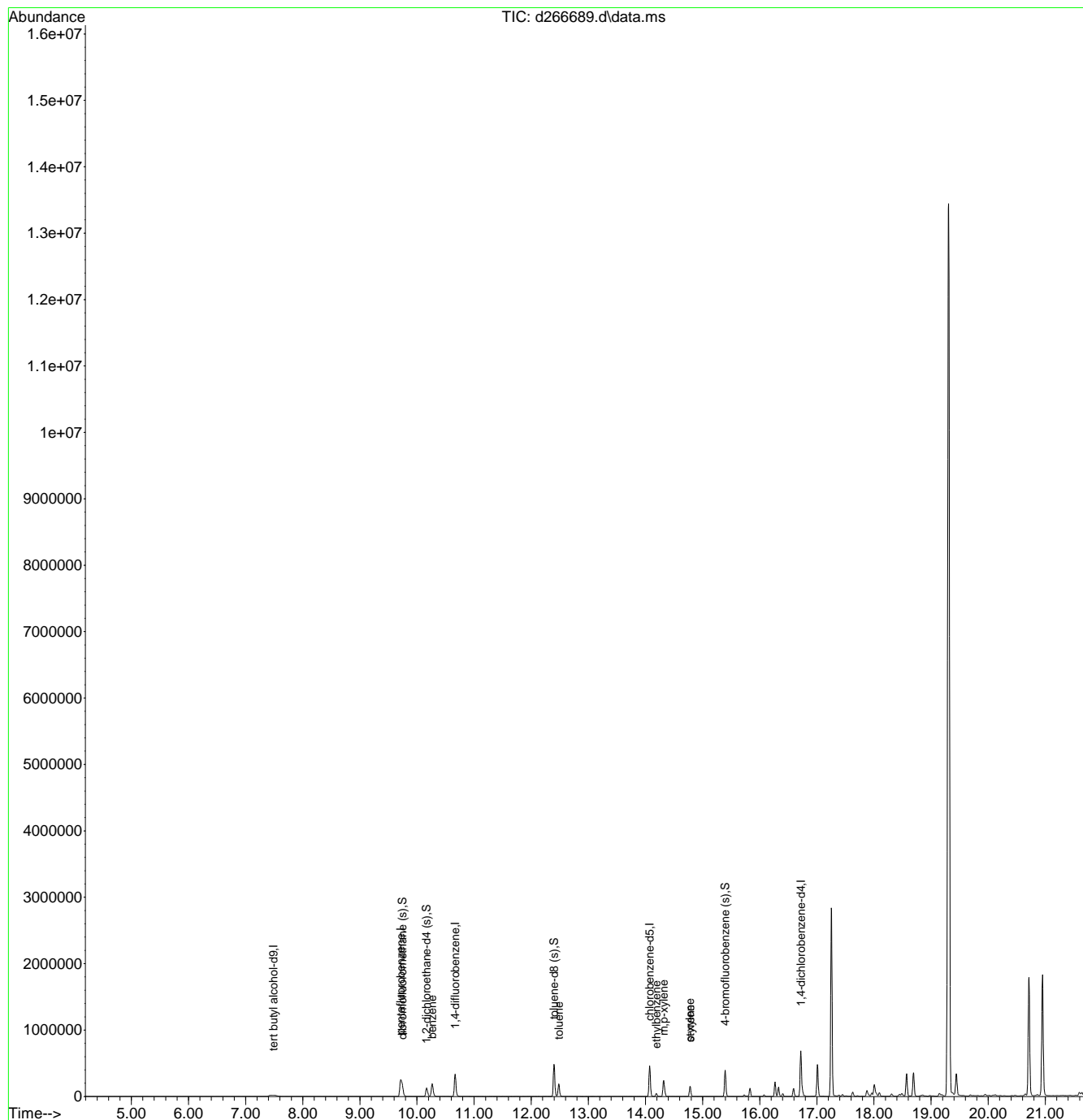
7.1.1
7



Quantitation Report (QT Reviewed)

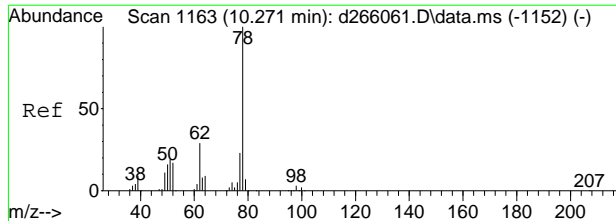
Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266689.d  
 Acq On : 3 Oct 2019 5:39 pm  
 Operator : thienn  
 Sample : jc95555-1 Inst : MSD  
 Misc : ms37920,vd10747,4.9,,2,10,1  
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 07 00:31:53 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration



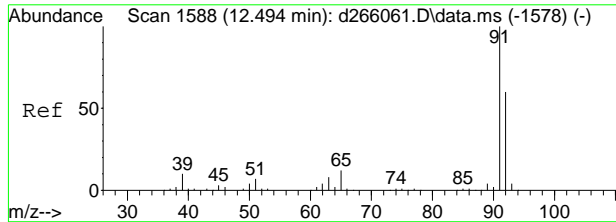
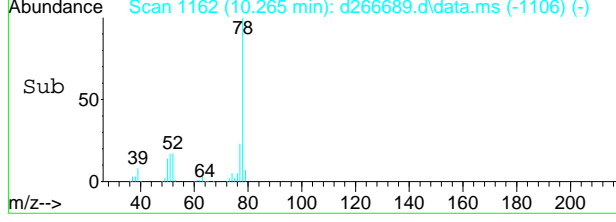
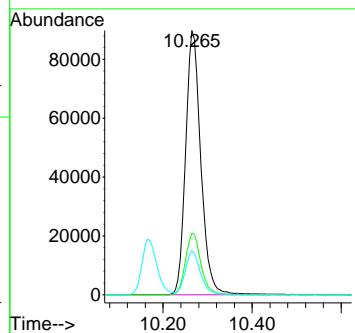
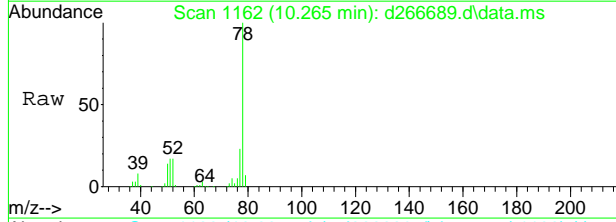
7.11  
7





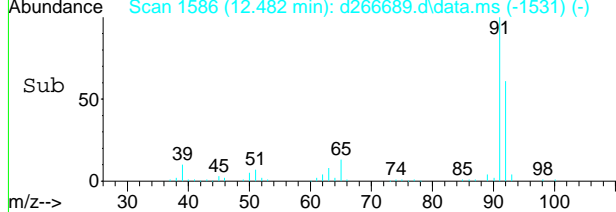
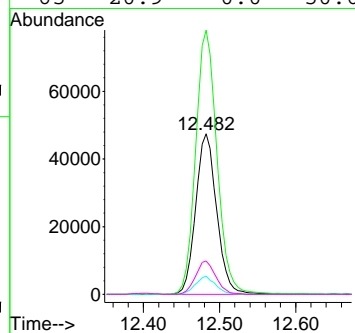
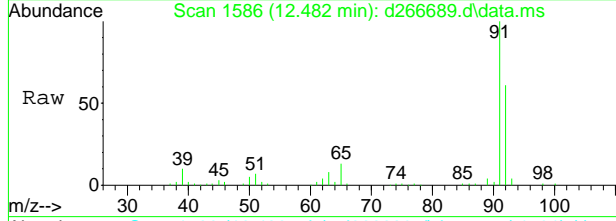
#58  
benzene  
Concen: 21.25 ug/L  
RT: 10.265 min Scan# 1162  
Delta R.T. -0.007 min  
Lab File: d266689.d  
Acq: 3 Oct 2019 5:39 pm

Tgt Ion	Resp	Lower	Upper
78	213326		
78	100		
77	23.4	0.0	53.4
51	16.6	0.0	49.1

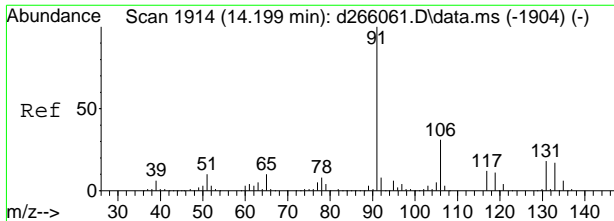


#77  
toluene  
Concen: 16.08 ug/L  
RT: 12.482 min Scan# 1586  
Delta R.T. -0.012 min  
Lab File: d266689.d  
Acq: 3 Oct 2019 5:39 pm

Tgt Ion	Resp	Lower	Upper
92	90793		
92	100		
91	164.6	146.9	186.9
51	11.4	0.0	41.2
65	20.9	0.0	50.6

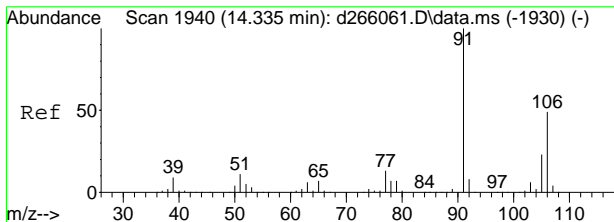
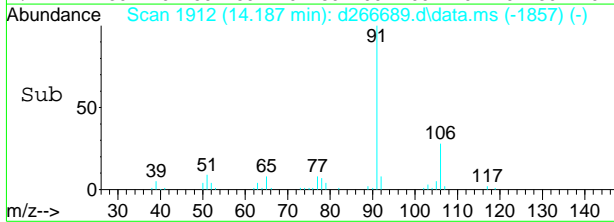
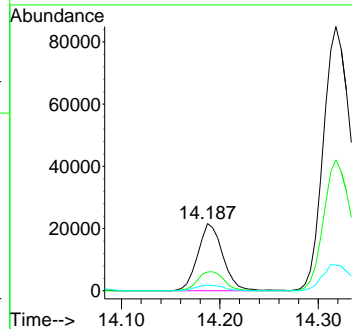
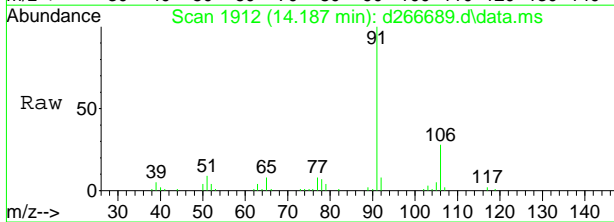


7.1.1  
7



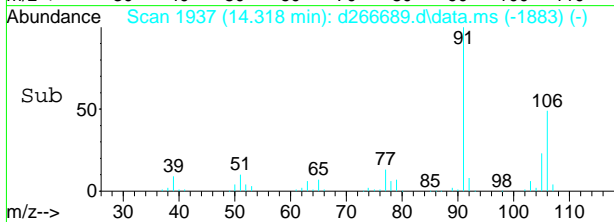
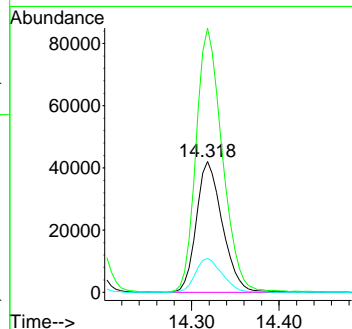
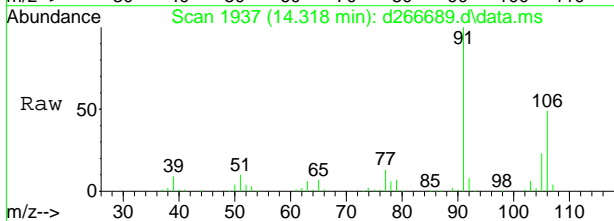
#90  
ethylbenzene  
Concen: 3.45 ug/L  
RT: 14.187 min Scan# 1912  
Delta R.T. -0.012 min  
Lab File: d266689.d  
Acq: 3 Oct 2019 5:39 pm

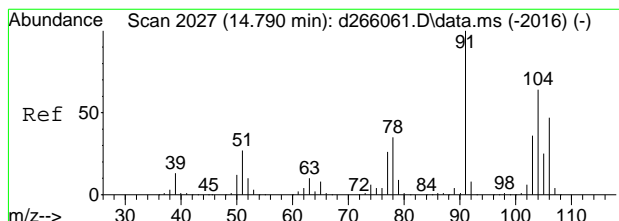
Tgt Ion	Resp	Lower	Upper
91	38318		
106	28.1	0.9	60.9
51	8.5	0.0	40.7



#91  
m,p-xylene  
Concen: 20.58 ug/L  
RT: 14.318 min Scan# 1937  
Delta R.T. -0.017 min  
Lab File: d266689.d  
Acq: 3 Oct 2019 5:39 pm

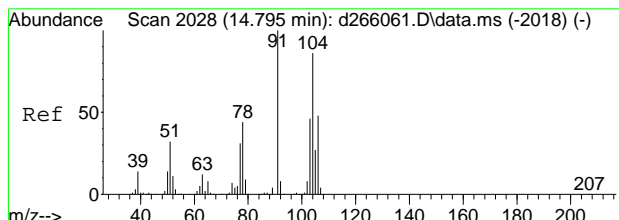
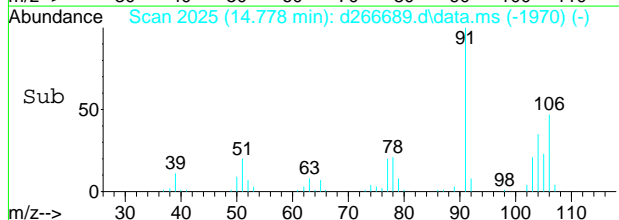
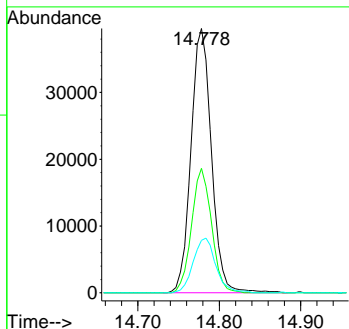
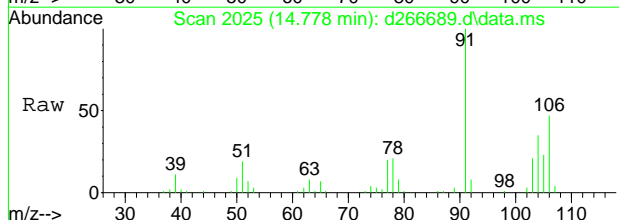
Tgt Ion	Resp	Lower	Upper
106	87042		
91	202.2	172.5	232.5
77	26.0	0.0	57.1





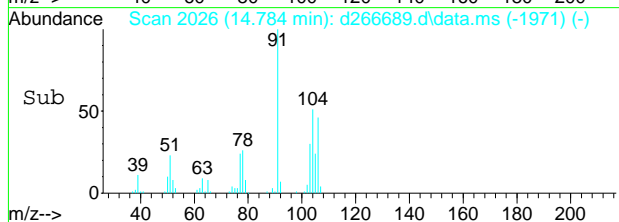
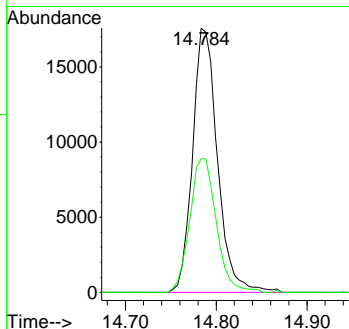
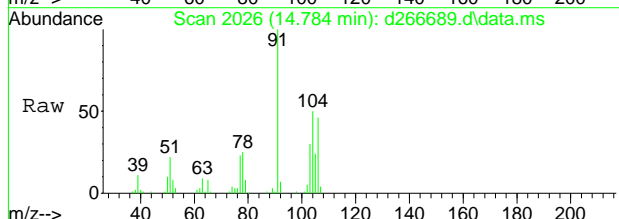
#92  
 o-xylene  
 Concen: 6.91 ug/L  
 RT: 14.778 min Scan# 2025  
 Delta R.T. -0.012 min  
 Lab File: d266689.d  
 Acq: 3 Oct 2019 5:39 pm

Tgt Ion	Ratio	Lower	Upper
91	100		
106	47.0	17.0	77.0
77	19.9	0.0	56.3



#93  
 styrene  
 Concen: 4.78 ug/L  
 RT: 14.784 min Scan# 2026  
 Delta R.T. -0.012 min  
 Lab File: d266689.d  
 Acq: 3 Oct 2019 5:39 pm

Tgt Ion	Ratio	Lower	Upper
104	100		
78	50.6	20.5	80.5



7.11  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266676.d  
 Acq On : 3 Oct 2019 11:28 am  
 Operator : thienn  
 Sample : jc95555-2 Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:35:29 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) tert butyl alcohol-d9	7.447	65	120620	500.00	ug/L	-0.04
5) pentafluorobenzene	9.712	168	198755	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.664	114	317931	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.074	117	295716	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.720	152	197063	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.738	113	105582	49.76	ug/L	-0.01
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.52%
55) 1,2-dichloroethane-d4 (s)	10.167	65	111273	48.57	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.14%
76) toluene-d8 (s)	12.400	98	370221	48.22	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.44%
100) 4-bromofluorobenzene (s)	15.392	95	162120	44.90	ug/L	-0.02
Spiked Amount	50.000	Range	79 - 127	Recovery	=	89.80%
Target Compounds						
23) carbon disulfide	7.275	76	16714	1.88	ug/L	95
58) benzene	10.261	78	641799	62.26	ug/L	97
77) toluene	12.484	92	41850	7.08	ug/L	98
90) ethylbenzene	14.189	91	10407	0.90	ug/L	98
91) m,p-xylene	14.325	106	7219	1.63	ug/L	94
92) o-xylene	14.780	91	18159	1.73	ug/L	89
96) isopropylbenzene	15.183	105	11914	0.90	ug/L	97
108) 1,3,5-trimethylbenzene	15.831	105	5997	0.46	ug/L	99
110) 1,2,4-trimethylbenzene	16.270	105	28784	2.18	ug/L	100
124) naphthalene	19.299	128	772586	64.14	ug/L	100
126) 2-methylnaphthalene	20.716	142	71774	15.06	ug/L	98
-----						

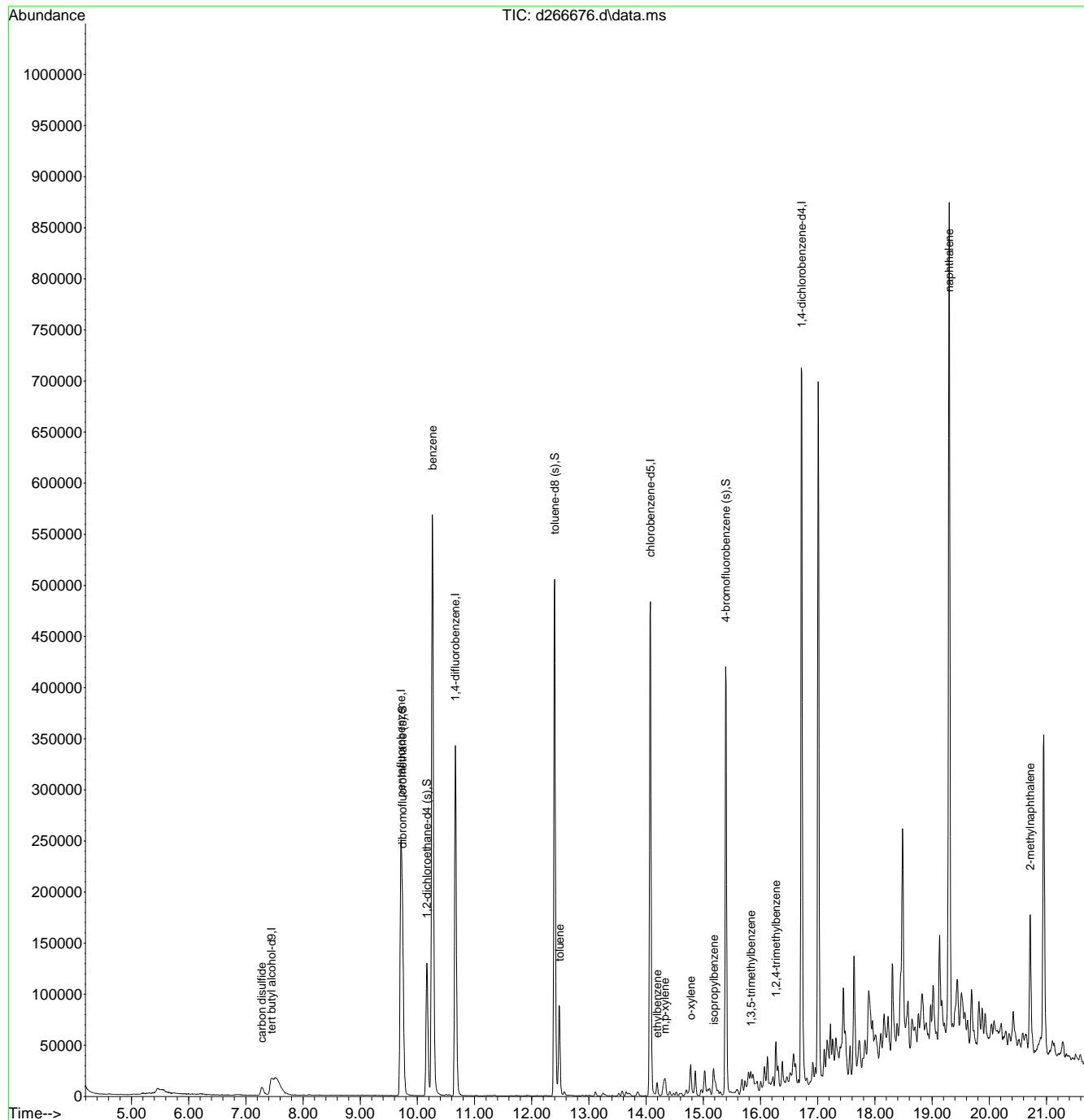
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.12  
7

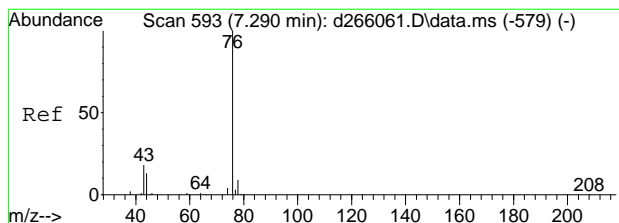
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266676.d  
 Acq On : 3 Oct 2019 11:28 am  
 Operator : thienn  
 Sample : jc95555-2 Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:35:29 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

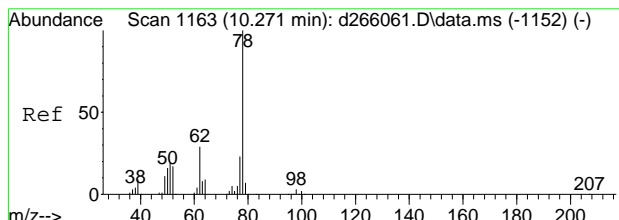
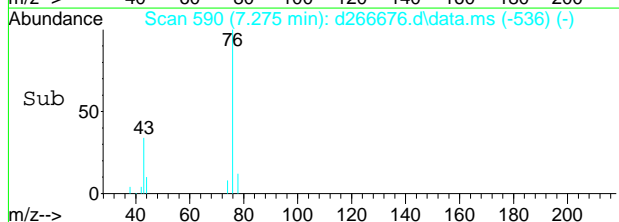
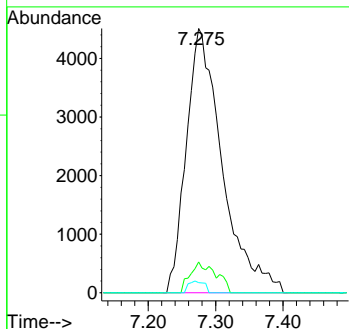
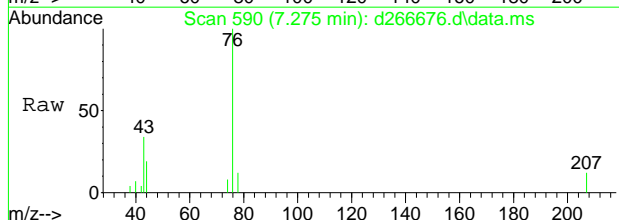


7.1.2  
7



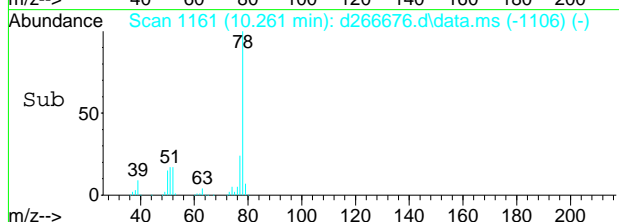
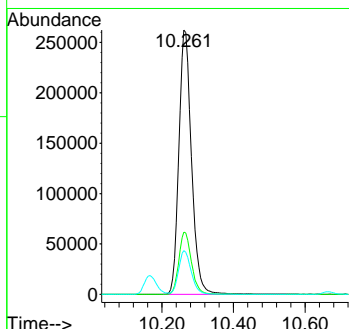
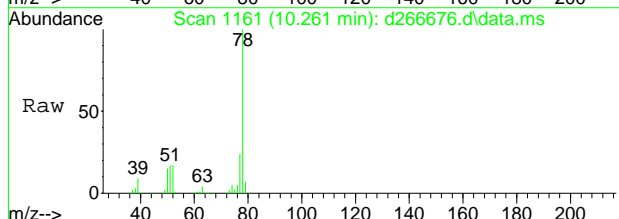
#23  
 carbon disulfide  
 Concen: 1.88 ug/L  
 RT: 7.275 min Scan# 590  
 Delta R.T. -0.015 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

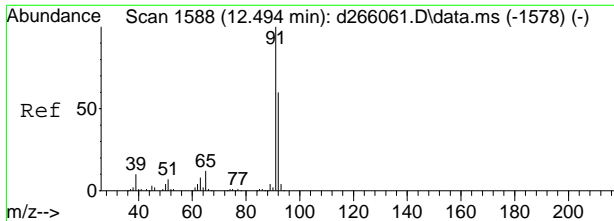
Tgt Ion	Resp	Lower	Upper
76	16714		
78	11.7	0.0	39.2
38	3.9	0.0	34.6



#58  
 benzene  
 Concen: 62.26 ug/L  
 RT: 10.261 min Scan# 1161  
 Delta R.T. -0.010 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

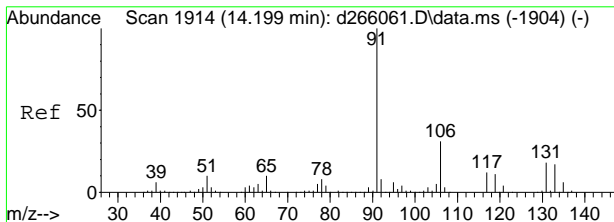
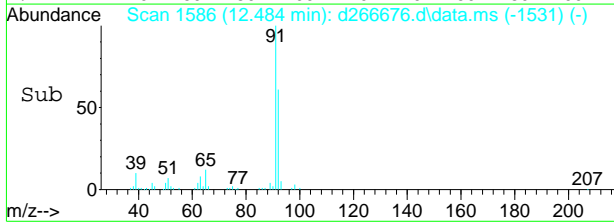
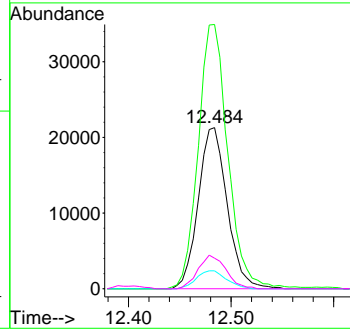
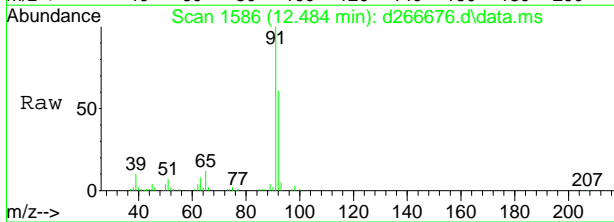
Tgt Ion	Resp	Lower	Upper
78	641799		
77	23.5	0.0	53.4
51	16.6	0.0	49.1





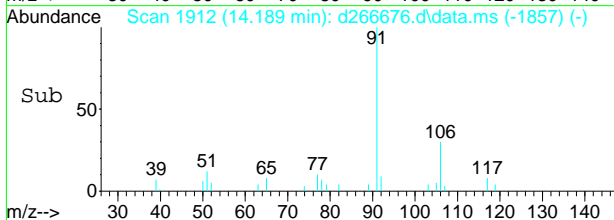
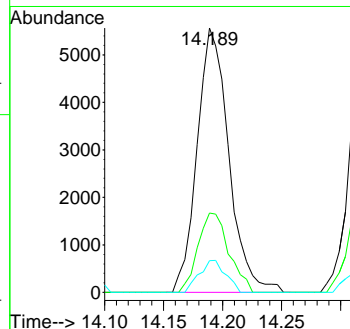
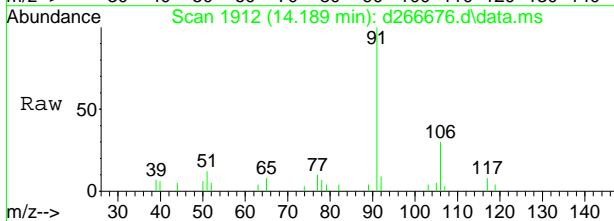
#77  
 toluene  
 Concen: 7.08 ug/L  
 RT: 12.484 min Scan# 1586  
 Delta R.T. -0.010 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Resp	Lower	Upper
92	41850		
91	164.1	146.9	186.9
51	11.2	0.0	41.2
65	18.9	0.0	50.6

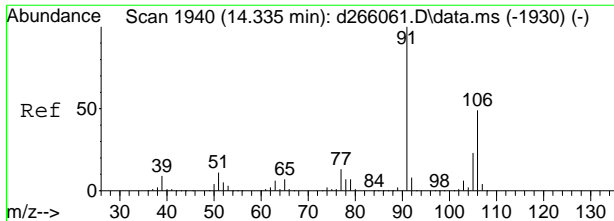


#90  
 ethylbenzene  
 Concen: 0.90 ug/L  
 RT: 14.189 min Scan# 1912  
 Delta R.T. -0.010 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Resp	Lower	Upper
91	10407		
91	100		
106	30.0	0.9	60.9
51	12.0	0.0	40.7

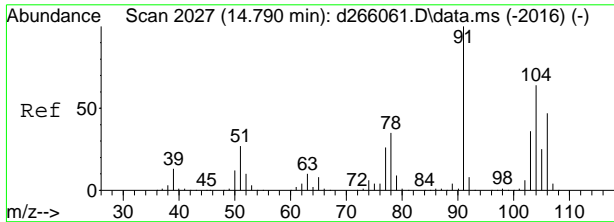
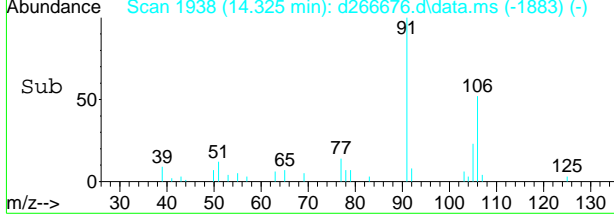
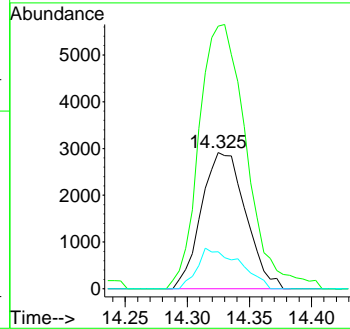
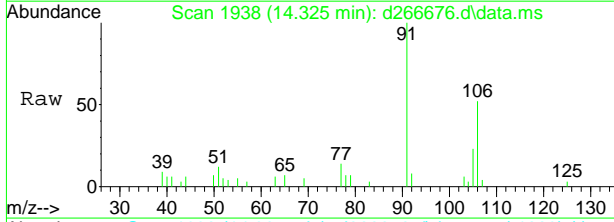


7.12  
 7



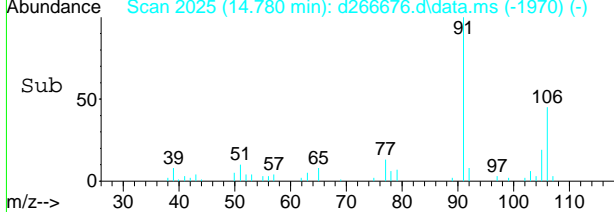
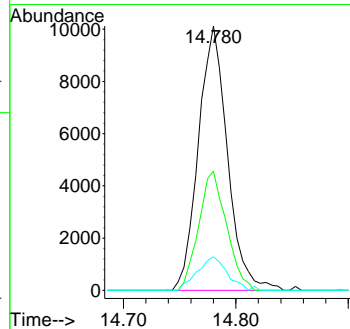
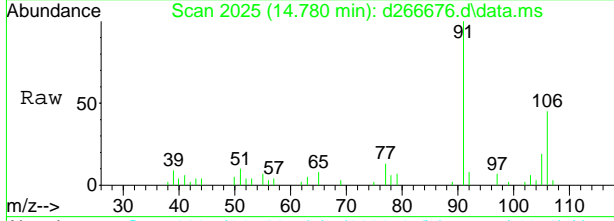
#91  
 m,p-xylene  
 Concen: 1.63 ug/L  
 RT: 14.325 min Scan# 1938  
 Delta R.T. -0.010 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Ratio	Lower	Upper
106	100		
91	192.8	172.5	232.5
77	27.2	0.0	57.1



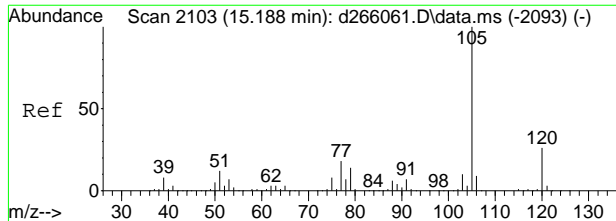
#92  
 o-xylene  
 Concen: 1.73 ug/L  
 RT: 14.780 min Scan# 2025  
 Delta R.T. -0.010 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Ratio	Lower	Upper
91	100		
106	45.1	17.0	77.0
77	12.8	0.0	56.3



7.12  
7

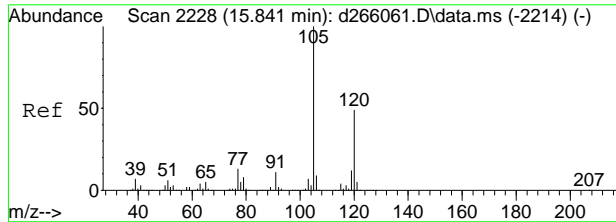
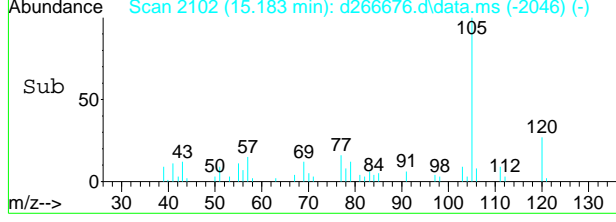
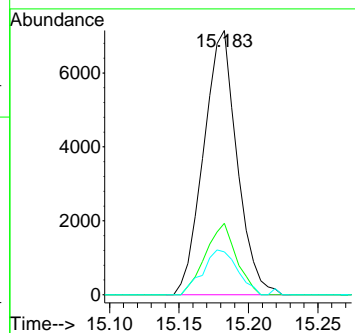
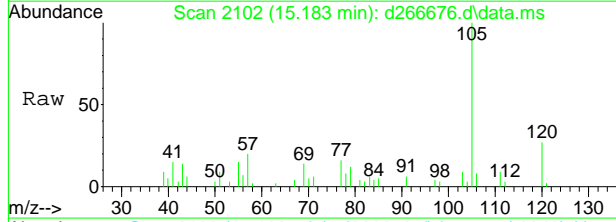




#96  
isopropylbenzene  
Concen: 0.90 ug/L  
RT: 15.183 min Scan# 2102  
Delta R.T. -0.005 min  
Lab File: d266676.d  
Acq: 3 Oct 2019 11:28 am

Tgt Ion:105 Resp: 11914

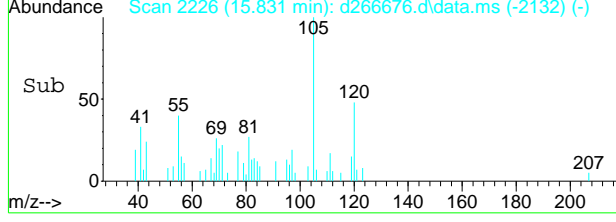
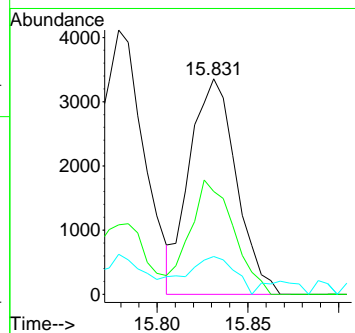
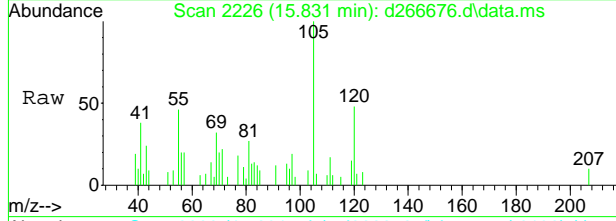
Ion	Ratio	Lower	Upper
105	100		
120	27.0	6.0	46.0
77	16.2	0.0	38.0

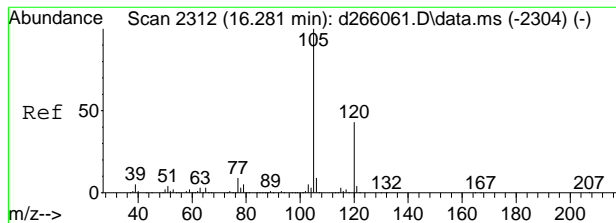


#108  
1,3,5-trimethylbenzene  
Concen: 0.46 ug/L  
RT: 15.831 min Scan# 2226  
Delta R.T. -0.010 min  
Lab File: d266676.d  
Acq: 3 Oct 2019 11:28 am

Tgt Ion:105 Resp: 5997

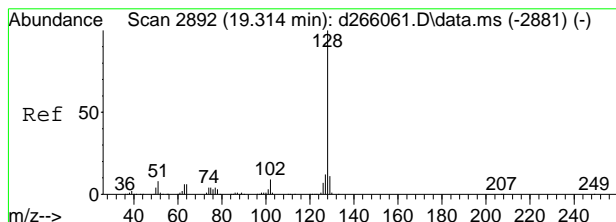
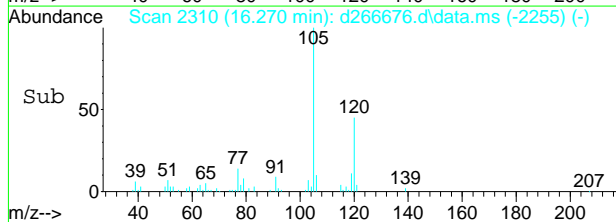
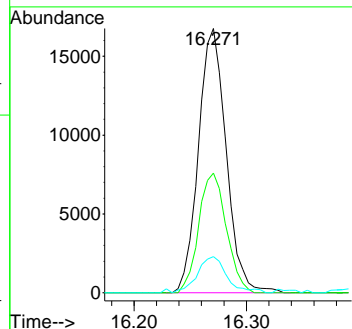
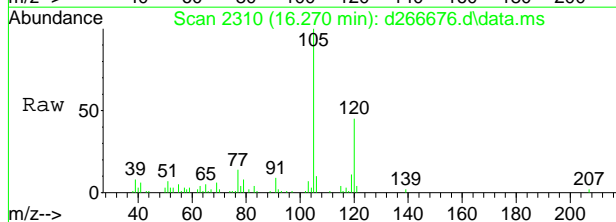
Ion	Ratio	Lower	Upper
105	100		
120	47.8	18.6	78.6
77	12.4	0.0	43.1





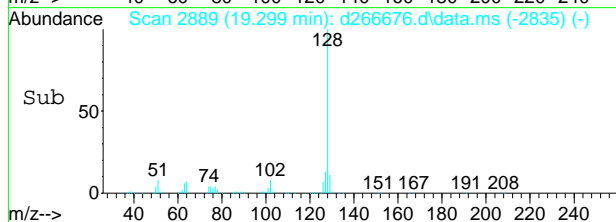
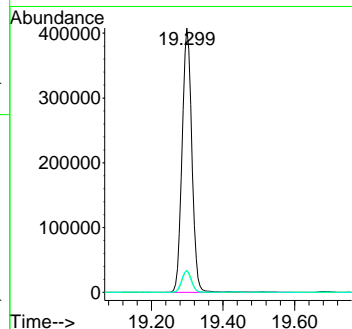
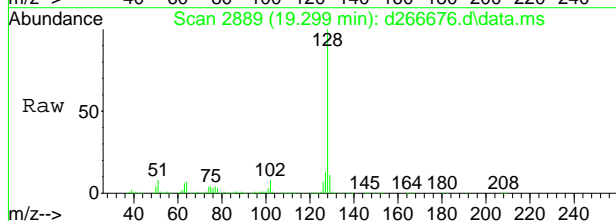
#110  
 1,2,4-trimethylbenzene  
 Concen: 2.18 ug/L  
 RT: 16.270 min Scan# 2310  
 Delta R.T. -0.010 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Ratio	Lower	Upper
105	100		
120	45.2	15.5	75.5
77	12.7	0.0	42.7

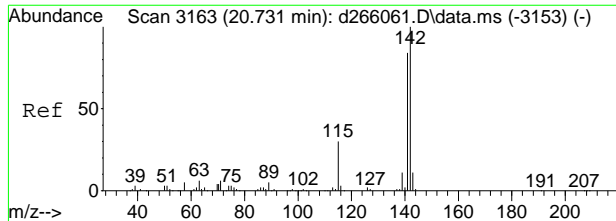


#124  
 naphthalene  
 Concen: 64.14 ug/L  
 RT: 19.299 min Scan# 2889  
 Delta R.T. -0.015 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Ratio	Lower	Upper
128	100		
102	8.4	0.0	38.6
51	8.2	0.0	38.0

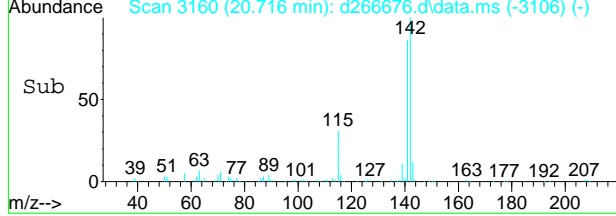
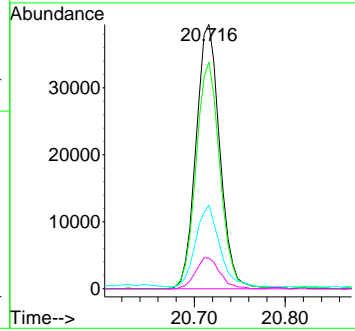
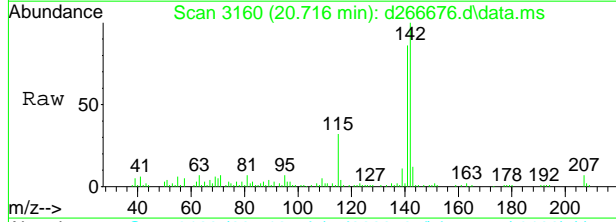


7.12  
7



#126  
 2-methylnaphthalene  
 Concen: 15.06 ug/L  
 RT: 20.716 min Scan# 3160  
 Delta R.T. -0.015 min  
 Lab File: d266676.d  
 Acq: 3 Oct 2019 11:28 am

Tgt Ion	Ratio	Lower	Upper
142	100		
141	85.7	64.0	104.0
115	30.9	0.0	59.9
143	11.6	0.0	40.7



7.12  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266690.d  
 Acq On : 3 Oct 2019 6:08 pm  
 Operator : thienn  
 Sample : jc95555-3 Inst : MSD  
 Misc : ms37920,vd10747,4,,2,10,1  
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 07 00:34:35 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.479	65	105252	500.00	ug/L	0.00
5) pentafluorobenzene	9.718	168	196693	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.670	114	311675	50.00	ug/L	0.00
75) chlorobenzene-d5	14.074	117	287086	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.721	152	187866	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.744	113	105649	50.32	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.64%
55) 1,2-dichloroethane-d4 (s)	10.173	65	113498	50.53	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	101.06%
76) toluene-d8 (s)	12.401	98	360032	48.30	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.60%
100) 4-bromofluorobenzene (s)	15.392	95	155801	45.26	ug/L	-0.01
Spiked Amount	50.000	Range	79 - 127	Recovery	=	90.52%
Target Compounds						
23) carbon disulfide	7.291	76	8683	0.99	ug/L	97
58) benzene	10.267	78	11839	1.17	ug/L	98
77) toluene	12.484	92	8386	1.46	ug/L	94
90) ethylbenzene	14.195	91	3109	0.28	ug/L	93
91) m,p-xylene	14.320	106	18600	4.33	ug/L	99
92) o-xylene	14.780	91	17161	1.69	ug/L	89

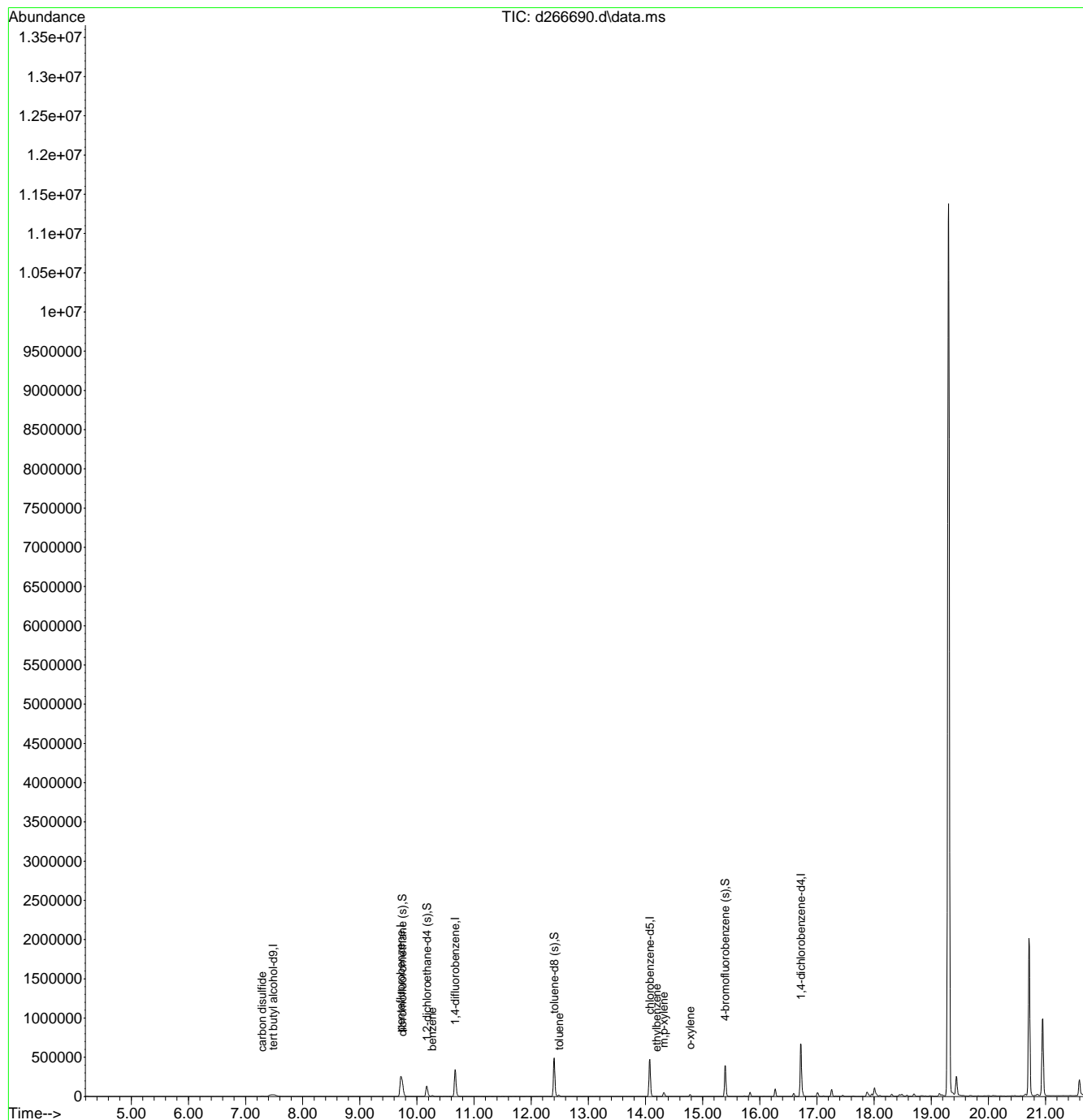
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.13  
7

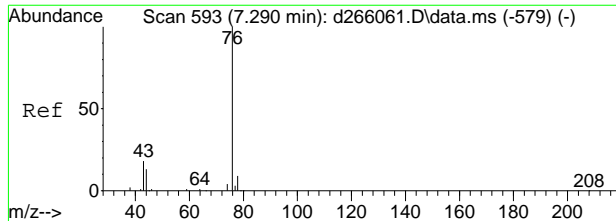
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266690.d  
 Acq On : 3 Oct 2019 6:08 pm  
 Operator : thienn  
 Sample : jc95555-3 Inst : MSD  
 Misc : ms37920,vd10747,4,,2,10,1  
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 07 00:34:35 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

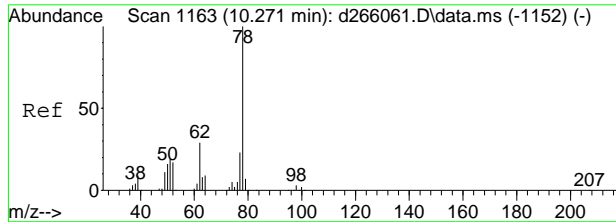
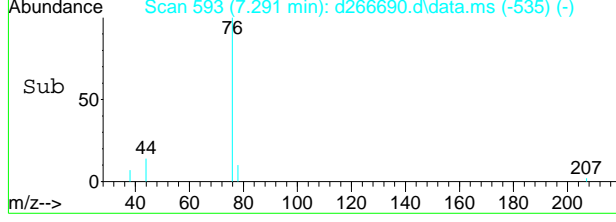
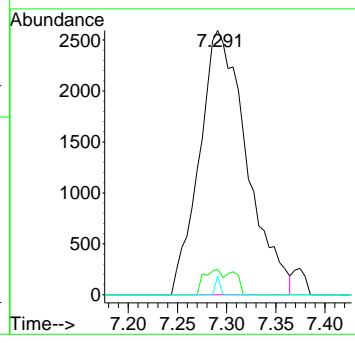
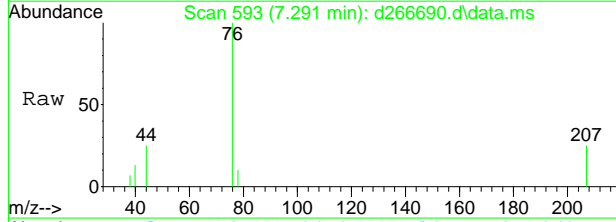


7.1.3  
7



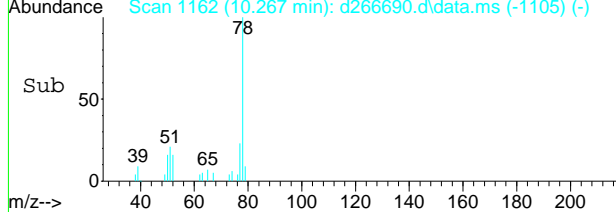
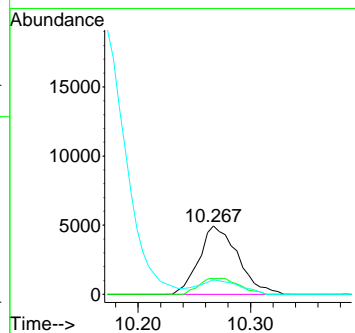
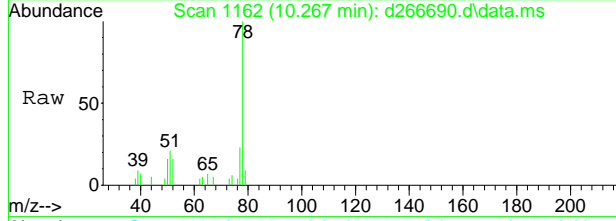
#23  
 carbon disulfide  
 Concen: 0.99 ug/L  
 RT: 7.291 min Scan# 593  
 Delta R.T. 0.001 min  
 Lab File: d266690.d  
 Acq: 3 Oct 2019 6:08 pm

Tgt Ion	Resp	Lower	Upper
76	8683		
78	9.7	0.0	39.2
38	7.1	0.0	34.6



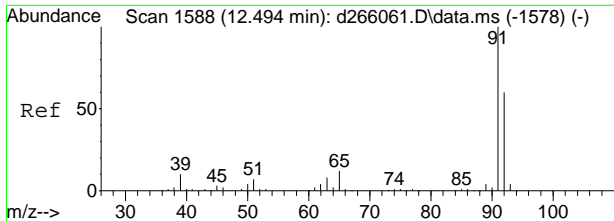
#58  
 benzene  
 Concen: 1.17 ug/L  
 RT: 10.267 min Scan# 1162  
 Delta R.T. -0.004 min  
 Lab File: d266690.d  
 Acq: 3 Oct 2019 6:08 pm

Tgt Ion	Resp	Lower	Upper
78	11839		
77	23.4	0.0	53.4
51	21.3	0.0	49.1



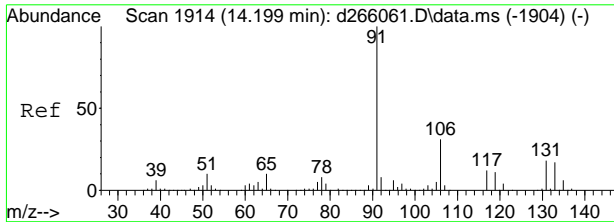
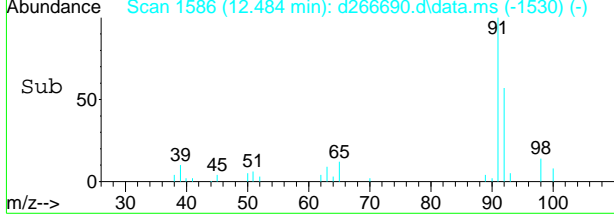
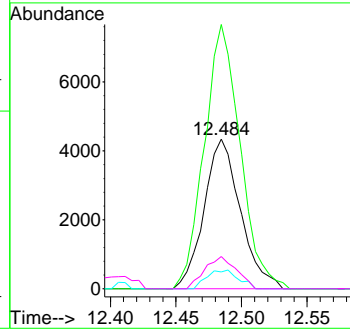
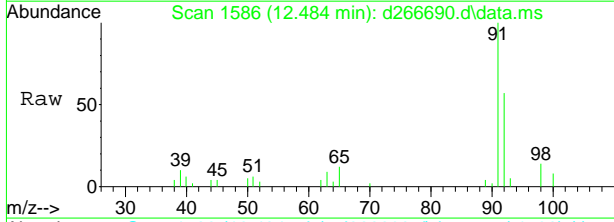
7.13  
7





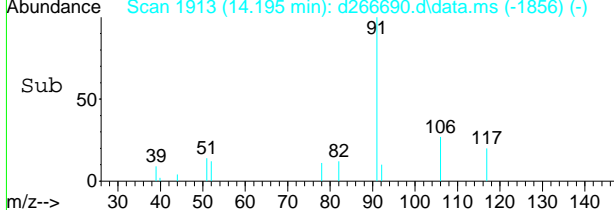
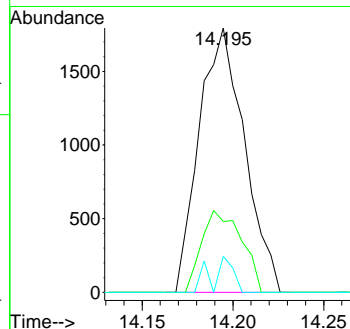
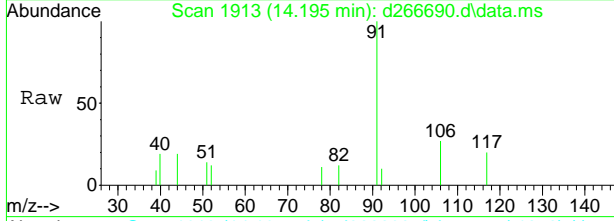
#77  
 toluene  
 Concen: 1.46 ug/L  
 RT: 12.484 min Scan# 1586  
 Delta R.T. -0.010 min  
 Lab File: d266690.d  
 Acq: 3 Oct 2019 6:08 pm

Tgt Ion	Resp	Lower	Upper
92	8386		
91	176.8	146.9	186.9
51	11.3	0.0	41.2
65	21.6	0.0	50.6



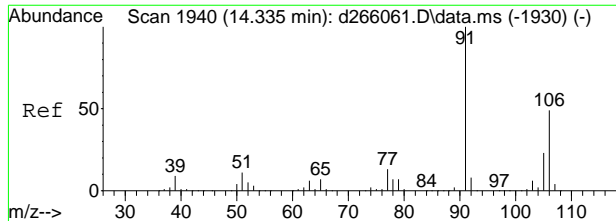
#90  
 ethylbenzene  
 Concen: 0.28 ug/L  
 RT: 14.195 min Scan# 1913  
 Delta R.T. -0.004 min  
 Lab File: d266690.d  
 Acq: 3 Oct 2019 6:08 pm

Tgt Ion	Resp	Lower	Upper
91	3109		
91	100		
106	26.9	0.9	60.9
51	13.6	0.0	40.7



7.1.3  
7

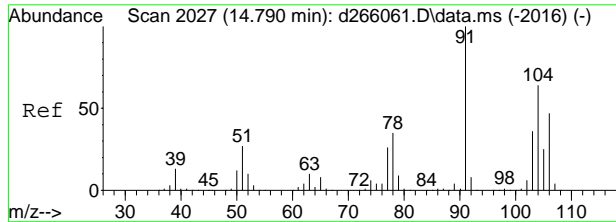
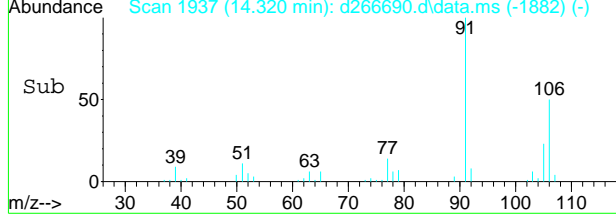
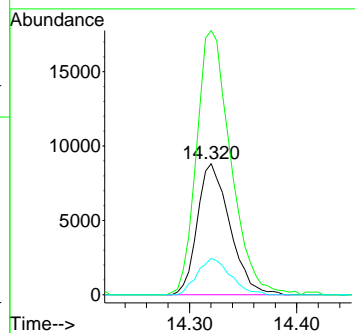
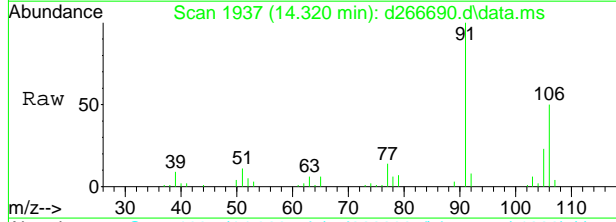




#91  
 m,p-xylene  
 Concen: 4.33 ug/L  
 RT: 14.320 min Scan# 1937  
 Delta R.T. -0.015 min  
 Lab File: d266690.d  
 Acq: 3 Oct 2019 6:08 pm

Tgt Ion: 106 Resp: 18600

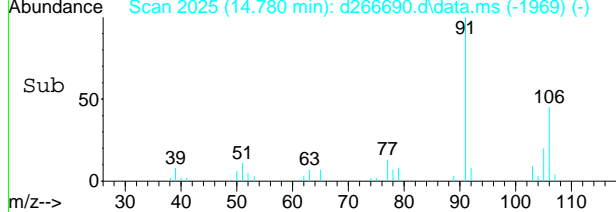
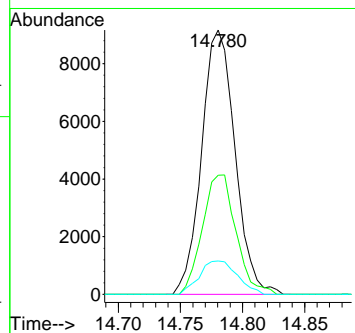
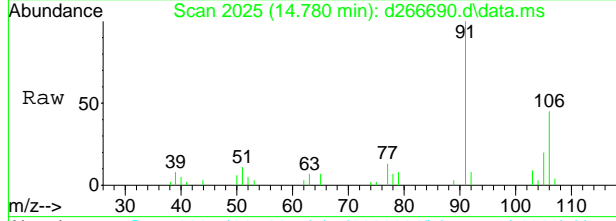
Ion	Ratio	Lower	Upper
106	100		
91	201.5	172.5	232.5
77	27.7	0.0	57.1



#92  
 o-xylene  
 Concen: 1.69 ug/L  
 RT: 14.780 min Scan# 2025  
 Delta R.T. -0.010 min  
 Lab File: d266690.d  
 Acq: 3 Oct 2019 6:08 pm

Tgt Ion: 91 Resp: 17161

Ion	Ratio	Lower	Upper
91	100		
106	45.1	17.0	77.0
77	12.7	0.0	56.3





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\  
 Data File : 1c167581.d  
 Acq On : 4 Oct 2019 2:13 pm  
 Operator : PrashanS  
 Sample : jc95555-4 Inst : GCMS1C  
 Misc : MS37920,V1C7331,2.9,,,,,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:15:11 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

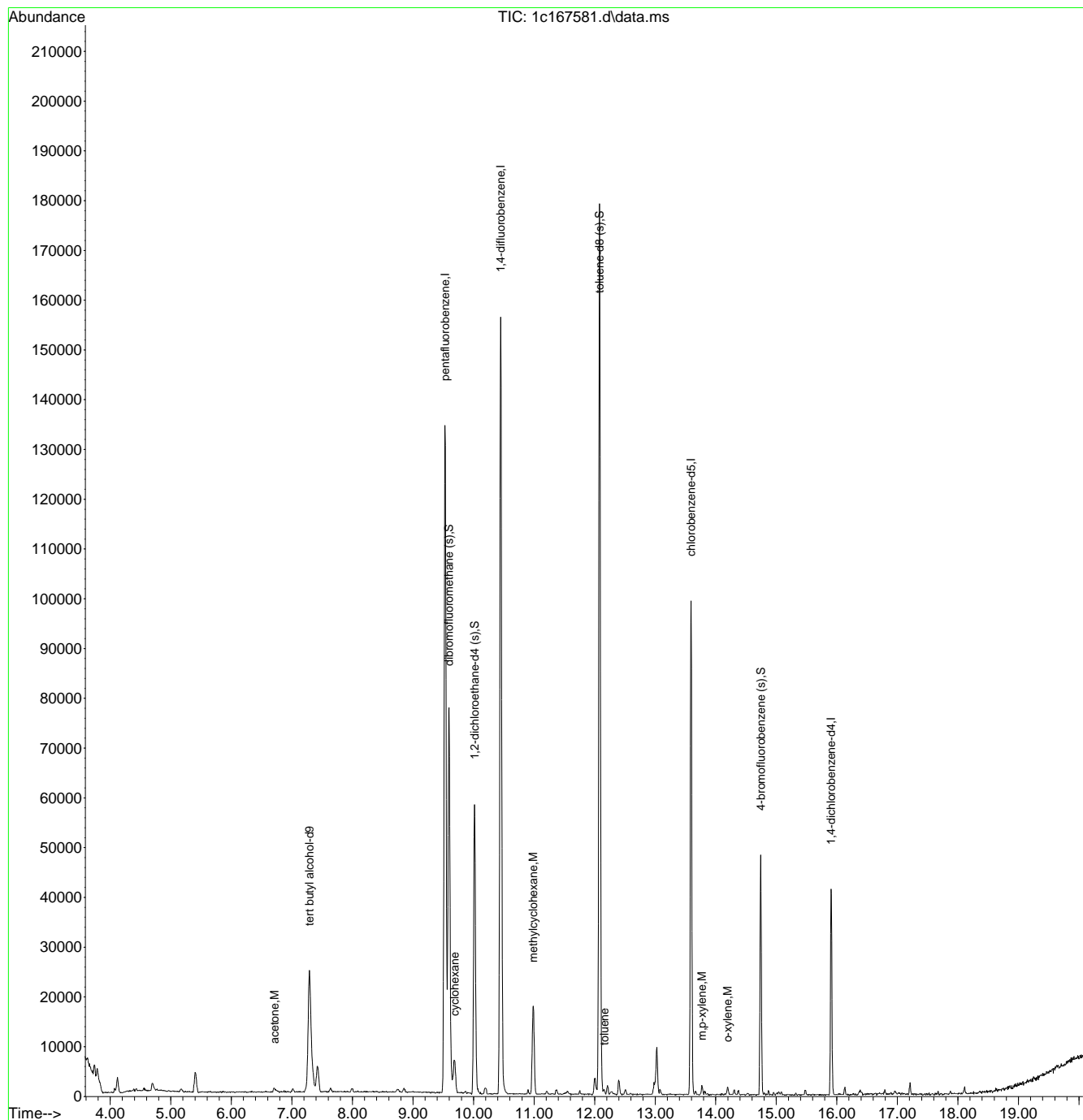
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.290	65	49412	500.00	ug/L	-0.01
5) pentafluorobenzene	9.529	168	116743	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	148458	50.00	ug/L	0.00
74) chlorobenzene-d5	13.592	117	57585	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.904	152	11632	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.591	113	53635	48.75	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	97.50%
53) 1,2-dichloroethane-d4 (s)	10.015	65	45555	51.67	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	103.34%
75) toluene-d8 (s)	12.081	98	131147	83.46	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	166.92%#
98) 4-bromofluorobenzene (s)	14.743	95	16027	69.18	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	138.36%#
Target Compounds						
19) acetone	6.709	43	1711	6.85	ug/L	98
47) cyclohexane	9.685	84	3470	2.28	ug/L	93
68) methylcyclohexane	10.983	83	9341	6.21	ug/L	94
76) toluene	12.159	92	431	0.44	ug/L #	72
90) m,p-xylene	13.770	106	677	1.00	ug/L #	78
91) o-xylene	14.194	106	436	0.68	ug/L #	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

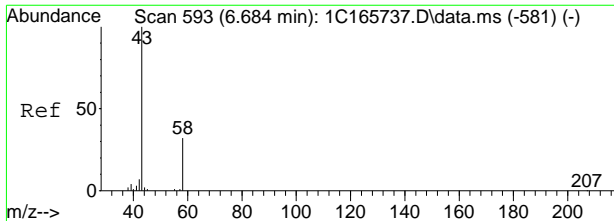
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167581.d  
 Acq On : 4 Oct 2019 2:13 pm  
 Operator : Prashans  
 Sample : jc95555-4 Inst : GCMS1C  
 Misc : MS37920,Vlc7331,2.9,,,,,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:15:11 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



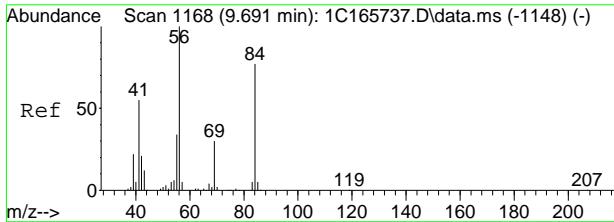
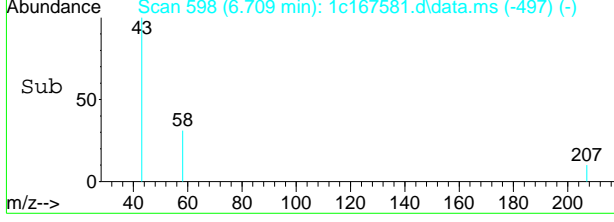
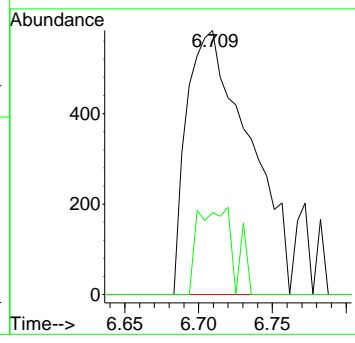
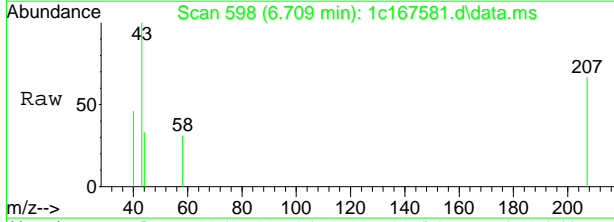
7.1.4  
7



#19  
 acetone  
 Concen: 6.85 ug/L  
 RT: 6.709 min Scan# 598  
 Delta R.T. 0.026 min  
 Lab File: 1c167581.d  
 Acq: 4 Oct 2019 2:13 pm

Tgt Ion: 43 Resp: 1711

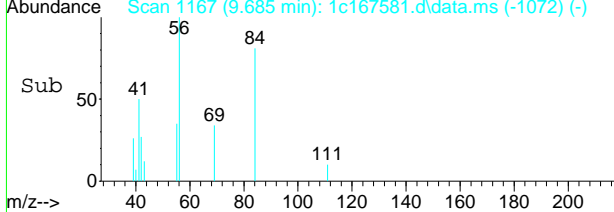
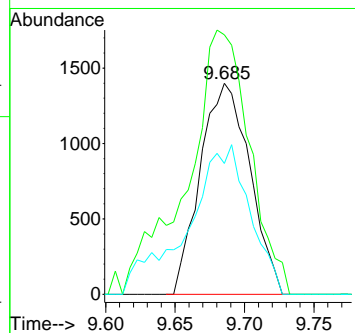
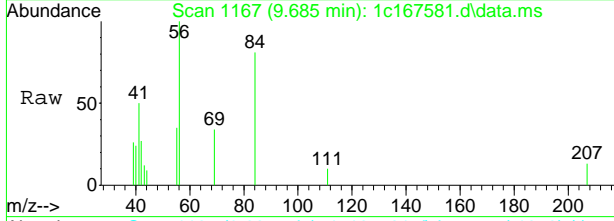
Ion	Ratio	Lower	Upper
43	100		
58	31.0	2.3	62.3



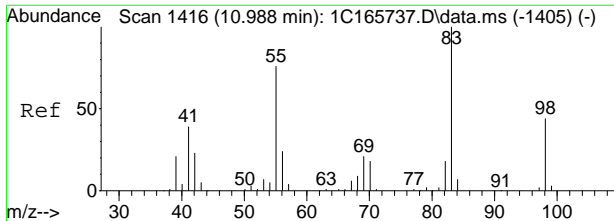
#47  
 cyclohexane  
 Concen: 2.28 ug/L  
 RT: 9.685 min Scan# 1167  
 Delta R.T. -0.006 min  
 Lab File: 1c167581.d  
 Acq: 4 Oct 2019 2:13 pm

Tgt Ion: 84 Resp: 3470

Ion	Ratio	Lower	Upper
84	100		
56	123.0	109.1	149.1
41	62.0	51.4	91.4

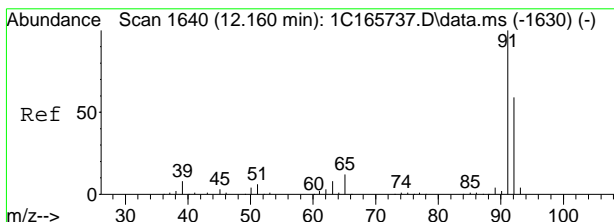
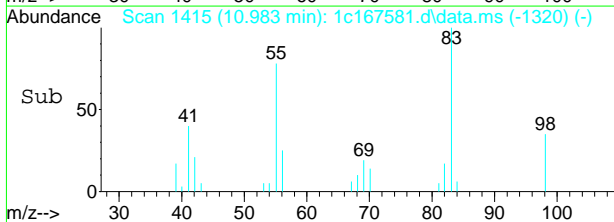
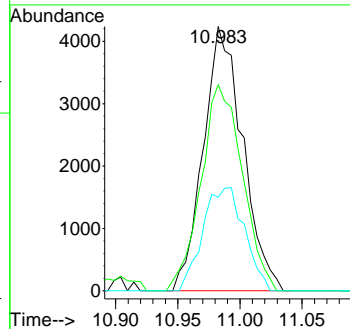
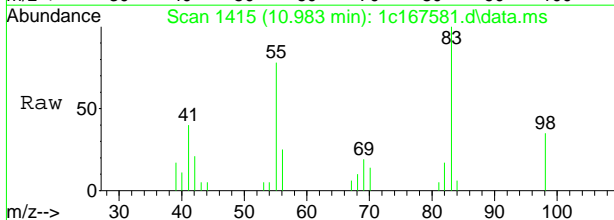


7.14  
7



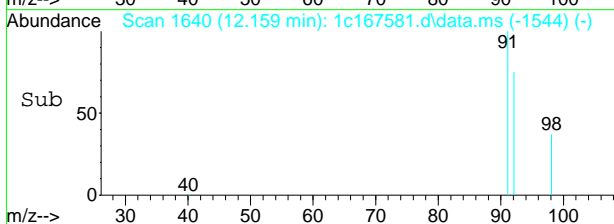
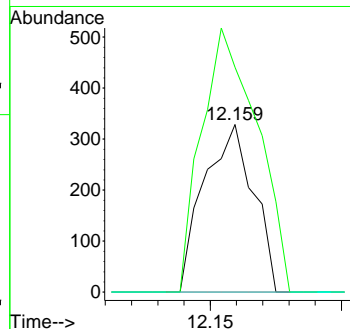
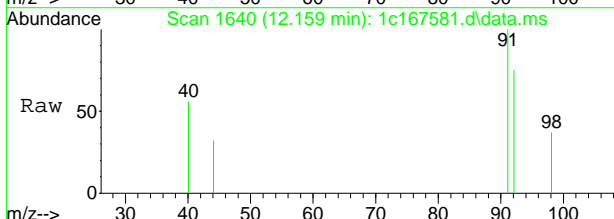
#68  
 methylcyclohexane  
 Concen: 6.21 ug/L  
 RT: 10.983 min Scan# 1415  
 Delta R.T. -0.006 min  
 Lab File: 1c167581.d  
 Acq: 4 Oct 2019 2:13 pm

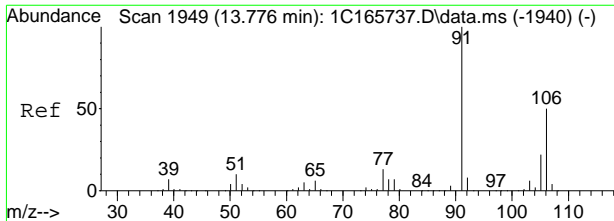
Tgt Ion	Resp	Lower	Upper
83	9341		
55	78.0	45.8	105.8
98	35.4	13.8	73.8



#76  
 toluene  
 Concen: 0.44 ug/L  
 RT: 12.159 min Scan# 1640  
 Delta R.T. -0.000 min  
 Lab File: 1c167581.d  
 Acq: 4 Oct 2019 2:13 pm

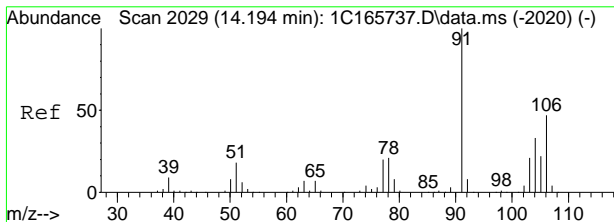
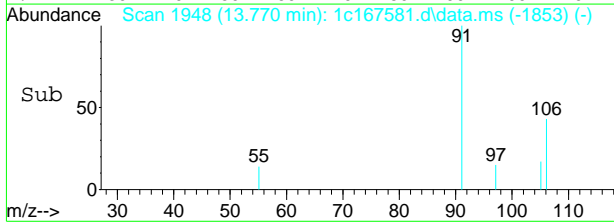
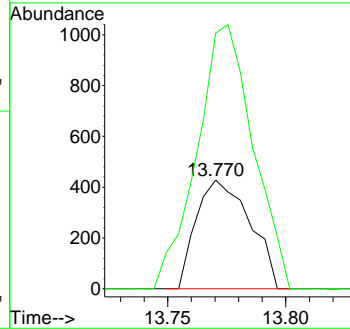
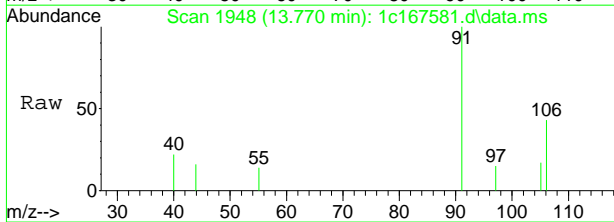
Tgt Ion	Resp	Lower	Upper
92	431		
91	134.0	149.6	189.6#
65	0.0	0.0	39.8





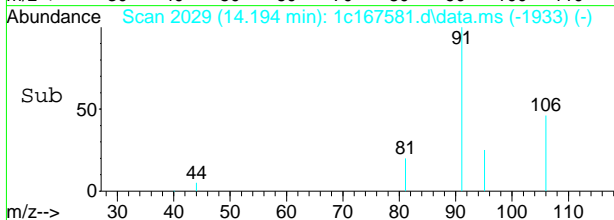
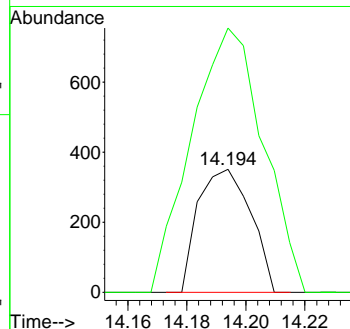
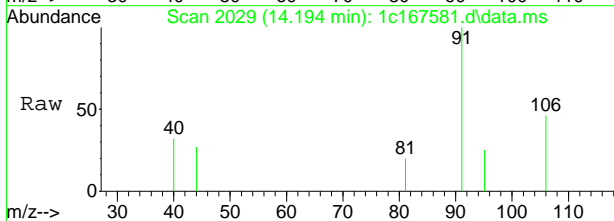
#90  
 m,p-xylene  
 Concen: 1.00 ug/L  
 RT: 13.770 min Scan# 1948  
 Delta R.T. -0.006 min  
 Lab File: 1c167581.d  
 Acq: 4 Oct 2019 2:13 pm

Tgt Ion:106 Resp: 677  
 Ion Ratio Lower Upper  
 106 100  
 91 235.0 171.8 231.8#



#91  
 o-xylene  
 Concen: 0.68 ug/L  
 RT: 14.194 min Scan# 2029  
 Delta R.T. -0.000 min  
 Lab File: 1c167581.d  
 Acq: 4 Oct 2019 2:13 pm

Tgt Ion:106 Resp: 436  
 Ion Ratio Lower Upper  
 106 100  
 91 174.6 183.1 243.1#



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167585.d  
 Acq On : 4 Oct 2019 3:59 pm  
 Operator : PrashanS  
 Sample : jc95555-4 Inst : GCMS1C  
 Misc : MS37920,V1C7331,2.8,,,,,1  
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:19:17 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

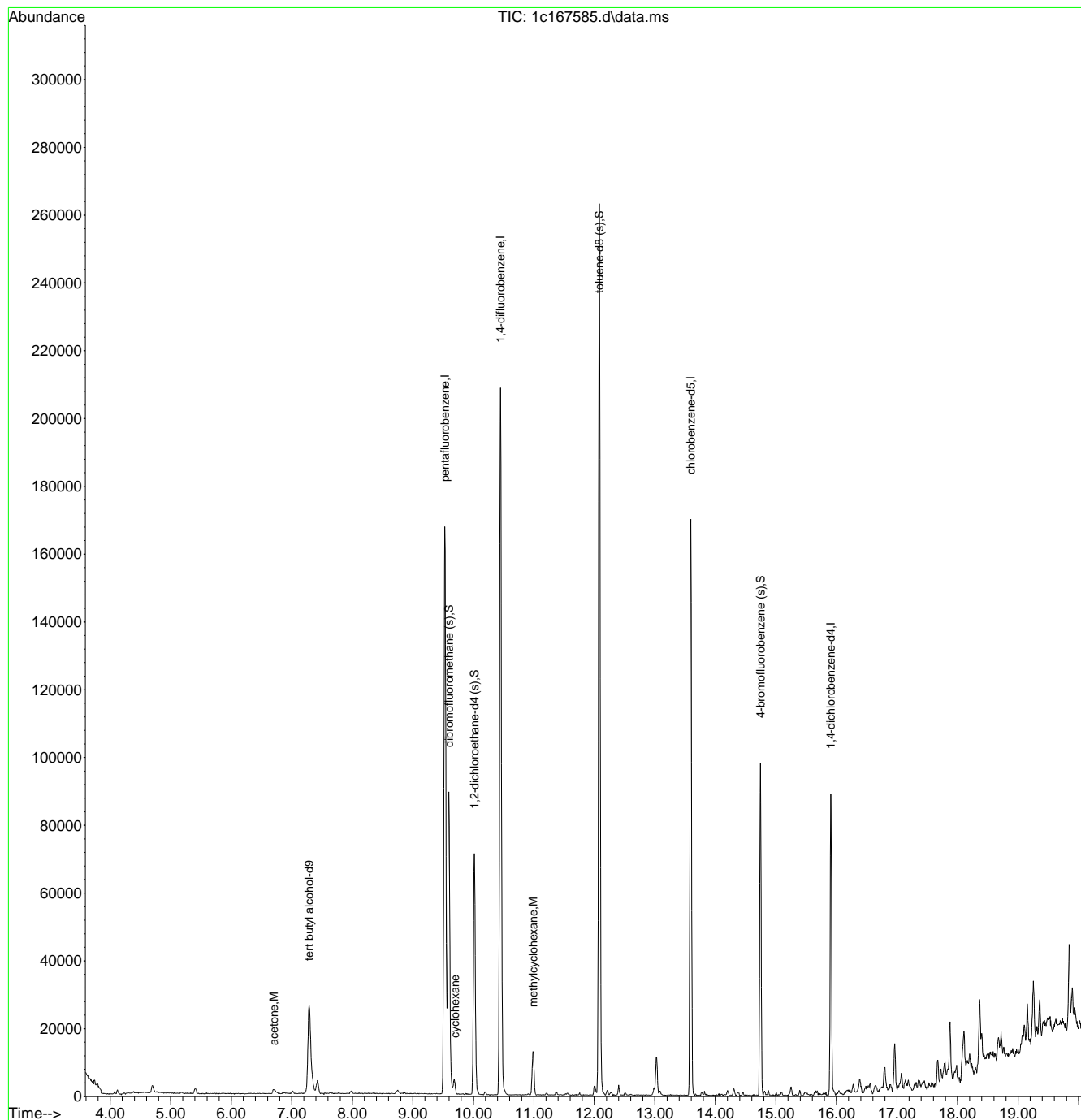
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) tert butyl alcohol-d9	7.285	65	53337	500.00	ug/L	-0.02
5) pentafluorobenzene	9.529	168	144694	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	194896	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	97909	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.905	152	23586	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	64157	47.05	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	94.10%
53) 1,2-dichloroethane-d4 (s)	10.015	65	56469	48.79	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.58%
75) toluene-d8 (s)	12.081	98	190605	71.34	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	142.68%#
98) 4-bromofluorobenzene (s)	14.743	95	32840	69.91	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	139.82%#
Target Compounds						
19) acetone	6.705	43	3056	9.87	ug/L	97
47) cyclohexane	9.696	84	2062	1.09	ug/L #	83
68) methylcyclohexane	10.988	83	6853	3.47	ug/L	94
-----						

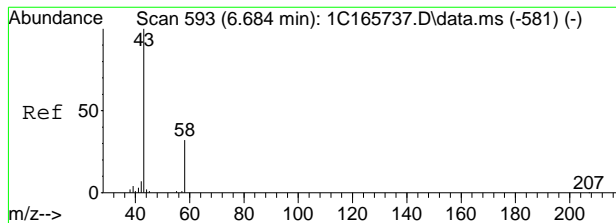
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\  
Data File : 1c167585.d  
Acq On : 4 Oct 2019 3:59 pm  
Operator : Prashans  
Sample : jc95555-4 Inst : GCMS1C  
Misc : MS37920,V1C7331,2.8,,,,,1  
ALS Vial : 20 Sample Multiplier: 1

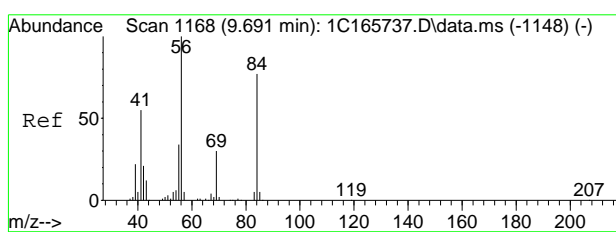
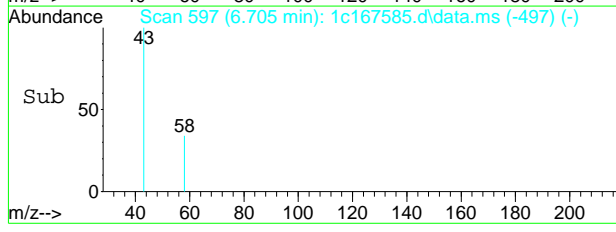
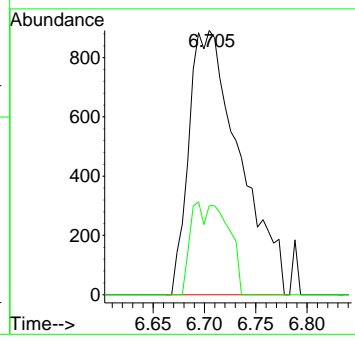
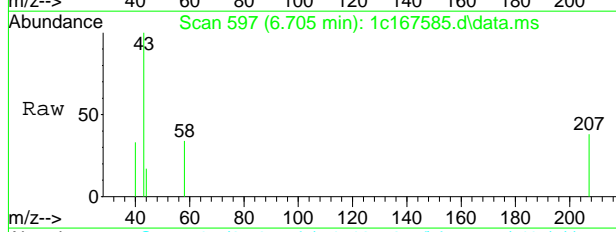
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
Quant Results File: M1CS7262.RES  
Quant Time: Oct 07 05:19:17 2019  
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
QLast Update : Tue Jul 16 09:07:34 2019  
Response via : Initial Calibration





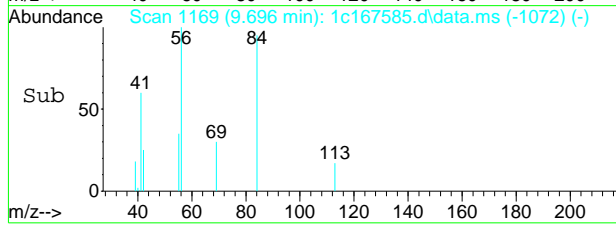
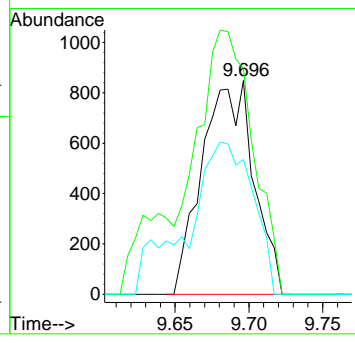
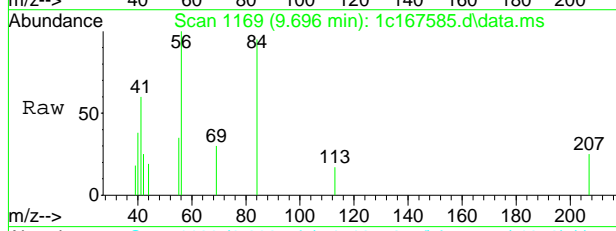
#19  
 acetone  
 Concen: 9.87 ug/L  
 RT: 6.705 min Scan# 597  
 Delta R.T. 0.021 min  
 Lab File: 1c167585.d  
 Acq: 4 Oct 2019 3:59 pm

Tgt Ion	Ratio	Lower	Upper
43	100		
58	33.7	2.3	62.3



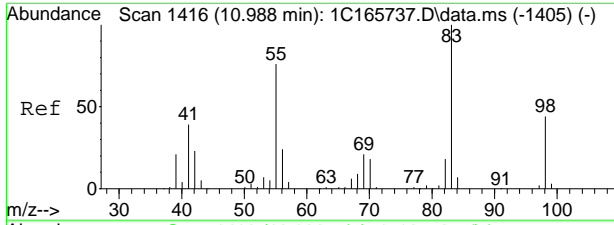
#47  
 cyclohexane  
 Concen: 1.09 ug/L  
 RT: 9.696 min Scan# 1169  
 Delta R.T. 0.005 min  
 Lab File: 1c167585.d  
 Acq: 4 Oct 2019 3:59 pm

Tgt Ion	Ratio	Lower	Upper
84	100		
56	105.5	109.1	149.1#
41	63.0	51.4	91.4



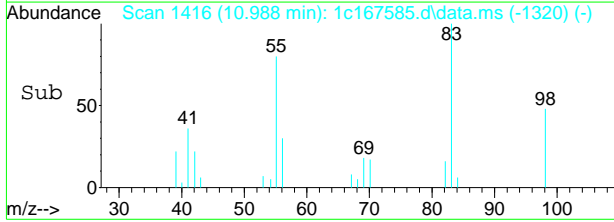
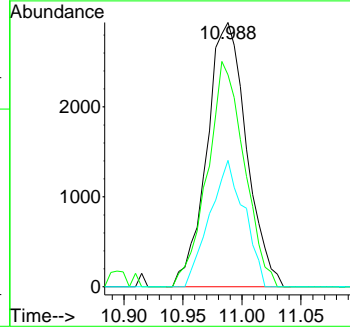
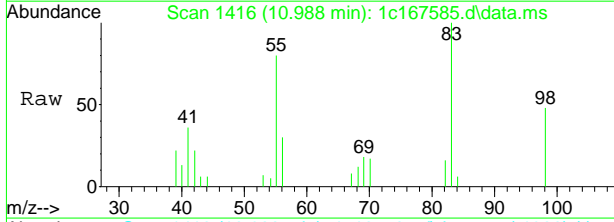
7.15  
7





#68  
 methylcyclohexane  
 Concen: 3.47 ug/L  
 RT: 10.988 min Scan# 1416  
 Delta R.T. 0.000 min  
 Lab File: 1c167585.d  
 Acq: 4 Oct 2019 3:59 pm

Tgt Ion	Ratio	Lower	Upper
83	100		
55	80.2	45.8	105.8
98	47.8	13.8	73.8



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266675.d  
 Acq On : 3 Oct 2019 10:59 am  
 Operator : thienn  
 Sample : jc95555-4 Inst : MSD  
 Misc : ms37920,vd10747,3.8,,100,10,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:30:50 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

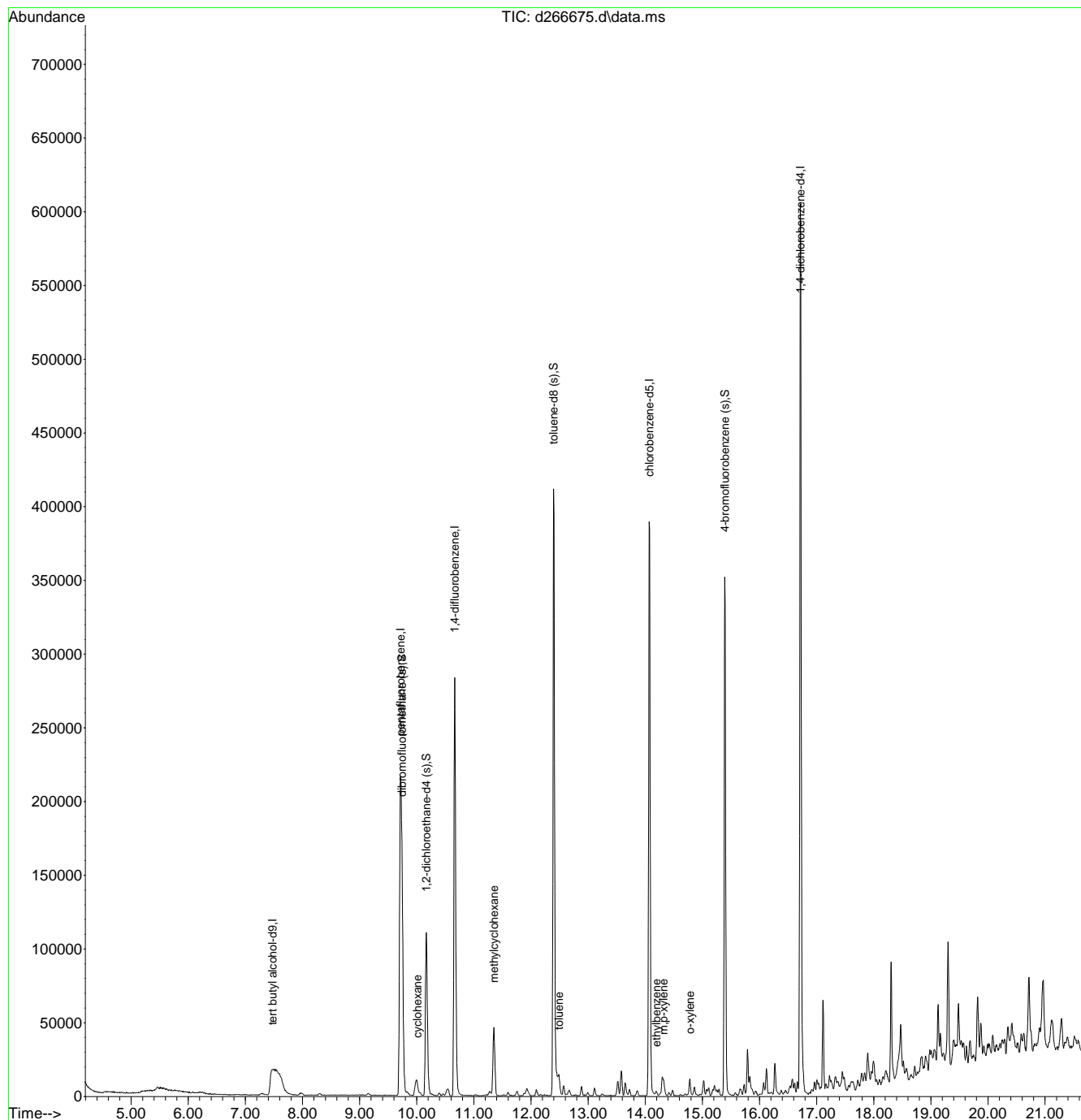
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.475	65	125241	500.00	ug/L	0.00
5) pentafluorobenzene	9.713	168	169801	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.665	114	260495	50.00	ug/L	0.00
75) chlorobenzene-d5	14.070	117	239570	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.716	152	168503	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.739	113	92759	51.18	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	102.36%
55) 1,2-dichloroethane-d4 (s)	10.163	65	95663	50.96	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	101.92%
76) toluene-d8 (s)	12.396	98	303172	48.74	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.48%
100) 4-bromofluorobenzene (s)	15.393	95	136331	44.16	ug/L	-0.01
Spiked Amount	50.000	Range	79 - 127	Recovery	=	88.32%
Target Compounds						
48) cyclohexane	10.006	84	5271	1.22	ug/L	90
66) methylcyclohexane	11.350	83	22440	5.75	ug/L	97
77) toluene	12.485	92	4688	0.98	ug/L	98
90) ethylbenzene	14.195	91	2793	0.30	ug/L	85
91) m,p-xylene	14.321	106	3573	1.00	ug/L	94
92) o-xylene	14.781	91	6852	0.81	ug/L	90

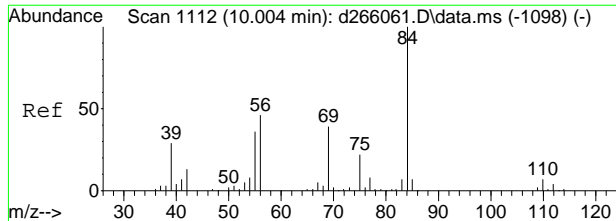
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
Data File : d266675.d  
Acq On : 3 Oct 2019 10:59 am  
Operator : thienn  
Sample : jc95555-4 Inst : MSD  
Misc : ms37920,vd10747,3.8,,100,10,1  
ALS Vial : 7 Sample Multiplier: 1

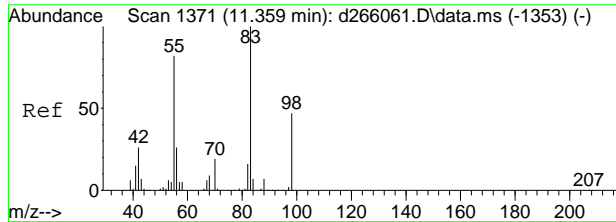
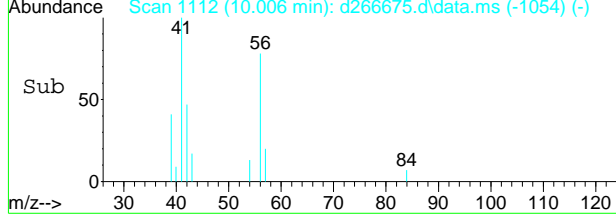
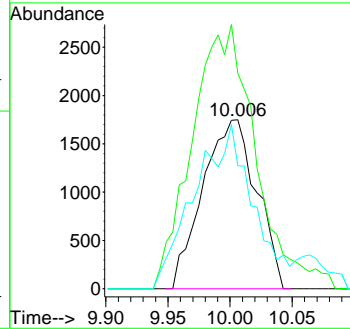
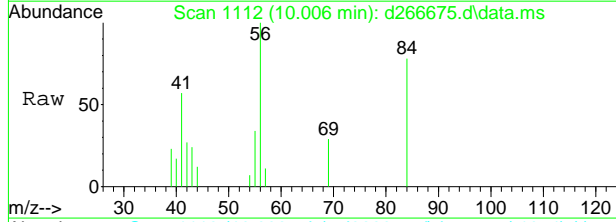
Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
Quant Results File: MD10725.RES  
Quant Time: Oct 06 23:30:50 2019  
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
QLast Update : Mon Sep 09 11:00:30 2019  
Response via : Initial Calibration





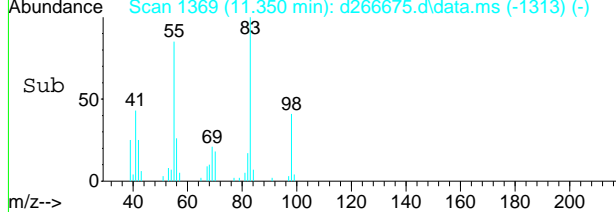
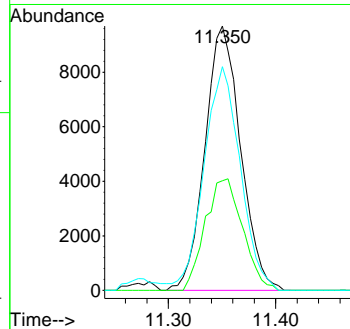
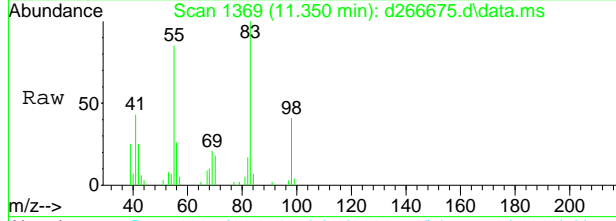
#48  
 cyclohexane  
 Concen: 1.22 ug/L  
 RT: 10.006 min Scan# 1112  
 Delta R.T. 0.002 min  
 Lab File: d266675.d  
 Acq: 3 Oct 2019 10:59 am

Tgt Ion	Resp	Lower	Upper
84	5271		
56	110.1	91.9	151.9
41	59.5	37.7	97.7

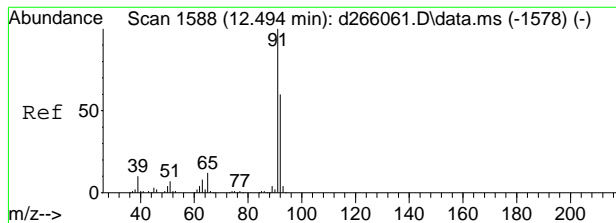


#66  
 methylcyclohexane  
 Concen: 5.75 ug/L  
 RT: 11.350 min Scan# 1369  
 Delta R.T. -0.009 min  
 Lab File: d266675.d  
 Acq: 3 Oct 2019 10:59 am

Tgt Ion	Resp	Lower	Upper
83	22440		
98	41.5	27.0	67.0
55	84.5	64.0	104.0

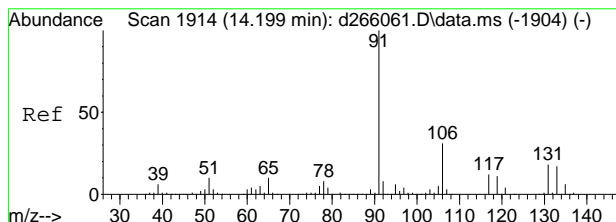
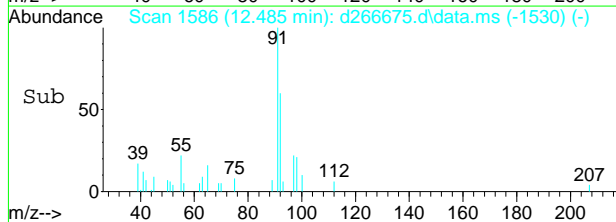
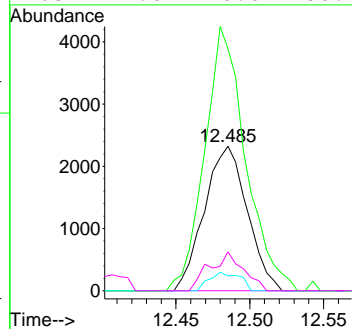
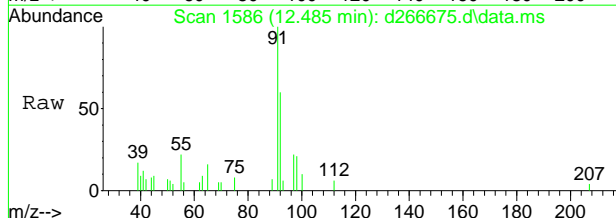


7.16  
7



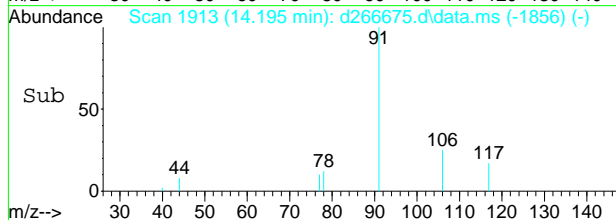
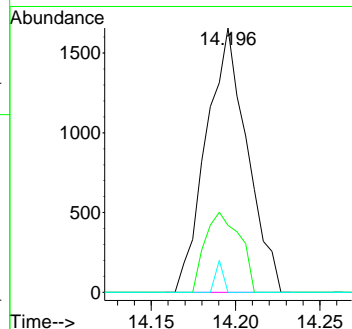
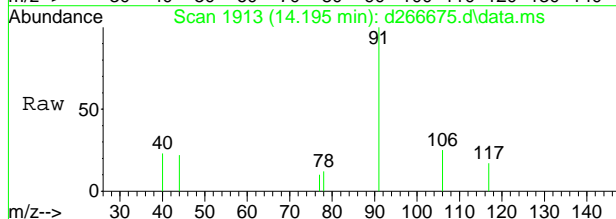
#77  
 toluene  
 Concen: 0.98 ug/L  
 RT: 12.485 min Scan# 1586  
 Delta R.T. -0.009 min  
 Lab File: d266675.d  
 Acq: 3 Oct 2019 10:59 am

Tgt Ion	Resp	Lower	Upper
92	4688		
91	167.3	146.9	186.9
51	10.3	0.0	41.2
65	27.0	0.0	50.6

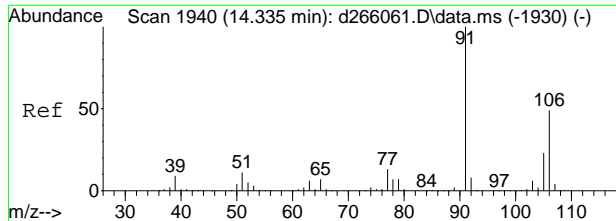


#90  
 ethylbenzene  
 Concen: 0.30 ug/L  
 RT: 14.195 min Scan# 1913  
 Delta R.T. -0.004 min  
 Lab File: d266675.d  
 Acq: 3 Oct 2019 10:59 am

Tgt Ion	Resp	Lower	Upper
91	2793		
91	100		
106	25.3	0.9	60.9
51	0.0	0.0	40.7

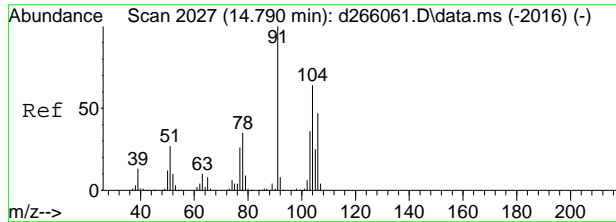
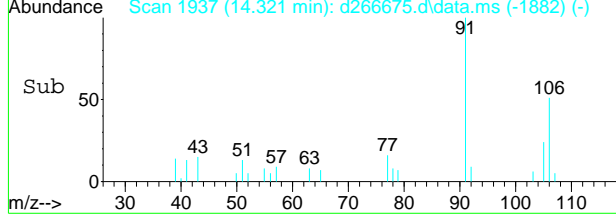
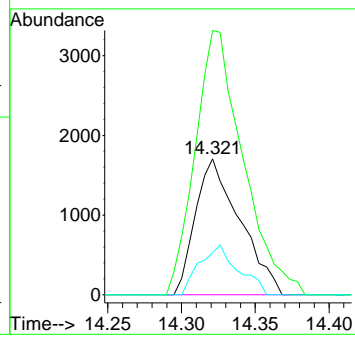
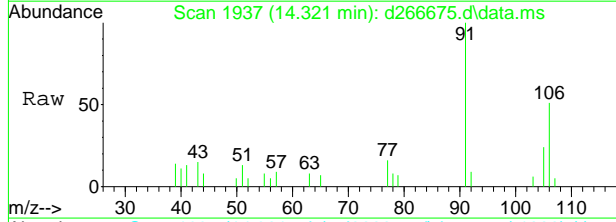


7.1.6  
7



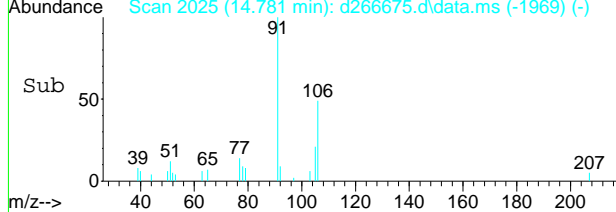
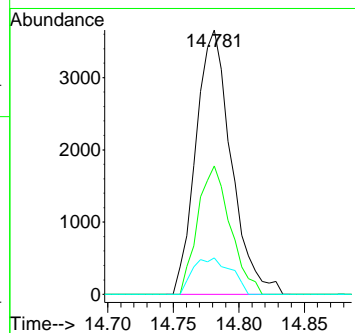
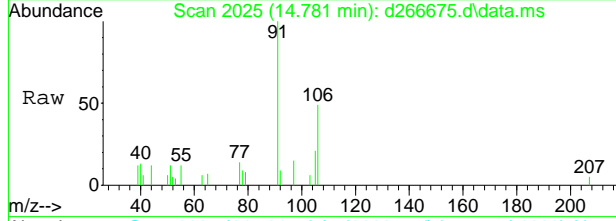
#91  
 m,p-xylene  
 Concen: 1.00 ug/L  
 RT: 14.321 min Scan# 1937  
 Delta R.T. -0.014 min  
 Lab File: d266675.d  
 Acq: 3 Oct 2019 10:59 am

Tgt Ion	Ratio	Lower	Upper
106	100		
91	194.3	172.5	232.5
77	31.0	0.0	57.1



#92  
 o-xylene  
 Concen: 0.81 ug/L  
 RT: 14.781 min Scan# 2025  
 Delta R.T. -0.009 min  
 Lab File: d266675.d  
 Acq: 3 Oct 2019 10:59 am

Tgt Ion	Ratio	Lower	Upper
91	100		
106	48.6	17.0	77.0
77	13.8	0.0	56.3



7.16  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253704.d  
 Acq On : 4 Oct 2019 9:48 am  
 Operator : krizhkac  
 Sample : jc95555-5 Inst : MSA  
 Misc : MS37917,VA9835,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:48:31 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.141	65	520179	500.00	ug/L	0.00
5) pentafluorobenzene	10.525	168	295397	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.487	114	435760	50.00	ug/L	-0.01
74) chlorobenzene-d5	14.886	117	408548	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.505	152	253514	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.562	113	152864	46.76	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.52%
53) 1,2-dichloroethane-d4 (s)	10.996	65	149382	46.39	ug/L	-0.01
Spiked Amount	50.000	Range	81 - 124	Recovery	=	92.78%
75) toluene-d8 (s)	13.218	98	492236	42.65	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	85.30%
99) 4-bromofluorobenzene (s)	16.193	95	201897	41.54	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	83.08%

Target Compounds Qvalue

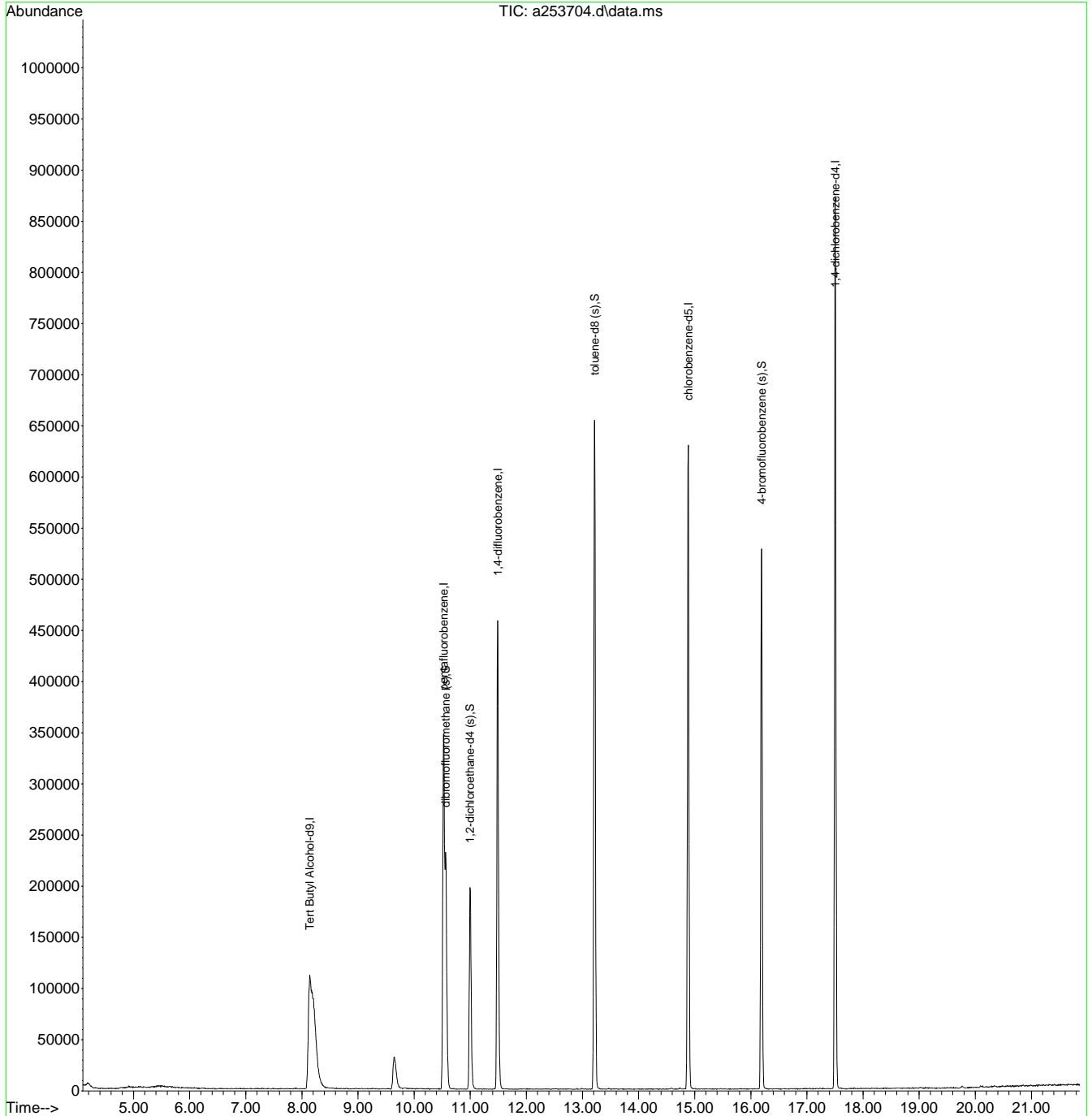
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.17  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253704.d  
 Acq On : 4 Oct 2019 9:48 am  
 Operator : krizhkac  
 Sample : jc95555-5 Inst : MSA  
 Misc : MS37917,VA9835,5,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:48:31 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration



7.1.7  
7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266673.d  
 Acq On : 3 Oct 2019 9:25 am  
 Operator : thienn  
 Sample : mb Inst : MSD  
 Misc : ms37701,vd10747,5,,100,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:26:10 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.452	65	126073	500.00	ug/L	-0.03
5) pentafluorobenzene	9.706	168	198383	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.663	114	325109	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.073	117	293984	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.720	152	199864	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.737	113	102673	48.48	ug/L	-0.01
Spiked Amount	50.000	Range	75 - 127	Recovery	=	96.96%
55) 1,2-dichloroethane-d4 (s)	10.161	65	114191	48.74	ug/L	-0.01
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.48%
76) toluene-d8 (s)	12.394	98	364339	47.73	ug/L	-0.02
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.46%
100) 4-bromofluorobenzene (s)	15.391	95	163340	44.60	ug/L	-0.02
Spiked Amount	50.000	Range	79 - 127	Recovery	=	89.20%

Target Compounds Qvalue

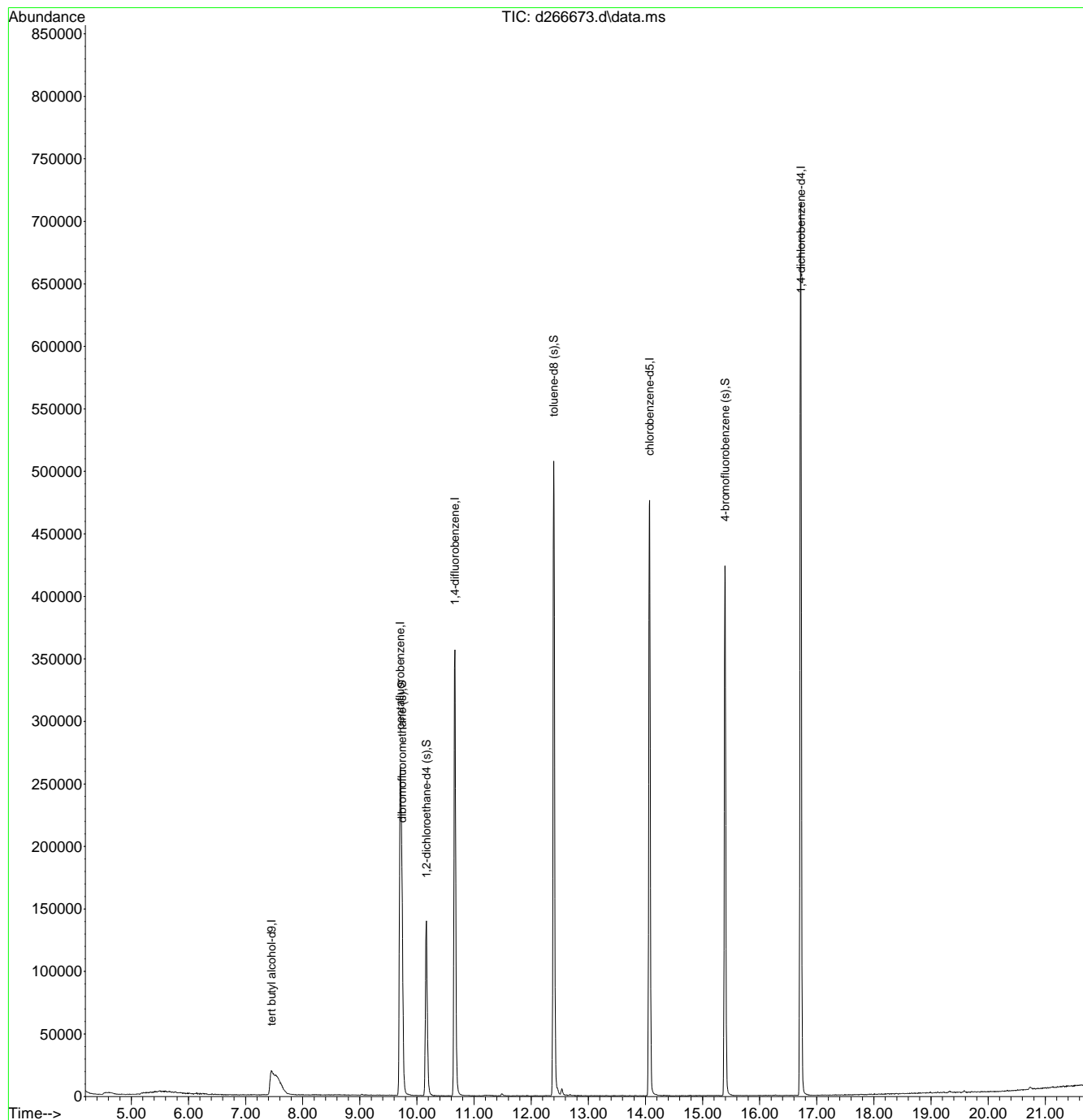
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.1  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266673.d  
 Acq On : 3 Oct 2019 9:25 am  
 Operator : thienn  
 Sample : mb Inst : MSD  
 Misc : ms37701,vd10747,5,,100,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:26:10 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration



7.2.1  
7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253702.d  
 Acq On : 4 Oct 2019 8:43 am  
 Operator : krizhkac  
 Sample : mb Inst : MSA  
 Misc : MS37677,VA9835,5,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:47:11 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Tert Butyl Alcohol-d9	8.147	65	523203	500.00	ug/L	0.00
5) pentafluorobenzene	10.526	168	304793	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.493	114	445438	50.00	ug/L	0.00
74) chlorobenzene-d5	14.886	117	408319	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.505	152	259013	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.567	113	153746	45.58	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	91.16%	
53) 1,2-dichloroethane-d4 (s)	11.001	65	151458	46.01	ug/L	0.00
Spiked Amount	50.000	Range 81 - 124	Recovery	=	92.02%	
75) toluene-d8 (s)	13.218	98	497380	43.12	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	86.24%	
99) 4-bromofluorobenzene (s)	16.193	95	201707	40.62	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	81.24%	
Target Compounds						
119) 1,2,4-trichlorobenzene	19.763	180	1427	0.20	ug/L	71
121) naphthalene	20.093	128	4052	0.16	ug/L	91
122) 1,2,3-trichlorobenzene	20.344	180	1268	0.16	ug/L #	69
-----						

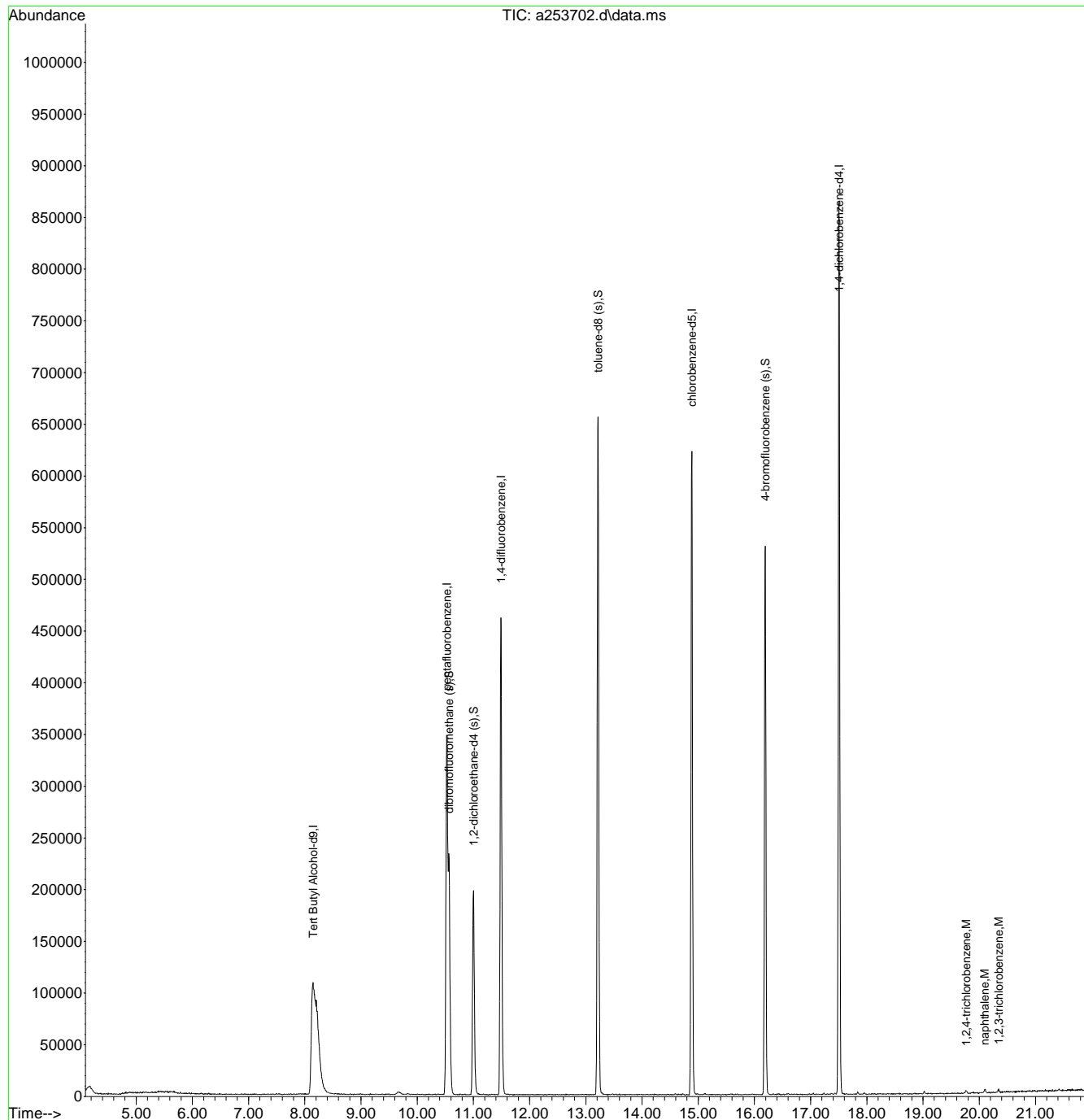
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.22  
7

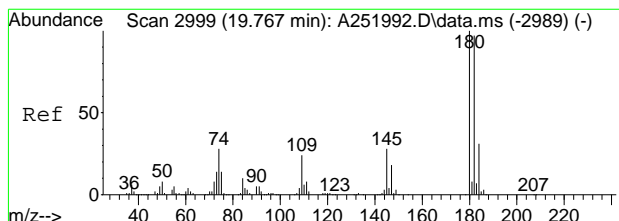
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253702.d  
 Acq On : 4 Oct 2019 8:43 am  
 Operator : krizhkac  
 Sample : mb Inst : MSA  
 Misc : MS37677,VA9835,5,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:47:11 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

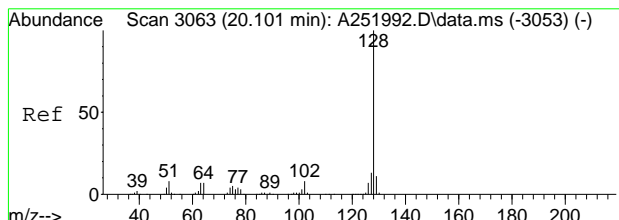
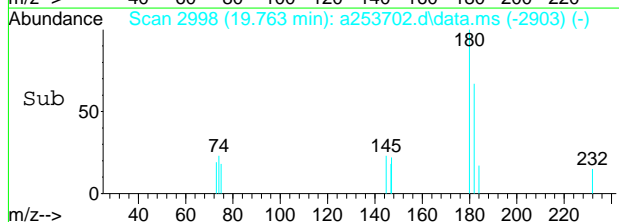
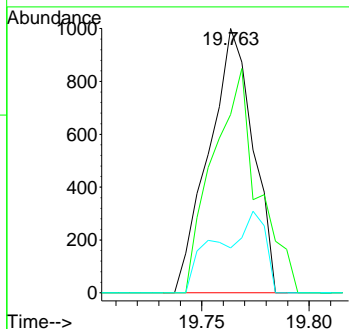
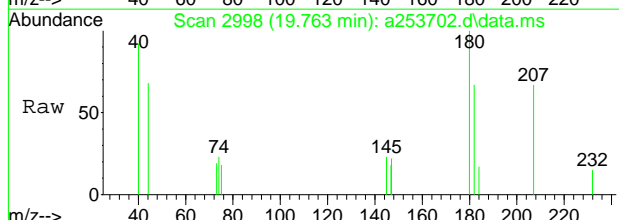


7.2.2  
7



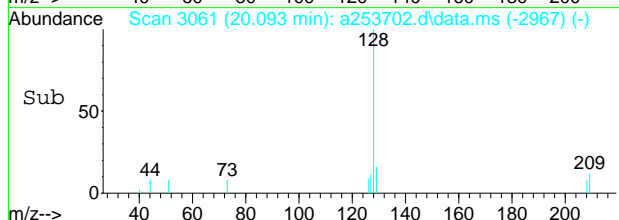
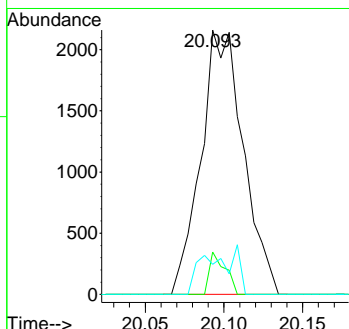
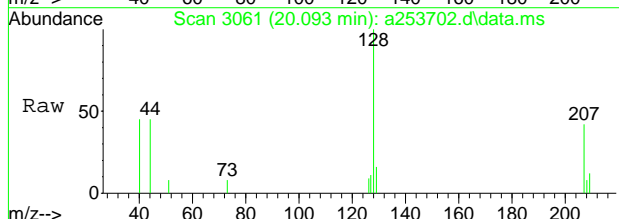
#119  
 1,2,4-trichlorobenzene  
 Concen: 0.20 ug/L  
 RT: 19.763 min Scan# 2998  
 Delta R.T. -0.003 min  
 Lab File: a253702.d  
 Acq: 4 Oct 2019 8:43 am

Tgt Ion	Resp	Lower	Upper
180	1427		
180	100		
182	67.4	66.9	126.9
184	17.0	0.8	60.8

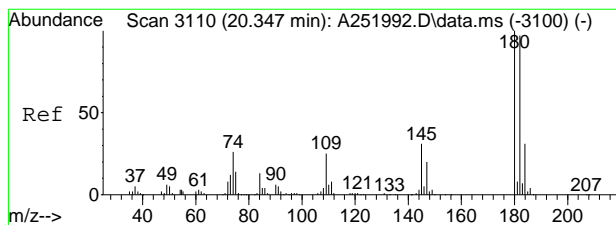


#121  
 naphthalene  
 Concen: 0.16 ug/L  
 RT: 20.093 min Scan# 3061  
 Delta R.T. -0.008 min  
 Lab File: a253702.d  
 Acq: 4 Oct 2019 8:43 am

Tgt Ion	Resp	Lower	Upper
128	4052		
128	100		
129	16.0	0.0	41.0
127	11.3	0.0	43.3

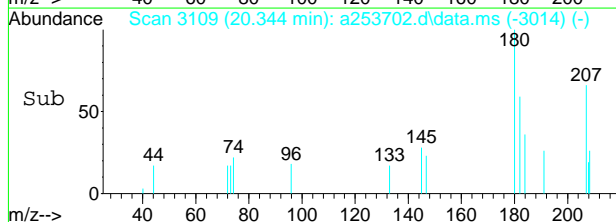
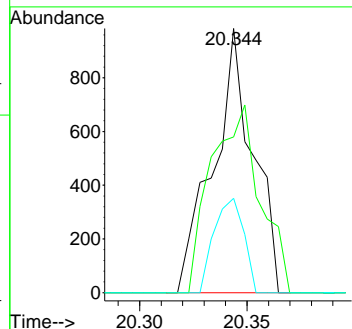
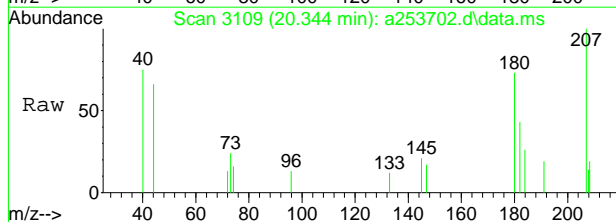


7.22  
7



#122  
 1,2,3-trichlorobenzene  
 Concen: 0.16 ug/L  
 RT: 20.344 min Scan# 3109  
 Delta R.T. -0.003 min  
 Lab File: a253702.d  
 Acq: 4 Oct 2019 8:43 am

Tgt Ion	Resp	Lower	Upper
180	1268		
180	100		
182	58.9	66.7	126.7#
184	35.7	0.6	60.6



7.22  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167571.d  
 Acq On : 4 Oct 2019 9:30 am  
 Operator : PrashanS  
 Sample : mb Inst : GCMS1C  
 Misc : MS37920,V1C7331,5.0,,,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:04:30 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) tert butyl alcohol-d9	7.285	65	61232	500.00	ug/L	-0.02
5) pentafluorobenzene	9.529	168	199337	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	298104	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	226967	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.904	152	111701	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	92277	49.12	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	98.24%
53) 1,2-dichloroethane-d4 (s)	10.015	65	86020	48.59	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.18%
75) toluene-d8 (s)	12.081	98	312963	50.53	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.06%
98) 4-bromofluorobenzene (s)	14.743	95	102743	46.18	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	92.36%
Target Compounds						
22) carbon disulfide	7.008	76	1635	0.32	ug/L	82
23) methylene chloride	7.348	84	1396	0.78	ug/L	94
76) toluene	12.154	92	593	0.15	ug/L	90
-----						

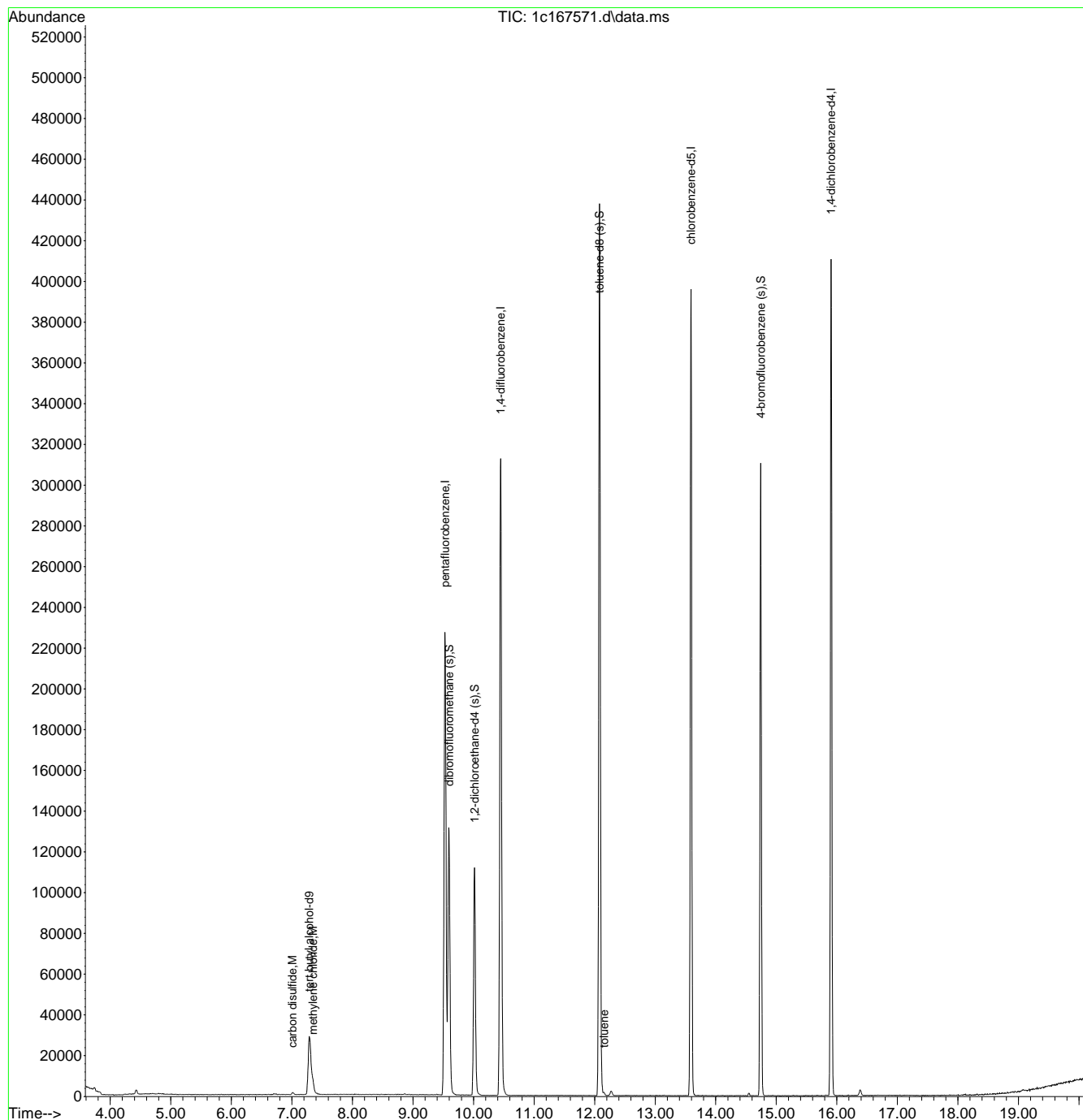
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.3  
7

Quantitation Report (QT Reviewed)

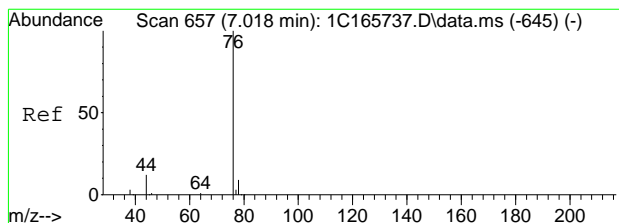
Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167571.d  
 Acq On : 4 Oct 2019 9:30 am  
 Operator : Prashans  
 Sample : mb Inst : GCMS1C  
 Misc : MS37920,V1C7331,5.0,,,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:04:30 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



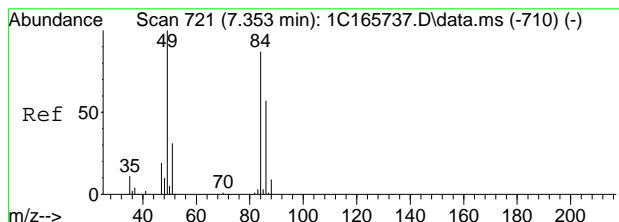
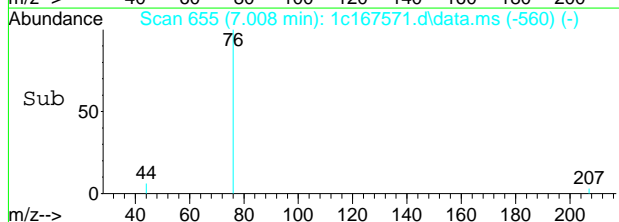
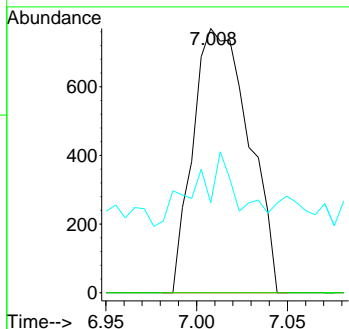
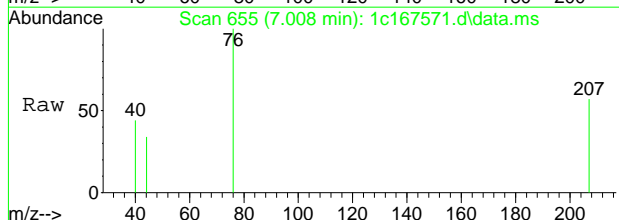
7.2.3  
7





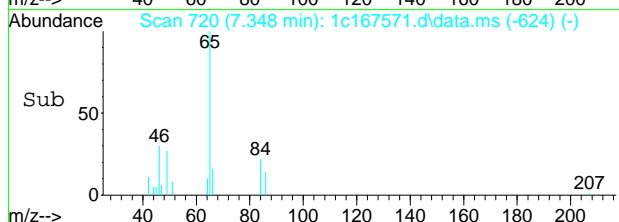
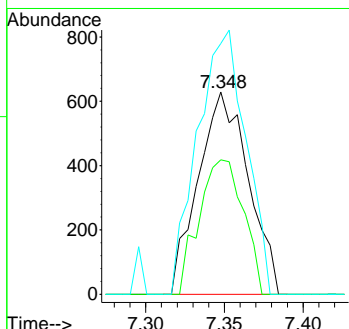
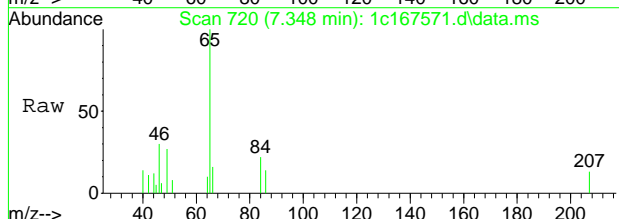
#22  
 carbon disulfide  
 Concen: 0.32 ug/L  
 RT: 7.008 min Scan# 655  
 Delta R.T. -0.005 min  
 Lab File: 1c167571.d  
 Acq: 4 Oct 2019 9:30 am

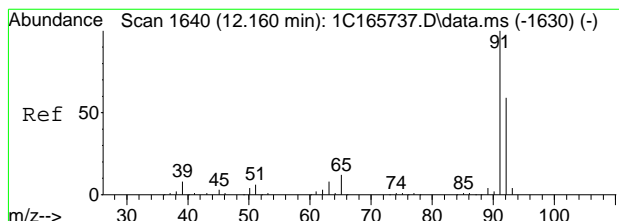
Tgt Ion	Resp	Lower	Upper
76	1635		
76	100		
78	0.0	0.0	39.2
44	6.9	0.0	42.0



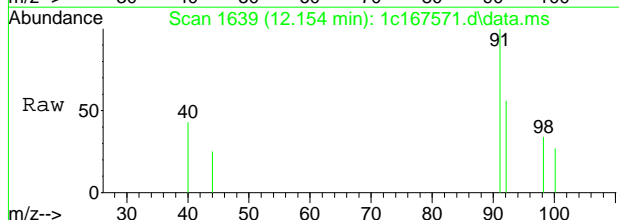
#23  
 methylene chloride  
 Concen: 0.78 ug/L  
 RT: 7.348 min Scan# 720  
 Delta R.T. -0.000 min  
 Lab File: 1c167571.d  
 Acq: 4 Oct 2019 9:30 am

Tgt Ion	Resp	Lower	Upper
84	1396		
84	100		
86	66.5	35.2	95.2
49	124.0	85.2	145.2

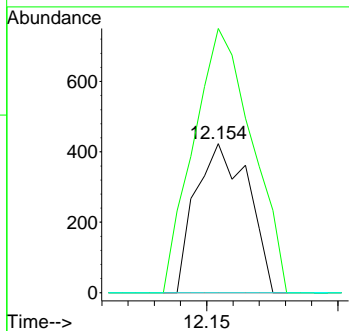
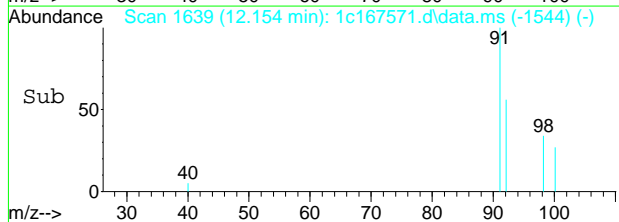




#76  
 toluene  
 Concen: 0.15 ug/L  
 RT: 12.154 min Scan# 1639  
 Delta R.T. -0.005 min  
 Lab File: 1c167571.d  
 Acq: 4 Oct 2019 9:30 am



Tgt Ion	Ratio	Lower	Upper
92	100		
91	177.5	149.6	189.6
65	0.0	0.0	39.8



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266671.d  
 Acq On : 3 Oct 2019 8:28 am  
 Operator : thienn  
 Sample : bs Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:25:07 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.479	65	120601	500.00	ug/L	0.00
5) pentafluorobenzene	9.712	168	184113	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.669	114	301074	50.00	ug/L	0.00
75) chlorobenzene-d5	14.074	117	265819	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.720	152	165316	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.743	113	97222	49.47	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	98.94%
55) 1,2-dichloroethane-d4 (s)	10.167	65	102194	47.10	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	94.20%
76) toluene-d8 (s)	12.400	98	340911	49.39	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.78%
100) 4-bromofluorobenzene (s)	15.392	95	139028	45.90	ug/L	-0.02
Spiked Amount	50.000	Range	79 - 127	Recovery	=	91.80%
Target Compounds						
3) tertiary butyl alcohol	7.583	59	79710	251.88	ug/L	98
4) 1,4-dioxane	11.333	88	42934	1413.46	ug/L	96
6) chlorodifluoromethane	4.414	51	223397	38.89	ug/L	97
7) dichlorodifluoromethane	4.409	85	227881	48.38	ug/L	99
8) chloromethane	4.728	50	291915	51.69	ug/L	99
9) 1,3-butadiene	4.989	54	132384	42.81	ug/L	97
10) vinyl chloride	4.974	62	281882	52.34	ug/L	99
11) bromomethane	5.523	94	150777	55.47	ug/L	98
12) chloroethane	5.674	64	132945	52.57	ug/L	98
13) trichlorofluoromethane	6.103	101	201308	54.01	ug/L	98
14) vinyl bromide	6.004	106	124218	50.22	ug/L	99
15) ethyl ether	6.469	74	59821	50.35	ug/L	96
16) 2-chloropropane	6.673	43	215004	43.35	ug/L	99
17) acrolein	6.647	56	16749	41.32	ug/L	95
18) freon 113	6.914	151	114010	53.87	ug/L	98
19) 1,1-dichloroethene	6.883	96	110726	41.61	ug/L	97
20) acetone	6.835	58	37762	198.36	ug/L	88
21) acetonitrile	7.196	41	169854	426.76	ug/L	98
22) iodomethane	7.123	142	179749	49.86	ug/L	99
23) carbon disulfide	7.285	76	422407	51.38	ug/L	99
24) methylene chloride	7.526	84	136870	47.39	ug/L	98
25) methyl acetate	7.290	74	16354	52.52	ug/L	91
26) methyl tert butyl ether	7.908	73	416545	47.08	ug/L	99
27) trans-1,2-dichloroethene	7.934	96	117680	44.32	ug/L	99
28) hexane	8.305	56	76876	44.37	ug/L	96
29) di-isopropyl ether	8.488	45	498543	45.58	ug/L	99
30) 2-butanone	9.084	72	38682	181.10	ug/L	98
31) 1,1-dichloroethane	8.478	63	224074	48.79	ug/L	99
32) chloroprene	8.593	53	179871	45.34	ug/L	97
33) acrylonitrile	7.766	53	42978	54.97	ug/L	95
34) vinyl acetate	8.399	86	20966	45.29	ug/L	96
35) ethyl tert-butyl ether	8.948	59	459595	45.28	ug/L	99
36) ethyl acetate	9.126	45	14263	39.14	ug/L	94
37) 2,2-dichloropropane	9.236	77	232185	50.43	ug/L	98
38) cis-1,2-dichloroethene	9.179	96	134698	46.21	ug/L	97
39) propionitrile	9.126	54	156902	455.49	ug/L	98
40) methyl acrylate	9.210	85	11787	44.29	ug/L	95
41) methacrylonitrile	9.346	67	36482	44.94	ug/L	99
42) bromochloromethane	9.471	128	58239	49.24	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266671.d  
 Acq On : 3 Oct 2019 8:28 am  
 Operator : thienn  
 Sample : bs Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:25:07 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	9.519	42	28292	40.89	ug/L	98
44) chloroform	9.555	83	205000	47.20	ug/L	99
45) tert-butyl formate	9.602	59	107851	43.01	ug/L	98
47) 1,1,1-trichloroethane	9.858	97	215085	49.18	ug/L	96
48) cyclohexane	10.000	84	227023	48.35	ug/L	99
50) 1,1-dichloropropene	10.021	75	149906	46.67	ug/L	99
51) carbon tetrachloride	10.073	117	172503	51.85	ug/L	95
52) tert-amyl alcohol	10.104	73	33712	210.26	ug/L	99
53) isopropyl acetate	10.146	87	22128	43.63	ug/L	98
56) n-butyl alcohol	10.680	41	124669	2159.77	ug/L	97
57) 2,2,4-trimethylpentane	10.392	57	355009	41.20	ug/L	98
58) benzene	10.266	78	468502	47.99	ug/L	98
59) tert-amyl methyl ether	10.355	73	426388	46.61	ug/L	98
60) heptane	10.549	57	65433	38.37	ug/L	99
61) 1,2-dichloroethane	10.256	62	131560	44.57	ug/L	99
62) ethyl acrylate	10.967	55	97326	39.68	ug/L	96
63) trichloroethene	11.004	95	105332	48.41	ug/L	97
64) 2-chloroethyl vinyl ether	11.799	63	241582	189.93	ug/L	99
65) methyl methacrylate	11.244	100	20799	41.87	ug/L	96
66) methylcyclohexane	11.349	83	229290	50.84	ug/L	99
67) 1,2-dichloropropane	11.281	63	116856	47.24	ug/L	99
68) dibromomethane	11.391	93	57358	45.91	ug/L	99
69) bromodichloromethane	11.553	83	139907	48.00	ug/L	98
70) 2-nitropropane	11.726	41	20417	43.48	ug/L	95
71) epichlorohydrin	11.872	57	49725	212.66	ug/L	99
72) cis-1,3-dichloropropene	12.045	75	163820	45.68	ug/L	97
73) 4-methyl-2-pentanone	12.139	58	162909	188.47	ug/L	99
74) isoamyl alcohol	12.134	70	74941	1003.09	ug/L	91
77) toluene	12.479	92	258864	48.75	ug/L	100
78) ethyl methacrylate	12.662	69	116827	44.34	ug/L	95
79) trans-1,3-dichloropropene	12.651	75	137523	47.91	ug/L	96
80) 1,1,2-trichloroethane	12.892	83	66904	46.75	ug/L	99
81) tetrachloroethene	13.112	164	79101	51.65	ug/L	98
82) 2-hexanone	13.075	58	126690	181.83	ug/L	98
83) 1,3-dichloropropane	13.096	76	137262	46.49	ug/L	96
84) butyl acetate	13.185	56	62939	45.68	ug/L	99
85) dibromochloromethane	13.378	129	88346	50.60	ug/L	98
86) 1,2-dibromoethane	13.556	107	84221	46.30	ug/L	100
87) n-butyl ether	14.090	57	522531	46.52	ug/L	99
88) chlorobenzene	14.111	112	269895	48.05	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.179	131	126134	54.41	ug/L	97
90) ethylbenzene	14.184	91	503438	48.18	ug/L	100
91) m,p-xylene	14.325	106	385125	96.81	ug/L	99
92) o-xylene	14.775	91	460632	48.91	ug/L	97
93) styrene	14.785	104	313853	47.81	ug/L	97
94) butyl acrylate	14.576	55	204605	40.08	ug/L	99
95) n-amyl acetate	14.817	70	87345	45.69	ug/L	94
96) isopropylbenzene	15.178	105	597309	50.37	ug/L	99
97) bromoform	15.026	173	58495	52.84	ug/L	99
98) cis-1,4-dichloro-2-butene	15.178	88	36100	51.86	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.449	83	124905	46.13	ug/L	98
102) trans-1,4-dichloro-2-b...	15.491	53	30721	51.87	ug/L	88
103) 1,2,3-trichloropropane	15.554	110	33306	47.36	ug/L	89
104) bromobenzene	15.601	156	125503	49.68	ug/L	98
105) n-propylbenzene	15.648	91	646079	46.69	ug/L	98
106) 2-chlorotoluene	15.795	126	132735	49.44	ug/L	94
107) 4-chlorotoluene	15.915	91	377475	45.80	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266671.d  
 Acq On : 3 Oct 2019 8:28 am  
 Operator : thienn  
 Sample : bs Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:25:07 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

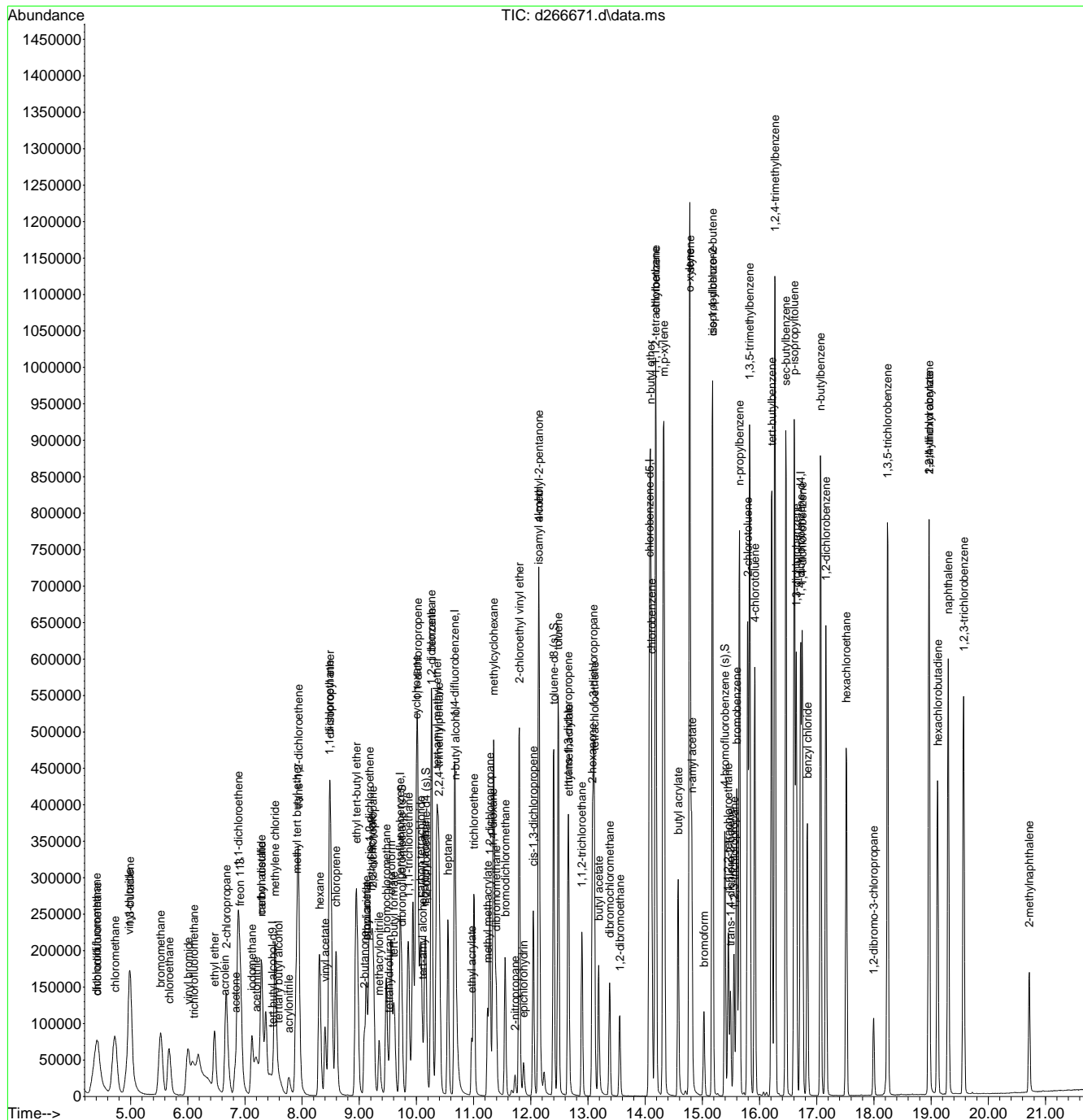
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.826	105	533027	48.96	ug/L	99
109) tert-butylbenzene	16.213	119	436289	50.79	ug/L	98
110) 1,2,4-trimethylbenzene	16.265	105	534411	48.18	ug/L	99
111) sec-butylbenzene	16.459	105	676238	48.56	ug/L	99
112) p-isopropyltoluene	16.605	119	566482	48.41	ug/L	99
113) 1,3-dichlorobenzene	16.642	146	265410	47.81	ug/L	99
114) 1,4-dichlorobenzene	16.747	146	268879	47.60	ug/L	100
115) 1,2-dichlorobenzene	17.160	146	286938	49.66	ug/L	100
116) benzyl chloride	16.835	91	295905	54.80	ug/L	97
117) n-butylbenzene	17.066	92	291971	46.64	ug/L	99
118) 2-ethylhexyl acrylate	18.964	70	33638	7.86	ug/L	92
119) hexachloroethane	17.515	201	93729	55.41	ug/L	99
120) 1,2-dibromo-3-chloropr...	17.991	75	29182	47.79	ug/L	96
121) 1,3,5-trichlorobenzene	18.237	180	275108	51.95	ug/L	98
122) 1,2,4-trichlorobenzene	18.964	180	248041	53.41	ug/L	98
123) hexachlorobutadiene	19.116	225	105530	51.39	ug/L	98
124) naphthalene	19.299	128	544976	53.93	ug/L	100
125) 1,2,3-trichlorobenzene	19.571	180	210725	54.78	ug/L	100
126) 2-methylnaphthalene	20.716	142	95479	23.89	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
Data File : d266671.d  
Acq On : 3 Oct 2019 8:28 am  
Operator : thienn  
Sample : bs  
Misc : ms37924, vd10747, 5, , 100, 5, 1  
ALS Vial : 3 Sample Multiplier: 1  
Inst : MSD

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
Quant Results File: MD10725.RES  
Quant Time: Oct 06 23:25:07 2019  
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
QLast Update : Mon Sep 09 11:00:30 2019  
Response via : Initial Calibration



7.3.1  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253700.d  
 Acq On : 4 Oct 2019 7:45 am  
 Operator : krizhkac  
 Sample : bs Inst : MSA  
 Misc : MS38027,VA9835,5,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:45:36 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.148	65	578645	500.00	ug/L	0.00
5) pentafluorobenzene	10.527	168	322919	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.494	114	493073	50.00	ug/L	0.00
74) chlorobenzene-d5	14.887	117	431709	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.506	152	235310	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.569	113	167782	46.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.90%
53) 1,2-dichloroethane-d4 (s)	10.998	65	167803	46.05	ug/L	-0.01
Spiked Amount	50.000	Range	81 - 124	Recovery	=	92.10%
75) toluene-d8 (s)	13.220	98	550477	45.14	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	90.28%
99) 4-bromofluorobenzene (s)	16.189	95	198457	43.99	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	87.98%
Target Compounds						
3) tertiary butyl alcohol	8.269	59	347308	282.61	ug/L	88
4) 1,4-dioxane	12.163	88	118382	1752.40	ug/L	97
6) chlorodifluoromethane	4.583	51	293873	34.33	ug/L	96
7) dichlorodifluoromethane	4.541	85	373256	44.48	ug/L	98
8) chloromethane	4.980	50	454562	44.68	ug/L	96
9) vinyl chloride	5.247	62	449244	55.08	ug/L	99
10) 1,3-butadiene	5.278	54	211090	35.81	ug/L	97
11) bromomethane	5.921	94	294433	51.60	ug/L	98
12) chloroethane	6.094	64	244659	49.26	ug/L	96
13) vinyl bromide	6.486	106	248012	48.18	ug/L	99
14) trichlorofluoromethane	6.622	101	380169	44.98	ug/L	99
15) ethyl ether	7.009	74	108471	49.38	ug/L	88
16) acrolein	7.254	56	49419	42.00	ug/L	99
17) freon 113	7.505	151	191622	51.40	ug/L	93
18) 1,1-dichloroethene	7.458	96	192285	37.41	ug/L	90
19) acetone	7.458	58	133069	193.12	ug/L	87
20) acetonitrile	7.903	41	426127m	424.38	ug/L	
21) iodomethane	7.735	142	344565	46.37	ug/L	94
22) carbon disulfide	7.892	76	617212	37.31	ug/L	99
23) methylene chloride	8.216	84	236809	39.18	ug/L	97
24) methyl acetate	7.955	43	228716	49.36	ug/L	99
25) methyl tert butyl ether	8.593	73	717351	49.98	ug/L	99
26) trans-1,2-dichloroethene	8.629	96	187703	46.34	ug/L	89
27) hexane	9.006	57	241182	39.01	ug/L	99
28) di-isopropyl ether	9.220	45	726548	46.47	ug/L	98
29) ethyl tert-butyl ether	9.706	59	694907	47.95	ug/L	100
30) 2-butanone	9.895	72	140264	193.61	ug/L #	82
31) 1,1-dichloroethane	9.231	63	342357	46.11	ug/L	98
32) chloroprene	9.340	53	256162	42.37	ug/L	96
33) acrylonitrile	8.514	53	122530	50.34	ug/L	95
34) vinyl acetate	9.157	86	42105	47.07	ug/L	94
35) ethyl acetate	9.915	45	42317	46.74	ug/L #	83
36) 2,2-dichloropropane	10.015	77	342392	49.33	ug/L	96
37) cis-1,2-dichloroethene	9.973	96	216601	47.48	ug/L	92
38) methyl acrylate	10.004	85	36798	47.79	ug/L #	79
39) propionitrile	9.973	54	487432	464.30	ug/L	90
40) bromochloromethane	10.281	128	108209	52.24	ug/L	90
41) tetrahydrofuran	10.297	42	97970	45.35	ug/L	97
42) chloroform	10.370	83	313150	43.95	ug/L	96



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253700.d  
 Acq On : 4 Oct 2019 7:45 am  
 Operator : krizhkac  
 Sample : bs Inst : MSA  
 Misc : MS38027,VA9835,5,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:45:36 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.412	59	183289	50.88	ug/L	96
45) methacrylonitrile	10.182	67	101965	46.52	ug/L	97
46) cyclohexane	10.773	84	357032	44.21	ug/L	96
47) 1,1,1-trichloroethane	10.653	97	323709	48.56	ug/L	97
48) iso-butyl alcohol	10.762	43	364530	469.66	ug/L	90
49) 1,1-dichloropropene	10.820	75	221209	41.89	ug/L	97
50) carbon tetrachloride	10.851	117	267120	47.36	ug/L	99
51) tert-amyl alcohol	10.945	73	172967	270.87	ug/L	98
54) benzene	11.076	78	705833	48.45	ug/L	99
55) iso-octane	11.181	57	680553	46.83	ug/L	98
56) tert-amyl methyl ether	11.160	73	705621	54.66	ug/L	99
57) heptane	11.337	71	123571	44.91	ug/L	97
58) isopropyl acetate	10.971	87	53524	54.59	ug/L	97
59) 1,2-dichloroethane	11.092	62	210941	45.46	ug/L	97
60) n-butyl alcohol	11.536	41	505720	2757.26	ug/L	100
61) ethyl acrylate	11.792	55	267200	53.38	ug/L	99
62) trichloroethene	11.824	95	158049	46.48	ug/L	93
63) 2-nitropropane	12.608	41	72143	55.70	ug/L	95
64) methylcyclohexane	12.143	83	373768	48.84	ug/L	97
65) 2-chloroethyl vinyl ether	12.639	63	495520	389.66	ug/L	98
66) methyl methacrylate	12.069	100	56540	56.90	ug/L #	90
67) 1,2-dichloropropane	12.122	63	182602	48.48	ug/L	98
68) dibromomethane	12.237	93	107840	50.24	ug/L	91
69) bromodichloromethane	12.399	83	217105	47.88	ug/L	98
70) epichlorohydrin	12.733	57	144562	270.34	ug/L	100
71) cis-1,3-dichloropropene	12.880	75	267459	50.66	ug/L	97
72) 4-methyl-2-pentanone	12.984	58	473046	226.25	ug/L	98
73) 3-methyl-1-butanol	12.984	55	499250	1179.47	ug/L	98
76) toluene	13.298	92	395838	45.92	ug/L	98
77) trans-1,3-dichloropropene	13.491	75	233194	46.82	ug/L	97
78) ethyl methacrylate	13.476	69	249678	51.08	ug/L	96
79) 1,1,2-trichloroethane	13.737	83	130524	48.34	ug/L	95
80) 2-hexanone	13.910	58	428383	197.64	ug/L	95
81) tetrachloroethene	13.910	166	164144	51.07	ug/L	95
82) 1,3-dichloropropane	13.936	76	246135	47.39	ug/L	98
83) butyl acetate	13.993	56	159276	49.15	ug/L	96
84) dibromochloromethane	14.208	129	163171	51.09	ug/L	100
85) 1,2-dibromoethane	14.385	107	172177	50.77	ug/L	97
86) n-butyl ether	14.861	57	759239	47.58	ug/L	99
87) chlorobenzene	14.919	112	428236	50.77	ug/L	97
88) 1,1,1,2-tetrachloroethane	14.992	131	205013	54.09	ug/L	100
89) ethylbenzene	14.987	91	742544	48.79	ug/L	97
90) m,p-xylene	15.117	106	591498	101.39	ug/L	95
91) o-xylene	15.572	106	327481	52.46	ug/L	94
92) styrene	15.583	104	485845	52.34	ug/L	99
93) butyl acrylate	15.363	55	398170	47.62	ug/L	99
94) n-amyl acetate	15.598	70	167323	48.70	ug/L	97
95) bromoform	15.844	173	128082	59.02	ug/L	98
96) isopropylbenzene	15.964	105	867056	49.82	ug/L	97
97) cis-1,4-dichloro-2-butene	15.996	75	102825	53.66	ug/L	96
100) bromobenzene	16.403	156	195034	52.28	ug/L	90
101) 1,1,2,2-tetrachloroethane	16.273	83	288393	49.86	ug/L	98
102) trans-1,4-dichloro-2-b...	16.304	53	65041	51.23	ug/L	91
103) 1,2,3-trichloropropane	16.372	110	73445	51.41	ug/L	95
104) n-propylbenzene	16.430	91	926076	46.89	ug/L	97
105) 2-chlorotoluene	16.586	126	204606	52.50	ug/L	90
106) 4-chlorotoluene	16.712	91	510179	45.96	ug/L	96



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253700.d  
 Acq On : 4 Oct 2019 7:45 am  
 Operator : krizhkac  
 Sample : bs Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 02:45:36 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

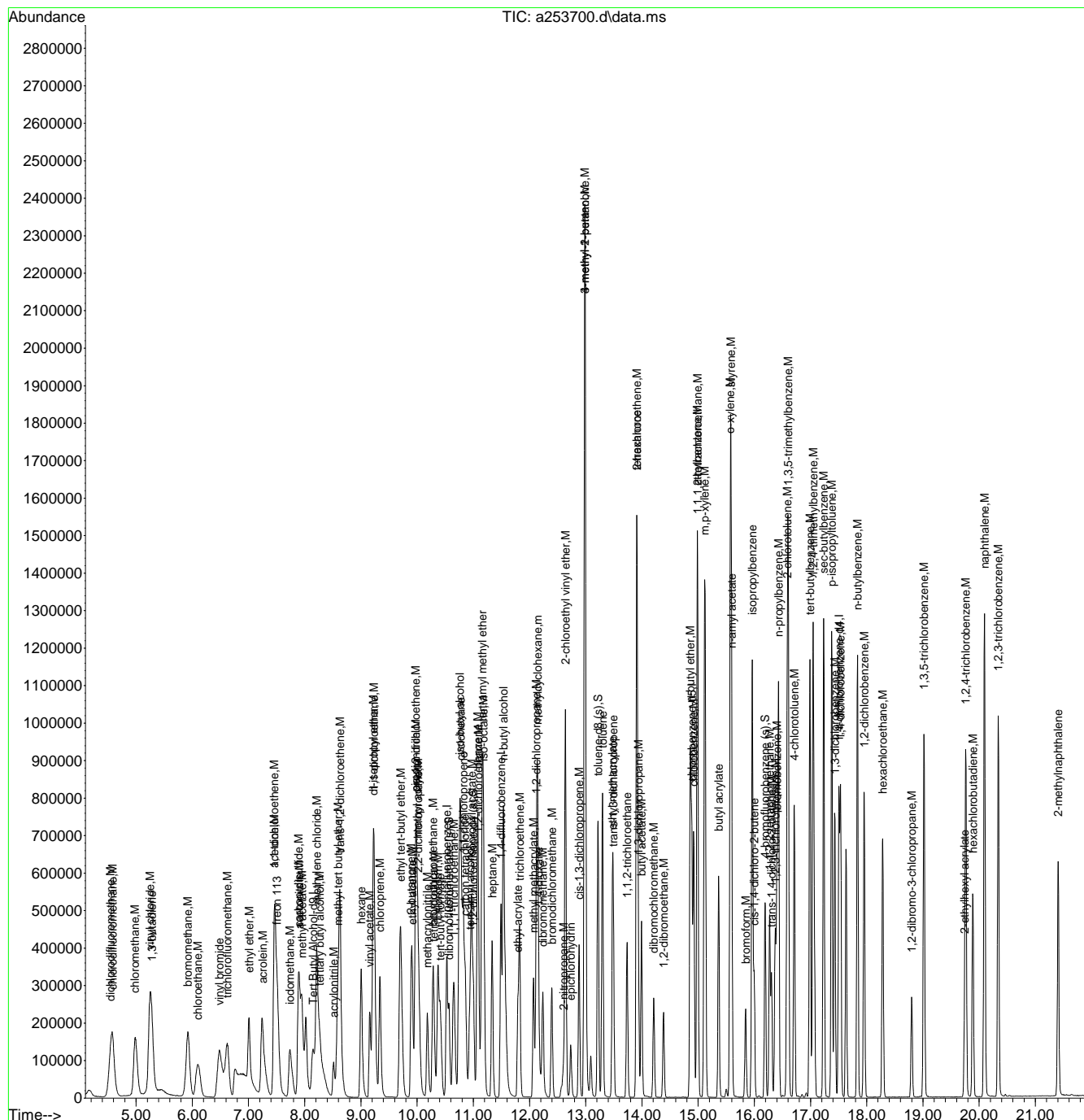
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.602	105	734390	49.06	ug/L	97
108) tert-butylbenzene	16.989	119	636975	47.39	ug/L	96
109) 1,2,4-trimethylbenzene	17.046	105	716938	48.02	ug/L	96
110) sec-butylbenzene	17.235	105	987237	48.84	ug/L	99
111) 1,3-dichlorobenzene	17.433	146	368000	50.83	ug/L	96
112) p-isopropyltoluene	17.376	119	817456	49.01	ug/L	97
113) 1,4-dichlorobenzene	17.533	146	373803	50.38	ug/L	98
114) 1,2-dichlorobenzene	17.956	146	399021	51.49	ug/L	98
115) n-butylbenzene	17.836	92	402235	46.24	ug/L	98
116) 1,2-dibromo-3-chloropr...	18.798	157	93871	55.78	ug/L	98
117) 1,3,5-trichlorobenzene	19.017	180	356513	51.23	ug/L	96
118) 2-ethylhexyl acrylate	19.739	70	48922	8.99	ug/L	99
119) 1,2,4-trichlorobenzene	19.760	180	352392	53.08	ug/L	99
120) hexachlorobutadiene	19.890	225	141434	51.43	ug/L	99
121) naphthalene	20.094	128	1177170	52.49	ug/L	100
122) 1,2,3-trichlorobenzene	20.340	180	383456	53.04	ug/L	98
123) hexachloroethane	18.285	201	150720	56.88	ug/L	97
124) 2-methylnaphthalene	21.407	142	377853	27.88	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\
Data File : a253700.d
Acq On : 4 Oct 2019 7:45 am
Operator : krizhkac
Sample : bs
Misc : MS38027,VA9835,5,,,,,1
ALS Vial : 3 Sample Multiplier: 1
Inst : MSA

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M
Quant Results File: MA9755.RES
Quant Time: Oct 07 02:45:36 2019
Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um
QLast Update : Tue Aug 20 13:28:09 2019
Response via : Initial Calibration



7.32
7

# Manual Integration Approval Summary

Sample Number: VA9835-BS                      Method: SW846 8260C  
Lab FileID: A253700.D                      Analyst approved: 10/07/19 03:15 Nizel Eugenio  
Injection Time: 10/04/19 07:45                      Supervisor approved: 10/07/19 14:10 Kanya Veerawat

Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetonitrile	75-05-8		7.90	Overlapping peak

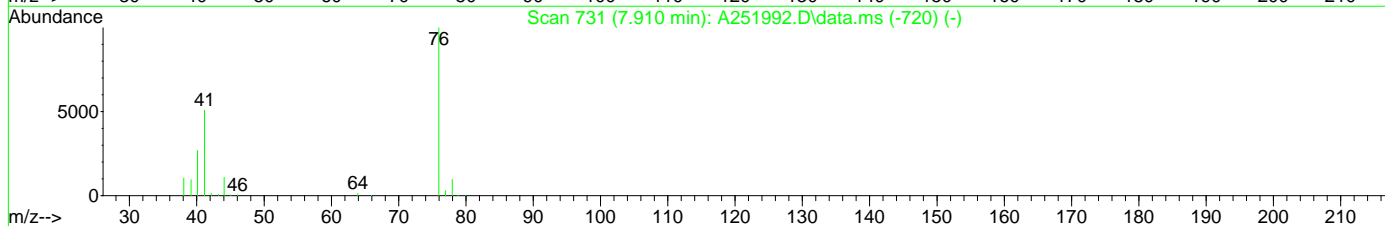
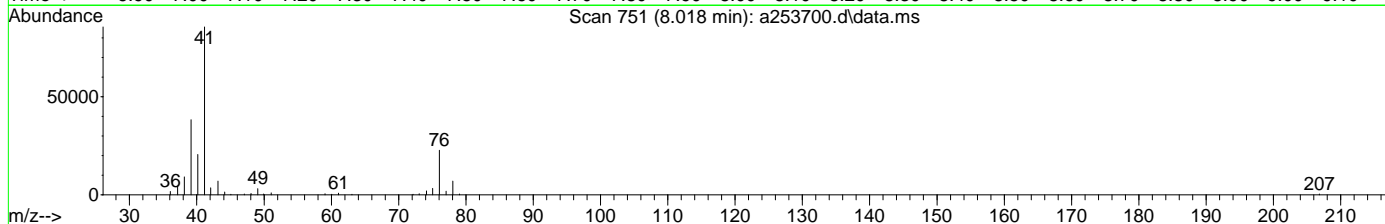
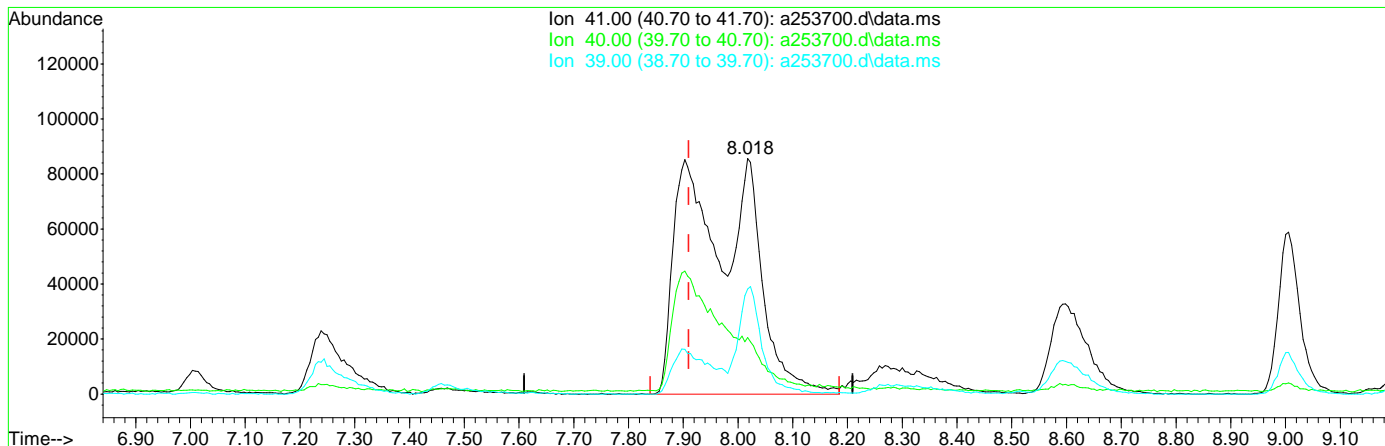
7.3.2.1

7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253700.d  
 Acq On : 4 Oct 2019 7:45 am  
 Operator : krizhkac  
 Sample : bs Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 04 08:27:35 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration



TIC: a253700.d\data.ms

(20) acetonitrile (M)

8.018min (+0.108) 726.66ug/L

response 729652

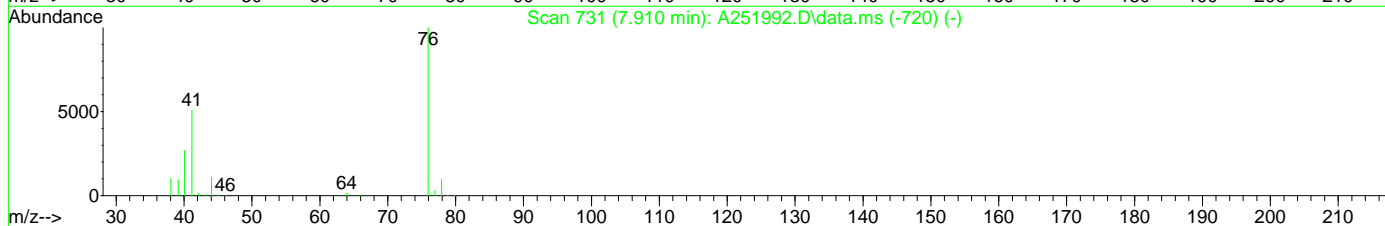
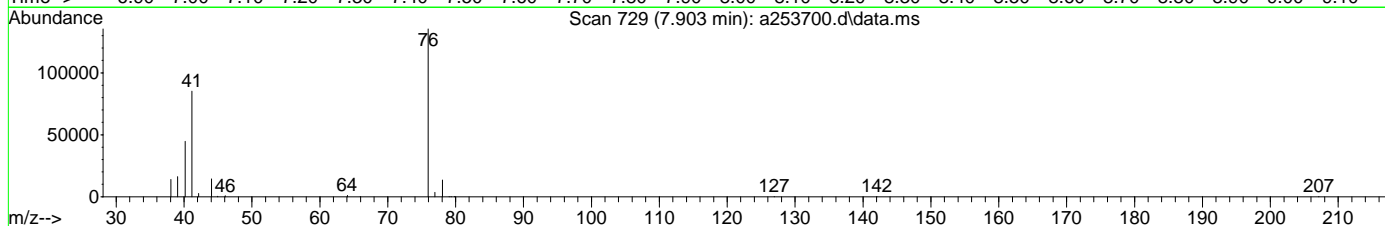
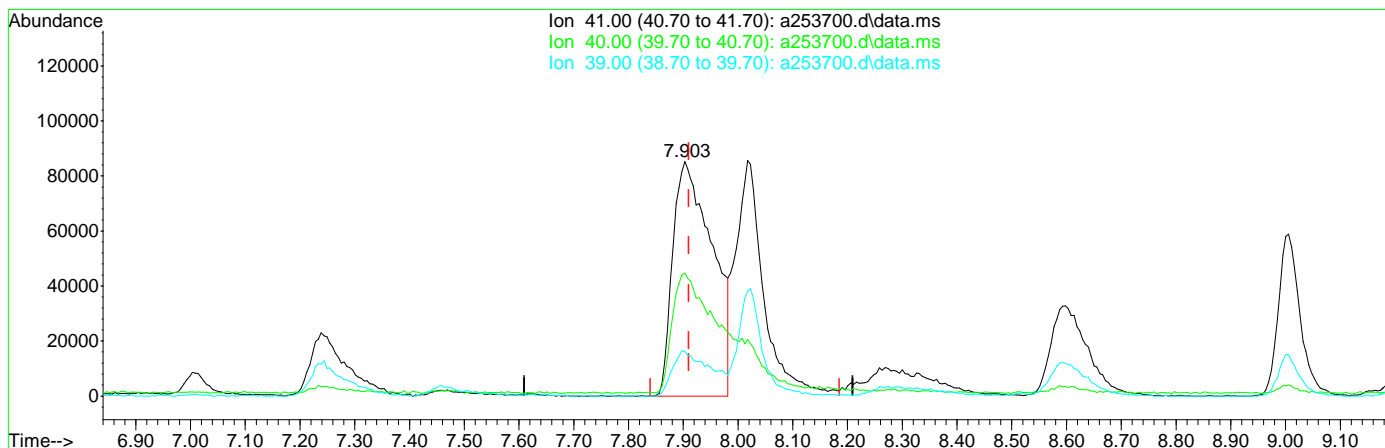
Ion	Exp%	Act%
41.00	100	100
40.00	52.80	22.56#
39.00	18.40	44.59
0.00	0.00	0.00

7.3.2.2  
7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253700.d  
 Acq On : 4 Oct 2019 7:45 am  
 Operator : krizhkac  
 Sample : bs Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 04 08:27:35 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration



TIC: a253700.d\data.ms

(20) acetonitrile (M)  
 7.903min (-0.007) 424.38ug/L m  
 response 426127

Ion	Exp%	Act%
41.00	100	100
40.00	52.80	52.45
39.00	18.40	19.06
0.00	0.00	0.00

7.3.2.3  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167569.d  
 Acq On : 4 Oct 2019 8:37 am  
 Operator : PrashanS  
 Sample : bs Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:02:47 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.285	65	67942	500.00	ug/L	-0.02
5) pentafluorobenzene	9.529	168	201245	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	310383	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	226578	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.904	152	112779	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.592	113	92029	48.52	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	97.04%
53) 1,2-dichloroethane-d4 (s)	10.015	65	88678	48.11	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	96.22%
75) toluene-d8 (s)	12.081	98	316306	51.16	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.32%
98) 4-bromofluorobenzene (s)	14.743	95	104802	46.66	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	93.32%
Target Compounds						
2) tertiary butyl alcohol	7.405	59	41379	217.25	ug/L	75
3) ethanol	6.040	45	90148	5719.68	ug/L	97
4) 1,4-dioxane	11.176	88	20817	1178.01	ug/L	95
6) chlorodifluoromethane	3.843	51	114268	47.83	ug/L	99
7) dichlorodifluoromethane	3.812	85	133783	42.77	ug/L	98
8) chloromethane	4.225	50	121154	52.15	ug/L	100
9) vinyl chloride	4.455	62	122845	51.08	ug/L	98
10) 1,3-butadiene	4.523	54	76660	46.50	ug/L	99
11) bromomethane	5.130	94	70228	64.01	ug/L	99
12) chloroethane	5.308	64	58062	47.64	ug/L	99
13) trichlorofluoromethane	5.742	101	133226	42.38	ug/L	99
14) vinyl bromide	5.653	106	80617	49.14	ug/L	99
15) ethyl ether	6.181	74	40616	48.92	ug/L	96
16) acrolein	6.464	56	11623	48.97	ug/L	92
17) freon 113	6.542	151	66192	47.48	ug/L	97
18) 1,1-dichloroethene	6.605	96	75377	43.41	ug/L	97
19) acetone	6.678	43	70591	164.00	ug/L	97
20) acetonitrile	7.133	41	87356	504.28	ug/L	99
21) iodomethane	6.893	142	72412	47.55	ug/L	100
22) carbon disulfide	7.008	76	224144	43.98	ug/L	100
23) methylene chloride	7.348	84	82534	45.77	ug/L	94
24) methyl acetate	7.139	43	49626	51.11	ug/L	99
25) methyl tert butyl ether	7.641	73	201804	53.92	ug/L	98
26) trans-1,2-dichloroethene	7.709	96	80350	42.55	ug/L	96
27) di-isopropyl ether	8.226	45	257388	49.44	ug/L	98
28) 2-butanone	8.985	72	29744	185.60	ug/L	94
29) 1,1-dichloroethane	8.284	63	142925	47.18	ug/L	100
30) chloroprene	8.383	53	120357	48.42	ug/L	97
31) acrylonitrile	7.693	53	22482	51.07	ug/L	98
32) hexane	7.986	57	136565	47.94	ug/L	97
33) vinyl acetate	8.263	86	12267	46.46	ug/L #	54
34) ethyl tert-butyl ether	8.692	59	228576	59.54	ug/L	97
35) ethyl acetate	8.995	45	10265	53.23	ug/L #	75
36) 2,2-dichloropropane	9.006	77	122882	54.42	ug/L	95
37) cis-1,2-dichloroethene	9.021	96	86854	43.05	ug/L	93
38) methyl acrylate	9.079	85	9702	47.23	ug/L #	86
39) propionitrile	9.105	54	94276	493.59	ug/L	99
40) bromochloromethane	9.335	128	39140	45.52	ug/L	90
41) tetrahydrofuran	9.367	42	21291	52.06	ug/L	89

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167569.d  
 Acq On : 4 Oct 2019 8:37 am  
 Operator : PrashanS  
 Sample : bs Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:02:47 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) chloroform	9.388	85	92531	43.46	ug/L	97
43) t-butyl formate	9.403	59	57155	89.12	ug/L	97
45) methacrylonitrile	9.283	67	26741	47.61	ug/L	96
46) 1,1,1-trichloroethane	9.628	97	128574	45.28	ug/L	98
47) cyclohexane	9.680	84	118070	44.97	ug/L	98
48) 1,1-dichloropropene	9.806	75	112071	46.83	ug/L	98
49) iso-butyl alcohol	9.827	43	30905	481.24	ug/L	97
50) carbon tetrachloride	9.822	117	115342	46.74	ug/L	98
51) tert amyl alcohol	9.942	55	14139	251.96	ug/L	92
54) n-butyl alcohol	10.575	56	107406	2455.84	ug/L	94
55) 2,2,4-trimethylpentane	10.036	57	269947	43.33	ug/L	99
56) benzene	10.073	78	310231	45.36	ug/L	99
57) tert-amyl methyl ether	10.083	87	47138	57.09	ug/L	93
58) heptane	10.214	71	71715	43.91	ug/L	95
59) isopropyl acetate	9.989	87	13900	46.87	ug/L #	73
60) 1,2-dichloroethane	10.104	62	93408	43.05	ug/L	97
61) trichloroethene	10.789	130	86330	46.32	ug/L	99
62) ethyl acrylate	10.789	55	83386	48.11	ug/L	98
64) 2-chloroethyl vinyl ether	11.579	63	188335	311.24	ug/L	97
65) methyl methacrylate	11.051	100	15756	44.51	ug/L #	88
66) 1,2-dichloropropane	11.061	63	80853	47.94	ug/L	99
67) dibromomethane	11.229	93	45736	45.08	ug/L	98
68) methylcyclohexane	10.983	83	144203	45.86	ug/L	96
69) bromodichloromethane	11.354	83	108460	45.38	ug/L	99
70) epichlorohydrin	11.720	57	31940	242.35	ug/L	100
71) cis-1,3-dichloropropene	11.804	75	127267	47.56	ug/L	99
72) 4-methyl-2-pentanone	11.888	58	93587	184.67	ug/L	96
73) 3-methyl-1-butanol	11.914	55	64963	981.13	ug/L	96
76) toluene	12.154	92	177384	46.15	ug/L	99
77) trans-1,3-dichloropropene	12.364	75	106064	52.50	ug/L	98
78) ethyl methacrylate	12.337	69	74138	46.71	ug/L	97
79) 1,1,2-trichloroethane	12.578	83	51680	46.32	ug/L	99
80) tetrachloroethene	12.735	164	65118	47.83	ug/L	97
81) 1,3-dichloropropane	12.761	76	91478	45.84	ug/L	96
82) 2-hexanone	12.735	58	85609	188.45	ug/L	94
83) butyl acetate	12.803	56	37678	47.73	ug/L	96
84) dibromochloromethane	13.023	129	76472	50.03	ug/L	100
85) 1,2-dibromoethane	13.174	107	68832	45.81	ug/L	99
86) n-butyl ether	13.509	57	276962	46.48	ug/L	98
87) chlorobenzene	13.619	112	177713	43.89	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.682	131	68392	48.45	ug/L	96
89) ethylbenzene	13.666	91	309645	43.65	ug/L	99
90) m,p-xylene	13.770	106	232769	87.03	ug/L	98
91) o-xylene	14.189	106	113467	44.73	ug/L	97
92) styrene	14.205	104	188770	44.15	ug/L	96
93) bromoform	14.482	173	48174	52.01	ug/L	97
94) butyl acrylate	14.011	55	112869	44.69	ug/L	98
95) isopropylbenzene	14.524	105	302697	44.45	ug/L	99
96) cis-1,4-dichloro-2-butene	14.618	88	26604	50.55	ug/L	100
99) bromobenzene	14.937	156	77285	44.68	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.853	83	68071	42.80	ug/L	99
101) trans-1,4-dichloro-2-b...	14.890	53	19002	56.52	ug/L	88
102) 1,2,3-trichloropropane	14.926	110	16673	44.30	ug/L	94
103) n-propylbenzene	14.932	91	356507	42.49	ug/L	99
104) 2-chlorotoluene	15.088	126	71380	43.69	ug/L	98
105) 4-chlorotoluene	15.188	91	209450	42.04	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	242053	42.27	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\  
 Data File : 1c167569.d  
 Acq On : 4 Oct 2019 8:37 am  
 Operator : PrashanS  
 Sample : bs Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:02:47 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.428	134	45902	43.62	ug/L	98
108) 1,2,4-trimethylbenzene	15.476	105	240737	41.13	ug/L	99
109) sec-butylbenzene	15.643	105	324087	42.78	ug/L	100
110) 1,3-dichlorobenzene	15.847	146	146620	44.28	ug/L	100
111) p-isopropyltoluene	15.763	119	270972	42.66	ug/L	98
112) 1,4-dichlorobenzene	15.931	146	142983	42.61	ug/L	100
113) benzyl chloride	16.051	91	142113	60.15	ug/L	100
114) 1,2-dichlorobenzene	16.333	146	139316	43.63	ug/L	99
115) n-butylbenzene	16.187	92	142674	42.73	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.128	75	13113	45.51	ug/L	98
117) 1,3,5-trichlorobenzene	17.290	180	116574	47.95	ug/L	99
118) 2-ethylhexyl acrylate	17.824	70	10509	7.47	ug/L	94
119) 1,2,4-trichlorobenzene	17.861	180	97075	48.26	ug/L	100
120) hexachlorobutadiene	17.955	225	63963	51.14	ug/L	98
121) naphthalene	18.112	128	183381	42.03	ug/L	99
122) 1,2,3-trichlorobenzene	18.321	180	87473	45.98	ug/L	98
123) hexachloroethane	16.595	201	54172	53.09	ug/L	96
124) 2-methylnaphthalene	19.069	142	59759	22.63	ug/L	96

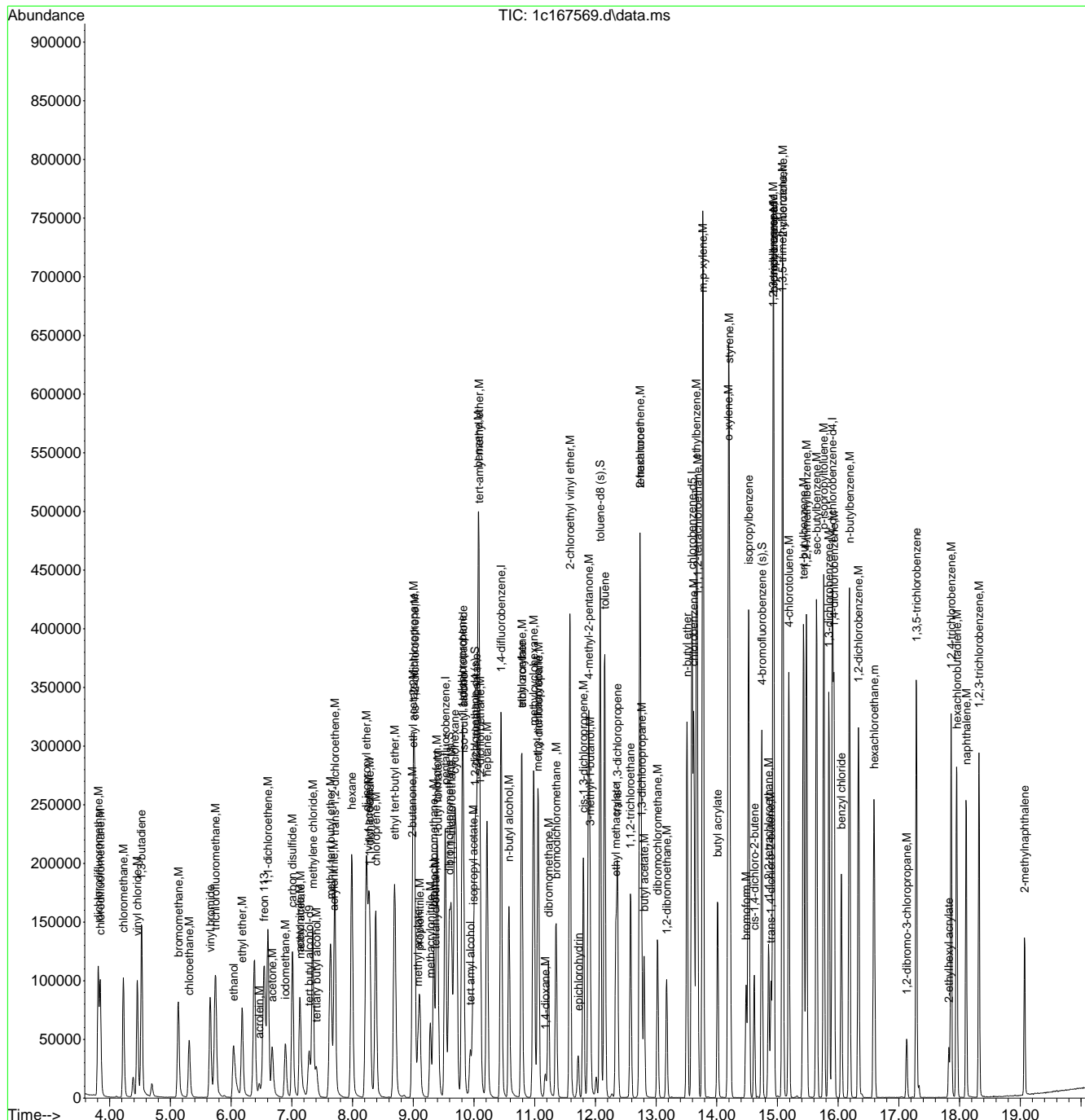
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\  
 Data File : 1c167569.d  
 Acq On : 4 Oct 2019 8:37 am  
 Operator : Prashans  
 Sample : bs  
 Misc : MS37954,V1C7331,5.0,,,1  
 ALS Vial : 4 Sample Multiplier: 1  
 Inst : GCMS1C

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:02:47 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



7.3.3  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266680.d  
 Acq On : 3 Oct 2019 1:22 pm  
 Operator : thienn  
 Sample : jc95555-2MS Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:57:38 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.536	65	120230	500.00	ug/L	0.05
5) pentafluorobenzene	9.706	168	211509	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.663	114	318403	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.073	117	286273	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.720	152	193058	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.738	113	109280	48.40	ug/L	-0.01
Spiked Amount	50.000	Range	75 - 127	Recovery	=	96.80%
55) 1,2-dichloroethane-d4 (s)	10.166	65	118134	51.49	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	102.98%
76) toluene-d8 (s)	12.395	98	358412	48.22	ug/L	-0.02
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.44%
100) 4-bromofluorobenzene (s)	15.391	95	153863	43.50	ug/L	-0.02
Spiked Amount	50.000	Range	79 - 127	Recovery	=	87.00%
Target Compounds						
3) tertiary butyl alcohol	7.614	59	83330	264.13	ug/L	98
4) 1,4-dioxane	11.338	88	34174	1128.53	ug/L #	74
6) chlorodifluoromethane	4.403	51	288391	43.70	ug/L	99
7) dichlorodifluoromethane	4.403	85	245779	45.42	ug/L	97
8) chloromethane	4.722	50	309887	47.76	ug/L	100
9) 1,3-butadiene	4.983	54	195985	55.17	ug/L	97
10) vinyl chloride	4.963	62	319615	51.66	ug/L	99
11) bromomethane	5.506	94	116229	37.22	ug/L	99
12) chloroethane	5.642	64	93732	32.26	ug/L	97
13) trichlorofluoromethane	6.056	101	193721	45.24	ug/L	98
14) vinyl bromide	5.988	106	121536	42.77	ug/L	98
15) ethyl ether	6.453	74	67683	49.59	ug/L	90
16) 2-chloropropane	6.657	43	246313	43.23	ug/L	98
17) acrolein	6.636	56	20796	44.66	ug/L	98
18) freon 113	6.903	151	129777	53.38	ug/L	95
19) 1,1-dichloroethene	6.866	96	134311	43.93	ug/L	94
20) acetone	6.840	58	44195	202.08	ug/L	92
21) acetonitrile	7.211	41	182912	400.05	ug/L	98
22) iodomethane	7.112	142	190477	45.99	ug/L	96
23) carbon disulfide	7.274	76	457992	48.49	ug/L	99
24) methylene chloride	7.520	84	150487	45.36	ug/L	99
25) methyl acetate	7.285	74	20752	58.02	ug/L #	85
26) methyl tert butyl ether	7.902	73	451865	44.46	ug/L	98
27) trans-1,2-dichloroethene	7.923	96	137363	45.03	ug/L	97
28) hexane	8.294	56	76975	38.68	ug/L	98
29) di-isopropyl ether	8.493	45	540115	42.98	ug/L	100
30) 2-butanone	9.079	72	42015	171.23	ug/L	96
31) 1,1-dichloroethane	8.472	63	249778	47.34	ug/L	98
32) chloroprene	8.587	53	206041	45.20	ug/L	97
33) acrylonitrile	7.766	53	47678	53.09	ug/L	98
34) vinyl acetate	8.393	86	22383	42.09	ug/L #	80
35) ethyl tert-butyl ether	8.943	59	497550	42.67	ug/L	99
36) ethyl acetate	9.115	45	16196	38.69	ug/L #	62
37) 2,2-dichloropropane	9.230	77	166214	31.42	ug/L	96
38) cis-1,2-dichloroethene	9.173	96	153898	45.95	ug/L	96
39) propionitrile	9.120	54	166117	419.78	ug/L	99
40) methyl acrylate	9.199	85	13060	42.71	ug/L	95
41) methacrylonitrile	9.340	67	40561	43.49	ug/L	99
42) bromochloromethane	9.466	128	67107	49.39	ug/L	95

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266680.d  
 Acq On : 3 Oct 2019 1:22 pm  
 Operator : thienn  
 Sample : jc95555-2MS Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:57:38 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	9.513	42	30852	38.82	ug/L	93
44) chloroform	9.549	83	227631	45.63	ug/L	99
45) tert-butyl formate	9.607	59	157262	54.60	ug/L	97
47) 1,1,1-trichloroethane	9.853	97	235802	46.93	ug/L	98
48) cyclohexane	9.999	84	264486	49.03	ug/L	99
50) 1,1-dichloropropene	10.015	75	171380	46.44	ug/L	98
51) carbon tetrachloride	10.072	117	196749	51.47	ug/L	97
52) tert-amyl alcohol	10.125	73	25491	138.39	ug/L #	76
53) isopropyl acetate	10.146	87	26266	45.08	ug/L #	90
56) n-butyl alcohol	10.679	41	116926	1915.39	ug/L	98
57) 2,2,4-trimethylpentane	10.391	57	352692	38.70	ug/L	100
58) benzene	10.261	78	1166485	112.99	ug/L	98
59) tert-amyl methyl ether	10.360	73	463633	47.92	ug/L	99
60) heptane	10.548	57	55244	30.63	ug/L	98
61) 1,2-dichloroethane	10.255	62	148000	47.41	ug/L	92
62) ethyl acrylate	10.961	55	108905	41.98	ug/L	98
63) trichloroethene	11.003	95	113744	49.44	ug/L	96
64) 2-chloroethyl vinyl ether	11.793	63	292510	217.46	ug/L	100
65) methyl methacrylate	11.244	100	23950	45.59	ug/L	98
66) methylcyclohexane	11.354	83	261204	54.76	ug/L	98
67) 1,2-dichloropropane	11.281	63	124130	47.45	ug/L	100
68) dibromomethane	11.390	93	61113	46.25	ug/L	95
69) bromodichloromethane	11.552	83	144228	46.79	ug/L	100
70) 2-nitropropane	11.720	41	19852	39.98	ug/L	97
71) epichlorohydrin	11.872	57	46819	189.34	ug/L	96
72) cis-1,3-dichloropropene	12.039	75	154044	40.61	ug/L	95
73) 4-methyl-2-pentanone	12.143	58	183532	200.77	ug/L	94
74) isoamyl alcohol	12.133	70	80539	1019.35	ug/L	95
77) toluene	12.478	92	315003	55.08	ug/L	99
78) ethyl methacrylate	12.661	69	131048	46.18	ug/L	98
79) trans-1,3-dichloropropene	12.651	75	134030	43.36	ug/L	99
80) 1,1,2-trichloroethane	12.891	83	71553	46.43	ug/L	98
81) tetrachloroethene	13.106	164	83600	50.69	ug/L	98
82) 2-hexanone	13.074	58	144182	192.15	ug/L	98
83) 1,3-dichloropropane	13.095	76	148526	46.71	ug/L	95
84) butyl acetate	13.184	56	73544	49.56	ug/L	95
85) dibromochloromethane	13.378	129	95244	50.65	ug/L	98
86) 1,2-dibromoethane	13.556	107	93315	47.63	ug/L	99
87) n-butyl ether	14.089	57	575168	47.55	ug/L	100
88) chlorobenzene	14.110	112	287192	47.48	ug/L	98
89) 1,1,1,2-tetrachloroethane	14.178	131	141443	56.65	ug/L	98
90) ethylbenzene	14.188	91	552626	49.11	ug/L	98
91) m,p-xylene	14.324	106	427090	99.69	ug/L	100
92) o-xylene	14.774	91	522346	51.50	ug/L	98
93) styrene	14.785	104	348793	49.33	ug/L	96
94) butyl acrylate	14.576	55	236682	43.05	ug/L	99
95) n-amyl acetate	14.816	70	103627	50.33	ug/L	93
96) isopropylbenzene	15.177	105	678359	53.11	ug/L	99
97) bromoform	15.031	173	67370	56.50	ug/L	99
98) cis-1,4-dichloro-2-butene	15.177	88	33518	44.71	ug/L	97
101) 1,1,2,2-tetrachloroethane	15.454	83	139720	44.19	ug/L	100
102) trans-1,4-dichloro-2-b...	15.491	53	29038	41.99	ug/L	87
103) 1,2,3-trichloropropane	15.554	110	37925	46.18	ug/L	94
104) bromobenzene	15.601	156	138756	47.03	ug/L	98
105) n-propylbenzene	15.648	91	702388	43.47	ug/L	98
106) 2-chlorotoluene	15.794	126	146967	46.88	ug/L	95
107) 4-chlorotoluene	15.914	91	408348	42.43	ug/L	100

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266680.d  
 Acq On : 3 Oct 2019 1:22 pm  
 Operator : thienn  
 Sample : jc95555-2MS Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:57:38 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

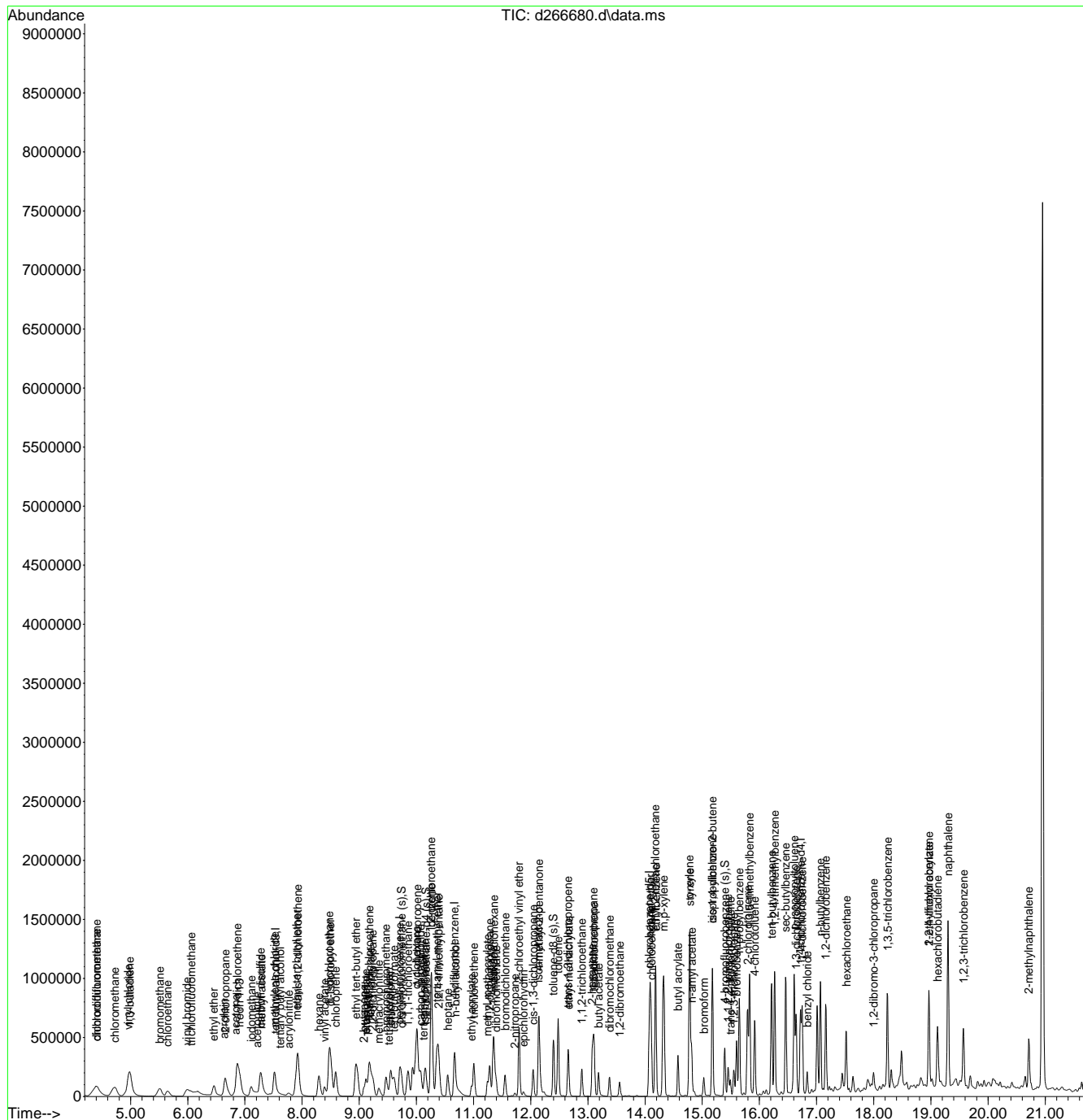
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.826	105	592752	46.62	ug/L	99
109) tert-butylbenzene	16.213	119	492152	49.06	ug/L	97
110) 1,2,4-trimethylbenzene	16.265	105	630902	48.70	ug/L	100
111) sec-butylbenzene	16.458	105	740831	45.55	ug/L	98
112) p-isopropyltoluene	16.610	119	622449	45.55	ug/L	99
113) 1,3-dichlorobenzene	16.641	146	299665	46.22	ug/L	98
114) 1,4-dichlorobenzene	16.746	146	309157	46.87	ug/L	99
115) 1,2-dichlorobenzene	17.159	146	325994	48.31	ug/L	99
116) benzyl chloride	16.835	91	148420	23.54	ug/L	99
117) n-butylbenzene	17.065	92	319381	43.69	ug/L	99
118) 2-ethylhexyl acrylate	18.964	70	44385	8.88	ug/L	98
119) hexachloroethane	17.520	201	106217	53.77	ug/L	98
120) 1,2-dibromo-3-chloropr...	17.996	75	32680	45.83	ug/L	91
121) 1,3,5-trichlorobenzene	18.242	180	279261	45.16	ug/L	99
122) 1,2,4-trichlorobenzene	18.964	180	239796	44.22	ug/L	98
123) hexachlorobutadiene	19.115	225	118023	49.21	ug/L	99
124) naphthalene	19.298	128	1328937	112.62	ug/L	100
125) 1,2,3-trichlorobenzene	19.570	180	188653	41.99	ug/L	99
126) 2-methylnaphthalene	20.710	142	243561	52.18	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266680.d  
 Acq On : 3 Oct 2019 1:22 pm  
 Operator : thienn  
 Sample : jc95555-2MS Inst : MSD  
 Misc : ms37920, vd10747, 4.3, ,100,10,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:57:38 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration



7.4.1  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266681.d  
 Acq On : 3 Oct 2019 1:51 pm  
 Operator : thienn  
 Sample : jc95555-2MSD Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:58:39 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.525	65	109096	500.00	ug/L	0.04
5) pentafluorobenzene	9.711	168	207350	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.663	114	317416	50.00	ug/L	-0.01
75) chlorobenzene-d5	14.073	117	282171	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.720	152	189271	50.00	ug/L	-0.01
System Monitoring Compounds						
46) dibromofluoromethane (s)	9.737	113	105986	47.88	ug/L	-0.01
Spiked Amount	50.000	Range	75 - 127	Recovery	=	95.76%
55) 1,2-dichloroethane-d4 (s)	10.166	65	108300	47.35	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	94.70%
76) toluene-d8 (s)	12.399	98	360272	49.17	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.34%
100) 4-bromofluorobenzene (s)	15.391	95	152118	43.86	ug/L	-0.02
Spiked Amount	50.000	Range	79 - 127	Recovery	=	87.72%
Target Compounds						
3) tertiary butyl alcohol	7.645	59	80650	281.72	ug/L	100
4) 1,4-dioxane	11.327	88	37339	1358.89	ug/L	92
6) chlorodifluoromethane	4.403	51	302176	46.71	ug/L	98
7) dichlorodifluoromethane	4.403	85	252429	47.58	ug/L	99
8) chloromethane	4.722	50	318958	50.15	ug/L	98
9) 1,3-butadiene	4.978	54	200604	57.60	ug/L	98
10) vinyl chloride	4.967	62	330008	54.41	ug/L	99
11) bromomethane	5.511	94	116008	37.89	ug/L	99
12) chloroethane	5.653	64	96353	33.83	ug/L	98
13) trichlorofluoromethane	6.160	101	198361	47.25	ug/L	98
14) vinyl bromide	5.987	106	124705	44.76	ug/L	98
15) ethyl ether	6.458	74	66164	49.45	ug/L	95
16) 2-chloropropane	6.652	43	248685	44.52	ug/L	97
17) acrolein	6.636	56	16976	37.19	ug/L	97
18) freon 113	6.897	151	131909	55.34	ug/L	95
19) 1,1-dichloroethene	6.866	96	136436	45.52	ug/L	95
20) acetone	6.829	58	41912	195.49	ug/L	87
21) acetonitrile	7.196	41	174141	388.50	ug/L	99
22) iodomethane	7.112	142	192358	47.38	ug/L	97
23) carbon disulfide	7.279	76	471477	50.92	ug/L	100
24) methylene chloride	7.515	84	151866	46.69	ug/L	97
25) methyl acetate	7.284	74	19875	56.68	ug/L #	83
26) methyl tert butyl ether	7.907	73	449424	45.10	ug/L	98
27) trans-1,2-dichloroethene	7.922	96	138908	46.45	ug/L	96
28) hexane	8.294	56	78613	40.29	ug/L	98
29) di-isopropyl ether	8.493	45	548837	44.55	ug/L	99
30) 2-butanone	9.084	72	41493	172.49	ug/L	95
31) 1,1-dichloroethane	8.472	63	250631	48.46	ug/L	98
32) chloroprene	8.587	53	207928	46.53	ug/L	98
33) acrylonitrile	7.760	53	45902	52.14	ug/L	97
34) vinyl acetate	8.393	86	15226	29.21	ug/L #	73
35) ethyl tert-butyl ether	8.948	59	498769	43.63	ug/L	98
36) ethyl acetate	9.120	45	15853	38.63	ug/L #	84
37) 2,2-dichloropropane	9.235	77	165946	32.00	ug/L	96
38) cis-1,2-dichloroethene	9.178	96	152141	46.34	ug/L	96
39) propionitrile	9.120	54	158770	409.26	ug/L	99
40) methyl acrylate	9.204	85	12792	42.67	ug/L	94
41) methacrylonitrile	9.345	67	40002	43.76	ug/L	98
42) bromochloromethane	9.465	128	66287	49.77	ug/L	90

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266681.d  
 Acq On : 3 Oct 2019 1:51 pm  
 Operator : thienn  
 Sample : jc95555-2MSD Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:58:39 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	9.512	42	36370	46.68	ug/L	99
44) chloroform	9.549	83	228741	46.77	ug/L	99
45) tert-butyl formate	9.607	59	120457	42.66	ug/L	98
47) 1,1,1-trichloroethane	9.852	97	240990	48.93	ug/L	97
48) cyclohexane	9.999	84	266027	50.31	ug/L	99
50) 1,1-dichloropropene	10.020	75	172944	47.80	ug/L	98
51) carbon tetrachloride	10.067	117	197682	52.75	ug/L	97
52) tert-amyl alcohol	10.119	73	25715	142.41	ug/L #	88
53) isopropyl acetate	10.145	87	25852	45.26	ug/L #	89
56) n-butyl alcohol	10.679	41	113198	1860.08	ug/L	96
57) 2,2,4-trimethylpentane	10.391	57	361386	39.78	ug/L	99
58) benzene	10.260	78	1176077	114.27	ug/L	98
59) tert-amyl methyl ether	10.360	73	467718	48.50	ug/L	99
60) heptane	10.548	57	56683	31.53	ug/L	99
61) 1,2-dichloroethane	10.255	62	148916	47.85	ug/L	91
62) ethyl acrylate	10.961	55	111722	43.20	ug/L	98
63) trichloroethene	11.003	95	120846	52.69	ug/L	96
64) 2-chloroethyl vinyl ether	11.793	63	295335	220.24	ug/L	99
65) methyl methacrylate	11.244	100	24222	46.25	ug/L	94
66) methylcyclohexane	11.348	83	263664	55.45	ug/L	99
67) 1,2-dichloropropane	11.280	63	126614	48.54	ug/L	100
68) dibromomethane	11.390	93	61741	46.87	ug/L	96
69) bromodichloromethane	11.547	83	148933	48.47	ug/L	99
70) 2-nitropropane	11.720	41	18791	37.96	ug/L	99
71) epichlorohydrin	11.871	57	44348	179.90	ug/L	98
72) cis-1,3-dichloropropene	12.039	75	159012	42.05	ug/L	95
73) 4-methyl-2-pentanone	12.143	58	180524	198.09	ug/L	97
74) isoamyl alcohol	12.138	70	76624	972.81	ug/L #	83
77) toluene	12.478	92	324632	57.59	ug/L	100
78) ethyl methacrylate	12.661	69	130683	46.72	ug/L	96
79) trans-1,3-dichloropropene	12.651	75	136133	44.68	ug/L	98
80) 1,1,2-trichloroethane	12.891	83	71502	47.07	ug/L	97
81) tetrachloroethene	13.106	164	84751	52.13	ug/L	98
82) 2-hexanone	13.074	58	141030	190.68	ug/L	96
83) 1,3-dichloropropane	13.095	76	148460	47.37	ug/L	97
84) butyl acetate	13.184	56	72696	49.70	ug/L	97
85) dibromochloromethane	13.378	129	96974	52.32	ug/L	98
86) 1,2-dibromoethane	13.550	107	93769	48.56	ug/L	99
87) n-butyl ether	14.089	57	582819	48.88	ug/L	99
88) chlorobenzene	14.110	112	293794	49.27	ug/L	97
89) 1,1,1,2-tetrachloroethane	14.178	131	142317	57.83	ug/L	98
90) ethylbenzene	14.188	91	567621	51.17	ug/L	99
91) m,p-xylene	14.324	106	433974	102.77	ug/L	99
92) o-xylene	14.774	91	531182	53.13	ug/L	97
93) styrene	14.784	104	353264	50.69	ug/L	96
94) butyl acrylate	14.575	55	231935	42.80	ug/L	98
95) n-amyl acetate	14.811	70	103632	51.07	ug/L	98
96) isopropylbenzene	15.177	105	681731	54.15	ug/L	98
97) bromoform	15.025	173	66511	56.59	ug/L	99
98) cis-1,4-dichloro-2-butene	15.177	88	33014	44.68	ug/L	98
101) 1,1,2,2-tetrachloroethane	15.454	83	131428	42.40	ug/L	99
102) trans-1,4-dichloro-2-b...	15.491	53	28312	41.75	ug/L	84
103) 1,2,3-trichloropropane	15.553	110	36773	45.68	ug/L	96
104) bromobenzene	15.600	156	140782	48.67	ug/L	99
105) n-propylbenzene	15.647	91	716381	45.22	ug/L	98
106) 2-chlorotoluene	15.794	126	148404	48.28	ug/L	95
107) 4-chlorotoluene	15.914	91	413507	43.83	ug/L	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266681.d  
 Acq On : 3 Oct 2019 1:51 pm  
 Operator : thienn  
 Sample : jc95555-2MSD Inst : MSD  
 Misc : ms37920,vd10747,4.3,,100,10,1  
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:58:39 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.825	105	605152	48.55	ug/L	100
109) tert-butylbenzene	16.212	119	499444	50.79	ug/L	97
110) 1,2,4-trimethylbenzene	16.265	105	631424	49.72	ug/L	99
111) sec-butylbenzene	16.458	105	758154	47.55	ug/L	99
112) p-isopropyltoluene	16.610	119	635758	47.46	ug/L	98
113) 1,3-dichlorobenzene	16.641	146	303852	47.80	ug/L	99
114) 1,4-dichlorobenzene	16.746	146	308621	47.72	ug/L	99
115) 1,2-dichlorobenzene	17.159	146	326985	49.43	ug/L	99
116) benzyl chloride	16.835	91	141508	22.89	ug/L	98
117) n-butylbenzene	17.065	92	325818	45.46	ug/L	99
118) 2-ethylhexyl acrylate	18.963	70	45496	9.28	ug/L	98
119) hexachloroethane	17.520	201	107779	55.65	ug/L	98
120) 1,2-dibromo-3-chloropr...	17.996	75	32046	45.84	ug/L	92
121) 1,3,5-trichlorobenzene	18.242	180	288738	47.62	ug/L	99
122) 1,2,4-trichlorobenzene	18.963	180	249706	46.96	ug/L	98
123) hexachlorobutadiene	19.115	225	124610	53.00	ug/L	99
124) naphthalene	19.298	128	1249272	107.98	ug/L	100
125) 1,2,3-trichlorobenzene	19.570	180	198382	45.04	ug/L	99
126) 2-methylnaphthalene	20.715	142	192779	42.12	ug/L	98

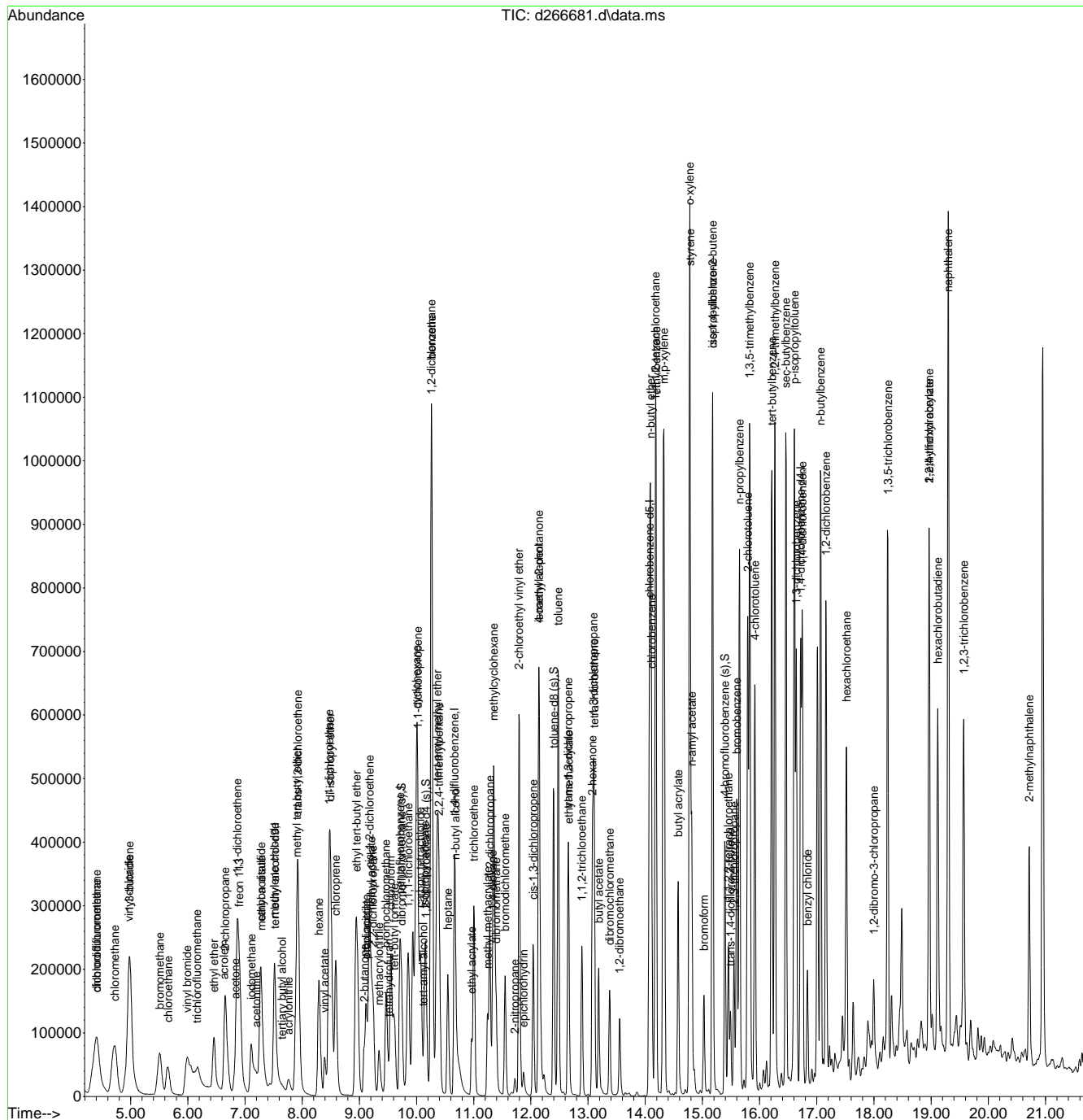
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\
Data File : d266681.d
Acq On : 3 Oct 2019 1:51 pm
Operator : thienn
Sample : jc95555-2MSD Inst : MSD
Misc : ms37920,vd10747,4.3,,100,10,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M
Quant Results File: MD10725.RES
Quant Time: Oct 06 23:58:39 2019
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um
QLast Update : Mon Sep 09 11:00:30 2019
Response via : Initial Calibration



7.4.2
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167577.d  
 Acq On : 4 Oct 2019 12:27 pm  
 Operator : PrashanS  
 Sample : jc95641-12ms Inst : GCMS1C  
 Misc : MS38095,V1C7331,6.1,,,,,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:10:33 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.290	65	42958	500.00	ug/L	-0.01
5) pentafluorobenzene	9.529	168	171981	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	268911	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	193671	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.904	152	94815	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.592	113	79775	49.22	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	98.44%
53) 1,2-dichloroethane-d4 (s)	10.015	65	75097	47.03	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	94.06%
75) toluene-d8 (s)	12.081	98	270599	51.20	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.40%
98) 4-bromofluorobenzene (s)	14.743	95	89118	47.19	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	94.38%
Target Compounds						
2) tertiary butyl alcohol	7.405	59	30385	252.30	ug/L	77
3) ethanol	6.040	45	68493	6873.15	ug/L	96
4) 1,4-dioxane	11.176	88	15897	1422.79	ug/L	92
6) chlorodifluoromethane	3.844	51	104514	51.19	ug/L	100
7) dichlorodifluoromethane	3.812	85	120849	45.21	ug/L	100
8) chloromethane	4.225	50	109975	55.39	ug/L	98
9) vinyl chloride	4.455	62	111564	54.28	ug/L	100
10) 1,3-butadiene	4.523	54	68576	48.68	ug/L	96
11) bromomethane	5.130	94	62603	66.77	ug/L	99
12) chloroethane	5.313	64	51769	49.70	ug/L	99
13) trichlorofluoromethane	5.742	101	119723	44.57	ug/L	97
14) vinyl bromide	5.658	106	72723	51.87	ug/L	96
15) ethyl ether	6.187	74	34374	48.45	ug/L	91
16) acrolein	6.469	56	8880	43.78	ug/L	100
17) freon 113	6.542	151	58398	49.02	ug/L	99
18) 1,1-dichloroethene	6.610	96	68587	46.22	ug/L	97
19) acetone	6.684	43	53148	144.48	ug/L	96
20) acetonitrile	7.133	41	65706	443.85	ug/L	99
21) iodomethane	6.893	142	63187	48.55	ug/L	99
22) carbon disulfide	7.013	76	202788	46.56	ug/L	99
23) methylene chloride	7.348	84	75173	48.78	ug/L	94
24) methyl acetate	7.139	43	37757	45.50	ug/L	99
25) methyl tert butyl ether	7.635	73	172095	53.81	ug/L	99
26) trans-1,2-dichloroethene	7.709	96	73747	45.70	ug/L	97
27) di-isopropyl ether	8.232	45	228757	51.41	ug/L	99
28) 2-butanone	8.990	72	21830	159.39	ug/L	93
29) 1,1-dichloroethane	8.284	63	129326	49.96	ug/L	99
30) chloroprene	8.383	53	106755	50.25	ug/L	98
31) acrylonitrile	7.693	53	16946	45.05	ug/L	98
32) hexane	7.991	57	114285	46.94	ug/L	99
33) vinyl acetate	8.268	86	10289	45.60	ug/L #	69
34) ethyl tert-butyl ether	8.697	59	198268	60.44	ug/L	99
35) ethyl acetate	9.001	45	7839	47.57	ug/L #	82
36) 2,2-dichloropropane	9.011	77	104050	53.93	ug/L	96
37) cis-1,2-dichloroethene	9.021	96	79526	46.13	ug/L	94
38) methyl acrylate	9.084	85	7414	42.23	ug/L #	89
39) propionitrile	9.110	54	71187	436.13	ug/L	95
40) bromochloromethane	9.341	128	34948	47.56	ug/L	93
41) tetrahydrofuran	9.372	42	16379	46.86	ug/L	92

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167577.d  
 Acq On : 4 Oct 2019 12:27 pm  
 Operator : PrashanS  
 Sample : jc95641-12ms Inst : GCMS1C  
 Misc : MS38095,V1C7331,6.1,,,,,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:10:33 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) chloroform	9.393	85	84412	46.39	ug/L	99
43) t-butyl formate	9.403	59	49534	90.38	ug/L	96
45) methacrylonitrile	9.283	67	21018	43.79	ug/L	96
46) 1,1,1-trichloroethane	9.628	97	116779	48.12	ug/L	98
47) cyclohexane	9.686	84	103921	46.32	ug/L	93
48) 1,1-dichloropropene	9.811	75	99792	48.79	ug/L	99
49) iso-butyl alcohol	9.827	43	22160	403.79	ug/L	93
50) carbon tetrachloride	9.827	117	104841	49.71	ug/L	99
51) tert amyl alcohol	9.942	55	10167	212.01	ug/L	87
54) n-butyl alcohol	10.580	56	79517	2098.56	ug/L	96
55) 2,2,4-trimethylpentane	10.036	57	205502	38.08	ug/L	98
56) benzene	10.078	78	282255	47.63	ug/L	99
57) tert-amyl methyl ether	10.083	87	40452	56.55	ug/L	98
58) heptane	10.219	71	55466	39.20	ug/L	96
59) isopropyl acetate	9.989	87	11241	43.75	ug/L #	86
60) 1,2-dichloroethane	10.104	62	82944	44.13	ug/L	98
61) trichloroethene	10.789	130	79740	49.39	ug/L	98
62) ethyl acrylate	10.789	55	65384	43.54	ug/L	98
64) 2-chloroethyl vinyl ether	11.584	63	153636	293.05	ug/L	99
65) methyl methacrylate	11.056	100	12345	40.25	ug/L #	69
66) 1,2-dichloropropane	11.061	63	72103	49.35	ug/L	99
67) dibromomethane	11.229	93	39028	44.40	ug/L	97
68) methylcyclohexane	10.988	83	122743	45.06	ug/L	96
69) bromodichloromethane	11.354	83	97727	47.20	ug/L	99
70) epichlorohydrin	11.720	57	23257	203.68	ug/L	97
71) cis-1,3-dichloropropene	11.804	75	109968	47.43	ug/L	98
72) 4-methyl-2-pentanone	11.888	58	70349	160.22	ug/L	95
73) 3-methyl-1-butanol	11.914	55	45527	793.63	ug/L	98
76) toluene	12.154	92	155713	47.40	ug/L	99
77) trans-1,3-dichloropropene	12.364	75	90206	52.24	ug/L	99
78) ethyl methacrylate	12.337	69	59966	44.20	ug/L	96
79) 1,1,2-trichloroethane	12.578	83	43826	45.96	ug/L	97
80) tetrachloroethene	12.730	164	57369	49.29	ug/L	99
81) 1,3-dichloropropane	12.761	76	78833	46.22	ug/L	96
82) 2-hexanone	12.735	58	62196	160.17	ug/L	92
83) butyl acetate	12.803	56	29324	43.46	ug/L	95
84) dibromochloromethane	13.023	129	66420	50.84	ug/L	99
85) 1,2-dibromoethane	13.174	107	57530	44.80	ug/L	100
86) n-butyl ether	13.509	57	239648	47.05	ug/L	98
87) chlorobenzene	13.624	112	157930	45.63	ug/L	97
88) 1,1,1,2-tetrachloroethane	13.682	131	60221	49.91	ug/L	99
89) ethylbenzene	13.666	91	274172	45.22	ug/L	99
90) m,p-xylene	13.771	106	206685	90.41	ug/L	97
91) o-xylene	14.189	106	100181	46.21	ug/L	98
92) styrene	14.205	104	164415	44.98	ug/L	94
93) bromoform	14.487	173	38586	48.74	ug/L	98
94) butyl acrylate	14.011	55	90524	41.93	ug/L	98
95) isopropylbenzene	14.524	105	266227	45.74	ug/L	99
96) cis-1,4-dichloro-2-butene	14.618	88	20922	46.51	ug/L	90
99) bromobenzene	14.937	156	67428	46.37	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.853	83	53906	40.31	ug/L	99
101) trans-1,4-dichloro-2-b...	14.895	53	14361	50.81	ug/L	93
102) 1,2,3-trichloropropane	14.926	110	13007	41.11	ug/L	95
103) n-propylbenzene	14.932	91	308971	43.80	ug/L	99
104) 2-chlorotoluene	15.089	126	62134	45.24	ug/L	95
105) 4-chlorotoluene	15.188	91	182613	43.60	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	209839	43.59	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167577.d  
 Acq On : 4 Oct 2019 12:27 pm  
 Operator : PrashanS  
 Sample : jc95641-12ms Inst : GCMS1C  
 Misc : MS38095,Vlc7331,6.1,,,,,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MICS7262.M  
 Quant Results File: MICS7262.RES  
 Quant Time: Oct 07 05:10:33 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

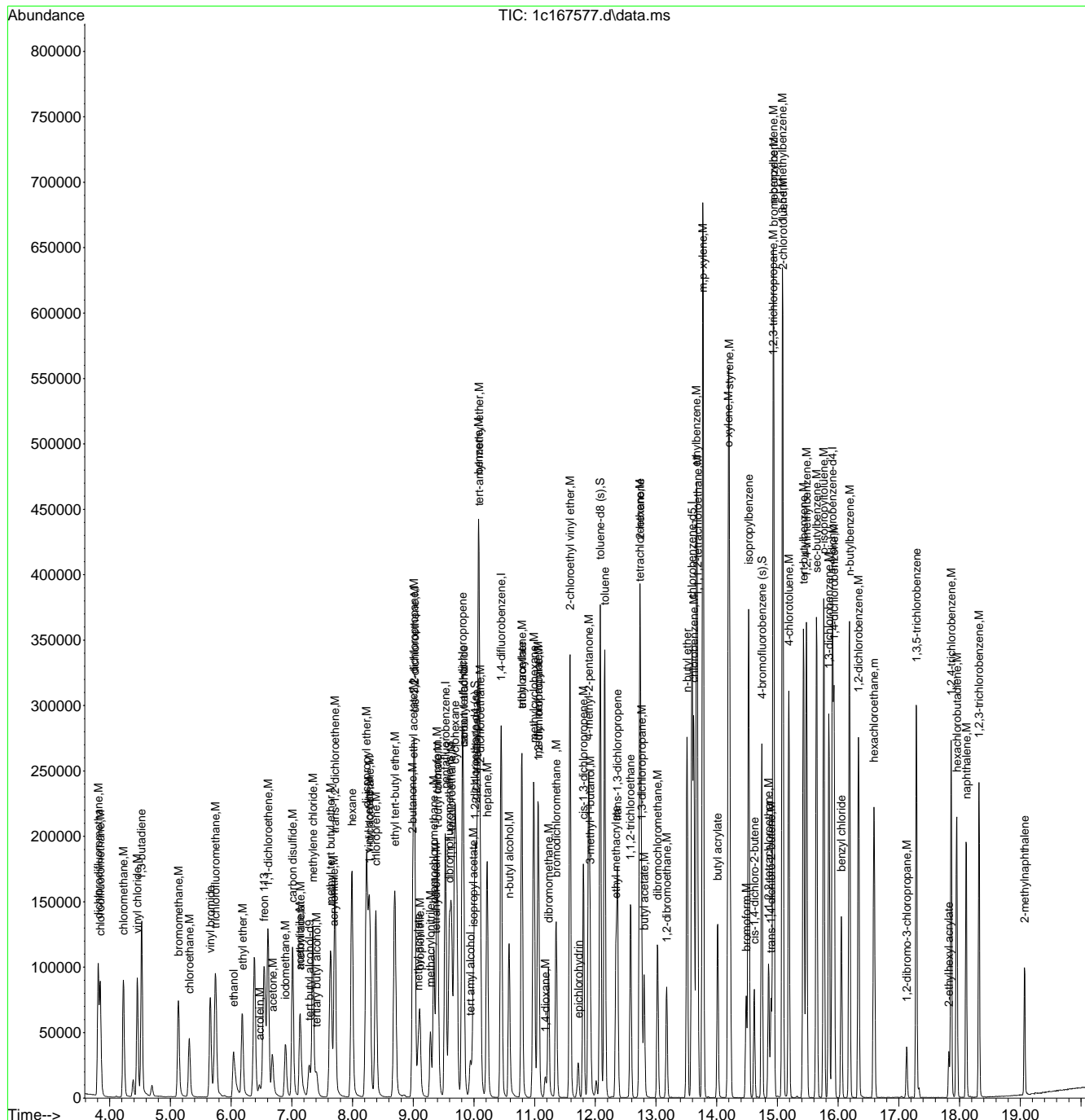
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.429	134	39108	44.20	ug/L	94
108) 1,2,4-trimethylbenzene	15.476	105	211858	43.05	ug/L	99
109) sec-butylbenzene	15.643	105	280164	43.98	ug/L	99
110) 1,3-dichlorobenzene	15.847	146	126808	45.56	ug/L	98
111) p-isopropyltoluene	15.763	119	233611	43.74	ug/L	98
112) 1,4-dichlorobenzene	15.931	146	124616	44.17	ug/L	97
113) benzyl chloride	16.051	91	104406	52.56	ug/L	99
114) 1,2-dichlorobenzene	16.333	146	119966	44.69	ug/L	99
115) n-butylbenzene	16.187	92	119845	42.70	ug/L	100
116) 1,2-dibromo-3-chloropr...	17.128	75	9824	40.56	ug/L	100
117) 1,3,5-trichlorobenzene	17.291	180	97782	47.84	ug/L	99
118) 2-ethylhexyl acrylate	17.824	70	8456	7.15	ug/L	93
119) 1,2,4-trichlorobenzene	17.861	180	79817	47.20	ug/L	99
120) hexachlorobutadiene	17.955	225	49490	47.07	ug/L	98
121) naphthalene	18.112	128	141564	38.59	ug/L	100
122) 1,2,3-trichlorobenzene	18.321	180	71545	44.73	ug/L	98
123) hexachloroethane	16.590	201	46543	54.26	ug/L	98
124) 2-methylnaphthalene	19.069	142	42589	19.18	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\
Data File : 1c167577.d
Acq On : 4 Oct 2019 12:27 pm
Operator : Prashans
Sample : jc95641-12ms Inst : GCMS1C
Misc : MS38095,V1C7331,6.1,,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M
Quant Results File: M1CS7262.RES
Quant Time: Oct 07 05:10:33 2019
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Jul 16 09:07:34 2019
Response via : Initial Calibration



7.4.3 7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253712.d  
 Acq On : 4 Oct 2019 1:48 pm  
 Operator : krizhkac  
 Sample : jc95745-5ms Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:03:43 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) Tert Butyl Alcohol-d9	8.145	65	548908	500.00	ug/L	0.00
5) pentafluorobenzene	10.529	168	307344	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.491	114	467556	50.00	ug/L	-0.01
74) chlorobenzene-d5	14.884	117	410153	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.503	152	225724	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.565	113	155413	45.69	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	91.38%
53) 1,2-dichloroethane-d4 (s)	10.999	65	158137	45.77	ug/L	-0.01
Spiked Amount	50.000	Range	81 - 124	Recovery	=	91.54%
75) toluene-d8 (s)	13.216	98	521372	45.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	90.00%
99) 4-bromofluorobenzene (s)	16.191	95	189164	43.72	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	87.44%
Target Compounds						
						Qvalue
3) tertiary butyl alcohol	8.270	59	284902	244.39	ug/L	90
4) 1,4-dioxane	12.165	88	95787	1494.75	ug/L	98
6) chlorodifluoromethane	4.574	51	421925	51.78	ug/L	100
7) dichlorodifluoromethane	4.543	85	423149	52.98	ug/L	98
8) chloromethane	4.977	50	450403	46.52	ug/L	99
9) vinyl chloride	5.238	62	490349	63.17	ug/L	98
10) 1,3-butadiene	5.269	54	316817	56.47	ug/L	98
11) bromomethane	5.912	94	287597	52.96	ug/L	97
12) chloroethane	6.090	64	230824	48.83	ug/L	99
13) vinyl bromide	6.477	106	264723	54.03	ug/L	99
14) trichlorofluoromethane	6.613	101	372470	46.30	ug/L	98
15) ethyl ether	7.005	74	122261	58.48	ug/L	96
16) acrolein	7.246	56	46489	41.51	ug/L	98
17) freon 113	7.497	151	205555	57.93	ug/L	94
18) 1,1-dichloroethene	7.460	96	189870	38.82	ug/L	93
19) acetone	7.455	58	106182	161.91	ug/L	89
20) acetonitrile	7.899	41	464030	485.55	ug/L	97
21) iodomethane	7.732	142	285987	40.43	ug/L	95
22) carbon disulfide	7.883	76	636298	40.41	ug/L	98
23) methylene chloride	8.208	84	200307	34.82	ug/L	95
24) methyl acetate	7.946	43	179002	40.59	ug/L	99
25) methyl tert butyl ether	8.589	73	583122	42.69	ug/L	100
26) trans-1,2-dichloroethene	8.621	96	177319	45.99	ug/L	88
27) hexane	9.002	57	269549	45.81	ug/L	99
28) di-isopropyl ether	9.217	45	612775	41.18	ug/L	96
29) ethyl tert-butyl ether	9.698	59	566463	41.07	ug/L	98
30) 2-butanone	9.896	72	110236	159.87	ug/L	96
31) 1,1-dichloroethane	9.232	63	300710	42.55	ug/L	96
32) chloroprene	9.337	53	241416	41.95	ug/L	97
33) acrylonitrile	8.511	53	97120	41.92	ug/L	94
34) vinyl acetate	9.154	86	35678	41.90	ug/L	98
35) ethyl acetate	9.912	45	33679	39.08	ug/L #	91
36) 2,2-dichloropropane	10.016	77	312444	47.30	ug/L	99
37) cis-1,2-dichloroethene	9.975	96	207158	47.71	ug/L	96
38) methyl acrylate	10.001	85	29601	40.39	ug/L #	77
39) propionitrile	9.975	54	391749	392.07	ug/L	86
40) bromochloromethane	10.283	128	88192	44.73	ug/L	95
41) tetrahydrofuran	10.299	42	78586	38.22	ug/L	100
42) chloroform	10.367	83	269423	39.73	ug/L	97



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253712.d  
 Acq On : 4 Oct 2019 1:48 pm  
 Operator : krizhkac  
 Sample : jc95745-5ms Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:03:43 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.419	59	107392	31.32	ug/L	94
45) methacrylonitrile	10.184	67	79936	38.32	ug/L	95
46) cyclohexane	10.769	84	387491	50.41	ug/L	86
47) 1,1,1-trichloroethane	10.649	97	292150	46.05	ug/L	99
48) iso-butyl alcohol	10.764	43	315803	427.50	ug/L	96
49) 1,1-dichloropropene	10.816	75	208169	41.42	ug/L	96
50) carbon tetrachloride	10.853	117	248269	46.25	ug/L	99
51) tert-amyl alcohol	10.942	73	136370	224.38	ug/L	98
54) benzene	11.073	78	631446	45.71	ug/L	98
55) iso-octane	11.177	57	615225	44.65	ug/L	99
56) tert-amyl methyl ether	11.156	73	562635	45.96	ug/L	98
57) heptane	11.334	71	127477	48.86	ug/L	95
58) isopropyl acetate	10.968	87	45081	48.49	ug/L #	88
59) 1,2-dichloroethane	11.093	62	175360	39.85	ug/L	97
60) n-butyl alcohol	11.533	41	399737	2298.37	ug/L	100
61) ethyl acrylate	11.789	55	215804	45.47	ug/L	98
62) trichloroethene	11.820	95	143453	44.49	ug/L	91
63) 2-nitropropane	12.599	41	39875	32.47	ug/L	85
64) methylcyclohexane	12.144	83	371742	51.23	ug/L	97
66) methyl methacrylate	12.071	100	44923	47.68	ug/L #	86
67) 1,2-dichloropropane	12.118	63	156802	43.90	ug/L	100
68) dibromomethane	12.233	93	88717	43.59	ug/L	93
69) bromodichloromethane	12.395	83	182191	42.37	ug/L	98
70) epichlorohydrin	12.730	57	104156	205.41	ug/L	99
71) cis-1,3-dichloropropene	12.881	75	220735	44.10	ug/L	95
72) 4-methyl-2-pentanone	12.986	58	386874	195.13	ug/L	99
73) 3-methyl-1-butanol	12.981	55	407605	1015.51	ug/L	97
76) toluene	13.300	92	345584	42.19	ug/L	97
77) trans-1,3-dichloropropene	13.488	75	189704	40.09	ug/L	99
78) ethyl methacrylate	13.477	69	199151	42.88	ug/L	95
79) 1,1,2-trichloroethane	13.734	83	104672	40.80	ug/L	95
80) 2-hexanone	13.906	58	346548	168.29	ug/L	96
81) tetrachloroethene	13.906	166	146391	47.94	ug/L	96
82) 1,3-dichloropropane	13.932	76	201766	40.89	ug/L	100
83) butyl acetate	13.990	56	130446	42.37	ug/L	96
84) dibromochloromethane	14.209	129	132522	43.68	ug/L	99
85) 1,2-dibromoethane	14.382	107	141511	43.92	ug/L	99
86) n-butyl ether	14.858	57	644652	42.52	ug/L	99
87) chlorobenzene	14.920	112	493347	61.56	ug/L	97
88) 1,1,1,2-tetrachloroethane	14.988	131	171145	47.53	ug/L	96
89) ethylbenzene	14.983	91	644407	44.57	ug/L	97
90) m,p-xylene	15.119	106	512838	92.53	ug/L	96
91) o-xylene	15.574	106	279136	47.07	ug/L	91
92) styrene	15.584	104	409474	46.43	ug/L	99
93) butyl acrylate	15.365	55	321656	40.49	ug/L	98
94) n-amyl acetate	15.600	70	137683	42.18	ug/L	91
95) bromoform	15.846	173	101577	49.27	ug/L	97
96) isopropylbenzene	15.961	105	752528	45.51	ug/L	98
97) cis-1,4-dichloro-2-butene	15.997	75	80422	44.18	ug/L	97
100) bromobenzene	16.405	156	164553	45.98	ug/L #	84
101) 1,1,2,2-tetrachloroethane	16.269	83	232457	41.89	ug/L	99
102) trans-1,4-dichloro-2-b...	16.306	53	50764	41.68	ug/L	94
103) 1,2,3-trichloropropane	16.374	110	58495	42.68	ug/L	93
104) n-propylbenzene	16.431	91	811021	42.81	ug/L	97
105) 2-chlorotoluene	16.583	126	171631	45.91	ug/L	91
106) 4-chlorotoluene	16.708	91	435854	40.93	ug/L	98
107) 1,3,5-trimethylbenzene	16.604	105	629446	43.84	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253712.d  
 Acq On : 4 Oct 2019 1:48 pm  
 Operator : krizhkac  
 Sample : jc95745-5ms Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:03:43 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.991	119	553747	42.95	ug/L	95
109) 1,2,4-trimethylbenzene	17.043	105	616154	43.02	ug/L	96
110) sec-butylbenzene	17.236	105	867078	44.72	ug/L	97
111) 1,3-dichlorobenzene	17.430	146	1189428	171.27	ug/L	97
112) p-isopropyltoluene	17.378	119	719007	44.94	ug/L	97
113) 1,4-dichlorobenzene	17.534	146	954597	134.12	ug/L	97
114) 1,2-dichlorobenzene	17.953	146	356443	47.95	ug/L	97
115) n-butylbenzene	17.832	92	353701	42.39	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.800	157	73356	45.44	ug/L	97
117) 1,3,5-trichlorobenzene	19.019	180	304110	45.56	ug/L	98
118) 2-ethylhexyl acrylate	19.741	70	40829	7.94	ug/L #	57
119) 1,2,4-trichlorobenzene	19.767	180	4414573	693.26	ug/L	96
120) hexachlorobutadiene	19.892	225	122061	46.27	ug/L	98
121) naphthalene	20.096	128	952524	44.28	ug/L	99
122) 1,2,3-trichlorobenzene	20.342	180	320523	46.22	ug/L	98
123) hexachloroethane	18.287	201	125612	49.42	ug/L	97
124) 2-methylnaphthalene	21.408	142	294426	22.65	ug/L	98

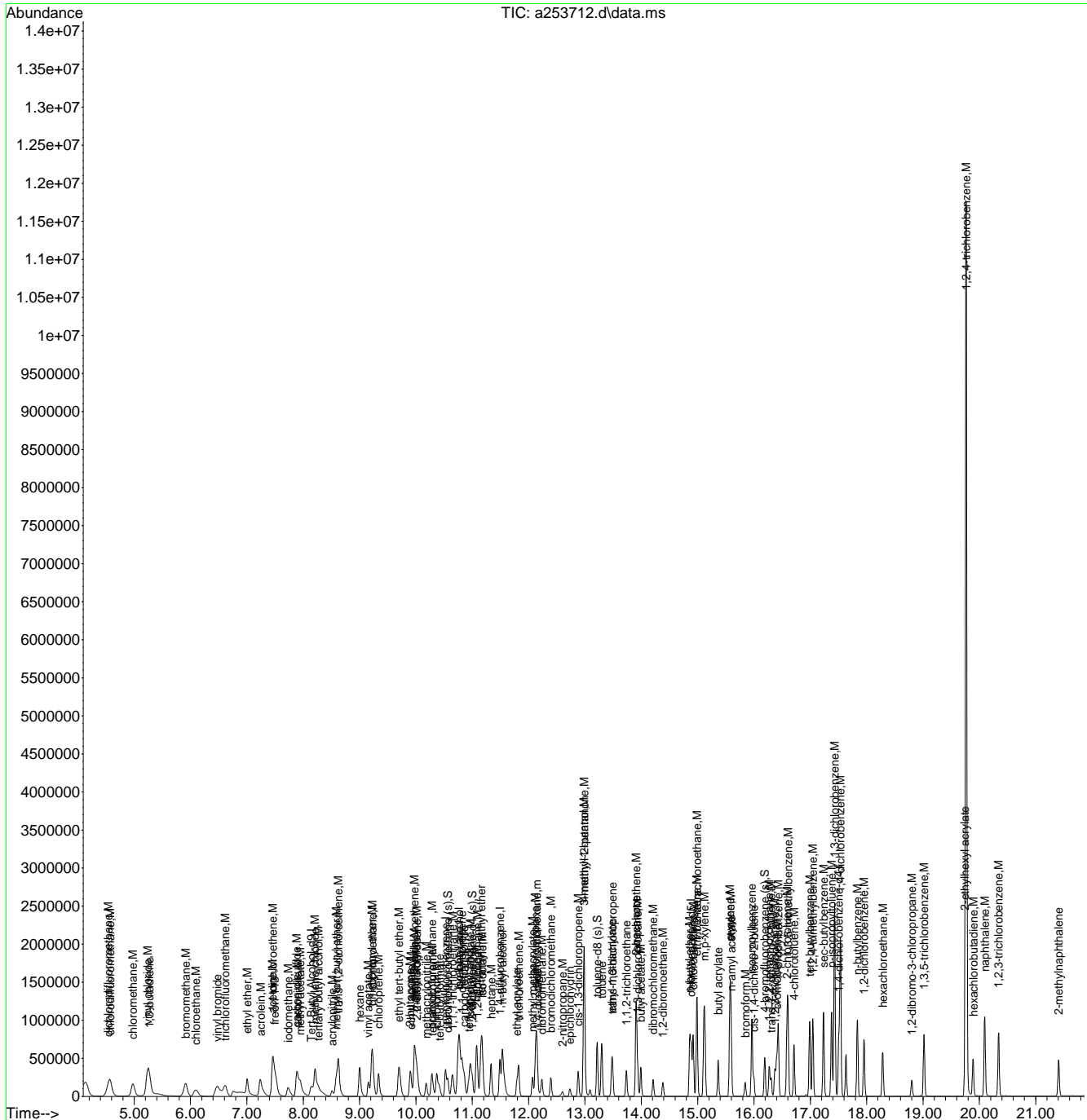
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253712.d  
 Acq On : 4 Oct 2019 1:48 pm  
 Operator : krizhkac  
 Sample : jc95745-5ms Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:03:43 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration



7.4.4  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253713.d  
 Acq On : 4 Oct 2019 2:17 pm  
 Operator : krizhkac  
 Sample : jc95745-5msd Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:04:41 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.156	65	529675	500.00	ug/L	0.00
5) pentafluorobenzene	10.524	168	306220	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.491	114	457479	50.00	ug/L	0.00
74) chlorobenzene-d5	14.884	117	398100	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.504	152	232992	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.566	113	156971	46.32	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	92.64%
53) 1,2-dichloroethane-d4 (s)	11.000	65	153866	45.51	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	91.02%
75) toluene-d8 (s)	13.217	98	509286	45.29	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	90.58%
99) 4-bromofluorobenzene (s)	16.191	95	189177	42.35	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	84.70%
Target Compounds						
3) tertiary butyl alcohol	8.287	59	286526	254.70	ug/L	87
4) 1,4-dioxane	12.166	88	96501	1560.57	ug/L	97
6) chlorodifluoromethane	4.585	51	419551	51.68	ug/L	98
7) dichlorodifluoromethane	4.559	85	426626	53.61	ug/L	98
8) chloromethane	4.988	50	467385	48.45	ug/L	97
9) vinyl chloride	5.254	62	497725	64.35	ug/L	98
10) 1,3-butadiene	5.281	54	326974	58.50	ug/L	98
11) bromomethane	5.918	94	298589	55.19	ug/L	100
12) chloroethane	6.107	64	231369	49.13	ug/L	99
13) vinyl bromide	6.483	106	269843	55.28	ug/L	99
14) trichlorofluoromethane	6.619	101	380618	47.49	ug/L	95
15) ethyl ether	7.006	74	128900	61.88	ug/L	94
16) acrolein	7.241	56	48038	43.05	ug/L	99
17) freon 113	7.492	151	211361	59.78	ug/L	93
18) 1,1-dichloroethene	7.461	96	205120	42.09	ug/L	93
19) acetone	7.455	58	106672	163.25	ug/L	92
20) acetonitrile	7.895	41	456128	479.03	ug/L	97
21) iodomethane	7.738	142	305893	43.41	ug/L	97
22) carbon disulfide	7.895	76	646526	41.21	ug/L	99
23) methylene chloride	8.213	84	211804	36.95	ug/L	97
24) methyl acetate	7.952	43	178578	40.64	ug/L	99
25) methyl tert butyl ether	8.600	73	608489	44.71	ug/L	100
26) trans-1,2-dichloroethene	8.626	96	184624	48.06	ug/L	92
27) hexane	9.003	57	277947	47.41	ug/L	99
28) di-isopropyl ether	9.217	45	638222	43.05	ug/L	98
29) ethyl tert-butyl ether	9.698	59	593597	43.20	ug/L	98
30) 2-butanone	9.897	72	109729	159.72	ug/L	100
31) 1,1-dichloroethane	9.228	63	316513	44.95	ug/L	97
32) chloroprene	9.337	53	251968	43.94	ug/L	97
33) acrylonitrile	8.511	53	96726	41.91	ug/L	98
34) vinyl acetate	9.155	86	35461	41.80	ug/L #	91
35) ethyl acetate	9.907	45	31034	36.14	ug/L	97
36) 2,2-dichloropropane	10.017	77	316040	48.02	ug/L	97
37) cis-1,2-dichloroethene	9.970	96	219746	50.80	ug/L	93
38) methyl acrylate	10.001	85	28479	39.01	ug/L #	90
39) propionitrile	9.975	54	388095	389.84	ug/L	84
40) bromochloromethane	10.284	128	93895	47.80	ug/L	88
41) tetrahydrofuran	10.299	42	78030	38.09	ug/L	99
42) chloroform	10.367	83	278232	41.18	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253713.d  
 Acq On : 4 Oct 2019 2:17 pm  
 Operator : krizhkac  
 Sample : jc95745-5msd Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:04:41 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.409	59	92088	26.96	ug/L	96
45) methacrylonitrile	10.179	67	81651	39.28	ug/L	95
46) cyclohexane	10.770	84	404640	52.84	ug/L	83
47) 1,1,1-trichloroethane	10.650	97	301347	47.67	ug/L	97
48) iso-butyl alcohol	10.765	43	315819	429.09	ug/L	94
49) 1,1-dichloropropene	10.817	75	217104	43.36	ug/L	97
50) carbon tetrachloride	10.854	117	258454	48.32	ug/L	99
51) tert-amyl alcohol	10.937	73	137419	226.94	ug/L	96
54) benzene	11.073	78	640998	47.43	ug/L	98
55) iso-octane	11.178	57	649339	48.16	ug/L	98
56) tert-amyl methyl ether	11.152	73	590476	49.30	ug/L	100
57) heptane	11.335	71	129870	50.87	ug/L	97
58) isopropyl acetate	10.969	87	44577	49.00	ug/L #	91
59) 1,2-dichloroethane	11.094	62	179161	41.61	ug/L	98
60) n-butyl alcohol	11.533	41	403028	2368.34	ug/L	100
61) ethyl acrylate	11.789	55	212730	45.80	ug/L	99
62) trichloroethene	11.821	95	144595	45.83	ug/L	87
63) 2-nitropropane	12.600	41	40510	33.71	ug/L	88
64) methylcyclohexane	12.140	83	390270	54.96	ug/L	97
66) methyl methacrylate	12.067	100	44364	48.12	ug/L #	88
67) 1,2-dichloropropane	12.119	63	158006	45.21	ug/L	100
68) dibromomethane	12.234	93	90733	45.56	ug/L	92
69) bromodichloromethane	12.391	83	183518	43.62	ug/L	98
70) epichlorohydrin	12.730	57	99727	201.01	ug/L	100
71) cis-1,3-dichloropropene	12.882	75	220317	44.98	ug/L	95
72) 4-methyl-2-pentanone	12.981	58	378920	195.33	ug/L	99
73) 3-methyl-1-butanol	12.981	55	409343	1042.31	ug/L	97
76) toluene	13.295	92	350800	44.13	ug/L	97
77) trans-1,3-dichloropropene	13.489	75	190611	41.50	ug/L	97
78) ethyl methacrylate	13.473	69	199503	44.26	ug/L	97
79) 1,1,2-trichloroethane	13.734	83	104490	41.97	ug/L	98
80) 2-hexanone	13.907	58	351101	175.66	ug/L	95
81) tetrachloroethene	13.907	166	149552	50.46	ug/L	94
82) 1,3-dichloropropane	13.933	76	203385	42.46	ug/L	99
83) butyl acetate	13.990	56	131178	43.90	ug/L	92
84) dibromochloromethane	14.205	129	132433	44.97	ug/L	97
85) 1,2-dibromoethane	14.383	107	146523	46.86	ug/L	98
86) n-butyl ether	14.858	57	666156	45.27	ug/L	99
87) chlorobenzene	14.921	112	503711	64.75	ug/L	98
88) 1,1,1,2-tetrachloroethane	14.989	131	170576	48.80	ug/L	98
89) ethylbenzene	14.984	91	661770	47.16	ug/L	98
90) m,p-xylene	15.114	106	524010	97.41	ug/L	97
91) o-xylene	15.569	106	284030	49.34	ug/L	92
92) styrene	15.580	104	416649	48.68	ug/L	99
93) butyl acrylate	15.360	55	335285	43.48	ug/L	96
94) n-amyl acetate	15.595	70	145069	45.79	ug/L	97
95) bromoform	15.846	173	104946	52.44	ug/L	96
96) isopropylbenzene	15.961	105	776849	48.40	ug/L	97
97) cis-1,4-dichloro-2-butene	15.998	75	80912	45.79	ug/L	96
100) bromobenzene	16.401	156	168184	45.53	ug/L	94
101) 1,1,2,2-tetrachloroethane	16.270	83	237998	41.56	ug/L	98
102) trans-1,4-dichloro-2-b...	16.306	53	53612	42.64	ug/L	97
103) 1,2,3-trichloropropane	16.369	110	61396	43.40	ug/L	98
104) n-propylbenzene	16.427	91	841083	43.01	ug/L	98
105) 2-chlorotoluene	16.584	126	181233	46.96	ug/L #	86
106) 4-chlorotoluene	16.709	91	455132	41.41	ug/L	96
107) 1,3,5-trimethylbenzene	16.604	105	652019	43.99	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253713.d  
 Acq On : 4 Oct 2019 2:17 pm  
 Operator : krizhkac  
 Sample : jc95745-5msd Inst : MSA  
 Misc : MS37990,VA9835,5,,,,,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 07 03:04:41 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

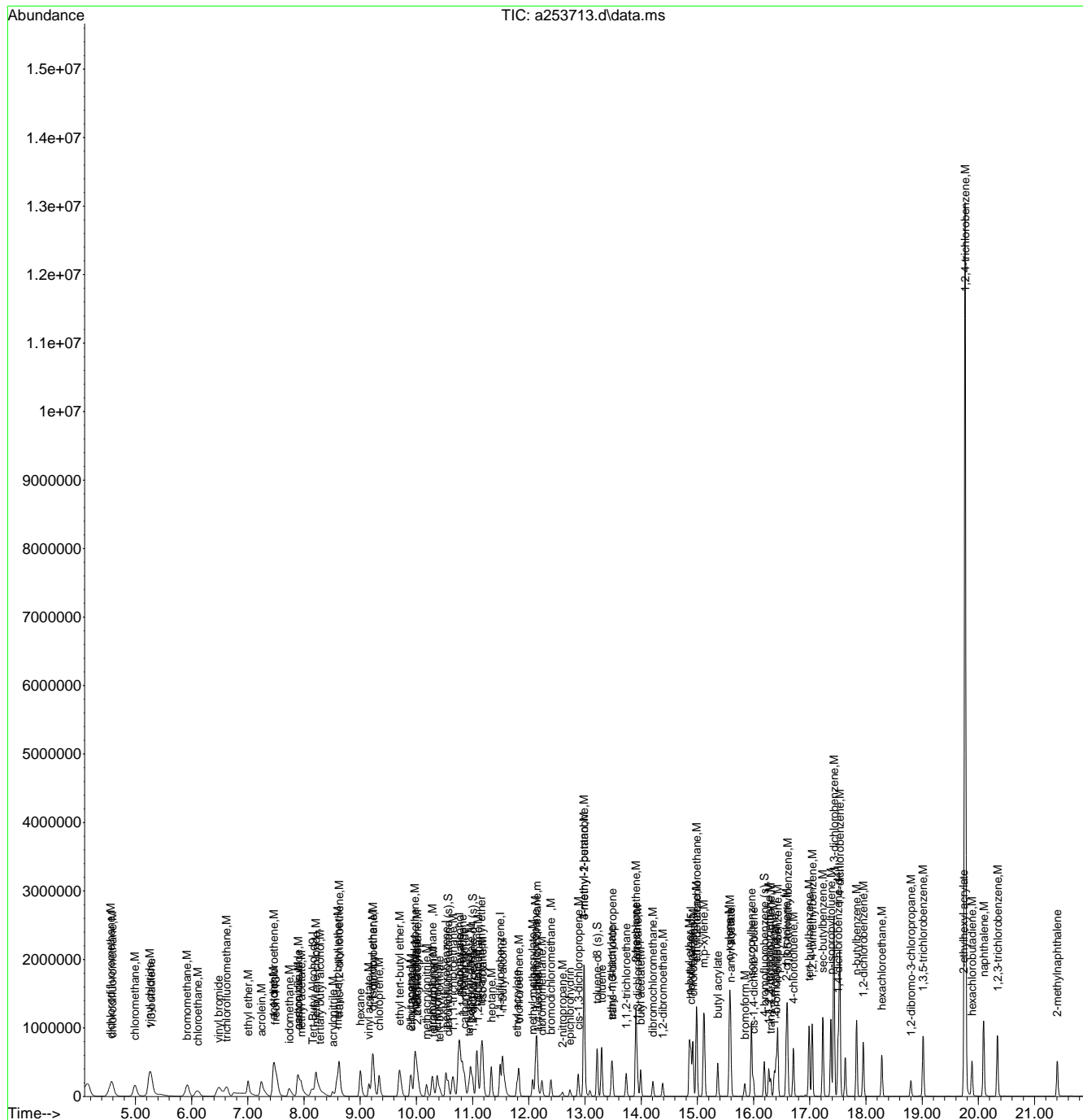
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	16.986	119	568474	42.72	ug/L	96
109) 1,2,4-trimethylbenzene	17.044	105	638448	43.19	ug/L	98
110) sec-butylbenzene	17.232	105	901186	45.03	ug/L	97
111) 1,3-dichlorobenzene	17.430	146	1254026	174.94	ug/L	98
112) p-isopropyltoluene	17.378	119	750164	45.42	ug/L	97
113) 1,4-dichlorobenzene	17.535	146	1003875	136.64	ug/L	97
114) 1,2-dichlorobenzene	17.953	146	376556	49.07	ug/L	98
115) n-butylbenzene	17.833	92	375946	43.65	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.800	157	78696	47.23	ug/L	92
117) 1,3,5-trichlorobenzene	19.015	180	332820	48.30	ug/L	98
118) 2-ethylhexyl acrylate	19.736	70	42815	8.05	ug/L #	79
119) 1,2,4-trichlorobenzene	19.762	180	4740735	721.25	ug/L	96
120) hexachlorobutadiene	19.888	225	128529	47.20	ug/L	98
121) naphthalene	20.097	128	1030785	46.42	ug/L	99
122) 1,2,3-trichlorobenzene	20.342	180	350581	48.98	ug/L	98
123) hexachloroethane	18.283	201	126651	48.27	ug/L	97
124) 2-methylnaphthalene	21.404	142	313443	23.36	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
Data File : a253713.d  
Acq On : 4 Oct 2019 2:17 pm  
Operator : krizhkac  
Sample : jc95745-5msd Inst : MSA  
Misc : MS37990,VA9835,5,,,,,1  
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
Quant Results File: MA9755.RES  
Quant Time: Oct 07 03:04:41 2019  
Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
QLast Update : Tue Aug 20 13:28:09 2019  
Response via : Initial Calibration



7.4.5  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\  
 Data File : 1c167579.d  
 Acq On : 4 Oct 2019 1:21 pm  
 Operator : PrashanS  
 Sample : jc95641-15dup Inst : GCMS1C  
 Misc : MS38095,V1C7331,4.8,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:12:17 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) tert butyl alcohol-d9	7.295	65	58216	500.00	ug/L	0.00
5) pentafluorobenzene	9.529	168	176931	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	269079	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	200151	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.904	152	96153	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	85662	51.37	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	102.74%
53) 1,2-dichloroethane-d4 (s)	10.015	65	85037	53.22	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	106.44%
75) toluene-d8 (s)	12.081	98	279377	51.15	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.30%
98) 4-bromofluorobenzene (s)	14.743	95	90895	47.47	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	94.94%
Target Compounds						
23) methylene chloride	7.348	84	3828	2.41	ug/L	96
32) hexane	7.991	57	2284	0.91	ug/L	97
61) trichloroethene	10.789	130	2520	1.56	ug/L	96
80) tetrachloroethene	12.735	164	47030	39.10	ug/L	97
90) m,p-xylene	13.776	106	668	0.28	ug/L	95
-----						

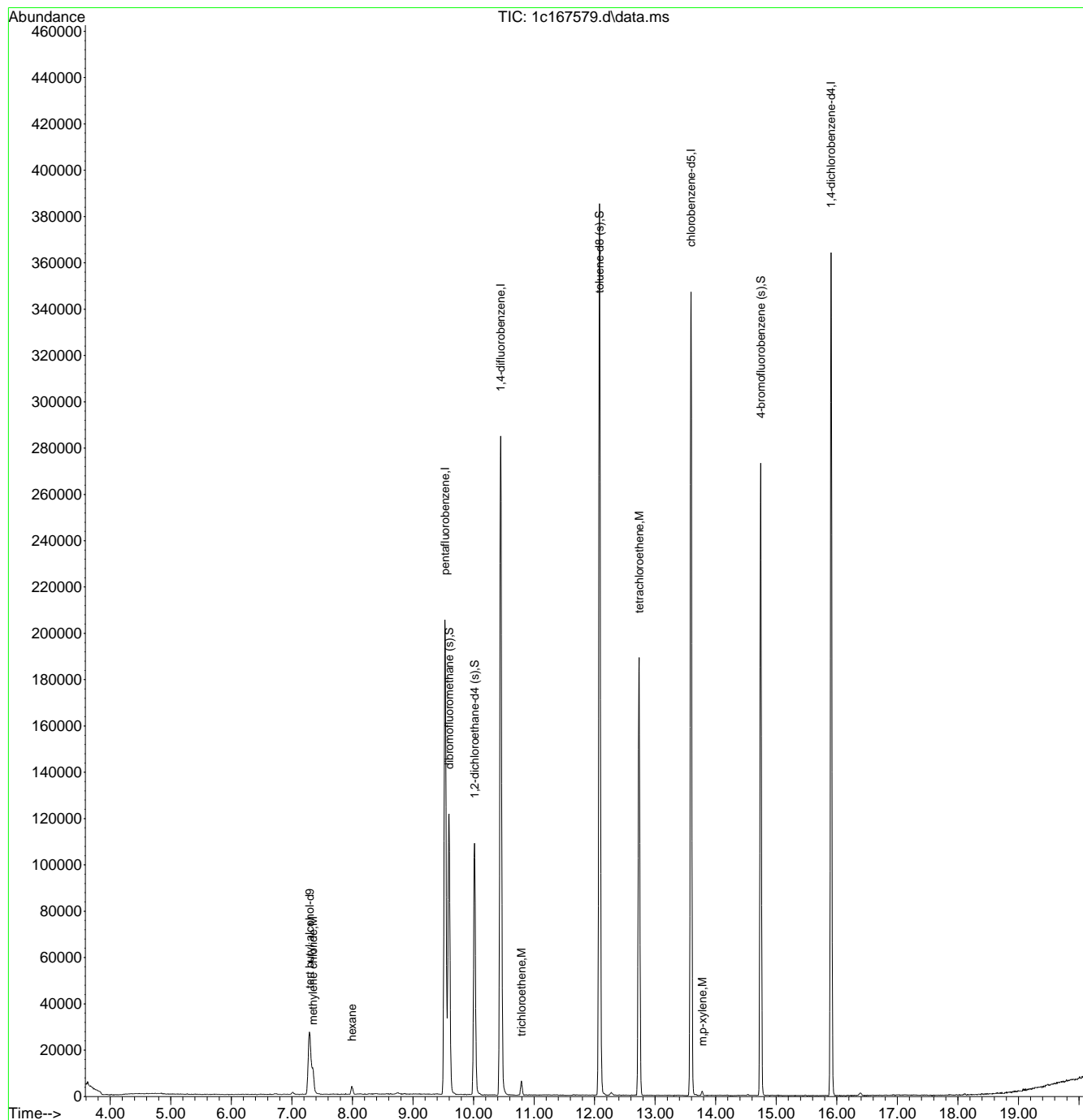
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.5.1  
7

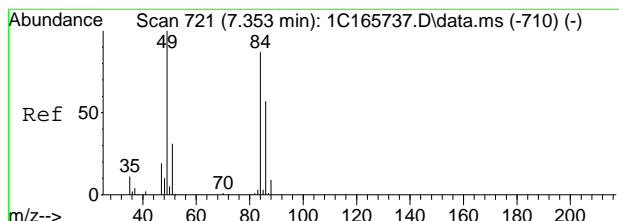
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167579.d  
 Acq On : 4 Oct 2019 1:21 pm  
 Operator : PrashanS  
 Sample : jc95641-15dup Inst : GCMS1C  
 Misc : MS38095,Vlc7331,4.8,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 05:12:17 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

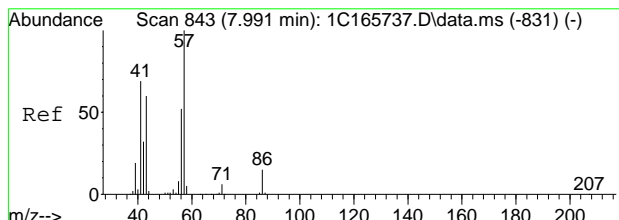
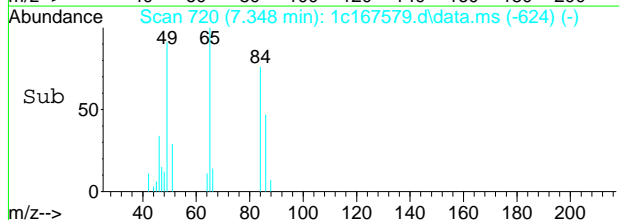
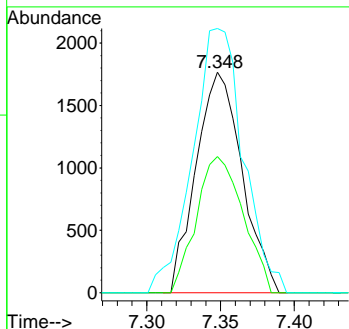
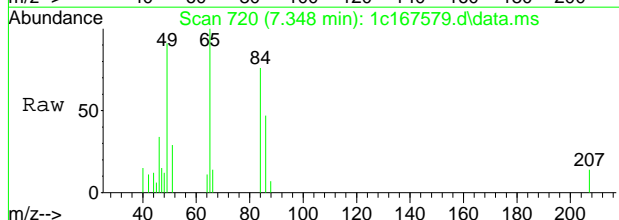


7.5.1  
 7



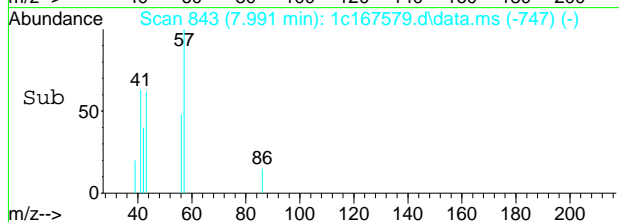
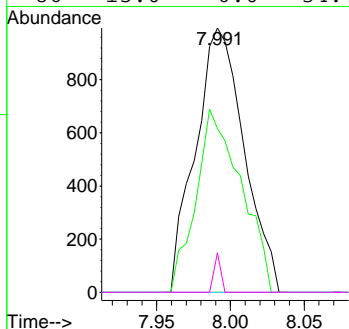
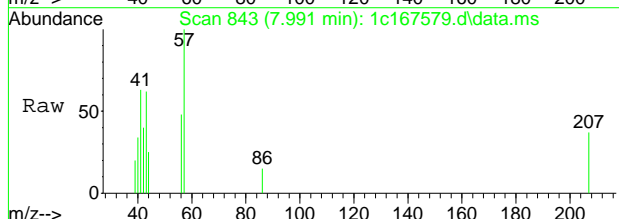
#23  
 methylene chloride  
 Concen: 2.41 ug/L  
 RT: 7.348 min Scan# 720  
 Delta R.T. -0.000 min  
 Lab File: 1c167579.d  
 Acq: 4 Oct 2019 1:21 pm

Tgt Ion	Resp	Lower	Upper
84	3828		
84	100		
86	61.7	35.2	95.2
49	119.9	85.2	145.2

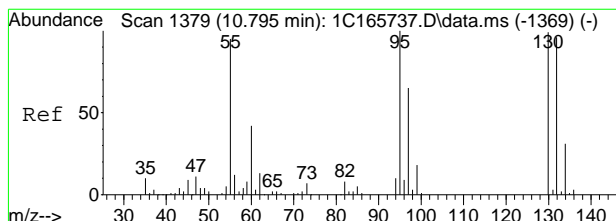


#32  
 hexane  
 Concen: 0.91 ug/L  
 RT: 7.991 min Scan# 843  
 Delta R.T. -0.000 min  
 Lab File: 1c167579.d  
 Acq: 4 Oct 2019 1:21 pm

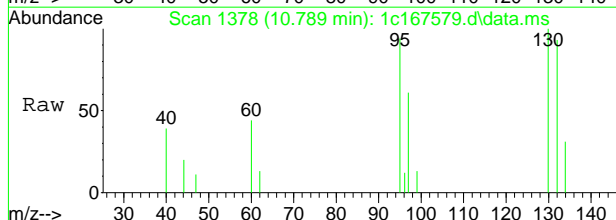
Tgt Ion	Resp	Lower	Upper
57	2284		
57	100		
43	61.9	40.2	80.2
71	0.0	0.0	25.8
86	15.0	0.0	34.7





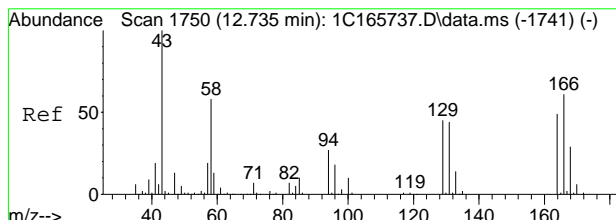
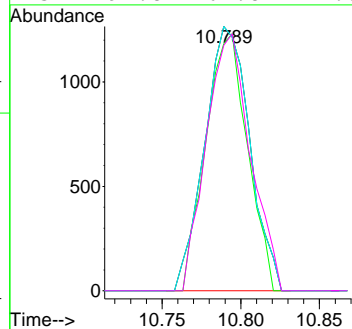
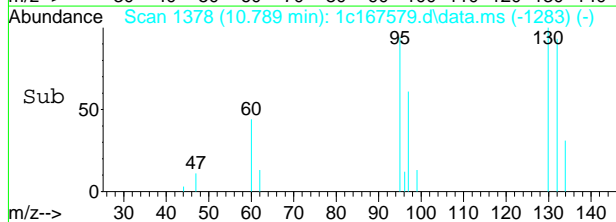


#61  
 trichloroethene  
 Concen: 1.56 ug/L  
 RT: 10.789 min Scan# 1378  
 Delta R.T. -0.005 min  
 Lab File: 1c167579.d  
 Acq: 4 Oct 2019 1:21 pm

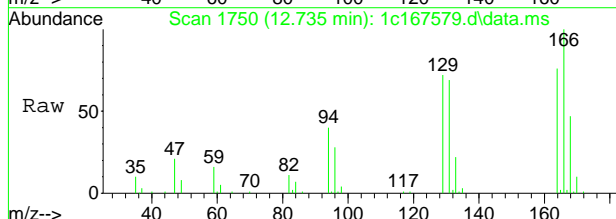


Tgt Ion:130 Resp: 2520

Ion	Ratio	Lower	Upper
130	100		
95	93.5	71.4	131.4
130	100.0	70.0	130.0
132	92.8	67.8	127.8

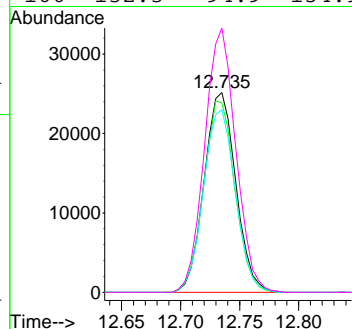
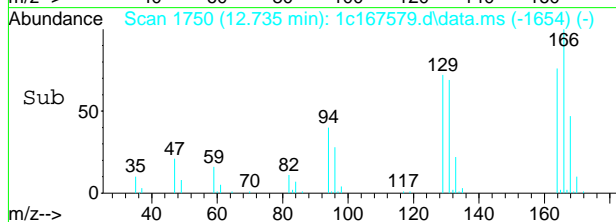


#80  
 tetrachloroethene  
 Concen: 39.10 ug/L  
 RT: 12.735 min Scan# 1750  
 Delta R.T. -0.000 min  
 Lab File: 1c167579.d  
 Acq: 4 Oct 2019 1:21 pm

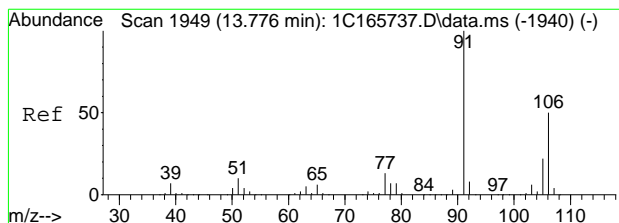


Tgt Ion:164 Resp: 47030

Ion	Ratio	Lower	Upper
164	100		
129	94.9	63.0	123.0
131	91.4	60.9	120.9
166	132.3	94.9	154.9

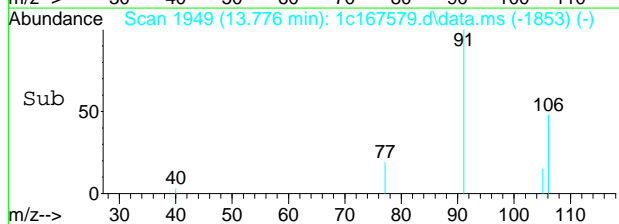
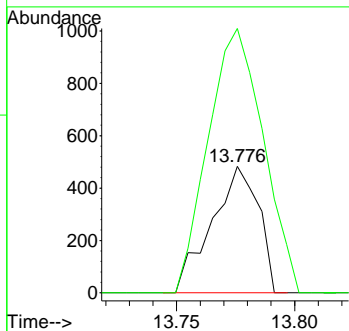
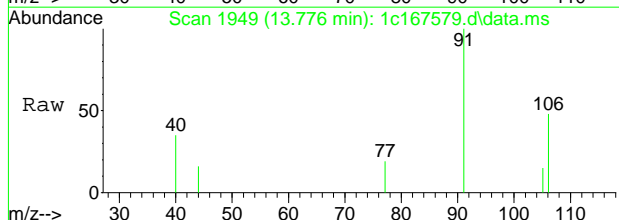


7.5.1  
7



#90  
 m,p-xylene  
 Concen: 0.28 ug/L  
 RT: 13.776 min Scan# 1949  
 Delta R.T. -0.000 min  
 Lab File: 1c167579.d  
 Acq: 4 Oct 2019 1:21 pm

Tgt Ion	Ratio	Lower	Upper
106	100		
91	209.1	171.8	231.8



7.5.1

7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V1C7262\1C165729.D

Vial: 1

Acq On : 13 Jul 2019 2:16 pm

Operator: PrashanS

Sample : BFB

Inst : GCMS1C

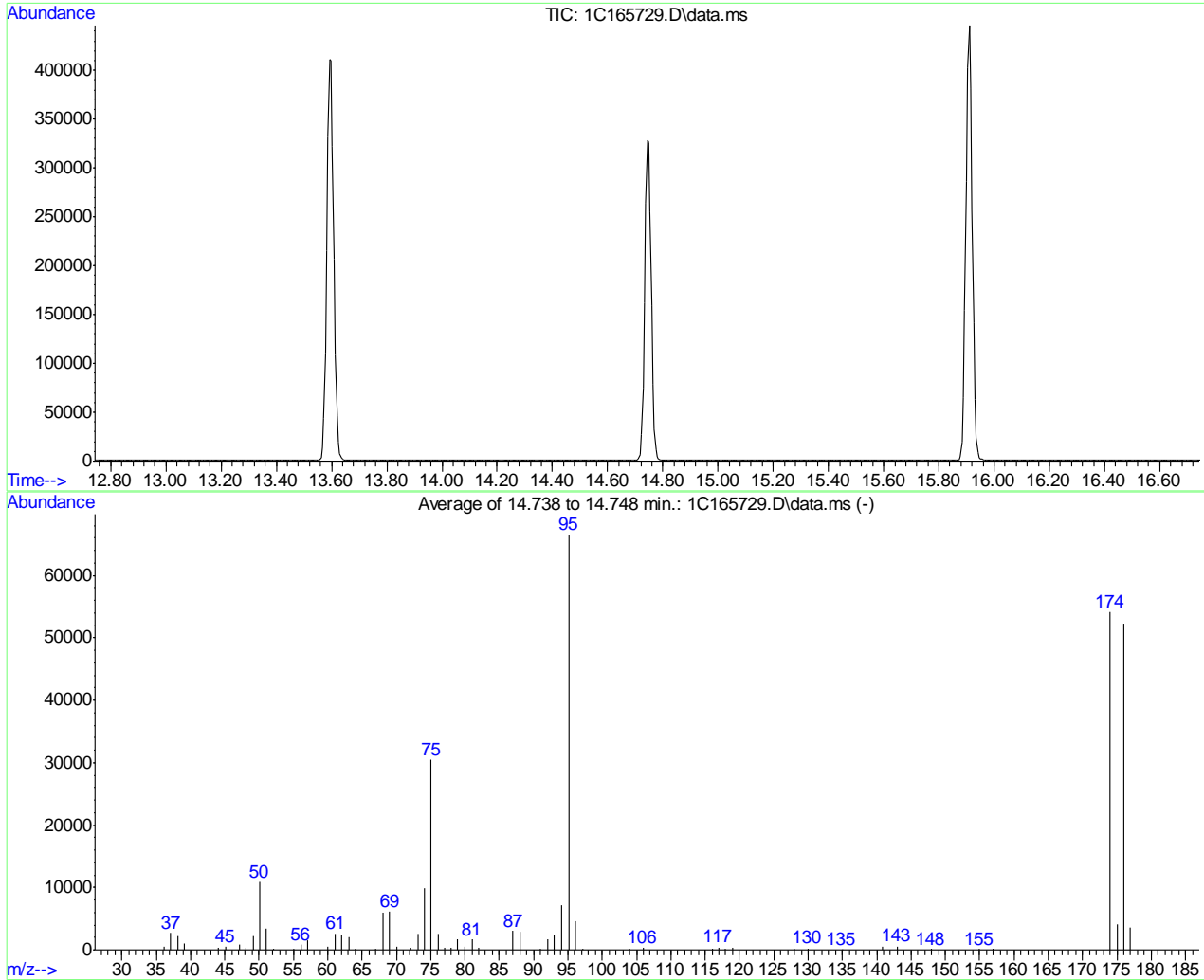
Misc : MS35874,V1C7262,5.0,,,,,1

Multiplr: 1.00

MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)

Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2133, 2134, 2135; Background Corrected with Scan 2125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.3	10861	PASS
75	95	30	60	45.7	30410	PASS
95	95	100	100	100.0	66488	PASS
96	95	5	9	6.8	4521	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	81.4	54138	PASS
175	174	5	9	7.6	4115	PASS
176	174	95	101	96.5	52229	PASS
177	176	5	9	6.8	3567	PASS

1C165729.D M1CS7262.M Tue Jul 16 09:05:51 2019

Average of 14.738 to 14.748 min.: 1C165729.D\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	471	52.10	120	69.05	6089	81.00	1683
37.10	2674	55.00	137	70.10	516	81.95	336
38.10	2279	56.10	801	72.05	291	87.00	3008
39.10	953	57.10	1572	73.10	2539	88.00	2986
44.00	292	60.00	513	74.10	9862	90.95	234
45.10	491	61.10	2606	75.10	30410	92.00	1686
47.10	871	62.10	2421	76.10	2516	93.05	2474
48.10	314	63.10	1999	77.05	387	94.10	7201
49.10	2170	64.05	163	78.05	300	95.10	66488
50.10	10861	67.05	164	78.95	1723	96.10	4521
51.10	3480	68.10	6040	80.00	468	97.10	118

Average of 14.738 to 14.748 min.: 1C165729.D\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.95	260	147.90	115				
105.95	276	154.95	110				
116.00	224	156.95	105				
116.95	373	174.00	54138				
117.95	212	175.00	4115				
119.00	337	176.00	52229				
127.95	218	177.00	3567				
129.95	228						
134.90	51						
140.90	563						
142.95	595						

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V1C7262\1C165746.D

Vial: 18

Acq On : 15 Jul 2019 12:53 pm

Operator: PrashanS

Sample : BFB2

Inst : GCMS1C

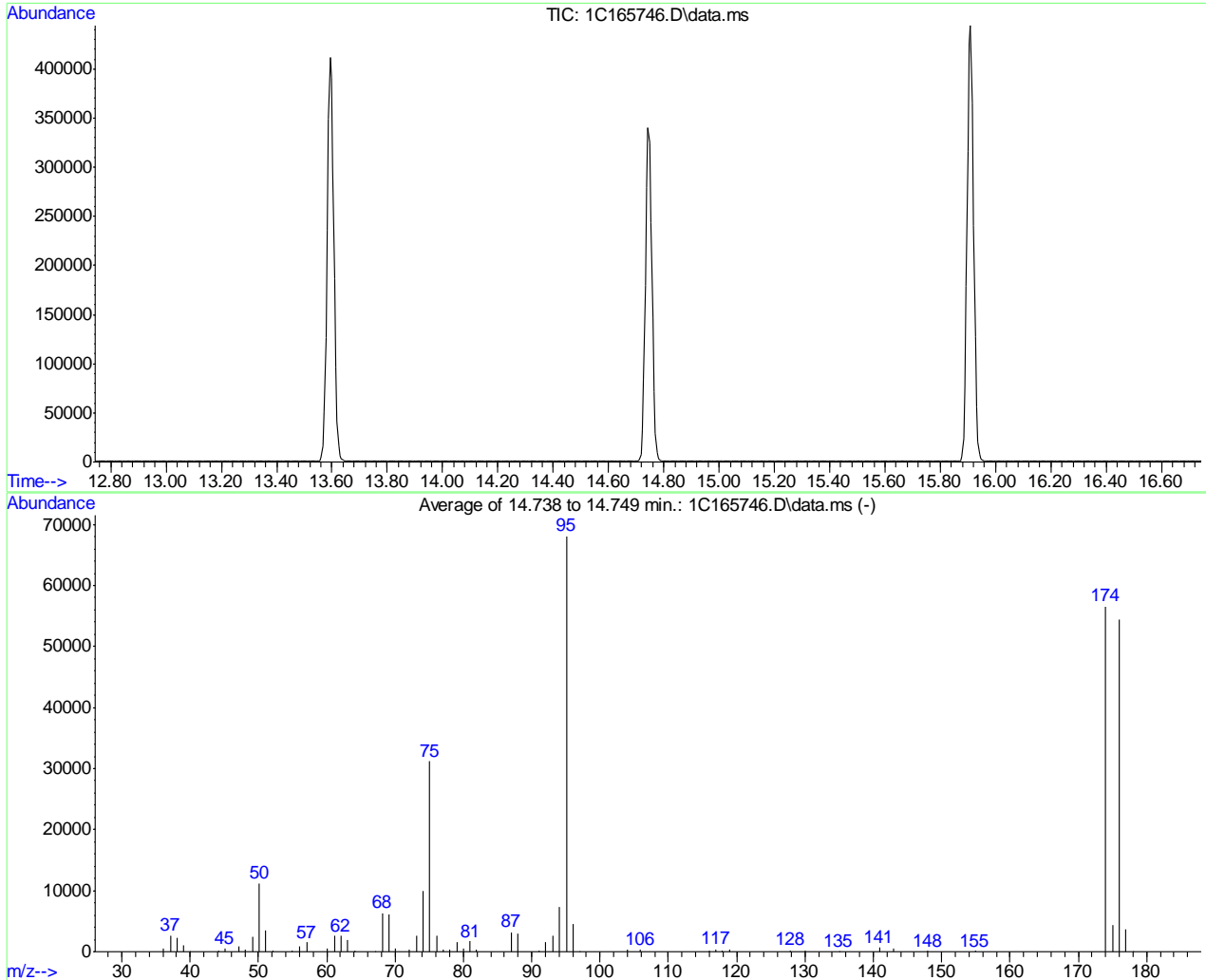
Misc : MS35874,V1C7262,5.0,,,,,1

Multiplr: 1.00

MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)

Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2133, 2134, 2135; Background Corrected with Scan 2125

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	11203	PASS
75	95	30	60	45.8	31200	PASS
95	95	100	100	100.0	68104	PASS
96	95	5	9	6.7	4565	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	83.1	56568	PASS
175	174	5	9	7.6	4315	PASS
176	174	95	101	96.3	54453	PASS
177	176	5	9	6.8	3677	PASS

1C165746.D M1CS7262.M Tue Jul 16 09:09:33 2019

Average of 14.738 to 14.749 min.: 1C165746.D\data.ms

BFB2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	471	51.10	3452	68.10	6355	79.95	503
37.10	2630	52.05	103	69.10	6178	81.00	1692
38.10	2279	55.00	121	70.05	487	81.95	410
39.10	985	56.05	867	72.00	321	87.00	3162
40.00	41	57.10	1497	73.10	2587	88.00	3011
44.10	237	60.10	556	74.10	9862	91.05	218
45.10	517	61.10	2594	75.10	31200	92.00	1645
47.10	845	62.05	2616	76.10	2655	93.05	2621
48.05	328	63.10	1948	77.05	380	94.10	7316
49.10	2383	64.05	196	78.05	288	95.10	68104
50.10	11203	67.00	52	79.00	1650	96.05	4565

Average of 14.738 to 14.749 min.: 1C165746.D\data.ms

BFB2

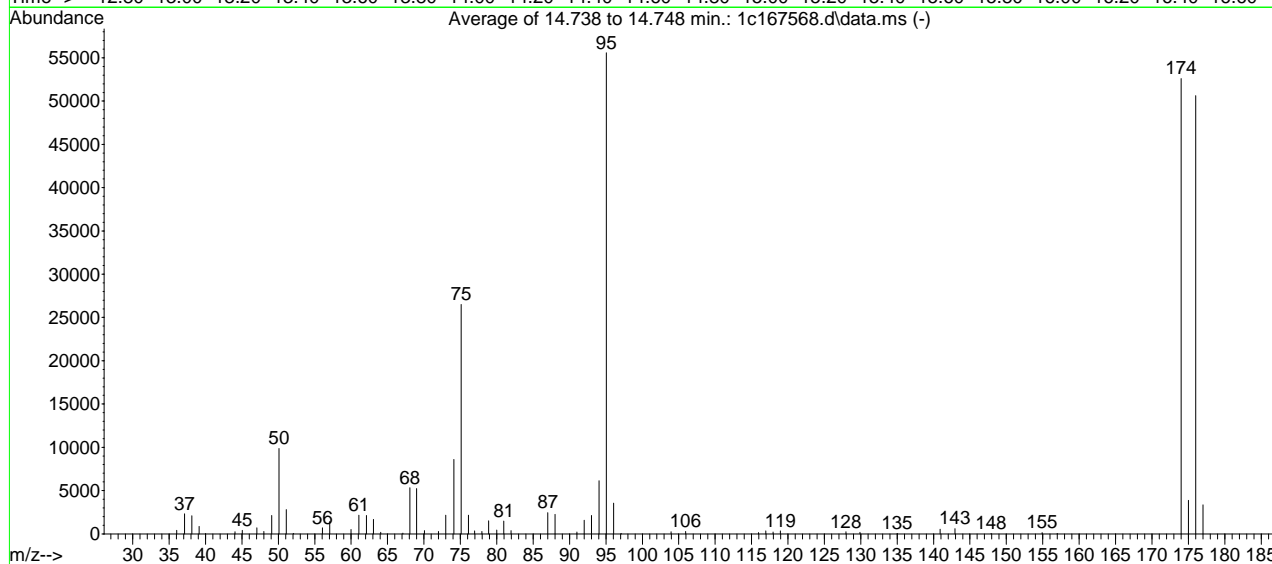
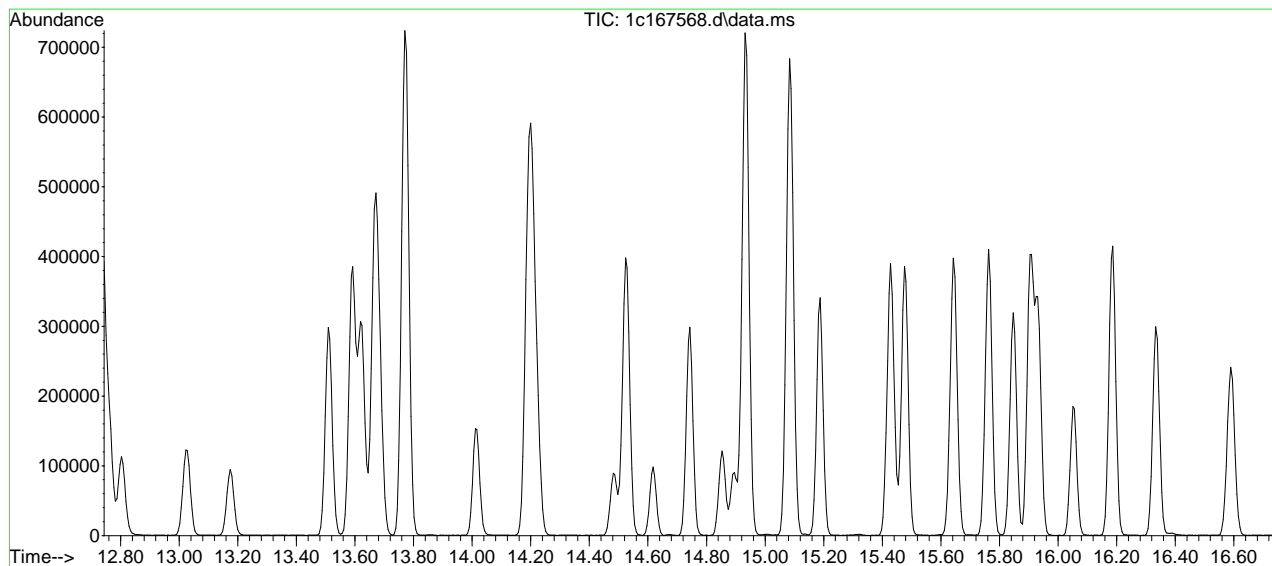
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	59	142.95	600				
103.95	273	148.00	116				
105.95	309	154.95	121				
115.95	240	174.00	56568				
117.00	401	175.00	4315				
117.90	210	176.00	54453				
118.95	296	177.00	3677				
127.90	267	178.00	47				
130.00	249						
135.00	49						
140.90	632						

SW-846 Method 8260

Data File : C:\msdchem\1\data\ni...19\v1c7331\1c167568.d Vial: 3  
 Acq On : 4 Oct 2019 7:59 am Operator: Prashans  
 Sample : bfb Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1 Multiplr: 1.00  
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M1CS7262.M (RTE Integrator)  
 Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um



AutoFind: Scans 2133, 2134, 2135; Background Corrected with Scan 2124

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	9856	PASS
75	95	30	60	47.7	26501	PASS
95	95	100	100	100.0	55571	PASS
96	95	5	9	6.4	3555	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	94.7	52600	PASS
175	174	5	9	7.3	3865	PASS
176	174	95	101	96.3	50635	PASS
177	176	5	9	6.6	3365	PASS

1c167568.d M1CS7262.M Mon Oct 07 04:54:24 2019

Average of 14.738 to 14.748 min.: 1c167568.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	409	51.10	2813	69.00	5228	80.95	1468
37.10	2315	52.10	47	70.05	375	81.95	380
38.10	2080	56.05	713	72.00	280	87.00	2431
39.10	872	57.05	1395	73.00	2150	88.00	2257
40.00	14	60.00	493	74.10	8610	91.00	199
44.05	237	61.05	2165	75.10	26501	92.00	1575
45.05	419	62.10	2138	76.10	2157	93.00	2139
47.05	690	63.05	1671	76.95	332	94.05	6145
48.00	283	64.05	164	77.95	278	95.05	55571
49.10	2130	67.10	66	78.90	1518	96.05	3555
50.10	9856	68.05	5341	80.00	453	97.10	47

Average of 14.738 to 14.748 min.: 1c167568.d\data.ms

bfb

Modified:subtracted

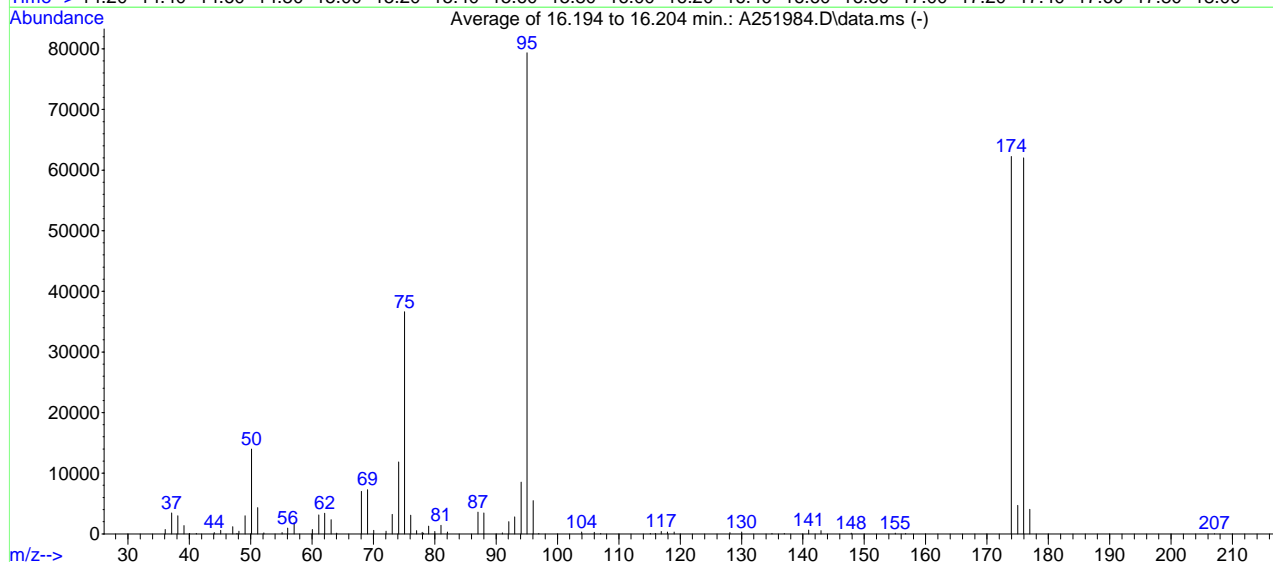
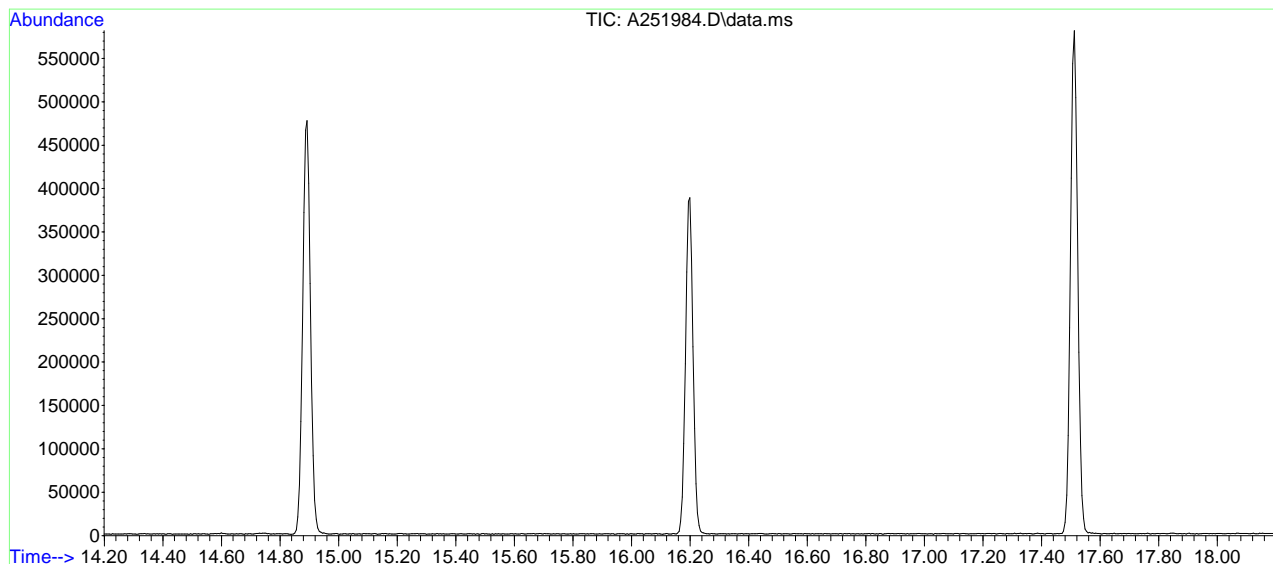
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.95	228	147.90	59				
105.95	264	154.90	152				
115.95	140	157.00	51				
116.95	336	174.00	52600				
117.95	220	175.00	3865				
118.95	341	176.00	50635				
127.95	230	177.00	3365				
129.90	195						
135.00	55						
140.90	521						
142.95	616						



SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9755\A251984.D Vial: 1  
 Acq On : 29 Jul 2019 5:24 pm Operator: edwardd  
 Sample : bfb Inst : MSA  
 Misc : MS36311,VA9755,5,,,,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9755.M (RTE Integrator)  
 Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um



AutoFind: Scans 2315, 2316, 2317; Background Corrected with Scan 2305

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.6	13974	PASS
75	95	30	60	46.2	36626	PASS
95	95	100	100	100.0	79333	PASS
96	95	5	9	6.9	5472	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.5	62256	PASS
175	174	5	9	7.6	4702	PASS
176	174	95	101	99.6	61994	PASS
177	176	5	9	6.6	4061	PASS

7.6.4  
7

Average of 16.194 to 16.204 min.: A251984.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	723	49.10	2978	64.05	138	78.15	119
37.15	3460	50.15	13974	68.05	7015	79.00	1272
38.15	2989	51.15	4324	69.05	7266	80.00	375
39.15	1361	52.15	164	70.05	595	81.00	1399
40.05	87	55.10	218	72.05	429	82.05	298
41.15	52	56.05	946	73.05	3212	87.05	3607
44.05	216	57.10	1886	74.10	11867	88.00	3453
45.10	560	60.05	702	75.10	36626	91.00	175
47.10	1176	61.10	3112	76.10	3086	92.05	2029
47.75	90	62.05	3391	77.05	523	93.05	2796
48.10	452	63.10	2347	77.95	270	94.10	8542

Average of 16.194 to 16.204 min.: A251984.D\data.ms

bfb

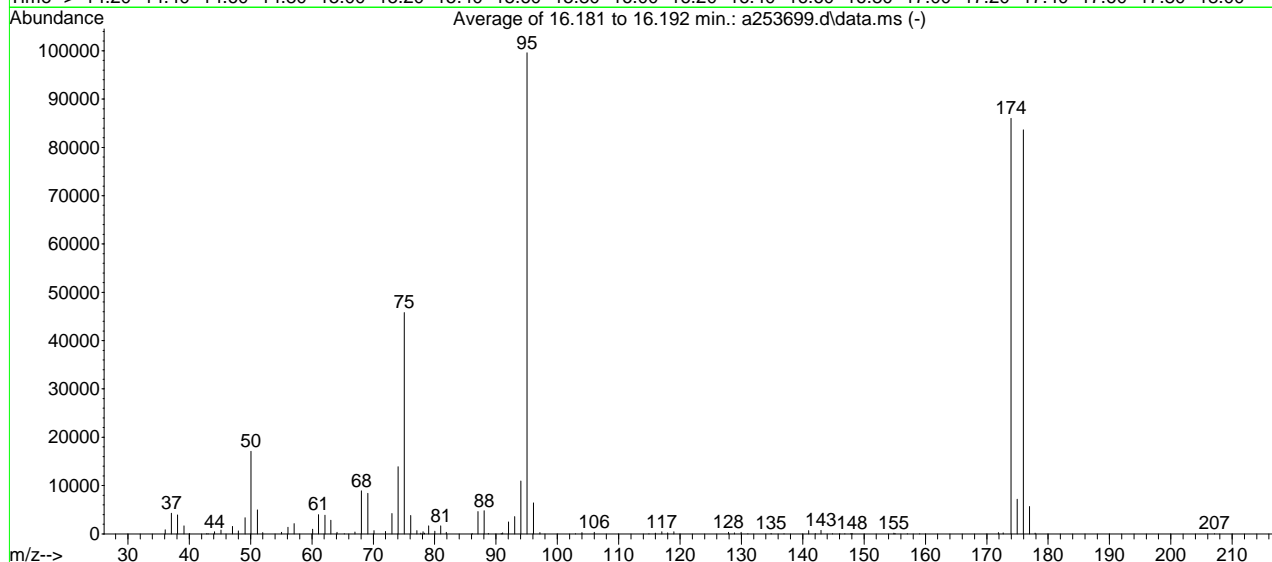
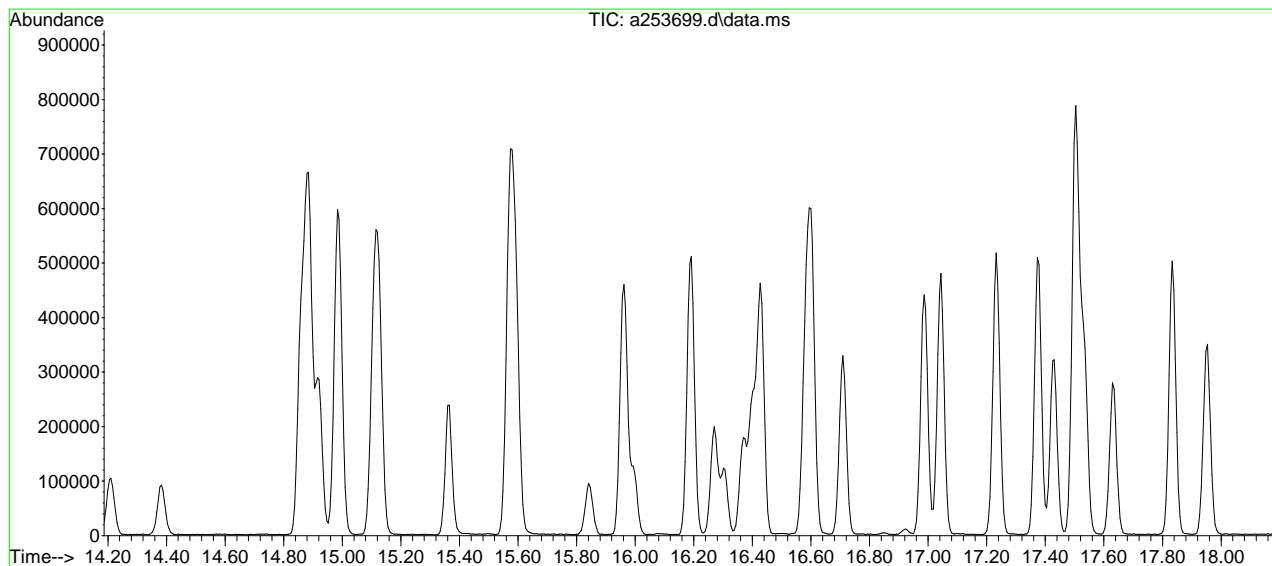
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.05	79333	128.10	221	175.95	61994		
96.05	5472	130.00	284	176.95	4061		
96.95	60	134.95	55	207.05	45		
103.95	309	136.95	69				
106.00	238	140.95	622				
107.05	59	142.95	536				
115.15	51	147.90	136				
115.95	75	155.05	137				
116.90	380	156.75	60				
117.90	290	173.95	62256				
119.00	315	175.00	4702				

SW-846 Method 8260

Data File : C:\msdchem\1\data\ni...7-19\va9835\a253699.d Vial: 2  
 Acq On : 4 Oct 2019 6:46 am Operator: krizhkac  
 Sample : bfb Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9755.M (RTE Integrator)  
 Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um



AutoFind: Scans 2313, 2314, 2315; Background Corrected with Scan 2304

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	17083	PASS
75	95	30	60	46.0	45789	PASS
95	95	100	100	100.0	99571	PASS
96	95	5	9	6.5	6427	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	86.4	86035	PASS
175	174	5	9	8.3	7169	PASS
176	174	95	101	97.2	83645	PASS
177	176	5	9	6.7	5637	PASS

a253699.d MA9755.M Mon Oct 07 02:38:50 2019

Average of 16.181 to 16.192 min.: a253699.d\data.ms  
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	855	49.10	3367	64.10	345	77.10	698
37.10	4274	50.05	17083	65.25	57	77.75	164
38.10	3926	51.10	4961	67.00	365	78.10	419
39.15	1676	52.00	274	68.05	8906	78.35	148
40.05	54	55.05	339	69.10	8407	79.00	1687
42.85	56	56.10	1374	70.10	660	80.05	546
43.05	52	57.10	2101	72.00	479	81.00	1674
44.10	419	60.10	951	73.05	4217	81.90	329
45.15	769	61.05	3965	74.05	13888	86.15	53
47.05	1555	62.10	3871	75.05	45789	87.05	4624
48.00	604	63.10	2816	76.10	3819	88.05	4773

Average of 16.181 to 16.192 min.: a253699.d\data.ms  
bfb

Modified:subtracted

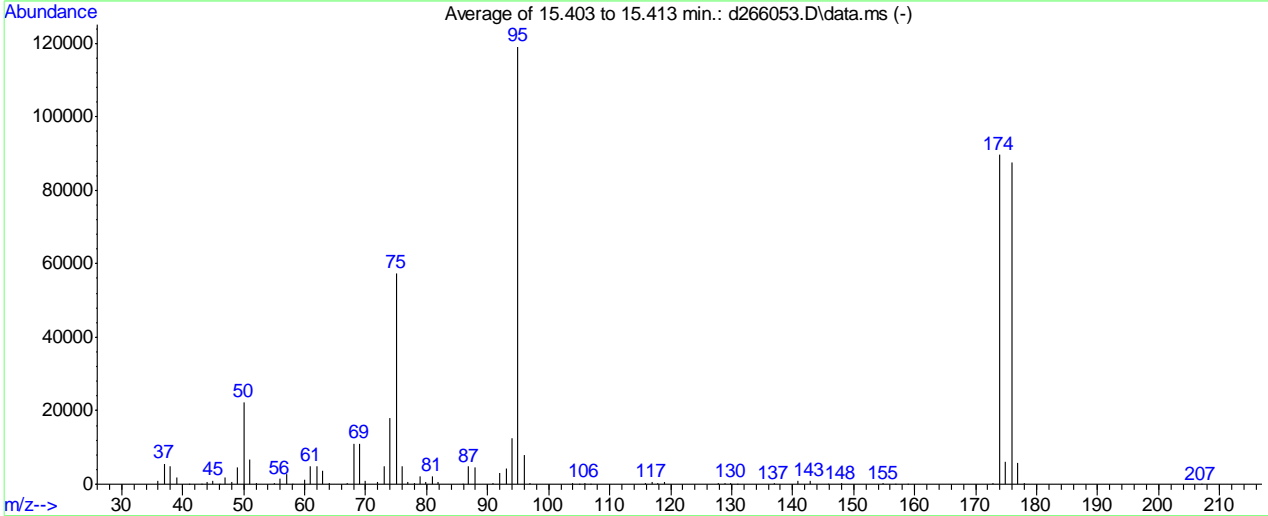
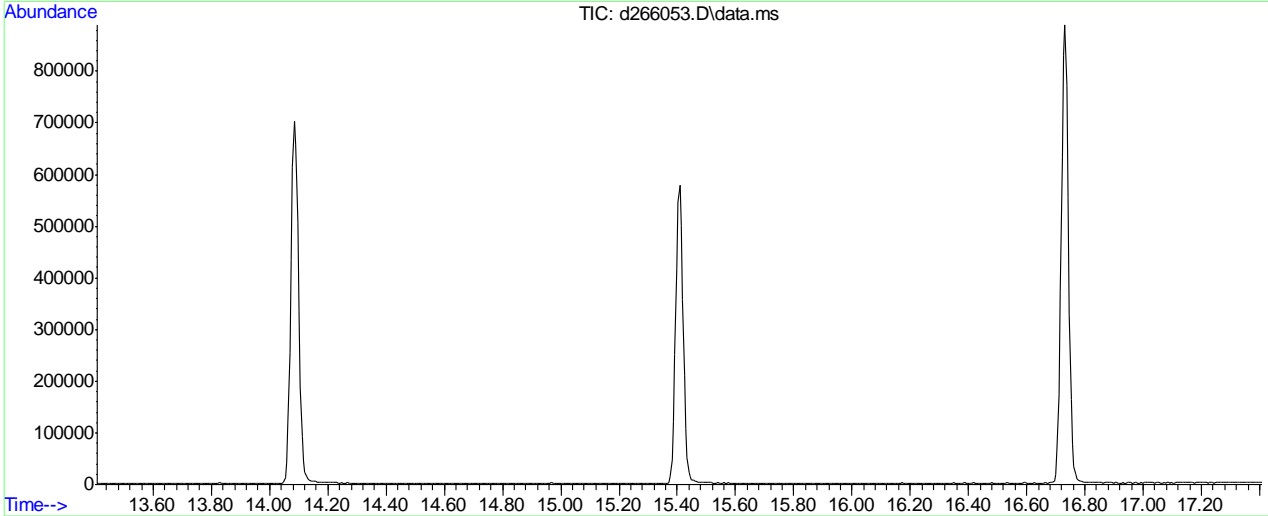
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.75	60	106.00	324	136.95	55	157.05	58
90.85	91	114.95	58	140.95	684	159.05	58
91.10	222	116.00	170	142.05	52	171.90	272
92.05	2449	117.05	465	143.00	704	172.65	203
93.05	3571	118.00	226	144.85	59	173.95	86035
94.05	10919	119.00	455	146.05	54	174.95	7169
95.05	99571	127.90	328	146.85	55	175.95	83645
96.10	6427	128.85	191	147.85	89	176.95	5637
97.15	236	129.95	324	148.05	92	177.90	143
102.95	53	131.05	52	154.85	155	207.10	21
104.00	262	134.85	69	155.05	86		

7.6.5  
7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VD10725\d266053.D Vial: 1  
 Acq On : 6 Sep 2019 6:16 pm Operator: thienn  
 Sample : BFB Inst : MSD  
 Misc : ms37297,vd10725,5,,100,5,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10725.M (RTE Integrator)  
 Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2144, 2145, 2146; Background Corrected with Scan 2134

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	22285	PASS
75	95	30	60	48.3	57512	PASS
95	95	100	100	100.0	119128	PASS
96	95	5	9	6.6	7876	PASS
173	174	0.00	2	0.2	197	PASS
174	95	50	150	75.2	89608	PASS
175	174	5	9	6.9	6210	PASS
176	174	95	101	97.6	87442	PASS
177	176	5	9	6.6	5774	PASS

7.6.6  
7

Average of 15.403 to 15.413 min.: d266053.D\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1054	49.00	4602	63.00	3694	76.90	733
37.00	5588	50.00	22285	64.00	333	77.95	451
38.00	4903	51.00	6782	66.95	310	78.90	2179
39.00	1948	52.00	271	68.00	10986	79.90	650
41.00	141	55.00	392	69.00	11089	80.90	2256
43.00	38	55.95	1401	70.00	946	81.90	561
44.00	608	57.00	2779	71.95	541	85.90	53
45.00	937	58.00	51	73.00	4787	86.90	4867
46.00	51	60.00	1114	74.00	17962	87.90	4525
47.00	1735	61.00	5000	75.00	57512	90.90	378
48.00	613	62.00	4925	76.00	4950	92.00	3038

Average of 15.403 to 15.413 min.: d266053.D\data.ms

BFB

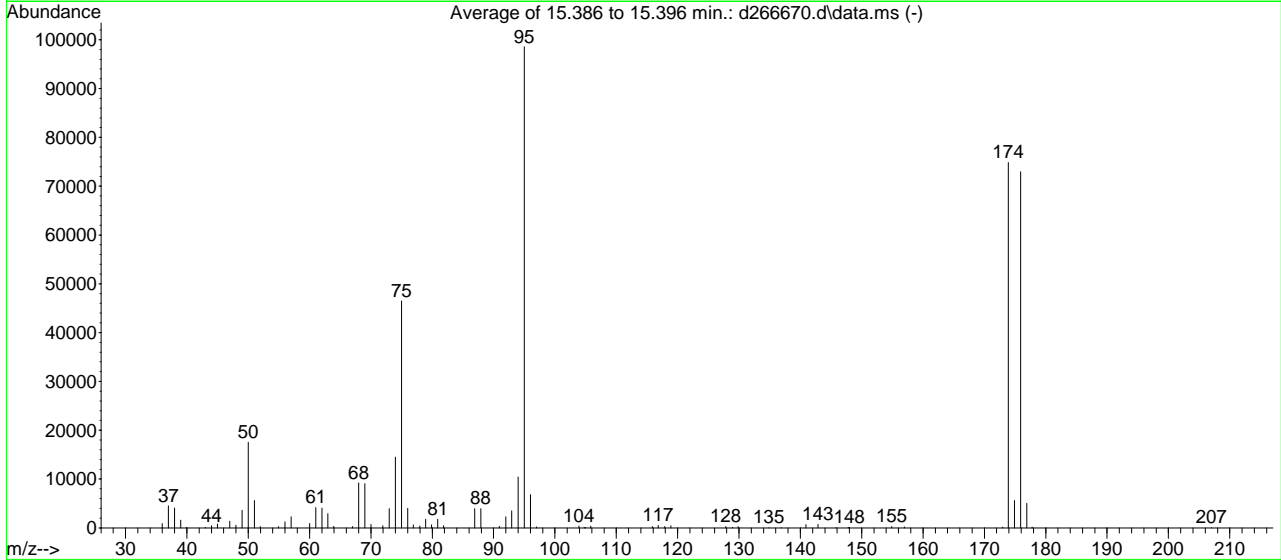
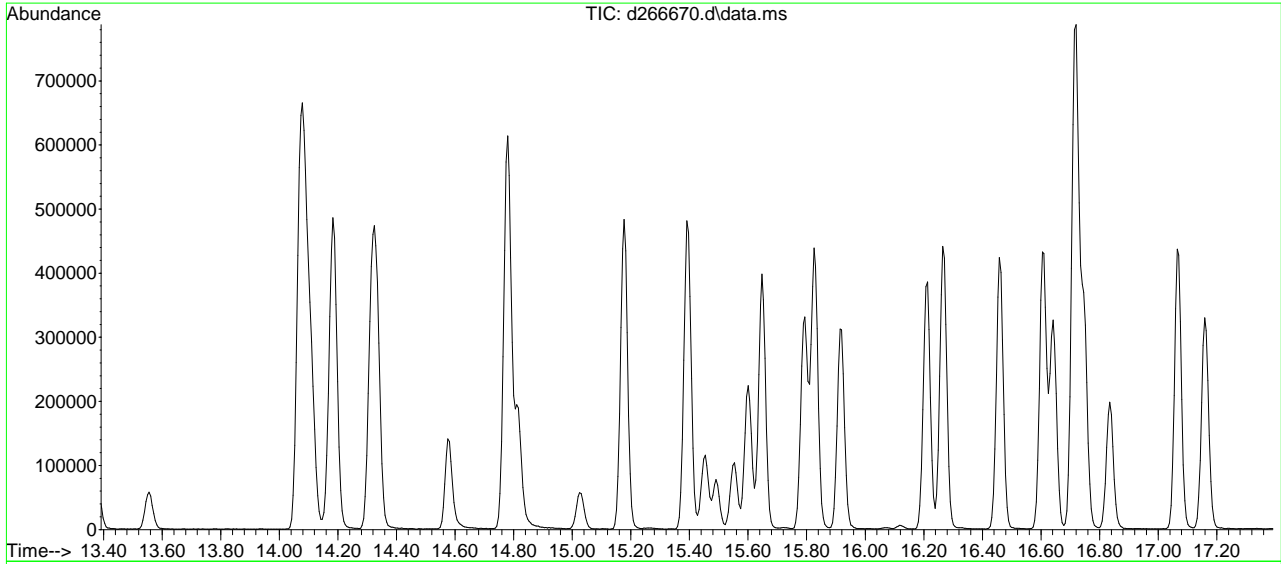
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	4321	117.90	280	154.90	245		
94.00	12430	118.90	522	156.85	123		
95.00	119128	127.85	297	158.80	55		
96.00	7876	128.90	190	172.90	197		
96.95	287	129.85	333	173.90	89608		
103.85	388	130.85	117	174.90	6210		
104.95	122	136.95	179	175.90	87442		
105.90	405	140.90	857	176.90	5774		
106.90	55	142.85	870	177.95	171		
115.90	360	145.80	51	206.95	1		
116.90	593	147.95	236				

SW-846 Method 8260

Data File : C:\msdchem\1\data\kr...719\vd10747\d266670.d Vial: 2  
 Acq On : 3 Oct 2019 7:38 am Operator: thienn  
 Sample : bfb Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1 Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MD10725.M (RTE Integrator)  
 Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2141, 2142, 2143; Background Corrected with Scan 2132

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	17555	PASS
75	95	30	60	47.2	46485	PASS
95	95	100	100	100.0	98541	PASS
96	95	5	9	6.9	6793	PASS
173	174	0.00	2	0.2	175	PASS
174	95	50	150	76.0	74845	PASS
175	174	5	9	7.5	5604	PASS
176	174	95	101	97.5	72941	PASS
177	176	5	9	6.9	5045	PASS

7.6.7  
7

Average of 15.386 to 15.396 min.: d266670.d\data.ms  
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	886	50.00	17555	67.00	271	78.90	1747
37.00	4516	51.00	5609	68.00	9204	79.90	611
38.00	4066	51.95	252	69.00	9026	80.90	1758
39.00	1573	54.95	257	70.00	743	81.85	418
39.95	93	56.00	1229	71.95	459	86.90	3925
43.00	105	57.00	2297	73.00	3939	87.90	3948
44.00	410	60.00	922	74.00	14511	90.95	323
45.00	777	61.00	4161	75.00	46485	92.00	2249
47.00	1354	62.00	4061	76.00	3973	92.95	3454
48.00	522	63.00	2918	76.90	576	94.00	10451
49.00	3564	63.95	301	77.95	398	95.00	98541

Average of 15.386 to 15.396 min.: d266670.d\data.ms  
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	6793	128.95	113	173.00	175		
97.00	185	129.85	264	173.90	74845		
103.90	359	134.90	58	174.90	5604		
104.80	60	136.90	51	175.90	72941		
105.00	62	140.90	667	176.90	5045		
105.85	353	142.90	712	177.80	174		
115.90	251	145.80	52	207.00	17		
116.85	502	147.80	104				
117.90	285	148.00	65				
118.90	424	154.90	252				
127.85	266	156.95	196				

7.6.7  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165730.D  
 Acq On : 13 Jul 2019 2:47 pm  
 Operator : PrashanS  
 Sample : IC7262-0.2  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 08:39:14 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:32:15 2019  
 Response via : Initial Calibration

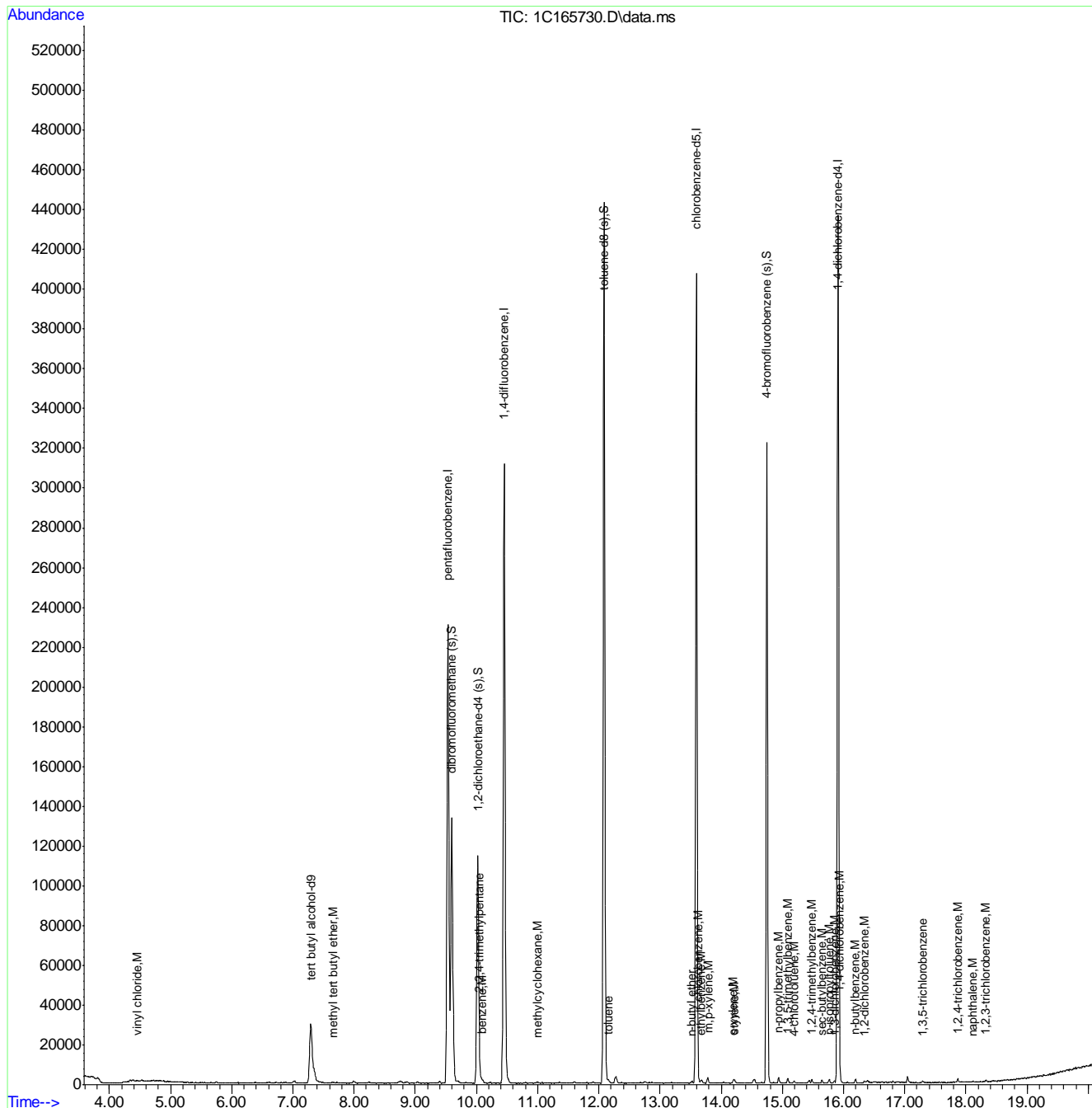
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.296	65	62398	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	197543	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.455	114	299324	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	236049	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	116331	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	92816	49.70	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	99.40%	
53) 1,2-dichloroethane-d4 (s)	10.021	65	89296	51.39	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	102.78%	
75) toluene-d8 (s)	12.086	98	321325	49.98	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.96%	
98) 4-bromofluorobenzene (s)	14.743	95	114856	50.34	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	100.68%	
Target Compounds						
						Qvalue
9) vinyl chloride	4.461	62	425	0.18	ug/L	# 50
25) methyl tert butyl ether	7.651	73	556	0.15	ug/L	54
55) 2,2,4-trimethylpentane	10.047	57	1045	0.17	ug/L	91
56) benzene	10.083	78	1291	0.20	ug/L	99
68) methylcyclohexane	10.988	83	543	0.17	ug/L	# 69
76) toluene	12.154	92	756	0.19	ug/L	91
86) n-butyl ether	13.514	57	1152	0.18	ug/L	67
87) chlorobenzene	13.624	112	862	0.21	ug/L	83
89) ethylbenzene	13.671	91	1553	0.22	ug/L	88
90) m,p-xylene	13.781	106	1124	0.41	ug/L	98
91) o-xylene	14.199	106	465	0.17	ug/L	# 69
92) styrene	14.210	104	851	0.19	ug/L	71
103) n-propylbenzene	14.937	91	1854	0.22	ug/L	87
105) 4-chlorotoluene	15.193	91	1037	0.21	ug/L	83
106) 1,3,5-trimethylbenzene	15.089	105	1332	0.23	ug/L	81
108) 1,2,4-trimethylbenzene	15.481	105	1483	0.26	ug/L	90
109) sec-butylbenzene	15.648	105	1446	0.19	ug/L	89
110) 1,3-dichlorobenzene	15.852	146	652	0.19	ug/L	94
111) p-isopropyltoluene	15.769	119	1482	0.23	ug/L	93
112) 1,4-dichlorobenzene	15.936	146	759	0.23	ug/L	74
114) 1,2-dichlorobenzene	16.333	146	633	0.19	ug/L	80
115) n-butylbenzene	16.192	92	694	0.20	ug/L	96
117) 1,3,5-trichlorobenzene	17.291	180	544	0.22	ug/L	# 76
119) 1,2,4-trichlorobenzene	17.866	180	390	0.19	ug/L	# 66
121) naphthalene	18.112	128	893	0.20	ug/L	69
122) 1,2,3-trichlorobenzene	18.321	180	366	0.19	ug/L	# 62

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165730.D  
 Acq On : 13 Jul 2019 2:47 pm  
 Operator : PrashanS  
 Sample : IC7262-0.2  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 08:39:14 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:32:15 2019  
 Response via : Initial Calibration



777  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165731.D  
 Acq On : 13 Jul 2019 3:14 pm  
 Operator : PrashanS  
 Sample : IC7262-0.5  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 08:40:55 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 08:32:26 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.290	65	63629	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	194429	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.454	114	292836	50.00	ug/L	0.00
74) chlorobenzene-d5	13.598	117	239626	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	115516	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	92061	50.08	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	100.16%	
53) 1,2-dichloroethane-d4 (s)	10.020	65	89224	52.49	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	104.98%	
75) toluene-d8 (s)	12.086	98	324086	49.66	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.32%	
98) 4-bromofluorobenzene (s)	14.743	95	116441	51.39	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	102.78%	
Target Compounds						
6) chlorodifluoromethane	3.849	51	1177	0.51	ug/L	66
7) dichlorodifluoromethane	3.812	85	1456	0.49	ug/L	90
9) vinyl chloride	4.455	62	1148	0.49	ug/L	92
10) 1,3-butadiene	4.529	54	850	0.52	ug/L	93
13) trichlorofluoromethane	5.737	101	1502	0.50	ug/L	91
14) vinyl bromide	5.658	106	630	0.39	ug/L	91
17) freon 113	6.537	151	572	0.41	ug/L #	77
18) 1,1-dichloroethene	6.615	96	886	0.54	ug/L	80
25) methyl tert butyl ether	7.646	73	1756	0.47	ug/L	92
26) trans-1,2-dichloroethene	7.719	96	1122	0.65	ug/L	83
27) di-isopropyl ether	8.247	45	2367	0.45	ug/L	93
29) 1,1-dichloroethane	8.294	63	1451	0.49	ug/L	83
30) chloroprene	8.383	53	1104	0.44	ug/L	82
34) ethyl tert-butyl ether	8.702	59	1794	0.49	ug/L	97
37) cis-1,2-dichloroethene	9.027	96	1030	0.54	ug/L	95
46) 1,1,1-trichloroethane	9.628	97	1347	0.48	ug/L #	62
47) cyclohexane	9.686	84	1137	0.45	ug/L	89
48) 1,1-dichloropropene	9.811	75	1207	0.51	ug/L	96
50) carbon tetrachloride	9.832	117	1172	0.48	ug/L	91
55) 2,2,4-trimethylpentane	10.046	57	3217	0.55	ug/L	92
56) benzene	10.083	78	3210	0.50	ug/L	98
61) trichloroethene	10.800	130	816	0.45	ug/L	94
66) 1,2-dichloropropane	11.072	63	761	0.47	ug/L #	48
67) dibromomethane	11.234	93	420	0.43	ug/L	90
68) methylcyclohexane	10.993	83	1420	0.46	ug/L	91
69) bromodichloromethane	11.359	83	1038	0.45	ug/L	93
71) cis-1,3-dichloropropene	11.814	75	1141	0.43	ug/L	95
72) 4-methyl-2-pentanone	11.903	58	868	1.71	ug/L #	90
76) toluene	12.165	92	2104	0.52	ug/L #	84
77) trans-1,3-dichloropropene	12.379	75	980	0.43	ug/L #	71
78) ethyl methacrylate	12.353	69	690	0.39	ug/L	82
80) tetrachloroethene	12.740	164	682	0.47	ug/L	96

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165731.D  
 Acq On : 13 Jul 2019 3:14 pm  
 Operator : PrashanS  
 Sample : IC7262-0.5  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 08:40:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:32:26 2019  
 Response via : Initial Calibration

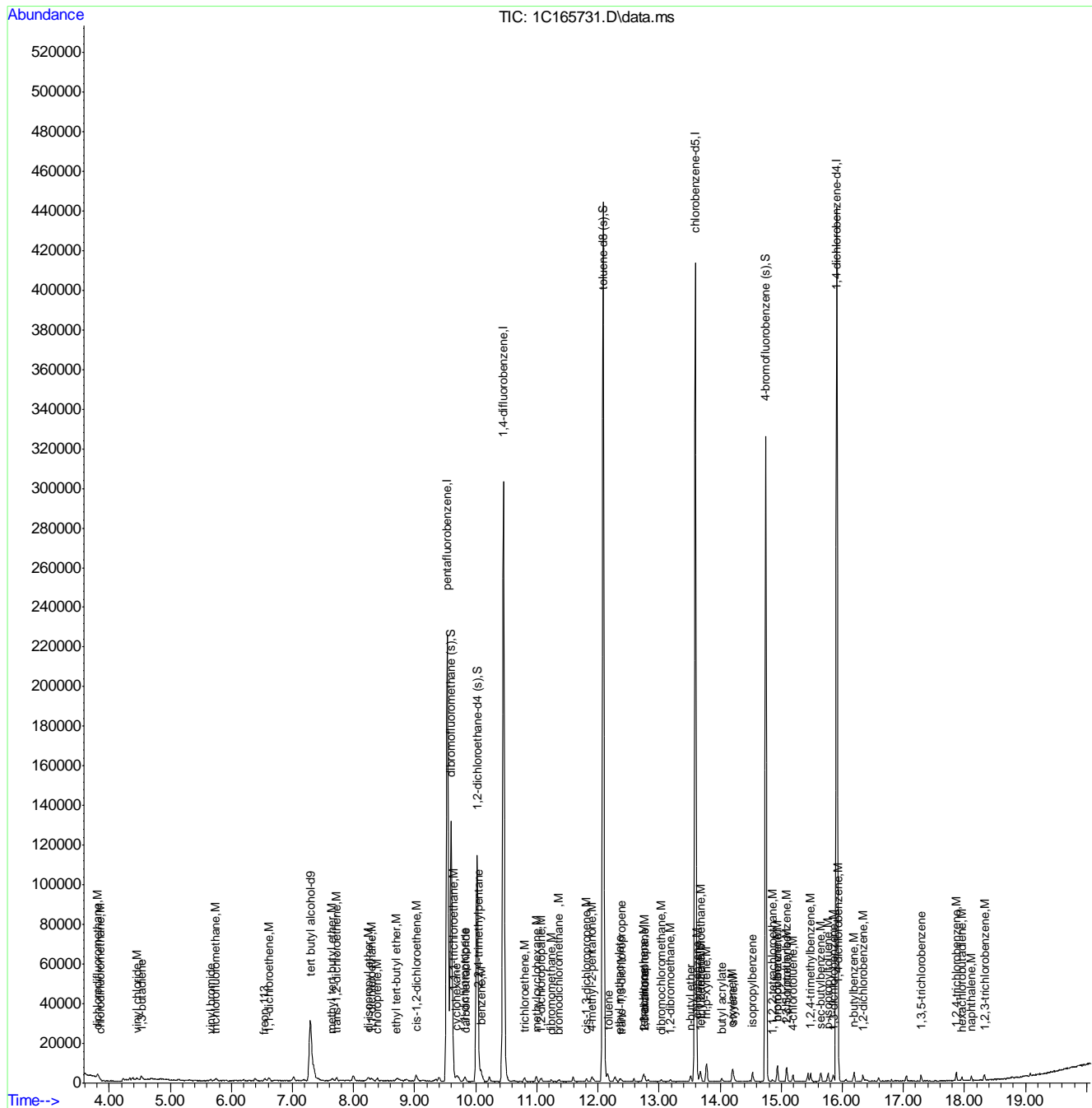
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
81) 1,3-dichloropropane	12.766	76	1010	0.47	ug/L	81
82) 2-hexanone	12.756	58	795	1.56	ug/L	92
84) dibromochloromethane	13.033	129	715	0.42	ug/L	88
85) 1,2-dibromoethane	13.185	107	684	0.42	ug/L	96
86) n-butyl ether	13.519	57	3176	0.49	ug/L	95
87) chlorobenzene	13.629	112	2214	0.53	ug/L	93
88) 1,1,1,2-tetrachloroethane	13.687	131	645	0.41	ug/L	94
89) ethylbenzene	13.676	91	3973	0.54	ug/L	100
90) m,p-xylene	13.776	106	2935	1.06	ug/L	99
91) o-xylene	14.194	106	1298	0.47	ug/L	99
92) styrene	14.210	104	2343	0.51	ug/L	96
94) butyl acrylate	14.027	55	1190	0.43	ug/L	91
95) isopropylbenzene	14.529	105	3628	0.50	ug/L	100
99) bromobenzene	14.942	156	845	0.48	ug/L	94
100) 1,1,2,2-tetrachloroethane	14.858	83	768	0.46	ug/L	92
103) n-propylbenzene	14.942	91	4614	0.55	ug/L	93
104) 2-chlorotoluene	15.094	126	812	0.49	ug/L	91
105) 4-chlorotoluene	15.193	91	2760	0.56	ug/L	96
106) 1,3,5-trimethylbenzene	15.083	105	3049	0.53	ug/L	97
108) 1,2,4-trimethylbenzene	15.481	105	3178	0.56	ug/L	97
109) sec-butylbenzene	15.648	105	4365	0.56	ug/L	90
110) 1,3-dichlorobenzene	15.852	146	1799	0.54	ug/L	91
111) p-isopropyltoluene	15.768	119	3496	0.55	ug/L	95
112) 1,4-dichlorobenzene	15.936	146	1855	0.56	ug/L	85
114) 1,2-dichlorobenzene	16.344	146	1754	0.54	ug/L	91
115) n-butylbenzene	16.192	92	1811	0.53	ug/L	87
117) 1,3,5-trichlorobenzene	17.290	180	1256	0.51	ug/L	93
119) 1,2,4-trichlorobenzene	17.866	180	1075	0.53	ug/L	92
120) hexachlorobutadiene	17.960	225	634	0.50	ug/L	94
121) naphthalene	18.111	128	2329	0.53	ug/L	85
122) 1,2,3-trichlorobenzene	18.326	180	1052	0.54	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165731.D  
 Acq On : 13 Jul 2019 3:14 pm  
 Operator : PrashanS  
 Sample : IC7262-0.5  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 08:40:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:32:26 2019  
 Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165732.D  
 Acq On : 13 Jul 2019 3:41 pm  
 Operator : PrashanS  
 Sample : IC7262-1  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 08:43:25 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:32:26 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.290	65	63643	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	195219	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.454	114	296229	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	237122	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	117144	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	92622	50.18	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.36%
53) 1,2-dichloroethane-d4 (s)	10.020	65	89593	52.10	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	104.20%
75) toluene-d8 (s)	12.086	98	325682	50.43	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.86%
98) 4-bromofluorobenzene (s)	14.743	95	117605	51.19	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	102.38%
Target Compounds						
						Qvalue
6) chlorodifluoromethane	3.849	51	2399	1.04	ug/L	84
7) dichlorodifluoromethane	3.812	85	3230	1.08	ug/L	99
8) chloromethane	4.225	50	2591	1.27	ug/L	90
9) vinyl chloride	4.455	62	2430	1.04	ug/L	93
10) 1,3-butadiene	4.523	54	1616	0.99	ug/L	89
12) chloroethane	5.313	64	1208	1.04	ug/L	98
13) trichlorofluoromethane	5.742	101	3139	1.04	ug/L	97
14) vinyl bromide	5.658	106	1532	0.94	ug/L	83
15) ethyl ether	6.197	74	703	0.84	ug/L	94
17) freon 113	6.547	151	1293	0.92	ug/L	96
18) 1,1-dichloroethene	6.615	96	1754	1.07	ug/L #	80
19) acetone	6.704	43	1743	4.25	ug/L #	42
25) methyl tert butyl ether	7.646	73	3643	0.97	ug/L	89
26) trans-1,2-dichloroethene	7.719	96	1917	1.10	ug/L	86
27) di-isopropyl ether	8.242	45	4814	0.92	ug/L	84
29) 1,1-dichloroethane	8.289	63	2951	1.00	ug/L	97
30) chloroprene	8.388	53	2350	0.94	ug/L	97
32) hexane	7.996	57	2614	0.92	ug/L	97
34) ethyl tert-butyl ether	8.702	59	3435	0.93	ug/L	98
36) 2,2-dichloropropane	9.016	77	1873	0.80	ug/L	97
37) cis-1,2-dichloroethene	9.027	96	2011	1.04	ug/L	85
39) propionitrile	9.131	54	1563	7.98	ug/L	64
40) bromochloromethane	9.340	128	785	0.92	ug/L	90
42) chloroform	9.398	85	2325	1.16	ug/L	90
46) 1,1,1-trichloroethane	9.628	97	2742	0.98	ug/L	76
47) cyclohexane	9.691	84	2715	1.07	ug/L	98
48) 1,1-dichloropropene	9.816	75	2186	0.93	ug/L	96
50) carbon tetrachloride	9.827	117	2284	0.92	ug/L	97
55) 2,2,4-trimethylpentane	10.046	57	6088	1.02	ug/L	88
56) benzene	10.078	78	6619	1.01	ug/L	95
58) heptane	10.224	71	1513	0.96	ug/L	95
60) 1,2-dichloroethane	10.109	62	2364	1.19	ug/L	87

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165732.D  
 Acq On : 13 Jul 2019 3:41 pm  
 Operator : PrashanS  
 Sample : IC7262-1  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 08:43:25 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 08:32:26 2019

Response via : Initial Calibration

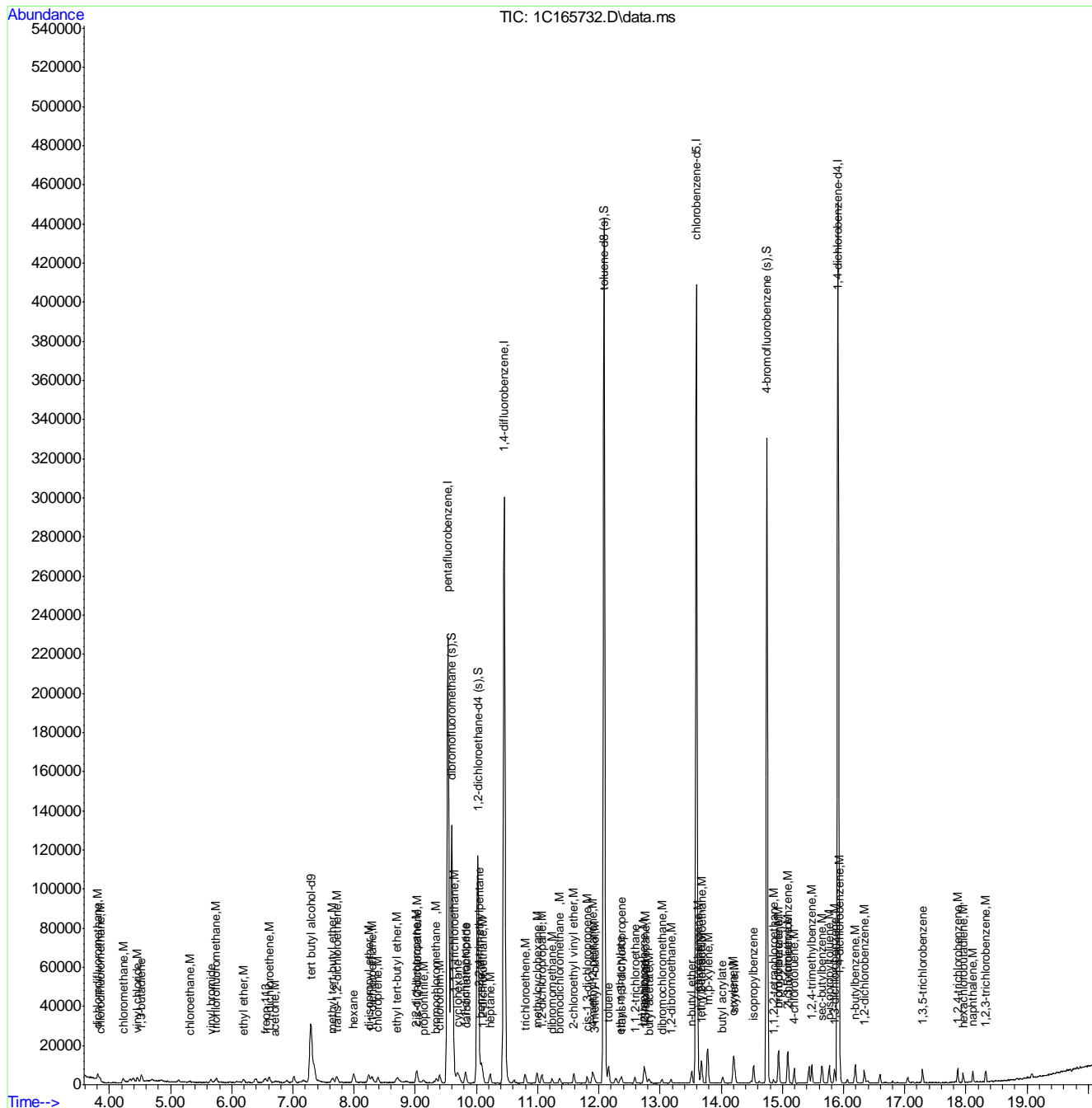
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
61) trichloroethene	10.794	130	1685	0.92	ug/L	98
64) 2-chloroethyl vinyl ether	11.589	63	2545	4.51	ug/L	94
66) 1,2-dichloropropane	11.072	63	1538	0.94	ug/L	97
67) dibromomethane	11.234	93	914	0.92	ug/L	90
68) methylcyclohexane	10.988	83	3042	0.97	ug/L	84
69) bromodichloromethane	11.359	83	2274	0.97	ug/L	89
71) cis-1,3-dichloropropene	11.809	75	2413	0.91	ug/L	95
72) 4-methyl-2-pentanone	11.898	58	1743	3.39	ug/L	95
73) 3-methyl-1-butanol	11.924	55	1063	15.36	ug/L	88
76) toluene	12.159	92	4099	1.02	ug/L	96
77) trans-1,3-dichloropropene	12.369	75	1951	0.86	ug/L	93
78) ethyl methacrylate	12.348	69	1546	0.89	ug/L	87
79) 1,1,2-trichloroethane	12.588	83	1193	1.00	ug/L #	78
80) tetrachloroethene	12.735	164	1425	0.99	ug/L	92
81) 1,3-dichloropropane	12.766	76	2100	1.00	ug/L	97
82) 2-hexanone	12.745	58	1868	3.69	ug/L	96
83) butyl acetate	12.824	56	688	0.79	ug/L #	65
84) dibromochloromethane	13.028	129	1487	0.88	ug/L	95
85) 1,2-dibromoethane	13.179	107	1502	0.92	ug/L	91
86) n-butyl ether	13.514	57	6200	0.97	ug/L	97
87) chlorobenzene	13.624	112	4406	1.06	ug/L	90
88) 1,1,1,2-tetrachloroethane	13.687	131	1429	0.93	ug/L	93
89) ethylbenzene	13.671	91	7546	1.04	ug/L	99
90) m,p-xylene	13.781	106	5763	2.11	ug/L	92
91) o-xylene	14.194	106	2769	1.02	ug/L	98
92) styrene	14.210	104	4632	1.02	ug/L	96
94) butyl acrylate	14.021	55	2458	0.89	ug/L	93
95) isopropylbenzene	14.534	105	7422	1.04	ug/L	98
99) bromobenzene	14.942	156	1869	1.06	ug/L	95
100) 1,1,2,2-tetrachloroethane	14.858	83	1577	0.92	ug/L	88
103) n-propylbenzene	14.942	91	8768	1.03	ug/L	96
104) 2-chlorotoluene	15.094	126	1819	1.09	ug/L	95
105) 4-chlorotoluene	15.193	91	5463	1.09	ug/L	94
106) 1,3,5-trimethylbenzene	15.088	105	5728	0.99	ug/L	97
108) 1,2,4-trimethylbenzene	15.481	105	6152	1.06	ug/L	98
109) sec-butylbenzene	15.648	105	7790	0.99	ug/L	97
110) 1,3-dichlorobenzene	15.852	146	3570	1.06	ug/L	93
111) p-isopropyltoluene	15.768	119	6556	1.02	ug/L	96
112) 1,4-dichlorobenzene	15.936	146	3505	1.04	ug/L	94
114) 1,2-dichlorobenzene	16.338	146	3471	1.05	ug/L	95
115) n-butylbenzene	16.187	92	3533	1.02	ug/L	98
117) 1,3,5-trichlorobenzene	17.290	180	2640	1.07	ug/L	100
119) 1,2,4-trichlorobenzene	17.866	180	2207	1.08	ug/L	99
120) hexachlorobutadiene	17.955	225	1284	0.99	ug/L	92
121) naphthalene	18.111	128	4793	1.07	ug/L	98
122) 1,2,3-trichlorobenzene	18.321	180	2057	1.05	ug/L	87

( # ) = qualifier out of range ( m ) = manual integration ( + ) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
Data File : 1C165732.D  
Acq On : 13 Jul 2019 3:41 pm  
Operator : PrashanS  
Sample : IC7262-1  
Misc : MS35874,V1C7262,5.0,,,,1  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 08:43:25 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
QLast Update : Tue Jul 16 08:32:26 2019  
Response via : Initial Calibration





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165733.D  
 Acq On : 13 Jul 2019 4:08 pm  
 Operator : PrashanS  
 Sample : IC7262-2  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 08:54:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:48:48 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.290	65	64776	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	194006	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	295329	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	237823	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	116694	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	91759	50.03	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.06%
53) 1,2-dichloroethane-d4 (s)	10.020	65	89414	52.16	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	104.32%
75) toluene-d8 (s)	12.086	98	322746	49.83	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.66%
98) 4-bromofluorobenzene (s)	14.743	95	116110	50.73	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	101.46%
Target Compounds						
2) tertiary butyl alcohol	7.426	59	1712	9.06	ug/L	77
3) ethanol	6.072	45	2942	185.12	ug/L	99
4) 1,4-dioxane	11.187	88	748	42.37	ug/L	81
6) chlorodifluoromethane	3.849	51	4831	2.10	ug/L	97
7) dichlorodifluoromethane	3.812	85	6252	2.11	ug/L	92
8) chloromethane	4.225	50	4584	2.25	ug/L	96
9) vinyl chloride	4.455	62	4810	2.07	ug/L	97
10) 1,3-butadiene	4.523	54	3217	1.98	ug/L	96
12) chloroethane	5.313	64	2279	1.97	ug/L	92
13) trichlorofluoromethane	5.742	101	6108	2.04	ug/L	97
14) vinyl bromide	5.658	106	3200	1.98	ug/L	94
15) ethyl ether	6.192	74	1609	1.93	ug/L	89
17) freon 113	6.553	151	2903	2.09	ug/L	96
18) 1,1-dichloroethene	6.610	96	3488	2.13	ug/L	94
19) acetone	6.704	43	3758	9.22	ug/L	94
20) acetonitrile	7.160	41	3375	20.83	ug/L	88
21) iodomethane	6.903	142	2358	1.39	ug/L	94
22) carbon disulfide	7.018	76	10921	2.25	ug/L	98
24) methyl acetate	7.160	43	1742	1.73	ug/L	98
25) methyl tert butyl ether	7.646	73	7567	2.02	ug/L	98
26) trans-1,2-dichloroethene	7.714	96	3766	2.17	ug/L	95
27) di-isopropyl ether	8.237	45	10190	1.95	ug/L	94
28) 2-butanone	9.006	72	1070	6.39	ug/L #	70
29) 1,1-dichloroethane	8.289	63	6084	2.07	ug/L	97
30) chloroprene	8.394	53	4849	1.95	ug/L	96
32) hexane	7.991	57	5590	1.97	ug/L	93
34) ethyl tert-butyl ether	8.702	59	7677	2.10	ug/L	97
36) 2,2-dichloropropane	9.016	77	4230	1.82	ug/L	89
37) cis-1,2-dichloroethene	9.027	96	4126	2.16	ug/L	98
39) propionitrile	9.131	54	3647	18.73	ug/L	92
40) bromochloromethane	9.346	128	1680	1.99	ug/L	92
42) chloroform	9.398	85	4347	2.18	ug/L	95

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165733.D  
 Acq On : 13 Jul 2019 4:08 pm  
 Operator : PrashanS  
 Sample : IC7262-2  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 08:54:18 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 08:48:48 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) methacrylonitrile	9.304	67	1003	1.78	ug/L	95
46) 1,1,1-trichloroethane	9.633	97	5534	1.99	ug/L	93
47) cyclohexane	9.691	84	5075	2.01	ug/L	97
48) 1,1-dichloropropene	9.811	75	4741	2.02	ug/L	90
50) carbon tetrachloride	9.827	117	4800	1.95	ug/L	99
54) n-butyl alcohol	10.601	56	3625	80.71	ug/L	91
55) 2,2,4-trimethylpentane	10.047	57	12260	2.06	ug/L	95
56) benzene	10.078	78	13949	2.14	ug/L	94
57) tert-amyl methyl ether	10.088	87	1562	2.05	ug/L #	76
58) heptane	10.224	71	3110	1.98	ug/L	92
60) 1,2-dichloroethane	10.115	62	4603	2.33	ug/L	100
61) trichloroethene	10.795	130	3803	2.09	ug/L	96
62) ethyl acrylate	10.805	55	3215	1.87	ug/L	92
64) 2-chloroethyl vinyl ether	11.590	63	5997	10.66	ug/L	98
65) methyl methacrylate	11.067	100	585	1.65	ug/L #	79
66) 1,2-dichloropropane	11.072	63	3394	2.07	ug/L	97
67) dibromomethane	11.234	93	2009	2.02	ug/L	91
68) methylcyclohexane	10.993	83	6360	2.03	ug/L	97
69) bromodichloromethane	11.359	83	4672	2.01	ug/L	99
70) epichlorohydrin	11.726	57	1228	9.43	ug/L	82
71) cis-1,3-dichloropropene	11.809	75	5139	1.93	ug/L	98
72) 4-methyl-2-pentanone	11.898	58	3919	7.64	ug/L	96
73) 3-methyl-1-butanol	11.924	55	2368	34.33	ug/L	96
76) toluene	12.160	92	8527	2.12	ug/L	98
77) trans-1,3-dichloropropene	12.374	75	4023	1.78	ug/L	95
78) ethyl methacrylate	12.348	69	3290	1.89	ug/L	98
79) 1,1,2-trichloroethane	12.583	83	2312	1.94	ug/L	98
80) tetrachloroethene	12.735	164	2973	2.05	ug/L	98
81) 1,3-dichloropropane	12.772	76	4490	2.13	ug/L	90
82) 2-hexanone	12.751	58	3914	7.72	ug/L	95
83) butyl acetate	12.813	56	1579	1.82	ug/L	88
84) dibromochloromethane	13.033	129	3131	1.84	ug/L	97
85) 1,2-dibromoethane	13.180	107	3133	1.92	ug/L	89
86) n-butyl ether	13.514	57	12597	1.96	ug/L	95
87) chlorobenzene	13.624	112	8705	2.10	ug/L	86
88) 1,1,1,2-tetrachloroethane	13.687	131	2988	1.93	ug/L	96
89) ethylbenzene	13.671	91	15292	2.11	ug/L	98
90) m,p-xylene	13.776	106	12076	4.41	ug/L	93
91) o-xylene	14.194	106	5717	2.10	ug/L	99
92) styrene	14.210	104	9348	2.06	ug/L	98
93) bromoform	14.487	173	1772	1.75	ug/L	88
94) butyl acrylate	14.022	55	5223	1.89	ug/L	96
95) isopropylbenzene	14.529	105	14693	2.06	ug/L	98
99) bromobenzene	14.942	156	3889	2.21	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.858	83	3236	1.90	ug/L	98
102) 1,2,3-trichloropropane	14.937	110	769	1.92	ug/L	91
103) n-propylbenzene	14.937	91	18246	2.15	ug/L	97
104) 2-chlorotoluene	15.094	126	3588	2.15	ug/L	97
105) 4-chlorotoluene	15.193	91	10521	2.11	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	12262	2.12	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165733.D  
 Acq On : 13 Jul 2019 4:08 pm  
 Operator : PrashanS  
 Sample : IC7262-2  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 08:54:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:48:48 2019  
 Response via : Initial Calibration

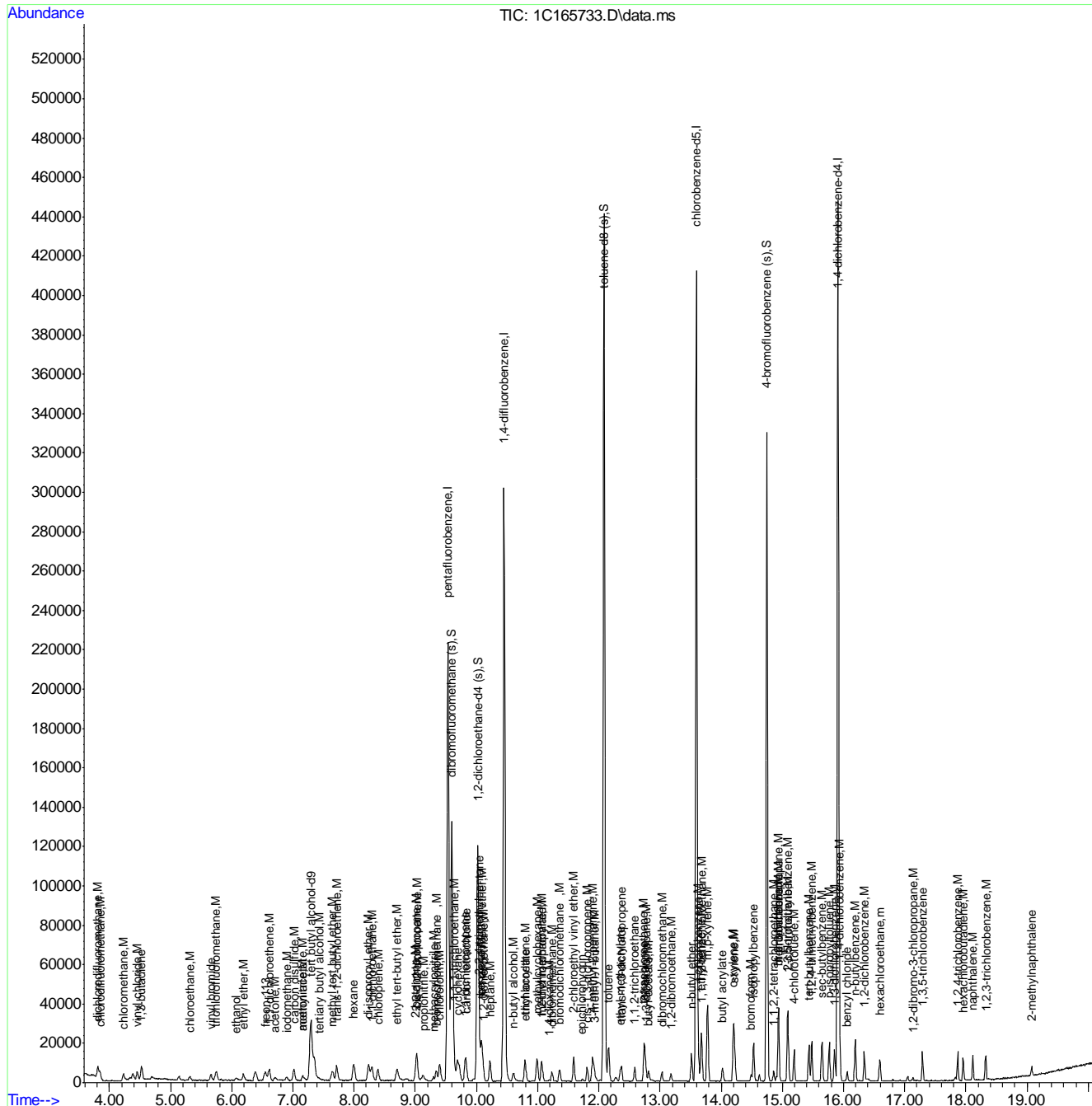
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.434	134	2173	1.99	ug/L #	75
108) 1,2,4-trimethylbenzene	15.481	105	12248	2.12	ug/L	99
109) sec-butylbenzene	15.648	105	16295	2.08	ug/L	98
110) 1,3-dichlorobenzene	15.852	146	7117	2.11	ug/L	97
111) p-isopropyltoluene	15.768	119	13312	2.09	ug/L	100
112) 1,4-dichlorobenzene	15.936	146	7223	2.15	ug/L	97
113) benzyl chloride	16.056	91	4402	1.68	ug/L	94
114) 1,2-dichlorobenzene	16.339	146	6798	2.06	ug/L	95
115) n-butylbenzene	16.187	92	7167	2.07	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.134	75	562	1.81	ug/L #	76
117) 1,3,5-trichlorobenzene	17.290	180	5172	2.10	ug/L	97
119) 1,2,4-trichlorobenzene	17.866	180	4508	2.21	ug/L	96
120) hexachlorobutadiene	17.955	225	2689	2.09	ug/L	96
121) naphthalene	18.112	128	9449	2.12	ug/L	100
122) 1,2,3-trichlorobenzene	18.326	180	4125	2.11	ug/L	89
123) hexachloroethane	16.595	201	1918	1.74	ug/L	93
124) 2-methylnaphthalene	19.074	142	2510	0.88	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165733.D  
 Acq On : 13 Jul 2019 4:08 pm  
 Operator : PrashanS  
 Sample : IC7262-2  
 Misc : MS35874,V1C7262,5.0,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 08:54:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 08:48:48 2019  
 Response via : Initial Calibration



7.7.4  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165734.D  
 Acq On : 13 Jul 2019 4:35 pm  
 Operator : PrashanS  
 Sample : IC7262-4  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 09:04:35 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.296	65	63994	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	193189	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.455	114	294320	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	235965	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	115255	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	91105	49.88	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.76%
53) 1,2-dichloroethane-d4 (s)	10.021	65	88164	51.60	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	103.20%
75) toluene-d8 (s)	12.086	98	321567	50.04	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.08%
98) 4-bromofluorobenzene (s)	14.743	95	115442	51.07	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	102.14%
Target Compounds						
2) tertiary butyl alcohol	7.416	59	3482	18.65	ug/L	66
3) ethanol	6.072	45	5488	349.54	ug/L	94
4) 1,4-dioxane	11.192	88	1703	97.64	ug/L	83
6) chlorodifluoromethane	3.849	51	9222	4.02	ug/L	96
7) dichlorodifluoromethane	3.812	85	12646	4.29	ug/L	95
8) chloromethane	4.225	50	9525	4.70	ug/L	97
9) vinyl chloride	4.456	62	9761	4.23	ug/L	97
10) 1,3-butadiene	4.524	54	6472	4.00	ug/L	97
11) bromomethane	5.135	94	3940	3.65	ug/L	90
12) chloroethane	5.313	64	4846	4.20	ug/L	92
13) trichlorofluoromethane	5.747	101	12624	4.23	ug/L	98
14) vinyl bromide	5.664	106	6776	4.21	ug/L	99
15) ethyl ether	6.192	74	3130	3.77	ug/L	96
17) freon 113	6.542	151	5647	4.08	ug/L	95
18) 1,1-dichloroethene	6.610	96	7154	4.40	ug/L	87
19) acetone	6.699	43	6777	16.71	ug/L	92
20) acetonitrile	7.160	41	6961	43.14	ug/L	98
21) iodomethane	6.898	142	4963	2.94	ug/L	97
22) carbon disulfide	7.018	76	20382	4.21	ug/L	98
23) methylene chloride	7.353	84	7425	4.35	ug/L	92
24) methyl acetate	7.149	43	3428	3.41	ug/L	82
25) methyl tert butyl ether	7.646	73	14401	3.86	ug/L	99
26) trans-1,2-dichloroethene	7.719	96	7099	4.11	ug/L	94
27) di-isopropyl ether	8.237	45	19728	3.80	ug/L	98
28) 2-butanone	9.011	72	2212	13.27	ug/L #	89
29) 1,1-dichloroethane	8.289	63	12015	4.10	ug/L	98
30) chloroprene	8.394	53	9888	3.99	ug/L	96
32) hexane	7.996	57	11209	3.97	ug/L	97
33) vinyl acetate	8.284	86	867	3.29	ug/L #	26
34) ethyl tert-butyl ether	8.697	59	14748	4.04	ug/L	99
35) ethyl acetate	9.022	45	649	3.27	ug/L #	1
36) 2,2-dichloropropane	9.016	77	8792	3.80	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165734.D  
 Acq On : 13 Jul 2019 4:35 pm  
 Operator : PrashanS  
 Sample : IC7262-4  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 09:04:35 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) cis-1,2-dichloroethene	9.027	96	7888	4.14	ug/L	95
38) methyl acrylate	9.095	85	546	2.47	ug/L #	58
39) propionitrile	9.126	54	6956	35.87	ug/L	93
40) bromochloromethane	9.346	128	3347	3.98	ug/L	93
41) tetrahydrofuran	9.382	42	1536	3.86	ug/L	89
42) chloroform	9.398	85	8343	4.19	ug/L	98
43) t-butyl formate	9.414	59	2190	3.65	ug/L	83
45) methacrylonitrile	9.299	67	1978	3.52	ug/L	91
46) 1,1,1-trichloroethane	9.628	97	11222	4.06	ug/L	95
47) cyclohexane	9.691	84	10746	4.28	ug/L	97
48) 1,1-dichloropropene	9.817	75	9497	4.07	ug/L	96
49) iso-butyl alcohol	9.832	43	2341	37.47	ug/L	93
50) carbon tetrachloride	9.832	117	9791	4.00	ug/L	97
51) tert amyl alcohol	9.958	55	930	17.21	ug/L #	86
54) n-butyl alcohol	10.596	56	7534	168.32	ug/L	99
55) 2,2,4-trimethylpentane	10.047	57	24468	4.13	ug/L	98
56) benzene	10.083	78	26947	4.15	ug/L	99
57) tert-amyl methyl ether	10.094	87	3099	4.07	ug/L	98
58) heptane	10.225	71	6450	4.12	ug/L	93
59) isopropyl acetate	10.005	87	956	3.19	ug/L #	81
60) 1,2-dichloroethane	10.115	62	8377	4.26	ug/L	99
61) trichloroethene	10.795	130	7288	4.02	ug/L	96
62) ethyl acrylate	10.805	55	6197	3.62	ug/L	95
64) 2-chloroethyl vinyl ether	11.590	63	11037	19.69	ug/L	95
65) methyl methacrylate	11.067	100	1285	3.63	ug/L #	86
66) 1,2-dichloropropane	11.067	63	6567	4.02	ug/L	98
67) dibromomethane	11.234	93	3929	3.96	ug/L	94
68) methylcyclohexane	10.993	83	12181	3.90	ug/L	98
69) bromodichloromethane	11.359	83	9261	3.99	ug/L	99
70) epichlorohydrin	11.726	57	2327	17.92	ug/L	93
71) cis-1,3-dichloropropene	11.809	75	10478	3.96	ug/L	98
72) 4-methyl-2-pentanone	11.898	58	7775	15.22	ug/L	99
73) 3-methyl-1-butanol	11.924	55	4746	69.04	ug/L	94
76) toluene	12.160	92	15979	4.00	ug/L	93
77) trans-1,3-dichloropropene	12.369	75	8221	3.66	ug/L	98
78) ethyl methacrylate	12.348	69	6697	3.88	ug/L	100
79) 1,1,2-trichloroethane	12.583	83	4352	3.68	ug/L	97
80) tetrachloroethene	12.740	164	6067	4.22	ug/L	98
81) 1,3-dichloropropane	12.766	76	8382	4.00	ug/L	90
82) 2-hexanone	12.745	58	7470	14.84	ug/L	98
83) butyl acetate	12.813	56	3342	3.88	ug/L	90
84) dibromochloromethane	13.028	129	6242	3.70	ug/L	95
85) 1,2-dibromoethane	13.180	107	6323	3.90	ug/L	97
86) n-butyl ether	13.514	57	24864	3.91	ug/L	97
87) chlorobenzene	13.624	112	17081	4.14	ug/L	90
88) 1,1,1,2-tetrachloroethane	13.687	131	6087	3.96	ug/L	96
89) ethylbenzene	13.671	91	30658	4.26	ug/L	99
90) m,p-xylene	13.776	106	23221	8.54	ug/L	98
91) o-xylene	14.194	106	11076	4.11	ug/L	96
92) styrene	14.210	104	18433	4.10	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165734.D  
 Acq On : 13 Jul 2019 4:35 pm  
 Operator : PrashanS  
 Sample : IC7262-4  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 09:04:35 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	14.487	173	3470	3.46	ug/L	96
94) butyl acrylate	14.022	55	10333	3.76	ug/L	99
95) isopropylbenzene	14.529	105	29588	4.17	ug/L	98
96) cis-1,4-dichloro-2-butene	14.623	88	1949	3.44	ug/L	92
99) bromobenzene	14.942	156	7285	4.19	ug/L	98
100) 1,1,2,2-tetrachloroethane	14.858	83	6348	3.78	ug/L	97
101) trans-1,4-dichloro-2-b...	14.900	53	1188	3.38	ug/L	89
102) 1,2,3-trichloropropane	14.932	110	1482	3.75	ug/L	94
103) n-propylbenzene	14.937	91	35598	4.24	ug/L	99
104) 2-chlorotoluene	15.094	126	7026	4.27	ug/L	94
105) 4-chlorotoluene	15.193	91	20852	4.24	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	24136	4.23	ug/L	97
107) tert-butylbenzene	15.434	134	4504	4.18	ug/L #	90
108) 1,2,4-trimethylbenzene	15.481	105	23537	4.13	ug/L	99
109) sec-butylbenzene	15.648	105	32162	4.16	ug/L	99
110) 1,3-dichlorobenzene	15.852	146	13990	4.20	ug/L	98
111) p-isopropyltoluene	15.769	119	26265	4.17	ug/L	99
112) 1,4-dichlorobenzene	15.936	146	13840	4.18	ug/L	97
113) benzyl chloride	16.056	91	8292	3.21	ug/L	98
114) 1,2-dichlorobenzene	16.339	146	13192	4.05	ug/L	96
115) n-butylbenzene	16.187	92	13920	4.07	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.128	75	1134	3.70	ug/L	85
117) 1,3,5-trichlorobenzene	17.291	180	10053	4.13	ug/L	98
118) 2-ethylhexyl acrylate	17.824	70	1215	0.82	ug/L	96
119) 1,2,4-trichlorobenzene	17.866	180	8438	4.18	ug/L	99
120) hexachlorobutadiene	17.955	225	5332	4.20	ug/L	98
121) naphthalene	18.112	128	17766	4.04	ug/L	98
122) 1,2,3-trichlorobenzene	18.321	180	8039	4.17	ug/L	96
123) hexachloroethane	16.595	201	3895	3.58	ug/L	96
124) 2-methylnaphthalene	19.074	142	5107	1.81	ug/L	95

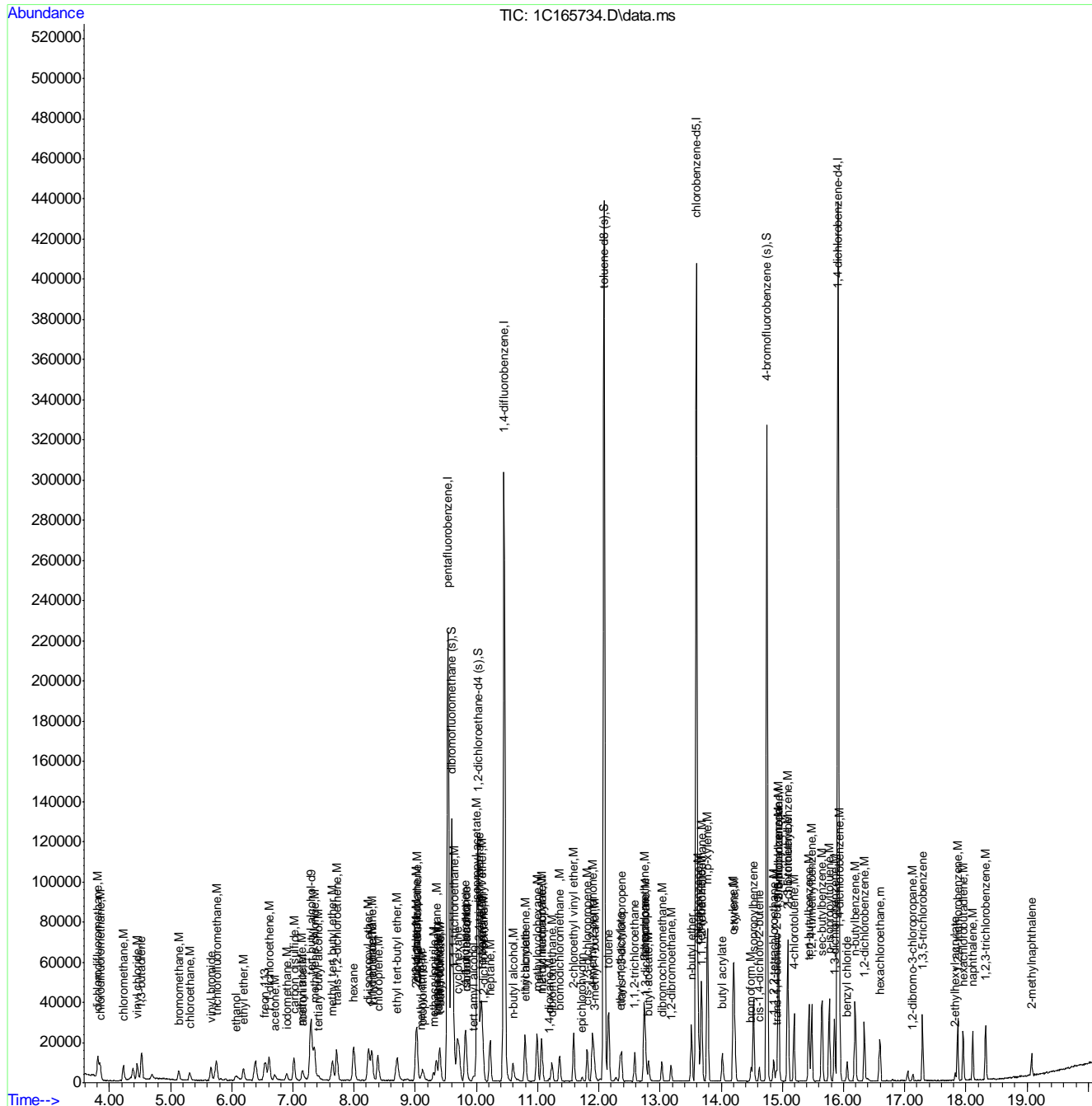
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
Data File : 1C165734.D  
Acq On : 13 Jul 2019 4:35 pm  
Operator : PrashanS  
Sample : IC7262-4  
Misc : MS35874,V1C7262,5.0,,,,1  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 09:04:35 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
QLast Update : Tue Jul 16 09:04:19 2019  
Response via : Initial Calibration



7.7.7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165735.D  
 Acq On : 13 Jul 2019 5:02 pm  
 Operator : PrashanS  
 Sample : IC7262-8  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 09:04:41 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.295	65	63044	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	192342	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.455	114	295029	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	234839	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	114787	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.602	113	90185	49.59	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.18%
53) 1,2-dichloroethane-d4 (s)	10.020	65	87916	51.34	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	102.68%
75) toluene-d8 (s)	12.086	98	320813	50.16	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.32%
98) 4-bromofluorobenzene (s)	14.743	95	114516	50.86	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	101.72%
Target Compounds						
2) tertiary butyl alcohol	7.421	59	6945	37.75	ug/L	70
3) ethanol	6.061	45	11378	735.61	ug/L	97
4) 1,4-dioxane	11.187	88	3142	182.86	ug/L	93
6) chlorodifluoromethane	3.849	51	17004	7.45	ug/L	97
7) dichlorodifluoromethane	3.812	85	22389	7.63	ug/L	99
8) chloromethane	4.231	50	16762	8.31	ug/L	100
9) vinyl chloride	4.455	62	18028	7.84	ug/L	98
10) 1,3-butadiene	4.529	54	11630	7.22	ug/L	98
11) bromomethane	5.135	94	7185	6.69	ug/L	92
12) chloroethane	5.318	64	9117	7.95	ug/L	96
13) trichlorofluoromethane	5.747	101	22772	7.66	ug/L	98
14) vinyl bromide	5.664	106	12226	7.64	ug/L	94
15) ethyl ether	6.187	74	5900	7.13	ug/L	96
16) acrolein	6.490	56	1490	6.40	ug/L	72
17) freon 113	6.553	151	10046	7.28	ug/L	95
18) 1,1-dichloroethene	6.616	96	12290	7.59	ug/L	96
19) acetone	6.699	43	12419	30.75	ug/L	95
20) acetonitrile	7.154	41	13420	83.54	ug/L	96
21) iodomethane	6.898	142	9371	5.57	ug/L	98
22) carbon disulfide	7.018	76	35781	7.43	ug/L	99
23) methylene chloride	7.348	84	13242	7.80	ug/L	95
24) methyl acetate	7.149	43	6814	6.81	ug/L	93
25) methyl tert butyl ether	7.646	73	26893	7.23	ug/L	97
26) trans-1,2-dichloroethene	7.714	96	13101	7.62	ug/L	96
27) di-isopropyl ether	8.237	45	37573	7.27	ug/L	99
28) 2-butanone	9.001	72	4540	27.36	ug/L	99
29) 1,1-dichloroethane	8.294	63	22003	7.54	ug/L	98
30) chloroprene	8.389	53	18026	7.30	ug/L	96
31) acrylonitrile	7.709	53	2672	6.11	ug/L	86
32) hexane	7.996	57	20268	7.21	ug/L	96
33) vinyl acetate	8.279	86	1647	6.28	ug/L #	83
34) ethyl tert-butyl ether	8.697	59	26423	7.27	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165735.D  
 Acq On : 13 Jul 2019 5:02 pm  
 Operator : PrashanS  
 Sample : IC7262-8  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 09:04:41 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) ethyl acetate	9.011	45	1276	6.45	ug/L #	72
36) 2,2-dichloropropane	9.011	77	15557	6.75	ug/L	95
37) cis-1,2-dichloroethene	9.032	96	14546	7.67	ug/L	98
38) methyl acrylate	9.095	85	1337	6.07	ug/L #	87
39) propionitrile	9.121	54	13959	72.31	ug/L	95
40) bromochloromethane	9.346	128	6330	7.55	ug/L	99
41) tetrahydrofuran	9.382	42	2778	7.02	ug/L	95
42) chloroform	9.403	85	14814	7.48	ug/L	97
43) t-butyl formate	9.414	59	4159	6.96	ug/L	93
45) methacrylonitrile	9.299	67	3904	6.97	ug/L	91
46) 1,1,1-trichloroethane	9.628	97	20228	7.34	ug/L	96
47) cyclohexane	9.691	84	19368	7.75	ug/L	99
48) 1,1-dichloropropene	9.816	75	16983	7.31	ug/L	97
49) iso-butyl alcohol	9.837	43	4662	74.94	ug/L	91
50) carbon tetrachloride	9.832	117	17925	7.36	ug/L	95
51) tert amyl alcohol	9.952	55	2159	40.12	ug/L #	79
54) n-butyl alcohol	10.591	56	14927	332.69	ug/L	98
55) 2,2,4-trimethylpentane	10.041	57	44357	7.48	ug/L	98
56) benzene	10.078	78	49723	7.64	ug/L	98
57) tert-amyl methyl ether	10.094	87	5718	7.50	ug/L	94
58) heptane	10.219	71	11572	7.38	ug/L	97
59) isopropyl acetate	10.005	87	1978	6.58	ug/L #	85
60) 1,2-dichloroethane	10.115	62	15649	7.94	ug/L	100
61) trichloroethene	10.795	130	13385	7.37	ug/L	100
62) ethyl acrylate	10.800	55	12138	7.07	ug/L	99
64) 2-chloroethyl vinyl ether	11.589	63	20887	37.18	ug/L	99
65) methyl methacrylate	11.061	100	2533	7.13	ug/L	96
66) 1,2-dichloropropane	11.066	63	12292	7.51	ug/L	99
67) dibromomethane	11.234	93	7566	7.61	ug/L	94
68) methylcyclohexane	10.993	83	22545	7.21	ug/L	99
69) bromodichloromethane	11.359	83	17237	7.40	ug/L	99
70) epichlorohydrin	11.726	57	4542	34.90	ug/L	95
71) cis-1,3-dichloropropene	11.809	75	19129	7.21	ug/L	99
72) 4-methyl-2-pentanone	11.893	58	14877	29.05	ug/L	95
73) 3-methyl-1-butanol	11.919	55	9572	138.90	ug/L	96
76) toluene	12.160	92	30043	7.56	ug/L	98
77) trans-1,3-dichloropropene	12.369	75	15824	7.08	ug/L	99
78) ethyl methacrylate	12.343	69	12614	7.35	ug/L	99
79) 1,1,2-trichloroethane	12.583	83	8785	7.46	ug/L	98
80) tetrachloroethene	12.735	164	10585	7.40	ug/L	98
81) 1,3-dichloropropane	12.766	76	15766	7.57	ug/L	99
82) 2-hexanone	12.745	58	14841	29.63	ug/L	97
83) butyl acetate	12.808	56	6176	7.21	ug/L	91
84) dibromochloromethane	13.028	129	11948	7.12	ug/L	98
85) 1,2-dibromoethane	13.180	107	12140	7.52	ug/L	98
86) n-butyl ether	13.514	57	46951	7.41	ug/L	99
87) chlorobenzene	13.624	112	31470	7.67	ug/L	94
88) 1,1,1,2-tetrachloroethane	13.687	131	11285	7.39	ug/L	97
89) ethylbenzene	13.671	91	55812	7.80	ug/L	100
90) m,p-xylene	13.776	106	42669	15.78	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165735.D  
 Acq On : 13 Jul 2019 5:02 pm  
 Operator : PrashanS  
 Sample : IC7262-8  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 09:04:41 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

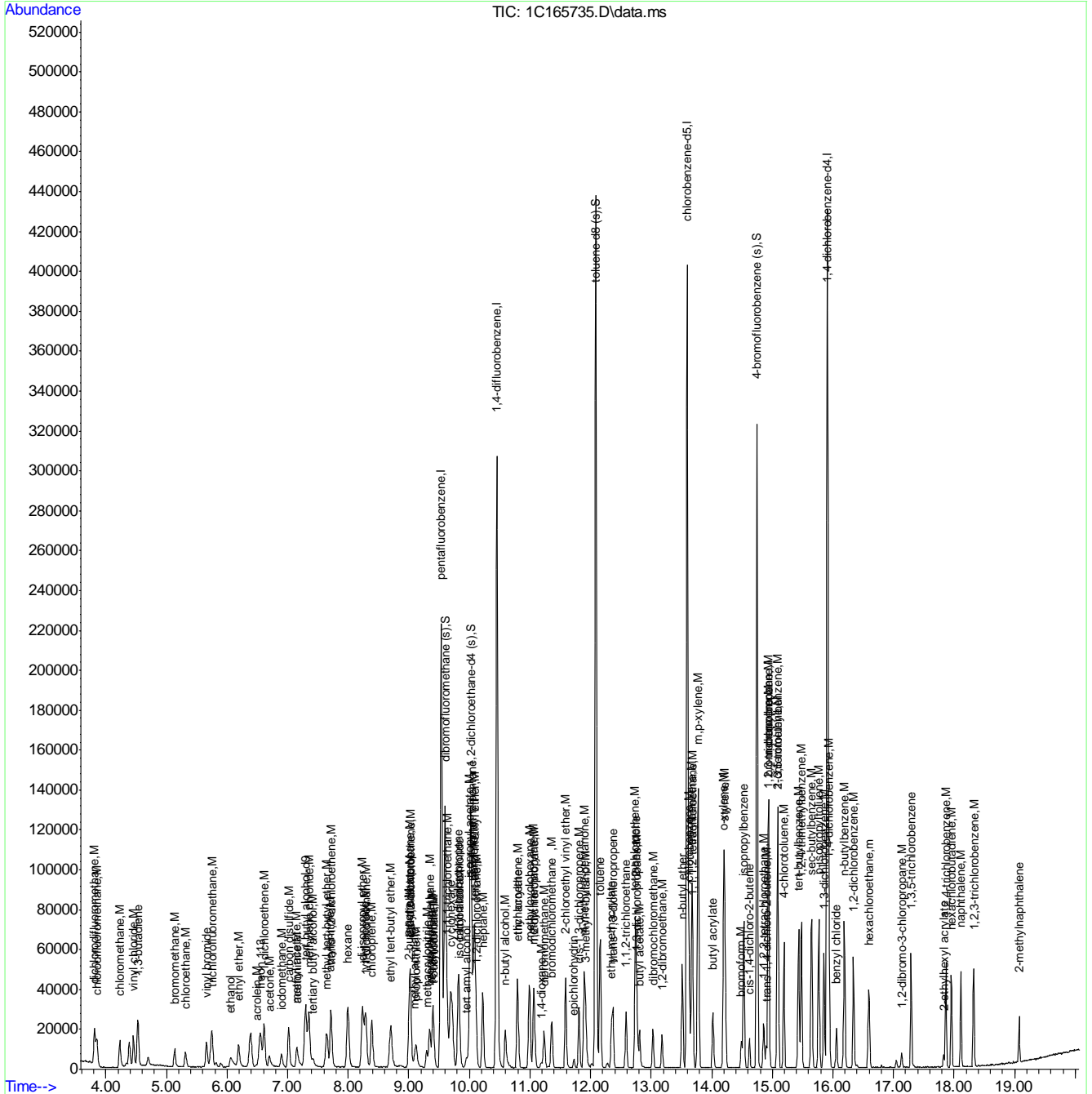
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.194	106	20337	7.58	ug/L	96
92) styrene	14.210	104	34247	7.65	ug/L	97
93) bromoform	14.487	173	6858	6.87	ug/L	96
94) butyl acrylate	14.016	55	19844	7.26	ug/L	99
95) isopropylbenzene	14.529	105	53236	7.54	ug/L	100
96) cis-1,4-dichloro-2-butene	14.623	88	3669	6.50	ug/L	99
99) bromobenzene	14.942	156	13497	7.79	ug/L	99
100) 1,1,2,2-tetrachloroethane	14.858	83	12439	7.44	ug/L	99
101) trans-1,4-dichloro-2-b...	14.900	53	2364	6.75	ug/L	91
102) 1,2,3-trichloropropane	14.932	110	2953	7.51	ug/L	92
103) n-propylbenzene	14.937	91	64092	7.66	ug/L	98
104) 2-chlorotoluene	15.094	126	12542	7.65	ug/L	94
105) 4-chlorotoluene	15.193	91	37853	7.72	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	43224	7.61	ug/L	99
107) tert-butylbenzene	15.429	134	8007	7.46	ug/L #	89
108) 1,2,4-trimethylbenzene	15.481	105	43330	7.64	ug/L	97
109) sec-butylbenzene	15.648	105	58114	7.55	ug/L	99
110) 1,3-dichlorobenzene	15.852	146	24987	7.54	ug/L	96
111) p-isopropyltoluene	15.768	119	47674	7.60	ug/L	98
112) 1,4-dichlorobenzene	15.936	146	25084	7.61	ug/L	97
113) benzyl chloride	16.056	91	16087	6.25	ug/L	99
114) 1,2-dichlorobenzene	16.339	146	23898	7.37	ug/L	98
115) n-butylbenzene	16.187	92	24828	7.29	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.134	75	2173	7.11	ug/L	93
117) 1,3,5-trichlorobenzene	17.290	180	17767	7.32	ug/L	99
118) 2-ethylhexyl acrylate	17.829	70	1880	1.27	ug/L	95
119) 1,2,4-trichlorobenzene	17.866	180	15045	7.49	ug/L	98
120) hexachlorobutadiene	17.955	225	9808	7.75	ug/L	96
121) naphthalene	18.112	128	33796	7.72	ug/L	100
122) 1,2,3-trichlorobenzene	18.326	180	14346	7.47	ug/L	98
123) hexachloroethane	16.595	201	7157	6.61	ug/L	94
124) 2-methylnaphthalene	19.074	142	9623	3.42	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\
Data File : 1C165735.D
Acq On : 13 Jul 2019 5:02 pm
Operator : PrashanS
Sample : IC7262-8
Misc : MS35874,V1C7262,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 09:04:41 2019
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um
QLast Update : Tue Jul 16 09:04:19 2019
Response via : Initial Calibration



7.7.6

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165736.D  
 Acq On : 13 Jul 2019 5:30 pm  
 Operator : PrashanS  
 Sample : IC7262-20  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 09:04:59 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) tert butyl alcohol-d9	7.296	65	66434	500.00	ug/L	0.00	
5) pentafluorobenzene	9.534	168	190365	50.00	ug/L	0.00	
52) 1,4-difluorobenzene	10.455	114	294658	50.00	ug/L	0.00	
74) chlorobenzene-d5	13.593	117	233629	50.00	ug/L	0.00	
97) 1,4-dichlorobenzene-d4	15.910	152	114537	50.00	ug/L	0.00	
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.597	113	90455	50.26	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.52%	
53) 1,2-dichloroethane-d4 (s)	10.021	65	88666	51.84	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 130	Recovery	=	103.68%	
75) toluene-d8 (s)	12.086	98	318679	50.08	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.16%	
98) 4-bromofluorobenzene (s)	14.743	95	113369	50.47	ug/L	0.00	
Spiked Amount	50.000	Range	79 - 127	Recovery	=	100.94%	
Target Compounds							
2) tertiary butyl alcohol	7.416	59	18693	96.43	ug/L	72	Qvalue
3) ethanol	6.061	45	31274	1918.74	ug/L	90	
4) 1,4-dioxane	11.182	88	8840	488.22	ug/L	99	
6) chlorodifluoromethane	3.849	51	44457	19.67	ug/L	98	
7) dichlorodifluoromethane	3.812	85	58209	20.04	ug/L	98	
8) chloromethane	4.231	50	42872	21.47	ug/L	100	
9) vinyl chloride	4.456	62	46379	20.38	ug/L	98	
10) 1,3-butadiene	4.524	54	31375	19.69	ug/L	97	
11) bromomethane	5.130	94	19300	18.15	ug/L	97	
12) chloroethane	5.313	64	22919	20.18	ug/L	98	
13) trichlorofluoromethane	5.742	101	59296	20.16	ug/L	98	
14) vinyl bromide	5.659	106	32344	20.41	ug/L	99	
15) ethyl ether	6.187	74	16234	19.83	ug/L	98	
16) acrolein	6.469	56	4522	19.62	ug/L	92	
17) freon 113	6.548	151	26810	19.64	ug/L	98	
18) 1,1-dichloroethene	6.610	96	31538	19.67	ug/L	98	
19) acetone	6.689	43	31871	79.73	ug/L	97	
20) acetonitrile	7.149	41	32959	207.31	ug/L	99	
21) iodomethane	6.903	142	29771	17.89	ug/L	99	
22) carbon disulfide	7.013	76	93519	19.62	ug/L	99	
23) methylene chloride	7.353	84	33931	20.20	ug/L	98	
24) methyl acetate	7.144	43	19778	19.98	ug/L	98	
25) methyl tert butyl ether	7.641	73	74021	20.12	ug/L	100	
26) trans-1,2-dichloroethene	7.714	96	34349	20.18	ug/L	99	
27) di-isopropyl ether	8.237	45	100406	19.62	ug/L	98	
28) 2-butanone	8.995	72	12709	77.38	ug/L	98	
29) 1,1-dichloroethane	8.289	63	57759	20.01	ug/L	100	
30) chloroprene	8.389	53	47760	19.55	ug/L	99	
31) acrylonitrile	7.704	53	8538	19.72	ug/L	93	
32) hexane	7.991	57	54267	19.50	ug/L	96	
33) vinyl acetate	8.279	86	5286	20.37	ug/L #	84	
34) ethyl tert-butyl ether	8.702	59	72305	20.11	ug/L	96	

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165736.D  
 Acq On : 13 Jul 2019 5:30 pm  
 Operator : PrashanS  
 Sample : IC7262-20  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 09:04:59 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) ethyl acetate	9.006	45	3739	19.11	ug/L #	86
36) 2,2-dichloropropane	9.011	77	43876	19.23	ug/L	97
37) cis-1,2-dichloroethene	9.027	96	37358	19.91	ug/L	98
38) methyl acrylate	9.090	85	4086	18.74	ug/L	92
39) propionitrile	9.116	54	38656	202.32	ug/L	98
40) bromochloromethane	9.346	128	17033	20.54	ug/L	97
41) tetrahydrofuran	9.377	42	8227	20.99	ug/L	94
42) chloroform	9.398	85	39699	20.25	ug/L	99
43) t-butyl formate	9.414	59	12389	20.95	ug/L	96
45) methacrylonitrile	9.288	67	10883	19.64	ug/L	92
46) 1,1,1-trichloroethane	9.628	97	53812	19.74	ug/L	99
47) cyclohexane	9.686	84	50604	20.46	ug/L	91
48) 1,1-dichloropropene	9.811	75	45549	19.81	ug/L	99
49) iso-butyl alcohol	9.832	43	12643	205.35	ug/L	97
50) carbon tetrachloride	9.832	117	47348	19.65	ug/L	99
51) tert amyl alcohol	9.947	55	5428	101.91	ug/L	94
54) n-butyl alcohol	10.585	56	43633	973.71	ug/L	98
55) 2,2,4-trimethylpentane	10.041	57	119473	20.16	ug/L	99
56) benzene	10.078	78	131117	20.16	ug/L	100
57) tert-amyl methyl ether	10.089	87	15917	20.89	ug/L	99
58) heptane	10.219	71	31379	20.03	ug/L	98
59) isopropyl acetate	9.994	87	5812	19.35	ug/L #	84
60) 1,2-dichloroethane	10.109	62	40265	20.45	ug/L	99
61) trichloroethene	10.795	130	36395	20.07	ug/L	99
62) ethyl acrylate	10.795	55	33373	19.46	ug/L	99
64) 2-chloroethyl vinyl ether	11.590	63	59093	105.32	ug/L	98
65) methyl methacrylate	11.061	100	7008	19.76	ug/L	97
66) 1,2-dichloropropane	11.067	63	32403	19.81	ug/L	99
67) dibromomethane	11.229	93	19933	20.07	ug/L	92
68) methylcyclohexane	10.988	83	61208	19.60	ug/L	96
69) bromodichloromethane	11.359	83	45515	19.58	ug/L	98
70) epichlorohydrin	11.726	57	13251	101.95	ug/L	100
71) cis-1,3-dichloropropene	11.809	75	52310	19.74	ug/L	97
72) 4-methyl-2-pentanone	11.893	58	40538	79.25	ug/L	100
73) 3-methyl-1-butanol	11.919	55	27210	395.34	ug/L	95
76) toluene	12.160	92	79220	20.05	ug/L	100
77) trans-1,3-dichloropropene	12.369	75	43437	19.54	ug/L	99
78) ethyl methacrylate	12.343	69	34539	20.23	ug/L	99
79) 1,1,2-trichloroethane	12.583	83	23276	19.88	ug/L	99
80) tetrachloroethene	12.735	164	28132	19.76	ug/L	99
81) 1,3-dichloropropane	12.766	76	41432	19.98	ug/L	98
82) 2-hexanone	12.740	58	40269	80.81	ug/L	99
83) butyl acetate	12.808	56	17393	20.40	ug/L	99
84) dibromochloromethane	13.028	129	32091	19.21	ug/L	98
85) 1,2-dibromoethane	13.180	107	31865	19.84	ug/L	99
86) n-butyl ether	13.514	57	126952	20.14	ug/L	99
87) chlorobenzene	13.624	112	82215	20.14	ug/L	98
88) 1,1,1,2-tetrachloroethane	13.687	131	29772	19.58	ug/L	99
89) ethylbenzene	13.671	91	145311	20.41	ug/L	100
90) m,p-xylene	13.776	106	110592	41.10	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165736.D  
 Acq On : 13 Jul 2019 5:30 pm  
 Operator : PrashanS  
 Sample : IC7262-20  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 09:04:59 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.194	106	54405	20.37	ug/L	100
92) styrene	14.210	104	90348	20.29	ug/L	98
93) bromoform	14.487	173	18798	18.93	ug/L	97
94) butyl acrylate	14.016	55	54703	20.11	ug/L	99
95) isopropylbenzene	14.529	105	140153	19.96	ug/L	100
96) cis-1,4-dichloro-2-butene	14.623	88	10781	19.21	ug/L	94
99) bromobenzene	14.942	156	35485	20.52	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.858	83	32532	19.49	ug/L	97
101) trans-1,4-dichloro-2-b...	14.900	53	6871	19.67	ug/L	90
102) 1,2,3-trichloropropane	14.932	110	8044	20.49	ug/L	99
103) n-propylbenzene	14.937	91	170796	20.46	ug/L	99
104) 2-chlorotoluene	15.094	126	33965	20.77	ug/L	98
105) 4-chlorotoluene	15.193	91	100185	20.48	ug/L	98
106) 1,3,5-trimethylbenzene	15.083	105	114845	20.26	ug/L	99
107) tert-butylbenzene	15.434	134	21818	20.38	ug/L	91
108) 1,2,4-trimethylbenzene	15.481	105	114657	20.26	ug/L	98
109) sec-butylbenzene	15.648	105	154897	20.16	ug/L	99
110) 1,3-dichlorobenzene	15.852	146	67823	20.51	ug/L	99
111) p-isopropyltoluene	15.769	119	126833	20.27	ug/L	100
112) 1,4-dichlorobenzene	15.936	146	66016	20.06	ug/L	99
113) benzyl chloride	16.056	91	47363	18.43	ug/L	98
114) 1,2-dichlorobenzene	16.339	146	64009	19.78	ug/L	100
115) n-butylbenzene	16.187	92	69296	20.40	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.134	75	6061	19.88	ug/L	95
117) 1,3,5-trichlorobenzene	17.291	180	49757	20.56	ug/L	100
118) 2-ethylhexyl acrylate	17.824	70	5108	3.45	ug/L	92
119) 1,2,4-trichlorobenzene	17.866	180	41797	20.85	ug/L	100
120) hexachlorobutadiene	17.955	225	26313	20.85	ug/L	97
121) naphthalene	18.112	128	91537	20.96	ug/L	100
122) 1,2,3-trichlorobenzene	18.321	180	39469	20.61	ug/L	98
123) hexachloroethane	16.595	201	20239	18.72	ug/L	98
124) 2-methylnaphthalene	19.074	142	28125	10.02	ug/L	98

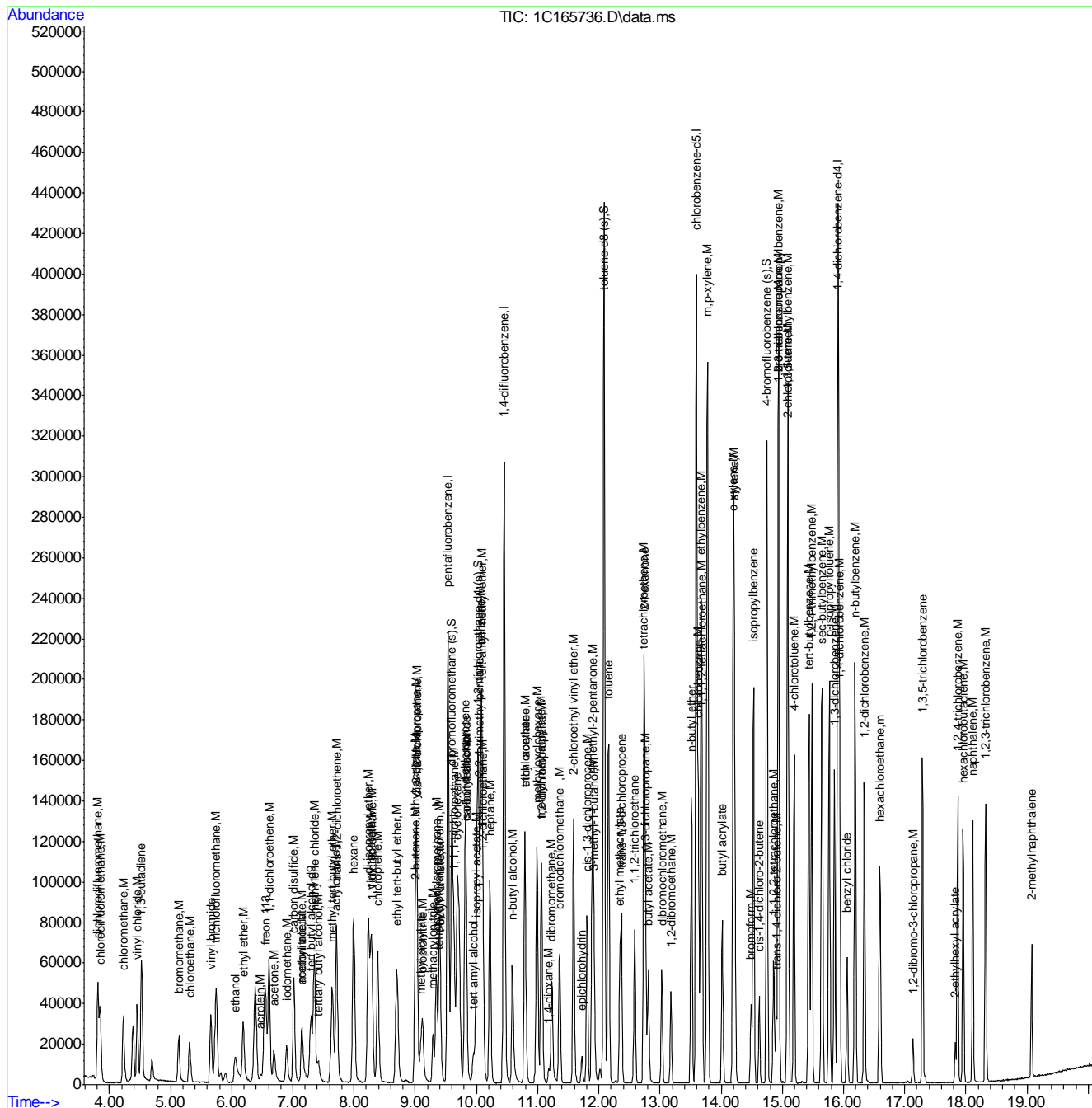
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
Data File : 1C165736.D  
Acq On : 13 Jul 2019 5:30 pm  
Operator : PrashanS  
Sample : IC7262-20  
Misc : MS35874,V1C7262,5.0,,,,1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 09:04:59 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
QLast Update : Tue Jul 16 09:04:19 2019  
Response via : Initial Calibration



777  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165737.D  
 Acq On : 13 Jul 2019 5:57 pm  
 Operator : PrashanS  
 Sample : ICC7262-50  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 09:05:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) tert butyl alcohol-d9	7.295	65	66005	500.00	ug/L	0.00	
5) pentafluorobenzene	9.534	168	194516	50.00	ug/L	0.00	
52) 1,4-difluorobenzene	10.455	114	301501	50.00	ug/L	0.00	
74) chlorobenzene-d5	13.593	117	238058	50.00	ug/L	0.00	
97) 1,4-dichlorobenzene-d4	15.910	152	116764	50.00	ug/L	0.00	
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.597	113	91952	50.00	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.00%	
53) 1,2-dichloroethane-d4 (s)	10.020	65	87507	50.00	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 130	Recovery	=	100.00%	
75) toluene-d8 (s)	12.086	98	324171	50.00	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%	
98) 4-bromofluorobenzene (s)	14.743	95	114508	50.00	ug/L	0.00	
Spiked Amount	50.000	Range	79 - 127	Recovery	=	100.00%	
Target Compounds							
2) tertiary butyl alcohol	7.416	59	48151	250.00	ug/L	100	Qvalue
3) ethanol	6.056	45	80970	5000.00	ug/L	100	
4) 1,4-dioxane	11.182	88	22487	1250.00	ug/L	100	
6) chlorodifluoromethane	3.849	51	115445	50.00	ug/L	100	
7) dichlorodifluoromethane	3.812	85	148402	50.00	ug/L	100	
8) chloromethane	4.231	50	102020	50.00	ug/L	100	
9) vinyl chloride	4.455	62	116241	50.00	ug/L	100	
10) 1,3-butadiene	4.529	54	81414	50.00	ug/L	100	
11) bromomethane	5.130	94	54342	50.00	ug/L	100	
12) chloroethane	5.313	64	58022	50.00	ug/L	100	
13) trichlorofluoromethane	5.747	101	150282	50.00	ug/L	100	
14) vinyl bromide	5.658	106	80950	50.00	ug/L	100	
15) ethyl ether	6.192	74	41826	50.00	ug/L	100	
16) acrolein	6.469	56	11774	50.00	ug/L	100	
17) freon 113	6.548	151	69733	50.00	ug/L	100	
18) 1,1-dichloroethene	6.610	96	81928	50.00	ug/L	100	
19) acetone	6.684	43	81691	200.00	ug/L	100	
20) acetonitrile	7.144	41	81226	500.00	ug/L	100	
21) iodomethane	6.898	142	85005	50.00	ug/L	100	
22) carbon disulfide	7.018	76	243528	50.00	ug/L	100	
23) methylene chloride	7.353	84	85838	50.00	ug/L	100	
24) methyl acetate	7.144	43	50583	50.00	ug/L	100	
25) methyl tert butyl ether	7.641	73	187992	50.00	ug/L	100	
26) trans-1,2-dichloroethene	7.714	96	86961	50.00	ug/L	100	
27) di-isopropyl ether	8.237	45	261415	50.00	ug/L	100	
28) 2-butanone	8.995	72	33565	200.00	ug/L	100	
29) 1,1-dichloroethane	8.289	63	147464	50.00	ug/L	100	
30) chloroprene	8.389	53	124789	50.00	ug/L	100	
31) acrylonitrile	7.698	53	22119	50.00	ug/L	100	
32) hexane	7.991	57	142172	50.00	ug/L	100	
33) vinyl acetate	8.274	86	13256	50.00	ug/L	100	
34) ethyl tert-butyl ether	8.697	59	183700	50.00	ug/L	100	

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165737.D  
 Acq On : 13 Jul 2019 5:57 pm  
 Operator : PrashanS  
 Sample : ICC7262-50  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 09:05:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) ethyl acetate	9.006	45	9996	50.00	ug/L	100
36) 2,2-dichloropropane	9.011	77	116582	50.00	ug/L	100
37) cis-1,2-dichloroethene	9.027	96	95883	50.00	ug/L	100
38) methyl acrylate	9.084	85	11142	50.00	ug/L	100
39) propionitrile	9.116	54	97617	500.00	ug/L	100
40) bromochloromethane	9.346	128	42367	50.00	ug/L	100
41) tetrahydrofuran	9.372	42	20020	50.00	ug/L	100
42) chloroform	9.398	85	100184	50.00	ug/L	100
43) t-butyl formate	9.414	59	30209	50.00	ug/L	100
45) methacrylonitrile	9.288	67	28312	50.00	ug/L	100
46) 1,1,1-trichloroethane	9.633	97	139285	50.00	ug/L	100
47) cyclohexane	9.691	84	126362	50.00	ug/L	100
48) 1,1-dichloropropene	9.811	75	117499	50.00	ug/L	100
49) iso-butyl alcohol	9.837	43	31456	500.00	ug/L	100
50) carbon tetrachloride	9.827	117	123120	50.00	ug/L	100
51) tert amyl alcohol	9.947	55	13606	250.00	ug/L	100
54) n-butyl alcohol	10.585	56	114629	2500.00	ug/L	100
55) 2,2,4-trimethylpentane	10.041	57	303172	50.00	ug/L	100
56) benzene	10.078	78	332755	50.00	ug/L	100
57) tert-amyl methyl ether	10.088	87	38978	50.00	ug/L	100
58) heptane	10.219	71	80137	50.00	ug/L	100
59) isopropyl acetate	9.994	87	15367	50.00	ug/L	100
60) 1,2-dichloroethane	10.109	62	100758	50.00	ug/L	100
61) trichloroethene	10.795	130	92771	50.00	ug/L	100
62) ethyl acrylate	10.795	55	87760	50.00	ug/L	100
64) 2-chloroethyl vinyl ether	11.590	63	143532	250.00	ug/L	100
65) methyl methacrylate	11.061	100	18148	50.00	ug/L	100
66) 1,2-dichloropropane	11.067	63	83663	50.00	ug/L	100
67) dibromomethane	11.234	93	50816	50.00	ug/L	100
68) methylcyclohexane	10.988	83	159798	50.00	ug/L	100
69) bromodichloromethane	11.359	83	118942	50.00	ug/L	100
70) epichlorohydrin	11.726	57	33247	250.00	ug/L	100
71) cis-1,3-dichloropropene	11.809	75	135597	50.00	ug/L	100
72) 4-methyl-2-pentanone	11.893	58	104674	200.00	ug/L	100
73) 3-methyl-1-butanol	11.919	55	70425	1000.00	ug/L	100
76) toluene	12.160	92	201328	50.00	ug/L	100
77) trans-1,3-dichloropropene	12.369	75	113282	50.00	ug/L	100
78) ethyl methacrylate	12.343	69	86995	50.00	ug/L	100
79) 1,1,2-trichloroethane	12.583	83	59655	50.00	ug/L	100
80) tetrachloroethene	12.735	164	72526	50.00	ug/L	100
81) 1,3-dichloropropane	12.766	76	105628	50.00	ug/L	100
82) 2-hexanone	12.740	58	101552	200.00	ug/L	100
83) butyl acetate	12.808	56	43443	50.00	ug/L	100
84) dibromochloromethane	13.028	129	85109	50.00	ug/L	100
85) 1,2-dibromoethane	13.180	107	81809	50.00	ug/L	100
86) n-butyl ether	13.514	57	321072	50.00	ug/L	100
87) chlorobenzene	13.624	112	207947	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.687	131	77452	50.00	ug/L	100
89) ethylbenzene	13.671	91	362753	50.00	ug/L	100
90) m,p-xylene	13.776	106	274186	100.00	ug/L	100

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165737.D  
 Acq On : 13 Jul 2019 5:57 pm  
 Operator : PrashanS  
 Sample : ICC7262-50  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 09:05:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

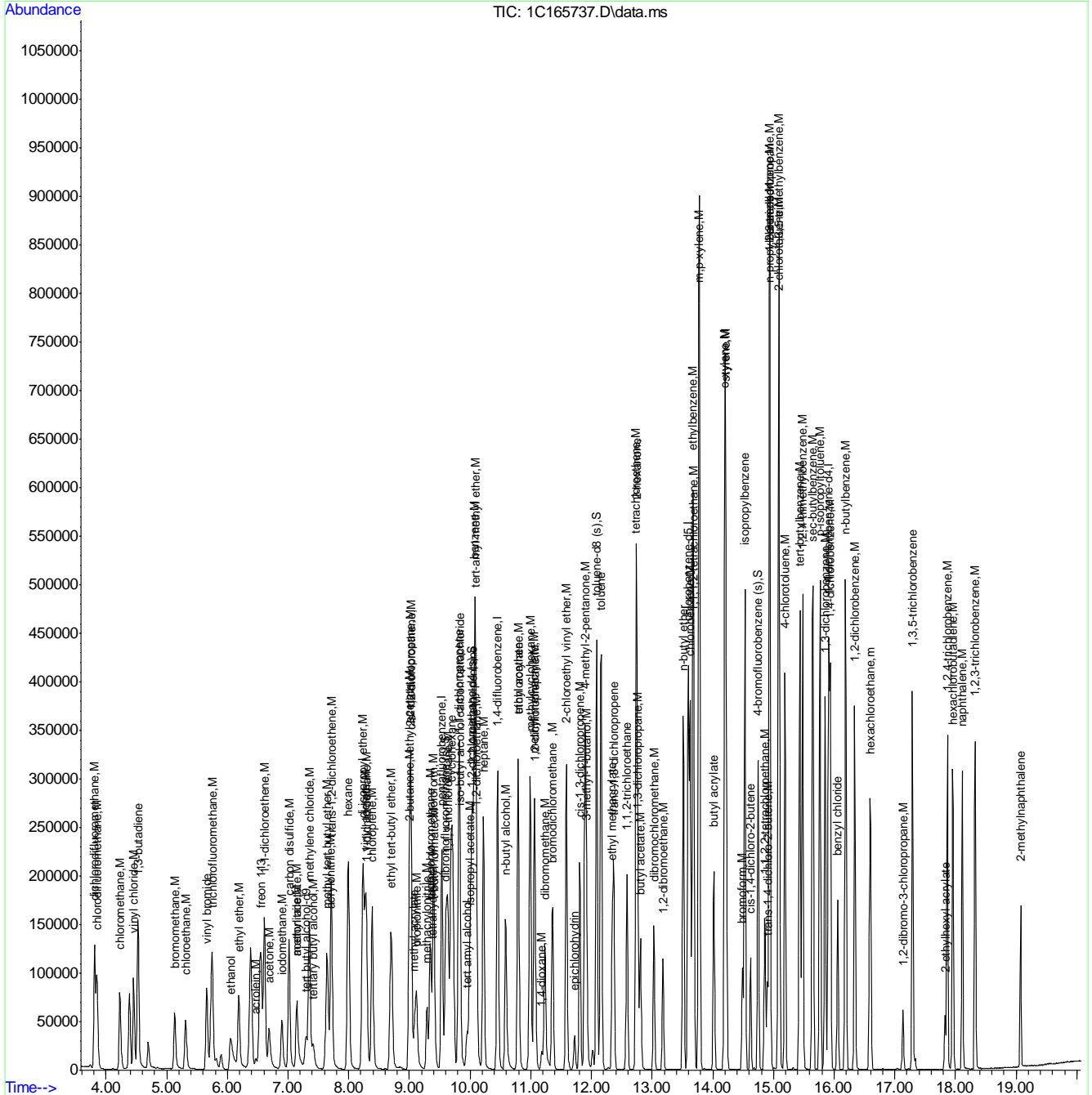
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.194	106	136068	50.00	ug/L	100
92) styrene	14.210	104	226850	50.00	ug/L	100
93) bromoform	14.487	173	50603	50.00	ug/L	100
94) butyl acrylate	14.016	55	138620	50.00	ug/L	100
95) isopropylbenzene	14.529	105	357818	50.00	ug/L	100
96) cis-1,4-dichloro-2-butene	14.623	88	28598	50.00	ug/L	100
99) bromobenzene	14.942	156	88148	50.00	ug/L	100
100) 1,1,2,2-tetrachloroethane	14.858	83	85071	50.00	ug/L	100
101) trans-1,4-dichloro-2-b...	14.900	53	17806	50.00	ug/L	100
102) 1,2,3-trichloropropane	14.932	110	20012	50.00	ug/L	100
103) n-propylbenzene	14.937	91	425527	50.00	ug/L	100
104) 2-chlorotoluene	15.094	126	83339	50.00	ug/L	100
105) 4-chlorotoluene	15.188	91	249383	50.00	ug/L	100
106) 1,3,5-trimethylbenzene	15.083	105	288970	50.00	ug/L	100
107) tert-butylbenzene	15.434	134	54557	50.00	ug/L	100
108) 1,2,4-trimethylbenzene	15.481	105	288434	50.00	ug/L	100
109) sec-butylbenzene	15.648	105	391651	50.00	ug/L	100
110) 1,3-dichlorobenzene	15.852	146	168562	50.00	ug/L	100
111) p-isopropyltoluene	15.768	119	318945	50.00	ug/L	100
112) 1,4-dichlorobenzene	15.936	146	167751	50.00	ug/L	100
113) benzyl chloride	16.056	91	130975	50.00	ug/L	100
114) 1,2-dichlorobenzene	16.339	146	164907	50.00	ug/L	100
115) n-butylbenzene	16.187	92	173111	50.00	ug/L	100
116) 1,2-dibromo-3-chloropr...	17.134	75	15537	50.00	ug/L	100
117) 1,3,5-trichlorobenzene	17.290	180	123371	50.00	ug/L	100
118) 2-ethylhexyl acrylate	17.829	70	15103	10.00	ug/L	100
119) 1,2,4-trichlorobenzene	17.866	180	102174	50.00	ug/L	100
120) hexachlorobutadiene	17.955	225	64328	50.00	ug/L	100
121) naphthalene	18.112	128	222619	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	18.321	180	97630	50.00	ug/L	100
123) hexachloroethane	16.595	201	55104	50.00	ug/L	100
124) 2-methylnaphthalene	19.074	142	71537	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165737.D  
 Acq On : 13 Jul 2019 5:57 pm  
 Operator : PrashanS  
 Sample : ICC7262-50  
 Misc : MS35874,V1C7262,5.0,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 09:05:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration



7.7.8  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165738.D  
 Acq On : 13 Jul 2019 6:25 pm  
 Operator : PrashanS  
 Sample : IC7262-100  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 09:05:20 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) tert butyl alcohol-d9	7.295	65	68921	500.00	ug/L	0.00	
5) pentafluorobenzene	9.534	168	198261	50.00	ug/L	0.00	
52) 1,4-difluorobenzene	10.454	114	310271	50.00	ug/L	0.00	
74) chlorobenzene-d5	13.598	117	242791	50.00	ug/L	0.00	
97) 1,4-dichlorobenzene-d4	15.910	152	118418	50.00	ug/L	0.00	
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.597	113	92623	49.41	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 127	Recovery	=	98.82%	
53) 1,2-dichloroethane-d4 (s)	10.020	65	89325	49.60	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 130	Recovery	=	99.20%	
75) toluene-d8 (s)	12.086	98	332607	50.30	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.60%	
98) 4-bromofluorobenzene (s)	14.743	95	116966	50.36	ug/L	0.00	
Spiked Amount	50.000	Range	79 - 127	Recovery	=	100.72%	
Target Compounds							
2) tertiary butyl alcohol	7.416	59	98491	489.73	ug/L	97	Qvalue
3) ethanol	6.051	45	163595	9674.78	ug/L	95	
4) 1,4-dioxane	11.181	88	45706	2433.20	ug/L	91	
6) chlorodifluoromethane	3.849	51	232080	98.62	ug/L	98	
7) dichlorodifluoromethane	3.812	85	304267	100.58	ug/L	98	
8) chloromethane	4.225	50	218095	104.87	ug/L	99	
9) vinyl chloride	4.455	62	236721	99.90	ug/L	98	
10) 1,3-butadiene	4.523	54	157704	95.02	ug/L	100	
11) bromomethane	5.130	94	124356	112.26	ug/L	99	
12) chloroethane	5.308	64	121742	102.93	ug/L	99	
13) trichlorofluoromethane	5.742	101	306526	100.06	ug/L	98	
14) vinyl bromide	5.658	106	171430	103.89	ug/L	99	
15) ethyl ether	6.187	74	87905	103.10	ug/L	93	
16) acrolein	6.464	56	25237	105.15	ug/L	99	
17) freon 113	6.547	151	140219	98.64	ug/L	98	
18) 1,1-dichloroethene	6.610	96	163913	98.15	ug/L	100	
19) acetone	6.683	43	164028	394.00	ug/L	99	
20) acetonitrile	7.144	41	169976	1026.55	ug/L	99	
21) iodomethane	6.898	142	179849	103.79	ug/L	99	
22) carbon disulfide	7.013	76	492353	99.18	ug/L	100	
23) methylene chloride	7.348	84	177028	101.17	ug/L	98	
24) methyl acetate	7.138	43	101425	98.36	ug/L	97	
25) methyl tert butyl ether	7.641	73	410389	107.09	ug/L	100	
26) trans-1,2-dichloroethene	7.714	96	176336	99.47	ug/L	99	
27) di-isopropyl ether	8.237	45	546244	102.50	ug/L	99	
28) 2-butanone	8.990	72	69821	408.18	ug/L	91	
29) 1,1-dichloroethane	8.289	63	296650	98.68	ug/L	98	
30) chloroprene	8.389	53	252030	99.07	ug/L	99	
31) acrylonitrile	7.698	53	47068	104.39	ug/L	100	
32) hexane	7.991	57	283127	97.69	ug/L	98	
33) vinyl acetate	8.273	86	29685	109.85	ug/L	99	
34) ethyl tert-butyl ether	8.697	59	419907	112.13	ug/L	98	

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165738.D  
 Acq On : 13 Jul 2019 6:25 pm  
 Operator : PrashanS  
 Sample : IC7262-100  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 09:05:20 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) ethyl acetate	9.000	45	21217	104.12	ug/L #	66
36) 2,2-dichloropropane	9.011	77	241401	101.58	ug/L	98
37) cis-1,2-dichloroethene	9.027	96	194254	99.38	ug/L	98
38) methyl acrylate	9.089	85	23226	102.26	ug/L	94
39) propionitrile	9.116	54	203516	1022.73	ug/L	96
40) bromochloromethane	9.346	128	86556	100.22	ug/L	98
41) tetrahydrofuran	9.372	42	42495	104.13	ug/L	96
42) chloroform	9.398	85	203488	99.64	ug/L	99
43) t-butyl formate	9.408	59	75156	122.04	ug/L	97
45) methacrylonitrile	9.288	67	60452	104.74	ug/L	95
46) 1,1,1-trichloroethane	9.628	97	283490	99.84	ug/L	99
47) cyclohexane	9.686	84	258603	100.39	ug/L	93
48) 1,1-dichloropropene	9.811	75	236963	98.93	ug/L	99
49) iso-butyl alcohol	9.832	43	66276	1033.57	ug/L	97
50) carbon tetrachloride	9.827	117	246330	98.15	ug/L	100
51) tert amyl alcohol	9.947	55	29575	533.15	ug/L	93
54) n-butyl alcohol	10.585	56	242967	5149.21	ug/L	100
55) 2,2,4-trimethylpentane	10.041	57	617682	98.99	ug/L	100
56) benzene	10.078	78	671947	98.11	ug/L	100
57) tert-amyl methyl ether	10.088	87	89907	112.07	ug/L	96
58) heptane	10.219	71	164176	99.54	ug/L	99
59) isopropyl acetate	9.994	87	32506	102.78	ug/L #	86
60) 1,2-dichloroethane	10.109	62	204551	98.64	ug/L	99
61) trichloroethene	10.794	130	190019	99.52	ug/L	99
62) ethyl acrylate	10.789	55	186400	103.20	ug/L	99
64) 2-chloroethyl vinyl ether	11.584	63	340342	576.04	ug/L	98
65) methyl methacrylate	11.056	100	38278	102.48	ug/L	93
66) 1,2-dichloropropane	11.066	63	170848	99.22	ug/L	98
67) dibromomethane	11.234	93	106859	102.17	ug/L	99
68) methylcyclohexane	10.988	83	316568	96.25	ug/L	98
69) bromodichloromethane	11.359	83	247538	101.12	ug/L	99
70) epichlorohydrin	11.725	57	70304	513.71	ug/L	99
71) cis-1,3-dichloropropene	11.809	75	283476	101.57	ug/L	99
72) 4-methyl-2-pentanone	11.893	58	216532	402.03	ug/L	99
73) 3-methyl-1-butanol	11.919	55	145486	2007.44	ug/L	98
76) toluene	12.160	92	416176	101.34	ug/L	99
77) trans-1,3-dichloropropene	12.369	75	238331	103.14	ug/L	99
78) ethyl methacrylate	12.343	69	188467	106.21	ug/L	98
79) 1,1,2-trichloroethane	12.583	83	124601	102.40	ug/L	99
80) tetrachloroethene	12.735	164	145839	98.58	ug/L	99
81) 1,3-dichloropropane	12.766	76	217049	100.74	ug/L	99
82) 2-hexanone	12.740	58	206883	399.50	ug/L	100
83) butyl acetate	12.808	56	91903	103.71	ug/L	98
84) dibromochloromethane	13.028	129	180690	104.08	ug/L	99
85) 1,2-dibromoethane	13.179	107	173313	103.86	ug/L	99
86) n-butyl ether	13.514	57	659745	100.74	ug/L	99
87) chlorobenzene	13.624	112	431832	101.81	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.687	131	160029	101.29	ug/L	99
89) ethylbenzene	13.671	91	732782	99.03	ug/L	99
90) m,p-xylene	13.776	106	550293	196.79	ug/L	99



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165738.D  
 Acq On : 13 Jul 2019 6:25 pm  
 Operator : PrashanS  
 Sample : IC7262-100  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 09:05:20 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

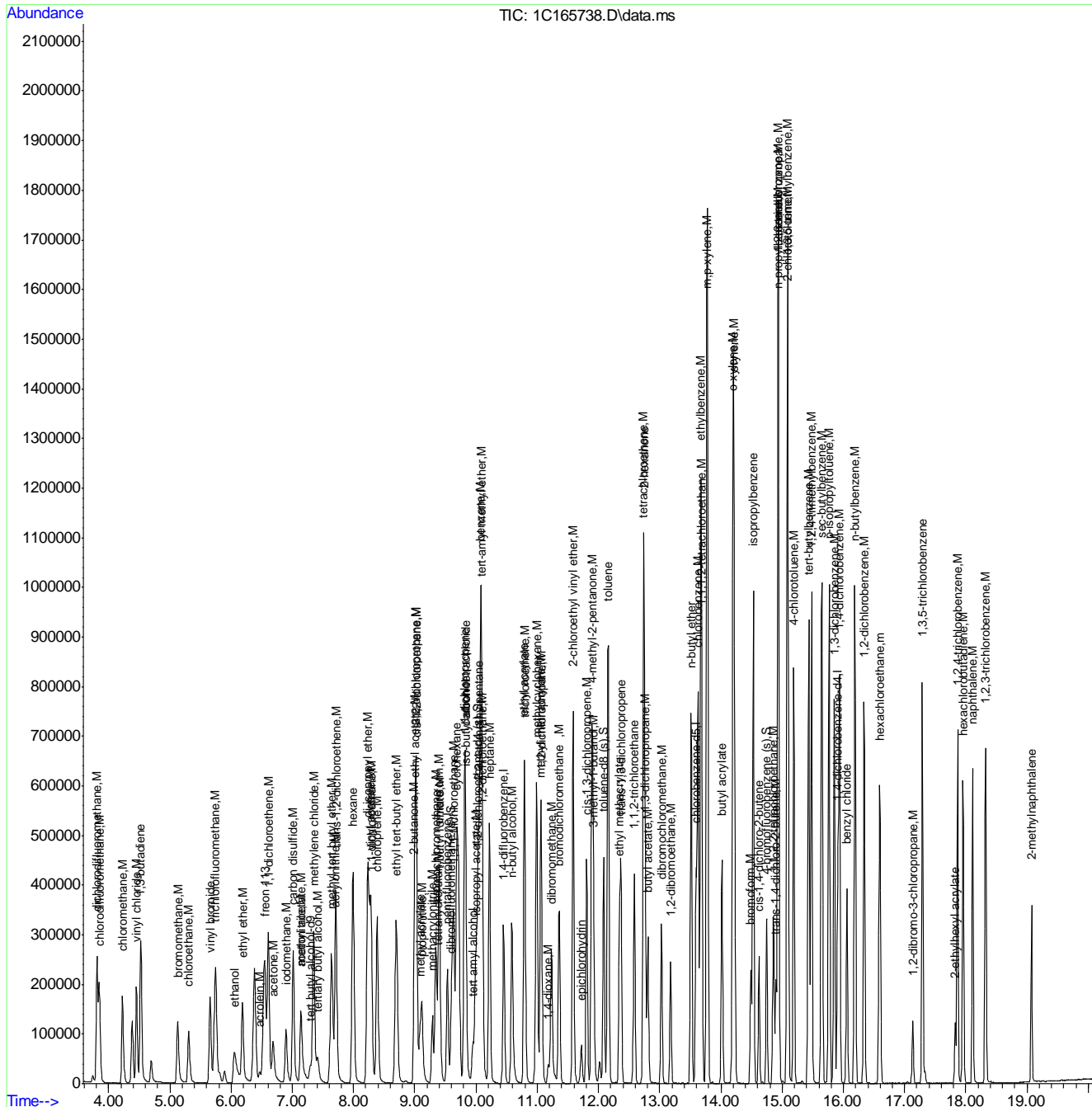
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.194	106	274680	98.97	ug/L	98
92) styrene	14.210	104	451068	97.48	ug/L	97
93) bromoform	14.487	173	111461	107.99	ug/L	100
94) butyl acrylate	14.016	55	298181	105.46	ug/L	99
95) isopropylbenzene	14.529	105	719210	98.54	ug/L	100
96) cis-1,4-dichloro-2-butene	14.623	88	63200	108.34	ug/L	98
99) bromobenzene	14.942	156	180702	101.07	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.858	83	180640	104.69	ug/L	99
101) trans-1,4-dichloro-2-b...	14.895	53	39723	109.99	ug/L	93
102) 1,2,3-trichloropropane	14.932	110	41196	101.49	ug/L	97
103) n-propylbenzene	14.937	91	839311	97.24	ug/L	99
104) 2-chlorotoluene	15.094	126	167311	98.98	ug/L	98
105) 4-chlorotoluene	15.193	91	511146	101.05	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	587615	100.25	ug/L	99
107) tert-butylbenzene	15.434	134	111097	100.40	ug/L	95
108) 1,2,4-trimethylbenzene	15.481	105	590113	100.87	ug/L	100
109) sec-butylbenzene	15.648	105	784608	98.77	ug/L	100
110) 1,3-dichlorobenzene	15.852	146	344592	100.79	ug/L	100
111) p-isopropyltoluene	15.768	119	643248	99.43	ug/L	99
112) 1,4-dichlorobenzene	15.936	146	345013	101.40	ug/L	99
113) benzyl chloride	16.056	91	293024	110.30	ug/L	99
114) 1,2-dichlorobenzene	16.338	146	337638	100.94	ug/L	99
115) n-butylbenzene	16.187	92	343722	97.89	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.133	75	32054	101.71	ug/L	96
117) 1,3,5-trichlorobenzene	17.290	180	253857	101.45	ug/L	100
118) 2-ethylhexyl acrylate	17.824	70	32767	21.39	ug/L	95
119) 1,2,4-trichlorobenzene	17.866	180	211304	101.96	ug/L	99
120) hexachlorobutadiene	17.955	225	131196	100.55	ug/L	97
121) naphthalene	18.112	128	450479	99.76	ug/L	100
122) 1,2,3-trichlorobenzene	18.321	180	199069	100.53	ug/L	99
123) hexachloroethane	16.595	201	120805	108.08	ug/L	97
124) 2-methylnaphthalene	19.074	142	154407	53.21	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165738.D  
 Acq On : 13 Jul 2019 6:25 pm  
 Operator : PrashanS  
 Sample : IC7262-100  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 09:05:20 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration



7.7.9  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165739.D  
 Acq On : 13 Jul 2019 6:52 pm  
 Operator : PrashanS  
 Sample : IC7262-200  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 09:05:32 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.301	65	64596	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	194993	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.455	114	305652	50.00	ug/L	0.00
74) chlorobenzene-d5	13.598	117	235940	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	114686	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	90895	49.30	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	98.60%
53) 1,2-dichloroethane-d4 (s)	10.020	65	86919	48.99	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.98%
75) toluene-d8 (s)	12.086	98	324438	50.49	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.98%
98) 4-bromofluorobenzene (s)	14.743	95	115386	51.30	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	102.60%
Target Compounds						
2) tertiary butyl alcohol	7.416	59	188400	999.51	ug/L	98
3) ethanol	6.061	45	308349	19456.27	ug/L	95
4) 1,4-dioxane	11.182	88	87352	4961.61	ug/L	99
6) chlorodifluoromethane	3.849	51	458620	198.15	ug/L	99
7) dichlorodifluoromethane	3.812	85	601714	202.24	ug/L	99
8) chloromethane	4.231	50	440677	215.45	ug/L	99
9) vinyl chloride	4.456	62	455128	195.29	ug/L	99
10) 1,3-butadiene	4.529	54	308670	189.10	ug/L	98
11) bromomethane	5.120	94	234481	215.22	ug/L	98
12) chloroethane	5.308	64	236594	203.38	ug/L	99
13) trichlorofluoromethane	5.742	101	611855	203.07	ug/L	98
14) vinyl bromide	5.653	106	335840	206.93	ug/L	99
15) ethyl ether	6.187	74	170448	203.26	ug/L	93
16) acrolein	6.469	56	49019	207.66	ug/L	98
17) freon 113	6.548	151	282171	201.83	ug/L	99
18) 1,1-dichloroethene	6.610	96	325730	198.30	ug/L	98
19) acetone	6.684	43	309884	756.82	ug/L	99
20) acetonitrile	7.144	41	321550	1974.51	ug/L	99
21) iodomethane	6.898	142	341134	200.16	ug/L	100
22) carbon disulfide	7.013	76	978079	200.32	ug/L	100
23) methylene chloride	7.348	84	346266	201.20	ug/L	98
24) methyl acetate	7.139	43	191486	188.82	ug/L	97
25) methyl tert butyl ether	7.641	73	783141	207.78	ug/L	99
26) trans-1,2-dichloroethene	7.714	96	344321	197.49	ug/L	98
27) di-isopropyl ether	8.237	45	1045850	199.55	ug/L	98
28) 2-butanone	8.990	72	133233	791.94	ug/L	91
29) 1,1-dichloroethane	8.289	63	569387	192.59	ug/L	99
30) chloroprene	8.389	53	494703	197.73	ug/L	99
31) acrylonitrile	7.698	53	90062	203.09	ug/L	98
32) hexane	7.991	57	570442	200.13	ug/L	99
33) vinyl acetate	8.268	86	55801	209.96	ug/L #	89
34) ethyl tert-butyl ether	8.697	59	800517	217.35	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165739.D  
 Acq On : 13 Jul 2019 6:52 pm  
 Operator : PrashanS  
 Sample : IC7262-200  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 09:05:32 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) ethyl acetate	9.001	45	39004	194.62	ug/L #	66
36) 2,2-dichloropropane	9.011	77	471251	201.62	ug/L	98
37) cis-1,2-dichloroethene	9.027	96	372706	193.88	ug/L	99
38) methyl acrylate	9.089	85	45196	202.32	ug/L	99
39) propionitrile	9.116	54	389727	1991.32	ug/L	97
40) bromochloromethane	9.346	128	163265	192.21	ug/L	95
41) tetrahydrofuran	9.372	42	79454	197.95	ug/L	97
42) chloroform	9.398	85	394549	196.43	ug/L	98
43) t-butyl formate	9.409	59	133860	221.01	ug/L	97
45) methacrylonitrile	9.288	67	118405	208.60	ug/L	94
46) 1,1,1-trichloroethane	9.633	97	561748	201.16	ug/L	100
47) cyclohexane	9.691	84	503471	198.73	ug/L	98
48) 1,1-dichloropropene	9.811	75	463338	196.68	ug/L	100
49) iso-butyl alcohol	9.837	43	124383	1972.26	ug/L	99
50) carbon tetrachloride	9.832	117	483318	195.80	ug/L	99
51) tert amyl alcohol	9.952	55	56246	1030.95	ug/L	97
54) n-butyl alcohol	10.585	56	465653	10017.73	ug/L	99
55) 2,2,4-trimethylpentane	10.041	57	1228981	199.93	ug/L	99
56) benzene	10.078	78	1283072	190.18	ug/L	100
57) tert-amyl methyl ether	10.088	87	167405	211.83	ug/L	94
58) heptane	10.219	71	330540	203.43	ug/L	98
59) isopropyl acetate	9.994	87	62906	201.90	ug/L #	83
60) 1,2-dichloroethane	10.109	62	384531	188.23	ug/L	99
61) trichloroethene	10.795	130	368165	195.73	ug/L	100
62) ethyl acrylate	10.789	55	351454	197.52	ug/L	99
64) 2-chloroethyl vinyl ether	11.590	63	641689	1102.50	ug/L	100
65) methyl methacrylate	11.056	100	73429	199.56	ug/L	90
66) 1,2-dichloropropane	11.067	63	331608	195.49	ug/L	99
67) dibromomethane	11.234	93	203030	197.06	ug/L	99
68) methylcyclohexane	10.988	83	636474	196.44	ug/L	99
69) bromodichloromethane	11.359	83	480731	199.34	ug/L	100
70) epichlorohydrin	11.726	57	132127	980.03	ug/L	99
71) cis-1,3-dichloropropene	11.809	75	546694	198.85	ug/L	99
72) 4-methyl-2-pentanone	11.893	58	404967	763.26	ug/L	99
73) 3-methyl-1-butanol	11.919	55	273243	3827.22	ug/L	97
76) toluene	12.160	92	797575	199.86	ug/L	98
77) trans-1,3-dichloropropene	12.369	75	453821	202.10	ug/L	99
78) ethyl methacrylate	12.343	69	357267	207.18	ug/L	99
79) 1,1,2-trichloroethane	12.583	83	240081	203.03	ug/L	100
80) tetrachloroethene	12.735	164	280705	195.26	ug/L	99
81) 1,3-dichloropropane	12.766	76	405240	193.55	ug/L	99
82) 2-hexanone	12.740	58	375302	745.77	ug/L	99
83) butyl acetate	12.808	56	172964	200.86	ug/L	97
84) dibromochloromethane	13.028	129	351867	208.57	ug/L	99
85) 1,2-dibromoethane	13.180	107	332923	205.30	ug/L	99
86) n-butyl ether	13.514	57	1264527	198.69	ug/L	99
87) chlorobenzene	13.624	112	821108	199.20	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.687	131	304730	198.49	ug/L	99
89) ethylbenzene	13.671	91	1372247	190.84	ug/L	98
90) m,p-xylene	13.776	106	1010376	371.81	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165739.D  
 Acq On : 13 Jul 2019 6:52 pm  
 Operator : PrashanS  
 Sample : IC7262-200  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 09:05:32 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:04:19 2019

Response via : Initial Calibration

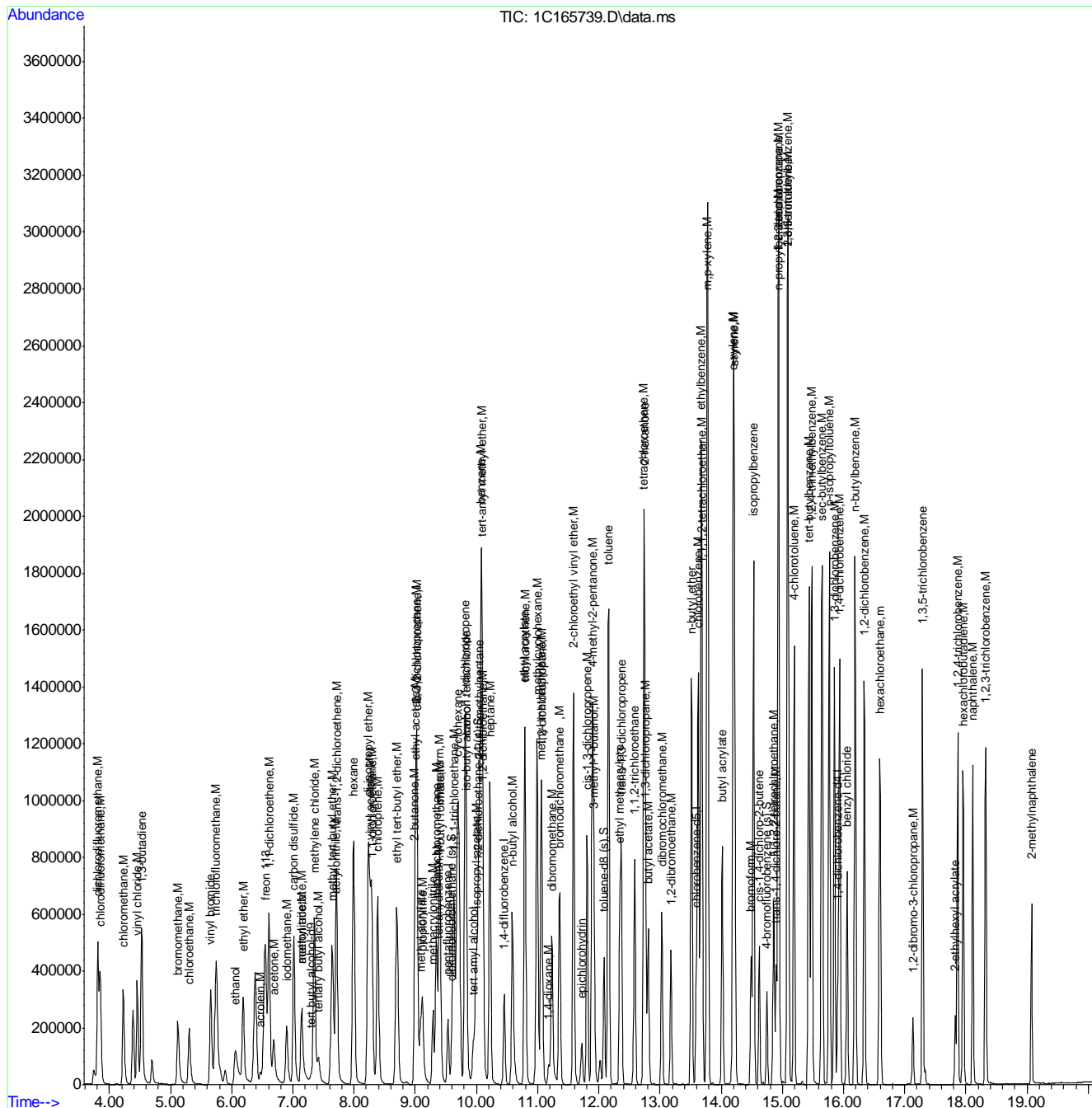
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.194	106	501248	185.84	ug/L	98
92) styrene	14.210	104	812480	180.69	ug/L	97
93) bromoform	14.487	173	221646	220.97	ug/L	99
94) butyl acrylate	14.016	55	561535	204.36	ug/L	100
95) isopropylbenzene	14.529	105	1351713	190.58	ug/L	100
96) cis-1,4-dichloro-2-butene	14.623	88	122943	216.88	ug/L	99
99) bromobenzene	14.942	156	331059	191.19	ug/L	95
100) 1,1,2,2-tetrachloroethane	14.858	83	343161	205.35	ug/L	98
101) trans-1,4-dichloro-2-b...	14.895	53	76377	218.36	ug/L	96
102) 1,2,3-trichloropropane	14.932	110	73742	187.58	ug/L	96
103) n-propylbenzene	14.937	91	1516320	181.40	ug/L	98
104) 2-chlorotoluene	15.094	126	304903	186.24	ug/L	97
105) 4-chlorotoluene	15.193	91	955350	195.01	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	1090962	192.19	ug/L	99
107) tert-butylbenzene	15.434	134	212613	198.38	ug/L	94
108) 1,2,4-trimethylbenzene	15.481	105	1095090	193.27	ug/L	100
109) sec-butylbenzene	15.648	105	1462060	190.04	ug/L	99
110) 1,3-dichlorobenzene	15.852	146	649124	196.04	ug/L	99
111) p-isopropyltoluene	15.769	119	1211202	193.32	ug/L	99
112) 1,4-dichlorobenzene	15.936	146	640685	194.42	ug/L	99
113) benzyl chloride	16.056	91	560479	217.84	ug/L	99
114) 1,2-dichlorobenzene	16.339	146	629629	194.36	ug/L	99
115) n-butylbenzene	16.187	92	638112	187.65	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.134	75	60424	197.98	ug/L	98
117) 1,3,5-trichlorobenzene	17.291	180	465732	192.17	ug/L	99
118) 2-ethylhexyl acrylate	17.824	70	61955	41.76	ug/L	97
119) 1,2,4-trichlorobenzene	17.866	180	379591	189.12	ug/L	99
120) hexachlorobutadiene	17.955	225	241337	190.98	ug/L	99
121) naphthalene	18.112	128	810481	185.33	ug/L	100
122) 1,2,3-trichlorobenzene	18.321	180	360111	187.77	ug/L	99
123) hexachloroethane	16.595	201	238403	220.24	ug/L	97
124) 2-methylnaphthalene	19.074	142	277005	98.56	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165739.D  
 Acq On : 13 Jul 2019 6:52 pm  
 Operator : PrashanS  
 Sample : IC7262-200  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 09:05:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:04:19 2019  
 Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165742.D  
 Acq On : 13 Jul 2019 8:14 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 16 09:08:25 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:07:34 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) tert butyl alcohol-d9	7.295	65	64085	500.00	ug/L	0.00	
5) pentafluorobenzene	9.534	168	197277	50.00	ug/L	0.00	
52) 1,4-difluorobenzene	10.449	114	305283	50.00	ug/L	0.00	
74) chlorobenzene-d5	13.593	117	236285	50.00	ug/L	0.00	
97) 1,4-dichlorobenzene-d4	15.910	152	116691	50.00	ug/L	0.00	
System Monitoring Compounds							
44) dibromofluoromethane (s)	9.597	113	92929	49.98	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.96%	
53) 1,2-dichloroethane-d4 (s)	10.020	65	88047	48.57	ug/L	0.00	
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.14%	
75) toluene-d8 (s)	12.086	98	326169	50.59	ug/L	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.18%	
98) 4-bromofluorobenzene (s)	14.743	95	114004	49.06	ug/L	0.00	
Spiked Amount	50.000	Range	79 - 127	Recovery	=	98.12%	
Target Compounds							
							Qvalue
2) tertiary butyl alcohol	7.411	59	48723	271.20	ug/L		90
3) ethanol	6.056	45	89945	6050.26	ug/L		95
4) 1,4-dioxane	11.182	88	22737	1364.10	ug/L		98
6) chlorodifluoromethane	3.849	51	109406	46.72	ug/L		98
7) dichlorodifluoromethane	3.812	85	124134	40.49	ug/L		99
8) chloromethane	4.225	50	101121	44.40	ug/L		99
9) vinyl chloride	4.455	62	113437	48.12	ug/L		97
10) 1,3-butadiene	4.529	54	91214	56.44	ug/L		98
11) bromomethane	5.130	94	70127	65.21	ug/L		100
12) chloroethane	5.313	64	50846	42.56	ug/L		100
13) trichlorofluoromethane	5.747	101	150045	48.69	ug/L		99
14) vinyl bromide	5.658	106	80512	50.06	ug/L		99
15) ethyl ether	6.187	74	42354	52.04	ug/L		95
16) acrolein	6.474	56	12213	52.50	ug/L		89
17) freon 113	6.548	151	80590	58.97	ug/L		100
18) 1,1-dichloroethene	6.610	96	78775	46.28	ug/L		96
19) acetone	6.684	43	85712	203.13	ug/L		100
21) iodomethane	6.898	142	86862	58.19	ug/L		99
22) carbon disulfide	7.013	76	272850	54.61	ug/L		99
23) methylene chloride	7.348	84	87546	49.53	ug/L		98
24) methyl acetate	7.139	43	49268	51.76	ug/L		93
25) methyl tert butyl ether	7.641	73	390477	106.44	ug/L		99
26) trans-1,2-dichloroethene	7.714	96	89169	48.17	ug/L		96
27) di-isopropyl ether	8.232	45	255968	50.15	ug/L		98
28) 2-butanone	8.990	72	34672	220.70	ug/L	#	88
29) 1,1-dichloroethane	8.289	63	152345	51.31	ug/L		98
30) chloroprene	8.389	53	135130	55.45	ug/L		99
32) hexane	7.991	57	147279	52.74	ug/L		100
33) vinyl acetate	8.274	86	12552	48.50	ug/L		99
34) ethyl tert-butyl ether	8.697	59	194240	51.62	ug/L		98
35) ethyl acetate	9.006	45	9856	52.14	ug/L	#	92
36) 2,2-dichloropropane	9.011	77	121051	54.69	ug/L		100

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165742.D  
 Acq On : 13 Jul 2019 8:14 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 16 09:08:25 2019

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M

Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um

QLast Update : Tue Jul 16 09:07:34 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) cis-1,2-dichloroethene	9.027	96	97025	49.06	ug/L	100
38) methyl acrylate	9.089	85	10996	54.60	ug/L	95
39) propionitrile	9.116	54	98894	528.18	ug/L	96
40) bromochloromethane	9.346	128	44665	52.99	ug/L	99
41) tetrahydrofuran	9.377	42	20212	50.42	ug/L	94
42) chloroform	9.398	85	104618	50.12	ug/L	98
43) t-butyl formate	9.408	59	30411	48.37	ug/L	94
45) methacrylonitrile	9.288	67	29352	53.31	ug/L	93
46) 1,1,1-trichloroethane	9.628	97	143884	51.69	ug/L	99
47) cyclohexane	9.691	84	136513	53.04	ug/L	99
48) 1,1-dichloropropene	9.811	75	122358	52.15	ug/L	99
49) iso-butyl alcohol	9.832	43	31717	503.82	ug/L	96
50) carbon tetrachloride	9.827	117	129708	53.62	ug/L	99
51) tert amyl alcohol	9.947	55	14837	269.72	ug/L	96
54) n-butyl alcohol	10.585	56	113050	2628.08	ug/L	98
55) 2,2,4-trimethylpentane	10.041	57	344501	56.22	ug/L	99
56) benzene	10.078	78	347564	51.66	ug/L	100
57) tert-amyl methyl ether	10.094	87	42796	52.69	ug/L	89
58) heptane	10.219	71	96782	60.25	ug/L	99
59) isopropyl acetate	9.994	87	14844	50.89	ug/L #	92
60) 1,2-dichloroethane	10.109	62	100703	47.19	ug/L	99
61) trichloroethene	10.794	130	99739	54.41	ug/L	99
62) ethyl acrylate	10.789	55	88449	51.88	ug/L	100
64) 2-chloroethyl vinyl ether	11.584	63	166538	279.81	ug/L	99
65) methyl methacrylate	11.061	100	18716	53.76	ug/L	99
66) 1,2-dichloropropane	11.066	63	85343	51.45	ug/L	99
67) dibromomethane	11.229	93	51002	51.11	ug/L	97
68) methylcyclohexane	10.988	83	162369	52.50	ug/L	99
69) bromodichloromethane	11.359	83	120793	51.39	ug/L	98
70) epichlorohydrin	11.725	57	34768	268.22	ug/L	99
71) cis-1,3-dichloropropene	11.804	75	140281	53.30	ug/L	99
72) 4-methyl-2-pentanone	11.893	58	104864	210.37	ug/L	99
73) 3-methyl-1-butanol	11.919	55	71033	1090.72	ug/L	97
76) toluene	12.160	92	210538	52.53	ug/L	99
77) trans-1,3-dichloropropene	12.369	75	118143	56.08	ug/L	99
78) ethyl methacrylate	12.343	69	90482	54.67	ug/L	99
79) 1,1,2-trichloroethane	12.583	83	61053	52.48	ug/L	98
81) 1,3-dichloropropane	12.766	76	108706	52.24	ug/L	97
82) 2-hexanone	12.740	58	101194	213.60	ug/L	98
83) butyl acetate	12.808	56	43502	52.84	ug/L	97
84) dibromochloromethane	13.028	129	90117	56.54	ug/L	100
85) 1,2-dibromoethane	13.179	107	83475	53.28	ug/L	99
86) n-butyl ether	13.514	57	346174	55.71	ug/L	100
87) chlorobenzene	13.624	112	220640	52.25	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.687	131	81307	55.23	ug/L	100
89) ethylbenzene	13.671	91	378902	51.22	ug/L	100
90) m,p-xylene	13.776	106	286996	102.89	ug/L	98
91) o-xylene	14.194	106	140159	52.99	ug/L	98
92) styrene	14.210	104	235178	52.74	ug/L	99
93) bromoform	14.487	173	56771	58.78	ug/L	99



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165742.D  
 Acq On : 13 Jul 2019 8:14 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 16 09:08:25 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

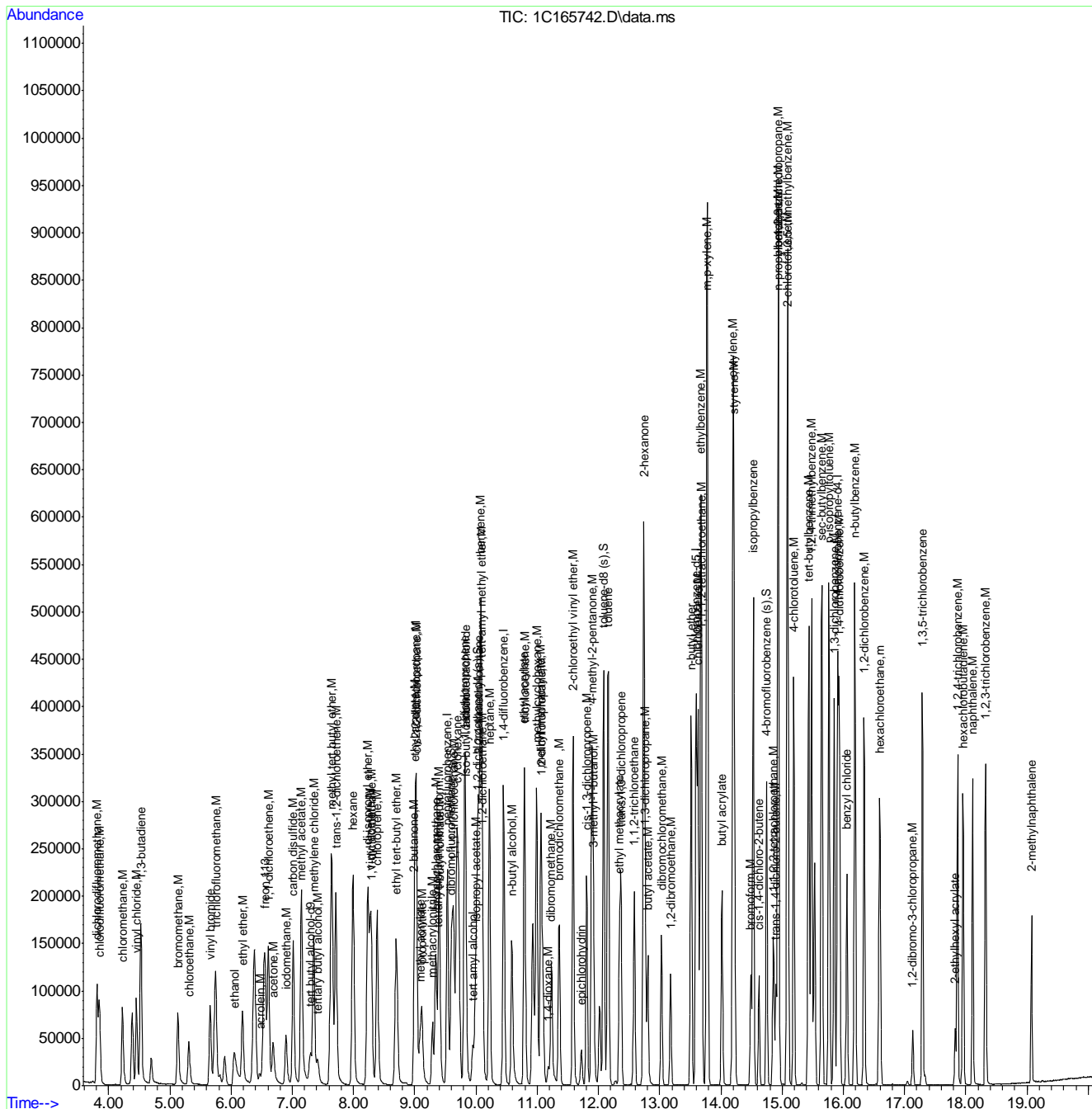
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
94) butyl acrylate	14.016	55	137881	52.35	ug/L	98
95) isopropylbenzene	14.529	105	374586	52.75	ug/L	99
96) cis-1,4-dichloro-2-butene	14.623	88	28527	51.98	ug/L	98
99) bromobenzene	14.942	156	91553	51.16	ug/L	95
100) 1,1,2,2-tetrachloroethane	14.858	83	85600	52.01	ug/L	100
101) trans-1,4-dichloro-2-b...	14.895	53	20241	58.19	ug/L	94
102) 1,2,3-trichloropropane	14.932	110	20034	51.45	ug/L	93
103) n-propylbenzene	14.937	91	446233	51.40	ug/L	100
104) 2-chlorotoluene	15.094	126	85296	50.46	ug/L	96
105) 4-chlorotoluene	15.188	91	261397	50.70	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	300752	50.76	ug/L	99
107) tert-butylbenzene	15.434	134	58317	53.56	ug/L	98
108) 1,2,4-trimethylbenzene	15.481	105	304348	50.25	ug/L	100
109) sec-butylbenzene	15.648	105	411972	52.55	ug/L	99
110) 1,3-dichlorobenzene	15.852	146	177948	51.94	ug/L	99
111) p-isopropyltoluene	15.768	119	338810	51.55	ug/L	100
112) 1,4-dichlorobenzene	15.936	146	174478	50.25	ug/L	99
113) benzyl chloride	16.056	91	167132	68.36	ug/L	98
114) 1,2-dichlorobenzene	16.339	146	170355	51.56	ug/L	99
115) n-butylbenzene	16.187	92	178382	51.64	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.128	75	15035	50.44	ug/L	91
117) 1,3,5-trichlorobenzene	17.290	180	128568	51.11	ug/L	99
118) 2-ethylhexyl acrylate	17.824	70	16393	11.26	ug/L	98
119) 1,2,4-trichlorobenzene	17.866	180	104135	50.03	ug/L	99
120) hexachlorobutadiene	17.955	225	66252	51.19	ug/L	99
121) naphthalene	18.112	128	224281	49.68	ug/L	99
122) 1,2,3-trichlorobenzene	18.321	180	98580	50.08	ug/L	98
123) hexachloroethane	16.595	201	60015	56.85	ug/L	99
124) 2-methylnaphthalene	19.074	142	75687	27.70	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165742.D  
 Acq On : 13 Jul 2019 8:14 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 16 09:08:25 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



7.7.11  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165743.D  
 Acq On : 13 Jul 2019 8:41 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 09:09:05 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

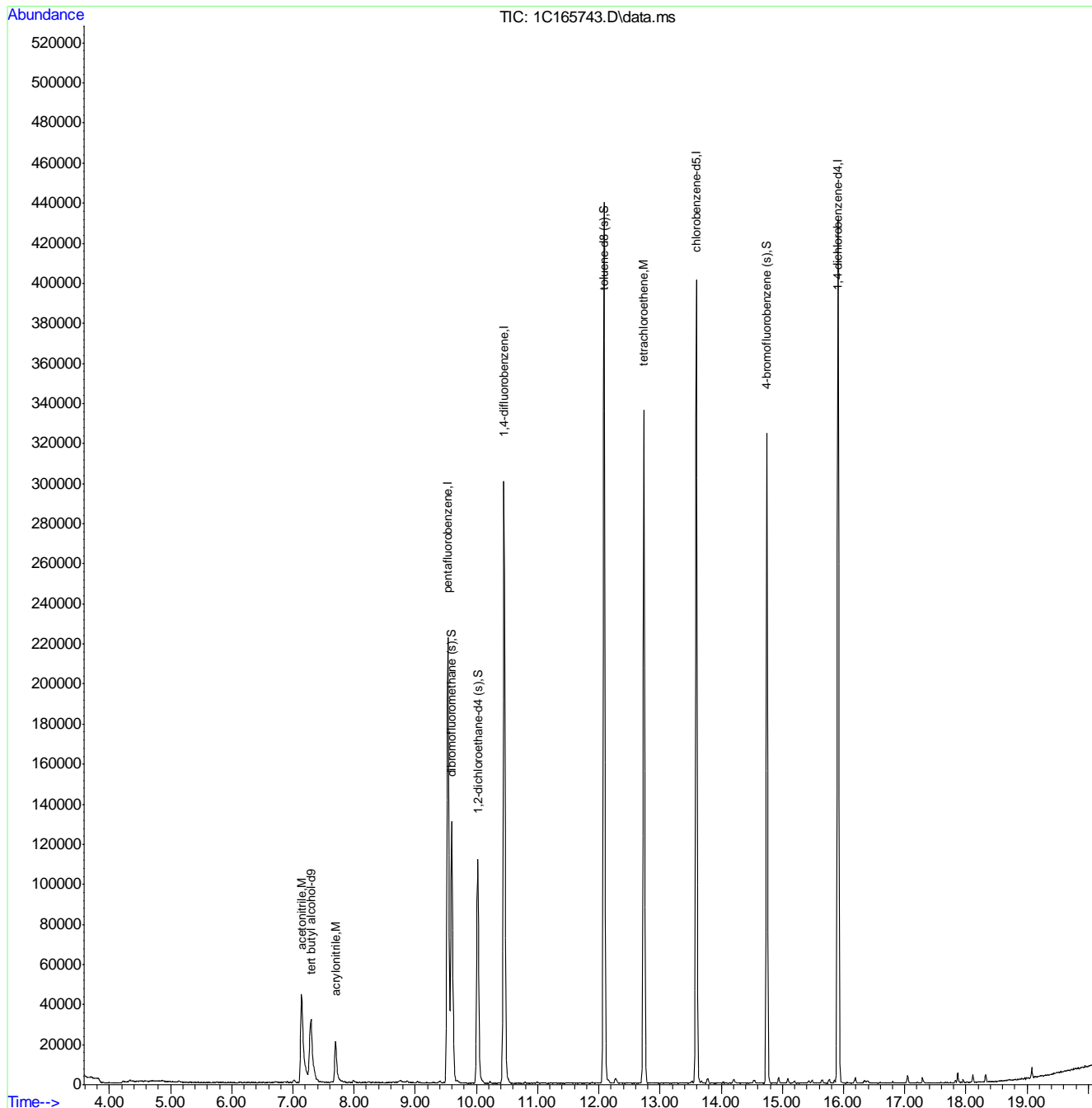
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.295	65	64243	500.00	ug/L	0.00
5) pentafluorobenzene	9.534	168	193508	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	292567	50.00	ug/L	0.00
74) chlorobenzene-d5	13.598	117	235038	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.909	152	115836	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	91715	50.29	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.58%
53) 1,2-dichloroethane-d4 (s)	10.020	65	87452	50.34	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	100.68%
75) toluene-d8 (s)	12.086	98	318740	49.70	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.40%
98) 4-bromofluorobenzene (s)	14.743	95	115762	50.18	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	100.36%
Target Compounds						
20) acetonitrile	7.138	41	85427	512.87	ug/L	97
31) acrylonitrile	7.698	53	21910	51.76	ug/L	93
80) tetrachloroethene	12.735	164	81877	57.97	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165743.D  
 Acq On : 13 Jul 2019 8:41 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 09:09:05 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



7.7.12  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165747.D  
 Acq On : 15 Jul 2019 1:23 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 16 09:10:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.290	65	60596	500.00	ug/L	-0.01
5) pentafluorobenzene	9.534	168	194841	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	298130	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	242892	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.910	152	120713	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	9.597	113	93560	50.95	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	101.90%
53) 1,2-dichloroethane-d4 (s)	10.015	65	88100	49.76	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	99.52%
75) toluene-d8 (s)	12.081	98	323896	48.87	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.74%
98) 4-bromofluorobenzene (s)	14.743	95	117679	48.95	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	97.90%
Target Compounds						
7) dichlorodifluoromethane	3.812	85	132117	43.63	ug/L	99
8) chloromethane	4.225	50	103125	45.85	ug/L	99
9) vinyl chloride	4.456	62	122624	52.67	ug/L	100
11) bromomethane	5.136	94	68507	64.50	ug/L	99
12) chloroethane	5.313	64	54082	45.83	ug/L	99
13) trichlorofluoromethane	5.747	101	157207	51.65	ug/L	98
14) vinyl bromide	5.659	106	83551	52.60	ug/L	98
32) hexane	7.991	57	145229	52.65	ug/L	99
47) cyclohexane	9.686	84	137846	54.23	ug/L	88

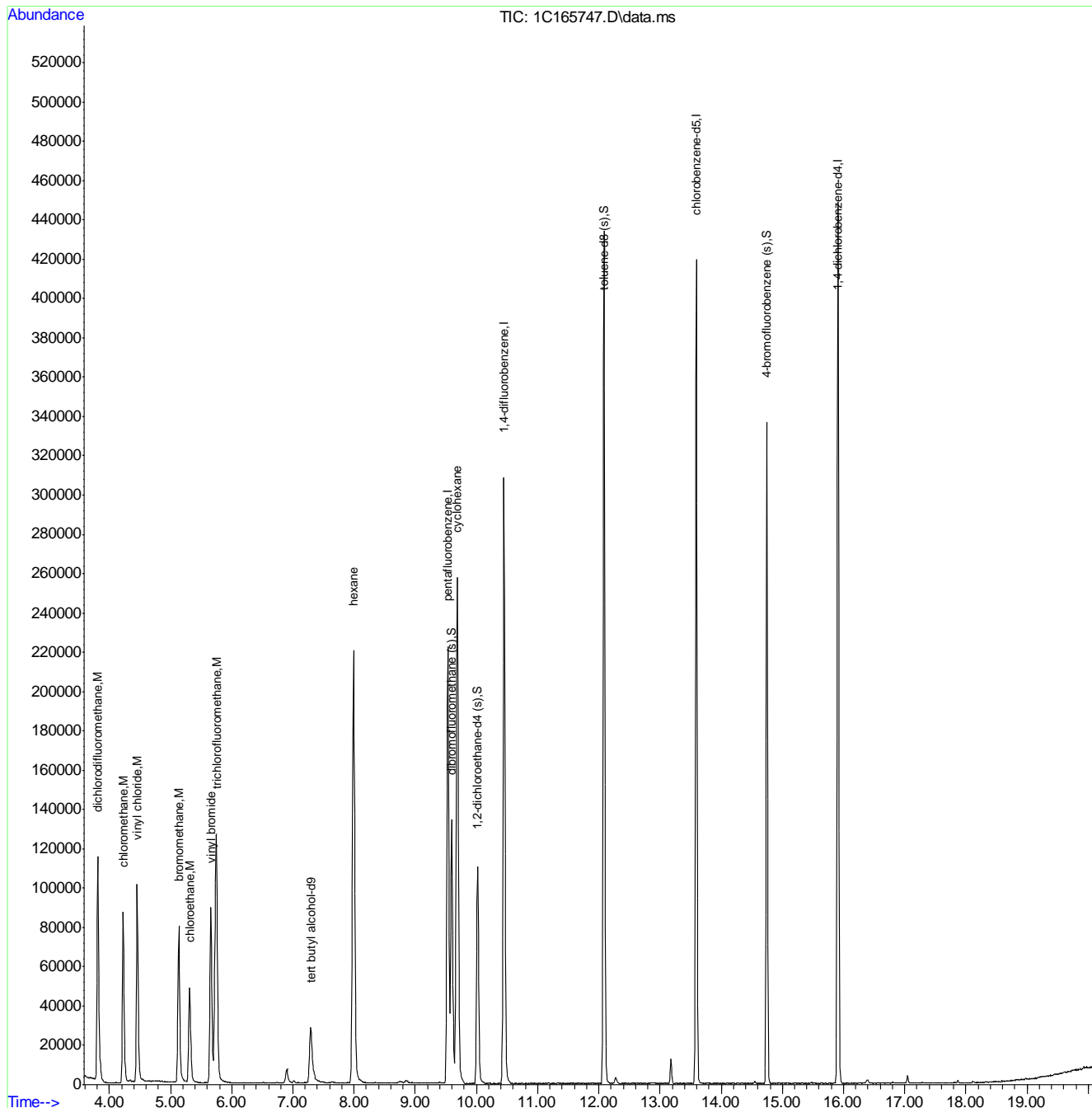
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.13  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V1C7262\  
 Data File : 1C165747.D  
 Acq On : 15 Jul 2019 1:23 pm  
 Operator : PrashanS  
 Sample : ICV7262-50  
 Misc : MS35874,V1C7262,5.0,,,,1  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 16 09:10:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



7.7.13  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167568.d  
 Acq On : 4 Oct 2019 7:59 am  
 Operator : PrashanS  
 Sample : cc7262-50 Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 04:55:16 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) tert butyl alcohol-d9	7.290	65	61732	500.00	ug/L	-0.01
5) pentafluorobenzene	9.529	168	188425	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.449	114	292061	50.00	ug/L	0.00
74) chlorobenzene-d5	13.593	117	211715	50.00	ug/L	0.00
97) 1,4-dichlorobenzene-d4	15.904	152	106042	50.00	ug/L	0.00
<b>System Monitoring Compounds</b>						
44) dibromofluoromethane (s)	9.591	113	86811	48.88	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	97.76%
53) 1,2-dichloroethane-d4 (s)	10.015	65	83011	47.86	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	95.72%
75) toluene-d8 (s)	12.081	98	295639	51.17	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.34%
98) 4-bromofluorobenzene (s)	14.743	95	97485	46.16	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	92.32%
<b>Target Compounds</b>						
2) tertiary butyl alcohol	7.405	59	39116	226.02	ug/L	75
3) ethanol	6.045	45	88212	6159.86	ug/L	93
4) 1,4-dioxane	11.176	88	20398	1270.42	ug/L	95
6) chlorodifluoromethane	3.843	51	108764	48.62	ug/L	100
7) dichlorodifluoromethane	3.812	85	126650	43.25	ug/L	99
8) chloromethane	4.225	50	114181	52.49	ug/L	99
9) vinyl chloride	4.455	62	116894	51.91	ug/L	98
10) 1,3-butadiene	4.523	54	72938	47.25	ug/L	99
11) bromomethane	5.130	94	66023	64.27	ug/L	99
12) chloroethane	5.313	64	54897	48.11	ug/L	99
13) trichlorofluoromethane	5.742	101	126471	42.97	ug/L	97
14) vinyl bromide	5.658	106	76318	49.69	ug/L	99
15) ethyl ether	6.187	74	37550	48.31	ug/L	98
16) acrolein	6.464	56	10696	48.13	ug/L	96
17) freon 113	6.547	151	62136	47.60	ug/L	99
18) 1,1-dichloroethene	6.605	96	71954	44.25	ug/L	97
19) acetone	6.678	43	66044	163.87	ug/L	99
20) acetonitrile	7.133	41	82471	508.48	ug/L	100
21) iodomethane	6.898	142	65615	46.02	ug/L	98
22) carbon disulfide	7.013	76	213163	44.67	ug/L	100
23) methylene chloride	7.348	84	76443	45.28	ug/L	94
24) methyl acetate	7.138	43	45846	50.43	ug/L	98
25) methyl tert butyl ether	7.641	73	189046	53.95	ug/L	99
26) trans-1,2-dichloroethene	7.709	96	77139	43.63	ug/L	94
27) di-isopropyl ether	8.232	45	236262	48.47	ug/L	99
28) 2-butanone	8.990	72	27732	184.82	ug/L #	86
29) 1,1-dichloroethane	8.284	63	134617	47.47	ug/L	99
30) chloroprene	8.383	53	112821	48.47	ug/L	96
31) acrylonitrile	7.693	53	21275	51.62	ug/L	96
32) hexane	7.991	57	127034	47.62	ug/L	98
33) vinyl acetate	8.268	86	11543	46.69	ug/L #	73
34) ethyl tert-butyl ether	8.697	59	211534	58.85	ug/L	99
35) ethyl acetate	9.000	45	9818	54.38	ug/L	95
36) 2,2-dichloropropane	9.006	77	116907	55.30	ug/L	95
37) cis-1,2-dichloroethene	9.021	96	82734	43.80	ug/L	92
38) methyl acrylate	9.084	85	9117	47.40	ug/L #	87
39) propionitrile	9.110	54	89636	501.23	ug/L	94
40) bromochloromethane	9.340	128	36826	45.75	ug/L	94
41) tetrahydrofuran	9.372	42	20429	53.35	ug/L	90

7.7.14  
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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167568.d  
 Acq On : 4 Oct 2019 7:59 am  
 Operator : PrashanS  
 Sample : cc7262-50 Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 04:55:16 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) chloroform	9.393	85	86882	43.58	ug/L	99
43) t-butyl formate	9.408	59	55891	93.08	ug/L	95
45) methacrylonitrile	9.283	67	25273	48.06	ug/L	98
46) 1,1,1-trichloroethane	9.628	97	122249	45.98	ug/L	99
47) cyclohexane	9.686	84	110511	44.96	ug/L	96
48) 1,1-dichloropropene	9.811	75	105507	47.08	ug/L	98
49) iso-butyl alcohol	9.827	43	28761	478.33	ug/L	95
50) carbon tetrachloride	9.827	117	108913	47.14	ug/L	99
51) tert amyl alcohol	9.947	55	13505	257.04	ug/L	90
54) n-butyl alcohol	10.580	56	104103	2529.65	ug/L	97
55) 2,2,4-trimethylpentane	10.041	57	250162	42.68	ug/L	99
56) benzene	10.073	78	294404	45.74	ug/L	98
57) tert-amyl methyl ether	10.083	87	44182	56.86	ug/L	97
58) heptane	10.219	71	67010	43.61	ug/L	97
59) isopropyl acetate	9.989	87	13454	48.22	ug/L #	78
60) 1,2-dichloroethane	10.104	62	87809	43.01	ug/L	96
61) trichloroethene	10.789	130	82190	46.87	ug/L	98
62) ethyl acrylate	10.789	55	78019	47.84	ug/L	99
64) 2-chloroethyl vinyl ether	11.584	63	179715	315.62	ug/L	98
65) methyl methacrylate	11.056	100	15008	45.06	ug/L	94
66) 1,2-dichloropropane	11.061	63	75213	47.40	ug/L	98
67) dibromomethane	11.229	93	42790	44.82	ug/L	98
68) methylcyclohexane	10.983	83	134392	45.42	ug/L	96
69) bromodichloromethane	11.354	83	100731	44.79	ug/L	99
70) epichlorohydrin	11.720	57	30078	242.54	ug/L	99
71) cis-1,3-dichloropropene	11.804	75	118593	47.10	ug/L	97
72) 4-methyl-2-pentanone	11.888	58	87012	182.46	ug/L	95
73) 3-methyl-1-butanol	11.914	55	60878	977.11	ug/L	96
76) toluene	12.154	92	163433	45.51	ug/L	100
77) trans-1,3-dichloropropene	12.363	75	98878	52.38	ug/L	99
78) ethyl methacrylate	12.337	69	68775	46.38	ug/L	95
79) 1,1,2-trichloroethane	12.583	83	47753	45.81	ug/L	97
80) tetrachloroethene	12.735	164	60937	47.90	ug/L	97
81) 1,3-dichloropropane	12.761	76	84874	45.52	ug/L	95
82) 2-hexanone	12.735	58	81366	191.68	ug/L	95
83) butyl acetate	12.803	56	35057	47.53	ug/L	96
84) dibromochloromethane	13.028	129	71166	49.83	ug/L	99
85) 1,2-dibromoethane	13.174	107	64411	45.88	ug/L	100
86) n-butyl ether	13.509	57	259487	46.60	ug/L	99
87) chlorobenzene	13.624	112	167933	44.38	ug/L	98
88) 1,1,1,2-tetrachloroethane	13.682	131	63016	47.77	ug/L	99
89) ethylbenzene	13.666	91	288379	43.51	ug/L	99
90) m,p-xylene	13.770	106	219932	88.00	ug/L	96
91) o-xylene	14.189	106	107336	45.29	ug/L	99
92) styrene	14.205	104	176605	44.20	ug/L	95
93) bromoform	14.482	173	44293	51.18	ug/L	99
94) butyl acrylate	14.011	55	105984	44.91	ug/L	97
95) isopropylbenzene	14.524	105	284213	44.67	ug/L	99
96) cis-1,4-dichloro-2-butene	14.618	88	25369	51.59	ug/L	96
99) bromobenzene	14.937	156	72695	44.70	ug/L	95
100) 1,1,2,2-tetrachloroethane	14.853	83	63022	42.14	ug/L	99
101) trans-1,4-dichloro-2-b...	14.890	53	18116	57.31	ug/L	89
102) 1,2,3-trichloropropane	14.926	110	15470	43.72	ug/L	94
103) n-propylbenzene	14.932	91	336481	42.65	ug/L	98
104) 2-chlorotoluene	15.088	126	66947	43.58	ug/L	94
105) 4-chlorotoluene	15.188	91	196138	41.87	ug/L	99
106) 1,3,5-trimethylbenzene	15.083	105	225726	41.93	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\vlc7331\  
 Data File : 1c167568.d  
 Acq On : 4 Oct 2019 7:59 am  
 Operator : PrashanS  
 Sample : cc7262-50 Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 04:55:16 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) tert-butylbenzene	15.428	134	42985	43.44	ug/L	99
108) 1,2,4-trimethylbenzene	15.475	105	227363	41.31	ug/L	98
109) sec-butylbenzene	15.643	105	302485	42.46	ug/L	100
110) 1,3-dichlorobenzene	15.847	146	137912	44.30	ug/L	99
111) p-isopropyltoluene	15.763	119	251475	42.10	ug/L	99
112) 1,4-dichlorobenzene	15.931	146	134758	42.71	ug/L	99
113) benzyl chloride	16.051	91	137945	62.09	ug/L	99
114) 1,2-dichlorobenzene	16.333	146	131458	43.79	ug/L	99
115) n-butylbenzene	16.187	92	135364	43.12	ug/L	98
116) 1,2-dibromo-3-chloropr...	17.128	75	12668	46.76	ug/L	99
117) 1,3,5-trichlorobenzene	17.285	180	110806	48.47	ug/L	99
118) 2-ethylhexyl acrylate	17.824	70	9582	7.24	ug/L #	84
119) 1,2,4-trichlorobenzene	17.860	180	92106	48.70	ug/L	99
120) hexachlorobutadiene	17.955	225	60572	51.51	ug/L	98
121) naphthalene	18.111	128	169206	41.24	ug/L	99
122) 1,2,3-trichlorobenzene	18.321	180	82211	45.95	ug/L	98
123) hexachloroethane	16.595	201	51148	53.31	ug/L	95
124) 2-methylnaphthalene	19.069	142	54863	22.09	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

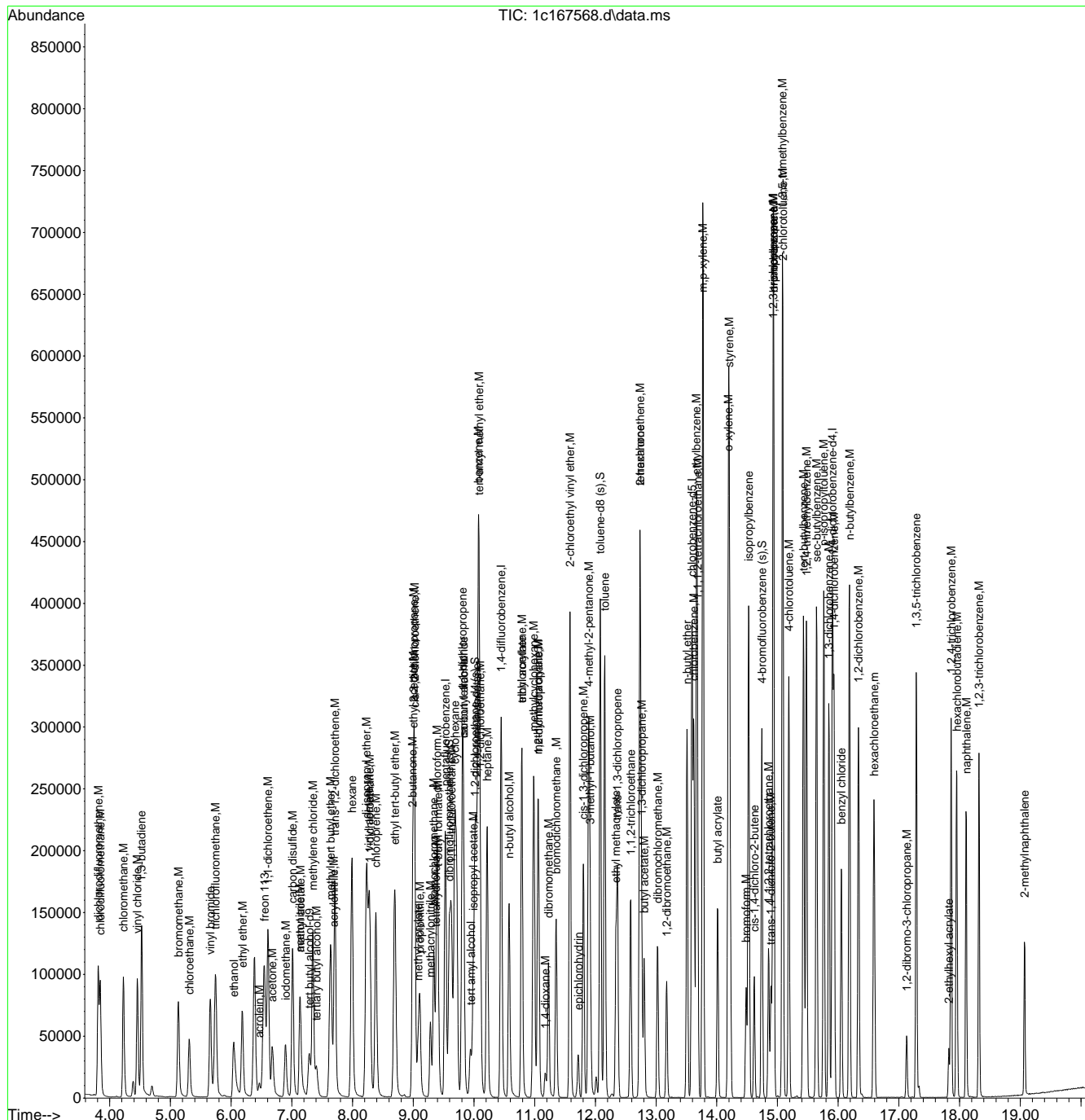
7.7.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\v1c7331\  
 Data File : 1c167568.d  
 Acq On : 4 Oct 2019 7:59 am  
 Operator : Prashans  
 Sample : cc7262-50 Inst : GCMS1C  
 Misc : MS37954,V1C7331,5.0,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M1CS7262.M  
 Quant Results File: M1CS7262.RES  
 Quant Time: Oct 07 04:55:16 2019  
 Quant Title : SW846 8260C, DB-624 60 m x 0.25 mm x 1.4 um  
 QLast Update : Tue Jul 16 09:07:34 2019  
 Response via : Initial Calibration



7.7.14  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251985.D  
 Acq On : 29 Jul 2019 6:10 pm  
 Operator : edwardd  
 Sample : ic9755-0.2  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 11:44:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.166	65	463804	500.00	ug/L	0.02
5) pentafluorobenzene	10.539	168	237966	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	395347	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	298793	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.514	152	165120	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.576	113	133092	52.06	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.12%
53) 1,2-dichloroethane-d4 (s)	11.010	65	149464	52.57	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	105.14%
75) toluene-d8 (s)	13.221	98	420630	48.78	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.56%
99) 4-bromofluorobenzene (s)	16.196	95	155701	48.56	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.12%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
9) vinyl chloride	5.264	62	941	0.15	ug/L	72
11) bromomethane	5.934	94	940	0.24	ug/L #	65
25) methyl tert butyl ether	8.610	73	1950	0.19	ug/L #	51
26) trans-1,2-dichloroethene	8.636	96	536	0.19	ug/L #	76
28) di-isopropyl ether	9.227	45	2031	0.18	ug/L	74
29) ethyl tert-butyl ether	9.698	59	1937	0.19	ug/L	86
31) 1,1-dichloroethane	9.238	63	962	0.18	ug/L	65
37) cis-1,2-dichloroethene	9.996	96	696	0.23	ug/L #	70
47) 1,1,1-trichloroethane	10.660	97	821	0.17	ug/L #	23
49) 1,1-dichloropropene	10.827	75	733	0.19	ug/L #	45
54) benzene	11.078	78	2491	0.23	ug/L	92
55) iso-octane	11.183	57	2434	0.22	ug/L	90
56) tert-amyl methyl ether	11.162	73	2005	0.20	ug/L	89
62) trichloroethene	11.831	95	663	0.26	ug/L	71
64) methylcyclohexane	12.144	83	1179	0.20	ug/L	83
69) bromodichloromethane	12.406	83	698	0.20	ug/L	91
71) cis-1,3-dichloropropene	12.892	75	827	0.19	ug/L	88
72) 4-methyl-2-pentanone	12.997	58	1056	0.61	ug/L #	39
76) toluene	13.305	92	1253	0.21	ug/L	91
77) trans-1,3-dichloropropene	13.509	75	679	0.20	ug/L #	65
78) ethyl methacrylate	13.493	69	652	0.19	ug/L	86
79) 1,1,2-trichloroethane	13.749	83	375	0.20	ug/L #	42
81) tetrachloroethene	13.922	166	389	0.17	ug/L	84
82) 1,3-dichloropropane	13.948	76	644	0.18	ug/L	79
84) dibromochloromethane	14.210	129	389	0.17	ug/L #	21
85) 1,2-dibromoethane	14.403	107	493	0.22	ug/L #	64
87) chlorobenzene	14.931	112	1209	0.21	ug/L #	69
88) 1,1,1,2-tetrachloroethane	15.004	131	474	0.18	ug/L	89
89) ethylbenzene	14.994	91	2157	0.21	ug/L	83
90) m,p-xylene	15.135	106	1854	0.48	ug/L	99
91) o-xylene	15.585	106	915	0.22	ug/L	95
92) styrene	15.600	104	1393	0.23	ug/L	96
96) isopropylbenzene	15.966	105	2491	0.21	ug/L	97
100) bromobenzene	16.411	156	604	0.24	ug/L #	74
101) 1,1,2,2-tetrachloroethane	16.280	83	826	0.20	ug/L	79
104) n-propylbenzene	16.437	91	2890	0.21	ug/L	93
105) 2-chlorotoluene	16.588	126	479	0.17	ug/L #	55
106) 4-chlorotoluene	16.724	91	1808	0.24	ug/L	88
107) 1,3,5-trimethylbenzene	16.609	105	2065	0.19	ug/L	91
109) 1,2,4-trimethylbenzene	17.054	105	2258	0.22	ug/L	97
110) sec-butylbenzene	17.237	105	2807	0.19	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251985.D  
 Acq On : 29 Jul 2019 6:10 pm  
 Operator : edwardd  
 Sample : ic9755-0.2  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 11:44:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	17.440	146	1103	0.23	ug/L	87
112) p-isopropyltoluene	17.383	119	2446	0.21	ug/L	93
113) 1,4-dichlorobenzene	17.545	146	1254	0.26	ug/L	86
114) 1,2-dichlorobenzene	17.963	146	1193	0.23	ug/L	96
115) n-butylbenzene	17.843	92	1347	0.23	ug/L	89
117) 1,3,5-trichlorobenzene	19.035	180	1102	0.24	ug/L #	55

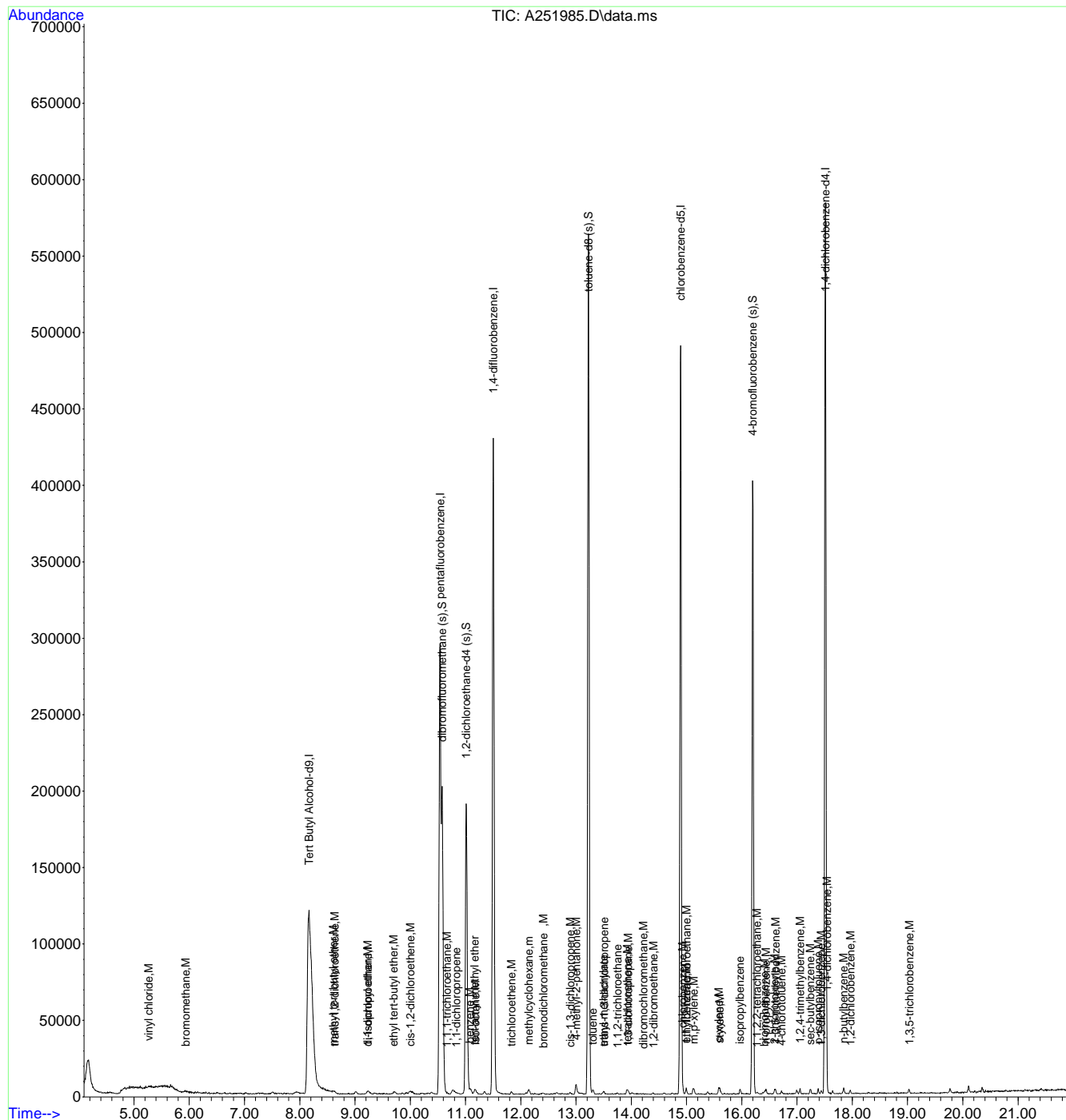
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.15  
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251985.D  
 Acq On : 29 Jul 2019 6:10 pm  
 Operator : edwardd  
 Sample : ic9755-0.2  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 30 11:44:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration



7.7.15  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:47:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.151	65	465402	500.00	ug/L	0.00
5) pentafluorobenzene	10.535	168	230777	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	379734	50.00	ug/L	0.00
74) chlorobenzene-d5	14.890	117	296832	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	162514	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.577	113	125906	50.78	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.56%
53) 1,2-dichloroethane-d4 (s)	11.011	65	144923	53.07	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	106.14%
75) toluene-d8 (s)	13.222	98	406058	47.40	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	94.80%
99) 4-bromofluorobenzene (s)	16.197	95	151781	48.10	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) chlorodifluoromethane	4.585	51	3414	0.57	ug/L	68
7) dichlorodifluoromethane	4.580	85	2842	0.46	ug/L	73
9) vinyl chloride	5.260	62	2810	0.46	ug/L	78
11) bromomethane	5.945	94	2141	0.56	ug/L	85
12) chloroethane	6.133	64	2029m	0.59	ug/L	
14) trichlorofluoromethane	6.656	101	2841	0.47	ug/L	72
15) ethyl ether	7.022	74	588	0.37	ug/L #	72
17) freon 113	7.503	151	1167	0.44	ug/L #	70
18) 1,1-dichloroethene	7.503	96	1971m	0.57	ug/L	
21) iodomethane	7.769	142	2703	0.52	ug/L	86
22) carbon disulfide	7.957	76	6996	0.64	ug/L	87
25) methyl tert butyl ether	8.600	73	5384	0.54	ug/L	89
26) trans-1,2-dichloroethene	8.637	96	1722	0.65	ug/L #	76
27) hexane	9.008	57	2288	0.53	ug/L #	81
28) di-isopropyl ether	9.223	45	6179	0.57	ug/L	84
29) ethyl tert-butyl ether	9.709	59	5456	0.54	ug/L	81
31) 1,1-dichloroethane	9.238	63	2893	0.56	ug/L	85
32) chloroprene	9.343	53	2416	0.58	ug/L	84
36) 2,2-dichloropropane	10.028	77	3250	0.73	ug/L	93
37) cis-1,2-dichloroethene	9.986	96	1778	0.59	ug/L	93
39) propionitrile	10.007	54	3768	5.01	ug/L #	67
40) bromochloromethane	10.300	128	774	0.54	ug/L	92
42) chloroform	10.383	83	3015	0.65	ug/L	94
43) tert-butyl formate	10.435	59	1248	0.48	ug/L #	13
46) cyclohexane	10.775	84	2950	0.53	ug/L	91
47) 1,1,1-trichloroethane	10.660	97	2511	0.53	ug/L	91
49) 1,1-dichloropropene	10.828	75	1984	0.54	ug/L	94
50) carbon tetrachloride	10.864	117	2055	0.52	ug/L	94
54) benzene	11.079	78	6292	0.60	ug/L	96
55) iso-octane	11.183	57	6265	0.58	ug/L	93
56) tert-amyl methyl ether	11.173	73	5665	0.60	ug/L	99
57) heptane	11.340	71	1107	0.53	ug/L	89
62) trichloroethene	11.831	95	1388	0.56	ug/L	96
64) methylcyclohexane	12.145	83	3221	0.57	ug/L	91
65) 2-chloroethyl vinyl ether	12.652	63	2217	2.15	ug/L	95
67) 1,2-dichloropropane	12.129	63	1579	0.56	ug/L	82
68) dibromomethane	12.250	93	780	0.47	ug/L	90
69) bromodichloromethane	12.406	83	1960	0.57	ug/L	79
71) cis-1,3-dichloropropene	12.893	75	2003	0.48	ug/L	94
72) 4-methyl-2-pentanone	13.002	58	3348	2.02	ug/L #	75
76) toluene	13.300	92	3156	0.54	ug/L	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:47:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration

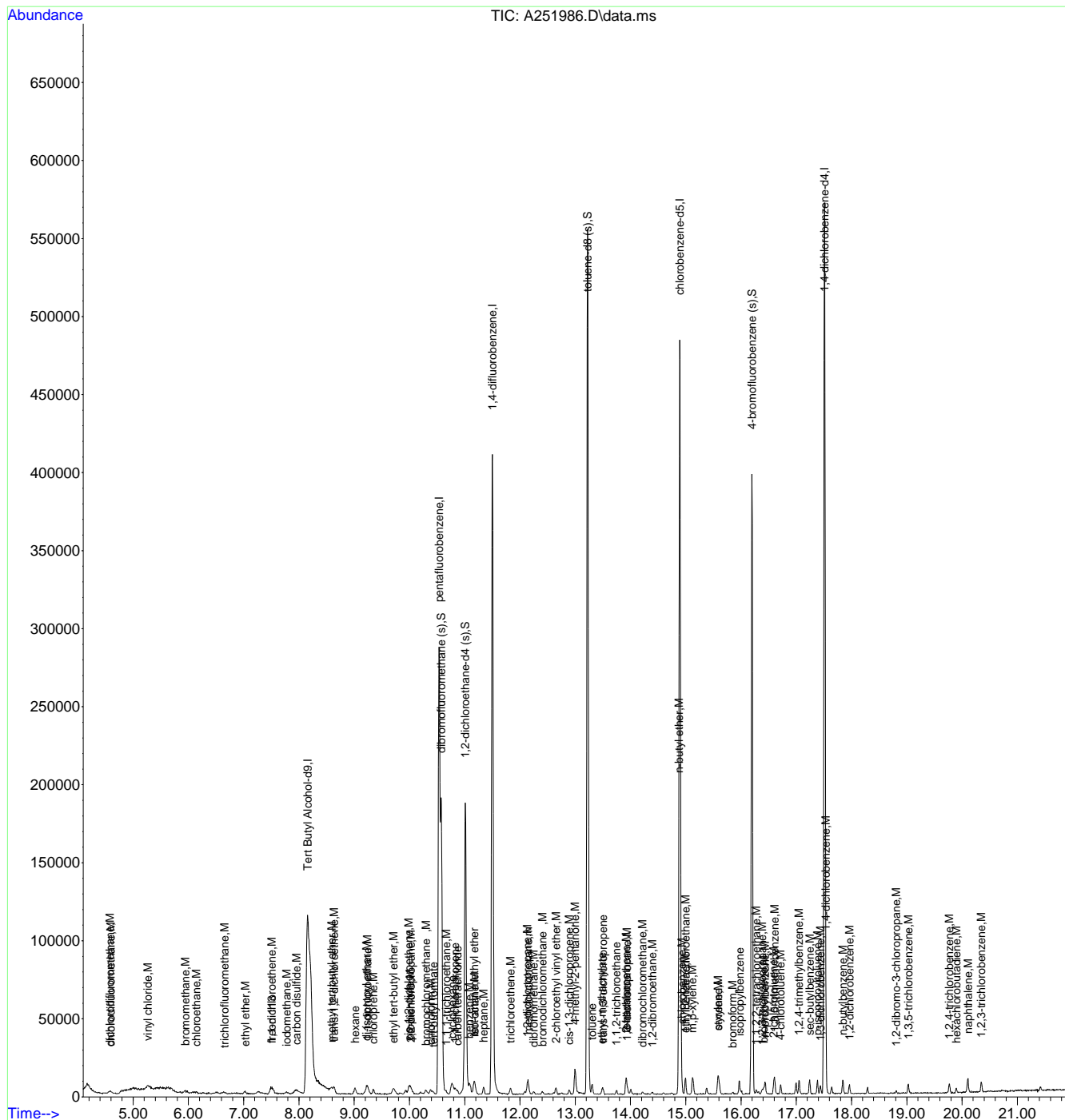
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) trans-1,3-dichloropropene	13.504	75	1843	0.53	ug/L	95
78) ethyl methacrylate	13.483	69	1729	0.50	ug/L	88
79) 1,1,2-trichloroethane	13.745	83	910	0.49	ug/L #	78
80) 2-hexanone	13.923	58	3105	2.20	ug/L #	87
81) tetrachloroethene	13.917	166	1137	0.51	ug/L	89
82) 1,3-dichloropropane	13.943	76	1832	0.52	ug/L	88
84) dibromochloromethane	14.221	129	1181	0.53	ug/L	81
85) 1,2-dibromoethane	14.393	107	1131	0.50	ug/L	91
86) n-butyl ether	14.869	57	6066	0.57	ug/L #	40
87) chlorobenzene	14.932	112	2981	0.52	ug/L	87
88) 1,1,1,2-tetrachloroethane	14.999	131	1220	0.45	ug/L	86
89) ethylbenzene	14.994	91	5506	0.54	ug/L	96
90) m,p-xylene	15.120	106	4124	1.07	ug/L	91
91) o-xylene	15.580	106	2304	0.55	ug/L	93
92) styrene	15.590	104	3477	0.57	ug/L	90
95) bromoform	15.846	173	781	0.52	ug/L	67
96) isopropylbenzene	15.972	105	6698	0.57	ug/L	99
100) bromobenzene	16.406	156	1330	0.53	ug/L	91
101) 1,1,2,2-tetrachloroethane	16.275	83	2017	0.51	ug/L	90
103) 1,2,3-trichloropropane	16.380	110	389	0.39	ug/L #	53
104) n-propylbenzene	16.437	91	7042	0.52	ug/L	94
105) 2-chlorotoluene	16.584	126	1398	0.51	ug/L #	63
106) 4-chlorotoluene	16.720	91	3977	0.54	ug/L	98
107) 1,3,5-trimethylbenzene	16.605	105	5153	0.49	ug/L	99
109) 1,2,4-trimethylbenzene	17.054	105	5509	0.55	ug/L	98
110) sec-butylbenzene	17.242	105	6947	0.47	ug/L	94
111) 1,3-dichlorobenzene	17.441	146	2738	0.57	ug/L	95
112) p-isopropyltoluene	17.383	119	5893	0.51	ug/L	97
113) 1,4-dichlorobenzene	17.540	146	2903	0.60	ug/L	98
114) 1,2-dichlorobenzene	17.964	146	2812	0.55	ug/L	92
115) n-butylbenzene	17.838	92	3197	0.55	ug/L #	76
116) 1,2-dibromo-3-chloropr...	18.800	157	516	0.45	ug/L	75
117) 1,3,5-trichlorobenzene	19.025	180	2549	0.57	ug/L	93
119) 1,2,4-trichlorobenzene	19.773	180	2439	0.57	ug/L	97
120) hexachlorobutadiene	19.893	225	1003	0.54	ug/L #	81
121) naphthalene	20.107	128	8472	0.57	ug/L	97
122) 1,2,3-trichlorobenzene	20.348	180	2787	0.59	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:47:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration



7.7.16  
7

# Manual Integration Approval Summary

Sample Number: VA9755-IC9755      Method: SW846 8260C  
Lab FileID: A251986.D      Analyst approved: 07/30/19 12:26 Robert Szot  
Injection Time: 07/29/19 18:40      Supervisor approved: 07/31/19 01:39 Kanya Veerawat

Parameter	CAS	Sig#	R.T. (min.)	Reason
Chloroethane	75-00-3		6.13	Poor instrument integration
1,1-Dichloroethene	75-35-4		7.50	Poor instrument integration

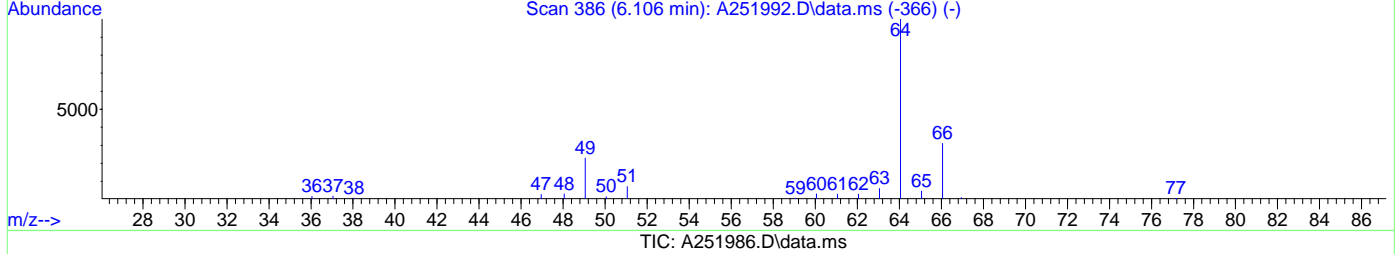
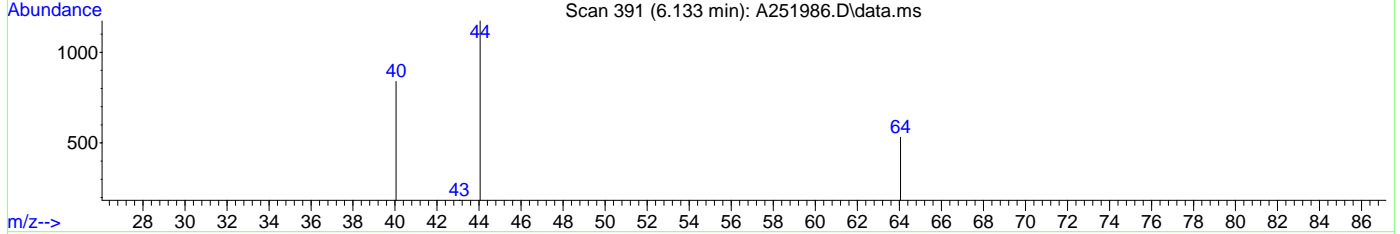
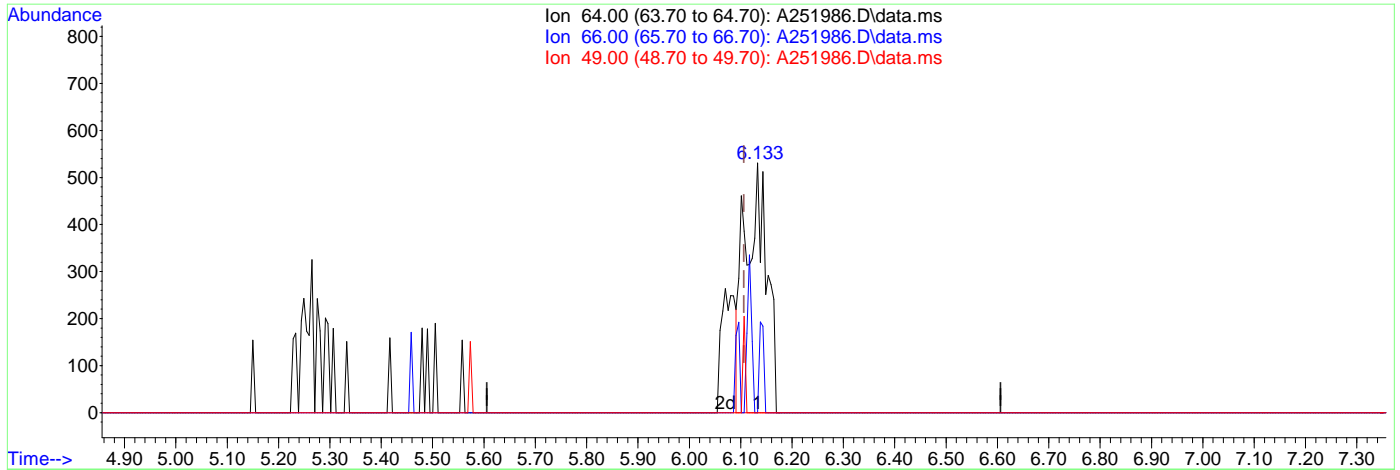
7.7.16.1

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Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:38:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration



(12) chloroethane (M)

6.133min (+0.027) 0.44ug/L

response 1530

Ion	Exp%	Act%
64.00	100	100
66.00	31.10	0.00#
49.00	23.00	0.00
0.00	0.00	0.00

7.7.16.2

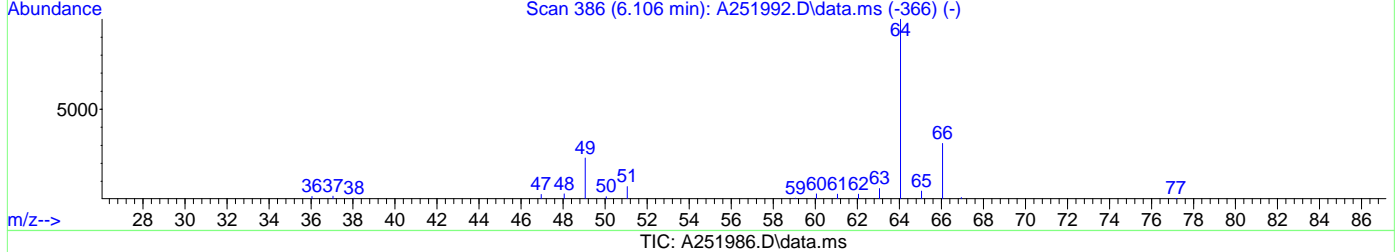
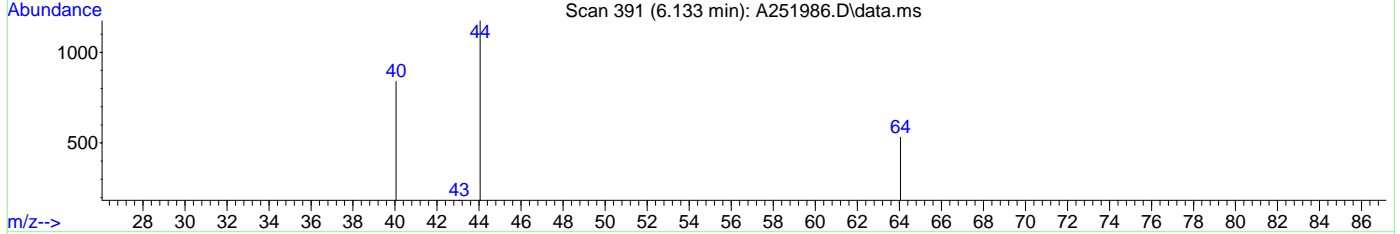
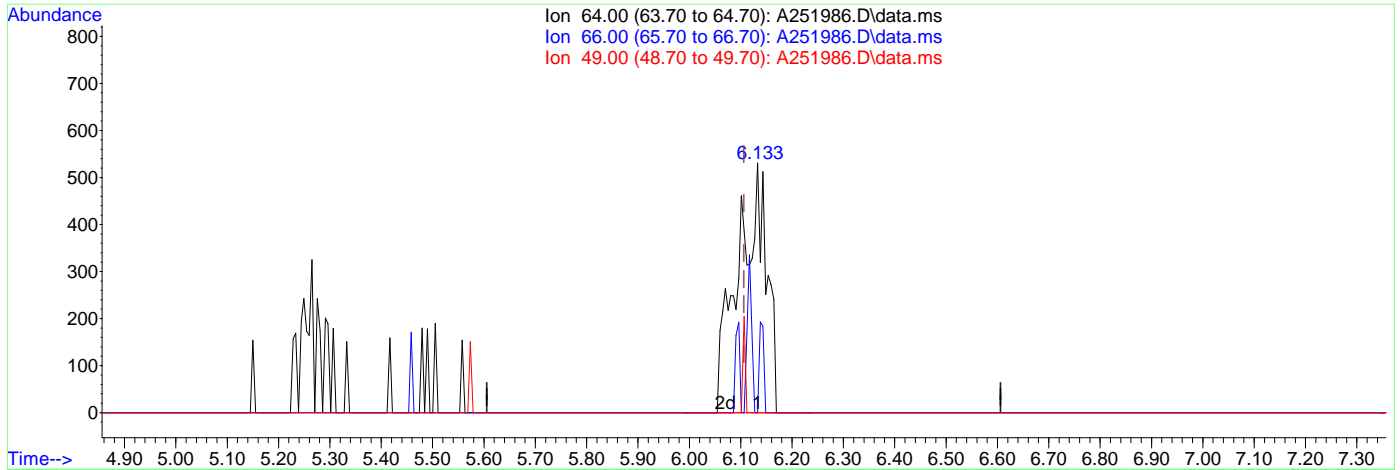
7



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:38:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration



(12) chloroethane (M)

6.133min (+0.027) 0.59ug/L m

response 2029

Ion	Exp%	Act%
64.00	100	100
66.00	31.10	0.00#
49.00	23.00	0.00
0.00	0.00	0.00

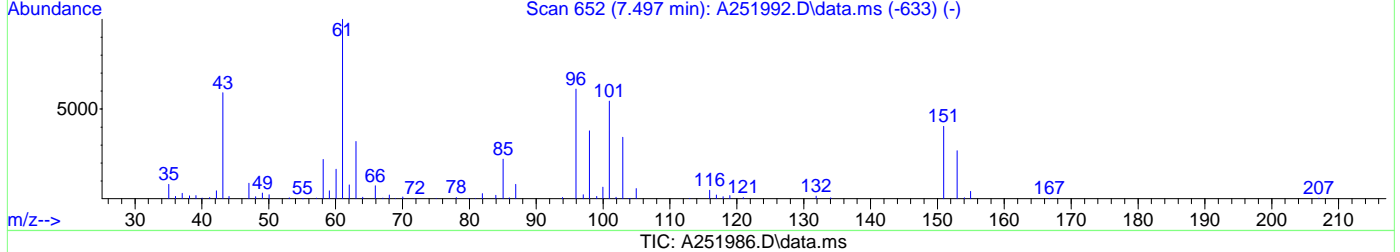
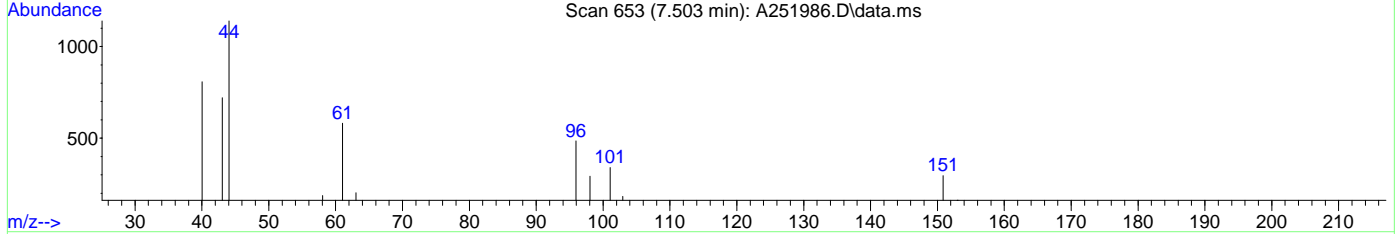
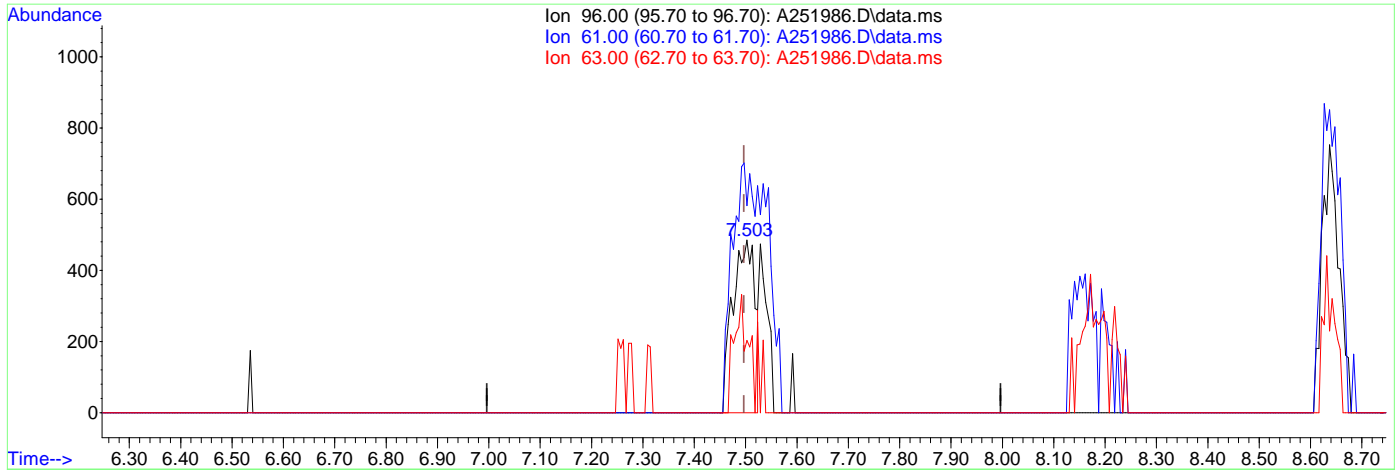
7.7.16.3

7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:38:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration



(18) 1,1-dichloroethene (M)

7.503min (+0.006) 0.42ug/L

response 1451

Ion	Exp%	Act%
96.00	100	100
61.00	163.70	120.00#
63.00	53.30	41.86
0.00	0.00	0.00

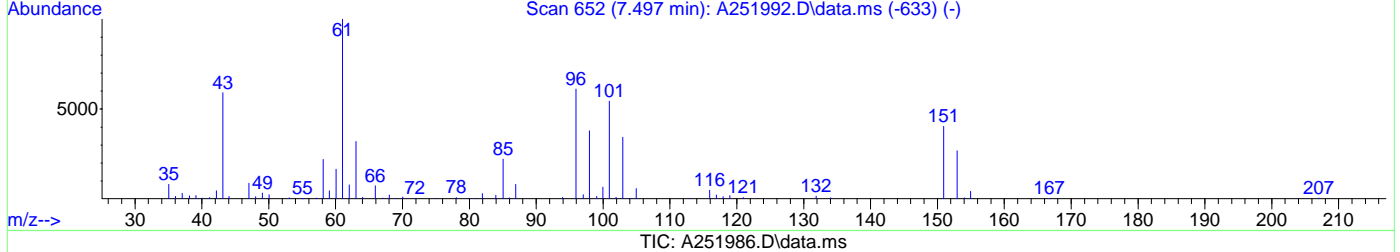
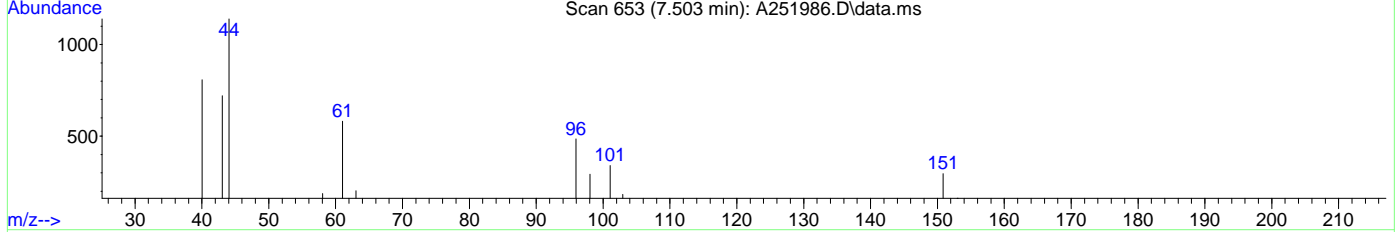
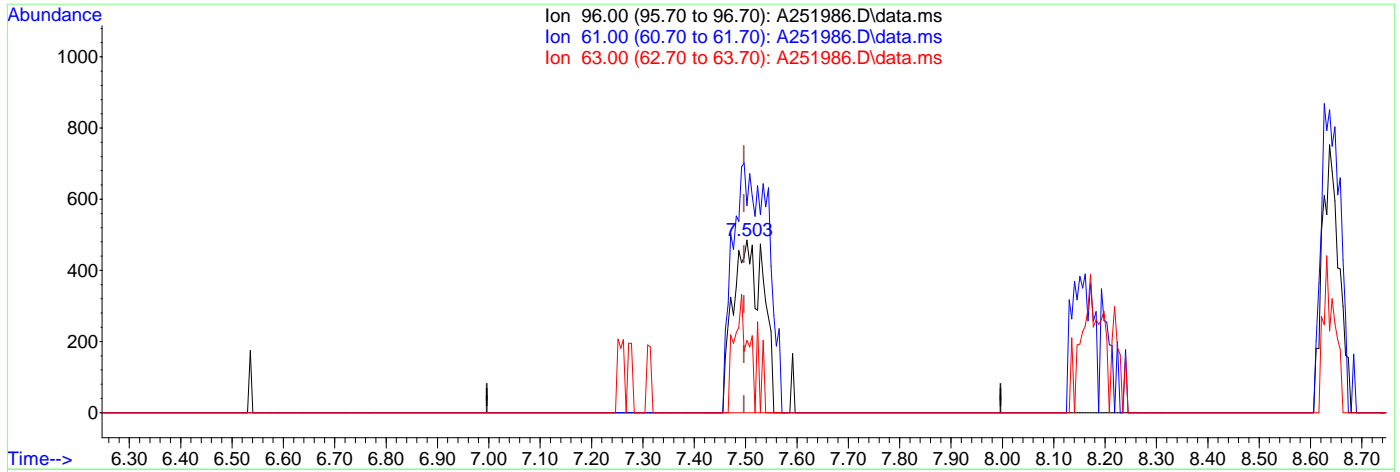
7.7.16.4

7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251986.D  
 Acq On : 29 Jul 2019 6:40 pm  
 Operator : edwardd  
 Sample : ic9755-0.5  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 30 11:38:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:38:00 2019  
 Response via : Initial Calibration



(18) 1,1-dichloroethene (M)  
 7.503min (+0.006) 0.57ug/L m  
 response 1971

Ion	Exp%	Act%
96.00	100	100
61.00	163.70	120.00#
63.00	53.30	41.86
0.00	0.00	0.00

7.7.16.5  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251987.D  
 Acq On : 29 Jul 2019 7:09 pm  
 Operator : edwardd  
 Sample : ic9755-1  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 30 11:56:28 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:54:50 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.150	65	437367	500.00	ug/L	0.00
5) pentafluorobenzene	10.534	168	227432	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	380697	50.00	ug/L	0.00
74) chlorobenzene-d5	14.889	117	286148	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.508	152	159885	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.576	113	126203	51.65	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.30%
53) 1,2-dichloroethane-d4 (s)	11.010	65	141803	51.79	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	103.58%
75) toluene-d8 (s)	13.221	98	406010	49.17	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.34%
99) 4-bromofluorobenzene (s)	16.196	95	148543	47.85	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.270	59	4466	4.81	ug/L	68
6) chlorodifluoromethane	4.585	51	6062	1.03	ug/L	87
7) dichlorodifluoromethane	4.574	85	5915	0.98	ug/L	84
8) chloromethane	4.998	50	6937	0.90	ug/L	85
9) vinyl chloride	5.259	62	5817	0.97	ug/L	95
10) 1,3-butadiene	5.254	54	4039	0.98	ug/L	91
11) bromomethane	5.949	94	3991	1.05	ug/L #	67
12) chloroethane	6.122	64	3442	1.01	ug/L	76
13) vinyl bromide	6.503	106	3570	0.97	ug/L #	94
14) trichlorofluoromethane	6.639	101	6026	1.02	ug/L	80
15) ethyl ether	7.010	74	1458	0.92	ug/L #	63
17) freon 113	7.502	151	2675	1.01	ug/L #	93
18) 1,1-dichloroethene	7.486	96	3797	1.12	ug/L	85
19) acetone	7.497	58	1989	4.13	ug/L #	58
21) iodomethane	7.768	142	4982	0.97	ug/L	92
22) carbon disulfide	7.931	76	12993	1.21	ug/L	87
23) methylene chloride	8.244	84	5283	1.40	ug/L	95
25) methyl tert butyl ether	8.605	73	10251	1.04	ug/L	97
26) trans-1,2-dichloroethene	8.642	96	2904	1.10	ug/L #	80
27) hexane	9.013	57	4511	1.07	ug/L #	89
28) di-isopropyl ether	9.222	45	11120	1.04	ug/L	96
29) ethyl tert-butyl ether	9.708	59	10565	1.06	ug/L	93
30) 2-butanone	9.922	72	1803	3.40	ug/L #	84
31) 1,1-dichloroethane	9.238	63	5471	1.08	ug/L	95
32) chloroprene	9.353	53	4240	1.03	ug/L	93
36) 2,2-dichloropropane	10.027	77	5145	1.17	ug/L	99
37) cis-1,2-dichloroethene	9.985	96	3524	1.19	ug/L	84
39) propionitrile	9.990	54	6775	9.14	ug/L	81
40) bromochloromethane	10.294	128	1403	1.00	ug/L	91
41) tetrahydrofuran	10.330	42	1653	1.15	ug/L	70
42) chloroform	10.377	83	5390	1.18	ug/L	92
43) tert-butyl formate	10.414	59	2253	0.88	ug/L #	81
45) methacrylonitrile	10.205	67	1319	0.86	ug/L	91
46) cyclohexane	10.775	84	5932	1.07	ug/L	95
47) 1,1,1-trichloroethane	10.649	97	4575	0.98	ug/L	91
49) 1,1-dichloropropene	10.827	75	3850	1.06	ug/L	94
50) carbon tetrachloride	10.858	117	3976	1.02	ug/L	95
54) benzene	11.083	78	11441	1.08	ug/L	96
55) iso-octane	11.182	57	11155	1.03	ug/L	87
56) tert-amyl methyl ether	11.167	73	10366	1.09	ug/L	95
57) heptane	11.344	71	2152	1.02	ug/L	94

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251987.D  
 Acq On : 29 Jul 2019 7:09 pm  
 Operator : edwardd  
 Sample : ic9755-1  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 30 11:56:28 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:54:50 2019  
 Response via : Initial Calibration

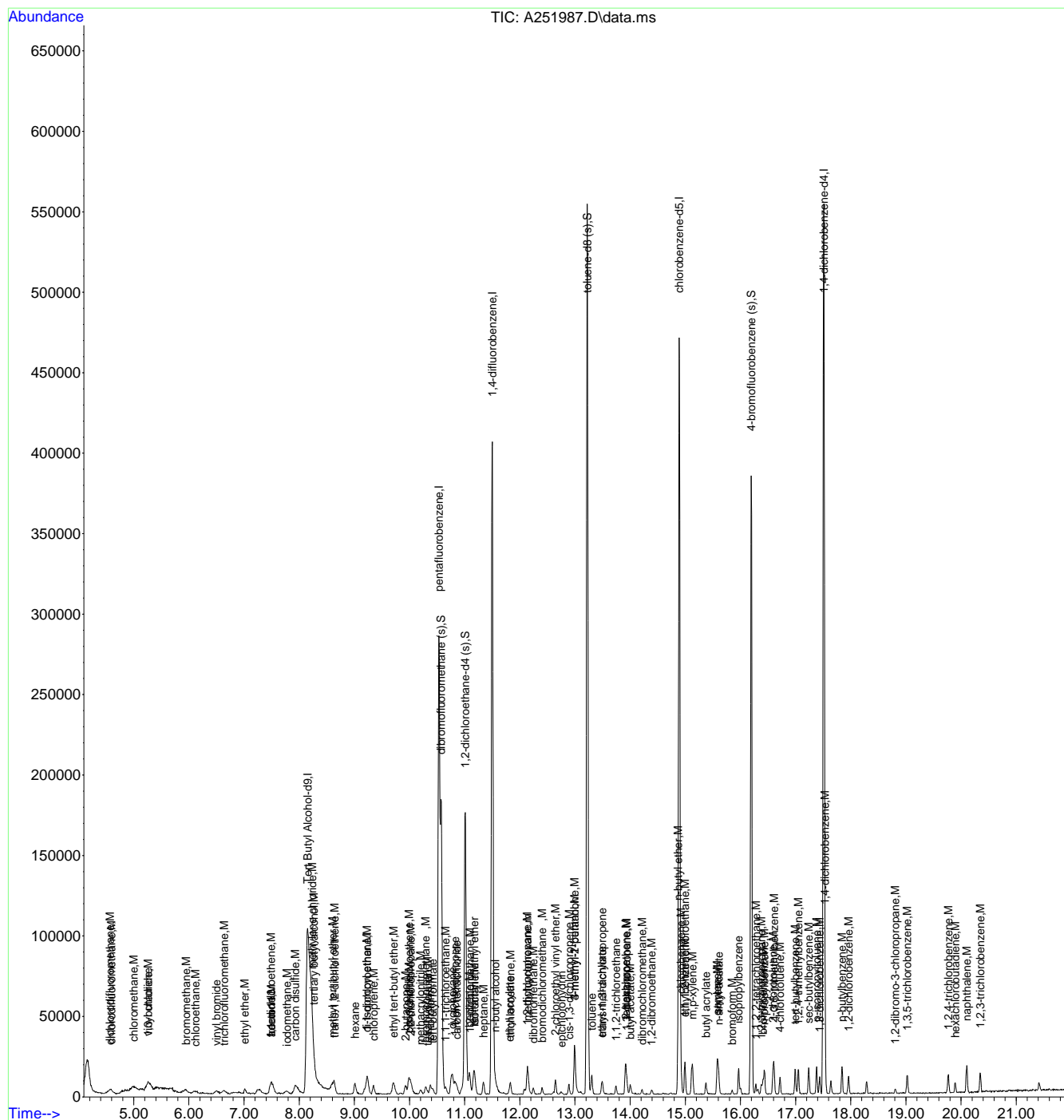
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
59) 1,2-dichloroethane	11.104	62	4163	1.26	ug/L	90
60) n-butyl alcohol	11.559	41	7181	176.53	ug/L #	18
61) ethyl acrylate	11.810	55	3412	0.85	ug/L	83
62) trichloroethene	11.831	95	2599	1.05	ug/L	92
64) methylcyclohexane	12.144	83	6264	1.11	ug/L	92
65) 2-chloroethyl vinyl ether	12.646	63	4311	4.17	ug/L	96
67) 1,2-dichloropropane	12.129	63	2951	1.04	ug/L	84
68) dibromomethane	12.244	93	1638	0.99	ug/L	94
69) bromodichloromethane	12.400	83	3485	1.02	ug/L	83
70) epichlorohydrin	12.751	57	1982	4.70	ug/L #	57
71) cis-1,3-dichloropropene	12.892	75	3888	0.93	ug/L	95
72) 4-methyl-2-pentanone	12.996	58	6228	3.75	ug/L	85
73) 3-methyl-1-butanol	12.991	55	6284	19.18	ug/L	96
76) toluene	13.300	92	5940	1.05	ug/L	98
77) trans-1,3-dichloropropene	13.498	75	3238	0.97	ug/L	94
78) ethyl methacrylate	13.483	69	2899	0.87	ug/L #	78
79) 1,1,2-trichloroethane	13.744	83	1917	1.07	ug/L	88
80) 2-hexanone	13.917	58	5918	4.33	ug/L	89
81) tetrachloroethene	13.917	166	2213	1.03	ug/L	89
82) 1,3-dichloropropane	13.943	76	3601	1.06	ug/L	93
83) butyl acetate	14.000	56	2129	1.02	ug/L #	75
84) dibromochloromethane	14.215	129	2061	0.95	ug/L	91
85) 1,2-dibromoethane	14.392	107	2209	1.01	ug/L	98
86) n-butyl ether	14.863	57	11322	1.11	ug/L	72
87) chlorobenzene	14.926	112	5914	1.08	ug/L	96
88) 1,1,1,2-tetrachloroethane	14.994	131	2661	1.03	ug/L	92
89) ethylbenzene	14.994	91	10486	1.06	ug/L	99
90) m,p-xylene	15.124	106	7863	2.12	ug/L	98
91) o-xylene	15.574	106	4032	0.99	ug/L #	75
92) styrene	15.590	104	6204	1.06	ug/L	98
93) butyl acrylate	15.375	55	5782	1.07	ug/L	91
94) n-amyl acetate	15.610	70	2322	1.09	ug/L #	74
95) bromoform	15.856	173	1450	1.01	ug/L	89
96) isopropylbenzene	15.971	105	11569	1.02	ug/L	95
100) bromobenzene	16.405	156	2312	0.93	ug/L	89
101) 1,1,2,2-tetrachloroethane	16.280	83	3938	1.01	ug/L	84
103) 1,2,3-trichloropropane	16.384	110	1017	1.04	ug/L	88
104) n-propylbenzene	16.437	91	13199	1.00	ug/L	95
105) 2-chlorotoluene	16.588	126	2537	0.94	ug/L	93
106) 4-chlorotoluene	16.719	91	7349	1.01	ug/L	94
107) 1,3,5-trimethylbenzene	16.614	105	9458	0.91	ug/L	99
108) tert-butylbenzene	16.991	119	8163	0.83	ug/L	92
109) 1,2,4-trimethylbenzene	17.048	105	9824	0.99	ug/L	96
110) sec-butylbenzene	17.242	105	12568	0.87	ug/L	97
111) 1,3-dichlorobenzene	17.435	146	4895	1.04	ug/L	90
112) p-isopropyltoluene	17.378	119	11007	0.96	ug/L	97
113) 1,4-dichlorobenzene	17.540	146	5005	1.06	ug/L	86
114) 1,2-dichlorobenzene	17.963	146	5266	1.05	ug/L	95
115) n-butylbenzene	17.838	92	5707	1.00	ug/L	89
116) 1,2-dibromo-3-chloropr...	18.810	157	1069	0.95	ug/L	85
117) 1,3,5-trichlorobenzene	19.024	180	4675	1.05	ug/L	94
119) 1,2,4-trichlorobenzene	19.772	180	4550	1.08	ug/L	94
120) hexachlorobutadiene	19.897	225	1824	0.99	ug/L	92
121) naphthalene	20.101	128	15404	1.06	ug/L	96
122) 1,2,3-trichlorobenzene	20.352	180	4627	0.99	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251987.D  
 Acq On : 29 Jul 2019 7:09 pm  
 Operator : edwardd  
 Sample : ic9755-1  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 30 11:56:28 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 11:54:50 2019  
 Response via : Initial Calibration



7.7.17  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251988.D  
 Acq On : 29 Jul 2019 7:39 pm  
 Operator : edwardd  
 Sample : ic9755-2  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 30 12:00:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:59:14 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.155	65	437958	500.00	ug/L	0.00
5) pentafluorobenzene	10.534	168	223564	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	371967	50.00	ug/L	0.00
74) chlorobenzene-d5	14.888	117	283437	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	155466	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.575	113	123927	51.60	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.20%
53) 1,2-dichloroethane-d4 (s)	11.009	65	140548	52.54	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	105.08%
75) toluene-d8 (s)	13.221	98	395248	48.32	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.64%
99) 4-bromofluorobenzene (s)	16.195	95	146130	48.41	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.82%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.285	59	9656	10.38	ug/L	88
6) chlorodifluoromethane	4.584	51	12181	2.10	ug/L	98
7) dichlorodifluoromethane	4.558	85	12793	2.15	ug/L	90
8) chloromethane	4.997	50	14908	1.97	ug/L	86
9) vinyl chloride	5.274	62	12247	2.07	ug/L	91
10) 1,3-butadiene	5.279	54	8708	2.15	ug/L	98
11) bromomethane	5.933	94	8464	2.27	ug/L	86
12) chloroethane	6.121	64	7490	2.24	ug/L	94
13) vinyl bromide	6.492	106	7469	2.07	ug/L #	94
14) trichlorofluoromethane	6.633	101	12866	2.20	ug/L	95
15) ethyl ether	7.020	74	3131	2.01	ug/L	90
16) acrolein	7.276	56	1465	1.79	ug/L	99
17) freon 113	7.512	151	5163	1.99	ug/L #	92
18) 1,1-dichloroethene	7.496	96	7332	2.21	ug/L	95
19) acetone	7.486	58	4172	8.81	ug/L #	77
21) iodomethane	7.784	142	10377	2.05	ug/L	92
22) carbon disulfide	7.940	76	23732	2.25	ug/L	91
23) methylene chloride	8.254	84	9142	2.47	ug/L	94
24) methyl acetate	7.972	43	7419	2.48	ug/L #	81
25) methyl tert butyl ether	8.610	73	20627	2.12	ug/L	99
26) trans-1,2-dichloroethene	8.636	96	6000	2.32	ug/L	87
27) hexane	9.012	57	9108	2.20	ug/L	97
28) di-isopropyl ether	9.221	45	22673	2.16	ug/L	94
29) ethyl tert-butyl ether	9.713	59	21157	2.16	ug/L	91
30) 2-butanone	9.917	72	3961	7.60	ug/L #	81
31) 1,1-dichloroethane	9.237	63	10610	2.13	ug/L	98
32) chloroprene	9.347	53	8655	2.15	ug/L	97
33) acrylonitrile	8.542	53	3037	1.84	ug/L	92
36) 2,2-dichloropropane	10.016	77	10575	2.46	ug/L	94
37) cis-1,2-dichloroethene	9.985	96	6459	2.22	ug/L	84
38) methyl acrylate	10.021	85	964	1.77	ug/L #	35
39) propionitrile	9.990	54	15035	20.64	ug/L	92
40) bromochloromethane	10.288	128	2929	2.11	ug/L	89
41) tetrahydrofuran	10.314	42	3300	2.33	ug/L	91
42) chloroform	10.382	83	10187	2.28	ug/L	95
43) tert-butyl formate	10.419	59	5085	2.01	ug/L	92
45) methacrylonitrile	10.199	67	3132	2.07	ug/L	90
46) cyclohexane	10.774	84	12065	2.22	ug/L	98
47) 1,1,1-trichloroethane	10.659	97	9929	2.16	ug/L	87
49) 1,1-dichloropropene	10.826	75	7388	2.08	ug/L	96
50) carbon tetrachloride	10.858	117	7465	1.95	ug/L	95

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251988.D  
 Acq On : 29 Jul 2019 7:39 pm  
 Operator : edwardd  
 Sample : ic9755-2  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 30 12:00:12 2019

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M

Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um

QLast Update : Tue Jul 30 11:59:14 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) tert-amyl alcohol	10.957	73	4363	9.98	ug/L	90
54) benzene	11.082	78	22603	2.18	ug/L	94
55) iso-octane	11.177	57	22359	2.11	ug/L	95
56) tert-amyl methyl ether	11.161	73	20160	2.17	ug/L	99
57) heptane	11.344	71	4247	2.07	ug/L	94
58) isopropyl acetate	10.978	87	1412	1.85	ug/L #	54
59) 1,2-dichloroethane	11.109	62	7443	2.31	ug/L	98
60) n-butyl alcohol	11.548	41	14911	375.15	ug/L #	19
61) ethyl acrylate	11.799	55	7546	1.92	ug/L	95
62) trichloroethene	11.835	95	5176	2.13	ug/L	89
64) methylcyclohexane	12.149	83	11878	2.14	ug/L	98
65) 2-chloroethyl vinyl ether	12.640	63	9126	9.04	ug/L	94
66) methyl methacrylate	12.076	100	1272	1.65	ug/L	89
67) 1,2-dichloropropane	12.128	63	5649	2.03	ug/L	95
68) dibromomethane	12.243	93	3182	1.97	ug/L	85
69) bromodichloromethane	12.405	83	7037	2.10	ug/L	91
70) epichlorohydrin	12.745	57	4046	9.81	ug/L	92
71) cis-1,3-dichloropropene	12.891	75	8102	1.97	ug/L	93
72) 4-methyl-2-pentanone	12.991	58	13907	8.57	ug/L	99
73) 3-methyl-1-butanol	12.991	55	13922	43.49	ug/L	97
76) toluene	13.304	92	11648	2.08	ug/L	97
77) trans-1,3-dichloropropene	13.498	75	6726	2.04	ug/L	97
78) ethyl methacrylate	13.482	69	6648	2.01	ug/L	97
79) 1,1,2-trichloroethane	13.743	83	3643	2.04	ug/L	91
80) 2-hexanone	13.916	58	12261	9.07	ug/L	99
81) tetrachloroethene	13.911	166	4430	2.08	ug/L	95
82) 1,3-dichloropropane	13.937	76	7301	2.16	ug/L	97
83) butyl acetate	14.000	56	4725	2.28	ug/L	99
84) dibromochloromethane	14.214	129	4020	1.88	ug/L	96
85) 1,2-dibromoethane	14.392	107	4681	2.15	ug/L	88
86) n-butyl ether	14.862	57	22015	2.18	ug/L	85
87) chlorobenzene	14.930	112	11097	2.04	ug/L	92
88) 1,1,1,2-tetrachloroethane	14.998	131	4726	1.84	ug/L	92
89) ethylbenzene	14.988	91	20848	2.13	ug/L	97
90) m,p-xylene	15.129	106	15841	4.31	ug/L	93
91) o-xylene	15.579	106	8277	2.05	ug/L	92
92) styrene	15.589	104	12448	2.14	ug/L	100
93) butyl acrylate	15.375	55	12030	2.25	ug/L	94
94) n-amyl acetate	15.610	70	5220	2.46	ug/L	88
95) bromoform	15.850	173	2873	2.01	ug/L	93
96) isopropylbenzene	15.971	105	22914	2.04	ug/L	98
97) cis-1,4-dichloro-2-butene	16.002	75	2477	1.93	ug/L #	82
100) bromobenzene	16.405	156	4709	1.95	ug/L #	82
101) 1,1,2,2-tetrachloroethane	16.279	83	7783	2.05	ug/L	94
102) trans-1,4-dichloro-2-b...	16.316	53	1765	2.06	ug/L	88
103) 1,2,3-trichloropropane	16.378	110	1953	2.06	ug/L	76
104) n-propylbenzene	16.436	91	25910	2.01	ug/L	98
105) 2-chlorotoluene	16.593	126	5089	1.93	ug/L	85
106) 4-chlorotoluene	16.718	91	14304	2.01	ug/L	99
107) 1,3,5-trimethylbenzene	16.608	105	19157	1.89	ug/L	95
108) tert-butylbenzene	16.995	119	16297	1.70	ug/L	93
109) 1,2,4-trimethylbenzene	17.048	105	19284	2.00	ug/L	99
110) sec-butylbenzene	17.241	105	25532	1.81	ug/L	97
111) 1,3-dichlorobenzene	17.440	146	9698	2.13	ug/L	95
112) p-isopropyltoluene	17.382	119	21130	1.90	ug/L	97
113) 1,4-dichlorobenzene	17.544	146	9723	2.11	ug/L	95
114) 1,2-dichlorobenzene	17.962	146	10663	2.18	ug/L	97
115) n-butylbenzene	17.842	92	11576	2.09	ug/L	99



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251988.D  
 Acq On : 29 Jul 2019 7:39 pm  
 Operator : edwardd  
 Sample : ic9755-2  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 30 12:00:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:59:14 2019  
 Response via : Initial Calibration

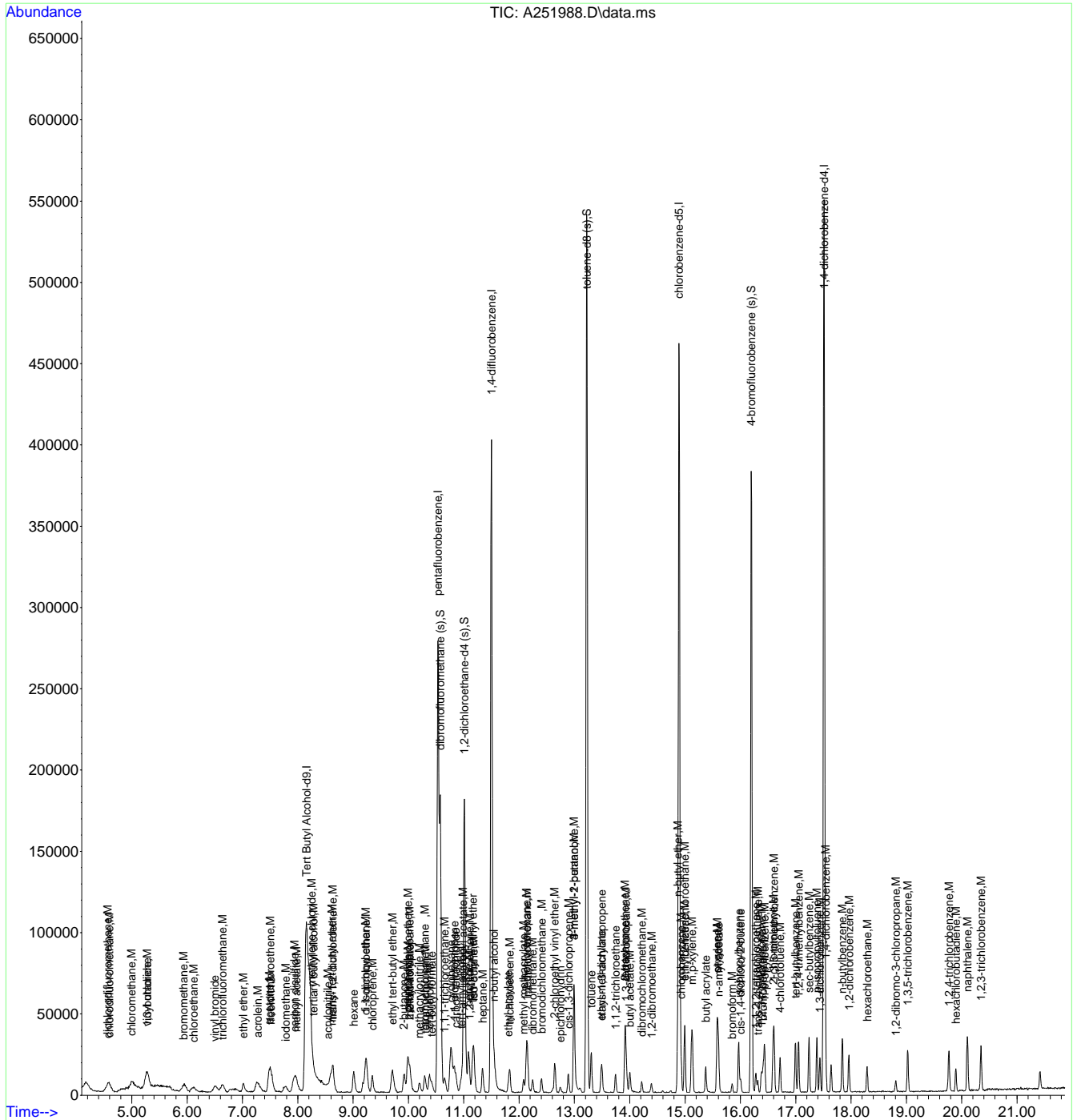
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) 1,2-dibromo-3-chloropr...	18.809	157	2447	2.23	ug/L	85
117) 1,3,5-trichlorobenzene	19.024	180	9400	2.18	ug/L	94
119) 1,2,4-trichlorobenzene	19.771	180	9128	2.23	ug/L	90
120) hexachlorobutadiene	19.892	225	3580	2.00	ug/L	93
121) naphthalene	20.106	128	30684	2.17	ug/L	98
122) 1,2,3-trichlorobenzene	20.352	180	10037	2.22	ug/L	95
123) hexachloroethane	18.292	201	2786	1.49	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251988.D  
 Acq On : 29 Jul 2019 7:39 pm  
 Operator : edwardd  
 Sample : ic9755-2  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 30 12:00:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 11:59:14 2019  
 Response via : Initial Calibration



7.7.18  
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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251989.D  
 Acq On : 29 Jul 2019 8:08 pm  
 Operator : edwardd  
 Sample : ic9755-4  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 30 12:02:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:02:14 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.151	65	419875	500.00	ug/L	0.00
5) pentafluorobenzene	10.535	168	222032	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.497	114	369170	50.00	ug/L	0.00
74) chlorobenzene-d5	14.890	117	281980	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	153206	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.571	113	120561	50.54	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.08%
53) 1,2-dichloroethane-d4 (s)	11.011	65	135909	51.19	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.38%
75) toluene-d8 (s)	13.222	98	394928	48.53	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.06%
99) 4-bromofluorobenzene (s)	16.197	95	144565	48.60	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.271	59	17608	19.74	ug/L	89
4) 1,4-dioxane	12.166	88	4883	93.93	ug/L	98
6) chlorodifluoromethane	4.585	51	24073	4.17	ug/L	97
7) dichlorodifluoromethane	4.570	85	22331	3.78	ug/L	97
8) chloromethane	4.998	50	24480	3.25	ug/L	99
9) vinyl chloride	5.260	62	22792	3.88	ug/L	88
10) 1,3-butadiene	5.265	54	16828	4.18	ug/L	94
11) bromomethane	5.939	94	15425	4.16	ug/L	90
12) chloroethane	6.122	64	13777	4.15	ug/L	96
13) vinyl bromide	6.504	106	13998	3.91	ug/L	98
14) trichlorofluoromethane	6.640	101	23368	4.03	ug/L	92
15) ethyl ether	7.022	74	6445	4.17	ug/L	76
16) acrolein	7.278	56	3237	3.99	ug/L	68
17) freon 113	7.503	151	10699	4.15	ug/L	98
18) 1,1-dichloroethene	7.503	96	14310	4.33	ug/L	95
19) acetone	7.476	58	7248	15.41	ug/L #	79
20) acetonitrile	7.926	41	29977	44.07	ug/L	86
21) iodomethane	7.780	142	21055	4.18	ug/L	96
22) carbon disulfide	7.936	76	45701	4.36	ug/L	99
23) methylene chloride	8.250	84	17591	4.79	ug/L	95
24) methyl acetate	7.968	43	13780	4.64	ug/L	89
25) methyl tert butyl ether	8.595	73	41441	4.30	ug/L	99
26) trans-1,2-dichloroethene	8.632	96	11419	4.45	ug/L	91
27) hexane	9.008	57	16849	4.09	ug/L	96
28) di-isopropyl ether	9.223	45	44888	4.30	ug/L	98
29) ethyl tert-butyl ether	9.704	59	41133	4.22	ug/L	99
30) 2-butanone	9.907	72	7945	15.35	ug/L #	88
31) 1,1-dichloroethane	9.238	63	20463	4.13	ug/L	99
32) chloroprene	9.348	53	16316	4.08	ug/L	97
33) acrylonitrile	8.532	53	7099	4.33	ug/L	91
34) vinyl acetate	9.170	86	2404	3.77	ug/L #	44
35) ethyl acetate	9.923	45	2178	3.45	ug/L #	62
36) 2,2-dichloropropane	10.028	77	18843	4.41	ug/L	96
37) cis-1,2-dichloroethene	9.981	96	12294	4.26	ug/L	94
38) methyl acrylate	10.022	85	1875	3.46	ug/L #	14
39) propionitrile	9.986	54	29343	40.57	ug/L	96
40) bromochloromethane	10.289	128	5726	4.16	ug/L	93
41) tetrahydrofuran	10.315	42	5780	4.11	ug/L	94
42) chloroform	10.378	83	19658	4.42	ug/L	99
43) tert-butyl formate	10.420	59	9831	3.91	ug/L	96
45) methacrylonitrile	10.195	67	6167	4.10	ug/L #	79

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251989.D  
 Acq On : 29 Jul 2019 8:08 pm  
 Operator : edwardd  
 Sample : ic9755-4  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 30 12:02:55 2019

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M

Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um

QLast Update : Tue Jul 30 12:02:14 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.775	84	21033	3.90	ug/L	91
47) 1,1,1-trichloroethane	10.655	97	18306	4.02	ug/L	94
48) iso-butyl alcohol	10.775	43	21768	41.17	ug/L	99
49) 1,1-dichloropropene	10.828	75	14654	4.15	ug/L	98
50) carbon tetrachloride	10.859	117	15785	4.16	ug/L	96
51) tert-amyl alcohol	10.943	73	8863	20.41	ug/L	87
54) benzene	11.078	78	44519	4.34	ug/L	97
55) iso-octane	11.178	57	43746	4.16	ug/L	99
56) tert-amyl methyl ether	11.162	73	40108	4.36	ug/L	92
57) heptane	11.340	71	8031	3.94	ug/L	90
58) isopropyl acetate	10.979	87	2775	3.66	ug/L #	59
59) 1,2-dichloroethane	11.099	62	14254	4.45	ug/L	96
60) n-butyl alcohol	11.544	41	29170	739.46	ug/L #	19
61) ethyl acrylate	11.805	55	15187	3.88	ug/L	98
62) trichloroethene	11.826	95	10060	4.18	ug/L	99
63) 2-nitropropane	12.610	41	3930	4.10	ug/L #	74
64) methylcyclohexane	12.145	83	22944	4.17	ug/L	97
65) 2-chloroethyl vinyl ether	12.642	63	18718	18.68	ug/L	99
66) methyl methacrylate	12.082	100	2925	3.83	ug/L #	59
67) 1,2-dichloropropane	12.124	63	11181	4.05	ug/L	97
68) dibromomethane	12.239	93	6871	4.28	ug/L	85
69) bromodichloromethane	12.401	83	13097	3.94	ug/L	100
70) epichlorohydrin	12.741	57	8146	19.90	ug/L	96
71) cis-1,3-dichloropropene	12.887	75	15549	3.82	ug/L	96
72) 4-methyl-2-pentanone	12.992	58	25993	16.13	ug/L	94
73) 3-methyl-1-butanol	12.992	55	26189	82.43	ug/L	97
76) toluene	13.300	92	21993	3.95	ug/L	93
77) trans-1,3-dichloropropene	13.499	75	12936	3.94	ug/L	95
78) ethyl methacrylate	13.483	69	13224	4.02	ug/L	91
79) 1,1,2-trichloroethane	13.745	83	7165	4.04	ug/L	92
80) 2-hexanone	13.917	58	24762	18.41	ug/L	88
81) tetrachloroethene	13.912	166	8567	4.05	ug/L	93
82) 1,3-dichloropropane	13.943	76	13771	4.10	ug/L	92
83) butyl acetate	14.001	56	9329	4.53	ug/L	98
84) dibromochloromethane	14.215	129	8630	4.05	ug/L	91
85) 1,2-dibromoethane	14.388	107	9118	4.21	ug/L	95
86) n-butyl ether	14.864	57	42700	4.25	ug/L	93
87) chlorobenzene	14.926	112	21825	4.03	ug/L	94
88) 1,1,1,2-tetrachloroethane	14.999	131	10114	3.96	ug/L	98
89) ethylbenzene	14.989	91	39466	4.06	ug/L	98
90) m,p-xylene	15.125	106	30150	8.25	ug/L	97
91) o-xylene	15.580	106	16438	4.10	ug/L	91
92) styrene	15.590	104	24726	4.27	ug/L	97
93) butyl acrylate	15.371	55	23715	4.46	ug/L	98
94) n-amyl acetate	15.606	70	10248	4.86	ug/L	98
95) bromoform	15.852	173	5756	4.05	ug/L	91
96) isopropylbenzene	15.967	105	45243	4.05	ug/L	95
97) cis-1,4-dichloro-2-butene	16.003	75	5332	4.17	ug/L	96
100) bromobenzene	16.411	156	9709	4.09	ug/L	90
101) 1,1,2,2-tetrachloroethane	16.280	83	14479	3.86	ug/L	94
102) trans-1,4-dichloro-2-b...	16.312	53	3295	3.90	ug/L	85
103) 1,2,3-trichloropropane	16.380	110	3700	3.96	ug/L	97
104) n-propylbenzene	16.437	91	50766	4.00	ug/L	99
105) 2-chlorotoluene	16.589	126	9865	3.80	ug/L	94
106) 4-chlorotoluene	16.720	91	28548	4.08	ug/L	99
107) 1,3,5-trimethylbenzene	16.610	105	37239	3.72	ug/L	97
108) tert-butylbenzene	16.991	119	31895	3.39	ug/L	99
109) 1,2,4-trimethylbenzene	17.049	105	36627	3.85	ug/L	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251989.D  
 Acq On : 29 Jul 2019 8:08 pm  
 Operator : edwardd  
 Sample : ic9755-4  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 30 12:02:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:02:14 2019  
 Response via : Initial Calibration

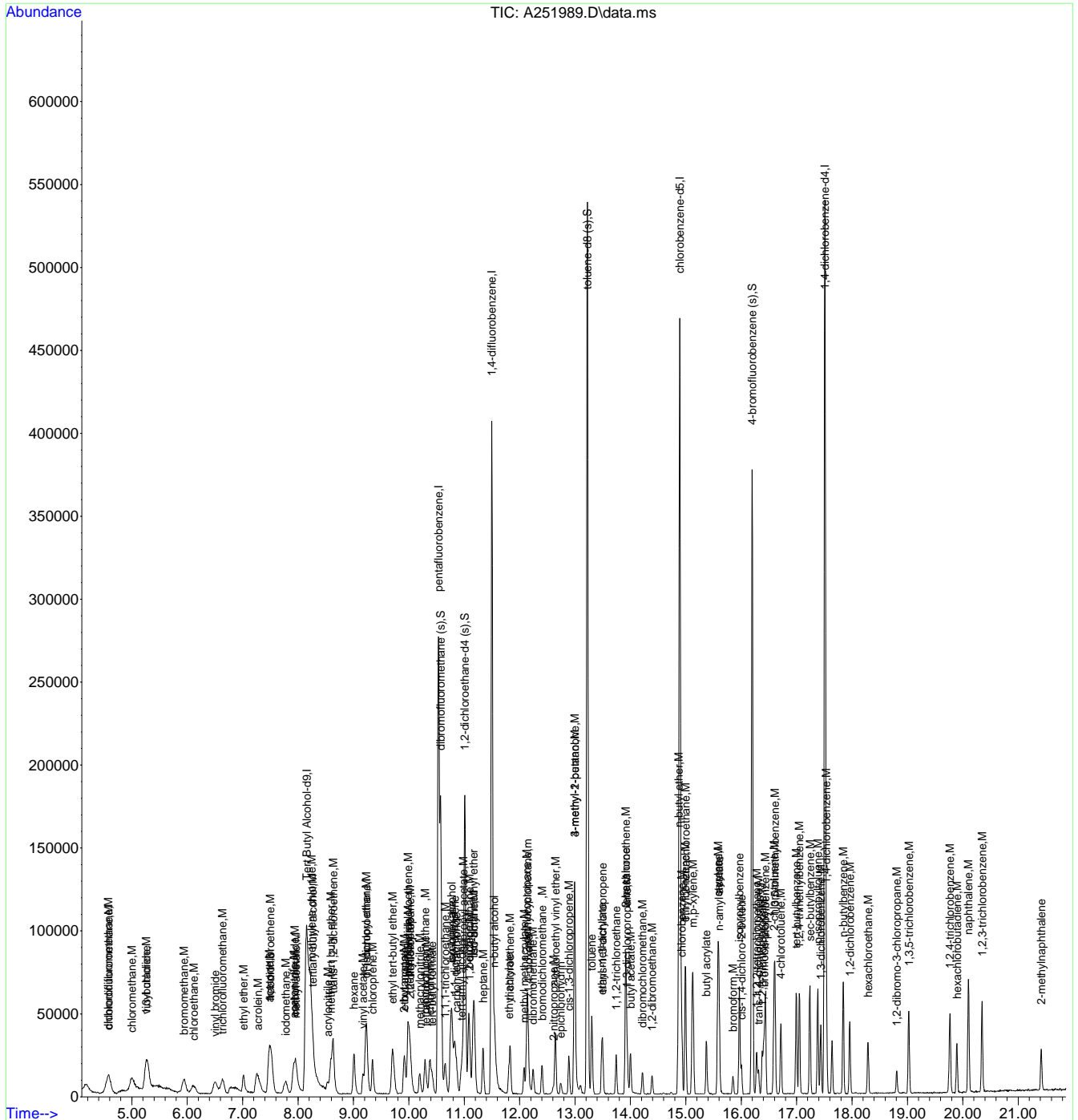
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.242	105	50198	3.62	ug/L	98
111) 1,3-dichlorobenzene	17.436	146	18689	4.16	ug/L	98
112) p-isopropyltoluene	17.383	119	41706	3.80	ug/L	98
113) 1,4-dichlorobenzene	17.540	146	18595	4.10	ug/L	98
114) 1,2-dichlorobenzene	17.959	146	19769	4.11	ug/L	95
115) n-butylbenzene	17.844	92	22003	4.02	ug/L	94
116) 1,2-dibromo-3-chloropr...	18.811	157	4608	4.26	ug/L	98
117) 1,3,5-trichlorobenzene	19.025	180	17974	4.23	ug/L	96
119) 1,2,4-trichlorobenzene	19.773	180	17160	4.25	ug/L	99
120) hexachlorobutadiene	19.893	225	6803	3.86	ug/L	92
121) naphthalene	20.102	128	59527	4.28	ug/L	99
122) 1,2,3-trichlorobenzene	20.348	180	18747	4.20	ug/L	98
123) hexachloroethane	18.288	201	5874	3.19	ug/L	96
124) 2-methylnaphthalene	21.414	142	14971	1.62	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251989.D  
 Acq On : 29 Jul 2019 8:08 pm  
 Operator : edwardd  
 Sample : ic9755-4  
 Misc : MS36311,VA9755,5,,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 30 12:02:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 12:02:14 2019  
 Response via : Initial Calibration



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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251990.D  
 Acq On : 29 Jul 2019 8:37 pm  
 Operator : edwardd  
 Sample : ic9755-8  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:06:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.155	65	434566	500.00	ug/L	0.00
5) pentafluorobenzene	10.534	168	231976	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	392800	50.00	ug/L	0.00
74) chlorobenzene-d5	14.889	117	289861	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	155419	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.576	113	128877	51.71	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.42%
53) 1,2-dichloroethane-d4 (s)	11.010	65	147295	52.14	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	104.28%
75) toluene-d8 (s)	13.221	98	415910	49.72	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.44%
99) 4-bromofluorobenzene (s)	16.196	95	147086	48.74	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.48%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.286	59	36585	39.62	ug/L	96
4) 1,4-dioxane	12.175	88	8274	153.78	ug/L	95
6) chlorodifluoromethane	4.590	51	47439	7.86	ug/L	95
7) dichlorodifluoromethane	4.558	85	47226	7.66	ug/L	95
8) chloromethane	4.992	50	50997	6.49	ug/L	98
9) vinyl chloride	5.259	62	46746	7.62	ug/L	94
10) 1,3-butadiene	5.285	54	32952	7.84	ug/L	98
11) bromomethane	5.944	94	31315	8.09	ug/L	98
12) chloroethane	6.116	64	27604	7.95	ug/L	94
13) vinyl bromide	6.498	106	29136	7.79	ug/L	98
14) trichlorofluoromethane	6.634	101	46720	7.72	ug/L	97
15) ethyl ether	7.021	74	13015	8.07	ug/L	86
16) acrolein	7.266	56	6781	8.00	ug/L	92
17) freon 113	7.517	151	21429	7.95	ug/L	98
18) 1,1-dichloroethene	7.496	96	27980	8.11	ug/L	98
19) acetone	7.475	58	15012	30.55	ug/L	97
20) acetonitrile	7.920	41	56568	79.60	ug/L	93
21) iodomethane	7.768	142	41497	7.89	ug/L	91
22) carbon disulfide	7.936	76	88334	8.06	ug/L	97
23) methylene chloride	8.233	84	32520	8.47	ug/L	99
24) methyl acetate	7.967	43	24299	7.82	ug/L	98
25) methyl tert butyl ether	8.605	73	81439	8.08	ug/L	99
26) trans-1,2-dichloroethene	8.631	96	22616	8.43	ug/L	98
27) hexane	9.012	57	34889	8.11	ug/L	97
28) di-isopropyl ether	9.227	45	88565	8.12	ug/L	96
29) ethyl tert-butyl ether	9.708	59	80803	7.94	ug/L	95
30) 2-butanone	9.917	72	16033	29.65	ug/L	94
31) 1,1-dichloroethane	9.237	63	43071	8.32	ug/L	97
32) chloroprene	9.347	53	32907	7.87	ug/L	97
33) acrylonitrile	8.531	53	14028	8.18	ug/L	93
34) vinyl acetate	9.175	86	4686	7.04	ug/L #	79
35) ethyl acetate	9.927	45	4961	7.52	ug/L #	72
36) 2,2-dichloropropane	10.027	77	37529	8.40	ug/L	99
37) cis-1,2-dichloroethene	9.985	96	25477	8.46	ug/L	97
38) methyl acrylate	10.016	85	4453	7.87	ug/L #	76
39) propionitrile	9.990	54	60213	79.67	ug/L	98
40) bromochloromethane	10.293	128	11600	8.07	ug/L	94
41) tetrahydrofuran	10.314	42	11843	8.06	ug/L	96
42) chloroform	10.377	83	39333	8.47	ug/L	99
43) tert-butyl formate	10.414	59	19839	7.56	ug/L	97
45) methacrylonitrile	10.194	67	12491	7.94	ug/L	94



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251990.D  
 Acq On : 29 Jul 2019 8:37 pm  
 Operator : edwardd  
 Sample : ic9755-8  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:06:01 2019

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M

Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um

QLast Update : Tue Jul 30 12:05:46 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.780	84	44980	7.99	ug/L	99
47) 1,1,1-trichloroethane	10.659	97	38308	8.04	ug/L	97
48) iso-butyl alcohol	10.769	43	44342	80.28	ug/L	97
49) 1,1-dichloropropene	10.827	75	29314	7.94	ug/L	98
50) carbon tetrachloride	10.858	117	31702	7.99	ug/L	99
51) tert-amyl alcohol	10.957	73	17552	38.68	ug/L	93
54) benzene	11.083	78	90162	8.25	ug/L	98
55) iso-octane	11.182	57	87530	7.82	ug/L	99
56) tert-amyl methyl ether	11.166	73	80018	8.17	ug/L	97
57) heptane	11.339	71	16994	7.83	ug/L	96
58) isopropyl acetate	10.978	87	5904	7.32	ug/L #	79
59) 1,2-dichloroethane	11.104	62	29098	8.54	ug/L	95
60) n-butyl alcohol	11.548	41	55754	1328.34	ug/L #	19
61) ethyl acrylate	11.799	55	30436	7.31	ug/L	97
62) trichloroethene	11.830	95	20290	7.92	ug/L	97
63) 2-nitropropane	12.609	41	8017	7.87	ug/L	82
64) methylcyclohexane	12.149	83	47526	8.13	ug/L	98
65) 2-chloroethyl vinyl ether	12.646	63	36953	34.66	ug/L	99
66) methyl methacrylate	12.076	100	5992	7.38	ug/L #	79
67) 1,2-dichloropropane	12.134	63	23654	8.05	ug/L	98
68) dibromomethane	12.243	93	13257	7.76	ug/L	97
69) bromodichloromethane	12.405	83	27952	7.91	ug/L	99
70) epichlorohydrin	12.745	57	16049	36.85	ug/L	99
71) cis-1,3-dichloropropene	12.892	75	32248	7.44	ug/L	96
72) 4-methyl-2-pentanone	12.996	58	52510	30.63	ug/L	93
73) 3-methyl-1-butanol	12.986	55	52804	156.21	ug/L	99
76) toluene	13.305	92	44820	7.83	ug/L	90
77) trans-1,3-dichloropropene	13.498	75	26341	7.80	ug/L	96
78) ethyl methacrylate	13.477	69	26220	7.75	ug/L	96
79) 1,1,2-trichloroethane	13.744	83	13757	7.55	ug/L	94
80) 2-hexanone	13.916	58	48467	35.05	ug/L	95
81) tetrachloroethene	13.916	166	17499	8.05	ug/L	96
82) 1,3-dichloropropane	13.942	76	27576	7.99	ug/L	97
83) butyl acetate	14.000	56	17902	8.45	ug/L	95
84) dibromochloromethane	14.214	129	16674	7.62	ug/L	99
85) 1,2-dibromoethane	14.392	107	17845	8.02	ug/L	97
86) n-butyl ether	14.863	57	87254	8.45	ug/L	97
87) chlorobenzene	14.925	112	43784	7.87	ug/L	96
88) 1,1,1,2-tetrachloroethane	14.993	131	21276	8.10	ug/L	95
89) ethylbenzene	14.988	91	82172	8.22	ug/L	99
90) m,p-xylene	15.124	106	60704	16.16	ug/L	99
91) o-xylene	15.579	106	33093	8.03	ug/L	98
92) styrene	15.589	104	49410	8.30	ug/L	96
93) butyl acrylate	15.370	55	47184	8.63	ug/L	97
94) n-amyl acetate	15.600	70	19093	8.81	ug/L	95
95) bromoform	15.851	173	11467	7.85	ug/L	99
96) isopropylbenzene	15.966	105	93350	8.13	ug/L	99
97) cis-1,4-dichloro-2-butene	16.002	75	10120	7.69	ug/L	91
100) bromobenzene	16.410	156	18587	7.71	ug/L	93
101) 1,1,2,2-tetrachloroethane	16.279	83	29601	7.78	ug/L	95
102) trans-1,4-dichloro-2-b...	16.311	53	6553	7.64	ug/L	97
103) 1,2,3-trichloropropane	16.379	110	7522	7.94	ug/L	95
104) n-propylbenzene	16.436	91	102327	7.94	ug/L	99
105) 2-chlorotoluene	16.588	126	19705	7.48	ug/L	98
106) 4-chlorotoluene	16.713	91	56630	7.97	ug/L	97
107) 1,3,5-trimethylbenzene	16.609	105	77028	7.58	ug/L	98
108) tert-butylbenzene	16.996	119	66525	6.96	ug/L	98
109) 1,2,4-trimethylbenzene	17.048	105	76608	7.94	ug/L	98



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251990.D  
 Acq On : 29 Jul 2019 8:37 pm  
 Operator : edwardd  
 Sample : ic9755-8  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:06:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.241	105	102871	7.31	ug/L	99
111) 1,3-dichlorobenzene	17.435	146	36808	8.08	ug/L	93
112) p-isopropyltoluene	17.383	119	84807	7.62	ug/L	99
113) 1,4-dichlorobenzene	17.539	146	36345	7.89	ug/L	99
114) 1,2-dichlorobenzene	17.958	146	39432	8.08	ug/L	99
115) n-butylbenzene	17.843	92	45317	8.17	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.810	157	8723	7.95	ug/L	94
117) 1,3,5-trichlorobenzene	19.024	180	34880	8.09	ug/L	96
118) 2-ethylhexyl acrylate	19.746	70	3811	1.16	ug/L	92
119) 1,2,4-trichlorobenzene	19.766	180	34874	8.51	ug/L	98
120) hexachlorobutadiene	19.892	225	13177	7.37	ug/L	98
121) naphthalene	20.101	128	117928	8.35	ug/L	98
122) 1,2,3-trichlorobenzene	20.347	180	37090	8.20	ug/L	98
123) hexachloroethane	18.292	201	12502	6.69	ug/L	97
124) 2-methylnaphthalene	21.413	142	31258	3.33	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

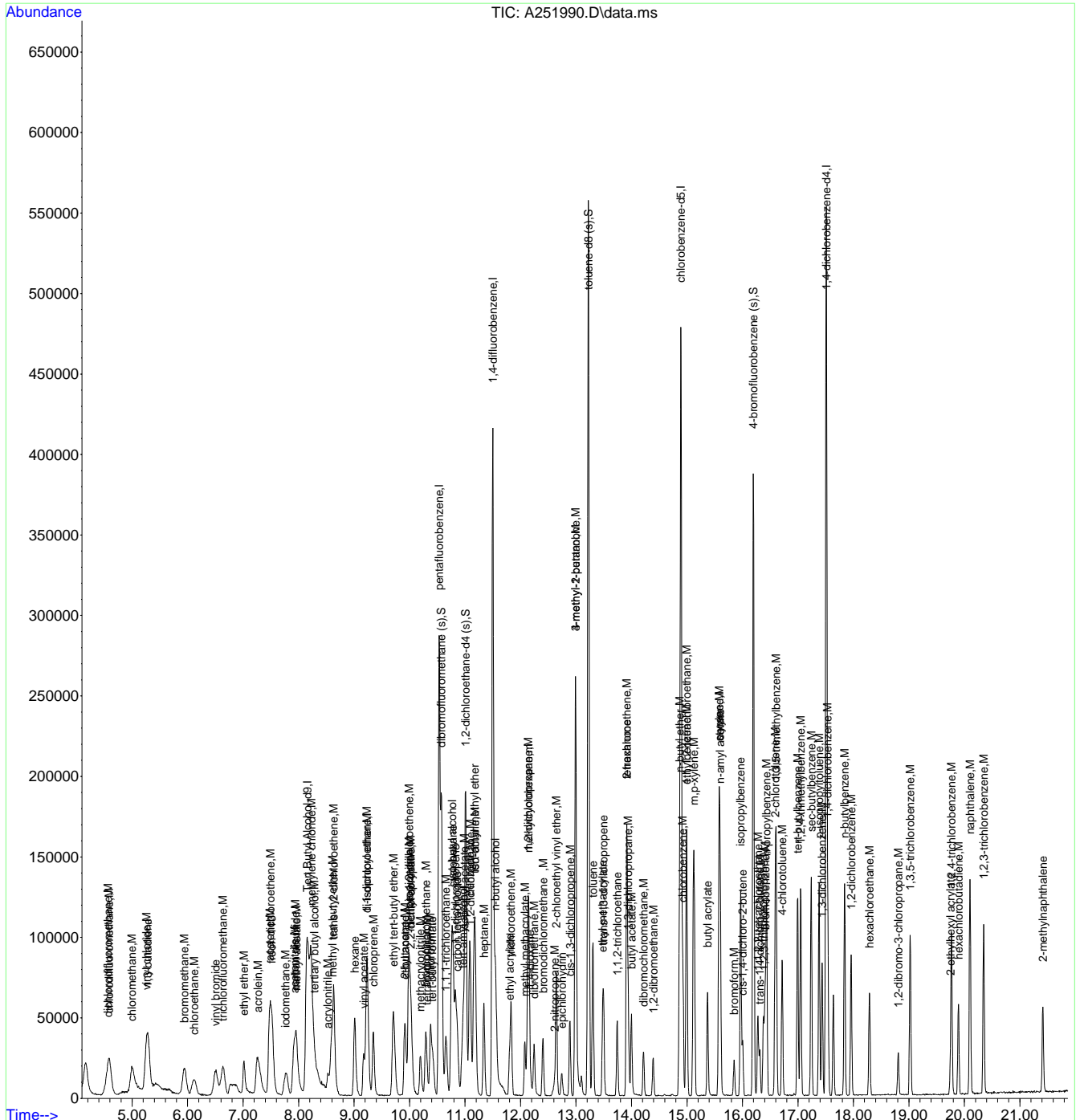
7.7.20

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
Data File : A251990.D  
Acq On : 29 Jul 2019 8:37 pm  
Operator : edwardd  
Sample : ic9755-8  
Misc : MS36311,VA9755,5,,1  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 30 12:06:01 2019  
Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
QLast Update : Tue Jul 30 12:05:46 2019  
Response via : Initial Calibration



7.7.20  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251991.D  
 Acq On : 29 Jul 2019 9:07 pm  
 Operator : edwardd  
 Sample : ic9755-20  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 30 12:06:19 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.151	65	421424	500.00	ug/L	0.00
5) pentafluorobenzene	10.535	168	225718	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.502	114	386873	50.00	ug/L	0.00
74) chlorobenzene-d5	14.890	117	293150	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	151348	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.577	113	127585	52.62	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.24%
53) 1,2-dichloroethane-d4 (s)	11.011	65	143137	51.44	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.88%
75) toluene-d8 (s)	13.222	98	421847	49.87	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.74%
99) 4-bromofluorobenzene (s)	16.197	95	145370	49.47	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.94%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.282	59	86911	97.06	ug/L	96
4) 1,4-dioxane	12.177	88	23195	444.54	ug/L	97
6) chlorodifluoromethane	4.586	51	118177	20.14	ug/L	97
7) dichlorodifluoromethane	4.565	85	118017	19.66	ug/L	96
8) chloromethane	4.993	50	155434	20.32	ug/L	97
9) vinyl chloride	5.260	62	120455	20.17	ug/L	97
10) 1,3-butadiene	5.286	54	81445	19.90	ug/L	96
11) bromomethane	5.945	94	76632	20.35	ug/L	99
12) chloroethane	6.107	64	67847	20.09	ug/L	96
13) vinyl bromide	6.504	106	71957	19.78	ug/L	100
14) trichlorofluoromethane	6.635	101	117434	19.93	ug/L	100
15) ethyl ether	7.011	74	31990	20.38	ug/L	91
16) acrolein	7.252	56	16599	20.13	ug/L	95
17) freon 113	7.503	151	53050	20.23	ug/L	100
18) 1,1-dichloroethene	7.498	96	69617	20.74	ug/L	91
19) acetone	7.471	58	37988	79.44	ug/L	97
20) acetonitrile	7.916	41	137234	198.47	ug/L	99
21) iodomethane	7.780	142	102291	19.99	ug/L	97
22) carbon disulfide	7.931	76	216447	20.29	ug/L	99
23) methylene chloride	8.229	84	78342	20.98	ug/L	99
24) methyl acetate	7.963	43	63173	20.91	ug/L	98
25) methyl tert butyl ether	8.601	73	201573	20.56	ug/L	99
26) trans-1,2-dichloroethene	8.637	96	55293	21.19	ug/L	97
27) hexane	9.008	57	86334	20.62	ug/L	100
28) di-isopropyl ether	9.223	45	220389	20.76	ug/L	94
29) ethyl tert-butyl ether	9.704	59	203736	20.58	ug/L	98
30) 2-butanone	9.908	72	41483	78.84	ug/L	95
31) 1,1-dichloroethane	9.239	63	104420	20.74	ug/L	98
32) chloroprene	9.343	53	84270	20.72	ug/L	96
33) acrylonitrile	8.527	53	34642	20.77	ug/L	94
34) vinyl acetate	9.171	86	12678	19.57	ug/L #	91
35) ethyl acetate	9.923	45	13711	21.37	ug/L #	80
36) 2,2-dichloropropane	10.023	77	90535	20.83	ug/L	96
37) cis-1,2-dichloroethene	9.986	96	62336	21.27	ug/L	96
38) methyl acrylate	10.012	85	11139	20.24	ug/L	95
39) propionitrile	9.986	54	151721	206.32	ug/L	93
40) bromochloromethane	10.295	128	29660	21.20	ug/L	92
41) tetrahydrofuran	10.310	42	29857	20.87	ug/L	99
42) chloroform	10.378	83	95971	21.23	ug/L	98
43) tert-butyl formate	10.415	59	51270	20.08	ug/L	99
45) methacrylonitrile	10.190	67	31395	20.52	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251991.D  
 Acq On : 29 Jul 2019 9:07 pm  
 Operator : edwardd  
 Sample : ic9755-20  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 30 12:06:19 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\VA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.770	84	112621	20.55	ug/L	99
47) 1,1,1-trichloroethane	10.655	97	93355	20.14	ug/L	99
48) iso-butyl alcohol	10.770	43	107938	200.83	ug/L	97
49) 1,1-dichloropropene	10.828	75	74284	20.68	ug/L	98
50) carbon tetrachloride	10.859	117	78510	20.34	ug/L	100
51) tert-amyl alcohol	10.953	73	44277	100.28	ug/L	96
54) benzene	11.084	78	222047	20.64	ug/L	99
55) iso-octane	11.183	57	222737	20.20	ug/L	99
56) tert-amyl methyl ether	11.162	73	199809	20.72	ug/L	98
57) heptane	11.340	71	43730	20.46	ug/L	98
58) isopropyl acetate	10.974	87	16055	20.22	ug/L	96
59) 1,2-dichloroethane	11.105	62	71048	21.17	ug/L	98
60) n-butyl alcohol	11.544	41	139116	3365.21	ug/L #	15
61) ethyl acrylate	11.795	55	77421	18.89	ug/L	98
62) trichloroethene	11.832	95	51434	20.38	ug/L	97
63) 2-nitropropane	12.605	41	19533	19.47	ug/L #	79
64) methylcyclohexane	12.145	83	118919	20.65	ug/L	99
65) 2-chloroethyl vinyl ether	12.642	63	98871	94.17	ug/L	98
66) methyl methacrylate	12.077	100	15816	19.77	ug/L #	84
67) 1,2-dichloropropane	12.130	63	58624	20.26	ug/L	97
68) dibromomethane	12.245	93	34450	20.47	ug/L	95
69) bromodichloromethane	12.401	83	70001	20.10	ug/L	99
70) epichlorohydrin	12.741	57	40921	95.40	ug/L	99
71) cis-1,3-dichloropropene	12.888	75	82729	19.38	ug/L	99
72) 4-methyl-2-pentanone	12.992	58	136158	80.63	ug/L	98
73) 3-methyl-1-butanol	12.987	55	133347	400.53	ug/L	99
76) toluene	13.301	92	113865	19.68	ug/L	94
77) trans-1,3-dichloropropene	13.499	75	66638	19.52	ug/L	98
78) ethyl methacrylate	13.478	69	68177	19.93	ug/L	98
79) 1,1,2-trichloroethane	13.740	83	36306	19.70	ug/L	99
80) 2-hexanone	13.918	58	116091	83.01	ug/L	97
81) tetrachloroethene	13.918	166	43912	19.96	ug/L	97
82) 1,3-dichloropropane	13.944	76	69673	19.97	ug/L	97
83) butyl acetate	13.996	56	44059	20.57	ug/L	98
84) dibromochloromethane	14.216	129	43684	19.73	ug/L	99
85) 1,2-dibromoethane	14.388	107	45242	20.11	ug/L	96
86) n-butyl ether	14.864	57	219645	21.03	ug/L	99
87) chlorobenzene	14.927	112	111843	19.88	ug/L	99
88) 1,1,1,2-tetrachloroethane	14.995	131	54104	20.37	ug/L	98
89) ethylbenzene	14.989	91	204772	20.26	ug/L	98
90) m,p-xylene	15.120	106	154141	40.59	ug/L	95
91) o-xylene	15.575	106	83907	20.12	ug/L	100
92) styrene	15.585	104	124455	20.67	ug/L	97
93) butyl acrylate	15.371	55	117386	21.24	ug/L	99
94) n-amyl acetate	15.601	70	48119	21.96	ug/L	98
95) bromoform	15.852	173	28915	19.58	ug/L	99
96) isopropylbenzene	15.967	105	239074	20.59	ug/L	99
97) cis-1,4-dichloro-2-butene	16.004	75	26895	20.21	ug/L	95
100) bromobenzene	16.406	156	46408	19.77	ug/L	97
101) 1,1,2,2-tetrachloroethane	16.275	83	74777	20.19	ug/L	97
102) trans-1,4-dichloro-2-b...	16.312	53	15822	18.93	ug/L	97
103) 1,2,3-trichloropropane	16.375	110	19384	21.02	ug/L	87
104) n-propylbenzene	16.437	91	257132	20.50	ug/L	99
105) 2-chlorotoluene	16.589	126	51339	20.00	ug/L	96
106) 4-chlorotoluene	16.715	91	139065	20.10	ug/L	97
107) 1,3,5-trimethylbenzene	16.610	105	196488	19.87	ug/L	99
108) tert-butylbenzene	16.992	119	175613	18.87	ug/L	96
109) 1,2,4-trimethylbenzene	17.049	105	191634	20.40	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251991.D  
 Acq On : 29 Jul 2019 9:07 pm  
 Operator : edwardd  
 Sample : ic9755-20  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 30 12:06:19 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.237	105	266637	19.45	ug/L	98
111) 1,3-dichlorobenzene	17.436	146	90318	20.36	ug/L	97
112) p-isopropyltoluene	17.384	119	213318	19.69	ug/L	99
113) 1,4-dichlorobenzene	17.541	146	91592	20.42	ug/L	97
114) 1,2-dichlorobenzene	17.959	146	98217	20.67	ug/L	98
115) n-butylbenzene	17.839	92	111661	20.67	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.811	157	21914	20.51	ug/L	99
117) 1,3,5-trichlorobenzene	19.025	180	86784	20.67	ug/L	97
118) 2-ethylhexyl acrylate	19.747	70	10656	3.34	ug/L	96
119) 1,2,4-trichlorobenzene	19.768	180	85221	21.36	ug/L	99
120) hexachlorobutadiene	19.893	225	33822	19.42	ug/L	98
121) naphthalene	20.102	128	288490	20.99	ug/L	100
122) 1,2,3-trichlorobenzene	20.348	180	91768	20.83	ug/L	97
123) hexachloroethane	18.288	201	33917	18.64	ug/L	98
124) 2-methylnaphthalene	21.415	142	86552	9.46	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

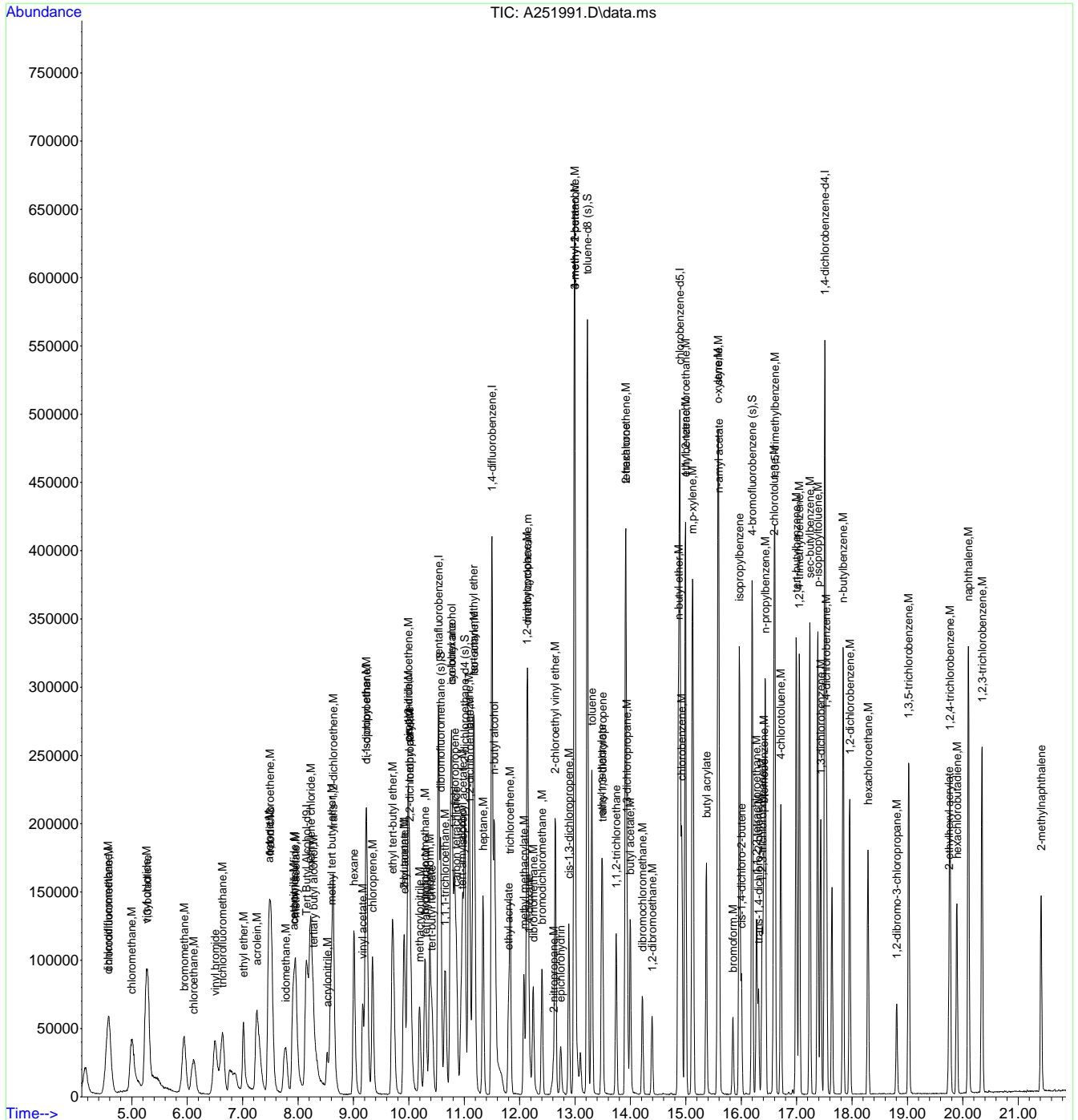
7.7.21

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
Data File : A251991.D  
Acq On : 29 Jul 2019 9:07 pm  
Operator : edwardd  
Sample : ic9755-20  
Misc : MS36311,VA9755,5,,1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 30 12:06:19 2019  
Quant Method : C:\MSDCHEM\1\METHODS\VA9755.M  
Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
QLast Update : Tue Jul 30 12:05:46 2019  
Response via : Initial Calibration



7.7.21

7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251992.D  
 Acq On : 29 Jul 2019 9:36 pm  
 Operator : edwardd  
 Sample : icc9755-50  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 30 12:07:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.150	65	408194	500.00	ug/L	0.00
5) pentafluorobenzene	10.534	168	222284	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	381226	50.00	ug/L	0.00
74) chlorobenzene-d5	14.889	117	297741	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.508	152	148747	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.576	113	119399	50.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
53) 1,2-dichloroethane-d4 (s)	11.010	65	137086	50.00	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	100.00%
75) toluene-d8 (s)	13.221	98	429611	50.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
99) 4-bromofluorobenzene (s)	16.196	95	144408	50.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.275	59	216832	250.00	ug/L	100
4) 1,4-dioxane	12.176	88	63174	1250.00	ug/L	100
6) chlorodifluoromethane	4.585	51	288995	50.00	ug/L	100
7) dichlorodifluoromethane	4.553	85	295517	50.00	ug/L	100
8) chloromethane	4.992	50	376678	50.00	ug/L	100
9) vinyl chloride	5.259	62	293998	50.00	ug/L	100
10) 1,3-butadiene	5.275	54	201486	50.00	ug/L	100
11) bromomethane	5.933	94	185442	50.00	ug/L	100
12) chloroethane	6.106	64	166278	50.00	ug/L	100
13) vinyl bromide	6.493	106	179096	50.00	ug/L	100
14) trichlorofluoromethane	6.634	101	290124	50.00	ug/L	100
15) ethyl ether	7.010	74	77288	50.00	ug/L	100
16) acrolein	7.251	56	40609	50.00	ug/L	100
17) freon 113	7.502	151	129135	50.00	ug/L	100
18) 1,1-dichloroethene	7.497	96	165264	50.00	ug/L	100
19) acetone	7.465	58	94184	200.00	ug/L	100
20) acetonitrile	7.910	41	340470	500.00	ug/L	100
21) iodomethane	7.758	142	252016	50.00	ug/L	100
22) carbon disulfide	7.930	76	525198	50.00	ug/L	100
23) methylene chloride	8.234	84	183897	50.00	ug/L	100
24) methyl acetate	7.962	43	148009	49.74	ug/L	100
25) methyl tert butyl ether	8.600	73	482734	50.00	ug/L	100
26) trans-1,2-dichloroethene	8.631	96	128497	50.00	ug/L	100
27) hexane	9.007	57	206174	50.00	ug/L	100
28) di-isopropyl ether	9.227	45	522850	50.00	ug/L	100
29) ethyl tert-butyl ether	9.708	59	487456	50.00	ug/L	100
30) 2-butanone	9.907	72	103626	200.00	ug/L	100
31) 1,1-dichloroethane	9.237	63	247889	50.00	ug/L	100
32) chloroprene	9.342	53	200273	50.00	ug/L	100
33) acrylonitrile	8.516	53	82132	50.00	ug/L	100
34) vinyl acetate	9.164	86	31902	50.00	ug/L	100
35) ethyl acetate	9.922	45	31587	50.00	ug/L	100
36) 2,2-dichloropropane	10.022	77	214053	50.00	ug/L	100
37) cis-1,2-dichloroethene	9.985	96	144336	50.00	ug/L	100
38) methyl acrylate	10.011	85	27094	50.00	ug/L	100
39) propionitrile	9.985	54	362082	500.00	ug/L	100
40) bromochloromethane	10.288	128	68894	50.00	ug/L	100
41) tetrahydrofuran	10.309	42	70435	50.00	ug/L	100
42) chloroform	10.377	83	222597	50.00	ug/L	100
43) tert-butyl formate	10.419	59	125728	50.00	ug/L	100
45) methacrylonitrile	10.189	67	75334	50.00	ug/L	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251992.D  
 Acq On : 29 Jul 2019 9:36 pm  
 Operator : edwardd  
 Sample : icc9755-50  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 30 12:07:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.775	84	269884	50.00	ug/L	100
47) 1,1,1-trichloroethane	10.654	97	228227	50.00	ug/L	100
48) iso-butyl alcohol	10.769	43	263851	498.51	ug/L	100
49) 1,1-dichloropropene	10.827	75	176879	50.00	ug/L	100
50) carbon tetrachloride	10.858	117	190082	50.00	ug/L	100
51) tert-amyl alcohol	10.947	73	108704	250.00	ug/L	100
54) benzene	11.083	78	530149	50.00	ug/L	100
55) iso-octane	11.182	57	543337	50.00	ug/L	100
56) tert-amyl methyl ether	11.161	73	475067	50.00	ug/L	100
57) heptane	11.339	71	105288	50.00	ug/L	100
58) isopropyl acetate	10.973	87	39116	50.00	ug/L	100
59) 1,2-dichloroethane	11.104	62	165319	50.00	ug/L	100
60) n-butyl alcohol	11.543	41	350552	8605.46	ug/L #	12
61) ethyl acrylate	11.799	55	201918	50.00	ug/L	100
62) trichloroethene	11.825	95	124323	50.00	ug/L	100
63) 2-nitropropane	12.615	41	49433	50.00	ug/L	100
64) methylcyclohexane	12.144	83	283780	50.00	ug/L	100
65) 2-chloroethyl vinyl ether	12.646	63	258652	250.00	ug/L	100
66) methyl methacrylate	12.076	100	39423	50.00	ug/L	100
67) 1,2-dichloropropane	12.129	63	142574	50.00	ug/L	100
68) dibromomethane	12.244	93	82939	50.00	ug/L	100
69) bromodichloromethane	12.406	83	171578	50.00	ug/L	100
70) epichlorohydrin	12.740	57	105673	250.00	ug/L	100
71) cis-1,3-dichloropropene	12.887	75	210353	50.00	ug/L	100
72) 4-methyl-2-pentanone	12.991	58	332794	200.00	ug/L	100
73) 3-methyl-1-butanol	12.991	55	328070	1000.00	ug/L	100
76) toluene	13.300	92	293845	50.00	ug/L	100
77) trans-1,3-dichloropropene	13.498	75	173394	50.00	ug/L	100
78) ethyl methacrylate	13.477	69	173763	50.00	ug/L	100
79) 1,1,2-trichloroethane	13.744	83	93568	50.00	ug/L	100
80) 2-hexanone	13.917	58	283660	199.69	ug/L	100
81) tetrachloroethene	13.917	166	111707	50.00	ug/L	100
82) 1,3-dichloropropane	13.943	76	177160	50.00	ug/L	100
83) butyl acetate	13.995	56	108759	50.00	ug/L	100
84) dibromochloromethane	14.215	129	112446	50.00	ug/L	100
85) 1,2-dibromoethane	14.387	107	114221	50.00	ug/L	100
86) n-butyl ether	14.863	57	530362	50.00	ug/L	100
87) chlorobenzene	14.926	112	285673	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	14.999	131	134894	50.00	ug/L	100
89) ethylbenzene	14.988	91	513244	50.00	ug/L	100
90) m,p-xylene	15.124	106	385743	100.00	ug/L	100
91) o-xylene	15.579	106	211752	50.00	ug/L	100
92) styrene	15.589	104	305833	50.00	ug/L	100
93) butyl acrylate	15.370	55	280720	50.00	ug/L	100
94) n-amyl acetate	15.600	70	111278	50.00	ug/L	100
95) bromoform	15.851	173	75008	50.00	ug/L	100
96) isopropylbenzene	15.966	105	589646	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	16.003	75	67581	50.00	ug/L	100
100) bromobenzene	16.410	156	115346	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	16.280	83	182015	50.00	ug/L	100
102) trans-1,4-dichloro-2-b...	16.311	53	41062	50.00	ug/L	100
103) 1,2,3-trichloropropane	16.379	110	45321	50.00	ug/L	100
104) n-propylbenzene	16.436	91	616490	50.00	ug/L	100
105) 2-chlorotoluene	16.588	126	126133	50.00	ug/L	100
106) 4-chlorotoluene	16.714	91	339907	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	16.609	105	485969	50.00	ug/L	100
108) tert-butylbenzene	16.996	119	457326	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	17.048	105	461551	50.00	ug/L	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251992.D  
 Acq On : 29 Jul 2019 9:36 pm  
 Operator : edwardd  
 Sample : icc9755-50  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 30 12:07:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.236	105	673496	50.00	ug/L	100
111) 1,3-dichlorobenzene	17.435	146	217973	50.00	ug/L	100
112) p-isopropyltoluene	17.383	119	532360	50.00	ug/L	100
113) 1,4-dichlorobenzene	17.540	146	220419	50.00	ug/L	100
114) 1,2-dichlorobenzene	17.958	146	233470	50.00	ug/L	100
115) n-butylbenzene	17.838	92	265503	50.00	ug/L	100
116) 1,2-dibromo-3-chloropr...	18.810	157	52496	50.00	ug/L	100
117) 1,3,5-trichlorobenzene	19.024	180	206351	50.00	ug/L	100
118) 2-ethylhexyl acrylate	19.746	70	31373	10.00	ug/L	100
119) 1,2,4-trichlorobenzene	19.767	180	196021	50.00	ug/L	100
120) hexachlorobutadiene	19.892	225	85600	50.00	ug/L	100
121) naphthalene	20.101	128	675506	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	20.347	180	216444	50.00	ug/L	100
123) hexachloroethane	18.292	201	89397	50.00	ug/L	100
124) 2-methylnaphthalene	21.413	142	224449	24.95	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

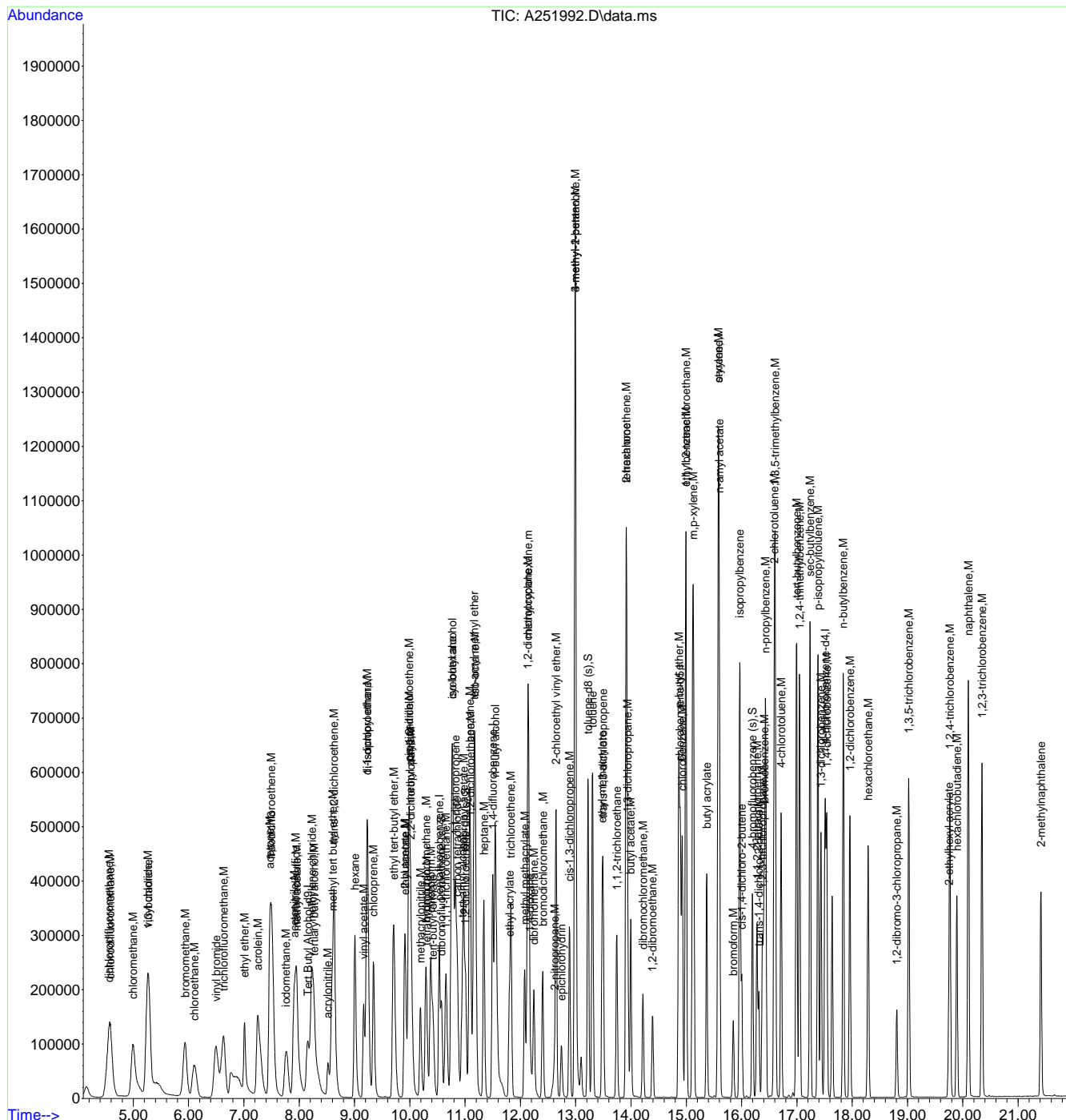
7.7.22

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\
Data File : A251992.D
Acq On : 29 Jul 2019 9:36 pm
Operator : edwardd
Sample : icc9755-50
Misc : MS36311,VA9755,5,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 30 12:07:12 2019
Quant Method : C:\MSDCHEM\1\METHODS\VA9755.M
Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um
QLast Update : Tue Jul 30 12:05:46 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251993.D  
 Acq On : 29 Jul 2019 10:06 pm  
 Operator : edwardd  
 Sample : ic9755-100  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 30 12:08:27 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.155	65	414853	500.00	ug/L	0.00
5) pentafluorobenzene	10.534	168	229682	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.501	114	399869	50.00	ug/L	0.00
74) chlorobenzene-d5	14.894	117	320958	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.513	152	149869	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.576	113	126546	51.29	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.58%
53) 1,2-dichloroethane-d4 (s)	11.010	65	143616	49.94	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	99.88%
75) toluene-d8 (s)	13.226	98	462638	49.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.90%
99) 4-bromofluorobenzene (s)	16.196	95	151234	51.97	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.94%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.281	59	460478	522.39	ug/L	99
4) 1,4-dioxane	12.170	88	133457	2598.28	ug/L	98
6) chlorodifluoromethane	4.595	51	598863	100.27	ug/L	98
7) dichlorodifluoromethane	4.564	85	606354	99.29	ug/L	98
8) chloromethane	5.008	50	756030	97.12	ug/L	98
9) vinyl chloride	5.259	62	606095	99.76	ug/L	98
10) 1,3-butadiene	5.285	54	427980	102.79	ug/L	99
11) bromomethane	5.944	94	375195	97.90	ug/L	97
12) chloroethane	6.121	64	344005	100.11	ug/L	99
13) vinyl bromide	6.503	106	371758	100.44	ug/L	99
14) trichlorofluoromethane	6.634	101	611561	102.00	ug/L	99
15) ethyl ether	7.015	74	169271	105.98	ug/L	95
16) acrolein	7.261	56	88285	105.20	ug/L	95
17) freon 113	7.507	151	276988	103.79	ug/L	100
18) 1,1-dichloroethene	7.507	96	368889	108.01	ug/L	99
19) acetone	7.470	58	198638	408.22	ug/L	97
20) acetonitrile	7.909	41	716104	1017.77	ug/L	98
21) iodomethane	7.779	142	551922	105.97	ug/L	97
22) carbon disulfide	7.941	76	1137482	104.80	ug/L	99
23) methylene chloride	8.244	84	407083	107.12	ug/L	97
24) methyl acetate	7.957	43	329007	107.00	ug/L	99
25) methyl tert butyl ether	8.600	73	1024118	102.66	ug/L	99
26) trans-1,2-dichloroethene	8.631	96	284958	107.31	ug/L	97
27) hexane	9.007	57	439974	103.26	ug/L	100
28) di-isopropyl ether	9.227	45	1117247	103.40	ug/L	98
29) ethyl tert-butyl ether	9.708	59	1045271	103.76	ug/L	100
30) 2-butanone	9.907	72	219267	409.56	ug/L	97
31) 1,1-dichloroethane	9.237	63	537282	104.88	ug/L	98
32) chloroprene	9.347	53	437569	105.72	ug/L	99
33) acrylonitrile	8.521	53	180742	106.49	ug/L	94
34) vinyl acetate	9.164	86	65444	99.27	ug/L	95
35) ethyl acetate	9.922	45	68002	104.18	ug/L	96
36) 2,2-dichloropropane	10.027	77	457265	103.37	ug/L	97
37) cis-1,2-dichloroethene	9.985	96	318686	106.84	ug/L	99
38) methyl acrylate	10.011	85	59326	105.96	ug/L	97
39) propionitrile	9.990	54	757161	1011.89	ug/L	89
40) bromochloromethane	10.288	128	150278	105.55	ug/L	94
41) tetrahydrofuran	10.309	42	150791	103.59	ug/L	98
42) chloroform	10.377	83	488926	106.29	ug/L	98
43) tert-butyl formate	10.414	59	277620	106.85	ug/L	99
45) methacrylonitrile	10.194	67	163472	105.00	ug/L	99



7.7.23  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251993.D  
 Acq On : 29 Jul 2019 10:06 pm  
 Operator : edwardd  
 Sample : ic9755-100  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 30 12:08:27 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) cyclohexane	10.774	84	574901	103.08	ug/L	99
47) 1,1,1-trichloroethane	10.654	97	501746	106.38	ug/L	98
48) iso-butyl alcohol	10.774	43	562141	1027.88	ug/L	95
49) 1,1-dichloropropene	10.827	75	385057	105.34	ug/L	98
50) carbon tetrachloride	10.858	117	418855	106.63	ug/L	100
51) tert-amyl alcohol	10.952	73	237041	527.59	ug/L	96
54) benzene	11.083	78	1142698	102.75	ug/L	99
55) iso-octane	11.187	57	1188850	104.30	ug/L	98
56) tert-amyl methyl ether	11.161	73	1021233	102.47	ug/L	99
57) heptane	11.339	71	228602	103.50	ug/L	97
58) isopropyl acetate	10.978	87	84404	102.86	ug/L	96
59) 1,2-dichloroethane	11.104	62	363928	104.94	ug/L	100
60) n-butyl alcohol	11.548	41	744215	17417.46	ug/L #	13
61) ethyl acrylate	11.799	55	439181	103.68	ug/L	99
62) trichloroethene	11.830	95	268455	102.93	ug/L	95
63) 2-nitropropane	12.609	41	110610	106.66	ug/L	89
64) methylcyclohexane	12.149	83	623177	104.68	ug/L	99
65) 2-chloroethyl vinyl ether	12.646	63	595814	549.03	ug/L	99
66) methyl methacrylate	12.076	100	89061	107.69	ug/L	92
67) 1,2-dichloropropane	12.128	63	308012	102.98	ug/L	99
68) dibromomethane	12.243	93	180043	103.48	ug/L	99
69) bromodichloromethane	12.406	83	378722	105.22	ug/L	98
70) epichlorohydrin	12.740	57	229626	517.92	ug/L	100
71) cis-1,3-dichloropropene	12.887	75	458214	103.84	ug/L	98
72) 4-methyl-2-pentanone	12.996	58	705421	404.17	ug/L	96
73) 3-methyl-1-butanol	12.991	55	686763	1995.75	ug/L	99
76) toluene	13.305	92	647117	102.15	ug/L	98
77) trans-1,3-dichloropropene	13.498	75	380121	101.68	ug/L	99
78) ethyl methacrylate	13.477	69	379893	101.41	ug/L	97
79) 1,1,2-trichloroethane	13.744	83	206171	102.20	ug/L	95
80) 2-hexanone	13.916	58	608938	397.67	ug/L	94
81) tetrachloroethene	13.916	166	247802	102.89	ug/L	97
82) 1,3-dichloropropane	13.943	76	399928	104.71	ug/L	99
83) butyl acetate	13.995	56	227538	97.04	ug/L	97
84) dibromochloromethane	14.220	129	257437	106.19	ug/L	98
85) 1,2-dibromoethane	14.392	107	260098	105.62	ug/L	100
86) n-butyl ether	14.863	57	1114076	97.43	ug/L	100
87) chlorobenzene	14.925	112	637671	103.54	ug/L	97
88) 1,1,1,2-tetrachloroethane	14.999	131	299139	102.86	ug/L	99
89) ethylbenzene	14.988	91	1123143	101.50	ug/L	99
90) m,p-xylene	15.124	106	854824	205.57	ug/L	100
91) o-xylene	15.579	106	467274	102.35	ug/L	94
92) styrene	15.589	104	667197	101.19	ug/L	98
93) butyl acrylate	15.370	55	577045	95.34	ug/L	98
94) n-amyl acetate	15.600	70	229439	95.64	ug/L	95
95) bromoform	15.851	173	165456	102.31	ug/L	94
96) isopropylbenzene	15.966	105	1278670	100.58	ug/L	98
97) cis-1,4-dichloro-2-butene	16.002	75	144603	99.25	ug/L	97
100) bromobenzene	16.410	156	252329	108.56	ug/L	99
101) 1,1,2,2-tetrachloroethane	16.279	83	389587	106.22	ug/L	98
102) trans-1,4-dichloro-2-b...	16.311	53	85584	103.43	ug/L	98
103) 1,2,3-trichloropropane	16.379	110	98903	108.30	ug/L	94
104) n-propylbenzene	16.436	91	1313336	105.72	ug/L	97
105) 2-chlorotoluene	16.588	126	275164	108.26	ug/L	99
106) 4-chlorotoluene	16.713	91	721269	105.30	ug/L	98
107) 1,3,5-trimethylbenzene	16.609	105	1062078	108.46	ug/L	99
108) tert-butylbenzene	16.996	119	1006121	109.18	ug/L	98
109) 1,2,4-trimethylbenzene	17.048	105	997358	107.24	ug/L	98

7.7.23  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251993.D  
 Acq On : 29 Jul 2019 10:06 pm  
 Operator : edwardd  
 Sample : ic9755-100  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 30 12:08:27 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) sec-butylbenzene	17.241	105	1452926	107.06	ug/L	99
111) 1,3-dichlorobenzene	17.435	146	466519	106.21	ug/L	98
112) p-isopropyltoluene	17.383	119	1150510	107.25	ug/L	98
113) 1,4-dichlorobenzene	17.539	146	464861	104.66	ug/L	99
114) 1,2-dichlorobenzene	17.958	146	493528	104.90	ug/L	100
115) n-butylbenzene	17.843	92	560099	104.69	ug/L	96
116) 1,2-dibromo-3-chloropr...	18.805	157	113901	107.67	ug/L	96
117) 1,3,5-trichlorobenzene	19.024	180	440426	105.92	ug/L	97
118) 2-ethylhexyl acrylate	19.746	70	73752	23.33	ug/L	98
119) 1,2,4-trichlorobenzene	19.767	180	424460	107.46	ug/L	98
120) hexachlorobutadiene	19.892	225	192065	111.35	ug/L	98
121) naphthalene	20.101	128	1411546	103.70	ug/L	99
122) 1,2,3-trichlorobenzene	20.347	180	468628	107.45	ug/L	99
123) hexachloroethane	18.292	201	206679	114.73	ug/L	99
124) 2-methylnaphthalene	21.413	142	493673	54.46	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

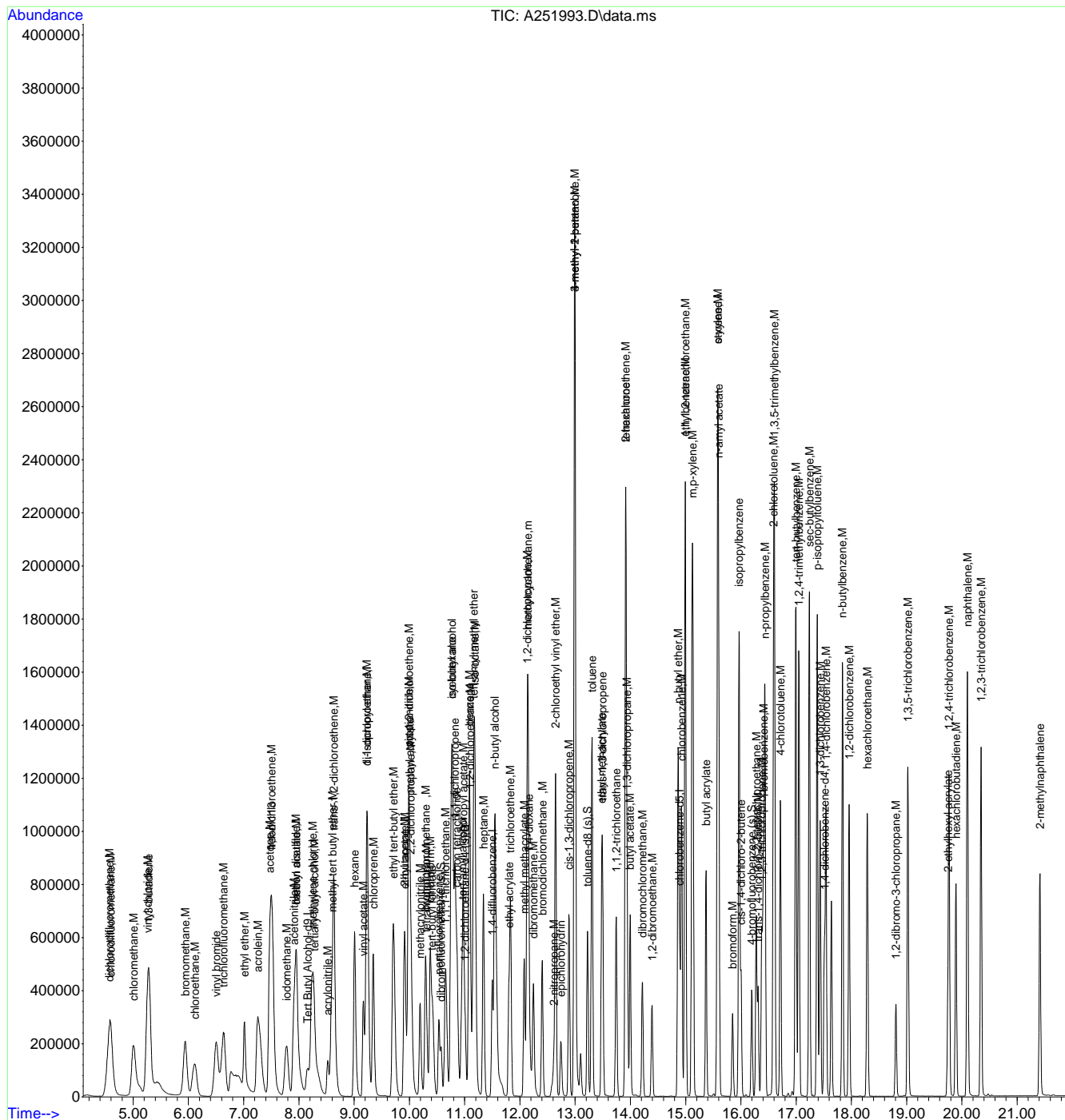
7.7.23  
7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251993.D  
 Acq On : 29 Jul 2019 10:06 pm  
 Operator : edwardd  
 Sample : ic9755-100  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 30 12:08:27 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\VA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration



7.7.23  
7



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251994.D  
 Acq On : 29 Jul 2019 10:36 pm  
 Operator : edwardd  
 Sample : ic9755-200  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 12:20:28 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.159	65	428012	500.00	ug/L	0.00
5) pentafluorobenzene	10.532	168	233291	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.500	114	418486	50.00	ug/L	0.00
74) chlorobenzene-d5	14.893	117	364652	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.512	152	165640	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.574	113	132482	52.86	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.72%
53) 1,2-dichloroethane-d4 (s)	11.013	65	147799	49.11	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.22%
75) toluene-d8 (s)	13.225	98	501793	47.68	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.36%
99) 4-bromofluorobenzene (s)	16.200	95	167087	51.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	103.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.290	59	913848	1004.85	ug/L	95
4) 1,4-dioxane	12.174	88	270518	5104.80	ug/L	99
6) chlorodifluoromethane	4.588	51	1129415	186.18	ug/L	97
7) dichlorodifluoromethane	4.557	85	1162259	187.37	ug/L	97
8) chloromethane	5.006	50	1488786	188.30	ug/L	99
9) vinyl chloride	5.257	62	1171466	189.83	ug/L	98
10) 1,3-butadiene	5.289	54	806380	190.67	ug/L	97
12) chloroethane	6.110	64	634191	181.70	ug/L	98
13) vinyl bromide	6.496	106	720091	191.55	ug/L	99
14) trichlorofluoromethane	6.632	101	1187500	195.00	ug/L	100
15) ethyl ether	7.014	74	328318	202.38	ug/L	96
16) acrolein	7.249	56	175383	205.75	ug/L	96
17) freon 113	7.511	151	534827	197.31	ug/L	99
18) 1,1-dichloroethene	7.511	96	724183	208.76	ug/L	99
19) acetone	7.469	58	392832	794.82	ug/L	96
20) acetonitrile	7.908	41	1405555	1966.75	ug/L	99
21) iodomethane	7.777	142	1080194	204.20	ug/L	99
22) carbon disulfide	7.939	76	2169843	196.83	ug/L	98
23) methylene chloride	8.243	84	798728	206.92	ug/L	96
24) methyl acetate	7.960	43	634883	203.29	ug/L	100
25) methyl tert butyl ether	8.603	73	1978278	195.24	ug/L	100
26) trans-1,2-dichloroethene	8.629	96	551166	204.35	ug/L	96
27) hexane	9.006	57	824004	190.40	ug/L	99
28) di-isopropyl ether	9.231	45	2124262	193.56	ug/L	98
29) ethyl tert-butyl ether	9.712	59	1989631	194.45	ug/L	99
30) 2-butanone	9.910	72	436780	803.22	ug/L	99
31) 1,1-dichloroethane	9.236	63	1016494	195.36	ug/L	99
32) chloroprene	9.346	53	827861	196.93	ug/L	98
33) acrylonitrile	8.525	53	349240	202.58	ug/L	95
34) vinyl acetate	9.168	86	133509	199.38	ug/L	98
35) ethyl acetate	9.926	45	133365	201.15	ug/L	98
36) 2,2-dichloropropane	10.031	77	855092	190.31	ug/L	99
37) cis-1,2-dichloroethene	9.984	96	609314	201.12	ug/L	99
38) methyl acrylate	10.015	85	118307	208.03	ug/L	96
39) propionitrile	9.989	54	1487751	1957.51	ug/L	94
40) bromochloromethane	10.292	128	293796	203.16	ug/L	96
41) tetrahydrofuran	10.313	42	301431	203.88	ug/L	99
42) chloroform	10.376	83	936826	200.50	ug/L	99
43) tert-butyl formate	10.423	59	550322	208.53	ug/L	99
45) methacrylonitrile	10.193	67	325417	205.79	ug/L	99
46) cyclohexane	10.778	84	1132343	199.89	ug/L	98



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251994.D  
 Acq On : 29 Jul 2019 10:36 pm  
 Operator : edwardd  
 Sample : ic9755-200  
 Misc : MS36311,VA9755,5,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 12:20:28 2019

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M

Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmxl.4um

QLast Update : Tue Jul 30 12:05:46 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) 1,1,1-trichloroethane	10.658	97	969348	202.35	ug/L	99
48) iso-butyl alcohol	10.773	43	1105107	1989.44	ug/L	96
49) 1,1-dichloropropene	10.825	75	748722	201.66	ug/L	98
50) carbon tetrachloride	10.862	117	822804	206.22	ug/L	100
51) tert-amyl alcohol	10.951	73	471587	1033.40	ug/L	96
54) benzene	11.081	78	2212276	190.07	ug/L	98
55) iso-octane	11.186	57	2267546	190.09	ug/L	99
56) tert-amyl methyl ether	11.165	73	1957594	187.69	ug/L	98
57) heptane	11.338	71	442782	191.55	ug/L	98
58) isopropyl acetate	10.977	87	169526	197.40	ug/L #	89
59) 1,2-dichloroethane	11.102	62	709879	195.58	ug/L	100
60) n-butyl alcohol	11.552	41	1457005	32582.49	ug/L #	12
61) ethyl acrylate	11.803	55	883601	199.32	ug/L	100
62) trichloroethene	11.829	95	529559	194.01	ug/L	96
63) 2-nitropropane	12.613	41	222946	205.43	ug/L	94
64) methylcyclohexane	12.148	83	1206291	193.62	ug/L	99
65) 2-chloroethyl vinyl ether	12.650	63	1264482	1113.37	ug/L	98
66) methyl methacrylate	12.080	100	181627	209.85	ug/L	94
67) 1,2-dichloropropane	12.132	63	605505	193.44	ug/L	99
68) dibromomethane	12.242	93	360967	198.23	ug/L	98
69) bromodichloromethane	12.404	83	746066	198.06	ug/L	99
70) epichlorohydrin	12.744	57	463386	998.67	ug/L	99
71) cis-1,3-dichloropropene	12.890	75	918483	198.88	ug/L	99
72) 4-methyl-2-pentanone	12.995	58	1386234	758.91	ug/L	89
73) 3-methyl-1-butanol	12.995	55	1337032	3712.59	ug/L	98
76) toluene	13.303	92	1313360	182.47	ug/L	98
77) trans-1,3-dichloropropene	13.497	75	781789	184.07	ug/L	99
78) ethyl methacrylate	13.481	69	776447	182.43	ug/L	99
79) 1,1,2-trichloroethane	13.742	83	424867	185.38	ug/L	97
80) 2-hexanone	13.915	58	1227372	705.50	ug/L	93
81) tetrachloroethene	13.915	166	501592	183.32	ug/L	96
82) 1,3-dichloropropane	13.946	76	829916	191.25	ug/L	99
83) butyl acetate	13.999	56	464973	174.54	ug/L	94
84) dibromochloromethane	14.218	129	535766	194.52	ug/L	98
85) 1,2-dibromoethane	14.391	107	541761	193.64	ug/L	100
86) n-butyl ether	14.866	57	2196243	169.06	ug/L	98
87) chlorobenzene	14.929	112	1347134	192.52	ug/L	98
88) 1,1,1,2-tetrachloroethane	14.997	131	602229	182.26	ug/L	99
89) ethylbenzene	14.992	91	2267019	180.33	ug/L	96
90) m,p-xylene	15.123	106	1770839	374.84	ug/L	96
91) o-xylene	15.577	106	957355	184.58	ug/L	95
92) styrene	15.588	104	1374269	183.45	ug/L	96
93) butyl acrylate	15.368	55	1115427	162.22	ug/L	97
94) n-amyl acetate	15.604	70	452057	165.85	ug/L	94
95) bromoform	15.849	173	340588	185.38	ug/L	97
96) isopropylbenzene	15.970	105	2544079	176.14	ug/L	95
97) cis-1,4-dichloro-2-butene	16.006	75	290039	175.21	ug/L	98
100) bromobenzene	16.409	156	523827	203.91	ug/L	98
101) 1,1,2,2-tetrachloroethane	16.278	83	785489	193.77	ug/L	97
102) trans-1,4-dichloro-2-b...	16.315	53	165268	180.72	ug/L	97
103) 1,2,3-trichloropropane	16.377	110	199741	197.89	ug/L	95
104) n-propylbenzene	16.435	91	2605002	189.73	ug/L	96
105) 2-chlorotoluene	16.592	126	578209	205.83	ug/L	95
106) 4-chlorotoluene	16.717	91	1464633	193.47	ug/L	99
107) 1,3,5-trimethylbenzene	16.607	105	2171430	200.63	ug/L	97
108) tert-butylbenzene	16.994	119	2030506	199.36	ug/L	96
109) 1,2,4-trimethylbenzene	17.052	105	2038180	198.28	ug/L	96
110) sec-butylbenzene	17.240	105	2901956	193.47	ug/L	96



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251994.D  
 Acq On : 29 Jul 2019 10:36 pm  
 Operator : edwardd  
 Sample : ic9755-200  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 12:20:28 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:05:46 2019  
 Response via : Initial Calibration

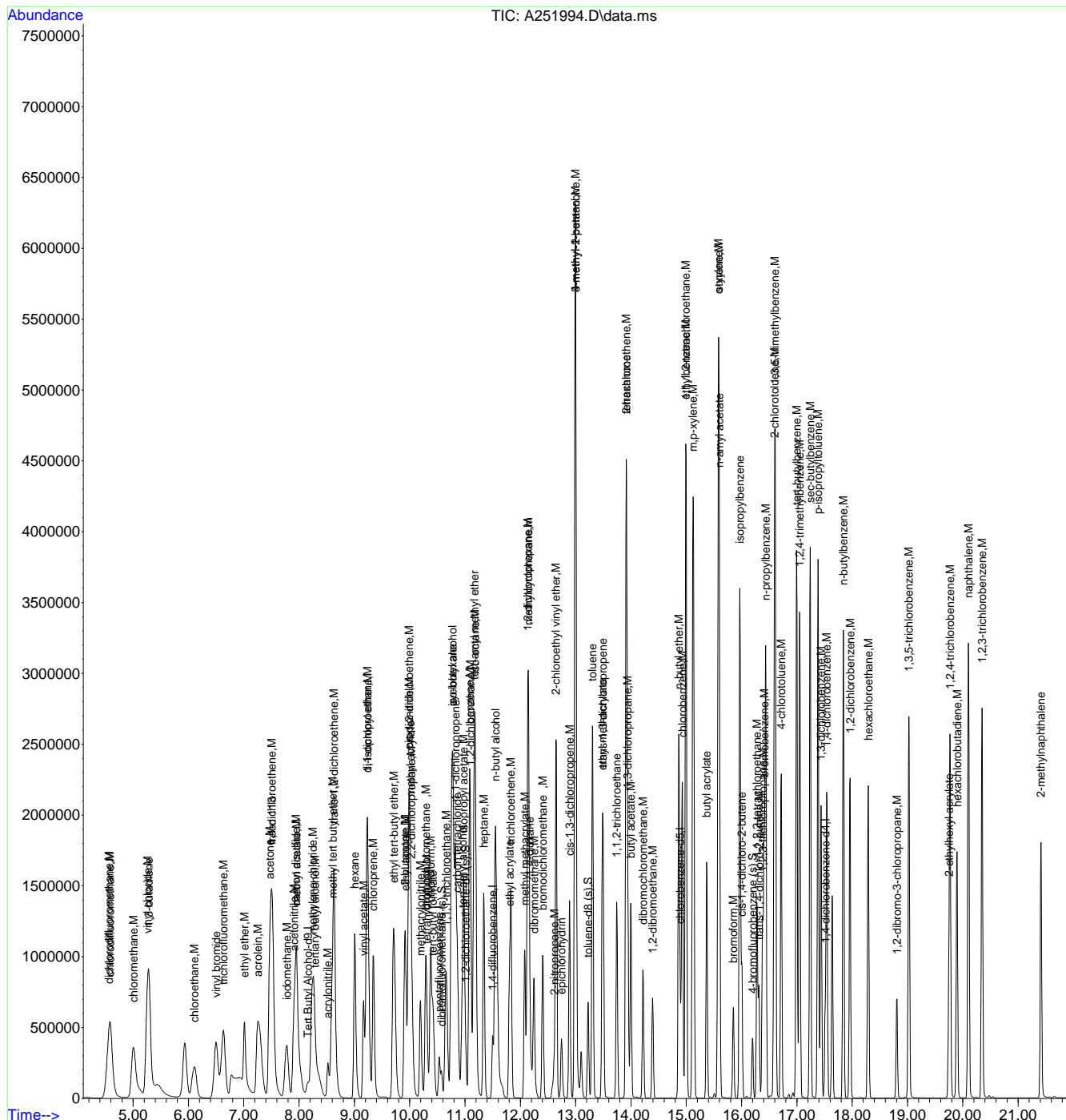
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	17.439	146	940322	193.70	ug/L	96
112) p-isopropyltoluene	17.381	119	2331748	196.67	ug/L	94
113) 1,4-dichlorobenzene	17.543	146	946074	192.72	ug/L	100
114) 1,2-dichlorobenzene	17.961	146	1014559	195.12	ug/L	99
115) n-butylbenzene	17.841	92	1136505	192.20	ug/L	94
116) 1,2-dibromo-3-chloropr...	18.808	157	232604	198.95	ug/L	98
117) 1,3,5-trichlorobenzene	19.023	180	938259	204.16	ug/L	97
118) 2-ethylhexyl acrylate	19.744	70	170360	48.76	ug/L	97
119) 1,2,4-trichlorobenzene	19.770	180	900592	206.29	ug/L	99
120) hexachlorobutadiene	19.896	225	421291	220.98	ug/L	97
121) naphthalene	20.100	128	2853395	189.66	ug/L	97
122) 1,2,3-trichlorobenzene	20.351	180	989526	205.27	ug/L	99
123) hexachloroethane	18.291	201	437645	219.81	ug/L	98
124) 2-methylnaphthalene	21.412	142	1043317	104.14	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\
Data File : A251994.D
Acq On : 29 Jul 2019 10:36 pm
Operator : edwardd
Sample : ic9755-200
Misc : MS36311,VA9755,5,,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 30 12:20:28 2019
Quant Method : C:\MSDCHEM\1\METHODS\VA9755.M
Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um
QLast Update : Tue Jul 30 12:05:46 2019
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251997.D  
 Acq On : 30 Jul 2019 12:04 am  
 Operator : edwardd  
 Sample : icv9755-50  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 30 12:22:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:20:13 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.158	65	455729	500.00	ug/L	0.00
5) pentafluorobenzene	10.536	168	248167	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.498	114	428668	50.00	ug/L	0.00
74) chlorobenzene-d5	14.891	117	330583	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.510	152	162413	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) dibromofluoromethane (s)	10.573	113	137740	50.15	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.30%
53) 1,2-dichloroethane-d4 (s)	11.012	65	154132	48.65	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	97.30%
75) toluene-d8 (s)	13.223	98	477993	51.19	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.38%
99) 4-bromofluorobenzene (s)	16.198	95	159756	51.31	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.62%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	8.288	59	242438	250.48	ug/L	96
4) 1,4-dioxane	12.173	88	69058	1297.98	ug/L	98
6) chlorodifluoromethane	4.592	51	307746	46.77	ug/L	96
7) dichlorodifluoromethane	4.555	85	321975	49.93	ug/L	99
8) chloromethane	5.005	50	320909	41.05	ug/L	97
9) vinyl chloride	5.266	62	335267	53.49	ug/L	97
10) 1,3-butadiene	5.282	54	271680	59.98	ug/L	99
11) bromomethane	5.941	94	261625	59.67	ug/L	99
12) chloroethane	6.113	64	163607	42.87	ug/L	98
13) vinyl bromide	6.505	106	219063	55.37	ug/L	100
14) trichlorofluoromethane	6.636	101	307532	47.34	ug/L	99
15) ethyl ether	7.013	74	87297	51.71	ug/L	96
16) acrolein	7.264	56	49175	54.38	ug/L	95
17) freon 113	7.504	151	162576	56.74	ug/L	99
18) 1,1-dichloroethene	7.494	96	173657	43.97	ug/L	99
19) acetone	7.467	58	101774	192.19	ug/L	94
21) iodomethane	7.771	142	317537	55.60	ug/L	99
22) carbon disulfide	7.927	76	651377	51.23	ug/L	97
23) methylene chloride	8.231	84	200904	43.25	ug/L	99
24) methyl acetate	7.959	43	168385	47.29	ug/L	99
25) methyl tert butyl ether	8.602	73	1047668	94.98	ug/L	99
26) trans-1,2-dichloroethene	8.633	96	145643	46.78	ug/L	97
27) hexane	9.010	57	242504	51.04	ug/L	100
28) di-isopropyl ether	9.229	45	560153	46.62	ug/L	99
29) ethyl tert-butyl ether	9.710	59	541006	48.58	ug/L	98
30) 2-butanone	9.909	72	116691	209.59	ug/L	98
31) 1,1-dichloroethane	9.240	63	279845	49.04	ug/L	98
32) chloroprene	9.350	53	238051	51.23	ug/L	98
34) vinyl acetate	9.167	86	32253	46.91	ug/L #	91
35) ethyl acetate	9.925	45	33712	48.45	ug/L #	82
36) 2,2-dichloropropane	10.029	77	214214	40.16	ug/L	98
37) cis-1,2-dichloroethene	9.987	96	160563	45.80	ug/L	99
38) methyl acrylate	10.013	85	30432	51.43	ug/L #	94
39) propionitrile	9.987	54	405722	502.88	ug/L	99
40) bromochloromethane	10.291	128	78631	49.39	ug/L	99
41) tetrahydrofuran	10.311	42	80110	48.26	ug/L	99
42) chloroform	10.379	83	254392	46.46	ug/L	99
43) tert-butyl formate	10.421	59	131890	47.64	ug/L	98
45) methacrylonitrile	10.196	67	84182	49.97	ug/L	98
46) cyclohexane	10.782	84	303220	48.86	ug/L	99
47) 1,1,1-trichloroethane	10.656	97	249384	48.68	ug/L	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251997.D  
 Acq On : 30 Jul 2019 12:04 am  
 Operator : edwardd  
 Sample : icv9755-50  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 30 12:22:23 2019

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M

Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um

QLast Update : Tue Jul 30 12:20:13 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
48) iso-butyl alcohol	10.777	43	295405	495.24	ug/L	94
49) 1,1-dichloropropene	10.829	75	197060	48.56	ug/L	97
50) carbon tetrachloride	10.860	117	215587	49.73	ug/L	100
51) tert-amyl alcohol	10.949	73	125556	255.85	ug/L	98
54) benzene	11.085	78	590539	46.63	ug/L	99
55) iso-octane	11.185	57	674481	53.39	ug/L	98
56) tert-amyl methyl ether	11.164	73	531084	47.32	ug/L	99
57) heptane	11.341	71	136211	56.94	ug/L	98
58) isopropyl acetate	10.975	87	41180	48.31	ug/L	99
59) 1,2-dichloroethane	11.106	62	181856	45.08	ug/L	99
60) n-butyl alcohol	11.545	41	377855	2369.65	ug/L	98
61) ethyl acrylate	11.801	55	221026	50.79	ug/L	99
62) trichloroethene	11.828	95	141399	47.83	ug/L	99
63) 2-nitropropane	12.612	41	57698	51.24	ug/L	84
64) methylcyclohexane	12.146	83	312487	46.97	ug/L	99
65) 2-chloroethyl vinyl ether	12.643	63	323176	292.32	ug/L	98
66) methyl methacrylate	12.079	100	43989	50.92	ug/L #	68
67) 1,2-dichloropropane	12.131	63	156851	47.90	ug/L	99
68) dibromomethane	12.246	93	91950	49.27	ug/L	99
69) bromodichloromethane	12.403	83	184692	46.85	ug/L	99
70) epichlorohydrin	12.742	57	119646	257.36	ug/L	99
71) cis-1,3-dichloropropene	12.889	75	225777	49.19	ug/L	99
72) 4-methyl-2-pentanone	12.993	58	370480	203.82	ug/L	99
73) 3-methyl-1-butanol	12.993	55	366102	994.86	ug/L	98
76) toluene	13.307	92	317108	48.04	ug/L	96
77) trans-1,3-dichloropropene	13.501	75	186441	48.89	ug/L	100
78) ethyl methacrylate	13.480	69	189922	50.74	ug/L	97
79) 1,1,2-trichloroethane	13.741	83	100741	48.72	ug/L	96
80) 2-hexanone	13.914	58	302964	182.54	ug/L	97
82) 1,3-dichloropropane	13.945	76	193162	48.57	ug/L	100
83) butyl acetate	13.997	56	115704	46.63	ug/L	96
84) dibromochloromethane	14.217	129	127279	52.05	ug/L	97
85) 1,2-dibromoethane	14.389	107	129161	49.74	ug/L	99
86) n-butyl ether	14.865	57	603700	49.40	ug/L	100
87) chlorobenzene	14.928	112	315384	48.83	ug/L	99
88) 1,1,1,2-tetrachloroethane	14.996	131	149990	51.68	ug/L	99
89) ethylbenzene	14.991	91	559289	47.99	ug/L	99
90) m,p-xylene	15.121	106	422285	94.53	ug/L	95
91) o-xylene	15.576	106	234529	49.06	ug/L	97
92) styrene	15.587	104	334423	47.05	ug/L	97
93) butyl acrylate	15.367	55	293092	45.77	ug/L	99
94) n-amyl acetate	15.602	70	113783	43.25	ug/L	99
95) bromoform	15.853	173	87907	52.90	ug/L	99
96) isopropylbenzene	15.968	105	653382	49.03	ug/L	99
97) cis-1,4-dichloro-2-butene	16.005	75	70531	48.07	ug/L	99
100) bromobenzene	16.407	156	124142	48.21	ug/L	98
101) 1,1,2,2-tetrachloroethane	16.277	83	200434	50.20	ug/L	100
102) trans-1,4-dichloro-2-b...	16.313	53	44750	51.06	ug/L	91
103) 1,2,3-trichloropropane	16.376	110	49637	50.34	ug/L	95
104) n-propylbenzene	16.433	91	682280	50.05	ug/L	100
105) 2-chlorotoluene	16.590	126	137514	51.12	ug/L	96
106) 4-chlorotoluene	16.716	91	370229	48.32	ug/L	99
107) 1,3,5-trimethylbenzene	16.606	105	535528	51.84	ug/L	99
108) tert-butylbenzene	16.993	119	497985	53.68	ug/L	98
109) 1,2,4-trimethylbenzene	17.050	105	522333	50.69	ug/L	98
110) sec-butylbenzene	17.239	105	740540	53.08	ug/L	99
111) 1,3-dichlorobenzene	17.437	146	239003	47.83	ug/L	97
112) p-isopropyltoluene	17.380	119	594848	51.67	ug/L	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251997.D  
 Acq On : 30 Jul 2019 12:04 am  
 Operator : edwardd  
 Sample : icv9755-50  
 Misc : MS36311,VA9755,5,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 30 12:22:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:20:13 2019  
 Response via : Initial Calibration

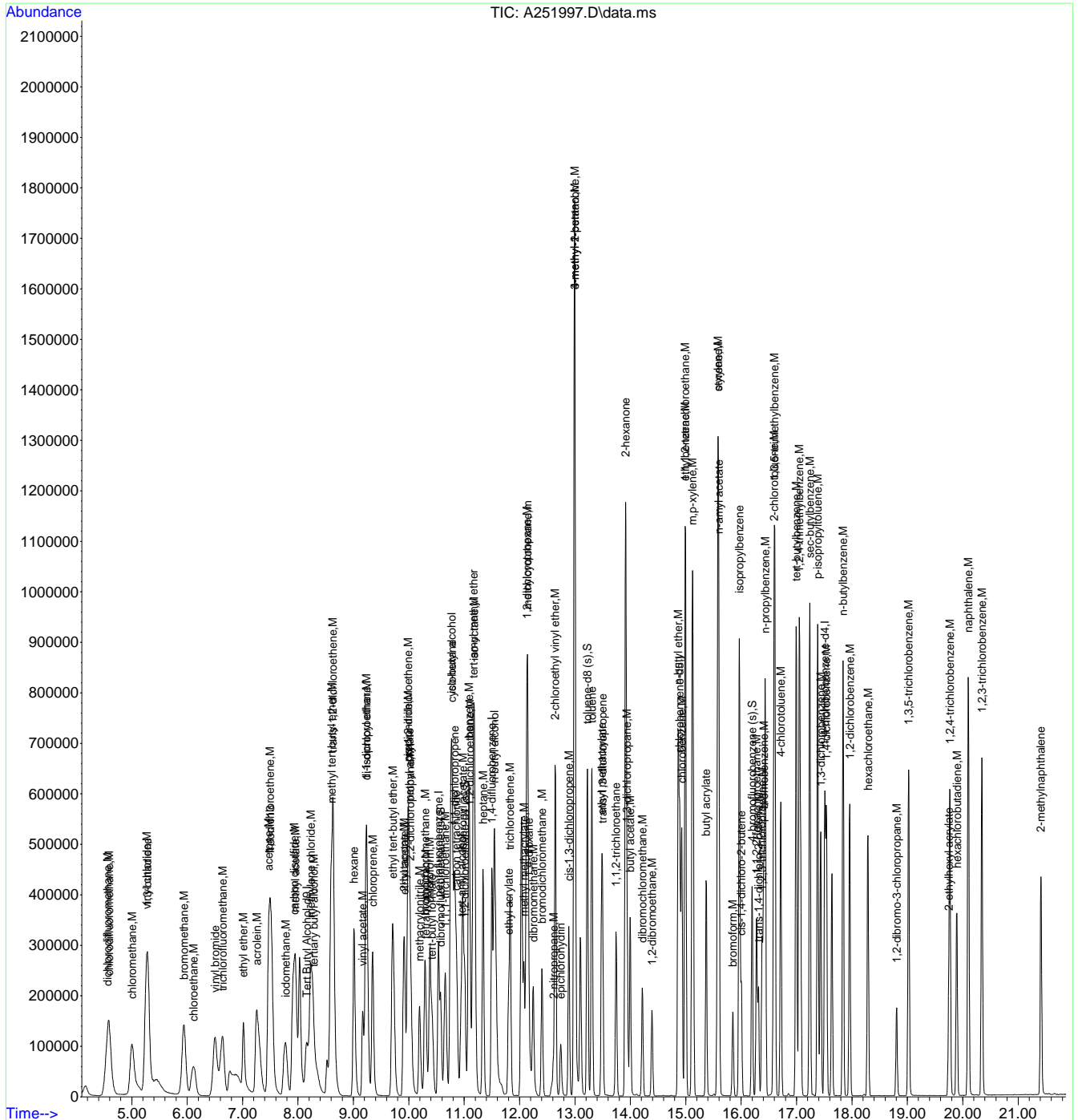
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
113) 1,4-dichlorobenzene	17.542	146	239385	46.74	ug/L	98
114) 1,2-dichlorobenzene	17.960	146	258255	48.28	ug/L	98
115) n-butylbenzene	17.840	92	291202	48.50	ug/L	97
116) 1,2-dibromo-3-chloropr...	18.807	157	57232	49.28	ug/L	96
117) 1,3,5-trichlorobenzene	19.021	180	230580	48.01	ug/L	96
118) 2-ethylhexyl acrylate	19.743	70	34817	9.24	ug/L	98
119) 1,2,4-trichlorobenzene	19.769	180	215823	47.10	ug/L	98
120) hexachlorobutadiene	19.894	225	89007	46.89	ug/L	98
121) naphthalene	20.098	128	747484	48.29	ug/L	99
122) 1,2,3-trichlorobenzene	20.344	180	238825	47.86	ug/L	98
123) hexachloroethane	18.289	201	100623	55.02	ug/L	99
124) 2-methylnaphthalene	21.410	142	257101	27.49	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251997.D  
 Acq On : 30 Jul 2019 12:04 am  
 Operator : edwardd  
 Sample : icv9755-50  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 30 12:22:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\VA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:20:13 2019  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251998.D  
 Acq On : 30 Jul 2019 12:33 am  
 Operator : edwardd  
 Sample : icv9755-50  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 30 12:22:57 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Jul 30 12:20:13 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.151	65	457589	500.00	ug/L	0.00
5) pentafluorobenzene	10.535	168	236851	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.497	114	392348	50.00	ug/L	0.00
74) chlorobenzene-d5	14.890	117	305981	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.509	152	172684	50.00	ug/L	0.00

System Monitoring Compounds						
44) dibromofluoromethane (s)	10.571	113	130755	49.88	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.76%	
53) 1,2-dichloroethane-d4 (s)	11.005	65	147422	50.84	ug/L	0.00
Spiked Amount	50.000	Range 81 - 124	Recovery	=	101.68%	
75) toluene-d8 (s)	13.222	98	420742	48.68	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	97.36%	
99) 4-bromofluorobenzene (s)	16.197	95	157664	47.63	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	95.26%	

Target Compounds						Qvalue
20) acetonitrile	7.910	41	362191	491.78	ug/L	99
33) acrylonitrile	8.517	53	86089	48.22	ug/L	94
81) tetrachloroethene	13.912	166	123028	54.00	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

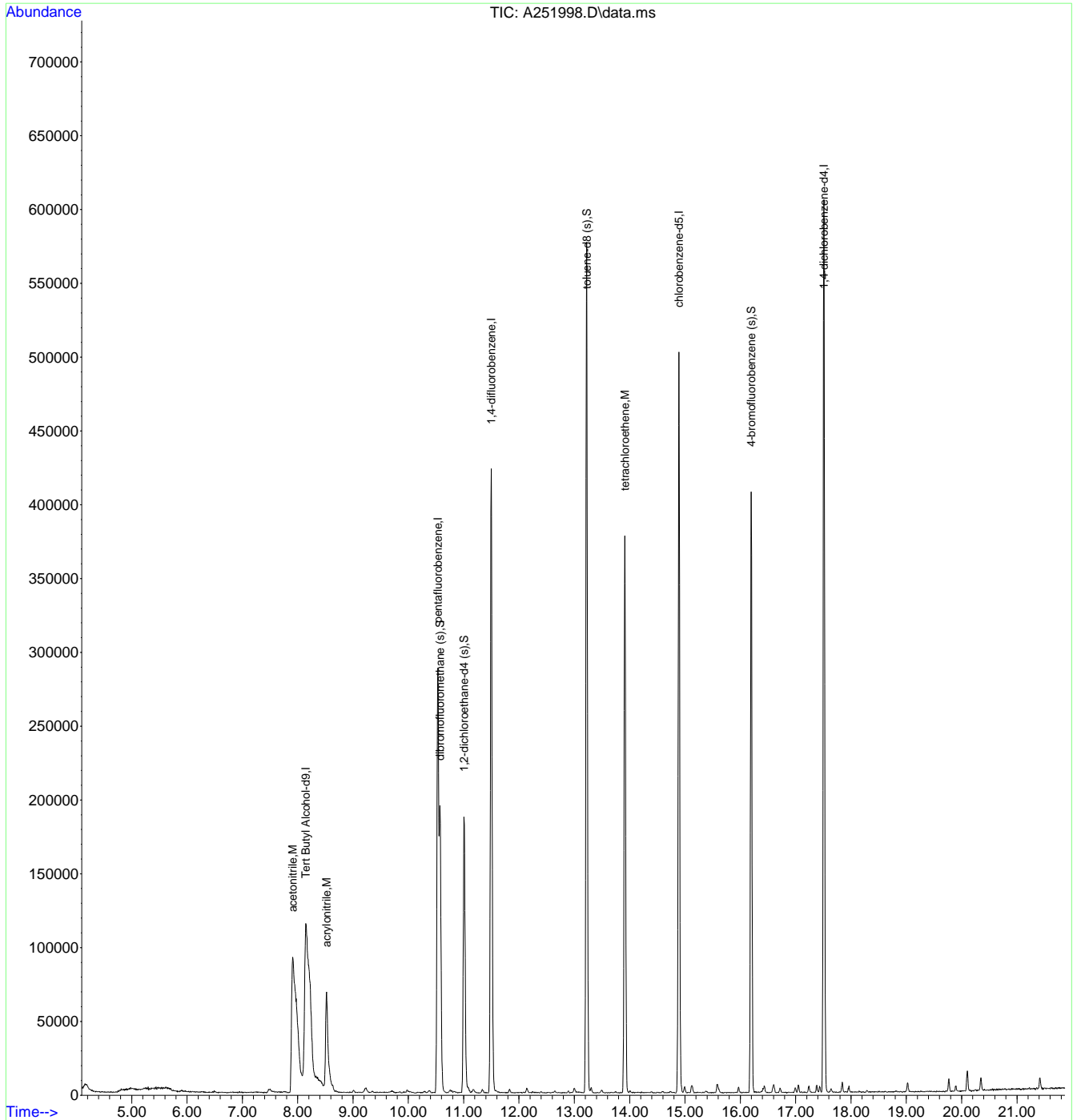
7.7.26  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9755\  
 Data File : A251998.D  
 Acq On : 30 Jul 2019 12:33 am  
 Operator : edwardd  
 Sample : icv9755-50  
 Misc : MS36311,VA9755,5,,,,,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 30 12:22:57 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60m x 0.25mm x 1.4um  
 QLast Update : Tue Jul 30 12:20:13 2019  
 Response via : Initial Calibration



7.7.26  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253699.d  
 Acq On : 4 Oct 2019 6:46 am  
 Operator : krizhkac  
 Sample : cc9755-20 Inst : MSA  
 Misc : MS38027,VA9835,5,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 04 07:31:47 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.146	65	529270	500.00	ug/L	0.00
5) pentafluorobenzene	10.524	168	306033	50.00	ug/L	0.00
52) 1,4-difluorobenzene	11.492	114	456047	50.00	ug/L	0.00
74) chlorobenzene-d5	14.885	117	412007	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	17.504	152	230829	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	10.566	113	154896	45.73	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	91.46%
53) 1,2-dichloroethane-d4 (s)	10.995	65	153161	45.44	ug/L	-0.01
Spiked Amount	50.000	Range	81 - 124	Recovery	=	90.88%
75) toluene-d8 (s)	13.217	98	520493	44.72	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	89.44%
99) 4-bromofluorobenzene (s)	16.186	95	190176	42.98	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	85.96%
Target Compounds						
3) tertiary butyl alcohol	8.261	59	125544	111.69	ug/L	92
4) 1,4-dioxane	12.166	88	44057	713.01	ug/L	99
6) chlorodifluoromethane	4.585	51	188891	23.28	ug/L	99
7) dichlorodifluoromethane	4.554	85	169536	21.32	ug/L	96
8) chloromethane	4.993	50	209562	21.74	ug/L	99
9) vinyl chloride	5.260	62	212111	27.44	ug/L	95
10) 1,3-butadiene	5.265	54	139674	25.00	ug/L	92
11) bromomethane	5.924	94	135383	25.04	ug/L	95
12) chloroethane	6.107	64	107636	22.87	ug/L	98
13) vinyl bromide	6.483	106	118510	24.29	ug/L	99
14) trichlorofluoromethane	6.624	101	158631	19.80	ug/L	94
15) ethyl ether	7.006	74	48142	23.12	ug/L	88
16) acrolein	7.246	56	26957	24.17	ug/L	84
17) freon 113	7.497	151	87925	24.88	ug/L	96
18) 1,1-dichloroethene	7.466	96	93016	19.10	ug/L	90
19) acetone	7.450	58	50241	76.94	ug/L	91
20) acetonitrile	7.895	41	223869	235.25	ug/L	98
21) iodomethane	7.738	142	145968	20.73	ug/L	93
22) carbon disulfide	7.895	76	296156	18.89	ug/L	97
23) methylene chloride	8.214	84	103455	18.06	ug/L	96
24) methyl acetate	7.952	43	87742	19.98	ug/L	99
25) methyl tert butyl ether	8.590	73	295295	21.71	ug/L	100
26) trans-1,2-dichloroethene	8.621	96	82626	21.52	ug/L	92
27) hexane	8.998	57	113265	19.33	ug/L	100
28) di-isopropyl ether	9.217	45	301146	20.33	ug/L	98
29) ethyl tert-butyl ether	9.698	59	280155	20.40	ug/L	96
30) 2-butanone	9.892	72	50143	73.03	ug/L	# 86
31) 1,1-dichloroethane	9.228	63	147776	21.00	ug/L	96
32) chloroprene	9.332	53	109972	19.19	ug/L	97
33) acrylonitrile	8.512	53	47011	20.38	ug/L	95
34) vinyl acetate	9.155	86	14925	17.60	ug/L	95
35) ethyl acetate	9.908	45	15408	17.96	ug/L	99
36) 2,2-dichloropropane	10.012	77	144297	21.94	ug/L	98
37) cis-1,2-dichloroethene	9.975	96	90707	20.98	ug/L	95
38) methyl acrylate	10.002	85	13529	18.54	ug/L	98
39) propionitrile	9.970	54	182959	183.89	ug/L	92
40) bromochloromethane	10.279	128	42871	21.84	ug/L	92
41) tetrahydrofuran	10.300	42	37789	18.46	ug/L	98
42) chloroform	10.368	83	129995	19.25	ug/L	98

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253699.d  
 Acq On : 4 Oct 2019 6:46 am  
 Operator : krizhkac  
 Sample : cc9755-20 Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 04 07:31:47 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tert-butyl formate	10.409	59	99585	29.17	ug/L	95
45) methacrylonitrile	10.179	67	37268	17.94	ug/L	89
46) cyclohexane	10.770	84	166937	21.81	ug/L	89
47) 1,1,1-trichloroethane	10.650	97	135862	21.51	ug/L	95
48) iso-butyl alcohol	10.765	43	139602	189.79	ug/L	94
49) 1,1-dichloropropene	10.817	75	95372	19.06	ug/L	97
50) carbon tetrachloride	10.854	117	111583	20.87	ug/L	98
51) tert-amyl alcohol	10.943	73	63301	104.60	ug/L	98
54) benzene	11.068	78	288918	21.44	ug/L	99
55) iso-octane	11.178	57	266299	19.81	ug/L	98
56) tert-amyl methyl ether	11.152	73	277961	23.28	ug/L	99
57) heptane	11.330	71	51549	20.26	ug/L	98
58) isopropyl acetate	10.964	87	21008	23.17	ug/L #	91
59) 1,2-dichloroethane	11.089	62	85509	19.92	ug/L	96
60) n-butyl alcohol	11.533	41	189584	1117.56	ug/L	99
61) ethyl acrylate	11.790	55	104028	22.47	ug/L	99
62) trichloroethene	11.821	95	63478	20.18	ug/L	98
63) 2-nitropropane	12.605	41	27341	22.82	ug/L	98
64) methylcyclohexane	12.140	83	160540	22.68	ug/L	98
65) 2-chloroethyl vinyl ether	12.637	63	213032	181.12	ug/L	97
66) methyl methacrylate	12.067	100	21279	23.15	ug/L #	86
67) 1,2-dichloropropane	12.119	63	73211	21.01	ug/L	100
68) dibromomethane	12.234	93	42449	21.38	ug/L	92
69) bromodichloromethane	12.391	83	85977	20.50	ug/L	100
70) epichlorohydrin	12.731	57	54100	109.38	ug/L	99
71) cis-1,3-dichloropropene	12.877	75	104848	21.47	ug/L	96
72) 4-methyl-2-pentanone	12.982	58	180304	93.24	ug/L	98
73) 3-methyl-1-butanol	12.982	55	189485	484.00	ug/L	99
76) toluene	13.295	92	160193	19.47	ug/L	98
77) trans-1,3-dichloropropene	13.489	75	95124	20.01	ug/L	98
78) ethyl methacrylate	13.473	69	95145	20.39	ug/L	97
79) 1,1,2-trichloroethane	13.729	83	51938	20.16	ug/L	94
80) 2-hexanone	13.907	58	170875	82.61	ug/L	98
81) tetrachloroethene	13.907	166	66550	21.70	ug/L	95
82) 1,3-dichloropropane	13.933	76	98756	19.92	ug/L	100
83) butyl acetate	13.991	56	63857	20.65	ug/L	96
84) dibromochloromethane	14.210	129	62911	20.64	ug/L	98
85) 1,2-dibromoethane	14.383	107	70290	21.72	ug/L	99
86) n-butyl ether	14.858	57	312139	20.50	ug/L	99
87) chlorobenzene	14.921	112	174834	21.72	ug/L	95
88) 1,1,1,2-tetrachloroethane	14.989	131	77298	21.37	ug/L	97
89) ethylbenzene	14.984	91	305254	21.02	ug/L	98
90) m,p-xylene	15.120	106	238363	42.81	ug/L	98
91) o-xylene	15.569	106	128600	21.59	ug/L	98
92) styrene	15.580	104	191461	21.61	ug/L	100
93) butyl acrylate	15.360	55	158412	19.85	ug/L	97
94) n-amyl acetate	15.596	70	70737	21.57	ug/L	96
95) bromoform	15.841	173	50834	24.54	ug/L	95
96) isopropylbenzene	15.962	105	346304	20.85	ug/L	97
97) cis-1,4-dichloro-2-butene	15.993	75	37905	20.73	ug/L	98
100) bromobenzene	16.401	156	77366	21.14	ug/L	91
101) 1,1,2,2-tetrachloroethane	16.270	83	113053	19.92	ug/L	100
102) trans-1,4-dichloro-2-b...	16.307	53	25218	20.25	ug/L	91
103) 1,2,3-trichloropropane	16.369	110	29614	21.13	ug/L	92
104) n-propylbenzene	16.427	91	384413	19.84	ug/L	99
105) 2-chlorotoluene	16.584	126	81529	21.33	ug/L	91
106) 4-chlorotoluene	16.709	91	208608	19.16	ug/L	97

7.7.27  
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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253699.d  
 Acq On : 4 Oct 2019 6:46 am  
 Operator : krizhkac  
 Sample : cc9755-20 Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 04 07:31:47 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	16.599	105	289128	19.69	ug/L	99
108) tert-butylbenzene	16.986	119	245887	18.65	ug/L	95
109) 1,2,4-trimethylbenzene	17.044	105	288473	19.70	ug/L	97
110) sec-butylbenzene	17.232	105	396837	20.01	ug/L	97
111) 1,3-dichlorobenzene	17.431	146	153131	21.56	ug/L	96
112) p-isopropyltoluene	17.373	119	330918	20.22	ug/L	98
113) 1,4-dichlorobenzene	17.530	146	156404	21.49	ug/L	94
114) 1,2-dichlorobenzene	17.953	146	163604	21.52	ug/L	97
115) n-butylbenzene	17.833	92	166680	19.53	ug/L	99
116) 1,2-dibromo-3-chloropr...	18.800	157	35952	21.78	ug/L	93
117) 1,3,5-trichlorobenzene	19.015	180	149286	21.87	ug/L	98
118) 2-ethylhexyl acrylate	19.741	70	15988	3.59	ug/L	98
119) 1,2,4-trichlorobenzene	19.762	180	148749	22.84	ug/L	99
120) hexachlorobutadiene	19.888	225	55875	20.71	ug/L	98
121) naphthalene	20.092	128	481831	21.90	ug/L	100
122) 1,2,3-trichlorobenzene	20.343	180	159147	22.44	ug/L	97
123) hexachloroethane	18.283	201	52512	20.20	ug/L	97
124) 2-methylnaphthalene	21.404	142	133451	10.04	ug/L	98

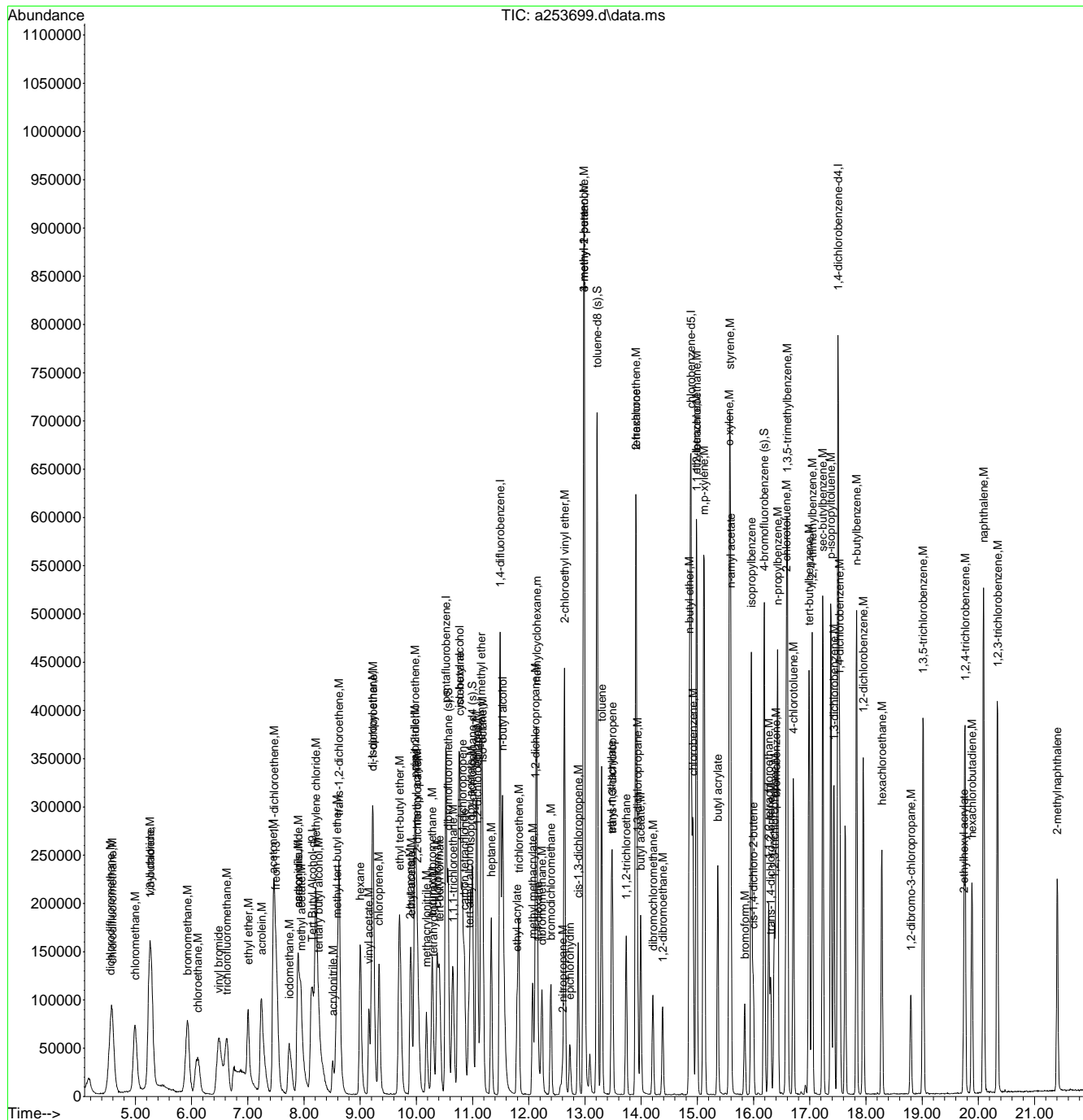
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\10\_oct\10-7-19\va9835\  
 Data File : a253699.d  
 Acq On : 4 Oct 2019 6:46 am  
 Operator : krizhkac  
 Sample : cc9755-20 Inst : MSA  
 Misc : MS38027,VA9835,5,,,,,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9755.M  
 Quant Results File: MA9755.RES  
 Quant Time: Oct 04 07:31:47 2019  
 Quant Title : SW-846 8260C/EPA 624 Rxi-624 60mx0.25mmx1.4um  
 QLast Update : Tue Aug 20 13:28:09 2019  
 Response via : Initial Calibration



7.7.27  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266054.D  
 Acq On : 6 Sep 2019 6:57 pm  
 Operator : thienn  
 Sample : IC10725-0.2  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 09 10:51:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.464	65	152855	500.00	ug/L	-0.02
5) pentafluorobenzene	9.718	168	194028	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.675	114	322851	50.00	ug/L	0.00
75) chlorobenzene-d5	14.085	117	290196	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.732	152	179790	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.750	113	105824	50.92	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	101.84%	
55) 1,2-dichloroethane-d4 (s)	10.178	65	120170	53.07	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	106.14%	
76) toluene-d8 (s)	12.412	98	382427	50.56	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	101.12%	
100) 4-bromofluorobenzene (s)	15.409	95	162499	48.70	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	97.40%	

## Target Compounds

						Qvalue
23) carbon disulfide	7.297	76	1906	0.22	ug/L	78
31) 1,1-dichloroethane	8.484	63	938	0.19	ug/L	82
35) ethyl tert-butyl ether	8.965	59	2216	0.20	ug/L	91
47) 1,1,1-trichloroethane	9.859	97	929	0.20	ug/L #	60
48) cyclohexane	10.006	84	937	0.18	ug/L	92
50) 1,1-dichloropropene	10.037	75	679	0.20	ug/L #	42
51) carbon tetrachloride	10.084	117	623	0.17	ug/L	85
58) benzene	10.278	78	2338	0.23	ug/L	91
72) cis-1,3-dichloropropene	12.067	75	784	0.20	ug/L	69
73) 4-methyl-2-pentanone	12.176	58	705	0.74	ug/L #	44
77) toluene	12.495	92	1144	0.19	ug/L	90
79) trans-1,3-dichloropropene	12.678	75	595	0.18	ug/L #	73
86) 1,2-dibromoethane	13.578	107	381	0.18	ug/L	92
87) n-butyl ether	14.117	57	2756	0.23	ug/L	82
88) chlorobenzene	14.117	112	1414	0.23	ug/L	75
89) 1,1,1,2-tetrachloroethane	14.195	131	515	0.20	ug/L	94
90) ethylbenzene	14.206	91	2501	0.22	ug/L	87
91) m,p-xylene	14.347	106	1875	0.43	ug/L #	61
92) o-xylene	14.791	91	2264	0.22	ug/L	97
93) styrene	14.807	104	1412	0.19	ug/L	86
96) isopropylbenzene	15.194	105	2975	0.23	ug/L	97
101) 1,1,2,2-tetrachloroethane	15.466	83	654	0.22	ug/L	79
104) bromobenzene	15.623	156	431	0.15	ug/L #	80
105) n-propylbenzene	15.665	91	3340	0.22	ug/L	90
106) 2-chlorotoluene	15.806	126	530	0.17	ug/L #	43
107) 4-chlorotoluene	15.937	91	1807	0.20	ug/L	88
108) 1,3,5-trimethylbenzene	15.837	105	2459	0.20	ug/L	97
109) tert-butylbenzene	16.230	119	1824	0.18	ug/L	90
110) 1,2,4-trimethylbenzene	16.287	105	2656	0.21	ug/L	93
111) sec-butylbenzene	16.476	105	3313	0.21	ug/L	93
112) p-isopropyltoluene	16.627	119	2590	0.19	ug/L	92
113) 1,3-dichlorobenzene	16.664	146	1330	0.22	ug/L	89
114) 1,4-dichlorobenzene	16.768	146	1344	0.22	ug/L	91

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266054.D  
 Acq On : 6 Sep 2019 6:57 pm  
 Operator : thienn  
 Sample : IC10725-0.2  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 09 10:51:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

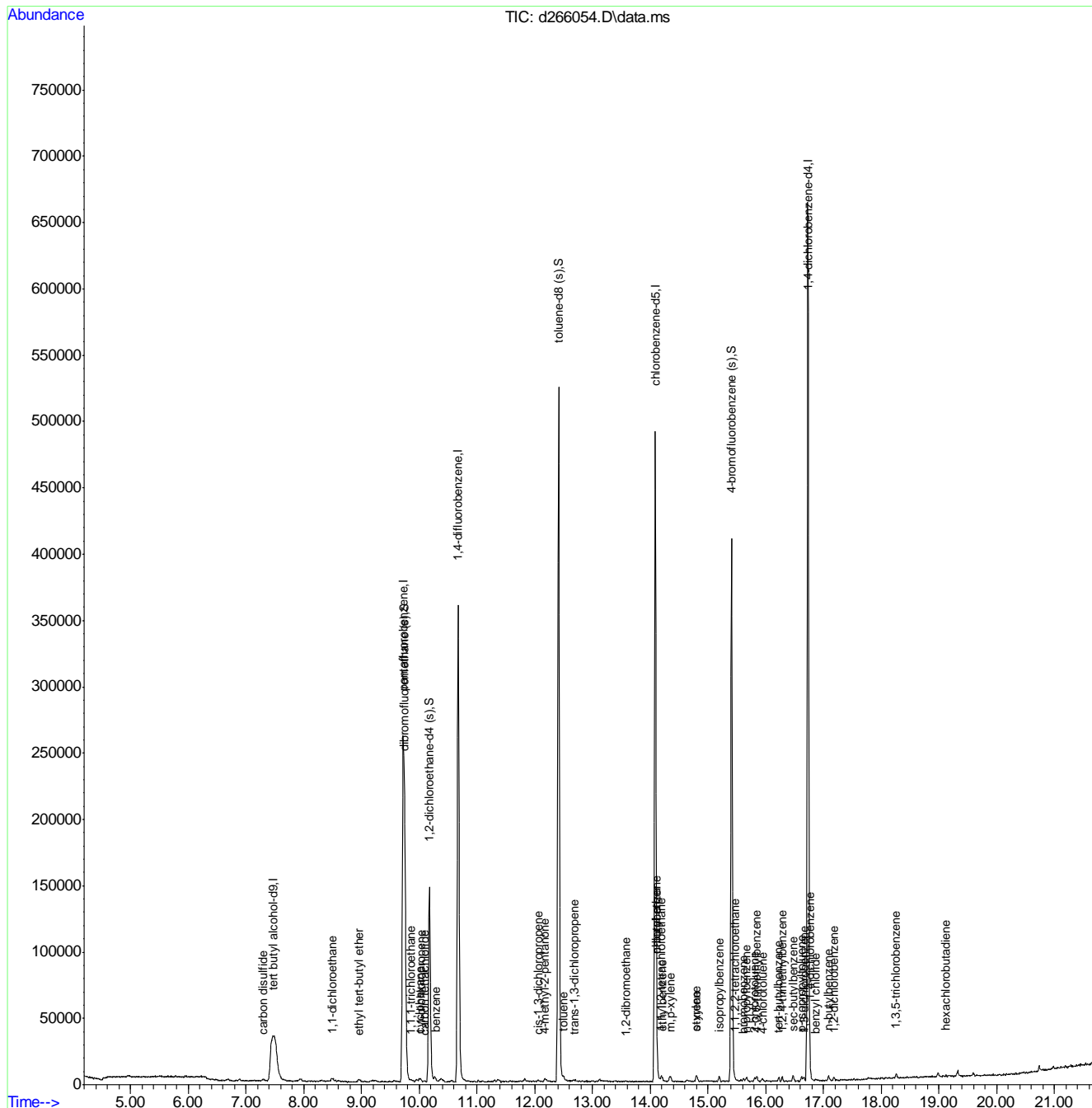
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2-dichlorobenzene	17.176	146	1303	0.20	ug/L	86
116) benzyl chloride	16.852	91	1286	0.21	ug/L	87
117) n-butylbenzene	17.087	92	1359	0.19	ug/L	97
121) 1,3,5-trichlorobenzene	18.264	180	1253	0.20	ug/L	93
123) hexachlorobutadiene	19.127	225	404	0.16	ug/L #	47

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266054.D  
 Acq On : 6 Sep 2019 6:57 pm  
 Operator : thienn  
 Sample : IC10725-0.2  
 Misc : ms37297, vd10725, 5, , 100, 5, 1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 09 10:51:09 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266055.D  
 Acq On : 6 Sep 2019 7:26 pm  
 Operator : thienn  
 Sample : IC10725-0.5  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 09 10:53:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.473	65	151018	500.00	ug/L	-0.01
5) pentafluorobenzene	9.722	168	220869	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.673	114	375720	50.00	ug/L	0.00
75) chlorobenzene-d5	14.083	117	342182	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	210469	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	117110	49.51	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.02%
55) 1,2-dichloroethane-d4 (s)	10.177	65	136206	51.68	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	103.36%
76) toluene-d8 (s)	12.410	98	442534	49.62	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.24%
100) 4-bromofluorobenzene (s)	15.407	95	192391	49.26	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	98.52%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) chlorodifluoromethane	4.423	51	3238	0.46	ug/L	71
8) chloromethane	4.654	50	3490	0.50	ug/L	85
9) 1,3-butadiene	4.952	54	1794	0.44	ug/L	94
10) vinyl chloride	4.931	62	2959	0.45	ug/L	92
11) bromomethane	5.490	94	1479	0.43	ug/L #	52
12) chloroethane	5.658	64	1558	0.51	ug/L	95
14) vinyl bromide	5.987	106	1436	0.47	ug/L	93
15) ethyl ether	6.468	74	614	0.40	ug/L #	75
22) iodomethane	7.117	142	2051	0.46	ug/L	83
23) carbon disulfide	7.290	76	4814	0.49	ug/L	74
24) methylene chloride	7.535	84	1873	0.54	ug/L	83
26) methyl tert butyl ether	7.912	73	5736	0.54	ug/L	89
29) di-isopropyl ether	8.498	45	7266	0.56	ug/L	94
31) 1,1-dichloroethane	8.472	63	2761	0.49	ug/L	84
32) chloroprene	8.597	53	2318	0.47	ug/L	93
35) ethyl tert-butyl ether	8.953	59	6003	0.48	ug/L	91
42) bromochloromethane	9.486	128	733	0.51	ug/L #	79
44) chloroform	9.554	83	2951	0.58	ug/L	88
47) 1,1,1-trichloroethane	9.858	97	2632	0.50	ug/L	92
48) cyclohexane	10.004	84	2493	0.43	ug/L	96
50) 1,1-dichloropropene	10.035	75	1954	0.49	ug/L	90
51) carbon tetrachloride	10.072	117	1902	0.45	ug/L	93
58) benzene	10.276	78	6251	0.52	ug/L	94
59) tert-amyl methyl ether	10.360	73	6742	0.61	ug/L	94
63) trichloroethene	11.024	95	1410	0.51	ug/L	86
64) 2-chloroethyl vinyl ether	11.819	63	4052	2.47	ug/L	93
67) 1,2-dichloropropane	11.301	63	1474	0.47	ug/L	93
68) dibromomethane	11.406	93	770	0.48	ug/L	89
69) bromodichloromethane	11.557	83	1831	0.48	ug/L	90
72) cis-1,3-dichloropropene	12.059	75	2355	0.51	ug/L	98
73) 4-methyl-2-pentanone	12.164	58	2152	1.94	ug/L	96
77) toluene	12.494	92	3502	0.50	ug/L	89
78) ethyl methacrylate	12.692	69	1753	0.50	ug/L	85



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266055.D  
 Acq On : 6 Sep 2019 7:26 pm  
 Operator : thienn  
 Sample : IC10725-0.5  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 09 10:53:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

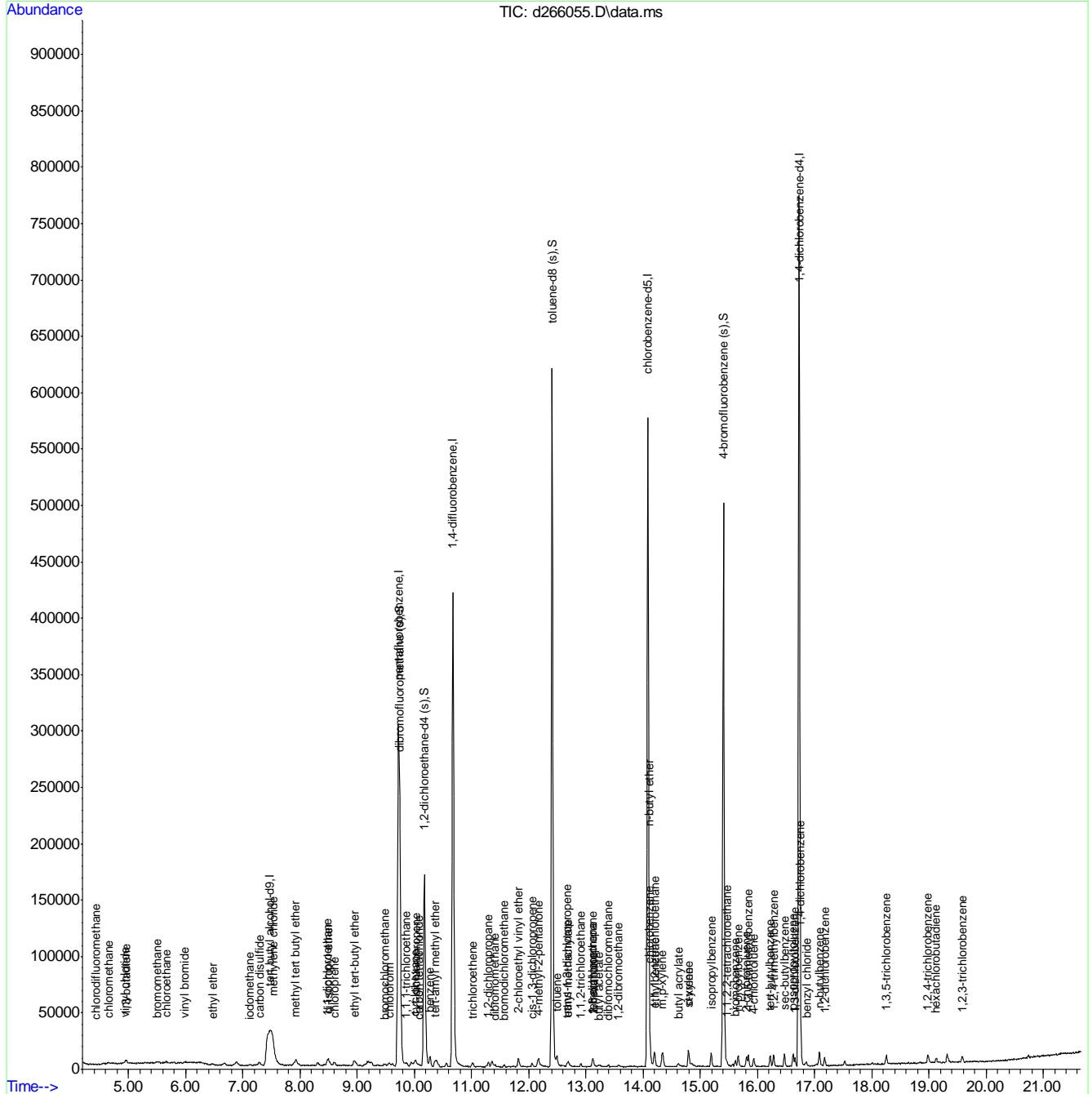
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) trans-1,3-dichloropropene	12.671	75	1972	0.51	ug/L	88
80) 1,1,2-trichloroethane	12.907	83	1011	0.53	ug/L	86
81) tetrachloroethene	13.126	164	948	0.46	ug/L	89
82) 2-hexanone	13.132	58	1572	1.72	ug/L #	64
83) 1,3-dichloropropane	13.111	76	1955	0.50	ug/L	85
84) butyl acetate	13.236	56	739	0.41	ug/L #	9
85) dibromochloromethane	13.393	129	1081	0.45	ug/L	86
86) 1,2-dibromoethane	13.571	107	1186	0.48	ug/L	84
87) n-butyl ether	14.110	57	7891	0.57	ug/L	91
88) chlorobenzene	14.120	112	3731	0.52	ug/L	93
89) 1,1,1,2-tetrachloroethane	14.193	131	1494	0.48	ug/L	88
90) ethylbenzene	14.204	91	6904	0.52	ug/L	98
91) m,p-xylene	14.340	106	5342	1.04	ug/L	99
92) o-xylene	14.795	91	6429	0.53	ug/L	91
93) styrene	14.805	104	4165	0.48	ug/L	86
94) butyl acrylate	14.617	55	3618	0.58	ug/L	89
96) isopropylbenzene	15.192	105	7797	0.51	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.469	83	1705	0.48	ug/L	92
104) bromobenzene	15.616	156	1636	0.48	ug/L	84
105) n-propylbenzene	15.663	91	9028	0.50	ug/L	95
106) 2-chlorotoluene	15.809	126	1770	0.49	ug/L	93
107) 4-chlorotoluene	15.935	91	5605	0.53	ug/L	95
108) 1,3,5-trimethylbenzene	15.841	105	6974	0.48	ug/L	99
109) tert-butylbenzene	16.228	119	5380	0.45	ug/L	95
110) 1,2,4-trimethylbenzene	16.285	105	7051	0.48	ug/L	96
111) sec-butylbenzene	16.474	105	8883	0.47	ug/L	93
112) p-isopropyltoluene	16.625	119	7372	0.47	ug/L	95
113) 1,3-dichlorobenzene	16.657	146	3579	0.50	ug/L	96
114) 1,4-dichlorobenzene	16.761	146	3712	0.51	ug/L	82
115) 1,2-dichlorobenzene	17.180	146	3531	0.46	ug/L	99
116) benzyl chloride	16.855	91	3487	0.49	ug/L	99
117) n-butylbenzene	17.080	92	3898	0.46	ug/L	89
121) 1,3,5-trichlorobenzene	18.257	180	3398	0.47	ug/L	95
122) 1,2,4-trichlorobenzene	18.984	180	2891	0.45	ug/L	87
123) hexachlorobutadiene	19.125	225	1249	0.43	ug/L	90
125) 1,2,3-trichlorobenzene	19.591	180	2351	0.44	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266055.D  
 Acq On : 6 Sep 2019 7:26 pm  
 Operator : thienn  
 Sample : IC10725-0.5  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 09 10:53:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266056.D  
 Acq On : 6 Sep 2019 7:54 pm  
 Operator : thienn  
 Sample : IC10725-1  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:54:34 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.480	65	144968	500.00	ug/L	0.00
5) pentafluorobenzene	9.718	168	224574	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.675	114	383665	50.00	ug/L	0.00
75) chlorobenzene-d5	14.085	117	351417	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.732	152	212074	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.750	113	120341	50.03	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.06%
55) 1,2-dichloroethane-d4 (s)	10.173	65	138815	51.58	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	103.16%
76) toluene-d8 (s)	12.412	98	454998	49.67	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.34%
100) 4-bromofluorobenzene (s)	15.409	95	193886	49.26	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	98.52%

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.611	59	1753	4.47	ug/L	77
6) chlorodifluoromethane	4.415	51	7149	0.99	ug/L	87
7) dichlorodifluoromethane	4.420	85	4652	0.78	ug/L #	51
8) chloromethane	4.671	50	6877	0.97	ug/L	88
9) 1,3-butadiene	4.964	54	3151	0.76	ug/L	91
10) vinyl chloride	4.954	62	6538	0.97	ug/L	90
11) bromomethane	5.508	94	3296	0.94	ug/L #	66
12) chloroethane	5.660	64	3242	1.05	ug/L	92
13) trichlorofluoromethane	6.104	101	3829	0.79	ug/L	86
14) vinyl bromide	5.994	106	2970	0.96	ug/L	85
15) ethyl ether	6.465	74	1362	0.88	ug/L #	68
18) freon 113	6.894	151	2121	0.77	ug/L #	80
19) 1,1-dichloroethene	6.889	96	4054	1.33	ug/L #	68
20) acetone	6.842	58	741	2.97	ug/L #	15
22) iodomethane	7.135	142	4385	0.98	ug/L	95
23) carbon disulfide	7.292	76	9920	0.99	ug/L	99
24) methylene chloride	7.532	84	3449	0.98	ug/L	93
26) methyl tert butyl ether	7.914	73	11007	1.02	ug/L	97
27) trans-1,2-dichloroethene	7.935	96	3924	1.28	ug/L	89
28) hexane	8.311	56	1921	0.86	ug/L	88
29) di-isopropyl ether	8.494	45	13664	1.04	ug/L	96
31) 1,1-dichloroethane	8.479	63	5677	0.99	ug/L	94
32) chloroprene	8.604	53	4950	0.99	ug/L	90
35) ethyl tert-butyl ether	8.949	59	12045	0.95	ug/L	98
37) 2,2-dichloropropane	9.237	77	6011	1.09	ug/L	91
38) cis-1,2-dichloroethene	9.180	96	4267	1.23	ug/L	89
39) propionitrile	9.159	54	3939	8.85	ug/L	89
41) methacrylonitrile	9.373	67	870	0.82	ug/L #	54
42) bromochloromethane	9.488	128	1504	1.02	ug/L #	73
44) chloroform	9.561	83	5513	1.06	ug/L	95
45) tert-butyl formate	9.619	59	2842	0.88	ug/L	87
47) 1,1,1-trichloroethane	9.870	97	5395	1.01	ug/L	85
48) cyclohexane	10.011	84	5878	1.00	ug/L	87

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266056.D  
 Acq On : 6 Sep 2019 7:54 pm  
 Operator : thienn  
 Sample : IC10725-1  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:54:34 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
50) 1,1-dichloropropene	10.027	75	3861	0.96	ug/L	93
51) carbon tetrachloride	10.074	117	3920	0.92	ug/L	92
57) 2,2,4-trimethylpentane	10.398	57	9290	0.78	ug/L	94
58) benzene	10.278	78	12620	1.02	ug/L	98
59) tert-amyl methyl ether	10.372	73	12303	1.09	ug/L	95
60) heptane	10.566	57	2065	0.91	ug/L	89
61) 1,2-dichloroethane	10.273	62	4107	1.10	ug/L	97
62) ethyl acrylate	11.000	55	3158	0.99	ug/L	83
63) trichloroethene	11.015	95	2738	0.96	ug/L	98
64) 2-chloroethyl vinyl ether	11.816	63	7999	4.78	ug/L	94
66) methylcyclohexane	11.366	83	5207	0.86	ug/L	89
67) 1,2-dichloropropane	11.293	63	3219	1.00	ug/L	94
68) dibromomethane	11.402	93	1540	0.94	ug/L	97
69) bromodichloromethane	11.559	83	3571	0.92	ug/L	98
71) epichlorohydrin	11.899	57	1574	5.27	ug/L	58
72) cis-1,3-dichloropropene	12.056	75	4303	0.91	ug/L	93
73) 4-methyl-2-pentanone	12.161	58	3997	3.54	ug/L	90
77) toluene	12.495	92	7041	0.98	ug/L	95
78) ethyl methacrylate	12.689	69	3397	0.95	ug/L	87
79) trans-1,3-dichloropropene	12.663	75	3673	0.92	ug/L	80
80) 1,1,2-trichloroethane	12.914	83	1813	0.93	ug/L	92
81) tetrachloroethene	13.128	164	1923	0.92	ug/L	95
82) 2-hexanone	13.107	58	3283	3.49	ug/L	85
83) 1,3-dichloropropane	13.113	76	3969	0.99	ug/L	93
84) butyl acetate	13.222	56	1704	0.91	ug/L	85
85) dibromochloromethane	13.395	129	2125	0.86	ug/L	96
86) 1,2-dibromoethane	13.568	107	2317	0.92	ug/L	98
87) n-butyl ether	14.106	57	15469	1.08	ug/L	92
88) chlorobenzene	14.122	112	7078	0.96	ug/L	94
89) 1,1,1,2-tetrachloroethane	14.190	131	2974	0.93	ug/L	96
90) ethylbenzene	14.201	91	13842	1.01	ug/L	99
91) m,p-xylene	14.336	106	10509	1.99	ug/L	94
92) o-xylene	14.792	91	11906	0.95	ug/L	95
93) styrene	14.802	104	8463	0.95	ug/L	97
94) butyl acrylate	14.608	55	7141	1.11	ug/L	95
95) n-amyl acetate	14.844	70	2449	0.99	ug/L	88
96) isopropylbenzene	15.194	105	15257	0.97	ug/L	97
97) bromoform	15.037	173	1268	0.81	ug/L	79
101) 1,1,2,2-tetrachloroethane	15.471	83	3592	1.00	ug/L	90
103) 1,2,3-trichloropropane	15.566	110	829	0.87	ug/L #	78
104) bromobenzene	15.613	156	3189	0.92	ug/L	96
105) n-propylbenzene	15.665	91	17444	0.96	ug/L	97
106) 2-chlorotoluene	15.811	126	3446	0.94	ug/L	99
107) 4-chlorotoluene	15.937	91	10507	0.98	ug/L	97
108) 1,3,5-trimethylbenzene	15.843	105	13925	0.95	ug/L	99
109) tert-butylbenzene	16.225	119	10638	0.88	ug/L	96
110) 1,2,4-trimethylbenzene	16.282	105	13718	0.93	ug/L	98
111) sec-butylbenzene	16.476	105	16850	0.89	ug/L	98
112) p-isopropyltoluene	16.622	119	14909	0.94	ug/L	98
113) 1,3-dichlorobenzene	16.659	146	7098	0.99	ug/L	93

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266056.D  
 Acq On : 6 Sep 2019 7:54 pm  
 Operator : thienn  
 Sample : IC10725-1  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:54:34 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

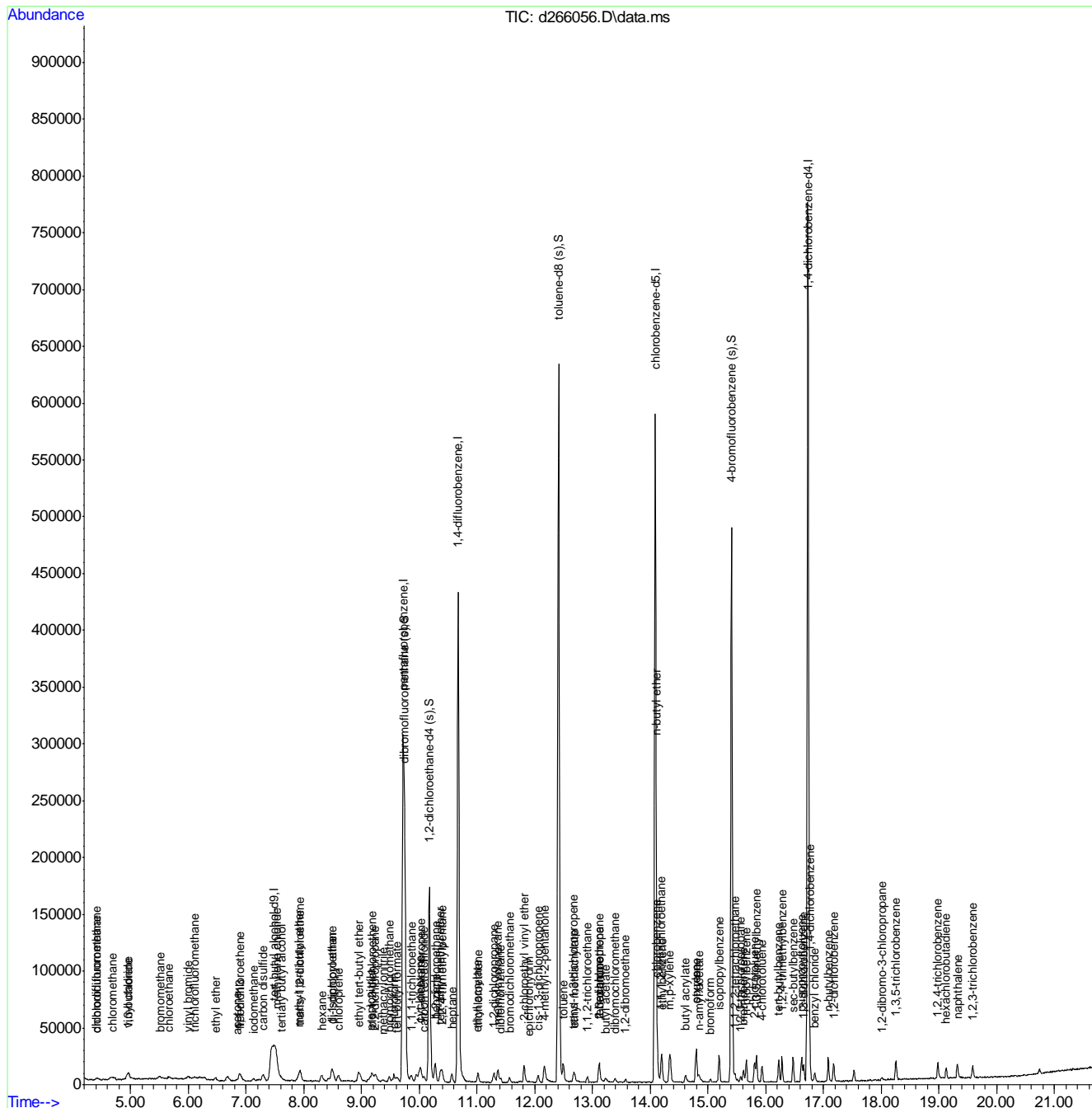
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
114) 1,4-dichlorobenzene	16.763	146	7335	1.00	ug/L	98
115) 1,2-dichlorobenzene	17.176	146	7258	0.95	ug/L	97
116) benzyl chloride	16.852	91	6897	0.96	ug/L	99
117) n-butylbenzene	17.088	92	7773	0.92	ug/L	99
120) 1,2-dibromo-3-chloropr...	18.013	75	835	1.03	ug/L	83
121) 1,3,5-trichlorobenzene	18.259	180	6298	0.87	ug/L	98
122) 1,2,4-trichlorobenzene	18.976	180	5792	0.89	ug/L	98
123) hexachlorobutadiene	19.122	225	2414	0.83	ug/L	96
124) naphthalene	19.321	128	12951	0.93	ug/L	98
125) 1,2,3-trichlorobenzene	19.588	180	4534	0.84	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266056.D  
 Acq On : 6 Sep 2019 7:54 pm  
 Operator : thienn  
 Sample : IC10725-1  
 Misc : ms37297, vd10725, 5, , 100, 5, 1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:54:34 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration



7.7.30  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266057.D  
 Acq On : 6 Sep 2019 8:23 pm  
 Operator : thienn  
 Sample : IC10725-2  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 10:56:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.478	65	146235	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	220561	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	377348	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	349006	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	211551	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	118082	49.99	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.98%
55) 1,2-dichloroethane-d4 (s)	10.177	65	137008	51.76	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	103.52%
76) toluene-d8 (s)	12.410	98	449593	49.42	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.84%
100) 4-bromofluorobenzene (s)	15.407	95	195342	49.76	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	99.52%

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.577	59	3790	9.57	ug/L	77
6) chlorodifluoromethane	4.413	51	13318	1.88	ug/L	94
7) dichlorodifluoromethane	4.450	85	11624	1.97	ug/L	92
8) chloromethane	4.664	50	12916	1.86	ug/L	93
9) 1,3-butadiene	4.952	54	7050	1.73	ug/L	93
10) vinyl chloride	4.952	62	13060	1.97	ug/L	91
11) bromomethane	5.501	94	6576	1.91	ug/L	87
12) chloroethane	5.663	64	6301	2.08	ug/L	94
13) trichlorofluoromethane	6.092	101	8580	1.81	ug/L	91
14) vinyl bromide	5.993	106	5866	1.94	ug/L	94
15) ethyl ether	6.469	74	2719	1.78	ug/L	96
16) 2-chloropropane	6.683	43	12560	2.17	ug/L	95
17) acrolein	6.673	56	832	1.65	ug/L	91
18) freon 113	6.903	151	4722	1.76	ug/L	89
19) 1,1-dichloroethene	6.877	96	6531	2.18	ug/L	91
20) acetone	6.845	58	1689	6.89	ug/L #	37
22) iodomethane	7.128	142	8618	1.95	ug/L	90
23) carbon disulfide	7.295	76	19607	2.00	ug/L	97
24) methylene chloride	7.525	84	7053	2.05	ug/L	88
26) methyl tert butyl ether	7.907	73	21072	2.00	ug/L	95
27) trans-1,2-dichloroethene	7.938	96	6785	2.26	ug/L	92
28) hexane	8.310	56	4083	1.87	ug/L	93
29) di-isopropyl ether	8.498	45	26804	2.08	ug/L	97
30) 2-butanone	9.105	72	1739	6.28	ug/L	89
31) 1,1-dichloroethane	8.482	63	11243	2.00	ug/L	95
32) chloroprene	8.603	53	9387	1.92	ug/L	95
35) ethyl tert-butyl ether	8.953	59	23983	1.92	ug/L	96
37) 2,2-dichloropropane	9.230	77	11476	2.12	ug/L	97
38) cis-1,2-dichloroethene	9.183	96	7485	2.19	ug/L	96
39) propionitrile	9.146	54	8068	18.46	ug/L	94
41) methacrylonitrile	9.361	67	1763	1.69	ug/L #	81
42) bromochloromethane	9.481	128	2673	1.84	ug/L #	88
43) tetrahydrofuran	9.533	42	1865	2.36	ug/L	92



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266057.D  
 Acq On : 6 Sep 2019 8:23 pm  
 Operator : thienn  
 Sample : IC10725-2  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 10:56:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) chloroform	9.560	83	10653	2.09	ug/L	97
45) tert-butyl formate	9.622	59	5578	1.76	ug/L	95
47) 1,1,1-trichloroethane	9.863	97	10465	1.99	ug/L	95
48) cyclohexane	10.009	84	11905	2.07	ug/L	96
50) 1,1-dichloropropene	10.025	75	7790	1.97	ug/L	98
51) carbon tetrachloride	10.083	117	7878	1.88	ug/L	92
56) n-butyl alcohol	10.721	41	7904	114.01	ug/L	85
57) 2,2,4-trimethylpentane	10.402	57	18865	1.60	ug/L	93
58) benzene	10.276	78	24387	2.01	ug/L	95
59) tert-amyl methyl ether	10.370	73	22904	2.07	ug/L	99
60) heptane	10.564	57	4113	1.85	ug/L	91
61) 1,2-dichloroethane	10.266	62	7757	2.11	ug/L	96
62) ethyl acrylate	10.993	55	6190	1.96	ug/L	78
63) trichloroethene	11.019	95	5502	1.97	ug/L	93
64) 2-chloroethyl vinyl ether	11.819	63	15956	9.70	ug/L	92
66) methylcyclohexane	11.364	83	10375	1.74	ug/L	95
67) 1,2-dichloropropane	11.296	63	6217	1.96	ug/L	91
68) dibromomethane	11.406	93	3013	1.87	ug/L	96
69) bromodichloromethane	11.563	83	6890	1.81	ug/L	92
71) epichlorohydrin	11.898	57	2873	9.77	ug/L	88
72) cis-1,3-dichloropropene	12.054	75	8884	1.92	ug/L	96
73) 4-methyl-2-pentanone	12.159	58	8698	7.82	ug/L	89
74) isoamyl alcohol	12.169	70	3446	35.51	ug/L #	71
77) toluene	12.494	92	14013	1.96	ug/L	94
78) ethyl methacrylate	12.687	69	6758	1.91	ug/L	92
79) trans-1,3-dichloropropene	12.666	75	7417	1.87	ug/L	91
80) 1,1,2-trichloroethane	12.907	83	3665	1.88	ug/L	96
81) tetrachloroethene	13.121	164	4139	1.99	ug/L	95
82) 2-hexanone	13.100	58	7434	7.95	ug/L	94
83) 1,3-dichloropropane	13.111	76	7600	1.90	ug/L	90
84) butyl acetate	13.216	56	3704	2.00	ug/L	87
85) dibromochloromethane	13.393	129	4284	1.74	ug/L	99
86) 1,2-dibromoethane	13.571	107	4718	1.88	ug/L	94
87) n-butyl ether	14.105	57	29724	2.09	ug/L	94
88) chlorobenzene	14.120	112	14520	1.98	ug/L	95
89) 1,1,1,2-tetrachloroethane	14.194	131	5978	1.89	ug/L	93
90) ethylbenzene	14.204	91	27668	2.03	ug/L	98
91) m,p-xylene	14.335	106	20158	3.85	ug/L	96
92) o-xylene	14.790	91	24356	1.96	ug/L	98
93) styrene	14.800	104	17578	1.98	ug/L	95
94) butyl acrylate	14.601	55	13693	2.14	ug/L	97
95) n-amyl acetate	14.837	70	4962	2.01	ug/L	94
96) isopropylbenzene	15.192	105	29594	1.89	ug/L	98
97) bromoform	15.041	173	2703	1.74	ug/L	91
98) cis-1,4-dichloro-2-butene	15.198	88	1663	1.66	ug/L	92
101) 1,1,2,2-tetrachloroethane	15.470	83	6536	1.83	ug/L	96
102) trans-1,4-dichloro-2-b...	15.512	53	1395	1.67	ug/L #	68
103) 1,2,3-trichloropropane	15.569	110	1805	1.90	ug/L	90
104) bromobenzene	15.621	156	6476	1.87	ug/L #	83
105) n-propylbenzene	15.663	91	34774	1.92	ug/L	99



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266057.D  
 Acq On : 6 Sep 2019 8:23 pm  
 Operator : thienn  
 Sample : IC10725-2  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 10:56:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:52:26 2019  
 Response via : Initial Calibration

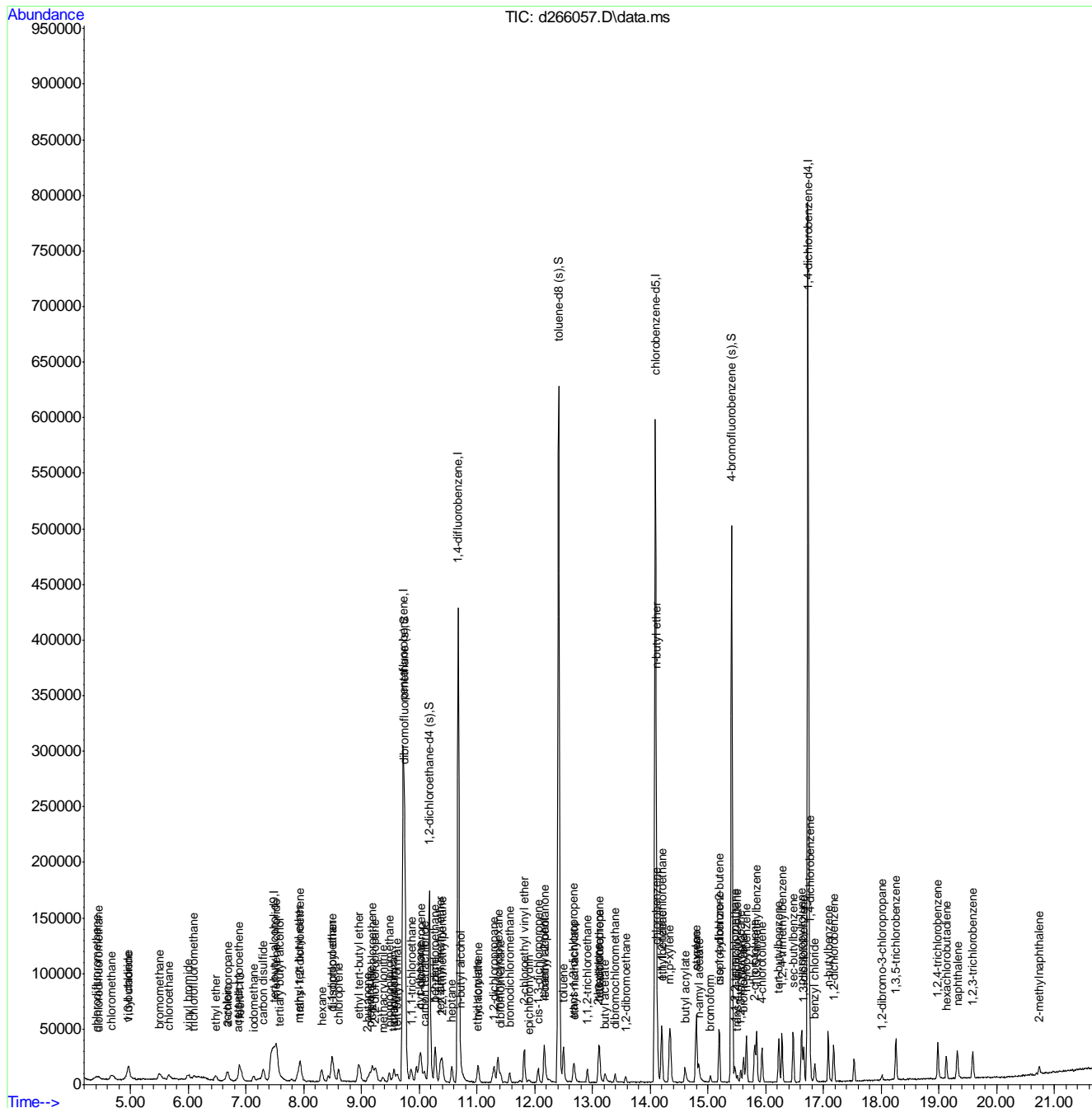
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
106) 2-chlorotoluene	15.810	126	6611	1.82	ug/L	98
107) 4-chlorotoluene	15.935	91	21249	1.99	ug/L	97
108) 1,3,5-trimethylbenzene	15.841	105	26596	1.81	ug/L	98
109) tert-butylbenzene	16.223	119	20325	1.68	ug/L	99
110) 1,2,4-trimethylbenzene	16.280	105	27876	1.90	ug/L	98
111) sec-butylbenzene	16.474	105	33943	1.80	ug/L	96
112) p-isopropyltoluene	16.620	119	28976	1.84	ug/L	99
113) 1,3-dichlorobenzene	16.657	146	14221	1.99	ug/L	96
114) 1,4-dichlorobenzene	16.762	146	14021	1.92	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	14878	1.95	ug/L	98
116) benzyl chloride	16.850	91	13294	1.85	ug/L	98
117) n-butylbenzene	17.081	92	15503	1.83	ug/L	97
120) 1,2-dibromo-3-chloropr...	18.017	75	1531	1.89	ug/L	98
121) 1,3,5-trichlorobenzene	18.257	180	13129	1.82	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	11470	1.78	ug/L	94
123) hexachlorobutadiene	19.126	225	5169	1.77	ug/L	88
124) naphthalene	19.319	128	25365	1.83	ug/L	98
125) 1,2,3-trichlorobenzene	19.586	180	9533	1.76	ug/L	98
126) 2-methylnaphthalene	20.736	142	4641	0.83	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
Data File : d266057.D  
Acq On : 6 Sep 2019 8:23 pm  
Operator : thienn  
Sample : IC10725-2  
Misc : ms37297,vd10725,5,,100,5,1  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 10:56:23 2019  
Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
QLast Update : Mon Sep 09 06:52:26 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266058.D  
 Acq On : 6 Sep 2019 8:52 pm  
 Operator : thienn  
 Sample : IC10725-4  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 09 10:57:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:55:10 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.489	65	149472	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	217550	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.679	114	371969	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	345214	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	211117	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	115559	49.76	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	99.52%	
55) 1,2-dichloroethane-d4 (s)	10.177	65	135052	50.38	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	100.76%	
76) toluene-d8 (s)	12.410	98	447410	49.91	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.82%	
100) 4-bromofluorobenzene (s)	15.407	95	193644	50.06	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	100.12%	

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.609	59	7476	19.06	ug/L	91
4) 1,4-dioxane	11.354	88	3371	89.54	ug/L	88
6) chlorodifluoromethane	4.413	51	27879	4.03	ug/L	96
7) dichlorodifluoromethane	4.434	85	23277	4.18	ug/L	93
8) chloromethane	4.675	50	26639	3.99	ug/L	96
9) 1,3-butadiene	4.957	54	14578	3.99	ug/L	98
10) vinyl chloride	4.952	62	26375	4.14	ug/L	99
11) bromomethane	5.512	94	13225	4.12	ug/L	96
12) chloroethane	5.668	64	12305	4.12	ug/L	98
13) trichlorofluoromethane	6.113	101	17586	3.99	ug/L	95
14) vinyl bromide	5.993	106	11914	4.08	ug/L	94
15) ethyl ether	6.469	74	6082	4.33	ug/L #	82
16) 2-chloropropane	6.678	43	27130	4.63	ug/L	96
17) acrolein	6.646	56	2042	4.26	ug/L	79
18) freon 113	6.918	151	11009	4.40	ug/L	96
19) 1,1-dichloroethene	6.887	96	13782	4.38	ug/L	94
20) acetone	6.840	58	3439	15.29	ug/L #	62
21) acetonitrile	7.217	41	20555	43.71	ug/L	97
22) iodomethane	7.133	142	18352	4.31	ug/L	94
23) carbon disulfide	7.295	76	41501	4.27	ug/L	99
24) methylene chloride	7.530	84	14550	4.26	ug/L	96
25) methyl acetate	7.300	74	1072	0.54	ug/L #	1
26) methyl tert butyl ether	7.917	73	44131	4.22	ug/L	97
27) trans-1,2-dichloroethene	7.938	96	13614	3.99	ug/L	93
28) hexane	8.299	56	8751	4.49	ug/L	85
29) di-isopropyl ether	8.498	45	54035	4.03	ug/L	96
30) 2-butanone	9.105	72	3877	16.86	ug/L	88
31) 1,1-dichloroethane	8.482	63	22518	4.15	ug/L	97
32) chloroprene	8.597	53	19401	4.25	ug/L	96
33) acrylonitrile	7.776	53	3397	3.95	ug/L	91
34) vinyl acetate	8.409	86	1963	3.99	ug/L #	37
35) ethyl tert-butyl ether	8.958	59	49320	4.11	ug/L	98
36) ethyl acetate	9.141	45	2008	4.21	ug/L #	64

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266058.D  
 Acq On : 6 Sep 2019 8:52 pm  
 Operator : thienn  
 Sample : IC10725-4  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 09 10:57:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:55:10 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.241	77	23177	4.06	ug/L	98
38) cis-1,2-dichloroethene	9.183	96	14345	4.05	ug/L	96
39) propionitrile	9.141	54	16465	43.19	ug/L	94
40) methyl acrylate	9.235	85	971	3.34	ug/L #	59
41) methacrylonitrile	9.366	67	3885	4.30	ug/L	91
42) bromochloromethane	9.481	128	5725	4.10	ug/L	98
43) tetrahydrofuran	9.523	42	3630	3.94	ug/L	89
44) chloroform	9.560	83	21176	4.02	ug/L	98
45) tert-butyl formate	9.622	59	11770	4.18	ug/L	92
47) 1,1,1-trichloroethane	9.863	97	21381	4.14	ug/L	97
48) cyclohexane	10.004	84	22717	4.09	ug/L	96
50) 1,1-dichloropropene	10.025	75	15636	4.12	ug/L	98
51) carbon tetrachloride	10.077	117	16745	4.26	ug/L	93
52) tert-amyl alcohol	10.130	73	4673	17.20	ug/L #	78
53) isopropyl acetate	10.166	87	2299	3.48	ug/L #	57
56) n-butyl alcohol	10.705	41	15573	235.88	ug/L	88
57) 2,2,4-trimethylpentane	10.397	57	42777	4.20	ug/L	96
58) benzene	10.276	78	49334	4.09	ug/L	99
59) tert-amyl methyl ether	10.365	73	45674	3.82	ug/L	98
60) heptane	10.564	57	9088	4.53	ug/L	92
61) 1,2-dichloroethane	10.266	62	14932	3.75	ug/L	96
62) ethyl acrylate	10.988	55	11862	4.16	ug/L	96
63) trichloroethene	11.014	95	10630	4.10	ug/L	96
64) 2-chloroethyl vinyl ether	11.814	63	32119	20.88	ug/L	94
65) methyl methacrylate	11.259	100	2272	4.04	ug/L	97
66) methylcyclohexane	11.359	83	24188	4.52	ug/L	97
67) 1,2-dichloropropane	11.291	63	12593	4.19	ug/L	99
68) dibromomethane	11.406	93	6478	4.20	ug/L	97
69) bromodichloromethane	11.563	83	14825	4.07	ug/L	99
70) 2-nitropropane	11.746	41	2835	2.98	ug/L	82
71) epichlorohydrin	11.887	57	5788	18.00	ug/L	90
72) cis-1,3-dichloropropene	12.054	75	17862	4.03	ug/L	96
73) 4-methyl-2-pentanone	12.159	58	18220	17.06	ug/L	98
74) isoamyl alcohol	12.164	70	7273	5.78	ug/L #	90
77) toluene	12.494	92	27870	4.04	ug/L	97
78) ethyl methacrylate	12.677	69	13984	4.37	ug/L	98
79) trans-1,3-dichloropropene	12.666	75	15113	4.05	ug/L	97
80) 1,1,2-trichloroethane	12.907	83	7643	4.32	ug/L	97
81) tetrachloroethene	13.121	164	8289	4.37	ug/L	96
82) 2-hexanone	13.101	58	16298	19.65	ug/L	99
83) 1,3-dichloropropane	13.111	76	15760	4.16	ug/L	95
84) butyl acetate	13.210	56	7855	4.39	ug/L	87
85) dibromochloromethane	13.393	129	9273	4.41	ug/L	95
86) 1,2-dibromoethane	13.571	107	9790	4.14	ug/L	97
87) n-butyl ether	14.105	57	61057	4.19	ug/L	96
88) chlorobenzene	14.126	112	29564	4.05	ug/L	92
89) 1,1,1,2-tetrachloroethane	14.194	131	11898	3.95	ug/L	99
90) ethylbenzene	14.204	91	55894	4.12	ug/L	98
91) m,p-xylene	14.340	106	42406	8.21	ug/L	99
92) o-xylene	14.790	91	50632	4.14	ug/L	96

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266058.D  
 Acq On : 6 Sep 2019 8:52 pm  
 Operator : thienn  
 Sample : IC10725-4  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 09 10:57:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:55:10 2019  
 Response via : Initial Calibration

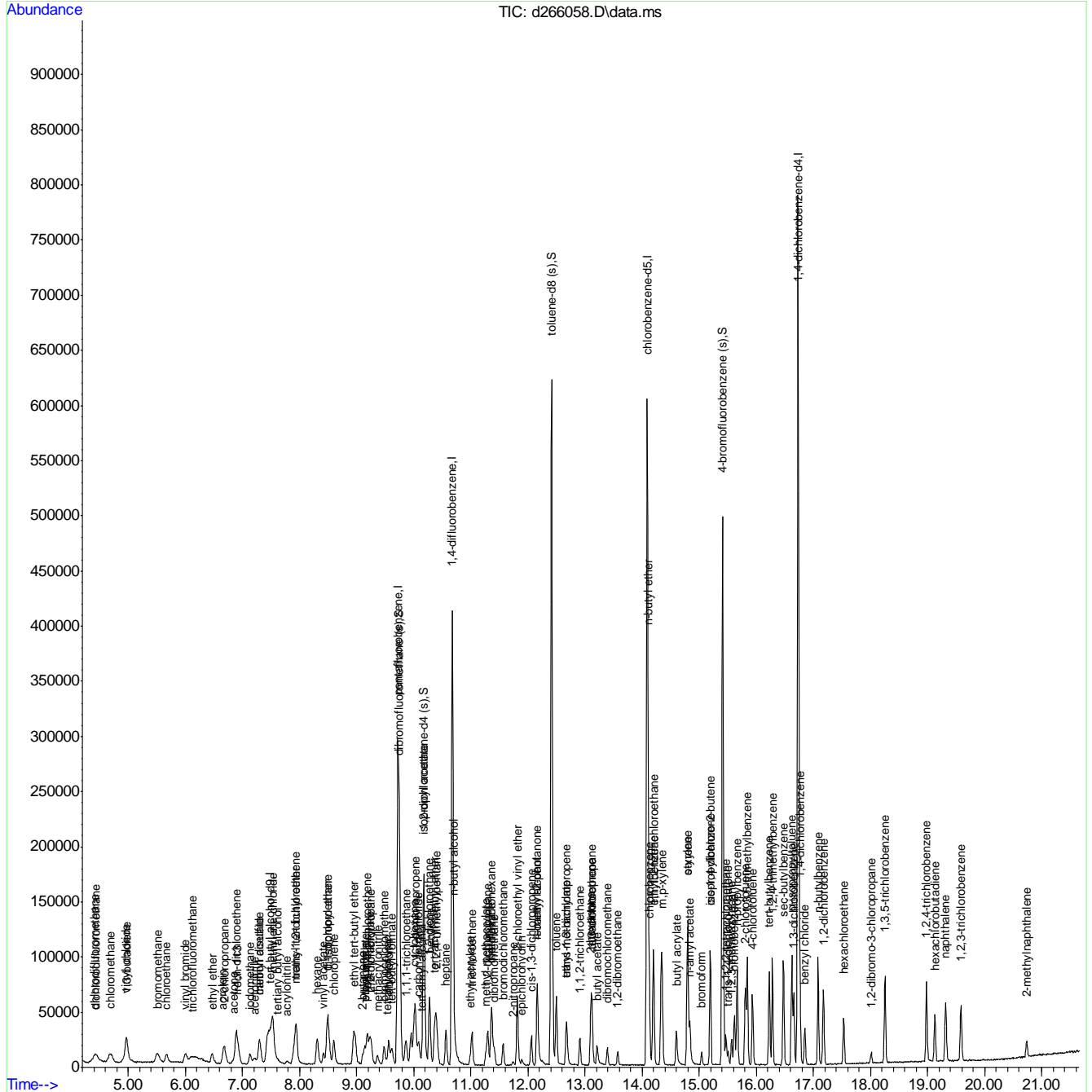
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.800	104	35399	4.15	ug/L	99
94) butyl acrylate	14.596	55	28216	4.19	ug/L	98
95) n-amyl acetate	14.837	70	10478	4.33	ug/L	93
96) isopropylbenzene	15.193	105	63569	4.13	ug/L	99
97) bromoform	15.041	173	5686	4.07	ug/L	95
98) cis-1,4-dichloro-2-butene	15.193	88	3280	0.72	ug/L	90
101) 1,1,2,2-tetrachloroethane	15.465	83	14028	4.06	ug/L	97
102) trans-1,4-dichloro-2-b...	15.506	53	2896	3.88	ug/L	95
103) 1,2,3-trichloropropane	15.564	110	3754	4.27	ug/L	94
104) bromobenzene	15.616	156	13385	4.15	ug/L	95
105) n-propylbenzene	15.663	91	72174	4.08	ug/L	99
106) 2-chlorotoluene	15.804	126	13776	4.02	ug/L	95
107) 4-chlorotoluene	15.930	91	42923	4.08	ug/L	98
108) 1,3,5-trimethylbenzene	15.841	105	55675	4.00	ug/L	98
109) tert-butylbenzene	16.223	119	42196	3.85	ug/L	99
110) 1,2,4-trimethylbenzene	16.280	105	57646	4.07	ug/L	99
111) sec-butylbenzene	16.474	105	70356	3.96	ug/L	98
112) p-isopropyltoluene	16.620	119	60540	4.05	ug/L	98
113) 1,3-dichlorobenzene	16.657	146	28402	4.01	ug/L	97
114) 1,4-dichlorobenzene	16.762	146	29028	4.02	ug/L	97
115) 1,2-dichlorobenzene	17.175	146	31008	4.20	ug/L	99
116) benzyl chloride	16.851	91	27668	4.01	ug/L	99
117) n-butylbenzene	17.081	92	32247	4.03	ug/L	99
119) hexachloroethane	17.530	201	7016	3.79	ug/L	94
120) 1,2-dibromo-3-chloropr...	18.006	75	3048	3.71	ug/L	86
121) 1,3,5-trichlorobenzene	18.252	180	26692	3.95	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	23048	3.78	ug/L	98
123) hexachlorobutadiene	19.126	225	10573	4.03	ug/L	95
124) naphthalene	19.314	128	51797	3.51	ug/L	100
125) 1,2,3-trichlorobenzene	19.586	180	19612	3.88	ug/L	98
126) 2-methylnaphthalene	20.731	142	9308	1.75	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266058.D  
 Acq On : 6 Sep 2019 8:52 pm  
 Operator : thienn  
 Sample : IC10725-4  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 09 10:57:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:55:10 2019  
 Response via : Initial Calibration



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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266059.D  
 Acq On : 6 Sep 2019 9:20 pm  
 Operator : thienn  
 Sample : IC10725-8  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 09 10:58:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 10:04:47 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.489	65	142244	500.00	ug/L	0.00
5) pentafluorobenzene	9.717	168	213564	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	362552	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	332406	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	200736	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	112153	49.20	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	98.40%	
55) 1,2-dichloroethane-d4 (s)	10.172	65	131062	50.16	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	100.32%	
76) toluene-d8 (s)	12.410	98	434005	50.28	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	100.56%	
100) 4-bromofluorobenzene (s)	15.407	95	186660	50.75	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	101.50%	

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.604	59	14663	39.28	ug/L	93
4) 1,4-dioxane	11.354	88	6817	190.28	ug/L	81
6) chlorodifluoromethane	4.418	51	53912	7.95	ug/L	98
7) dichlorodifluoromethane	4.445	85	45603	8.35	ug/L	95
8) chloromethane	4.680	50	51997	7.94	ug/L	98
9) 1,3-butadiene	4.962	54	26402	7.36	ug/L	98
10) vinyl chloride	4.957	62	50950	8.16	ug/L	94
11) bromomethane	5.506	94	25686	8.15	ug/L	96
12) chloroethane	5.663	64	23304	7.94	ug/L	96
13) trichlorofluoromethane	6.092	101	35372	8.18	ug/L	96
14) vinyl bromide	5.988	106	22659	7.90	ug/L	99
15) ethyl ether	6.458	74	11180	8.11	ug/L	92
16) 2-chloropropane	6.673	43	43584	7.58	ug/L	98
17) acrolein	6.647	56	3880	8.25	ug/L	84
18) freon 113	6.924	151	18986	7.73	ug/L	93
19) 1,1-dichloroethene	6.882	96	22831	7.40	ug/L	93
20) acetone	6.824	58	7505	33.99	ug/L #	56
21) acetonitrile	7.206	41	37527	81.29	ug/L	93
22) iodomethane	7.128	142	32504	7.77	ug/L	98
23) carbon disulfide	7.290	76	71992	7.55	ug/L	100
24) methylene chloride	7.525	84	25377	7.58	ug/L	98
25) methyl acetate	7.290	74	2791	7.73	ug/L #	75
26) methyl tert butyl ether	7.907	73	78103	7.61	ug/L	99
27) trans-1,2-dichloroethene	7.928	96	23297	7.56	ug/L	99
28) hexane	8.305	56	15693	7.81	ug/L	95
29) di-isopropyl ether	8.493	45	96291	7.59	ug/L	96
30) 2-butanone	9.099	72	7851	31.69	ug/L	91
31) 1,1-dichloroethane	8.482	63	41719	7.83	ug/L	99
32) chloroprene	8.597	53	35359	7.89	ug/L	98
33) acrylonitrile	7.761	53	7982	8.66	ug/L	85
34) vinyl acetate	8.409	86	3941	7.34	ug/L #	83
35) ethyl tert-butyl ether	8.943	59	89613	7.61	ug/L	99
36) ethyl acetate	9.126	45	3467	8.20	ug/L #	90



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266059.D  
 Acq On : 6 Sep 2019 9:20 pm  
 Operator : thienn  
 Sample : IC10725-8  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 09 10:58:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 10:04:47 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.246	77	40546	7.59	ug/L	98
38) cis-1,2-dichloroethene	9.183	96	25258	7.47	ug/L	95
39) propionitrile	9.141	54	31611	79.11	ug/L	97
40) methyl acrylate	9.230	85	2239	7.25	ug/L #	44
41) methacrylonitrile	9.361	67	7366	7.82	ug/L	90
42) bromochloromethane	9.476	128	10513	7.66	ug/L	96
43) tetrahydrofuran	9.534	42	6367	7.93	ug/L	92
44) chloroform	9.560	83	37518	7.45	ug/L	99
45) tert-butyl formate	9.607	59	22007	7.57	ug/L	92
47) 1,1,1-trichloroethane	9.858	97	38231	7.54	ug/L	95
48) cyclohexane	10.004	84	43556	8.00	ug/L	98
50) 1,1-dichloropropene	10.030	75	28942	7.77	ug/L	98
51) carbon tetrachloride	10.078	117	29502	7.64	ug/L	99
52) tert-amyl alcohol	10.119	73	7935	42.66	ug/L #	84
53) isopropyl acetate	10.156	87	4263	7.25	ug/L	94
56) n-butyl alcohol	10.700	41	28654	412.23	ug/L	90
57) 2,2,4-trimethylpentane	10.397	57	78468	7.56	ug/L	99
58) benzene	10.271	78	90600	7.71	ug/L	100
59) tert-amyl methyl ether	10.365	73	82276	7.47	ug/L	98
60) heptane	10.559	57	16289	7.93	ug/L	99
61) 1,2-dichloroethane	10.266	62	27311	7.68	ug/L	96
62) ethyl acrylate	10.982	55	23743	8.04	ug/L	97
63) trichloroethene	11.019	95	19993	7.63	ug/L	97
64) 2-chloroethyl vinyl ether	11.809	63	59949	39.99	ug/L	97
65) methyl methacrylate	11.260	100	4375	7.31	ug/L	96
66) methylcyclohexane	11.359	83	42249	7.78	ug/L	97
67) 1,2-dichloropropane	11.296	63	23444	7.87	ug/L	99
68) dibromomethane	11.401	93	11923	7.92	ug/L	97
69) bromodichloromethane	11.563	83	26690	7.52	ug/L	99
70) 2-nitropropane	11.735	41	4784	8.46	ug/L	96
71) epichlorohydrin	11.887	57	11257	39.99	ug/L	95
72) cis-1,3-dichloropropene	12.055	75	32872	7.61	ug/L	100
73) 4-methyl-2-pentanone	12.159	58	33765	32.44	ug/L	94
74) isoamyl alcohol	12.159	70	14539	161.61	ug/L #	87
77) toluene	12.494	92	51910	7.82	ug/L	100
78) ethyl methacrylate	12.677	69	26150	7.94	ug/L	98
79) trans-1,3-dichloropropene	12.666	75	28202	7.86	ug/L	97
80) 1,1,2-trichloroethane	12.907	83	13838	7.73	ug/L	94
81) tetrachloroethene	13.121	164	14878	7.77	ug/L	98
82) 2-hexanone	13.095	58	29416	33.76	ug/L	98
83) 1,3-dichloropropane	13.111	76	29530	8.09	ug/L	96
84) butyl acetate	13.205	56	14454	8.39	ug/L	94
85) dibromochloromethane	13.393	129	17004	7.79	ug/L	98
86) 1,2-dibromoethane	13.566	107	18100	7.96	ug/L	98
87) n-butyl ether	14.105	57	109725	7.81	ug/L	99
88) chlorobenzene	14.120	112	54271	7.73	ug/L	95
89) 1,1,1,2-tetrachloroethane	14.188	131	22156	7.64	ug/L	94
90) ethylbenzene	14.199	91	101469	7.77	ug/L	100
91) m,p-xylene	14.340	106	76703	15.42	ug/L	100
92) o-xylene	14.790	91	91597	7.78	ug/L	96



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266059.D  
 Acq On : 6 Sep 2019 9:20 pm  
 Operator : thienn  
 Sample : IC10725-8  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 09 10:58:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 10:04:47 2019  
 Response via : Initial Calibration

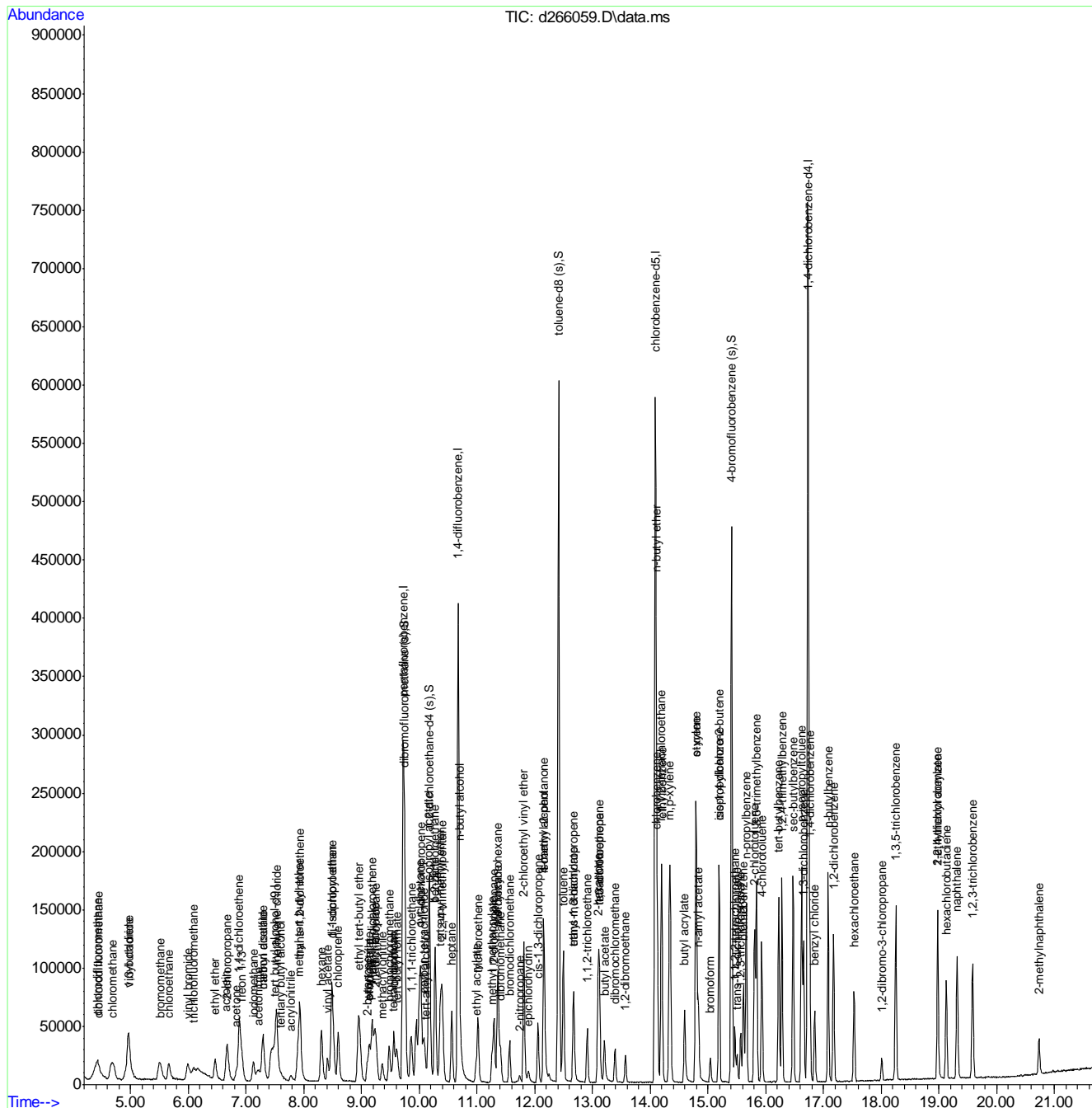
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.795	104	66139	8.06	ug/L	97
94) butyl acrylate	14.591	55	50666	7.82	ug/L	98
95) n-amyl acetate	14.832	70	20185	8.67	ug/L	99
96) isopropylbenzene	15.193	105	114451	7.72	ug/L	99
97) bromoform	15.041	173	10540	7.61	ug/L	99
98) cis-1,4-dichloro-2-butene	15.193	88	6499	7.47	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.465	83	25865	7.87	ug/L	97
102) trans-1,4-dichloro-2-b...	15.506	53	5568	7.74	ug/L	90
103) 1,2,3-trichloropropane	15.564	110	6801	7.96	ug/L	93
104) bromobenzene	15.616	156	24558	8.01	ug/L	93
105) n-propylbenzene	15.663	91	131262	7.81	ug/L	98
106) 2-chlorotoluene	15.805	126	25205	7.73	ug/L	96
107) 4-chlorotoluene	15.930	91	78108	7.81	ug/L	99
108) 1,3,5-trimethylbenzene	15.841	105	102837	7.78	ug/L	99
109) tert-butylbenzene	16.223	119	79398	7.61	ug/L	98
110) 1,2,4-trimethylbenzene	16.280	105	104325	7.75	ug/L	100
111) sec-butylbenzene	16.474	105	131528	7.78	ug/L	99
112) p-isopropyltoluene	16.620	119	110897	7.81	ug/L	98
113) 1,3-dichlorobenzene	16.652	146	52177	7.74	ug/L	97
114) 1,4-dichlorobenzene	16.762	146	52518	7.66	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	55530	7.91	ug/L	96
116) benzyl chloride	16.851	91	50026	7.63	ug/L	100
117) n-butylbenzene	17.081	92	60771	8.00	ug/L	98
118) 2-ethylhexyl acrylate	18.984	70	7504	1.44	ug/L	97
119) hexachloroethane	17.530	201	13860	6.75	ug/L	93
120) 1,2-dibromo-3-chloropr...	18.006	75	5719	7.71	ug/L	93
121) 1,3,5-trichlorobenzene	18.252	180	50825	7.90	ug/L	98
122) 1,2,4-trichlorobenzene	18.979	180	45506	8.07	ug/L	98
123) hexachlorobutadiene	19.126	225	19979	8.01	ug/L	95
124) naphthalene	19.314	128	97957	7.98	ug/L	98
125) 1,2,3-trichlorobenzene	19.586	180	37746	8.08	ug/L	100
126) 2-methylnaphthalene	20.731	142	18043	3.72	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
Data File : d266059.D  
Acq On : 6 Sep 2019 9:20 pm  
Operator : thienn  
Sample : IC10725-8  
Misc : ms37297, vd10725, 5, , 100, 5, 1  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 09 10:58:38 2019  
Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
QLast Update : Mon Sep 09 10:04:47 2019  
Response via : Initial Calibration



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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266060.D  
 Acq On : 6 Sep 2019 9:49 pm  
 Operator : thienn  
 Sample : IC10725-20  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 09 10:58:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:59:16 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.489	65	140812	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	214567	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	371005	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	343065	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	204358	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	114455	49.97	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	99.94%	
55) 1,2-dichloroethane-d4 (s)	10.177	65	136037	50.88	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	101.76%	
76) toluene-d8 (s)	12.410	98	445270	49.99	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.98%	
100) 4-bromofluorobenzene (s)	15.407	95	187077	49.96	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	99.92%	

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.593	59	36889	99.84	ug/L	95
4) 1,4-dioxane	11.359	88	17694	498.91	ug/L	83
6) chlorodifluoromethane	4.424	51	139636	20.49	ug/L	99
7) dichlorodifluoromethane	4.424	85	116482	21.22	ug/L	97
8) chloromethane	4.690	50	132963	20.20	ug/L	99
9) 1,3-butadiene	4.968	54	74814	20.76	ug/L	98
10) vinyl chloride	4.957	62	132467	21.11	ug/L	99
11) bromomethane	5.506	94	67979	21.46	ug/L	98
12) chloroethane	5.658	64	60373	20.48	ug/L	97
13) trichlorofluoromethane	6.092	101	94221	21.69	ug/L	99
14) vinyl bromide	6.003	106	59971	20.80	ug/L	96
15) ethyl ether	6.463	74	28500	20.58	ug/L	98
16) 2-chloropropane	6.673	43	114638	19.83	ug/L	99
17) acrolein	6.652	56	9483	20.08	ug/L	91
18) freon 113	6.913	151	50964	20.66	ug/L	96
19) 1,1-dichloroethene	6.882	96	60274	19.43	ug/L	98
20) acetone	6.840	58	19289	86.94	ug/L #	85
21) acetonitrile	7.206	41	91405	197.06	ug/L	99
22) iodomethane	7.128	142	85306	20.30	ug/L	99
23) carbon disulfide	7.295	76	193667	20.21	ug/L	100
24) methylene chloride	7.530	84	67939	20.19	ug/L	98
25) methyl acetate	7.290	74	7668	3.89	ug/L #	1
26) methyl tert butyl ether	7.907	73	201623	19.55	ug/L	99
27) trans-1,2-dichloroethene	7.933	96	59939	17.80	ug/L	97
28) hexane	8.304	56	41273	21.47	ug/L	98
29) di-isopropyl ether	8.493	45	250765	18.98	ug/L	99
30) 2-butanone	9.094	72	20096	88.62	ug/L	95
31) 1,1-dichloroethane	8.477	63	109992	20.55	ug/L	98
32) chloroprene	8.597	53	95722	21.27	ug/L	99
33) acrylonitrile	7.766	53	17701	20.87	ug/L	96
34) vinyl acetate	8.404	86	10816	22.31	ug/L #	89
35) ethyl tert-butyl ether	8.948	59	236797	20.02	ug/L	99
36) ethyl acetate	9.131	45	8412	17.87	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266060.D  
 Acq On : 6 Sep 2019 9:49 pm  
 Operator : thienn  
 Sample : IC10725-20  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 09 10:58:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:59:16 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.241	77	106405	18.90	ug/L	98
38) cis-1,2-dichloroethene	9.183	96	64681	18.49	ug/L	96
39) propionitrile	9.136	54	81191	215.94	ug/L	100
40) methyl acrylate	9.214	85	6343	22.11	ug/L #	79
41) methacrylonitrile	9.356	67	19639	22.06	ug/L	94
42) bromochloromethane	9.476	128	27734	20.12	ug/L	98
43) tetrahydrofuran	9.523	42	15561	17.10	ug/L	99
44) chloroform	9.560	83	99373	19.10	ug/L	99
45) tert-butyl formate	9.617	59	58688	21.11	ug/L	97
47) 1,1,1-trichloroethane	9.858	97	101571	19.93	ug/L	99
48) cyclohexane	10.009	84	113766	20.79	ug/L	94
50) 1,1-dichloropropene	10.030	75	76196	20.35	ug/L	98
51) carbon tetrachloride	10.077	117	79493	20.50	ug/L	96
52) tert-amyl alcohol	10.125	73	15802	58.97	ug/L	93
53) isopropyl acetate	10.151	87	11286	17.30	ug/L #	90
56) n-butyl alcohol	10.695	41	65779	998.92	ug/L	96
57) 2,2,4-trimethylpentane	10.402	57	212267	20.92	ug/L	99
58) benzene	10.271	78	237514	19.74	ug/L	98
59) tert-amyl methyl ether	10.365	73	215002	18.03	ug/L	99
60) heptane	10.559	57	42110	21.06	ug/L	98
61) 1,2-dichloroethane	10.271	62	70774	17.82	ug/L	99
62) ethyl acrylate	10.977	55	60713	21.35	ug/L	97
63) trichloroethene	11.014	95	53457	20.66	ug/L	97
64) 2-chloroethyl vinyl ether	11.809	63	157153	102.43	ug/L	98
65) methyl methacrylate	11.254	100	12199	21.73	ug/L	94
66) methylcyclohexane	11.359	83	113389	21.23	ug/L	98
67) 1,2-dichloropropane	11.291	63	60745	20.28	ug/L	96
68) dibromomethane	11.401	93	30936	20.09	ug/L	98
69) bromodichloromethane	11.563	83	72729	20.03	ug/L	100
70) 2-nitropropane	11.735	41	10351	10.92	ug/L	97
71) epichlorohydrin	11.887	57	28504	88.89	ug/L	93
72) cis-1,3-dichloropropene	12.054	75	86782	19.64	ug/L	99
73) 4-methyl-2-pentanone	12.154	58	87724	82.36	ug/L	96
74) isoamyl alcohol	12.149	70	37691	30.02	ug/L	93
77) toluene	12.494	92	139010	20.28	ug/L	98
78) ethyl methacrylate	12.672	69	69334	21.80	ug/L	98
79) trans-1,3-dichloropropene	12.661	75	73885	19.94	ug/L	98
80) 1,1,2-trichloroethane	12.907	83	36519	20.78	ug/L	94
81) tetrachloroethene	13.121	164	40124	21.28	ug/L	96
82) 2-hexanone	13.090	58	77336	93.83	ug/L	99
83) 1,3-dichloropropane	13.106	76	76581	20.33	ug/L	96
84) butyl acetate	13.200	56	37613	21.15	ug/L	99
85) dibromochloromethane	13.388	129	45740	21.89	ug/L	99
86) 1,2-dibromoethane	13.566	107	47262	20.13	ug/L	98
87) n-butyl ether	14.099	57	288804	19.92	ug/L	100
88) chlorobenzene	14.120	112	143421	19.78	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.194	131	61028	20.40	ug/L	98
90) ethylbenzene	14.199	91	271991	20.17	ug/L	99
91) m,p-xylene	14.335	106	206204	40.16	ug/L	99
92) o-xylene	14.790	91	245134	20.17	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266060.D  
 Acq On : 6 Sep 2019 9:49 pm  
 Operator : thienn  
 Sample : IC10725-20  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 09 10:58:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:59:16 2019  
 Response via : Initial Calibration

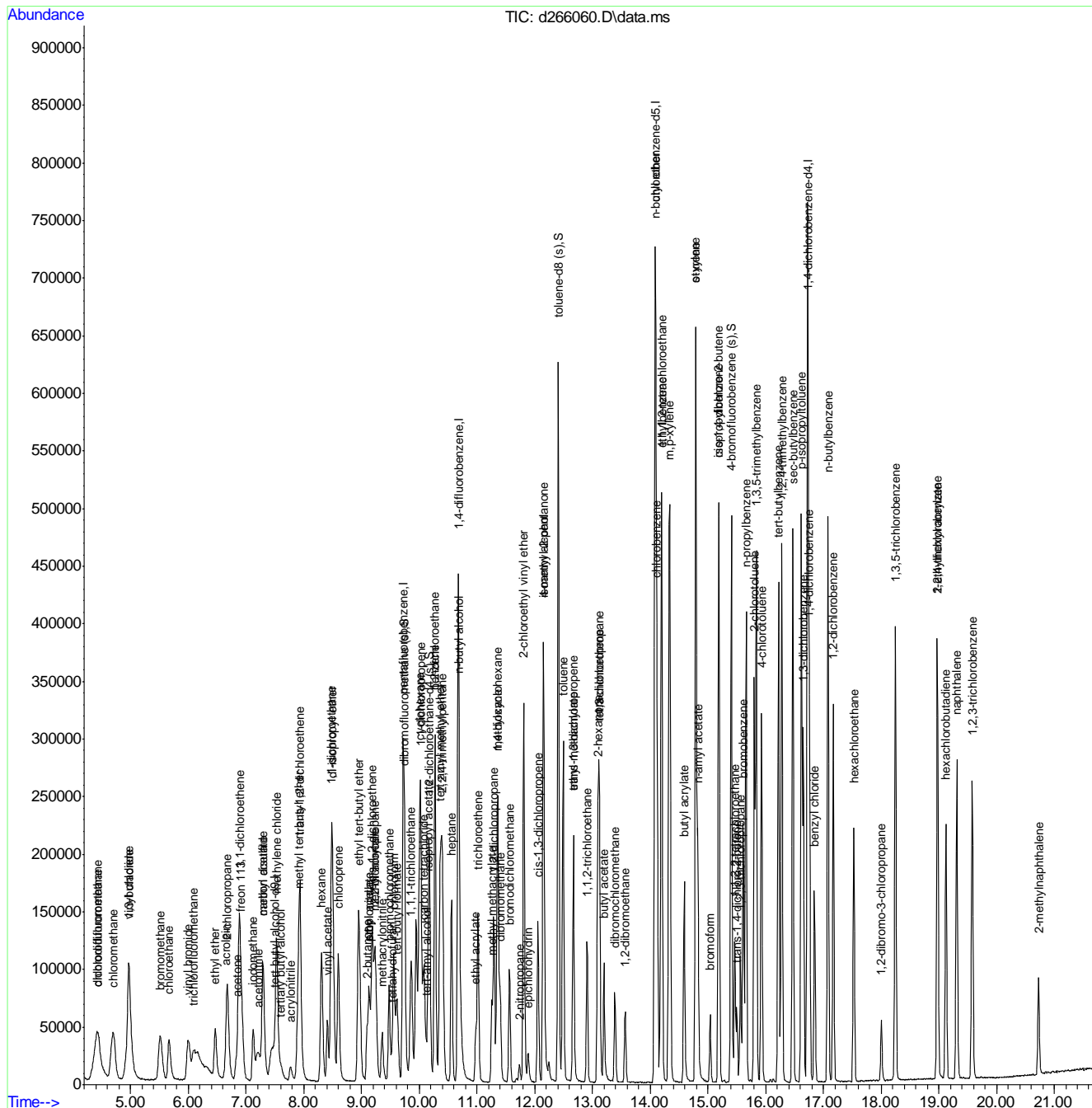
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.795	104	173044	20.42	ug/L	98
94) butyl acrylate	14.591	55	130414	19.51	ug/L	100
95) n-amyl acetate	14.826	70	51632	21.48	ug/L	99
96) isopropylbenzene	15.187	105	307701	20.10	ug/L	99
97) bromoform	15.041	173	29117	20.97	ug/L	99
98) cis-1,4-dichloro-2-butene	15.193	88	18060	4.00	ug/L	98
101) 1,1,2,2-tetrachloroethane	15.464	83	66615	19.90	ug/L	99
102) trans-1,4-dichloro-2-b...	15.501	53	15039	20.81	ug/L	97
103) 1,2,3-trichloropropane	15.564	110	17745	20.86	ug/L	94
104) bromobenzene	15.616	156	66218	21.20	ug/L	98
105) n-propylbenzene	15.663	91	349726	20.45	ug/L	99
106) 2-chlorotoluene	15.804	126	68486	20.64	ug/L	99
107) 4-chlorotoluene	15.930	91	205731	20.19	ug/L	99
108) 1,3,5-trimethylbenzene	15.841	105	273587	20.33	ug/L	99
109) tert-butylbenzene	16.223	119	220852	20.80	ug/L	99
110) 1,2,4-trimethylbenzene	16.280	105	277074	20.21	ug/L	100
111) sec-butylbenzene	16.474	105	354910	20.62	ug/L	98
112) p-isopropyltoluene	16.620	119	296693	20.51	ug/L	99
113) 1,3-dichlorobenzene	16.657	146	135616	19.76	ug/L	98
114) 1,4-dichlorobenzene	16.762	146	139069	19.92	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	143207	20.05	ug/L	99
116) benzyl chloride	16.845	91	133552	20.01	ug/L	98
117) n-butylbenzene	17.081	92	161001	20.81	ug/L	99
118) 2-ethylhexyl acrylate	18.979	70	20267	4.01	ug/L	94
119) hexachloroethane	17.530	201	40502	22.58	ug/L	96
120) 1,2-dibromo-3-chloropr...	18.006	75	14582	18.33	ug/L	97
121) 1,3,5-trichlorobenzene	18.252	180	133854	20.45	ug/L	99
122) 1,2,4-trichlorobenzene	18.979	180	118588	20.10	ug/L	98
123) hexachlorobutadiene	19.126	225	52971	20.87	ug/L	98
124) naphthalene	19.314	128	254673	17.83	ug/L	100
125) 1,2,3-trichlorobenzene	19.581	180	98210	20.06	ug/L	99
126) 2-methylnaphthalene	20.731	142	48738	9.45	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
Data File : d266060.D  
Acq On : 6 Sep 2019 9:49 pm  
Operator : thienn  
Sample : IC10725-20  
Misc : ms37297, vd10725, 5, , 100, 5, 1  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 09 10:58:55 2019  
Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
QLast Update : Mon Sep 09 06:59:16 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266061.D  
 Acq On : 6 Sep 2019 10:17 pm  
 Operator : thienn  
 Sample : ICC10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 09 10:59:08 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:59:16 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.484	65	141375	500.00	ug/L	0.00
5) pentafluorobenzene	9.717	168	214631	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	372203	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	345861	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	201730	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	114937	50.17	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.34%
55) 1,2-dichloroethane-d4 (s)	10.172	65	130533	48.67	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.34%
76) toluene-d8 (s)	12.410	98	450745	50.19	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.38%
100) 4-bromofluorobenzene (s)	15.407	95	187185	50.64	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	101.28%

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.588	59	95667	257.88	ug/L	100
4) 1,4-dioxane	11.343	88	47333	1329.30	ug/L	100
6) chlorodifluoromethane	4.419	51	344413	50.53	ug/L	100
7) dichlorodifluoromethane	4.429	85	286554	52.19	ug/L	100
8) chloromethane	4.706	50	337615	51.28	ug/L	100
9) 1,3-butadiene	4.973	54	197887	54.89	ug/L	100
10) vinyl chloride	4.963	62	323081	51.46	ug/L	100
11) bromomethane	5.517	94	167596	52.89	ug/L	100
12) chloroethane	5.658	64	147734	50.11	ug/L	100
13) trichlorofluoromethane	6.092	101	230290	53.00	ug/L	100
14) vinyl bromide	6.003	106	147418	51.12	ug/L	100
15) ethyl ether	6.464	74	74152	53.53	ug/L	100
16) 2-chloropropane	6.673	43	281674	48.71	ug/L	100
17) acrolein	6.647	56	24601	52.07	ug/L	100
18) freon 113	6.913	151	130800	53.01	ug/L	100
19) 1,1-dichloroethene	6.882	96	145667	46.95	ug/L	100
20) acetone	6.830	58	47698	214.93	ug/L	100
21) acetonitrile	7.201	41	231135	498.16	ug/L	100
22) iodomethane	7.123	142	214506	51.04	ug/L	100
23) carbon disulfide	7.290	76	476924	49.76	ug/L	100
24) methylene chloride	7.525	84	167801	49.84	ug/L	100
25) methyl acetate	7.285	74	20141	10.22	ug/L #	1
26) methyl tert butyl ether	7.907	73	513620	49.80	ug/L	100
27) trans-1,2-dichloroethene	7.933	96	146382	43.45	ug/L	100
28) hexane	8.305	56	106177	55.22	ug/L	100
29) di-isopropyl ether	8.493	45	626050	47.36	ug/L	100
30) 2-butanone	9.089	72	53935	237.78	ug/L	100
31) 1,1-dichloroethane	8.477	63	273978	51.18	ug/L	100
32) chloroprene	8.592	53	238408	52.96	ug/L	100
33) acrylonitrile	7.761	53	46392	54.67	ug/L	100
34) vinyl acetate	8.399	86	29020	59.83	ug/L	100
35) ethyl tert-butyl ether	8.948	59	608537	51.42	ug/L	100
36) ethyl acetate	9.126	45	21646	45.98	ug/L	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266061.D  
 Acq On : 6 Sep 2019 10:17 pm  
 Operator : thienn  
 Sample : ICC10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 09 10:59:08 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:59:16 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.236	77	263537	46.79	ug/L	100
38) cis-1,2-dichloroethene	9.183	96	166284	47.53	ug/L	100
39) propionitrile	9.131	54	212606	565.30	ug/L	100
40) methyl acrylate	9.210	85	17053	59.43	ug/L	100
41) methacrylonitrile	9.351	67	50907	57.16	ug/L	100
42) bromochloromethane	9.476	128	70504	51.14	ug/L	100
43) tetrahydrofuran	9.529	42	38474	42.27	ug/L	100
44) chloroform	9.560	83	248167	47.70	ug/L	100
45) tert-butyl formate	9.607	59	154599	55.59	ug/L	100
47) 1,1,1-trichloroethane	9.863	97	255800	50.17	ug/L	100
48) cyclohexane	10.004	84	280429	51.23	ug/L	100
50) 1,1-dichloropropene	10.025	75	192076	51.29	ug/L	100
51) carbon tetrachloride	10.072	117	203897	52.57	ug/L	100
52) tert-amyl alcohol	10.114	73	42812	159.71	ug/L	100
53) isopropyl acetate	10.151	87	30672	47.02	ug/L	100
56) n-butyl alcohol	10.690	41	170955	2587.78	ug/L	100
57) 2,2,4-trimethylpentane	10.402	57	579699	56.94	ug/L	100
58) benzene	10.271	78	598681	49.61	ug/L	100
59) tert-amyl methyl ether	10.365	73	545933	45.63	ug/L	100
60) heptane	10.559	57	109568	54.62	ug/L	100
61) 1,2-dichloroethane	10.266	62	181167	45.46	ug/L	100
62) ethyl acrylate	10.972	55	155455	54.48	ug/L	100
63) trichloroethene	11.014	95	137909	53.13	ug/L	100
64) 2-chloroethyl vinyl ether	11.809	63	405815	263.67	ug/L	100
65) methyl methacrylate	11.254	100	32500	57.71	ug/L	100
66) methylcyclohexane	11.359	83	293238	54.72	ug/L	100
67) 1,2-dichloropropane	11.291	63	156367	52.04	ug/L	100
68) dibromomethane	11.401	93	79601	51.53	ug/L	100
69) bromodichloromethane	11.563	83	188056	51.63	ug/L	100
70) 2-nitropropane	11.736	41	26881	28.27	ug/L	100
71) epichlorohydrin	11.887	57	72506	225.39	ug/L	100
72) cis-1,3-dichloropropene	12.055	75	228165	51.46	ug/L	100
73) 4-methyl-2-pentanone	12.154	58	219283	205.21	ug/L	100
74) isoamyl alcohol	12.149	70	95728	75.99	ug/L	100
77) toluene	12.494	92	354116	51.26	ug/L	100
78) ethyl methacrylate	12.672	69	175665	54.78	ug/L	100
79) trans-1,3-dichloropropene	12.661	75	196138	52.51	ug/L	100
80) 1,1,2-trichloroethane	12.907	83	96390	54.41	ug/L	100
81) tetrachloroethene	13.122	164	103178	54.29	ug/L	100
82) 2-hexanone	13.085	58	185268	222.96	ug/L	100
83) 1,3-dichloropropane	13.106	76	197976	52.12	ug/L	100
84) butyl acetate	13.195	56	91965	51.30	ug/L	100
85) dibromochloromethane	13.388	129	121760	57.80	ug/L	100
86) 1,2-dibromoethane	13.566	107	124201	52.47	ug/L	100
87) n-butyl ether	14.100	57	705558	48.28	ug/L	100
88) chlorobenzene	14.121	112	363921	49.79	ug/L	100
89) 1,1,1,2-tetrachloroethane	14.189	131	156656	51.94	ug/L	100
90) ethylbenzene	14.199	91	676820	49.78	ug/L	100
91) m,p-xylene	14.335	106	518766	100.23	ug/L	100
92) o-xylene	14.790	91	615097	50.20	ug/L	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266061.D  
 Acq On : 6 Sep 2019 10:17 pm  
 Operator : thienn  
 Sample : ICC10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 09 10:59:08 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 06:59:16 2019  
 Response via : Initial Calibration

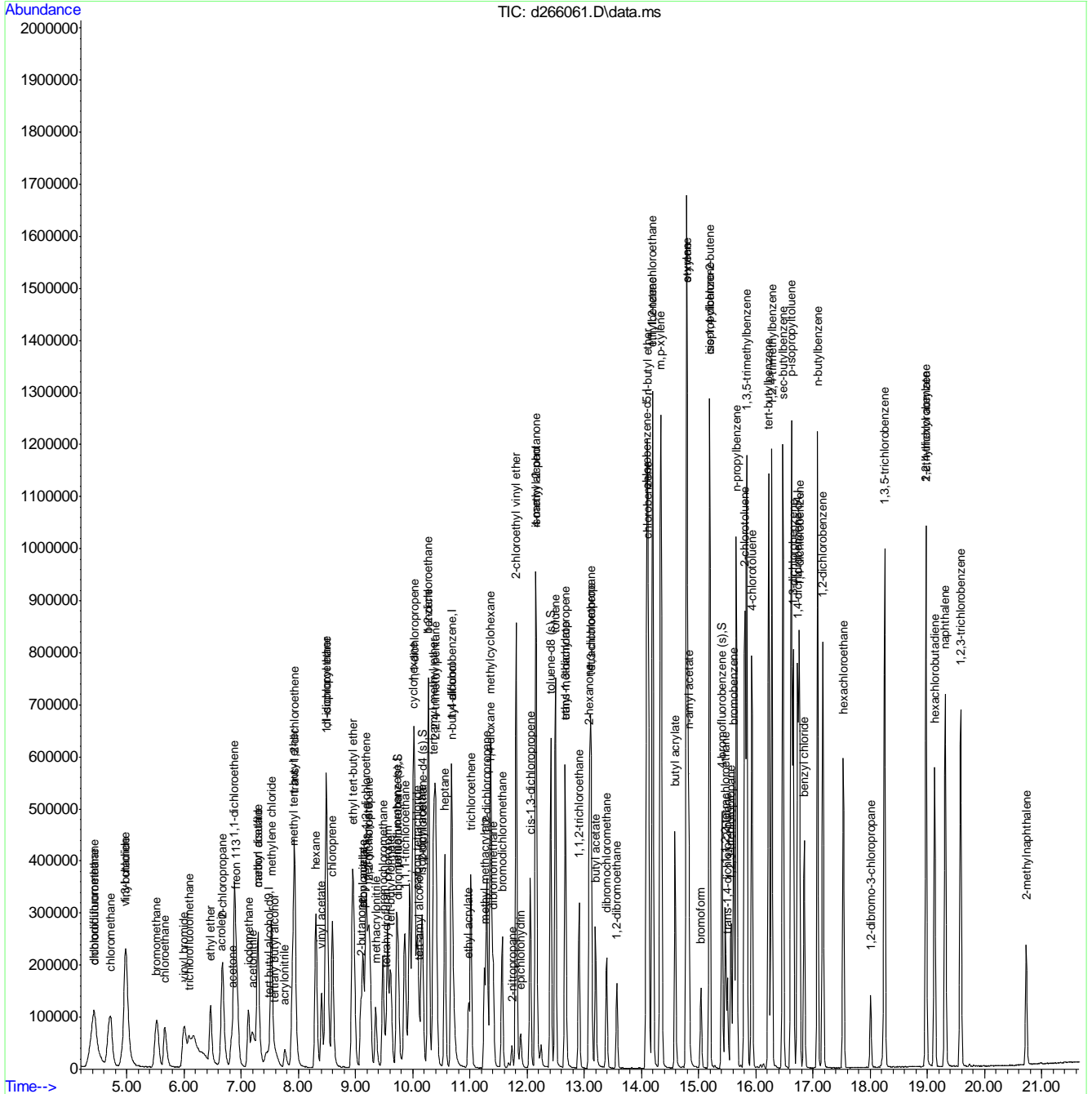
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.795	104	439413	51.44	ug/L	100
94) butyl acrylate	14.586	55	317584	47.12	ug/L	100
95) n-amyl acetate	14.827	70	122181	50.41	ug/L	100
96) isopropylbenzene	15.188	105	773849	50.15	ug/L	100
97) bromoform	15.041	173	76972	54.99	ug/L	100
98) cis-1,4-dichloro-2-butene	15.188	88	49547	10.90	ug/L	100
101) 1,1,2,2-tetrachloroethane	15.465	83	170135	51.49	ug/L	100
102) trans-1,4-dichloro-2-b...	15.501	53	39818	55.82	ug/L	100
103) 1,2,3-trichloropropane	15.564	110	45351	54.01	ug/L	100
104) bromobenzene	15.616	156	165026	53.53	ug/L	100
105) n-propylbenzene	15.658	91	863244	51.13	ug/L	100
106) 2-chlorotoluene	15.805	126	173461	52.95	ug/L	100
107) 4-chlorotoluene	15.930	91	510139	50.73	ug/L	100
108) 1,3,5-trimethylbenzene	15.841	105	699885	52.68	ug/L	100
109) tert-butylbenzene	16.223	119	576909	55.04	ug/L	100
110) 1,2,4-trimethylbenzene	16.281	105	701178	51.80	ug/L	100
111) sec-butylbenzene	16.474	105	900505	52.99	ug/L	100
112) p-isopropyltoluene	16.621	119	750889	52.59	ug/L	100
113) 1,3-dichlorobenzene	16.652	146	340851	50.31	ug/L	100
114) 1,4-dichlorobenzene	16.762	146	347453	50.41	ug/L	100
115) 1,2-dichlorobenzene	17.175	146	364054	51.63	ug/L	100
116) benzyl chloride	16.846	91	342083	51.92	ug/L	100
117) n-butylbenzene	17.081	92	402839	52.74	ug/L	100
118) 2-ethylhexyl acrylate	18.979	70	55249	11.09	ug/L	100
119) hexachloroethane	17.531	201	112963	63.79	ug/L	100
120) 1,2-dibromo-3-chloropr...	18.007	75	38692	49.26	ug/L	100
121) 1,3,5-trichlorobenzene	18.252	180	343127	53.10	ug/L	100
122) 1,2,4-trichlorobenzene	18.974	180	307824	52.86	ug/L	100
123) hexachlorobutadiene	19.126	225	138973	55.46	ug/L	100
124) naphthalene	19.314	128	661627	46.93	ug/L	100
125) 1,2,3-trichlorobenzene	19.581	180	257835	53.35	ug/L	100
126) 2-methylnaphthalene	20.731	142	133513	26.24	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
Data File : d266061.D  
Acq On : 6 Sep 2019 10:17 pm  
Operator : thienn  
Sample : ICC10725-50  
Misc : ms37297, vd10725, 5, , 100, 5, 1  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 09 10:59:08 2019  
Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
QLast Update : Mon Sep 09 06:59:16 2019  
Response via : Initial Calibration



7.7.35  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266062.D  
 Acq On : 6 Sep 2019 10:46 pm  
 Operator : thienn  
 Sample : IC10725-100  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 09 10:59:17 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 07:00:12 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.469	65	140871	500.00	ug/L	-0.01
5) pentafluorobenzene	9.718	168	215118	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.675	114	373038	50.00	ug/L	0.00
75) chlorobenzene-d5	14.085	117	352633	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.732	152	203876	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.744	113	114007	49.65	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	99.30%
55) 1,2-dichloroethane-d4 (s)	10.173	65	130401	48.51	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.02%
76) toluene-d8 (s)	12.412	98	457328	49.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.90%
100) 4-bromofluorobenzene (s)	15.403	95	189784	50.80	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	101.60%

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.605	59	191330	517.60	ug/L	99
4) 1,4-dioxane	11.345	88	93565	2637.08	ug/L	97
6) chlorodifluoromethane	4.420	51	668290	97.82	ug/L	100
7) dichlorodifluoromethane	4.420	85	547528	99.49	ug/L	98
8) chloromethane	4.723	50	660623	100.11	ug/L	97
9) 1,3-butadiene	4.985	54	399706	110.62	ug/L	98
10) vinyl chloride	4.974	62	617664	98.16	ug/L	99
11) bromomethane	5.529	94	318912	100.41	ug/L	98
12) chloroethane	5.660	64	280571	94.96	ug/L	99
13) trichlorofluoromethane	6.146	101	446879	102.61	ug/L	97
14) vinyl bromide	6.005	106	292193	101.10	ug/L	99
15) ethyl ether	6.460	74	145826	105.04	ug/L	96
16) 2-chloropropane	6.669	43	553620	95.64	ug/L	100
17) acrolein	6.648	56	48438	102.28	ug/L	94
18) freon 113	6.915	151	259792	105.06	ug/L	99
19) 1,1-dichloroethene	6.878	96	283512	91.18	ug/L	97
20) acetone	6.821	58	93900	422.15	ug/L	99
21) acetonitrile	7.197	41	445208	957.38	ug/L	99
22) iodomethane	7.119	142	420508	99.83	ug/L	99
23) carbon disulfide	7.286	76	941216	97.98	ug/L	99
24) methylene chloride	7.527	84	325059	96.33	ug/L	98
25) methyl acetate	7.281	74	39021	130.53	ug/L	99
26) methyl tert butyl ether	7.903	73	1012384	97.93	ug/L	99
27) trans-1,2-dichloroethene	7.929	96	280985	83.22	ug/L	100
28) hexane	8.301	56	205273	106.52	ug/L	100
29) di-isopropyl ether	8.489	45	1226341	92.56	ug/L	99
30) 2-butanone	9.091	72	105152	462.52	ug/L	93
31) 1,1-dichloroethane	8.479	63	527344	98.28	ug/L	99
32) chloroprene	8.594	53	459905	101.93	ug/L	99
33) acrylonitrile	7.762	53	91219	107.26	ug/L	97
34) vinyl acetate	8.400	86	58267	119.86	ug/L	95
35) ethyl tert-butyl ether	8.949	59	1204592	101.56	ug/L	100
36) ethyl acetate	9.122	45	38356	81.29	ug/L	94

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266062.D  
 Acq On : 6 Sep 2019 10:46 pm  
 Operator : thienn  
 Sample : IC10725-100  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 09 10:59:17 2019

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M

Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um

QLast Update : Mon Sep 09 07:00:12 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.242	77	518601	91.86	ug/L	99
38) cis-1,2-dichloroethene	9.179	96	316148	90.16	ug/L	98
39) propionitrile	9.127	54	409185	1085.52	ug/L	99
40) methyl acrylate	9.211	85	34416	119.67	ug/L #	92
41) methacrylonitrile	9.352	67	100233	112.29	ug/L	96
42) bromochloromethane	9.472	128	137259	99.33	ug/L	99
43) tetrahydrofuran	9.519	42	75215	82.46	ug/L	99
44) chloroform	9.556	83	483762	92.77	ug/L	99
45) tert-butyl formate	9.608	59	314490	112.83	ug/L	98
47) 1,1,1-trichloroethane	9.865	97	515419	100.86	ug/L	98
48) cyclohexane	10.011	84	549072	100.08	ug/L	98
50) 1,1-dichloropropene	10.027	75	368315	98.13	ug/L	99
51) carbon tetrachloride	10.079	117	410808	105.67	ug/L	96
52) tert-amyl alcohol	10.110	73	89890	334.58	ug/L	93
53) isopropyl acetate	10.152	87	63169	96.61	ug/L	98
56) n-butyl alcohol	10.686	41	338031	5105.39	ug/L	99
57) 2,2,4-trimethylpentane	10.403	57	1203180	117.91	ug/L	99
58) benzene	10.273	78	1164441	96.27	ug/L	99
59) tert-amyl methyl ether	10.367	73	1096486	91.44	ug/L	100
60) heptane	10.560	57	211867	105.38	ug/L	98
61) 1,2-dichloroethane	10.267	62	354613	88.78	ug/L	99
62) ethyl acrylate	10.973	55	301170	105.31	ug/L	98
63) trichloroethene	11.015	95	271317	104.28	ug/L	99
64) 2-chloroethyl vinyl ether	11.805	63	791484	513.09	ug/L	99
65) methyl methacrylate	11.251	100	65430	115.93	ug/L	97
66) methylcyclohexane	11.360	83	579207	107.84	ug/L	99
67) 1,2-dichloropropane	11.292	63	308928	102.57	ug/L	100
68) dibromomethane	11.402	93	156832	101.30	ug/L	99
69) bromodichloromethane	11.559	83	373274	102.25	ug/L	99
70) 2-nitropropane	11.732	41	54933	57.65	ug/L	93
71) epichlorohydrin	11.883	57	143990	446.60	ug/L	98
72) cis-1,3-dichloropropene	12.056	75	453469	102.05	ug/L	99
73) 4-methyl-2-pentanone	12.150	58	435564	406.69	ug/L	100
74) isoamyl alcohol	12.145	70	188788	149.52	ug/L	93
77) toluene	12.490	92	702604	99.74	ug/L	99
78) ethyl methacrylate	12.673	69	350842	107.31	ug/L	98
79) trans-1,3-dichloropropene	12.663	75	386169	101.41	ug/L	98
80) 1,1,2-trichloroethane	12.903	83	188524	104.37	ug/L	99
81) tetrachloroethene	13.123	164	204142	105.35	ug/L	99
82) 2-hexanone	13.086	58	363664	429.24	ug/L	98
83) 1,3-dichloropropane	13.107	76	384549	99.30	ug/L	98
84) butyl acetate	13.196	56	183374	100.32	ug/L	98
85) dibromochloromethane	13.390	129	244345	113.77	ug/L	99
86) 1,2-dibromoethane	13.568	107	243206	100.78	ug/L	99
87) n-butyl ether	14.101	57	1358797	91.19	ug/L	99
88) chlorobenzene	14.122	112	722611	96.98	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.190	131	315696	102.65	ug/L	100
90) ethylbenzene	14.200	91	1329748	95.93	ug/L	99
91) m,p-xylene	14.336	106	1031269	195.42	ug/L	97
92) o-xylene	14.786	91	1204393	96.40	ug/L	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266062.D  
 Acq On : 6 Sep 2019 10:46 pm  
 Operator : thienn  
 Sample : IC10725-100  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 09 10:59:17 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 07:00:12 2019  
 Response via : Initial Calibration

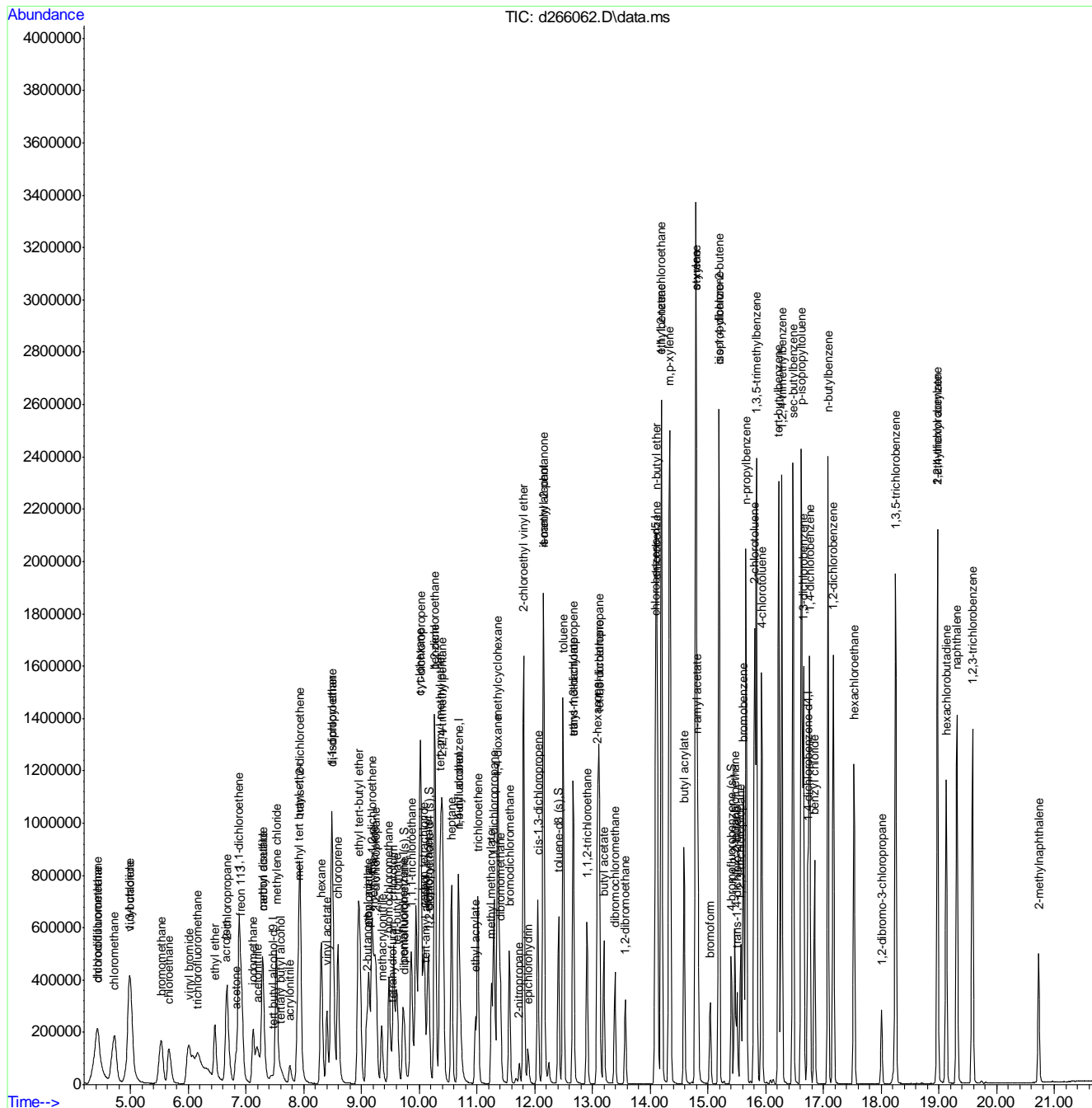
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.797	104	863062	99.10	ug/L	100
94) butyl acrylate	14.587	55	622854	90.64	ug/L	99
95) n-amyyl acetate	14.823	70	241989	97.92	ug/L	99
96) isopropylbenzene	15.189	105	1536871	97.69	ug/L	99
97) bromoform	15.042	173	158162	110.83	ug/L	98
98) cis-1,4-dichloro-2-butene	15.189	88	98550	21.26	ug/L	99
101) 1,1,2,2-tetrachloroethane	15.466	83	332912	99.70	ug/L	100
102) trans-1,4-dichloro-2-b...	15.503	53	76916	106.69	ug/L	90
103) 1,2,3-trichloropropane	15.565	110	88707	104.54	ug/L	94
104) bromobenzene	15.613	156	330825	106.18	ug/L	97
105) n-propylbenzene	15.660	91	1690969	99.10	ug/L	98
106) 2-chlorotoluene	15.806	126	350193	105.77	ug/L	98
107) 4-chlorotoluene	15.926	91	1007568	99.14	ug/L	99
108) 1,3,5-trimethylbenzene	15.837	105	1390691	103.58	ug/L	99
109) tert-butylbenzene	16.224	119	1161119	109.61	ug/L	99
110) 1,2,4-trimethylbenzene	16.277	105	1386524	101.36	ug/L	99
111) sec-butylbenzene	16.476	105	1791544	104.32	ug/L	99
112) p-isopropyltoluene	16.622	119	1503691	104.21	ug/L	98
113) 1,3-dichlorobenzene	16.653	146	677361	98.93	ug/L	99
114) 1,4-dichlorobenzene	16.758	146	687661	98.72	ug/L	99
115) 1,2-dichlorobenzene	17.171	146	718220	100.79	ug/L	98
116) benzyl chloride	16.847	91	665705	99.97	ug/L	99
117) n-butylbenzene	17.077	92	798642	103.46	ug/L	97
118) 2-ethylhexyl acrylate	18.976	70	116436	23.12	ug/L	97
119) hexachloroethane	17.532	201	240092	134.15	ug/L	98
120) 1,2-dibromo-3-chloropr...	18.008	75	78973	99.49	ug/L	100
121) 1,3,5-trichlorobenzene	18.254	180	683554	104.66	ug/L	99
122) 1,2,4-trichlorobenzene	18.976	180	613354	104.23	ug/L	99
123) hexachlorobutadiene	19.127	225	280192	110.64	ug/L	99
124) naphthalene	19.310	128	1303592	91.49	ug/L	99
125) 1,2,3-trichlorobenzene	19.582	180	513228	105.07	ug/L	99
126) 2-methylnaphthalene	20.728	142	282230	54.88	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266062.D  
 Acq On : 6 Sep 2019 10:46 pm  
 Operator : thienn  
 Sample : IC10725-100  
 Misc : ms37297, vd10725, 5, , 100, 5, 1  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 09 10:59:17 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 07:00:12 2019  
 Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266063.D  
 Acq On : 6 Sep 2019 11:14 pm  
 Operator : thienn  
 Sample : IC10725-200  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 09 10:59:25 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 07:10:13 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.483	65	144603	500.00	ug/L	0.00
5) pentafluorobenzene	9.716	168	213431	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.673	114	376029	50.00	ug/L	0.00
75) chlorobenzene-d5	14.083	117	363617	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	230194	50.00	ug/L	0.00

## System Monitoring Compounds

46) dibromofluoromethane (s)	9.742	113	114241	50.14	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	100.28%
55) 1,2-dichloroethane-d4 (s)	10.177	65	132373	48.85	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	97.70%
76) toluene-d8 (s)	12.410	98	468718	49.64	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.28%
100) 4-bromofluorobenzene (s)	15.407	95	203604	48.27	ug/L	0.00
Spiked Amount	50.000	Range	79 - 127	Recovery	=	96.54%

## Target Compounds

Qvalue

3) tertiary butyl alcohol	7.593	59	413764	1090.45	ug/L	99
4) 1,4-dioxane	11.343	88	188857	5185.46	ug/L	97
6) chlorodifluoromethane	4.423	51	1287618	189.95	ug/L	99
7) dichlorodifluoromethane	4.418	85	1061467	194.39	ug/L	99
8) chloromethane	4.732	50	1296755	198.06	ug/L	98
9) 1,3-butadiene	4.988	54	779008	217.30	ug/L	98
10) vinyl chloride	4.978	62	1192442	191.00	ug/L	98
11) bromomethane	5.527	94	571455	181.35	ug/L	98
12) chloroethane	5.663	64	517953	176.68	ug/L	99
13) trichlorofluoromethane	6.123	101	868893	201.09	ug/L	99
14) vinyl bromide	6.003	106	561025	195.65	ug/L	98
15) ethyl ether	6.458	74	274477	199.28	ug/L	94
16) 2-chloropropane	6.667	43	1055561	183.79	ug/L	100
17) acrolein	6.641	56	91893	195.57	ug/L	99
18) freon 113	6.918	151	508307	207.18	ug/L	99
19) 1,1-dichloroethene	6.876	96	545495	176.82	ug/L	98
20) acetone	6.829	58	183981	833.68	ug/L	98
21) acetonitrile	7.190	41	878684	1904.46	ug/L	99
22) iodomethane	7.122	142	814184	194.81	ug/L	100
23) carbon disulfide	7.284	76	1795559	188.40	ug/L	100
24) methylene chloride	7.525	84	628010	187.59	ug/L	97
25) methyl acetate	7.284	74	76994	213.32	ug/L	95
26) methyl tert butyl ether	7.901	73	1940171	189.16	ug/L	98
27) trans-1,2-dichloroethene	7.928	96	536623	174.34	ug/L	99
28) hexane	8.299	56	391472	194.93	ug/L	99
29) di-isopropyl ether	8.492	45	2349459	185.29	ug/L	99
30) 2-butanone	9.089	72	208882	843.62	ug/L	95
31) 1,1-dichloroethane	8.477	63	1004276	188.64	ug/L	99
32) chloroprene	8.592	53	885501	197.80	ug/L	99
33) acrylonitrile	7.760	53	179847	204.49	ug/L	97
34) vinyl acetate	8.404	86	110546	206.01	ug/L #	81
35) ethyl tert-butyl ether	8.947	59	2342400	199.06	ug/L	99
36) ethyl acetate	9.120	45	75947	179.77	ug/L #	87



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266063.D  
 Acq On : 6 Sep 2019 11:14 pm  
 Operator : thienn  
 Sample : IC10725-200  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 09 10:59:25 2019

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M

Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um

QLast Update : Mon Sep 09 07:10:13 2019

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.240	77	1001579	187.64	ug/L	99
38) cis-1,2-dichloroethene	9.183	96	604867	178.98	ug/L	98
39) propionitrile	9.131	54	796992	1995.88	ug/L	98
40) methyl acrylate	9.209	85	67466	218.66	ug/L	99
41) methacrylonitrile	9.350	67	198325	210.76	ug/L	95
42) bromochloromethane	9.476	128	267738	195.29	ug/L	98
43) tetrahydrofuran	9.518	42	148153	184.72	ug/L	95
44) chloroform	9.554	83	930896	184.91	ug/L	99
45) tert-butyl formate	9.612	59	620753	213.56	ug/L	98
47) 1,1,1-trichloroethane	9.863	97	1008231	198.86	ug/L	99
48) cyclohexane	10.009	84	1083717	199.09	ug/L	99
50) 1,1-dichloropropene	10.025	75	714986	192.00	ug/L	99
51) carbon tetrachloride	10.077	117	810863	210.23	ug/L	98
52) tert-amyl alcohol	10.114	73	181903	978.65	ug/L	97
53) isopropyl acetate	10.150	87	126575	215.30	ug/L #	93
56) n-butyl alcohol	10.684	41	689780	9567.80	ug/L	98
57) 2,2,4-trimethylpentane	10.407	57	2402281	223.21	ug/L	100
58) benzene	10.271	78	2238722	183.61	ug/L	98
59) tert-amyl methyl ether	10.365	73	2134626	186.83	ug/L	100
60) heptane	10.558	57	414459	194.61	ug/L	98
61) 1,2-dichloroethane	10.265	62	693328	188.06	ug/L	98
62) ethyl acrylate	10.972	55	600189	195.90	ug/L	98
63) trichloroethene	11.013	95	539851	198.67	ug/L	99
64) 2-chloroethyl vinyl ether	11.808	63	1510977	971.72	ug/L	99
65) methyl methacrylate	11.254	100	129294	208.41	ug/L	97
66) methylcyclohexane	11.364	83	1138599	202.12	ug/L	99
67) 1,2-dichloropropane	11.291	63	606242	196.21	ug/L	100
68) dibromomethane	11.400	93	310642	199.06	ug/L	100
69) bromodichloromethane	11.563	83	741917	201.62	ug/L	99
70) 2-nitropropane	11.735	41	112088	191.14	ug/L	100
71) epichlorohydrin	11.887	57	284769	975.32	ug/L	97
72) cis-1,3-dichloropropene	12.054	75	903146	201.62	ug/L	100
73) 4-methyl-2-pentanone	12.154	58	854002	791.04	ug/L	95
74) isoamyl alcohol	12.143	70	375216	4021.17	ug/L #	90
77) toluene	12.494	92	1389070	191.24	ug/L	97
78) ethyl methacrylate	12.671	69	686958	190.59	ug/L	98
79) trans-1,3-dichloropropene	12.661	75	765236	194.88	ug/L	99
80) 1,1,2-trichloroethane	12.907	83	374586	191.36	ug/L	98
81) tetrachloroethene	13.121	164	415111	198.15	ug/L	98
82) 2-hexanone	13.085	58	728726	764.57	ug/L	99
83) 1,3-dichloropropane	13.105	76	750426	187.93	ug/L	99
84) butyl acetate	13.194	56	367506	194.98	ug/L	97
85) dibromochloromethane	13.388	129	499380	209.09	ug/L	99
86) 1,2-dibromoethane	13.566	107	488951	196.49	ug/L	99
87) n-butyl ether	14.099	57	2578510	167.81	ug/L	97
88) chlorobenzene	14.120	112	1450054	188.72	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.193	131	634579	200.11	ug/L	99
90) ethylbenzene	14.199	91	2581413	180.60	ug/L	97
91) m,p-xylene	14.335	106	2046071	376.01	ug/L	95
92) o-xylene	14.790	91	2355054	182.80	ug/L	98



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266063.D  
 Acq On : 6 Sep 2019 11:14 pm  
 Operator : thienn  
 Sample : IC10725-200  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 09 10:59:25 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 07:10:13 2019  
 Response via : Initial Calibration

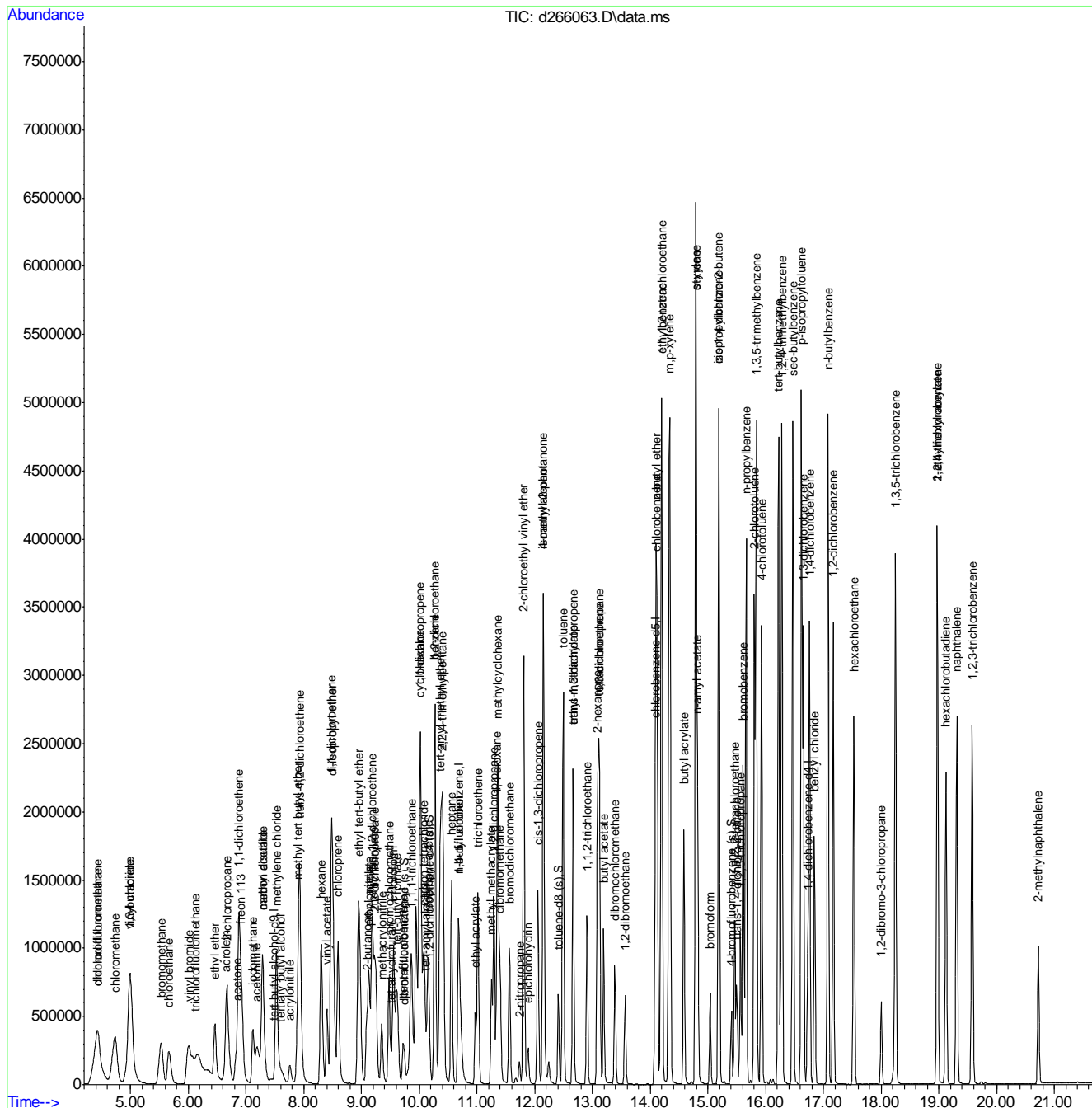
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	14.795	104	1703108	189.65	ug/L	96
94) butyl acrylate	14.586	55	1253522	176.90	ug/L	99
95) n-amyl acetate	14.826	70	496398	194.81	ug/L	99
96) isopropylbenzene	15.192	105	2999019	184.87	ug/L	96
97) bromoform	15.041	173	332896	219.82	ug/L	99
98) cis-1,4-dichloro-2-butene	15.187	88	206223	216.59	ug/L	96
101) 1,1,2,2-tetrachloroethane	15.464	83	680999	180.63	ug/L	100
102) trans-1,4-dichloro-2-b...	15.501	53	160374	194.47	ug/L	91
103) 1,2,3-trichloropropane	15.564	110	183459	187.36	ug/L	90
104) bromobenzene	15.616	156	691090	196.46	ug/L	99
105) n-propylbenzene	15.663	91	3339717	173.35	ug/L	95
106) 2-chlorotoluene	15.804	126	728762	194.94	ug/L	96
107) 4-chlorotoluene	15.930	91	2091374	182.25	ug/L	98
108) 1,3,5-trimethylbenzene	15.841	105	2802523	184.87	ug/L	97
109) tert-butylbenzene	16.223	119	2391278	199.93	ug/L	96
110) 1,2,4-trimethylbenzene	16.280	105	2808781	181.85	ug/L	96
111) sec-butylbenzene	16.474	105	3542508	182.69	ug/L	95
112) p-isopropyltoluene	16.620	119	3011508	184.83	ug/L	95
113) 1,3-dichlorobenzene	16.657	146	1447107	187.19	ug/L	99
114) 1,4-dichlorobenzene	16.761	146	1474198	187.43	ug/L	98
115) 1,2-dichlorobenzene	17.174	146	1505147	187.07	ug/L	98
116) benzyl chloride	16.845	91	1409910	187.52	ug/L	98
117) n-butylbenzene	17.080	92	1656364	190.04	ug/L	94
118) 2-ethylhexyl acrylate	18.974	70	233761	39.21	ug/L	99
119) hexachloroethane	17.530	201	532694	226.15	ug/L	98
120) 1,2-dibromo-3-chloropr...	18.006	75	163238	191.99	ug/L	98
121) 1,3,5-trichlorobenzene	18.252	180	1331439	180.56	ug/L	99
122) 1,2,4-trichlorobenzene	18.974	180	1182641	182.88	ug/L	100
123) hexachlorobutadiene	19.125	225	555834	194.38	ug/L	99
124) naphthalene	19.314	128	2476868	176.03	ug/L	99
125) 1,2,3-trichlorobenzene	19.580	180	998635	186.42	ug/L	98
126) 2-methylnaphthalene	20.726	142	570748	102.54	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266063.D  
 Acq On : 6 Sep 2019 11:14 pm  
 Operator : thienn  
 Sample : IC10725-200  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 09 10:59:25 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 07:10:13 2019  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266066.D  
 Acq On : 7 Sep 2019 12:40 am  
 Operator : thienn  
 Sample : ICV10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 09 11:01:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.479	65	138909	500.00	ug/L	0.00
5) pentafluorobenzene	9.722	168	220919	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	381024	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	347091	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.731	152	204352	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	117779	49.94	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	99.88%	
55) 1,2-dichloroethane-d4 (s)	10.172	65	134445	48.96	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	97.92%	
76) toluene-d8 (s)	12.411	98	452944	50.26	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	100.52%	
100) 4-bromofluorobenzene (s)	15.407	95	186495	49.81	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	99.62%	

Target Compounds

						Qvalue
3) tertiary butyl alcohol	7.604	59	98217	269.45	ug/L	98
4) 1,4-dioxane	11.344	88	47040	1344.52	ug/L	97
6) chlorodifluoromethane	4.424	51	267241	38.77	ug/L	98
7) dichlorodifluoromethane	4.424	85	218115	38.59	ug/L	99
8) chloromethane	4.707	50	270131	39.86	ug/L	97
9) 1,3-butadiene	4.984	54	188059	50.68	ug/L	97
10) vinyl chloride	4.963	62	278913	43.16	ug/L	97
11) bromomethane	5.522	94	185775	56.96	ug/L	98
12) chloroethane	5.664	64	115621	38.10	ug/L	97
13) trichlorofluoromethane	6.087	101	193854	43.34	ug/L	99
14) vinyl bromide	5.998	106	148962	50.19	ug/L	96
15) ethyl ether	6.464	74	77974	54.69	ug/L	96
16) 2-chloropropane	6.673	43	281301	47.26	ug/L	99
17) acrolein	6.647	56	24150	49.66	ug/L	93
18) freon 113	6.914	151	120843	47.59	ug/L	99
19) 1,1-dichloroethene	6.877	96	132017	41.34	ug/L	99
20) acetone	6.835	58	50053	219.12	ug/L	94
22) iodomethane	7.123	142	244493	56.52	ug/L	99
23) carbon disulfide	7.290	76	491600	49.83	ug/L	98
24) methylene chloride	7.526	84	167712	48.40	ug/L	100
25) methyl acetate	7.290	74	20635	55.23	ug/L	92
26) methyl tert butyl ether	7.902	73	1044635	98.40	ug/L	99
27) trans-1,2-dichloroethene	7.934	96	144331	45.30	ug/L	98
28) hexane	8.305	56	90390	43.48	ug/L	98
29) di-isopropyl ether	8.493	45	615715	46.91	ug/L	99
30) 2-butanone	9.089	72	57994	226.28	ug/L	93
31) 1,1-dichloroethane	8.477	63	278895	50.61	ug/L	99
32) chloroprene	8.593	53	246525	51.78	ug/L	99
34) vinyl acetate	8.399	86	26967	48.55	ug/L #	91
35) ethyl tert-butyl ether	8.948	59	603406	49.54	ug/L	99
36) ethyl acetate	9.126	45	22164	50.69	ug/L	100
37) 2,2-dichloropropane	9.241	77	248084	44.90	ug/L	99
38) cis-1,2-dichloroethene	9.184	96	164765	47.10	ug/L	99

7.7.38  
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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266066.D  
 Acq On : 7 Sep 2019 12:40 am  
 Operator : thienn  
 Sample : ICV10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 09 11:01:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	9.131	54	221637	536.22	ug/L	98
40) methyl acrylate	9.215	85	17732	55.52	ug/L	95
41) methacrylonitrile	9.351	67	53958	55.40	ug/L	97
42) bromochloromethane	9.476	128	74062	52.19	ug/L	98
43) tetrahydrofuran	9.524	42	40295	48.54	ug/L	96
44) chloroform	9.555	83	260112	49.92	ug/L	99
45) tert-butyl formate	9.607	59	141105	46.90	ug/L	96
47) 1,1,1-trichloroethane	9.858	97	254551	48.50	ug/L	99
48) cyclohexane	10.005	84	246848	43.81	ug/L	100
50) 1,1-dichloropropene	10.026	75	193854	50.29	ug/L	99
51) carbon tetrachloride	10.078	117	204723	51.28	ug/L	98
52) tert-amyl alcohol	10.109	73	45539	236.70	ug/L	96
53) isopropyl acetate	10.156	87	30582	50.26	ug/L #	89
56) n-butyl alcohol	10.690	41	174422	2387.66	ug/L	99
57) 2,2,4-trimethylpentane	10.402	57	553970	50.80	ug/L	99
58) benzene	10.271	78	610181	49.39	ug/L	100
59) tert-amyl methyl ether	10.366	73	548888	47.41	ug/L	100
60) heptane	10.559	57	111835	51.82	ug/L	97
61) 1,2-dichloroethane	10.266	62	182846	48.95	ug/L	99
62) ethyl acrylate	10.972	55	155241	50.01	ug/L	98
63) trichloroethene	11.014	95	144392	52.44	ug/L	97
64) 2-chloroethyl vinyl ether	11.809	63	438875	272.64	ug/L	99
65) methyl methacrylate	11.255	100	34252	54.49	ug/L #	84
66) methylcyclohexane	11.359	83	283529	49.67	ug/L	99
67) 1,2-dichloropropane	11.291	63	160341	51.21	ug/L	100
68) dibromomethane	11.401	93	80951	51.19	ug/L	99
69) bromodichloromethane	11.563	83	189037	51.25	ug/L	99
70) 2-nitropropane	11.731	41	30421	51.19	ug/L	95
71) epichlorohydrin	11.882	57	76759	259.40	ug/L	98
72) cis-1,3-dichloropropene	12.055	75	233495	51.44	ug/L	99
73) 4-methyl-2-pentanone	12.154	58	225204	205.87	ug/L	100
74) isoamyl alcohol	12.144	70	97779	1034.16	ug/L	92
77) toluene	12.494	92	360514	52.00	ug/L	99
78) ethyl methacrylate	12.672	69	183404	53.31	ug/L	97
79) trans-1,3-dichloropropene	12.662	75	201442	53.74	ug/L	99
80) 1,1,2-trichloroethane	12.907	83	97736	52.31	ug/L	100
82) 2-hexanone	13.085	58	186910	205.44	ug/L	100
83) 1,3-dichloropropane	13.106	76	200703	52.06	ug/L	99
84) butyl acetate	13.195	56	92833	51.60	ug/L	99
85) dibromochloromethane	13.389	129	128318	56.28	ug/L	99
86) 1,2-dibromoethane	13.566	107	126465	53.24	ug/L	97
87) n-butyl ether	14.100	57	746136	50.87	ug/L	99
88) chlorobenzene	14.121	112	378135	51.56	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.189	131	160480	53.01	ug/L	98
90) ethylbenzene	14.199	91	691472	50.68	ug/L	100
91) m,p-xylene	14.335	106	532151	102.45	ug/L	99
92) o-xylene	14.790	91	623376	50.69	ug/L	99
93) styrene	14.796	104	451900	52.72	ug/L	99
94) butyl acrylate	14.586	55	310456	46.57	ug/L	99
95) n-amyl acetate	14.827	70	117305	46.99	ug/L	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266066.D  
 Acq On : 7 Sep 2019 12:40 am  
 Operator : thienn  
 Sample : ICV10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 09 11:01:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

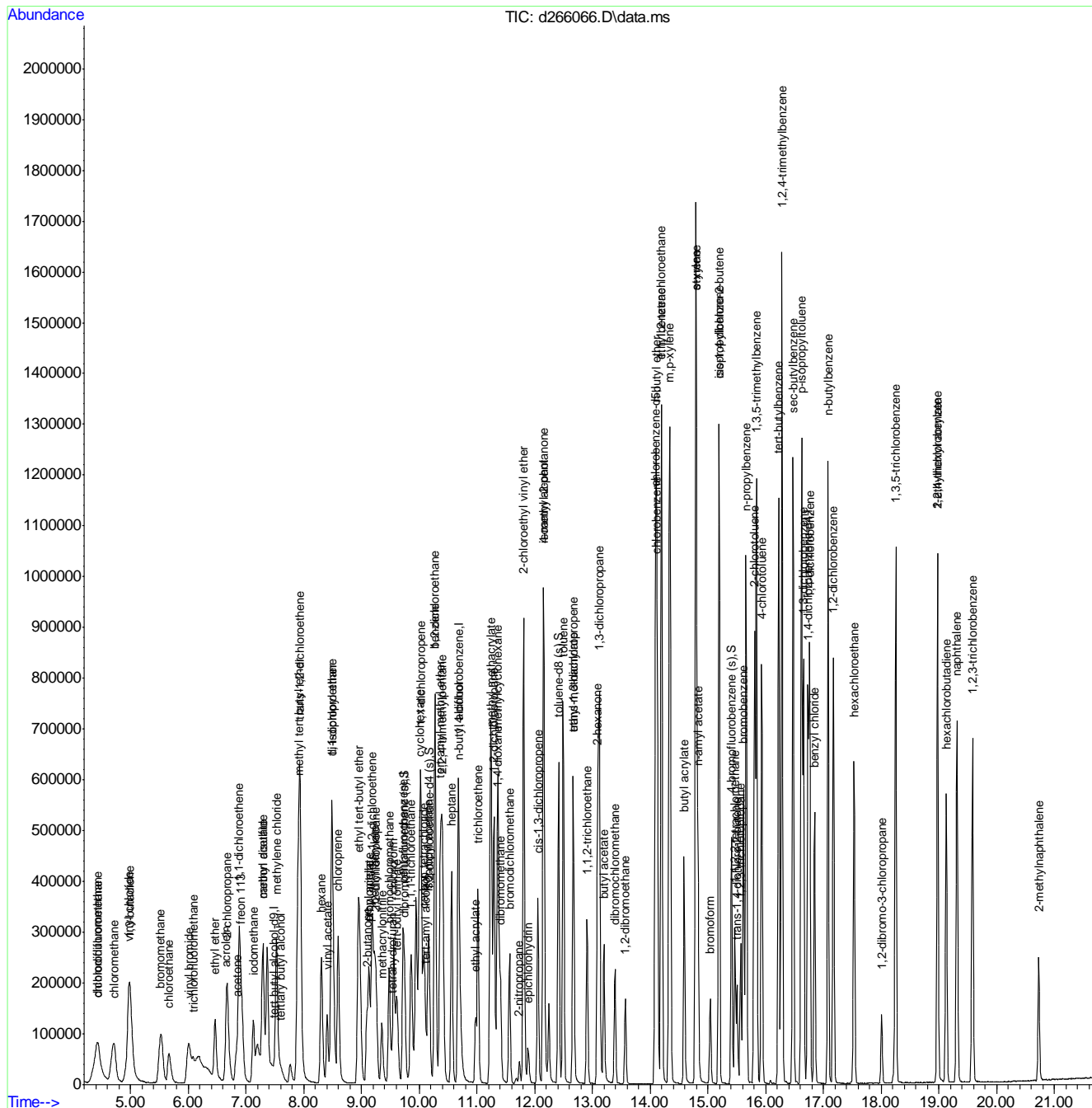
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) isopropylbenzene	15.188	105	787086	50.83	ug/L	100
97) bromoform	15.041	173	84645	58.55	ug/L	100
98) cis-1,4-dichloro-2-butene	15.188	88	49011	53.93	ug/L	98
101) 1,1,2,2-tetrachloroethane	15.465	83	170435	50.92	ug/L	100
102) trans-1,4-dichloro-2-b...	15.502	53	44674	61.02	ug/L	93
103) 1,2,3-trichloropropane	15.564	110	44939	51.70	ug/L	93
104) bromobenzene	15.617	156	170894	54.72	ug/L	98
105) n-propylbenzene	15.658	91	882088	51.57	ug/L	99
106) 2-chlorotoluene	15.805	126	175526	52.89	ug/L	99
107) 4-chlorotoluene	15.930	91	537275	52.74	ug/L	99
108) 1,3,5-trimethylbenzene	15.842	105	706982	52.53	ug/L	99
109) tert-butylbenzene	16.223	119	587709	55.35	ug/L	99
110) 1,2,4-trimethylbenzene	16.281	105	718440	52.40	ug/L	100
111) sec-butylbenzene	16.474	105	915953	53.21	ug/L	100
112) p-isopropyltoluene	16.621	119	773500	53.48	ug/L	99
113) 1,3-dichlorobenzene	16.652	146	356672	51.97	ug/L	100
114) 1,4-dichlorobenzene	16.762	146	361402	51.76	ug/L	99
115) 1,2-dichlorobenzene	17.175	146	371462	52.01	ug/L	100
116) benzyl chloride	16.846	91	416976	62.47	ug/L	100
117) n-butylbenzene	17.081	92	408398	52.78	ug/L	98
118) 2-ethylhexyl acrylate	18.980	70	57926	10.95	ug/L	98
119) hexachloroethane	17.531	201	121214	57.97	ug/L	99
120) 1,2-dibromo-3-chloropr...	18.007	75	37978	50.31	ug/L	95
121) 1,3,5-trichlorobenzene	18.253	180	361003	55.15	ug/L	99
122) 1,2,4-trichlorobenzene	18.974	180	307014	53.48	ug/L	99
123) hexachlorobutadiene	19.126	225	135603	53.42	ug/L	98
124) naphthalene	19.314	128	662977	53.08	ug/L	100
125) 1,2,3-trichlorobenzene	19.581	180	255479	53.72	ug/L	99
126) 2-methylnaphthalene	20.726	142	138814	28.09	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266066.D  
 Acq On : 7 Sep 2019 12:40 am  
 Operator : thienn  
 Sample : ICV10725-50  
 Misc : ms37297, vd10725, 5, , 100, 5, 1  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 09 11:01:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration



7.7.38  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266067.D  
 Acq On : 7 Sep 2019 1:08 am  
 Operator : thienn  
 Sample : ICV10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 09 11:02:07 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.499	65	144671	500.00	ug/L	0.02
5) pentafluorobenzene	9.717	168	203242	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.674	114	334431	50.00	ug/L	0.00
75) chlorobenzene-d5	14.084	117	313036	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	16.730	152	199155	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	9.748	113	106511	49.09	ug/L	0.00
Spiked Amount	50.000	Range 75 - 127	Recovery	=	98.18%	
55) 1,2-dichloroethane-d4 (s)	10.172	65	120087	49.83	ug/L	0.00
Spiked Amount	50.000	Range 75 - 130	Recovery	=	99.66%	
76) toluene-d8 (s)	12.410	98	404313	49.74	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.48%	
100) 4-bromofluorobenzene (s)	15.407	95	176779	48.45	ug/L	0.00
Spiked Amount	50.000	Range 79 - 127	Recovery	=	96.90%	

Target Compounds

						Qvalue
21) acetonitrile	7.201	41	243857	555.03	ug/L	98
33) acrylonitrile	7.766	53	55483	64.29	ug/L	98
81) tetrachloroethene	13.122	164	110523	61.28	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

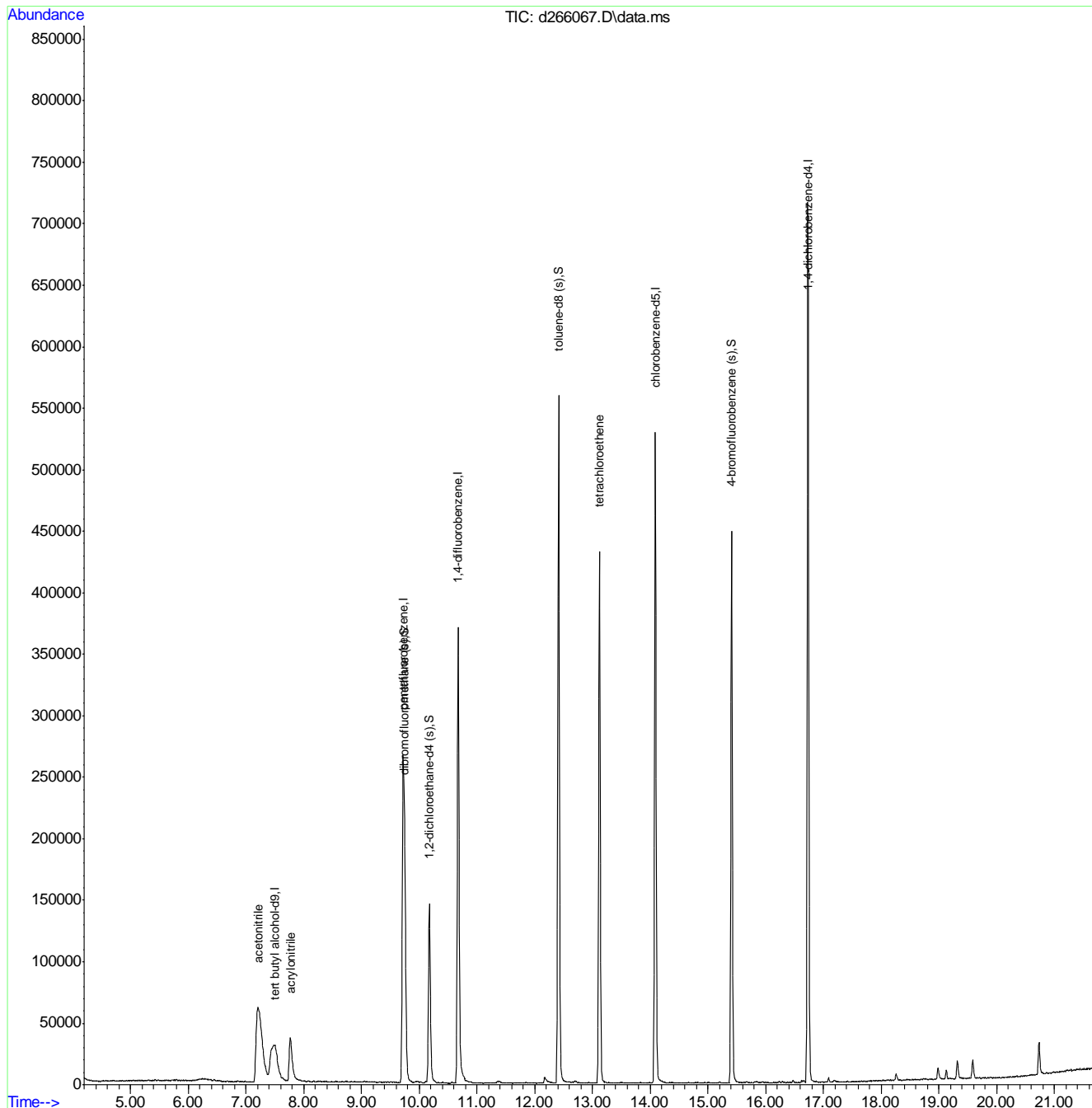
7.7.39

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VD10725\  
 Data File : d266067.D  
 Acq On : 7 Sep 2019 1:08 am  
 Operator : thienn  
 Sample : ICV10725-50  
 Misc : ms37297,vd10725,5,,100,5,1  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 09 11:02:07 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration



7.7.39  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266670.d  
 Acq On : 3 Oct 2019 7:38 am  
 Operator : thienn  
 Sample : cc10725-20 Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:22:59 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) tert butyl alcohol-d9	7.499	65	129473	500.00	ug/L	0.02
5) pentafluorobenzene	9.711	168	215302	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.668	114	352496	50.00	ug/L	0.00
75) chlorobenzene-d5	14.073	117	322463	50.00	ug/L	-0.01
99) 1,4-dichlorobenzene-d4	16.720	152	218569	50.00	ug/L	-0.01
<b>System Monitoring Compounds</b>						
46) dibromofluoromethane (s)	9.743	113	110590	48.12	ug/L	0.00
Spiked Amount	50.000	Range	75 - 127	Recovery	=	96.24%
55) 1,2-dichloroethane-d4 (s)	10.166	65	127085	50.03	ug/L	0.00
Spiked Amount	50.000	Range	75 - 130	Recovery	=	100.06%
76) toluene-d8 (s)	12.400	98	402629	48.09	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.18%
100) 4-bromofluorobenzene (s)	15.391	95	182736	45.63	ug/L	-0.02
Spiked Amount	50.000	Range	79 - 127	Recovery	=	91.26%
<b>Target Compounds</b>						
3) tertiary butyl alcohol	7.598	59	32438	95.48	ug/L	96
4) 1,4-dioxane	11.338	88	23908	733.16	ug/L	95
6) chlorodifluoromethane	4.413	51	137814	20.52	ug/L	98
7) dichlorodifluoromethane	4.403	85	110813	20.12	ug/L	99
8) chloromethane	4.711	50	145397	22.01	ug/L	99
9) 1,3-butadiene	4.978	54	83762	23.16	ug/L	97
10) vinyl chloride	4.973	62	144445	22.94	ug/L	99
11) bromomethane	5.522	94	73145	23.01	ug/L	98
12) chloroethane	5.663	64	60903	20.59	ug/L	99
13) trichlorofluoromethane	6.071	101	88924	20.40	ug/L	99
14) vinyl bromide	6.003	106	64648	22.35	ug/L	97
15) ethyl ether	6.463	74	30548	21.99	ug/L	95
16) 2-chloropropane	6.667	43	112210	19.35	ug/L	99
17) acrolein	6.646	56	9996	21.09	ug/L	98
18) freon 113	6.918	151	55738	22.52	ug/L	91
19) 1,1-dichloroethene	6.882	96	56987	18.31	ug/L	93
20) acetone	6.835	58	17293	77.68	ug/L	95
21) acetonitrile	7.201	41	84180	180.87	ug/L	99
22) iodomethane	7.122	142	77842	18.46	ug/L	98
23) carbon disulfide	7.290	76	191806	19.95	ug/L	98
24) methylene chloride	7.525	84	64318	19.04	ug/L	95
25) methyl acetate	7.279	74	7410	20.35	ug/L #	77
26) methyl tert butyl ether	7.902	73	190944	18.45	ug/L	98
27) trans-1,2-dichloroethene	7.928	96	58181	18.74	ug/L	98
28) hexane	8.304	56	41906	20.69	ug/L	97
29) di-isopropyl ether	8.493	45	232015	18.14	ug/L	98
30) 2-butanone	9.094	72	18674	74.76	ug/L	90
31) 1,1-dichloroethane	8.477	63	108376	20.18	ug/L	98
32) chloroprene	8.592	53	86525	18.65	ug/L	99
33) acrylonitrile	7.771	53	19160	20.96	ug/L	96
34) vinyl acetate	8.409	86	10136	18.72	ug/L #	77
35) ethyl tert-butyl ether	8.948	59	208388	17.55	ug/L	99
36) ethyl acetate	9.120	45	6832	16.03	ug/L #	72
37) 2,2-dichloropropane	9.235	77	109438	20.32	ug/L	100
38) cis-1,2-dichloroethene	9.178	96	63627	18.66	ug/L	96
39) propionitrile	9.131	54	75273	186.87	ug/L	98
40) methyl acrylate	9.214	85	5474	17.59	ug/L #	74
41) methacrylonitrile	9.350	67	17374	18.30	ug/L	93
42) bromochloromethane	9.471	128	27510	19.89	ug/L	93

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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266670.d  
 Acq On : 3 Oct 2019 7:38 am  
 Operator : thienn  
 Sample : cc10725-20 Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:22:59 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	9.518	42	13321	16.46	ug/L	95
44) chloroform	9.554	83	96717	19.04	ug/L	98
45) tert-butyl formate	9.607	59	66600	22.71	ug/L	97
47) 1,1,1-trichloroethane	9.858	97	100499	19.65	ug/L	99
48) cyclohexane	9.999	84	119404	21.75	ug/L	97
50) 1,1-dichloropropene	10.020	75	74916	19.94	ug/L	99
51) carbon tetrachloride	10.067	117	80070	20.58	ug/L	98
52) tert-amyl alcohol	10.098	73	14314	76.34	ug/L	93
53) isopropyl acetate	10.145	87	10367	17.48	ug/L #	78
56) n-butyl alcohol	10.689	41	59502	880.44	ug/L	98
57) 2,2,4-trimethylpentane	10.396	57	156255	15.49	ug/L	98
58) benzene	10.266	78	232271	20.32	ug/L	99
59) tert-amyl methyl ether	10.355	73	193075	18.03	ug/L	99
60) heptane	10.553	57	34169	17.12	ug/L	98
61) 1,2-dichloroethane	10.260	62	66260	19.17	ug/L	99
62) ethyl acrylate	10.967	55	48484	16.88	ug/L	98
63) trichloroethene	11.008	95	51340	20.16	ug/L	94
64) 2-chloroethyl vinyl ether	11.798	63	133986	89.97	ug/L	98
65) methyl methacrylate	11.249	100	9766	16.79	ug/L	93
66) methylcyclohexane	11.354	83	108628	20.57	ug/L	98
67) 1,2-dichloropropane	11.286	63	56567	19.53	ug/L	98
68) dibromomethane	11.390	93	28288	19.34	ug/L	100
69) bromodichloromethane	11.552	83	66364	19.45	ug/L	99
70) 2-nitropropane	11.720	41	9713	17.67	ug/L	97
71) epichlorohydrin	11.877	57	23817	87.00	ug/L	94
72) cis-1,3-dichloropropene	12.044	75	81010	19.29	ug/L	97
73) 4-methyl-2-pentanone	12.143	58	76015	75.11	ug/L	99
74) isoamyl alcohol	12.138	70	32971	376.94	ug/L	93
77) toluene	12.483	92	127574	19.81	ug/L	98
78) ethyl methacrylate	12.661	69	55242	17.28	ug/L	95
79) trans-1,3-dichloropropene	12.651	75	69469	19.95	ug/L	93
80) 1,1,2-trichloroethane	12.896	83	33289	19.18	ug/L	98
81) tetrachloroethene	13.111	164	39088	21.04	ug/L	97
82) 2-hexanone	13.079	58	65451	77.43	ug/L	95
83) 1,3-dichloropropane	13.095	76	70437	19.67	ug/L	100
84) butyl acetate	13.189	56	31970	19.13	ug/L	91
85) dibromochloromethane	13.378	129	42216	19.93	ug/L	99
86) 1,2-dibromoethane	13.555	107	43076	19.52	ug/L	99
87) n-butyl ether	14.089	57	265134	19.46	ug/L	99
88) chlorobenzene	14.110	112	136870	20.09	ug/L	99
89) 1,1,1,2-tetrachloroethane	14.178	131	57717	20.52	ug/L	99
90) ethylbenzene	14.188	91	255816	20.18	ug/L	99
91) m,p-xylene	14.324	106	195214	40.45	ug/L	99
92) o-xylene	14.774	91	228119	19.97	ug/L	96
93) styrene	14.785	104	162501	20.40	ug/L	97
94) butyl acrylate	14.575	55	102732	16.59	ug/L	98
95) n-amyl acetate	14.816	70	44528	19.20	ug/L	96
96) isopropylbenzene	15.177	105	285686	19.86	ug/L	99
97) bromoform	15.030	173	29684	22.10	ug/L	96
98) cis-1,4-dichloro-2-butene	15.177	88	19453	23.04	ug/L	98
101) 1,1,2,2-tetrachloroethane	15.454	83	63798	17.82	ug/L	99
102) trans-1,4-dichloro-2-b...	15.491	53	17134	21.88	ug/L	90
103) 1,2,3-trichloropropane	15.553	110	17483	18.80	ug/L	97
104) bromobenzene	15.600	156	67296	20.15	ug/L	98
105) n-propylbenzene	15.647	91	332475	18.17	ug/L	98
106) 2-chlorotoluene	15.794	126	66681	18.79	ug/L	99
107) 4-chlorotoluene	15.919	91	206850	18.98	ug/L	98

Quantitation Report (QT Reviewed)

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 Operator : thienn  
 Sample : cc10725-20 Inst : MSD  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:22:59 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 1,3,5-trimethylbenzene	15.825	105	256980	17.85	ug/L	99
109) tert-butylbenzene	16.212	119	197884	17.42	ug/L	98
110) 1,2,4-trimethylbenzene	16.265	105	264984	18.07	ug/L	100
111) sec-butylbenzene	16.458	105	315655	17.14	ug/L	99
112) p-isopropyltoluene	16.605	119	271844	17.57	ug/L	99
113) 1,3-dichlorobenzene	16.641	146	141851	19.33	ug/L	99
114) 1,4-dichlorobenzene	16.746	146	145780	19.52	ug/L	99
115) 1,2-dichlorobenzene	17.159	146	148710	19.47	ug/L	98
116) benzyl chloride	16.835	91	158617	22.22	ug/L	99
117) n-butylbenzene	17.065	92	145940	17.63	ug/L	99
118) 2-ethylhexyl acrylate	18.969	70	12031	2.13	ug/L	97
119) hexachloroethane	17.515	201	40398	18.06	ug/L	98
120) 1,2-dibromo-3-chloropr...	17.996	75	13548	16.78	ug/L	91
121) 1,3,5-trichlorobenzene	18.242	180	120933	17.27	ug/L	99
122) 1,2,4-trichlorobenzene	18.963	180	102313	16.66	ug/L	99
123) hexachlorobutadiene	19.115	225	46877	17.27	ug/L	99
124) naphthalene	19.298	128	216230	16.18	ug/L	99
125) 1,2,3-trichlorobenzene	19.570	180	82698	16.26	ug/L	99
126) 2-methylnaphthalene	20.715	142	32676	6.18	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

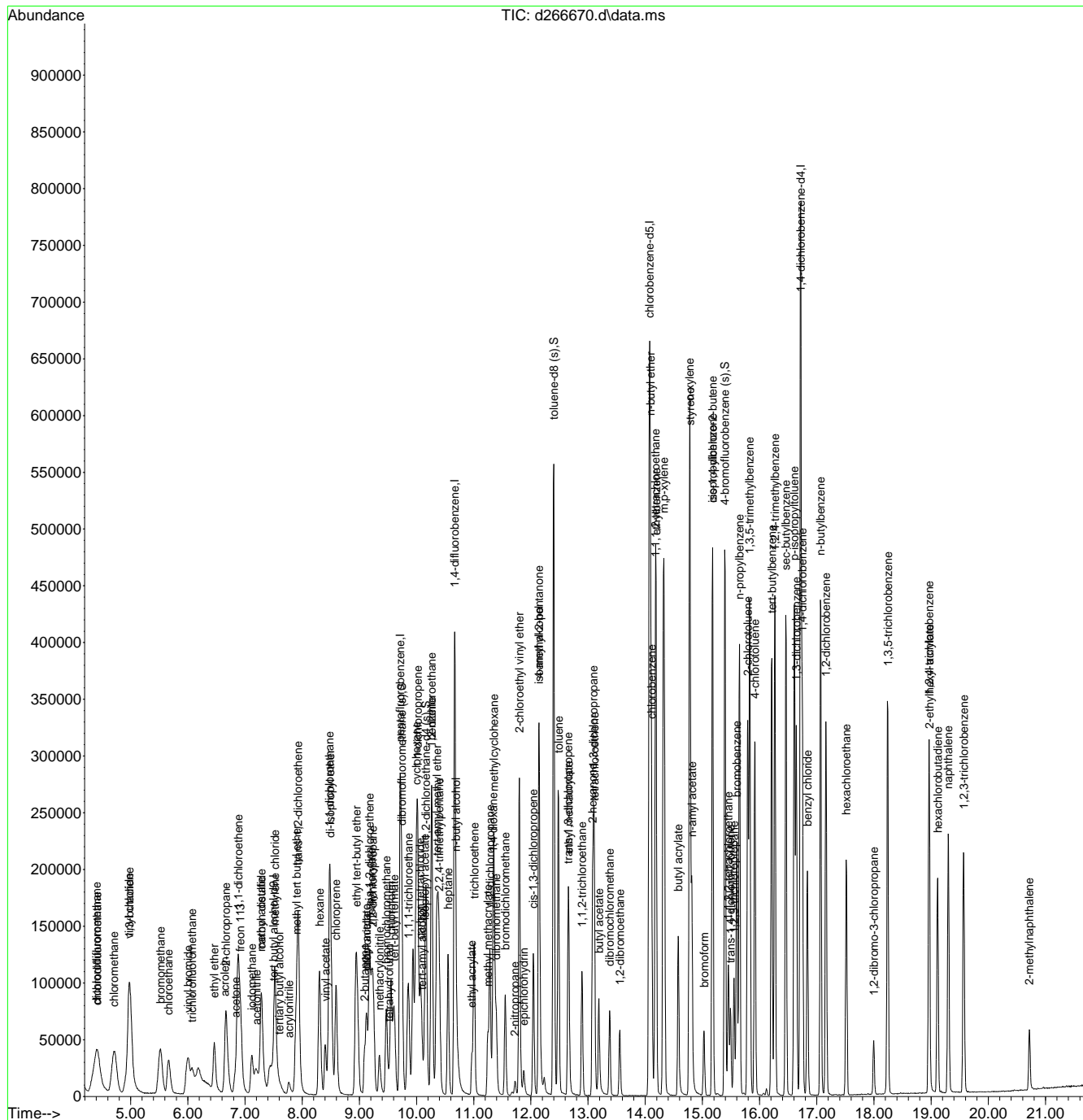
7.7.40  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\OCTOBER\100719\vd10747\  
 Data File : d266670.d  
 Acq On : 3 Oct 2019 7:38 am  
 Operator : thienn  
 Sample : cc10725-20  
 Misc : ms37924,vd10747,5,,100,5,1  
 ALS Vial : 2 Sample Multiplier: 1  
 Inst : MSD

Quant Method : C:\MSDCHEM\1\METHODS\MD10725.M  
 Quant Results File: MD10725.RES  
 Quant Time: Oct 06 23:22:59 2019  
 Quant Title : SW846 8260C, Rxi-624 MS 60m x 0.25mm x 1.4um  
 QLast Update : Mon Sep 09 11:00:30 2019  
 Response via : Initial Calibration



7.7.40  
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# GCMS Volatile Run Log

Standard / Reagents		Lot #									
Standard	ABK: V019-2659-45.33	EC: V019-2659-74.3	Acrolein: V019-2659-67.9								
Standard Concentrations	100-10,000 PPM	100 PPM	100 PPM								
Ext. Standard	Ext.ABK: V019-2659-57.5	Ext.EC: V019-2659-69.1.3	Ext.PA: V019-2659-48.2								
Standard Concentrations	100-10,000 PPM	100 PPM	100-1,000 PPM								
Internal Surrogate	V019-2659-61										
I/S Concentration	50/500 PPM										
Rough reviewed by	Prashant B. Shukla										
Standard / Reagents											
GCMS1C	Instrument ID:	Sequence loaded by									
Analysis Date	7/13/2019	Data processed by									
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	V1C7262								
Method	V8260C	Matrix	SO								
Init Calib Date	7/13/2019	Approved By:	KANYAV								
Init Calib Quant Method	M1CS7260	Approved Date:	7/23/2019 4:11:12 AM								
DI Purge Volume	5										
Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	Purge (uL)	ALS #	Status	Comments
1C 165729	BFB		NA		TUNE	5.0	5		1	OK	2:16 PM (7/13/2019)
1C 165730	IC7262-0.2		NA		Soil IC8260C	5.0	5		2	OK	1uL Std.A/B/K,EC,Acrolein in 500mL DI H2O
1C 165731	IC7262-0.5		NA		Soil IC8260C	5.0	5		3	OK	1uL Std.A/B/K,EC,Acrolein in 200mL DI H2O
1C 165732	IC7262-1		NA		Soil IC8260C	5.0	5		4	OK	1uL Std.A/B/K,EC,Acrolein in 100mL DI H2O
1C 165733	IC7262-2		NA		Soil IC8260C	5.0	5		5	OK	1uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165734	IC7262-4		NA		Soil IC8260C	5.0	5		6	OK	2uL Std.A/B/K,EC,Acrolein in 50mL DI H2O



Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH/ Purge (uL)	ALS #	Status	Comments
1C 165735	IC7262-8		NA		Soil IC8260C	5.0	5		7	OK	4uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165736	IC7262-20		NA		Soil IC8260C	5.0	5		8	OK	10uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165737	ICC7262-50		NA		Soil IC8260C	5.0	5		9	OK	25uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165738	IC7262-100		NA		Soil IC8260C	5.0	5		10	OK	50uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165739	IC7262-200		NA		Soil IC8260C	5.0	5		11	OK	100uL Std.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165740	IB		NA			5.0	5		12	OK	
1C 165741	IB		NA			5.0	5		13	OK	
1C 165742	ICV7262-50		NA		Soil ICV8260C	5.0	5		14	OK	25uL Ext.A/B/K,EC,Acrolein in 50mL DI H2O
1C 165743	ICV7262-50		NA		Soil ICV8260C	5.0	5		15	OK	25uL Ext.PA in 50mL DI H2O
1C 165744	IB		NA			5.0	5		16	OK	
1C 165745	IB		NA			5.0	5		17	OK	
1C 165746	BFB2		NA		TUNE	5.0	5		18	OK	12:53 PM (7/15/2019)
1C 165747	ICV7262-50		NA		Soil ICV8260C	5.0	5		19	OK	25uL Ext.EC in 50mL DI H2O



# GCMS Volatile Run Log

Standard / Reagents		Lot #	
Standard	ABK: V019-2688-22.19	EC: V019-2688-33.9	Acrolein: V019-2688-32.13
Standard Concentration	100-10000 PPM	100 PPM	100 PPM
Exp. Dt.	10/23/2019	10/08/2019	10/27/2019
Internal Surrogate	v019-2688-26		
I/S Concentration	250/2500 PPM		
Exp. Dt.	10/26/2019		

Standard / Reagents			
GCMS1C	Instrument ID:	Sequence loaded by	
Analysis Date	10/4/2019	Data processed by	
Column	Rxi-624(60mx0.25mmx1.4 um)	Batch ID	V1C7331
Method	V8260C	Matrix	SO
		Approved By:	KANYAV
Init Calib Quant Method	M1CS7262	Approved Date:	10/9/2019 7:34:58 PM
DI Purge Volume	5		

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/		ALS #	Status	Comments
							DI (ml)	FV (uL)			
1C 167566	IB		NA			5	5		1	OK	
1C 167567	IB		NA			5	5		2	OK	
1C 167568	BFB/CC7262-50		NA			5	5		3	ok/ok	ABK,EC,ACROLEIN, 25UL/50ML DI WATER, #11 HIGH, 7:59AM
1C 167569	BS		NA			5	5		4	ok	ABK,EC,ACROLEIN, 25UL/50ML DI WATER
1C 167570	IB		NA			5	5		5	OK	
1C 167571	MB		NA			5	5		6	ok	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH/ Purge (uL)	ALS #	Status	Comments
1C 167572	JC95641-12	5	NA	MS38095	V8260PCE,TCE	5.7	5		7	ok	
1C 167573	JC95641-15	4	NA	MS38095	V8260PCE,TCE	4.9	5		8	ok	
1C 167574	JC95641-18	5	NA	MS38095	V8260PCE,TCE	5.2	5		9	ok	
1C 167575	JC95641-21	4	NA	MS38095	V8260PCE,TCE	4	5		10	ok	
1C 167576	JC95641-29	4	NA	MS38095	V8260PCE,TCE	5.6	5		11	ok	
1C 167577	JC95641-12MS	4	NA	MS38095	V8260PCE,TCE	6.1	5		12	ok	ABK,EC,ACROLEIN, 2.5UL/SAMPLE
1C 167578	IB		NA			5	5		13	OK	
1C 167579	JC95641-15DUP	5	NA	MS38095	V8260PCE,TCE	4.8	5		14	ok	
1C 167580	JC95733-9	4	NA	MS37972	V8260BTXMT,VLS	5.4	5		15	ok	
1C 167581	JC95555-4	5	NA	MS37920	V8260TCL20	2.9	5		16	RR	INT OUT
1C 167582	JC95733-13	4	NA	MS37972	V8260BTXMT,VLS	5.3	5		17	ok	
1C 167583	JC95733-16	5	NA	MS37972	V8260BTXMT,VLS	3.7	5		18	ok	
1C 167584	IB		NA			5	5		19	OK	
1C 167585	JC95555-4	4	NA	MS37920	V8260TCL20	2.8	5		20	ok	COMBINE WITH D CORE AND 1C167581
1C 167586	JC95949-1	6	NA	MS38095	V8260TCL20+	5.5	5		21	ok	
1C 167587	JC95816-1	4	NA	MS38095	V8260PCE,TCE	5.4	5		22	ok	
1C 167588	IB		NA			5	5		23	OK	
1C 167589	JC95495-1	7	NA	MS37920	V8260TCL20+	4.2	5		24	ok	
1C 167590	JC95495-2	7	NA	MS37920	V8260TCL20+	5.1	5		25	ok	
1C 167591	JC95495-3	7	NA	MS37920	V8260TCL20+	3.5	5		26	ok	



Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH/ Purge (uL)	ALS #	Status	Comments
1C 167592	JC96016-9	7	NA	MS38093	V8260TCL20+,TBA	6.1	5		27	ok/DL	SME, 7:03 PM
1C 167593	IB		NA			5	5		28	OK	
1C 167594	IB		NA			5	5		29	OK	
1C 167595	IB		NA			5	5		30	OK	
1C 167596	IB		NA			5	5		31	OK	
1C 167597	IB		NA			5	5		32	OK	10/5/19
1C 167598	IB		NA			5	5		33	OK	

## GCMS Volatile Run Log

Standard / Reagents		Lot #		Column
Standards	ABK V019-2659-90.22	EC V019-2659-85.4	Acrolein V019-2659-67.6	DB-624(60mX0.25mmX1.4um)
Standard Concentration	100ppm-10.000ppm	100ppm	100ppm	V8260C
Internal Surrogate	V019-2659-61			7/29/2019
Internal Surrogate Concentration	50/500ppm			
Ext. Standards	Ext.ABK V019-2659-57.11	Ext.EC V019-2659-86.9	Ext.Acrolein V019-2659-48	Analysis Date
Standard Concentration	100ppm-10.000ppm	100ppm	100ppm-1000ppm	Sequence loaded by
				Prashant B. Shukla
				Data processed by
				Robert Szot
				Batch ID
				VA9755
				Matrix
				AQ
Initial Calibration Method	MA9755			Approved By:
				KANYAV
				Approved Date:
				7/31/2019 1:47:25 AM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 251984	BFB		NA			5			1	OK	5:24 PM
A 251985	IC9755-0.2		NA		8260 initial calibration	5			2	OK	1uL Std.ABK,EC,Acrolein in 500mL DI H2O
A 251986	IC9755-0.5		NA		8260 initial calibration	5			3	OK	1uL Std.ABK,EC,Acrolein in 200mL DI H2O
A 251987	IC9755-1		NA		8260 initial calibration	5			4	OK	1uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251988	IC9755-2		NA		8260 initial calibration	5			5	OK	2uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251989	IC9755-4		NA		8260 initial calibration	5			6	OK	4uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251990	IC9755-8		NA		8260 initial calibration	5			7	OK	8uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251991	IC9755-20		NA		8260 initial calibration	5			8	OK	20uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251992	IC9755-50		NA		8260 initial calibration	5			9	OK	50uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251993	IC9755-100		NA		8260 initial calibration	5			10	OK	100uL Std.ABK,EC,Acrolein in 100mL DI H2O
A 251994	IC9755-200		NA		8260 initial calibration	5			11	OK	200uL Std.ABK,EC,Acrolein in 100mL DI H2O

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 251995	IB		NA			5			12	OK	
A 251996	IB		NA			5			13	OK	vial labeled as "BS"
A 251997	ICV9755-50		NA		8260 initial calibration	5			14	OK	50uL Ext.ABK,EC,Acrolein in 100mL DI H2O
A 251998	ICV9755-50		NA		8260 initial calibration	5			15	OK	50uL Ext. PA in 100mL DI H2O
A 251999	IB		NA			5			16	OK	

## GCMS Volatile Run Log

Standard / Reagents		Lot #		Column
Standard	ABK: V019-2688-22.31	EC: V019-2688-33.12	Acrolein: V019-2688-32.1	Rxi-624(30mx0.25mmx1.4um)
Standard Concentration	100- 10.000ppm	100ppm	100ppm	Method V8260C
Expiration Date	10/23/2019	10/8/2019	10/27/2019	Init Calib Date 4/2/2019
Internal Surrogate	V019-2659-142			
Internal Surrogate Concentration	50/500ppm			Analysis Date 10/4/2019
Expiration Date	10/4/2019			Sequence loaded by Krizhka Cuenta
				Data processed by nizele
Rough Review	Krizhka Cuenta 10/4, 10/7			Batch ID VA9835
Initial Calibration Method	MA9755			Matrix AQ
pH Paper Lot#	217518			Approved By: KANYAV
				Approved Date: 10/7/2019 1:32:05 PM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 254698	IB		NA			5			1	ok	
A 254699	BFB/CC9755-20		NA			5			2	ok/ok	20uL ABK, EC, Acrolein/100mL (6:46 am) #9, 11, 17, 95 high
A 254700	BS		NA			5			3	ok	50uL ABK, EC, Acrolein/100mL
A 254701	IB		NA			5			4	ok	
A 254702	MB		NA			5			5	ok	
A 254703	JC95586-5	5	NA	MS37913	V8260SL	5		1	6	ok	
A 254704	JC95555-5	2	NA	MS37917	V8260TCL20	5		1	7	ok	
A 254705	JC95628-1	5	NA	MS37950	V8260BTXX	5		1	8	ok	
A 254706	JC95745-5	10	NA	MS37990	V8260SL	5		1	9	ok/dl	f/d 10x
A 254707	JC95745-8	4	50X	MS37990	V8260SL	1/50		1	10	ok/r/r	50x screen; l/d 1x
A 254708	JC95745-10	4	2.5X	MS37990	V8260SL	20/50		1	11	r/r	f/d 500x (surr out)

OR048-01

Rev Date: 12/18/2017

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 254709	JC95745-1	4	2.5X	MS37990	V8260SL	20/50		1	12	rr	f/d 500x (surr out)
A 254710	JC95745-2	4	2.5X	MS37990	V8260SL	20/50		1	13	rr	f/d 500x (surr out)
A 254711	IB		NA	MS37990		5			14	ok	
A 254712	JC95745-5MS	11	NA	MS37990	V8260SL	5		1	15	ok	20uL ABK, EC, Acrolein/40mL
A 254713	JC95745-5MSD	12	NA	MS37990	V8260SL	5		1	16	ok	20uL ABK, EC, Acrolein/40mL
A 254714	IB		NA			5			17	ok	
A 254715	JC95745-5	10	10X	MS37990	V8260SL	5/50		1	18	ok	
A 254716	JC95745-12	4	NA	MS37990	V8260SL	5		1	19	rr	rr 1x (c/o?)
A 254717	JC95745-13	1	NA	MS37990	V8260SL	5		1	20	rr	rr 1x (c/o?)
A 254718	JC95745-8	4	NA	MS37990	V8260SL	5		1	21	ok	
A 254719	IB		NA			5			22	ok	
A 254720	IB		NA			5			23	ok	
A 254721	IB		NA			5			24	ok	
A 254722	JC95745-3	4	500X	MS37990	V8260SL	0.10/50		1	25	rr	running at higher dilution due to last surr out for previous samples that ran at 2.5x (6:38 pm); l/d 25x
A 254723	IB		NA			5			26	ok	
A 254724	IB		NA			5			27	ok	
A 254725	IB		NA			5			28	ok	
A 254726	IB		NA			5			29	ok	
A 254727	IB		NA			5			30	ok	



# GCMS Volatile Run Log

Standard / Reagents		Lot #									
Standards	ABK: V019-2659-128.34	EC:V019-2659-143.4	Acrolein: V019-2659-135.9								
Standard Concentration	100-10,000 ppm	100 ppm	100 ppm								
Standards Exp	09/27/2019	09/12/2019	09/29/2019								
Standards	Ext ABK: V019-2659-138.2	Ext EC:V019-2659-145.8	Ext Acrolein: V019-2659-139.2								
Standard Concentration	100-10,000 ppm	100 ppm	100 ppm								
Standards Exp	10/3/19	9/12/19	10/3/19								
Internal Surrogate	V019-2659-141										
I/S Concentration	250/2,500ppm										
I/S Exp	10/4/2019										
Init Calib Quant Method	MD10725										
<b>Standard / Reagents</b>											
GCMSD	Instrument ID:	Sequence loaded by	Robert Szot								
Analysis Date	9/6/2019	Data processed by	Robert Szot								
Column	Rxi-624(60mx0.25mmx1.4um)	Batch ID	VD10725								
Method	V8260C	Matrix	SO								
Init Calib Date	9/6/19	Approved By:	KANYAV								
Init Calib Quant Method	MD10725	Approved Date:	9/9/2019 12:23:23 PM								
DI Purge Volume	5										
Data File	Sample ID	Workgroup #	Bot #	Dil	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	Purge (uL)	ALS #	Status	Comments
D 266053	BFB			NA		10	10	100	1	ok	6:16 pm
D 266054	IC10725-0.2			NA	8260 initial calibration	10	10	100	2	ok	1 uL ABK, EC, Acrolein / 500 mL DI H2O
D 266055	IC10725-0.5			NA	8260 initial calibration	10	10	100	3	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
D 266056	IC10725-1			NA	8260 initial calibration	10	10	100	4	ok	5 uL ABK, EC, Acrolein / 500 mL DI H2O
D 266057	IC10725-2			NA	8260 initial calibration	10	10	100	5	ok	10 uL ABK, EC, Acrolein / 500 mL DI H2O
D 266058	IC10725-4			NA	8260 initial calibration	10	10	100	6	ok	20 uL ABK, EC, Acrolein / 500 mL DI H2O



Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH/ Purge (uL)	ALS #	Status	Comments
D 266059	IC10725-8		NA		8260 initial calibration	10	10	100	7	ok	40 uL ABK, EC, Acrolein / 500 mL DI H2O
D 266060	IC10725-20		NA		8260 initial calibration	10	10	100	8	ok	40 uL ABK, EC, Acrolein / 200 mL DI H2O
D 266061	ICC10725-50		NA		8260 initial calibration	10	10	100	9	ok	100 uL ABK, EC, Acrolein / 200 mL DI H2O
D 266062	IC10725-100		NA		8260 initial calibration	10	10	100	10	ok	200 uL ABK, EC, Acrolein / 200 mL DI H2O
D 266063	IC10725-200		NA		8260 initial calibration	10	10	100	11	ok	400 uL ABK, EC, Acrolein / 200 mL DI H2O
D 266064	IB		NA		8260 initial calibration	10	10	100	12	ok	
D 266065	IB		NA			10	10	100	13	ok	
D 266066	ICV10725-50		NA		8260 initial calibration	10	10	100	14	ok	100 uL Ext ABK, Ext EC, Ext Acrolein / 200 mL DI H2O
D 266067	ICV10725-50		NA		8260 initial calibration	10	10	100	15	ok	100 uL Ext PA / 200 mL DI H2O



# GCMS Volatile Run Log

Standard / Reagents		Lot #	
Standards	ABK: V019-2688-22.37	EC: V019-2688-33.7	MeOH lot#: 188623, Fisher Chemical
Standard Concentration	100-10,000ppm	100ppm	
Standards Exp	10/23/2019	10/8/2019	10/27/2019
Internal Surrogate	V019-2688-014		
I/S Concentration	250/2,500ppm		
I/S Exp	10/17/2019		
Method	V8260C		
Init Calib Quant Method	MD10725		
Rough reviewed by	thienn		

Standard / Reagents	
GCMSD	Sequence loaded by thienn
Analysis Date	10/3/2019
Column	Rxi-624(60mx0.25mmx1.4um)
	Batch ID VD10747
	Matrix SO
	Approved By: MEI
	Approved Date: 10/8/2019 3:54:50 PM
DI Purge Volume	5

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	Purge (uL)	ALS #	Status	Comments
D 266669	IB		NA				5		1	OK	
D 266670	BFB/CC10725-20		NA				5		2	OK/OK	ABK,EC, Acrolein 10ul/50ml DI water, 7.38AM,
D 266671	BS		NA				5		3	OK	ABK,EC, Acrolein 25ul/50ml DI water
D 266672	IB		NA				5		4	OK	
D 266673	MB/JC80308J-3A		NA	MS37341	V8260SL	5	5	100	5	OK	Daily blank disp #55 MeOH lot # 188623, Fisher Chemical
D 266674	JC80306A-39		NA	MS31659	V8260SL	5	5	100	6	OK	R14-9/24/2019





Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/DI FV (ml)	Purge (uL)	ALS #	Status	Comments
D 266675	JC95555-4	3	NA	MS37920	V8260TCL20	3.75	10	100	7	OK/R	LL, report LL w/ last two istd failed per Jessica
D 266676	JC95555-2	3	NA	MS37920	V8260TCL20	4.26	10	100	8	OK	Dilution due to non targets.
D 266677	JC95649-1	6	NA	MS37954	V8260TCL20+	5.1	5	100	9	OK	Dilution due to non targets.
D 266678	JC95668-2	6	NA	MS37954	V8260BTX	4.4	5	100	10	OK/DL	+D, Dilution due to non targets.
D 266679	JC95489-6	4	NA	MS37874	V8260TCL20+	6.58	10	100	11	NG	C/O, RR 1X/10X
D 266680	JC95555-2MS	3	NA	MS37920	V8260TCL20	4.26	10	100	12	OK	ABK,EC, Acrolein 25ul/ SAMPLE
D 266681	JC95555-2MSD	3	NA	MS37920	V8260TCL20	4.26	10	100	13	OK	ABK,EC, Acrolein 25ul/ SAMPLE
D 266682	IB		NA				5		14	OK	
D 266683	JC95648-2	3	NA	MS37924	V8260BTXMT,VLS	5.4	5	1	15	OK	+D
D 266684	JC95648-3	3	NA	MS37924	V8260BTXMT,VLS	5.6	5	10	16	OK	+D
D 266685	JC95668-2	6	NA	MS37954	V8260BTX	4.4	5	5	17	OK	+D
D 266686	JC95489-6	4	NA	MS37874	V8260TCL20+	6.58	10	10	18	OK	+D
D 266687	JC95489-6	4	NA	MS37874	V8260TCL20+	6.58	10	100	19	OK	+D, Dilution due to non targets.
D 266688	IB		NA				5		20	OK	
D 266689	JC95555-1	3	NA	MS37920	V8260TCL20	4.87	10	2	21	OK	Dilution due to non targets.
D 266690	JC95555-3	3	NA	MS37920	V8260TCL20	4.02	10	2	22	OK	Dilution due to non targets.
D 266691	JC95922-3	3	NA	MS38050	V8260TCL20,124TMB,135TMB,TBA	5.18	10	2	23	OK	Dilution due to non targets.
D 266692	JC95922-8	3	NA	MS38050	V8260TCL20,124TMB,135TMB,TBA	4.8	10	2	24	OK	Dilution due to non targets.7.05PM
D 266693	IB		NA				5		25	OK	
D 266694	IB		NA				5		26	OK	



Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Smpl Amt (g)	MeOH/ DI FV (ml)	MeOH/ Purge (uL)	ALS #	Status	Comments
D 266695	IB		NA				5		27	OK	
D 266696	IB		NA				5		28	OK	
D 266697	IB		NA				5		29	OK	
D 266698	IB		NA				5		30	OK	

## MS Semi-volatiles

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### QC Data Summaries

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#### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

## Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-MB1	5P63438.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	4.6	ug/kg	
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

## Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-MB1	5P63438.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

# Method Blank Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-MB1	5P63438.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	71% 23-115%
4165-62-2	Phenol-d5	76% 27-114%
118-79-6	2,4,6-Tribromophenol	78% 19-152%
4165-60-0	Nitrobenzene-d5	82% 26-134%
321-60-8	2-Fluorobiphenyl	75% 39-124%
1718-51-0	Terphenyl-d14	85% 36-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	2.61	280	ug/kg	J
	Total TIC, Semi-Volatile		0	ug/kg	

8.1.1  
8

**Blank Spike Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-BS1	5P63439.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	933	56	44-122
59-50-7	4-Chloro-3-methyl phenol	1670	1100	66	50-123
120-83-2	2,4-Dichlorophenol	1670	998	60	48-122
105-67-9	2,4-Dimethylphenol	1670	1070	64	48-124
51-28-5	2,4-Dinitrophenol	3330	2560	77	34-146
534-52-1	4,6-Dinitro-o-cresol	1670	1170	70	49-140
95-48-7	2-Methylphenol	1670	890	53	40-126
	3&4-Methylphenol	1670	979	59	40-127
88-75-5	2-Nitrophenol	1670	983	59	44-133
100-02-7	4-Nitrophenol	1670	1220	73	35-153
87-86-5	Pentachlorophenol	1670	1290	77	15-149
108-95-2	Phenol	1670	930	56	50-109
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1040	62	44-132
95-95-4	2,4,5-Trichlorophenol	1670	978	59	45-124
88-06-2	2,4,6-Trichlorophenol	1670	983	59	57-122
83-32-9	Acenaphthene	1670	1000	60	53-119
208-96-8	Acenaphthylene	1670	1020	61	41-125
98-86-2	Acetophenone	1670	918	55	52-112
120-12-7	Anthracene	1670	1050	63	51-120
1912-24-9	Atrazine	1670	1360	82	49-139
56-55-3	Benzo(a)anthracene	1670	1120	67	54-118
50-32-8	Benzo(a)pyrene	1670	1080	65	55-121
205-99-2	Benzo(b)fluoranthene	1670	1080	65	57-116
191-24-2	Benzo(g,h,i)perylene	1670	1060	64	40-124
207-08-9	Benzo(k)fluoranthene	1670	1020	61	59-116
101-55-3	4-Bromophenyl phenyl ether	1670	1080	65	60-122
85-68-7	Butyl benzyl phthalate	1670	1140	68	51-134
92-52-4	1,1'-Biphenyl	1670	933	56	46-122
100-52-7	Benzaldehyde	1670	858	51	14-139
91-58-7	2-Chloronaphthalene	1670	931	56	49-120
106-47-8	4-Chloroaniline	1670	720	43	10-115
86-74-8	Carbazole	1670	1100	66	52-124
105-60-2	Caprolactam	1670	1180	71	16-139
218-01-9	Chrysene	1670	1060	64	51-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1080	65	36-131
111-44-4	bis(2-Chloroethyl)ether	1670	1010	61	41-131

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-BS1	5P63439.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1300	78	22-134
7005-72-3	4-Chlorophenyl phenyl ether	1670	976	59	56-118
121-14-2	2,4-Dinitrotoluene	1670	1010	61	57-131
606-20-2	2,6-Dinitrotoluene	1670	1030	62	57-132
91-94-1	3,3'-Dichlorobenzidine	3330	1630	49	10-129
123-91-1	1,4-Dioxane	1670	600	36	10-110
53-70-3	Dibenzo(a,h)anthracene	1670	1010	61	48-121
132-64-9	Dibenzofuran	1670	1020	61	51-119
84-74-2	Di-n-butyl phthalate	1670	1140	68	59-125
117-84-0	Di-n-octyl phthalate	1670	1150	69	47-147
84-66-2	Diethyl phthalate	1670	1080	65	57-116
131-11-3	Dimethyl phthalate	1670	1050	63	56-116
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1120	67	53-133
206-44-0	Fluoranthene	1670	1170	70	58-117
86-73-7	Fluorene	1670	1070	64	56-114
118-74-1	Hexachlorobenzene	1670	1060	64	50-128
87-68-3	Hexachlorobutadiene	1670	1040	62	43-129
77-47-4	Hexachlorocyclopentadiene	3330	1870	56	15-140
67-72-1	Hexachloroethane	1670	866	52	43-123
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1080	65	49-124
78-59-1	Isophorone	1670	1110	67	38-128
91-57-6	2-Methylnaphthalene	1670	1070	64	37-124
88-74-4	2-Nitroaniline	1670	1120	67	45-144
99-09-2	3-Nitroaniline	1670	905	54	10-134
100-01-6	4-Nitroaniline	1670	974	58	41-130
91-20-3	Naphthalene	1670	1000	60	44-116
98-95-3	Nitrobenzene	1670	1040	62	36-132
621-64-7	N-Nitroso-di-n-propylamine	1670	1060	64	38-125
86-30-6	N-Nitrosodiphenylamine	1670	1120	67	51-122
85-01-8	Phenanthrene	1670	1040	62	53-119
129-00-0	Pyrene	1670	1130	68	54-124
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	965	58	45-128

\* = Outside of Control Limits.



# Blank Spike Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-BS1	5P63439.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	63%	23-115%
4165-62-2	Phenol-d5	63%	27-114%
118-79-6	2,4,6-Tribromophenol	67%	19-152%
4165-60-0	Nitrobenzene-d5	70%	26-134%
321-60-8	2-Fluorobiphenyl	62%	39-124%
1718-51-0	Terphenyl-d14	86%	36-134%

8.2.1

8

\* = Outside of Control Limits.

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-MS	5P63456.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977
OP23015-MSD	5P63457.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977
JC95509-2	5P63458.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Compound	JC95509-2 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		1930	1220	63	1930	1320	68	8	10-137/34
59-50-7	4-Chloro-3-methyl phenol	ND		1930	1420	74	1930	1530	79	7	11-147/35
120-83-2	2,4-Dichlorophenol	ND		1930	1270	66	1930	1410	73	10	15-140/34
105-67-9	2,4-Dimethylphenol	ND		1930	1430	74	1930	1560	81	9	10-151/34
51-28-5	2,4-Dinitrophenol	ND		3860	2380	62	3860	2500	65	5	10-148/49
534-52-1	4,6-Dinitro-o-cresol	ND		1930	1200	62	1930	1200	62	0	10-150/48
95-48-7	2-Methylphenol	ND		1930	1220	63	1930	1310	68	7	10-138/33
	3&4-Methylphenol	ND		1930	1320	68	1930	1400	73	6	10-143/33
88-75-5	2-Nitrophenol	ND		1930	1280	66	1930	1380	71	8	10-150/39
100-02-7	4-Nitrophenol	ND		1930	1550	80	1930	1740	90	12	10-163/38
87-86-5	Pentachlorophenol	ND		1930	1560	81	1930	1720	89	10	10-148/39
108-95-2	Phenol	ND		1930	1080	56	1930	1200	62	11	24-114/32
58-90-2	2,3,4,6-Tetrachlorophenol	ND		1930	1340	69	1930	1530	79	13	14-140/38
95-95-4	2,4,5-Trichlorophenol	ND		1930	1260	65	1930	1430	74	13	10-146/36
88-06-2	2,4,6-Trichlorophenol	ND		1930	1300	67	1930	1430	74	10	16-148/36
83-32-9	Acenaphthene	ND		1930	1260	65	1930	1420	74	12	21-136/34
208-96-8	Acenaphthylene	ND		1930	1290	67	1930	1440	75	11	10-143/36
98-86-2	Acetophenone	ND		1930	1240	64	1930	1370	71	10	24-127/31
120-12-7	Anthracene	ND		1930	1310	68	1930	1440	75	9	10-147/39
1912-24-9	Atrazine	ND		1930	1660	86	1930	1850	96	11	10-161/38
56-55-3	Benzo(a)anthracene	28.0	J	1930	1370	70	1930	1530	78	11	10-151/41
50-32-8	Benzo(a)pyrene	29.3	J	1930	1300	66	1930	1470	75	12	10-149/40
205-99-2	Benzo(b)fluoranthene	38.2	J	1930	1320	66	1930	1420	72	7	10-147/42
191-24-2	Benzo(g,h,i)perylene	22.2	J	1930	1260	64	1930	1400	71	11	10-150/41
207-08-9	Benzo(k)fluoranthene	ND		1930	1250	65	1930	1470	76	16	12-142/41
101-55-3	4-Bromophenyl phenyl ether	ND		1930	1390	72	1930	1440	75	4	26-138/37
85-68-7	Butyl benzyl phthalate	9.9	J	1930	1480	76	1930	1550	80	5	24-143/36
92-52-4	1,1'-Biphenyl	ND		1930	1180	61	1930	1260	65	7	18-138/32
100-52-7	Benzaldehyde	ND		1930	1080	56	1930	1250	65	15	10-149/37
91-58-7	2-Chloronaphthalene	ND		1930	1170	61	1930	1310	68	11	24-130/31
106-47-8	4-Chloroaniline	ND		1930	649	34	1930	745	39	14	10-111/52
86-74-8	Carbazole	ND		1930	1360	70	1930	1440	75	6	12-146/39
105-60-2	Caprolactam	ND		1930	1400	73	1930	1600	83	13	10-147/40
218-01-9	Chrysene	28.9	J	1930	1320	67	1930	1480	75	11	10-151/41
111-91-1	bis(2-Chloroethoxy)methane	ND		1930	1340	69	1930	1470	76	9	10-144/35
111-44-4	bis(2-Chloroethyl)ether	ND		1930	1220	63	1930	1360	70	11	12-142/35

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-MS	5P63456.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977
OP23015-MSD	5P63457.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977
JC95509-2	5P63458.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Compound	JC95509-2 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		1930	1640	85	1930	1790	93	9	10-137/33
7005-72-3	4-Chlorophenyl phenyl ether	ND		1930	1230	64	1930	1370	71	11	21-136/35
121-14-2	2,4-Dinitrotoluene	ND		1930	1240	64	1930	1440	75	15	14-148/41
606-20-2	2,6-Dinitrotoluene	ND		1930	1350	70	1930	1520	79	12	14-152/40
91-94-1	3,3'-Dichlorobenzidine	ND		3860	1830	47	3860	2140	55	16	10-137/47
123-91-1	1,4-Dioxane	ND		1930	717	37	1930	778	40	8	10-110/40
53-70-3	Dibenzo(a,h)anthracene	ND		1930	1220	63	1930	1330	69	9	10-152/38
132-64-9	Dibenzofuran	ND		1930	1280	66	1930	1410	73	10	17-141/36
84-74-2	Di-n-butyl phthalate	9.1	J	1930	1440	74	1930	1490	77	3	26-137/35
117-84-0	Di-n-octyl phthalate	ND		1930	1400	73	1930	1570	81	11	23-145/36
84-66-2	Diethyl phthalate	ND		1930	1380	71	1930	1480	77	7	25-133/35
131-11-3	Dimethyl phthalate	ND		1930	1310	68	1930	1440	75	9	21-134/36
117-81-7	bis(2-Ethylhexyl)phthalate	26.8	J	1930	1450	74	1930	1640	84	12	26-144/39
206-44-0	Fluoranthene	49.9		1930	1360	68	1930	1550	78	13	10-151/44
86-73-7	Fluorene	ND		1930	1350	70	1930	1520	79	12	19-133/36
118-74-1	Hexachlorobenzene	ND		1930	1310	68	1930	1380	71	5	18-142/37
87-68-3	Hexachlorobutadiene	ND		1930	1310	68	1930	1450	75	10	16-137/32
77-47-4	Hexachlorocyclopentadiene	ND		3860	1680	44	3860	1750	45	4	10-150/50
67-72-1	Hexachloroethane	ND		1930	1130	59	1930	1170	61	3	10-131/38
193-39-5	Indeno(1,2,3-cd)pyrene	22.1	J	1930	1300	66	1930	1460	74	12	10-148/41
78-59-1	Isophorone	ND		1930	1400	73	1930	1560	81	11	11-142/33
91-57-6	2-Methylnaphthalene	ND		1930	1330	69	1930	1470	76	10	10-141/35
88-74-4	2-Nitroaniline	ND		1930	1350	70	1930	1530	79	13	14-156/38
99-09-2	3-Nitroaniline	ND		1930	1070	55	1930	1160	60	8	10-144/45
100-01-6	4-Nitroaniline	ND		1930	1070	55	1930	1240	64	15	10-156/44
91-20-3	Naphthalene	ND		1930	1270	66	1930	1390	72	9	10-136/36
98-95-3	Nitrobenzene	ND		1930	1320	68	1930	1460	76	10	10-142/34
621-64-7	N-Nitroso-di-n-propylamine	ND		1930	1340	69	1930	1440	75	7	10-142/31
86-30-6	N-Nitrosodiphenylamine	ND		1930	1390	72	1930	1510	78	8	10-156/37
85-01-8	Phenanthrene	32.3	J	1930	1320	67	1930	1450	73	9	11-145/45
129-00-0	Pyrene	53.5		1930	1500	75	1930	1650	83	10	11-155/44
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1930	1230	64	1930	1360	70	10	23-136/32

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23015-MS	5P63456.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977
OP23015-MSD	5P63457.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977
JC95509-2	5P63458.D	1	10/01/19	CS	09/28/19	OP23015	E5P2977

The QC reported here applies to the following samples:

Method: SW846 8270D

JC95555-1, JC95555-2, JC95555-3, JC95555-4

CAS No.	Surrogate Recoveries	MS	MSD	JC95509-2	Limits
367-12-4	2-Fluorophenol	67%	74%	54%	23-115%
4165-62-2	Phenol-d5	69%	73%	57%	27-114%
118-79-6	2,4,6-Tribromophenol	72%	75%	61%	19-152%
4165-60-0	Nitrobenzene-d5	74%	80%	63%	26-134%
321-60-8	2-Fluorobiphenyl	66%	71%	58%	39-124%
1718-51-0	Terphenyl-d14	91%	95%	69%	36-134%

8.3.1  
8

\* = Outside of Control Limits.

**Instrument Performance Check (DFTPP)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2940-DFTPP	Injection Date:	09/06/19
Lab File ID:	5P62557.D	Injection Time:	11:53
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	44283	46.8	Pass
68	Less than 2.0% of mass 69	556	0.59 (1.00) <sup>a</sup>	Pass
69	Mass 69 relative abundance	55569	58.7	Pass
70	Less than 2.0% of mass 69	436	0.46 (0.78) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	49805	52.6	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	94698	100.0	Pass
199	5.0 - 9.0% of mass 198	6628	7.00	Pass
275	10.0 - 30.0% of mass 198	23590	24.9	Pass
365	1.0 - 100.0% of mass 198	3879	4.10	Pass
441	Present, but less than mass 443	13837	14.6 (76.2) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	88808	93.8	Pass
443	17.0 - 23.0% of mass 442	18155	19.2 (20.4) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2940-IC2940	5P62558.D	09/06/19	13:58	02:05	Initial cal 100
E5P2940-IC2940	5P62565.D	09/06/19	14:21	02:28	Initial cal 1
E5P2940-IC2940	5P62566.D	09/06/19	14:46	02:53	Initial cal 80
E5P2940-ICC2940	5P62567.D	09/06/19	15:10	03:17	Initial cal 50
E5P2940-IC2940	5P62568.D	09/06/19	15:35	03:42	Initial cal 25
E5P2940-IC2940	5P62569.D	09/06/19	15:59	04:06	Initial cal 10
E5P2940-IC2940	5P62570.D	09/06/19	16:24	04:31	Initial cal 5
E5P2940-IC2940	5P62571.D	09/06/19	16:48	04:55	Initial cal 2
E5P2940-ICV2940	5P62574.D	09/06/19	18:01	06:08	Initial cal verification 50

**Instrument Performance Check (DFTPP)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2941-DFTPP	Injection Date:	09/06/19
Lab File ID:	5P62578.D	Injection Time:	19:35
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	36089	42.5	Pass
68	Less than 2.0% of mass 69	86	0.10 (0.19) <sup>a</sup>	Pass
69	Mass 69 relative abundance	44287	52.1	Pass
70	Less than 2.0% of mass 69	160	0.19 (0.36) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	42672	50.2	Pass
197	Less than 1.0% of mass 198	309	0.36	Pass
198	Base peak, 100% relative abundance	84997	100.0	Pass
199	5.0 - 9.0% of mass 198	5654	6.65	Pass
275	10.0 - 30.0% of mass 198	21271	25.0	Pass
365	1.0 - 100.0% of mass 198	3130	3.68	Pass
441	Present, but less than mass 443	12598	14.8 (81.0) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	78877	92.8	Pass
443	17.0 - 23.0% of mass 442	15561	18.3 (19.7) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2941-IC2941	5P62579.D	09/06/19	19:48	00:13	Initial cal 100
E5P2941-IC2941	5P62580.D	09/06/19	20:12	00:37	Initial cal 80
E5P2941-ICC2941	5P62581.D	09/06/19	20:37	01:02	Initial cal 50
E5P2941-IC2941	5P62582.D	09/06/19	21:01	01:26	Initial cal 25
E5P2941-IC2941	5P62583.D	09/06/19	21:25	01:50	Initial cal 10
E5P2941-IC2941	5P62584.D	09/06/19	21:50	02:15	Initial cal 5
E5P2941-IC2941	5P62585.D	09/06/19	22:13	02:38	Initial cal 2
E5P2941-IC2941	5P62586.D	09/06/19	22:37	03:02	Initial cal 1
E5P2941-ICV2941	5P62587.D	09/06/19	23:02	03:27	Initial cal verification 50

**Instrument Performance Check (DFTPP)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2942-DFTPP	Injection Date:	09/06/19
Lab File ID:	5P62588.D	Injection Time:	23:22
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	32892	43.3	Pass
68	Less than 2.0% of mass 69	199	0.26 (0.48) <sup>a</sup>	Pass
69	Mass 69 relative abundance	41598	54.7	Pass
70	Less than 2.0% of mass 69	171	0.22 (0.41) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	39068	51.4	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	76024	100.0	Pass
199	5.0 - 9.0% of mass 198	5333	7.01	Pass
275	10.0 - 30.0% of mass 198	18995	25.0	Pass
365	1.0 - 100.0% of mass 198	3154	4.15	Pass
441	Present, but less than mass 443	12521	16.5 (85.5) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	74168	97.6	Pass
443	17.0 - 23.0% of mass 442	14636	19.3 (19.7) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2942-IC2942	5P62589.D	09/06/19	23:34	00:12	Initial cal 100
E5P2942-IC2942	5P62590.D	09/06/19	23:58	00:36	Initial cal 80
E5P2942-ICC2942	5P62591.D	09/07/19	00:22	01:00	Initial cal 50
E5P2942-IC2942	5P62592.D	09/07/19	00:46	01:24	Initial cal 25
E5P2942-IC2942	5P62593.D	09/07/19	01:10	01:48	Initial cal 10
E5P2942-IC2942	5P62594.D	09/07/19	01:34	02:12	Initial cal 5
E5P2942-IC2942	5P62595.D	09/07/19	01:58	02:36	Initial cal 2
E5P2942-IC2942	5P62596.D	09/07/19	02:22	03:00	Initial cal 1
E5P2942-ICV2942	5P62597.D	09/07/19	02:46	03:24	Initial cal verification 50
E5P2942-ICV2942	5P62598.D	09/07/19	03:11	03:49	Initial cal verification 50
E5P2942-ICV2942	5P62599.D	09/07/19	03:35	04:13	Initial cal verification 50

**Instrument Performance Check (DFTPP)**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2943-DFTPP	Injection Date:	09/09/19
Lab File ID:	5P62601.D	Injection Time:	10:27
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	54986	49.9	Pass
68	Less than 2.0% of mass 69	409	0.37 (0.61) <sup>a</sup>	Pass
69	Mass 69 relative abundance	66930	60.7	Pass
70	Less than 2.0% of mass 69	346	0.31 (0.52) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	59658	54.1	Pass
197	Less than 1.0% of mass 198	464	0.42	Pass
198	Base peak, 100% relative abundance	110253	100.0	Pass
199	5.0 - 9.0% of mass 198	7343	6.66	Pass
275	10.0 - 30.0% of mass 198	28210	25.6	Pass
365	1.0 - 100.0% of mass 198	4268	3.87	Pass
441	Present, but less than mass 443	16045	14.6 (77.1) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	106464	96.6	Pass
443	17.0 - 23.0% of mass 442	20811	18.9 (19.5) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2943-ICV2940	5P62602.D	09/09/19	10:40	00:13	Initial cal verification 50
E5P2943-ICV2940	5P62603.D	09/09/19	11:04	00:37	Initial cal verification 50
E5P2943-ICV2940	5P62604.D	09/09/19	11:28	01:01	Initial cal verification 50
E5P2943-ICV2940	5P62605.D	09/09/19	11:52	01:25	Initial cal verification 50
E5P2943-ICV2940	5P62606.D	09/09/19	12:17	01:50	Initial cal verification 50



## Instrument Performance Check (DFTPP)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2977-DFTPP	Injection Date:	10/01/19
Lab File ID:	5P63433.D	Injection Time:	00:36
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	56653	50.5	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) <sup>a</sup>	Pass
69	Mass 69 relative abundance	70084	62.4	Pass
70	Less than 2.0% of mass 69	401	0.36 (0.57) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	60677	54.1	Pass
197	Less than 1.0% of mass 198	384	0.34	Pass
198	Base peak, 100% relative abundance	112229	100.0	Pass
199	5.0 - 9.0% of mass 198	7888	7.03	Pass
275	10.0 - 30.0% of mass 198	30640	27.3	Pass
365	1.0 - 100.0% of mass 198	5894	5.25	Pass
441	Present, but less than mass 443	15305	13.6 (95.5) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	81664	72.8	Pass
443	17.0 - 23.0% of mass 442	16019	14.3 (19.6) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2977-CC2940	5P63434.D	10/01/19	00:52	00:16	Continuing cal 50
E5P2977-CC2941	5P63435.D	10/01/19	01:16	00:40	Continuing cal 50
E5P2977-CC2942	5P63436.D	10/01/19	01:41	01:05	Continuing cal 50
OP23015-MB1	5P63438.D	10/01/19	02:31	01:55	Method Blank
OP23015-BS1	5P63439.D	10/01/19	02:55	02:19	Blank Spike
ZZZZZZ	5P63440.D	10/01/19	03:19	02:43	(unrelated sample)
ZZZZZZ	5P63441.D	10/01/19	03:43	03:07	(unrelated sample)
ZZZZZZ	5P63442.D	10/01/19	04:08	03:32	(unrelated sample)
ZZZZZZ	5P63443.D	10/01/19	04:32	03:56	(unrelated sample)
ZZZZZZ	5P63444.D	10/01/19	04:56	04:20	(unrelated sample)
ZZZZZZ	5P63445.D	10/01/19	05:21	04:45	(unrelated sample)
ZZZZZZ	5P63446.D	10/01/19	05:45	05:09	(unrelated sample)
ZZZZZZ	5P63447.D	10/01/19	06:09	05:33	(unrelated sample)
ZZZZZZ	5P63448.D	10/01/19	06:33	05:57	(unrelated sample)
JC95555-4	5P63449.D	10/01/19	06:58	06:22	MW-108(10-12)
ZZZZZZ	5P63450.D	10/01/19	07:22	06:46	(unrelated sample)
ZZZZZZ	5P63451.D	10/01/19	07:46	07:10	(unrelated sample)
JC95555-2	5P63452.D	10/01/19	08:10	07:34	MW-111(13-15)
ZZZZZZ	5P63453.D	10/01/19	08:34	07:58	(unrelated sample)

# Instrument Performance Check (DFTPP)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2977-DFTPP	Injection Date:	10/01/19
Lab File ID:	5P63433.D	Injection Time:	00:36
Instrument ID:	GCMS5P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	5P63454.D	10/01/19	08:59	08:23	(unrelated sample)
ZZZZZZ	5P63455.D	10/01/19	09:23	08:47	(unrelated sample)
OP23015-MS	5P63456.D	10/01/19	09:48	09:12	Matrix Spike
OP23015-MSD	5P63457.D	10/01/19	10:12	09:36	Matrix Spike Duplicate
JC95509-2	5P63458.D	10/01/19	10:37	10:01	(used for QC only; not part of job JC95555)
JC95555-1	5P63459.D	10/01/19	11:01	10:25	MW-111(11-13)
JC95555-3	5P63460.D	10/01/19	11:25	10:49	MW-108(5-7)
ZZZZZZ	5P63461.D	10/01/19	11:50	11:14	(unrelated sample)
ZZZZZZ	5P63462.D	10/01/19	12:15	11:39	(unrelated sample)

8.4.5  
8

## Instrument Performance Check (DFTPP)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2978-DFTPP	Injection Date:	10/01/19
Lab File ID:	5P63465.D	Injection Time:	13:27
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	36926	53.9	Pass
68	Less than 2.0% of mass 69	77	0.11 (0.17) <sup>a</sup>	Pass
69	Mass 69 relative abundance	46030	67.2	Pass
70	Less than 2.0% of mass 69	281	0.41 (0.61) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	39383	57.5	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	68448	100.0	Pass
199	5.0 - 9.0% of mass 198	4505	6.58	Pass
275	10.0 - 30.0% of mass 198	18388	26.9	Pass
365	1.0 - 100.0% of mass 198	3403	4.97	Pass
441	Present, but less than mass 443	8763	12.8 (95.7) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	46685	68.2	Pass
443	17.0 - 23.0% of mass 442	9152	13.4 (19.6) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2978-CC2940	5P63466.D	10/01/19	13:41	00:14	Continuing cal 25
E5P2978-CC2941	5P63467.D	10/01/19	14:05	00:38	Continuing cal 25
E5P2978-CC2942	5P63468.D	10/01/19	14:30	01:03	Continuing cal 25
OP23047-MB1	5P63469.D	10/01/19	14:55	01:28	Method Blank
OP23047-BS1	5P63470.D	10/01/19	15:19	01:52	Blank Spike
ZZZZZZ	5P63471.D	10/01/19	15:45	02:18	(unrelated sample)
ZZZZZZ	5P63472.D	10/01/19	16:09	02:42	(unrelated sample)
JC95745-5	5P63473.D	10/01/19	16:33	03:06	(used for QC only; not part of job JC95555)
ZZZZZZ	5P63474.D	10/01/19	16:58	03:31	(unrelated sample)
ZZZZZZ	5P63475.D	10/01/19	17:22	03:55	(unrelated sample)
ZZZZZZ	5P63476.D	10/01/19	17:47	04:20	(unrelated sample)
ZZZZZZ	5P63477.D	10/01/19	18:12	04:45	(unrelated sample)
ZZZZZZ	5P63478.D	10/01/19	18:36	05:09	(unrelated sample)
ZZZZZZ	5P63479.D	10/01/19	19:01	05:34	(unrelated sample)
ZZZZZZ	5P63480.D	10/01/19	19:25	05:58	(unrelated sample)
ZZZZZZ	5P63481.D	10/01/19	19:51	06:24	(unrelated sample)
ZZZZZZ	5P63482.D	10/01/19	20:16	06:49	(unrelated sample)
ZZZZZZ	5P63483.D	10/01/19	20:40	07:13	(unrelated sample)
ZZZZZZ	5P63484.D	10/01/19	21:05	07:38	(unrelated sample)

# Instrument Performance Check (DFTPP)

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2978-DFTPP	Injection Date:	10/01/19
Lab File ID:	5P63465.D	Injection Time:	13:27
Instrument ID:	GCMS5P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	5P63485.D	10/01/19	21:30	08:03	(unrelated sample)
ZZZZZZ	5P63486.D	10/01/19	21:54	08:27	(unrelated sample)
ZZZZZZ	5P63487.D	10/01/19	22:19	08:52	(unrelated sample)
ZZZZZZ	5P63488.D	10/01/19	22:43	09:16	(unrelated sample)
ZZZZZZ	5P63489.D	10/01/19	23:08	09:41	(unrelated sample)
OP23047-MS	5P63490.D	10/01/19	23:32	10:05	Matrix Spike
OP23047-MSD	5P63491.D	10/01/19	23:56	10:29	Matrix Spike Duplicate
JC95555-1	5P63492.D	10/02/19	00:21	10:54	MW-111(11-13)
JC95555-2	5P63493.D	10/02/19	00:45	11:18	MW-111(13-15)
JC95555-3	5P63494.D	10/02/19	01:10	11:43	MW-108(5-7)

8.4.6  
8

## Instrument Performance Check (DFTPP)

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample:	E5P2987-DFTPP	Injection Date:	10/07/19
Lab File ID:	5P63668.D	Injection Time:	08:57
Instrument ID:	GCMS5P		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	26650	48.9	Pass
68	Less than 2.0% of mass 69	82	0.15 (0.25) <sup>a</sup>	Pass
69	Mass 69 relative abundance	32552	59.7	Pass
70	Less than 2.0% of mass 69	77	0.14 (0.24) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	29514	54.1	Pass
197	Less than 1.0% of mass 198	150	0.28	Pass
198	Base peak, 100% relative abundance	54541	100.0	Pass
199	5.0 - 9.0% of mass 198	4212	7.72	Pass
275	10.0 - 30.0% of mass 198	15033	27.6	Pass
365	1.0 - 100.0% of mass 198	2873	5.27	Pass
441	Present, but less than mass 443	8141	14.9 (85.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	49149	90.1	Pass
443	17.0 - 23.0% of mass 442	9529	17.5 (19.4) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E5P2987-CC2940	5P63669.D	10/07/19	09:11	00:14	Continuing cal 25
E5P2987-CC2941	5P63670.D	10/07/19	09:35	00:38	Continuing cal 25
E5P2987-CC2942	5P63671.D	10/07/19	10:00	01:03	Continuing cal 25
OP23114-MB1	5P63674.D	10/07/19	11:14	02:17	Method Blank
ZZZZZZ	5P63675.D	10/07/19	11:39	02:42	(unrelated sample)
ZZZZZZ	5P63676.D	10/07/19	12:04	03:07	(unrelated sample)
JC95555-3	5P63684.D	10/07/19	12:29	03:32	MW-108(5-7)
ZZZZZZ	5P63677.D	10/07/19	12:54	03:57	(unrelated sample)
ZZZZZZ	5P63679.D	10/07/19	13:46	04:49	(unrelated sample)
ZZZZZZ	5P63681.D	10/07/19	14:36	05:39	(unrelated sample)
ZZZZZZ	5P63682.D	10/07/19	15:01	06:04	(unrelated sample)
ZZZZZZ	5P63683.D	10/07/19	15:26	06:29	(unrelated sample)
ZZZZZZ	5P63685.D	10/07/19	15:50	06:53	(unrelated sample)
ZZZZZZ	5P63686.D	10/07/19	16:16	07:19	(unrelated sample)
ZZZZZZ	5P63687.D	10/07/19	16:41	07:44	(unrelated sample)
ZZZZZZ	5P63688.D	10/07/19	17:06	08:09	(unrelated sample)
ZZZZZZ	5P63689.D	10/07/19	17:31	08:34	(unrelated sample)

# Internal Standard Area Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E5P2977-CC2940	Injection Date:	10/01/19
Lab File ID:	5P63434.D	Injection Time:	00:52
Instrument ID:	GCMS5P	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	127242	4.05	447480	5.24	247140	6.92	474654	8.36	421616	11.64	526815	13.61
Upper Limit <sup>a</sup>	254484	4.55	894960	5.74	494280	7.42	949308	8.86	843232	12.14	1053630	14.11
Lower Limit <sup>b</sup>	63621	3.55	223740	4.74	123570	6.42	237327	7.86	210808	11.14	263408	13.11

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP23015-MB1	141938	4.05	503030	5.23	278011	6.92	510010	8.35	459769	11.63	520225	13.60
OP23015-BS1	124238	4.05	421056	5.24	227852	6.92	408751	8.35	348893	11.63	429222	13.60
ZZZZZZ	133021	4.05	469486	5.24	264024	6.92	469042	8.35	413789	11.63	477129	13.60
ZZZZZZ	130354	4.05	475239	5.23	252092	6.92	452655	8.35	400373	11.63	442046	13.60
ZZZZZZ	137752	4.05	493724	5.23	267984	6.92	496867	8.35	381131	11.63	393499	13.60
ZZZZZZ	132373	4.05	476190	5.24	249882	6.92	450910	8.35	351302	11.63	373132	13.60
ZZZZZZ	134430	4.05	493579	5.24	258850	6.92	461469	8.35	371670	11.63	404924	13.60
ZZZZZZ	140659	4.05	496394	5.24	255061	6.92	470917	8.35	378417	11.63	403718	13.60
ZZZZZZ	146340	4.05	503378	5.24	265284	6.92	470198	8.35	382342	11.63	402087	13.60
ZZZZZZ	124400	4.05	435309	5.24	227842	6.92	421167	8.35	346115	11.63	376112	13.61
ZZZZZZ	122079	4.05	439255	5.24	234060	6.92	422821	8.35	336645	11.63	362014	13.61
JC95555-4	126197	4.05	436857	5.24	219059	6.92	385082	8.35	334267	11.63	375846	13.61
ZZZZZZ	123516	4.05	456585	5.24	239961	6.92	430424	8.35	348002	11.63	386063	13.61
ZZZZZZ	127893	4.05	456210	5.24	251913	6.92	466839	8.36	367048	11.64	421944	13.61
JC95555-2	118555	4.05	408011	5.24	214058	6.93	379249	8.36	284156	11.64	349969	13.62
ZZZZZZ	128370	4.05	459164	5.24	249090	6.92	442626	8.36	358551	11.64	409381	13.61
ZZZZZZ	124314	4.05	443007	5.24	230063	6.93	409568	8.36	326128	11.64	371981	13.62
ZZZZZZ	130933	4.05	450644	5.24	239709	6.93	433614	8.36	349613	11.64	394751	13.62
OP23015-MS	116333	4.06	404363	5.24	217274	6.93	382363	8.36	300510	11.65	372226	13.63
OP23015-MSD	103211	4.06	359424	5.24	191523	6.93	357980	8.36	284551	11.65	361035	13.63
JC95509-2	133116	4.06	471080	5.24	248866	6.93	448364	8.36	357074	11.65	403686	13.63
JC95555-1 <sup>c</sup>	141022	4.06	321153	5.27	239753	6.94	362053	8.40	351408	11.73	378057	13.70
JC95555-3	102394	4.06	217717*	5.28	191222	6.94	265458	8.41	284613	11.76	301311	13.72
ZZZZZZ	130883	4.06	460699	5.24	229079	6.93	335514	8.39	299520	11.71	338888	13.67
ZZZZZZ	101870	4.06	361703	5.24	198507	6.93	363857	8.37	297267	11.65	329165	13.64

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

8.5.1  
8

# Internal Standard Area Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E5P2977-CC2940	Injection Date:	10/01/19
Lab File ID:	5P63434.D	Injection Time:	00:52
Instrument ID:	GCMS5P	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(c) Dilution required due to viscosity of the extract matrix. Elevated detection limit due to high final volume of viscous extract.

8.5.1  
8

# Internal Standard Area Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E5P2978-CC2940	Injection Date:	10/01/19
Lab File ID:	5P63466.D	Injection Time:	13:41
Instrument ID:	GCMS5P	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	118155	4.05	418695	5.23	232929	6.92	450046	8.35	399856	11.64	452191	13.62
Upper Limit <sup>a</sup>	236310	4.55	837390	5.73	465858	7.42	900092	8.85	799712	12.14	904382	14.12
Lower Limit <sup>b</sup>	59078	3.55	209348	4.73	116465	6.42	225023	7.85	199928	11.14	226096	13.12

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP23047-MB1	111660	4.05	391269	5.23	218704	6.92	426996	8.35	373293	11.63	414330	13.61
OP23047-BS1	88607	4.05	314147	5.23	172225	6.92	316908	8.35	276880	11.63	334872	13.61
ZZZZZZ	100466	4.05	344766	5.23	189742	6.92	361845	8.35	334651	11.63	377263	13.61
ZZZZZZ	110656	4.05	371238	5.23	202229	6.92	369585	8.35	334076	11.64	374590	13.63
JC95745-5	120985	4.05	405547	5.24	273396	6.92	509136	8.35	446596	11.63	498450	13.61
ZZZZZZ	90893	4.05	270306	5.26	213559	6.92	402888	8.35	370748	11.63	411090	13.61
ZZZZZZ	107308	4.05	305786	5.25	237513	6.92	443844	8.35	408332	11.63	449374	13.61
ZZZZZZ	104846	4.05	396881	5.23	242774	6.92	457650	8.35	416731	11.63	470092	13.61
ZZZZZZ	90252	4.05	280182	5.25	201671	6.92	378311	8.35	348327	11.63	391578	13.61
ZZZZZZ	79969	4.05	206493*	5.29	190855	6.92	356082	8.35	333481	11.63	386804	13.61
ZZZZZZ	107962	4.05	388927	5.23	219358	6.92	417763	8.35	378619	11.63	425489	13.61
ZZZZZZ	86477	4.05	300716	5.23	187199	6.92	366293	8.35	337406	11.63	326017	13.60
ZZZZZZ	93695	4.05	337226	5.23	189415	6.92	358857	8.35	331800	11.63	382946	13.60
ZZZZZZ	112039	4.05	416412	5.23	236142	6.92	444325	8.35	406328	11.63	457700	13.60
ZZZZZZ	91657	4.05	325721	5.24	197241	6.92	379606	8.35	345864	11.63	392147	13.60
ZZZZZZ	115996	4.05	422870	5.23	233929	6.92	438902	8.35	402906	11.63	431410	13.60
ZZZZZZ	123630	4.05	434747	5.23	244897	6.92	463054	8.35	425203	11.63	474801	13.60
ZZZZZZ	102665	4.05	367219	5.23	200895	6.92	390970	8.35	349334	11.63	404971	13.60
ZZZZZZ	130855	4.05	460367	5.23	264420	6.92	499727	8.35	465099	11.63	521140	13.60
ZZZZZZ	93682	4.05	340236	5.23	194632	6.92	375656	8.35	343476	11.63	378294	13.60
ZZZZZZ	80262	4.06	187751 <sup>c</sup>	5.30	173613	6.92	335377	8.35	321542	11.63	372172	13.60
OP23047-MS	81211	4.05	273940	5.23	163976	6.92	310235	8.35	282967	11.63	338261	13.60
OP23047-MSD	88944	4.05	296485	5.24	180232	6.92	336304	8.35	300717	11.63	365528	13.60
JC95555-1	106423	4.05	376548	5.23	206126	6.92	397418	8.35	350413	11.63	418217	13.61
JC95555-2	102968	4.05	378526	5.23	203202	6.92	376768	8.35	312274	11.63	365361	13.61
JC95555-3	93128	4.05	338400	5.23	173684	6.92	336019	8.35	281525	11.63	337715	13.60

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

8.5.2  
8



# Internal Standard Area Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E5P2978-CC2940	Injection Date:	10/01/19
Lab File ID:	5P63466.D	Injection Time:	13:41
Instrument ID:	GCMS5P	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Outside control limits due to matrix interference. The results confirmed by re-analysis.

8.5.2  
8

# Internal Standard Area Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Check Std:	E5P2987-CC2940	Injection Date:	10/07/19
Lab File ID:	5P63669.D	Injection Time:	09:11
Instrument ID:	GCMS5P	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	125595	4.28	475773	5.47	274139	7.16	546748	8.62	468157	12.00	553989	14.00
Upper Limit <sup>a</sup>	251190	4.78	951546	5.97	548278	7.66	1093496	9.12	936314	12.50	1107978	14.50
Lower Limit <sup>b</sup>	62798	3.78	237887	4.97	137070	6.66	273374	8.12	234079	11.50	276995	13.50

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP23114-MB1	98003	4.28	388543	5.47	218121	7.16	429272	8.61	409539	11.99	465848	13.99
ZZZZZZ	86079	4.28	320970	5.47	177059	7.16	347925	8.61	276433	11.99	323165	13.99
ZZZZZZ	106789	4.28	396979	5.47	222656	7.16	421933	8.61	410129	11.99	473411	13.99
JC95555-3	102029	4.28	395543	5.47	223715	7.16	442086	8.61	408798	11.99	474473	13.99
ZZZZZZ	91275	4.28	321040	5.47	172796	7.16	320965	8.61	348474	11.99	416980	13.99
ZZZZZZ	95737	4.29	298662	5.47	212784	7.16	410578	8.61	387619	11.99	451742	14.00
ZZZZZZ	109345	4.28	418469	5.47	225351	7.16	431296	8.61	403603	11.99	450630	13.99
ZZZZZZ	103482	4.28	301995	5.47	173301	7.16	347119	8.62	344322	12.00	409062	14.00
ZZZZZZ	108561	4.28	339240	5.47	161233	7.17	328981	8.63	341028	12.00	356949	14.00
ZZZZZZ	88239	4.28	351471	5.47	198586	7.16	373733	8.61	316205	11.99	338940	13.99
ZZZZZZ	109791	4.28	425178	5.47	239791	7.16	467951	8.61	424581	12.00	462698	14.00
ZZZZZZ	107603	4.28	393449	5.47	220695	7.16	426524	8.62	419482	12.00	476500	14.00
ZZZZZZ	88473	4.28	331349	5.47	180262	7.16	350588	8.61	348680	11.99	371768	13.99
ZZZZZZ	108304	4.28	419230	5.47	230635	7.16	432252	8.61	390296	12.00	430620	14.00

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

8.5.3  
8

# Surrogate Recovery Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Method: SW846 8270D	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JC95555-1	5P63492.D	0* a	0* a	0* a	0* a	0* a	0* a
JC95555-1	5P63459.D	73	85	79	146* b	98	88
JC95555-2	5P63493.D	54	59	63	66	61	73
JC95555-2	5P63452.D	57	61	62	66	61	77
JC95555-3	5P63494.D	0* a	0* a	0* a	0* a	0* a	0* a
JC95555-3	5P63684.D	0* a	0* a	0* a	0* a	0* a	0* a
JC95555-3	5P63460.D	79	86	97	145* b	72	71
JC95555-4	5P63449.D	56	61	60	67	62	66
OP23015-BS1	5P63439.D	63	63	67	70	62	86
OP23015-MB1	5P63438.D	71	76	78	82	75	85
OP23015-MS	5P63456.D	67	69	72	74	66	91
OP23015-MSD	5P63457.D	74	73	75	80	71	95

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	23-115%
S2 = Phenol-d5	27-114%
S3 = 2,4,6-Tribromophenol	19-152%
S4 = Nitrobenzene-d5	26-134%
S5 = 2-Fluorobiphenyl	39-124%
S6 = Terphenyl-d14	36-134%

- (a) Outside control limits due to dilution.
- (b) Outside control limits due to matrix interference.

8.6.1  
8

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2940-ICC2940  
 Lab FileID: 5P62567.D

## Response Factor Report MS5P

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Fri Sep 06 17:39:49 2019  
 Response via : Initial Calibration

### Calibration Files

2 =5p62571.D 5 =5p62570.D 25 =5p62568.D 80 =5p62566.D  
 100 =5p62558.D 50 =5p62567.D 1 =5p62565.D 10 =5p62569.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	-----ISTD-----									
2) 1,4-Dioxane	1.028	0.810	0.815	0.804	0.835	0.783	1.028	0.865	0.871	11.46
3) Pyridine	2.232	2.459	2.297	2.070	2.034	2.113	2.399	2.474	2.260	7.77
4) N-Nitrosodim	1.378	1.458	1.264	1.225	1.274	1.245	1.141	1.352	1.292	7.70
5) 2-Fluorophen	1.761	1.802	1.644	1.630	1.677	1.634	1.738	1.763	1.706	3.97
6) Indene	2.908	2.908	2.516	2.342	2.311	2.385	3.133	2.788	2.662	11.73
7) Cumene	4.738	4.607	4.220	3.856	3.877	4.034	4.626	4.615	4.322	8.49
8) Phenol-d5		2.689	2.412	2.223	2.184	2.350		2.549	2.401	8.04
9) Phenol	3.080	3.092	2.620	2.211	2.185	2.425	3.136	2.968	2.715	14.90
10) Aniline	3.430	3.526	2.918	2.504	2.509	2.697		3.321	2.986	14.65
11) bis(2-Chloro	2.106	2.094	1.816	1.682	1.663	1.794	2.298	2.005	1.932	11.79
12) 2-Chlorophen	1.700	1.768	1.554	1.430	1.423	1.494	1.901	1.745	1.627	10.84
13) Decane	2.269	2.362	1.975	1.639		1.800		2.196	2.040	13.93
14) 1,3-Dichloro	1.871	1.863	1.550	1.459	1.451	1.483	1.851	1.640	1.646	11.44
15) 1,4-Dichloro	1.871	1.746	1.517	1.415	1.410	1.462	1.912	1.660	1.624	12.48
16) Benzyl alcoh	1.195	1.212	1.096	1.053	1.037	1.074	1.086	1.196	1.119	6.31
17) 1,2-Dichloro	1.701	1.624	1.502	1.319	1.302	1.398	1.675	1.629	1.519	10.63
18) Acetophenone	2.898	2.823	2.560	2.312	2.260	2.404	2.878	2.829	2.620	10.23
19) 2-Methylphen	1.934	1.831	1.589	1.425	1.385	1.471	1.755	1.767	1.645	12.47
20) 2,2'-oxybis(	2.654	2.692	2.176	1.876		2.012		2.411	2.303	14.65
21) 3&4-Methylph	1.829	1.813	1.623	1.432	1.367	1.506	1.915	1.780	1.658	12.37
22) n-Nitroso-di	1.738	1.620	1.469	1.227		1.332	1.717	1.707	1.544	13.23
23) Hexachloroet	0.655	0.691	0.567	0.555	0.561	0.567		0.647	0.606	9.27
24) I Naphthalene-d8	-----ISTD-----									
25) Nitrobenzene	0.712	0.703	0.624	0.547	0.542	0.550	0.666	0.657	0.625	11.31
26) Nitrobenzene	0.765	0.770	0.643	0.556	0.538	0.573	0.727	0.694	0.658	14.35
27) Quinoline	0.936	0.908	0.840	0.773	0.791	0.782	0.930	0.866	0.853	7.87
28) Isophorone	1.208	1.234	1.119	0.995	0.981	1.015	1.193	1.156	1.113	9.16
29) 2-Nitropheno	0.301	0.256	0.245	0.219	0.224	0.229	0.245	0.248	0.246	10.42
30) 2,4-Dimethyl	0.583	0.586	0.508	0.449	0.442	0.456	0.529	0.559	0.514	11.63
31) Benzoic acid	0.335	0.380	0.409	0.419	0.411	0.414	0.430	0.379	0.397	7.75
32) bis(2-Chloro	0.716	0.720	0.684	0.597	0.582	0.610	0.734	0.667	0.664	9.05
33) 2,4-Dichloro	0.364	0.376	0.348	0.305	0.297	0.314	0.366	0.341	0.339	8.90
34) 2,6-Dichloro	0.343	0.339	0.304	0.281	0.278	0.285	0.357	0.339	0.316	10.21
35) 1,3,5-Trichl	0.443	0.413	0.395	0.339	0.335	0.342	0.392	0.412	0.384	10.50
36) 1,2,4-Trichl	0.396	0.437	0.381	0.340	0.343	0.346	0.387	0.410	0.380	9.22
37) 1,2,3-Trichl	0.432	0.405	0.346	0.303	0.298	0.313	0.418	0.368	0.360	14.93
38) Naphthalene	1.283	1.209	1.146	1.011	1.010	1.019	1.332	1.200	1.151	11.02
39) 4-Chloroanil	0.550	0.586	0.528	0.480	0.460	0.487	0.654	0.555	0.537	11.84
40) 2,3-Dichloro	0.451	0.467	0.422	0.381	0.375	0.384	0.471	0.431	0.423	9.21
41) Caprolactam	0.310	0.280	0.265	0.247	0.240	0.250		0.281	0.268	12.19
42) Hexachlorobu	0.232	0.266	0.233	0.207	0.206	0.205	0.275	0.246	0.234	11.60
43) 4-Chloro-3-m	0.517	0.485	0.473	0.420	0.416	0.430	0.473	0.482	0.462	7.83
44) 2-Methylnaph	0.637	0.669	0.627	0.540	0.531	0.568	0.682	0.630	0.610	9.39
45) 1-Methylnaph	0.728	0.771	0.709	0.610	0.591	0.632	0.804	0.716	0.695	11.08

87.1

8

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2940-ICC2940  
 Lab FileID: 5P62567.D

46)	Dimethylnaph	0.766	0.764	0.675	0.609	0.599	0.622	0.769	0.724	0.691	10.70
47)	I Acenaphthene-d10	-----ISTD-----									
48)	Hexachlorocy	0.445	0.482	0.486	0.413	0.436	0.426	0.445	0.481	0.452	6.14
49)	2,4,6-Trichl	0.488	0.512	0.467	0.405	0.426	0.418	0.542	0.479	0.467	10.25
50)	2,4,5-Trichl	0.572	0.505	0.508	0.433	0.455	0.448	0.571	0.529	0.503	10.71
51)	2-Fluorobiph	1.779	1.787	1.560	1.369	1.385	1.387	1.784	1.614	1.583	11.83
52)	2-Chloronaph	1.499	1.521	1.334	1.112	1.113	1.162	1.407	1.411	1.320	12.81
53)	Biphenyl	2.032	1.950	1.765	1.520	1.520	1.595	2.030	1.810	1.778	12.13
54)	2-Nitroanili	0.807	0.852	0.730	0.593	0.581	0.634	0.830	0.766	0.724	14.94
55)	Dimethylphth	1.754	1.727	1.618	1.411	1.483	1.487	1.707	1.595	1.598	7.99
56)	Acenaphthyle	2.508	2.462	2.266	1.921	1.954	2.010	2.397	2.232	2.219	10.49
57)	2,6-Dinitrot	0.327	0.404	0.340	0.315	0.331	0.325	0.341	0.371	0.344	8.49
58)	3-Nitroanili	0.438	0.449	0.442	0.404	0.407	0.424	0.449	0.433	0.431	4.09
59)	Acenaphthene	1.517	1.505	1.357	1.199	1.208	1.201	1.452	1.372	1.351	10.00
60)	2,4-Dinitrop	0.158	0.186	0.222	0.218	0.232	0.214	0.127	0.201	0.195	18.49
61)	4-Nitropheno	0.264	0.292	0.317	0.274	0.284	0.286	0.308	0.299	0.290	6.04
62)	Dibenzofuran	2.254	2.160	1.902	1.609	1.637	1.684	2.255	1.941	1.930	14.03
63)	2,4-Dinitrot	0.472	0.505	0.472	0.395	0.399	0.413	0.547	0.474	0.460	11.72
64)	2,3,4,6-Tetr	0.411	0.429	0.420	0.391	0.411	0.394	0.430	0.405	0.411	3.54
65)	Diethylphtha	1.974	1.923	1.792	1.531	1.550	1.625	1.747	1.744	1.736	9.33
66)	Fluorene	1.656	1.712	1.623	1.343	1.406	1.457	1.537	1.586	1.540	8.35
67)	4-Chlorophen	0.902	0.873	0.742	0.645	0.649	0.671	0.812	0.804	0.762	13.23
68)	4-Nitroanili	0.473	0.487	0.434	0.378	0.389	0.405	0.505	0.442	0.439	10.63
69)	I Phenanthrene-d10	-----ISTD-----									
70)	4,6-Dinitro-	0.111	0.131	0.164	0.156	0.159	0.157		0.145	0.146	13.06
71)	n-Nitrosodip	0.654	0.664	0.606	0.543	0.535	0.553	0.633	0.607	0.600	8.45
72)	1,2-Diphenyl	1.417	1.406	1.291	1.067	1.010	1.129	1.377	1.303	1.250	12.78
73)	2,4,6-Tribo	0.164	0.162	0.163	0.156	0.161	0.158	0.162	0.162	0.161	1.60
74)	4-Bromopheny	0.266	0.280	0.263	0.243	0.245	0.240	0.274	0.257	0.258	5.78
75)	Hexachlorobe	0.330	0.335	0.319	0.293	0.293	0.294	0.351	0.315	0.316	6.93
76)	Pentachlorop	0.164	0.170	0.184	0.180	0.185	0.181	0.153	0.173	0.174	6.39
77)	Phenanthrene	1.201	1.211	1.111	0.996	0.980	1.022	1.199	1.157	1.110	8.77
78)	Anthracene	1.224	1.228	1.168	1.048	1.028	1.072	1.279	1.211	1.157	8.23
79)	Carbazole	1.240	1.285	1.213	1.113	1.092	1.152	1.262	1.271	1.204	6.23
80)	Di-n-butylph	1.676	1.740	1.702	1.537	1.478	1.576	1.645	1.693	1.631	5.59
81)	Fluoranthene	1.433	1.471	1.427	1.302	1.282	1.344	1.515	1.461	1.404	6.04
82)	Octadecane	0.807	0.816	0.767	0.648	0.587	0.657	0.683	0.761	0.716	11.64
83)	I Chrysene-d12	-----ISTD-----									
84)	Pyrene	1.766	1.830	1.707	1.556	1.619	1.566	1.704	1.663	1.676	5.68
85)	Terphenyl-d1	0.979	1.072	1.087	1.037	1.066	1.034	1.026	1.026	1.041	3.26
86)	Butylbenzylp	0.873	0.912	0.906	0.857	0.885	0.871	0.886	0.897	0.886	2.11
87)	Benzo[a]anth	1.557	1.577	1.542	1.455	1.504	1.468	1.654	1.456	1.527	4.57
88)	3,3'-Dichlor	0.626	0.645	0.649	0.595	0.613	0.608	0.699	0.612	0.631	5.25
89)	Chrysene	1.472	1.547	1.440	1.360	1.435	1.370	1.457	1.396	1.435	4.21
90)	bis(2-Ethylh	1.195	1.222	1.196	1.132	1.162	1.133	1.216	1.153	1.176	3.07
91)	I Perylene-d12	-----ISTD-----									
92)	Di-n-octylph	1.628	1.827	1.795	1.586	1.512	1.636	1.679	1.743	1.676	6.40
93)	Benzo[b]fluo	1.463	1.470	1.386	1.262	1.290	1.237	1.528	1.384	1.378	7.73
94)	Benzo[k]fluo	1.325	1.402	1.236	1.048	0.990	1.131	1.276	1.274	1.210	11.67
95)	Benzo[a]pyre	1.266	1.347	1.279	1.148	1.133	1.162	1.275	1.286	1.237	6.32
96)	Indeno[1,2,3	1.085	1.253	1.165	1.071	1.079	1.070	1.193	1.168	1.135	6.07
97)	Dibenz(a,h)a	1.090	1.188	1.085	0.971	0.994	0.984	1.149	1.082	1.068	7.41
98)	Dibenz[a,h]a	1.191	1.277	1.166	1.043	1.062	1.064	1.258	1.190	1.156	7.86
99)	7,12-Dimethy	0.680	0.659	0.623	0.543	0.545	0.559	0.707	0.644	0.620	10.29

# Initial Calibration Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2940-ICC2940  
Lab FileID: 5P62567.D

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100) Benzo[g,h,i] 1.273 1.230 1.113 1.028 1.035 1.044 1.310 1.173 1.151 9.77

-----  
(#) = Out of Range ### Number of calibration levels exceeded format ###

M5P2940.M Mon Sep 09 08:26:58 2019 RPT1

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2940-ICV2940  
 Lab FileID: 5P62574.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2940\5p62574.D Vial: 12  
 Acq On : 6 Sep 2019 6:01 pm Operator: hennys  
 Sample : icv2940-50 Inst : MS5P  
 Misc : op22049,e5p2940,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Fri Sep 06 17:39:49 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	0.00	4.33
3 t	Pyridine	2.260	2.130	5.8	136	0.00	2.01
10	Aniline	2.986	2.892	3.1	145	0.00	4.03
16 t	Benzyl alcohol	1.119	1.107	1.1	140	0.00	4.46
24 I	Naphthalene-d8	1.000	1.000	0.0	131	0.00	5.52
39 t	4-Chloroaniline	0.537	0.487	9.3	131	0.00	5.60
44 t	2-Methylnaphthalene	0.610	0.579	5.1	133	0.00	6.21
47 I	Acenaphthene-d10	1.000	1.000	0.0	108	0.00	7.21
54 t	2-Nitroaniline	0.724	0.669	7.6	114	0.00	6.78
58 t	3-Nitroaniline	0.431	0.483	-12.1	123	0.00	7.18
62 t	Dibenzofuran	1.930	2.083	-7.9	133	0.00	7.41
68 t	4-Nitroaniline	0.439	0.465	-5.9	124	-0.01	7.77
69 I	Phenanthrene-d10	1.000	1.000	0.0	125	0.00	8.67
79 t	Carbazole	1.204	1.102	8.5	119	0.00	8.93

(#) = Out of Range  
 5p62567.D M5P2940.M

SPCC's out = 0 CCC's out = 0  
 Mon Sep 09 08:27:35 2019 RPT1

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2941-ICC2941  
 Lab FileID: 5P62581.D

Response Factor Report MS5P

Method : C:\MSDCHEM\1\METHODS\M5P2941.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:02:39 2019  
 Response via : Initial Calibration

Calibration Files

2 =5p62585.D 5 =5p62584.D 25 =5p62582.D 80 =5p62580.D  
 100 =5p62579.D 50 =5p62581.D 1 =5p62586.D 10 =5p62583.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
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101)	1,4-Dichlorobenzene-d	-----ISTD-----									
102)	Benzaldehyde	1.486	1.517	1.376	1.283	1.165	1.298	1.421	1.420	1.371	8.49
107)	Phenanthrene-d10a	-----ISTD-----									
108)	Atrazine	0.103	0.098	0.104	0.096	0.094	0.101	0.074	0.097	0.096	9.80
109)	Pentachloron	0.050	0.060	0.060	0.055	0.053	0.058	0.055	0.059	0.056	6.31

(#) = Out of Range ### Number of calibration levels exceeded format ###

M5P2940.M Mon Sep 09 09:06:52 2019 RPT1

8.7.3

8



**Initial Calibration Verification**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2941-ICV2941  
 Lab FileID: 5P62587.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2940\5p62587.D Vial: 24  
 Acq On : 6 Sep 2019 11:02 pm Operator: hennys  
 Sample : icv2941-50 Inst : MS5P  
 Misc : op22049,e5p2941,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:02:39 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 1,4-Dichlorobenzene-d4b	1.000	1.000	0.0	88	0.00	4.32
102 Benzaldehyde	1.371	1.271	7.3	87	0.00	3.92
107 Phenanthrene-d10a	1.000	1.000	0.0	88	0.00	8.67
108 Atrazine	0.096	0.097	-1.0	84	0.01	8.41
109 Pentachloronitrobenzene	0.056	0.048	14.3	73	0.00	8.50

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62581a.D M5P2940.M Mon Sep 09 09:06:33 2019 RPT1

# Initial Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2942-ICC2942  
 Lab FileID: 5P62591.D

Response Factor Report MS5P

Method : C:\MSDCHEM\1\METHODS\M5P2942.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration

Calibration Files

2 =5p62595.D 5 =5p62594.D 25 =5p62592.D 80 =5p62590.D  
 100 =5p62589.D 50 =5p62591.D 1 =5p62596.D 10 =5p62593.D

Compound	2	5	25	80	100	50	1	10	Avg	%RSD
103) Acenaphthene-d10a	-----ISTD-----									
104) 1,2,4,5-Tetr	0.673	0.615	0.598	0.562	0.529	0.572	0.656	0.617	0.603	7.99
105) Chrysene-d12a	-----ISTD-----									
106) 1-chloroocta	0.473	0.507	0.524	0.463	0.464	0.506	0.413	0.522	0.484	7.85
110) I Naphthalene-d8a	-----ISTD-----									
111) Hydroquinone	0.307	0.377	0.397	0.382	0.394		0.361	0.369		9.02
116) Chrysene-d12c	-----ISTD-----									
117) Benzidine	0.692	0.850	0.922	0.729	0.686	0.881	0.951	0.816		13.69
120) Phenanthrene-d10b	-----ISTD-----									
121) o-terphenyl	0.519	0.536	0.549	0.502	0.475	0.505	0.532	0.547	0.521	4.92

(#) = Out of Range ### Number of calibration levels exceeded format ###

M5P2940.M Mon Sep 09 10:13:33 2019 RPT1

8.7.5  
8

**Initial Calibration Verification**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2942-ICV2942  
 Lab FileID: 5P62597.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2940\5p62597.D Vial: 24  
 Acq On : 7 Sep 2019 2:46 am Operator: hennys  
 Sample : icv2942-50 Inst : MS5P  
 Misc : op22049,e5p2942,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:47:08 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
103	Acenaphthene-d10a	1.000	1.000	0.0	89	0.00	7.21
104	1,2,4,5-Tetrachlorobenzen	0.603	0.548	9.1	85	0.00	6.37

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62597.D M5P2940.M Mon Sep 09 10:13:05 2019 RPT1

**Initial Calibration Verification**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2942-ICV2942  
 Lab FileID: 5P62598.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2940\5p62598.D Vial: 33  
 Acq On : 7 Sep 2019 3:11 am Operator: hennys  
 Sample : icv2942-50 Inst : MS5P  
 Misc : op22049,e5p2942,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:47:08 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
110 I Naphthalene-d8a	1.000	1.000	0.0	134	0.00	5.52
111 Hydroquinone	0.369	0.408	-10.6	139	0.02	5.96

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62591a.D M5P2940.M Mon Sep 09 10:13:08 2019 RPT1

**Initial Calibration Verification**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2942-ICV2942  
 Lab FileID: 5P62599.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2940\5p62599.D Vial: 34  
 Acq On : 7 Sep 2019 3:35 am Operator: hennys  
 Sample : icv2942-50 Inst : MS5P  
 Misc : op22049,e5p2942,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:47:08 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
116 Chrysene-d12c	1.000	1.000	0.0	109	0.00	12.05
117 Benzidine	0.816	0.909	-11.4	112	0.00	10.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62591a.D M5P2940.M Mon Sep 09 10:13:10 2019 RPT1

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2943-ICV2940  
 Lab FileID: 5P62602.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2943\5p62602.D Vial: 2  
 Acq On : 9 Sep 2019 10:40 am Operator: hennys  
 Sample : icv2940-50 Inst : MS5P  
 Misc : op22049,e5p2943,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 09:47:08 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	119	0.00	4.33
4 t	N-Nitrosodimethylamine	1.292	1.259	2.6	121	0.01	2.00
11 t	bis(2-Chloroethyl)ether	1.932	1.895	1.9	126	0.00	4.09
14 t	1,3-Dichlorobenzene	1.646	1.534	6.8	123	0.00	4.27
15 t	1,4-Dichlorobenzene	1.624	1.470	9.5	120	0.00	4.34
17 t	1,2-Dichlorobenzene	1.519	1.431	5.8	122	0.00	4.48
20 t	2,2'-oxybis(1-Chloropropa	2.303	2.552	-10.8	151	0.00	4.59
22 t	n-Nitroso-di-n-propylamin	1.544	1.393	9.8	125	0.00	4.71
23 t	Hexachloroethane	0.606	0.554	8.6	117	0.00	4.79
24 I	Naphthalene-d8	1.000	1.000	0.0	110	0.00	5.51
26 t	Nitrobenzene	0.658	0.582	11.6	111	0.00	4.86
28 t	Isophorone	1.113	1.020	8.4	110	-0.01	5.08
32 t	bis(2-Chloroethoxy)methan	0.664	0.630	5.1	113	0.00	5.31
36 t	1,2,4-Trichlorobenzene	0.380	0.367	3.4	116	0.00	5.47
38 t	Naphthalene	1.151	1.072	6.9	116	0.00	5.54
42 t	Hexachlorobutadiene	0.234	0.230	1.7	123	0.00	5.67
47 I	Acenaphthene-d10	1.000	1.000	0.0	103	0.00	7.21
48 t	Hexachlorocyclopentadiene	0.452	0.462	-2.2	98	0.00	6.37
52 t	2-Chloronaphthalene	1.320	1.300	1.5	116	-0.01	6.67
55 t	Dimethylphthalate	1.598	1.437	10.1	100	0.00	6.97
56 t	Acenaphthylene	2.219	2.009	9.5	103	0.00	7.07
57 t	2,6-Dinitrotoluene	0.344	0.296	14.0	94	0.00	7.02
59 t	Acenaphthene	1.351	1.185	12.3	102	0.00	7.24
63 t	2,4-Dinitrotoluene	0.460	0.409	11.1	102	-0.01	7.40
65 t	Diethylphthalate	1.736	1.544	11.1	98	0.00	7.66
66 t	Fluorene	1.540	1.447	6.0	103	0.00	7.74
67 t	4-Chlorophenyl-phenylethe	0.762	0.661	13.3	102	0.00	7.75
69 I	Phenanthrene-d10	1.000	1.000	0.0	106	0.00	8.67
71 t	n-Nitrosodiphenylamine	0.600	0.515	14.2	99	0.00	7.87
72 t	1,2-Diphenylhydrazine	1.250	1.039	16.9	98	0.00	7.91

# Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2943-ICV2940  
 Lab FileID: 5P62602.D

74	t	4-Bromophenyl-phenylether	0.258	0.235	8.9	104	0.00	8.23
75	t	Hexachlorobenzene	0.316	0.282	10.8	102	-0.01	8.28
77	t	Phenanthrene	1.110	0.977	12.0	101	0.00	8.69
78	t	Anthracene	1.157	1.003	13.3	99	0.00	8.75
80	t	Di-n-butylphthalate	1.631	1.364	16.4	92	0.00	9.37
81	t	Fluoranthene	1.404	1.225	12.7	97	0.00	10.07
83	I	Chrysene-d12	1.000	1.000	0.0	91	-0.01	12.05
84	t	Pyrene	1.676	1.642	2.0	96	-0.01	10.35
86	t	Butylbenzylphthalate	0.886	0.857	3.3	90	0.00	11.34
87	t	Benzo[a]anthracene	1.527	1.471	3.7	91	-0.01	12.03
88	t	3,3'-Dichlorobenzidine	0.631	0.646	-2.4	97	-0.01	12.04
89	t	Chrysene	1.435	1.363	5.0	91	-0.01	12.08
90	t	bis(2-Ethylhexyl)phthalat	1.176	1.089	7.4	88	0.00	12.23
91	I	Perylene-d12	1.000	1.000	0.0	87	-0.01	14.04
92	t	Di-n-octylphthalate	1.676	1.582	5.6	84	0.00	13.17
93	t	Benzo[b]fluoranthene	1.378	1.274	7.5	89	-0.01	13.54
94	t	Benzo[k]fluoranthene	1.210	1.178	2.6	90	-0.02	13.58
95	t	Benzo[a]pyrene	1.237	1.212	2.0	90	-0.01	13.97
96	t	Indeno[1,2,3-cd]pyrene	1.135	1.145	-0.9	93	-0.02	15.37
98	t	Dibenz[a,h]anthracene	1.156	1.089	5.8	89	-0.02	15.41
100	t	Benzo[g,h,i]perylene	1.151	1.143	0.7	95	-0.02	15.72

(#) = Out of Range  
 5p62591a.D M5P2940.M

SPCC's out = 0 CCC's out = 0  
 Mon Sep 09 11:24:01 2019 RPT1

8.7.9  
 8

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2943-ICV2940  
 Lab FileID: 5P62603.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2943\5p62603.D Vial: 3  
 Acq On : 9 Sep 2019 11:04 am Operator: hennys  
 Sample : icv2940-50 Inst : MS5P  
 Misc : op22049,e5p2943,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 11:33:33 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	133	0.00	4.32
2 t	1,4-Dioxane	0.871	0.790	9.3	134	0.02	1.77
6 t	Indene	2.662	2.527	5.1	141	0.00	4.56
7 t	Cumene	4.322	3.833	11.3	126	0.00	3.61
13 t	Decane	2.040	1.687	17.3	125	0.00	4.20
18 t	Acetophenone	2.620	2.226	15.0	123	-0.01	4.70
24 I	Naphthalene-d8	1.000	1.000	0.0	128	0.00	5.51
27 t	Quinoline	0.853	0.709	16.9	116	-0.02	5.85
40 t	2,3-Dichloroaniline	0.423	0.313	26.0	104	0.00	6.48
41 t	Caprolactam	0.268	0.192	28.4	98	-0.03	5.91
45 t	1-Methylnaphthalene	0.695	0.559	19.6	113	0.00	6.30
46 t	Dimethylnaphthalene	0.691	0.576	16.6	119	0.00	6.81
47 I	Acenaphthene-d10	1.000	1.000	0.0	122	0.00	7.21
53 t	Biphenyl	1.778	1.519	14.6	116	0.00	6.66
69 I	Phenanthrene-d10	1.000	1.000	0.0	109	0.00	8.67
82 t	Octadecane	0.716	0.669	6.6	111	0.00	8.62

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62591a.D M5P2940.M Mon Sep 09 11:53:03 2019 RPT1



## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2943-ICV2940  
 Lab FileID: 5P62604.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2943\5p62604.D Vial: 4  
 Acq On : 9 Sep 2019 11:28 am Operator: hennys  
 Sample : icv2940-50 Inst : MS5P  
 Misc : op22049,e5p2943,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 11:33:33 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	146	0.00	4.33
9 t	Phenol	2.715	2.064	24.0	124	0.00	4.02
12 t	2-Chlorophenol	1.627	1.326	18.5	129	0.00	4.14
19 t	2-Methylphenol	1.645	1.337	18.7	133	-0.01	4.57
21 t	3&4-Methylphenol	1.658	1.358	18.1	131	-0.01	4.72
24 I	Naphthalene-d8	1.000	1.000	0.0	128	0.00	5.51
29 t	2-Nitrophenol	0.246	0.203	17.5	114	0.00	5.16
30 t	2,4-Dimethylphenol	0.514	0.435	15.4	122	0.00	5.22
31 t	Benzoic acid	0.397	0.147	63.0#	46#	-0.02	5.34
33 t	2,4-Dichlorophenol	0.339	0.297	12.4	121	0.00	5.39
34 t	2,6-Dichlorophenol	0.316	0.290	8.2	131	0.00	5.60
43 t	4-Chloro-3-methylphenol	0.462	0.386	16.5	115	-0.02	6.08
47 I	Acenaphthene-d10	1.000	1.000	0.0	132	0.00	7.21
49 t	2,4,6-Trichlorophenol	0.467	0.405	13.3	128	-0.01	6.49
50 t	2,4,5-Trichlorophenol	0.503	0.398	20.9	117	-0.01	6.52
60 t	2,4-Dinitrophenol	0.195	0.144	26.2	85	-0.01	7.28
61 t	4-Nitrophenol	0.290	0.217	25.2	100	-0.02	7.36
64	2,3,4,6-Tetrachlorophenol	0.411	0.334	18.7	112	0.00	7.54
69 I	Phenanthrene-d10	1.000	1.000	0.0	123	0.00	8.67
70 t	4,6-Dinitro-2-methylpheno	0.146	0.127	13.0	99	0.00	7.80
76 t	Pentachlorophenol	0.174	0.173	0.6	114	0.00	8.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62591a.D M5P2940.M Mon Sep 09 11:53:05 2019 RPT1

## Initial Calibration Verification

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2943-ICV2940  
 Lab FileID: 5P62605.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2943\5p62605.D Vial: 5  
 Acq On : 9 Sep 2019 11:52 am Operator: hennys  
 Sample : icv2940-50 Inst : MS5P  
 Misc : op22049,e5p2943,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 12:23:06 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	153	0.00	4.33
5 S	2-Fluorophenol	1.706	1.400	17.9	131	0.00	3.17
8 S	Phenol-d5	2.401	1.921	20.0	125	0.00	4.01
24 I	Naphthalene-d8	1.000	1.000	0.0	147	0.00	5.51
25 S	Nitrobenzene-d5	0.625	0.515	17.6	138	0.00	4.84
47 I	Acenaphthene-d10	1.000	1.000	0.0	137	0.00	7.21
51 S	2-Fluorobiphenyl	1.583	1.365	13.8	135	0.00	6.57
69 I	Phenanthrene-d10	1.000	1.000	0.0	134	0.00	8.67
73 S	2,4,6-Tribromophenol	0.161	0.136	15.5	115	-0.01	7.97
83 I	Chrysene-d12	1.000	1.000	0.0	126	-0.02	12.04
85 S	Terphenyl-d14	1.041	1.001	3.8	122	0.00	10.61

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62591a.D M5P2940.M Mon Sep 09 12:26:11 2019 RPT1

**Initial Calibration Verification**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2943-ICV2940  
 Lab FileID: 5P62606.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2943\5p62606.D Vial: 6  
 Acq On : 9 Sep 2019 12:17 pm Operator: hennys  
 Sample : icv2940-50 Inst : MS5P  
 Misc : op22049,e5p2943,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Mon Sep 09 12:23:06 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
83 I Chrysene-d12	1.000	1.000	0.0	118	-0.02	12.04
88 t 3,3'-Dichlorobenzidine	0.631	0.571	9.5	111	-0.01	12.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p62591a.D M5P2940.M Mon Sep 09 12:38:44 2019 RPT1

## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2977-CC2940  
 Lab FileID: 5P63434.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2977\5p63434.D Vial: 2  
 Acq On : 1 Oct 2019 12:52 am Operator: chriss2  
 Sample : cc2940-50 Inst : MS5P  
 Misc : op22049,e5p2977,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Tue Oct 01 08:00:16 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	121	-0.03	4.05
2 t	1,4-Dioxane	0.871	0.870	0.1	135	-0.04	1.47
3 t	Pyridine	2.260	2.145	5.1	123	-0.04	1.74
4 t	N-Nitrosodimethylamine	1.292	1.326	-2.6	129	-0.04	1.71
5 S	2-Fluorophenol	1.706	1.680	1.5	125	-0.03	2.90
6 t	Indene	2.662	2.346	11.9	119	-0.03	4.29
7 t	Cumene	4.322	4.177	3.4	126	-0.03	3.33
8 S	Phenol-d5	2.401	2.191	8.7	113	-0.03	3.77
9 t	Phenol	2.715	2.341	13.8	117	-0.03	3.78
10	Aniline	2.986	2.659	11.0	120	-0.03	3.76
11 t	bis(2-Chloroethyl)ether	1.932	1.741	9.9	118	-0.03	3.83
12 t	2-Chlorophenol	1.627	1.424	12.5	116	-0.03	3.87
13 t	Decane	2.040	1.909	6.4	129	-0.03	3.94
14 t	1,3-Dichlorobenzene	1.646	1.436	12.8	118	-0.03	4.00
15 t	1,4-Dichlorobenzene	1.624	1.334	17.9	111	-0.03	4.07
16 t	Benzyl alcohol	1.119	0.981	12.3	111	-0.03	4.20
17 t	1,2-Dichlorobenzene	1.519	1.281	15.7	111	-0.03	4.21
18 t	Acetophenone	2.620	2.347	10.4	118	-0.03	4.44
19 t	2-Methylphenol	1.645	1.381	16.0	114	-0.03	4.33
20 t	2,2'-oxybis(1-Chloropropa	2.303	2.151	6.6	130	-0.03	4.32
21 t	3&4-Methylphenol	1.658	1.494	9.9	120	-0.03	4.47
22 t	n-Nitroso-di-n-propylamin	1.544	1.444	6.5	132	-0.02	4.45
23 t	Hexachloroethane	0.606	0.545	10.1	117	-0.03	4.52
24 I	Naphthalene-d8	1.000	1.000	0.0	116	-0.03	5.24
25 S	Nitrobenzene-d5	0.625	0.602	3.7	127	-0.03	4.57
26 t	Nitrobenzene	0.658	0.619	5.9	125	-0.03	4.59
27 t	Quinoline	0.853	0.801	6.1	119	-0.02	5.59
28 t	Isophorone	1.113	1.088	2.2	124	-0.02	4.82
29 t	2-Nitrophenol	0.246	0.218	11.4	111	-0.03	4.89
30 t	2,4-Dimethylphenol	0.514	0.467	9.1	119	-0.03	4.97
31 t	Benzoic acid	0.397	0.431	-8.6	121	0.00	5.13
32 t	bis(2-Chloroethoxy)methan	0.664	0.615	7.4	117	-0.02	5.05
33 t	2,4-Dichlorophenol	0.339	0.307	9.4	113	-0.03	5.13
34 t	2,6-Dichlorophenol	0.316	0.274	13.3	112	-0.03	5.34
35	1,3,5-Trichlorobenzene	0.384	0.327	14.8	111	-0.03	4.90
36 t	1,2,4-Trichlorobenzene	0.380	0.335	11.8	112	-0.03	5.20
37	1,2,3-Trichlorobenzene	0.360	0.287	20.3#	107	-0.03	5.40
38 t	Naphthalene	1.151	0.980	14.9	112	-0.03	5.26
39 t	4-Chloroaniline	0.537	0.441	17.9	105	-0.03	5.33
40 t	2,3-Dichloroaniline	0.423	0.383	9.5	115	-0.03	6.21
41 t	Caprolactam	0.268	0.291	-8.6	135	-0.01	5.68

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2977-CC2940  
 Lab FileID: 5P63434.D

42	t	Hexachlorobutadiene	0.234	0.205	12.4	116	-0.03	5.40
43	t	4-Chloro-3-methylphenol	0.462	0.453	1.9	122	-0.03	5.84
44	t	2-Methylnaphthalene	0.610	0.546	10.5	111	-0.03	5.93
45	t	1-Methylnaphthalene	0.695	0.586	15.7	108	-0.03	6.02
46	t	Dimethylnaphthalene	0.691	0.593	14.2	111	-0.03	6.53
47	I	Acenaphthene-d10	1.000	1.000	0.0	116	-0.03	6.92
48	t	Hexachlorocyclopentadiene	0.452	0.399	11.7	109	-0.03	6.09
49	t	2,4,6-Trichlorophenol	0.467	0.412	11.8	114	-0.03	6.22
50	t	2,4,5-Trichlorophenol	0.503	0.450	10.5	117	-0.03	6.26
51	S	2-Fluorobiphenyl	1.583	1.354	14.5	113	-0.03	6.30
52	t	2-Chloronaphthalene	1.320	1.061	19.6	106	-0.03	6.39
53	t	Biphenyl	1.778	1.447	18.6	105	-0.03	6.38
54	t	2-Nitroaniline	0.724	0.759	-4.8	139	-0.03	6.51
55	t	Dimethylphthalate	1.598	1.490	6.8	116	-0.03	6.70
56	t	Acenaphthylene	2.219	1.882	15.2	109	-0.03	6.78
57	t	2,6-Dinitrotoluene	0.344	0.319	7.3	114	-0.03	6.75
58	t	3-Nitroaniline	0.431	0.405	6.0	111	-0.03	6.91
59	t	Acenaphthene	1.351	1.157	14.4	112	-0.03	6.95
60	t	2,4-Dinitrophenol	0.195	0.222	-13.8	120	-0.03	7.01
61	t	4-Nitrophenol	0.290	0.341	-17.6	138	-0.03	7.12
62	t	Dibenzofuran	1.930	1.622	16.0	112	-0.03	7.12
63	t	2,4-Dinitrotoluene	0.460	0.421	8.5	118	-0.03	7.14
64	t	2,3,4,6-Tetrachlorophenol	0.411	0.394	4.1	116	-0.03	7.26
65	t	Diethylphthalate	1.736	1.654	4.7	118	-0.03	7.39
66	t	Fluorene	1.540	1.382	10.3	110	-0.03	7.46
67	t	4-Chlorophenyl-phenylethe	0.762	0.644	15.5	111	-0.03	7.47
68	t	4-Nitroaniline	0.439	0.373	15.0	107	-0.02	7.50
69	I	Phenanthrene-d10	1.000	1.000	0.0	120	-0.03	8.36
70	t	4,6-Dinitro-2-methylpheno	0.146	0.148	-1.4	113	-0.03	7.54
71	t	n-Nitrosodiphenylamine	0.600	0.518	13.7	113	-0.03	7.59
72	t	1,2-Diphenylhydrazine	1.250	1.152	7.8	123	-0.03	7.62
73	S	2,4,6-Tribromophenol	0.161	0.147	8.7	112	-0.03	7.69
74	t	4-Bromophenyl-phenylether	0.258	0.236	8.5	118	-0.03	7.94
75	t	Hexachlorobenzene	0.316	0.275	13.0	113	-0.03	7.99
76	t	Pentachlorophenol	0.174	0.172	1.1	114	-0.03	8.19
77	t	Phenanthrene	1.110	0.941	15.2	111	-0.03	8.38
78	t	Anthracene	1.157	0.969	16.2	109	-0.03	8.43
79	t	Carbazole	1.204	1.089	9.6	114	-0.04	8.61
80	t	Di-n-butylphthalate	1.631	1.572	3.6	120	-0.04	9.05
81	t	Fluoranthene	1.404	1.336	4.8	120	-0.04	9.70
82	t	Octadecane	0.716	0.695	2.9	127	-0.03	8.33
83	I	Chrysene-d12	1.000	1.000	0.0	124	-0.05	11.64
84	t	Pyrene	1.676	1.492	11.0	118	-0.04	9.98
85	S	Terphenyl-d14	1.041	0.963	7.5	116	-0.05	10.23
86	t	Butylbenzylphthalate	0.886	0.838	5.4	120	-0.04	10.95
87	t	Benzo[a]anthracene	1.527	1.416	7.3	120	-0.05	11.62
88	t	3,3'-Dichlorobenzidine	0.631	0.532	15.7	109	-0.05	11.64
89	t	Chrysene	1.435	1.220	15.0	111	-0.05	11.68
90	t	bis(2-Ethylhexyl)phthalat	1.176	1.109	5.7	122	-0.05	11.84
91	I	Perylene-d12	1.000	1.000	0.0	121	-0.05	13.61
92	t	Di-n-octylphthalate	1.676	1.617	3.5	120	-0.05	12.77
93	t	Benzo[b]fluoranthene	1.378	1.237	10.2	121	-0.05	13.12
94	t	Benzo[k]fluoranthene	1.210	1.041	14.0	112	-0.05	13.16
95	t	Benzo[a]pyrene	1.237	1.121	9.4	117	-0.05	13.53
96	t	Indeno[1,2,3-cd]pyrene	1.135	1.087	4.2	123	-0.06	14.89
97	t	Dibenz(a,h)acridine	1.068	0.982	8.1	121	-0.05	14.65

8.7.14

8

# Continuing Calibration Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2977-CC2940  
Lab FileID: 5P63434.D

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98 t	Dibenz[a,h]anthracene	1.156	1.039	10.1	119	-0.05	14.93
99 t	7,12-Dimethylbenz(a)anthr	0.620	0.517	16.6	112	-0.05	13.13
100 t	Benzo[g,h,i]perylene	1.151	1.053	8.5	122	-0.06	15.20

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(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
5p63331.D    M5P2940.M                      Tue Oct 01 08:02:55 2019    RPT1

8.7.14

8

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2977-CC2941  
 Lab FileID: 5P63435.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2977\5p63435.D Vial: 3  
 Acq On : 1 Oct 2019 1:16 am Operator: chriss2  
 Sample : cc2941-50 Inst : MS5P  
 Misc : op22049,e5p2977,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Tue Oct 01 08:00:16 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 1,4-Dichlorobenzene-d4b	1.000	1.000	0.0	101	-0.03	4.05
102 Benzaldehyde	1.371	1.288	6.1	100	-0.27	3.65
107 Phenanthrene-d10a	1.000	1.000	0.0	103	-0.04	8.35
108 Atrazine	0.096	0.110	-14.6	112	-0.03	8.13
109 Pentachloronitrobenzene	0.056	0.059	-5.4	105	0.00	8.20

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p63331.D M5P2940.M Tue Oct 01 08:02:57 2019 RPT1

8.7.15  
8

**Continuing Calibration Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2977-CC2942  
 Lab FileID: 5P63436.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2977\5p63436.D Vial: 4  
 Acq On : 1 Oct 2019 1:41 am Operator: chriss2  
 Sample : cc2942-50 Inst : MS5P  
 Misc : op22049,e5p2977,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Tue Oct 01 08:00:16 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
103 Acenaphthene-d10a	1.000	1.000	0.0	114	-0.03	6.92
104 1,2,4,5-Tetrachlorobenzen	0.603	0.579	4.0	115	-0.28	6.09
105 Chrysene-d12a	1.000	1.000	0.0	122	-0.06	11.63
106 s 1-chlorooctadecane	0.484	0.545	-12.6	131	-0.22	9.67
110 I Naphthalene-d8a	1.000	1.000	0.0	111	-0.03	5.24
111 Hydroquinone	0.369	0.480	-30.1#	135	-0.13	5.71
116 Chrysene-d12c	1.000	1.000	0.0	122	-0.06	11.63
117 Benzidine	0.816	0.871	-6.7	121	-0.09	9.91
120 Phenanthrene-d10b	1.000	1.000	0.0	117	-0.04	8.35
121 S o-terphenyl	0.521	0.527	-1.2	122	-0.21	8.79

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p63331.D M5P2940.M Tue Oct 01 08:02:59 2019 RPT1



## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2978-CC2940  
 Lab FileID: 5P63466.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...eel\5p2978\5p63466.d Vial: 2  
 Acq On : 1 Oct 2019 1:41 pm Operator: hennys  
 Sample : cc2940-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Wed Oct 02 00:52:59 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	4.05
2 t	1,4-Dioxane	0.871	0.760	12.7	96	0.00	1.47
3 t	Pyridine	2.260	2.084	7.8	94	0.00	1.74
4 t	N-Nitrosodimethylamine	1.292	1.198	7.3	98	0.00	1.71
5 S	2-Fluorophenol	1.706	1.577	7.6	99	0.00	2.91
6 t	Indene	2.662	2.486	6.6	102	0.00	4.28
7 t	Cumene	4.322	4.304	0.4	105	0.00	3.33
8 S	Phenol-d5	2.401	2.312	3.7	99	0.00	3.77
9 t	Phenol	2.715	2.274	16.2	90	0.00	3.79
10	Aniline	2.986	2.930	1.9	104	0.00	3.75
11 t	bis(2-Chloroethyl)ether	1.932	1.797	7.0	102	0.00	3.82
12 t	2-Chlorophenol	1.627	1.484	8.8	99	0.00	3.87
13 t	Decane	2.040	2.194	-7.5	115	0.00	3.93
14 t	1,3-Dichlorobenzene	1.646	1.520	7.7	101	0.00	3.99
15 t	1,4-Dichlorobenzene	1.624	1.420	12.6	97	0.00	4.06
16 t	Benzyl alcohol	1.119	1.051	6.1	99	0.00	4.20
17 t	1,2-Dichlorobenzene	1.519	1.402	7.7	96	0.00	4.20
18 t	Acetophenone	2.620	2.548	2.7	103	0.00	4.43
19 t	2-Methylphenol	1.645	1.494	9.2	97	0.00	4.33
20 t	2,2'-oxybis(1-Chloropropa	2.303	2.310	-0.3	110	0.00	4.32
21 t	3&4-Methylphenol	1.658	1.565	5.6	100	0.00	4.47
22 t	n-Nitroso-di-n-propylamin	1.544	1.593	-3.2	112	0.00	4.45
23 t	Hexachloroethane	0.606	0.574	5.3	105	0.00	4.51
24 I	Naphthalene-d8	1.000	1.000	0.0	106	0.00	5.23
25 S	Nitrobenzene-d5	0.625	0.640	-2.4	108	0.00	4.57
26 t	Nitrobenzene	0.658	0.694	-5.5	114	0.00	4.58
27 t	Quinoline	0.853	0.816	4.3	103	0.00	5.58
28 t	Isophorone	1.113	1.153	-3.6	109	0.00	4.82
29 t	2-Nitrophenol	0.246	0.228	7.3	98	0.00	4.89
30 t	2,4-Dimethylphenol	0.514	0.508	1.2	106	0.00	4.97
31 t	Benzoic acid	0.397	0.472	-18.9	122	0.00	5.11
32 t	bis(2-Chloroethoxy)methan	0.664	0.646	2.7	100	0.00	5.04
33 t	2,4-Dichlorophenol	0.339	0.338	0.3	103	0.00	5.13
34 t	2,6-Dichlorophenol	0.316	0.297	6.0	103	0.00	5.33
35	1,3,5-Trichlorobenzene	0.384	0.368	4.2	99	0.00	4.90
36 t	1,2,4-Trichlorobenzene	0.380	0.363	4.5	101	0.00	5.19
37	1,2,3-Trichlorobenzene	0.360	0.324	10.0	99	0.00	5.40
38 t	Naphthalene	1.151	1.054	8.4	97	0.00	5.25
39 t	4-Chloroaniline	0.537	0.492	8.4	98	0.00	5.33
40 t	2,3-Dichloroaniline	0.423	0.399	5.7	100	0.00	6.20
41 t	Caprolactam	0.268	0.296	-10.4	118	0.00	5.67

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2978-CC2940  
 Lab FileID: 5P63466.D

42 t	Hexachlorobutadiene	0.234	0.229	2.1	104	0.00	5.39
43 t	4-Chloro-3-methylphenol	0.462	0.483	-4.5	108	0.00	5.84
44 t	2-Methylnaphthalene	0.610	0.604	1.0	102	0.00	5.92
45 t	1-Methylnaphthalene	0.695	0.670	3.6	100	0.00	6.01
46 t	Dimethylnaphthalene	0.691	0.644	6.8	101	0.00	6.53
47 I	Acenaphthene-d10	1.000	1.000	0.0	109	0.00	6.92
48 t	Hexachlorocyclopentadiene	0.452	0.412	8.8	92	0.00	6.09
49 t	2,4,6-Trichlorophenol	0.467	0.434	7.1	101	0.00	6.22
50 t	2,4,5-Trichlorophenol	0.503	0.480	4.6	103	0.00	6.26
51 S	2-Fluorobiphenyl	1.583	1.460	7.8	102	0.00	6.29
52 t	2-Chloronaphthalene	1.320	1.187	10.1	97	0.00	6.39
53 t	Biphenyl	1.778	1.615	9.2	100	0.00	6.38
54 t	2-Nitroaniline	0.724	0.841	-16.2	125	0.00	6.50
55 t	Dimethylphthalate	1.598	1.545	3.3	104	0.00	6.70
56 t	Acenaphthylene	2.219	2.057	7.3	99	0.00	6.78
57 t	2,6-Dinitrotoluene	0.344	0.344	0.0	110	0.00	6.74
58 t	3-Nitroaniline	0.431	0.431	0.0	106	0.00	6.90
59 t	Acenaphthene	1.351	1.275	5.6	102	0.00	6.95
60 t	2,4-Dinitrophenol	0.195	0.220	-12.8	108	0.00	7.01
61 t	4-Nitrophenol	0.290	0.357	-23.1#	123	0.00	7.12
62 t	Dibenzofuran	1.930	1.794	7.0	103	0.00	7.12
63 t	2,4-Dinitrotoluene	0.460	0.450	2.2	104	0.00	7.13
64	2,3,4,6-Tetrachlorophenol	0.411	0.401	2.4	104	0.00	7.26
65 t	Diethylphthalate	1.736	1.802	-3.8	110	0.00	7.39
66 t	Fluorene	1.540	1.520	1.3	102	0.00	7.45
67 t	4-Chlorophenyl-phenylethe	0.762	0.727	4.6	107	0.00	7.47
68 t	4-Nitroaniline	0.439	0.392	10.7	98	0.00	7.49
69 I	Phenanthrene-d10	1.000	1.000	0.0	113	0.00	8.35
70 t	4,6-Dinitro-2-methylpheno	0.146	0.151	-3.4	104	0.00	7.54
71 t	n-Nitrosodiphenylamine	0.600	0.556	7.3	104	0.00	7.58
72 t	1,2-Diphenylhydrazine	1.250	1.251	-0.1	109	0.00	7.62
73 S	2,4,6-Tribromophenol	0.161	0.150	6.8	104	0.00	7.68
74 t	4-Bromophenyl-phenylether	0.258	0.240	7.0	103	0.00	7.94
75 t	Hexachlorobenzene	0.316	0.292	7.6	103	0.00	7.99
76 t	Pentachlorophenol	0.174	0.177	-1.7	108	0.00	8.19
77 t	Phenanthrene	1.110	1.004	9.5	102	0.00	8.38
78 t	Anthracene	1.157	1.073	7.3	104	0.00	8.43
79 t	Carbazole	1.204	1.151	4.4	107	0.00	8.61
80 t	Di-n-butylphthalate	1.631	1.696	-4.0	113	0.00	9.04
81 t	Fluoranthene	1.404	1.398	0.4	111	0.00	9.70
82 t	Octadecane	0.716	0.799	-11.6	118	0.00	8.33
83 I	Chrysene-d12	1.000	1.000	0.0	117	0.00	11.64
84 t	Pyrene	1.676	1.544	7.9	106	0.00	9.98
85 S	Terphenyl-d14	1.041	0.995	4.4	107	0.00	10.23
86 t	Butylbenzylphthalate	0.886	0.884	0.2	114	0.00	10.95
87 t	Benzo[a]anthracene	1.527	1.435	6.0	109	0.00	11.62
88 t	3,3'-Dichlorobenzidine	0.631	0.537	14.9	97	0.00	11.64
89 t	Chrysene	1.435	1.273	11.3	104	0.00	11.68
90 t	bis(2-Ethylhexyl)phthalat	1.176	1.174	0.2	115	0.00	11.84
91 I	Perylene-d12	1.000	1.000	0.0	108	0.00	13.62
92 t	Di-n-octylphthalate	1.676	1.810	-8.0	109	0.00	12.77
93 t	Benzo[b]fluoranthene	1.378	1.306	5.2	102	0.00	13.12
94 t	Benzo[k]fluoranthene	1.210	1.171	3.2	103	0.00	13.16
95 t	Benzo[a]pyrene	1.237	1.179	4.7	100	0.00	13.53
96 t	Indeno[1,2,3-cd]pyrene	1.135	1.073	5.5	100	0.00	14.90
97 t	Dibenz(a,h)acridine	1.068	0.976	8.6	97	0.00	14.65

# Continuing Calibration Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2978-CC2940  
Lab FileID: 5P63466.D

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98 t	Dibenz[a,h]anthracene	1.156	1.052	9.0	98	0.00	14.93
99 t	7,12-Dimethylbenz(a)anthr	0.620	0.575	7.3	100	0.00	13.13
100 t	Benzo[g,h,i]perylene	1.151	1.009	12.3	98	0.00	15.21

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(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
5p63466.d    M5P2940.M                      Wed Oct 02 01:03:51 2019

**Continuing Calibration Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2978-CC2941  
 Lab FileID: 5P63467.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...eel\5p2978\5p63467.d Vial: 3  
 Acq On : 1 Oct 2019 2:05 pm Operator: hennys  
 Sample : cc2941-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Wed Oct 02 00:52:59 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101	1,4-Dichlorobenzene-d4b	1.000	1.000	0.0	106	0.00	4.05
102	Benzaldehyde	1.371	1.393	-1.6	107	0.00	3.65
107	Phenanthrene-d10a	1.000	1.000	0.0	109	0.00	8.35
108	Atrazine	0.096	0.113	-17.7	118	0.00	8.13
109	Pentachloronitrobenzene	0.056	0.059	-5.4	106	0.00	8.20

(#) = Out of Range  
 5p63466.d M5P2940.M SPCC's out = 0 CCC's out = 0  
 Wed Oct 02 01:03:54 2019

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2978-CC2942  
 Lab FileID: 5P63468.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...eel\5p2978\5p63468.d Vial: 4  
 Acq On : 1 Oct 2019 2:30 pm Operator: hennys  
 Sample : cc2942-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Wed Oct 02 00:52:59 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
103	Acenaphthene-d10a	1.000	1.000	0.0	99	0.00	6.92
104	1,2,4,5-Tetrachlorobenzen	0.603	0.657	-9.0	109	0.00	6.09
105	Chrysene-d12a	1.000	1.000	0.0	100	0.00	11.63
106 s	1-chlorooctadecane	0.484	0.615	-27.1#	117	0.00	9.67
110 I	Naphthalene-d8a	1.000	1.000	0.0	95	0.00	5.23
111	Hydroquinone	0.369	0.427	-15.7	107	0.00	5.70
116	Chrysene-d12c	1.000	1.000	0.0	100	0.00	11.63
117	Benzidine	0.816	0.996	-22.1#	108	0.00	9.91
120	Phenanthrene-d10b	1.000	1.000	0.0	102	0.00	8.35
121 S	o-terphenyl	0.521	0.598	-14.8	112	0.00	8.78

(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
 5p63466.d    M5P2940.M                      Wed Oct 02 01:03:58 2019

8.7.19  
8

## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2987-CC2940  
 Lab FileID: 5P63669.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2987\5p63669.D Vial: 2  
 Acq On : 7 Oct 2019 9:11 am Operator: hennys  
 Sample : cc2940-25 Inst : MS5P  
 Misc : op22049,e5p2987,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Fri Oct 04 14:36:57 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	110	-0.03	4.28
2 t	1,4-Dioxane	0.871	0.562	35.5#	76	-0.03	1.71
3 t	Pyridine	2.260	1.655	26.8#	79	-0.03	1.98
4 t	N-Nitrosodimethylamine	1.292	1.009	21.9#	88	-0.03	1.96
5 S	2-Fluorophenol	1.706	1.441	15.5	96	-0.03	3.13
6 t	Indene	2.662	2.549	4.2	111	-0.03	4.51
7 t	Cumene	4.322	4.189	3.1	109	-0.03	3.56
8 S	Phenol-d5	2.401	2.274	5.3	104	-0.02	3.99
9 t	Phenol	2.715	2.504	7.8	105	-0.02	4.00
10	Aniline	2.986	2.567	14.0	97	-0.03	3.98
11 t	bis(2-Chloroethyl)ether	1.932	1.847	4.4	112	-0.03	4.05
12 t	2-Chlorophenol	1.627	1.512	7.1	107	-0.03	4.09
13 t	Decane	2.040	2.328	-14.1	129	-0.03	4.15
14 t	1,3-Dichlorobenzene	1.646	1.545	6.1	110	-0.03	4.22
15 t	1,4-Dichlorobenzene	1.624	1.491	8.2	108	-0.03	4.29
16 t	Benzyl alcohol	1.119	1.125	-0.5	113	-0.03	4.42
17 t	1,2-Dichlorobenzene	1.519	1.452	4.4	106	-0.03	4.43
18 t	Acetophenone	2.620	2.624	-0.2	113	-0.03	4.66
19 t	2-Methylphenol	1.645	1.543	6.2	107	-0.03	4.54
20 t	2,2'-oxybis(1-Chloropropa	2.303	2.603	-13.0	131	-0.03	4.54
21 t	3&4-Methylphenol	1.658	1.650	0.5	112	-0.03	4.69
22 t	n-Nitroso-di-n-propylamin	1.544	1.664	-7.8	124	-0.03	4.67
23 t	Hexachloroethane	0.606	0.610	-0.7	118	-0.03	4.74
24 I	Naphthalene-d8	1.000	1.000	0.0	120	-0.03	5.47
25 S	Nitrobenzene-d5	0.625	0.630	-0.8	121	-0.03	4.79
26 t	Nitrobenzene	0.658	0.658	0.0	123	-0.03	4.81
27 t	Quinoline	0.853	0.841	1.4	120	-0.02	5.82
28 t	Isophorone	1.113	1.173	-5.4	126	-0.03	5.04
29 t	2-Nitrophenol	0.246	0.235	4.5	115	-0.03	5.12
30 t	2,4-Dimethylphenol	0.514	0.473	8.0	112	-0.03	5.18
31 t	Benzoic acid	0.397	0.470	-18.4	138	-0.02	5.33
32 t	bis(2-Chloroethoxy)methan	0.664	0.649	2.3	114	-0.03	5.26
33 t	2,4-Dichlorophenol	0.339	0.329	2.9	114	-0.03	5.36
34 t	2,6-Dichlorophenol	0.316	0.303	4.1	120	-0.03	5.56
35	1,3,5-Trichlorobenzene	0.384	0.367	4.4	112	-0.03	5.13
36 t	1,2,4-Trichlorobenzene	0.380	0.363	4.5	115	-0.03	5.42
37	1,2,3-Trichlorobenzene	0.360	0.334	7.2	116	-0.03	5.63
38 t	Naphthalene	1.151	1.075	6.6	113	-0.03	5.49
39 t	4-Chloroaniline	0.537	0.469	12.7	107	-0.03	5.56
40 t	2,3-Dichloroaniline	0.423	0.418	1.2	119	-0.03	6.43
41 t	Caprolactam	0.268	0.321	-19.8	146	-0.02	5.90

# Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2987-CC2940  
 Lab FileID: 5P63669.D

42 t	Hexachlorobutadiene	0.234	0.229	2.1	118	-0.03	5.62
43 t	4-Chloro-3-methylphenol	0.462	0.486	-5.2	123	-0.02	6.06
44 t	2-Methylnaphthalene	0.610	0.623	-2.1	119	-0.03	6.16
45 t	1-Methylnaphthalene	0.695	0.708	-1.9	120	-0.03	6.25
46 t	Dimethylnaphthalene	0.691	0.680	1.6	121	-0.03	6.77
47 I	Acenaphthene-d10	1.000	1.000	0.0	128	-0.03	7.16
48 t	Hexachlorocyclopentadiene	0.452	0.387	14.4	102	-0.03	6.32
49 t	2,4,6-Trichlorophenol	0.467	0.440	5.8	121	-0.02	6.45
50 t	2,4,5-Trichlorophenol	0.503	0.478	5.0	121	-0.03	6.49
51 S	2-Fluorobiphenyl	1.583	1.468	7.3	121	-0.03	6.52
52 t	2-Chloronaphthalene	1.320	1.206	8.6	116	-0.03	6.62
53 t	Biphenyl	1.778	1.704	4.2	124	-0.03	6.61
54 t	2-Nitroaniline	0.724	0.848	-17.1	149	-0.03	6.74
55 t	Dimethylphthalate	1.598	1.569	1.8	124	-0.03	6.93
56 t	Acenaphthylene	2.219	2.080	6.3	118	-0.03	7.02
57 t	2,6-Dinitrotoluene	0.344	0.349	-1.5	131	-0.03	6.98
58 t	3-Nitroaniline	0.431	0.414	3.9	120	-0.03	7.14
59 t	Acenaphthene	1.351	1.301	3.7	123	-0.03	7.19
60 t	2,4-Dinitrophenol	0.195	0.238	-22.1#	138	-0.02	7.25
61 t	4-Nitrophenol	0.290	0.347	-19.7	140	-0.02	7.35
62 t	Dibenzofuran	1.930	1.806	6.4	122	-0.03	7.36
63 t	2,4-Dinitrotoluene	0.460	0.456	0.9	124	-0.02	7.38
64	2,3,4,6-Tetrachlorophenol	0.411	0.414	-0.7	127	-0.03	7.50
65 t	Diethylphthalate	1.736	1.756	-1.2	126	-0.03	7.62
66 t	Fluorene	1.540	1.554	-0.9	123	-0.03	7.69
67 t	4-Chlorophenyl-phenylethe	0.762	0.740	2.9	128	-0.02	7.71
68 t	4-Nitroaniline	0.439	0.386	12.1	114	-0.03	7.73
69 I	Phenanthrene-d10	1.000	1.000	0.0	137	-0.03	8.62
70 t	4,6-Dinitro-2-methylpheno	0.146	0.158	-8.2	131	-0.03	7.78
71 t	n-Nitrosodiphenylamine	0.600	0.561	6.5	127	-0.03	7.82
72 t	1,2-Diphenylhydrazine	1.250	1.163	7.0	124	-0.03	7.86
73 S	2,4,6-Tribromophenol	0.161	0.141	12.4	119	-0.03	7.93
74 t	4-Bromophenyl-phenylether	0.258	0.243	5.8	127	-0.03	8.18
75 t	Hexachlorobenzene	0.316	0.281	11.1	121	-0.03	8.24
76 t	Pentachlorophenol	0.174	0.174	0.0	130	-0.03	8.44
77 t	Phenanthrene	1.110	1.006	9.4	124	-0.03	8.64
78 t	Anthracene	1.157	1.072	7.3	126	-0.03	8.69
79 t	Carbazole	1.204	1.158	3.8	131	-0.03	8.88
80 t	Di-n-butylphthalate	1.631	1.620	0.7	131	-0.03	9.31
81 t	Fluoranthene	1.404	1.402	0.1	135	-0.04	10.01
82 t	Octadecane	0.716	0.780	-8.9	140	-0.03	8.56
83 I	Chrysene-d12	1.000	1.000	0.0	137	-0.04	12.00
84 t	Pyrene	1.676	1.664	0.7	134	-0.04	10.30
85 S	Terphenyl-d14	1.041	1.096	-5.3	138	-0.03	10.55
86 t	Butylbenzylphthalate	0.886	0.906	-2.3	137	-0.03	11.27
87 t	Benzo[a]anthracene	1.527	1.471	3.7	131	-0.03	11.98
88 t	3,3'-Dichlorobenzidine	0.631	0.561	11.1	119	-0.04	11.99
89 t	Chrysene	1.435	1.387	3.3	132	-0.03	12.03
90 t	bis(2-Ethylhexyl)phthalat	1.176	1.165	0.9	134	-0.04	12.16
91 I	Perylene-d12	1.000	1.000	0.0	133	-0.03	14.00
92 t	Di-n-octylphthalate	1.676	1.739	-3.8	129	-0.04	13.10
93 t	Benzo[b]fluoranthene	1.378	1.317	4.4	126	-0.04	13.50
94 t	Benzo[k]fluoranthene	1.210	1.172	3.1	126	-0.04	13.53
95 t	Benzo[a]pyrene	1.237	1.184	4.3	123	-0.04	13.92
96 t	Indeno[1,2,3-cd]pyrene	1.135	1.058	6.8	121	-0.04	15.32
97 t	Dibenz(a,h)acridine	1.068	0.987	7.6	121	-0.04	15.04

# Continuing Calibration Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2987-CC2940  
Lab FileID: 5P63669.D

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98 t	Dibenz[a,h]anthracene	1.156	1.082	6.4	123	-0.04	15.36
99 t	7,12-Dimethylbenz(a)anthr	0.620	0.565	8.9	120	-0.04	13.50
100 t	Benzo[g,h,i]perylene	1.151	1.049	8.9	125	-0.04	15.67

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(#) = Out of Range                      SPCC's out = 0    CCC's out = 0  
5p63613.D    M5P2940.M                      Mon Oct 07 10:14:52 2019    RPT1



**Continuing Calibration Summary**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2987-CC2941  
 Lab FileID: 5P63670.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2987\5p63670.D Vial: 3  
 Acq On : 7 Oct 2019 9:35 am Operator: hennys  
 Sample : cc2941-25 Inst : MS5P  
 Misc : op22049,e5p2987,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Fri Oct 04 14:36:57 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
101 1,4-Dichlorobenzene-d4b	1.000	1.000	0.0	87	-0.03	4.28
102 Benzaldehyde	1.371	1.371	0.0	87	0.13	3.88
107 Phenanthrene-d10a	1.000	1.000	0.0	105	-0.03	8.61
108 Atrazine	0.096	0.121	-26.0#	122	0.04	8.36
109 Pentachloronitrobenzene	0.056	0.059	-5.4	103	0.14	8.45

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p63613.D M5P2940.M Mon Oct 07 10:14:54 2019 RPT1

## Continuing Calibration Summary

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Sample: E5P2987-CC2942  
 Lab FileID: 5P63671.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\E5P2987\5p63671.D Vial: 4  
 Acq On : 7 Oct 2019 10:00 am Operator: hennys  
 Sample : cc2942-25 Inst : MS5P  
 Misc : op22049,e5p2987,1000,,,1,1 Multiplr: 1.00  
 MS Integration Params: lscint.p

Method : C:\MSDCHEM\1\METHODS\M5P2940.M (RTE Integrator)  
 Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 Last Update : Fri Oct 04 14:36:57 2019  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
103 Acenaphthene-d10a	1.000	1.000	0.0	122	-0.03	7.16
104 1,2,4,5-Tetrachlorobenzen	0.603	0.637	-5.6	130	0.13	6.32
105 Chrysene-d12a	1.000	1.000	0.0	132	-0.04	11.99
106 s 1-chlorooctadecane	0.484	0.647	-33.7#	163	-0.06	9.96
110 I Naphthalene-d8a	1.000	1.000	0.0	115	-0.03	5.47
111 Hydroquinone	0.369	0.488	-32.2#	148	-0.02	5.92
116 Chrysene-d12c	1.000	1.000	0.0	132	-0.04	11.99
117 Benzidine	0.816	0.966	-18.4	139	-0.14	10.22
120 Phenanthrene-d10b	1.000	1.000	0.0	134	-0.03	8.61
121 S o-terphenyl	0.521	0.621	-19.2	152	0.21	9.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 5p63613.D M5P2940.M Mon Oct 07 10:21:30 2019 RPT1

**Run Sequence Report**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2940	Method: SW846 8270D	Instrument ID: GCMS5P
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2940-DFTPP	5P62557.D	09/06/19 11:53	n/a	DFTPP Tune
E5P2940-IC2940	5P62558.D	09/06/19 13:58	n/a	Initial cal 100
E5P2940-IC2940	5P62565.D	09/06/19 14:21	n/a	Initial cal 1
E5P2940-IC2940	5P62566.D	09/06/19 14:46	n/a	Initial cal 80
E5P2940-ICC2940	5P62567.D	09/06/19 15:10	n/a	Initial cal 50
E5P2940-IC2940	5P62568.D	09/06/19 15:35	n/a	Initial cal 25
E5P2940-IC2940	5P62569.D	09/06/19 15:59	n/a	Initial cal 10
E5P2940-IC2940	5P62570.D	09/06/19 16:24	n/a	Initial cal 5
E5P2940-IC2940	5P62571.D	09/06/19 16:48	n/a	Initial cal 2
E5P2940-ICV2940	5P62574.D	09/06/19 18:01	n/a	Initial cal verification 50

**Run Sequence Report**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2941	Method: SW846 8270D	Instrument ID: GCMS5P
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2941-DFTPP	5P62578.D	09/06/19 19:35	n/a	DFTPP Tune
E5P2941-IC2941	5P62579.D	09/06/19 19:48	n/a	Initial cal 100
E5P2941-IC2941	5P62580.D	09/06/19 20:12	n/a	Initial cal 80
E5P2941-ICC2941	5P62581.D	09/06/19 20:37	n/a	Initial cal 50
E5P2941-IC2941	5P62582.D	09/06/19 21:01	n/a	Initial cal 25
E5P2941-IC2941	5P62583.D	09/06/19 21:25	n/a	Initial cal 10
E5P2941-IC2941	5P62584.D	09/06/19 21:50	n/a	Initial cal 5
E5P2941-IC2941	5P62585.D	09/06/19 22:13	n/a	Initial cal 2
E5P2941-IC2941	5P62586.D	09/06/19 22:37	n/a	Initial cal 1
E5P2941-ICV2941	5P62587.D	09/06/19 23:02	n/a	Initial cal verification 50

**Run Sequence Report**

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2942	Method: SW846 8270D	Instrument ID: GCMS5P
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2942-DFTPP	5P62588.D	09/06/19 23:22	n/a	DFTPP Tune
E5P2942-IC2942	5P62589.D	09/06/19 23:34	n/a	Initial cal 100
E5P2942-IC2942	5P62590.D	09/06/19 23:58	n/a	Initial cal 80
E5P2942-ICC2942	5P62591.D	09/07/19 00:22	n/a	Initial cal 50
E5P2942-IC2942	5P62592.D	09/07/19 00:46	n/a	Initial cal 25
E5P2942-IC2942	5P62593.D	09/07/19 01:10	n/a	Initial cal 10
E5P2942-IC2942	5P62594.D	09/07/19 01:34	n/a	Initial cal 5
E5P2942-IC2942	5P62595.D	09/07/19 01:58	n/a	Initial cal 2
E5P2942-IC2942	5P62596.D	09/07/19 02:22	n/a	Initial cal 1
E5P2942-ICV2942	5P62597.D	09/07/19 02:46	n/a	Initial cal verification 50
E5P2942-ICV2942	5P62598.D	09/07/19 03:11	n/a	Initial cal verification 50
E5P2942-ICV2942	5P62599.D	09/07/19 03:35	n/a	Initial cal verification 50

# Run Sequence Report

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2943	Method: SW846 8270D	Instrument ID: GCMS5P
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2943-DFTPP	5P62601.D	09/09/19 10:27	n/a	DFTPP Tune
E5P2943-ICV2940	5P62602.D	09/09/19 10:40	n/a	Initial cal verification 50
E5P2943-ICV2940	5P62603.D	09/09/19 11:04	n/a	Initial cal verification 50
E5P2943-ICV2940	5P62604.D	09/09/19 11:28	n/a	Initial cal verification 50
E5P2943-ICV2940	5P62605.D	09/09/19 11:52	n/a	Initial cal verification 50
E5P2943-ICV2940	5P62606.D	09/09/19 12:17	n/a	Initial cal verification 50

## Run Sequence Report

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2977	Method: SW846 8270D	Instrument ID: GCMS5P
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2977-DFTPP	5P63433.D	10/01/19 00:36	n/a	DFTPP Tune
E5P2977-CC2940	5P63434.D	10/01/19 00:52	n/a	Continuing cal 50
E5P2977-CC2941	5P63435.D	10/01/19 01:16	n/a	Continuing cal 50
E5P2977-CC2942	5P63436.D	10/01/19 01:41	n/a	Continuing cal 50
OP23015-MB1	5P63438.D	10/01/19 02:31	OP23015	Method Blank
OP23015-BS1	5P63439.D	10/01/19 02:55	OP23015	Blank Spike
ZZZZZZ	5P63440.D	10/01/19 03:19	OP23015	(unrelated sample)
ZZZZZZ	5P63441.D	10/01/19 03:43	OP23015	(unrelated sample)
ZZZZZZ	5P63442.D	10/01/19 04:08	OP23015	(unrelated sample)
ZZZZZZ	5P63443.D	10/01/19 04:32	OP23015	(unrelated sample)
ZZZZZZ	5P63444.D	10/01/19 04:56	OP23015	(unrelated sample)
ZZZZZZ	5P63445.D	10/01/19 05:21	OP23015	(unrelated sample)
ZZZZZZ	5P63446.D	10/01/19 05:45	OP23015	(unrelated sample)
ZZZZZZ	5P63447.D	10/01/19 06:09	OP23015	(unrelated sample)
ZZZZZZ	5P63448.D	10/01/19 06:33	OP23015	(unrelated sample)
JC95555-4	5P63449.D	10/01/19 06:58	OP23015	MW-108(10-12)
ZZZZZZ	5P63450.D	10/01/19 07:22	OP23015	(unrelated sample)
ZZZZZZ	5P63451.D	10/01/19 07:46	OP23015	(unrelated sample)
JC95555-2	5P63452.D	10/01/19 08:10	OP23015	MW-111(13-15)
ZZZZZZ	5P63453.D	10/01/19 08:34	OP23015	(unrelated sample)
ZZZZZZ	5P63454.D	10/01/19 08:59	OP23015	(unrelated sample)
ZZZZZZ	5P63455.D	10/01/19 09:23	OP23015	(unrelated sample)
OP23015-MS	5P63456.D	10/01/19 09:48	OP23015	Matrix Spike
OP23015-MSD	5P63457.D	10/01/19 10:12	OP23015	Matrix Spike Duplicate
JC95509-2	5P63458.D	10/01/19 10:37	OP23015	(used for QC only; not part of job JC95555)
JC95555-1	5P63459.D	10/01/19 11:01	OP23015	MW-111(11-13)
JC95555-3	5P63460.D	10/01/19 11:25	OP23015	MW-108(5-7)
ZZZZZZ	5P63461.D	10/01/19 11:50	OP23015	(unrelated sample)
ZZZZZZ	5P63462.D	10/01/19 12:15	OP23015	(unrelated sample)

## Run Sequence Report

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2978	Method: SW846 8270D	Instrument ID: GCMS5P		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2978-DFTPP	5P63465.D	10/01/19 13:27	n/a	DFTPP Tune
E5P2978-CC2940	5P63466.D	10/01/19 13:41	n/a	Continuing cal 25
E5P2978-CC2941	5P63467.D	10/01/19 14:05	n/a	Continuing cal 25
E5P2978-CC2942	5P63468.D	10/01/19 14:30	n/a	Continuing cal 25
OP23047-MB1	5P63469.D	10/01/19 14:55	OP23047	Method Blank
OP23047-BS1	5P63470.D	10/01/19 15:19	OP23047	Blank Spike
ZZZZZZ	5P63471.D	10/01/19 15:45	OP23047	(unrelated sample)
ZZZZZZ	5P63472.D	10/01/19 16:09	OP23047	(unrelated sample)
JC95745-5	5P63473.D	10/01/19 16:33	OP23047	(used for QC only; not part of job JC95555)
ZZZZZZ	5P63474.D	10/01/19 16:58	OP23047	(unrelated sample)
ZZZZZZ	5P63475.D	10/01/19 17:22	OP23047	(unrelated sample)
ZZZZZZ	5P63476.D	10/01/19 17:47	OP23047	(unrelated sample)
ZZZZZZ	5P63477.D	10/01/19 18:12	OP23047	(unrelated sample)
ZZZZZZ	5P63478.D	10/01/19 18:36	OP23047	(unrelated sample)
ZZZZZZ	5P63479.D	10/01/19 19:01	OP23047	(unrelated sample)
ZZZZZZ	5P63480.D	10/01/19 19:25	OP23047	(unrelated sample)
ZZZZZZ	5P63481.D	10/01/19 19:51	OP23047	(unrelated sample)
ZZZZZZ	5P63482.D	10/01/19 20:16	OP23047	(unrelated sample)
ZZZZZZ	5P63483.D	10/01/19 20:40	OP23047	(unrelated sample)
ZZZZZZ	5P63484.D	10/01/19 21:05	OP23047	(unrelated sample)
ZZZZZZ	5P63485.D	10/01/19 21:30	OP23047	(unrelated sample)
ZZZZZZ	5P63486.D	10/01/19 21:54	OP23047	(unrelated sample)
ZZZZZZ	5P63487.D	10/01/19 22:19	OP23047	(unrelated sample)
ZZZZZZ	5P63488.D	10/01/19 22:43	OP23047	(unrelated sample)
ZZZZZZ	5P63489.D	10/01/19 23:08	OP23047	(unrelated sample)
OP23047-MS	5P63490.D	10/01/19 23:32	OP23047	Matrix Spike
OP23047-MSD	5P63491.D	10/01/19 23:56	OP23047	Matrix Spike Duplicate
JC95555-1	5P63492.D	10/02/19 00:21	OP23015	MW-111(11-13)
JC95555-2	5P63493.D	10/02/19 00:45	OP23015	MW-111(13-15)
JC95555-3	5P63494.D	10/02/19 01:10	OP23015	MW-108(5-7)



## Run Sequence Report

Job Number: JC95555  
 Account: BBLNYS Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

Run ID: E5P2987	Method: SW846 8270D	Instrument ID: GCMS5P
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
E5P2987-DFTPP	5P63668.D	10/07/19 08:57	n/a	DFTPP Tune
E5P2987-CC2940	5P63669.D	10/07/19 09:11	n/a	Continuing cal 25
E5P2987-CC2941	5P63670.D	10/07/19 09:35	n/a	Continuing cal 25
E5P2987-CC2942	5P63671.D	10/07/19 10:00	n/a	Continuing cal 25
OP23114-MB1	5P63674.D	10/07/19 11:14	OP23114	Method Blank
ZZZZZZ	5P63675.D	10/07/19 11:39	OP23114	(unrelated sample)
ZZZZZZ	5P63676.D	10/07/19 12:04	OP23114	(unrelated sample)
JC95555-3	5P63684.D	10/07/19 12:29	OP23015	MW-108(5-7)
ZZZZZZ	5P63677.D	10/07/19 12:54	OP23114	(unrelated sample)
ZZZZZZ	5P63679.D	10/07/19 13:46	OP23114	(unrelated sample)
ZZZZZZ	5P63681.D	10/07/19 14:36	OP23114	(unrelated sample)
ZZZZZZ	5P63682.D	10/07/19 15:01	OP23114	(unrelated sample)
ZZZZZZ	5P63683.D	10/07/19 15:26	OP23114	(unrelated sample)
ZZZZZZ	5P63685.D	10/07/19 15:50	OP23114	(unrelated sample)
ZZZZZZ	5P63686.D	10/07/19 16:16	OP23114	(unrelated sample)
ZZZZZZ	5P63687.D	10/07/19 16:41	OP23114	(unrelated sample)
ZZZZZZ	5P63688.D	10/07/19 17:06	OP23114	(unrelated sample)
ZZZZZZ	5P63689.D	10/07/19 17:31	OP23114	(unrelated sample)

**MS Semi-volatiles**

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**Raw Data**

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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 12:03:37 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.058	152	141022	40.00	ppm	0.00
24) Naphthalene-d8	5.265	136	321153	40.00	ppm	0.03
47) Acenaphthene-d10	6.937	164	239753	40.00	ppm	0.02
69) Phenanthrene-d10	8.401	188	362053	40.00	ppm	0.04
83) Chrysene-d12	11.729	240	351408	40.00	ppm	0.09
91) Perylene-d12	13.701	264	378057	40.00	ppm	0.09
101) 1,4-Dichlorobenzene-d4b	4.058	152	141022	40.00	ppm	0.00
103) Acenaphthene-d10a	6.937	164	239753	40.00	ppm	0.02
105) Chrysene-d12a	11.729	240	351408	40.00	ppm	0.09
107) Phenanthrene-d10a	8.401	188	362053	40.00	ppm	0.04
110) Naphthalene-d8a	5.265	136	321153	40.00	ppm	0.03
112) Chrysene-d12b	11.729	240	351408	40.00	ppm	0.09
114) 1,4-Dichlorobenzene-d4c	4.058	152	141022	40.00	ppm	0.00
116) Chrysene-d12c	11.729	240	351408	40.00	ppm	0.09
118) Chrysene-d12d	11.729	240	351408	40.00	ppm	0.09
120) Phenanthrene-d10b	8.401	188	362053	40.00	ppm	0.04
System Monitoring Compounds						
5) 2-Fluorophenol	2.920	112	8793	1.46	ppm	0.02
Spiked Amount	50.000		Recovery	=	2.92%	
8) Phenol-d5	3.780	99	14306	1.69	ppm	0.01
Spiked Amount	50.000		Recovery	=	3.38%	
25) Nitrobenzene-d5	4.576	82	14652	2.92	ppm	0.00
Spiked Amount	50.000		Recovery	=	5.84%	
51) 2-Fluorobiphenyl	6.296	172	18652	1.97	ppm	0.00
Spiked Amount	50.000		Recovery	=	3.94%	
73) 2,4,6-Tribromophenol	7.717	330	2293	1.57	ppm	0.03
Spiked Amount	50.000		Recovery	=	3.14%	
85) Terphenyl-d14	10.271	244	16065	1.76	ppm	0.04
Spiked Amount	50.000		Recovery	=	3.52%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
9) Phenol	3.791	94	330860	34.57	ppm	77
18) Acetophenone	4.442	105	3819	0.41	ppm	90
19) 2-Methylphenol	4.336	108	177666	30.64	ppm	100
21) 3&4-Methylphenol	4.496	108	512496	87.68	ppm	79
30) 2,4-Dimethylphenol	4.993	107	294624	71.39	ppm	94
38) Naphthalene	5.324	128	15257759	1650.45	ppm	94
44) 2-Methylnaphthalene	5.954	141	2667297	544.26	ppm	91
53) Biphenyl	6.398	154	1217688	114.28	ppm	99
56) Acenaphthylene	6.820	152	5411794	406.93	ppm	97
59) Acenaphthene	6.975	153	1498991	185.08	ppm	91
62) Dibenzofuran	7.156	168	4442535	383.98	ppm	95
66) Fluorene	7.498	166	4805520	520.62	ppm	96
77) Phenanthrene	8.465	178	14891240m	1482.44	ppm	

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 12:03:37 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

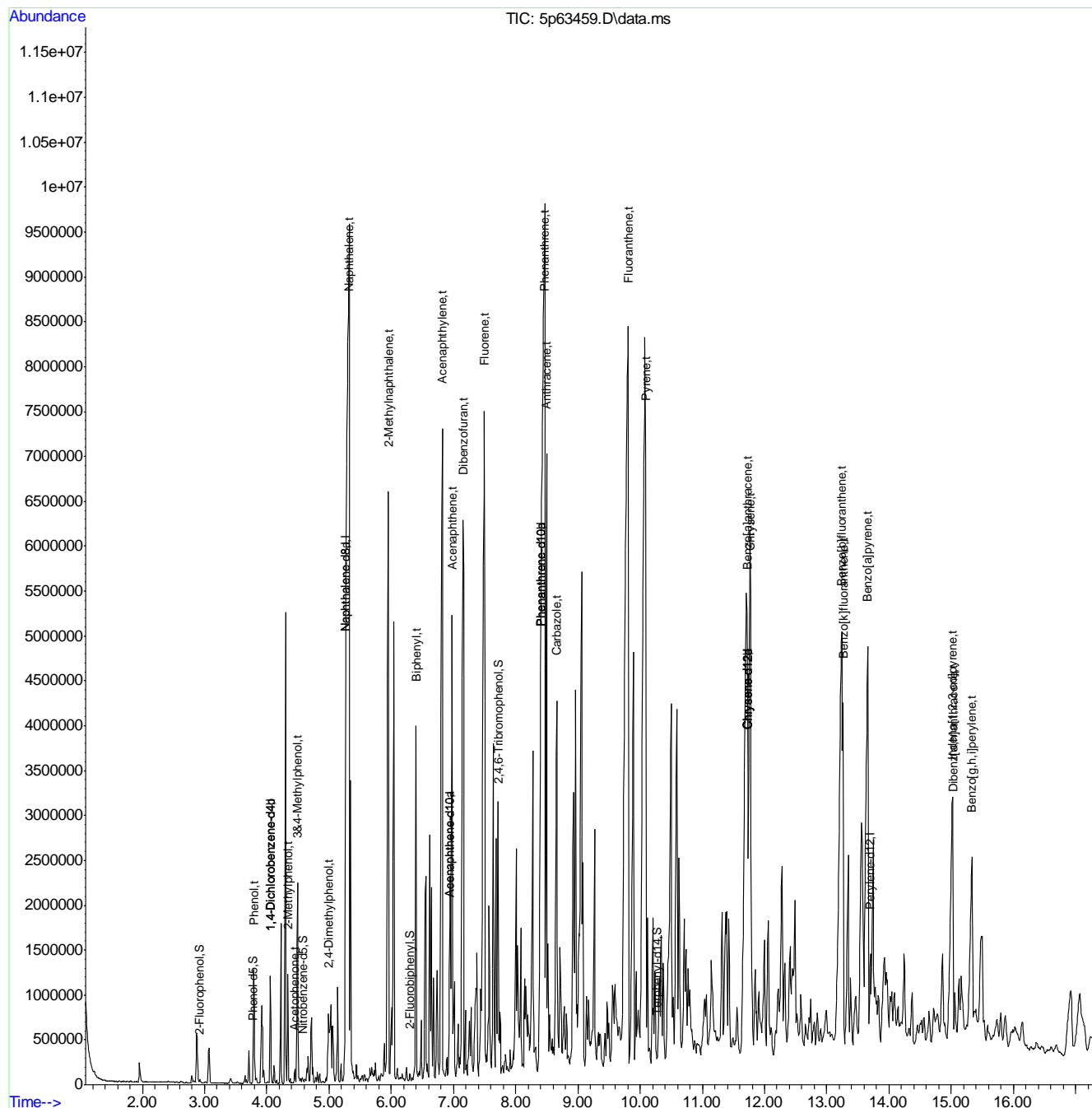
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.497	178	3443011m	328.67	ppm	
79) Carbazole	8.663	167	2624199	240.90	ppm	98
81) Fluoranthene	9.806	202	13610642	1070.76	ppm	90
84) Pyrene	10.089	202	10517808	714.14	ppm	97
87) Benzo[a]anthracene	11.719	228	6295031	469.40	ppm	96
89) Chrysene	11.777	228	3912148	310.40	ppm	88
93) Benzo[b]fluoranthene	13.241	252	6865705m	527.33	ppm	
94) Benzo[k]fluoranthene	13.262	252	1193681m	104.35	ppm	
95) Benzo[a]pyrene	13.658	252	4500809	384.95	ppm	93
96) Indeno[1,2,3-cd]pyrene	15.015	276	2413203	224.89	ppm	98
98) Dibenz[a,h]anthracene	15.025	278	789933	72.28	ppm	85
100) Benzo[g,h,i]perylene	15.335	276	2173784	199.90	ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

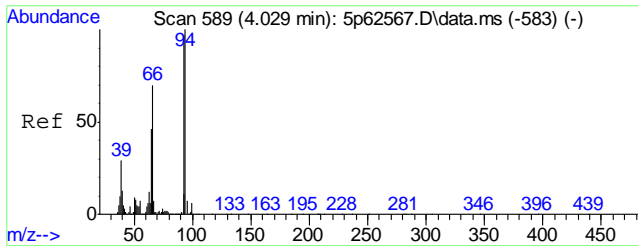
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 12:03:37 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

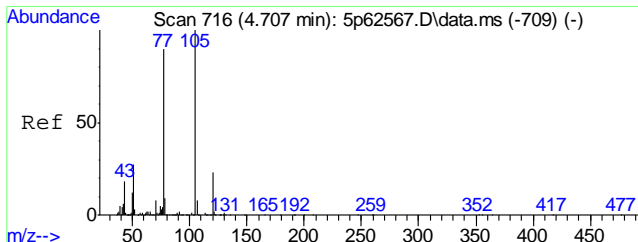
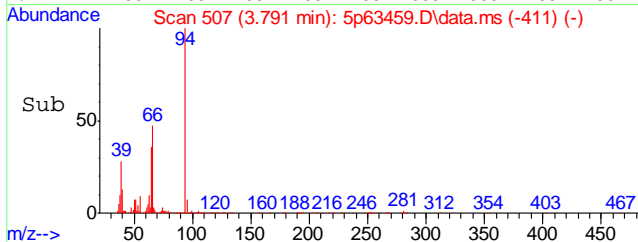
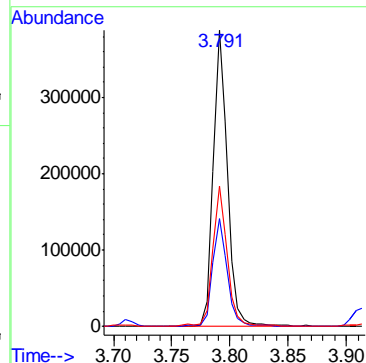
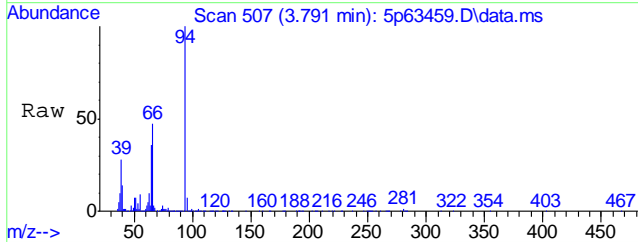


9.1.1  
9



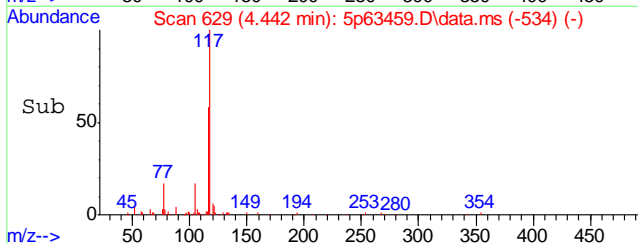
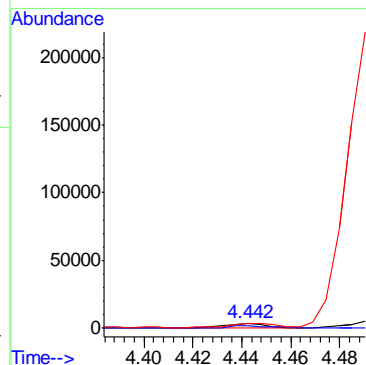
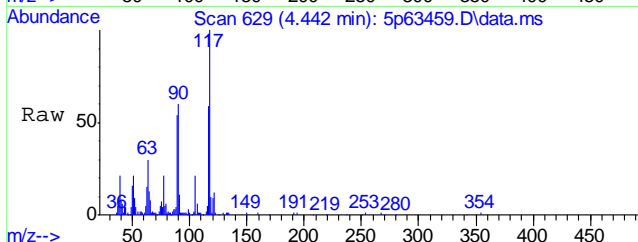
#9  
 Phenol  
 Concen: 34.57 ppm  
 RT: 3.791 min Scan# 507  
 Delta R.T. 0.011 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

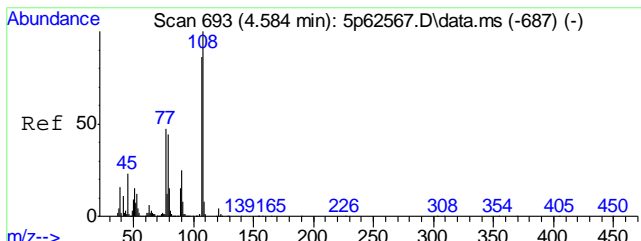
Tgt Ion	Resp	Lower	Upper
94	330860		
65	36.1	16.4	76.4
66	47.3	40.0	100.0



#18  
 Acetophenone  
 Concen: 0.41 ppm  
 RT: 4.442 min Scan# 629  
 Delta R.T. 0.005 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

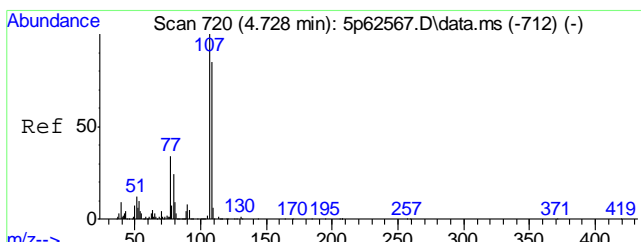
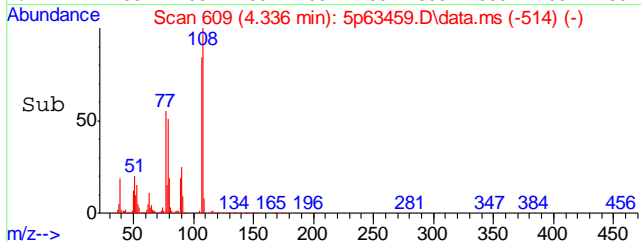
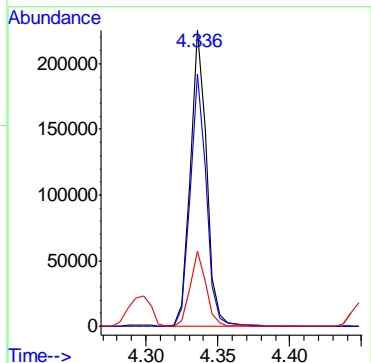
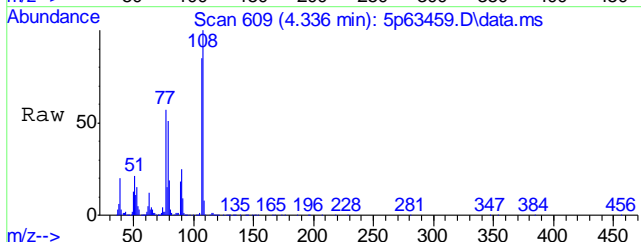
Tgt Ion	Resp	Lower	Upper
105	3819		
120	41.9	0.0	52.6
77	87.8	59.7	119.7





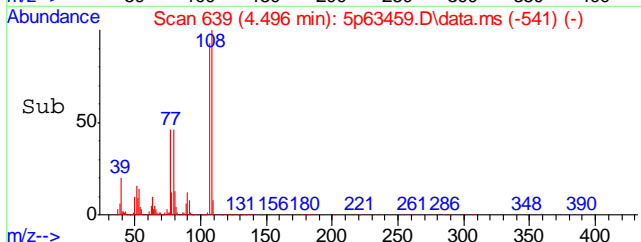
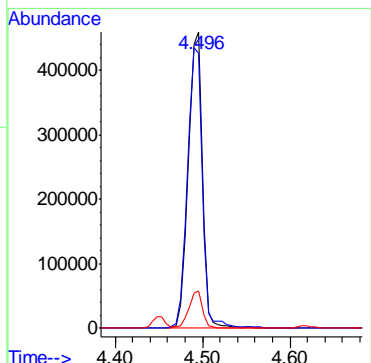
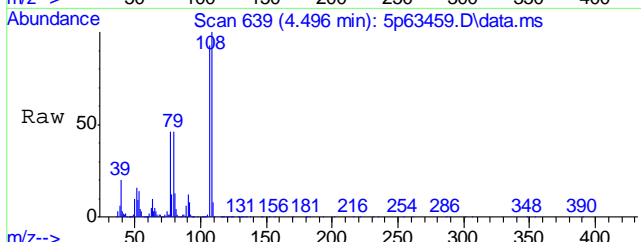
#19  
 2-Methylphenol  
 Concen: 30.64 ppm  
 RT: 4.336 min Scan# 609  
 Delta R.T. 0.005 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

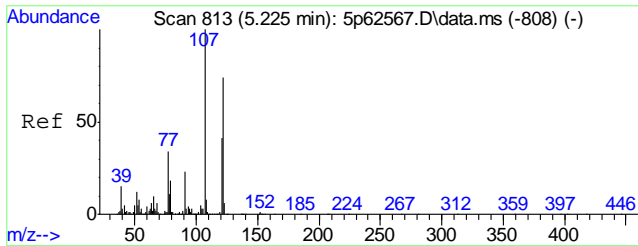
Tgt Ion	Resp	Lower	Upper
108	177666		
107	85.3	55.5	115.5
90	25.2	0.0	55.2



#21  
 3&4-Methylphenol  
 Concen: 87.68 ppm  
 RT: 4.496 min Scan# 639  
 Delta R.T. 0.021 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

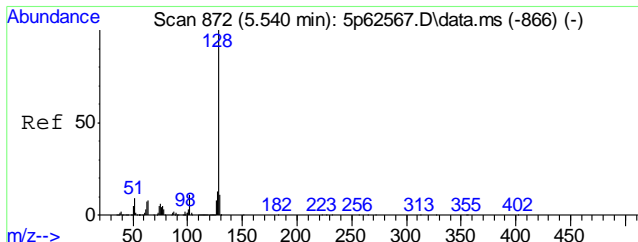
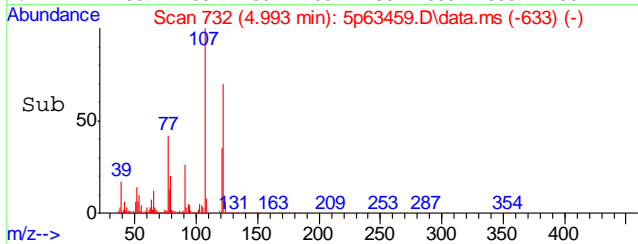
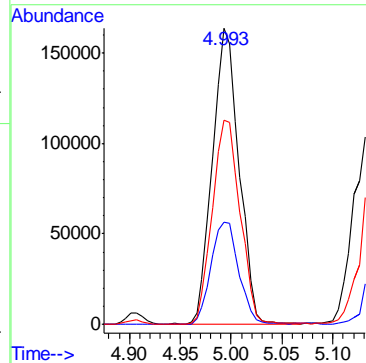
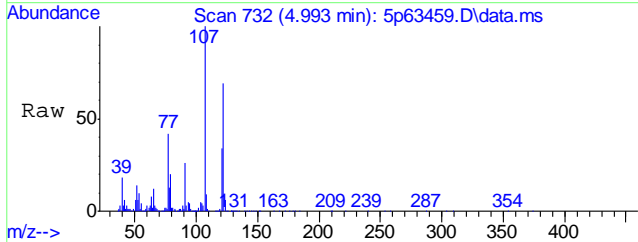
Tgt Ion	Resp	Lower	Upper
108	512496		
107	92.9	87.9	147.9
90	11.4	0.0	39.4





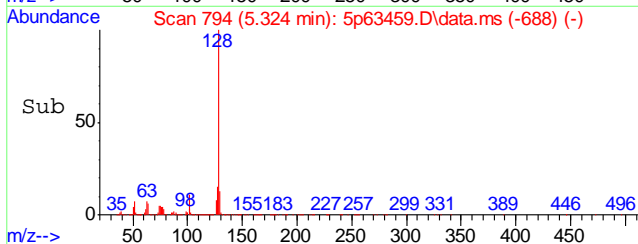
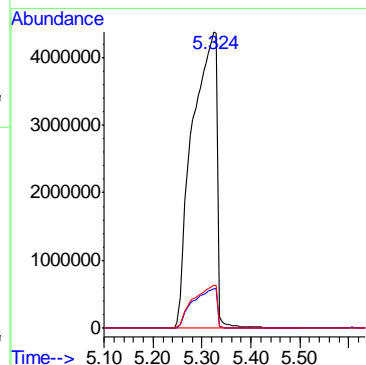
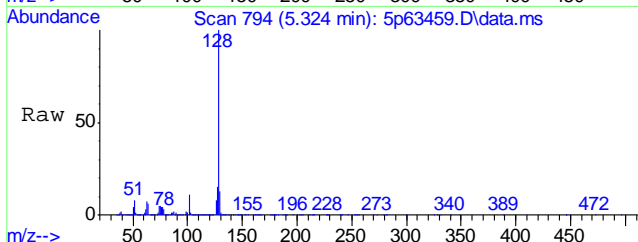
#30  
 2,4-Dimethylphenol  
 Concen: 71.39 ppm  
 RT: 4.993 min Scan# 732  
 Delta R.T. 0.027 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
107	294624	100	
121	34.2	11.2	71.2
122	68.9	41.7	101.7



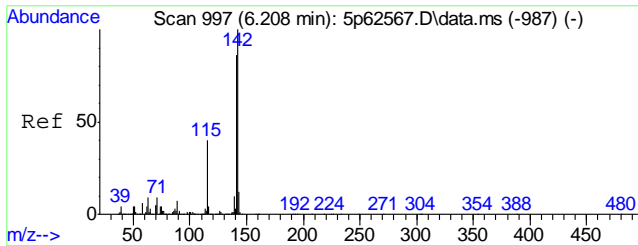
#38  
 Naphthalene  
 Concen: 1650.45 ppm  
 RT: 5.324 min Scan# 794  
 Delta R.T. 0.064 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
128	15257759	100	
129	13.4	0.0	40.6
127	14.5	0.0	42.6



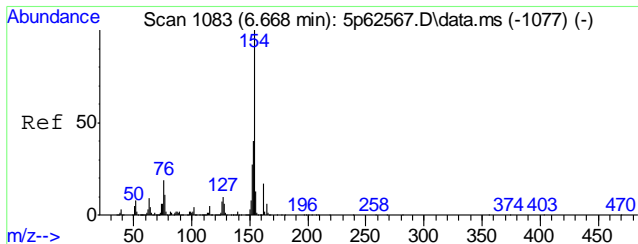
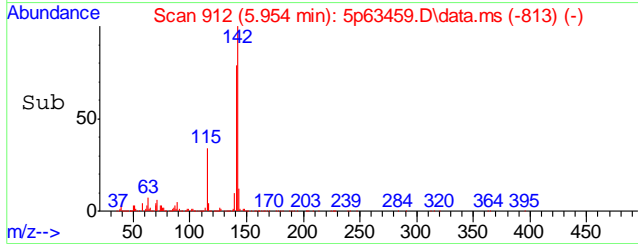
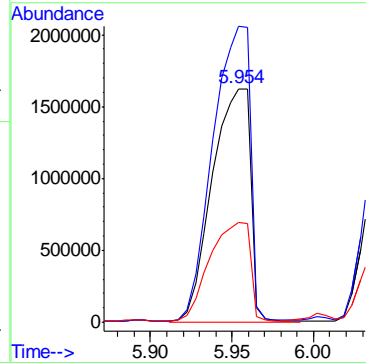
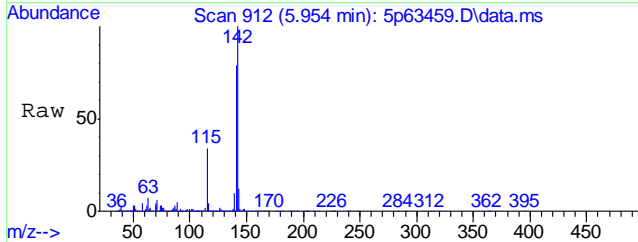
9.11  
 9





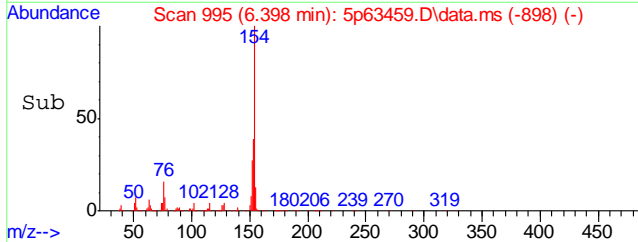
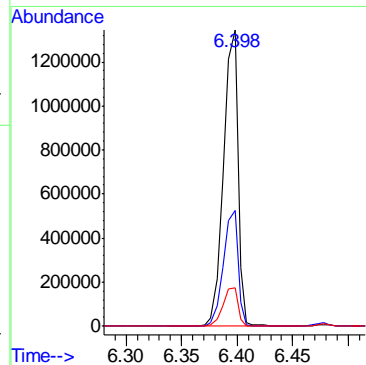
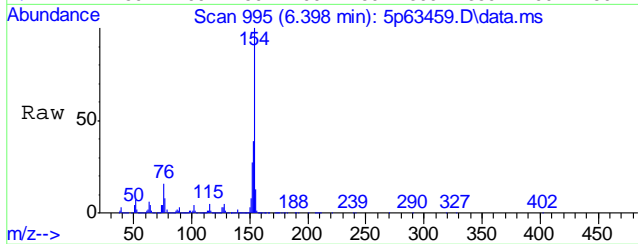
#44  
 2-Methylnaphthalene  
 Concen: 544.26 ppm  
 RT: 5.954 min Scan# 912  
 Delta R.T. 0.027 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

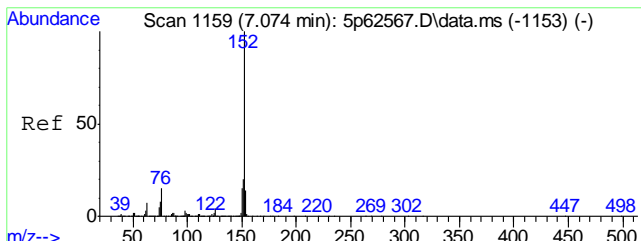
Tgt Ion	Resp	Lower	Upper
141	2667297		
142	100		
142	126.7	86.4	146.4
115	42.2	16.6	76.6



#53  
 Biphenyl  
 Concen: 114.28 ppm  
 RT: 6.398 min Scan# 995  
 Delta R.T. 0.016 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

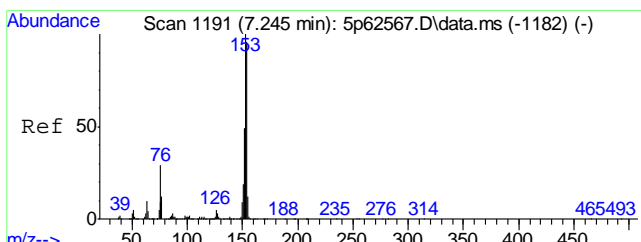
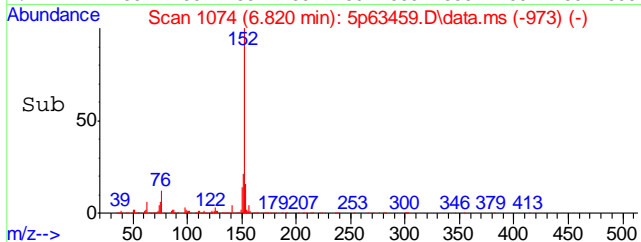
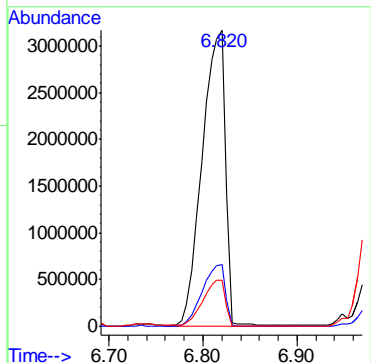
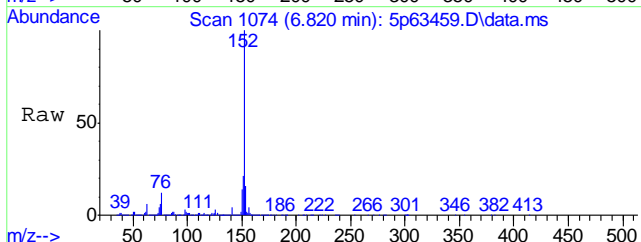
Tgt Ion	Resp	Lower	Upper
154	1217688		
154	100		
153	39.0	9.6	69.6
155	12.7	0.0	42.7





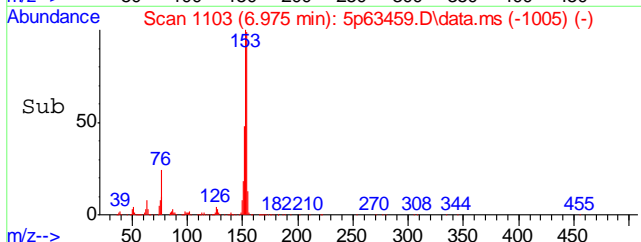
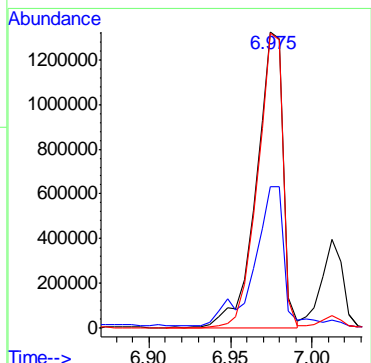
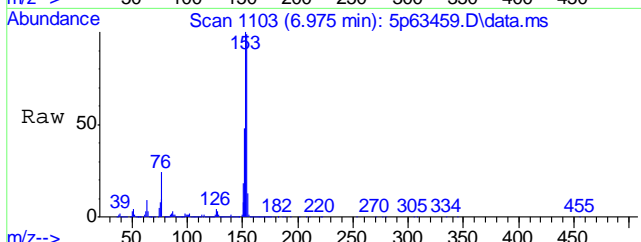
#56  
 Acenaphthylene  
 Concen: 406.93 ppm  
 RT: 6.820 min Scan# 1074  
 Delta R.T. 0.037 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

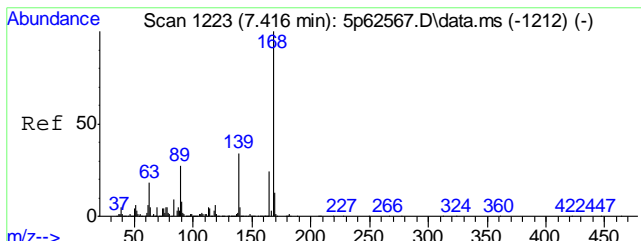
Tgt Ion	Resp	Lower	Upper
152	5411794	100	
151	20.7	0.0	49.8
153	15.5	0.0	43.6



#59  
 Acenaphthene  
 Concen: 185.08 ppm  
 RT: 6.975 min Scan# 1103  
 Delta R.T. 0.021 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

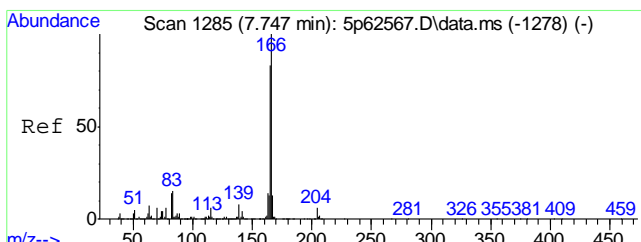
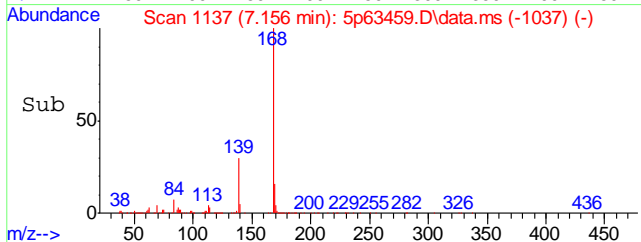
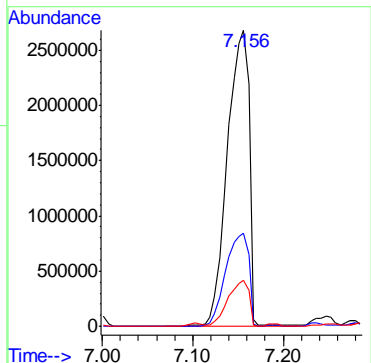
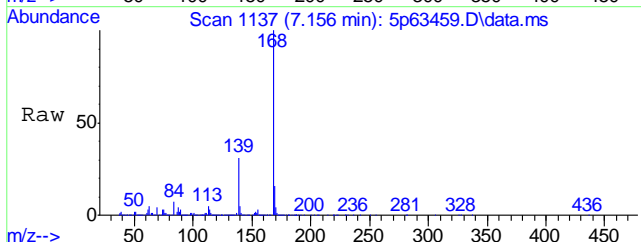
Tgt Ion	Resp	Lower	Upper
153	1498991	100	
152	46.4	19.1	79.1
154	100.2	58.9	118.9





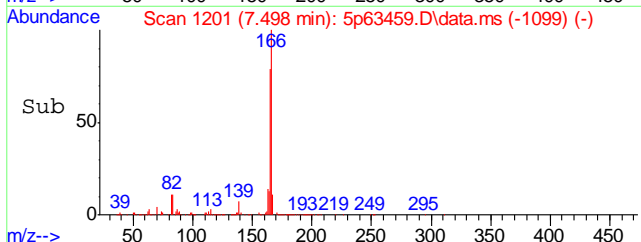
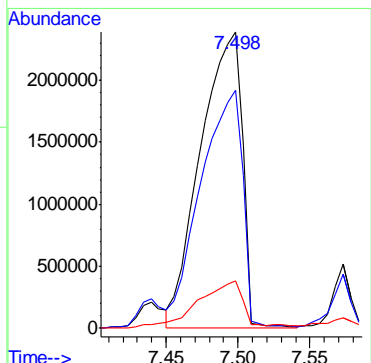
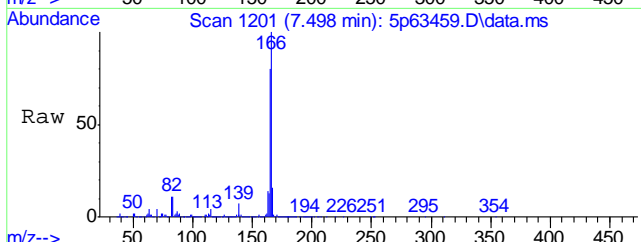
#62  
 Dibenzofuran  
 Concen: 383.98 ppm  
 RT: 7.156 min Scan# 1137  
 Delta R.T. 0.032 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

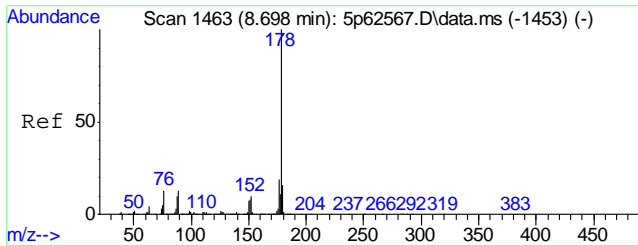
Tgt Ion	Resp	Lower	Upper
168	100		
139	31.4	3.9	63.9
169	15.7	0.0	43.3



#66  
 Fluorene  
 Concen: 520.62 ppm  
 RT: 7.498 min Scan# 1201  
 Delta R.T. 0.043 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

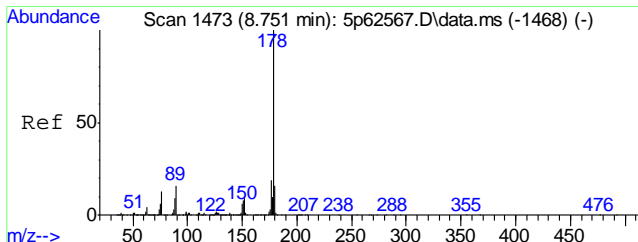
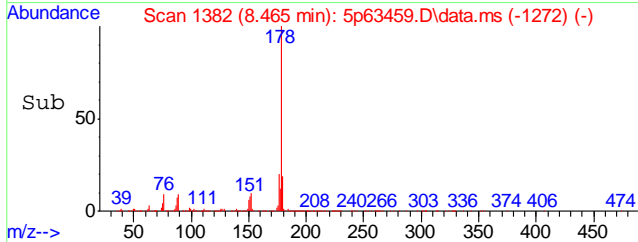
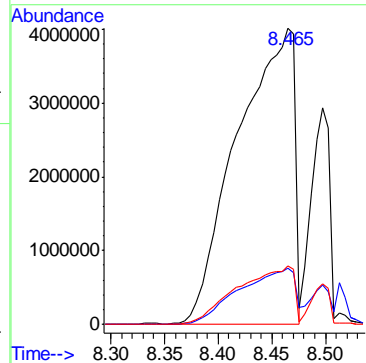
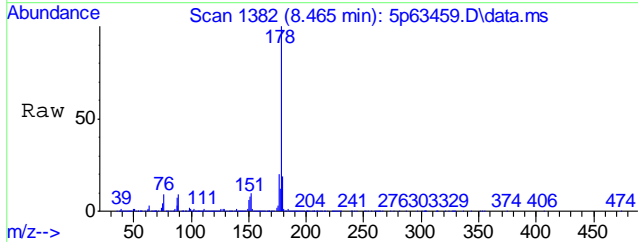
Tgt Ion	Resp	Lower	Upper
166	100		
165	79.4	53.2	113.2
167	15.0	0.0	43.0





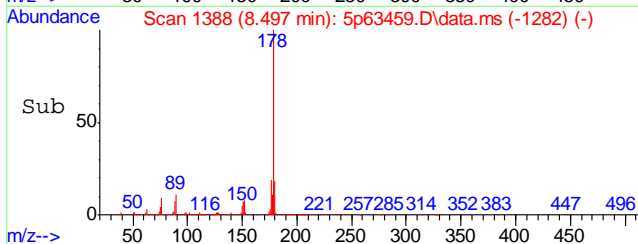
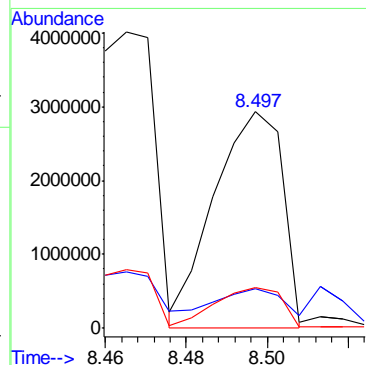
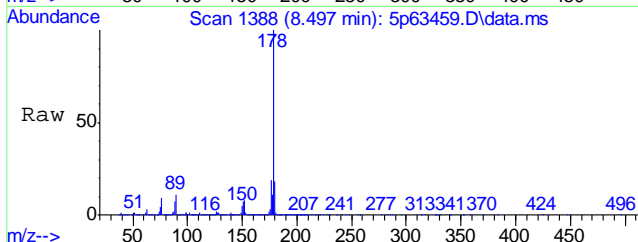
#77  
 Phenanthrene  
 Concen: 1482.44 ppm m  
 RT: 8.465 min Scan# 1382  
 Delta R.T. 0.086 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
178	14891240		
179	18.8	0.0	45.8
176	19.7	0.0	48.7

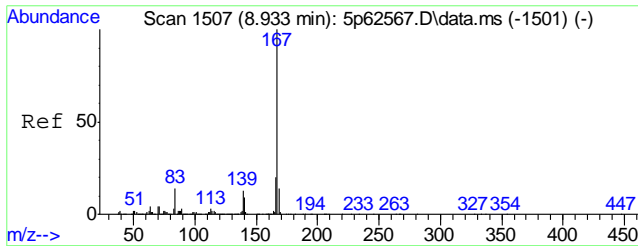


#78  
 Anthracene  
 Concen: 328.67 ppm m  
 RT: 8.497 min Scan# 1388  
 Delta R.T. 0.064 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
178	3443011		
179	18.0	0.0	46.2
176	18.5	0.0	49.1

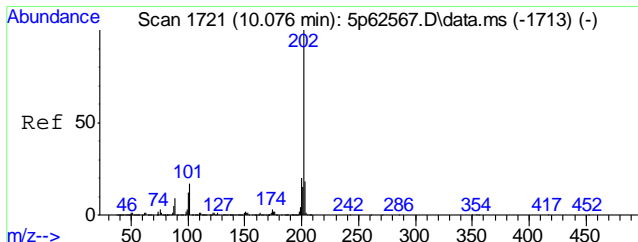
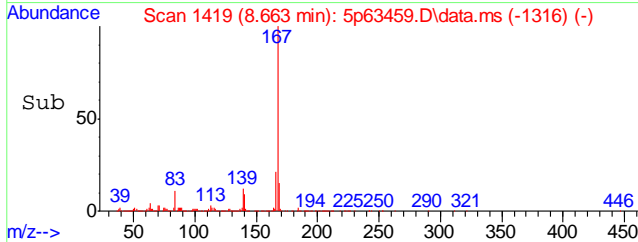
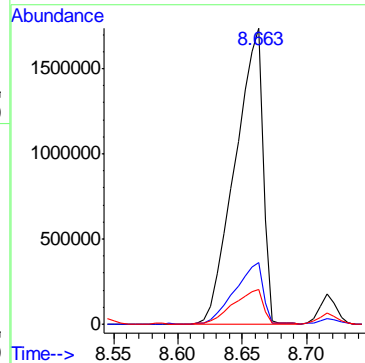
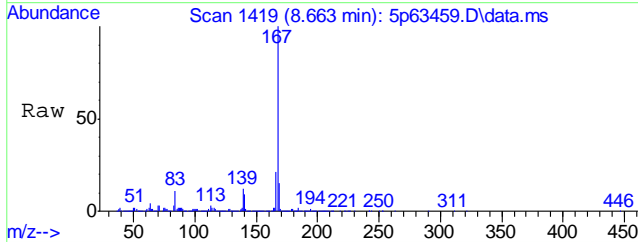


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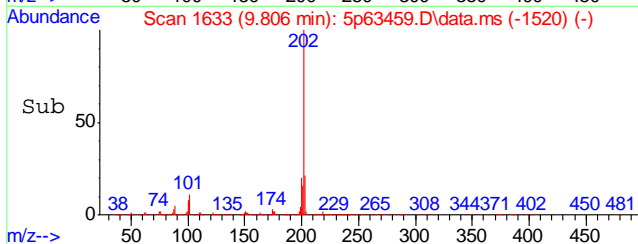
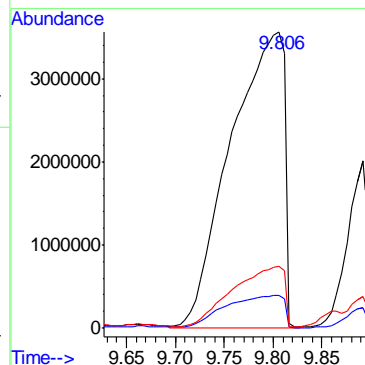
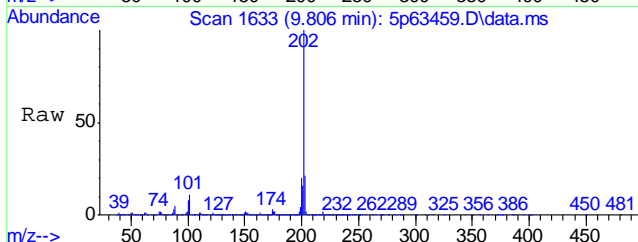
#79  
 Carbazole  
 Concen: 240.90 ppm  
 RT: 8.663 min Scan# 1419  
 Delta R.T. 0.048 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
167	100		
166	20.7	0.0	50.2
139	11.7	0.0	43.0

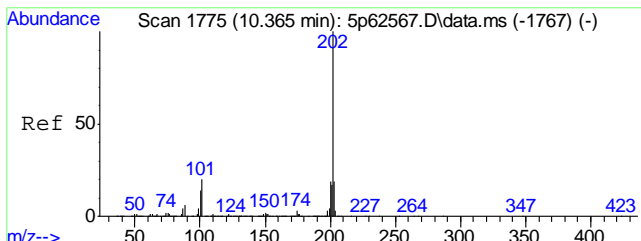


#81  
 Fluoranthene  
 Concen: 1070.76 ppm  
 RT: 9.806 min Scan# 1633  
 Delta R.T. 0.102 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
202	100		
101	10.9	0.0	47.0
203	20.6	0.0	47.8

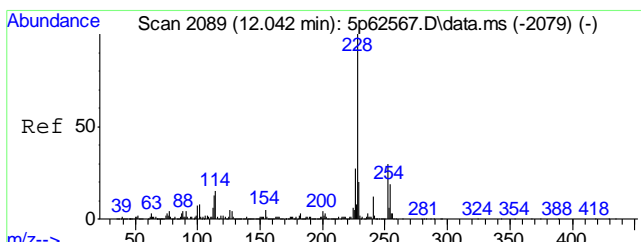
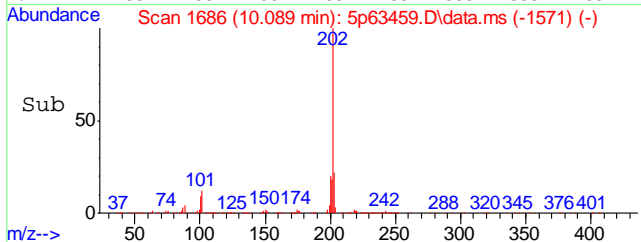
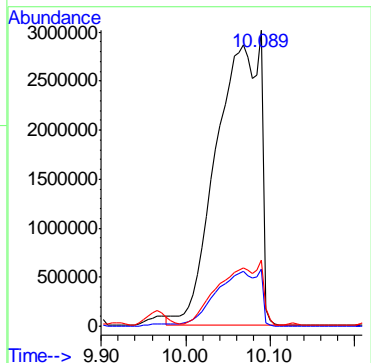
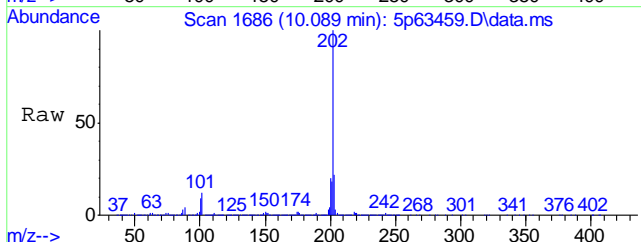


9.11  
 9



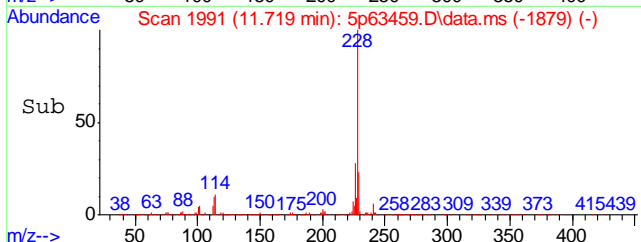
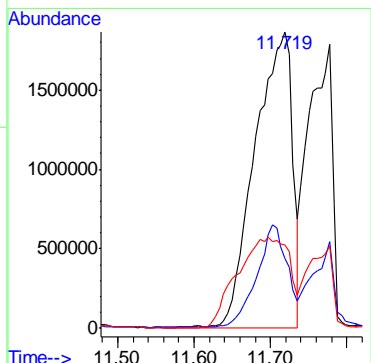
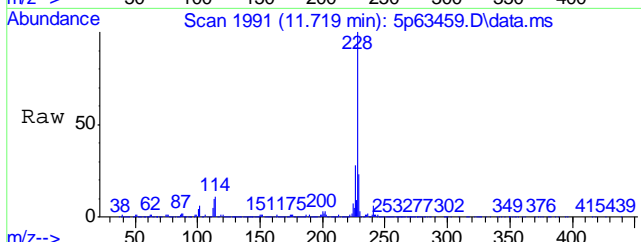
#84  
 Pyrene  
 Concen: 714.14 ppm  
 RT: 10.089 min Scan# 1686  
 Delta R.T. 0.112 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

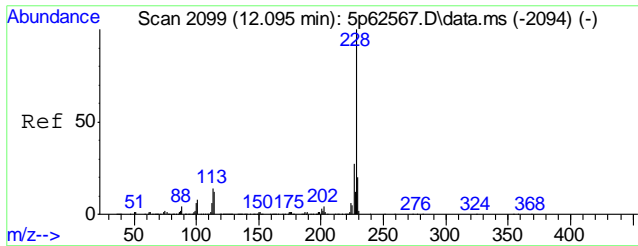
Tgt Ion	Resp	Lower	Upper
202	10517808		
200	19.5	0.0	48.7
203	20.8	0.0	48.8



#87  
 Benzo[a]anthracene  
 Concen: 469.40 ppm  
 RT: 11.719 min Scan# 1991  
 Delta R.T. 0.096 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

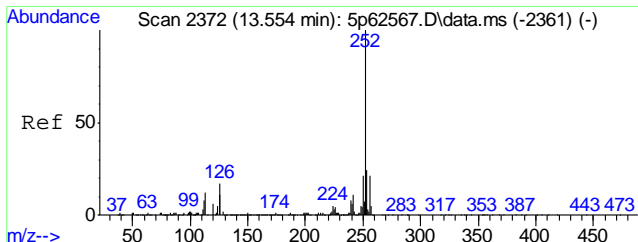
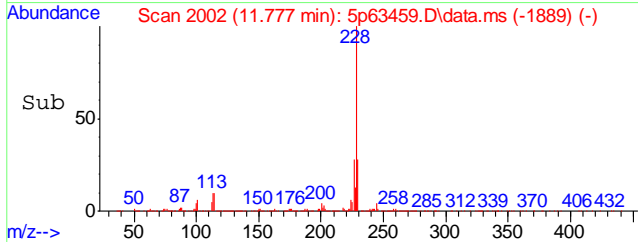
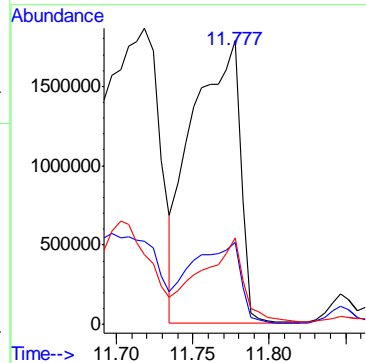
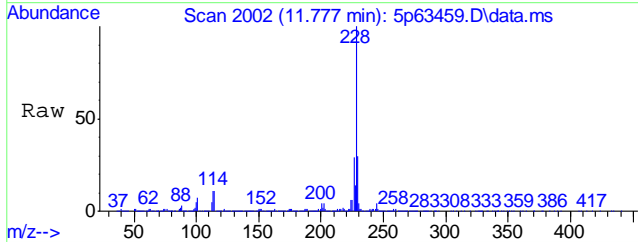
Tgt Ion	Resp	Lower	Upper
228	6295031		
229	23.0	0.0	49.7
226	27.7	0.0	56.6





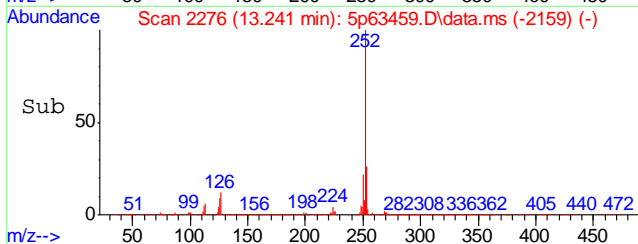
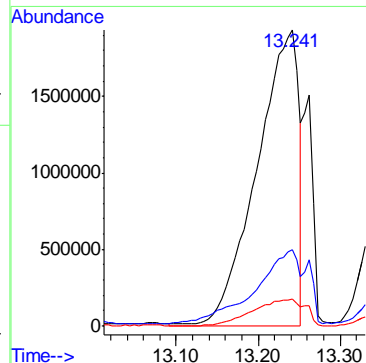
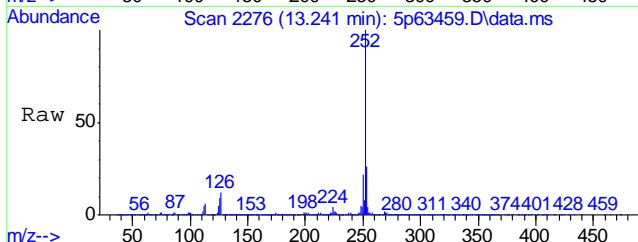
#89  
 Chrysene  
 Concen: 310.40 ppm  
 RT: 11.777 min Scan# 2002  
 Delta R.T. 0.102 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

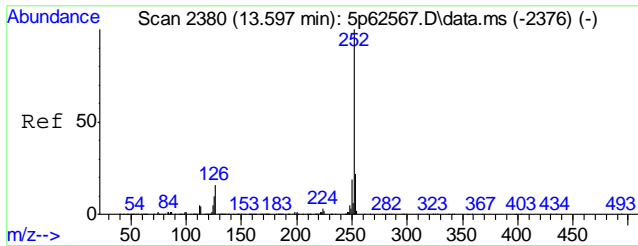
Tgt Ion	Resp	Lower	Upper
228	3912148		
226	28.5	0.0	57.2
229	31.5	0.0	50.1



#93  
 Benzo[b]fluoranthene  
 Concen: 527.33 ppm m  
 RT: 13.241 min Scan# 2276  
 Delta R.T. 0.123 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

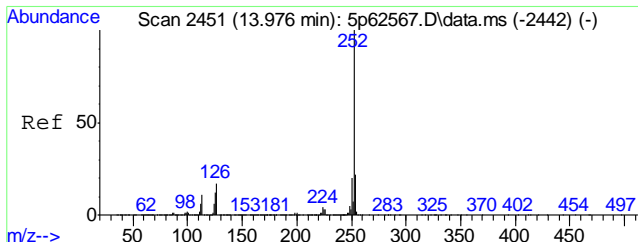
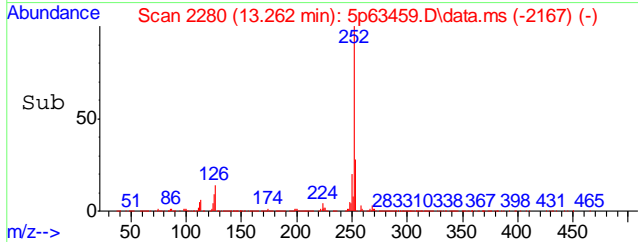
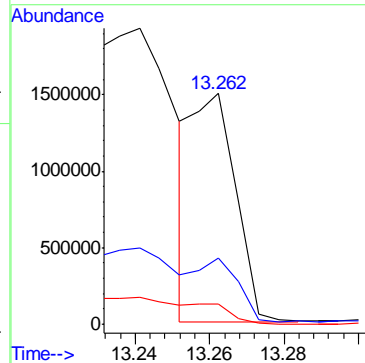
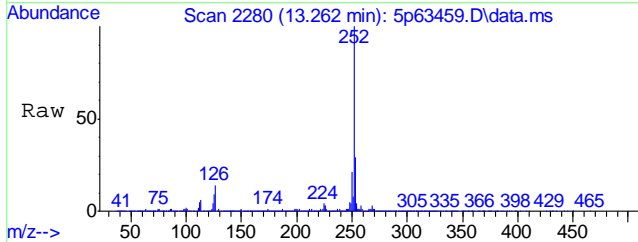
Tgt Ion	Resp	Lower	Upper
252	6865705		
253	25.8	0.0	53.8
125	9.0	0.0	40.9





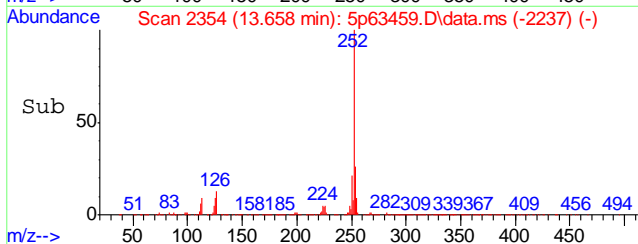
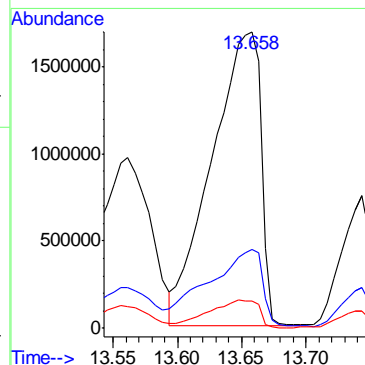
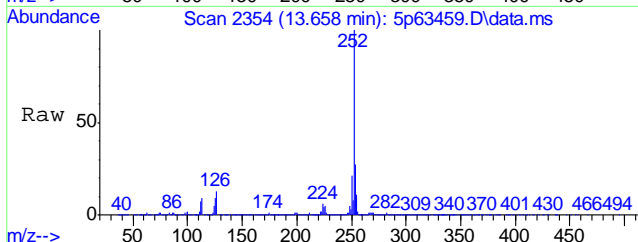
#94  
 Benzo[k]fluoranthene  
 Concen: 104.35 ppm  
 RT: 13.262 min Scan# 2280  
 Delta R.T. 0.102 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
252	1193681	100	
253	28.7	0.0	52.1
125	8.6	0.0	40.2



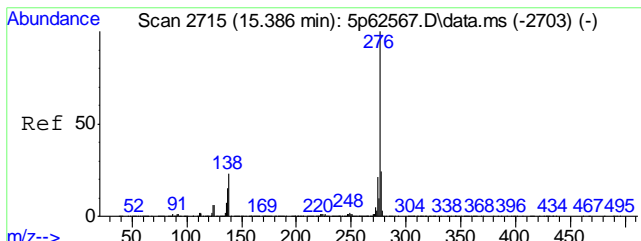
#95  
 Benzo[a]pyrene  
 Concen: 384.95 ppm  
 RT: 13.658 min Scan# 2354  
 Delta R.T. 0.123 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
252	4500809	100	
253	24.7	0.0	51.7
125	9.0	0.0	42.0



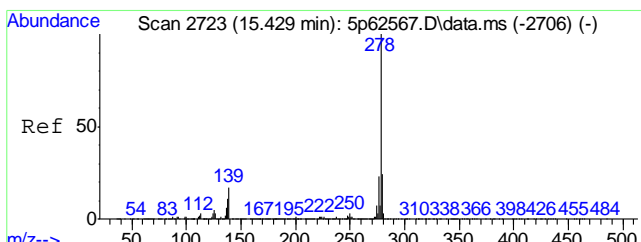
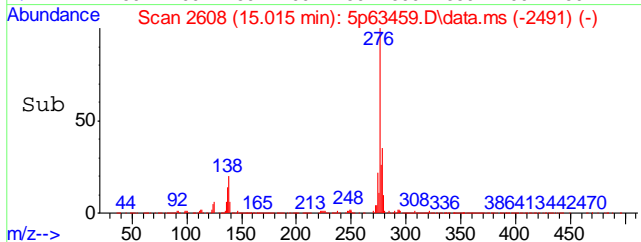
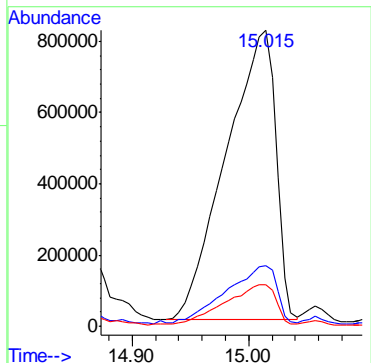
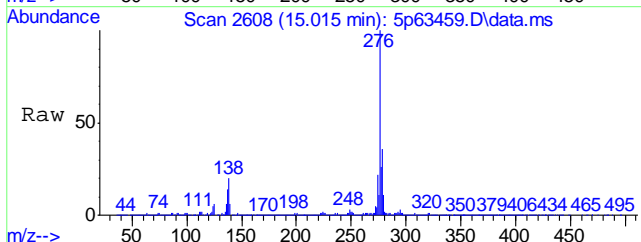
9.11  
 9





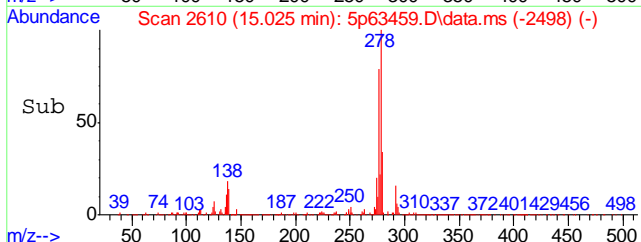
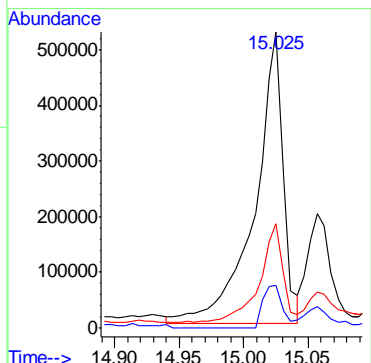
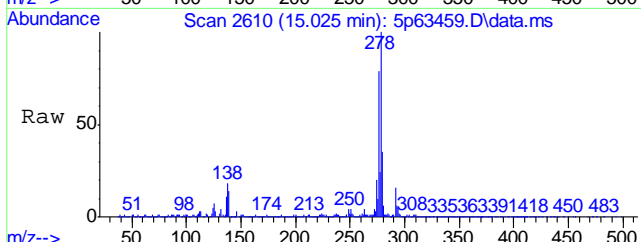
#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 224.89 ppm  
 RT: 15.015 min Scan# 2608  
 Delta R.T. 0.123 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

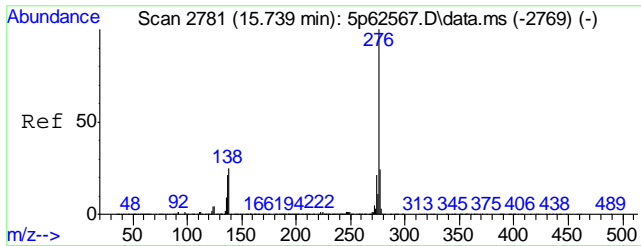
Tgt Ion	Resp	Lower	Upper
276	2413203	100	
138	19.8	0.0	50.9
137	13.6	0.0	44.2



#98  
 Dibenz[a,h]anthracene  
 Concen: 72.28 ppm  
 RT: 15.025 min Scan# 2610  
 Delta R.T. 0.096 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

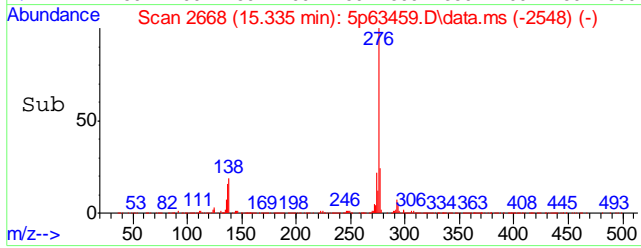
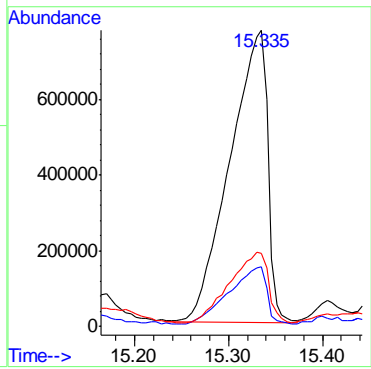
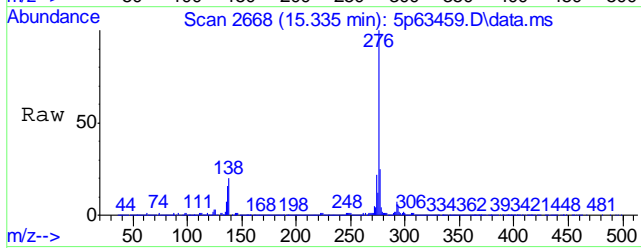
Tgt Ion	Resp	Lower	Upper
278	789933	100	
139	13.3	0.0	46.7
279	34.6	0.0	54.4





#100  
 Benzo[g,h,i]perylene  
 Concen: 199.90 ppm  
 RT: 15.335 min Scan# 2668  
 Delta R.T. 0.139 min  
 Lab File: 5p63459.D  
 Acq: 1 Oct 19 11:01 am

Tgt Ion	Resp	Lower	Upper
276	2173784	100	
138	19.3	0.0	54.8
277	23.8	0.0	53.6



9.1.1  
 9

# Manual Integration Approval Summary

Sample Number: JC95555-1                      Method: SW846 8270D  
Lab FileID: 5P63459.D                      Analyst approved: 10/07/19 11:11 Kristi Schollenberger  
Injection Time: 10/01/19 11:01                      Supervisor approved: 10/07/19 11:24 Kristi Schollenberger

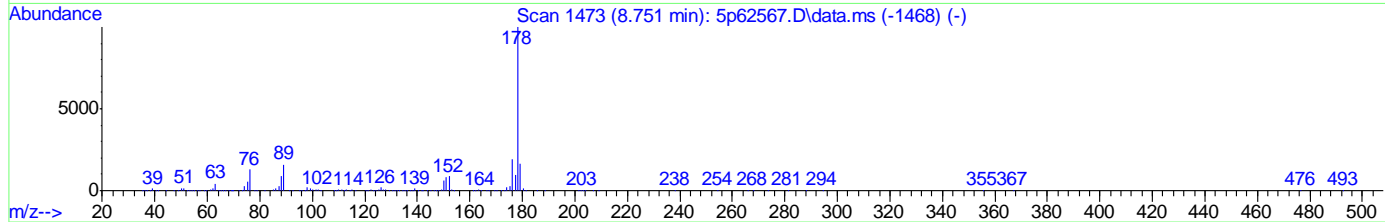
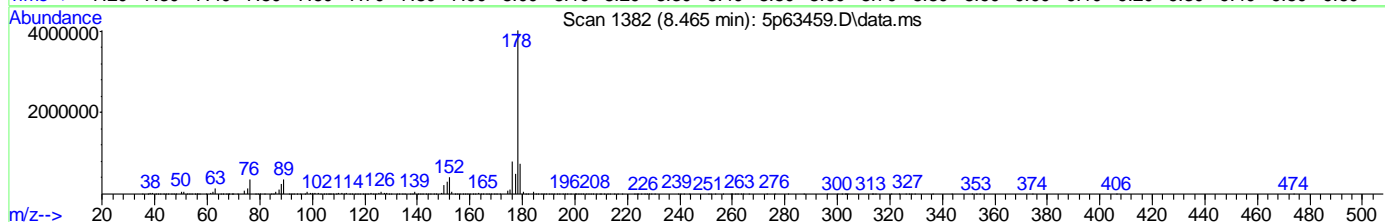
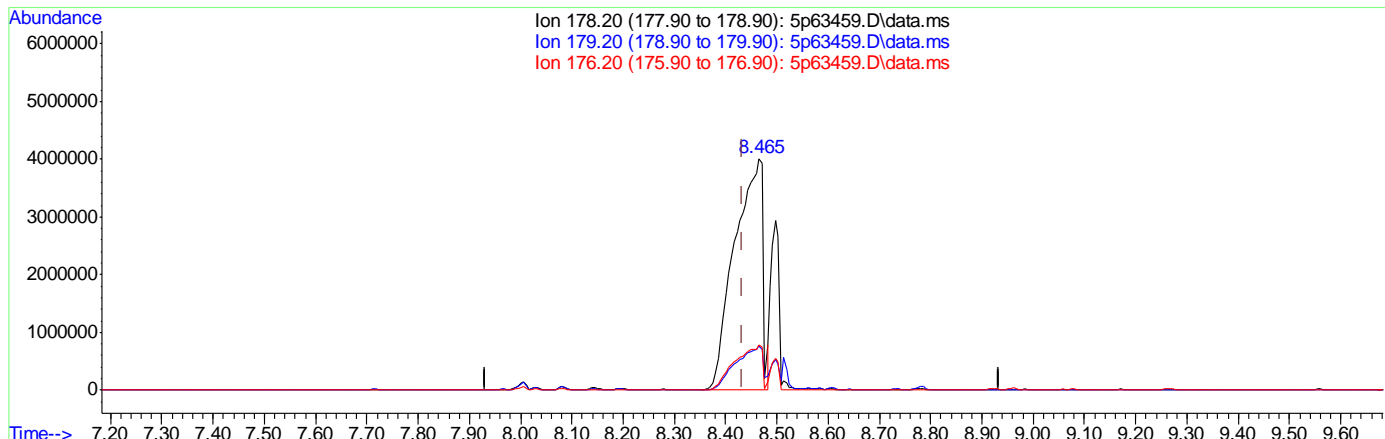
Parameter	CAS	Sig#	R.T. (min.)	Reason
Phenanthrene	85-01-8		8.47	Poor instrument integration
Anthracene	120-12-7		8.50	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.24	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.26	Overlapping peak

9.1.1.1  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 11:56:57 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



(78) Anthracene (t)  
 8.465min (+0.032) 1441.40ppm  
 response 15099301

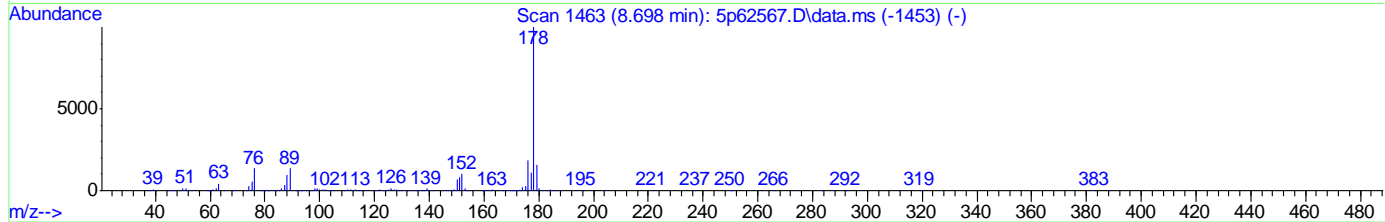
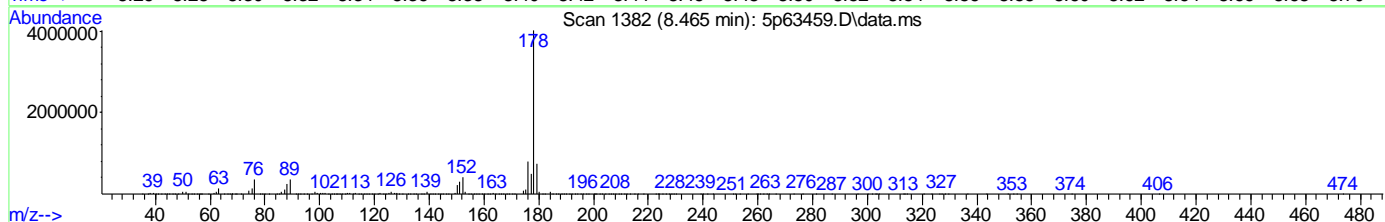
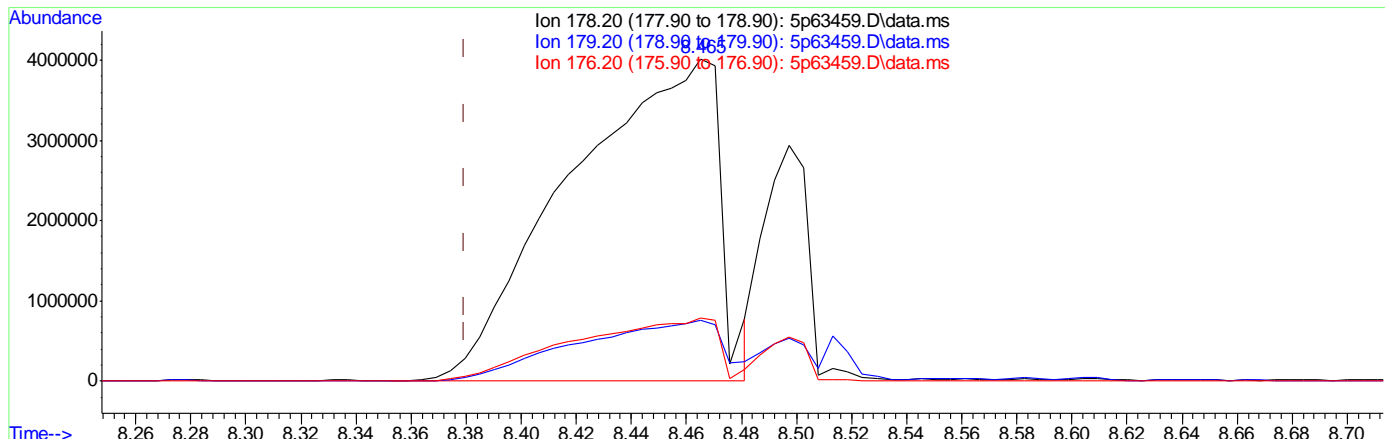
Ion	Exp%	Act%
178.20	100	100
179.20	16.20	17.56
176.20	19.10	19.91
0.00	0.00	0.00

9.1.1.2  
**9**

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 11:56:57 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63459.D\data.ms

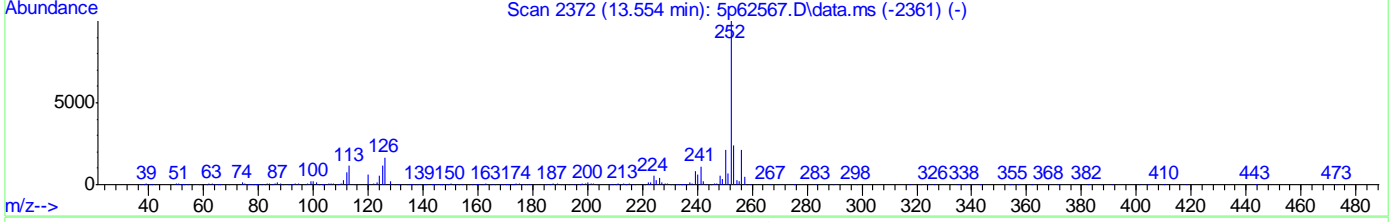
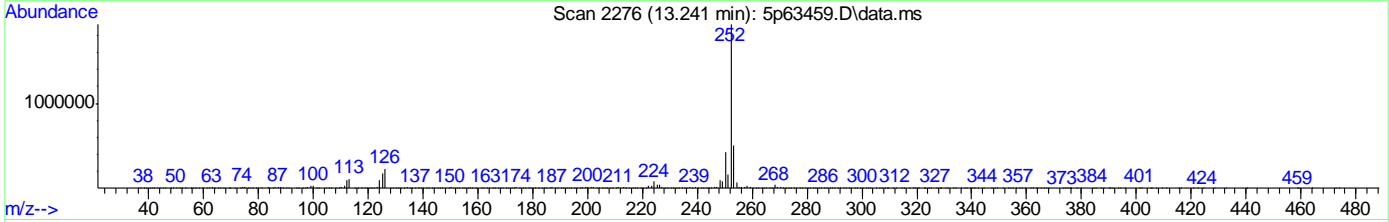
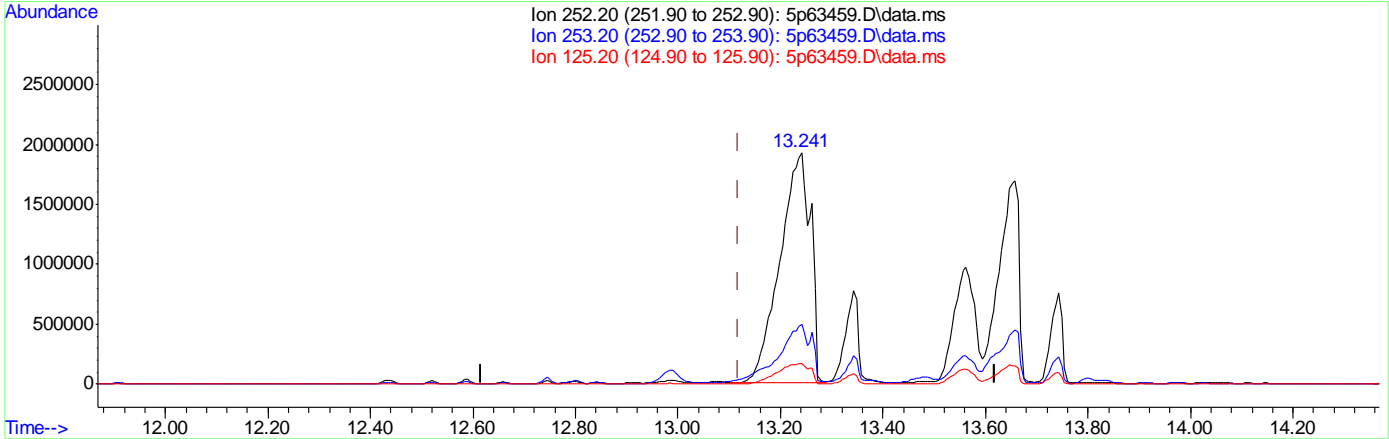
(77) Phenanthrene (t)		
8.465min (+0.086)	1504.41ppm	
response	15111863	
Ion	Exp%	Act%
178.20	100	100
179.20	15.80	17.56
176.20	18.70	19.91
0.00	0.00	0.00

9.1.1.3  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 11:56:57 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63459.D\data.ms

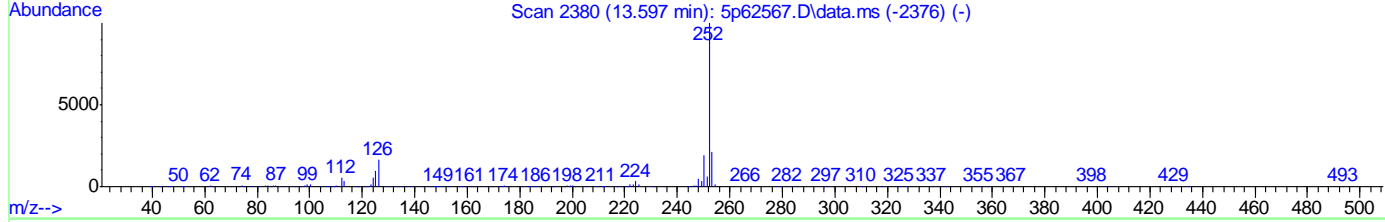
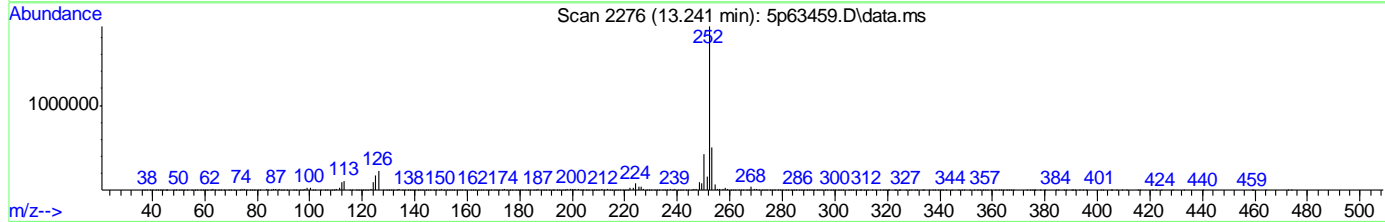
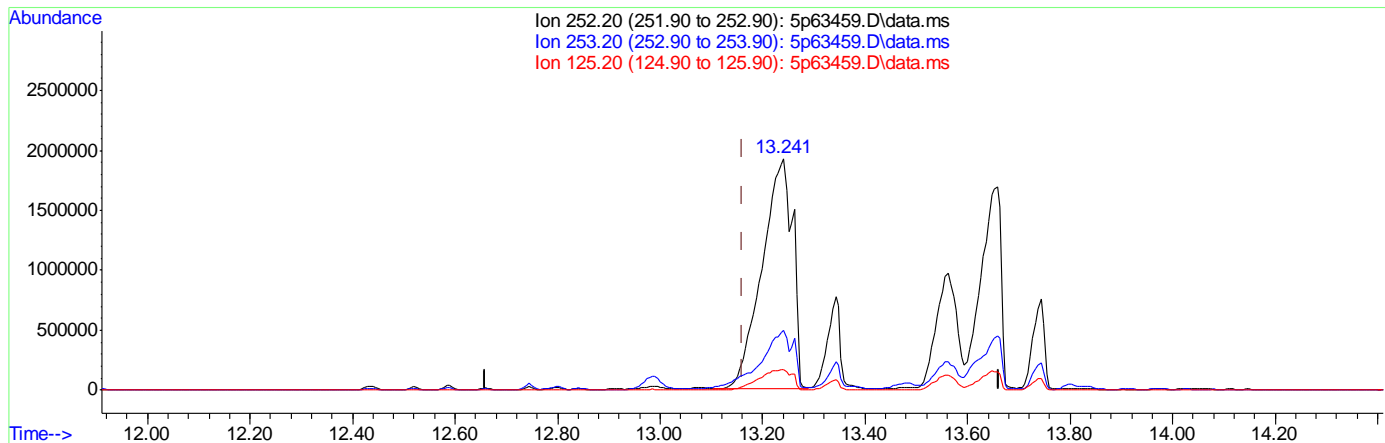
(93) Benzo[b]fluoranthene (t)		
13.241min (+0.123) 611.50ppm		
response 7961613		
Ion	Exp%	Act%
252.20	100	100
253.20	23.80	25.03
125.20	10.90	8.98
0.00	0.00	0.00

9.1.1.4  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63459.D  
 Acq On : 1 Oct 2019 11:01 am  
 Operator : chriss2  
 Sample : jc95555-1  
 Misc : op23015,e5p2977,31.5,,,5,5  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 01 11:56:57 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63459.D\data.ms

(94) Benzo[k]fluoranthene (t)  
 13.241min (+0.080) 696.60ppm  
 response 7968171

Ion	Exp%	Act%
252.20	100	100
253.20	22.10	25.03
125.20	10.20	8.98
0.00	0.00	0.00

9.1.1.5  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\5p2978\  
 Data File : 5p63492.d  
 Acq On : 2 Oct 2019 12:21 am  
 Operator : hennys  
 Sample : jc95555-1 Inst : MS5P  
 Misc : op23015,e5p2978,31.5,,,5,200  
 ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:06:46 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.047	152	106423	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	376548	40.00	ppm	0.00
47) Acenaphthene-d10	6.916	164	206126	40.00	ppm	0.00
69) Phenanthrene-d10	8.348	188	397418	40.00	ppm	0.00
83) Chrysene-d12	11.628	240	350413	40.00	ppm	-0.01
91) Perylene-d12	13.610	264	418217	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.047	152	106423	40.00	ppm	0.00
103) Acenaphthene-d10a	6.916	164	206126	40.00	ppm	0.00
105) Chrysene-d12a	11.628	240	350413	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.348	188	397418	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	376548	40.00	ppm	0.00
112) Chrysene-d12b	11.628	240	349931	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.047	152	106423	40.00	ppm	0.00
116) Chrysene-d12c	11.628	240	350413	40.00	ppm	-0.01
118) Chrysene-d12d	11.628	240	349931	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.348	188	397418	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
9) Phenol	3.780	94	7437	1.03	ppm	Qvalue 96
19) 2-Methylphenol	4.330	108	5040	1.15	ppm	80
21) 3&4-Methylphenol	4.480	108	15361	3.48	ppm	75
30) 2,4-Dimethylphenol	4.966	107	8043	1.66	ppm	91
38) Naphthalene	5.254	128	955268	88.13	ppm	98
44) 2-Methylnaphthalene	5.917	141	120817	21.03	ppm	96
53) Biphenyl	6.376	154	39994	4.37	ppm	96
56) Acenaphthylene	6.777	152	243133	21.26	ppm	99
59) Acenaphthene	6.948	153	52618	7.56	ppm	97
62) Dibenzofuran	7.113	168	182109	18.31	ppm	87
66) Fluorene	7.445	166	215528	27.16	ppm	93
77) Phenanthrene	8.374	178	726420	65.88	ppm	99
78) Anthracene	8.422	178	133758	11.63	ppm	99
79) Carbazole	8.609	167	97769	8.18	ppm	98
81) Fluoranthene	9.699	202	616012	44.15	ppm	98
84) Pyrene	9.972	202	436756	29.74	ppm	99
87) Benzo[a]anthracene	11.617	228	218573	16.34	ppm	99
89) Chrysene	11.660	228	151755	12.07	ppm	97
93) Benzo[b]fluoranthene	13.107	252	231009	16.04	ppm	99
94) Benzo[k]fluoranthene	13.145	252	67912	5.37	ppm	94



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63492.d  
 Acq On : 2 Oct 2019 12:21 am  
 Operator : hennys  
 Sample : jc95555-1 Inst : MS5P  
 Misc : op23015,e5p2978,31.5,,,5,200  
 ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:06:46 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	13.524	252	167621	12.96	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.886	276	85654	7.22	ppm	94
98) Dibenz[a,h]anthracene	14.913	278	24136	2.00	ppm	89
100) Benzo[g,h,i]perylene	15.186	276	80513	6.69	ppm	96

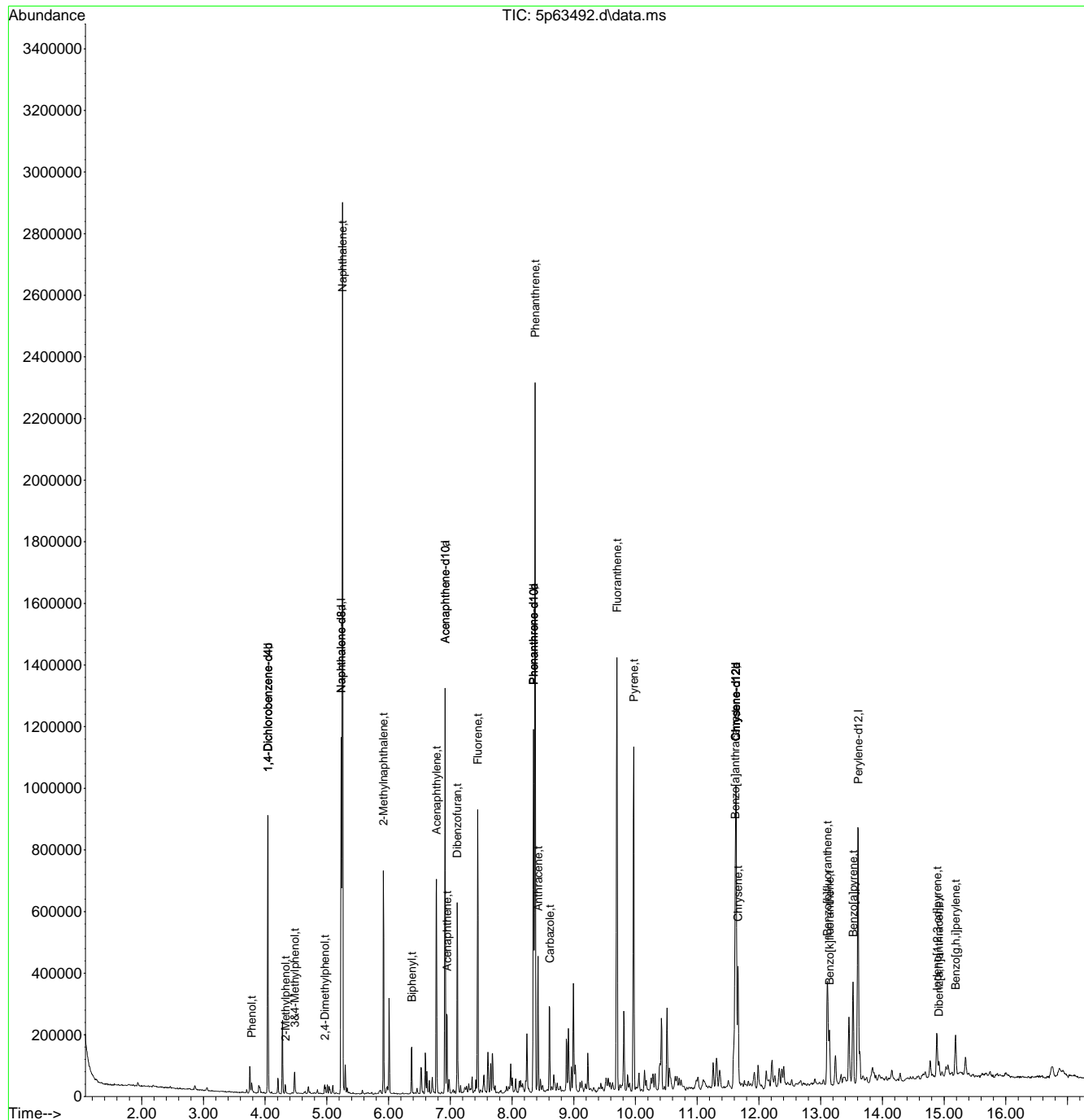
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

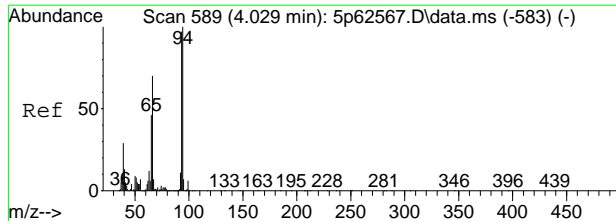
Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63492.d  
 Acq On : 2 Oct 2019 12:21 am  
 Operator : hennys  
 Sample : jc95555-1  
 Misc : op23015,e5p2978,31.5,,,5,200  
 ALS Vial : 28 Sample Multiplier: 1

Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:06:46 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

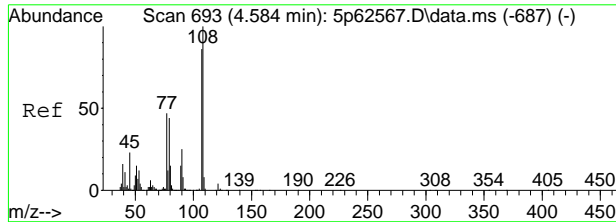
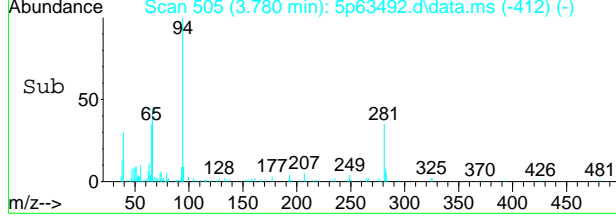
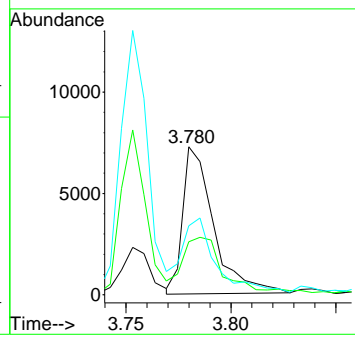
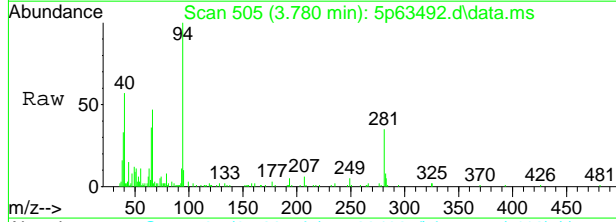


9.12  
9



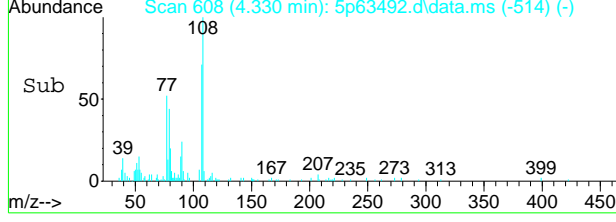
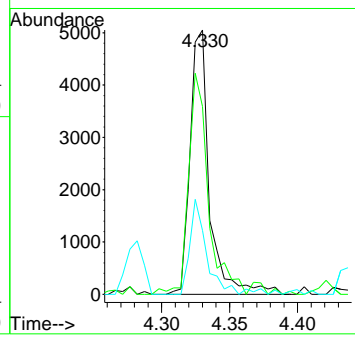
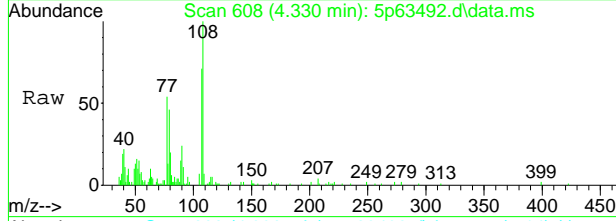
#9  
 Phenol  
 Concen: 1.03 ppm  
 RT: 3.780 min Scan# 505  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
94	100		
65	30.6	1.8	61.8
66	38.9	12.5	72.5

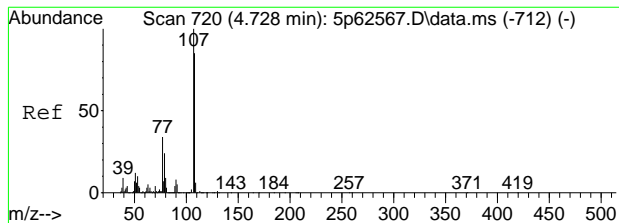


#19  
 2-Methylphenol  
 Concen: 1.15 ppm  
 RT: 4.330 min Scan# 608  
 Delta R.T. 0.000 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
108	100		
107	69.9	63.7	123.7
90	23.6	0.0	55.6

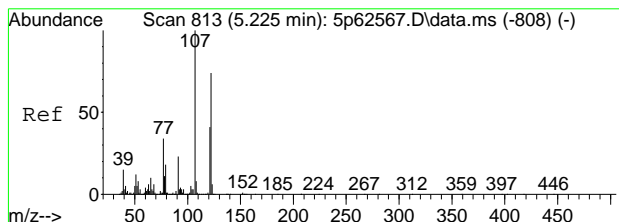
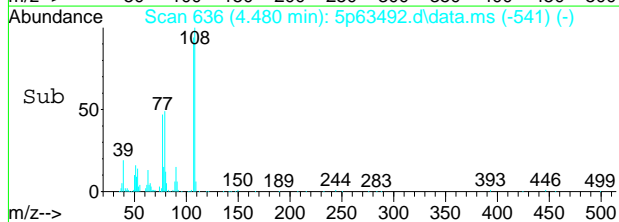
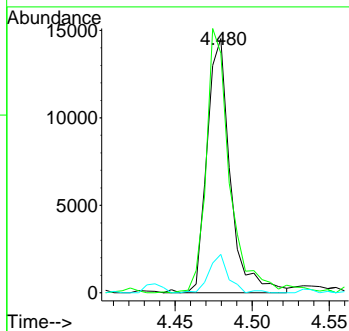
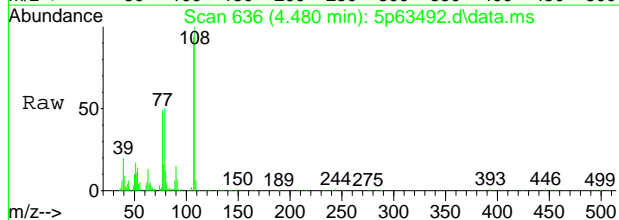


9.12  
 9



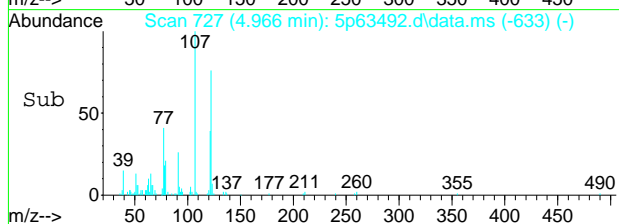
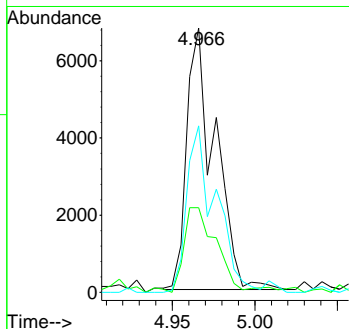
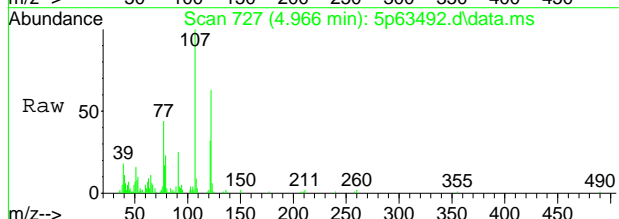
#21  
 3&4-Methylphenol  
 Concen: 3.48 ppm  
 RT: 4.480 min Scan# 636  
 Delta R.T. 0.006 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

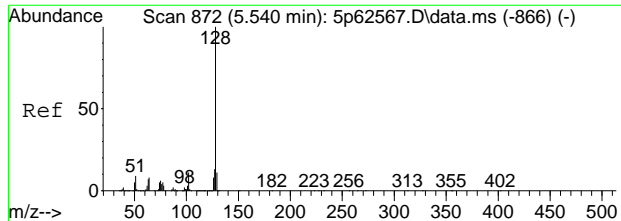
Tgt Ion	Resp	Lower	Upper
108	15361		
107	93.4	92.4	152.4
90	14.2	0.0	39.9



#30  
 2,4-Dimethylphenol  
 Concen: 1.66 ppm  
 RT: 4.966 min Scan# 727  
 Delta R.T. 0.000 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

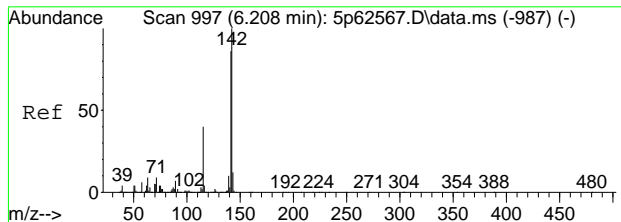
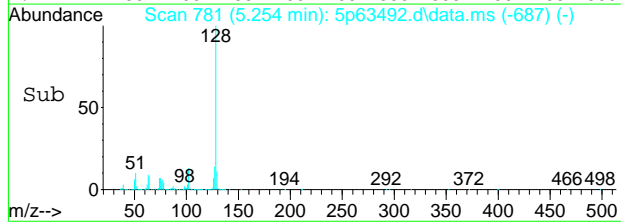
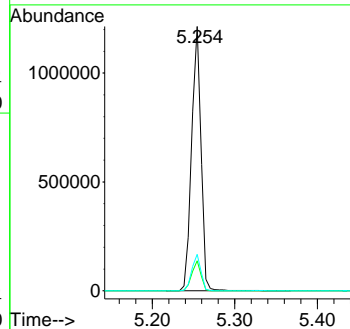
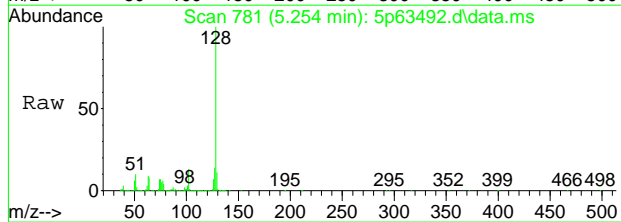
Tgt Ion	Resp	Lower	Upper
107	8043		
107	100		
121	31.2	8.0	68.0
122	63.8	40.0	100.0





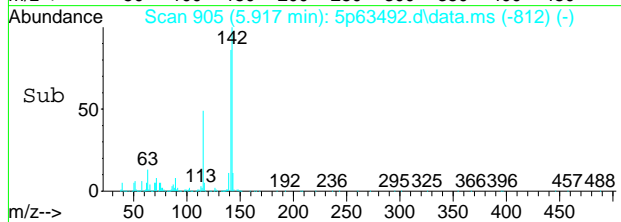
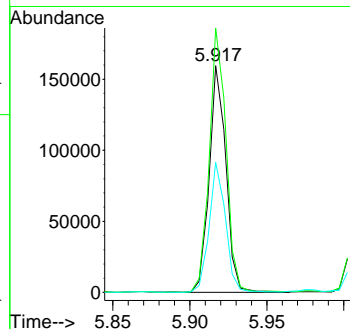
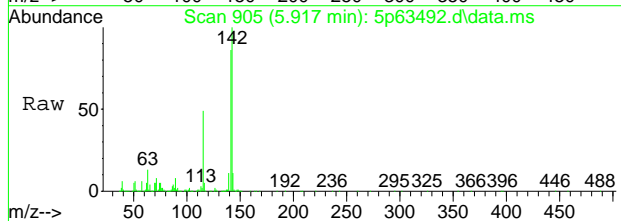
#38  
 Naphthalene  
 Concen: 88.13 ppm  
 RT: 5.254 min Scan# 781  
 Delta R.T. 0.000 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
128	955268		
128	100		
129	11.4	0.0	40.7
127	13.8	0.0	42.6

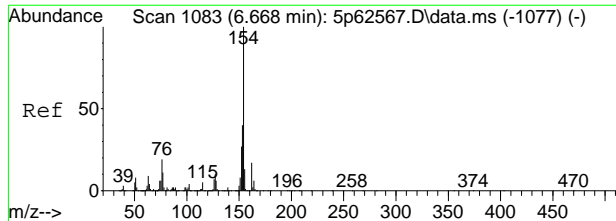


#44  
 2-Methylnaphthalene  
 Concen: 21.03 ppm  
 RT: 5.917 min Scan# 905  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
141	120817		
141	100		
142	116.6	91.3	151.3
115	57.2	25.7	85.7

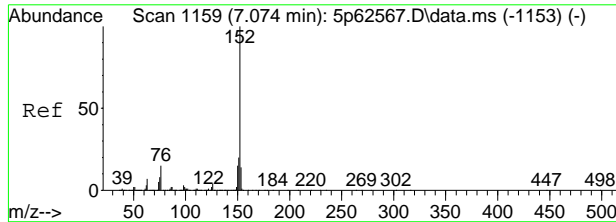
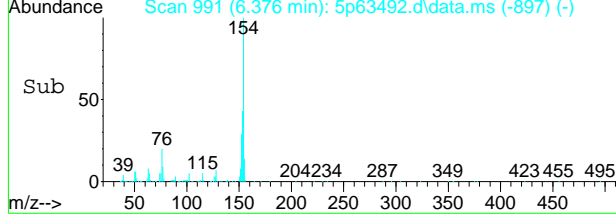
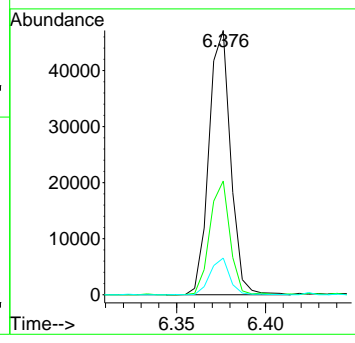
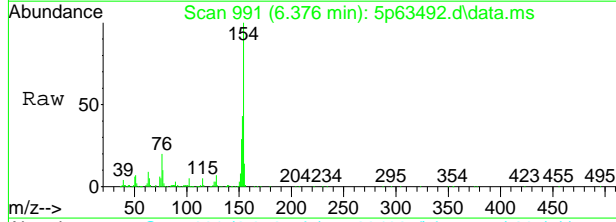


9.12  
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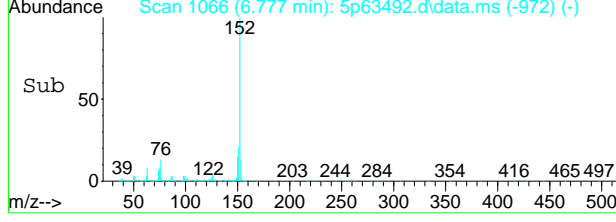
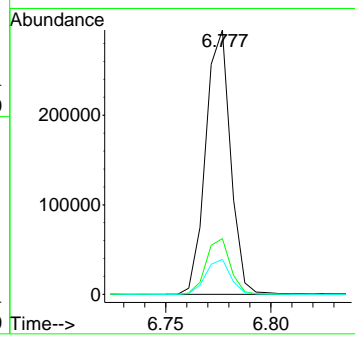
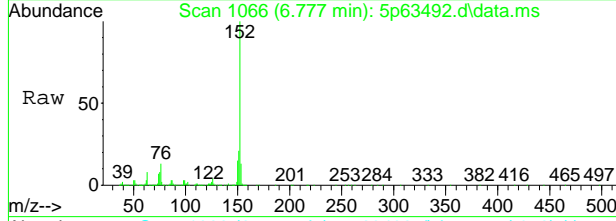
#53  
 Biphenyl  
 Concen: 4.37 ppm  
 RT: 6.376 min Scan# 991  
 Delta R.T. 0.000 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
154	39994		
153	42.9	9.8	69.8
155	13.9	0.0	43.2

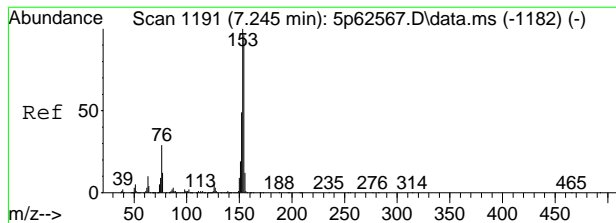


#56  
 Acenaphthylene  
 Concen: 21.26 ppm  
 RT: 6.777 min Scan# 1066  
 Delta R.T. 0.000 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
152	243133		
151	21.1	0.0	50.5
153	13.2	0.0	43.9

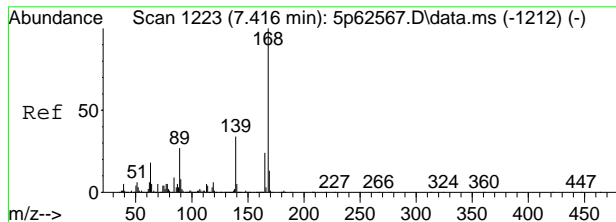
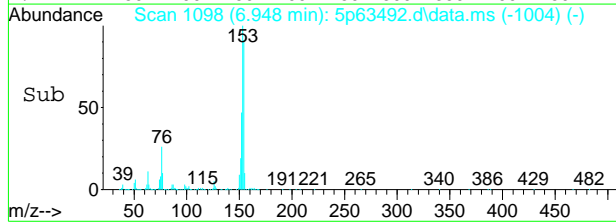
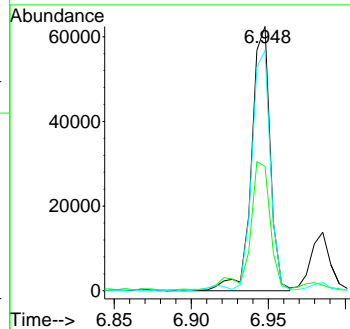
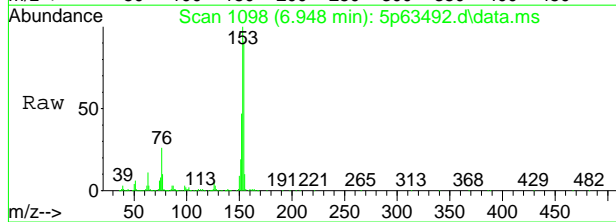


9.12  
**9**



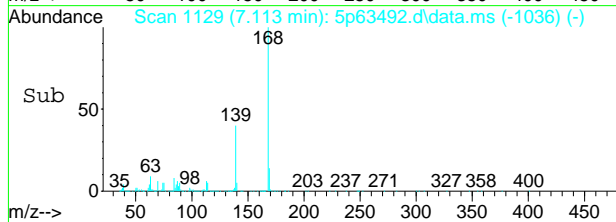
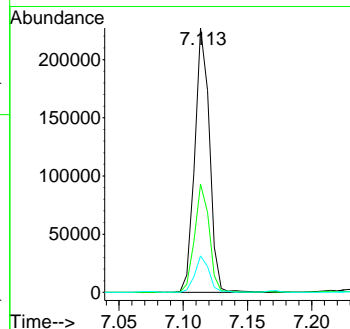
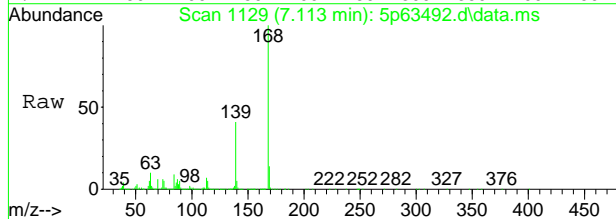
#59  
 Acenaphthene  
 Concen: 7.56 ppm  
 RT: 6.948 min Scan# 1098  
 Delta R.T. 0.000 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
153	52618		
152	46.7	20.1	80.1
154	91.0	63.1	123.1

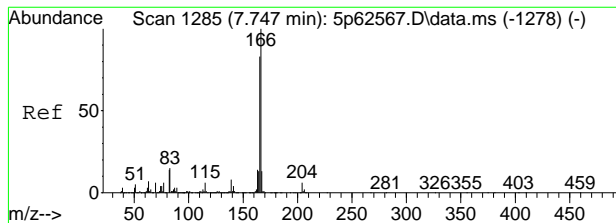


#62  
 Dibenzofuran  
 Concen: 18.31 ppm  
 RT: 7.113 min Scan# 1129  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
168	182109		
139	40.9	22.9	82.9
169	13.7	0.0	43.7

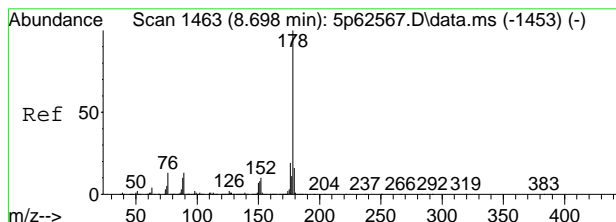
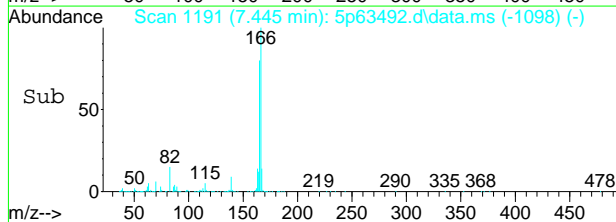
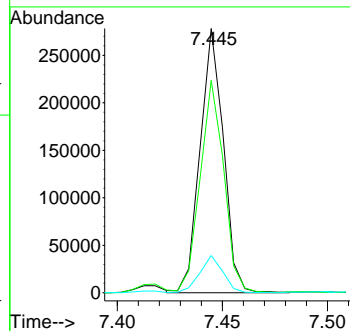
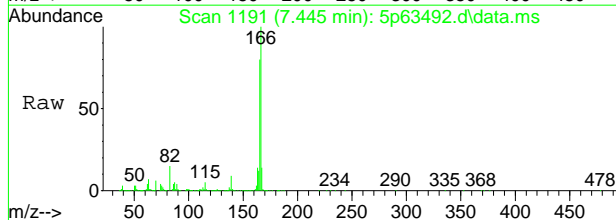


9.12  
 9



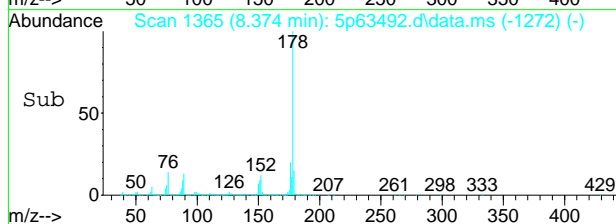
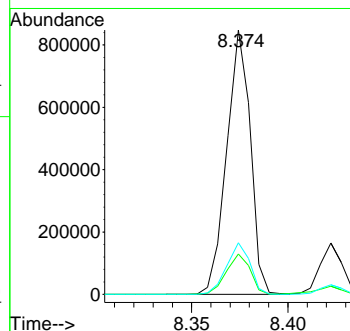
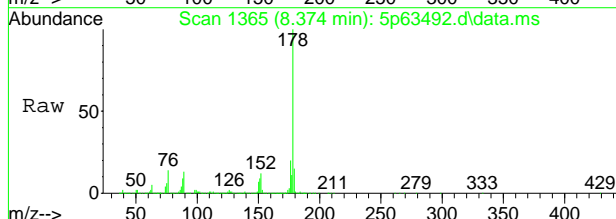
#66  
 Fluorene  
 Concen: 27.16 ppm  
 RT: 7.445 min Scan# 1191  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
166	100		
165	80.1	57.0	117.0
167	14.0	0.0	43.3

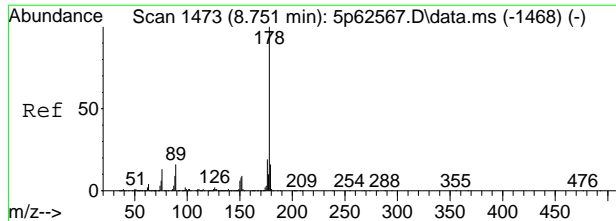


#77  
 Phenanthrene  
 Concen: 65.88 ppm  
 RT: 8.374 min Scan# 1365  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
178	100		
179	15.1	0.0	45.3
176	19.5	0.0	50.3



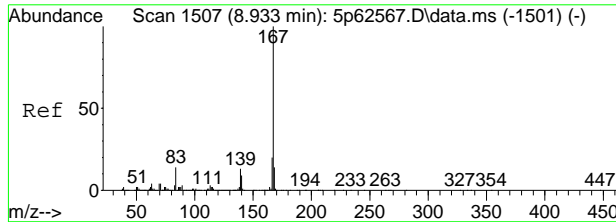
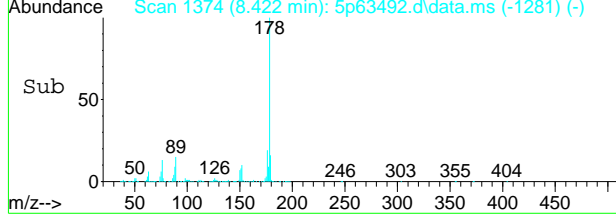
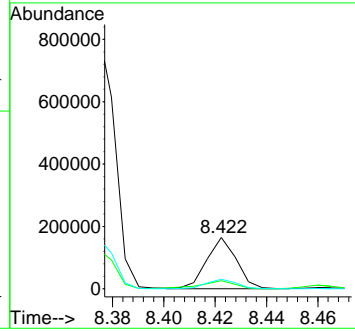
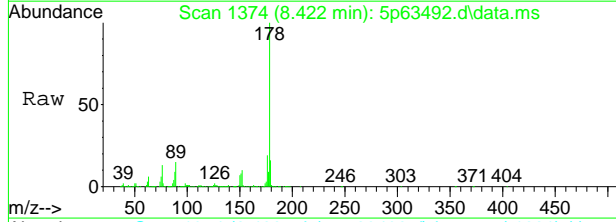




#78  
 Anthracene  
 Concen: 11.63 ppm  
 RT: 8.422 min Scan# 1374  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp
178	133758

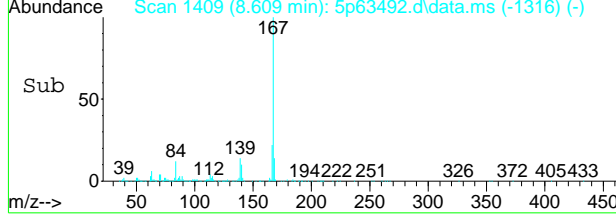
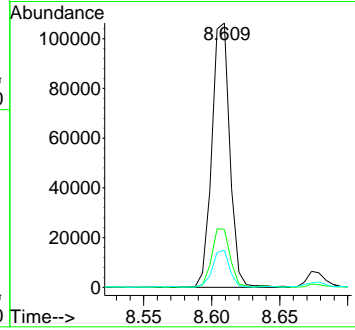
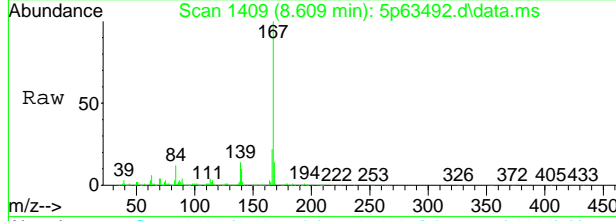
Ion	Ratio	Lower	Upper
178	100		
179	14.6	0.0	45.5
176	18.8	0.0	48.8



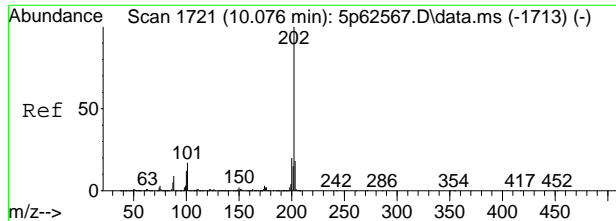
#79  
 Carbazole  
 Concen: 8.18 ppm  
 RT: 8.609 min Scan# 1409  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp
167	97769

Ion	Ratio	Lower	Upper
167	100		
166	21.9	0.0	51.1
139	13.9	0.0	43.2

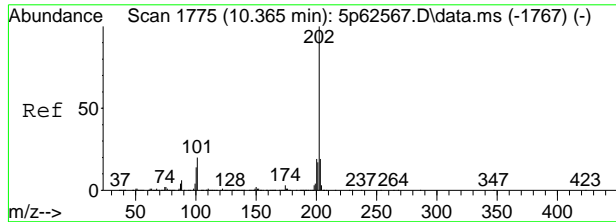
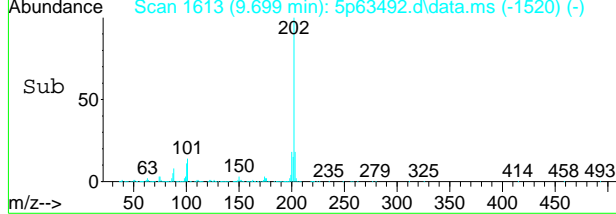
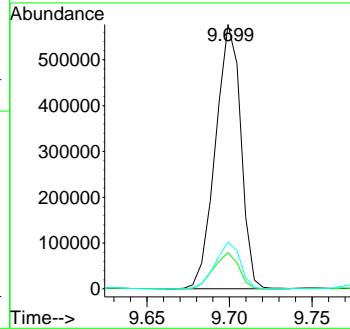
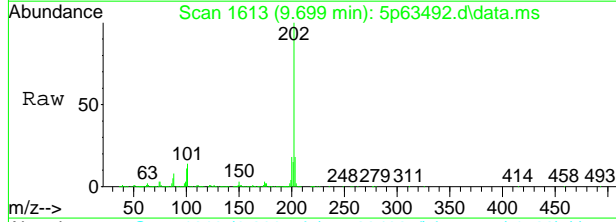


9.12  
 9



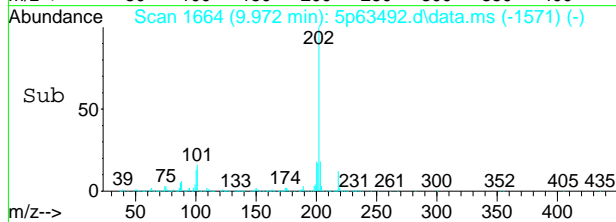
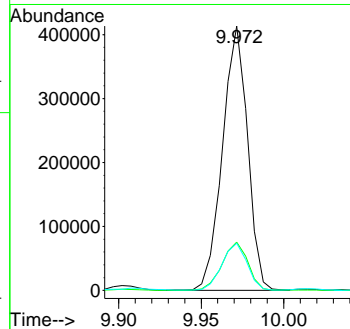
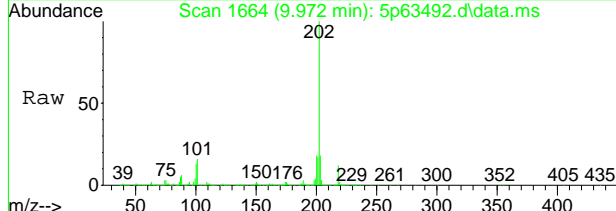
#81  
 Fluoranthene  
 Concen: 44.15 ppm  
 RT: 9.699 min Scan# 1613  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.7	0.0	42.7
203	17.5	0.0	48.4

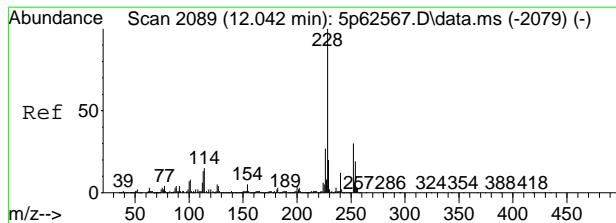


#84  
 Pyrene  
 Concen: 29.74 ppm  
 RT: 9.972 min Scan# 1664  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
202	100		
200	18.3	0.0	48.7
203	17.7	0.0	48.4

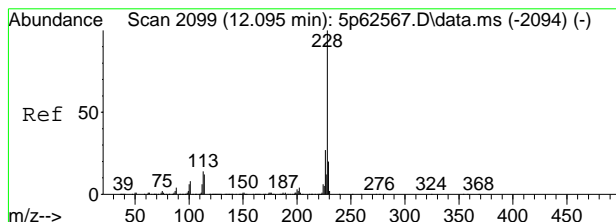
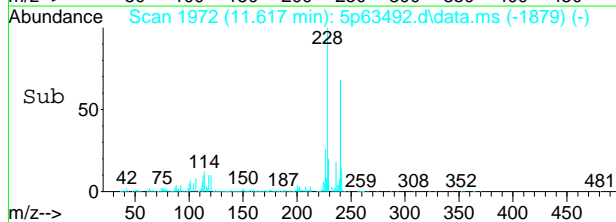
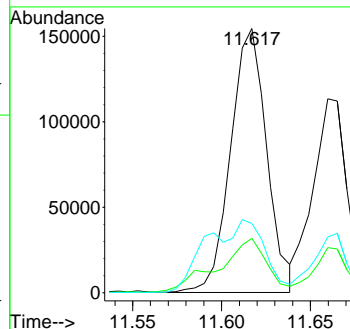
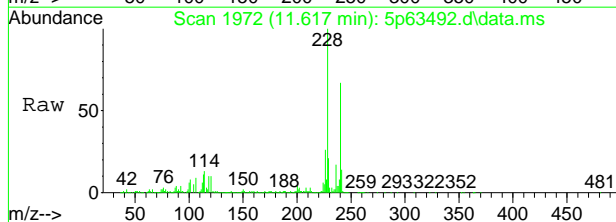


9.12  
**9**



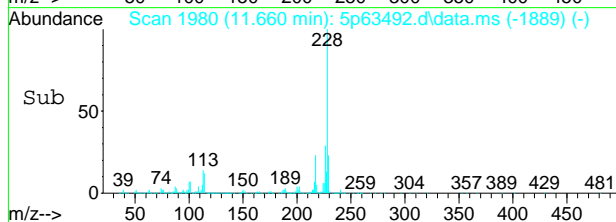
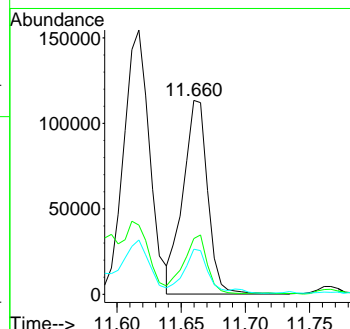
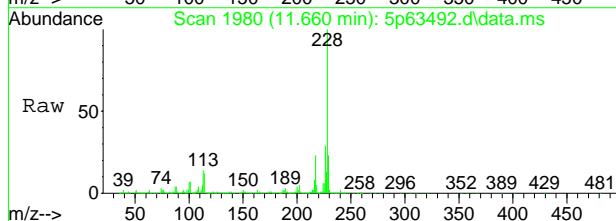
#87  
 Benzo[a]anthracene  
 Concen: 16.34 ppm  
 RT: 11.617 min Scan# 1972  
 Delta R.T. -0.005 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

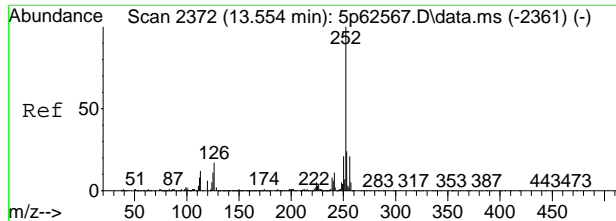
Tgt Ion	Ratio	Lower	Upper
228	100		
229	20.0	0.0	49.4
226	25.9	0.0	56.7



#89  
 Chrysene  
 Concen: 12.07 ppm  
 RT: 11.660 min Scan# 1980  
 Delta R.T. -0.016 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

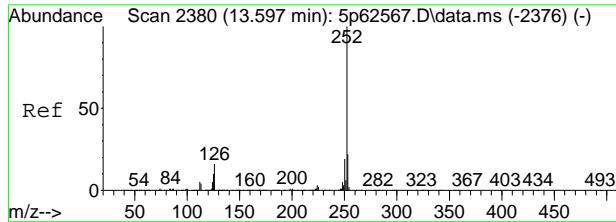
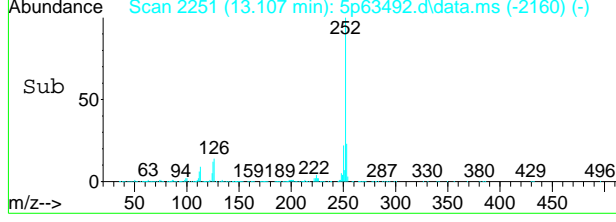
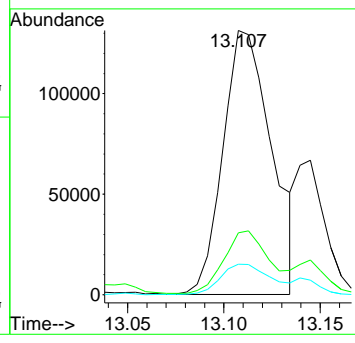
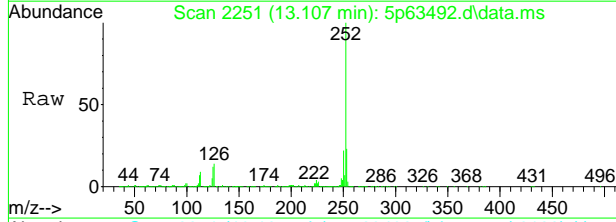
Tgt Ion	Ratio	Lower	Upper
228	100		
226	28.4	0.0	59.6
229	22.6	0.0	50.2





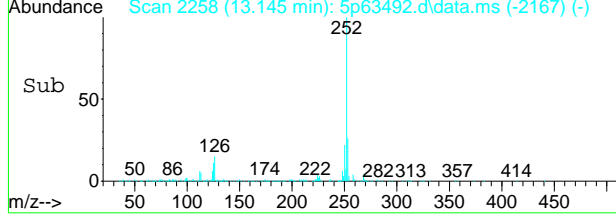
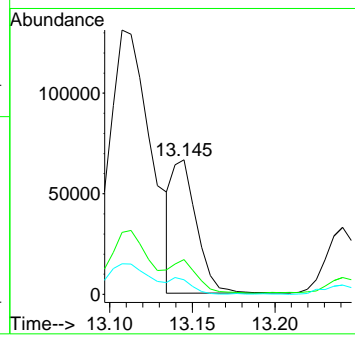
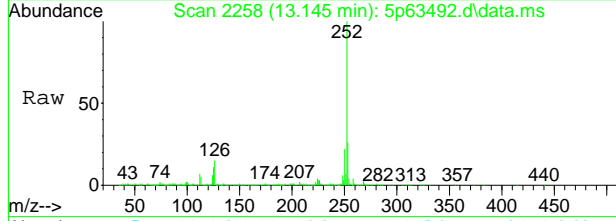
#93  
 Benzo[b]fluoranthene  
 Concen: 16.04 ppm  
 RT: 13.107 min Scan# 2251  
 Delta R.T. -0.016 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

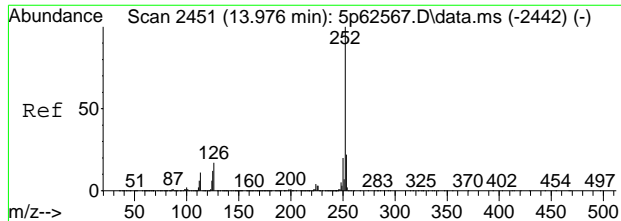
Tgt Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	52.7
125	11.5	0.0	40.6



#94  
 Benzo[k]fluoranthene  
 Concen: 5.37 ppm  
 RT: 13.145 min Scan# 2258  
 Delta R.T. -0.016 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

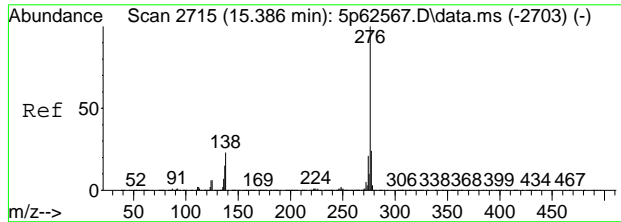
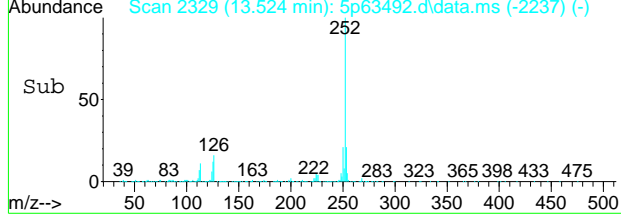
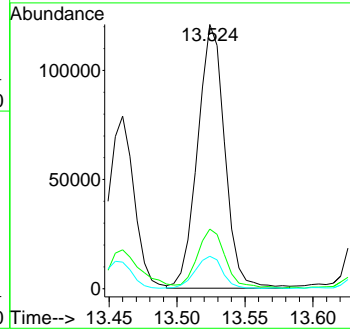
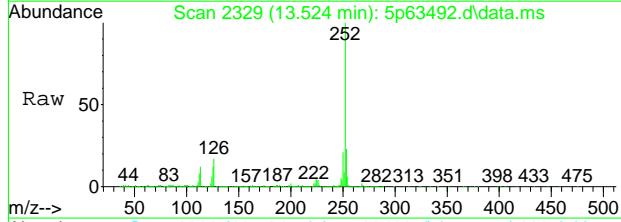
Tgt Ion	Ratio	Lower	Upper
252	100		
253	25.9	0.0	52.2
125	10.6	0.0	39.7





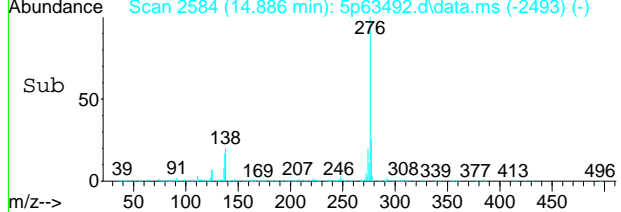
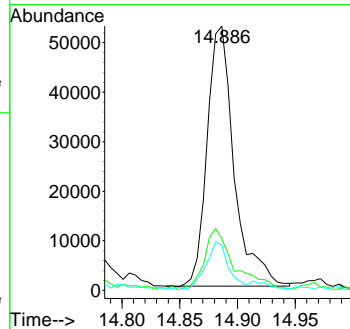
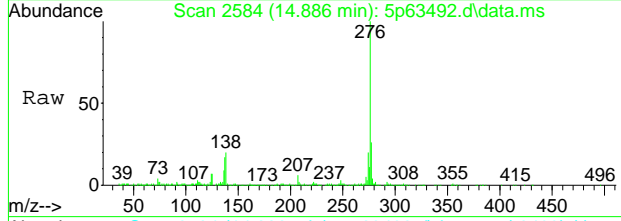
#95  
 Benzo[a]pyrene  
 Concen: 12.96 ppm  
 RT: 13.524 min Scan# 2329  
 Delta R.T. -0.011 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	52.8
125	12.3	0.0	42.0

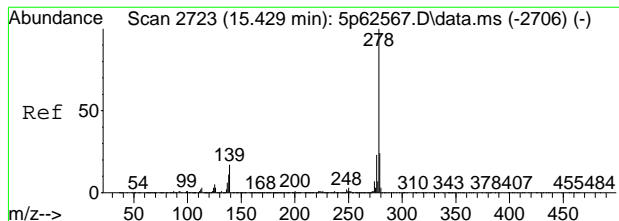


#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 7.22 ppm  
 RT: 14.886 min Scan# 2584  
 Delta R.T. -0.016 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Ratio	Lower	Upper
276	100		
138	19.2	0.0	47.8
137	16.7	0.0	42.9

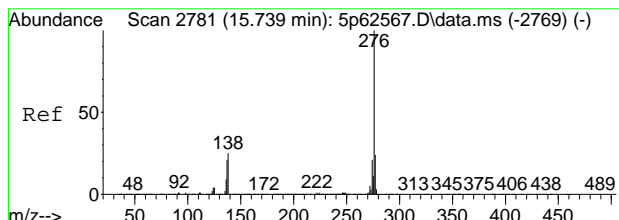
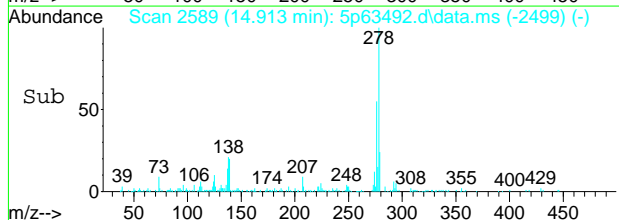
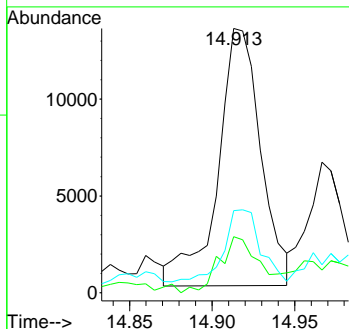
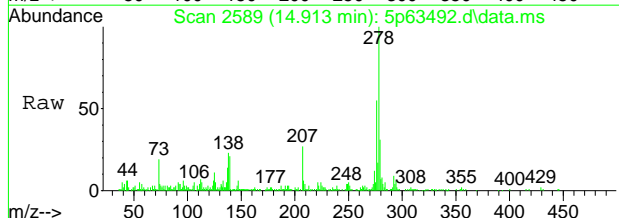


9.12  
 9



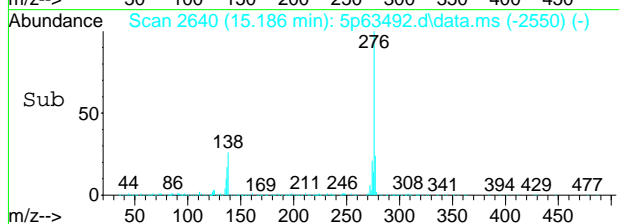
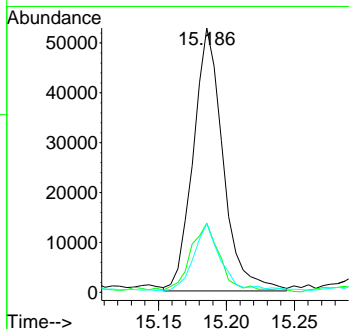
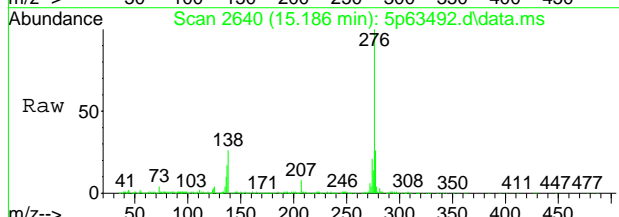
#98  
 Dibenz[a,h]anthracene  
 Concen: 2.00 ppm  
 RT: 14.913 min Scan# 2589  
 Delta R.T. -0.021 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
278	24136		
139	18.8	0.0	47.1
279	30.6	0.0	53.0



#100  
 Benzo[g,h,i]perylene  
 Concen: 6.69 ppm  
 RT: 15.186 min Scan# 2640  
 Delta R.T. -0.021 min  
 Lab File: 5p63492.d  
 Acq: 2 Oct 2019 12:21 am

Tgt Ion	Resp	Lower	Upper
276	80513		
138	25.7	0.0	52.7
277	25.4	0.0	54.2



9.12  
**9**

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63452.D  
 Acq On : 1 Oct 2019 8:10 am  
 Operator : chriss2  
 Sample : jc95555-2  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 01 09:09:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.052	152	118555	40.00	ppm	0.00
24) Naphthalene-d8	5.238	136	408011	40.00	ppm	0.00
47) Acenaphthene-d10	6.927	164	214058	40.00	ppm	0.00
69) Phenanthrene-d10	8.358	188	379249	40.00	ppm	0.00
83) Chrysene-d12	11.644	240	284156	40.00	ppm	0.00
91) Perylene-d12	13.620	264	349969	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4b	4.052	152	118555	40.00	ppm	0.00
103) Acenaphthene-d10a	6.927	164	214058	40.00	ppm	0.00
105) Chrysene-d12a	11.644	240	284156	40.00	ppm	0.00
107) Phenanthrene-d10a	8.358	188	379249	40.00	ppm	0.00
110) Naphthalene-d8a	5.238	136	408011	40.00	ppm	0.00
112) Chrysene-d12b	11.644	240	284156	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.052	152	118555	40.00	ppm	0.00
116) Chrysene-d12c	11.644	240	284156	40.00	ppm	0.00
118) Chrysene-d12d	11.644	240	284156	40.00	ppm	0.00
120) Phenanthrene-d10b	8.358	188	379288	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.915	112	144175	28.51	ppm	0.01
Spiked Amount	50.000		Recovery	=	57.02%	
8) Phenol-d5	3.775	99	217695	30.59	ppm	0.00
Spiked Amount	50.000		Recovery	=	61.18%	
25) Nitrobenzene-d5	4.565	82	210521	33.01	ppm	0.00
Spiked Amount	50.000		Recovery	=	66.02%	
51) 2-Fluorobiphenyl	6.291	172	257281	30.37	ppm	0.00
Spiked Amount	50.000		Recovery	=	60.74%	
73) 2,4,6-Tribromophenol	7.690	330	47445	31.06	ppm	0.00
Spiked Amount	50.000		Recovery	=	62.12%	
85) Terphenyl-d14	10.239	244	285427	38.60	ppm	0.00
Spiked Amount	50.000		Recovery	=	77.20%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
21) 3&4-Methylphenol	4.480	108	2849	0.58	ppm	Qvalue # 65
30) 2,4-Dimethylphenol	4.971	107	2913	0.56	ppm	89
38) Naphthalene	5.260	128	1005525	85.61	ppm	98
44) 2-Methylnaphthalene	5.928	141	150451	24.16	ppm	93
53) Biphenyl	6.382	154	64544	6.78	ppm	97
56) Acenaphthylene	6.782	152	92768	7.81	ppm	99
59) Acenaphthene	6.959	153	361693	50.02	ppm	96
62) Dibenzofuran	7.124	168	326456	31.60	ppm	93
66) Fluorene	7.455	166	390643	47.40	ppm	98
77) Phenanthrene	8.390	178	1357772	129.04	ppm	99
78) Anthracene	8.433	178	244036	22.24	ppm	98
79) Carbazole	8.615	167	177872	15.59	ppm	99
81) Fluoranthene	9.721	202	1067697	80.19	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
Data File : 5p63452.D  
Acq On : 1 Oct 2019 8:10 am  
Operator : chriss2  
Sample : jc95555-2  
Misc : op23015,e5p2977,30.0,,,1,1  
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 01 09:09:35 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Tue Oct 01 08:17:31 2019  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
84) Pyrene	9.988	202	842246	70.72	ppm	100
87) Benzo[a]anthracene	11.633	228	430682	39.72	ppm	99
89) Chrysene	11.676	228	306007	30.03	ppm	97
93) Benzo[b]fluoranthene	13.124	252	438028	36.34	ppm	96
94) Benzo[k]fluoranthene	13.156	252	161749	15.28	ppm	94
95) Benzo[a]pyrene	13.540	252	351867	32.51	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.897	276	196021	19.73	ppm	98
98) Dibenz[a,h]anthracene	14.929	278	64034	6.33	ppm	91
100) Benzo[g,h,i]perylene	15.202	276	186625	18.54	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

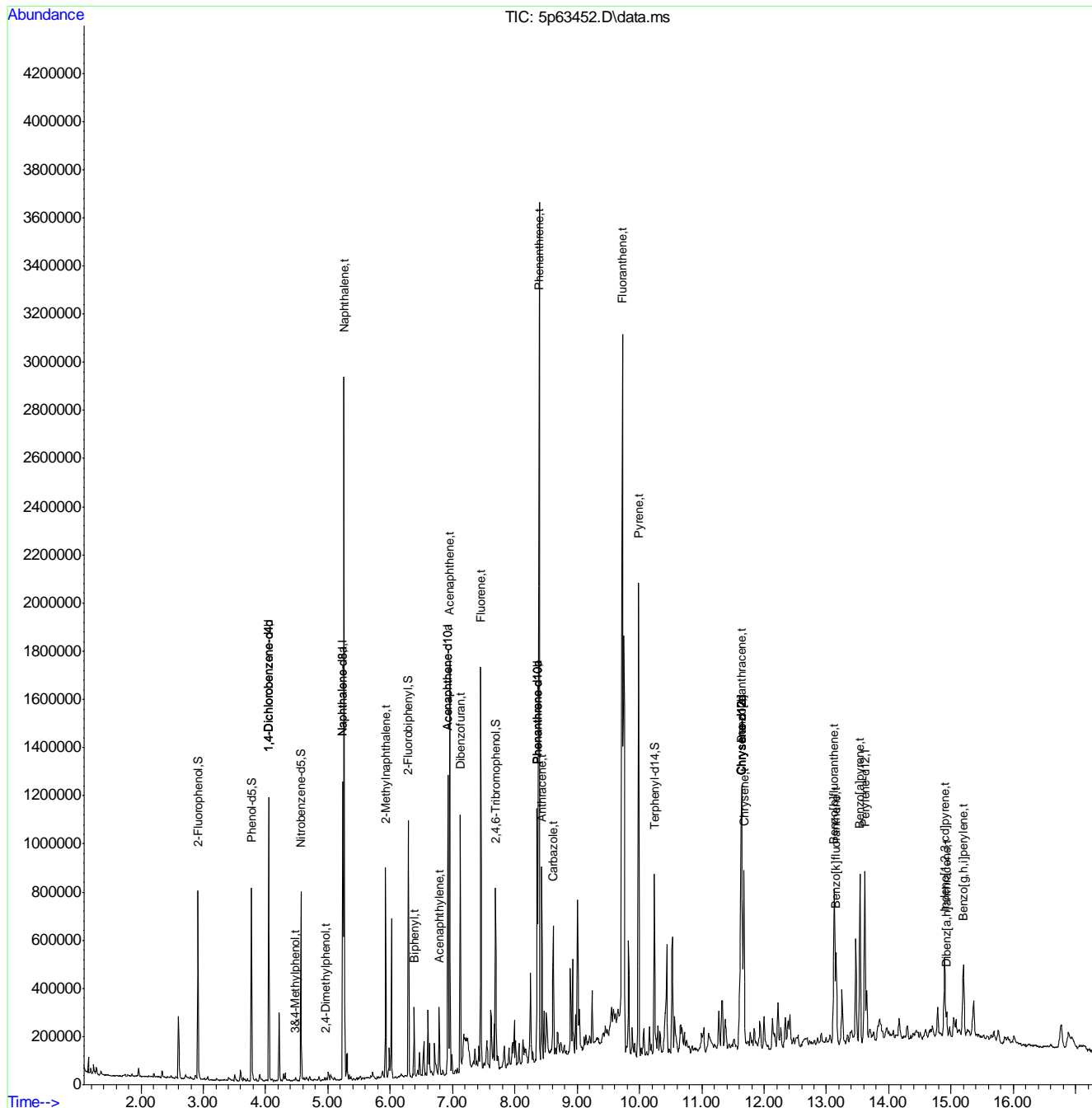
9.1.3  
9

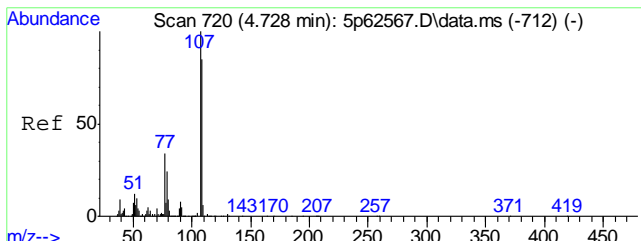


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63452.D  
 Acq On : 1 Oct 2019 8:10 am  
 Operator : chriss2  
 Sample : jc95555-2  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 20 Sample Multiplier: 1

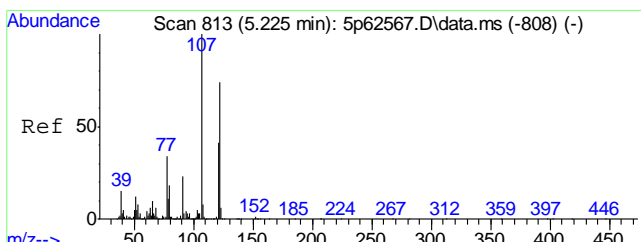
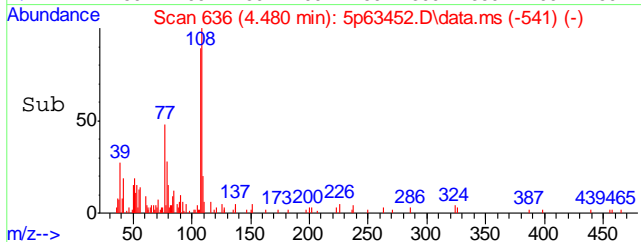
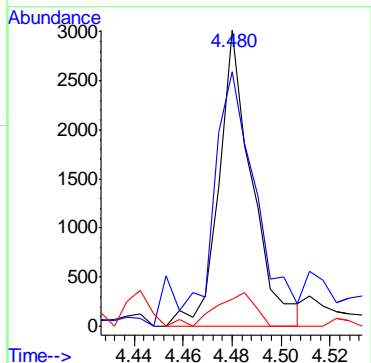
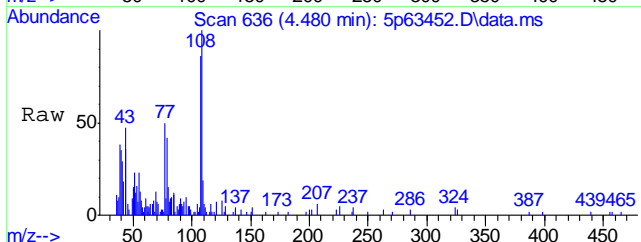
Quant Time: Oct 01 09:09:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration





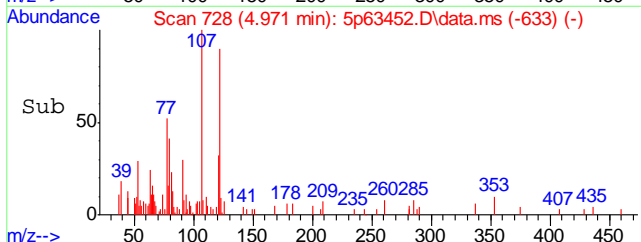
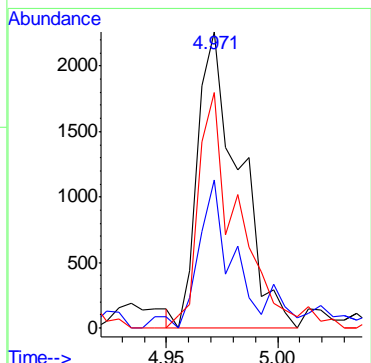
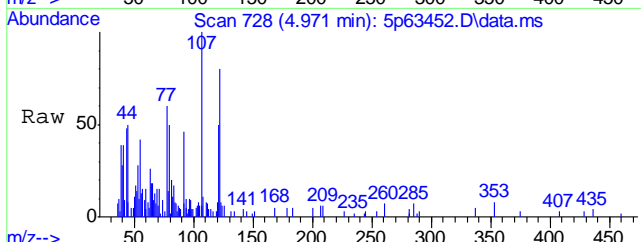
#21  
 3&4-Methylphenol  
 Concen: 0.58 ppm  
 RT: 4.480 min Scan# 636  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

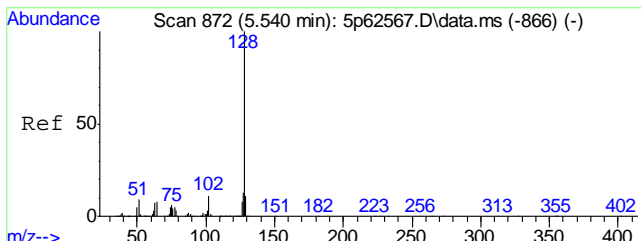
Tgt Ion	Ratio	Lower	Upper
108	100		
107	76.6	87.9	147.9#
90	9.7	0.0	39.4



#30  
 2,4-Dimethylphenol  
 Concen: 0.56 ppm  
 RT: 4.971 min Scan# 728  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

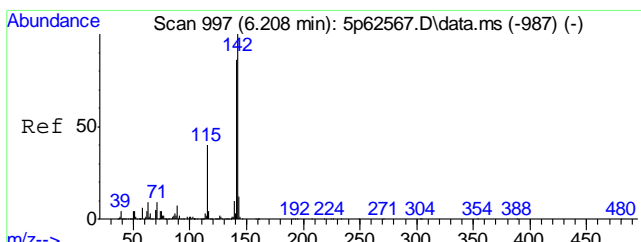
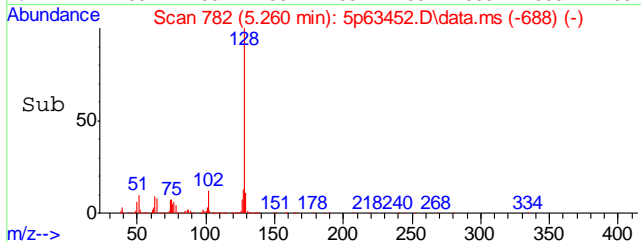
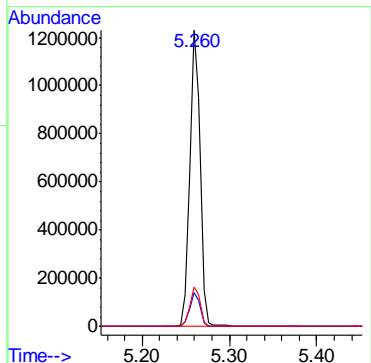
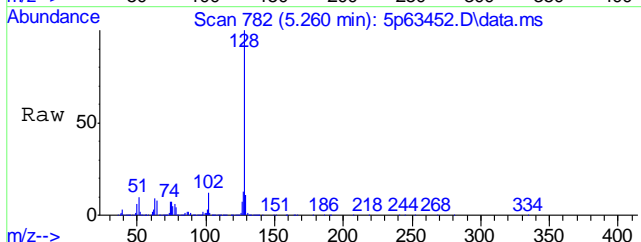
Tgt Ion	Ratio	Lower	Upper
107	100		
121	48.0	11.2	71.2
122	80.3	41.7	101.7





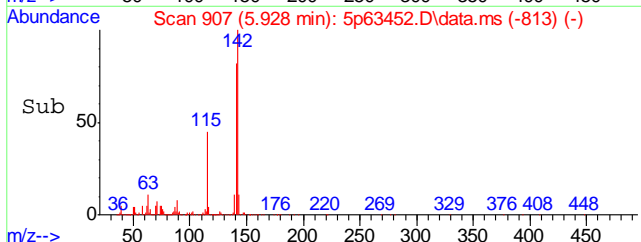
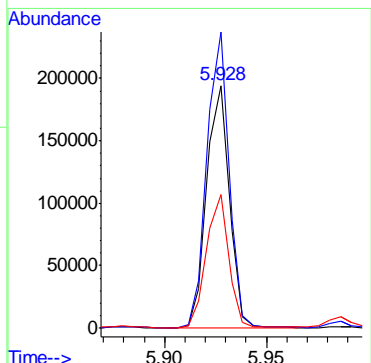
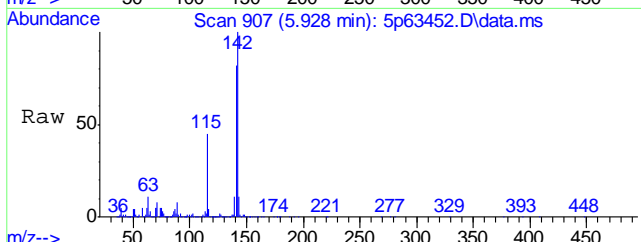
#38  
Naphthalene  
Concen: 85.61 ppm  
RT: 5.260 min Scan# 782  
Delta R.T. 0.000 min  
Lab File: 5p63452.D  
Acq: 1 Oct 19 8:10 am

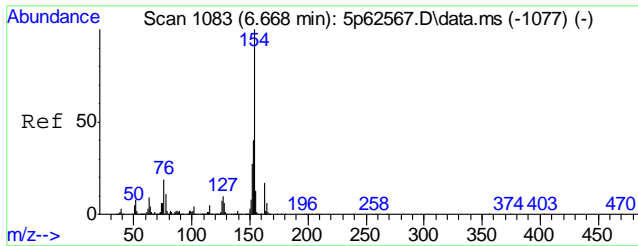
Tgt Ion	Ratio	Lower	Upper
128	100		
129	11.4	0.0	40.6
127	13.4	0.0	42.6



#44  
2-Methylnaphthalene  
Concen: 24.16 ppm  
RT: 5.928 min Scan# 907  
Delta R.T. 0.000 min  
Lab File: 5p63452.D  
Acq: 1 Oct 19 8:10 am

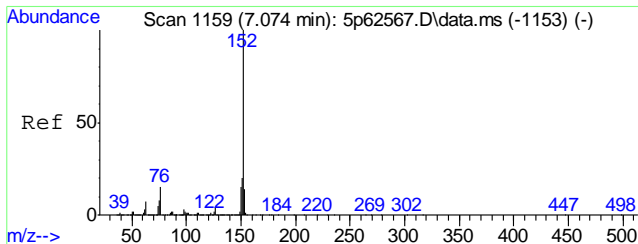
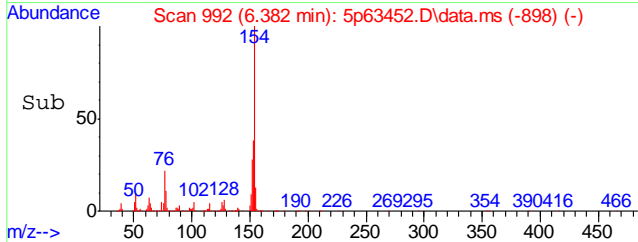
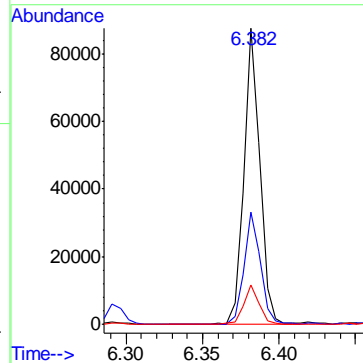
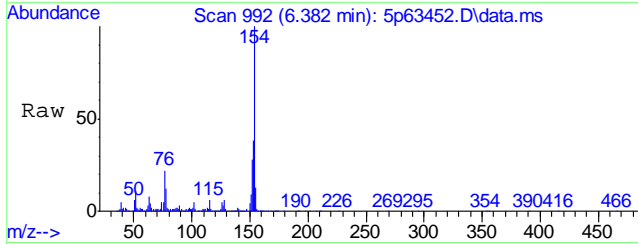
Tgt Ion	Ratio	Lower	Upper
141	100		
142	121.8	86.4	146.4
115	54.7	16.6	76.6





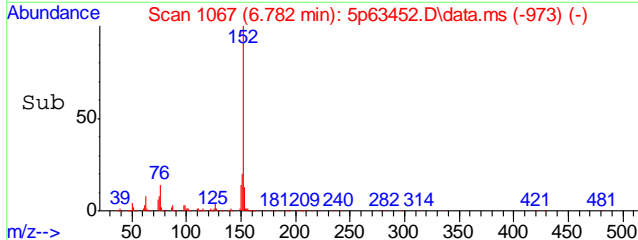
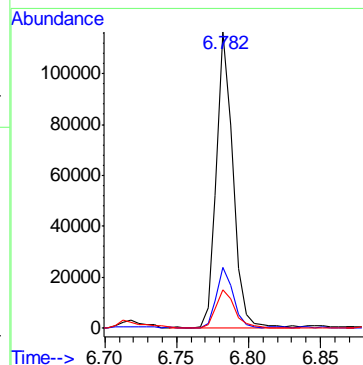
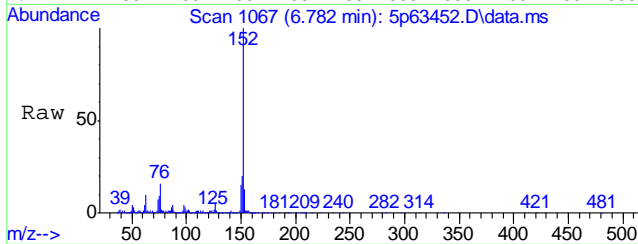
#53  
 Biphenyl  
 Concen: 6.78 ppm  
 RT: 6.382 min Scan# 992  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

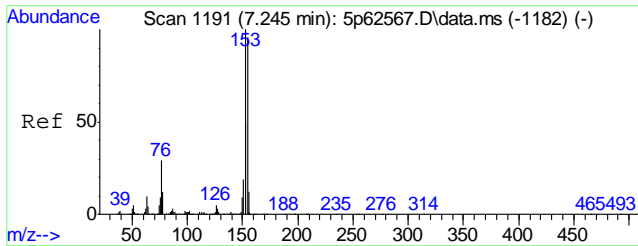
Tgt Ion	Resp	Lower	Upper
154	64544		
153	37.7	9.6	69.6
155	13.1	0.0	42.7



#56  
 Acenaphthylene  
 Concen: 7.81 ppm  
 RT: 6.782 min Scan# 1067  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

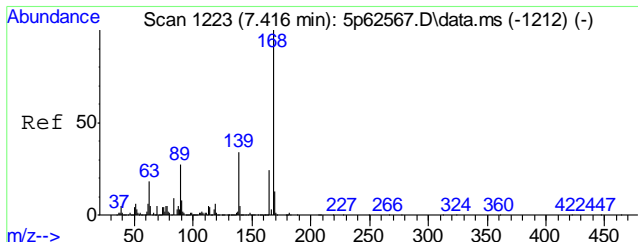
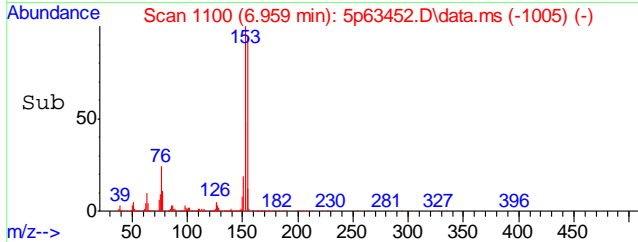
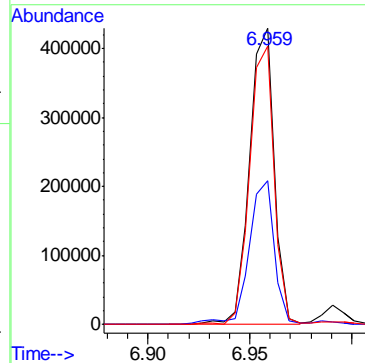
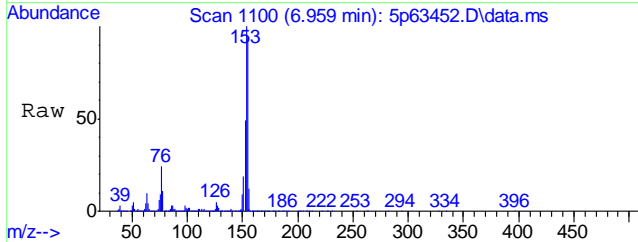
Tgt Ion	Resp	Lower	Upper
152	92768		
151	20.1	0.0	49.8
153	12.7	0.0	43.6





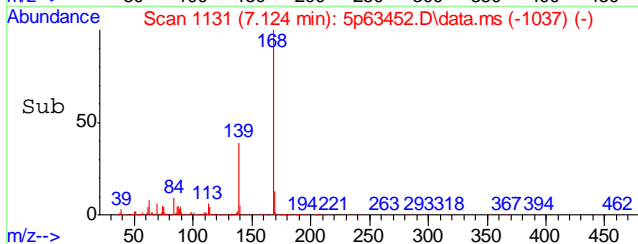
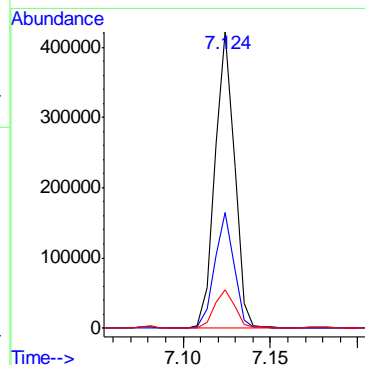
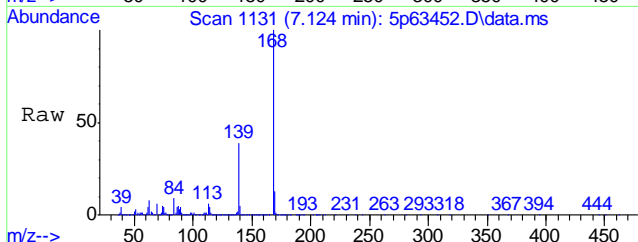
#59  
 Acenaphthene  
 Concen: 50.02 ppm  
 RT: 6.959 min Scan# 1100  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

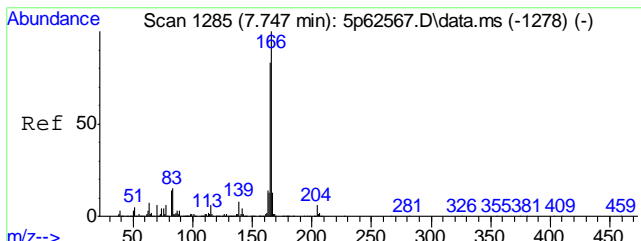
Tgt Ion	Resp	Lower	Upper
153	361693		
152	48.4	19.1	79.1
154	94.0	58.9	118.9



#62  
 Dibenzofuran  
 Concen: 31.60 ppm  
 RT: 7.124 min Scan# 1131  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

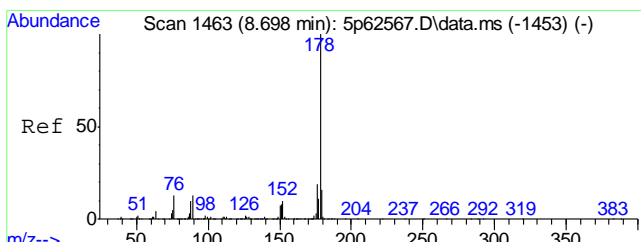
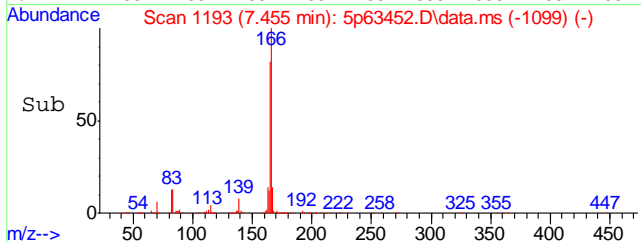
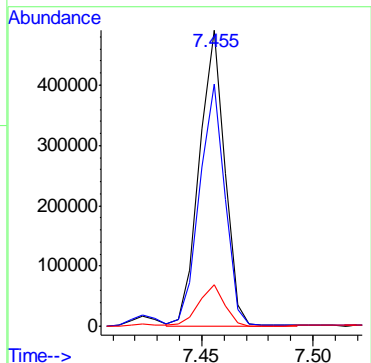
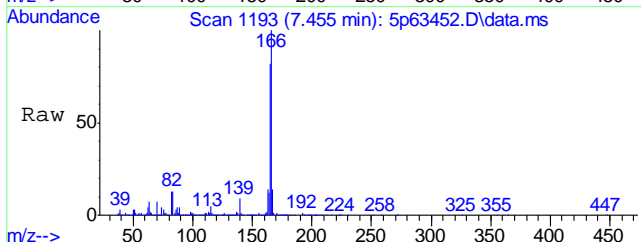
Tgt Ion	Resp	Lower	Upper
168	326456		
139	38.9	3.9	63.9
169	12.7	0.0	43.3





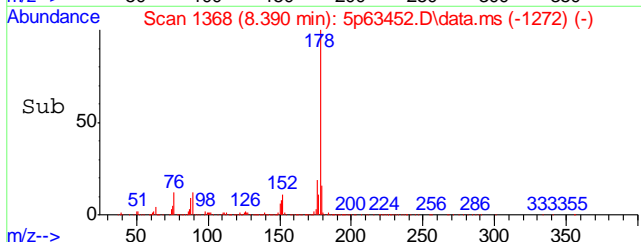
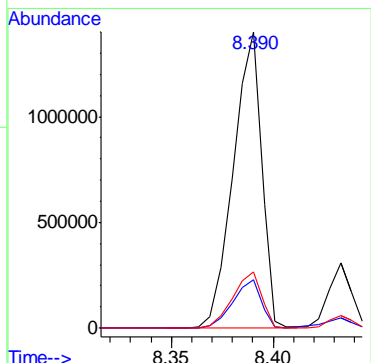
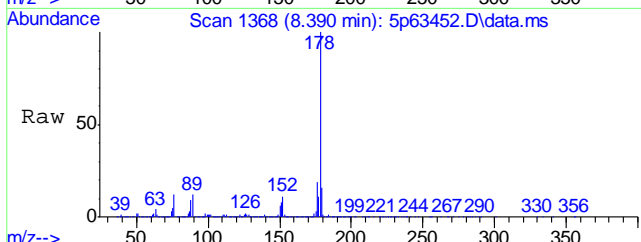
#66  
 Fluorene  
 Concen: 47.40 ppm  
 RT: 7.455 min Scan# 1193  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

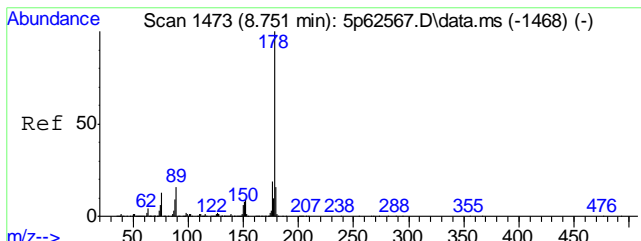
Tgt Ion	Resp	Lower	Upper
166	390643	100	
165	81.7	53.2	113.2
167	13.7	0.0	43.0



#77  
 Phenanthrene  
 Concen: 129.04 ppm  
 RT: 8.390 min Scan# 1368  
 Delta R.T. 0.011 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

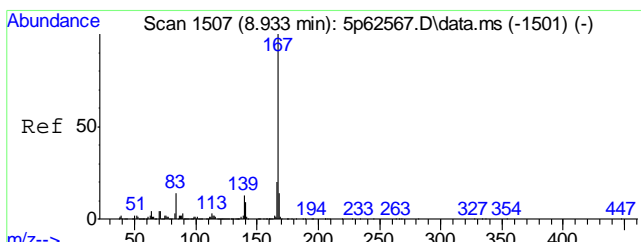
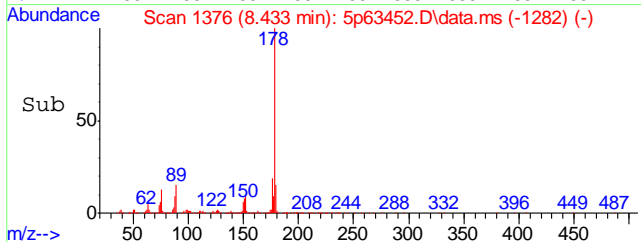
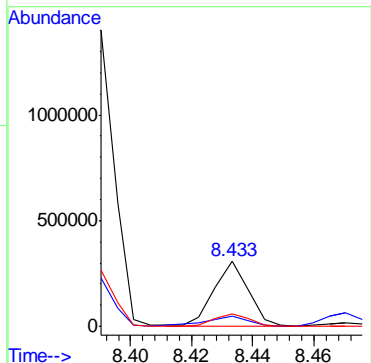
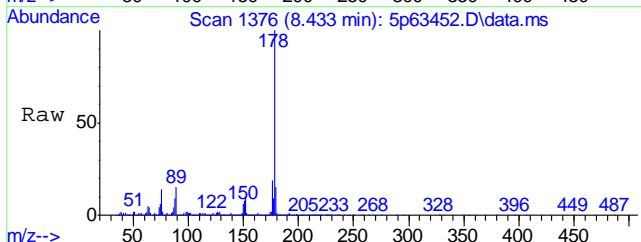
Tgt Ion	Resp	Lower	Upper
178	1357772	100	
179	16.0	0.0	45.8
176	19.1	0.0	48.7





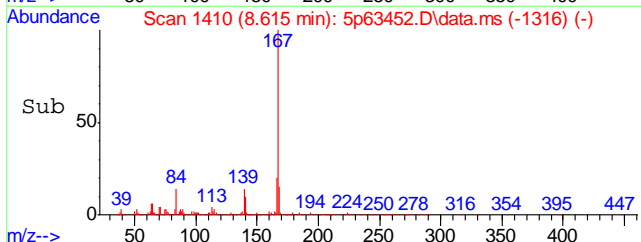
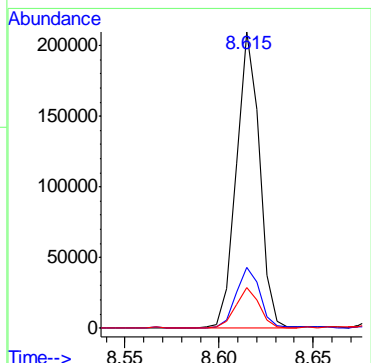
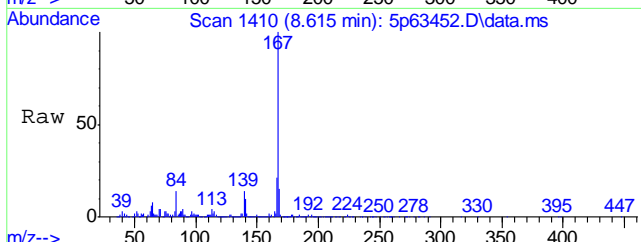
#78  
 Anthracene  
 Concen: 22.24 ppm  
 RT: 8.433 min Scan# 1376  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

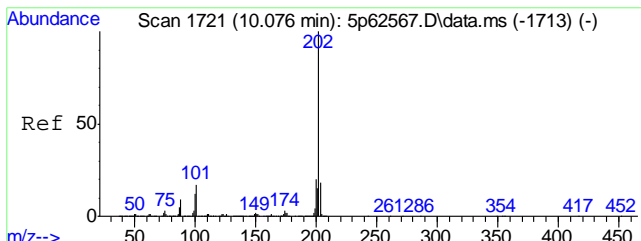
Tgt Ion	Resp	Lower	Upper
178	244036	100	
179	14.3	0.0	46.2
176	18.7	0.0	49.1



#79  
 Carbazole  
 Concen: 15.59 ppm  
 RT: 8.615 min Scan# 1410  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

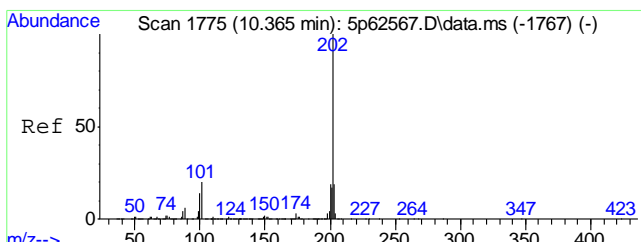
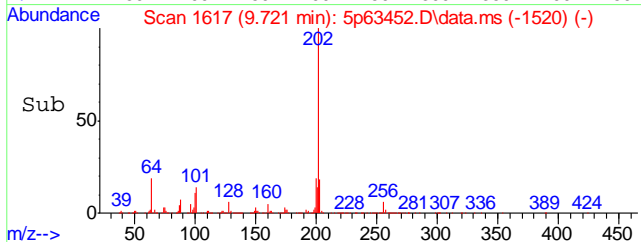
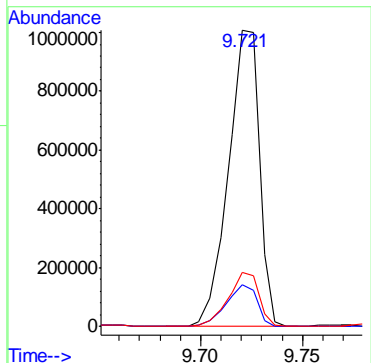
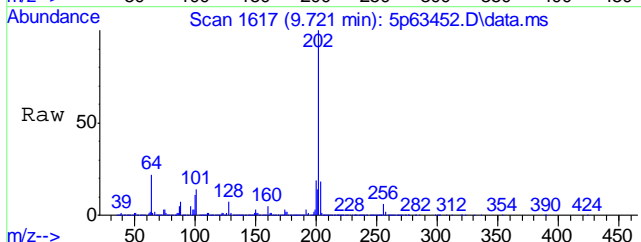
Tgt Ion	Resp	Lower	Upper
167	177872	100	
166	20.4	0.0	50.2
139	13.5	0.0	43.0





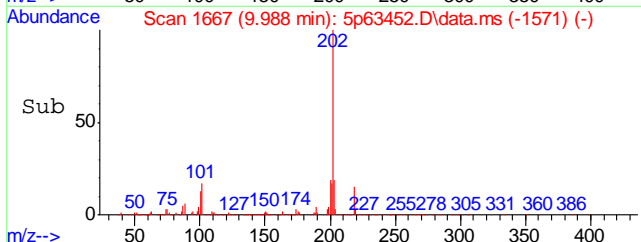
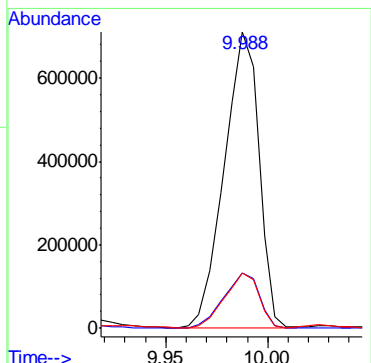
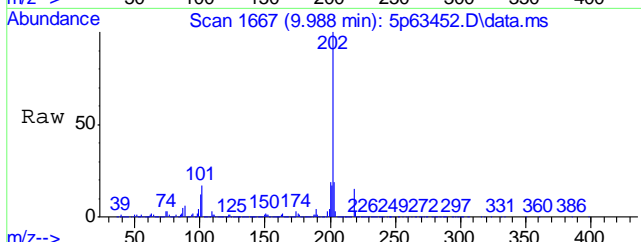
#81  
 Fluoranthene  
 Concen: 80.19 ppm  
 RT: 9.721 min Scan# 1617  
 Delta R.T. 0.016 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
202	1067697		
101	14.0	0.0	47.0
203	18.1	0.0	47.8



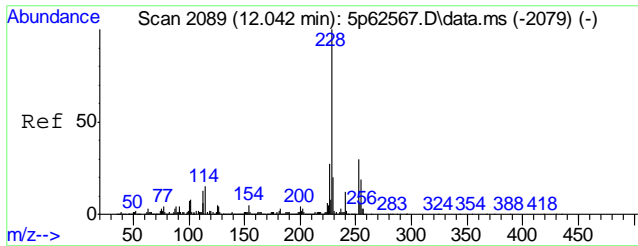
#84  
 Pyrene  
 Concen: 70.72 ppm  
 RT: 9.988 min Scan# 1667  
 Delta R.T. 0.011 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
202	842246		
200	18.6	0.0	48.7
203	18.5	0.0	48.8



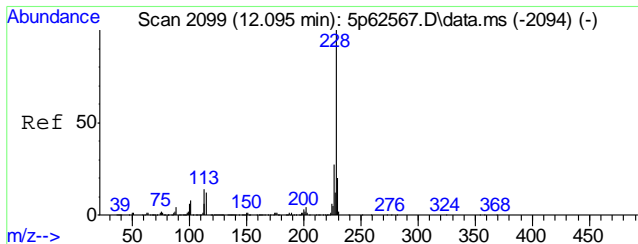
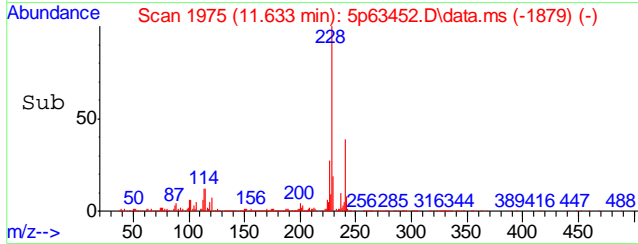
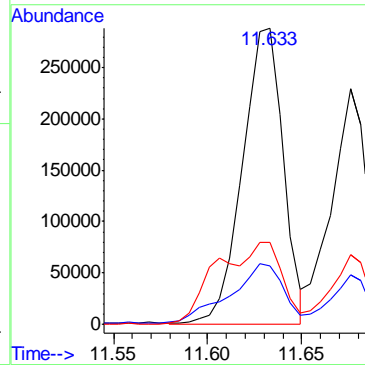
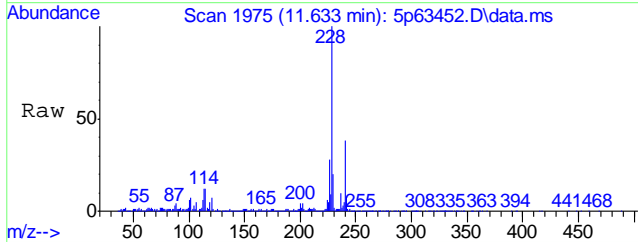
9.13  
9





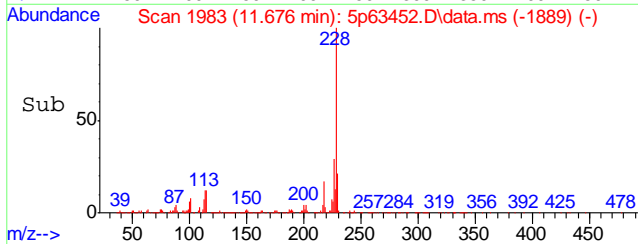
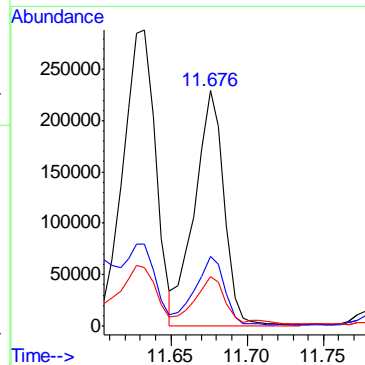
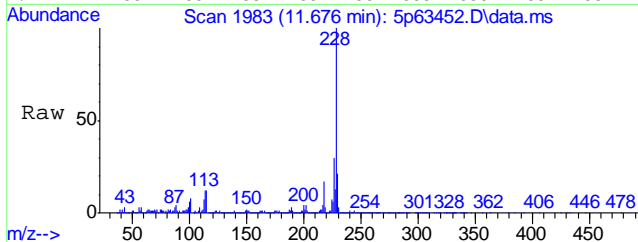
#87  
 Benzo[a]anthracene  
 Concen: 39.72 ppm  
 RT: 11.633 min Scan# 1975  
 Delta R.T. 0.011 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
228	430682	100	
229	19.1	0.0	49.7
226	27.1	0.0	56.6

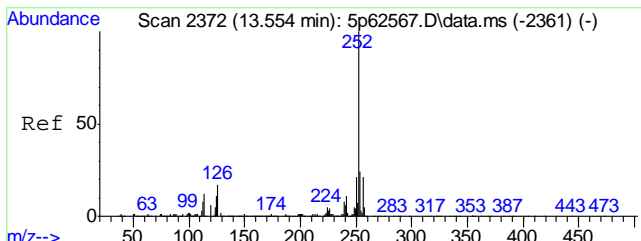


#89  
 Chrysene  
 Concen: 30.03 ppm  
 RT: 11.676 min Scan# 1983  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
228	306007	100	
226	29.3	0.0	57.2
229	20.3	0.0	50.1

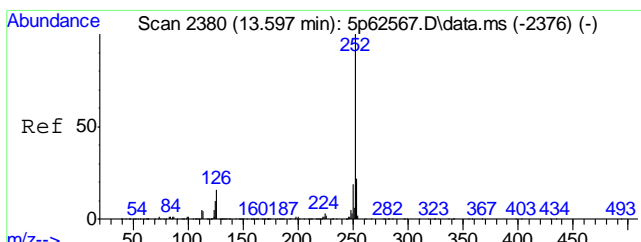
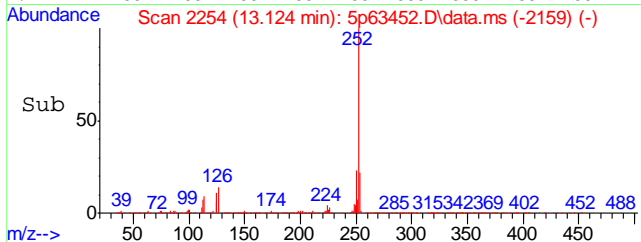
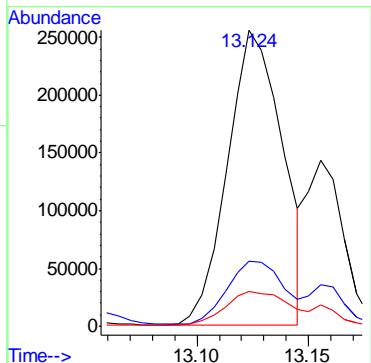
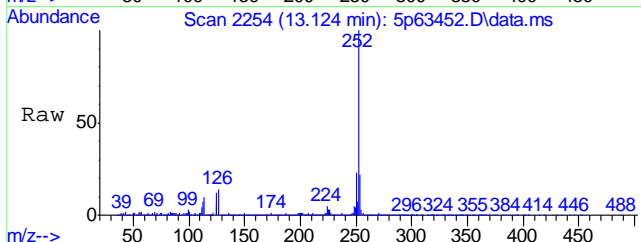


9.1.3  
 9



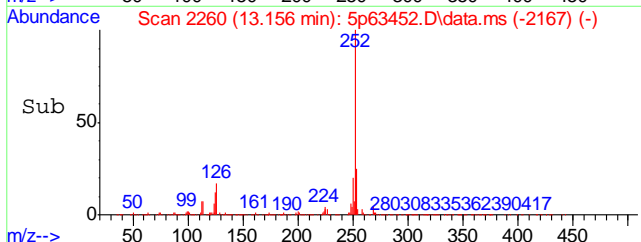
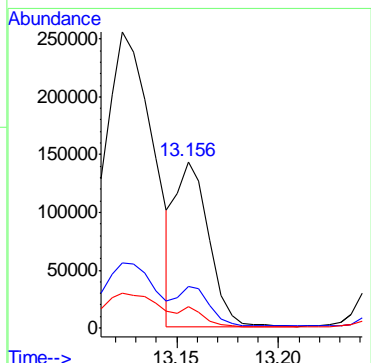
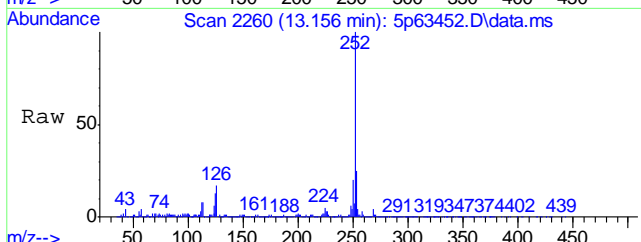
#93  
 Benzo[b]fluoranthene  
 Concen: 36.34 ppm  
 RT: 13.124 min Scan# 2254  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
252	100		
253	21.3	0.0	53.8
125	10.6	0.0	40.9

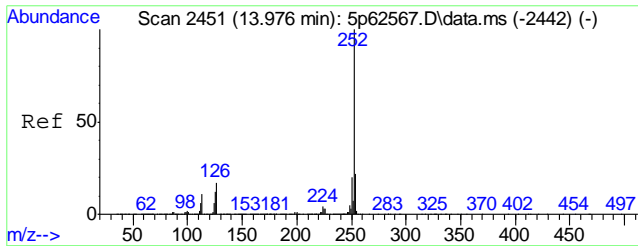


#94  
 Benzo[k]fluoranthene  
 Concen: 15.28 ppm  
 RT: 13.156 min Scan# 2260  
 Delta R.T. -0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
252	100		
253	25.5	0.0	52.1
125	11.5	0.0	40.2

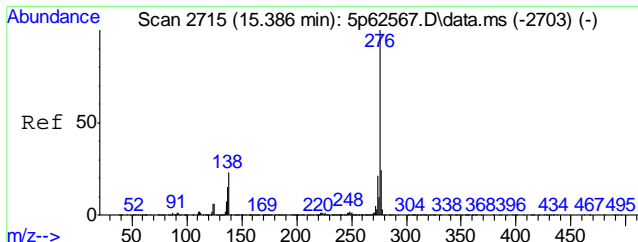
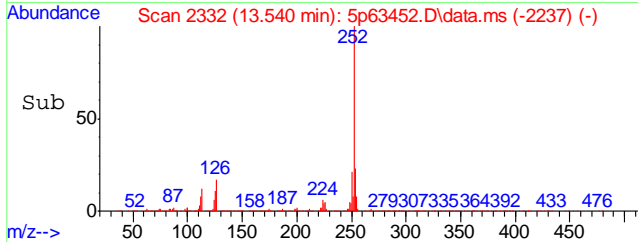
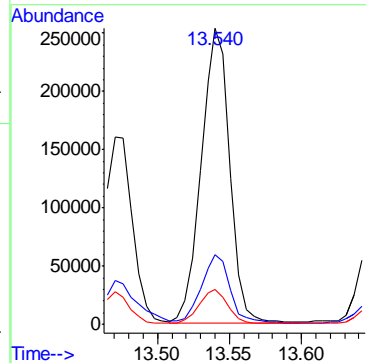
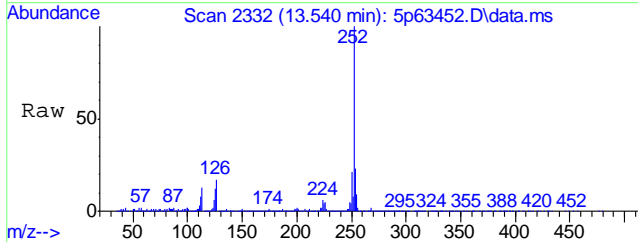


9.13  
9



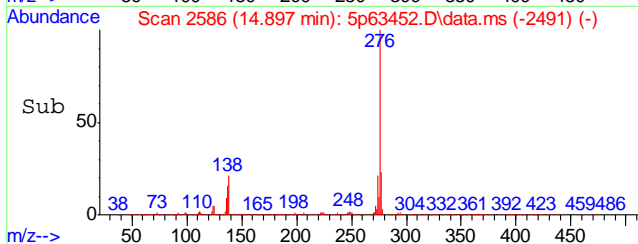
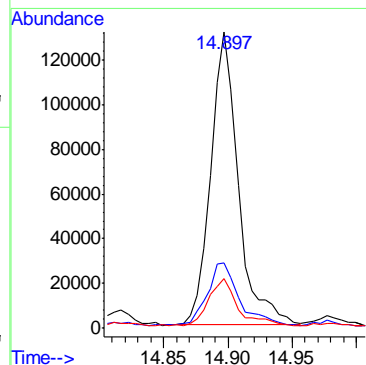
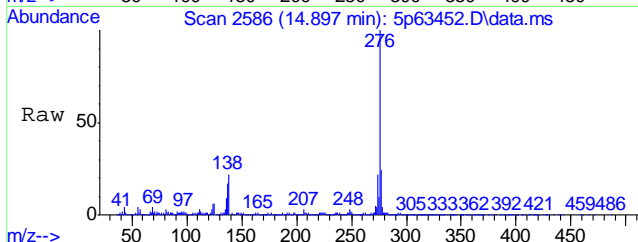
#95  
 Benzo[a]pyrene  
 Concen: 32.51 ppm  
 RT: 13.540 min Scan# 2332  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
252	100		
253	22.7	0.0	51.7
125	11.2	0.0	42.0

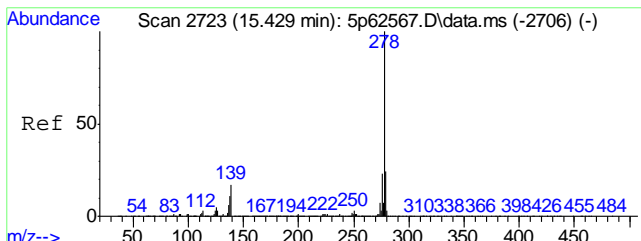


#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 19.73 ppm  
 RT: 14.897 min Scan# 2586  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
276	100		
138	21.3	0.0	50.9
137	15.9	0.0	44.2

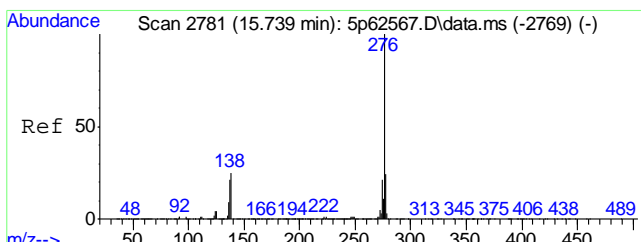
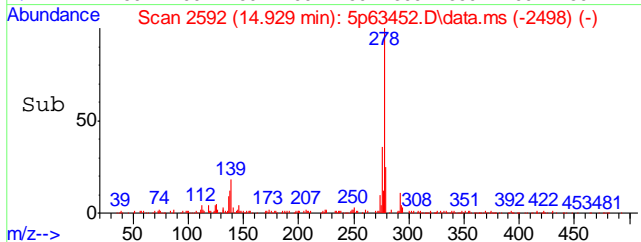
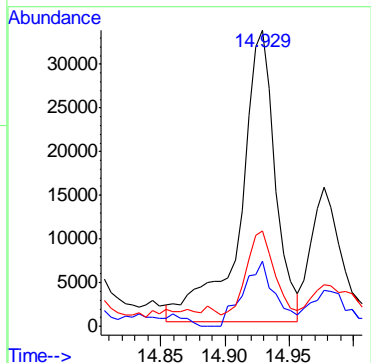
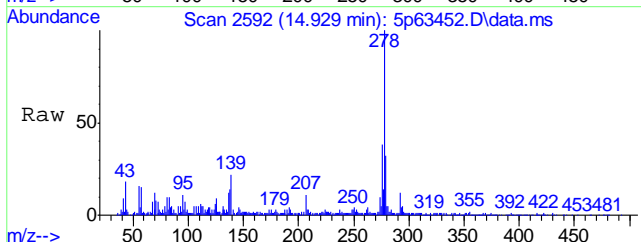


9.13  
 9



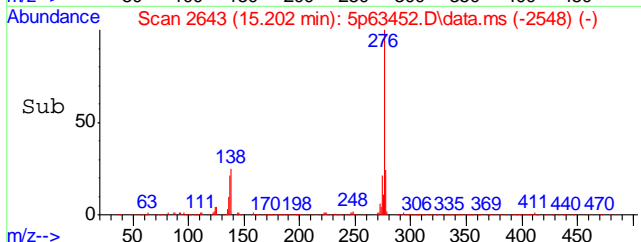
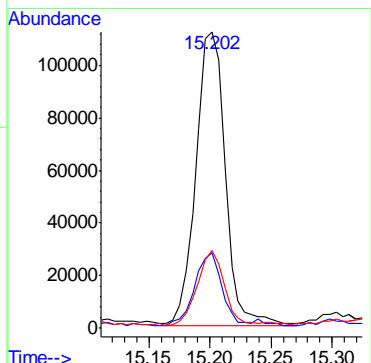
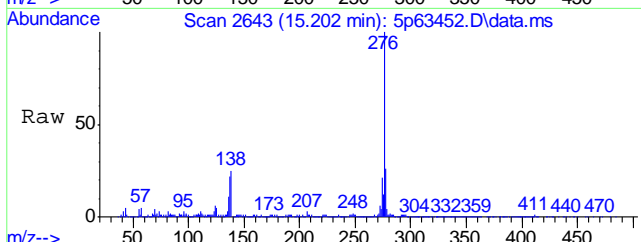
#98  
 Dibenz[a,h]anthracene  
 Concen: 6.33 ppm  
 RT: 14.929 min Scan# 2592  
 Delta R.T. 0.000 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
278	64034	100	
139	20.2	0.0	46.7
279	29.3	0.0	54.4



#100  
 Benzo[g,h,i]perylene  
 Concen: 18.54 ppm  
 RT: 15.202 min Scan# 2643  
 Delta R.T. 0.005 min  
 Lab File: 5p63452.D  
 Acq: 1 Oct 19 8:10 am

Tgt Ion	Resp	Lower	Upper
276	186625	100	
138	24.6	0.0	54.8
277	25.4	0.0	53.6



9.13  
 9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63493.d  
 Acq On : 2 Oct 2019 12:45 am  
 Operator : hennys  
 Sample : jc95555-2 Inst : MS5P  
 Misc : op23015,e5p2978,30.0,,,1,2  
 ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:09:30 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.047	152	102968	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	378526	40.00	ppm	0.00
47) Acenaphthene-d10	6.916	164	203202	40.00	ppm	0.00
69) Phenanthrene-d10	8.347	188	376768	40.00	ppm	0.00
83) Chrysene-d12	11.633	240	312274	40.00	ppm	0.00
91) Perylene-d12	13.609	264	365361	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.047	152	102968	40.00	ppm	0.00
103) Acenaphthene-d10a	6.916	164	203202	40.00	ppm	0.00
105) Chrysene-d12a	11.633	240	312274	40.00	ppm	0.00
107) Phenanthrene-d10a	8.347	188	376768	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	378526	40.00	ppm	0.00
112) Chrysene-d12b	11.633	240	312274	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.047	152	102968	40.00	ppm	0.00
116) Chrysene-d12c	11.633	240	312274	40.00	ppm	0.00
118) Chrysene-d12d	11.633	240	312274	40.00	ppm	0.00
120) Phenanthrene-d10b	8.347	188	376686	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.909	112	58846	13.40	ppm	0.00
Spiked Amount	50.000		Recovery	=	26.80%	
8) Phenol-d5	3.769	99	91614	14.82	ppm	0.00
Spiked Amount	50.000		Recovery	=	29.64%	
25) Nitrobenzene-d5	4.560	82	98275	16.61	ppm	0.00
Spiked Amount	50.000		Recovery	=	33.22%	
51) 2-Fluorobiphenyl	6.285	172	122618	15.25	ppm	0.00
Spiked Amount	50.000		Recovery	=	30.50%	
73) 2,4,6-Tribromophenol	7.680	330	23944	15.78	ppm	0.00
Spiked Amount	50.000		Recovery	=	31.56%	
85) Terphenyl-d14	10.228	244	148755	18.31	ppm	0.00
Spiked Amount	50.000		Recovery	=	36.62%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
38) Naphthalene	5.254	128	508199	46.64	ppm	99
44) 2-Methylnaphthalene	5.917	141	69045	11.95	ppm	99
53) Biphenyl	6.376	154	29682	3.29	ppm	99
56) Acenaphthylene	6.777	152	40433	3.59	ppm	95
59) Acenaphthene	6.948	153	180206	26.25	ppm	98
62) Dibenzofuran	7.113	168	158958	16.21	ppm	85
66) Fluorene	7.445	166	193976	24.79	ppm	99
77) Phenanthrene	8.374	178	702742	67.23	ppm	98
78) Anthracene	8.422	178	115299	10.58	ppm	99
79) Carbazole	8.609	167	88009	7.76	ppm	99
81) Fluoranthene	9.704	202	575167	43.48	ppm	98
84) Pyrene	9.971	202	449607	34.35	ppm	98
87) Benzo[a]anthracene	11.617	228	227602	19.10	ppm	97
89) Chrysene	11.665	228	154098	13.76	ppm	95
93) Benzo[b]fluoranthene	13.113	252	240382	19.10	ppm	97
94) Benzo[k]fluoranthene	13.145	252	77570	7.02	ppm	96
95) Benzo[a]pyrene	13.529	252	180839	16.00	ppm	96
96) Indeno[1,2,3-cd]pyrene	14.886	276	99294	9.57	ppm	95
98) Dibenz[a,h]anthracene	14.918	278	24217	2.29	ppm	98
100) Benzo[g,h,i]perylene	15.185	276	95847	9.12	ppm	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
Data File : 5p63493.d  
Acq On : 2 Oct 2019 12:45 am  
Operator : hennys  
Sample : jc95555-2 Inst : MS5P  
Misc : op23015,e5p2978,30.0,,,1,2  
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Results File: M5P2940.RES  
Quant Time: Oct 02 03:09:30 2019  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Wed Oct 02 00:52:59 2019  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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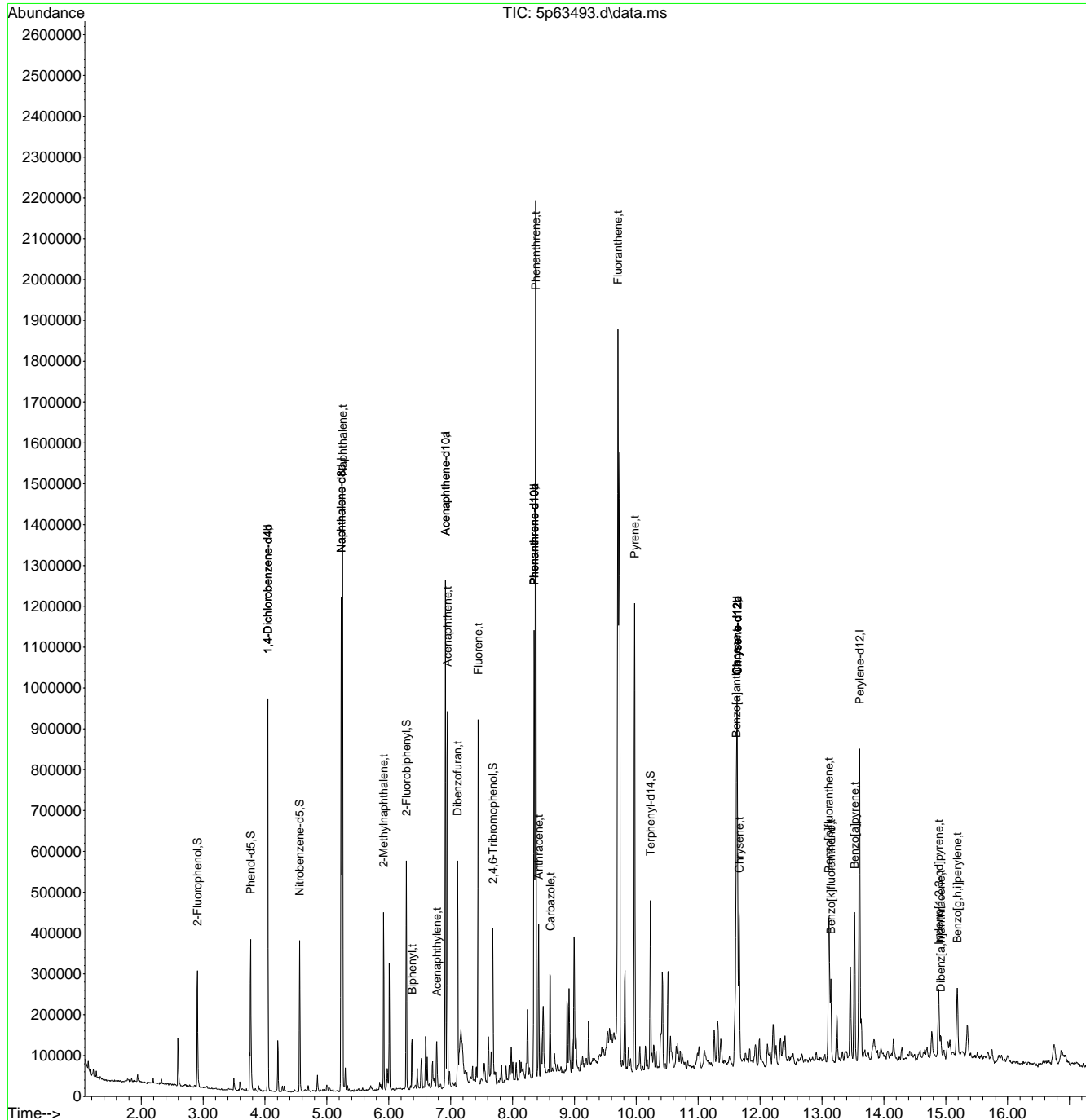
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

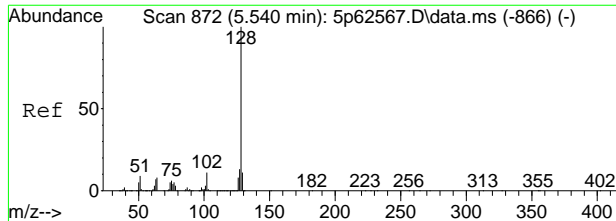
Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63493.d  
 Acq On : 2 Oct 2019 12:45 am  
 Operator : hennys  
 Sample : jc95555-2  
 Misc : op23015,e5p2978,30.0,,,1,2  
 ALS Vial : 29 Sample Multiplier: 1

Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:09:30 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

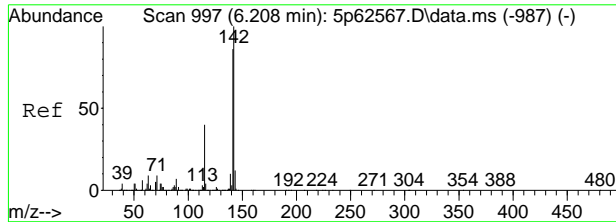
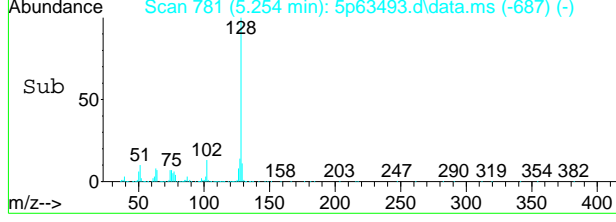
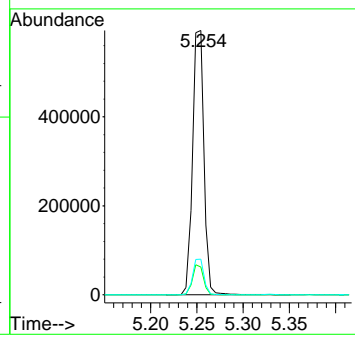
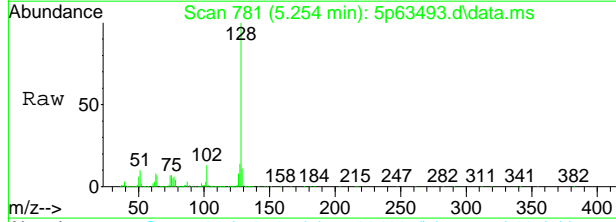


9.1.4  
9



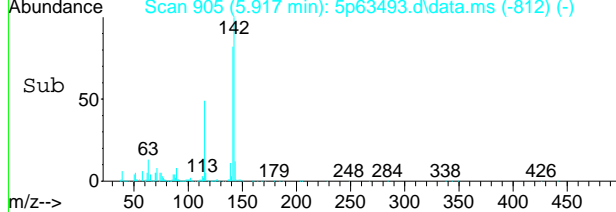
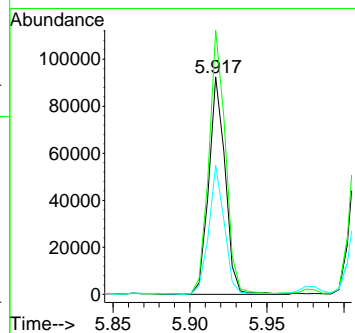
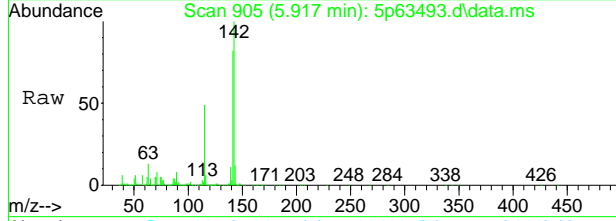
#38  
 Naphthalene  
 Concen: 46.64 ppm  
 RT: 5.254 min Scan# 781  
 Delta R.T. 0.000 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Resp	Lower	Upper
128	508199		
128	100		
129	10.5	0.0	40.7
127	13.5	0.0	42.6



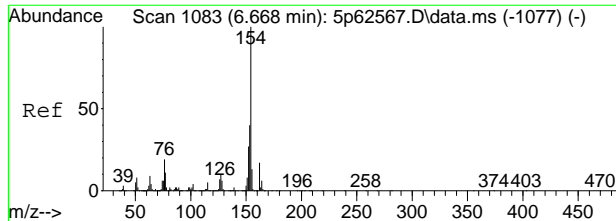
#44  
 2-Methylnaphthalene  
 Concen: 11.95 ppm  
 RT: 5.917 min Scan# 905  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Resp	Lower	Upper
141	69045		
141	100		
142	121.4	91.3	151.3
115	59.0	25.7	85.7



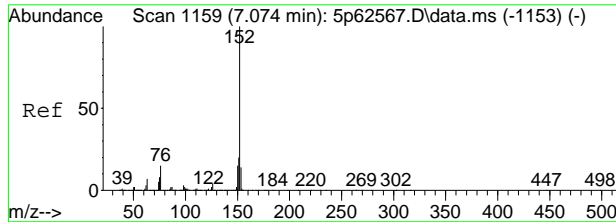
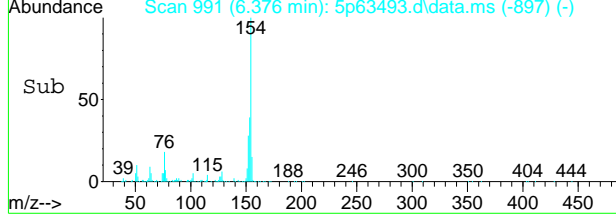
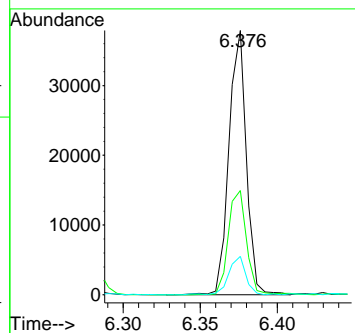
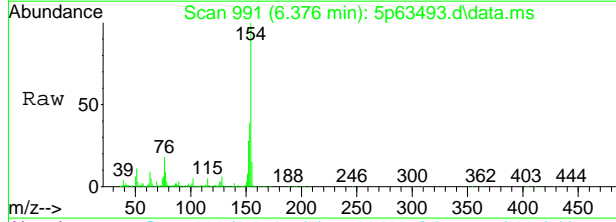
9.14  
 9





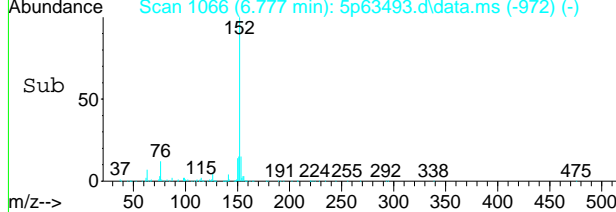
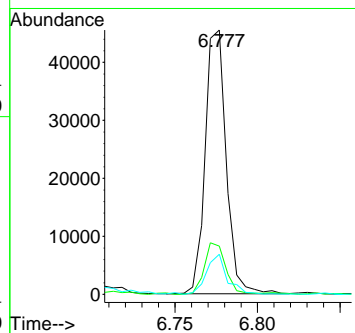
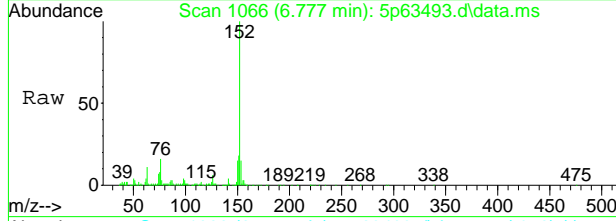
#53  
 Biphenyl  
 Concen: 3.29 ppm  
 RT: 6.376 min Scan# 991  
 Delta R.T. -0.000 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
154	100		
153	39.2	9.8	69.8
155	14.4	0.0	43.2

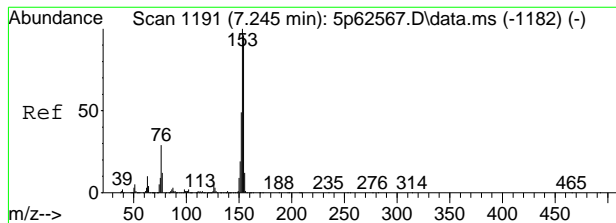


#56  
 Acenaphthylene  
 Concen: 3.59 ppm  
 RT: 6.777 min Scan# 1066  
 Delta R.T. -0.000 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
152	100		
151	17.8	0.0	50.5
153	15.1	0.0	43.9

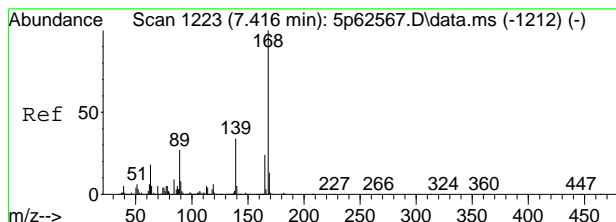
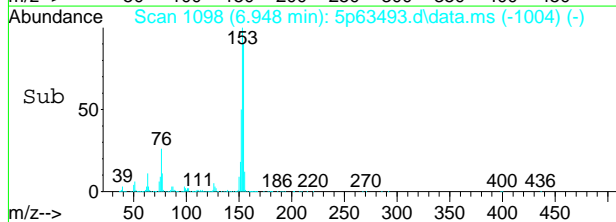
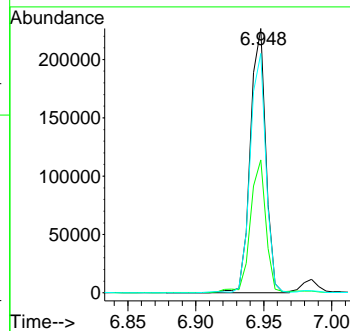
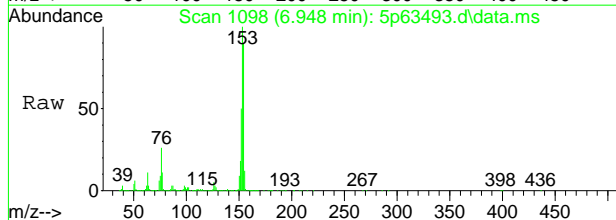


9.14  
 9



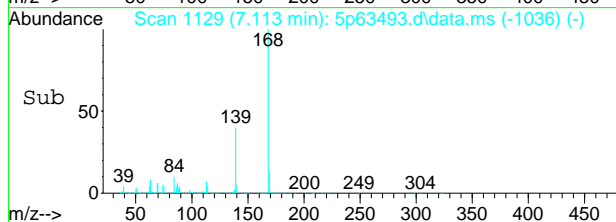
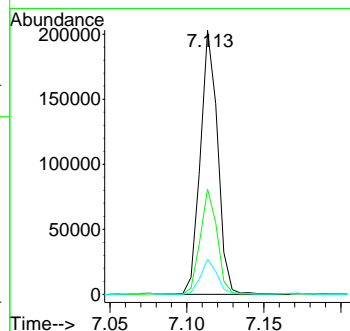
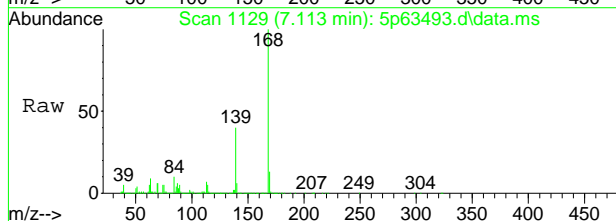
#59  
 Acenaphthene  
 Concen: 26.25 ppm  
 RT: 6.948 min Scan# 1098  
 Delta R.T. -0.000 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

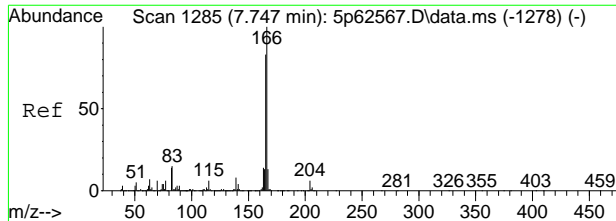
Tgt Ion	Resp	Lower	Upper
153	180206		
152	50.1	20.1	80.1
154	90.6	63.1	123.1



#62  
 Dibenzofuran  
 Concen: 16.21 ppm  
 RT: 7.113 min Scan# 1129  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

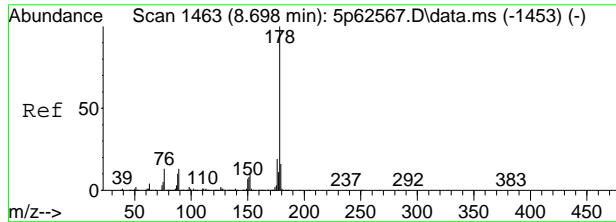
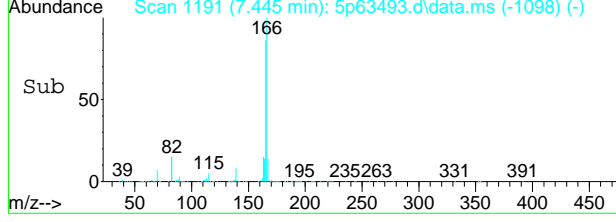
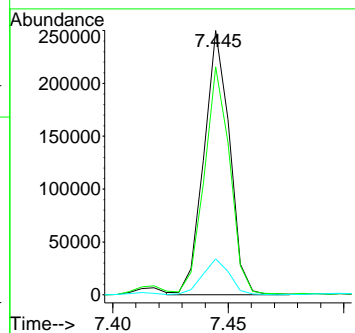
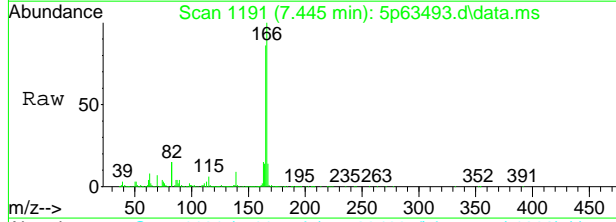
Tgt Ion	Resp	Lower	Upper
168	158958		
139	39.8	22.9	82.9
169	13.1	0.0	43.7





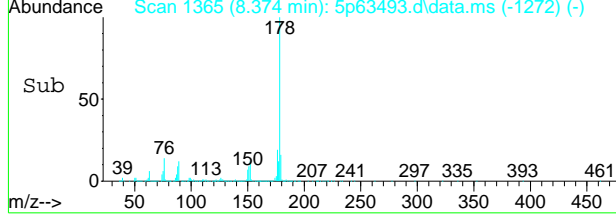
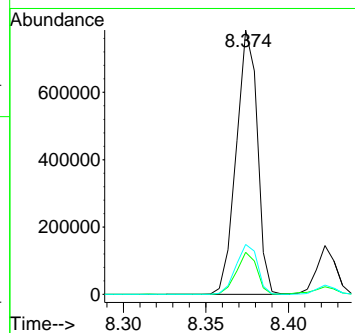
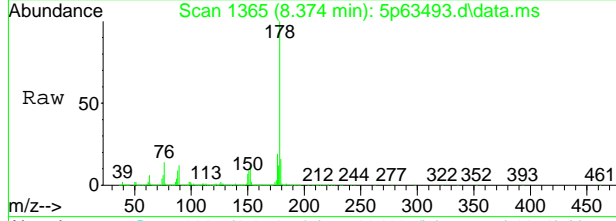
#66  
 Fluorene  
 Concen: 24.79 ppm  
 RT: 7.445 min Scan# 1191  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

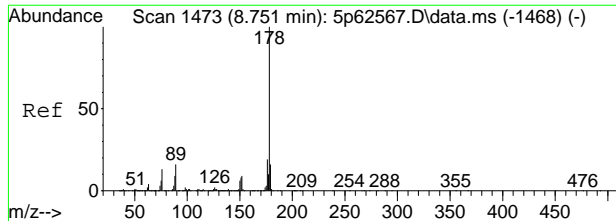
Tgt Ion	Resp	Lower	Upper
166	193976		
165	85.8	57.0	117.0
167	13.5	0.0	43.3



#77  
 Phenanthrene  
 Concen: 67.23 ppm  
 RT: 8.374 min Scan# 1365  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

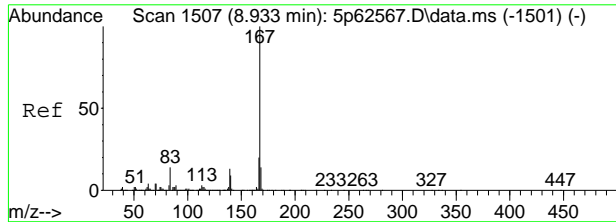
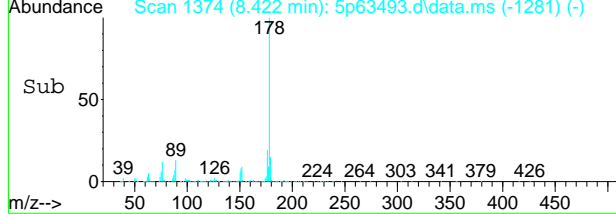
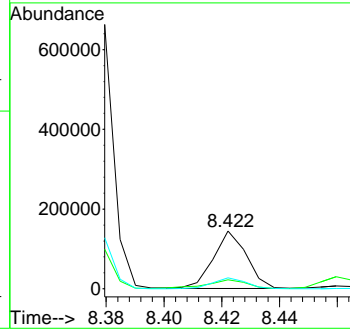
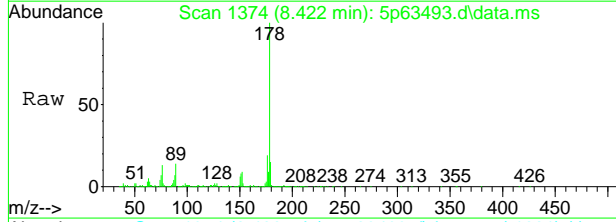
Tgt Ion	Resp	Lower	Upper
178	702742		
179	15.8	0.0	45.3
176	18.9	0.0	50.3





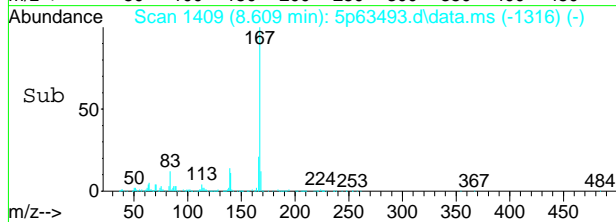
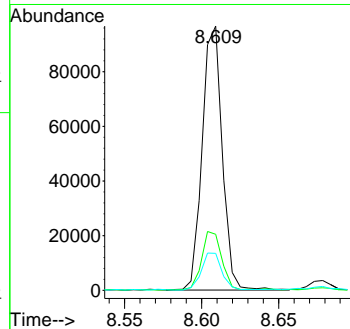
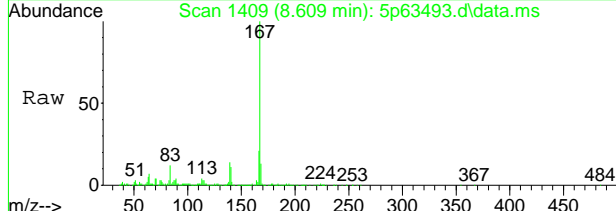
#78  
 Anthracene  
 Concen: 10.58 ppm  
 RT: 8.422 min Scan# 1374  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Resp	Lower	Upper
178	115299		
178	100		
179	14.4	0.0	45.5
176	18.9	0.0	48.8

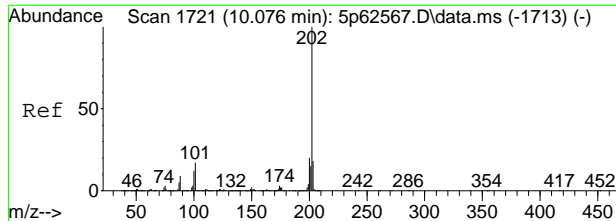


#79  
 Carbazole  
 Concen: 7.76 ppm  
 RT: 8.609 min Scan# 1409  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Resp	Lower	Upper
167	88009		
167	100		
166	21.0	0.0	51.1
139	13.7	0.0	43.2

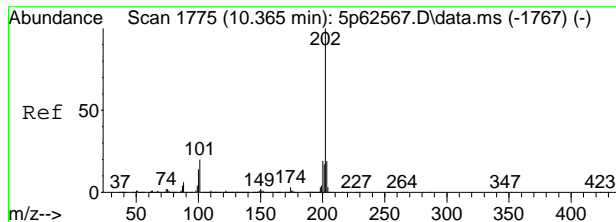
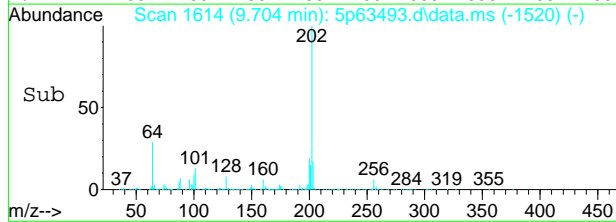
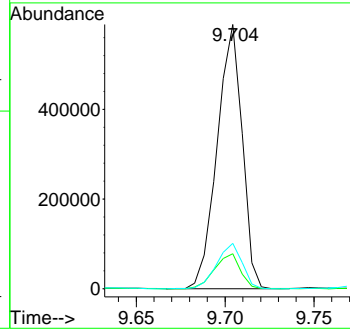
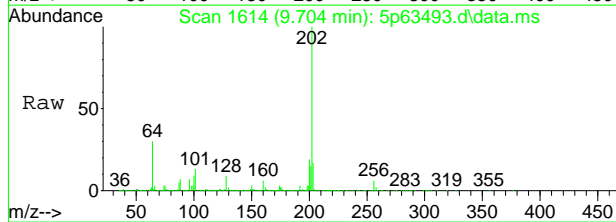


9.14  
**9**



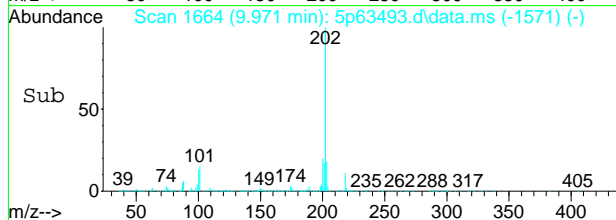
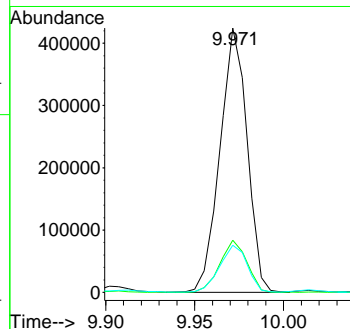
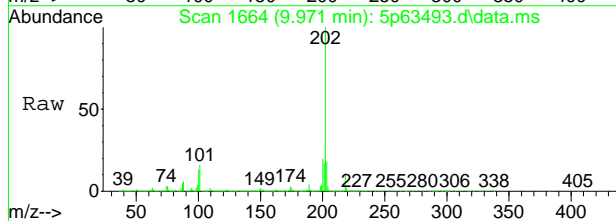
#81  
 Fluoranthene  
 Concen: 43.48 ppm  
 RT: 9.704 min Scan# 1614  
 Delta R.T. -0.000 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

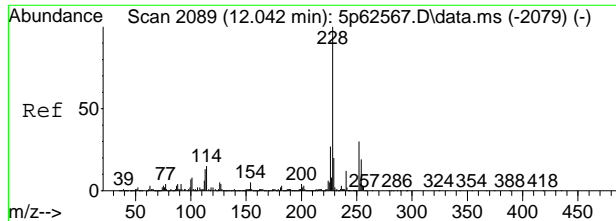
Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.3	0.0	42.7
203	17.1	0.0	48.4



#84  
 Pyrene  
 Concen: 34.35 ppm  
 RT: 9.971 min Scan# 1664  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

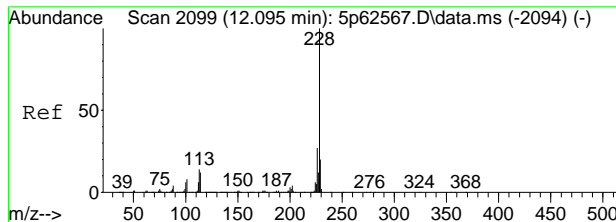
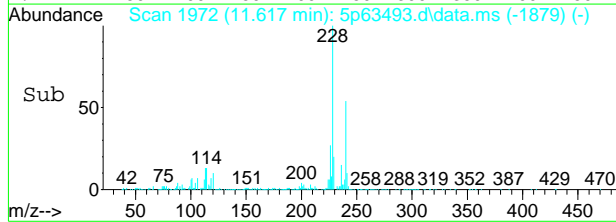
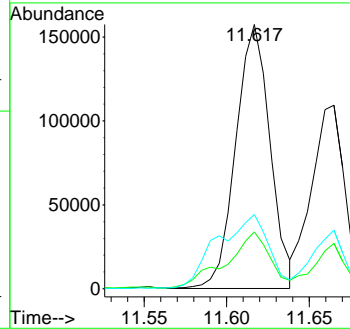
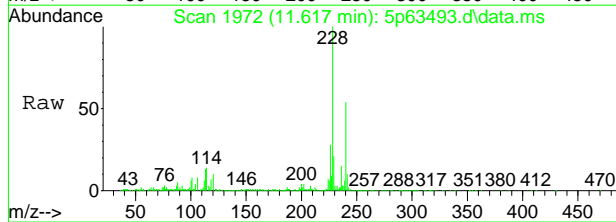
Tgt Ion	Ratio	Lower	Upper
202	100		
200	19.7	0.0	48.7
203	17.7	0.0	48.4





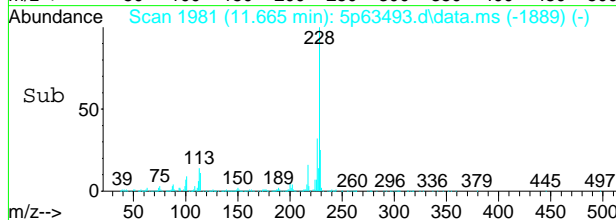
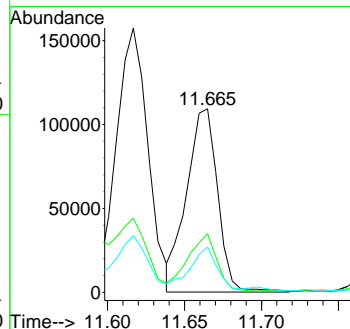
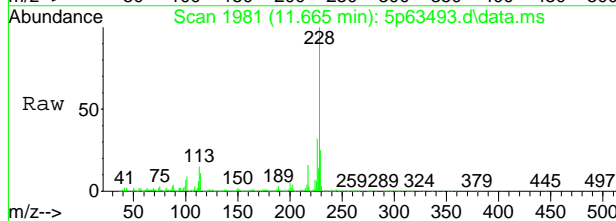
#87  
 Benzo[a]anthracene  
 Concen: 19.10 ppm  
 RT: 11.617 min Scan# 1972  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
228	100		
229	20.9	0.0	49.4
226	27.8	0.0	56.7

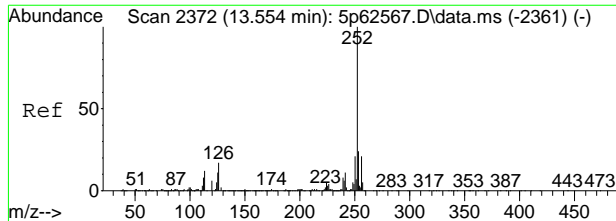


#89  
 Chrysene  
 Concen: 13.76 ppm  
 RT: 11.665 min Scan# 1981  
 Delta R.T. -0.011 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
228	100		
226	31.6	0.0	59.6
229	23.9	0.0	50.2

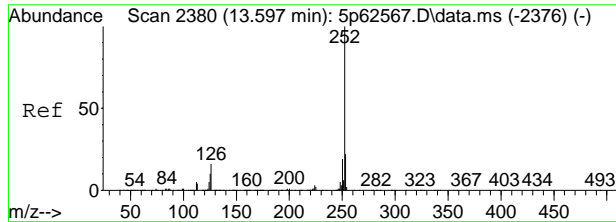
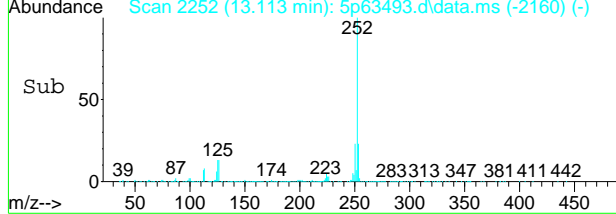
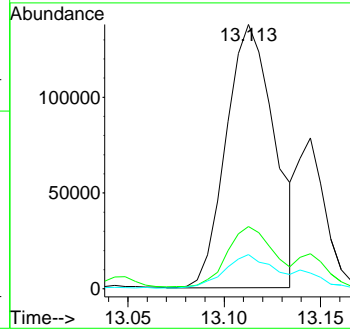
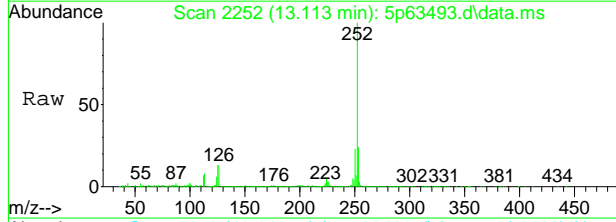


9.14  
**9**



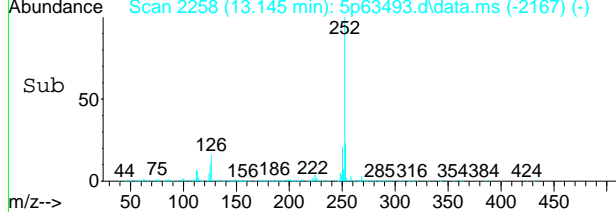
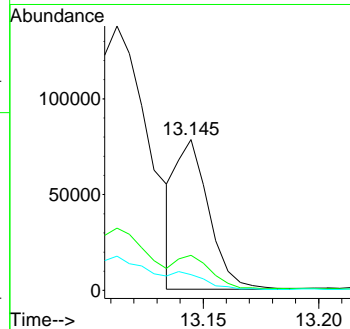
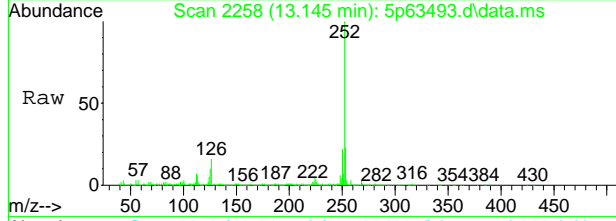
#93  
 Benzo[b]fluoranthene  
 Concen: 19.10 ppm  
 RT: 13.113 min Scan# 2252  
 Delta R.T. -0.011 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
252	100		
253	23.9	0.0	52.7
125	12.7	0.0	40.6

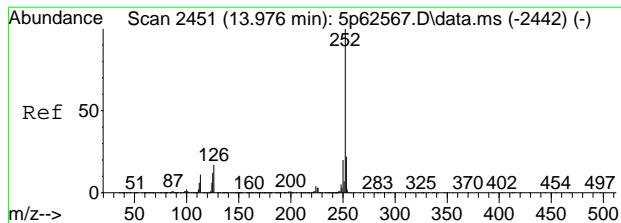


#94  
 Benzo[k]fluoranthene  
 Concen: 7.02 ppm  
 RT: 13.145 min Scan# 2258  
 Delta R.T. -0.016 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
252	100		
253	23.9	0.0	52.2
125	8.4	0.0	39.7

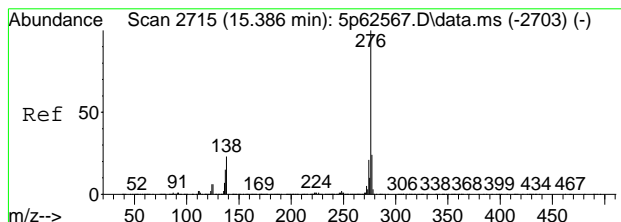
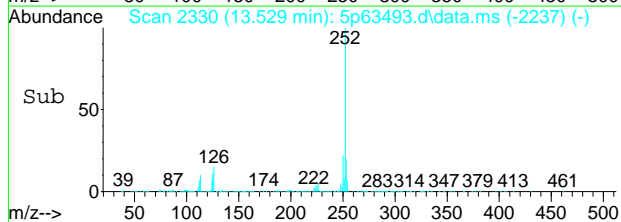
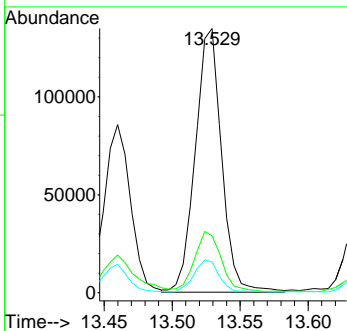
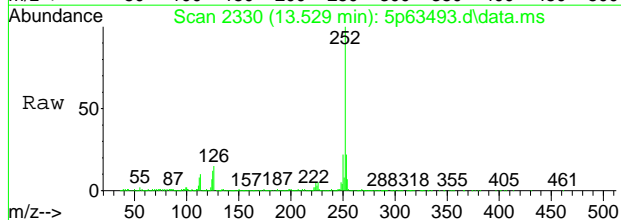


9.14  
**9**



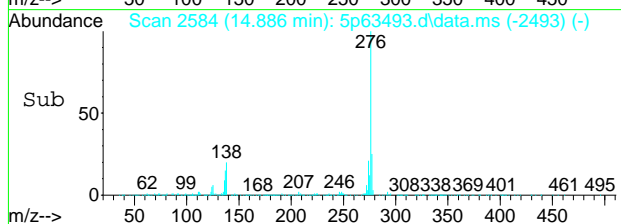
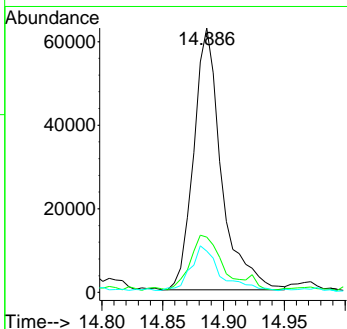
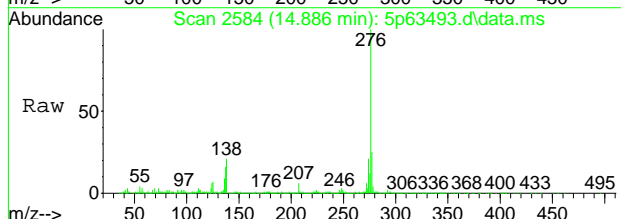
#95  
 Benzo[a]pyrene  
 Concen: 16.00 ppm  
 RT: 13.529 min Scan# 2330  
 Delta R.T. -0.005 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Resp	Lower	Upper
252	180839		
253	20.5	0.0	52.8
125	11.3	0.0	42.0

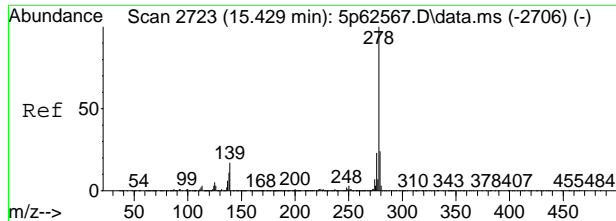


#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 9.57 ppm  
 RT: 14.886 min Scan# 2584  
 Delta R.T. -0.016 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Resp	Lower	Upper
276	99294		
138	19.8	0.0	47.8
137	14.9	0.0	42.9

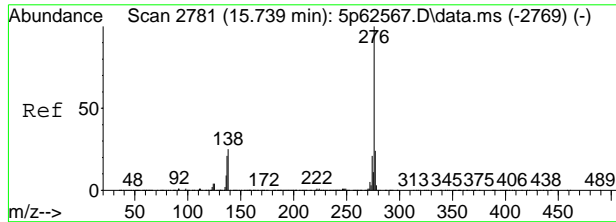
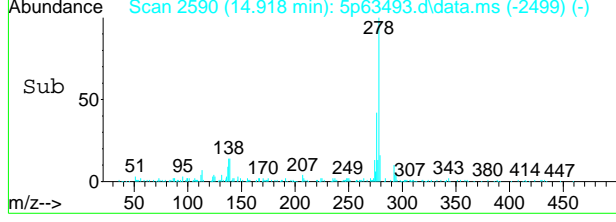
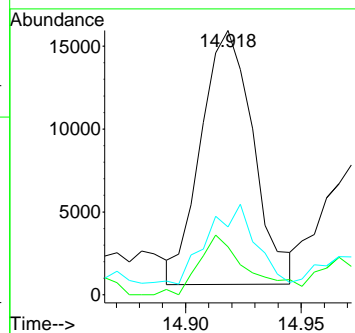
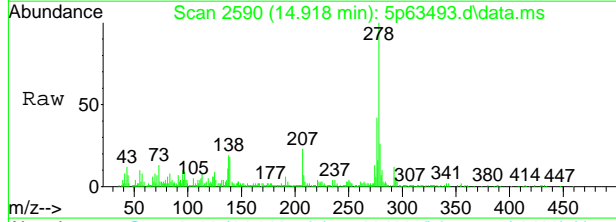






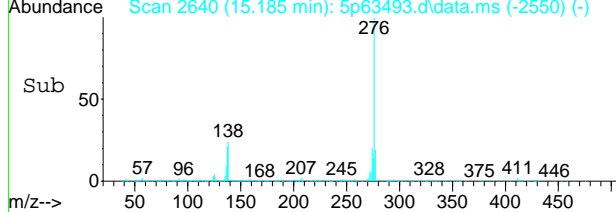
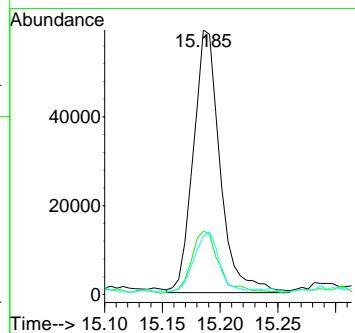
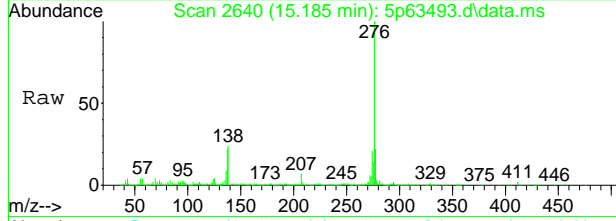
#98  
 Dibenz[a,h]anthracene  
 Concen: 2.29 ppm  
 RT: 14.918 min Scan# 2590  
 Delta R.T. -0.016 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
278	100		
139	16.7	0.0	47.1
279	24.3	0.0	53.0



#100  
 Benzo[g,h,i]perylene  
 Concen: 9.12 ppm  
 RT: 15.185 min Scan# 2640  
 Delta R.T. -0.021 min  
 Lab File: 5p63493.d  
 Acq: 2 Oct 2019 12:45 am

Tgt Ion	Ratio	Lower	Upper
276	100		
138	22.9	0.0	52.7
277	21.1	0.0	54.2



9.14  
 9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:11:29 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.058	152	102394	40.00	ppm	0.00
24) Naphthalene-d8	5.276	136	217717	40.00	ppm	0.04
47) Acenaphthene-d10	6.937	164	191222	40.00	ppm	0.02
69) Phenanthrene-d10	8.412	188	265458	40.00	ppm	0.05
83) Chrysene-d12	11.761	240	284613	40.00	ppm	0.12
91) Perylene-d12	13.722	264	301311	40.00	ppm	0.11
101) 1,4-Dichlorobenzene-d4b	4.058	152	102394	40.00	ppm	0.00
103) Acenaphthene-d10a	6.937	164	191222	40.00	ppm	0.02
105) Chrysene-d12a	11.761	240	284613	40.00	ppm	0.12
107) Phenanthrene-d10a	8.412	188	265458	40.00	ppm	0.05
110) Naphthalene-d8a	5.276	136	217717	40.00	ppm	0.04
112) Chrysene-d12b	11.761	240	284613	40.00	ppm	0.12
114) 1,4-Dichlorobenzene-d4c	4.058	152	102394	40.00	ppm	0.00
116) Chrysene-d12c	11.761	240	284613	40.00	ppm	0.12
118) Chrysene-d12d	11.761	240	284613	40.00	ppm	0.12
120) Phenanthrene-d10b	8.412	188	263204	40.00	ppm	0.05
System Monitoring Compounds						
5) 2-Fluorophenol	2.920	112	6898	1.58	ppm	0.02
Spiked Amount	50.000		Recovery	=	3.16%	
8) Phenol-d5	3.785	99	10534	1.71	ppm	0.02
Spiked Amount	50.000		Recovery	=	3.42%	
25) Nitrobenzene-d5	4.581	82	9895m	2.91	ppm	0.01
Spiked Amount	50.000		Recovery	=	5.82%	
51) 2-Fluorobiphenyl	6.301	172	10972	1.45	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.90%	
73) 2,4,6-Tribromophenol	7.722	330	2080	1.95	ppm	0.03
Spiked Amount	50.000		Recovery	=	3.90%	
85) Terphenyl-d14	10.287	244	10546	1.42	ppm	0.05
Spiked Amount	50.000		Recovery	=	2.84%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
9) Phenol	3.796	94	167137	24.05	ppm	80
18) Acetophenone	4.448	105	44696	6.66	ppm	93
19) 2-Methylphenol	4.341	108	152003	36.11	ppm	100
21) 3&4-Methylphenol	4.496	108	311625	73.42	ppm	83
30) 2,4-Dimethylphenol	5.009	107	257096	91.90	ppm	97
38) Naphthalene	5.350	128	21549750	3438.54	ppm	92
44) 2-Methylnaphthalene	5.975	141	3818601	1149.37	ppm	91
53) Biphenyl	6.403	154	1590445	187.15	ppm	99
56) Acenaphthylene	6.814	152	2667537	251.49	ppm	97
59) Acenaphthene	6.974	153	714622	110.63	ppm	93
62) Dibenzofuran	7.167	168	5832836	632.10	ppm	95
66) Fluorene	7.514	166	6652534	903.63	ppm	96
77) Phenanthrene	8.492	178	19151729m	2600.35	ppm	

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:11:29 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

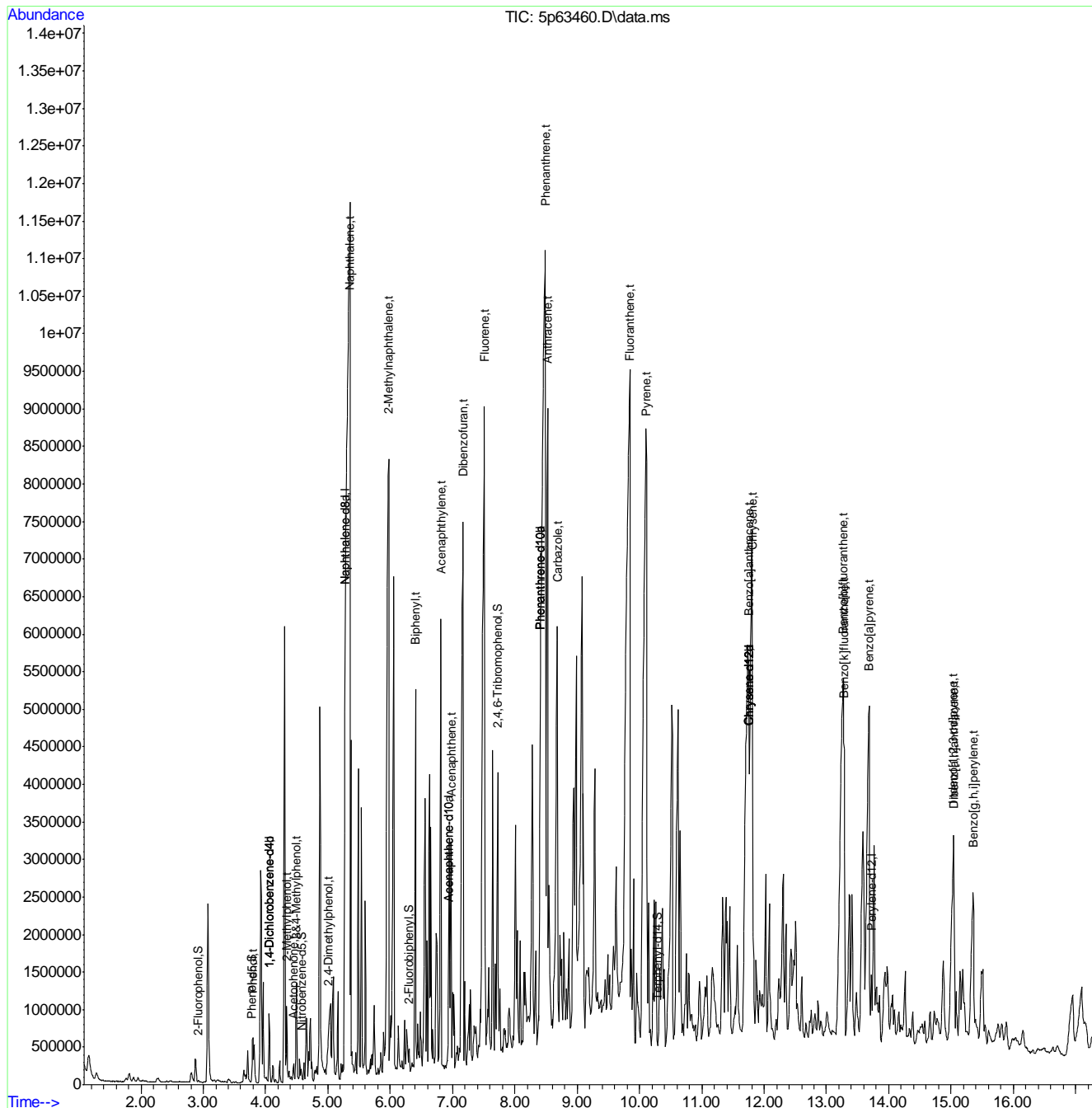
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
78) Anthracene	8.529	178	5453275m	710.01	ppm	
79) Carbazole	8.684	167	3693524	462.43	ppm	97
81) Fluoranthene	9.838	202	16470390	1767.23	ppm	90
84) Pyrene	10.116	202	11844141m	992.93	ppm	
87) Benzo[a]anthracene	11.750	228	8570627	789.07	ppm	97
89) Chrysene	11.809	228	5397223	528.72	ppm	88
93) Benzo[b]fluoranthene	13.268	252	8137281m	784.18	ppm	
94) Benzo[k]fluoranthene	13.278	252	1374271m	150.74	ppm	
95) Benzo[a]pyrene	13.679	252	4920540	528.05	ppm	94
96) Indeno[1,2,3-cd]pyrene	15.036	276	2536896	296.63	ppm	99
98) Dibenz[a,h]anthracene	15.047	278	989845	113.64	ppm	89
100) Benzo[g,h,i]perylene	15.356	276	2064535	238.21	ppm	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

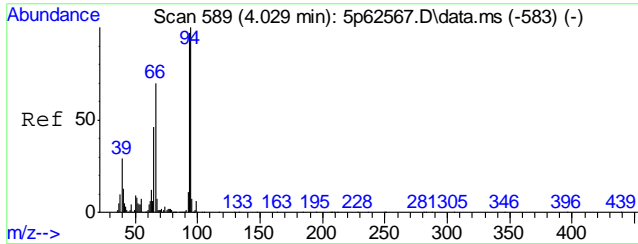
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:11:29 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

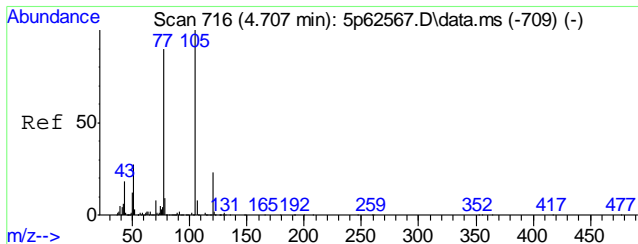
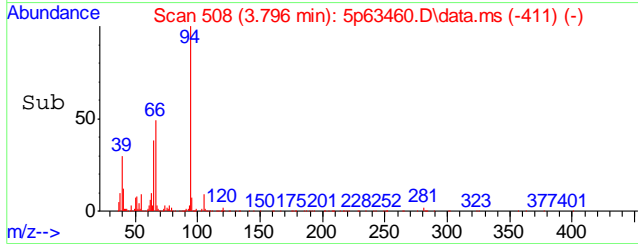
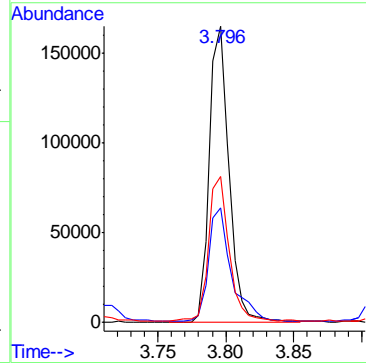
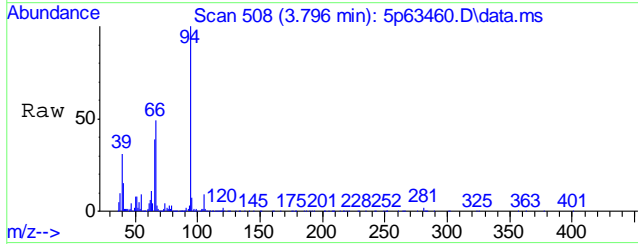


9.15  
9



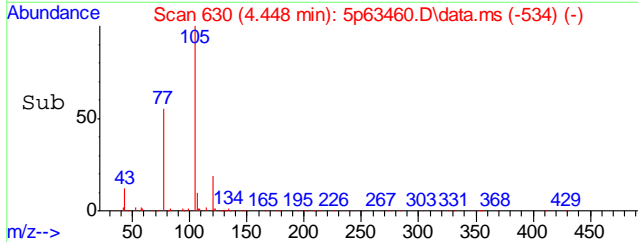
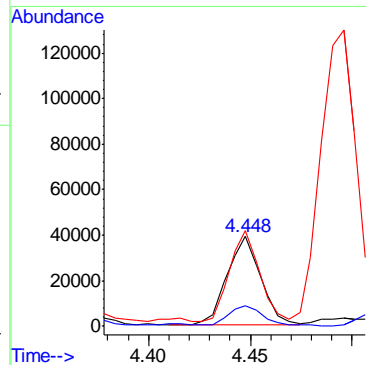
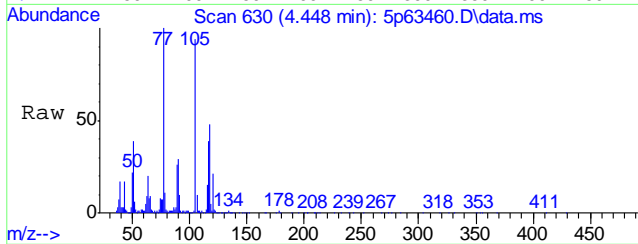
#9  
 Phenol  
 Concen: 24.05 ppm  
 RT: 3.796 min Scan# 508  
 Delta R.T. 0.016 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

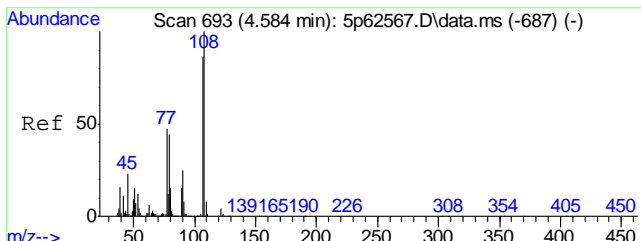
Tgt Ion	Resp	Lower	Upper
94	167137		
65	38.3	16.4	76.4
66	48.8	40.0	100.0



#18  
 Acetophenone  
 Concen: 6.66 ppm  
 RT: 4.448 min Scan# 630  
 Delta R.T. 0.011 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

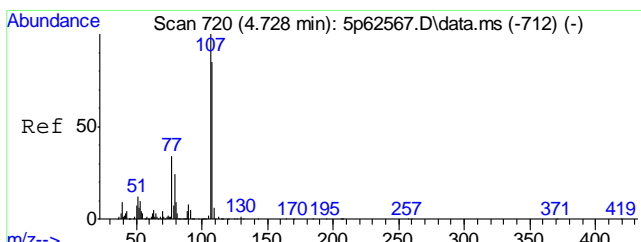
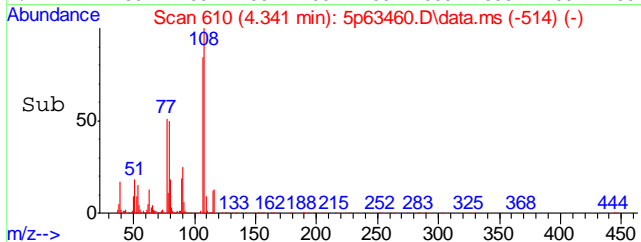
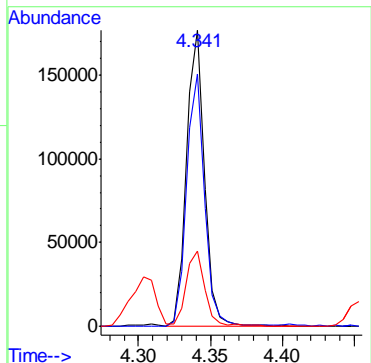
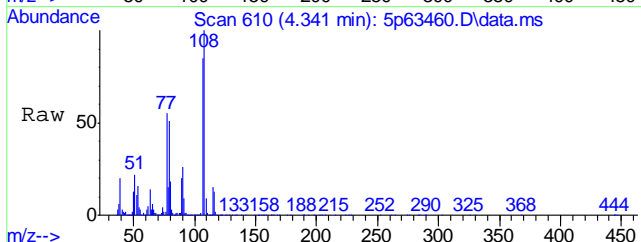
Tgt Ion	Resp	Lower	Upper
105	44696		
120	21.5	0.0	52.6
77	97.3	59.7	119.7





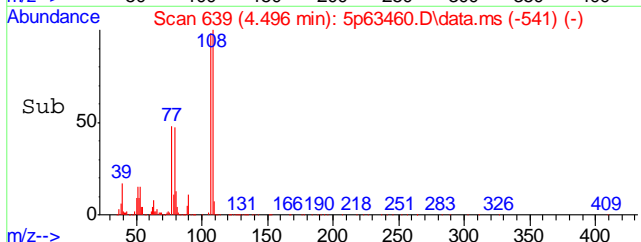
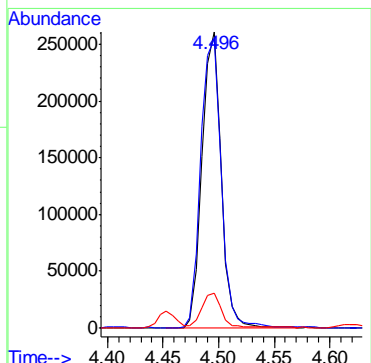
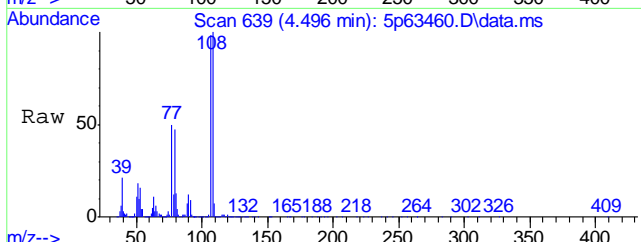
#19  
 2-Methylphenol  
 Concen: 36.11 ppm  
 RT: 4.341 min Scan# 610  
 Delta R.T. 0.011 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

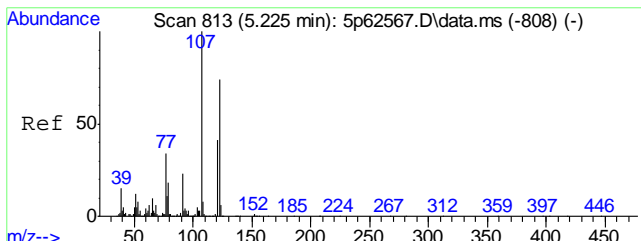
Tgt Ion	Resp	Lower	Upper
108	152003		
107	85.0	55.5	115.5
90	25.0	0.0	55.2



#21  
 3&4-Methylphenol  
 Concen: 73.42 ppm  
 RT: 4.496 min Scan# 639  
 Delta R.T. 0.021 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

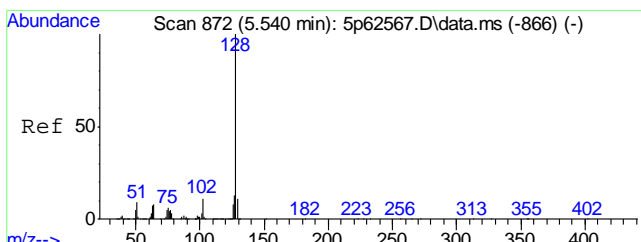
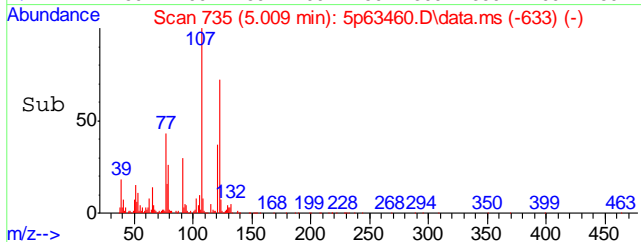
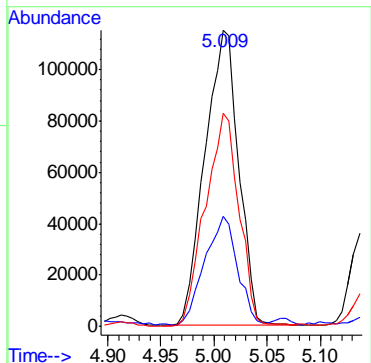
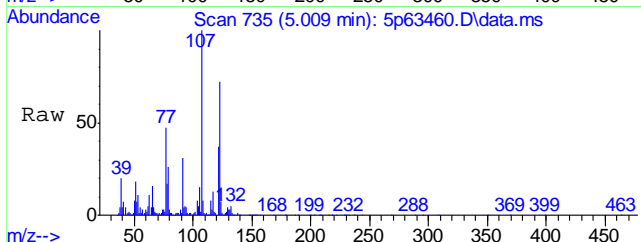
Tgt Ion	Resp	Lower	Upper
108	311625		
107	97.6	87.9	147.9
90	9.0	0.0	39.4





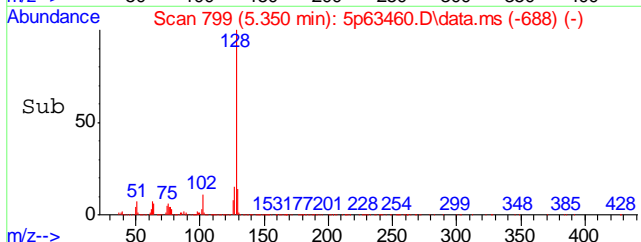
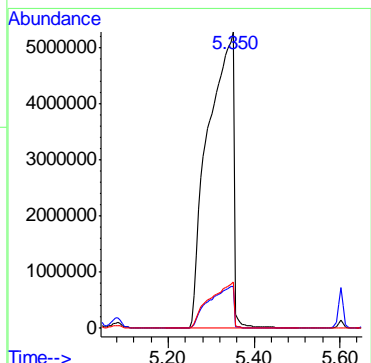
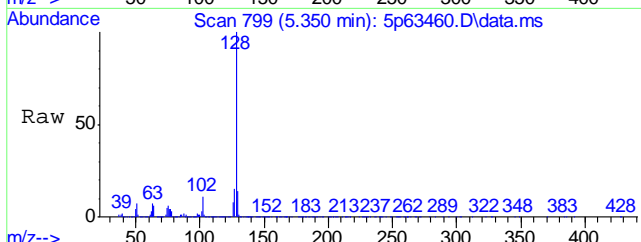
#30  
 2,4-Dimethylphenol  
 Concen: 91.90 ppm  
 RT: 5.009 min Scan# 735  
 Delta R.T. 0.043 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

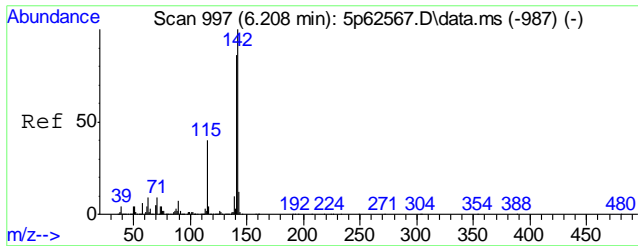
Tgt Ion	Resp	Lower	Upper
107	257096	100	
121	36.3	11.2	71.2
122	71.9	41.7	101.7



#38  
 Naphthalene  
 Concen: 3438.54 ppm  
 RT: 5.350 min Scan# 799  
 Delta R.T. 0.091 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

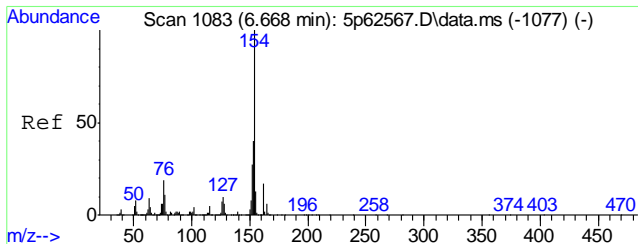
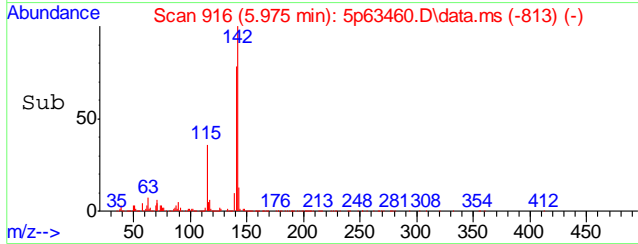
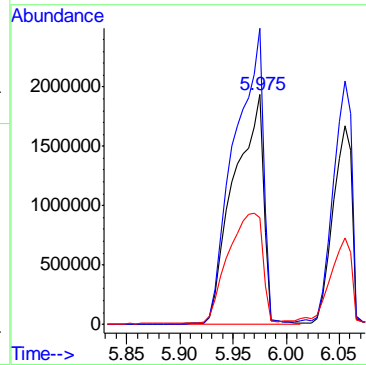
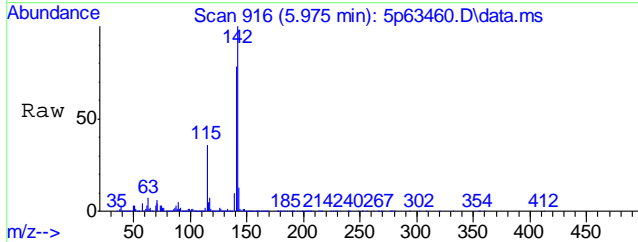
Tgt Ion	Resp	Lower	Upper
128	21549750	100	
129	14.2	0.0	40.6
127	15.5	0.0	42.6





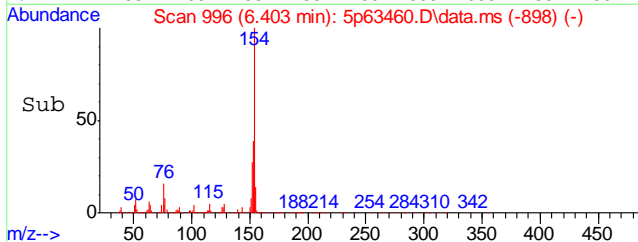
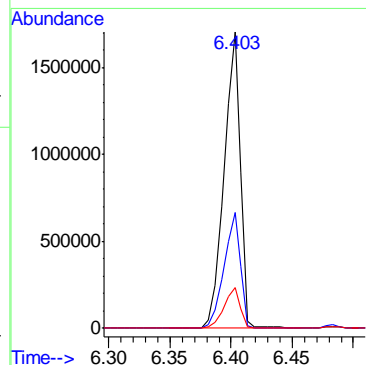
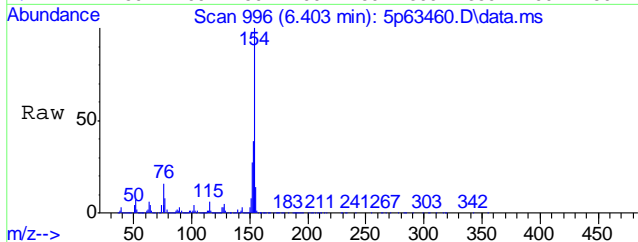
#44  
 2-Methylnaphthalene  
 Concen: 1149.37 ppm  
 RT: 5.975 min Scan# 916  
 Delta R.T. 0.048 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Ratio	Lower	Upper
141	100		
142	128.4	86.4	146.4
115	44.9	16.6	76.6

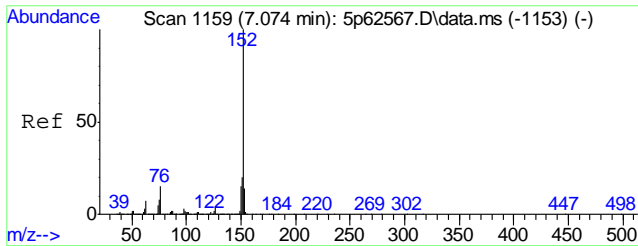


#53  
 Biphenyl  
 Concen: 187.15 ppm  
 RT: 6.403 min Scan# 996  
 Delta R.T. 0.021 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Ratio	Lower	Upper
154	100		
153	39.2	9.6	69.6
155	13.8	0.0	42.7

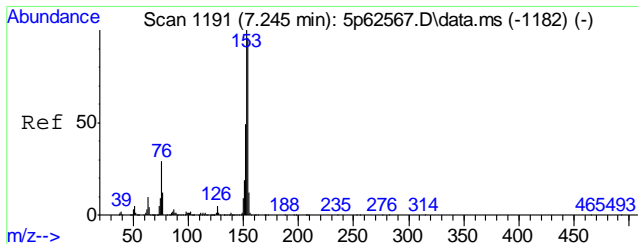
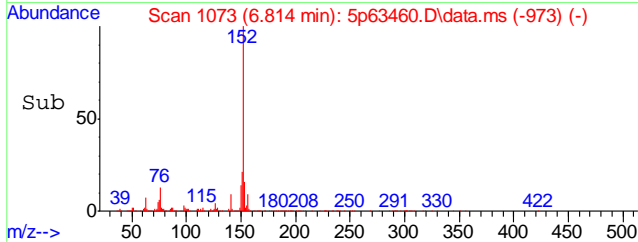
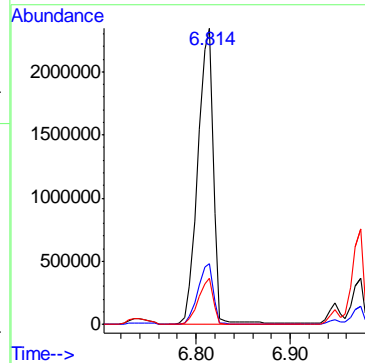
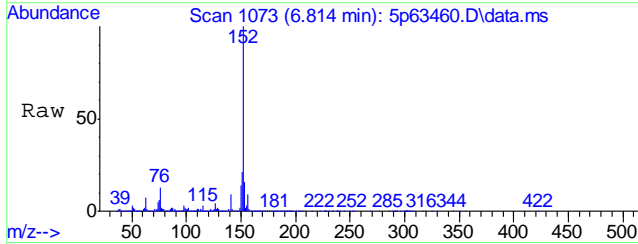






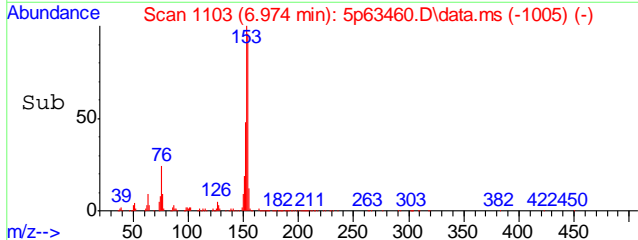
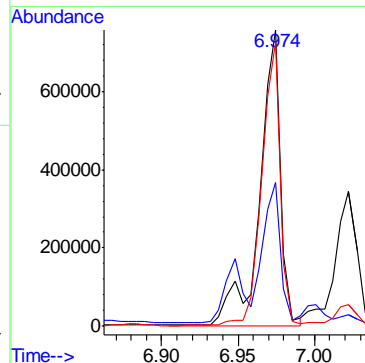
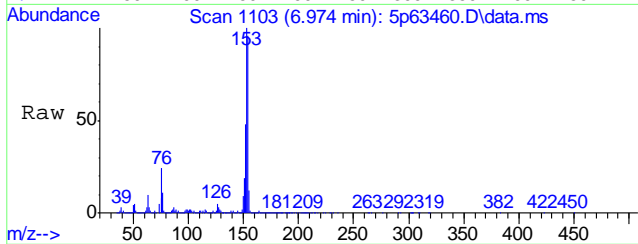
#56  
 Acenaphthylene  
 Concen: 251.49 ppm  
 RT: 6.814 min Scan# 1073  
 Delta R.T. 0.032 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
152	100		
151	20.6	0.0	49.8
153	15.5	0.0	43.6

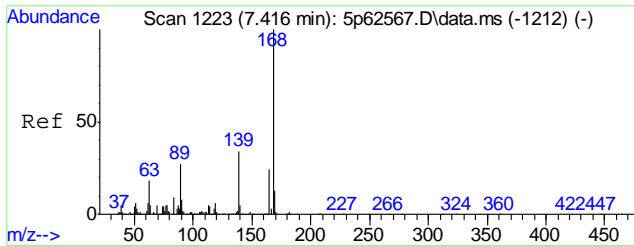


#59  
 Acenaphthene  
 Concen: 110.63 ppm  
 RT: 6.974 min Scan# 1103  
 Delta R.T. 0.021 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
153	100		
152	46.7	19.1	79.1
154	96.9	58.9	118.9

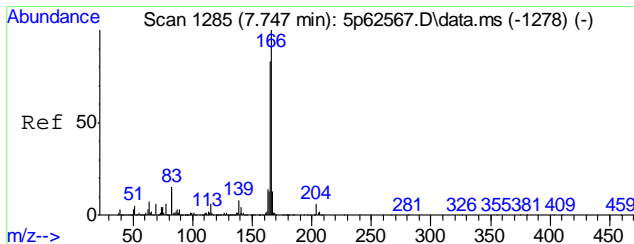
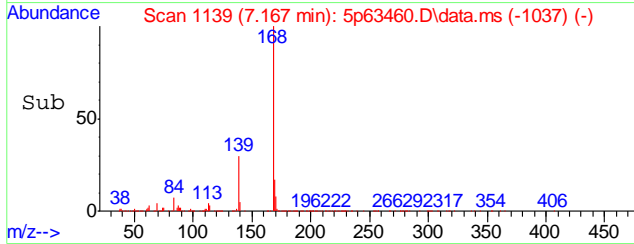
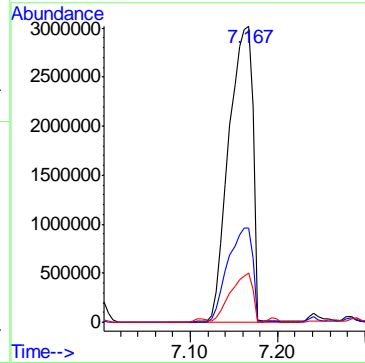
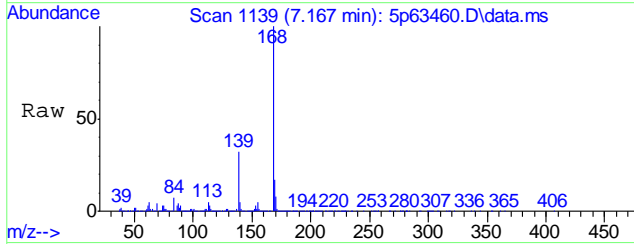


9.15  
 9



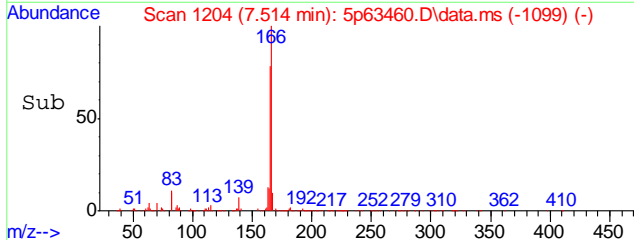
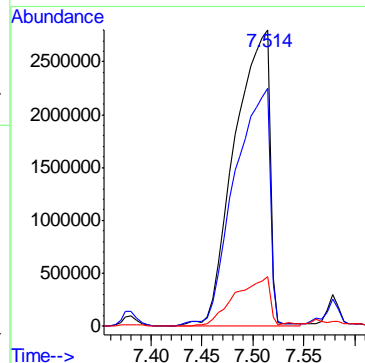
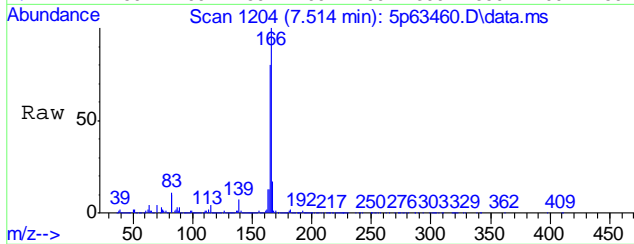
#62  
 Dibenzofuran  
 Concen: 632.10 ppm  
 RT: 7.167 min Scan# 1139  
 Delta R.T. 0.043 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

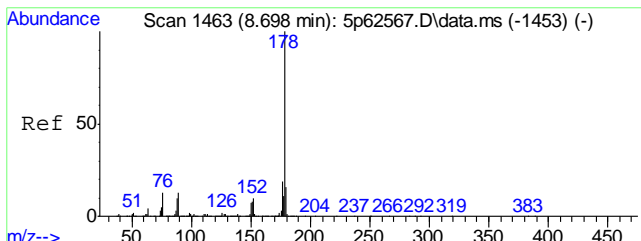
Tgt Ion	Resp	Lower	Upper
168	100		
139	31.8	3.9	63.9
169	16.5	0.0	43.3



#66  
 Fluorene  
 Concen: 903.63 ppm  
 RT: 7.514 min Scan# 1204  
 Delta R.T. 0.059 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
166	100		
165	80.2	53.2	113.2
167	16.3	0.0	43.0

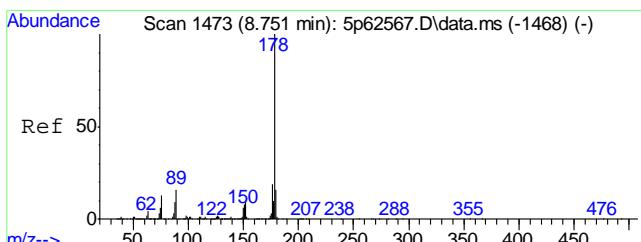
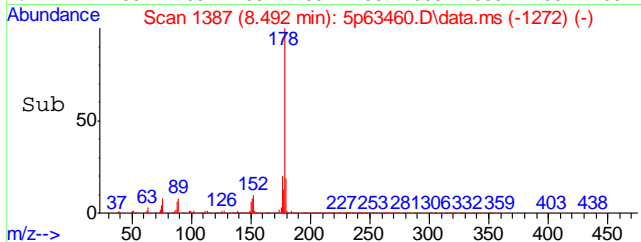
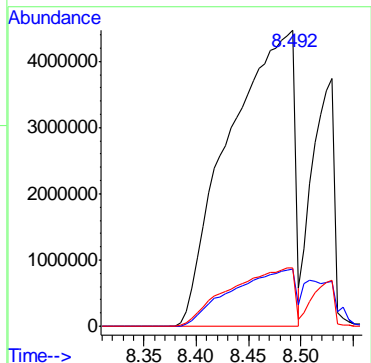
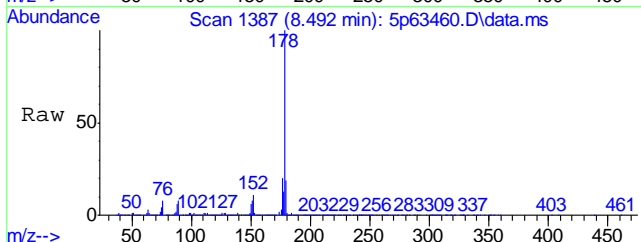




#77  
 Phenanthrene  
 Concen: 2600.35 ppm m  
 RT: 8.492 min Scan# 1387  
 Delta R.T. 0.112 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion: 178 Resp: 19151729

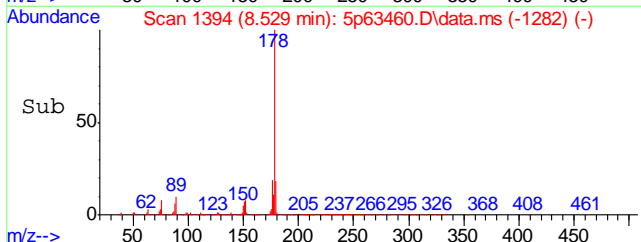
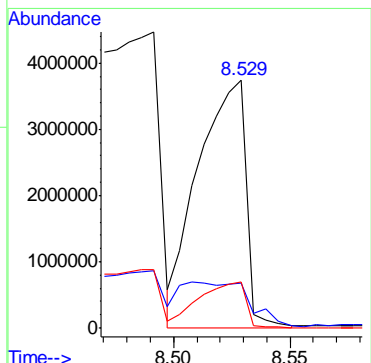
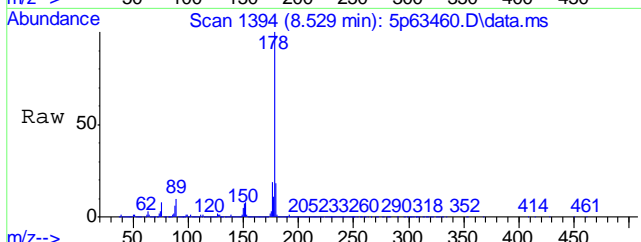
Ion	Ratio	Lower	Upper
178	100		
179	19.3	0.0	45.8
176	19.7	0.0	48.7

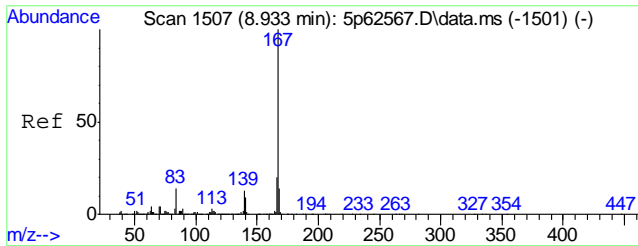


#78  
 Anthracene  
 Concen: 710.01 ppm m  
 RT: 8.529 min Scan# 1394  
 Delta R.T. 0.096 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion: 178 Resp: 5453275

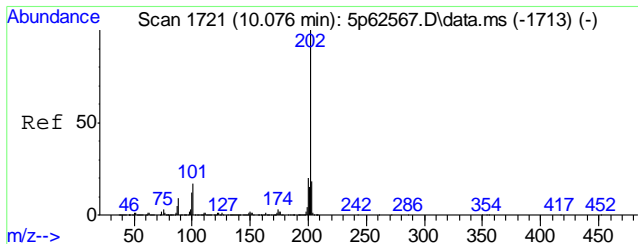
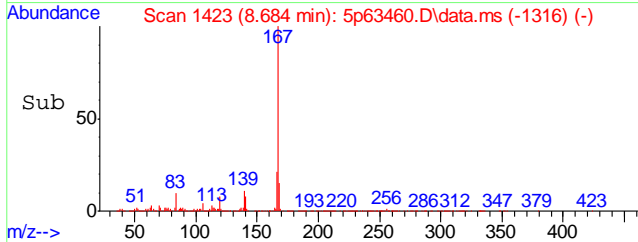
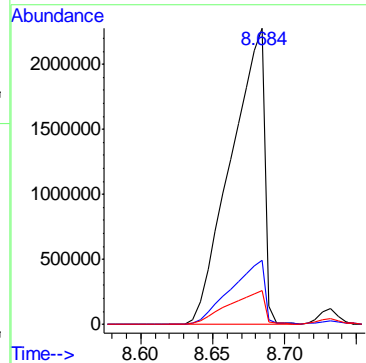
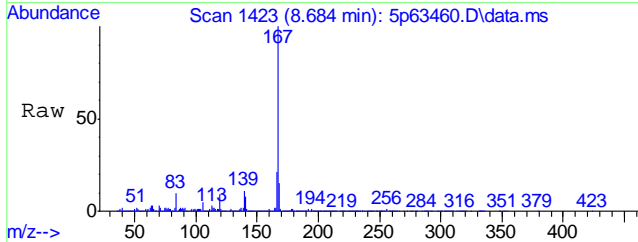
Ion	Ratio	Lower	Upper
178	100		
179	18.3	0.0	46.2
176	18.7	0.0	49.1





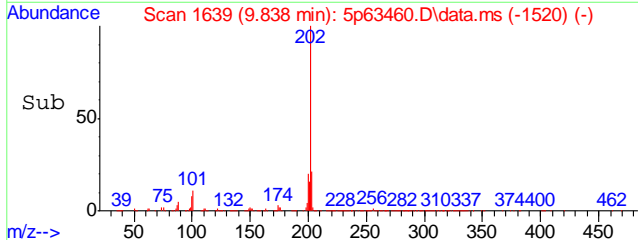
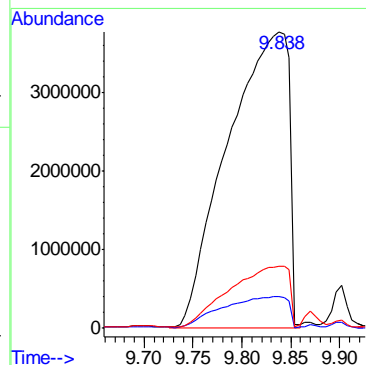
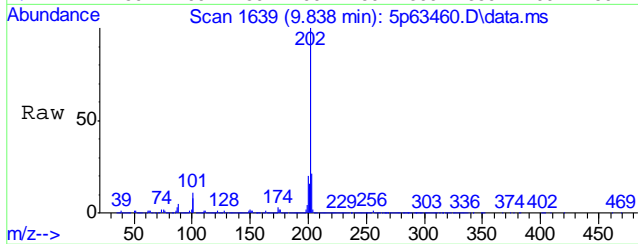
#79  
 Carbazole  
 Concen: 462.43 ppm  
 RT: 8.684 min Scan# 1423  
 Delta R.T. 0.069 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
167	3693524		
166	21.3	0.0	50.2
139	11.0	0.0	43.0

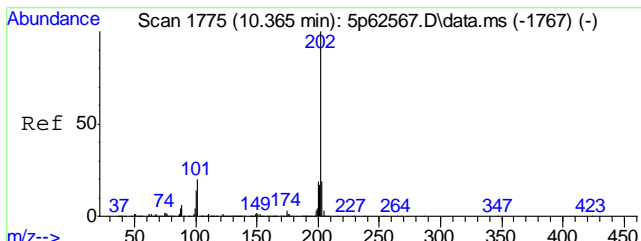


#81  
 Fluoranthene  
 Concen: 1767.23 ppm  
 RT: 9.838 min Scan# 1639  
 Delta R.T. 0.133 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
202	16470390		
202	100		
101	10.5	0.0	47.0
203	20.5	0.0	47.8

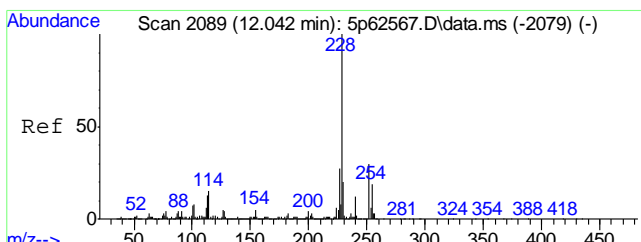
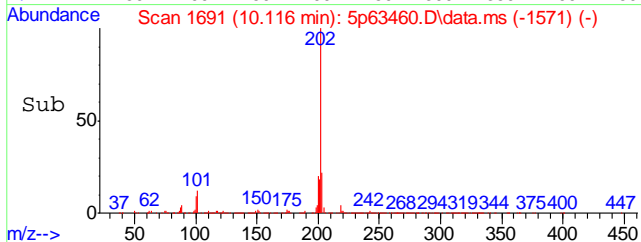
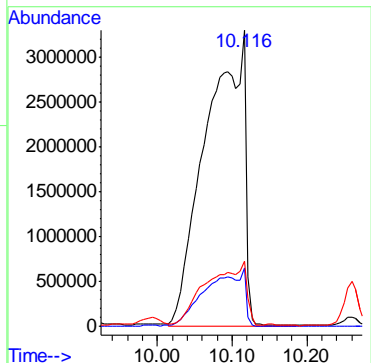
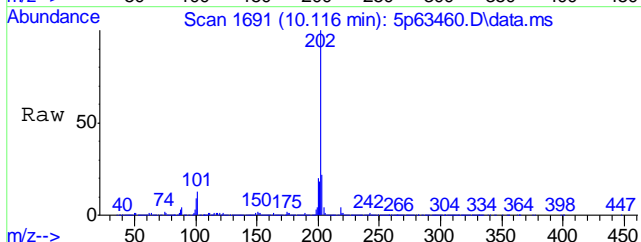


9.15  
 9



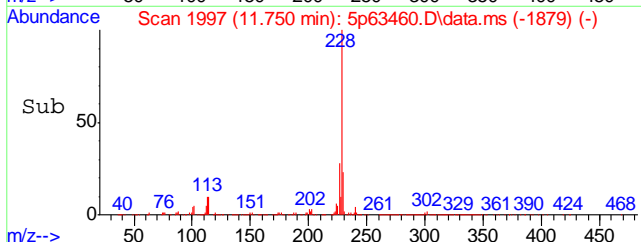
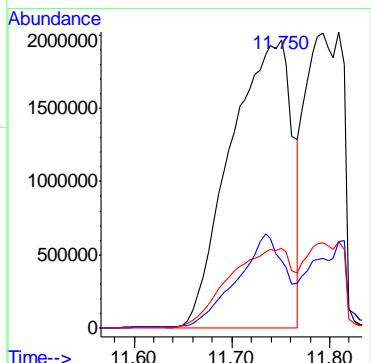
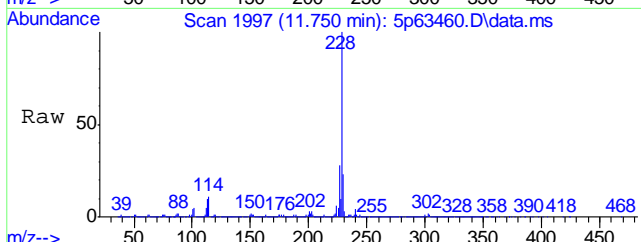
#84  
 Pyrene  
 Concen: 992.93 ppm  
 RT: 10.116 min Scan# 1691  
 Delta R.T. 0.139 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
202	11844141	100	
200	19.7	0.0	48.7
203	22.1	0.0	48.8

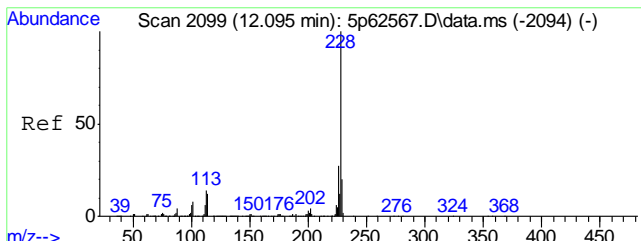


#87  
 Benzo[a]anthracene  
 Concen: 789.07 ppm  
 RT: 11.750 min Scan# 1997  
 Delta R.T. 0.128 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
228	8570627	100	
229	23.0	0.0	49.7
226	26.8	0.0	56.6

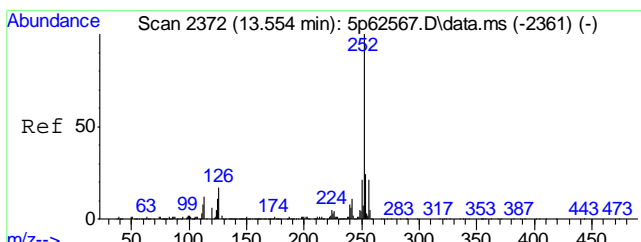
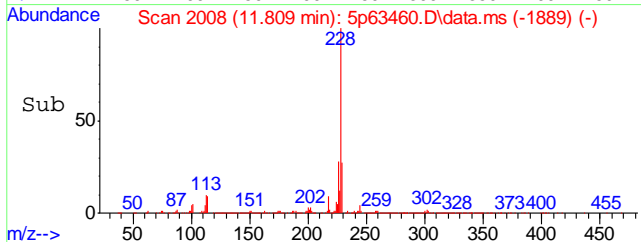
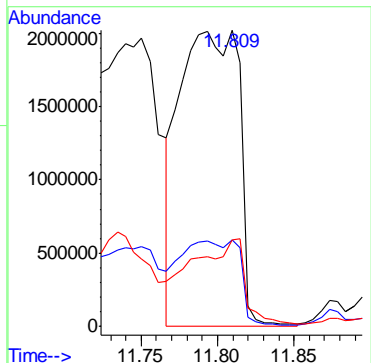
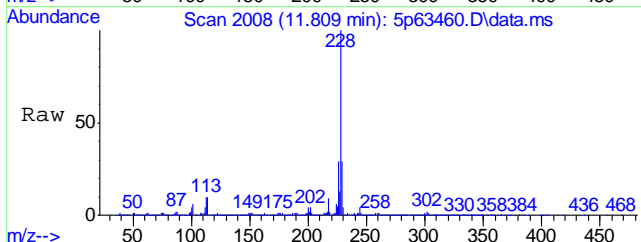


9.15  
 9



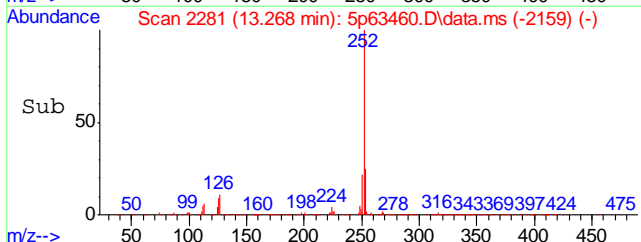
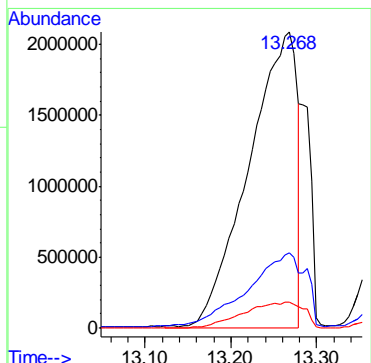
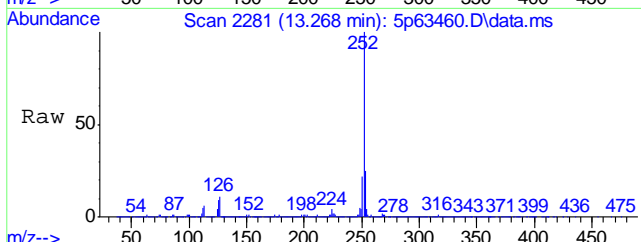
#89  
 Chrysene  
 Concen: 528.72 ppm  
 RT: 11.809 min Scan# 2008  
 Delta R.T. 0.133 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
228	5397223	100	
226	28.9	0.0	57.2
229	31.3	0.0	50.1

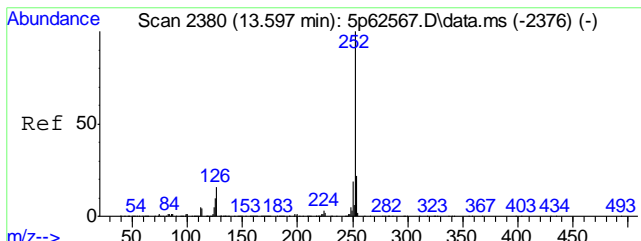


#93  
 Benzo[b]fluoranthene  
 Concen: 784.18 ppm m  
 RT: 13.268 min Scan# 2281  
 Delta R.T. 0.149 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
252	8137281	100	
253	25.4	0.0	53.8
125	8.6	0.0	40.9

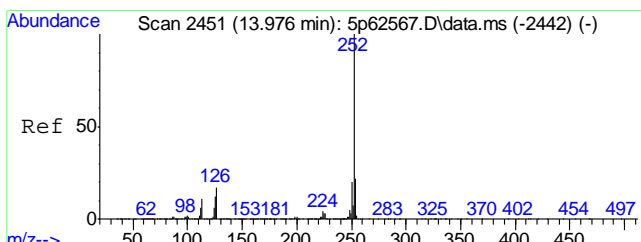
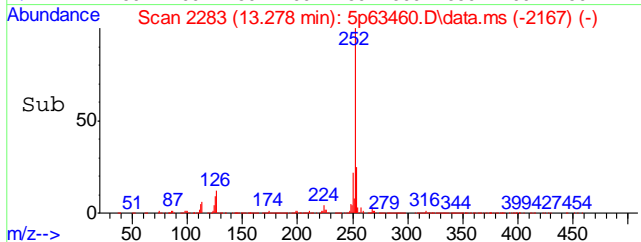
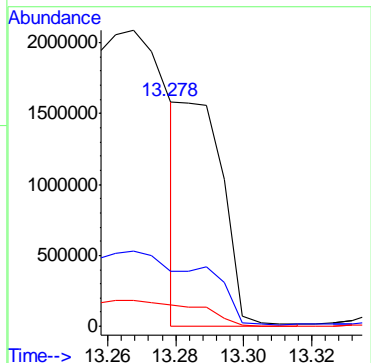
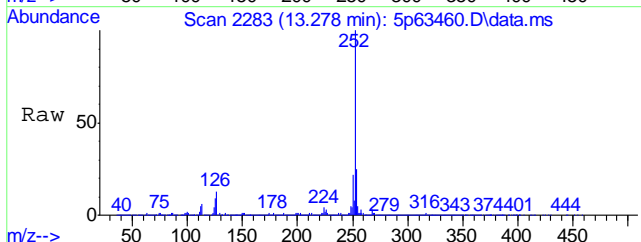


9.15  
 9



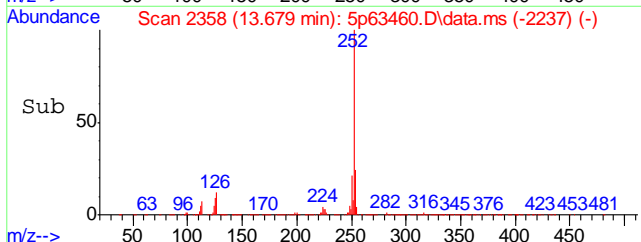
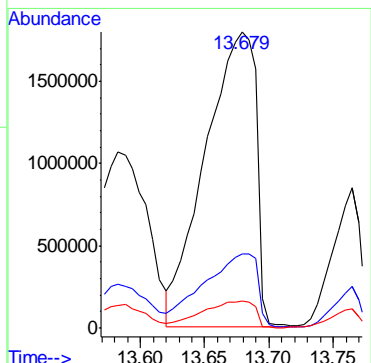
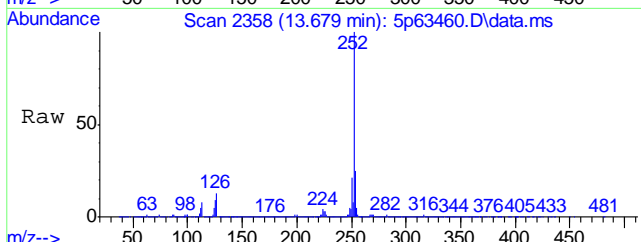
#94  
 Benzo[k]fluoranthene  
 Concen: 150.74 ppm  
 RT: 13.278 min Scan# 2283  
 Delta R.T. 0.117 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

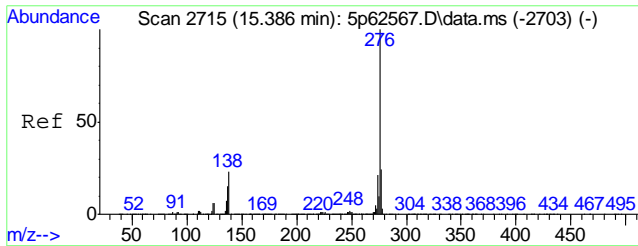
Tgt Ion	Resp	Lower	Upper
252	100		
253	24.7	0.0	52.1
125	9.3	0.0	40.2



#95  
 Benzo[a]pyrene  
 Concen: 528.05 ppm  
 RT: 13.679 min Scan# 2358  
 Delta R.T. 0.144 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

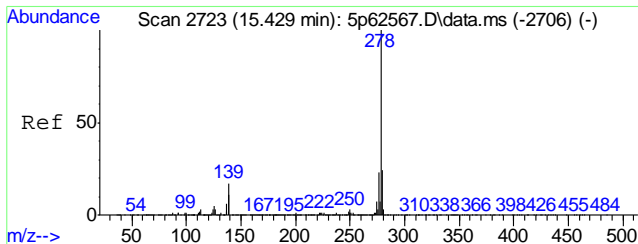
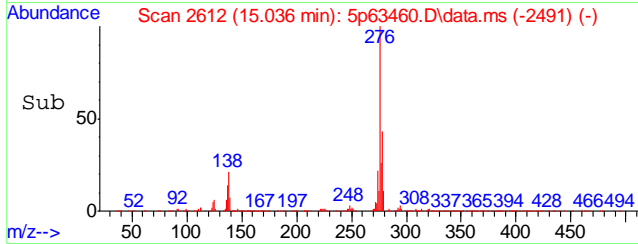
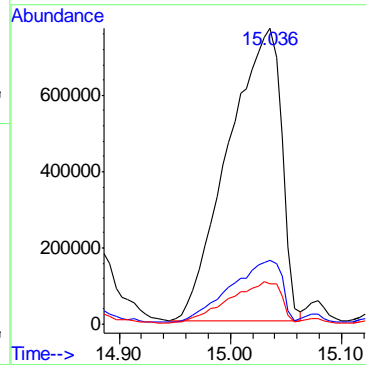
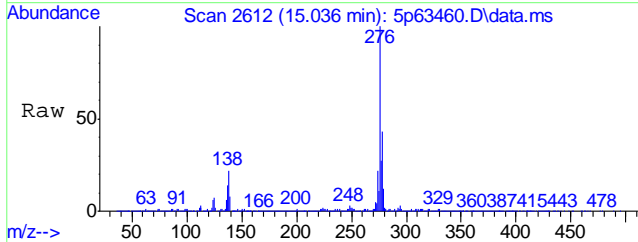
Tgt Ion	Resp	Lower	Upper
252	100		
253	23.9	0.0	51.7
125	8.7	0.0	42.0





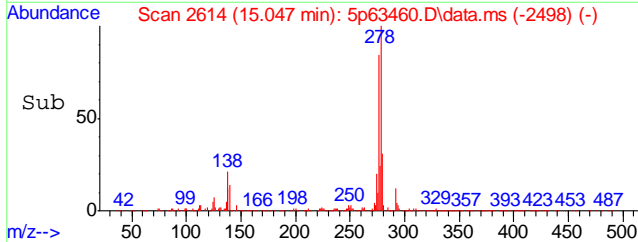
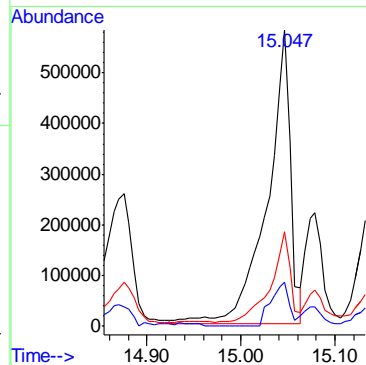
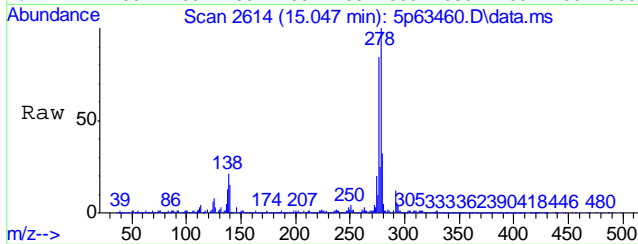
#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 296.63 ppm  
 RT: 15.036 min Scan# 2612  
 Delta R.T. 0.144 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
276	2536896	100	100
138	21.1	0.0	50.9
137	13.4	0.0	44.2



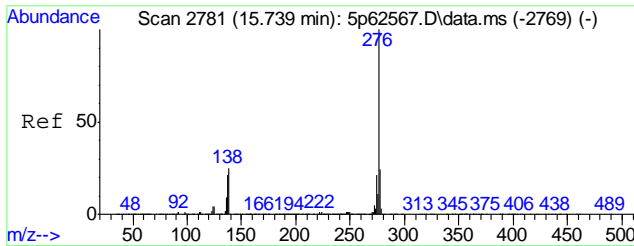
#98  
 Dibenz[a,h]anthracene  
 Concen: 113.64 ppm  
 RT: 15.047 min Scan# 2614  
 Delta R.T. 0.117 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
278	989845	100	100
139	14.0	0.0	46.7
279	31.2	0.0	54.4



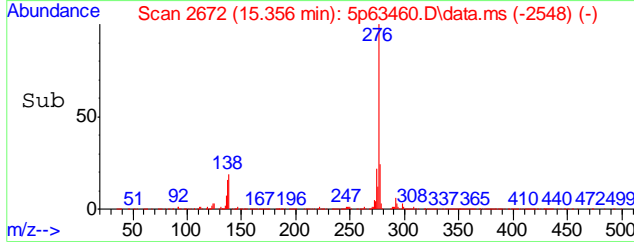
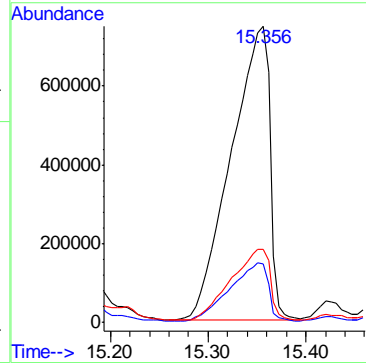
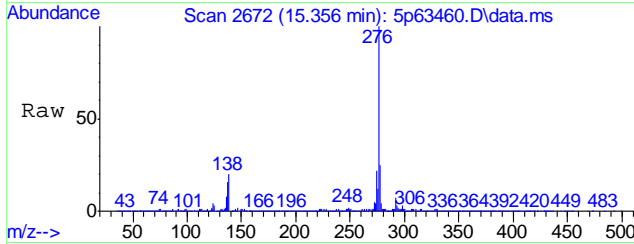
9.15  
 9





#100  
 Benzo[g,h,i]perylene  
 Concen: 238.21 ppm  
 RT: 15.356 min Scan# 2672  
 Delta R.T. 0.160 min  
 Lab File: 5p63460.D  
 Acq: 1 Oct 19 11:25 am

Tgt Ion	Resp	Lower	Upper
276	100		
138	19.4	0.0	54.8
277	24.2	0.0	53.6



9.15  
9

# Manual Integration Approval Summary

Sample Number: JC95555-3                      Method: SW846 8270D  
Lab FileID: 5P63460.D                      Analyst approved: 10/07/19 11:11 Kristi Schollenberger  
Injection Time: 10/01/19 11:25                      Supervisor approved: 10/07/19 15:00 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Nitrobenzene-d5	4165-60-0		4.58	Poor instrument integration
Phenanthrene	85-01-8		8.49	Poor instrument integration
Anthracene	120-12-7		8.53	Poor instrument integration
Pyrene	129-00-0		10.12	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.27	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.28	Overlapping peak

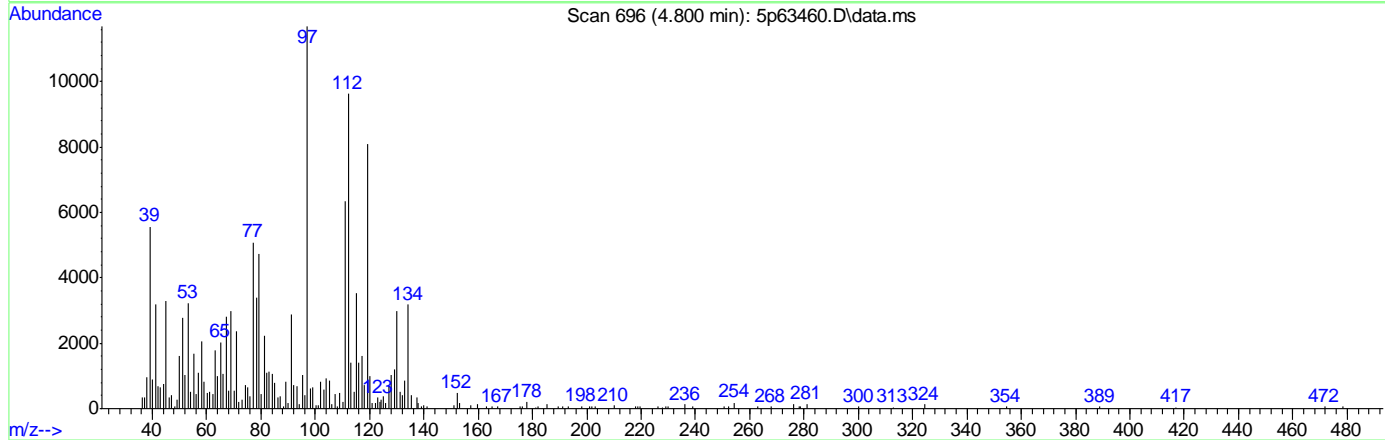
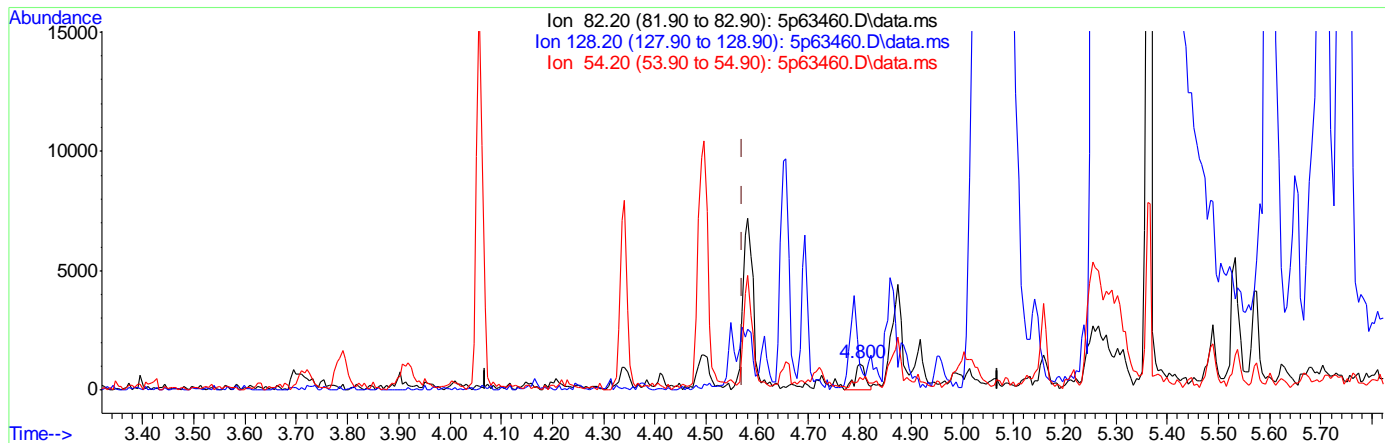
9.1.5.1

9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



(25) Nitrobenzene-d5 (S)

4.800min (+0.230) 0.47ppm

response 1583

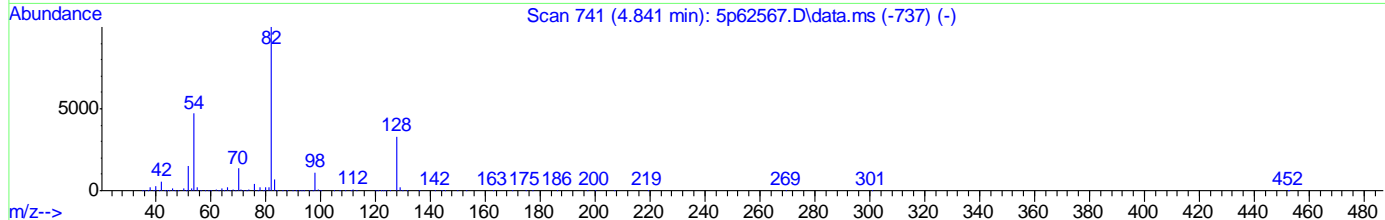
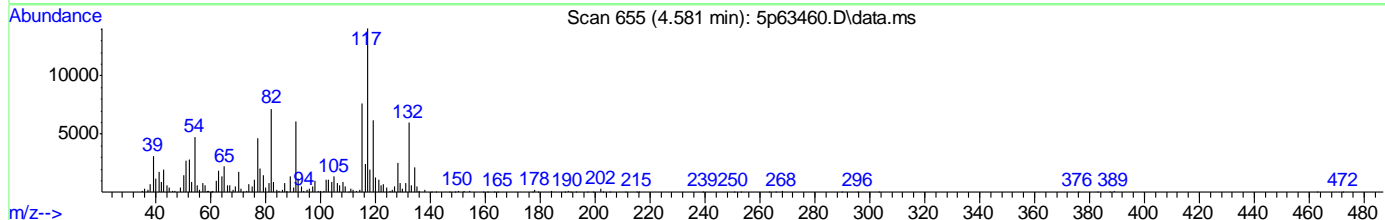
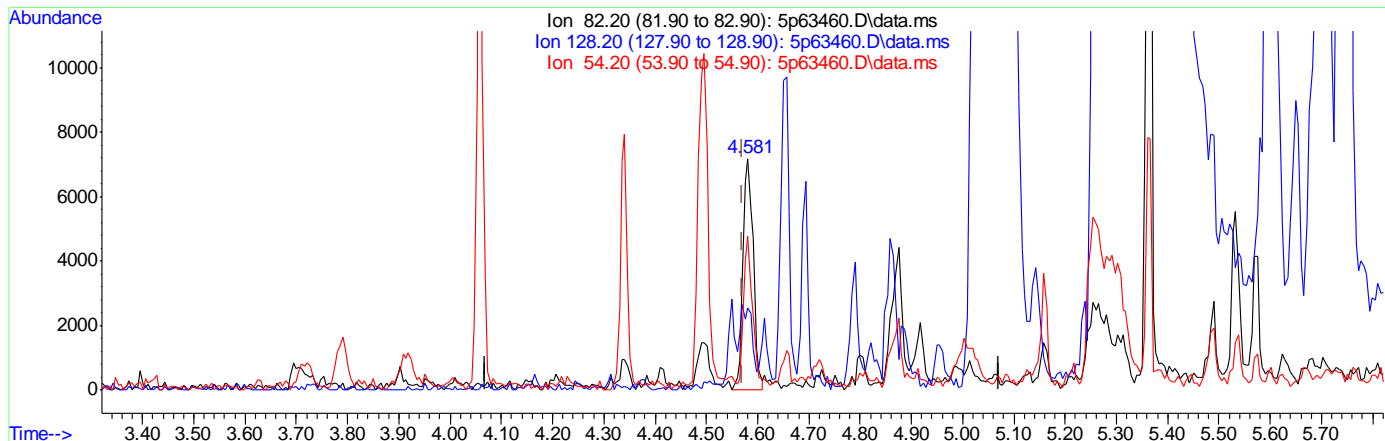
Ion	Exp%	Act%
82.20	100	100
128.20	33.10	18.87
54.20	47.10	29.33
0.00	0.00	0.00

9.1.5.2  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63460.D\data.ms

(25) Nitrobenzene-d5 (S)

4.581min (+0.011) 2.91ppm m

response 9895

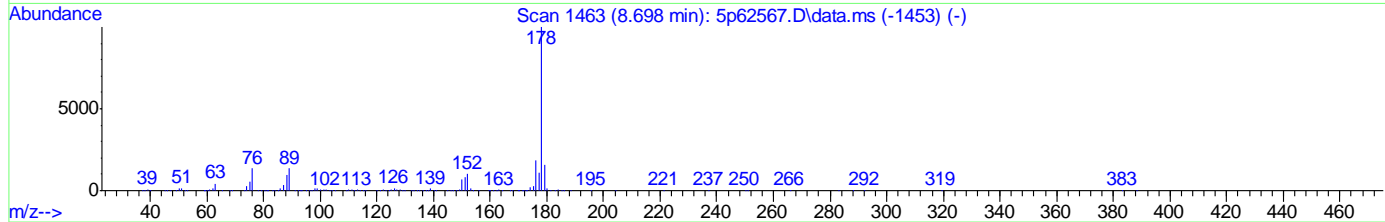
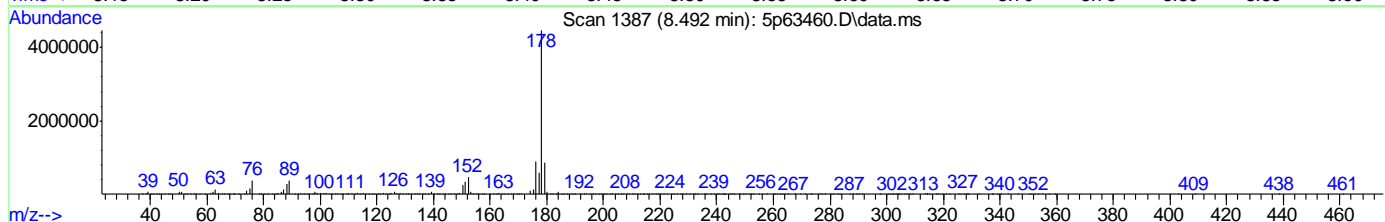
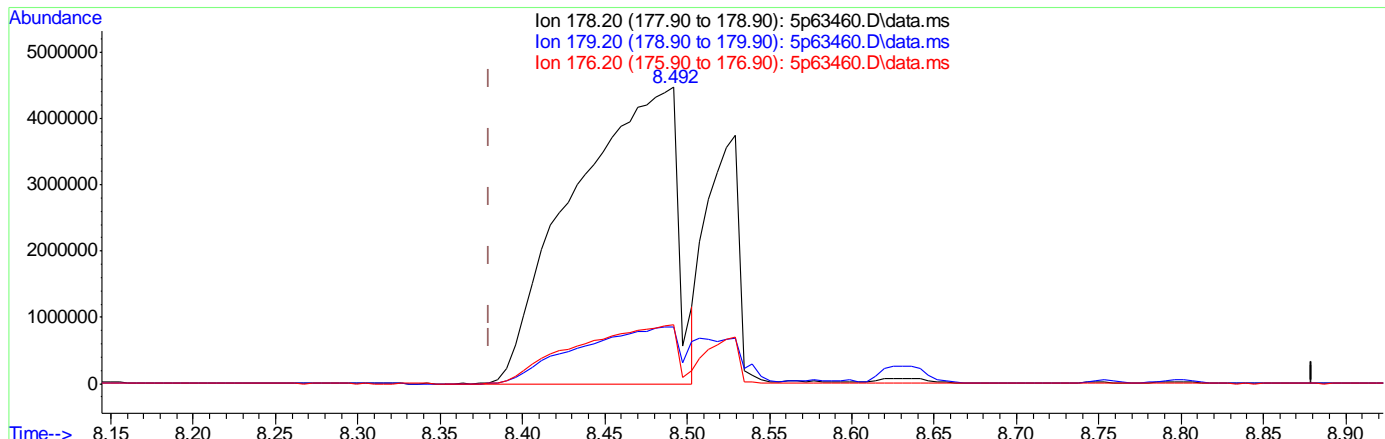
Ion	Exp%	Act%
82.20	100	100
128.20	33.10	35.73
54.20	47.10	66.69
0.00	0.00	0.00

9.1.5.3  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63460.D\data.ms

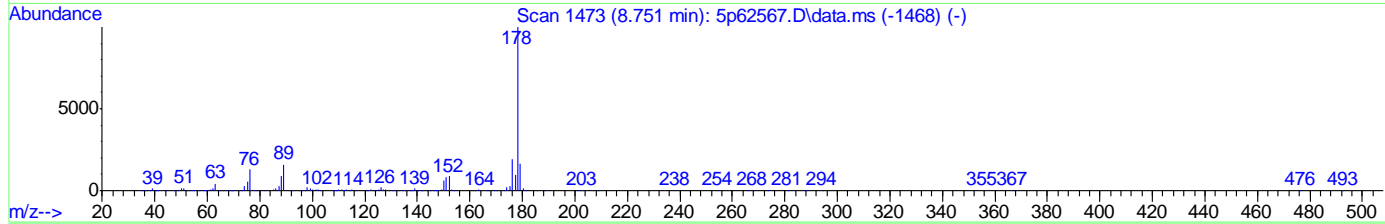
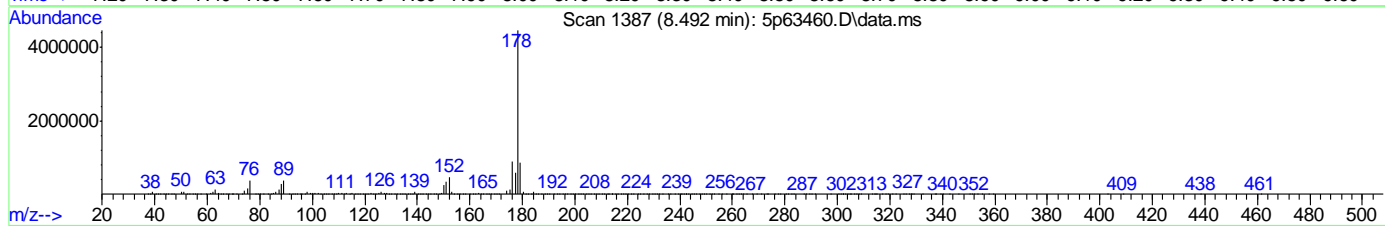
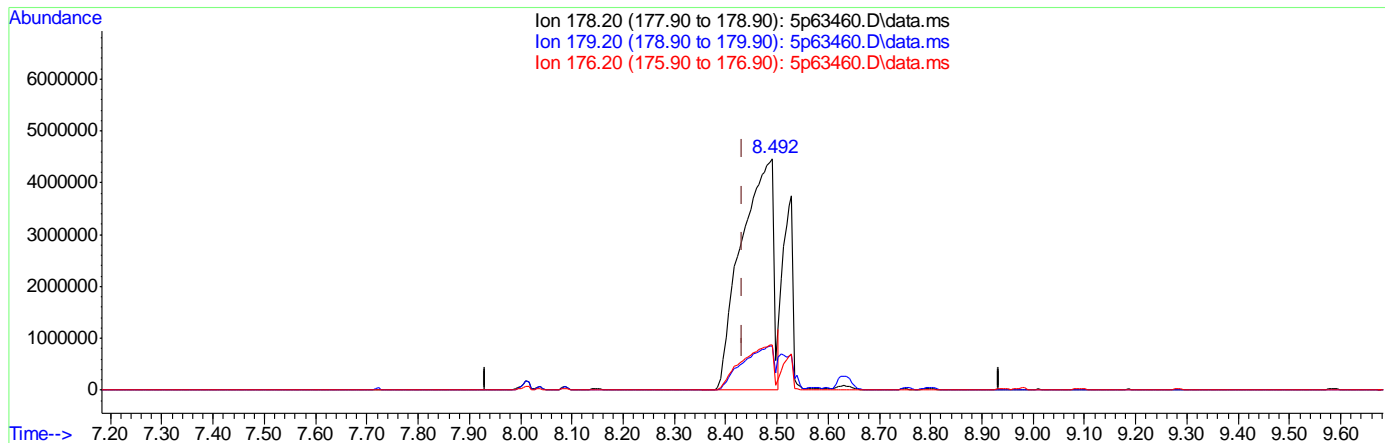
(77) Phenanthrene (t)		
8.492min (+0.112)	2649.92ppm	
response	19516802	
Ion	Exp%	Act%
178.20	100	100
179.20	15.80	13.94
176.20	18.70	20.12
0.00	0.00	0.00

9.1.5.4  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



(78) Anthracene (t)  
 8.492min (+0.059) 2541.05ppm  
 response 19516802

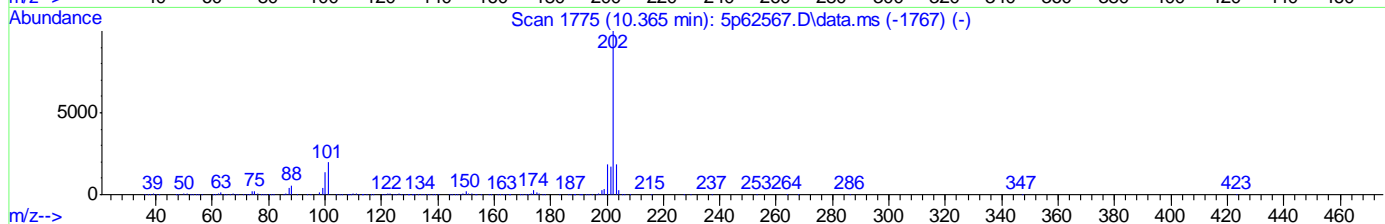
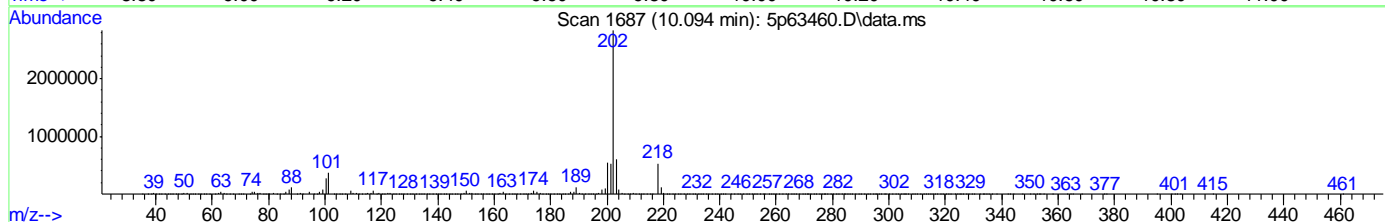
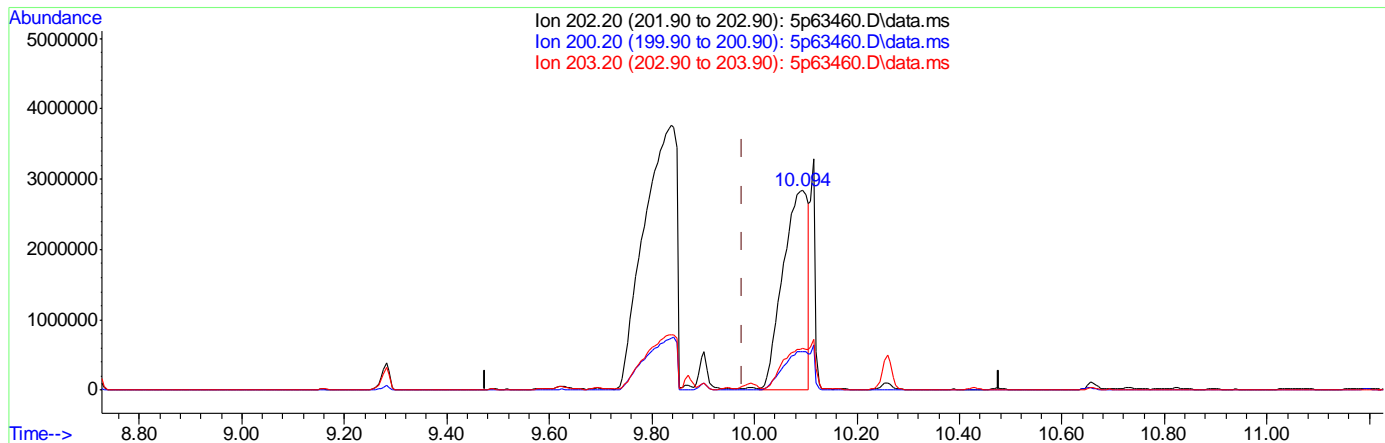
Ion	Exp%	Act%
178.20	100	100
179.20	16.20	13.94
176.20	19.10	20.12
0.00	0.00	0.00

9.1.5.5  
**9**

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63460.D\data.ms

(84) Pyrene (t)  
 10.094min (+0.117) 806.76ppm  
 response 9623406

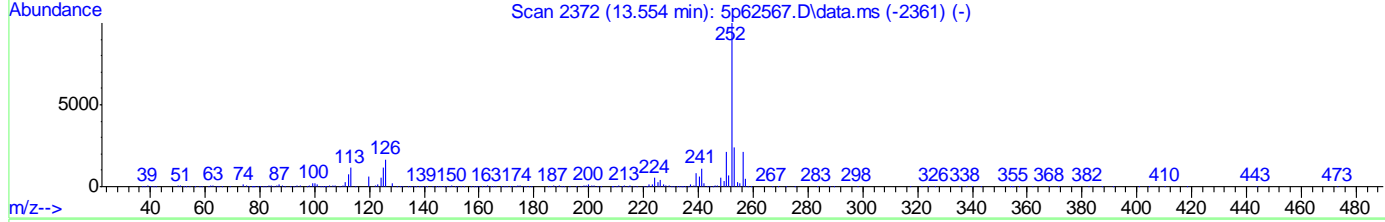
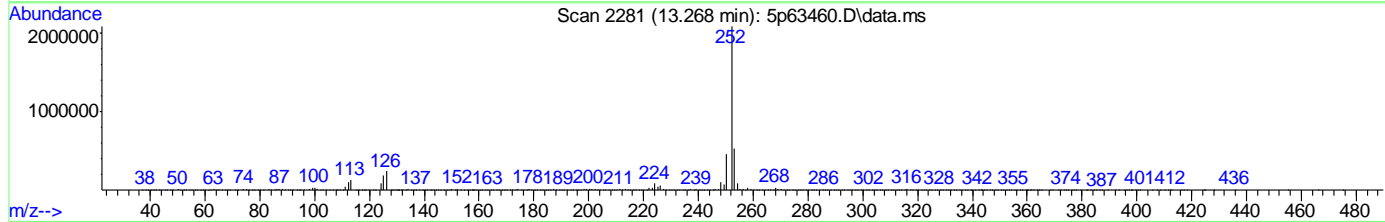
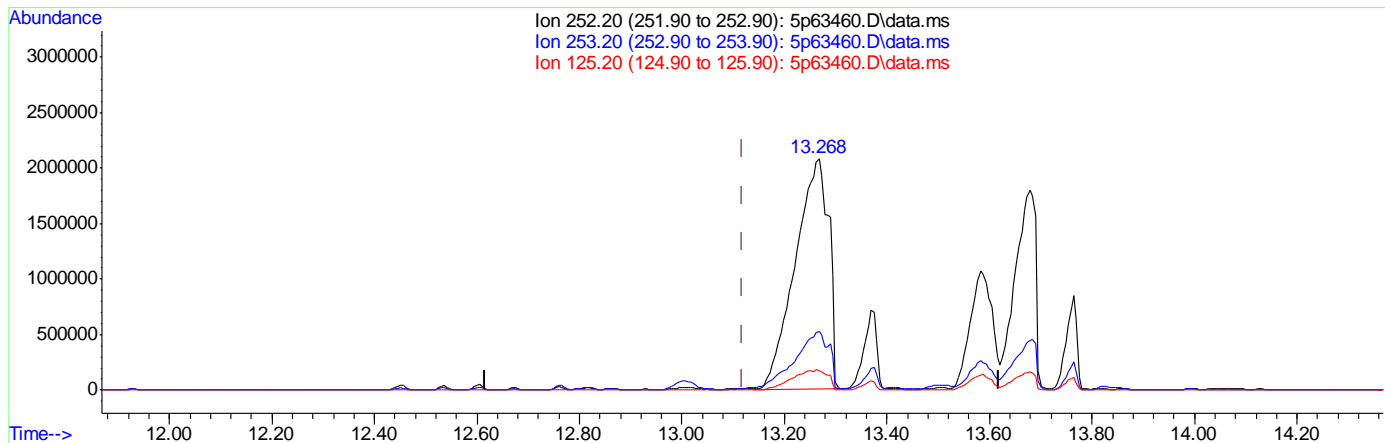
Ion	Exp%	Act%
202.20	100	100
200.20	18.70	18.81
203.20	18.80	19.09
0.00	0.00	0.00

9.1.5.6  
**9**

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63460.D  
 Acq On : 1 Oct 2019 11:25 am  
 Operator : chriss2  
 Sample : jc95555-3  
 Misc : op23015,e5p2977,30.5,,,5,5  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration



TIC: 5p63460.D\data.ms

(93) Benzo[b]fluoranthene (t)  
 13.268min (+0.149) 906.14ppm  
 response 9402779

Ion	Exp%	Act%
252.20	100	100
253.20	23.80	24.70
125.20	10.90	8.51
0.00	0.00	0.00

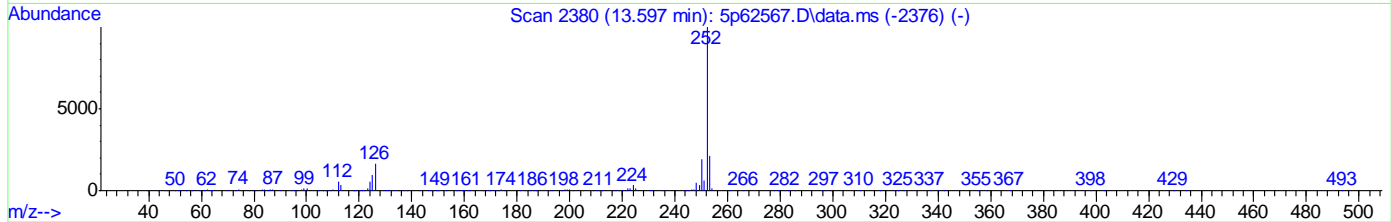
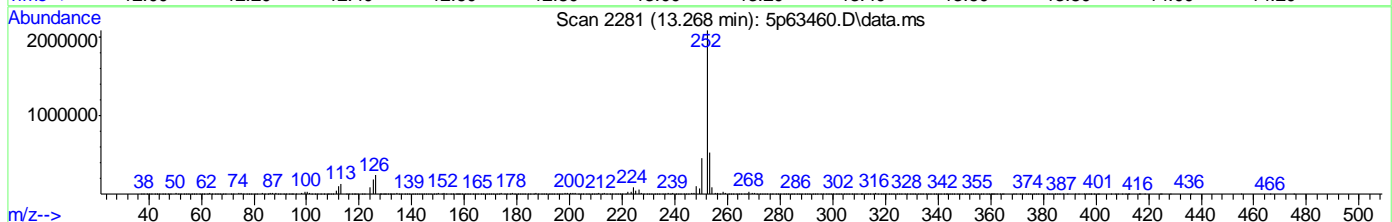
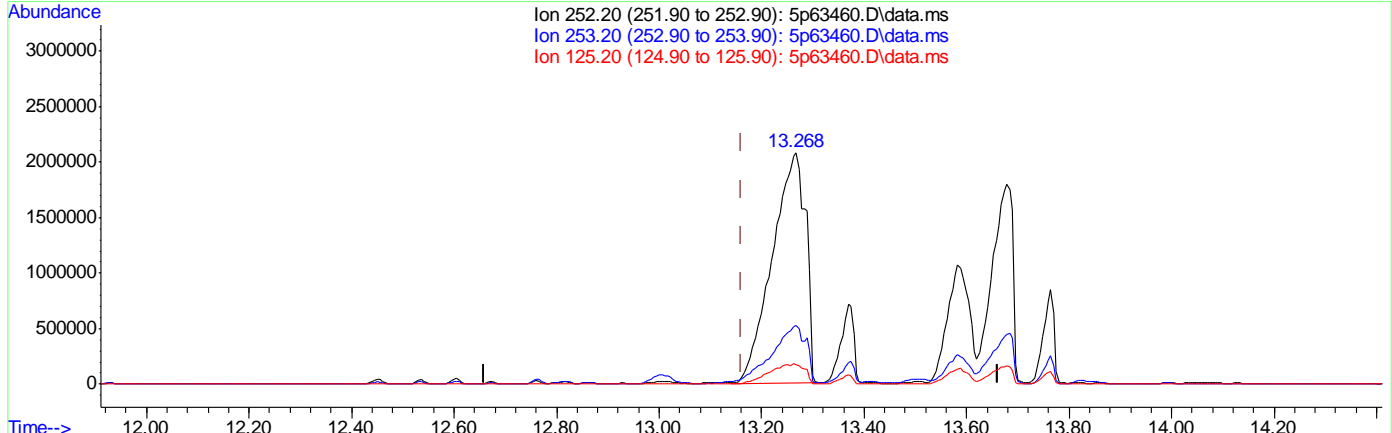
9.1.5.7  
**9**



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
Data File : 5p63460.D  
Acq On : 1 Oct 2019 11:25 am  
Operator : chriss2  
Sample : jc95555-3  
Misc : op23015,e5p2977,30.5,,,5,5  
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 01 12:05:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Tue Oct 01 08:17:31 2019  
Response via : Initial Calibration



TIC: 5p63460.D\data.ms

(94) Benzo[k]fluoranthene (t)  
13.268min (+0.107) 1032.61ppm  
response 9413860

Ion	Exp%	Act%
252.20	100	100
253.20	22.10	24.70
125.20	10.20	8.51
0.00	0.00	0.00

9.1.5.8  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63494.d  
 Acq On : 2 Oct 2019 1:10 am  
 Operator : hennys  
 Sample : jc95555-3 Inst : MS5P  
 Misc : op23015,e5p2978,30.5,,,5,200  
 ALS Vial : 30 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:12:04 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.047	152	93128	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	338400	40.00	ppm	0.00
47) Acenaphthene-d10	6.916	164	173684	40.00	ppm	0.00
69) Phenanthrene-d10	8.347	188	336019	40.00	ppm	0.00
83) Chrysene-d12	11.633	240	281525	40.00	ppm	0.00
91) Perylene-d12	13.604	264	337715	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4b	4.047	152	93128	40.00	ppm	0.00
103) Acenaphthene-d10a	6.916	164	173684	40.00	ppm	0.00
105) Chrysene-d12a	11.633	240	281525	40.00	ppm	0.00
107) Phenanthrene-d10a	8.347	188	336019	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	338400	40.00	ppm	0.00
112) Chrysene-d12b	11.633	240	281508	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.047	152	93128	40.00	ppm	0.00
116) Chrysene-d12c	11.633	240	281525	40.00	ppm	0.00
118) Chrysene-d12d	11.633	240	281508	40.00	ppm	0.00
120) Phenanthrene-d10b	8.347	188	336019	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
9) Phenol	3.785	94	3910	0.62	ppm	Qvalue 71
19) 2-Methylphenol	4.325	108	4473	1.17	ppm	95
21) 3&4-Methylphenol	4.474	108	9045	2.34	ppm	79
30) 2,4-Dimethylphenol	4.966	107	7925	1.82	ppm	93
38) Naphthalene	5.254	128	1496596	153.64	ppm	97
44) 2-Methylnaphthalene	5.917	141	201213	38.97	ppm	98
53) Biphenyl	6.376	154	57876	7.50	ppm	99
56) Acenaphthylene	6.771	152	71159	7.39	ppm	97
59) Acenaphthene	6.942	153	22738	3.88	ppm	98
62) Dibenzofuran	7.113	168	258277	30.82	ppm	85
66) Fluorene	7.445	166	313828	46.93	ppm	95
77) Phenanthrene	8.380	178	939523	100.78	ppm	99
78) Anthracene	8.422	178	236628	24.34	ppm	99
79) Carbazole	8.609	167	145527	14.39	ppm	100
81) Fluoranthene	9.704	202	705926	59.84	ppm	99
84) Pyrene	9.971	202	503664	42.69	ppm	99
87) Benzo[a]anthracene	11.617	228	272549	25.37	ppm	97
89) Chrysene	11.665	228	226705	22.45	ppm	98
93) Benzo[b]fluoranthene	13.113	252	254202	21.86	ppm	95
94) Benzo[k]fluoranthene	13.145	252	79064	7.74	ppm	96

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63494.d  
 Acq On : 2 Oct 2019 1:10 am  
 Operator : hennys  
 Sample : jc95555-3 Inst : MS5P  
 Misc : op23015,e5p2978,30.5,,,5,200  
 ALS Vial : 30 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:12:04 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Benzo[a]pyrene	13.524	252	172305	16.50	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.881	276	87545	9.13	ppm	86
98) Dibenz[a,h]anthracene	14.918	278	28020	2.87	ppm	86
100) Benzo[g,h,i]perylene	15.186	276	75622	7.78	ppm	97

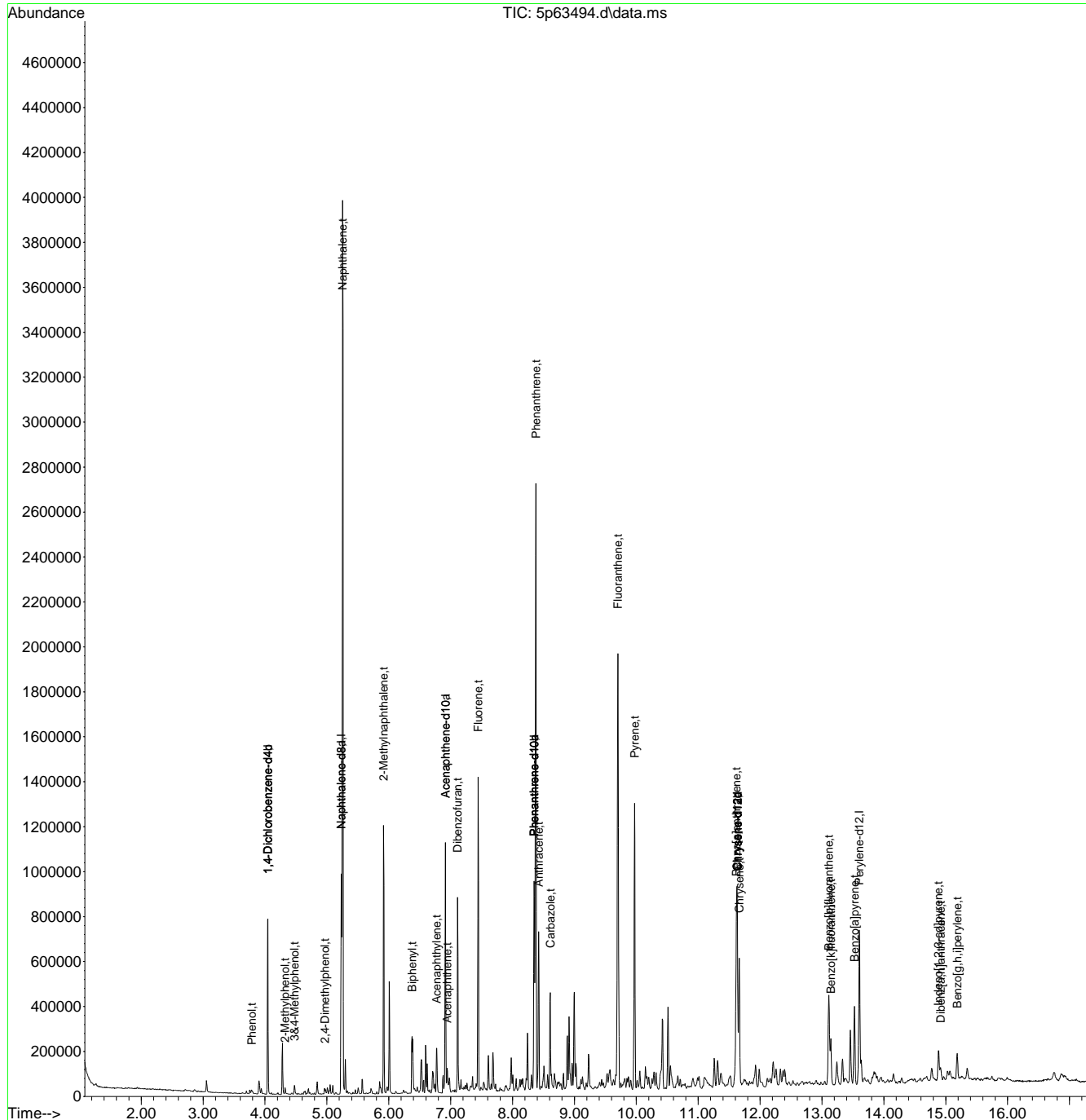
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

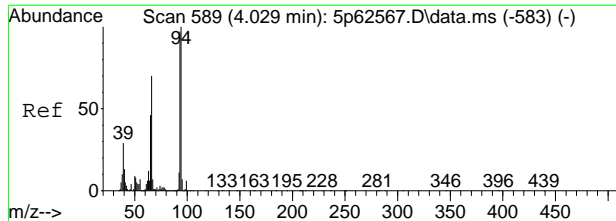
Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63494.d  
 Acq On : 2 Oct 2019 1:10 am  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2978,30.5,,,5,200  
 ALS Vial : 30 Sample Multiplier: 1

Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 03:12:04 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:52:59 2019  
 Response via : Initial Calibration

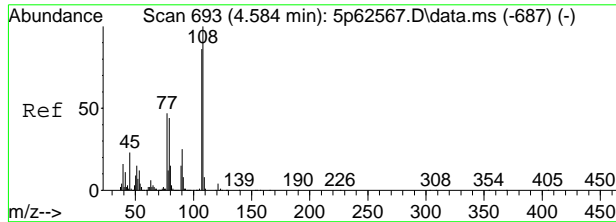
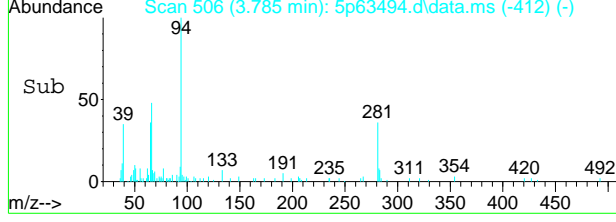
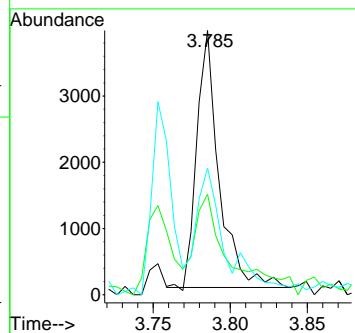
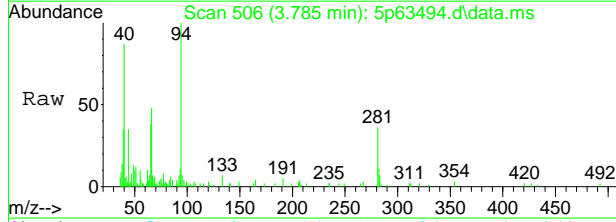


9.1.6  
9



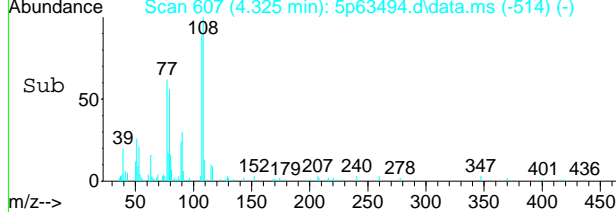
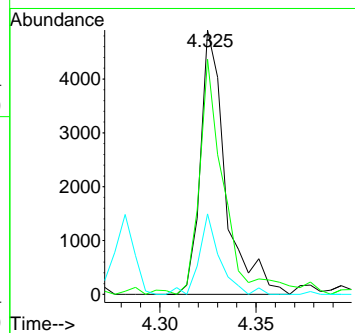
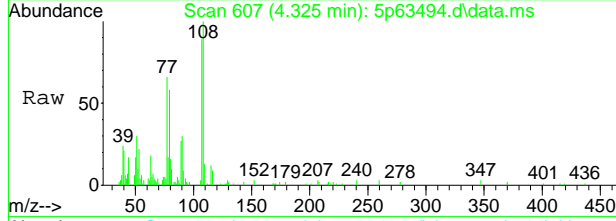
#9  
 Phenol  
 Concen: 0.62 ppm  
 RT: 3.785 min Scan# 506  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

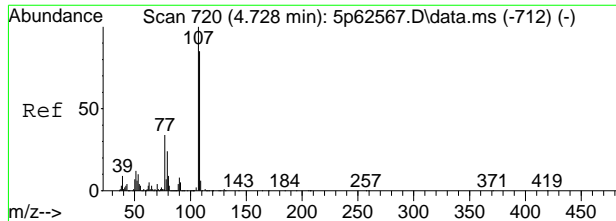
Tgt Ion	Ratio	Lower	Upper
94	100		
65	23.1	1.8	61.8
66	17.7	12.5	72.5



#19  
 2-Methylphenol  
 Concen: 1.17 ppm  
 RT: 4.325 min Scan# 607  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

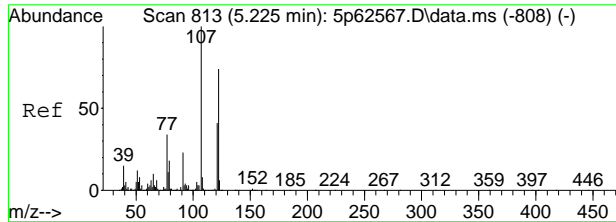
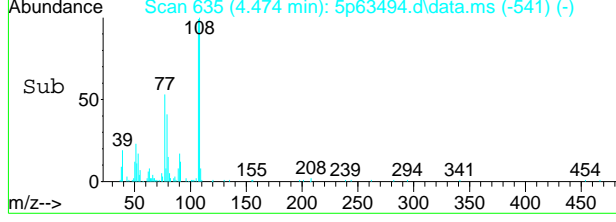
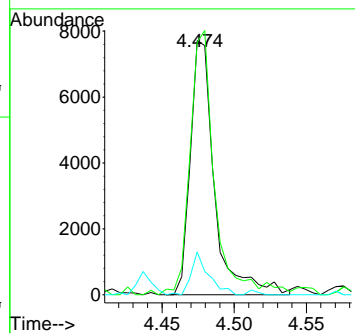
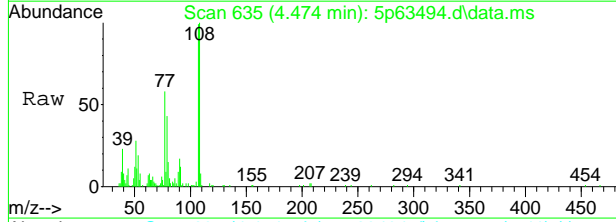
Tgt Ion	Ratio	Lower	Upper
108	100		
107	88.4	63.7	123.7
90	27.2	0.0	55.6





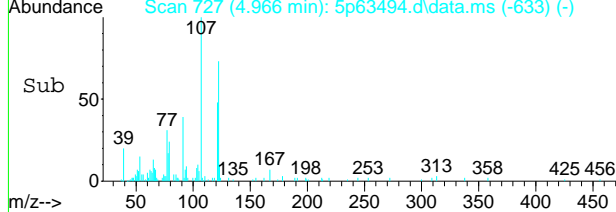
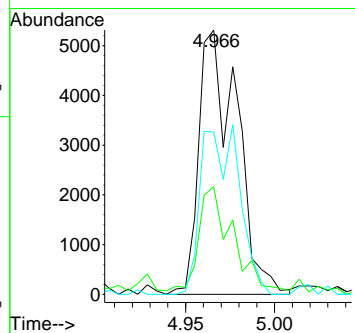
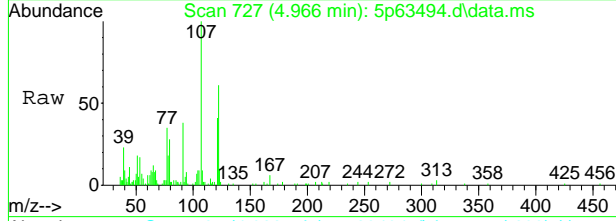
#21  
 3&4-Methylphenol  
 Concen: 2.34 ppm  
 RT: 4.474 min Scan# 635  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
108	100		
107	98.5	92.4	152.4
90	16.3	0.0	39.9



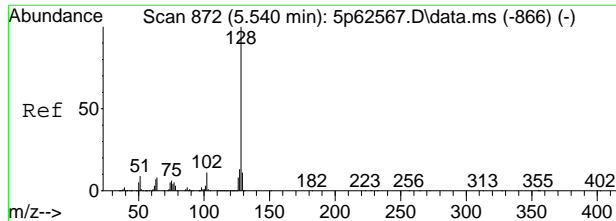
#30  
 2,4-Dimethylphenol  
 Concen: 1.82 ppm  
 RT: 4.966 min Scan# 727  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
107	100		
121	39.8	8.0	68.0
122	61.9	40.0	100.0



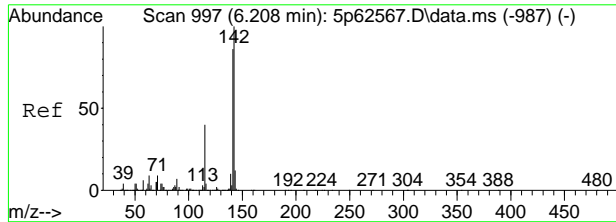
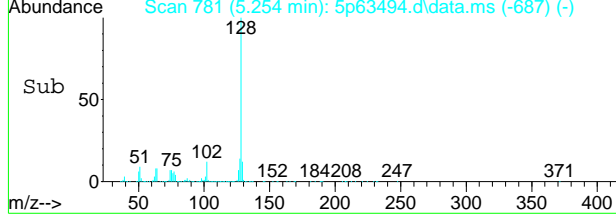
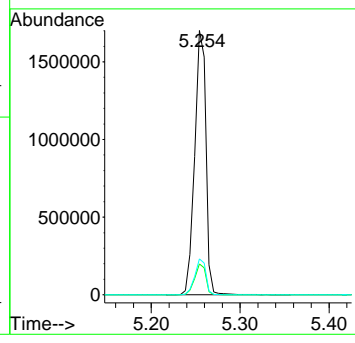
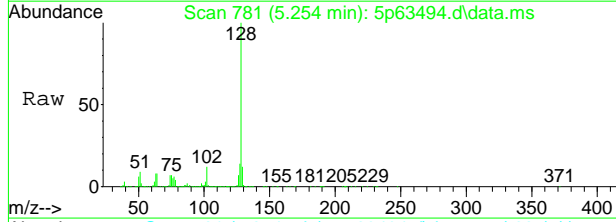
9.1.6  
9





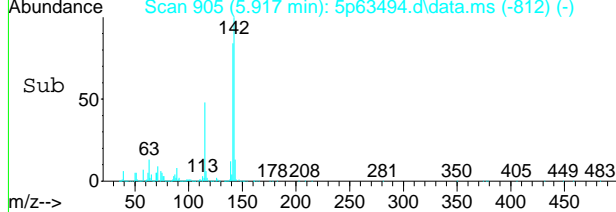
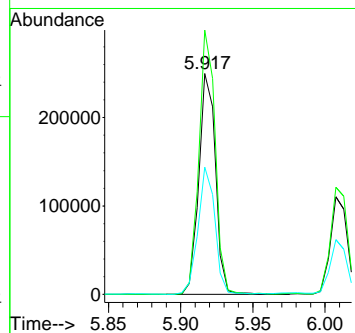
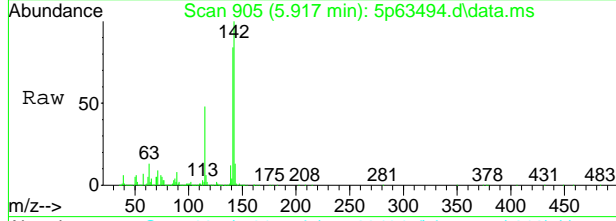
#38  
 Naphthalene  
 Concen: 153.64 ppm  
 RT: 5.254 min Scan# 781  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	40.7
127	13.6	0.0	42.6

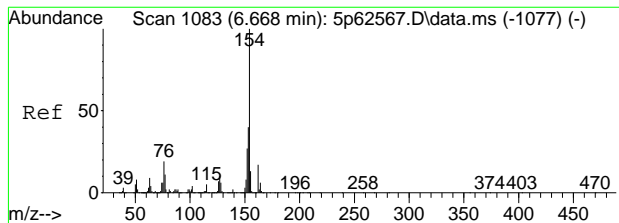


#44  
 2-Methylnaphthalene  
 Concen: 38.97 ppm  
 RT: 5.917 min Scan# 905  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
141	100		
142	119.5	91.3	151.3
115	57.3	25.7	85.7

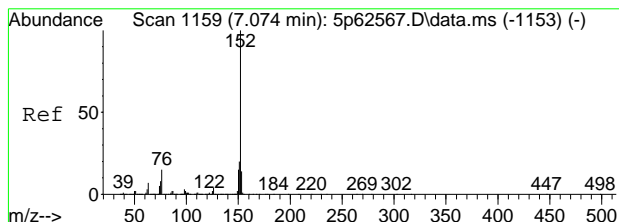
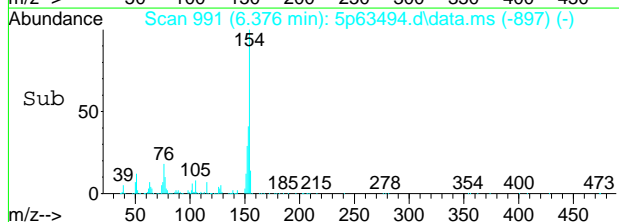
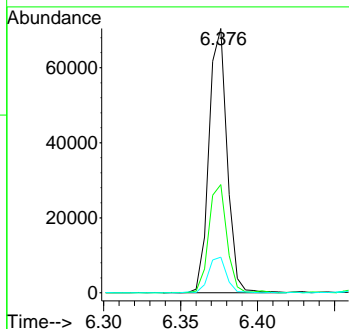
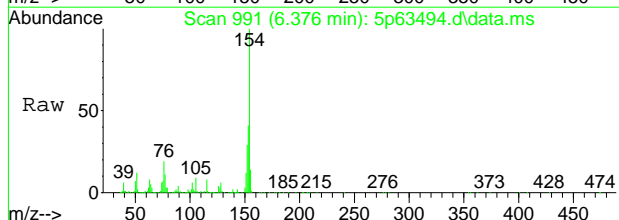


9.1.6  
 9



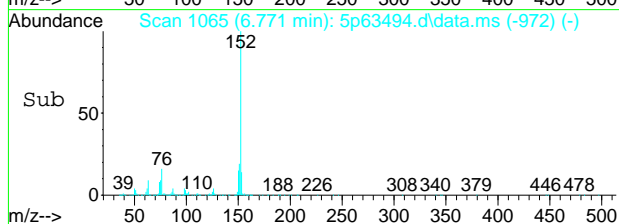
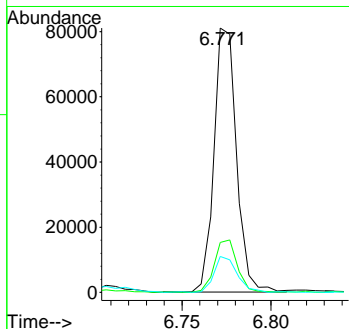
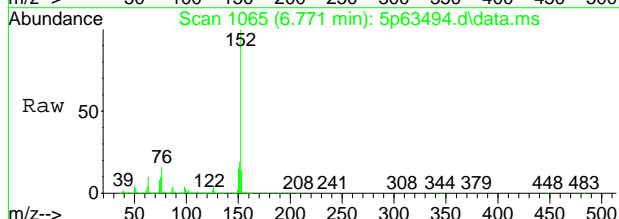
#53  
 Biphenyl  
 Concen: 7.50 ppm  
 RT: 6.376 min Scan# 991  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
154	100		
153	40.8	9.8	69.8
155	13.5	0.0	43.2



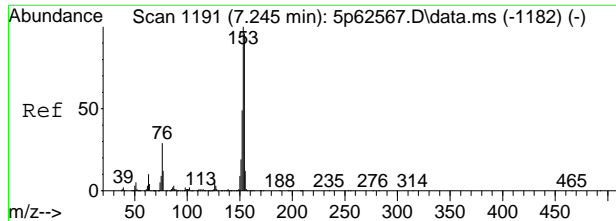
#56  
 Acenaphthylene  
 Concen: 7.39 ppm  
 RT: 6.771 min Scan# 1065  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
152	100		
151	18.8	0.0	50.5
153	13.5	0.0	43.9



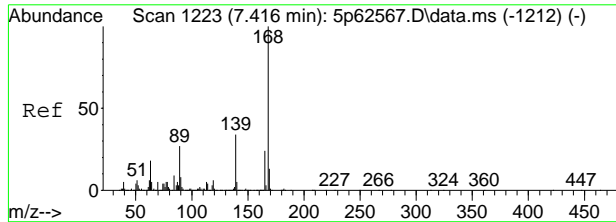
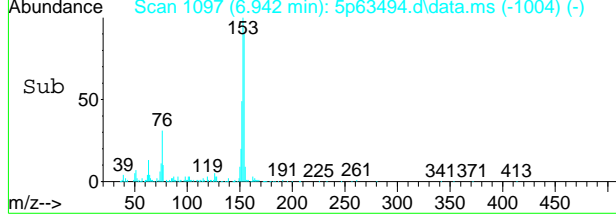
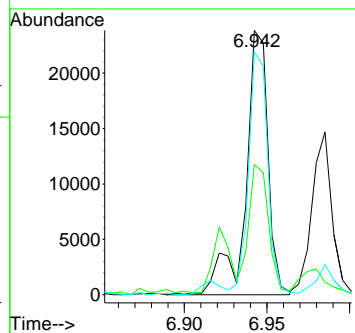
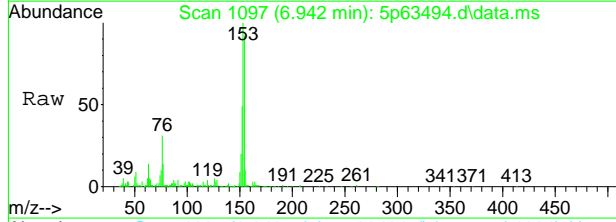
9.16  
**9**





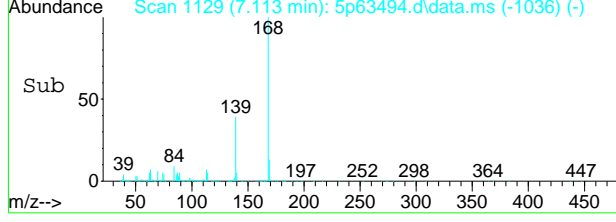
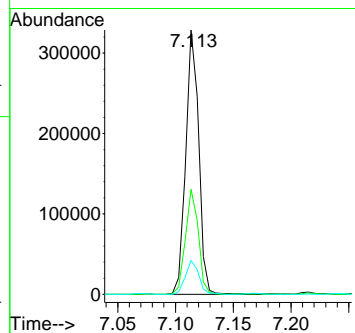
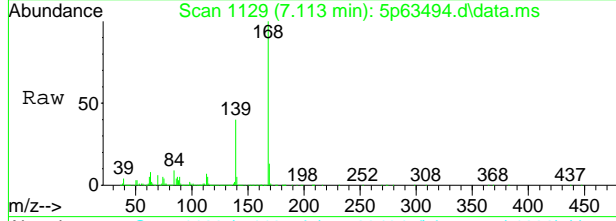
#59  
 Acenaphthene  
 Concen: 3.88 ppm  
 RT: 6.942 min Scan# 1097  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Resp	Lower	Upper
153	22738		
152	47.9	20.1	80.1
154	91.7	63.1	123.1

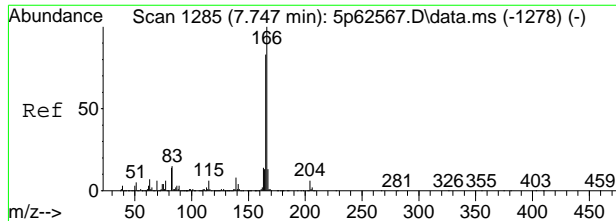


#62  
 Dibenzofuran  
 Concen: 30.82 ppm  
 RT: 7.113 min Scan# 1129  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Resp	Lower	Upper
168	258277		
169	12.8	0.0	43.7
139	39.7	22.9	82.9

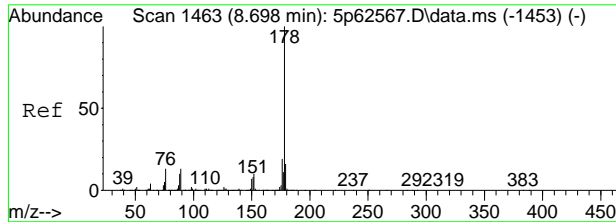
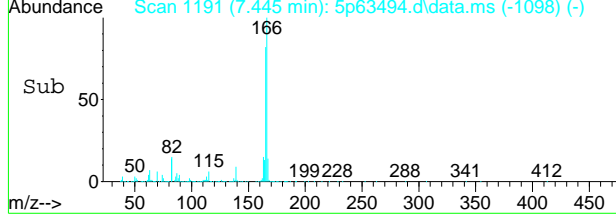
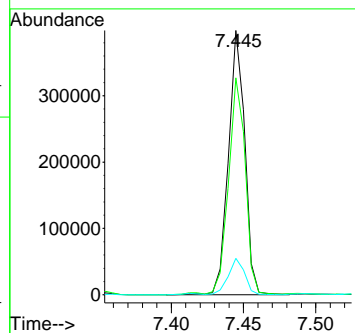
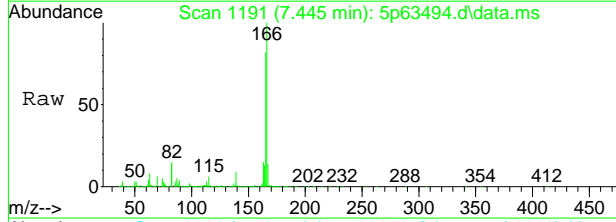


9.1.6  
 9



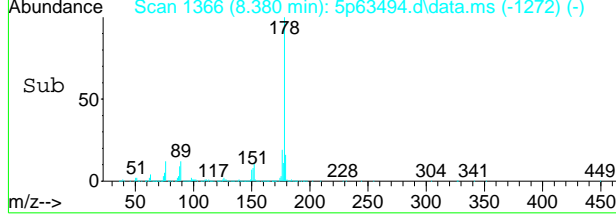
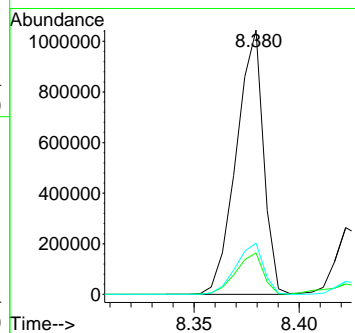
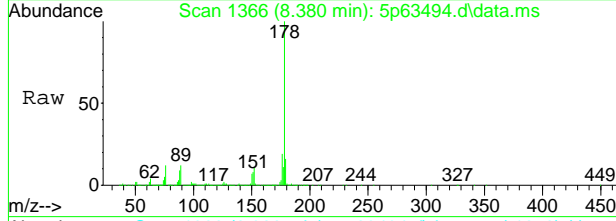
#66  
 Fluorene  
 Concen: 46.93 ppm  
 RT: 7.445 min Scan# 1191  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

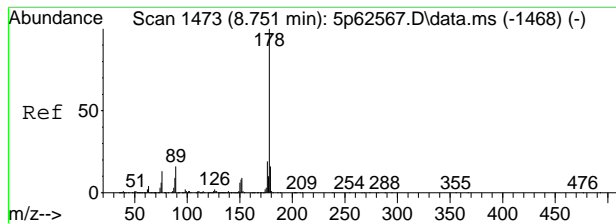
Tgt Ion	Resp	Lower	Upper
166	313828		
165	82.0	57.0	117.0
167	13.7	0.0	43.3



#77  
 Phenanthrene  
 Concen: 100.78 ppm  
 RT: 8.380 min Scan# 1366  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

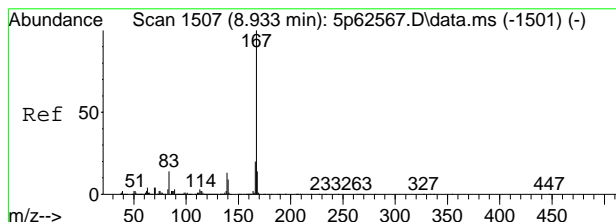
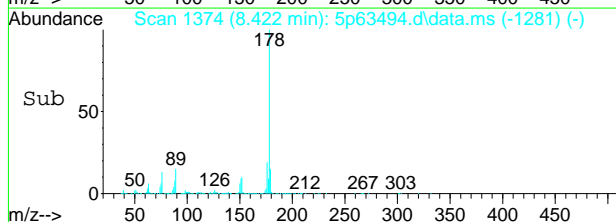
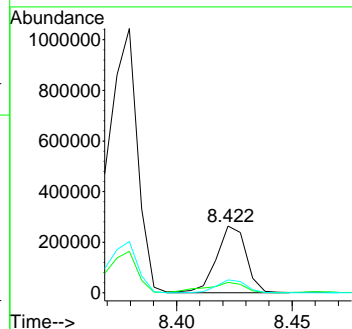
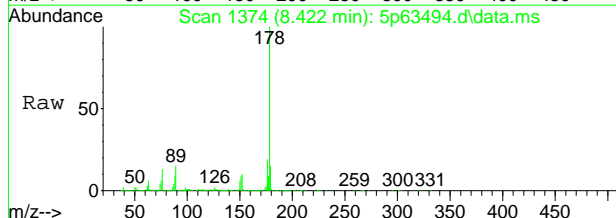
Tgt Ion	Resp	Lower	Upper
178	939523		
179	15.6	0.0	45.3
176	19.4	0.0	50.3





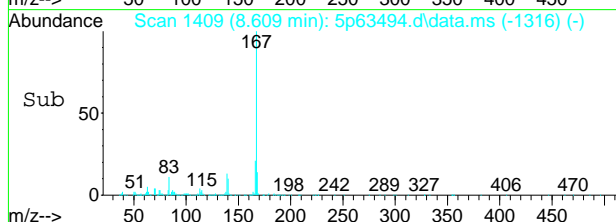
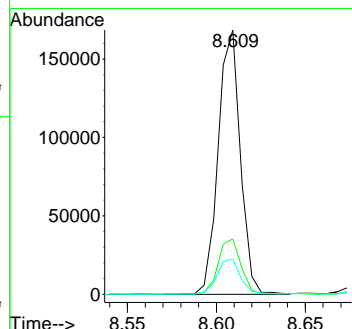
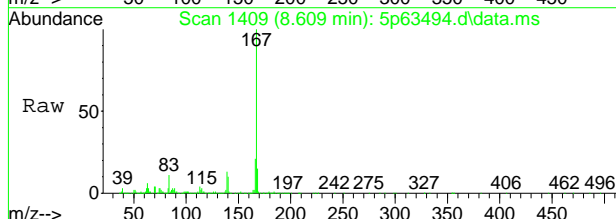
#78  
 Anthracene  
 Concen: 24.34 ppm  
 RT: 8.422 min Scan# 1374  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

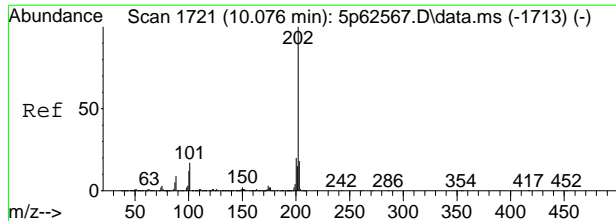
Tgt Ion	Resp	Lower	Upper
178	236628		
178	100		
179	15.1	0.0	45.5
176	19.5	0.0	48.8



#79  
 Carbazole  
 Concen: 14.39 ppm  
 RT: 8.609 min Scan# 1409  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

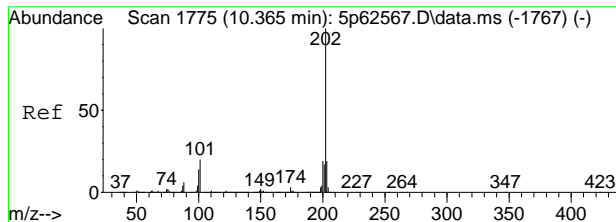
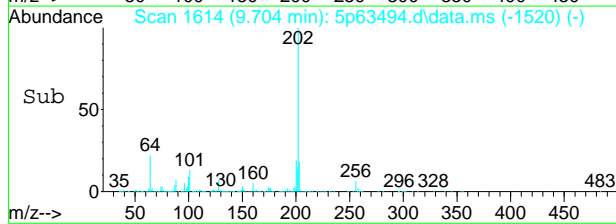
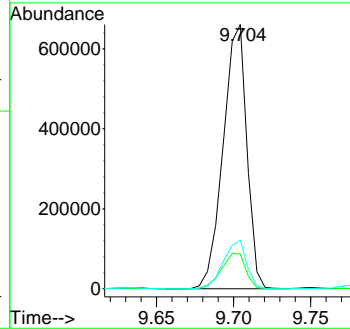
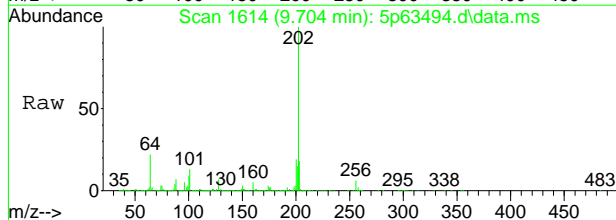
Tgt Ion	Resp	Lower	Upper
167	145527		
167	100		
166	20.8	0.0	51.1
139	13.2	0.0	43.2





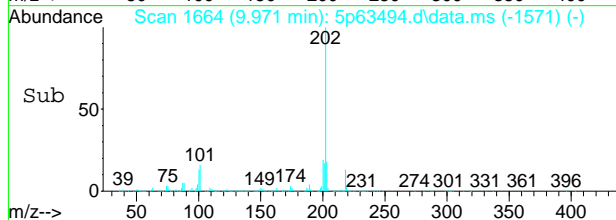
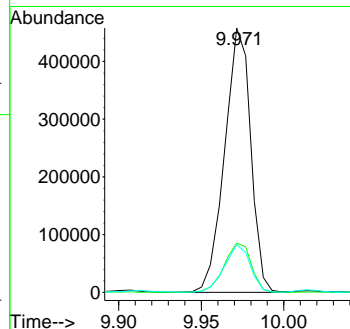
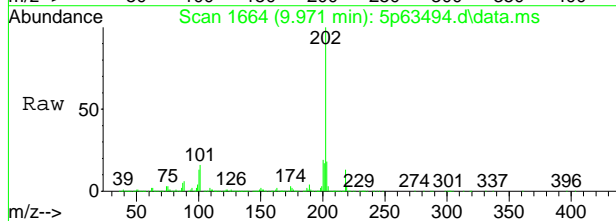
#81  
 Fluoranthene  
 Concen: 59.84 ppm  
 RT: 9.704 min Scan# 1614  
 Delta R.T. 0.000 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
202	100		
101	13.1	0.0	42.7
203	18.3	0.0	48.4

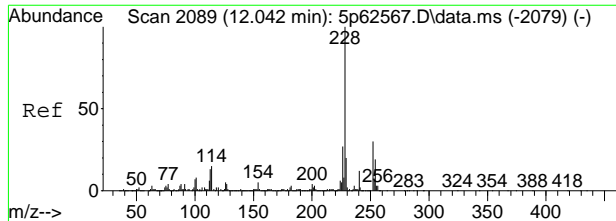


#84  
 Pyrene  
 Concen: 42.69 ppm  
 RT: 9.971 min Scan# 1664  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
202	100		
200	18.6	0.0	48.7
203	17.8	0.0	48.4

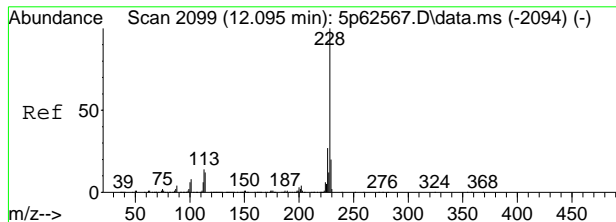
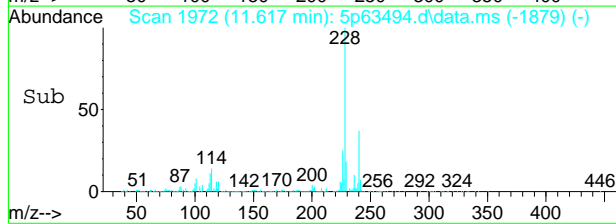
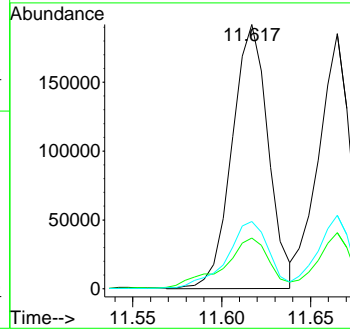
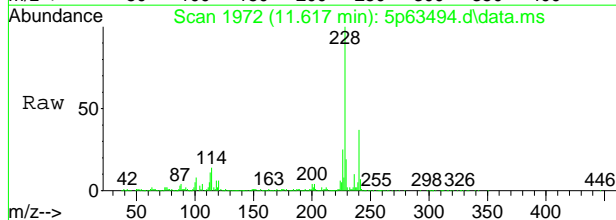


9.16  
**9**



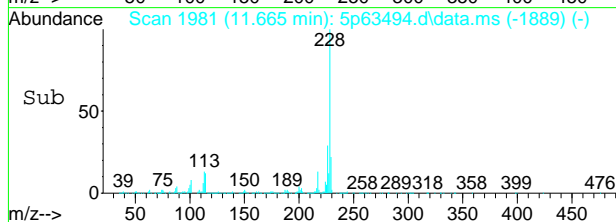
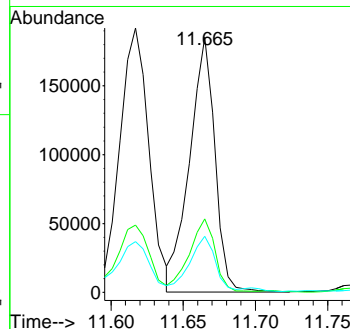
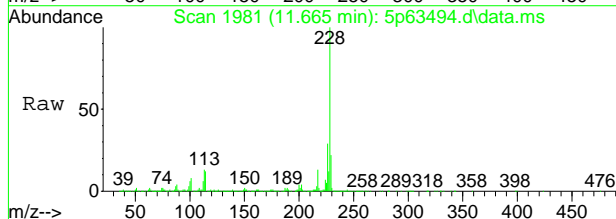
#87  
 Benzo[a]anthracene  
 Concen: 25.37 ppm  
 RT: 11.617 min Scan# 1972  
 Delta R.T. -0.005 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

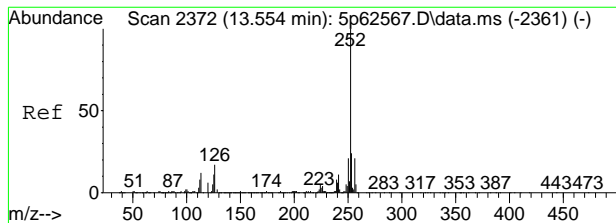
Tgt Ion	Ratio	Lower	Upper
228	100		
229	18.5	0.0	49.4
226	25.2	0.0	56.7



#89  
 Chrysene  
 Concen: 22.45 ppm  
 RT: 11.665 min Scan# 1981  
 Delta R.T. -0.011 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

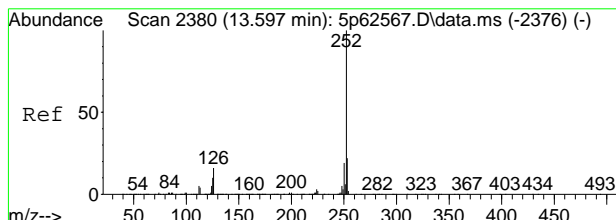
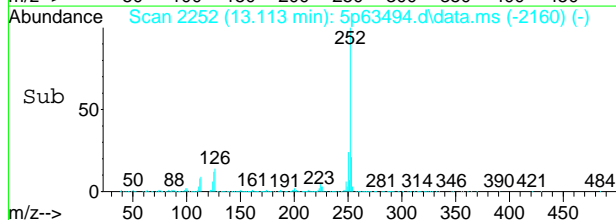
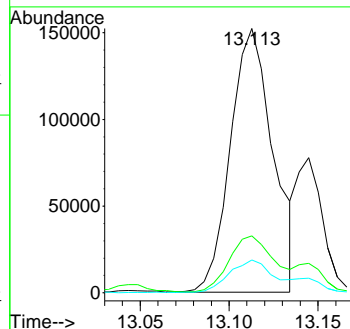
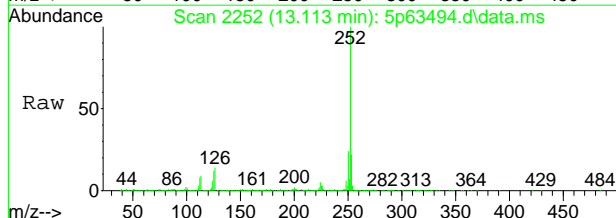
Tgt Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	59.6
229	21.5	0.0	50.2





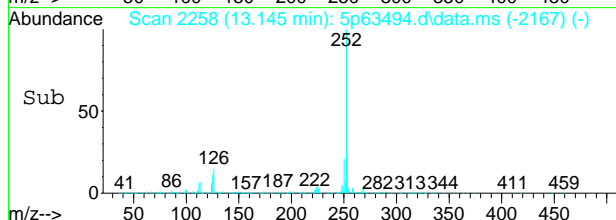
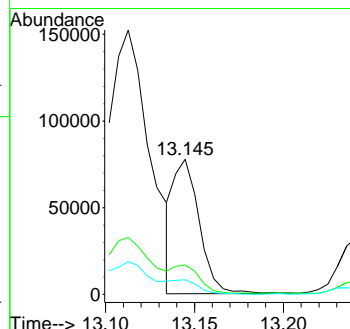
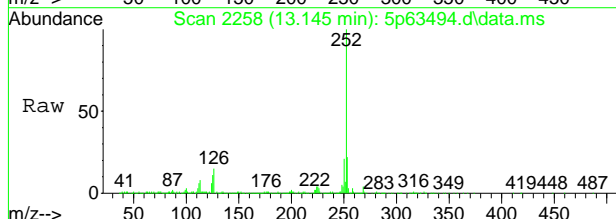
#93  
 Benzo[b]fluoranthene  
 Concen: 21.86 ppm  
 RT: 13.113 min Scan# 2252  
 Delta R.T. -0.011 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
252	100		
253	20.2	0.0	52.7
125	12.0	0.0	40.6

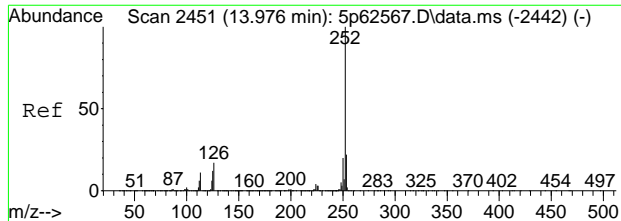


#94  
 Benzo[k]fluoranthene  
 Concen: 7.74 ppm  
 RT: 13.145 min Scan# 2258  
 Delta R.T. -0.016 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
252	100		
253	19.6	0.0	52.2
125	9.1	0.0	39.7

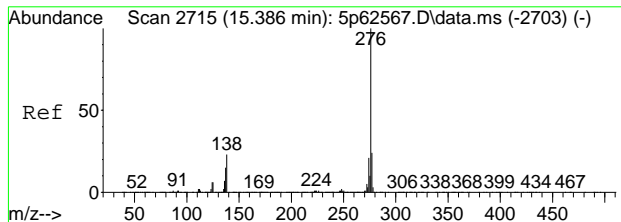
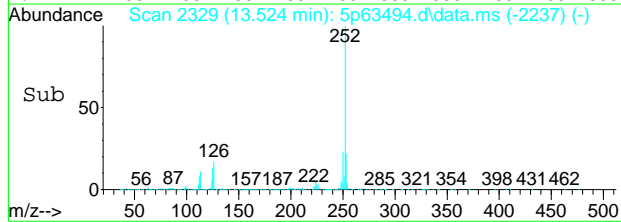
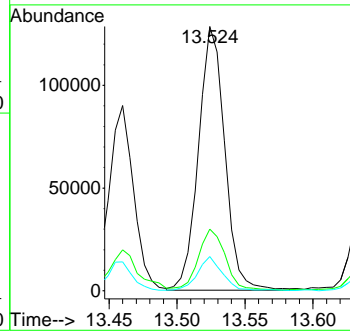
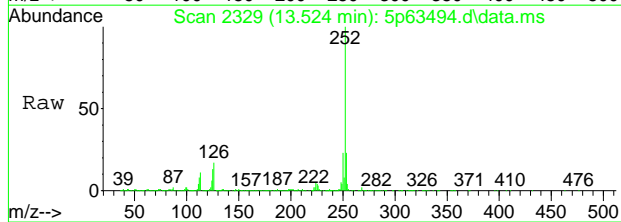


9.1.6  
 9



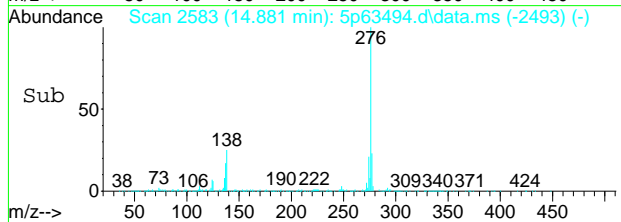
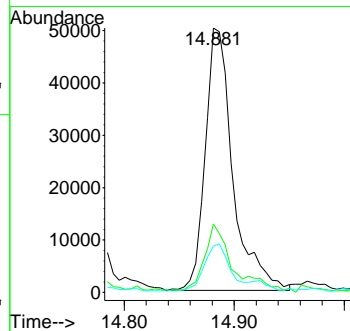
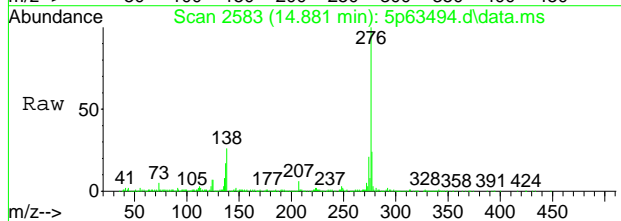
#95  
 Benzo[a]pyrene  
 Concen: 16.50 ppm  
 RT: 13.524 min Scan# 2329  
 Delta R.T. -0.011 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.8
125	12.8	0.0	42.0

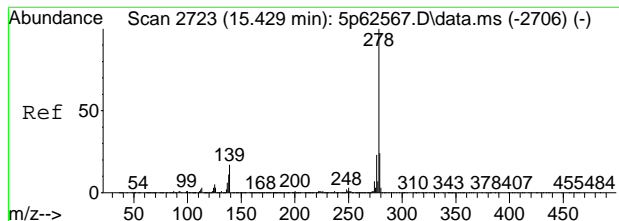


#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 9.13 ppm  
 RT: 14.881 min Scan# 2583  
 Delta R.T. -0.021 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
276	100		
138	25.4	0.0	47.8
137	16.5	0.0	42.9

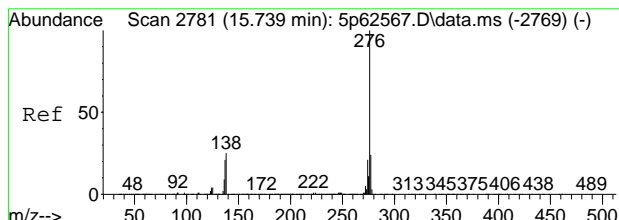
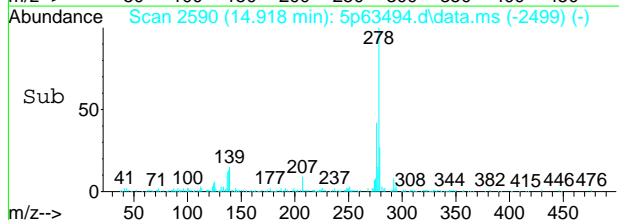
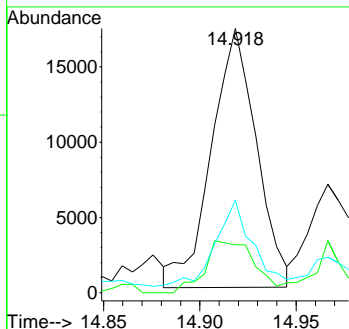
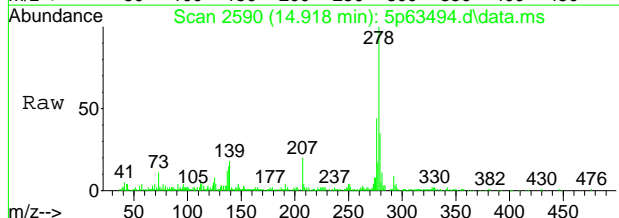


9.16  
**9**



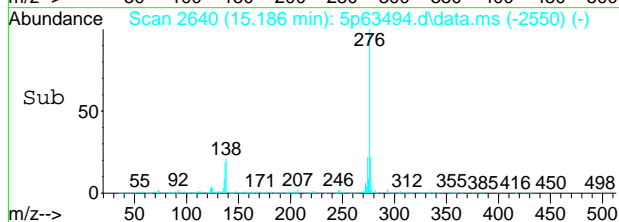
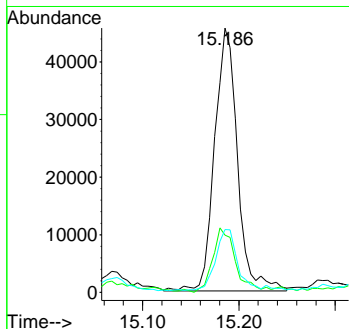
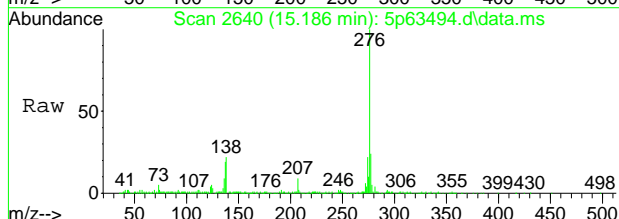
#98  
 Dibenz[a,h]anthracene  
 Concen: 2.87 ppm  
 RT: 14.918 min Scan# 2590  
 Delta R.T. -0.016 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
278	100		
139	18.0	0.0	47.1
279	34.5	0.0	53.0



#100  
 Benzo[g,h,i]perylene  
 Concen: 7.78 ppm  
 RT: 15.186 min Scan# 2640  
 Delta R.T. -0.021 min  
 Lab File: 5p63494.d  
 Acq: 2 Oct 2019 1:10 am

Tgt Ion	Ratio	Lower	Upper
276	100		
138	20.9	0.0	52.7
277	23.2	0.0	54.2



9.1.6  
**9**



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 13:17:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.277	152	102029	40.00	ppm	0.00
24) Naphthalene-d8	5.468	136	395543	40.00	ppm	0.00
47) Acenaphthene-d10	7.161	164	223715	40.00	ppm	0.00
69) Phenanthrene-d10	8.614	188	442086	40.00	ppm	0.00
83) Chrysene-d12	11.985	240	408798	40.00	ppm	-0.01
91) Perylene-d12	13.989	264	474473	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.277	152	102029	40.00	ppm	0.00
103) Acenaphthene-d10a	7.161	164	223715	40.00	ppm	0.00
105) Chrysene-d12a	11.985	240	408798	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.614	188	442086	40.00	ppm	0.00
110) Naphthalene-d8a	5.468	136	395543	40.00	ppm	0.00
112) Chrysene-d12b	11.985	240	408901	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.277	152	102029	40.00	ppm	0.00
116) Chrysene-d12c	11.985	240	408798	40.00	ppm	-0.01
118) Chrysene-d12d	11.985	240	408901	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.614	188	442086	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
21) 3&4-Methylphenol	4.704	108	1028	0.24	ppm	Qvalue 80
30) 2,4-Dimethylphenol	5.185	107	1152m	0.23	ppm	
38) Naphthalene	5.484	128	234278	20.58	ppm	99
44) 2-Methylnaphthalene	6.152	141	29581	4.90	ppm	92
53) Biphenyl	6.611	154	7523	0.76	ppm	93
56) Acenaphthylene	7.017	152	9718	0.78	ppm	91
59) Acenaphthene	7.188	153	3034	0.40	ppm	97
62) Dibenzofuran	7.359	168	36653	3.40	ppm	93
66) Fluorene	7.690	166	47851	5.56	ppm	100
77) Phenanthrene	8.636	178	154973	12.63	ppm	98
78) Anthracene	8.689	178	35699	2.79	ppm	96
79) Carbazole	8.876	167	21326	1.60	ppm	92
81) Fluoranthene	10.014	202	118108	7.61	ppm	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 13:17:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration

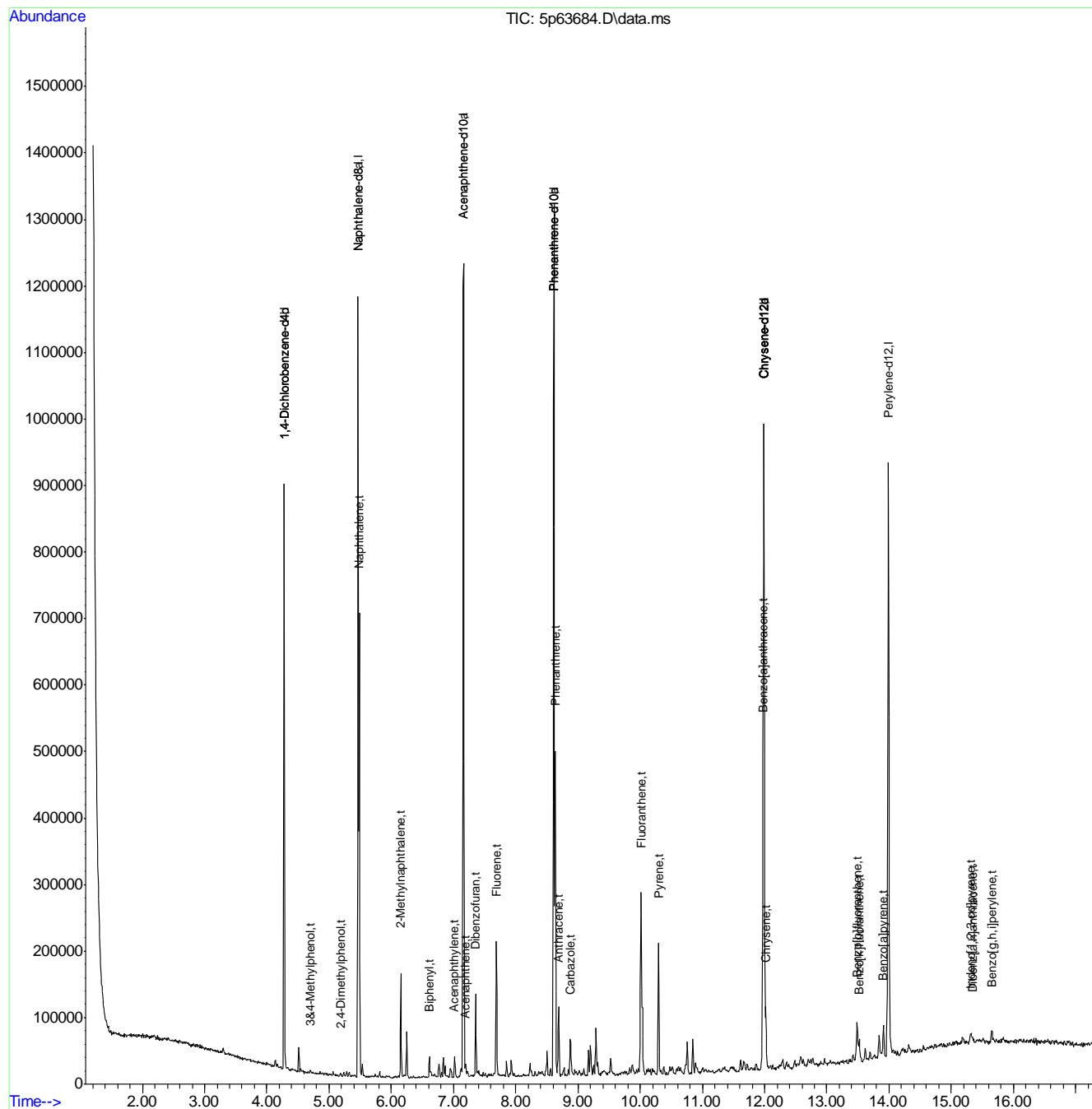
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
84) Pyrene	10.297	202	81238	4.74	ppm	98
87) Benzo[a]anthracene	11.975	228	42636	2.73	ppm	96
89) Chrysene	12.018	228	34602	2.36	ppm	94
93) Benzo[b]fluoranthene	13.487	252	35898m	2.20	ppm	
94) Benzo[k]fluoranthene	13.524	252	13619m	0.95	ppm	
95) Benzo[a]pyrene	13.909	252	26635	1.82	ppm	91
96) Indeno[1,2,3-cd]pyrene	15.308	276	12824	0.95	ppm	87
98) Dibenz[a,h]anthracene	15.340	278	4730	0.34	ppm	85
100) Benzo[g,h,i]perylene	15.650	276	11070	0.81	ppm	89

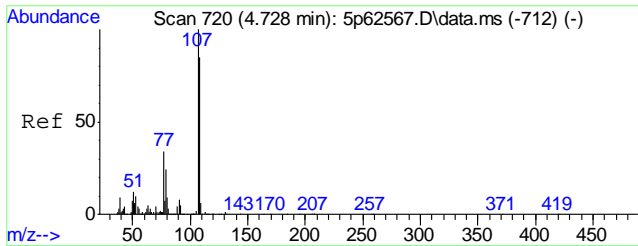
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

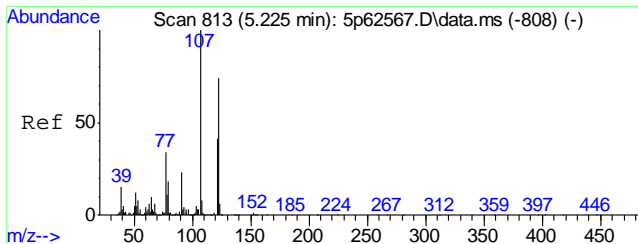
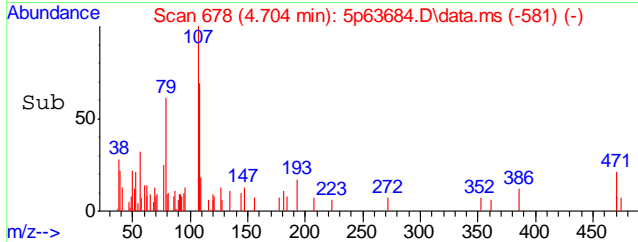
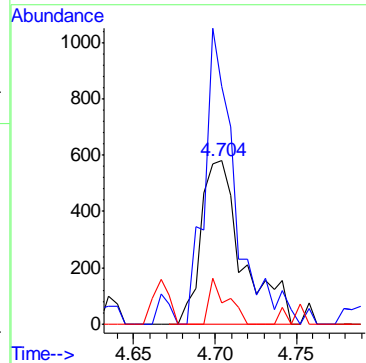
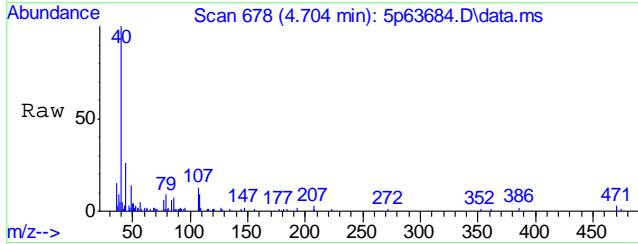
Quant Time: Oct 07 13:17:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration





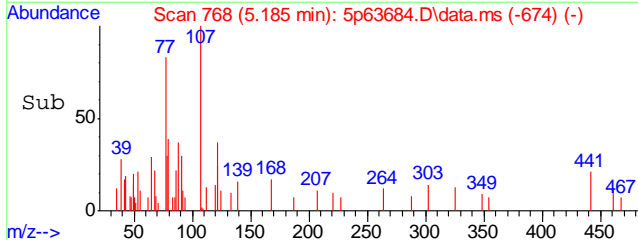
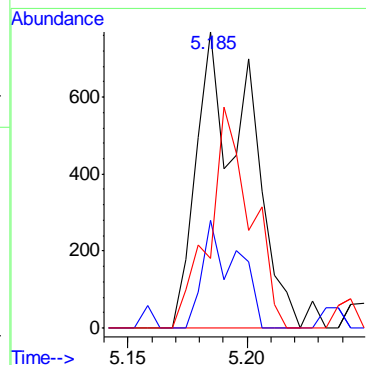
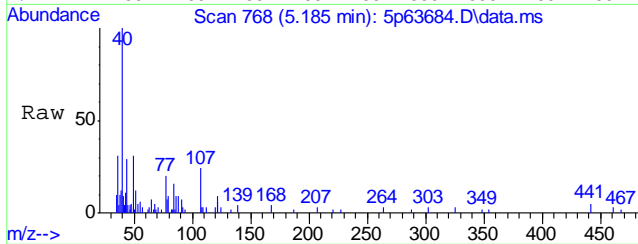
#21  
 3&4-Methylphenol  
 Concen: 0.24 ppm  
 RT: 4.704 min Scan# 678  
 Delta R.T. 0.016 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

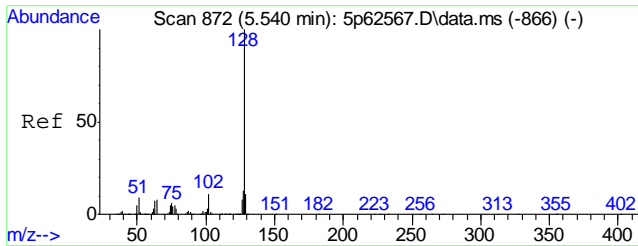
Tgt Ion	Ratio	Lower	Upper
108	100		
107	139.4	87.9	147.9
90	0.0	0.0	39.4



#30  
 2,4-Dimethylphenol  
 Concen: 0.23 ppm m  
 RT: 5.185 min Scan# 768  
 Delta R.T. 0.000 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

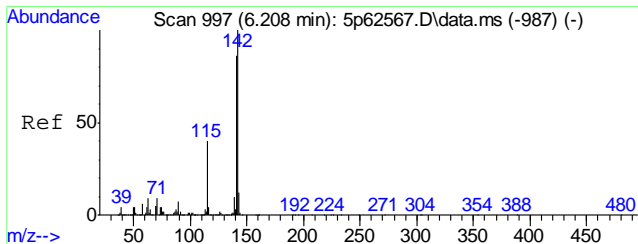
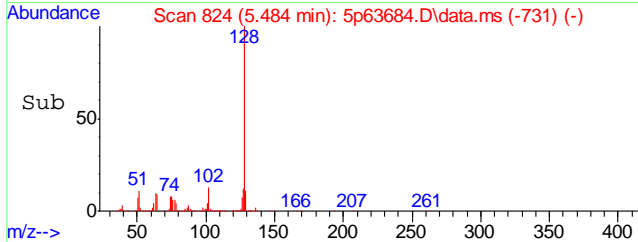
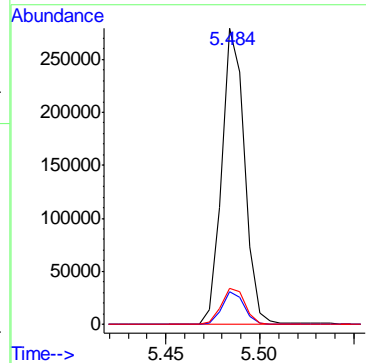
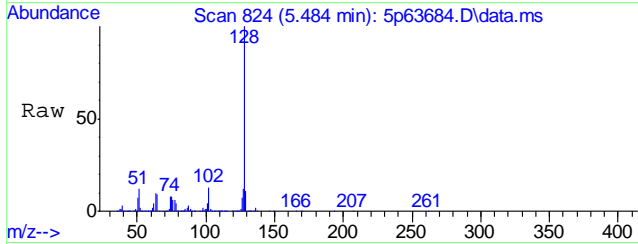
Tgt Ion	Ratio	Lower	Upper
107	100		
121	36.5	11.2	71.2
122	23.7	41.7	101.7#





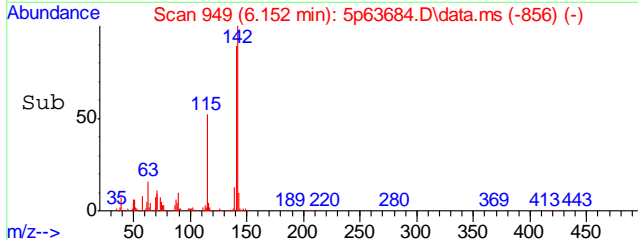
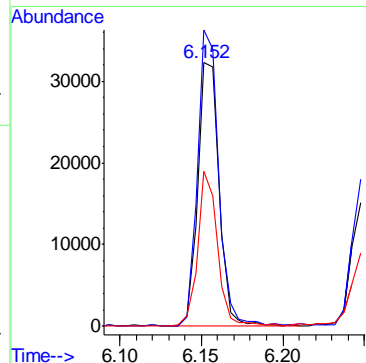
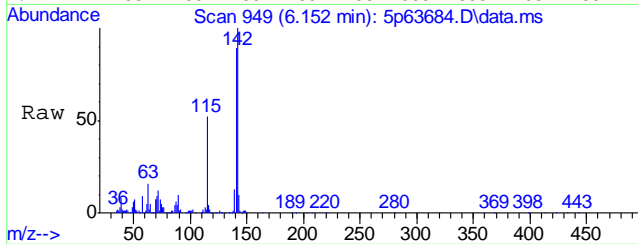
#38  
 Naphthalene  
 Concen: 20.58 ppm  
 RT: 5.484 min Scan# 824  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

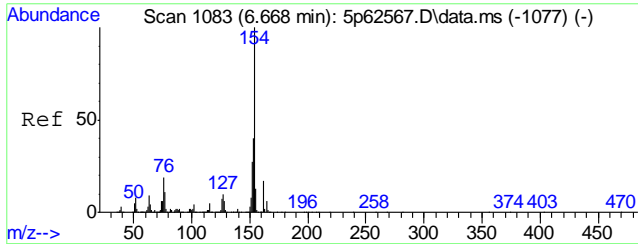
Tgt Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	40.6
127	12.1	0.0	42.6



#44  
 2-Methylnaphthalene  
 Concen: 4.90 ppm  
 RT: 6.152 min Scan# 949  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

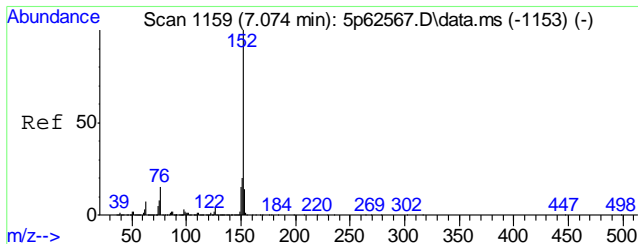
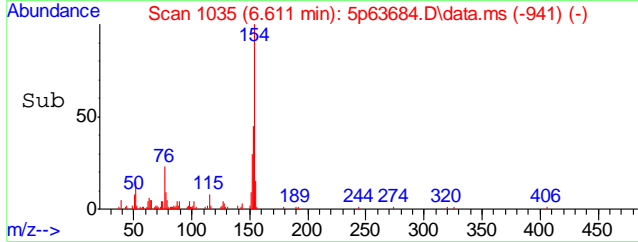
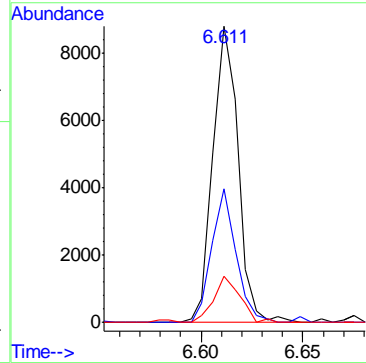
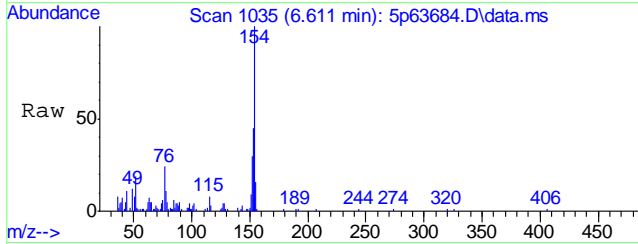
Tgt Ion	Ratio	Lower	Upper
141	100		
142	112.0	86.4	146.4
115	58.5	16.6	76.6





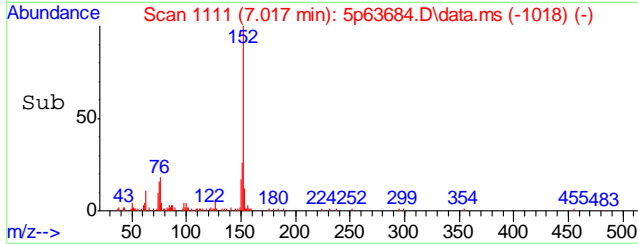
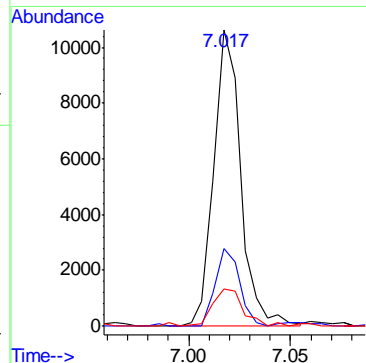
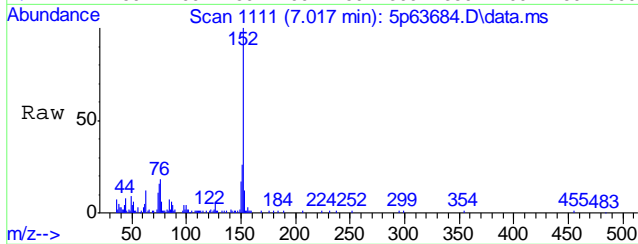
#53  
 Biphenyl  
 Concen: 0.76 ppm  
 RT: 6.611 min Scan# 1035  
 Delta R.T. 0.000 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
154	100		
153	44.1	9.6	69.6
155	15.2	0.0	42.7

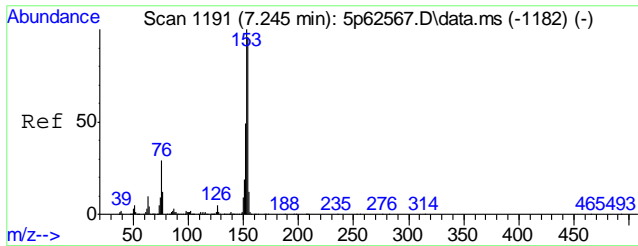


#56  
 Acenaphthylene  
 Concen: 0.78 ppm  
 RT: 7.017 min Scan# 1111  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
152	100		
151	25.5	0.0	49.8
153	11.6	0.0	43.6

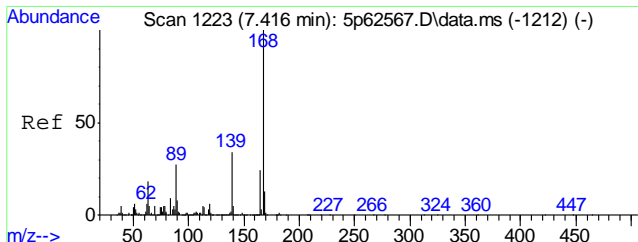
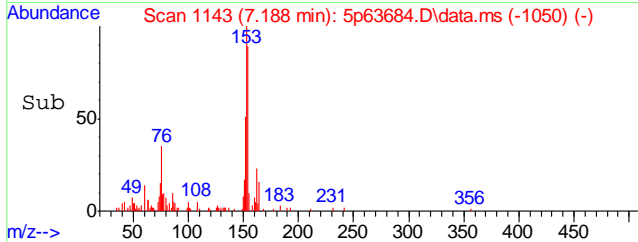
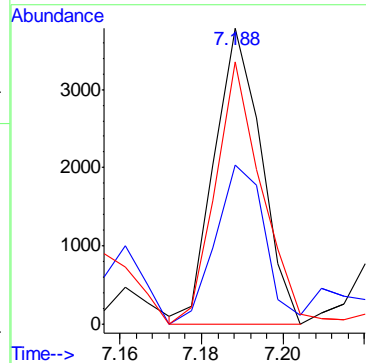
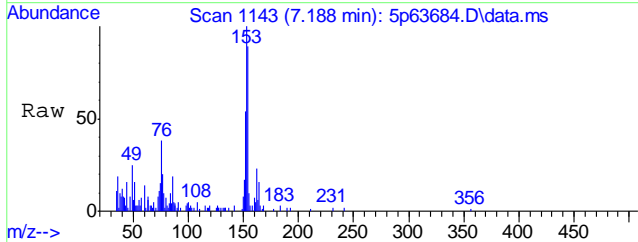


9.17  
 9



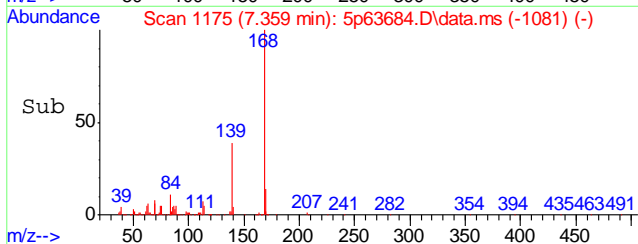
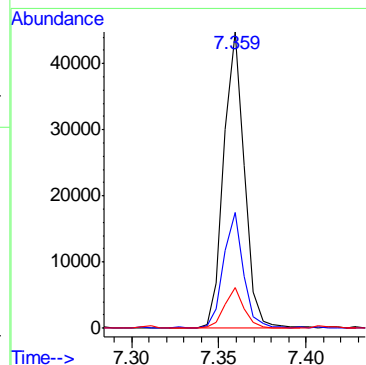
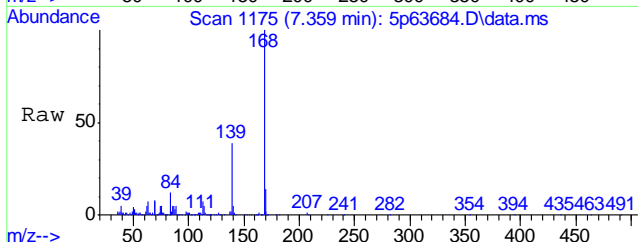
#59  
 Acenaphthene  
 Concen: 0.40 ppm  
 RT: 7.188 min Scan# 1143  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
153	3034	100	
152	53.0	19.1	79.1
154	87.9	58.9	118.9

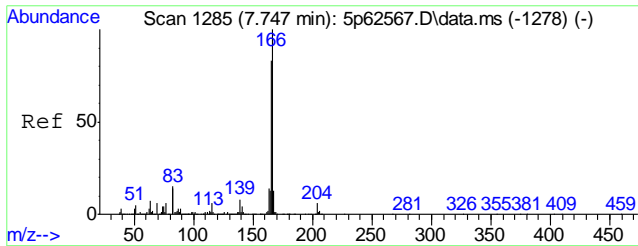


#62  
 Dibenzofuran  
 Concen: 3.40 ppm  
 RT: 7.359 min Scan# 1175  
 Delta R.T. 0.000 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
168	36653	100	
139	39.2	3.9	63.9
169	13.9	0.0	43.3

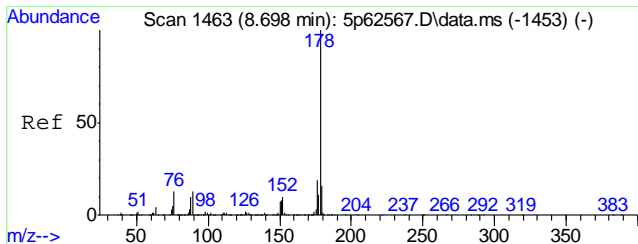
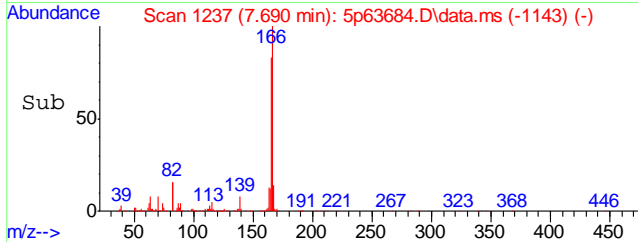
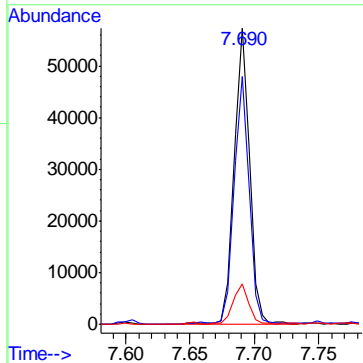
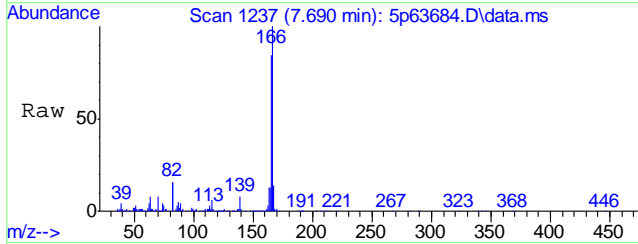


9.17  
 9



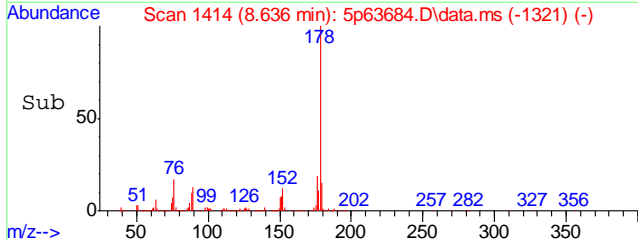
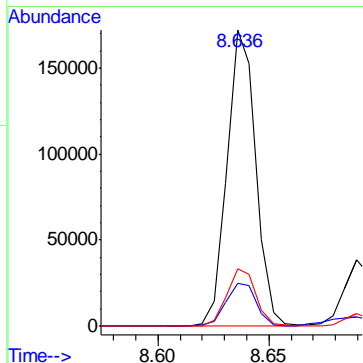
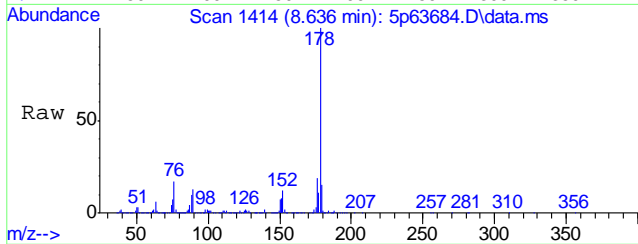
#66  
 Fluorene  
 Concen: 5.56 ppm  
 RT: 7.690 min Scan# 1237  
 Delta R.T. 0.000 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
166	47851	100	
165	83.2	53.2	113.2
167	13.6	0.0	43.0



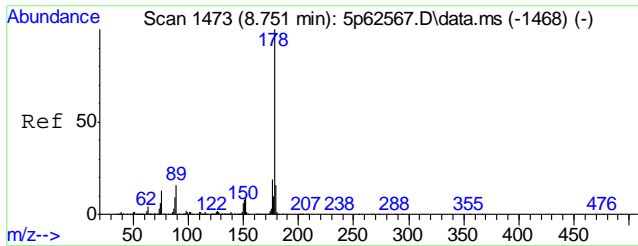
#77  
 Phenanthrene  
 Concen: 12.63 ppm  
 RT: 8.636 min Scan# 1414  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
178	154973	100	
179	14.5	0.0	45.8
176	19.4	0.0	48.7



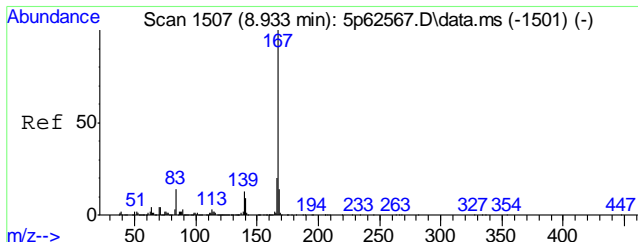
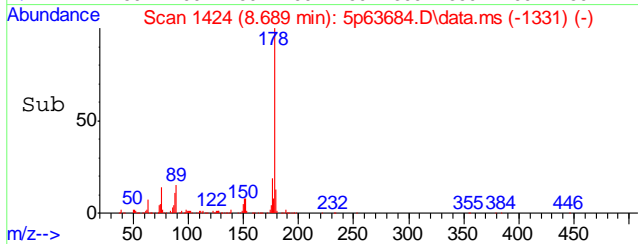
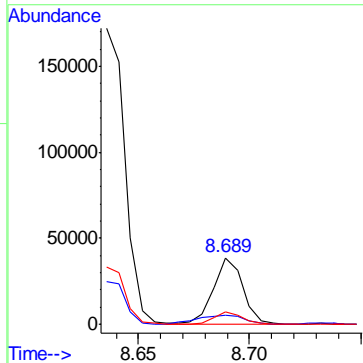
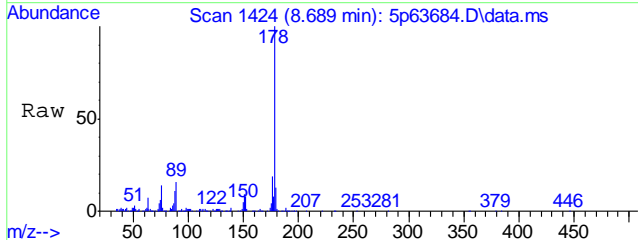
9.17  
 9





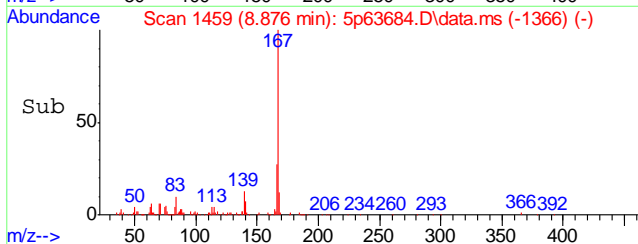
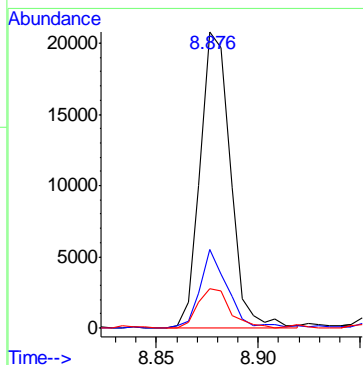
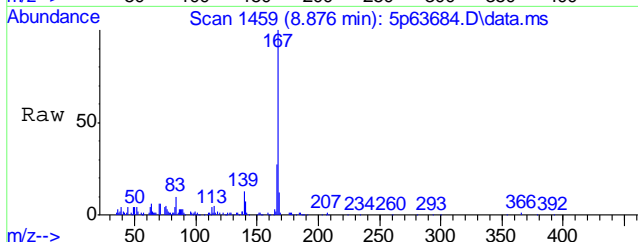
#78  
 Anthracene  
 Concen: 2.79 ppm  
 RT: 8.689 min Scan# 1424  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

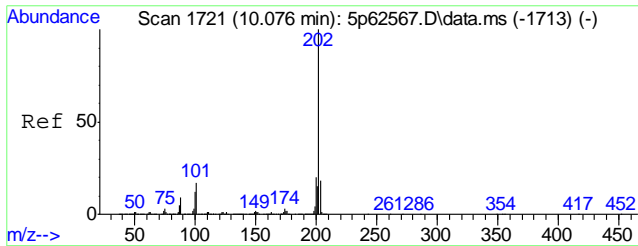
Tgt Ion	Resp	Lower	Upper
178	100		
179	12.6	0.0	46.2
176	18.6	0.0	49.1



#79  
 Carbazole  
 Concen: 1.60 ppm  
 RT: 8.876 min Scan# 1459  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

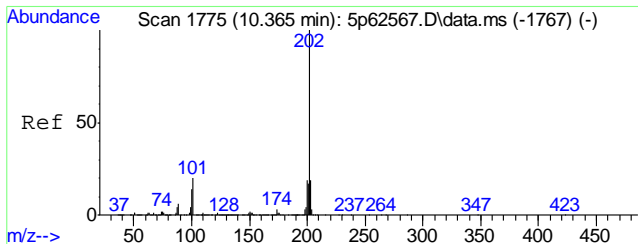
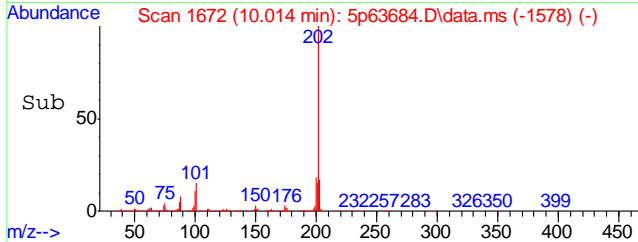
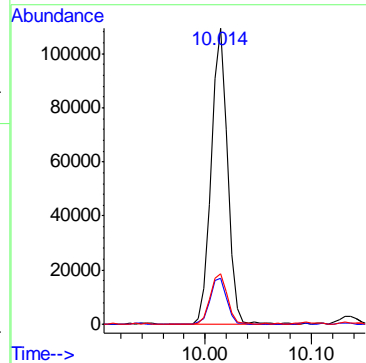
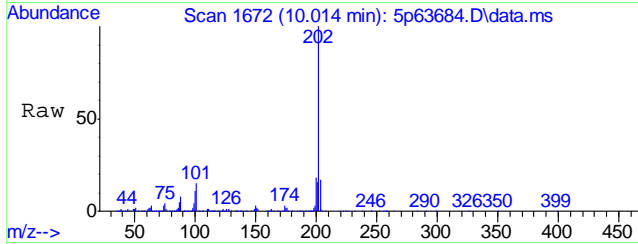
Tgt Ion	Resp	Lower	Upper
167	100		
166	26.2	0.0	50.2
139	12.6	0.0	43.0





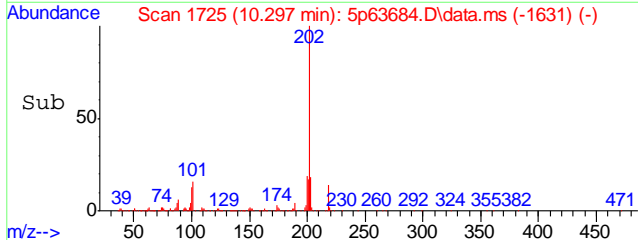
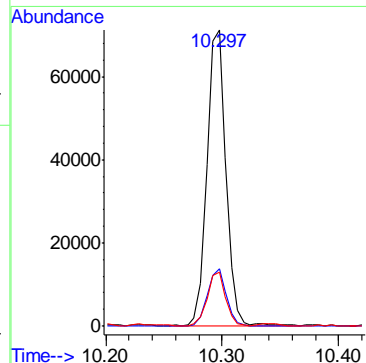
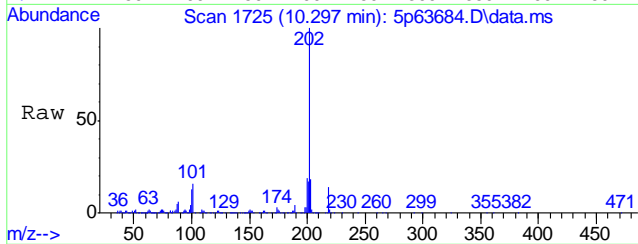
#81  
 Fluoranthene  
 Concen: 7.61 ppm  
 RT: 10.014 min Scan# 1672  
 Delta R.T. 0.000 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
202	118108		
101	15.2	0.0	47.0
203	16.9	0.0	47.8

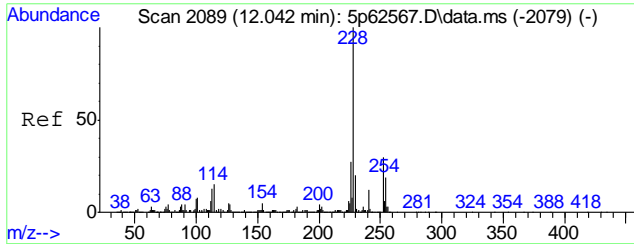


#84  
 Pyrene  
 Concen: 4.74 ppm  
 RT: 10.297 min Scan# 1725  
 Delta R.T. 0.000 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
202	81238		
200	19.2	0.0	48.7
203	17.8	0.0	48.8

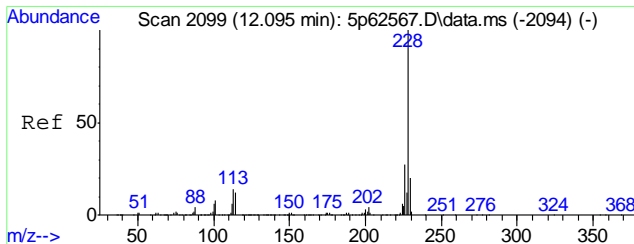
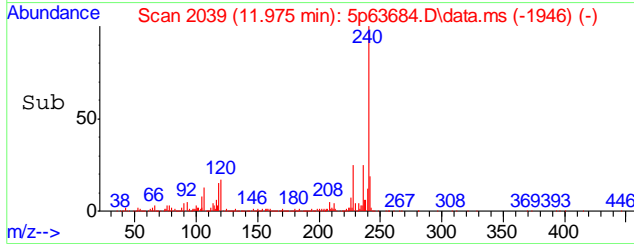
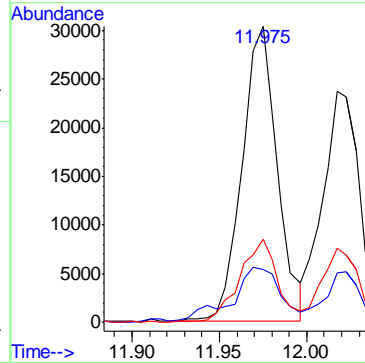
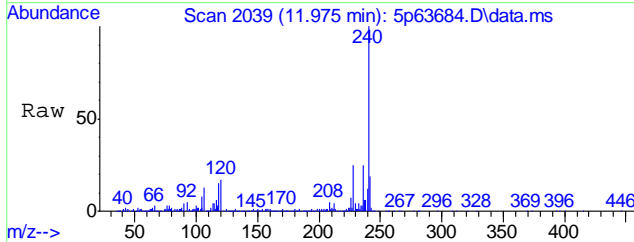


9.17  
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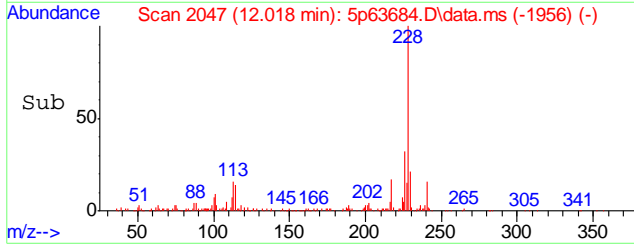
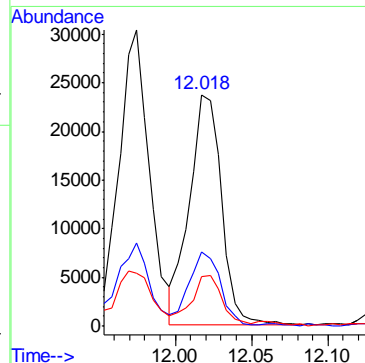
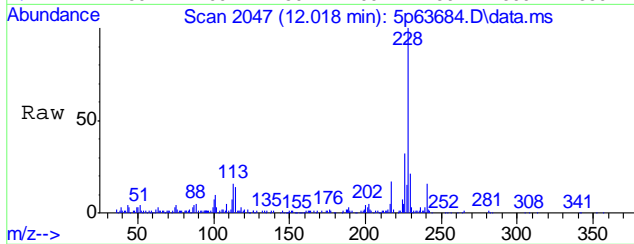
#87  
 Benzo[a]anthracene  
 Concen: 2.73 ppm  
 RT: 11.975 min Scan# 2039  
 Delta R.T. -0.005 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
228	100		
229	17.0	0.0	49.7
226	28.0	0.0	56.6

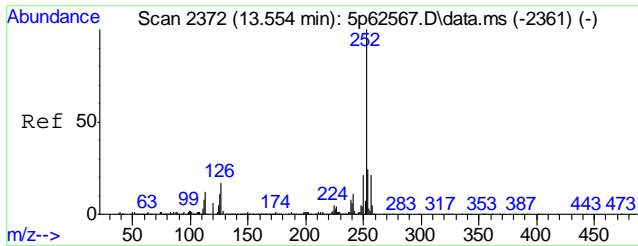


#89  
 Chrysene  
 Concen: 2.36 ppm  
 RT: 12.018 min Scan# 2047  
 Delta R.T. -0.016 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
228	100		
226	32.2	0.0	57.2
229	20.3	0.0	50.1

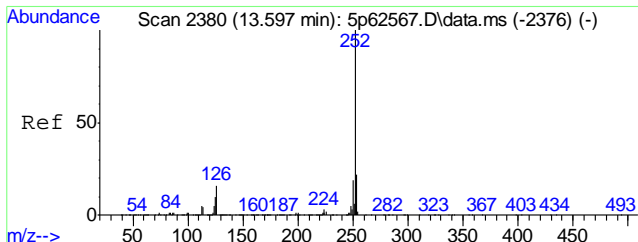
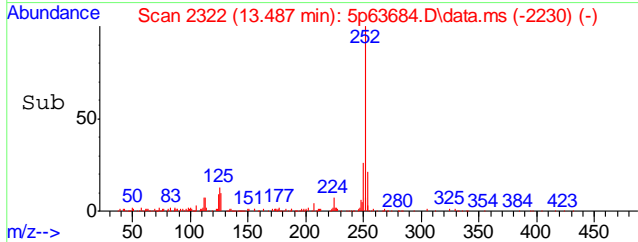
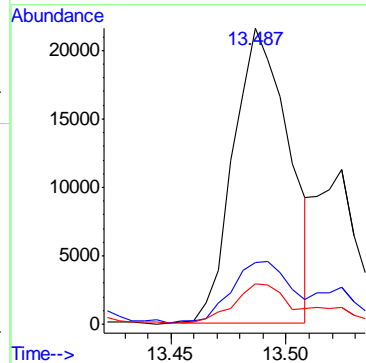
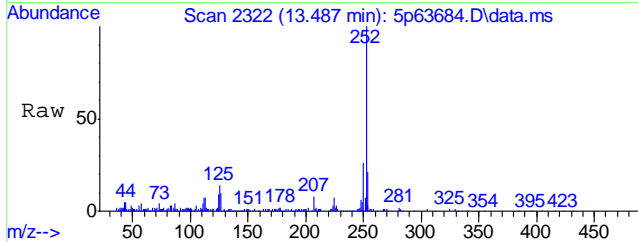


9.1.7  
 9



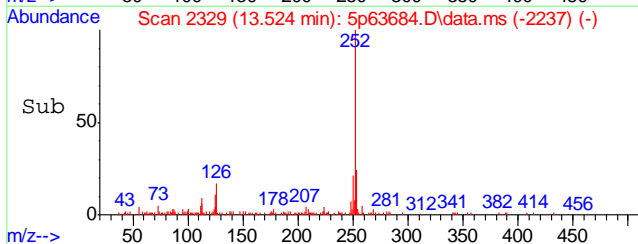
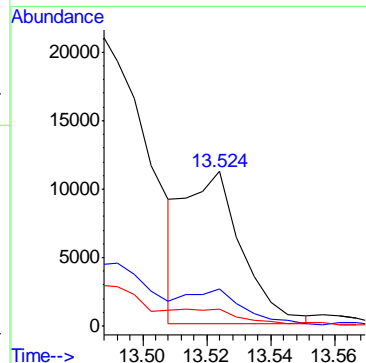
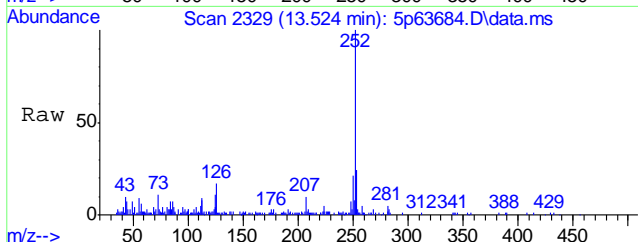
#93  
 Benzo[b]fluoranthene  
 Concen: 2.20 ppm m  
 RT: 13.487 min Scan# 2322  
 Delta R.T. -0.011 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
252	100		
253	21.0	0.0	53.8
125	13.8	0.0	40.9

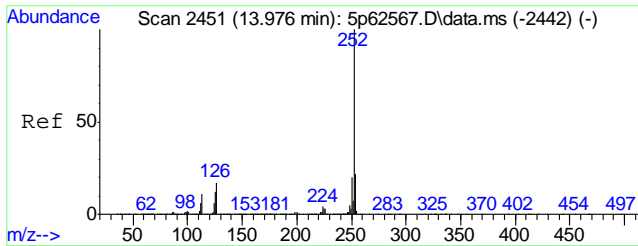


#94  
 Benzo[k]fluoranthene  
 Concen: 0.95 ppm m  
 RT: 13.524 min Scan# 2329  
 Delta R.T. -0.011 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
252	100		
253	24.3	0.0	52.1
125	10.9	0.0	40.2

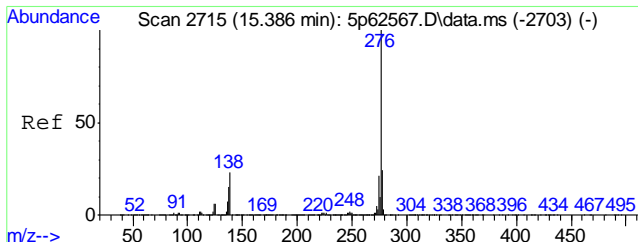
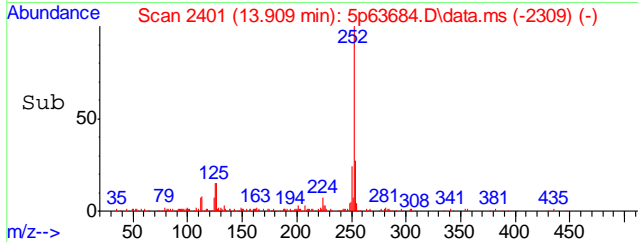
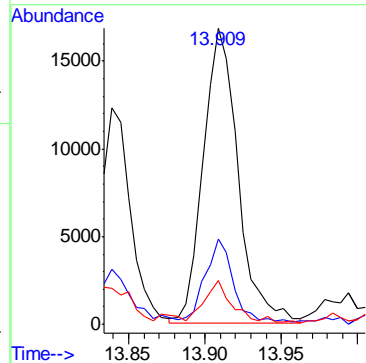
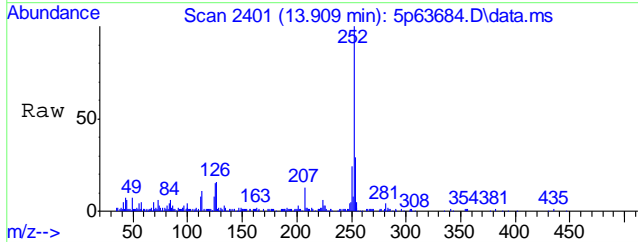


9.17  
 9



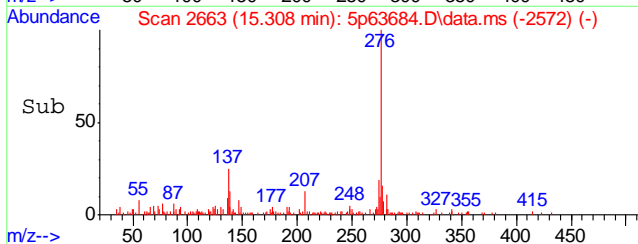
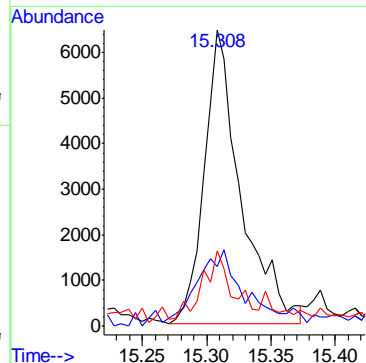
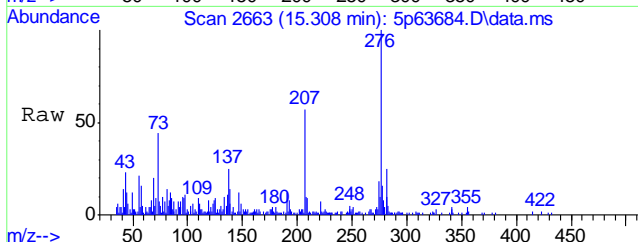
#95  
 Benzo[a]pyrene  
 Concen: 1.82 ppm  
 RT: 13.909 min Scan# 2401  
 Delta R.T. -0.011 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
252	100		
253	27.6	0.0	51.7
125	13.3	0.0	42.0

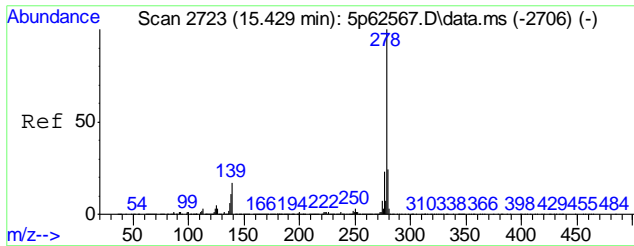


#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 0.95 ppm  
 RT: 15.308 min Scan# 2663  
 Delta R.T. -0.016 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
276	100		
138	17.3	0.0	50.9
137	22.4	0.0	44.2

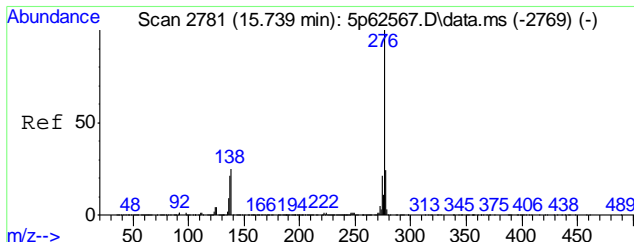
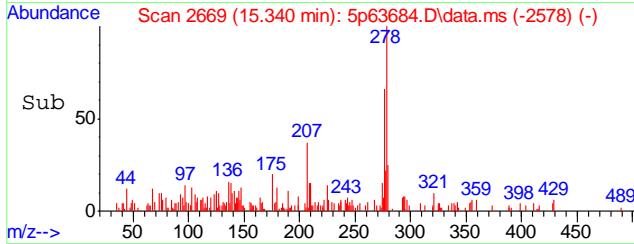
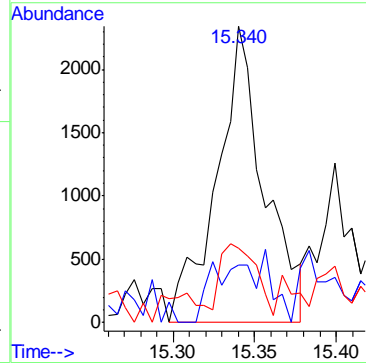
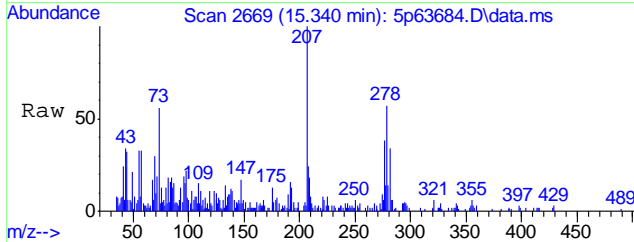


9.17  
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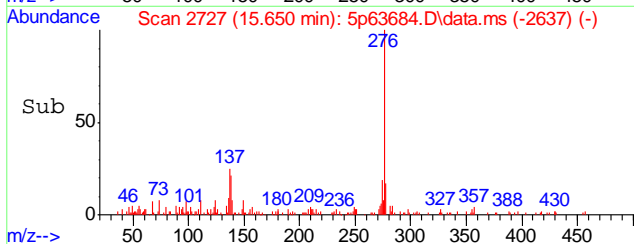
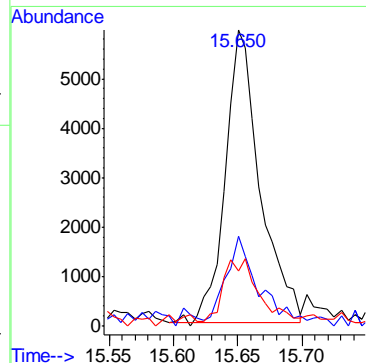
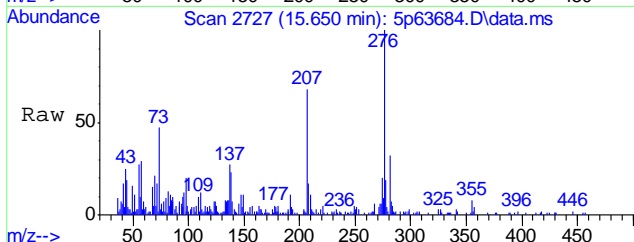
#98  
 Dibenz[a,h]anthracene  
 Concen: 0.34 ppm  
 RT: 15.340 min Scan# 2669  
 Delta R.T. -0.016 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
278	4730		
139	7.9	0.0	46.7
279	18.5	0.0	54.4



#100  
 Benzo[g,h,i]perylene  
 Concen: 0.81 ppm  
 RT: 15.650 min Scan# 2727  
 Delta R.T. -0.021 min  
 Lab File: 5p63684.D  
 Acq: 7 Oct 19 12:29 pm

Tgt Ion	Resp	Lower	Upper
276	11070		
138	27.6	0.0	54.8
277	15.8	0.0	53.6



9.17  
 9

# Manual Integration Approval Summary

Sample Number: JC95555-3                      Method: SW846 8270D  
Lab FileID: 5P63684.D                      Analyst approved: 10/07/19 13:26 Ying Li  
Injection Time: 10/07/19 12:29                      Supervisor approved: 10/07/19 15:00 Kristi Schollenberger

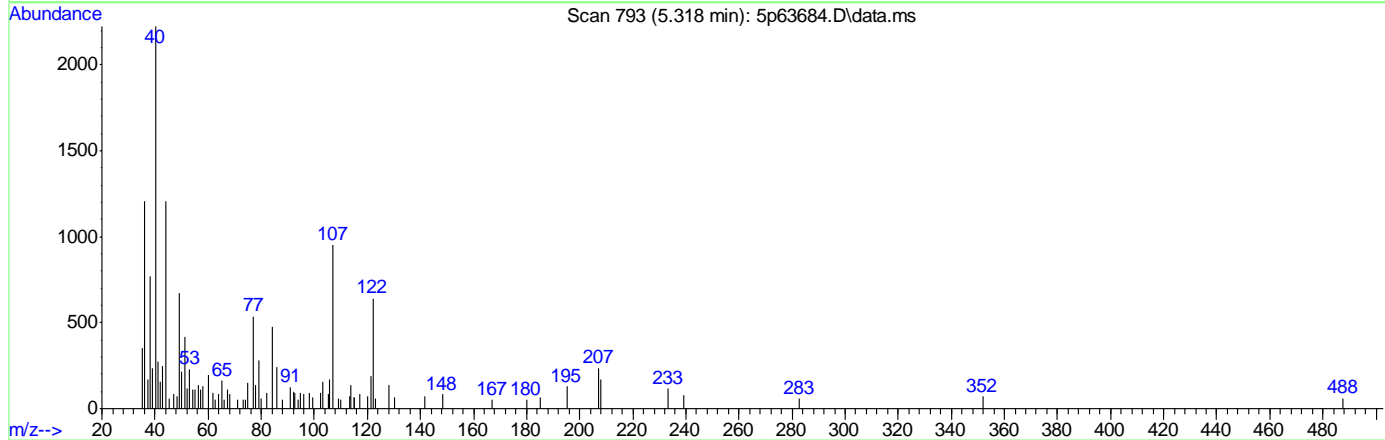
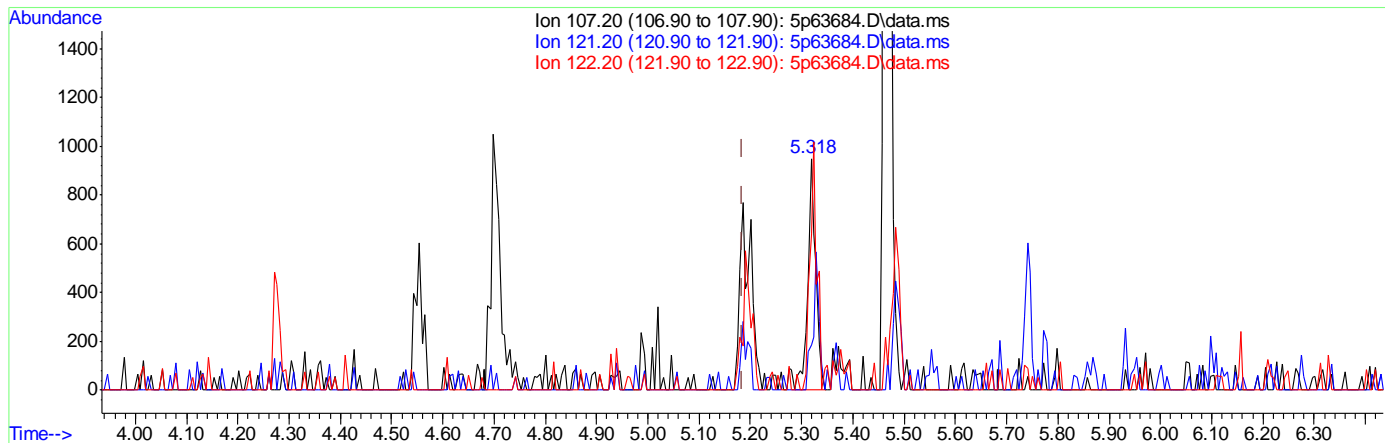
Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4-Dimethylphenol	105-67-9		5.18	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.49	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.52	Overlapping peak

9.1.7.1  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 12:46:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration



(30) 2,4-Dimethylphenol (t)

5.318min (+0.134) 0.20ppm

response 1039

Ion	Exp%	Act%
107.20	100	100
121.20	41.20	19.68
122.20	71.70	62.74
0.00	0.00	0.00

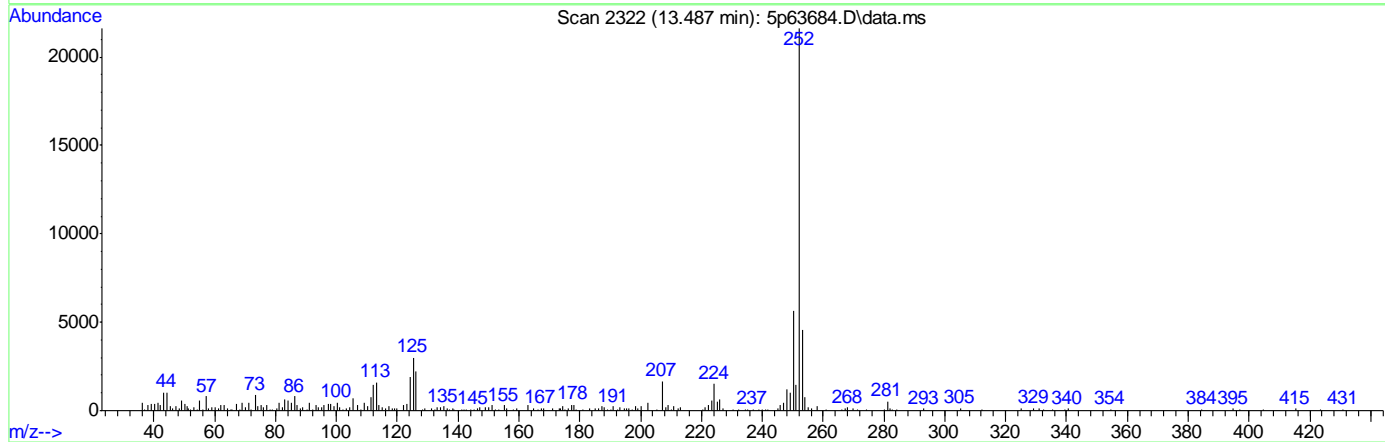
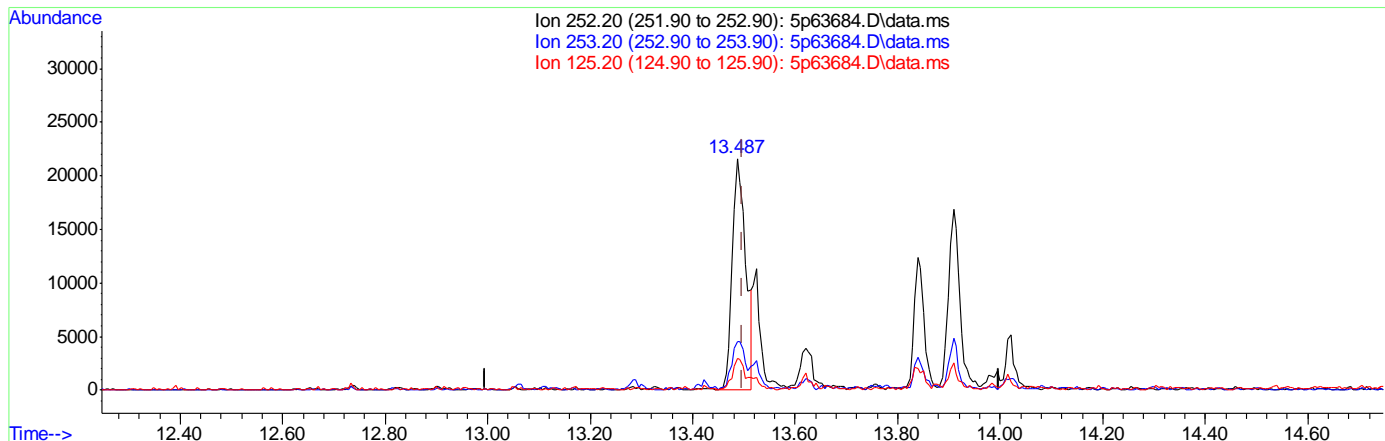
9.1.7.2  
9



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 12:46:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration



(93) Benzo[b]fluoranthene (t)

13.487min (-0.011) 2.41ppm

response 39311

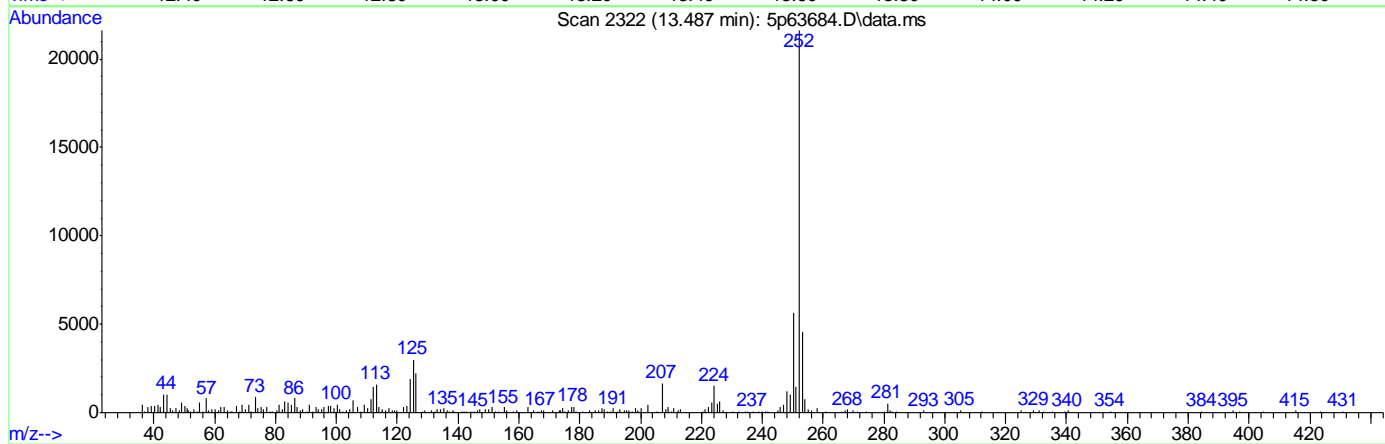
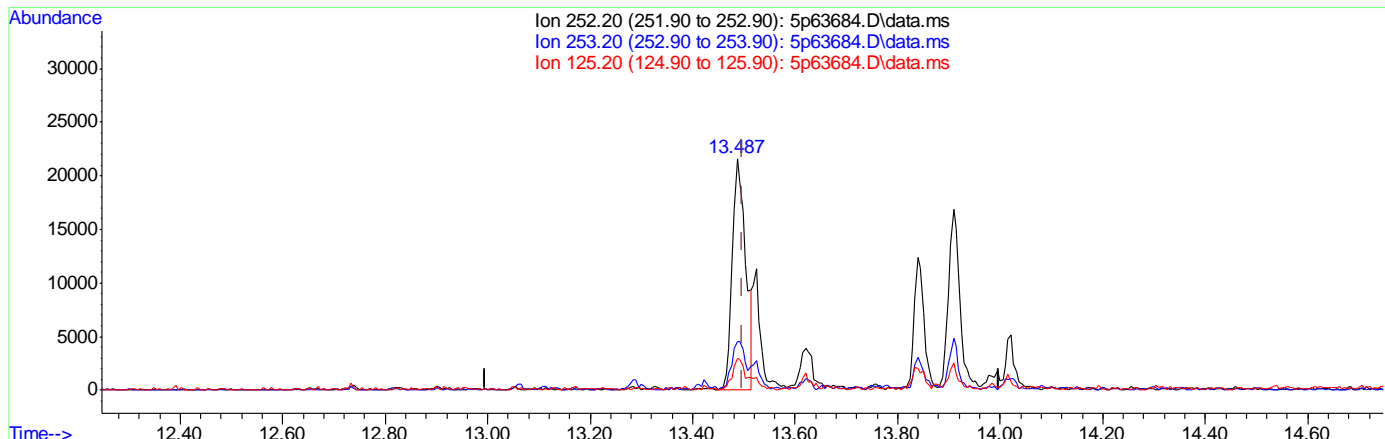
Ion	Exp%	Act%
252.20	100	100
253.20	23.80	19.18
125.20	10.90	13.56
0.00	0.00	0.00

9.1.7.3  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 12:46:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration



(93) Benzo[b]fluoranthene (t)

13.487min (-0.011) 2.41ppm

response 39311

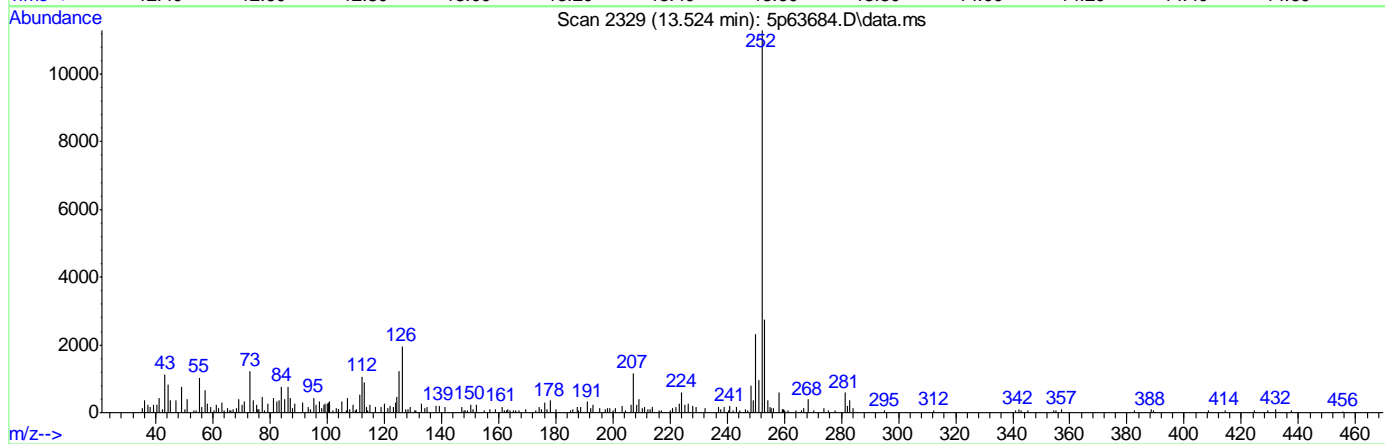
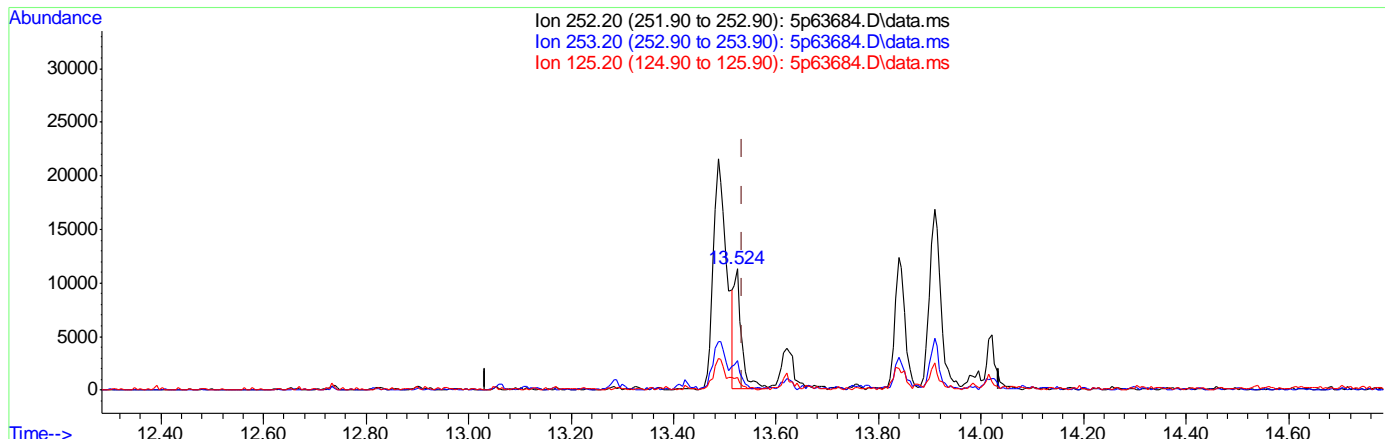
Ion	Exp%	Act%
252.20	100	100
253.20	23.80	19.18
125.20	10.90	13.56
0.00	0.00	0.00

9.1.7.4  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63684.D  
 Acq On : 7 Oct 2019 12:29 pm  
 Operator : hennys  
 Sample : jc95555-3  
 Misc : op23015,e5p2987,30.5,,,5,2000  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 12:46:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Oct 07 12:06:34 2019  
 Response via : Initial Calibration



(94) Benzo[k]fluoranthene (t)

13.524min (-0.011) 0.80ppm

response 11515

Ion	Exp%	Act%
252.20	100	100
253.20	22.10	23.65
125.20	10.20	7.77
0.00	0.00	0.00

9.1.7.5  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 13:24:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.052	152	126197	40.00	ppm	0.00
24) Naphthalene-d8	5.238	136	436857	40.00	ppm	0.00
47) Acenaphthene-d10	6.921	164	219059	40.00	ppm	0.00
69) Phenanthrene-d10	8.353	188	385082	40.00	ppm	0.00
83) Chrysene-d12	11.633	240	334267	40.00	ppm	0.00
91) Perylene-d12	13.610	264	375846	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.052	152	126197	40.00	ppm	0.00
103) Acenaphthene-d10a	6.921	164	219059	40.00	ppm	0.00
105) Chrysene-d12a	11.633	240	334267	40.00	ppm	0.00
107) Phenanthrene-d10a	8.353	188	385082	40.00	ppm	0.00
110) Naphthalene-d8a	5.238	136	436857	40.00	ppm	0.00
112) Chrysene-d12b	11.633	240	333907	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.052	152	126197	40.00	ppm	0.00
116) Chrysene-d12c	11.633	240	334267	40.00	ppm	0.00
118) Chrysene-d12d	11.633	240	333907	40.00	ppm	0.00
120) Phenanthrene-d10b	8.353	188	385082	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.914	112	150376	27.94	ppm	0.01
Spiked Amount	50.000		Recovery	=	55.88%	
8) Phenol-d5	3.769	99	229258	30.27	ppm	0.00
Spiked Amount	50.000		Recovery	=	60.54%	
25) Nitrobenzene-d5	4.565	82	228503	33.47	ppm	0.00
Spiked Amount	50.000		Recovery	=	66.94%	
51) 2-Fluorobiphenyl	6.291	172	267371	30.84	ppm	0.00
Spiked Amount	50.000		Recovery	=	61.68%	
73) 2,4,6-Tribromophenol	7.690	330	46215	29.80	ppm	0.00
Spiked Amount	50.000		Recovery	=	59.60%	
85) Terphenyl-d14	10.239	244	286590	32.95	ppm	0.00
Spiked Amount	50.000		Recovery	=	65.90%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
21) 3&4-Methylphenol	4.480	108	2144	0.41	ppm	Qvalue # 73
30) 2,4-Dimethylphenol	4.966	107	2371m	0.42	ppm	
38) Naphthalene	5.260	128	297052	23.62	ppm	97
44) 2-Methylnaphthalene	5.922	141	39997	6.00	ppm	89
53) Biphenyl	6.382	154	9494	0.98	ppm	99
56) Acenaphthylene	6.782	152	9812	0.81	ppm	93
59) Acenaphthene	6.953	153	7980m	1.08	ppm	
62) Dibenzofuran	7.119	168	24306	2.30	ppm	99
66) Fluorene	7.450	166	23864	2.83	ppm	94
77) Phenanthrene	8.380	178	86060	8.06	ppm	98
78) Anthracene	8.428	178	18955	1.70	ppm	96
79) Carbazole	8.615	167	11233	0.97	ppm	98
81) Fluoranthene	9.710	202	72522	5.36	ppm	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
Data File : 5p63449.D  
Acq On : 1 Oct 2019 6:58 am  
Operator : chriss2  
Sample : jc95555-4  
Misc : op23015,e5p2977,30.6,,,1,1  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 13:24:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Tue Oct 01 08:06:24 2019  
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
84) Pyrene	9.977	202	79143	5.65	ppm	97
87) Benzo[a]anthracene	11.622	228	33516	2.63	ppm	98
89) Chrysene	11.665	228	39509	3.30	ppm	96
93) Benzo[b]fluoranthene	13.113	252	40218m	3.11	ppm	
94) Benzo[k]fluoranthene	13.145	252	13545m	1.19	ppm	
95) Benzo[a]pyrene	13.529	252	27976	2.41	ppm	91
96) Indeno[1,2,3-cd]pyrene	14.886	276	17011	1.59	ppm	93
98) Dibenz[a,h]anthracene	14.918	278	3625m	0.33	ppm	
100) Benzo[g,h,i]perylene	15.191	276	19165	1.77	ppm	94

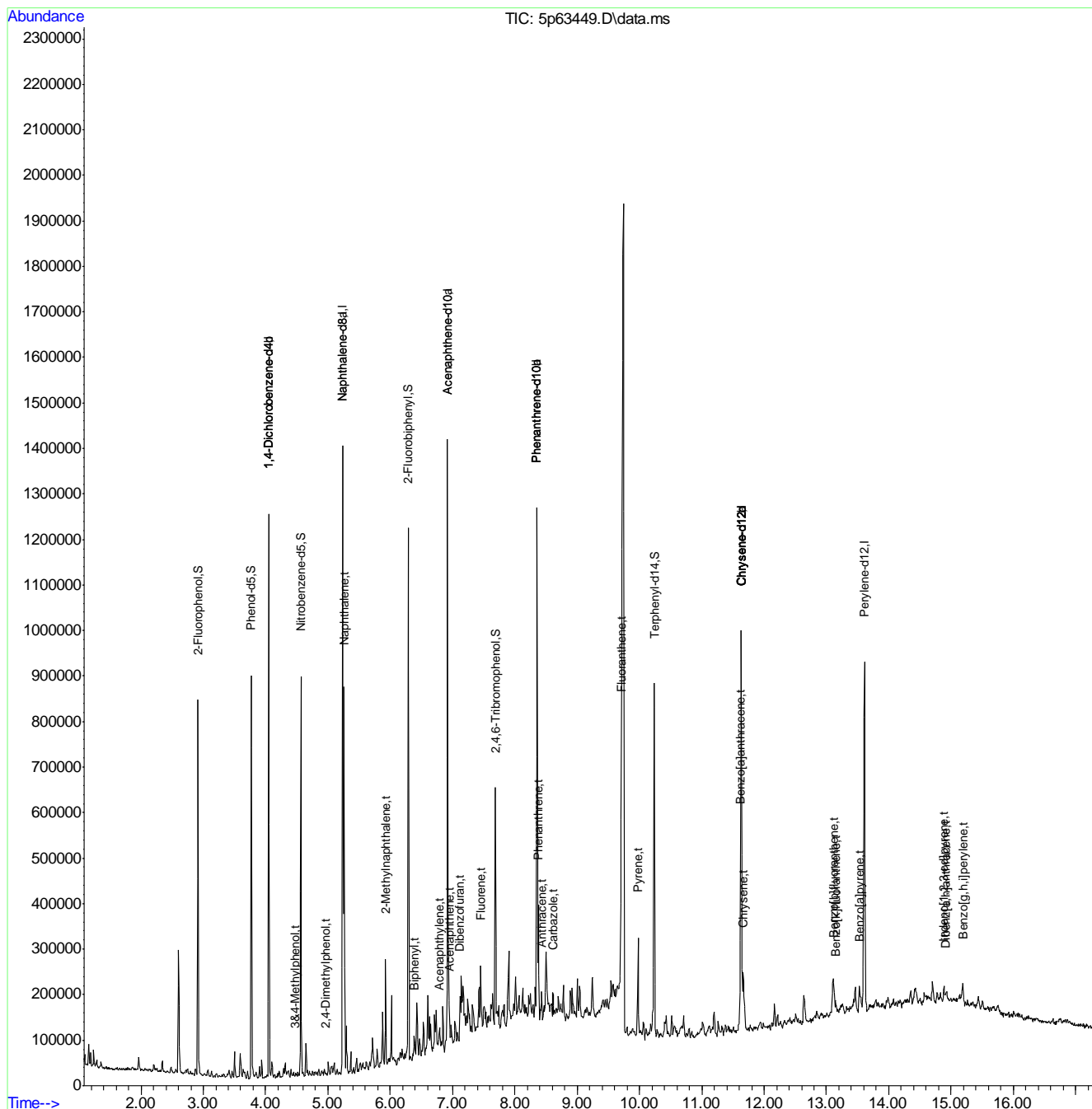
(#) = qualifier out of range (m) = manual integration (+) = signals summed

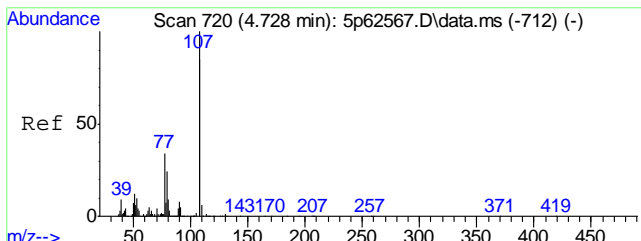
9.1.8  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

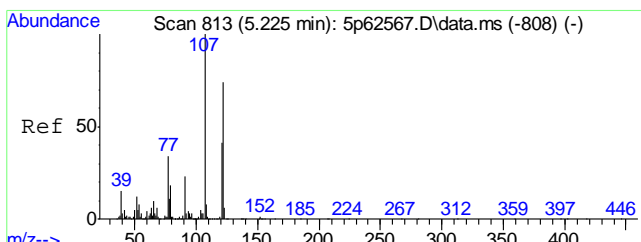
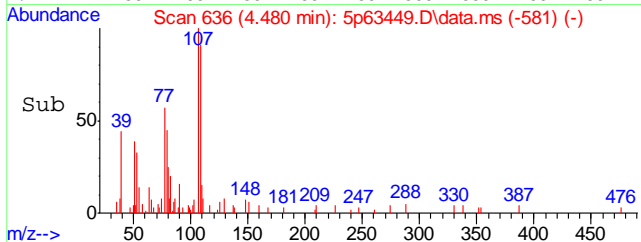
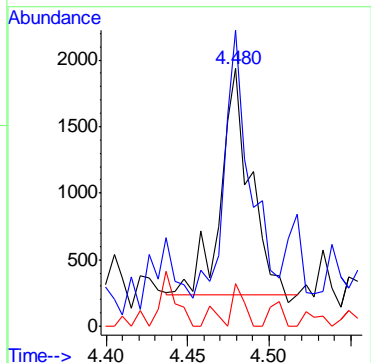
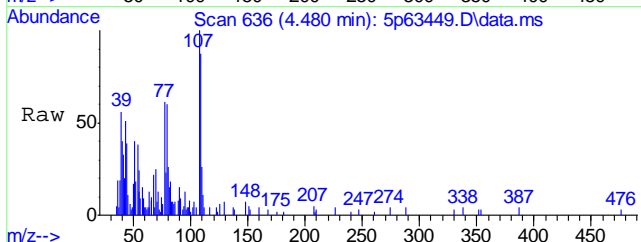
Quant Time: Oct 07 13:24:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration





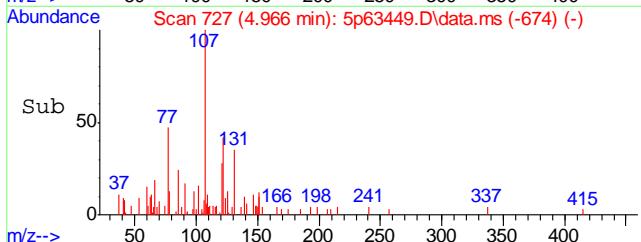
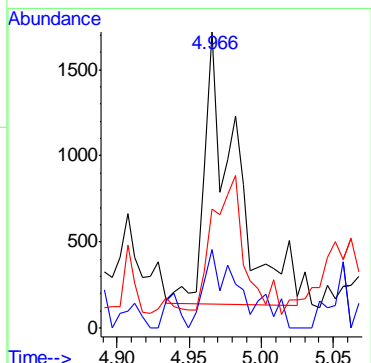
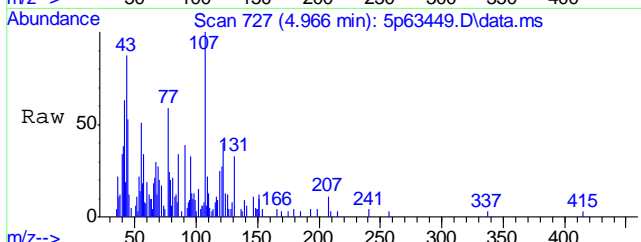
#21  
 3&4-Methylphenol  
 Concen: 0.41 ppm  
 RT: 4.480 min Scan# 636  
 Delta R.T. -0.208 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
108	2144		
107	100		
107	87.0	87.9	147.9#
90	6.8	0.0	39.4

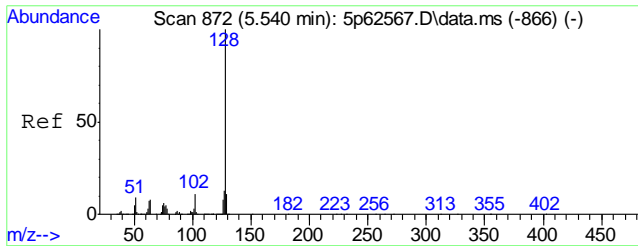


#30  
 2,4-Dimethylphenol  
 Concen: 0.42 ppm m  
 RT: 4.966 min Scan# 727  
 Delta R.T. -0.219 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
107	2371		
107	100		
121	26.5	11.2	71.2
122	40.2	41.7	101.7#

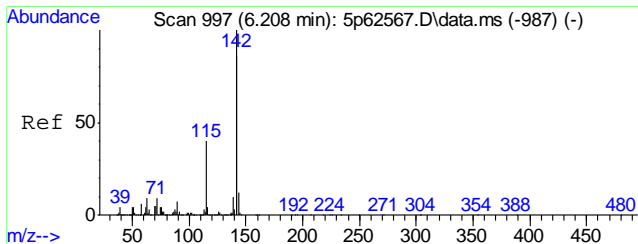
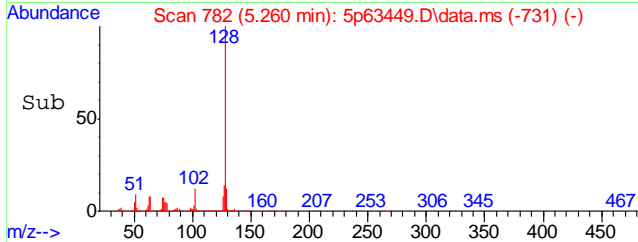
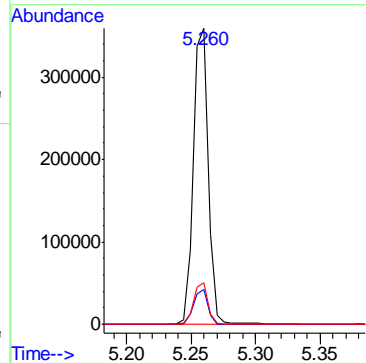
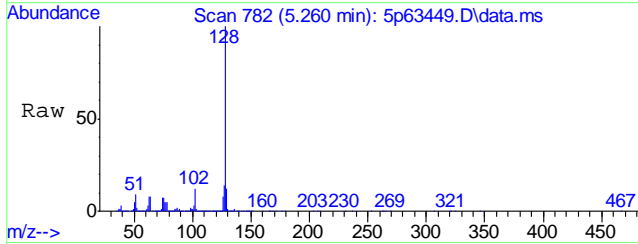


9.1.8  
 9



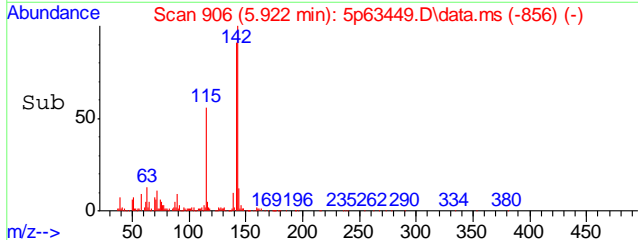
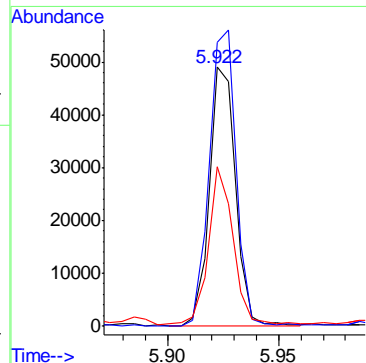
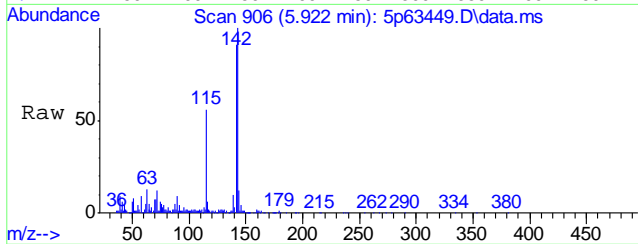
#38  
 Naphthalene  
 Concen: 23.62 ppm  
 RT: 5.260 min Scan# 782  
 Delta R.T. -0.230 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Ratio	Lower	Upper
128	100		
129	11.7	0.0	40.6
127	14.2	0.0	42.6



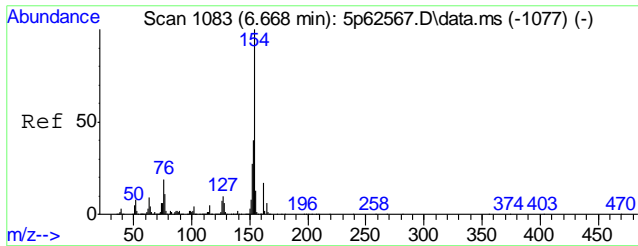
#44  
 2-Methylnaphthalene  
 Concen: 6.00 ppm  
 RT: 5.922 min Scan# 906  
 Delta R.T. -0.235 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Ratio	Lower	Upper
141	100		
142	109.5	86.4	146.4
115	61.1	16.6	76.6



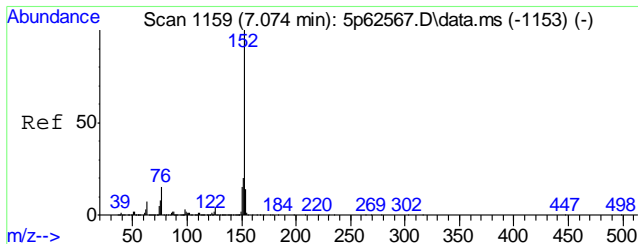
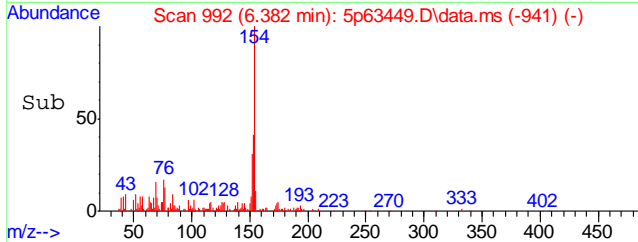
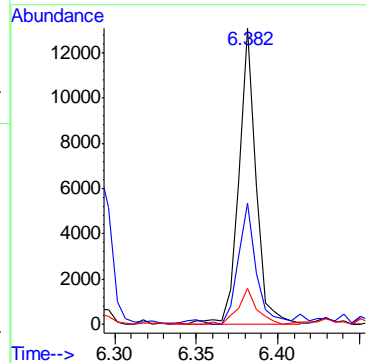
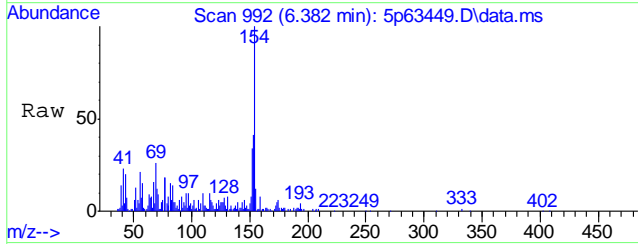
9.18  
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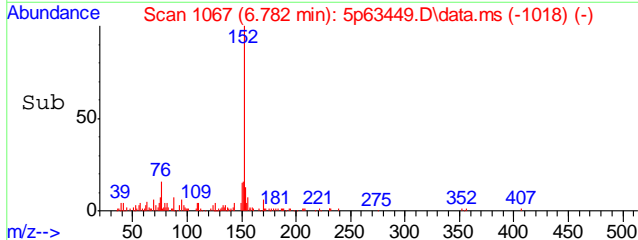
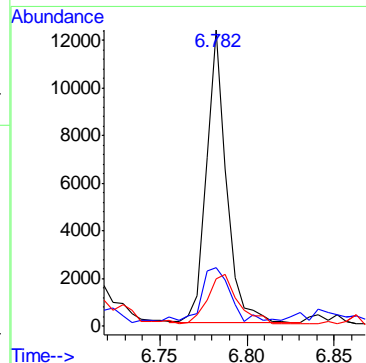
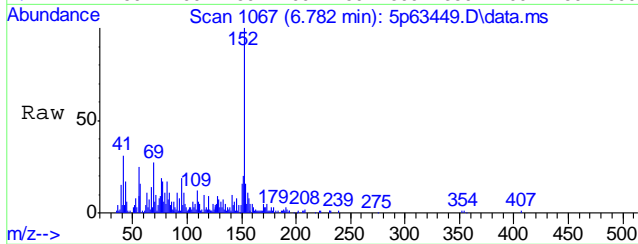
#53  
 Biphenyl  
 Concen: 0.98 ppm  
 RT: 6.382 min Scan# 992  
 Delta R.T. -0.230 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

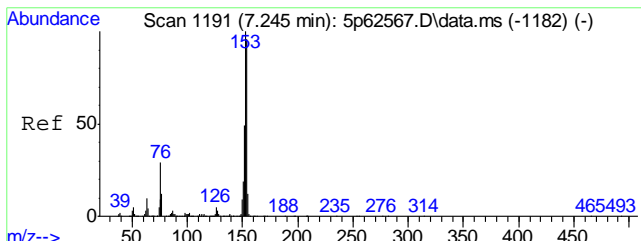
Tgt Ion	Resp	Lower	Upper
154	9494	100	
153	39.2	9.6	69.6
155	11.6	0.0	42.7



#56  
 Acenaphthylene  
 Concen: 0.81 ppm  
 RT: 6.782 min Scan# 1067  
 Delta R.T. -0.240 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

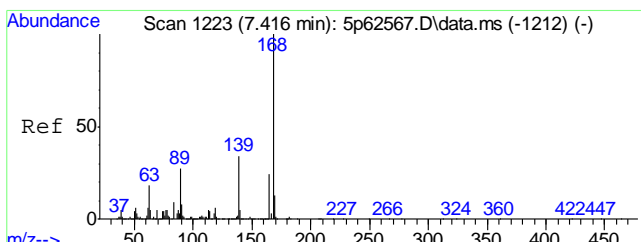
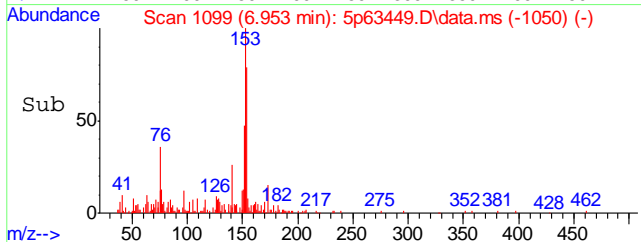
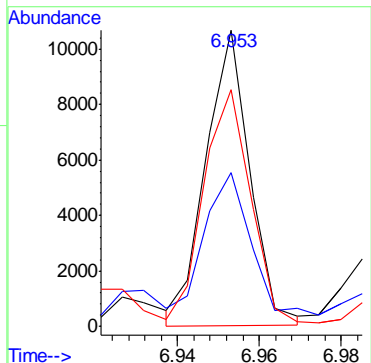
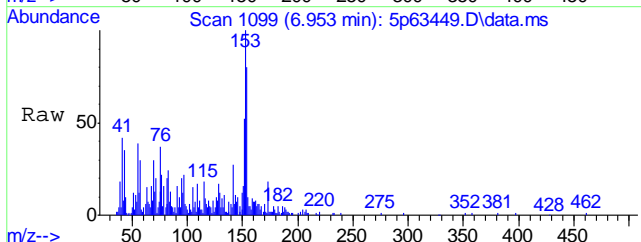
Tgt Ion	Resp	Lower	Upper
152	9812	100	
151	15.1	0.0	49.8
153	14.8	0.0	43.6





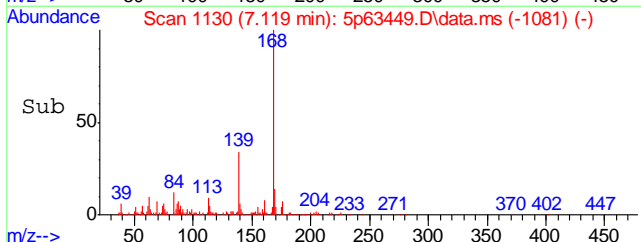
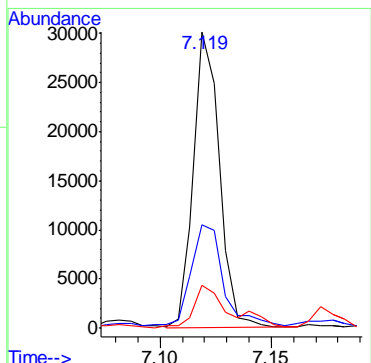
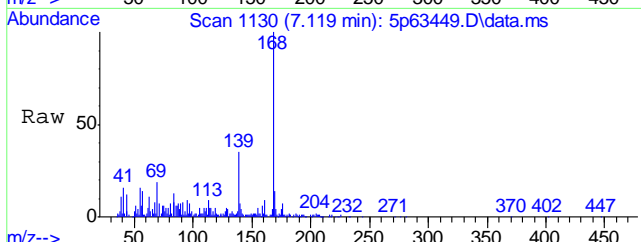
#59  
 Acenaphthene  
 Concen: 1.08 ppm  
 RT: 6.953 min Scan# 1099  
 Delta R.T. -0.240 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

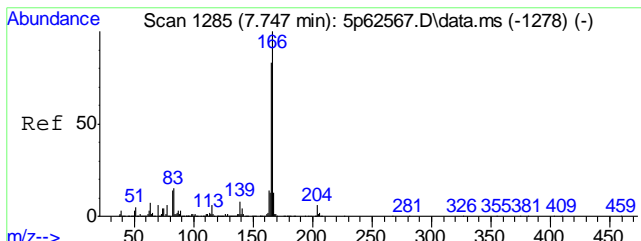
Tgt Ion	Resp	Lower	Upper
153	7980	100	
152	51.9	19.1	79.1
154	80.0	58.9	118.9



#62  
 Dibenzofuran  
 Concen: 2.30 ppm  
 RT: 7.119 min Scan# 1130  
 Delta R.T. -0.240 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

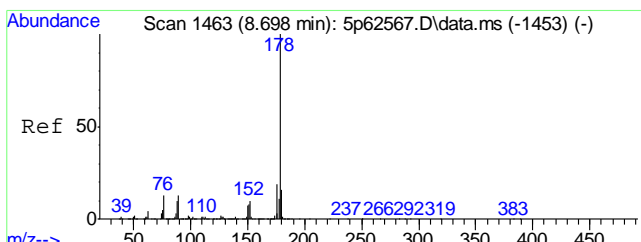
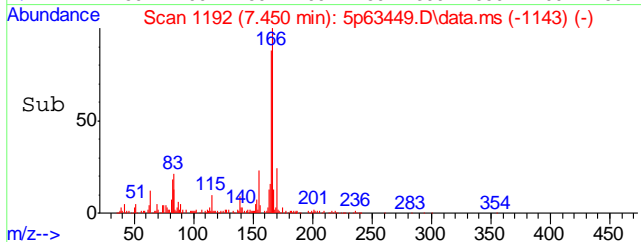
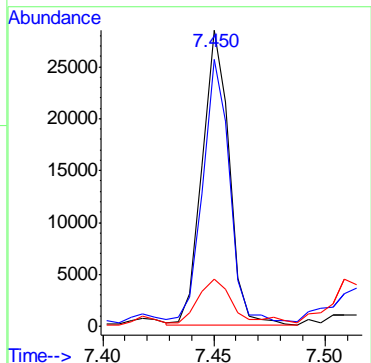
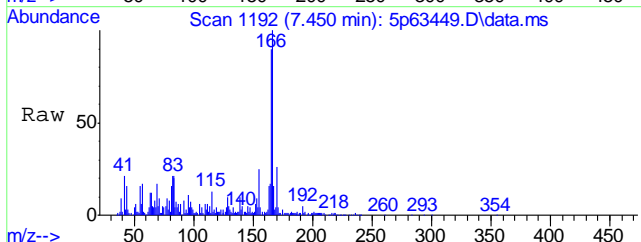
Tgt Ion	Resp	Lower	Upper
168	24306	100	
139	33.7	3.9	63.9
169	13.8	0.0	43.3





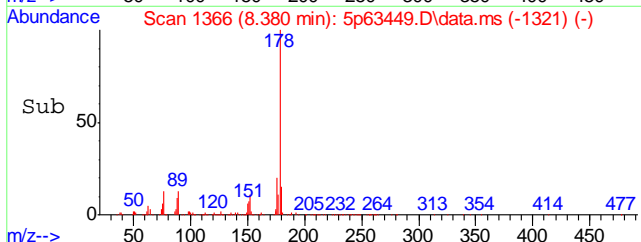
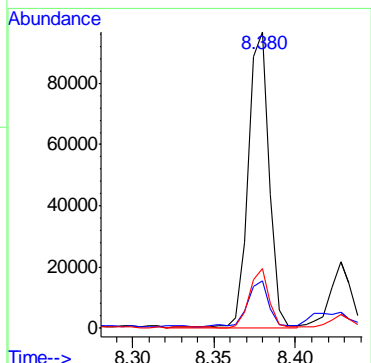
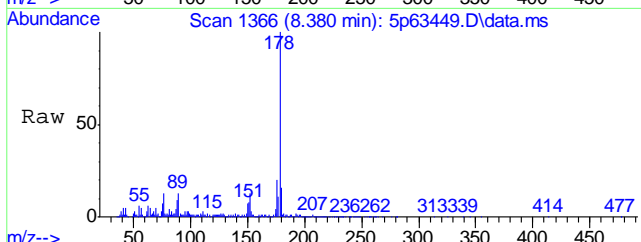
#66  
 Fluorene  
 Concen: 2.83 ppm  
 RT: 7.450 min Scan# 1192  
 Delta R.T. -0.240 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

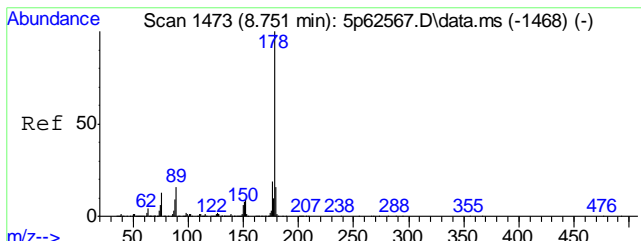
Tgt Ion	Resp	Lower	Upper
166	100		
165	88.8	53.2	113.2
167	14.9	0.0	43.0



#77  
 Phenanthrene  
 Concen: 8.06 ppm  
 RT: 8.380 min Scan# 1366  
 Delta R.T. -0.262 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

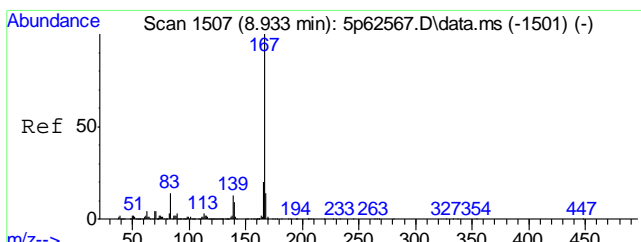
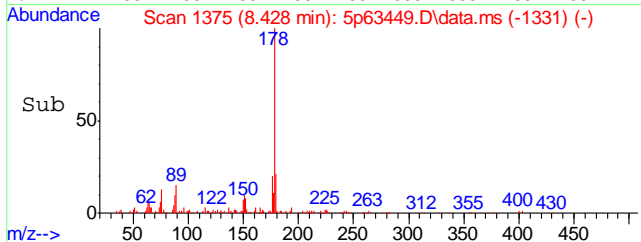
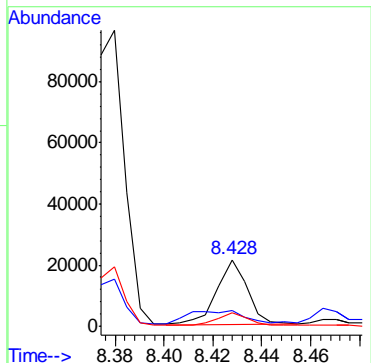
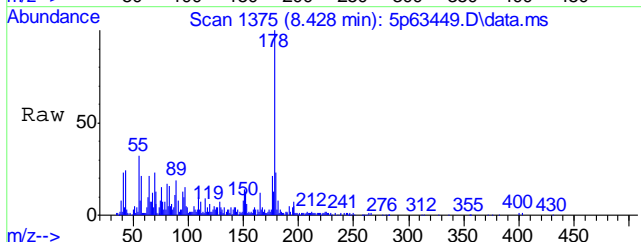
Tgt Ion	Resp	Lower	Upper
178	100		
179	15.2	0.0	45.8
176	19.9	0.0	48.7





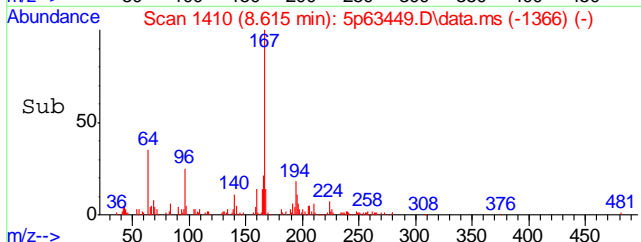
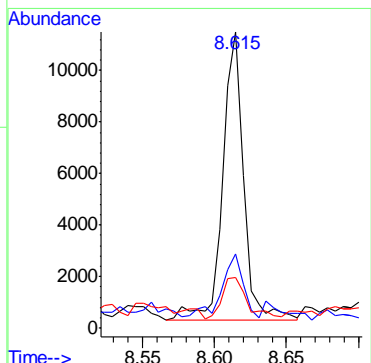
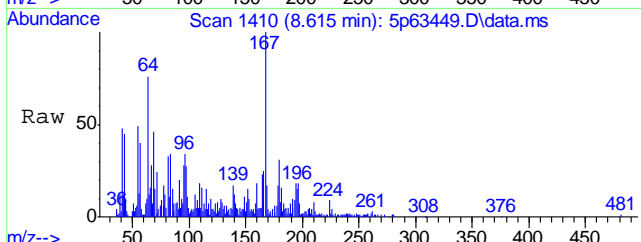
#78  
 Anthracene  
 Concen: 1.70 ppm  
 RT: 8.428 min Scan# 1375  
 Delta R.T. -0.267 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

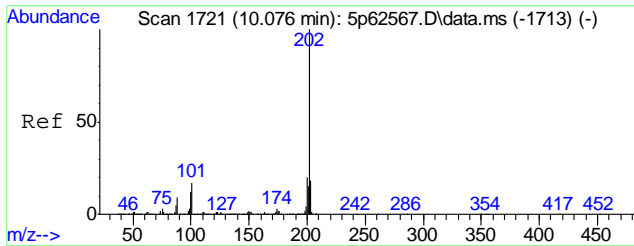
Tgt Ion	Resp	Lower	Upper
178	18955	100	
179	19.2	0.0	46.2
176	19.3	0.0	49.1



#79  
 Carbazole  
 Concen: 0.97 ppm  
 RT: 8.615 min Scan# 1410  
 Delta R.T. -0.267 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

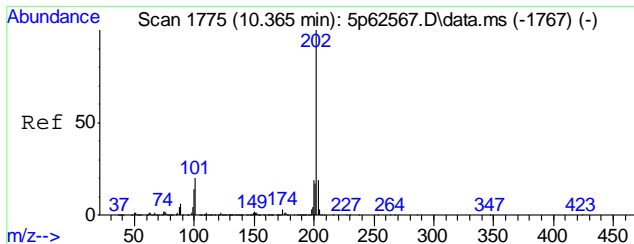
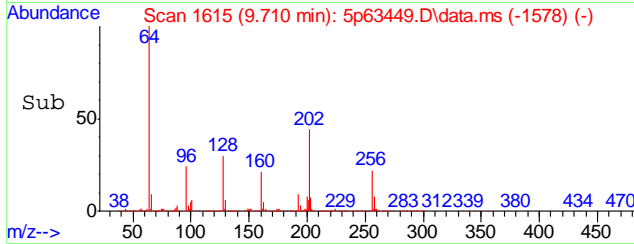
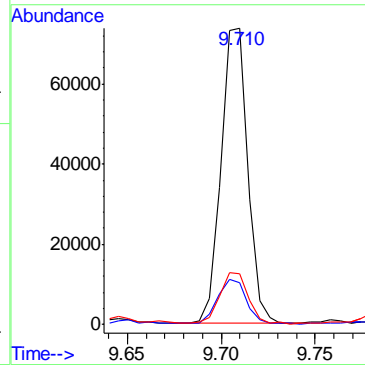
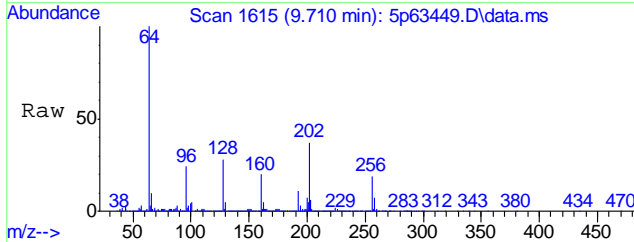
Tgt Ion	Resp	Lower	Upper
167	11233	100	
166	19.9	0.0	50.2
139	11.2	0.0	43.0





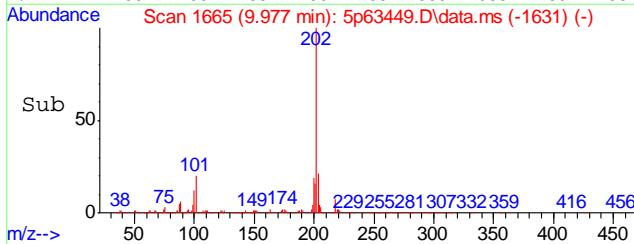
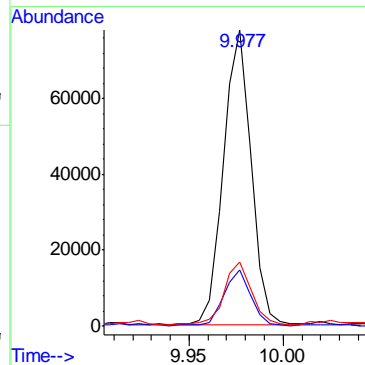
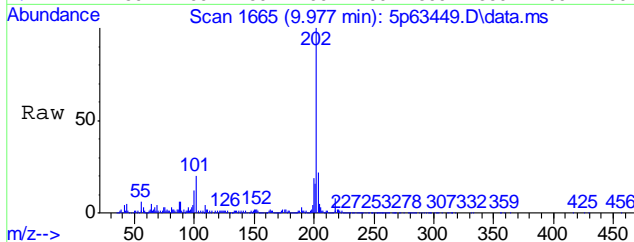
#81  
 Fluoranthene  
 Concen: 5.36 ppm  
 RT: 9.710 min Scan# 1615  
 Delta R.T. -0.304 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
202	72522	100	
101	13.9	0.0	47.0
203	16.5	0.0	47.8

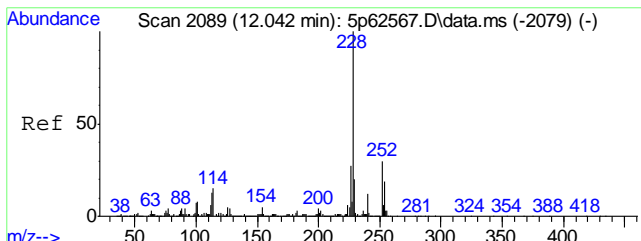


#84  
 Pyrene  
 Concen: 5.65 ppm  
 RT: 9.977 min Scan# 1665  
 Delta R.T. -0.320 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
202	79143	100	
200	18.9	0.0	48.7
203	21.4	0.0	48.8

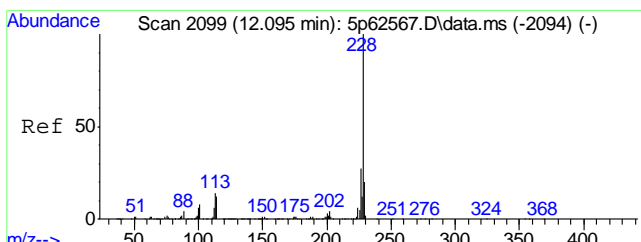
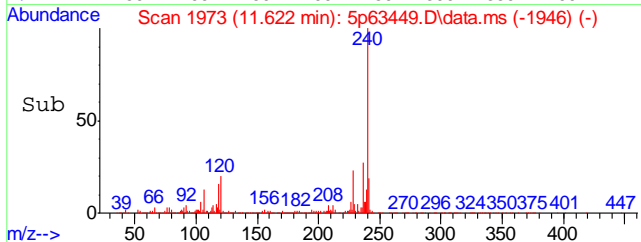
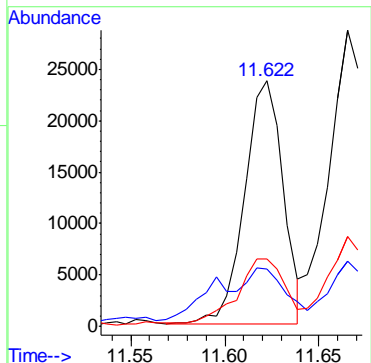
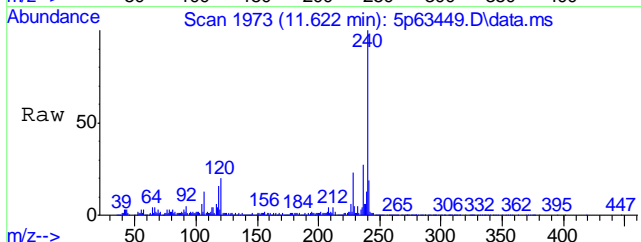


9.18  
 9



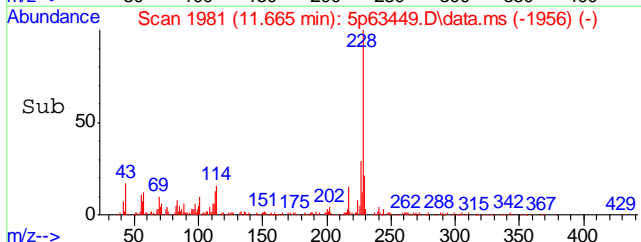
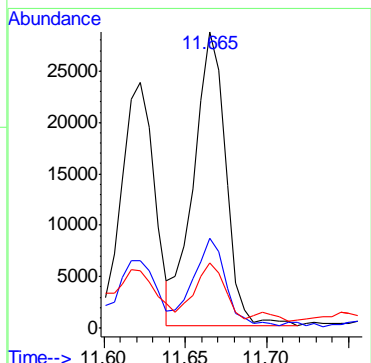
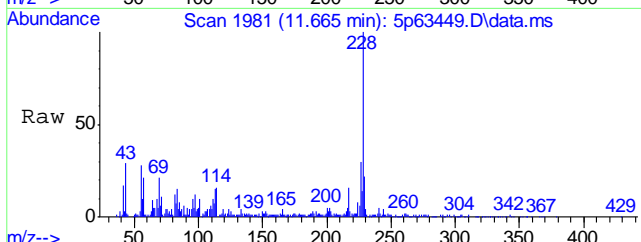
#87  
 Benzo[a]anthracene  
 Concen: 2.63 ppm  
 RT: 11.622 min Scan# 1973  
 Delta R.T. -0.358 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

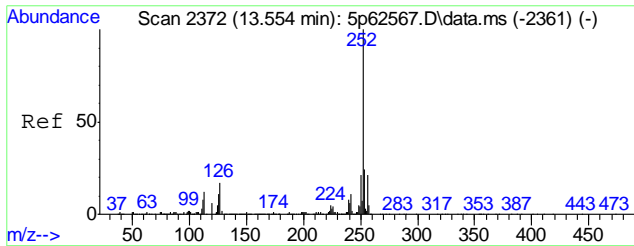
Tgt Ion	Resp	Lower	Upper
228	33516	100	
229	18.7	0.0	49.7
226	25.7	0.0	56.6



#89  
 Chrysene  
 Concen: 3.30 ppm  
 RT: 11.665 min Scan# 1981  
 Delta R.T. -0.368 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

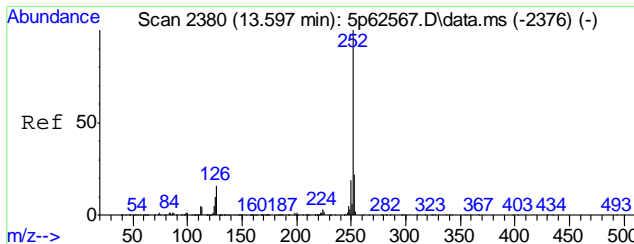
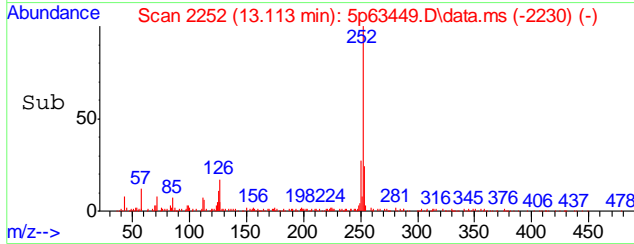
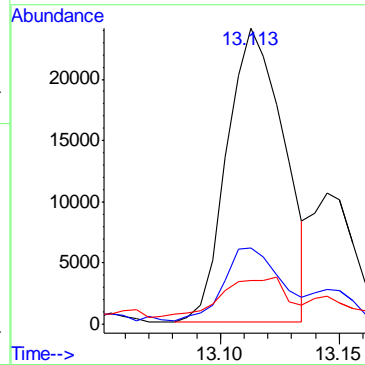
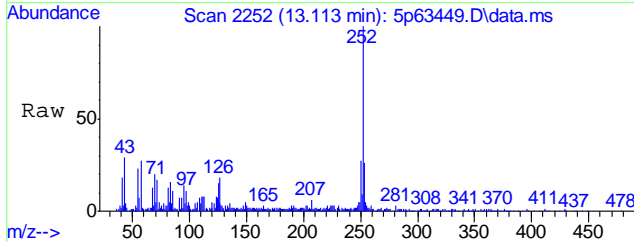
Tgt Ion	Resp	Lower	Upper
228	39509	100	
226	28.8	0.0	57.2
229	18.1	0.0	50.1





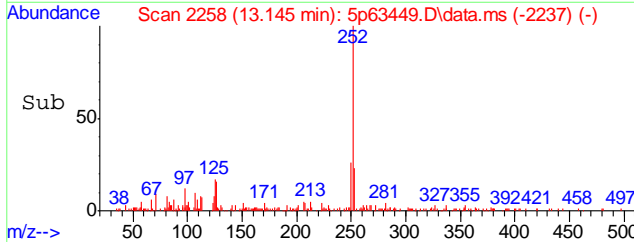
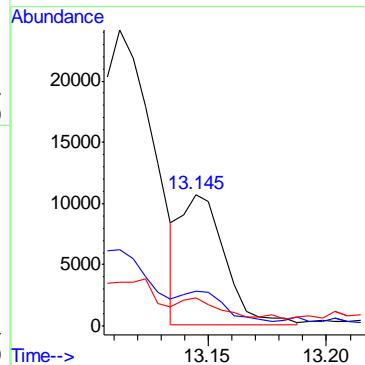
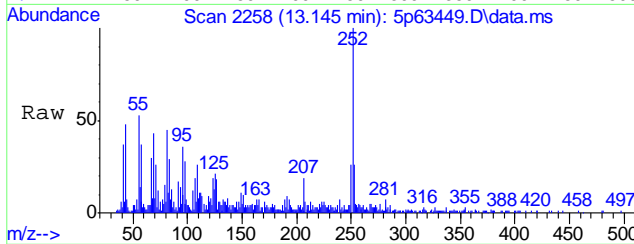
#93  
 Benzo[b]fluoranthene  
 Concen: 3.11 ppm m  
 RT: 13.113 min Scan# 2252  
 Delta R.T. -0.385 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
252	100		
253	25.7	0.0	53.8
125	14.9	0.0	40.9

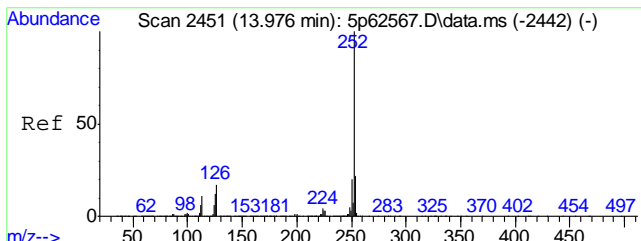


#94  
 Benzo[k]fluoranthene  
 Concen: 1.19 ppm m  
 RT: 13.145 min Scan# 2258  
 Delta R.T. -0.390 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
252	100		
253	26.2	0.0	52.1
125	21.2	0.0	40.2

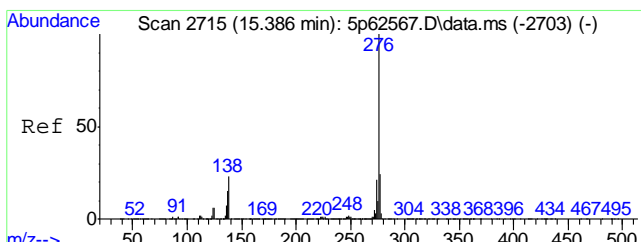
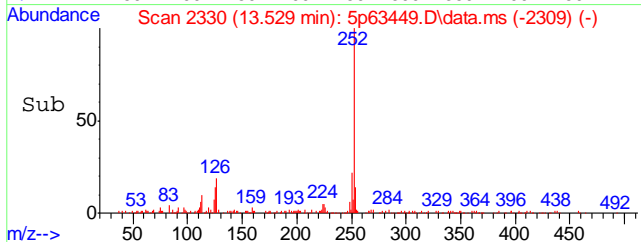
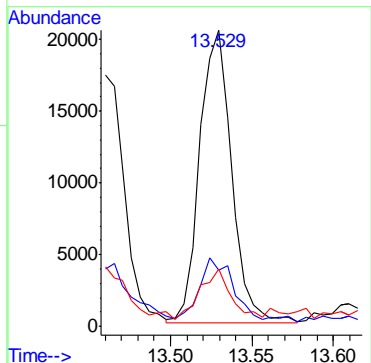
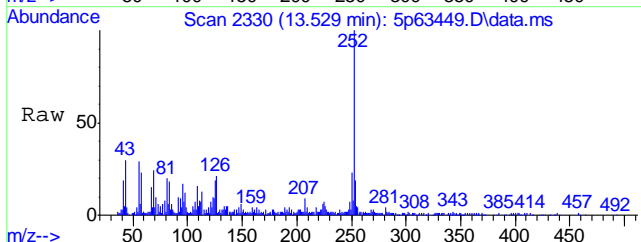


9.1.8  
 9



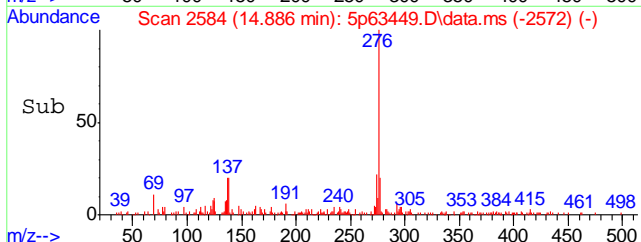
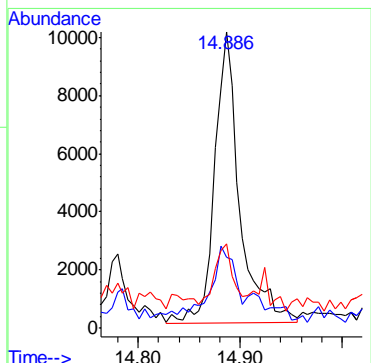
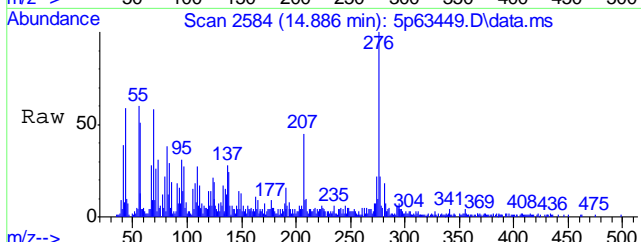
#95  
 Benzo[a]pyrene  
 Concen: 2.41 ppm  
 RT: 13.529 min Scan# 2330  
 Delta R.T. -0.390 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
252	27976	100	
253	16.6	0.0	51.7
125	14.6	0.0	42.0



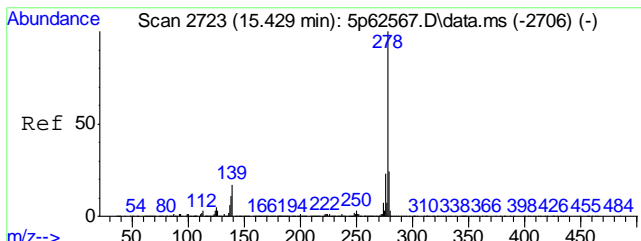
#96  
 Indeno[1,2,3-cd]pyrene  
 Concen: 1.59 ppm  
 RT: 14.886 min Scan# 2584  
 Delta R.T. -0.438 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
276	17011	100	
138	21.1	0.0	50.9
137	21.2	0.0	44.2



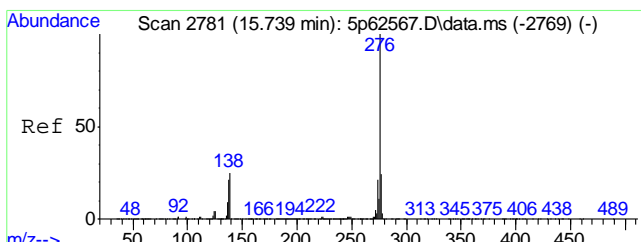
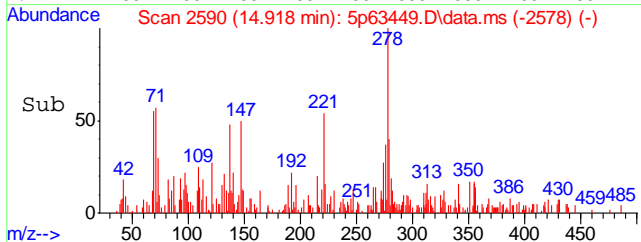
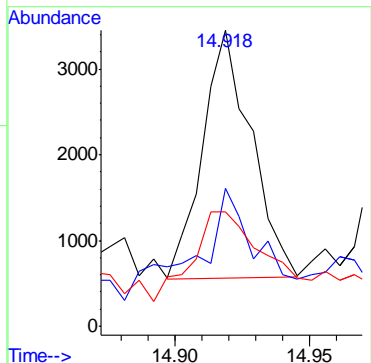
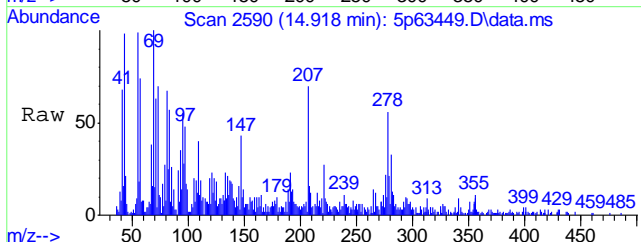
9.18  
 9





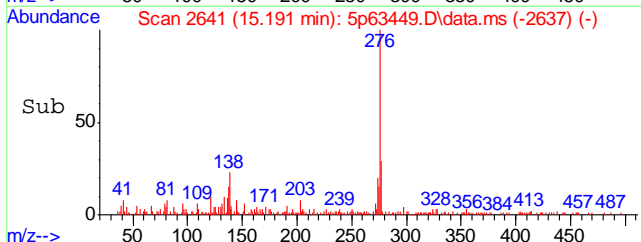
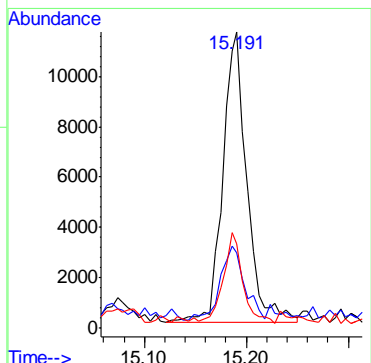
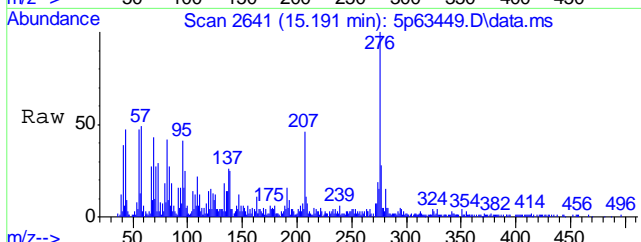
#98  
 Dibenz[a,h]anthracene  
 Concen: 0.33 ppm  
 RT: 14.918 min Scan# 2590  
 Delta R.T. -0.438 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
278	3625	100	
139	31.2	0.0	46.7
279	38.5	0.0	54.4



#100  
 Benzo[g,h,i]perylene  
 Concen: 1.77 ppm  
 RT: 15.191 min Scan# 2641  
 Delta R.T. -0.481 min  
 Lab File: 5p63449.D  
 Acq: 1 Oct 19 6:58 am

Tgt Ion	Resp	Lower	Upper
276	19165	100	
138	20.0	0.0	54.8
277	25.0	0.0	53.6



9.18  
 9

# Manual Integration Approval Summary

Sample Number: JC95555-4                      Method: SW846 8270D  
Lab FileID: 5P63449.D                      Analyst approved: 10/07/19 11:11 Kristi Schollenberger  
Injection Time: 10/01/19 06:58                      Supervisor approved: 10/07/19 11:34 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,4-Dimethylphenol	105-67-9		4.97	Poor instrument integration
Acenaphthene	83-32-9		6.95	Poor instrument integration
Benzo(b)fluoranthene	205-99-2		13.11	Overlapping peak
Benzo(k)fluoranthene	207-08-9		13.14	Overlapping peak
Dibenzo(a,h)anthracene	53-70-3		14.92	Poor instrument integration

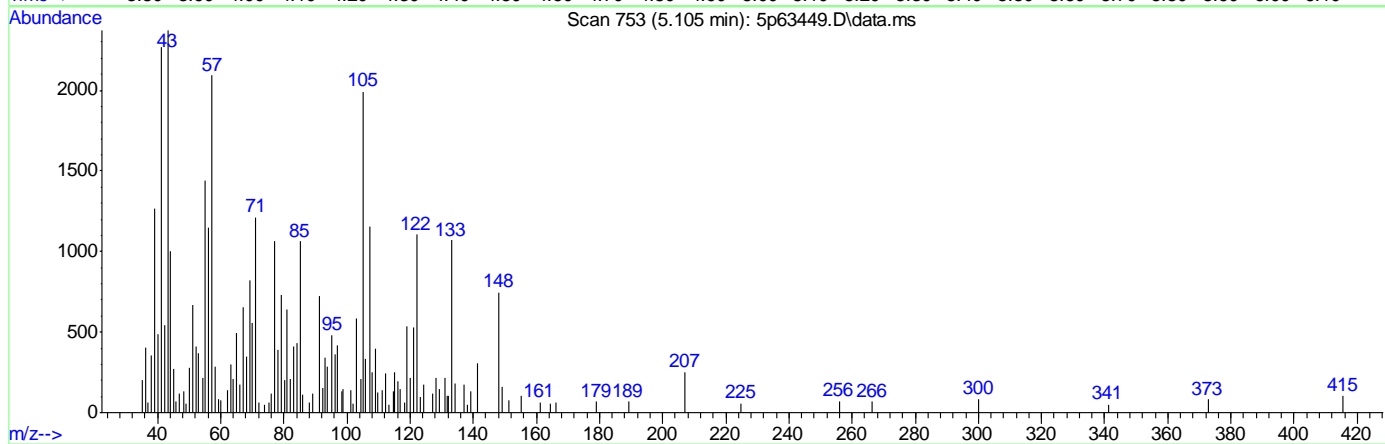
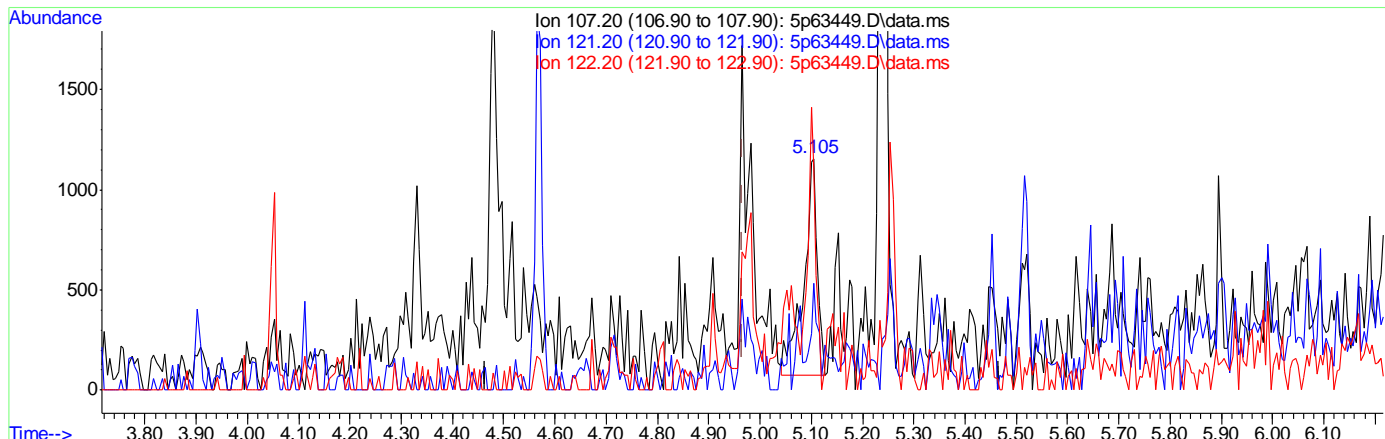
9.1.8.1

9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 01 08:07:15 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration



(30) 2,4-Dimethylphenol (t)

5.105min (+0.139) 0.37ppm

response 2051

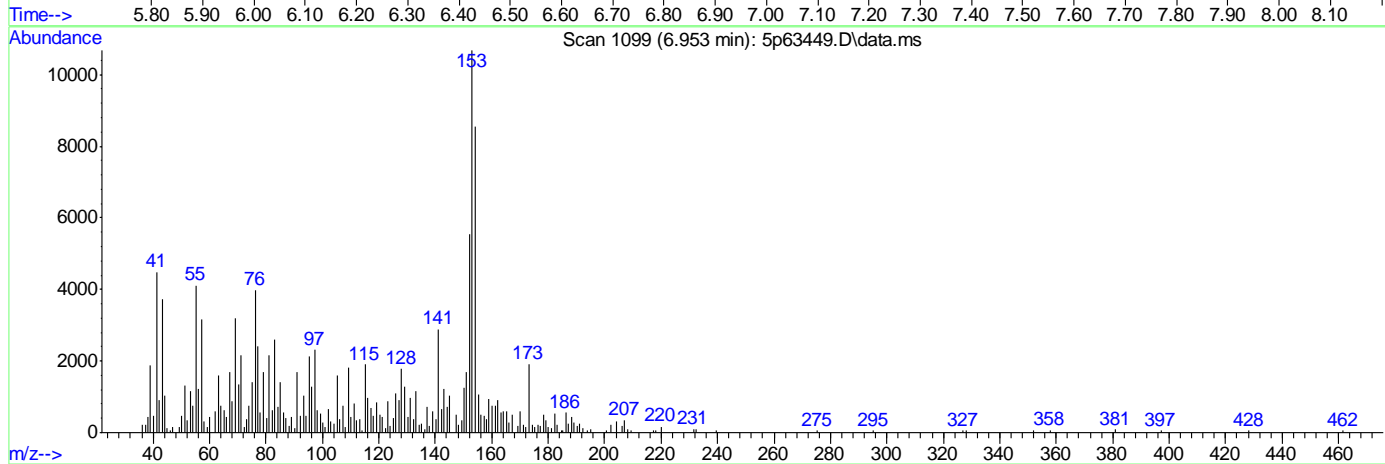
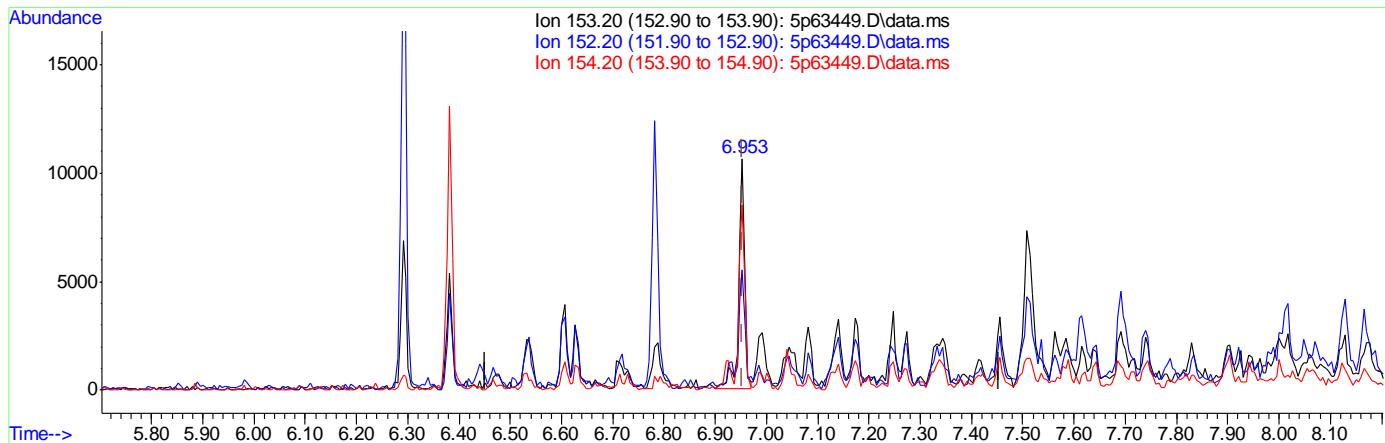
Ion	Exp%	Act%
107.20	100	100
121.20	41.20	32.14
122.20	71.70	87.92
0.00	0.00	0.00

9.1.8.2  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 01 08:07:15 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration



(59) Acenaphthene (t)  
 6.953min (-0.000) 1.20ppm  
 response 8856

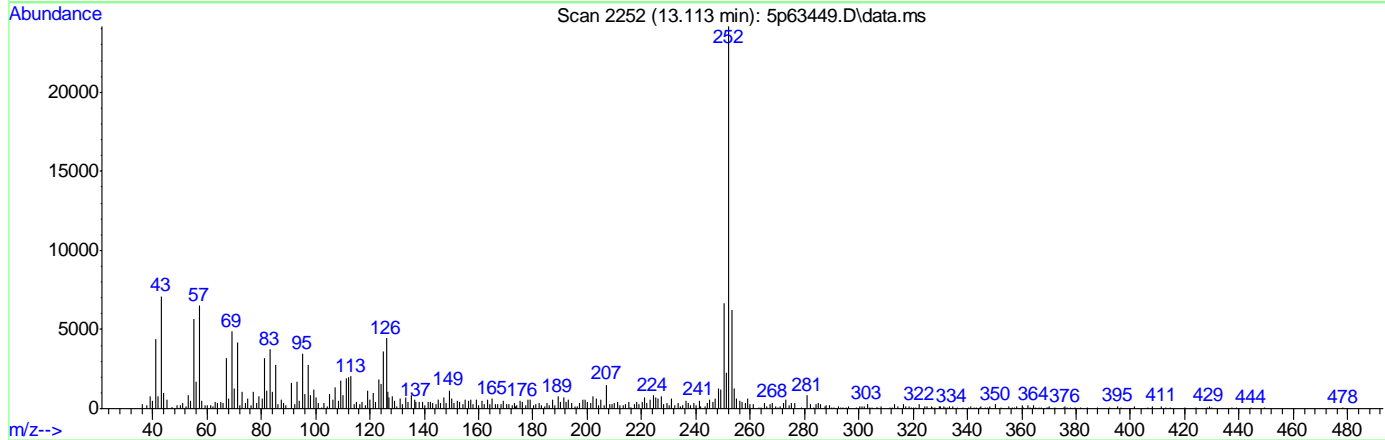
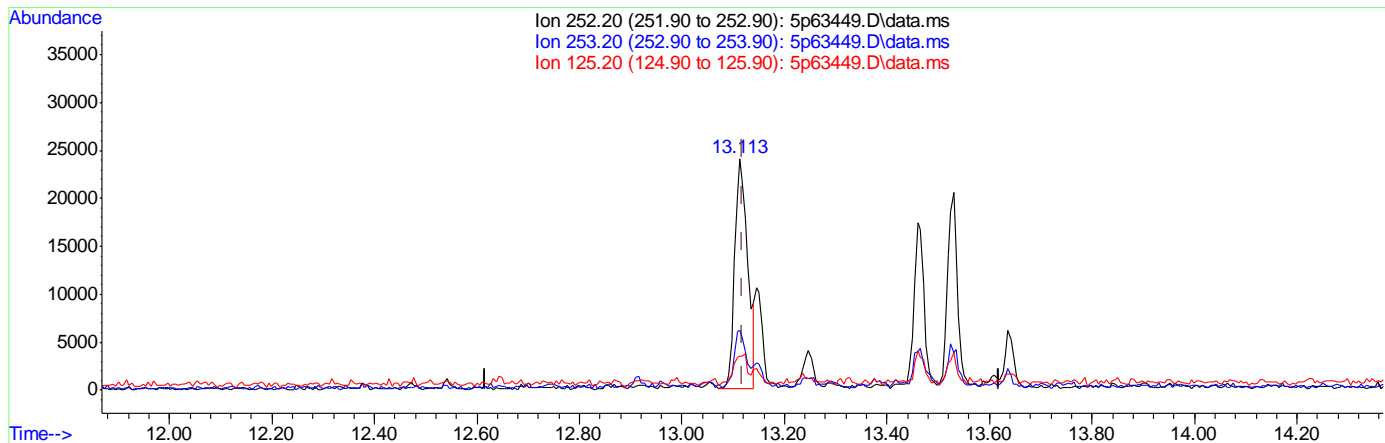
Ion	Exp%	Act%
153.20	100	100
152.20	49.10	48.90
154.20	88.90	80.42
0.00	0.00	0.00

9.1.8.3  
 9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 01 08:07:15 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration



(93) Benzo[b]fluoranthene (t)

13.113min (-0.005) 3.33ppm

response 43042

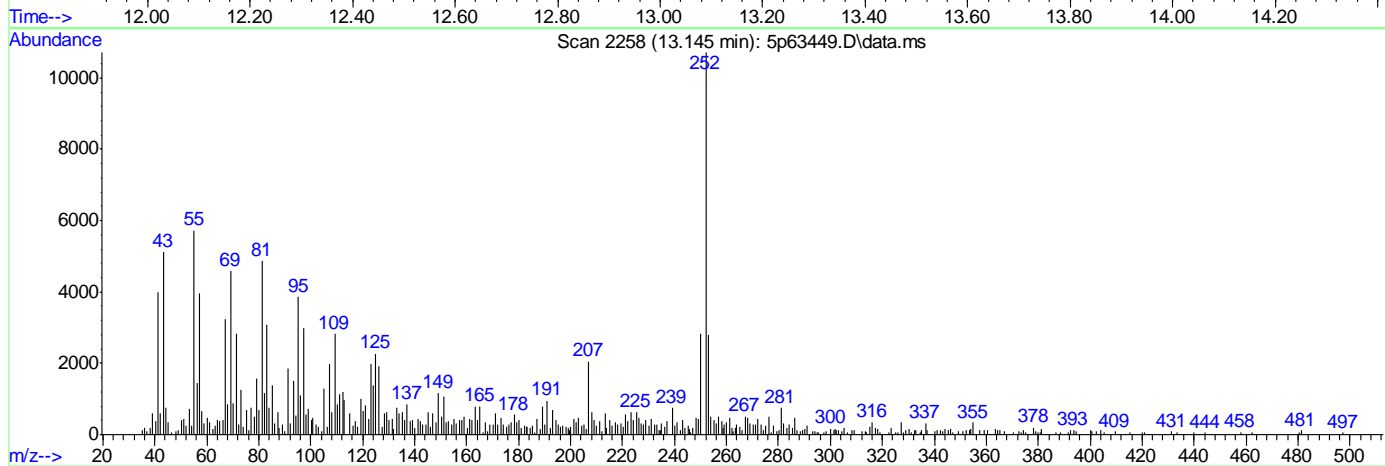
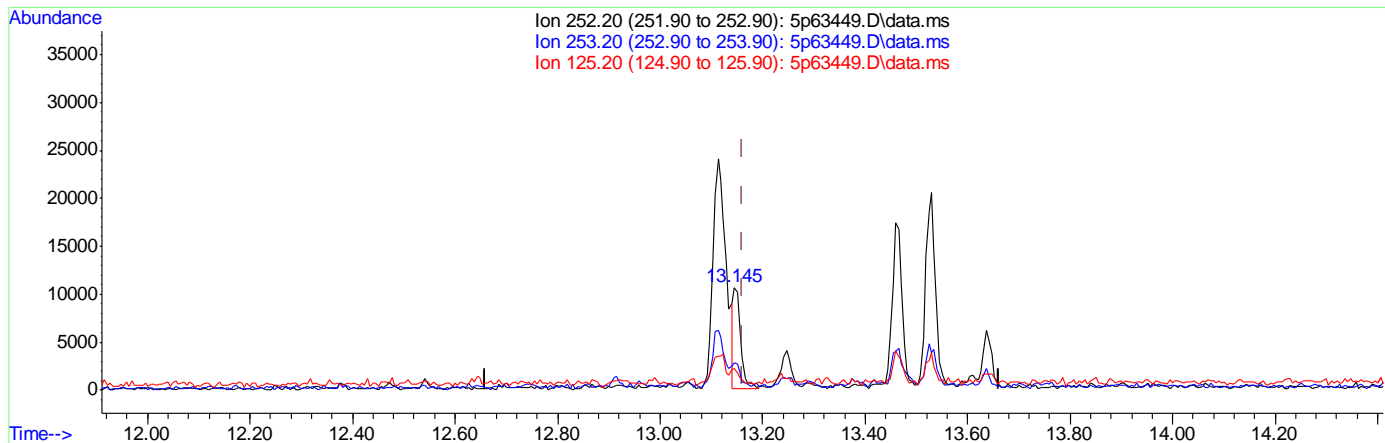
Ion	Exp%	Act%
252.20	100	100
253.20	23.80	23.66
125.20	10.90	11.64
0.00	0.00	0.00

9.1.8.4  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 01 08:07:15 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration



(94) Benzo[k]fluoranthene (t)

13.145min (-0.016) 0.94ppm

response 10659

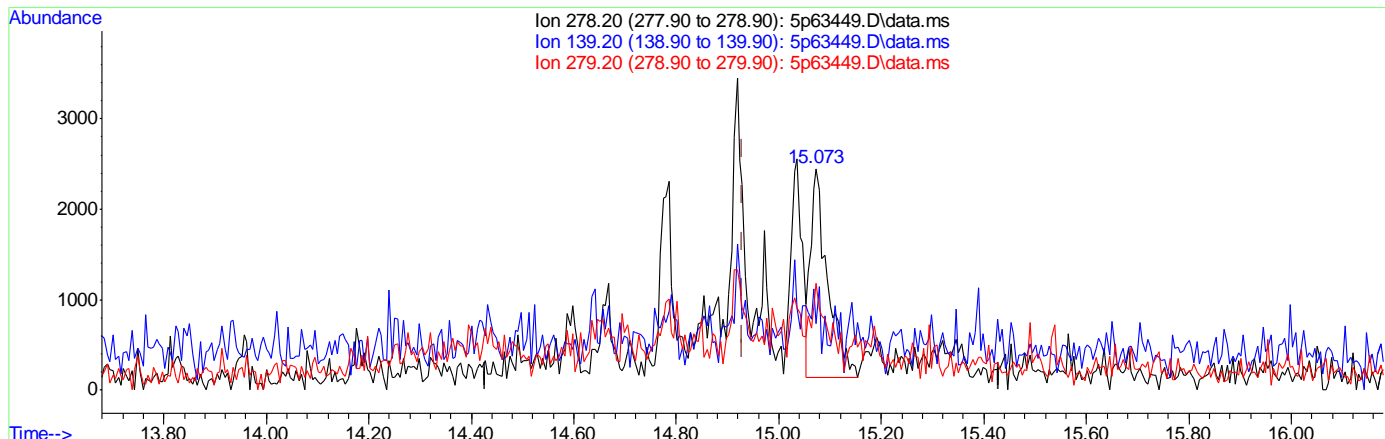
Ion	Exp%	Act%
252.20	100	100
253.20	22.10	22.23
125.20	10.20	13.43
0.00	0.00	0.00

9.1.8.5  
9

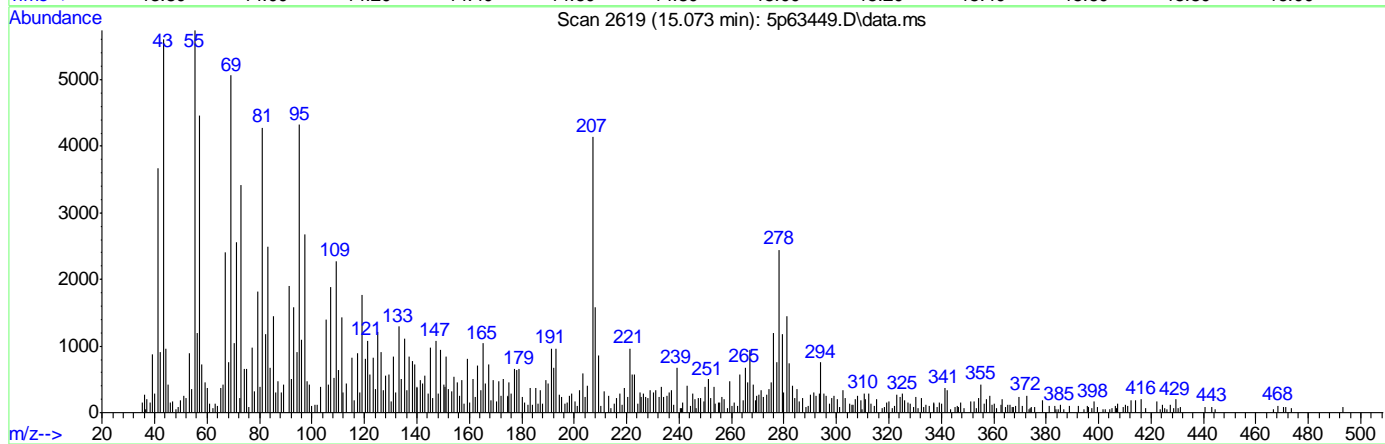
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63449.D  
 Acq On : 1 Oct 2019 6:58 am  
 Operator : chriss2  
 Sample : jc95555-4  
 Misc : op23015,e5p2977,30.6,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 01 08:07:15 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration



9.1.8.6  
9



(98) Dibenz[a,h]anthracene (t)

15.073min (+0.144) 0.50ppm

response 5439

Ion	Exp%	Act%
278.20	100	100
139.20	16.70	13.78
279.20	24.40	50.14
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63438.D  
 Acq On : 1 Oct 2019 2:31 am  
 Operator : chriss2  
 Sample : op23015-mb1  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 01 08:09:11 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.052	152	141938	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	503030	40.00	ppm	0.00
47) Acenaphthene-d10	6.921	164	278011	40.00	ppm	0.00
69) Phenanthrene-d10	8.353	188	510010	40.00	ppm	0.00
83) Chrysene-d12	11.628	240	459769	40.00	ppm	-0.01
91) Perylene-d12	13.604	264	520225	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.052	152	141938	40.00	ppm	0.00
103) Acenaphthene-d10a	6.921	164	278011	40.00	ppm	0.00
105) Chrysene-d12a	11.628	240	459769	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.353	188	510010	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	503030	40.00	ppm	0.00
112) Chrysene-d12b	11.628	240	459769	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.052	152	141938	40.00	ppm	0.00
116) Chrysene-d12c	11.628	240	459769	40.00	ppm	-0.01
118) Chrysene-d12d	11.628	240	459769	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.353	188	510087	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.909	112	216104	35.69	ppm	0.00
Spiked Amount	50.000		Recovery	=	71.38%	
8) Phenol-d5	3.764	99	325208	38.17	ppm	0.00
Spiked Amount	50.000		Recovery	=	76.34%	
25) Nitrobenzene-d5	4.565	82	323934	41.20	ppm	0.00
Spiked Amount	50.000		Recovery	=	82.40%	
51) 2-Fluorobiphenyl	6.291	172	411888	37.43	ppm	0.00
Spiked Amount	50.000		Recovery	=	74.86%	
73) 2,4,6-Tribromophenol	7.685	330	79702	38.80	ppm	0.00
Spiked Amount	50.000		Recovery	=	77.60%	
85) Terphenyl-d14	10.233	244	506905	42.37	ppm	0.00
Spiked Amount	50.000		Recovery	=	84.74%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

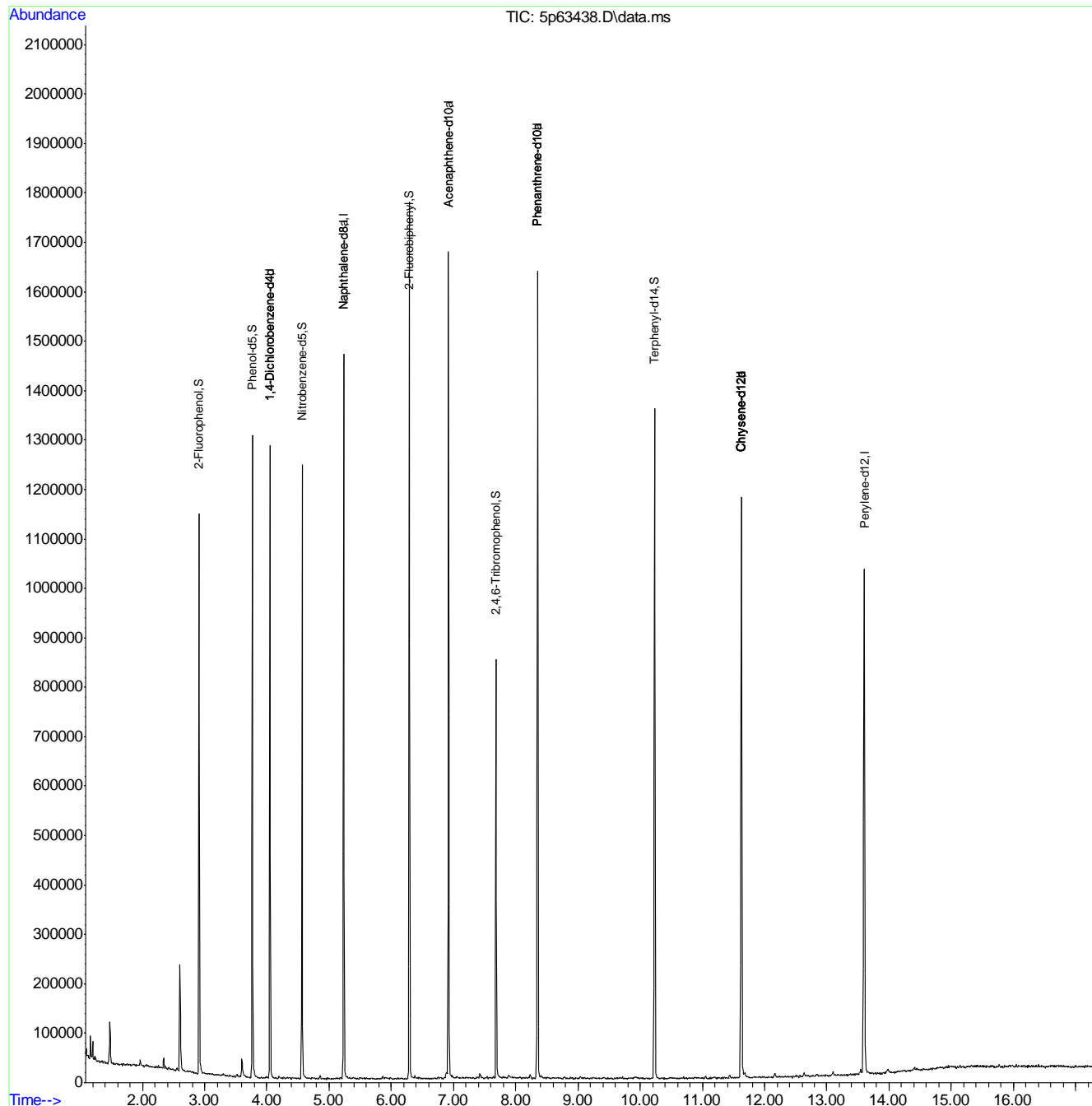
9.2.1  
9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63438.D  
 Acq On : 1 Oct 2019 2:31 am  
 Operator : chriss2  
 Sample : op23015-mb1  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 01 08:09:11 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:06:24 2019  
 Response via : Initial Calibration



9.2.1  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63439.D  
 Acq On : 1 Oct 2019 2:55 am  
 Operator : chriss2  
 Sample : op23015-bs1  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 01 08:18:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.052	152	124238	40.00	ppm	0.00
24) Naphthalene-d8	5.238	136	421056	40.00	ppm	0.00
47) Acenaphthene-d10	6.921	164	227852	40.00	ppm	0.00
69) Phenanthrene-d10	8.353	188	408751	40.00	ppm	0.00
83) Chrysene-d12	11.633	240	348893	40.00	ppm	0.00
91) Perylene-d12	13.604	264	429222	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.052	152	124238	40.00	ppm	0.00
103) Acenaphthene-d10a	6.921	164	227852	40.00	ppm	0.00
105) Chrysene-d12a	11.633	240	348893	40.00	ppm	0.00
107) Phenanthrene-d10a	8.353	188	408751	40.00	ppm	0.00
110) Naphthalene-d8a	5.238	136	421056	40.00	ppm	0.00
112) Chrysene-d12b	11.633	240	348852	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.052	152	124238	40.00	ppm	0.00
116) Chrysene-d12c	11.633	240	348893	40.00	ppm	0.00
118) Chrysene-d12d	11.633	240	348852	40.00	ppm	0.00
120) Phenanthrene-d10b	8.353	188	408751	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.909	112	168033	31.71	ppm	0.00
Spiked Amount	50.000		Recovery	=	63.42%	
8) Phenol-d5	3.769	99	236028	31.65	ppm	0.00
Spiked Amount	50.000		Recovery	=	63.30%	
25) Nitrobenzene-d5	4.565	82	229093	34.81	ppm	0.00
Spiked Amount	50.000		Recovery	=	69.62%	
51) 2-Fluorobiphenyl	6.291	172	277300	30.75	ppm	0.00
Spiked Amount	50.000		Recovery	=	61.50%	
73) 2,4,6-Tribromophenol	7.685	330	55541	33.74	ppm	0.00
Spiked Amount	50.000		Recovery	=	67.48%	
85) Terphenyl-d14	10.233	244	388650	42.81	ppm	0.00
Spiked Amount	50.000		Recovery	=	85.62%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.494	88	48734	18.01	ppm	96
3) Pyridine	1.755	79	169431	24.14	ppm	93
4) N-Nitrosodimethylamine	1.729	74	121432	30.26	ppm	85
6) Indene	4.287	116	247695	29.96	ppm	97
7) Cumene	3.337	105	372124	27.72	ppm	98
9) Phenol	3.780	94	235116	27.89	ppm	73
10) Aniline	3.759	93	254052	27.39	ppm	64
11) bis(2-Chloroethyl)ether	3.828	93	181507	30.24	ppm	95
12) 2-Chlorophenol	3.865	128	141374	27.98	ppm	92
13) Decane	3.940	43	193128	30.48	ppm	95
14) 1,3-Dichlorobenzene	3.999	146	135627	26.53	ppm	97
15) 1,4-Dichlorobenzene	4.068	146	133882	26.54	ppm	95
16) Benzyl alcohol	4.197	108	110828	31.90	ppm	85

9.3.1  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63439.D  
 Acq On : 1 Oct 2019 2:55 am  
 Operator : chriss2  
 Sample : op23015-bs1  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 01 08:18:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.202	146	129623	27.48	ppm	96
18) Acetophenone	4.432	105	224186	27.55	ppm	96
19) 2-Methylphenol	4.325	108	136402	26.70	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.325	45	278130	38.88	ppm #	55
21) 3&4-Methylphenol	4.469	108	151196	29.36	ppm	97
22) n-Nitroso-di-n-propyla...	4.448	70	152539	31.80	ppm	90
23) Hexachloroethane	4.512	201	48913	25.98	ppm	89
26) Nitrobenzene	4.587	77	216372	31.23	ppm	96
27) Quinoline	5.580	129	271181	30.20	ppm	98
28) Isophorone	4.816	82	389957	33.30	ppm	96
29) 2-Nitrophenol	4.886	139	76297	29.50	ppm	94
30) 2,4-Dimethylphenol	4.966	107	173041	31.98	ppm	98
31) Benzoic acid	5.110	105	156614	37.47	ppm	94
32) bis(2-Chloroethoxy)met...	5.041	93	226787	32.46	ppm	97
33) 2,4-Dichlorophenol	5.126	162	106823	29.94	ppm	97
34) 2,6-Dichlorophenol	5.335	162	99613	29.99	ppm	93
36) 1,2,4-Trichlorobenzene	5.190	180	115670	28.92	ppm	98
38) Naphthalene	5.254	128	364175	30.05	ppm	99
39) 4-Chloroaniline	5.329	127	122283	21.61	ppm	91
40) 2,3-Dichloroaniline	6.200	161	124034	27.87	ppm	95
41) Caprolactam	5.676	55	99729	35.40	ppm	94
42) Hexachlorobutadiene	5.399	225	76528	31.10	ppm	98
43) 4-Chloro-3-methylphenol	5.837	107	161056	33.11	ppm	97
44) 2-Methylnaphthalene	5.922	141	205757	32.02	ppm	95
45) 1-Methylnaphthalene	6.013	141	199616	27.28	ppm	93
46) Dimethylnaphthalene	6.531	156	211703	29.11	ppm	98
48) Hexachlorocyclopentadiene	6.088	237	144281	56.08	ppm	97
49) 2,4,6-Trichlorophenol	6.216	196	78429	29.48	ppm	98
50) 2,4,5-Trichlorophenol	6.253	196	84019	29.34	ppm	98
52) 2-Chloronaphthalene	6.387	162	209909	27.92	ppm	94
53) Biphenyl	6.382	154	283469	27.99	ppm	100
54) 2-Nitroaniline	6.505	65	139013	33.70	ppm	83
55) Dimethylphthalate	6.702	163	286789	31.51	ppm	99
56) Acenaphthylene	6.782	152	387783	30.68	ppm	97
57) 2,6-Dinitrotoluene	6.745	165	60802	31.00	ppm	73
58) 3-Nitroaniline	6.900	138	66573	27.14	ppm	85
59) Acenaphthene	6.953	153	231958	30.14	ppm	96
60) 2,4-Dinitrophenol	7.012	184	85211	76.81	ppm	74
61) 4-Nitrophenol	7.114	109	60748	36.74	ppm #	75
62) Dibenzofuran	7.119	168	337471	30.69	ppm	79
63) 2,4-Dinitrotoluene	7.135	165	79444	30.35	ppm	90
64) 2,3,4,6-Tetrachlorophenol	7.258	232	73387	31.32	ppm	97
65) Diethylphthalate	7.386	149	321589	32.53	ppm	99
66) Fluorene	7.450	166	282012	32.15	ppm	97
67) 4-Chlorophenyl-phenyle...	7.466	204	127179	29.29	ppm	91
68) 4-Nitroaniline	7.493	138	73102	29.21	ppm #	71
70) 4,6-Dinitro-2-methylph...	7.530	198	52611	35.20	ppm #	53
71) n-Nitrosodiphenylamine	7.589	169	205064	33.47	ppm	98
72) 1,2-Diphenylhydrazine	7.621	77	468468	36.68	ppm	95
74) 4-Bromophenyl-phenylether	7.936	248	85605	32.42	ppm	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63439.D  
 Acq On : 1 Oct 2019 2:55 am  
 Operator : chriss2  
 Sample : op23015-bs1  
 Misc : op23015,e5p2977,30.0,,,1,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 01 08:18:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
75) Hexachlorobenzene	7.990	284	102380	31.68	ppm	91
76) Pentachlorophenol	8.193	266	68464	38.55	ppm	99
77) Phenanthrene	8.380	178	352552	31.09	ppm	99
78) Anthracene	8.428	178	372028	31.46	ppm	99
79) Carbazole	8.609	167	406259	33.03	ppm	100
80) Di-n-butylphthalate	9.042	149	570463	34.23	ppm	99
81) Fluoranthene	9.699	202	502848	35.04	ppm	97
82) Octadecane	8.326	57	279375	38.20	ppm	95
84) Pyrene	9.972	202	497230	34.00	ppm	99
86) Butylbenzylphthalate	10.949	149	264751	34.27	ppm	91
87) Benzo[a]anthracene	11.617	228	446564	33.54	ppm	99
88) 3,3'-Dichlorobenzidine	11.638	252	268924	48.87	ppm	98
89) Chrysene	11.665	228	396239	31.66	ppm	98
90) bis(2-Ethylhexyl)phtha...	11.841	149	344030	33.53	ppm	100
92) Di-n-octylphthalate	12.771	149	621257	34.55	ppm	95
93) Benzo[b]fluoranthene	13.113	252	478563	32.37	ppm	98
94) Benzo[k]fluoranthene	13.150	252	398444	30.68	ppm	99
95) Benzo[a]pyrene	13.524	252	430760	32.45	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.881	276	396355	32.53	ppm	99
98) Dibenz[a,h]anthracene	14.919	278	376508	30.34	ppm	96
99) 7,12-Dimethylbenz(a)an...	13.118	256	194343	29.21	ppm	98
100) Benzo[g,h,i]perylene	15.186	276	393874	31.90	ppm	98
102) Benzaldehyde	3.652	105	109609	25.74	ppm	95
104) 1,2,4,5-Tetrachloroben...	6.093	216	99431	28.96	ppm	100
108) Atrazine	8.134	215	40093	40.88	ppm #	75
109) Pentachloronitrobenzene	8.203	295	17596	30.63	ppm	94
117) Benzidine	9.908	184	272726	38.32	ppm	99

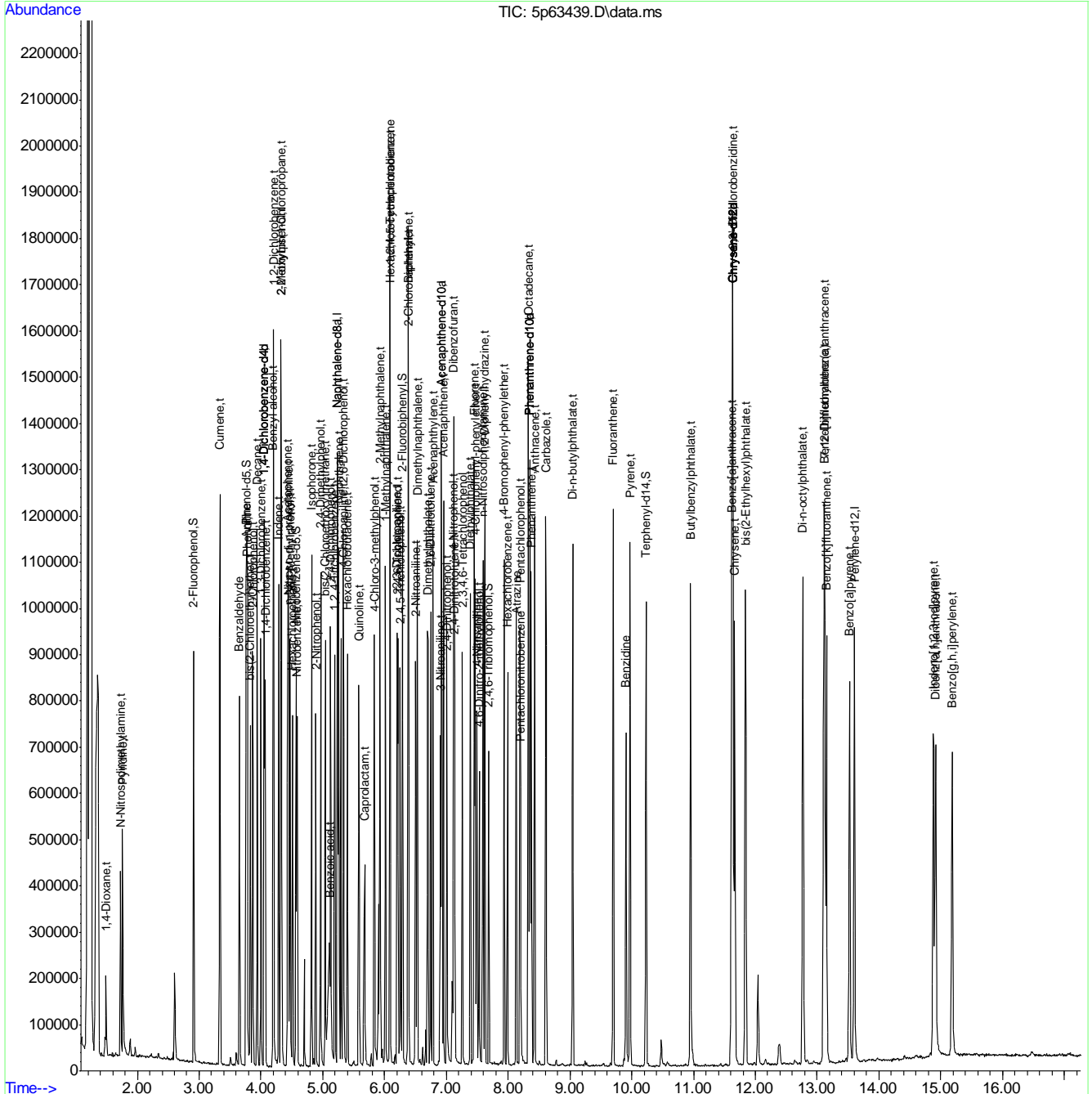
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.3.1  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
Data File : 5p63439.D  
Acq On : 1 Oct 2019 2:55 am  
Operator : chriss2  
Sample : op23015-bs1  
Misc : op23015,e5p2977,30.0,,,1,1  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 01 08:18:01 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Tue Oct 01 08:17:31 2019  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63456.D  
 Acq On : 1 Oct 2019 9:48 am  
 Operator : chriss2  
 Sample : op23015-ms  
 Misc : op23015,e5p2977,30.4,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 01 10:06:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.058	152	116333	40.00	ppm	0.00
24) Naphthalene-d8	5.244	136	404363	40.00	ppm	0.00
47) Acenaphthene-d10	6.927	164	217274	40.00	ppm	0.00
69) Phenanthrene-d10	8.364	188	382363	40.00	ppm	0.00
83) Chrysene-d12	11.649	240	300510	40.00	ppm	0.01
91) Perylene-d12	13.626	264	372226	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4b	4.058	152	116333	40.00	ppm	0.00
103) Acenaphthene-d10a	6.927	164	217274	40.00	ppm	0.00
105) Chrysene-d12a	11.649	240	300510	40.00	ppm	0.01
107) Phenanthrene-d10a	8.364	188	382363	40.00	ppm	0.00
110) Naphthalene-d8a	5.244	136	404363	40.00	ppm	0.00
112) Chrysene-d12b	11.649	240	300510	40.00	ppm	0.01
114) 1,4-Dichlorobenzene-d4c	4.058	152	116333	40.00	ppm	0.00
116) Chrysene-d12c	11.649	240	300510	40.00	ppm	0.01
118) Chrysene-d12d	11.649	240	300510	40.00	ppm	0.01
120) Phenanthrene-d10b	8.364	188	382376	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.920	112	166726	33.60	ppm	0.02
Spiked Amount	50.000		Recovery	=	67.20%	
8) Phenol-d5	3.780	99	239473	34.29	ppm	0.01
Spiked Amount	50.000		Recovery	=	68.58%	
25) Nitrobenzene-d5	4.571	82	234827	37.16	ppm	0.00
Spiked Amount	50.000		Recovery	=	74.32%	
51) 2-Fluorobiphenyl	6.296	172	283713	32.99	ppm	0.00
Spiked Amount	50.000		Recovery	=	65.98%	
73) 2,4,6-Tribromophenol	7.696	330	55429	36.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	72.00%	
85) Terphenyl-d14	10.244	244	355954	45.52	ppm	0.01
Spiked Amount	50.000		Recovery	=	91.04%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.494	88	47072	18.58	ppm	98
3) Pyridine	1.761	79	140656	21.40	ppm	90
4) N-Nitrosodimethylamine	1.729	74	114925	30.59	ppm	70
6) Indene	4.293	116	258017	33.33	ppm	97
7) Cumene	3.337	105	391513	31.15	ppm	97
9) Phenol	3.791	94	220401	27.92	ppm	76
10) Aniline	3.764	93	181131	20.85	ppm	# 62
11) bis(2-Chloroethyl)ether	3.833	93	176962	31.49	ppm	96
12) 2-Chlorophenol	3.876	128	149710	31.64	ppm	98
13) Decane	3.940	43	191904	32.34	ppm	91
14) 1,3-Dichlorobenzene	4.004	146	139585	29.16	ppm	95
15) 1,4-Dichlorobenzene	4.074	146	139158	29.46	ppm	97
16) Benzyl alcohol	4.207	108	114855	35.30	ppm	88

9.4.1  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63456.D  
 Acq On : 1 Oct 2019 9:48 am  
 Operator : chriss2  
 Sample : op23015-ms  
 Misc : op23015,e5p2977,30.4,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 01 10:06:18 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Tue Oct 01 08:17:31 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.207	146	132105	29.91	ppm	95
18) Acetophenone	4.437	105	245596	32.23	ppm	93
19) 2-Methylphenol	4.336	108	151162	31.60	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.330	45	284991	42.54	ppm	85
21) 3&4-Methylphenol	4.485	108	165449	34.31	ppm	97
22) n-Nitroso-di-n-propyla...	4.453	70	155766	34.68	ppm	84
23) Hexachloroethane	4.517	201	51637	29.29	ppm	92
26) Nitrobenzene	4.592	77	228129	34.28	ppm	94
27) Quinoline	5.586	129	286533	33.22	ppm	97
28) Isophorone	4.827	82	407464	36.23	ppm	97
29) 2-Nitrophenol	4.891	139	82035	33.03	ppm	84
30) 2,4-Dimethylphenol	4.977	107	191881	36.93	ppm	98
31) Benzoic acid	5.126	105	157501	39.24	ppm	85
32) bis(2-Chloroethoxy)met...	5.046	93	233119	34.74	ppm	97
33) 2,4-Dichlorophenol	5.137	162	113128	33.01	ppm	97
34) 2,6-Dichlorophenol	5.345	162	106243	33.31	ppm	97
36) 1,2,4-Trichlorobenzene	5.201	180	120417	31.35	ppm	96
38) Naphthalene	5.265	128	384306	33.02	ppm	99
39) 4-Chloroaniline	5.335	127	91383	16.82	ppm	84
40) 2,3-Dichloroaniline	6.211	161	128012	29.95	ppm	100
41) Caprolactam	5.687	55	97833	36.17	ppm	95
42) Hexachlorobutadiene	5.404	225	80444	34.04	ppm	99
43) 4-Chloro-3-methylphenol	5.847	107	171329	36.68	ppm	91
44) 2-Methylnaphthalene	5.933	141	213064	34.53	ppm	92
45) 1-Methylnaphthalene	6.024	141	215443	30.66	ppm	93
46) Dimethylnaphthalene	6.537	156	224568	32.15	ppm	98
48) Hexachlorocyclopentadiene	6.093	237	106526	43.42	ppm	98
49) 2,4,6-Trichlorophenol	6.227	196	85687	33.77	ppm	97
50) 2,4,5-Trichlorophenol	6.269	196	89400	32.74	ppm	95
52) 2-Chloronaphthalene	6.398	162	217883	30.39	ppm	98
53) Biphenyl	6.387	154	294951	30.55	ppm	99
54) 2-Nitroaniline	6.515	65	137203	34.88	ppm	91
55) Dimethylphthalate	6.708	163	293694	33.84	ppm	99
56) Acenaphthylene	6.788	152	403880	33.51	ppm	99
57) 2,6-Dinitrotoluene	6.756	165	65387	34.96	ppm	87
58) 3-Nitroaniline	6.911	138	64587	27.61	ppm	97
59) Acenaphthene	6.959	153	238603	32.51	ppm	94
60) 2,4-Dinitrophenol	7.023	184	65191	61.62	ppm	70
61) 4-Nitrophenol	7.135	109	63346	40.18	ppm #	70
62) Dibenzofuran	7.130	168	346924	33.09	ppm	81
63) 2,4-Dinitrotoluene	7.146	165	80364	32.19	ppm	97
64) 2,3,4,6-Tetrachlorophenol	7.269	232	77791	34.82	ppm	93
65) Diethylphthalate	7.397	149	337387	35.79	ppm	98
66) Fluorene	7.461	166	291574	34.86	ppm	97
67) 4-Chlorophenyl-phenyle...	7.477	204	132225	31.93	ppm	97
68) 4-Nitroaniline	7.504	138	66165	27.73	ppm #	65
70) 4,6-Dinitro-2-methylph...	7.541	198	43270	30.95	ppm	89
71) n-Nitrosodiphenylamine	7.594	169	206909	36.10	ppm	99
72) 1,2-Diphenylhydrazine	7.626	77	466340	39.03	ppm	93
74) 4-Bromophenyl-phenylether	7.942	248	89040	36.04	ppm	95



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63456.D  
 Acq On : 1 Oct 2019 9:48 am  
 Operator : chriss2  
 Sample : op23015-ms  
 Misc : op23015,e5p2977,30.4,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 01 10:06:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
75) Hexachlorobenzene	8.000	284	102565	33.93	ppm	94
76) Pentachlorophenol	8.203	266	67012	40.34	ppm	98
77) Phenanthrene	8.385	178	362656	34.19	ppm	99
78) Anthracene	8.438	178	376593	34.04	ppm	99
79) Carbazole	8.620	167	405122	35.21	ppm	99
80) Di-n-butylphthalate	9.053	149	580668	37.25	ppm	98
81) Fluoranthene	9.715	202	474600	35.35	ppm	96
82) Octadecane	8.332	57	269445	39.38	ppm	95
84) Pyrene	9.988	202	488644	38.80	ppm	99
86) Butylbenzylphthalate	10.965	149	255592	38.41	ppm	96
87) Benzo[a]anthracene	11.638	228	405789	35.38	ppm	98
88) 3,3'-Dichlorobenzidine	11.654	252	224036	47.27	ppm	97
89) Chrysene	11.687	228	367391	34.09	ppm	96
90) bis(2-Ethylhexyl)phtha...	11.852	149	331088	37.47	ppm	99
92) Di-n-octylphthalate	12.787	149	564459	36.20	ppm	97
93) Benzo[b]fluoranthene	13.134	252	437335	34.12	ppm	97
94) Benzo[k]fluoranthene	13.172	252	363209	32.25	ppm	99
95) Benzo[a]pyrene	13.551	252	386468	33.57	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.913	276	354514	33.56	ppm	95
98) Dibenz[a,h]anthracene	14.945	278	338886	31.49	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.140	256	151290	26.22	ppm	98
100) Benzo[g,h,i]perylene	15.218	276	349324	32.63	ppm	97
102) Benzaldehyde	3.657	105	111414	27.94	ppm	94
104) 1,2,4,5-Tetrachloroben...	6.099	216	103994	31.76	ppm	98
108) Atrazine	8.145	215	39496	43.05	ppm #	79
109) Pentachloronitrobenzene	8.214	295	15545	28.92	ppm	84
117) Benzidine	9.918	184	34317	5.60	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

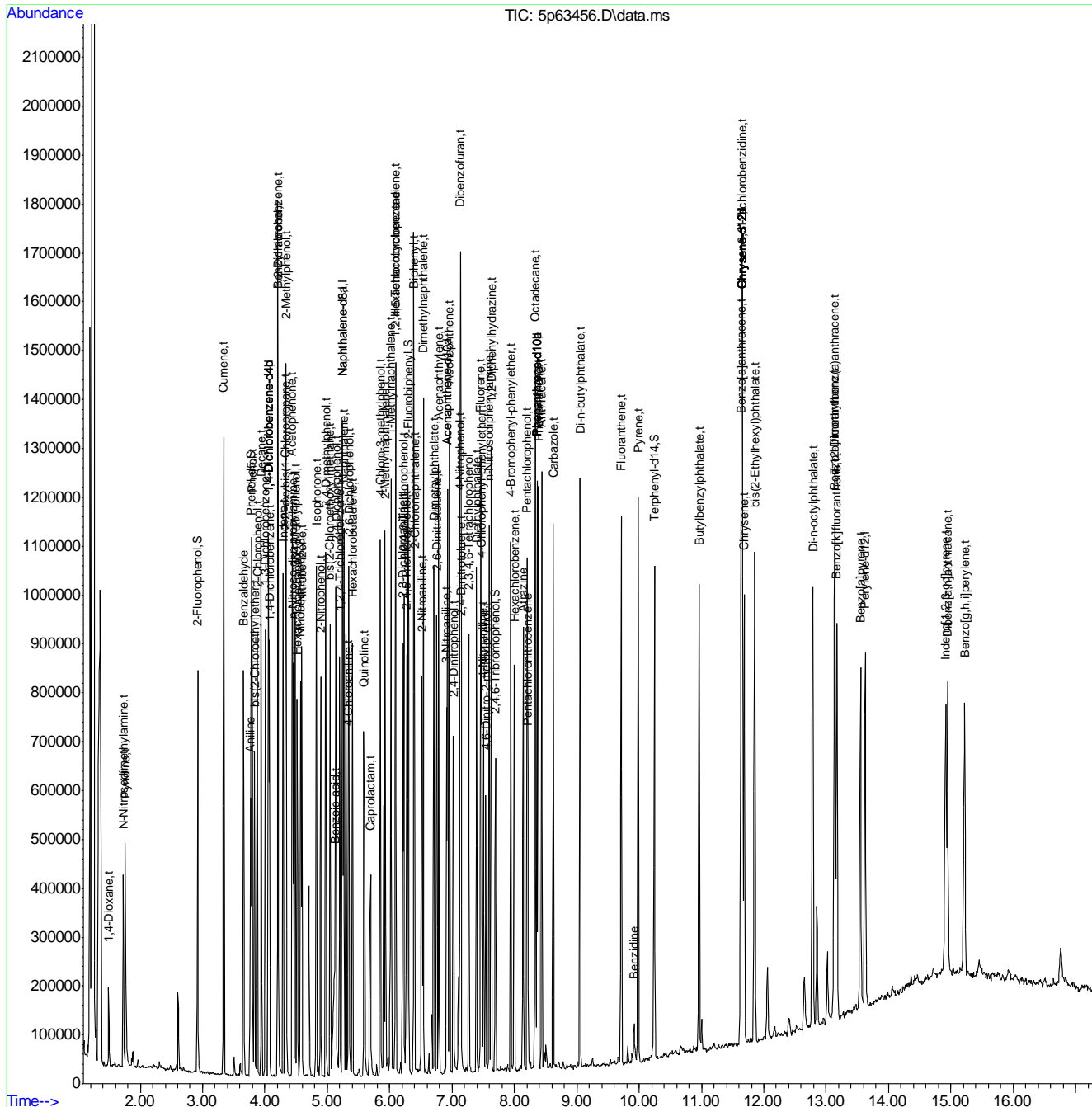
9.4.1  
9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\
Data File : 5p63456.D
Acq On : 1 Oct 2019 9:48 am
Operator : chriss2
Sample : op23015-ms
Misc : op23015,e5p2977,30.4,,,1,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Oct 01 10:06:18 2019
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue Oct 01 08:17:31 2019
Response via : Initial Calibration



9.4.1
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63457.D  
 Acq On : 1 Oct 2019 10:12 am  
 Operator : chriss2  
 Sample : op23015-msd  
 Misc : op23015,e5p2977,30.4,,,1,1  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Oct 01 11:54:13 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.058	152	103211	40.00	ppm	0.00
24) Naphthalene-d8	5.244	136	359424	40.00	ppm	0.00
47) Acenaphthene-d10	6.926	164	191523	40.00	ppm	0.00
69) Phenanthrene-d10	8.363	188	357980	40.00	ppm	0.00
83) Chrysene-d12	11.654	240	284551	40.00	ppm	0.02
91) Perylene-d12	13.631	264	361035	40.00	ppm	0.02
101) 1,4-Dichlorobenzene-d4b	4.058	152	103211	40.00	ppm	0.00
103) Acenaphthene-d10a	6.926	164	191523	40.00	ppm	0.00
105) Chrysene-d12a	11.654	240	284551	40.00	ppm	0.02
107) Phenanthrene-d10a	8.363	188	357980	40.00	ppm	0.00
110) Naphthalene-d8a	5.244	136	359424	40.00	ppm	0.00
112) Chrysene-d12b	11.654	240	284487	40.00	ppm	0.02
114) 1,4-Dichlorobenzene-d4c	4.058	152	103211	40.00	ppm	0.00
116) Chrysene-d12c	11.654	240	284551	40.00	ppm	0.02
118) Chrysene-d12d	11.654	240	284487	40.00	ppm	0.02
120) Phenanthrene-d10b	8.363	188	357714	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	2.920	112	161794	36.75	ppm	0.02
Spiked Amount	50.000		Recovery	=	73.50%	
8) Phenol-d5	3.780	99	225801	36.45	ppm	0.01
Spiked Amount	50.000		Recovery	=	72.90%	
25) Nitrobenzene-d5	4.576	82	225258	40.10	ppm	0.00
Spiked Amount	50.000		Recovery	=	80.20%	
51) 2-Fluorobiphenyl	6.296	172	269109	35.50	ppm	0.00
Spiked Amount	50.000		Recovery	=	71.00%	
73) 2,4,6-Tribromophenol	7.696	330	54031	37.48	ppm	0.00
Spiked Amount	50.000		Recovery	=	74.96%	
85) Terphenyl-d14	10.244	244	350801	47.38	ppm	0.01
Spiked Amount	50.000		Recovery	=	94.76%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.488	88	45282	20.15	ppm	90
3) Pyridine	1.755	79	133548	22.90	ppm	88
4) N-Nitrosodimethylamine	1.723	74	112572	33.77	ppm	77
6) Indene	4.293	116	242764	35.35	ppm	98
7) Cumene	3.336	105	368370	33.04	ppm	96
9) Phenol	3.790	94	216830	30.96	ppm	76
10) Aniline	3.764	93	183747	23.85	ppm	64
11) bis(2-Chloroethyl)ether	3.833	93	175403	35.18	ppm	96
12) 2-Chlorophenol	3.876	128	143480	34.18	ppm	98
13) Decane	3.940	43	178794	33.96	ppm	90
14) 1,3-Dichlorobenzene	4.004	146	134282	31.62	ppm	99
15) 1,4-Dichlorobenzene	4.074	146	133926	31.96	ppm	98
16) Benzyl alcohol	4.207	108	110749	38.37	ppm	87

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63457.D  
 Acq On : 1 Oct 2019 10:12 am  
 Operator : chriss2  
 Sample : op23015-msd  
 Misc : op23015,e5p2977,30.4,,,1,1  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Oct 01 11:54:13 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Tue Oct 01 08:17:31 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.207	146	125711	32.08	ppm	96
18) Acetophenone	4.437	105	239378	35.40	ppm	92
19) 2-Methylphenol	4.341	108	144095	33.96	ppm	99
20) 2,2'-oxybis(1-Chloropr...	4.330	45	276259	46.48	ppm	89
21) 3&4-Methylphenol	4.485	108	155321	36.31	ppm	99
22) n-Nitroso-di-n-propyla...	4.458	70	148734	37.32	ppm	91
23) Hexachloroethane	4.517	201	47466	30.35	ppm	85
26) Nitrobenzene	4.592	77	223140	37.73	ppm	91
27) Quinoline	5.585	129	281903	36.77	ppm	98
28) Isophorone	4.827	82	402804	40.29	ppm	97
29) 2-Nitrophenol	4.891	139	78919	35.75	ppm	77
30) 2,4-Dimethylphenol	4.976	107	186385	40.36	ppm	98
31) Benzoic acid	5.131	105	157908	44.26	ppm	93
32) bis(2-Chloroethoxy)met...	5.046	93	227239	38.10	ppm	97
33) 2,4-Dichlorophenol	5.137	162	111051	36.46	ppm	97
34) 2,6-Dichlorophenol	5.345	162	104056	36.70	ppm	95
36) 1,2,4-Trichlorobenzene	5.201	180	116176	34.03	ppm	95
38) Naphthalene	5.265	128	373012	36.05	ppm	99
39) 4-Chloroaniline	5.334	127	93138	19.28	ppm	87
40) 2,3-Dichloroaniline	6.210	161	125127	32.94	ppm	98
41) Caprolactam	5.687	55	99749	41.48	ppm	96
42) Hexachlorobutadiene	5.404	225	79088	37.65	ppm	97
43) 4-Chloro-3-methylphenol	5.847	107	164209	39.55	ppm	92
44) 2-Methylnaphthalene	5.933	141	209105	38.12	ppm	98
45) 1-Methylnaphthalene	6.024	141	209464	33.53	ppm	95
46) Dimethylnaphthalene	6.536	156	211283	34.03	ppm	98
48) Hexachlorocyclopentadiene	6.093	237	98106	45.37	ppm	96
49) 2,4,6-Trichlorophenol	6.227	196	82912	37.07	ppm	100
50) 2,4,5-Trichlorophenol	6.269	196	89109	37.02	ppm	94
52) 2-Chloronaphthalene	6.397	162	213642	33.81	ppm	98
53) Biphenyl	6.387	154	278463	32.72	ppm	99
54) 2-Nitroaniline	6.515	65	137428	39.64	ppm	91
55) Dimethylphthalate	6.707	163	285399	37.30	ppm	100
56) Acenaphthylene	6.787	152	397537	37.42	ppm	100
57) 2,6-Dinitrotoluene	6.755	165	64823	39.32	ppm	80
58) 3-Nitroaniline	6.910	138	61743	29.95	ppm	89
59) Acenaphthene	6.958	153	238784	36.91	ppm	98
60) 2,4-Dinitrophenol	7.023	184	60311	64.68	ppm	65
61) 4-Nitrophenol	7.135	109	62519	44.99	ppm #	72
62) Dibenzofuran	7.129	168	336638	36.42	ppm	82
63) 2,4-Dinitrotoluene	7.145	165	82175	37.34	ppm	99
64) 2,3,4,6-Tetrachlorophenol	7.268	232	77870	39.54	ppm	92
65) Diethylphthalate	7.396	149	319001	38.39	ppm	100
66) Fluorene	7.461	166	289748	39.30	ppm	99
67) 4-Chlorophenyl-phenyle...	7.477	204	129953	35.60	ppm	95
68) 4-Nitroaniline	7.503	138	67810	32.24	ppm #	75
70) 4,6-Dinitro-2-methylph...	7.541	198	40655	31.06	ppm	81
71) n-Nitrosodiphenylamine	7.594	169	210162	39.17	ppm	97
72) 1,2-Diphenylhydrazine	7.626	77	464826	41.56	ppm	93
74) 4-Bromophenyl-phenylether	7.941	248	86131	37.24	ppm	90

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63457.D  
 Acq On : 1 Oct 2019 10:12 am  
 Operator : chriss2  
 Sample : op23015-msd  
 Misc : op23015,e5p2977,30.4,,,1,1  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Oct 01 11:54:13 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:17:31 2019  
 Response via : Initial Calibration

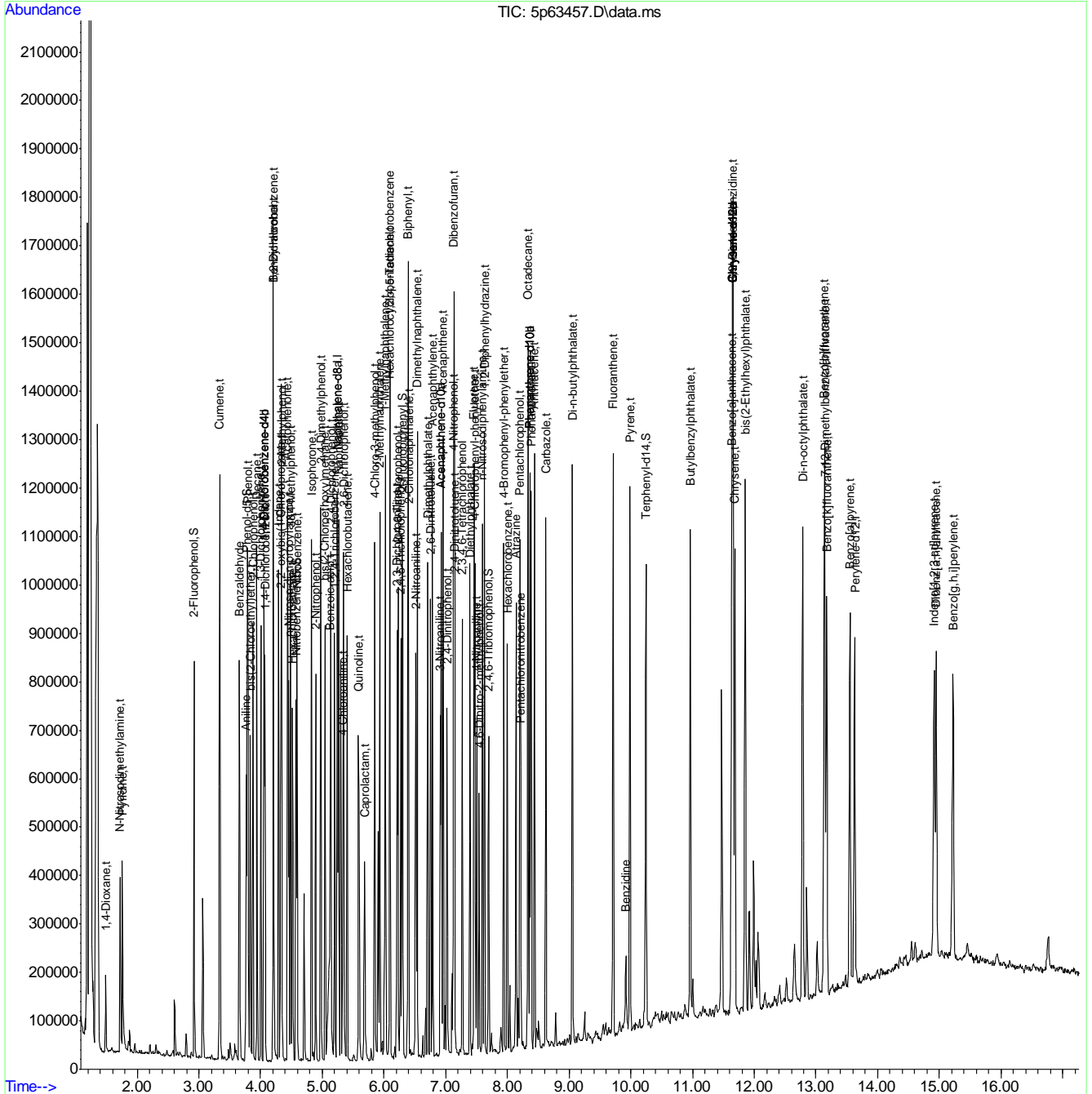
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
75) Hexachlorobenzene	8.000	284	101084	35.72	ppm	90
76) Pentachlorophenol	8.203	266	69239	44.52	ppm	97
77) Phenanthrene	8.385	178	373832	37.64	ppm	99
78) Anthracene	8.438	178	385656	37.23	ppm	99
79) Carbazole	8.625	167	401920	37.32	ppm	99
80) Di-n-butylphthalate	9.053	149	564386	38.67	ppm	98
81) Fluoranthene	9.715	202	503214	40.04	ppm	97
82) Octadecane	8.331	57	274701	42.88	ppm	96
84) Pyrene	9.987	202	508618	42.65	ppm	98
86) Butylbenzylphthalate	10.965	149	253617	40.25	ppm	95
87) Benzo[a]anthracene	11.638	228	430170	39.61	ppm	100
88) 3,3'-Dichlorobenzidine	11.654	252	249284	55.55	ppm	99
89) Chrysene	11.686	228	391945	38.40	ppm	97
90) bis(2-Ethylhexyl)phtha...	11.852	149	355955	42.54	ppm	98
92) Di-n-octylphthalate	12.787	149	616012	40.73	ppm	96
93) Benzo[b]fluoranthene	13.139	252	455800	36.66	ppm	99
94) Benzo[k]fluoranthene	13.177	252	414812	37.97	ppm	98
95) Benzo[a]pyrene	13.551	252	426518	38.20	ppm	99
96) Indeno[1,2,3-cd]pyrene	14.913	276	386555	37.72	ppm	96
98) Dibenz[a,h]anthracene	14.950	278	359248	34.42	ppm	100
99) 7,12-Dimethylbenz(a)an...	13.145	256	155026	27.70	ppm	96
100) Benzo[g,h,i]perylene	15.223	276	375708	36.18	ppm	96
102) Benzaldehyde	3.657	105	114828	32.46	ppm	89
104) 1,2,4,5-Tetrachloroben...	6.098	216	101878	35.30	ppm	98
108) Atrazine	8.144	215	41221	47.99	ppm #	76
109) Pentachloronitrobenzene	8.214	295	15767	31.34	ppm	90
117) Benzidine	9.918	184	63366	10.92	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\
Data File : 5p63457.D
Acq On : 1 Oct 2019 10:12 am
Operator : chriss2
Sample : op23015-msd
Misc : op23015,e5p2977,30.4,,,1,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Oct 01 11:54:13 2019
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Tue Oct 01 08:17:31 2019
Response via : Initial Calibration



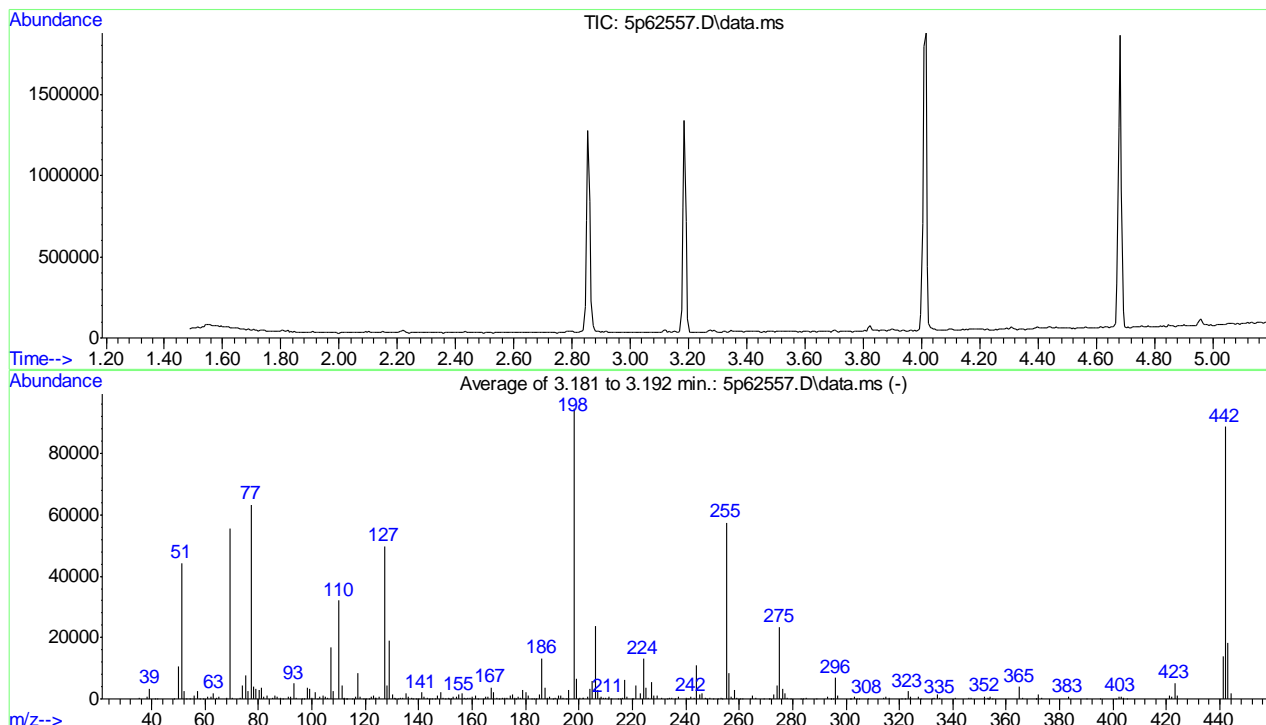
9.4.2
9

DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62557.D  
 Acq On : 6 Sep 2019 11:53 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 318, 319, 320; Background Corrected with Scan 314

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.8	44283	PASS
68	69	0.00	2	1.0	556	PASS
69	198	0.00	100	58.7	55569	PASS
70	69	0.00	2	0.8	436	PASS
127	198	40	60	52.6	49805	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	94698	PASS
199	198	5	9	7.0	6628	PASS
275	198	10	30	24.9	23590	PASS
365	198	1	100	4.1	3879	PASS
441	443	0.10	100	76.2	13837	PASS
442	198	40	100	93.8	88808	PASS
443	442	17	23	20.4	18155	PASS

9.5.1  
9

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	218	56.05	1124	70.05	436	83.10	974
38.10	697	57.10	2695	73.15	334	85.10	434
39.10	3349	58.00	82	74.10	4508	86.05	1107
41.15	77	59.10	78	75.10	7830	87.05	660
42.05	75	61.05	615	76.10	2747	88.05	406
48.10	2	62.15	706	77.10	63370	89.10	104
50.10	10587	63.10	1922	78.15	4179	91.10	885
51.10	44283	64.10	305	79.10	3143	92.10	879
52.15	2722	65.05	848	80.05	2945	93.05	5044
53.05	54	68.15	556	81.10	3611	94.05	353
54.10	193	69.10	55569	82.05	750	96.05	122

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.20	31	108.10	2646	119.10	118	130.10	1518
98.10	3835	110.10	32162	120.10	155	131.00	96
99.10	3439	111.10	4463	121.40	71	131.15	217
100.10	294	111.80	98	122.10	833	132.10	70
101.10	2184	112.05	535	123.10	1049	133.10	257
102.15	159	112.90	82	123.90	210	134.10	476
103.05	753	113.10	69	124.05	464	135.10	1723
104.05	984	115.15	150	125.15	650	136.15	607
105.00	859	116.15	748	127.10	49805	137.15	556
105.90	236	117.10	8276	128.10	4259	137.90	76
107.10	16848	118.15	714	129.10	18898	139.00	68

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
140.00	66	151.10	244	160.10	673	172.00	353
141.10	2143	151.30	83	161.05	1043	173.10	475
142.05	758	151.95	145	162.15	175	174.05	959
143.05	505	153.05	791	164.10	115	175.10	1481
144.10	73	154.10	609	165.05	563	176.10	387
145.00	75	155.15	1341	166.05	627	176.30	150
146.10	141	156.15	1885	167.10	3803	177.05	732
147.10	1044	157.05	278	168.05	2065	178.10	219
148.10	2123	157.30	141	169.10	311	179.05	3046
149.10	552	158.10	470	170.00	105	180.10	2133
150.00	157	159.05	434	171.15	256	181.05	1242

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
182.10	152	193.10	1242	205.10	5898	215.30	128
183.00	116	194.10	347	206.10	23640	216.05	439
184.10	170	195.10	110	207.05	2947	217.05	6108
185.10	1402	196.10	2903	207.90	201	218.00	751
186.10	13345	198.10	94698	208.15	598	219.90	92
187.10	3733	199.05	6628	209.00	223	220.10	80
188.10	292	200.10	540	210.00	350	221.10	4504
189.00	793	201.50	308	210.90	195	223.00	1730
190.20	78	201.70	208	211.15	586	224.10	13022
191.00	521	203.10	820	212.10	113	225.10	3517
192.15	975	204.10	3193	214.70	90	226.10	495

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
227.10	5616	241.10	127	253.05	343	265.05	1128
228.10	952	242.05	796	253.70	102	266.05	279
229.05	1196	243.15	529	255.10	57405	269.20	74
231.10	472	244.10	10867	256.10	8393	271.10	67

233.20	102	245.10	1321	257.10	593	271.40	67
234.00	316	246.10	1848	257.30	141	273.05	1570
234.90	545	247.10	496	258.10	2918	274.10	4556
236.10	111	247.90	75	259.10	538	275.10	23590
237.05	676	249.05	254	260.20	70	276.10	3407
240.10	203	250.10	73	261.10	80	277.10	1885
240.40	97	252.00	73	264.30	72	278.05	356

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms  
dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
279.10	80	301.30	90	323.15	2456	352.05	857
283.10	155	301.80	83	324.10	741	352.90	128
284.00	173	303.10	737	327.05	583	353.10	500
285.10	474	304.10	188	328.05	193	353.70	84
289.00	96	305.00	92	332.05	140	354.10	828
293.00	579	308.00	125	333.05	298	354.80	70
294.20	68	314.10	349	334.05	1563	365.05	3879
294.40	70	315.05	769	335.20	262	366.05	446
295.10	85	316.10	359	341.05	270	371.00	168
296.10	6781	320.90	99	346.00	455	371.30	109
297.05	982	322.00	91	346.95	204	372.05	1539

Average of 3.181 to 3.192 min.: 5p62557.D\data.ms  
dftpp

Modified:subtracted

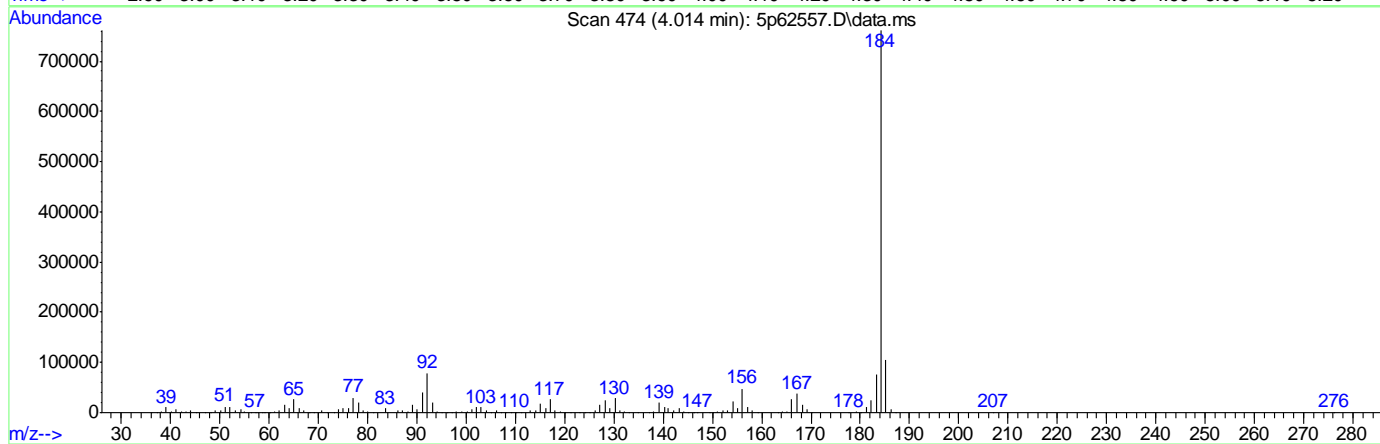
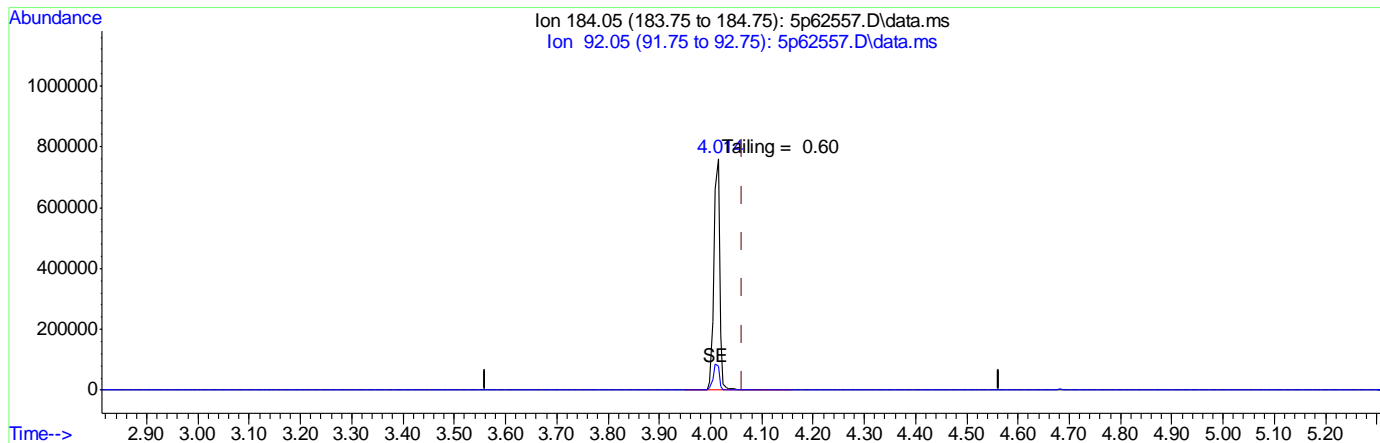
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
373.10	264	423.10	5274				
383.15	614	424.10	1145				
390.10	160	441.10	13837				
395.20	88	442.10	88808				
400.90	117	443.10	18155				
402.05	599	444.05	1810				
403.05	913						
404.05	246						
405.00	80						
421.05	966						
422.10	743						



## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62557.D  
 Acq On : 6 Sep 2019 11:53 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 11:59:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



TIC: 5p62557.D\data.ms

(2) Benzidine (M)

4.014min (-0.048) 121.88ng m

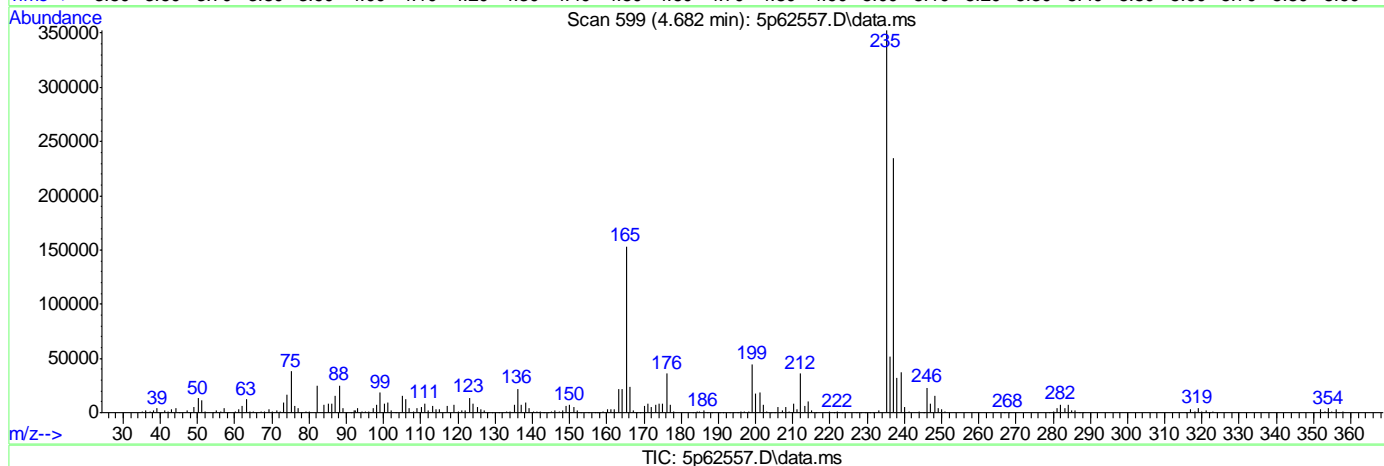
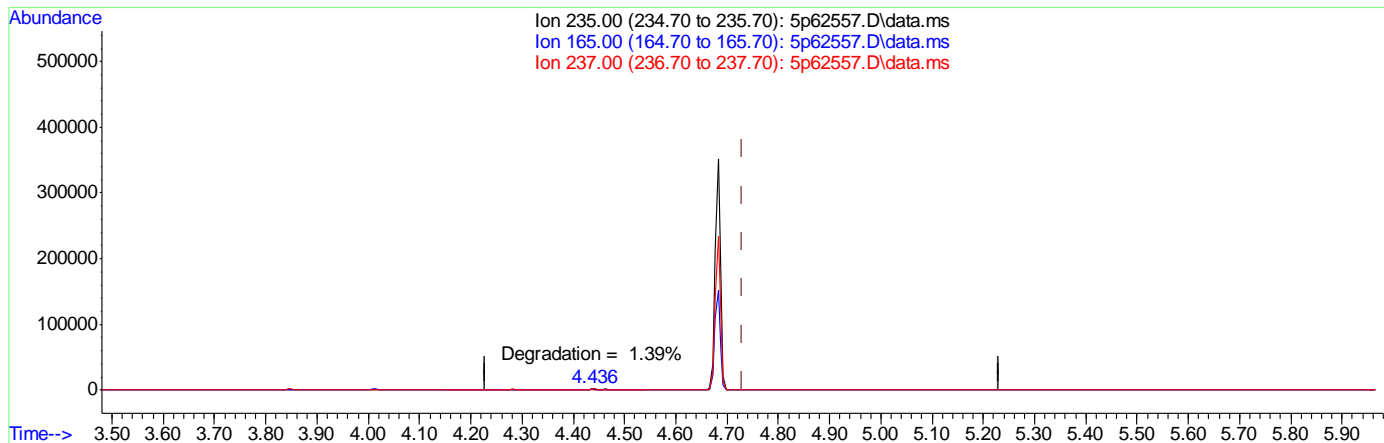
response 616921

Ion	Exp%	Act%
184.05	100	100
92.05	11.50	10.34
0.00	0.00	0.00
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62557.D  
 Acq On : 6 Sep 2019 11:53 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 11:59:23 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(3) PP-DDT (MC)

4.682min (-0.048) 133.93ng m

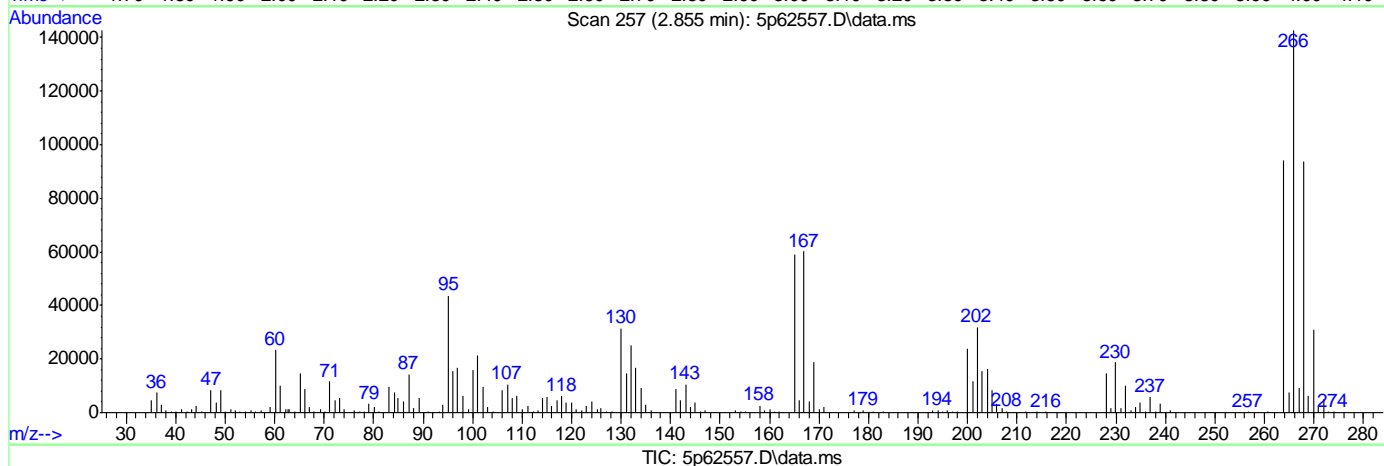
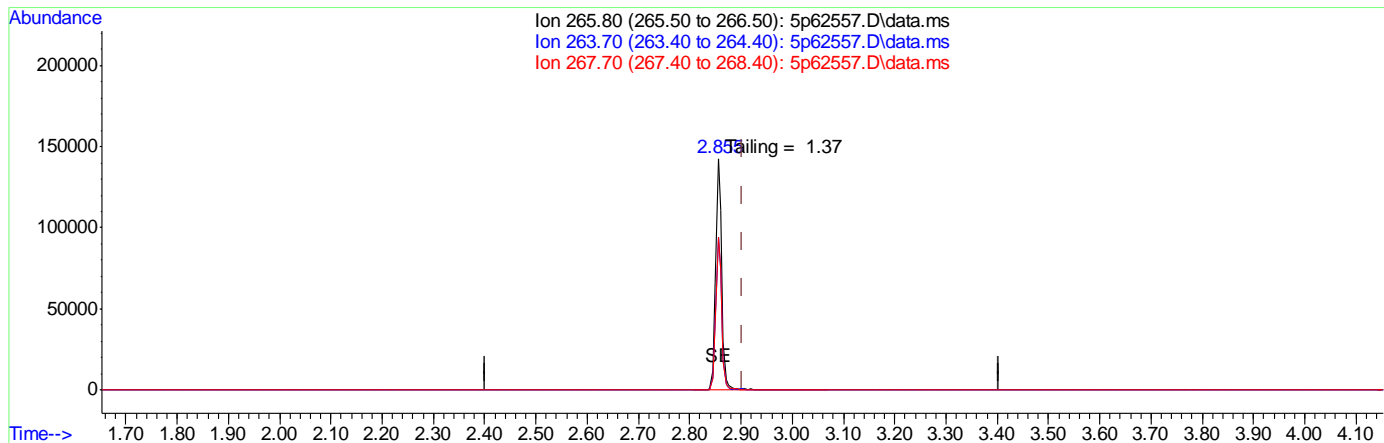
response 262836

Ion	Exp%	Act%
235.00	100	100
165.00	49.60	43.41
237.00	66.90	66.50
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62557.D  
 Acq On : 6 Sep 2019 11:53 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 16:06:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(1) Pentachlorophenol (MC)

2.855min (-0.048) 73.78ng m

response 123020

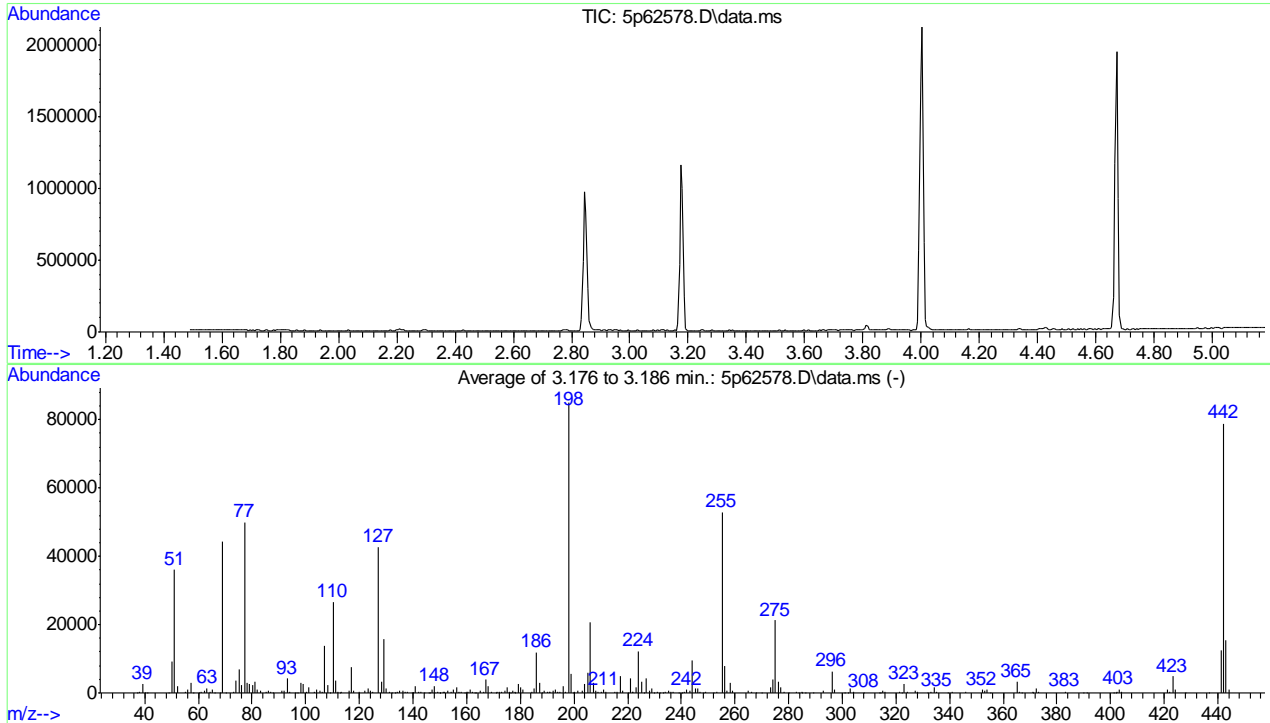
Ion	Exp%	Act%
265.80	100	100
263.70	63.20	65.97
267.70	64.40	65.76
0.00	0.00	0.00

## DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62578.D  
 Acq On : 6 Sep 2019 7:35 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 317, 318, 319; Background Corrected with Scan 312

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.5	36089	PASS
68	69	0.00	2	0.2	86	PASS
69	198	0.00	100	52.1	44287	PASS
70	69	0.00	2	0.4	160	PASS
127	198	40	60	50.2	42672	PASS
197	198	0.00	1	0.4	309	PASS
198	198	100	100	100.0	84997	PASS
199	198	5	9	6.7	5654	PASS
275	198	10	30	25.0	21271	PASS
365	198	1	100	3.7	3130	PASS
441	443	0.10	100	81.0	12598	PASS
442	198	40	100	92.8	78877	PASS
443	442	17	23	19.7	15561	PASS

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	71	57.05	2995	70.10	160	83.05	758
38.05	289	58.10	79	73.05	233	85.10	433
39.10	2545	60.10	76	74.10	3588	86.00	626
40.05	115	61.10	434	75.10	6745	87.05	396
41.10	129	62.10	535	76.20	2286	87.90	103
49.05	137	63.10	1420	77.10	50035	91.10	685
50.10	9139	64.15	220	78.10	2985	92.10	594
51.10	36089	65.15	898	79.05	2554	93.10	4176
52.10	2135	66.10	75	80.05	2346	94.00	387
55.05	485	68.00	86	81.05	3399	96.10	22
56.05	1121	69.10	44287	82.05	884	97.10	86

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
98.10	3098	110.10	26688	124.05	518	136.10	555
99.05	2647	111.10	3553	125.10	400	137.05	476
100.10	266	112.05	488	127.10	42672	138.05	240
101.05	1537	112.70	78	128.10	3214	139.50	69
103.05	477	113.25	188	129.10	15704	139.80	82
104.05	912	116.15	659	130.10	1359	140.10	101
105.10	779	117.10	7460	131.00	235	141.00	1898
106.15	215	118.00	529	132.10	169	142.15	439
107.10	13839	119.95	200	133.10	72	142.95	346
108.10	2179	122.10	516	134.05	447	144.10	133
109.20	111	123.10	1301	135.05	814	146.00	153

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
146.20	160	155.10	1132	165.05	603	176.05	462
147.10	867	156.10	1607	166.10	467	176.50	102
147.70	112	157.10	407	167.10	3812	177.15	721
148.10	1975	157.95	233	168.10	1921	177.95	187
149.10	461	159.00	131	169.10	307	178.20	73
150.00	127	160.10	370	170.70	103	179.10	2506
150.20	75	160.30	213	171.10	234	180.10	1602
151.05	284	161.15	914	172.05	360	181.10	836
151.70	176	162.10	283	172.95	479	184.15	212
153.05	610	163.10	67	174.10	679	185.05	1298
154.10	433	163.30	74	175.10	1621	186.10	11862

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
187.10	2994	196.70	309	208.10	683	221.70	442
188.05	93	198.10	84997	209.05	243	222.00	251
189.05	648	199.05	5654	210.10	250	223.10	1584
190.05	206	199.80	75	211.10	837	224.10	12210
190.90	176	200.10	306	211.70	179	225.10	3255
191.05	237	201.45	539	215.05	223	226.10	135
192.10	736	203.10	566	216.10	199	227.05	4424
193.10	977	204.10	2763	217.10	4892	228.05	602
194.05	340	205.10	5851	218.10	729	229.00	1170
194.90	252	206.10	20800	220.00	110	230.00	137
196.10	1997	207.10	2987	221.10	4224	231.05	329

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
231.90	83	244.10	9446	258.10	2893	278.10	218
233.10	118	245.10	1348	259.05	566	280.00	73
234.05	190	246.10	1380	265.10	794	283.05	282
235.10	672	247.10	416	266.05	359	283.90	72

236.05	202	248.10	81	268.00	67	284.80	103
237.05	309	249.10	408	269.90	67	285.10	263
239.05	166	252.10	75	273.10	1597	286.10	85
240.10	84	253.05	238	274.10	4049	289.00	74
241.05	308	255.10	52850	275.10	21271	293.05	593
242.05	838	256.10	7834	276.10	3299	296.10	6364
243.15	676	257.10	599	277.05	1521	297.10	920

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms  
dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
300.90	89	323.10	2561	352.10	916	383.05	473
301.90	90	324.10	342	353.15	616	390.00	119
303.10	1293	327.05	532	354.10	1039	391.10	87
304.15	202	327.95	200	355.10	115	401.00	120
308.10	81	331.70	101	365.05	3130	402.00	156
314.00	131	333.15	263	366.00	332	402.20	486
314.20	126	334.10	1516	367.00	78	403.10	1036
315.10	809	335.15	388	371.00	220	404.10	244
315.95	344	339.10	86	371.20	101	421.10	852
321.15	292	341.15	243	372.10	1288	422.05	429
322.10	76	346.10	468	373.05	384	423.10	4770

Average of 3.176 to 3.186 min.: 5p62578.D\data.ms  
dftpp

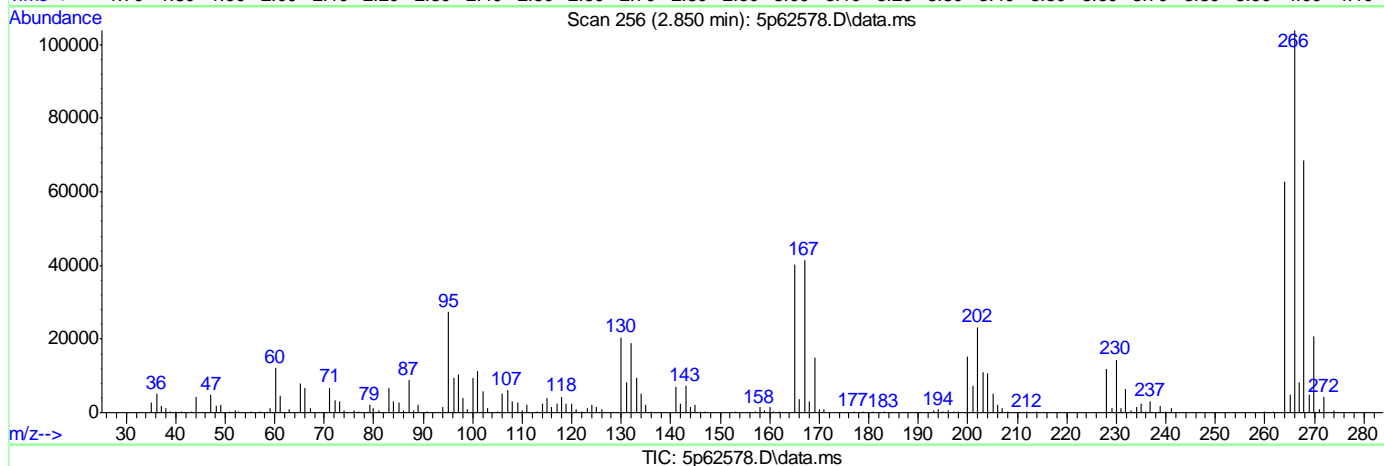
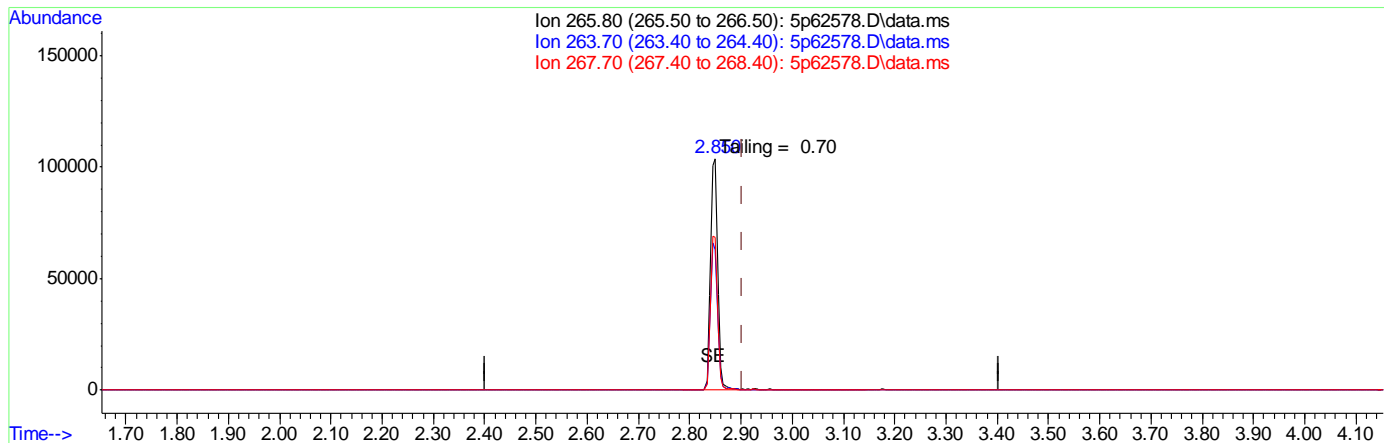
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
424.10	938						
427.70	78						
436.50	80						
441.15	12598						
442.10	78877						
443.10	15561						
444.00	1146						

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62578.D  
 Acq On : 6 Sep 2019 7:35 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 19:41:06 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(1) Pentachlorophenol (MC)

2.850min (-0.053) 60.32ng

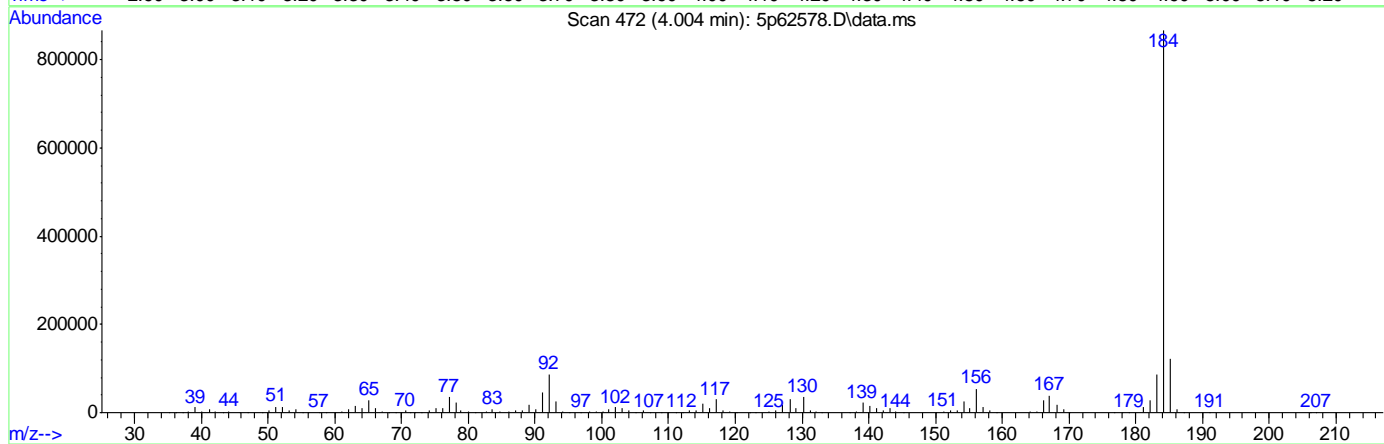
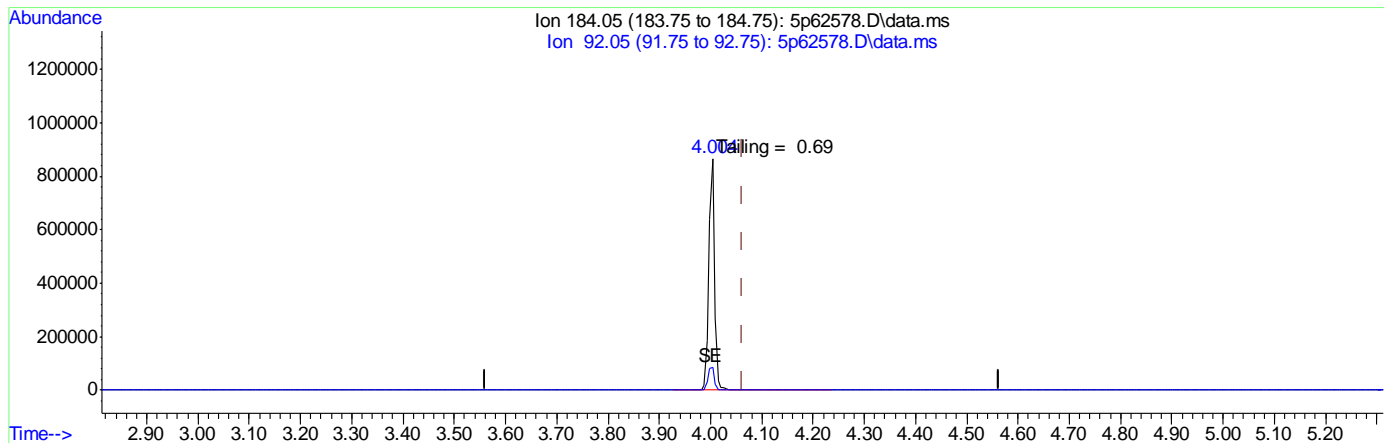
response 100566

Ion	Exp%	Act%
265.80	100	100
263.70	63.20	60.53
267.70	64.40	66.02
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62578.D  
 Acq On : 6 Sep 2019 7:35 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 19:41:06 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



TIC: 5p62578.D\data.ms

(2) Benzidine (M)

4.004min (-0.059) 130.76ng m

response 661872

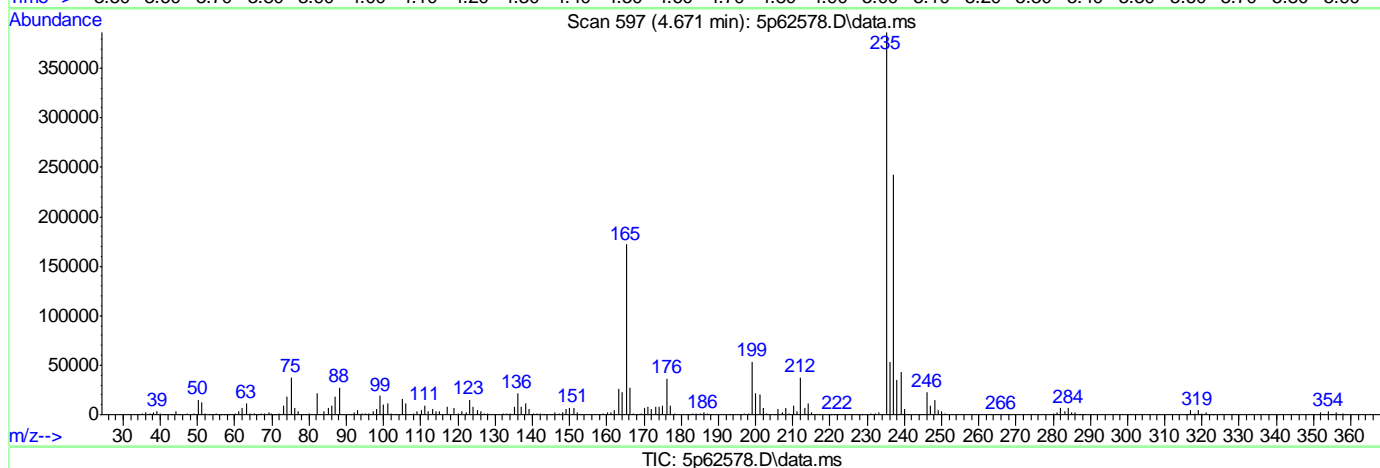
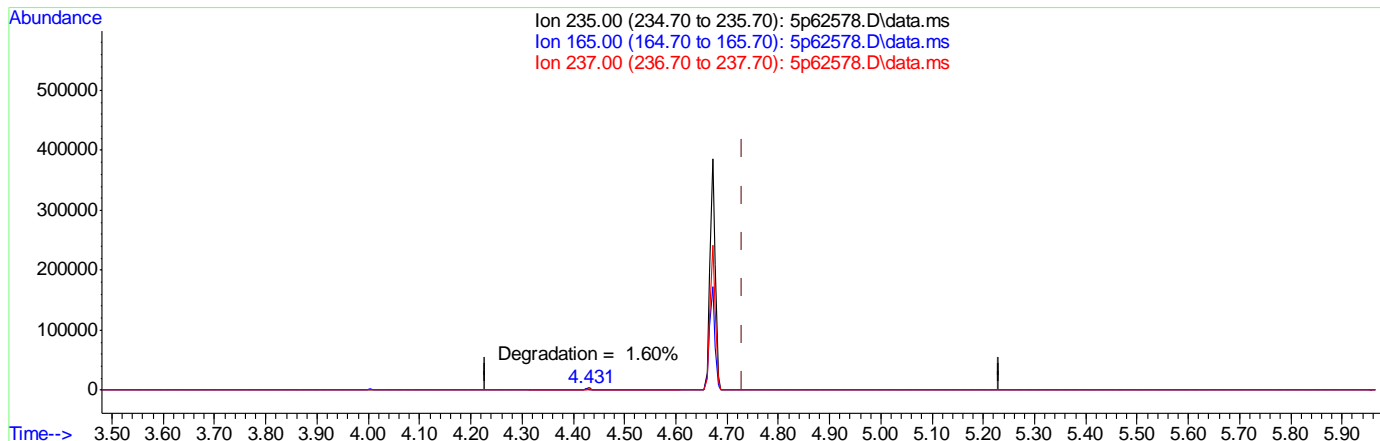
Ion	Exp%	Act%
184.05	100	100
92.05	11.50	10.06
0.00	0.00	0.00
0.00	0.00	0.00



## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62578.D  
 Acq On : 6 Sep 2019 7:35 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 19:41:06 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(3) PP-DDT (MC)

4.671min (-0.059) 138.54ng m

response 271881

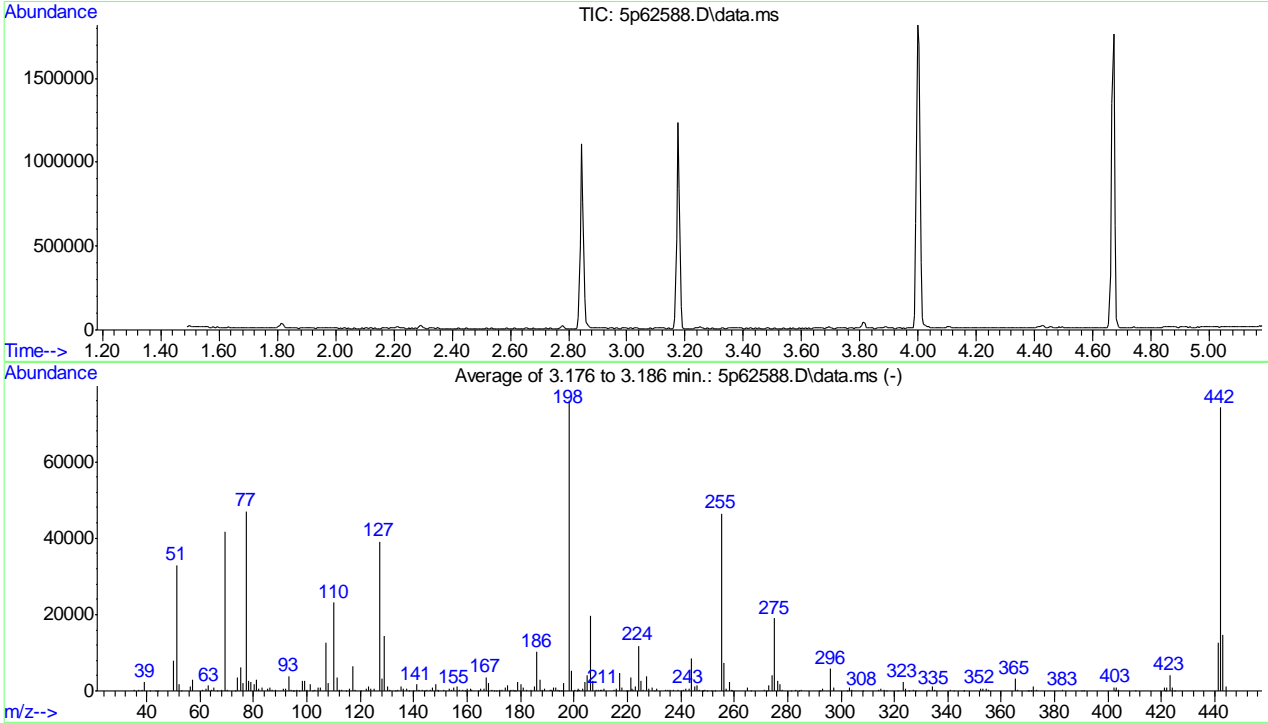
Ion	Exp%	Act%
235.00	100	100
165.00	49.60	44.52
237.00	66.90	62.62
0.00	0.00	0.00

DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62588.D  
 Acq On : 6 Sep 2019 11:22 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 317, 318, 319; Background Corrected with Scan 312

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.3	32892	PASS
68	69	0.00	2	0.5	199	PASS
69	198	0.00	100	54.7	41598	PASS
70	69	0.00	2	0.4	171	PASS
127	198	40	60	51.4	39068	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	76024	PASS
199	198	5	9	7.0	5333	PASS
275	198	10	30	25.0	18995	PASS
365	198	1	100	4.1	3154	PASS
441	443	0.10	100	85.5	12521	PASS
442	198	40	100	97.6	74168	PASS
443	442	17	23	19.7	14636	PASS

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	328	56.10	1043	73.10	97	85.05	660
37.05	205	57.10	2832	74.10	3567	86.05	960
38.05	212	61.00	402	75.10	6309	87.10	419
39.20	2333	62.00	461	76.15	1988	88.05	251
41.10	107	63.10	1467	77.10	47035	91.10	489
43.15	148	64.05	162	78.15	2794	92.10	578
44.10	154	65.10	825	79.10	2420	93.10	3964
50.10	7907	66.20	85	80.10	1854	94.00	236
51.10	32892	68.10	199	81.10	2845	94.90	134
52.10	1640	69.10	41598	82.05	733	95.10	106
53.10	94	70.10	171	83.05	957	96.05	234

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
97.00	100	110.10	23098	124.05	527	137.15	497
98.10	2763	111.10	3512	125.05	499	138.10	72
99.10	2547	112.10	419	127.10	39068	140.00	115
100.05	321	113.10	166	128.05	3317	141.10	1659
101.10	1696	114.80	67	129.10	14471	142.05	438
102.10	77	116.10	585	130.10	1146	143.10	264
103.05	449	117.10	6555	131.10	261	144.10	68
104.05	871	118.00	365	133.00	69	144.95	185
105.10	933	120.20	87	134.10	345	146.05	285
107.10	12628	122.10	539	135.10	1170	147.15	797
108.10	1975	123.10	1214	136.00	511	148.05	1633

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
149.00	195	161.10	660	173.15	294	182.15	198
149.20	135	161.75	276	174.10	775	184.00	226
151.25	355	164.10	110	175.10	1412	185.10	1284
153.10	463	165.05	586	175.90	103	186.10	10169
153.95	381	166.10	608	176.20	256	187.10	3038
155.10	874	167.10	3663	177.05	445	188.15	307
156.10	1316	168.10	2087	177.70	143	189.15	467
157.10	225	169.10	380	178.10	75	191.10	360
158.10	262	170.20	113	179.05	2394	191.40	163
159.00	126	171.10	94	180.10	1752	192.10	872
160.10	595	172.05	314	181.10	847	193.05	1027

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
194.10	278	204.10	2409	217.05	4661	227.10	3861
194.50	132	205.10	4255	218.05	744	228.00	477
195.20	103	206.10	19621	219.40	70	229.05	975
196.10	2056	207.10	2752	220.10	96	230.10	105
198.05	76024	208.05	404	221.10	3620	231.10	542
199.10	5333	209.10	208	221.80	570	234.10	184
200.10	361	210.10	223	222.10	332	235.05	324
201.10	101	210.50	217	223.05	1086	236.10	210
201.50	480	211.15	686	224.10	11818	237.05	379
202.15	246	215.05	179	225.10	2579	239.05	181
203.10	497	216.00	452	226.10	218	240.10	94

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
241.05	277	251.70	77	272.20	101	292.00	100
242.00	523	252.90	139	273.10	1364	292.20	77
243.05	593	255.10	46504	274.10	3973	293.00	478
244.10	8519	256.10	7222	275.10	18995	296.10	5742

245.10	1290	257.10	473	276.10	2530	297.10	879
246.10	1572	258.10	2466	277.10	1806	302.30	70
246.95	230	258.90	124	278.05	219	303.10	864
248.00	72	259.20	160	281.10	68	304.15	242
248.20	67	265.05	946	283.15	164	308.10	133
249.00	192	266.10	92	284.05	145	314.05	307
249.90	68	271.05	163	285.10	193	315.05	633

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms  
dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
316.05	367	335.05	362	370.00	76	404.00	294
317.00	111	341.10	296	370.30	80	410.00	89
321.05	152	342.20	134	371.10	83	421.05	875
323.10	2253	345.80	150	372.15	1257	421.60	76
324.10	506	346.10	129	373.20	290	422.05	765
325.30	89	352.10	690	383.10	256	423.10	4152
327.05	346	353.10	562	390.10	116	424.10	945
328.05	141	354.15	678	390.90	143	425.10	70
332.10	96	355.05	207	402.10	769	441.10	12521
333.05	179	365.10	3154	402.60	89	442.10	74168
334.10	1312	366.05	404	403.05	941	443.10	14636

Average of 3.176 to 3.186 min.: 5p62588.D\data.ms  
dftpp

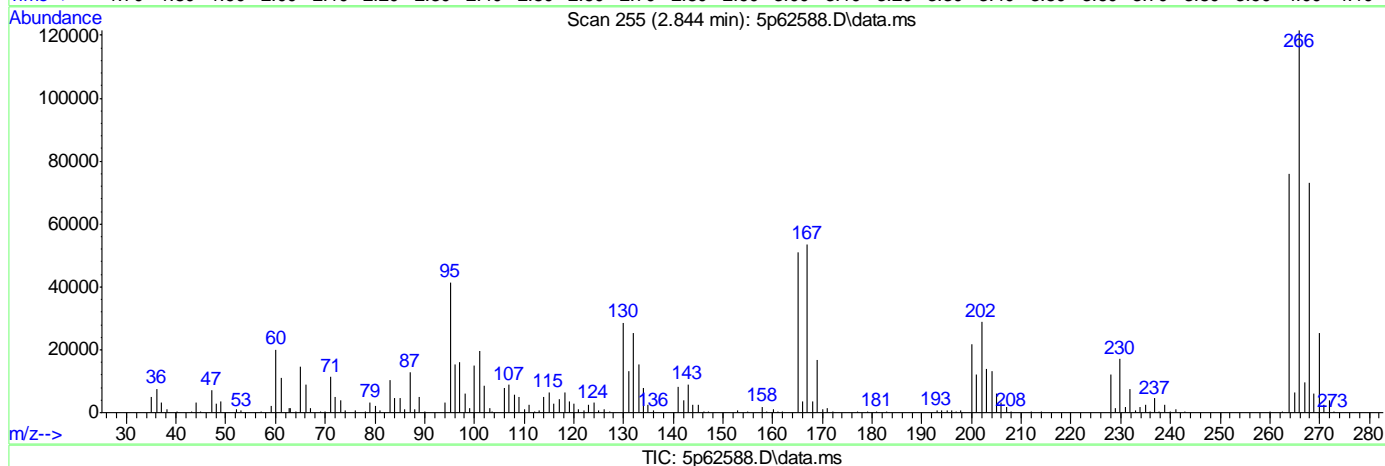
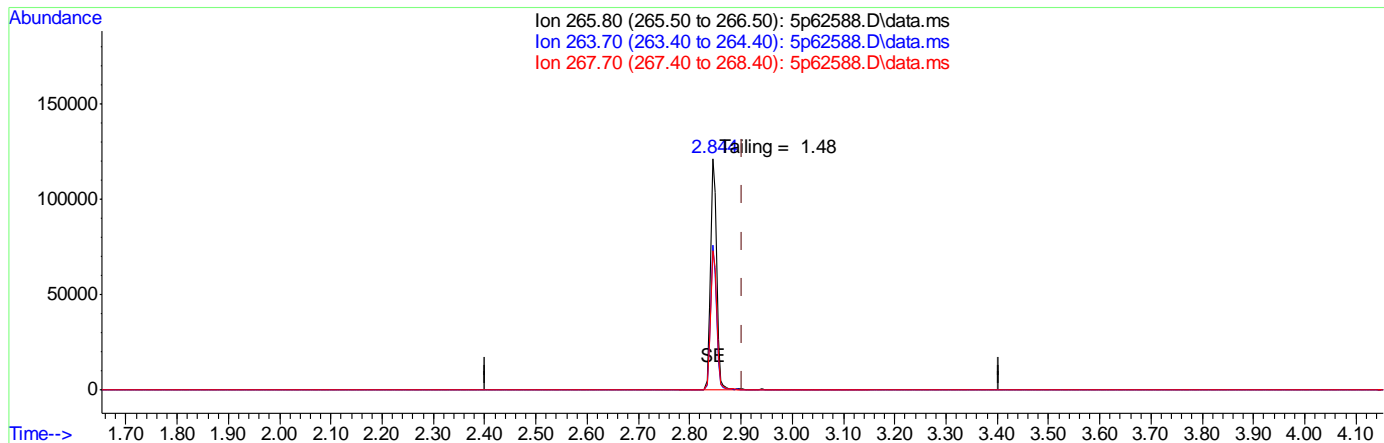
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
444.05	1095						

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62588.D  
 Acq On : 6 Sep 2019 11:22 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 23:28:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(1) Pentachlorophenol (MC)

2.844min (-0.059) 60.96ng m

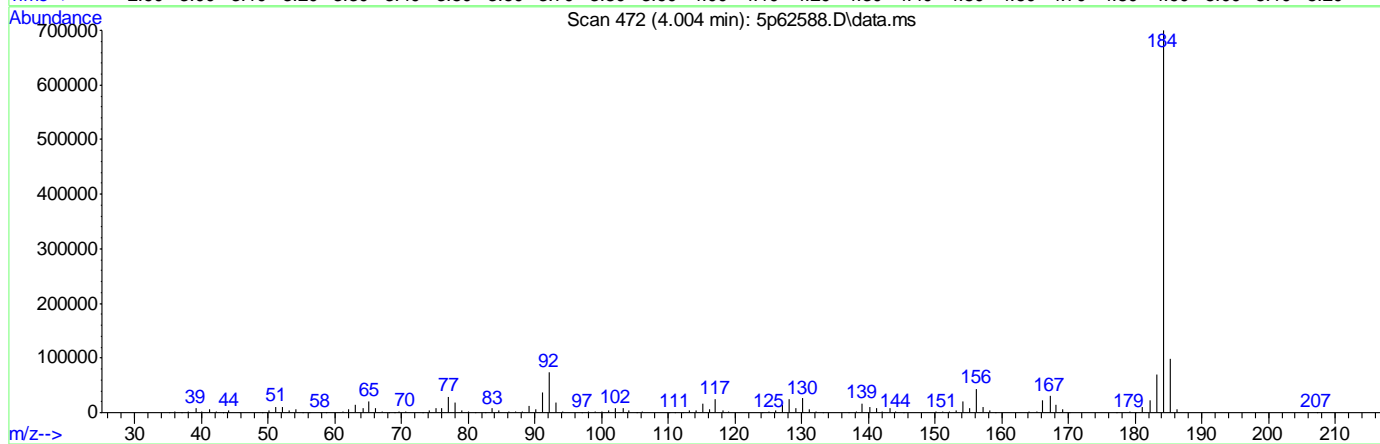
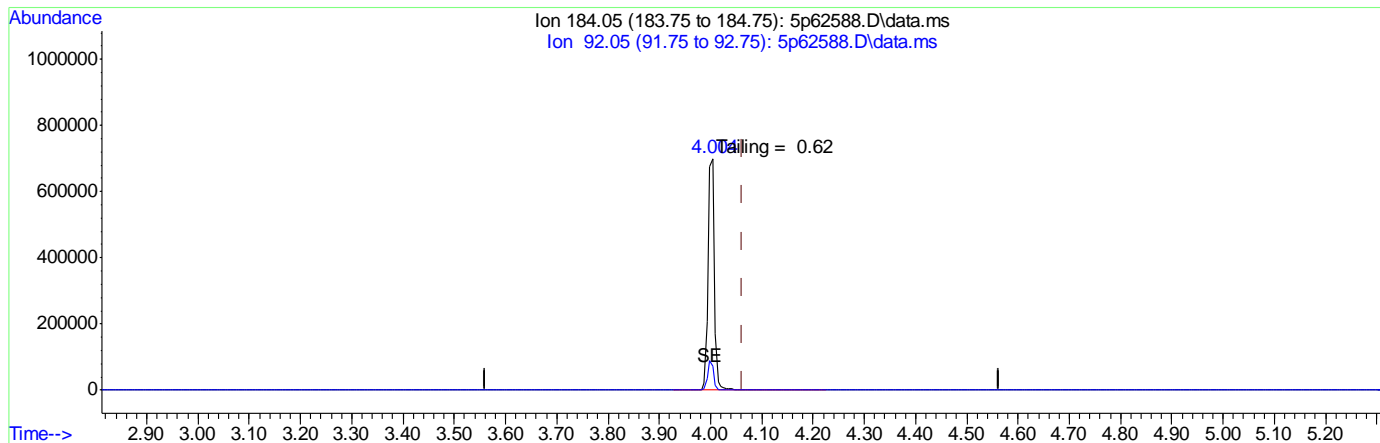
response 101639

Ion	Exp%	Act%
265.80	100	100
263.70	63.20	62.38
267.70	64.40	60.21
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62588.D  
 Acq On : 6 Sep 2019 11:22 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 23:28:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



TIC: 5p62588.D\data.ms

(2) Benzidine (M)

4.004min (-0.059) 118.35ng m

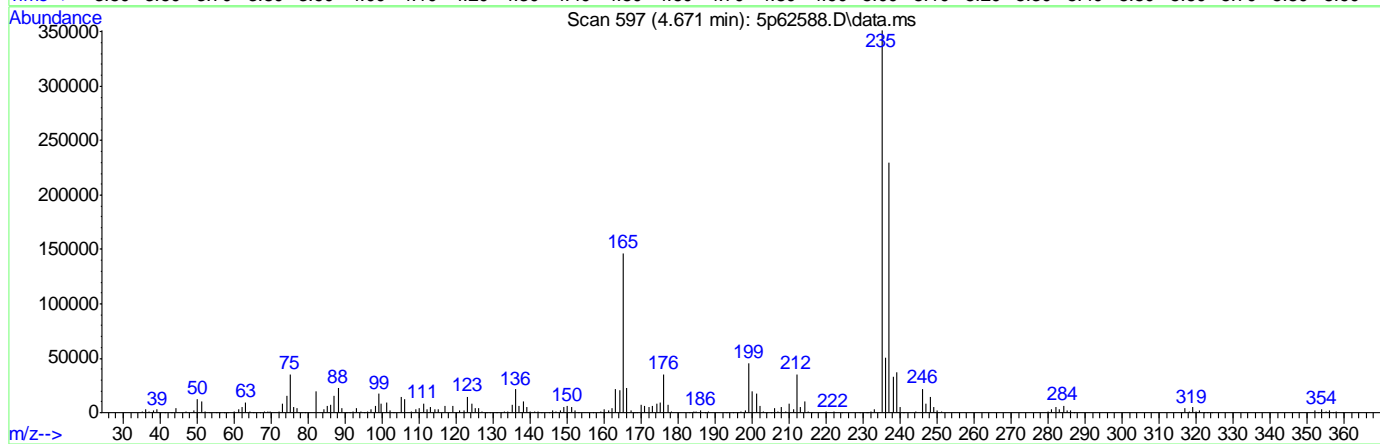
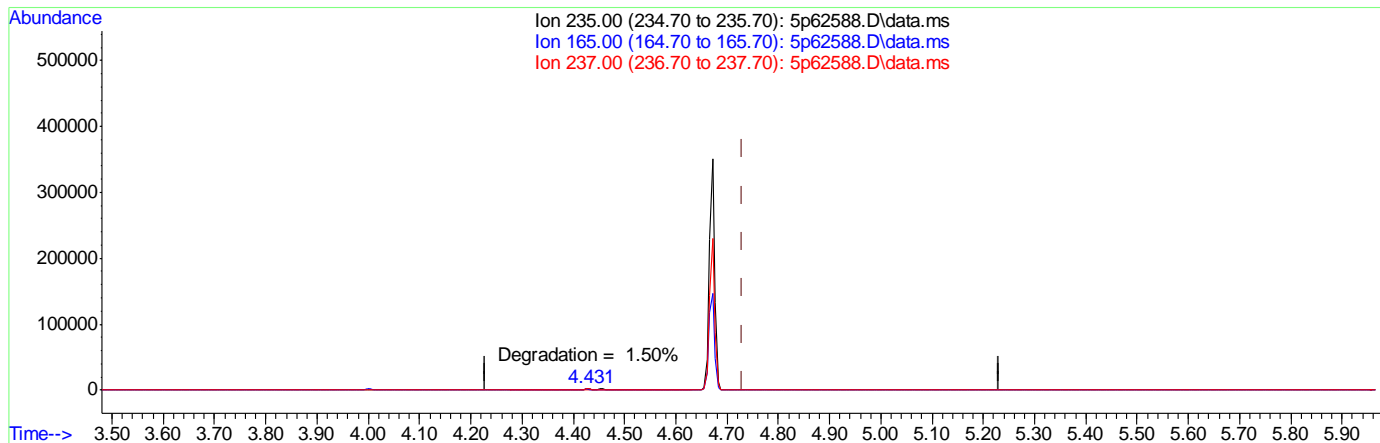
response 599017

Ion	Exp%	Act%
184.05	100	100
92.05	11.50	10.58
0.00	0.00	0.00
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62588.D  
 Acq On : 6 Sep 2019 11:22 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 06 23:28:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



TIC: 5p62588.D\data.ms

(3) PP-DDT (MC)

4.671min (-0.059) 127.14ng m

response 249508

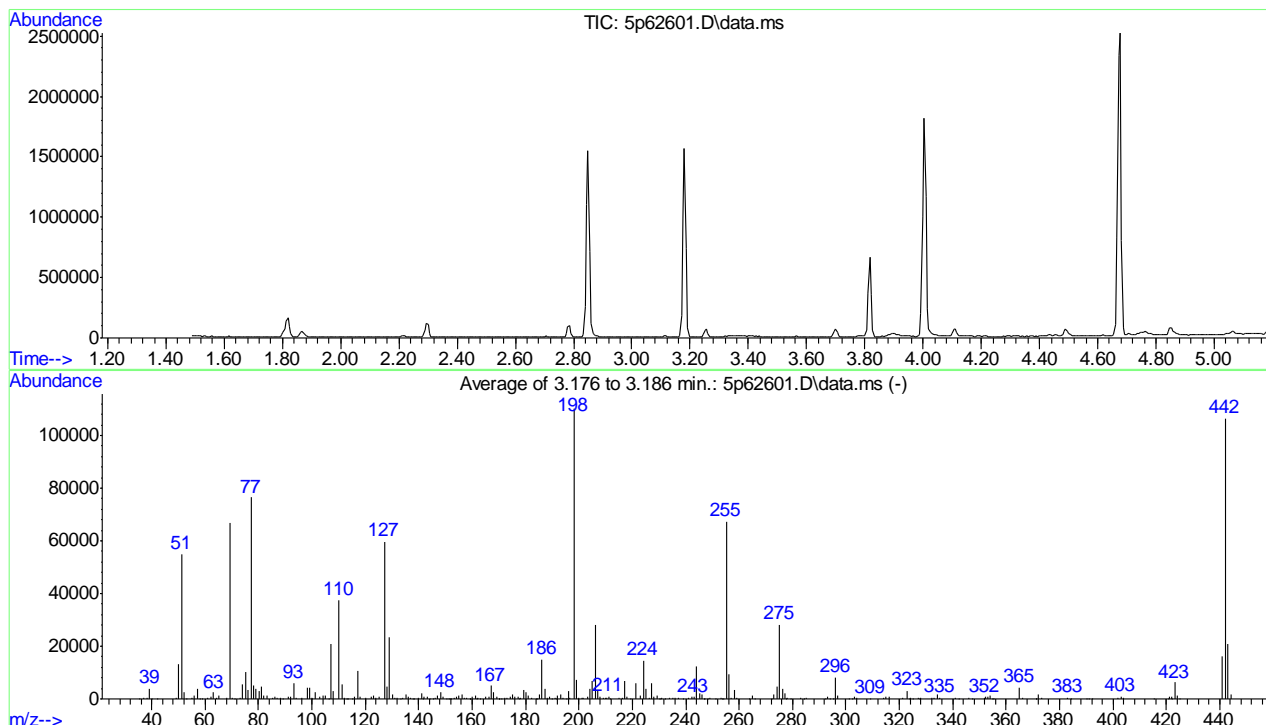
Ion	Exp%	Act%
235.00	100	100
165.00	49.60	41.69
237.00	66.90	65.41
0.00	0.00	0.00

DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62601.D  
 Acq On : 9 Sep 2019 10:27 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 317, 318, 319; Background Corrected with Scan 302

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.9	54986	PASS
68	69	0.00	2	0.6	409	PASS
69	198	0.00	100	60.7	66930	PASS
70	69	0.00	2	0.5	346	PASS
127	198	40	60	54.1	59658	PASS
197	198	0.00	1	0.4	464	PASS
198	198	100	100	100.0	110253	PASS
199	198	5	9	6.7	7343	PASS
275	198	10	30	25.6	28210	PASS
365	198	1	100	3.9	4268	PASS
441	443	0.10	100	77.1	16045	PASS
442	198	40	100	96.6	106464	PASS
443	442	17	23	19.5	20811	PASS



Average of 3.176 to 3.186 min.: 5p62601.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	78	55.10	521	69.10	66930	81.10	4719
37.10	299	56.05	1198	70.15	346	82.05	1117
38.10	610	57.10	3710	71.10	66	83.10	1369
39.15	3908	58.10	117	73.05	299	85.05	648
40.05	44	59.00	98	74.10	5635	86.10	942
42.20	73	61.10	600	75.10	10292	87.10	514
49.05	276	62.15	749	76.10	3345	88.05	231
50.10	13023	63.10	2534	77.10	76600	89.05	179
51.10	54986	64.10	298	78.10	5292	91.10	1027
52.10	2503	65.10	1410	79.10	3839	92.10	928
53.10	177	68.10	409	80.10	2968	93.10	5967

Average of 3.176 to 3.186 min.: 5p62601.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.10	636	107.05	20721	120.10	365	133.05	12
96.05	385	108.10	3054	122.00	843	134.05	534
98.10	4342	110.10	37632	123.10	1370	135.10	1701
99.10	4197	111.10	5588	124.05	625	136.05	736
99.90	133	112.00	576	125.05	813	137.05	595
100.10	231	112.90	111	127.10	59658	137.70	177
101.05	2566	113.20	72	128.10	4613	138.20	134
103.05	785	115.10	80	129.10	23351	140.05	242
104.10	1325	116.10	1018	130.10	1846	141.10	2003
105.10	1243	117.10	10817	131.05	309	141.70	77
106.10	135	118.05	733	132.00	262	142.10	698

Average of 3.176 to 3.186 min.: 5p62601.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.10	655	153.15	582	162.10	253	173.15	480
144.10	131	154.10	730	163.00	98	174.10	1038
145.10	73	155.10	1321	165.05	891	175.10	1843
146.10	465	156.10	1916	166.10	821	176.05	678
147.10	1471	157.10	313	167.10	4978	177.05	719
148.10	2627	158.10	316	168.10	2472	177.70	73
149.05	687	159.00	107	169.05	670	178.00	232
150.20	76	159.20	145	169.90	99	179.10	3504
151.10	225	160.10	847	170.20	143	180.10	2581
151.70	126	161.10	1170	171.00	83	181.10	1202
152.10	125	161.80	94	172.05	406	182.15	259

Average of 3.176 to 3.186 min.: 5p62601.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
183.90	77	193.10	1519	204.10	3688	216.05	354
184.20	198	194.15	250	205.10	6702	217.05	6629
185.10	1850	195.10	85	206.10	28288	218.10	1047
186.10	14941	196.05	2864	207.05	3436	219.20	74
187.10	3993	196.70	464	208.05	850	221.10	5851
188.15	585	198.10	110253	209.05	301	223.10	1435
189.10	793	199.10	7343	210.10	243	224.10	14662
190.00	92	200.05	610	210.35	308	225.10	3849
191.20	442	201.10	357	211.10	973	226.20	315
191.40	89	201.65	476	211.80	165	227.10	5826
192.00	1317	203.05	664	215.05	356	228.10	845

Average of 3.176 to 3.186 min.: 5p62601.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
229.10	1451	242.10	828	253.70	110	273.05	1762
230.00	134	243.10	845	253.90	107	274.10	4757
230.70	102	244.10	12177	255.10	67266	275.10	28210
231.10	542	245.10	1973	256.10	9463	276.10	3665

232.10	88	246.05	1906	257.05	596	277.00	2254
234.10	426	246.80	74	258.10	3371	277.70	69
235.05	455	247.05	196	259.10	484	278.05	325
236.00	282	248.10	81	263.90	84	279.10	83
237.10	575	249.00	554	265.05	1281	283.15	237
239.00	118	251.20	108	265.95	39	284.10	198
241.10	233	253.00	344	272.05	218	285.05	621

Average of 3.176 to 3.186 min.: 5p62601.D\data.ms  
dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
292.10	73	314.05	316	332.10	328	354.10	1084
293.05	654	315.05	969	333.05	357	355.00	144
294.10	112	316.15	770	334.10	1735	355.20	103
295.00	73	321.05	375	335.15	602	365.05	4268
296.10	8203	323.10	3128	341.05	377	366.00	596
297.05	1087	323.90	70	342.10	104	371.00	167
301.15	144	324.05	398	346.00	609	371.15	213
302.30	75	325.10	71	347.10	71	372.05	1828
303.05	864	327.05	612	352.00	285	373.10	479
304.05	300	327.70	78	352.20	844	383.10	561
309.10	68	328.05	309	353.10	728	384.10	90

Average of 3.176 to 3.186 min.: 5p62601.D\data.ms  
dftpp

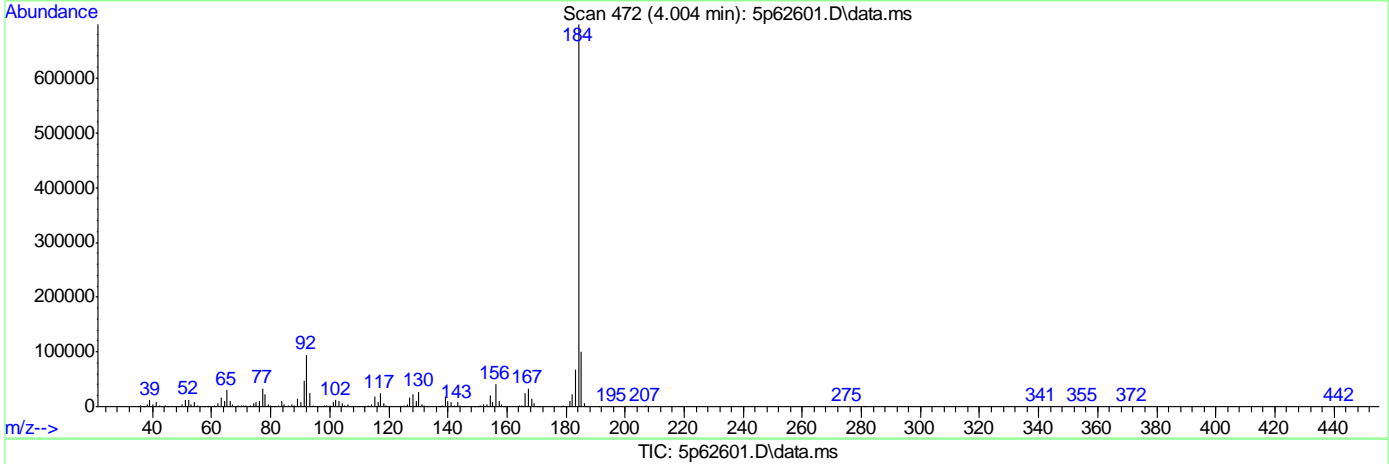
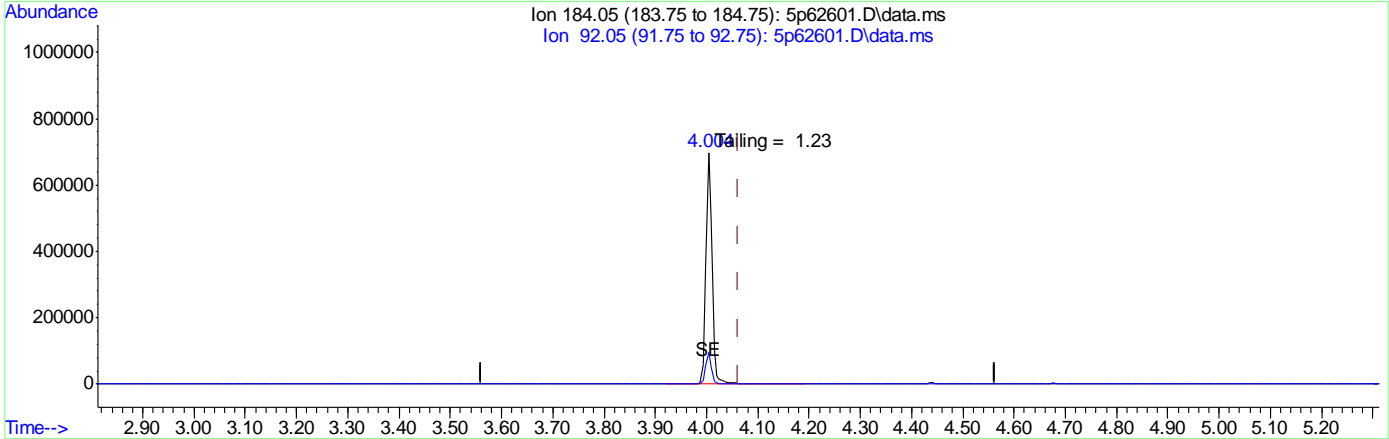
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
390.05	210	423.10	6196				
391.00	84	424.10	1346				
392.10	91	425.10	88				
402.00	628	441.10	16045				
403.05	948	442.10	106464				
404.05	444	443.10	20811				
415.10	67	444.10	1858				
420.80	85						
421.05	991						
421.90	67						
422.15	783						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62601.D  
 Acq On : 9 Sep 2019 10:27 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 10:34:52 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(2) Benzidine (M)

4.004min (-0.059) 115.05ng m

response 582347

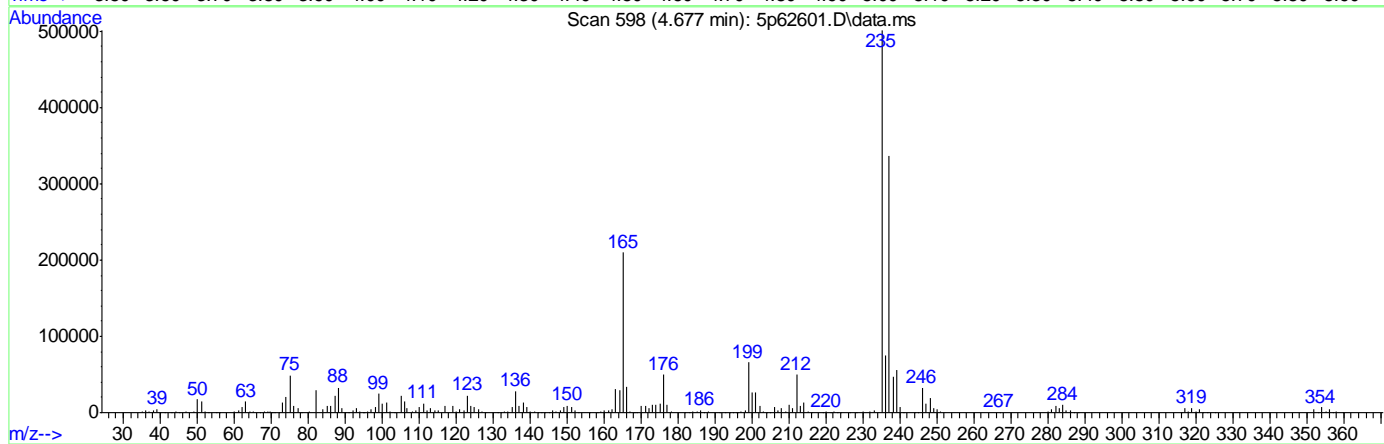
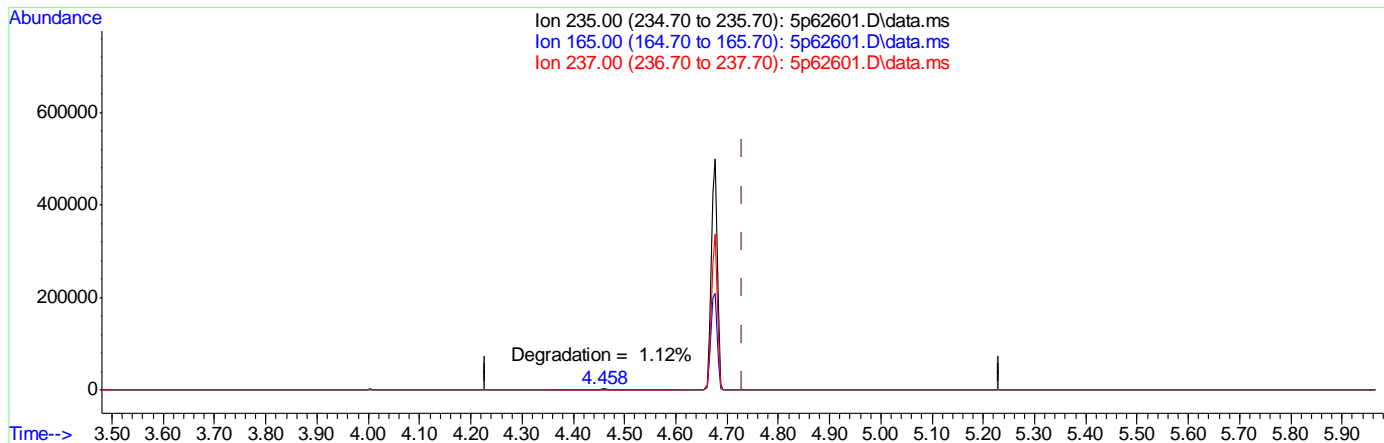
Ion	Exp%	Act%
184.05	100	100
92.05	11.50	13.56
0.00	0.00	0.00
0.00	0.00	0.00

9.5.4.1  
 9

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62601.D  
 Acq On : 9 Sep 2019 10:27 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 10:34:52 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



TIC: 5p62601.D\data.ms

(3) PP-DDT (MC)

4.677min (-0.053) 205.81ng m

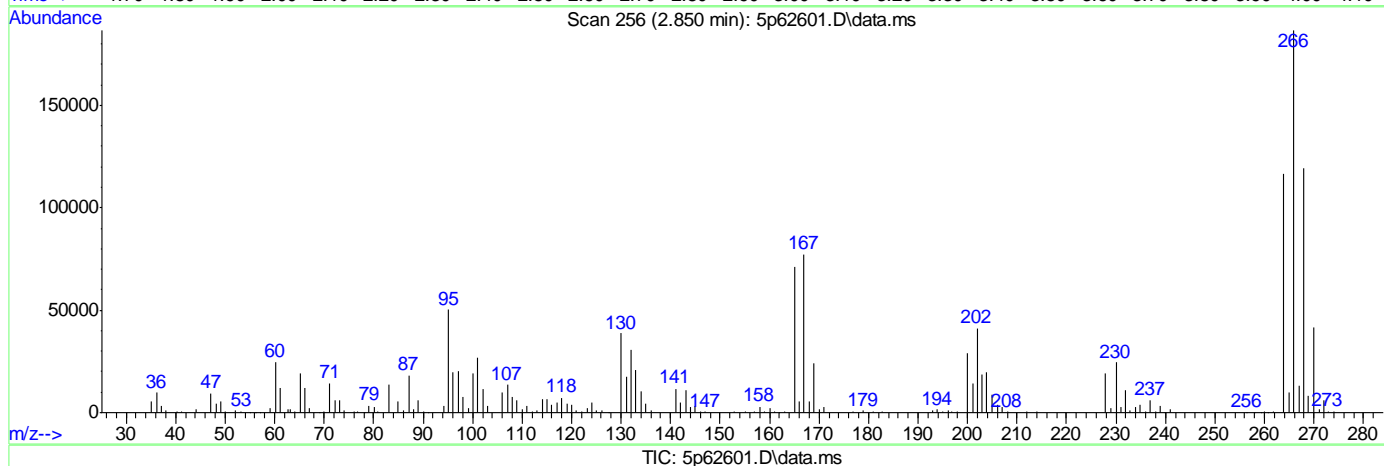
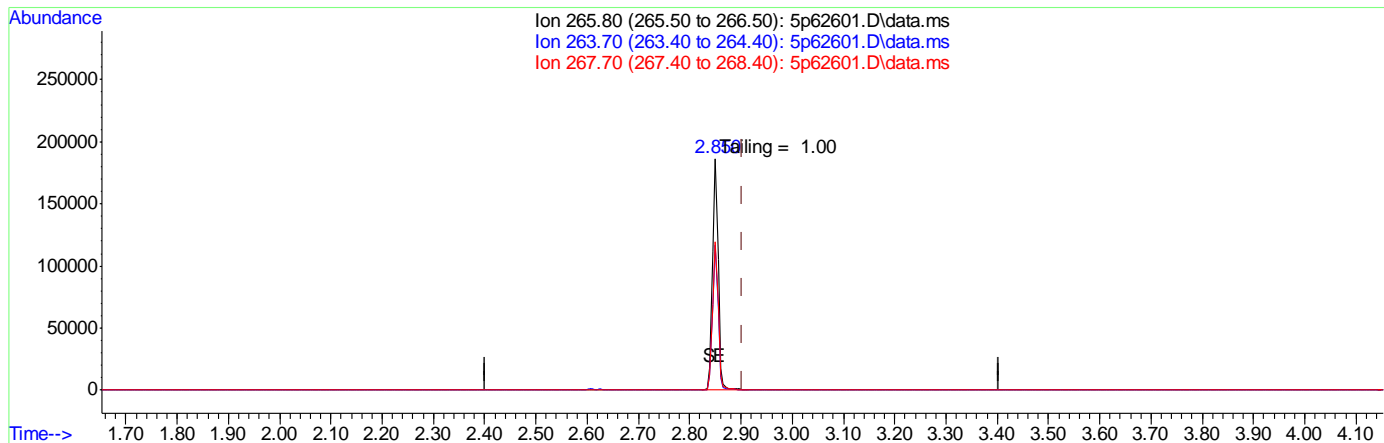
response 403886

Ion	Exp%	Act%
235.00	100	100
165.00	49.60	41.90
237.00	66.90	67.26
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62601.D  
 Acq On : 9 Sep 2019 10:27 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 10:34:52 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(1) Pentachlorophenol (MC)

2.850min (-0.053) 87.97ng m

response 146667

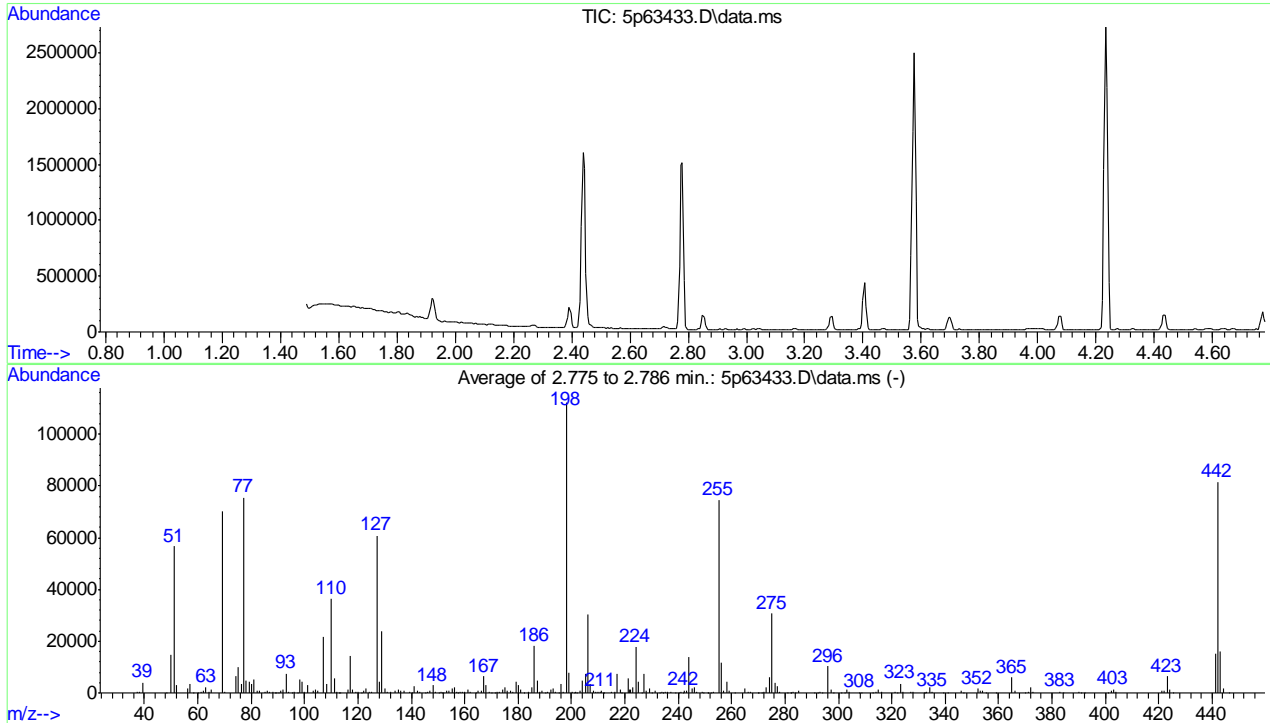
Ion	Exp%	Act%
265.80	100	100
263.70	63.20	62.59
267.70	64.40	64.06
0.00	0.00	0.00

## DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63433.D  
 Acq On : 1 Oct 2019 12:36 am  
 Operator : chriss2  
 Sample : dftpp  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 242, 243, 244; Background Corrected with Scan 227

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.5	56653	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	62.4	70084	PASS
70	69	0.00	2	0.6	401	PASS
127	198	40	60	54.1	60677	PASS
197	198	0.00	1	0.3	384	PASS
198	198	100	100	100.0	112229	PASS
199	198	5	9	7.0	7888	PASS
275	198	10	30	27.3	30640	PASS
365	198	1	100	5.3	5894	PASS
441	443	0.10	100	95.5	15305	PASS
442	198	40	100	72.8	81664	PASS
443	442	17	23	19.6	16019	PASS

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	265	61.05	447	78.10	4834	89.20	71
38.10	486	62.10	1068	79.10	4162	90.30	70
39.20	4126	63.10	2385	80.10	3495	91.10	983
48.10	94	64.15	313	81.10	5246	92.10	1161
50.10	14605	65.15	1117	82.10	976	93.10	7386
51.05	56653	69.10	70084	83.10	769	94.10	644
52.20	3022	70.15	401	85.10	546	95.05	194
56.10	1672	74.10	6495	86.00	1058	96.10	256
57.10	3675	75.10	9882	87.05	659	97.20	80
58.10	116	76.15	3462	88.05	369	98.10	5047
60.10	68	77.10	75518	89.00	156	99.10	4383

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
100.05	294	113.20	68	127.10	60677	140.10	169
101.10	2942	116.10	1445	128.10	4443	141.05	2632
103.05	769	117.10	14253	129.05	23829	142.10	1076
104.10	1455	118.10	1154	130.10	1783	143.00	641
105.00	948	119.10	284	131.10	509	145.20	157
107.10	21712	120.05	278	132.05	265	146.05	428
108.10	3303	121.20	171	134.00	679	147.05	877
110.10	36380	122.10	1046	135.10	1469	148.10	2890
111.05	5620	123.10	1532	136.10	708	149.05	544
112.10	500	124.05	632	137.15	964	150.10	134
112.95	190	125.10	577	139.15	267	151.05	450

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
151.70	107	161.05	1140	173.05	501	185.10	2086
152.10	112	162.05	463	174.10	1259	186.10	18053
153.10	713	164.00	117	175.10	2288	187.10	4659
154.10	768	165.05	979	176.05	716	188.15	355
155.10	1593	166.10	921	177.10	818	189.10	958
156.10	2392	167.10	6305	178.10	445	190.05	191
157.00	411	168.10	3064	179.10	4365	191.00	466
157.60	114	169.10	474	180.10	2884	192.10	1335
158.10	493	170.05	192	181.05	1185	193.10	1872
159.15	307	171.10	217	182.05	207	194.10	369
160.10	429	172.05	513	184.05	478	195.00	81

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
196.10	3290	206.10	30492	217.05	7196	228.10	1019
196.80	384	207.05	3265	218.10	1150	229.10	1669
198.05	112229	208.05	845	218.80	97	230.00	137
199.10	7888	209.10	623	221.10	5619	231.20	807
200.05	476	210.00	479	221.75	1253	233.20	170
201.20	168	210.90	533	222.10	1176	233.95	283
201.65	447	211.10	750	223.10	2142	234.20	157
202.10	130	211.85	229	224.10	17733	235.05	642
203.10	878	212.10	96	225.10	4334	236.10	397
204.10	4736	215.05	455	226.20	194	237.05	630
205.10	7368	216.10	448	227.10	7474	239.00	206

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
240.15	230	251.00	103	266.00	482	278.00	461
241.05	456	251.20	102	267.05	243	280.90	93
241.80	124	252.20	194	269.80	85	282.00	74
242.05	976	253.05	333	270.10	84	282.20	77

243.05	934	255.10	74658	271.20	98	283.10	332
244.10	13760	256.10	11540	272.20	232	284.00	114
245.10	1684	257.05	823	273.10	2252	285.00	723
246.10	2268	258.10	4155	274.10	6063	291.00	84
247.05	557	259.10	805	275.10	30640	292.20	70
248.95	298	261.10	68	276.10	4041	293.05	635
249.20	68	265.10	1609	277.05	2469	294.05	188

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms  
dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.10	10271	315.05	1222	334.10	2332	365.05	5894
297.05	1494	316.05	652	335.10	641	366.05	940
298.00	88	321.10	339	339.20	82	370.00	67
300.90	100	322.00	162	341.00	111	371.05	259
302.15	153	323.10	3686	346.05	856	372.10	1995
303.10	1216	324.10	603	347.00	112	373.05	400
304.15	351	326.95	545	352.10	1596	383.00	633
307.90	83	328.10	306	353.05	797	384.15	163
308.80	71	332.00	211	354.10	885	390.05	295
312.90	87	332.70	129	355.15	230	390.90	141
314.15	583	333.10	383	358.90	69	392.00	66

Average of 2.775 to 2.786 min.: 5p63433.D\data.ms  
dftpp

Modified:subtracted

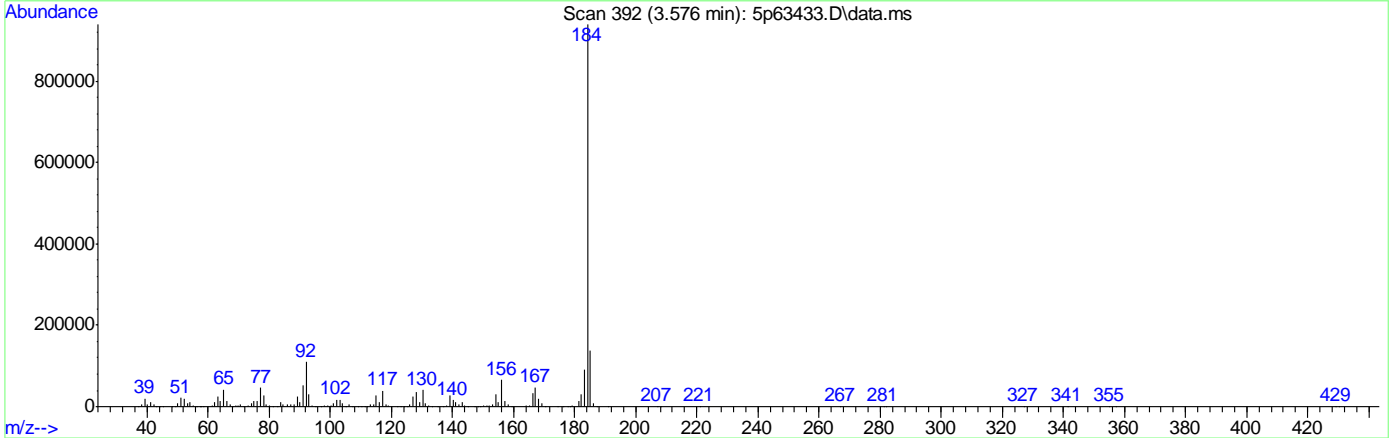
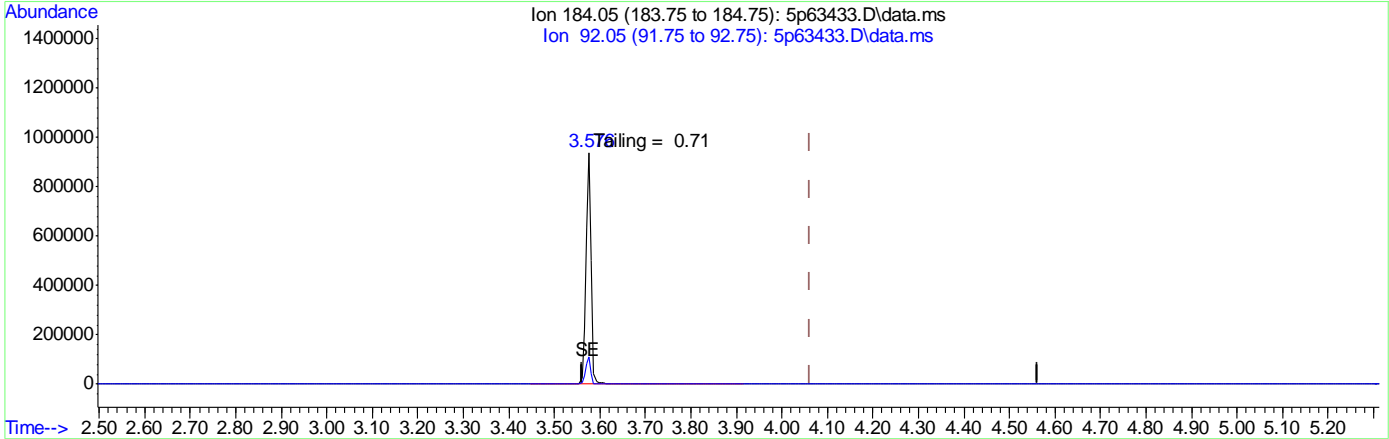
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
401.00	69	443.10	16019				
402.05	806	444.10	1638				
403.10	1352	446.20	79				
404.10	555						
421.10	911						
422.10	1026						
423.10	6309						
424.10	1259						
425.35	173						
441.10	15305						
442.10	81664						



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63433.D  
 Acq On : 1 Oct 2019 12:36 am  
 Operator : chriss2  
 Sample : dftpp  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 01 00:42:40 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(2) Benzidine (M)  
 3.576min (-0.486) 153.79ng m  
 response 778442

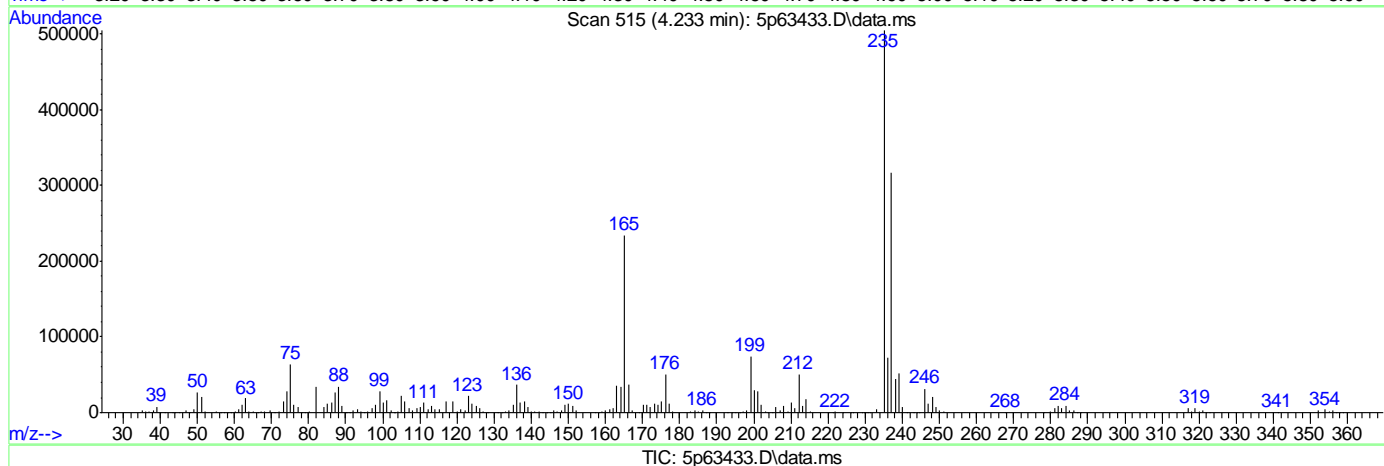
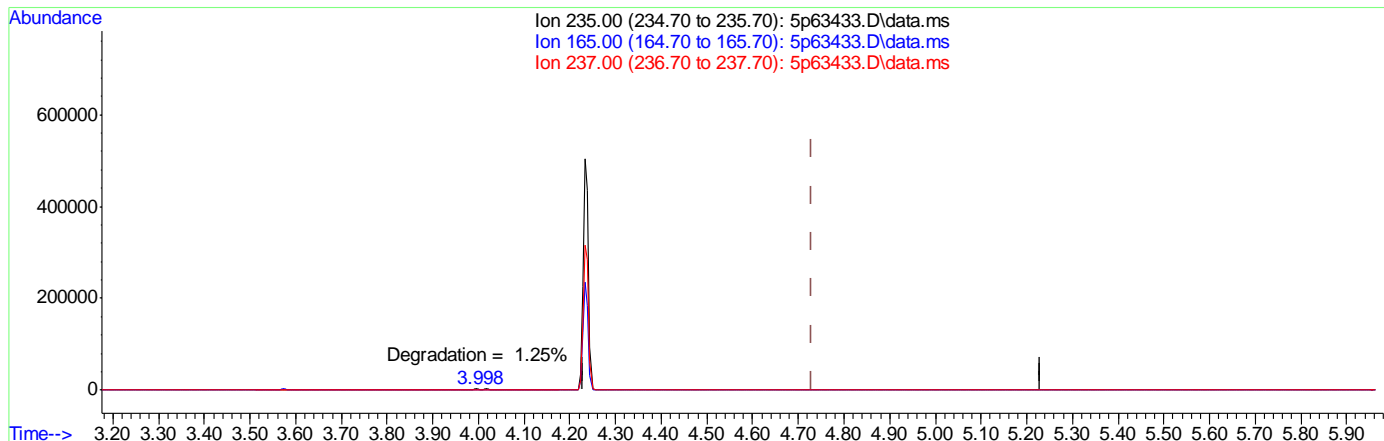
Ion	Exp%	Act%
184.05	100	100
92.05	11.50	11.67
0.00	0.00	0.00
0.00	0.00	0.00

9.5.5.1  
 9

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63433.D  
 Acq On : 1 Oct 2019 12:36 am  
 Operator : chriss2  
 Sample : dftpp  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 01 00:42:40 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(3) PP-DDT (MC)

4.233min (-0.497) 212.43ng m

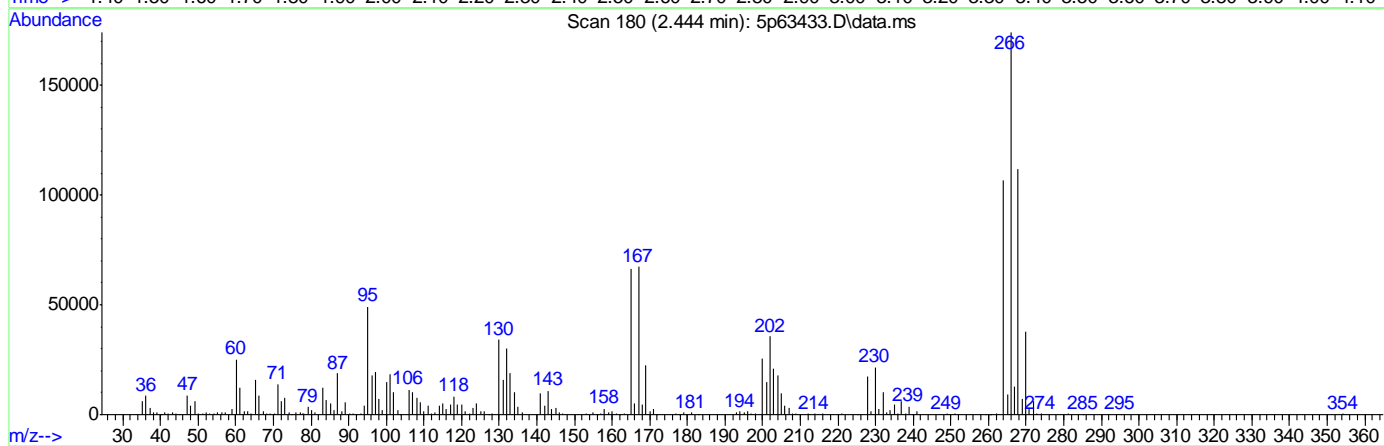
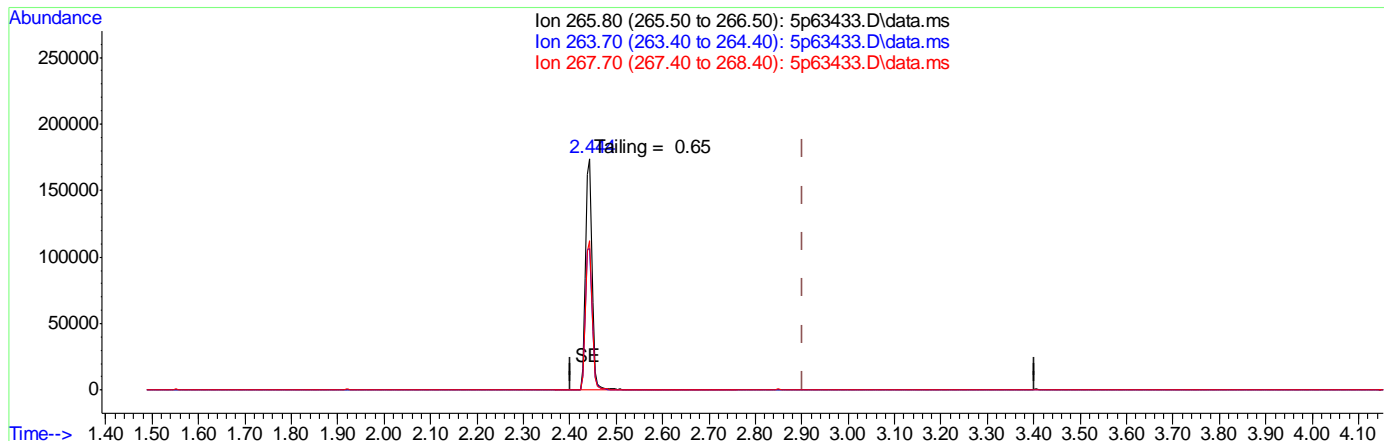
response 416875

Ion	Exp%	Act%
235.00	100	100
165.00	49.60	46.42
237.00	66.90	62.72
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63433.D  
 Acq On : 1 Oct 2019 12:36 am  
 Operator : chriss2  
 Sample : dftpp  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 01 07:56:04 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



TIC: 5p63433.D\data.ms

(1) Pentachlorophenol (MC)  
 2.444min (-0.460) 104.00ng m  
 response 173392

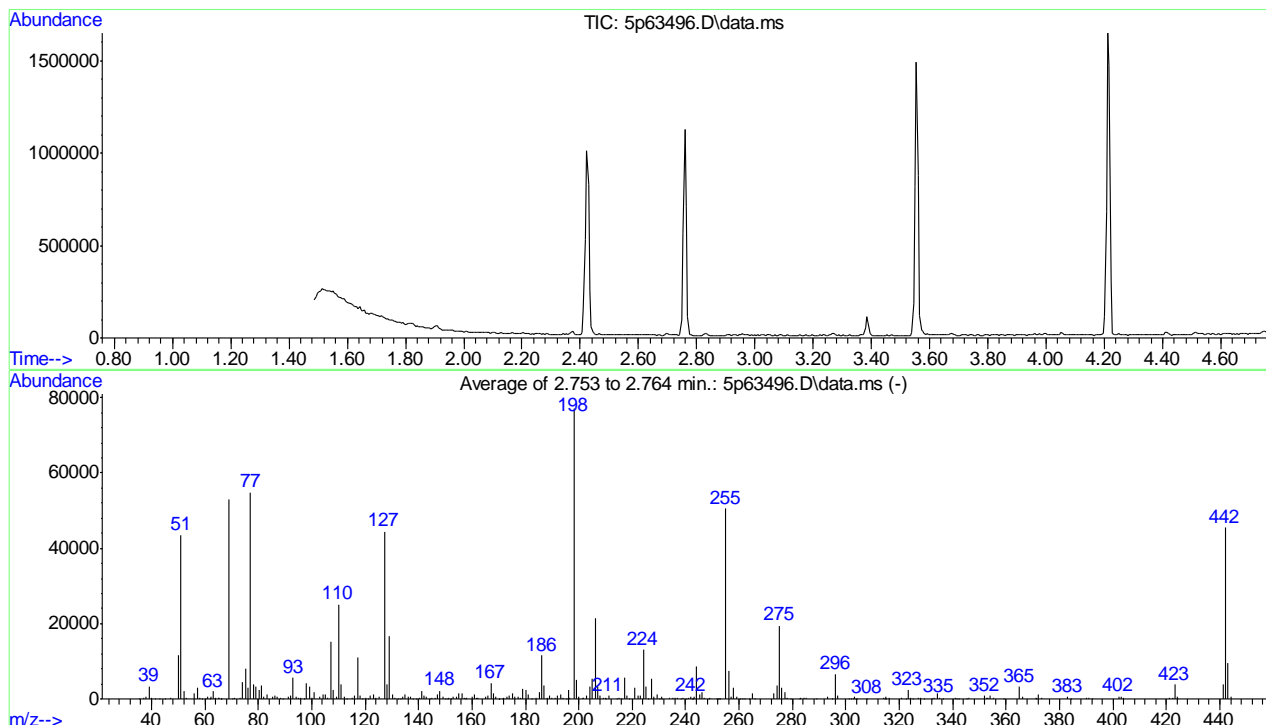
Ion	Exp%	Act%
265.80	100	100
263.70	63.20	61.35
267.70	64.40	64.35
0.00	0.00	0.00

DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2979\  
 Data File : 5p63496.D  
 Acq On : 2 Oct 2019 3:49 am  
 Operator : chriss2  
 Sample : dftpp  
 Misc : op22049,e5p2979,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 238, 239, 240; Background Corrected with Scan 235

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	56.4	43495	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	68.8	53083	PASS
70	69	0.00	2	0.3	135	PASS
127	198	40	60	57.6	44408	PASS
197	198	0.00	1	0.2	175	PASS
198	198	100	100	100.0	77114	PASS
199	198	5	9	6.5	4998	PASS
275	198	10	30	25.3	19474	PASS
365	198	1	100	4.2	3267	PASS
441	443	0.10	100	42.4	3989	PASS
442	198	40	100	59.0	45486	PASS
443	442	17	23	20.7	9407	PASS

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.20	94	52.10	2215	64.10	267	76.10	3010
37.10	175	53.15	313	65.00	335	77.10	54895
38.10	602	56.10	1461	65.20	415	78.10	3779
39.15	3320	57.10	3130	66.00	76	79.10	3170
40.10	339	58.10	185	66.20	76	80.10	2498
41.10	155	59.10	71	69.10	53083	81.10	3712
43.10	19	60.10	68	70.05	135	82.05	747
45.10	99	61.05	704	70.95	206	83.10	1117
47.05	186	62.00	150	73.15	381	85.15	717
50.10	11538	62.15	633	74.10	4496	86.05	787
51.10	43495	63.10	1985	75.10	8078	87.05	462

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.10	162	100.10	320	112.10	556	124.05	440
89.10	118	101.05	1715	113.00	107	125.15	598
91.10	691	103.10	584	115.20	189	127.10	44408
92.10	922	104.05	1076	116.05	827	128.10	3835
93.10	5578	105.10	1159	117.10	11044	129.10	16814
94.10	530	106.00	185	118.05	900	130.10	1319
95.10	187	107.10	15226	119.10	87	131.10	425
95.90	218	108.10	2360	120.05	254	132.20	90
97.20	127	109.20	533	121.20	97	133.00	86
98.10	4220	110.10	25128	122.05	817	134.10	633
99.10	3143	111.10	3803	123.10	1276	135.05	1287

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.10	546	147.05	1098	157.25	286	169.05	521
137.10	680	148.05	2225	157.70	117	170.00	92
137.80	108	149.05	508	158.00	295	170.20	75
139.10	127	150.10	96	160.10	718	171.20	134
140.15	219	151.00	100	161.05	1064	171.95	295
141.05	2097	151.25	213	161.75	224	173.05	624
142.05	762	152.20	99	162.00	181	174.05	811
143.00	499	153.05	672	165.00	624	175.10	1597
144.10	121	154.05	560	166.10	789	176.15	549
145.10	176	155.05	1394	167.05	4281	177.05	688
146.10	305	156.10	1622	168.10	1616	178.05	378

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
179.05	2767	191.00	435	201.75	231	214.30	79
180.05	2448	192.05	1014	203.05	769	215.05	396
181.05	1125	193.10	1095	204.10	3348	215.90	91
182.10	72	194.15	273	205.10	5321	217.05	5716
184.00	354	195.10	104	206.10	21374	218.05	803
185.10	1726	196.10	2339	207.10	3187	219.00	152
186.10	11480	196.70	175	208.05	921	221.10	3073
187.10	3530	198.05	77114	209.10	334	222.10	846
188.10	296	199.10	4998	209.90	83	223.05	825
189.10	814	200.00	514	210.10	354	224.10	12992
190.05	170	201.50	218	211.10	790	225.10	3159

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
226.10	115	238.10	97	247.05	444	259.10	505
227.05	5356	239.05	402	248.60	68	260.40	79
228.10	754	240.20	74	249.05	232	261.20	75
229.10	1136	241.10	442	251.40	102	262.00	87

230.10	72	242.10	678	251.90	94	263.90	85
230.80	70	242.50	89	252.20	66	265.05	1366
231.15	499	242.80	117	252.90	67	266.00	142
234.10	212	243.05	490	255.10	50496	273.00	1475
235.15	413	244.10	8578	256.10	7476	274.10	3571
236.00	238	245.10	1169	257.05	547	275.10	19474
237.05	334	246.10	1898	258.05	3060	276.10	2865

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms  
dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
277.10	1709	297.05	897	315.10	647	333.00	175
278.05	441	301.00	77	316.10	413	334.05	1450
279.10	67	302.00	83	321.00	347	335.05	368
282.60	78	302.90	85	322.30	91	336.20	68
283.05	323	303.10	526	323.15	2315	341.00	163
284.10	217	303.70	70	324.15	419	341.20	82
285.15	411	304.00	93	325.10	73	342.20	100
289.10	73	307.90	83	327.05	447	345.00	71
293.00	474	314.00	322	328.05	287	346.00	415
294.70	68	314.30	157	329.20	67	352.05	858
296.10	6639	314.90	138	332.00	155	352.90	300

Average of 2.753 to 2.764 min.: 5p63496.D\data.ms  
dftpp

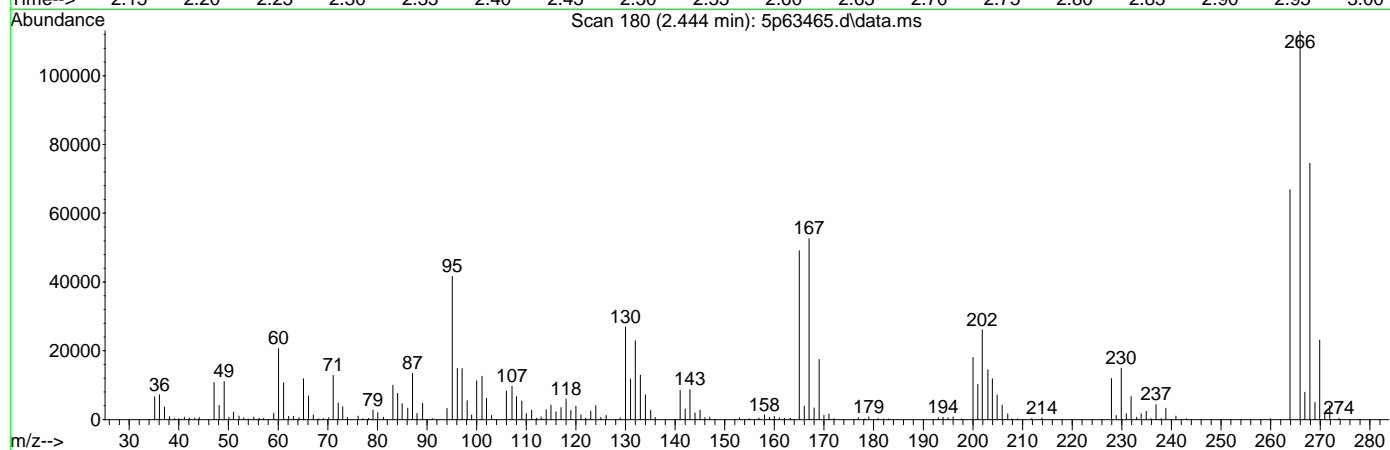
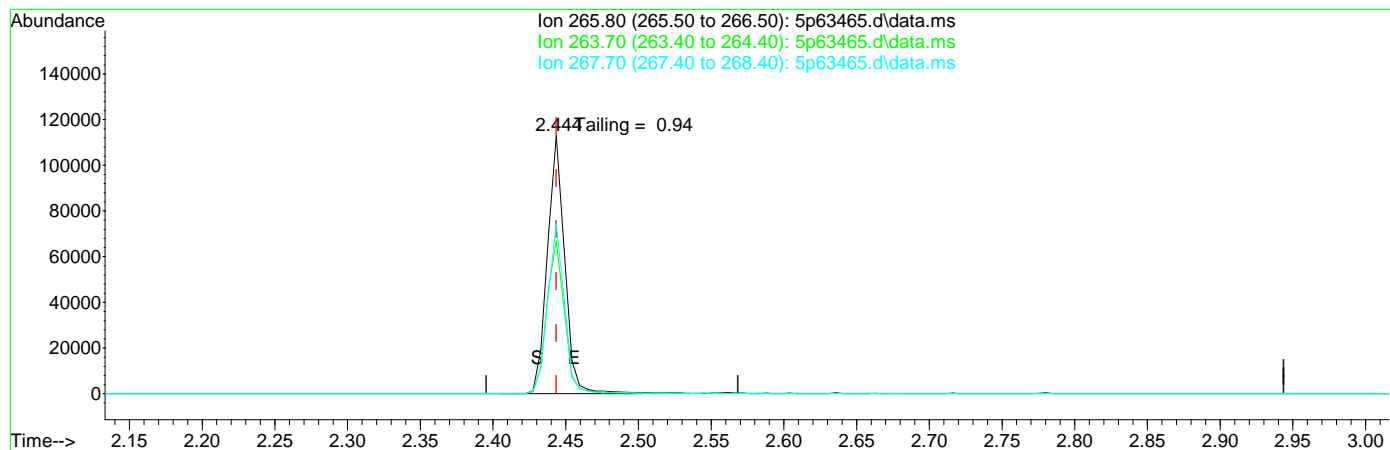
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
353.10	212	384.00	103	424.10	542		
354.10	917	390.20	193	441.20	3989		
355.15	267	391.05	164	442.10	45486		
359.10	72	392.20	75	443.10	9407		
365.05	3267	402.10	622	444.05	687		
366.00	493	403.05	609				
371.10	173	403.95	178				
371.30	74	421.05	387				
372.15	1212	422.20	291				
373.10	282	423.10	3754				
383.10	525	423.90	71				

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63465.d  
 Acq On : 1 Oct 2019 1:27 pm  
 Operator : hennys  
 Sample : dftpp Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Results File: DFTPP5P.RES  
 Quant Time: Oct 02 00:51:00 2019  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018  
 QLast Update : Wed Oct 02 00:50:54 2019  
 Response via : Initial Calibration



TIC: 5p63465.d\data.ms

(1) Pentachlorophenol (MC)

2.444min (0.000) 56.76ng m

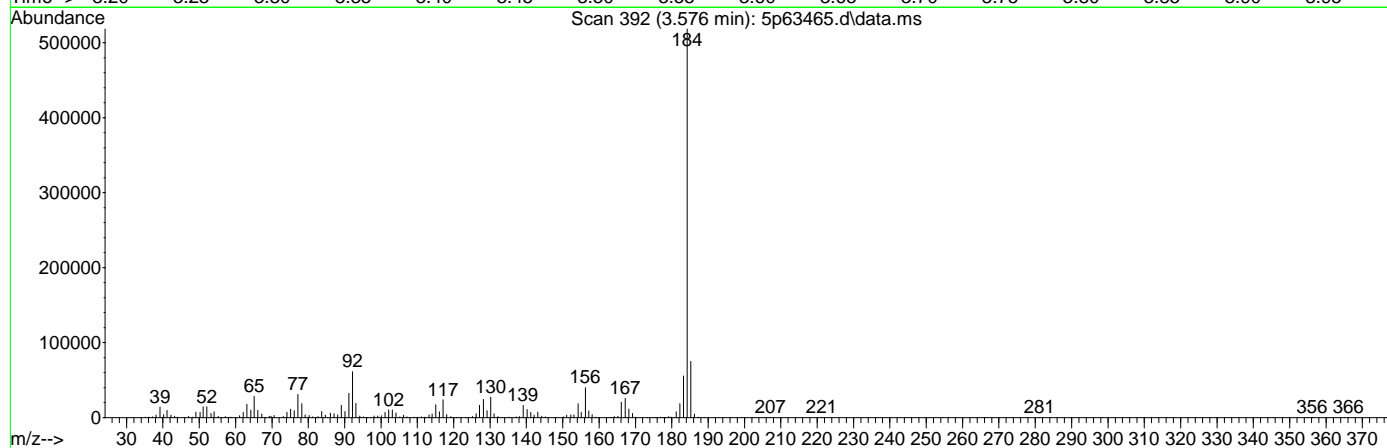
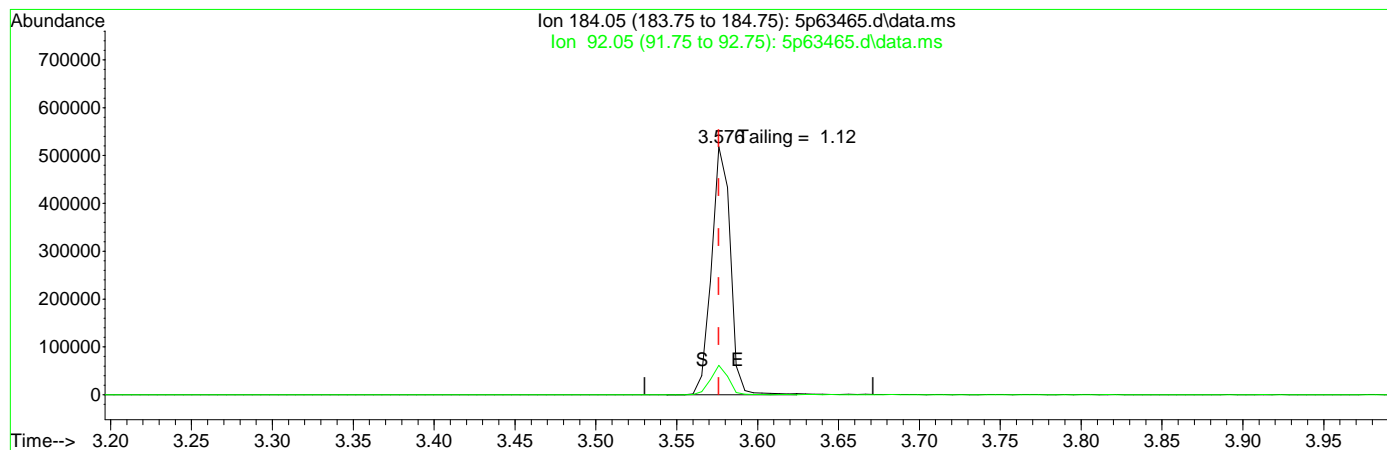
response 94627

Ion	Exp%	Act%
265.80	100	100
263.70	59.20	59.19
267.70	65.90	65.93
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63465.d  
 Acq On : 1 Oct 2019 1:27 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1  
 Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Results File: DFTPP5P.RES  
 Quant Time: Oct 02 00:51:00 2019  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018  
 QLast Update : Wed Oct 02 00:50:54 2019  
 Response via : Initial Calibration



TIC: 5p63465.d\data.ms

(2) Benzidine (M)

3.576min (0.000) 83.95ng m

response 424937

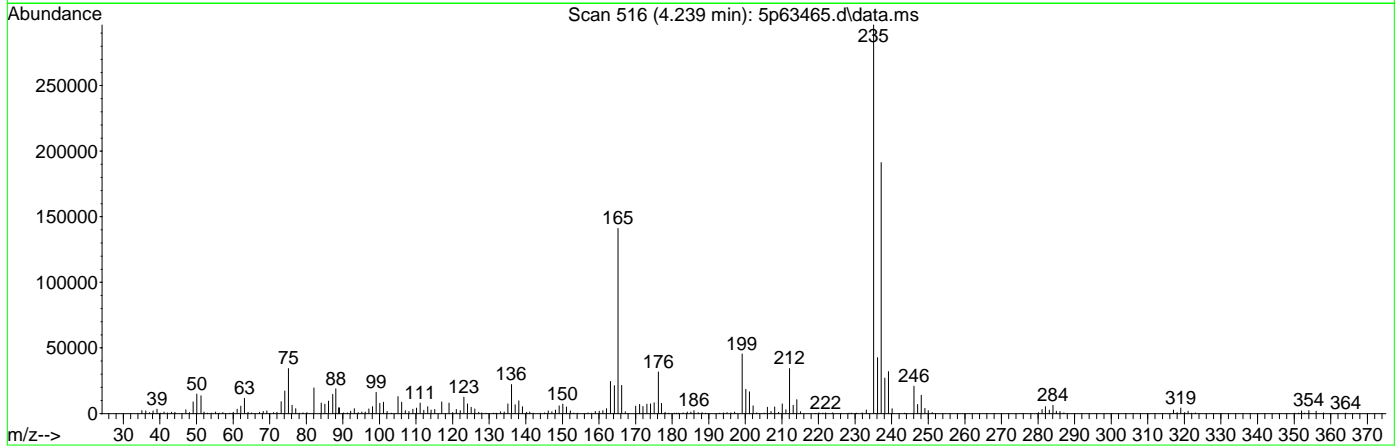
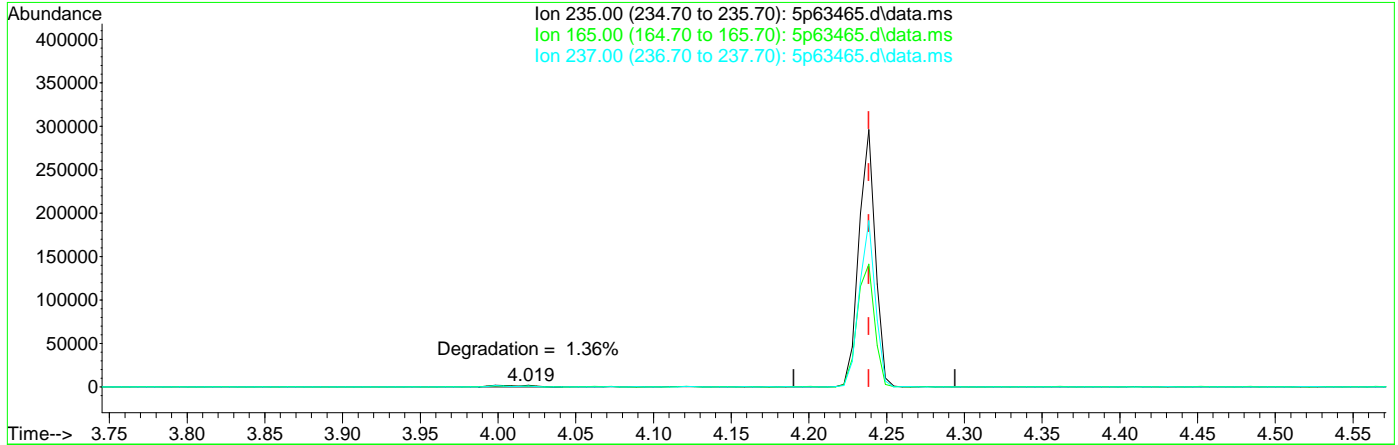
Ion	Exp%	Act%
184.05	100	100
92.05	11.80	11.83
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63465.d  
 Acq On : 1 Oct 2019 1:27 pm  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1  
 Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Results File: DFTPP5P.RES  
 Quant Time: Oct 02 00:51:00 2019  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Mon May 14 11:39:11 2018  
 QLast Update : Wed Oct 02 00:50:54 2019  
 Response via : Initial Calibration



TIC: 5p63465.d\data.ms

(3) PP-DDT (MC)  
 4.239min (0.000) 110.12ppb m  
 response 216109

Ion	Exp%	Act%
235.00	100	100
165.00	47.60	47.65
237.00	64.50	64.54
0.00	0.00	0.00

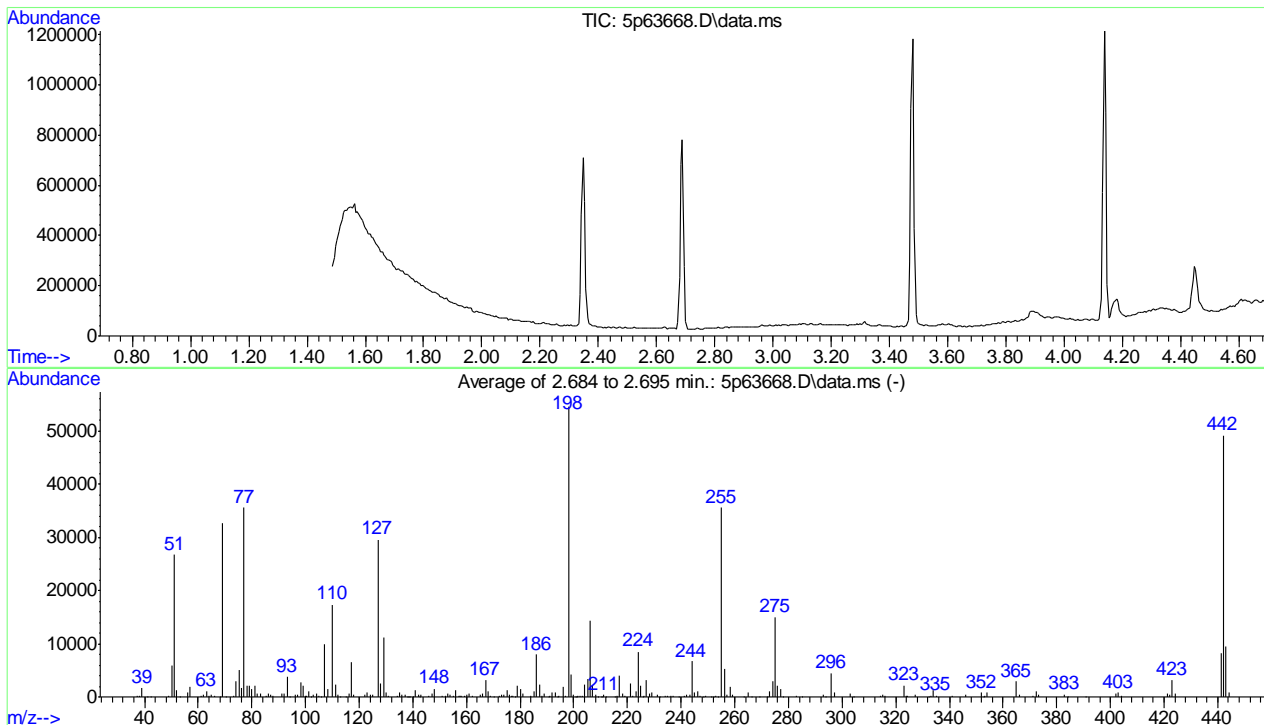
9.5.6.3  
9

DFTPPR

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63668.D  
 Acq On : 7 Oct 2019 8:57 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 Last Update : Fri Aug 30 10:49:56 2019



AutoFind: Scans 225, 226, 227; Background Corrected with Scan 221

AUTOFIND via AUTOINTEGRATE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.9	26650	PASS
68	69	0.00	2	0.3	82	PASS
69	198	0.00	100	59.7	32552	PASS
70	69	0.00	2	0.2	77	PASS
127	198	40	60	54.1	29514	PASS
197	198	0.00	1	0.3	150	PASS
198	198	100	100	100.0	54541	PASS
199	198	5	9	7.7	4212	PASS
275	198	10	30	27.6	15033	PASS
365	198	1	100	5.3	2873	PASS
441	443	0.10	100	85.4	8141	PASS
442	198	40	100	90.1	49149	PASS
443	442	17	23	19.4	9529	PASS

Average of 2.684 to 2.695 min.: 5p63668.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	190	57.10	1930	74.10	2994	86.05	650
38.05	304	61.10	323	75.10	4964	87.00	361
39.15	1597	62.10	369	76.20	1714	87.95	197
41.15	55	63.05	1100	77.10	35517	91.05	670
42.10	74	64.10	161	78.05	2213	92.10	686
49.10	202	65.00	416	79.10	2172	93.10	3702
50.10	5915	66.15	187	80.05	1532	93.95	46
51.10	26650	68.05	82	81.10	2045	96.15	404
52.10	1341	69.10	32552	82.00	603	97.10	434
53.10	88	70.10	77	83.10	667	98.10	2799
56.10	763	73.05	266	85.15	129	99.05	2137

Average of 2.684 to 2.695 min.: 5p63668.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
100.00	145	111.10	2240	127.10	29514	138.80	79
100.20	112	112.05	487	128.05	2522	140.20	82
101.05	1136	112.80	80	129.10	11146	141.05	1214
102.00	98	115.10	36	130.05	919	142.05	489
103.05	380	116.10	719	131.05	207	142.60	107
104.05	704	117.10	6470	134.15	253	143.10	353
105.10	278	118.10	448	135.10	851	145.95	309
105.90	74	122.10	529	136.00	472	147.10	725
107.10	9987	123.10	929	137.05	522	148.10	1515
108.10	1444	124.05	409	138.00	78	151.05	270
110.10	17353	125.10	452	138.20	69	152.15	198

Average of 2.684 to 2.695 min.: 5p63668.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
153.05	542	165.05	494	176.90	181	189.05	587
154.05	336	166.10	611	177.10	312	190.50	74
155.10	278	167.10	3197	177.90	89	191.05	260
156.10	1191	168.05	1080	179.10	2125	192.05	890
157.15	241	169.05	252	180.10	1440	193.05	801
157.80	118	170.10	100	181.05	701	194.00	70
158.05	199	172.10	184	184.10	113	194.20	145
159.15	202	173.05	326	185.10	1071	196.05	1853
160.10	341	174.10	459	186.10	7972	196.70	150
161.10	595	175.15	1193	187.10	2300	198.00	54541
162.10	152	176.00	420	188.10	291	199.00	4212

Average of 2.684 to 2.695 min.: 5p63668.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
200.00	345	209.00	87	221.90	268	234.00	151
200.80	72	210.10	100	223.00	1018	235.05	277
201.20	94	210.50	78	224.10	8486	235.95	161
201.65	249	211.10	405	225.05	2148	236.95	231
202.20	213	212.10	97	225.90	92	239.00	70
203.05	268	215.10	86	226.05	209	241.10	151
204.10	2340	216.00	264	227.10	3163	242.00	411
205.10	3469	217.05	4001	228.10	685	243.10	476
206.10	14322	218.00	541	229.10	815	244.10	6659
207.10	2031	219.15	178	231.15	458	245.10	880
208.05	387	221.10	2531	232.10	84	246.00	1063

Average of 2.684 to 2.695 min.: 5p63668.D\data.ms

dftpp

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
247.05	254	259.10	400	278.10	81	316.05	239
248.10	92	263.30	76	283.05	181	323.10	2109
249.00	261	265.05	874	285.20	87	323.80	196
251.10	98	266.10	91	293.05	332	324.10	241

252.00	103	269.00	78	294.00	70	327.05	438
252.90	116	271.90	68	296.10	4491	332.20	71
253.60	100	273.10	1103	297.05	819	333.10	187
255.10	35570	274.10	2861	303.10	732	334.10	1320
256.10	5297	275.10	15033	304.20	74	335.10	244
257.10	469	276.05	2161	314.15	244	341.05	180
258.10	1988	277.05	1469	315.05	445	346.05	338

Average of 2.684 to 2.695 min.: 5p63668.D\data.ms  
dftpp

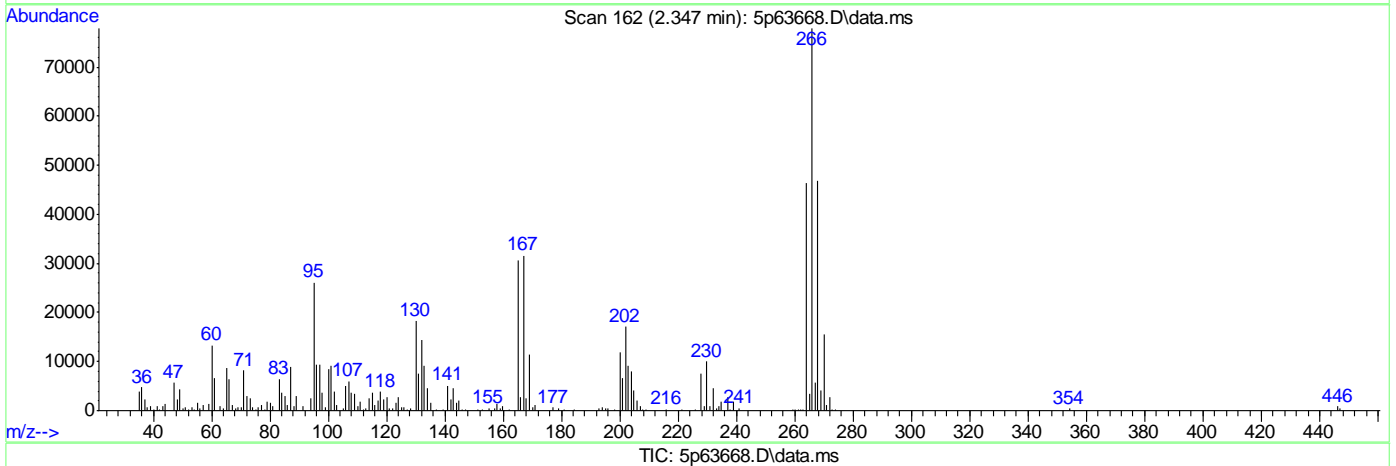
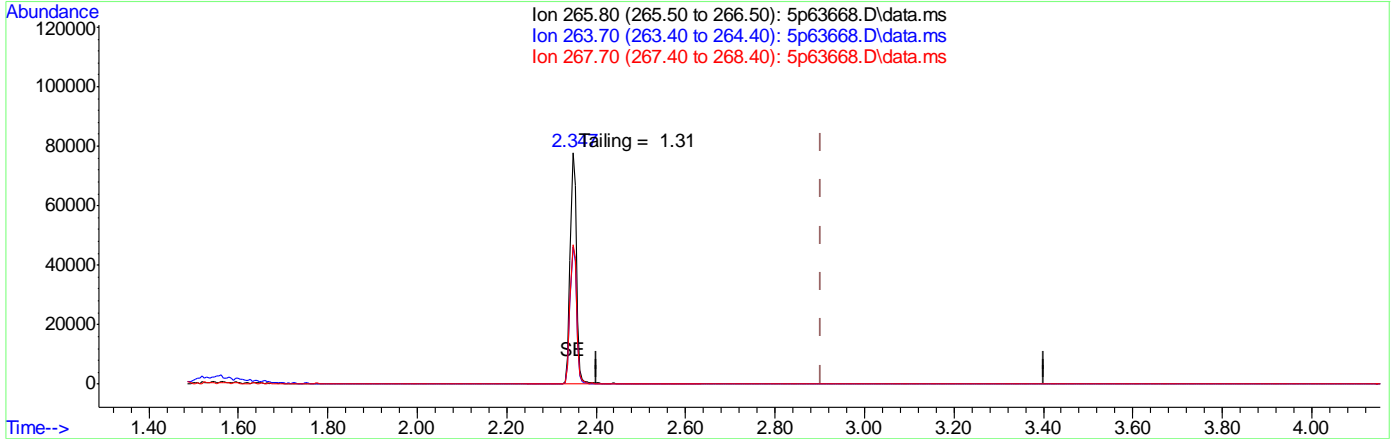
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
352.05	788	390.90	80	444.05	801		
352.80	81	402.05	548				
353.10	261	403.00	753				
354.10	765	404.05	189				
365.00	2873	421.05	594				
366.05	522	422.05	500				
371.10	118	423.05	3171				
372.15	1079	424.10	659				
373.15	336	441.10	8141				
383.00	446	442.10	49149				
383.90	69	443.10	9529				

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63668.D  
 Acq On : 7 Oct 2019 8:57 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 07 09:03:54 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(1) Pentachlorophenol (MC)

2.347min (-0.556) 44.12ng m

response 73558

Ion	Exp%	Act%
265.80	100	100
263.70	63.20	59.42
267.70	64.40	60.12
0.00	0.00	0.00

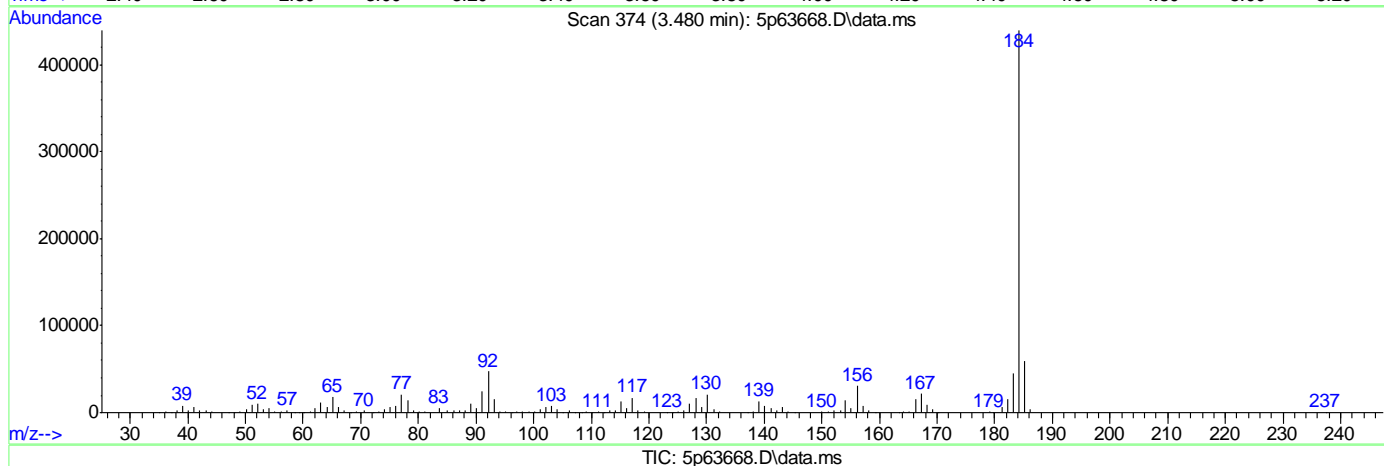
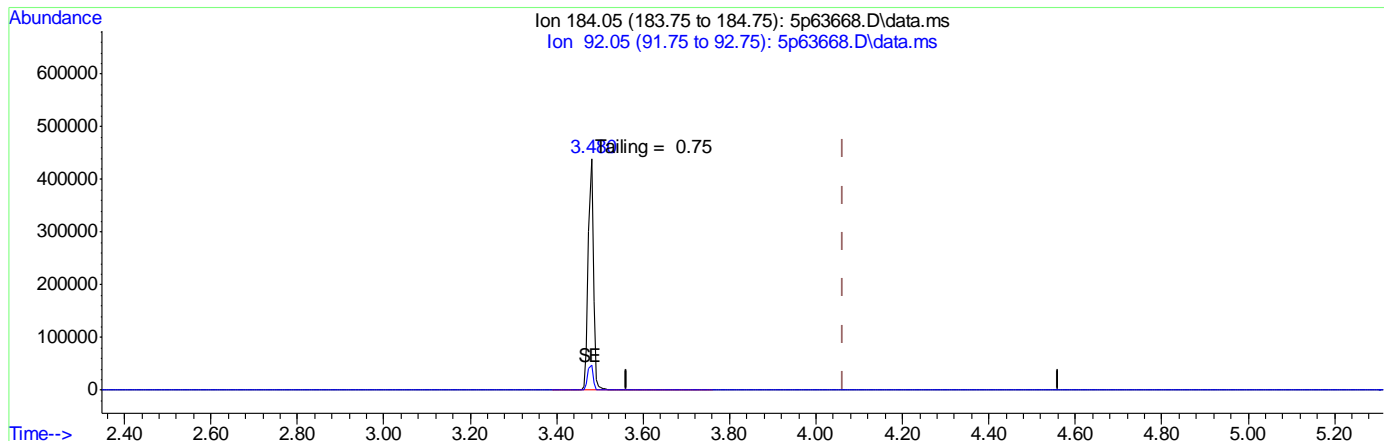
9.5.7.1

9

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63668.D  
 Acq On : 7 Oct 2019 8:57 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 07 09:03:54 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(2) Benzidine (M)

3.480min (-0.582) 66.43ng m

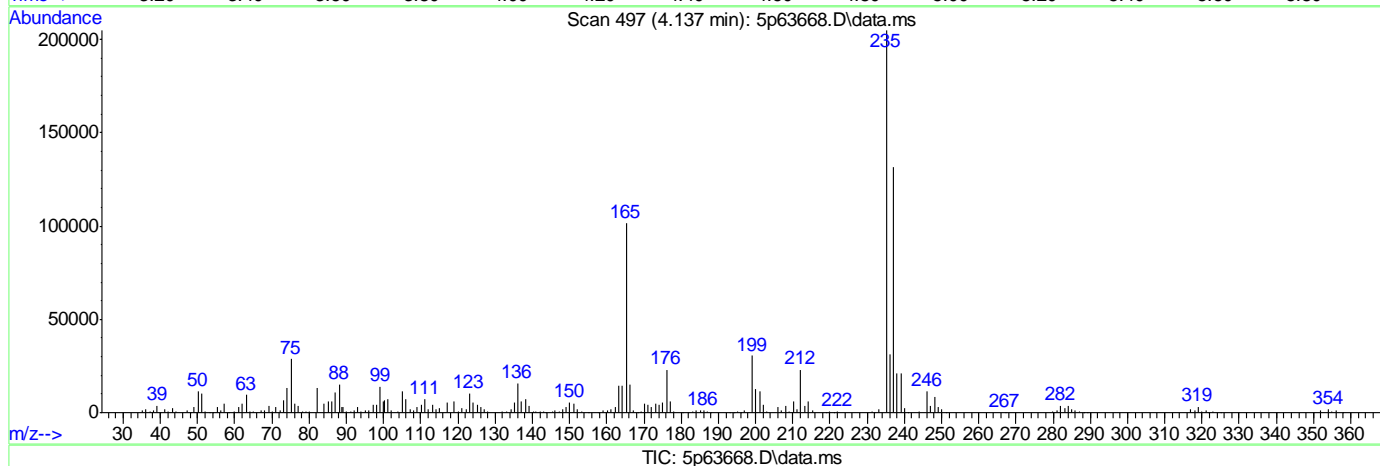
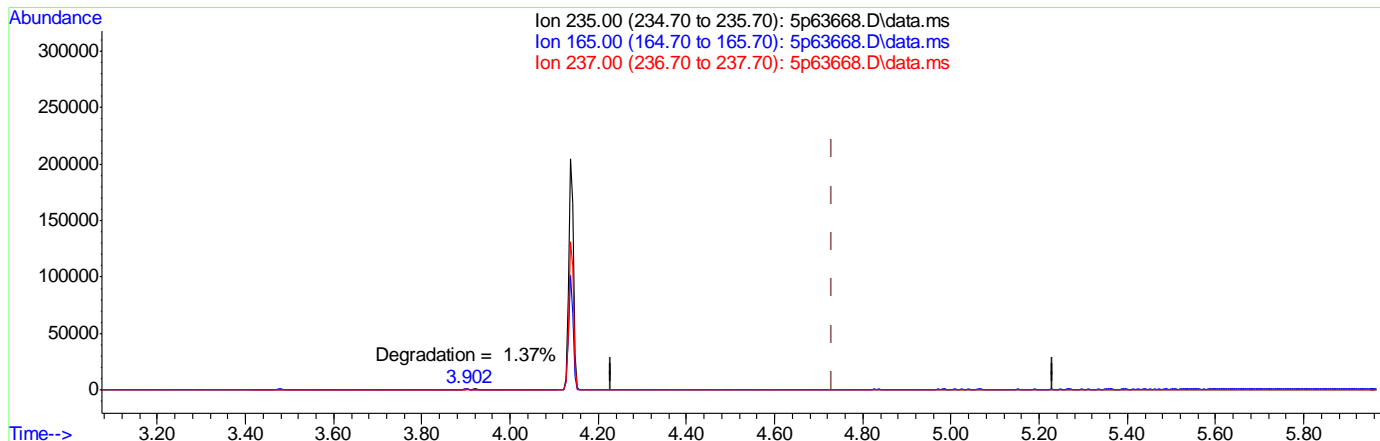
response 336223

Ion	Exp%	Act%
184.05	100	100
92.05	11.50	10.80
0.00	0.00	0.00
0.00	0.00	0.00

## Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63668.D  
 Acq On : 7 Oct 2019 8:57 am  
 Operator : hennys  
 Sample : dftpp  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 07 09:03:54 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\DFTPP5P.M  
 Quant Title : Semi Volatile Extractables by GC/MS zb-5msi 30mx0.Fri Aug 30 10:49:56 2019  
 QLast Update : Fri Aug 30 10:49:56 2019  
 Response via : Initial Calibration



(3) PP-DDT (MC)

4.137min (-0.593) 81.55ng m

response 160036

Ion	Exp%	Act%
235.00	100	100
165.00	49.60	49.60
237.00	66.90	64.20
0.00	0.00	0.00

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62558.D  
 Acq On : 6 Sep 2019 1:58 pm  
 Operator : hennys  
 Sample : ic2940-100  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 06 16:14:36 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	107357	40.00	ppm	0.00
24) Naphthalene-d8	5.524	136	381379	40.00	ppm	0.00
47) Acenaphthene-d10	7.218	164	203387	40.00	ppm	0.00
69) Phenanthrene-d10	8.676	188	384916	40.00	ppm	0.00
83) Chrysene-d12	12.069	240	300609	40.00	ppm	0.01
91) Perylene-d12	14.061	264	405122	40.00	ppm	0.01
101) 1,4-Dichlorobenzene-d4b	4.328	152	107357	40.00	ppm	0.00
103) Acenaphthene-d10a	7.218	164	203387	40.00	ppm	0.00
105) Chrysene-d12a	12.069	240	300609	40.00	ppm	0.01
107) Phenanthrene-d10a	8.676	188	384916	40.00	ppm	0.00
110) Naphthalene-d8a	5.524	136	381379	40.00	ppm	0.00
112) Chrysene-d12b	12.069	240	300609	40.00	ppm	0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	107357	40.00	ppm	0.00
116) Chrysene-d12c	12.069	240	300609	40.00	ppm	0.01
118) Chrysene-d12d	12.069	240	300609	40.00	ppm	0.01
120) Phenanthrene-d10b	8.676	188	384916	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.174	112	450130	102.65	ppm	0.00
Spiked Amount	50.000		Recovery	=	205.30%	
8) Phenol-d5	4.023	99	586096	92.92	ppm	0.00
Spiked Amount	50.000		Recovery	=	185.84%	
25) Nitrobenzene-d5	4.846	82	516460	98.40	ppm	0.00
Spiked Amount	50.000		Recovery	=	196.80%	
51) 2-Fluorobiphenyl	6.577	172	704397	99.91	ppm	0.00
Spiked Amount	50.000		Recovery	=	199.82%	
73) 2,4,6-Tribromophenol	7.987	330	154756	101.64	ppm	0.00
Spiked Amount	50.000		Recovery	=	203.28%	
85) Terphenyl-d14	10.626	244	800910	103.10	ppm	0.01
Spiked Amount	50.000		Recovery	=	206.20%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.747	88	224193	106.73	ppm	96
3) Pyridine	2.020	79	545911	96.25	ppm	95
4) N-Nitrosodimethylamine	1.988	74	341897	102.35	ppm	94
6) Indene	4.568	116	620346	96.90	ppm	95
7) Cumene	3.612	105	1040447	96.11	ppm	98
9) Phenol	4.039	94	586413	90.09	ppm	70
10) Aniline	4.029	93	673461	93.04	ppm	70
11) bis(2-Chloroethyl)ether	4.098	93	446363	92.69	ppm	97
12) 2-Chlorophenol	4.141	128	381914	95.22	ppm	94
13) Decane	4.210	43	416715	86.27	ppm	97
14) 1,3-Dichlorobenzene	4.280	146	389514	97.84	ppm	98
15) 1,4-Dichlorobenzene	4.344	146	378331	96.42	ppm	99
16) Benzyl alcohol	4.472	108	278371	96.53	ppm	96



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62558.D  
 Acq On : 6 Sep 2019 1:58 pm  
 Operator : hennys  
 Sample : ic2940-100  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 06 16:14:36 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	349568	93.19	ppm	99
18) Acetophenone	4.712	105	606629	94.03	ppm	99
19) 2-Methylphenol	4.590	108	371855	94.22	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.600	45	461259	102.70	ppm	91
21) 3&4-Methylphenol	4.734	108	366835	90.73	ppm	99
22) n-Nitroso-di-n-propyla...	4.723	70	313879	87.79	ppm	99
23) Hexachloroethane	4.798	201	150673	98.94	ppm	99
26) Nitrobenzene	4.867	77	512596	93.76	ppm	94
27) Quinoline	5.877	129	753886	101.08	ppm	99
28) Isophorone	5.102	82	935605	96.71	ppm	97
29) 2-Nitrophenol	5.167	139	213693	97.92	ppm	95
30) 2,4-Dimethylphenol	5.231	107	421338	96.92	ppm	97
31) Benzoic acid	5.396	105	392181	99.47	ppm	96
32) bis(2-Chloroethoxy)met...	5.316	93	554773	95.36	ppm	97
33) 2,4-Dichlorophenol	5.402	162	283216	94.46	ppm	99
34) 2,6-Dichlorophenol	5.621	162	264977	97.60	ppm	95
35) 1,3,5-Trichlorobenzene	5.183	180	319876	98.16	ppm	98
36) 1,2,4-Trichlorobenzene	5.476	180	326604	98.87	ppm	98
37) 1,2,3-Trichlorobenzene	5.690	180	284525	95.38	ppm	99
38) Naphthalene	5.546	128	963157	99.10	ppm	99
39) 4-Chloroaniline	5.610	127	438830	94.55	ppm	99
40) 2,3-Dichloroaniline	6.486	161	358008	97.71	ppm	97
41) Caprolactam	5.973	55	229160m	96.02	ppm	
42) Hexachlorobutadiene	5.685	225	196392	100.38	ppm	97
43) 4-Chloro-3-methylphenol	6.101	107	397106	96.95	ppm	98
44) 2-Methylnaphthalene	6.214	141	506414	93.55	ppm	96
45) 1-Methylnaphthalene	6.304	141	563433	93.53	ppm	95
46) Dimethylnaphthalene	6.823	156	571262	96.32	ppm	96
48) Hexachlorocyclopentadiene	6.379	237	443417	204.76	ppm	98
49) 2,4,6-Trichlorophenol	6.502	196	216800	102.08	ppm	98
50) 2,4,5-Trichlorophenol	6.539	196	231383	101.56	ppm	99
52) 2-Chloronaphthalene	6.684	162	565851	95.78	ppm	97
53) Biphenyl	6.673	154	772832	95.29	ppm	99
54) 2-Nitroaniline	6.791	65	295349	91.63	ppm	98
55) Dimethylphthalate	6.983	163	753920	99.70	ppm	99
56) Acenaphthylene	7.079	152	993559	97.22	ppm	99
57) 2,6-Dinitrotoluene	7.031	165	168484	101.91	ppm	98
58) 3-Nitroaniline	7.191	138	206943	95.95	ppm	98
59) Acenaphthene	7.250	153	614122	100.53	ppm	97
60) 2,4-Dinitrophenol	7.298	184	236162	216.63	ppm	# 68
61) 4-Nitrophenol	7.384	109	144293	99.36	ppm	97
62) Dibenzofuran	7.421	168	832257	97.17	ppm	91
63) 2,4-Dinitrotoluene	7.421	165	202785	96.58	ppm	83
64) 2,3,4,6-Tetrachlorophenol	7.549	232	208726	104.32	ppm	98
65) Diethylphthalate	7.672	149	788238	95.39	ppm	98
66) Fluorene	7.752	166	714906	96.49	ppm	98
67) 4-Chlorophenyl-phenyle...	7.763	204	329853	96.61	ppm	99
68) 4-Nitroaniline	7.790	138	197870	96.09	ppm	95
70) 4,6-Dinitro-2-methylph...	7.822	198	152938	101.01	ppm	97
71) n-Nitrosodiphenylamine	7.880	169	514565	96.66	ppm	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62558.D  
 Acq On : 6 Sep 2019 1:58 pm  
 Operator : hennys  
 Sample : ic2940-100  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 06 16:14:36 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

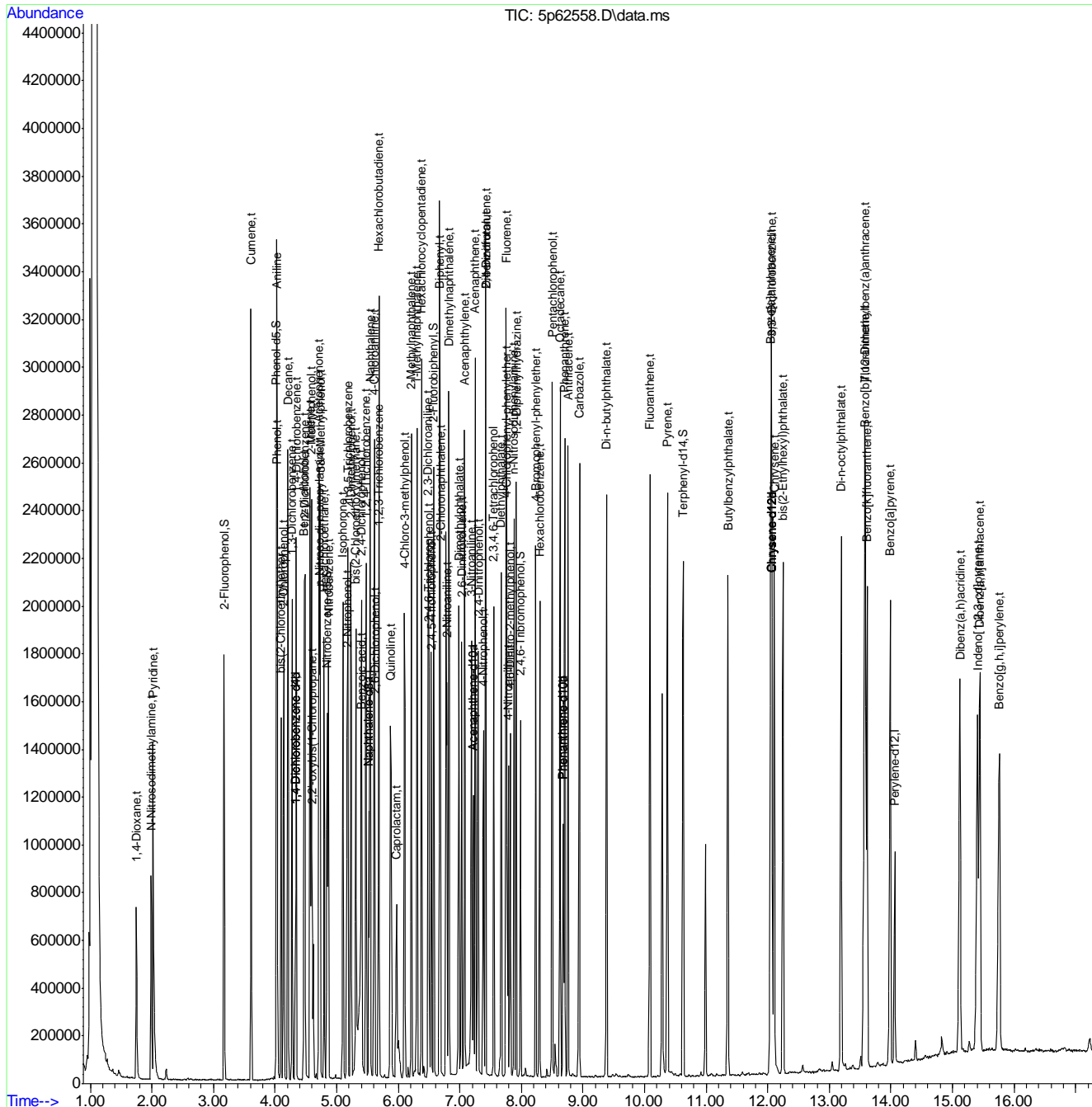
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.918	77	971555	89.45	ppm	98
74) 4-Bromophenyl-phenylether	8.233	248	235282	101.94	ppm	96
75) Hexachlorobenzene	8.297	284	281800	99.75	ppm	98
76) Pentachlorophenol	8.500	266	355633	203.64	ppm	99
77) Phenanthrene	8.703	178	942872	95.83	ppm	99
78) Anthracene	8.756	178	988959	95.86	ppm	99
79) Carbazole	8.943	167	1050624	94.73	ppm	99
80) Di-n-butylphthalate	9.382	149	1422737	93.81	ppm	98
81) Fluoranthene	10.087	202	1233533	95.37	ppm	99
82) Octadecane	8.628	57	565339	89.36	ppm	96
84) Pyrene	10.375	202	1216860	103.40	ppm	99
86) Butylbenzylphthalate	11.353	149	665277	101.67	ppm	95
87) Benzo[a]anthracene	12.053	228	1130081	102.44	ppm	98
88) 3,3'-Dichlorobenzidine	12.063	252	460372	100.76	ppm	99
89) Chrysene	12.106	228	1078738	104.75	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.250	149	873284	102.60	ppm	98
92) Di-n-octylphthalate	13.191	149	1531044	92.41	ppm	99
93) Benzo[b]fluoranthene	13.575	252	1306539	104.29	ppm	98
94) Benzo[k]fluoranthene	13.618	252	1003141	87.56	ppm	99
95) Benzo[a]pyrene	13.992	252	1147852	97.53	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.408	276	1092857	100.87	ppm	96
97) Dibenz(a,h)acridine	15.124	279	1006857	101.00	ppm	97
98) Dibenz[a,h]anthracene	15.445	278	1075473	99.83	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.581	256	551740	97.38	ppm	98
100) Benzo[g,h,i]perylene	15.760	276	1048624	99.20	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62558.D  
 Acq On : 6 Sep 2019 1:58 pm  
 Operator : hennys  
 Sample : ic2940-100  
 Misc : op22049,e5p2940,1000,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 06 16:14:36 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



# Manual Integration Approval Summary

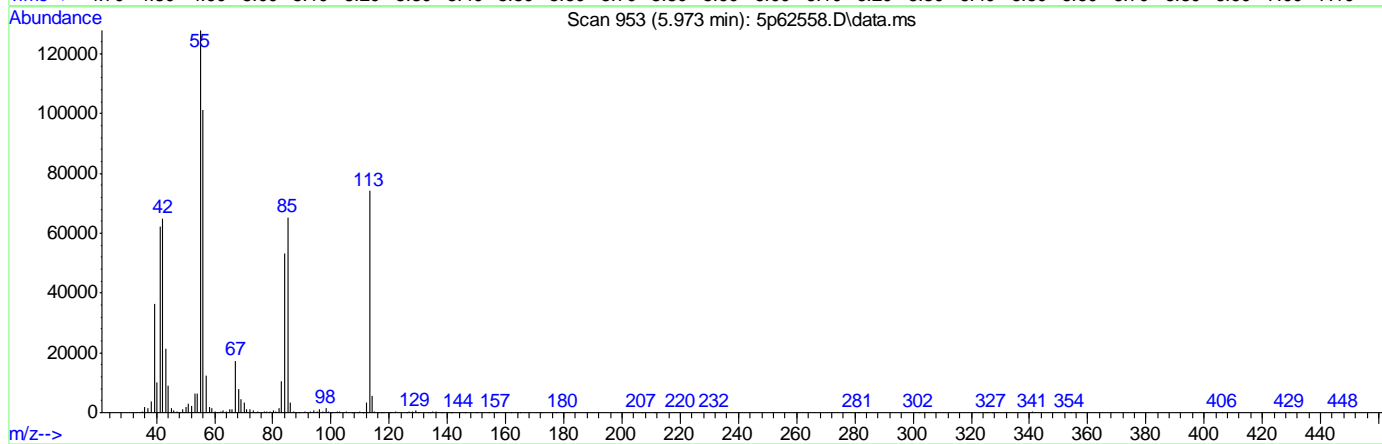
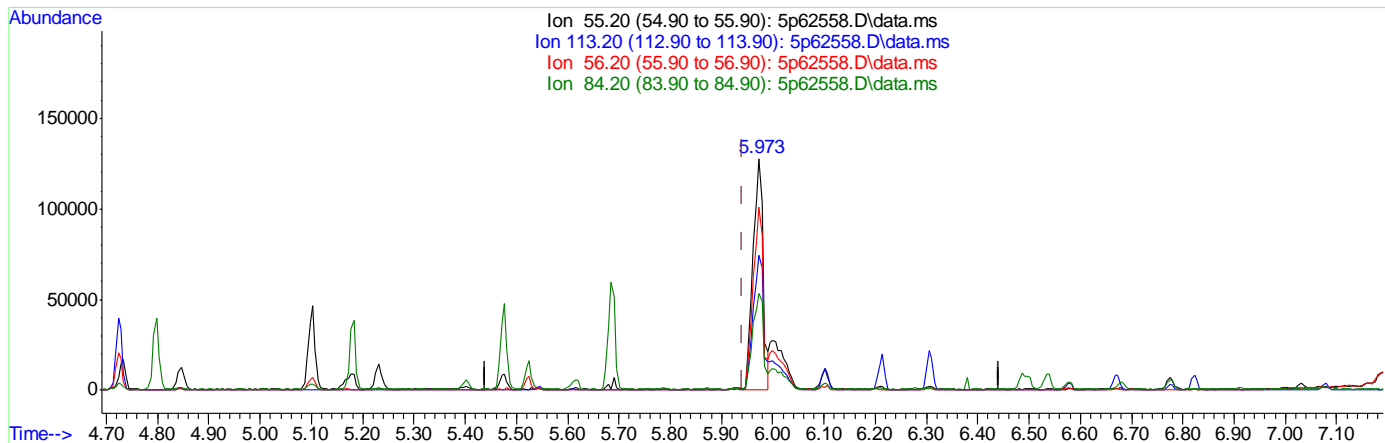
Sample Number: E5P2940-IC2940      Method: SW846 8270D  
Lab FileID: 5P62558.D      Analyst approved: 09/09/19 12:42 Ying Li  
Injection Time: 09/06/19 13:58      Supervisor approved: 09/09/19 15:51 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
Caprolactam	105-60-2		5.97	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62558.D  
 Acq On : 6 Sep 2019 1:58 pm  
 Operator : hennys  
 Sample : ic2940-100  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 06 16:12:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



(41) Caprolactam (t)  
 5.973min (+0.032) 71.43ppm  
 response 170483

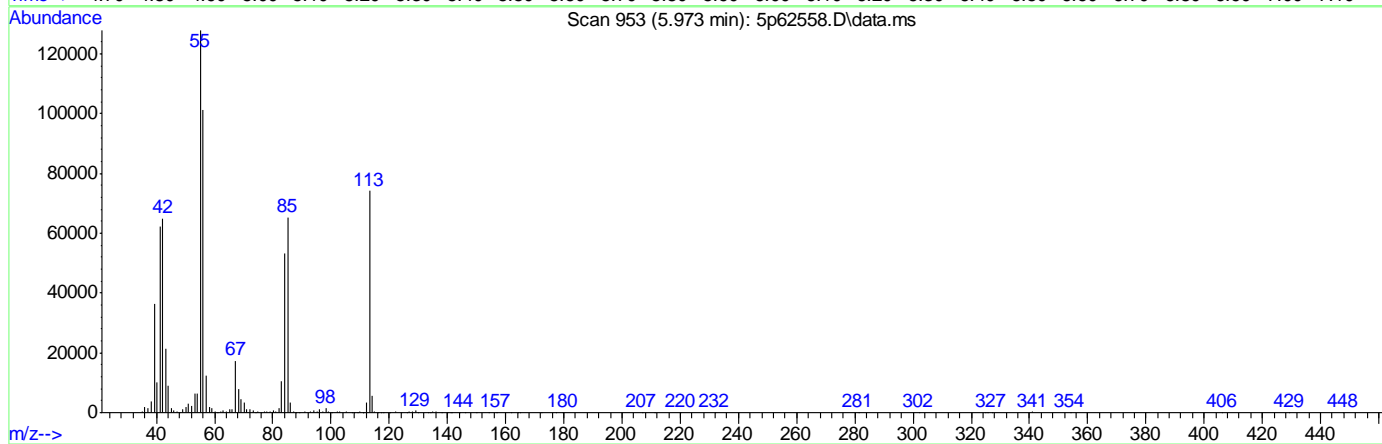
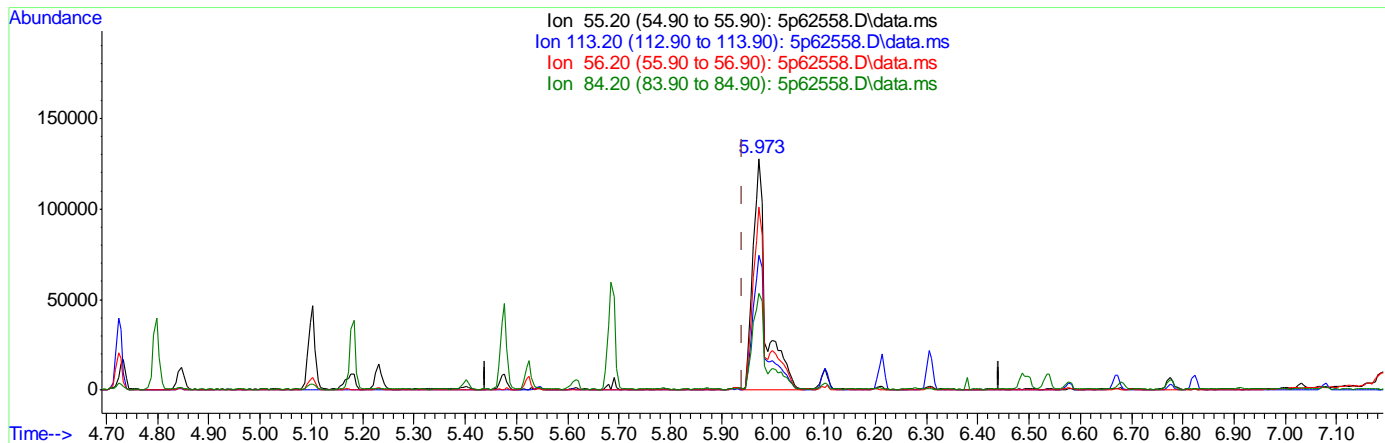
Ion	Exp%	Act%
55.20	100	100
113.20	56.90	56.66
56.20	82.00	79.14
84.20	42.80	41.39

9.6.12  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62558.D  
 Acq On : 6 Sep 2019 1:58 pm  
 Operator : hennys  
 Sample : ic2940-100  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 06 16:12:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



(41) Caprolactam (t)

5.973min (+0.032) 96.02ppm m

response 229160

Ion	Exp%	Act%
55.20	100	100
113.20	56.90	58.05
56.20	82.00	79.06
84.20	42.80	41.60

9.6.1.3  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62565.D  
 Acq On : 6 Sep 2019 2:21 pm  
 Operator : hennys  
 Sample : ic2940-1  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 06 16:16:42 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	116995	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	432925	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	237636	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	448072	40.00	ppm	0.00
83) Chrysene-d12	12.053	240	394771	40.00	ppm	0.00
91) Perylene-d12	14.051	264	467439	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	116995	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	237636	40.00	ppm	0.00
105) Chrysene-d12a	12.053	240	394771	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	448072	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	432925	40.00	ppm	0.00
112) Chrysene-d12b	12.053	240	394810	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	116995	40.00	ppm	0.00
116) Chrysene-d12c	12.053	240	394771	40.00	ppm	0.00
118) Chrysene-d12d	12.053	240	394810	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	447972	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.169	112	5082	1.06	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.12%	
8) Phenol-d5	4.013	99	7283	1.06	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.12%	
25) Nitrobenzene-d5	4.835	82	7213	1.21	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.42%	
51) 2-Fluorobiphenyl	6.572	172	10599	1.29	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.58%	
73) 2,4,6-Tribromophenol	7.977	330	1812	1.02	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.04%	
85) Terphenyl-d14	10.616	244	10127	0.99	ppm	0.00
Spiked Amount	50.000		Recovery	=	1.98%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.758	88	3006	1.31	ppm	92
3) Pyridine	2.052	79	7018	1.14	ppm	94
4) N-Nitrosodimethylamine	1.999	74	3336	0.92	ppm	70
6) Indene	4.563	116	9165	1.31	ppm	96
7) Cumene	3.612	105	13530	1.15	ppm	95
9) Phenol	4.023	94	9173	1.29	ppm	96
10) Aniline	4.029	93	11037	1.40	ppm	78
11) bis(2-Chloroethyl)ether	4.093	93	6722	1.28	ppm	87
12) 2-Chlorophenol	4.136	128	5561	1.27	ppm	96
13) Decane	4.205	43	6851	1.30	ppm	92
14) 1,3-Dichlorobenzene	4.274	146	5413	1.25	ppm	91
15) 1,4-Dichlorobenzene	4.344	146	5593	1.31	ppm	95
16) Benzyl alcohol	4.461	108	3176	1.01	ppm	88

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62565.D  
 Acq On : 6 Sep 2019 2:21 pm  
 Operator : hennys  
 Sample : ic2940-1  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 06 16:16:42 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Fri Sep 06 16:10:41 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	4900	1.20	ppm	91
18) Acetophenone	4.702	105	8417	1.20	ppm	93
19) 2-Methylphenol	4.579	108	5133	1.19	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.595	45	8233	1.68	ppm	95
21) 3&4-Methylphenol	4.723	108	5601	1.27	ppm	94
22) n-Nitroso-di-n-propyla...	4.712	70	5023	1.29	ppm	95
23) Hexachloroethane	4.793	201	2561	1.54	ppm #	68
26) Nitrobenzene	4.857	77	7867	1.27	ppm	92
27) Quinoline	5.856	129	10070	1.19	ppm	94
28) Isophorone	5.086	82	12911	1.18	ppm	98
29) 2-Nitrophenol	5.161	139	2652	1.07	ppm	95
30) 2,4-Dimethylphenol	5.220	107	5725	1.16	ppm	79
31) Benzoic acid	5.273	105	4654	1.04	ppm	99
32) bis(2-Chloroethoxy)met...	5.305	93	7942	1.20	ppm	100
33) 2,4-Dichlorophenol	5.396	162	3963	1.16	ppm	91
34) 2,6-Dichlorophenol	5.610	162	3859	1.25	ppm	96
35) 1,3,5-Trichlorobenzene	5.172	180	4248	1.15	ppm	89
36) 1,2,4-Trichlorobenzene	5.471	180	4184	1.12	ppm	100
37) 1,2,3-Trichlorobenzene	5.679	180	4528	1.34	ppm	80
38) Naphthalene	5.535	128	14412	1.31	ppm	97
39) 4-Chloroaniline	5.599	127	7078	1.34	ppm	99
40) 2,3-Dichloroaniline	6.481	161	5096	1.23	ppm	95
41) Caprolactam	5.904	55	3659	1.35	ppm	93
42) Hexachlorobutadiene	5.679	225	2972	1.34	ppm	81
43) 4-Chloro-3-methylphenol	6.085	107	5123	1.10	ppm	83
44) 2-Methylnaphthalene	6.208	141	7378	1.20	ppm	94
45) 1-Methylnaphthalene	6.299	141	8706	1.27	ppm	99
46) Dimethylnaphthalene	6.812	156	8326	1.24	ppm	92
48) Hexachlorocyclopentadiene	6.374	237	5283	2.09	ppm	92
49) 2,4,6-Trichlorophenol	6.491	196	3217	1.30	ppm	84
50) 2,4,5-Trichlorophenol	6.523	196	3392	1.27	ppm	79
52) 2-Chloronaphthalene	6.673	162	8357	1.21	ppm	92
53) Biphenyl	6.662	154	12060	1.27	ppm	93
54) 2-Nitroaniline	6.775	65	4928	1.31	ppm	78
55) Dimethylphthalate	6.972	163	10142	1.15	ppm	96
56) Acenaphthylene	7.068	152	14239	1.19	ppm	97
57) 2,6-Dinitrotoluene	7.020	165	2024	1.05	ppm	91
58) 3-Nitroaniline	7.175	138	2665	1.06	ppm	89
59) Acenaphthene	7.245	153	8628	1.21	ppm	95
60) 2,4-Dinitrophenol	7.277	184	1513	1.19	ppm #	76
61) 4-Nitrophenol	7.368	109	1827	1.08	ppm #	57
62) Dibenzofuran	7.410	168	13398	1.34	ppm	96
63) 2,4-Dinitrotoluene	7.410	165	3251	1.33	ppm	97
64) 2,3,4,6-Tetrachlorophenol	7.544	232	2557	1.09	ppm	87
65) Diethylphthalate	7.661	149	10376	1.07	ppm	95
66) Fluorene	7.742	166	9130	1.05	ppm	85
67) 4-Chlorophenyl-phenyle...	7.758	204	4825	1.21	ppm	88
68) 4-Nitroaniline	7.763	138	3001	1.25	ppm	90
70) 4,6-Dinitro-2-methylph...	7.806	198	1194	0.68	ppm	74
71) n-Nitrosodiphenylamine	7.870	169	7093	1.14	ppm	99



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62565.D  
 Acq On : 6 Sep 2019 2:21 pm  
 Operator : hennys  
 Sample : ic2940-1  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 06 16:16:42 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

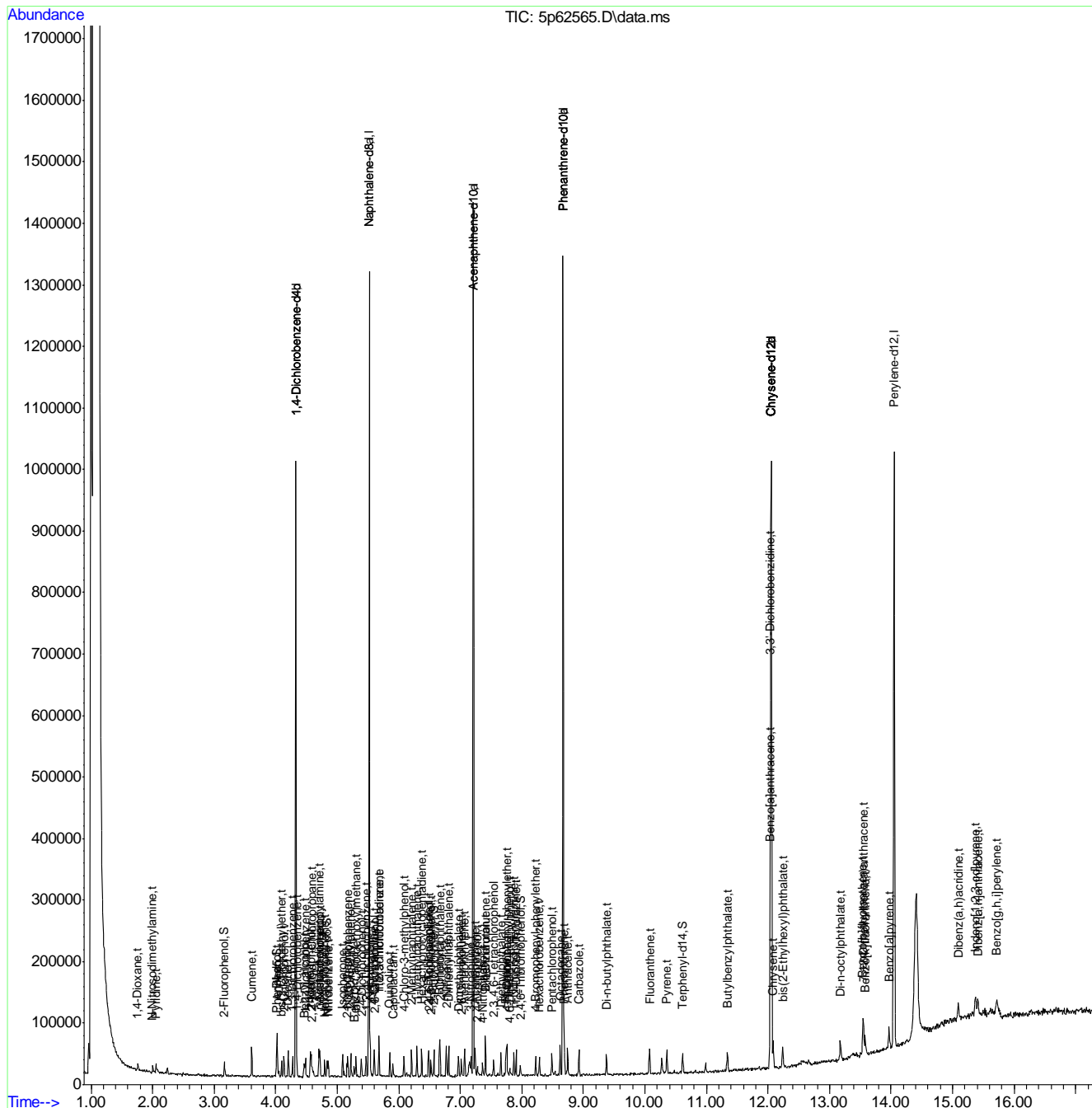
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.907	77	15420	1.22	ppm	100
74) 4-Bromophenyl-phenylether	8.228	248	3073	1.14	ppm	85
75) Hexachlorobenzene	8.286	284	3934	1.20	ppm	93
76) Pentachlorophenol	8.489	266	3434	1.69	ppm	97
77) Phenanthrene	8.692	178	13434	1.17	ppm	96
78) Anthracene	8.746	178	14330	1.19	ppm	94
79) Carbazole	8.928	167	14133	1.09	ppm	95
80) Di-n-butylphthalate	9.376	149	18429	1.04	ppm	98
81) Fluoranthene	10.076	202	16970	1.13	ppm	95
82) Octadecane	8.623	57	7649	1.04	ppm	88
84) Pyrene	10.359	202	16816	1.09	ppm	98
86) Butylbenzylphthalate	11.342	149	8744	1.02	ppm	96
87) Benzo[a]anthracene	12.037	228	16322	1.13	ppm	98
88) 3,3'-Dichlorobenzidine	12.042	252	6898	1.15	ppm	95
89) Chrysene	12.085	228	14378	1.06	ppm	97
90) bis(2-Ethylhexyl)phtha...	12.240	149	12003	1.07	ppm	89
92) Di-n-octylphthalate	13.180	149	19623	1.03	ppm	96
93) Benzo[b]fluoranthene	13.543	252	17854	1.24	ppm	92
94) Benzo[k]fluoranthene	13.586	252	14908	1.13	ppm	98
95) Benzo[a]pyrene	13.965	252	14896	1.10	ppm	93
96) Indeno[1,2,3-cd]pyrene	15.370	276	13939	1.12	ppm	92
97) Dibenz(a,h)acridine	15.092	279	13424	1.17	ppm	91
98) Dibenz[a,h]anthracene	15.413	278	14702	1.18	ppm	97
99) 7,12-Dimethylbenz(a)an...	13.554	256	8261	1.26	ppm	87
100) Benzo[g,h,i]perylene	15.717	276	15306	1.25	ppm	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62565.D  
 Acq On : 6 Sep 2019 2:21 pm  
 Operator : hennys  
 Sample : ic2940-1  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 06 16:16:42 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



9.6.2  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62566.D  
 Acq On : 6 Sep 2019 2:46 pm  
 Operator : hennys  
 Sample : ic2940-80  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 16:17:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	105889	40.00	ppm	0.00
24) Naphthalene-d8	5.524	136	379626	40.00	ppm	0.00
47) Acenaphthene-d10	7.212	164	211516	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	381846	40.00	ppm	0.00
83) Chrysene-d12	12.063	240	320891	40.00	ppm	0.00
91) Perylene-d12	14.056	264	417928	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	105889	40.00	ppm	0.00
103) Acenaphthene-d10a	7.212	164	211516	40.00	ppm	0.00
105) Chrysene-d12a	12.063	240	320891	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	381846	40.00	ppm	0.00
110) Naphthalene-d8a	5.524	136	379626	40.00	ppm	0.00
112) Chrysene-d12b	12.063	240	320865	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	105889	40.00	ppm	0.00
116) Chrysene-d12c	12.063	240	320891	40.00	ppm	0.00
118) Chrysene-d12d	12.063	240	320865	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	381846	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.174	112	345197	79.81	ppm	0.00
Spiked Amount	50.000		Recovery	=	159.62%	
8) Phenol-d5	4.023	99	470720	75.66	ppm	0.00
Spiked Amount	50.000		Recovery	=	151.32%	
25) Nitrobenzene-d5	4.846	82	415002	79.43	ppm	0.00
Spiked Amount	50.000		Recovery	=	158.86%	
51) 2-Fluorobiphenyl	6.577	172	578998	78.97	ppm	0.00
Spiked Amount	50.000		Recovery	=	157.94%	
73) 2,4,6-Tribromophenol	7.982	330	119493	79.11	ppm	0.00
Spiked Amount	50.000		Recovery	=	158.22%	
85) Terphenyl-d14	10.621	244	665622	80.27	ppm	0.00
Spiked Amount	50.000		Recovery	=	160.54%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.747	88	170372	82.23	ppm	97
3) Pyridine	2.020	79	438413	78.37	ppm	98
4) N-Nitrosodimethylamine	1.988	74	259401	78.73	ppm	100
6) Indene	4.568	116	495953	78.55	ppm	96
7) Cumene	3.612	105	816598	76.48	ppm	99
9) Phenol	4.034	94	468174	72.92	ppm	86
10) Aniline	4.029	93	530334	74.28	ppm	83
11) bis(2-Chloroethyl)ether	4.098	93	356121	74.97	ppm	98
12) 2-Chlorophenol	4.141	128	302891	76.57	ppm	95
13) Decane	4.210	43	347003	72.83	ppm	97
14) 1,3-Dichlorobenzene	4.274	146	308884	78.66	ppm	100
15) 1,4-Dichlorobenzene	4.344	146	299701	77.44	ppm	96
16) Benzyl alcohol	4.467	108	223043	78.42	ppm	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62566.D  
 Acq On : 6 Sep 2019 2:46 pm  
 Operator : hennys  
 Sample : ic2940-80  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 16:17:45 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Fri Sep 06 16:10:41 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	279359	75.50	ppm	99
18) Acetophenone	4.707	105	489562	76.93	ppm	97
19) 2-Methylphenol	4.584	108	301731	77.51	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.600	45	397197	89.66	ppm	93
21) 3&4-Methylphenol	4.728	108	303162	76.02	ppm	98
22) n-Nitroso-di-n-propyla...	4.723	70	259922	73.71	ppm	96
23) Hexachloroethane	4.798	201	117508	78.24	ppm	97
26) Nitrobenzene	4.862	77	421890	77.52	ppm	97
27) Quinoline	5.872	129	586554	79.00	ppm	98
28) Isophorone	5.097	82	755824	78.49	ppm	97
29) 2-Nitrophenol	5.166	139	166148	76.48	ppm	87
30) 2,4-Dimethylphenol	5.231	107	340981	78.80	ppm	97
31) Benzoic acid	5.375	105	317862	80.99	ppm	96
32) bis(2-Chloroethoxy)met...	5.311	93	453328	78.28	ppm	99
33) 2,4-Dichlorophenol	5.401	162	231521	77.58	ppm	96
34) 2,6-Dichlorophenol	5.615	162	212978	78.81	ppm	95
35) 1,3,5-Trichlorobenzene	5.177	180	257686	79.44	ppm	96
36) 1,2,4-Trichlorobenzene	5.476	180	258368	78.57	ppm	96
37) 1,2,3-Trichlorobenzene	5.685	180	229785	77.39	ppm	97
38) Naphthalene	5.540	128	767863	79.37	ppm	98
39) 4-Chloroaniline	5.604	127	364308	78.85	ppm	99
40) 2,3-Dichloroaniline	6.486	161	288899	79.21	ppm	95
41) Caprolactam	5.962	55	187331	78.85	ppm	97
42) Hexachlorobutadiene	5.679	225	157538	80.89	ppm	98
43) 4-Chloro-3-methylphenol	6.096	107	318656	78.16	ppm	97
44) 2-Methylnaphthalene	6.208	141	409898	76.07	ppm	99
45) 1-Methylnaphthalene	6.304	141	463284	77.26	ppm	95
46) Dimethylnaphthalene	6.822	156	462329	78.31	ppm	97
48) Hexachlorocyclopentadiene	6.379	237	349492	155.19	ppm	99
49) 2,4,6-Trichlorophenol	6.497	196	171434	77.62	ppm	99
50) 2,4,5-Trichlorophenol	6.534	196	183194	77.32	ppm	100
52) 2-Chloronaphthalene	6.678	162	470266	76.54	ppm	99
53) Biphenyl	6.668	154	642809	76.21	ppm	98
54) 2-Nitroaniline	6.785	65	250885	74.84	ppm	93
55) Dimethylphthalate	6.983	163	596867	75.89	ppm	99
56) Acenaphthylene	7.074	152	812847	76.48	ppm	99
57) 2,6-Dinitrotoluene	7.026	165	133076	77.40	ppm	96
58) 3-Nitroaniline	7.186	138	170780	76.14	ppm	99
59) Acenaphthene	7.250	153	507085	79.82	ppm	96
60) 2,4-Dinitrophenol	7.293	184	184538	162.77	ppm	87
61) 4-Nitrophenol	7.378	109	115753	76.64	ppm	95
62) Dibenzofuran	7.415	168	680780	76.43	ppm	99
63) 2,4-Dinitrotoluene	7.415	165	167018	76.49	ppm	91
64) 2,3,4,6-Tetrachlorophenol	7.544	232	165609	79.59	ppm	97
65) Diethylphthalate	7.672	149	647536	75.35	ppm	98
66) Fluorene	7.747	166	568000	73.72	ppm	99
67) 4-Chlorophenyl-phenyle...	7.757	204	272941	76.87	ppm	97
68) 4-Nitroaniline	7.784	138	159940	74.69	ppm	98
70) 4,6-Dinitro-2-methylph...	7.816	198	118857	79.13	ppm	99
71) n-Nitrosodiphenylamine	7.880	169	414670	78.52	ppm	99

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62566.D  
 Acq On : 6 Sep 2019 2:46 pm  
 Operator : hennys  
 Sample : ic2940-80  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 16:17:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

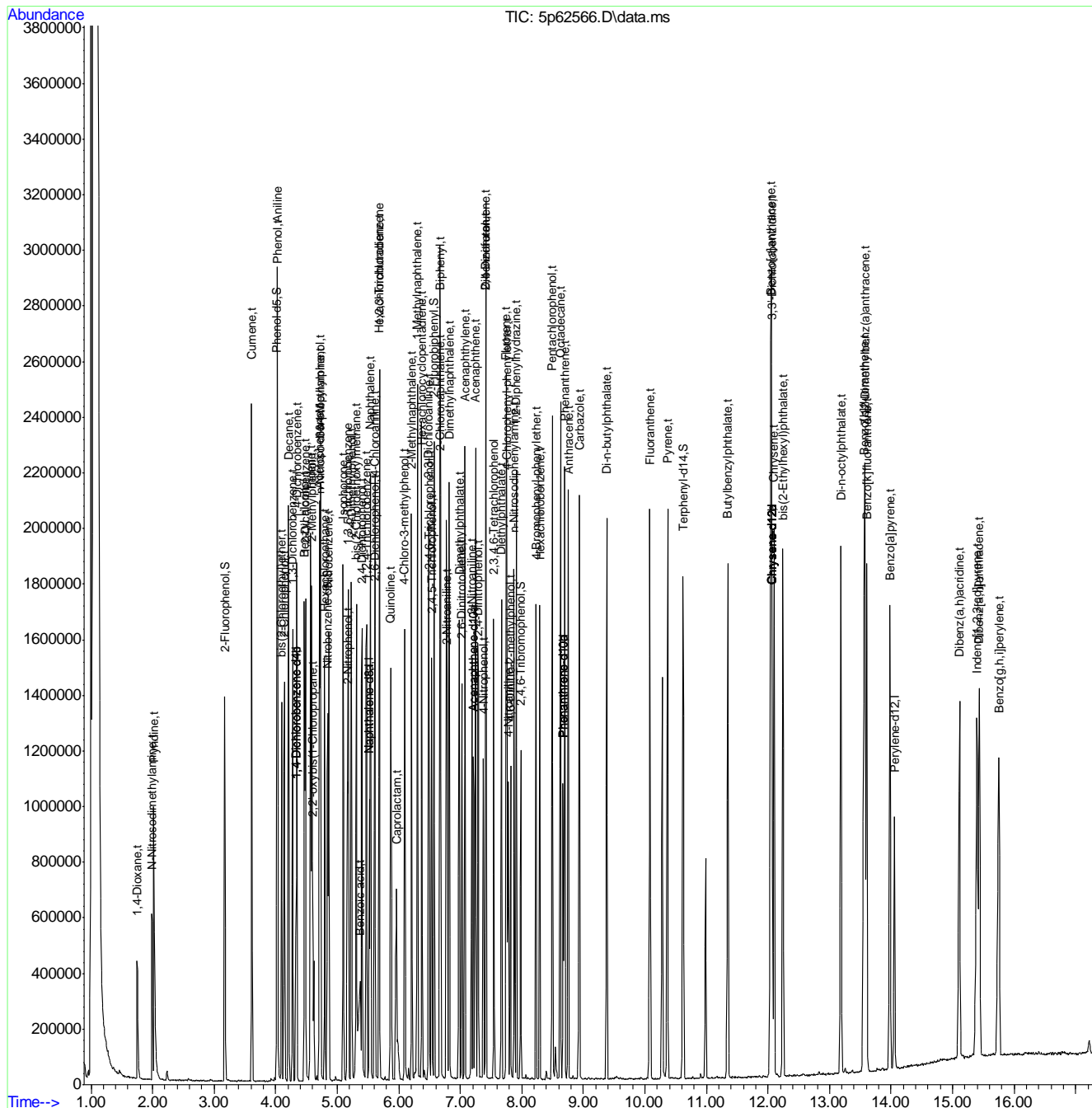
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.912	77	815012	75.64	ppm	99
74) 4-Bromophenyl-phenylether	8.233	248	185668	81.09	ppm	90
75) Hexachlorobenzene	8.292	284	223757	79.84	ppm	97
76) Pentachlorophenol	8.495	266	274989	158.73	ppm	99
77) Phenanthrene	8.698	178	760592	77.92	ppm	99
78) Anthracene	8.756	178	800159	78.18	ppm	98
79) Carbazole	8.938	167	849813	77.24	ppm	99
80) Di-n-butylphthalate	9.381	149	1173834	78.02	ppm	98
81) Fluoranthene	10.081	202	994202	77.48	ppm	99
82) Octadecane	8.628	57	494756	78.83	ppm	96
84) Pyrene	10.370	202	998718	79.50	ppm	100
86) Butylbenzylphthalate	11.347	149	549929	78.73	ppm	98
87) Benzo[a]anthracene	12.047	228	933701	79.29	ppm	99
88) 3,3'-Dichlorobenzidine	12.058	252	381887	78.30	ppm	100
89) Chrysene	12.101	228	873002	79.41	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.245	149	726249	79.93	ppm	100
92) Di-n-octylphthalate	13.185	149	1325964	77.58	ppm	99
93) Benzo[b]fluoranthene	13.564	252	1054787	81.61	ppm	99
94) Benzo[k]fluoranthene	13.607	252	875930	74.11	ppm	99
95) Benzo[a]pyrene	13.986	252	959876	79.06	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.397	276	895252	80.10	ppm	99
97) Dibenz(a,h)acridine	15.114	279	811440	78.90	ppm	97
98) Dibenz[a,h]anthracene	15.434	278	871816	78.45	ppm	97
99) 7,12-Dimethylbenz(a)an...	13.575	256	453987	77.67	ppm	97
100) Benzo[g,h,i]perylene	15.755	276	858854	78.76	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\
Data File : 5p62566.D
Acq On : 6 Sep 2019 2:46 pm
Operator : hennys
Sample : ic2940-80
Misc : op22049,e5p2940,1000,,1,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 06 16:17:45 2019
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Sep 06 16:10:41 2019
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62567.D  
 Acq On : 6 Sep 2019 3:10 pm  
 Operator : hennys  
 Sample : icc2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 17:28:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	104850	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	385852	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	212987	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	394224	40.00	ppm	0.00
83) Chrysene-d12	12.058	240	339171	40.00	ppm	0.00
91) Perylene-d12	14.051	264	434007	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	104850	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	212987	40.00	ppm	0.00
105) Chrysene-d12a	12.058	240	339171	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	394224	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	385852	40.00	ppm	0.00
112) Chrysene-d12b	12.058	240	339099	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	104850	40.00	ppm	0.00
116) Chrysene-d12c	12.058	240	339171	40.00	ppm	0.00
118) Chrysene-d12d	12.058	240	339099	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	394201	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.169	112	214142	50.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	100.00%	
8) Phenol-d5	4.018	99	308016	50.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	100.00%	
25) Nitrobenzene-d5	4.841	82	265510	50.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	100.00%	
51) 2-Fluorobiphenyl	6.572	172	369148	50.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	100.00%	
73) 2,4,6-Tribromophenol	7.982	330	77974	50.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	100.00%	
85) Terphenyl-d14	10.616	244	438227	50.00	ppm	0.00
Spiked Amount	50.000		Recovery	=	100.00%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.747	88	102573	50.00	ppm	Qvalue 100
3) Pyridine	2.020	79	276964	50.00	ppm	100
4) N-Nitrosodimethylamine	1.988	74	163128	50.00	ppm	100
6) Indene	4.563	116	312610	50.00	ppm	100
7) Cumene	3.612	105	528647	50.00	ppm	100
9) Phenol	4.029	94	317869	50.00	ppm	100
10) Aniline	4.029	93	353469	50.00	ppm	100
11) bis(2-Chloroethyl)ether	4.093	93	235170	50.00	ppm	100
12) 2-Chlorophenol	4.135	128	195858	50.00	ppm	100
13) Decane	4.210	43	235889	50.00	ppm	100
14) 1,3-Dichlorobenzene	4.274	146	194412	50.00	ppm	100
15) 1,4-Dichlorobenzene	4.344	146	191602	50.00	ppm	100
16) Benzyl alcohol	4.467	108	140816	50.00	ppm	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62567.D  
 Acq On : 6 Sep 2019 3:10 pm  
 Operator : hennys  
 Sample : icc2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 17:28:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	183186	50.00	ppm	100
18) Acetophenone	4.707	105	315046	50.00	ppm	100
19) 2-Methylphenol	4.584	108	192735	50.00	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.595	45	263665m	60.11	ppm	
21) 3&4-Methylphenol	4.728	108	197443	50.00	ppm	100
22) n-Nitroso-di-n-propyla...	4.718	70	174584	50.00	ppm	100
23) Hexachloroethane	4.798	201	74362	50.00	ppm	100
26) Nitrobenzene	4.862	77	276570	50.00	ppm	100
27) Quinoline	5.866	129	377303	50.00	ppm	100
28) Isophorone	5.092	82	489365	50.00	ppm	100
29) 2-Nitrophenol	5.161	139	110397	50.00	ppm	100
30) 2,4-Dimethylphenol	5.225	107	219917	50.00	ppm	100
31) Benzoic acid	5.353	105	199453	50.00	ppm	100
32) bis(2-Chloroethoxy)met...	5.311	93	294302	50.00	ppm	100
33) 2,4-Dichlorophenol	5.396	162	151669	50.00	ppm	100
34) 2,6-Dichlorophenol	5.610	162	137334	50.00	ppm	100
35) 1,3,5-Trichlorobenzene	5.177	180	164845	50.00	ppm	100
36) 1,2,4-Trichlorobenzene	5.471	180	167112	50.00	ppm	100
37) 1,2,3-Trichlorobenzene	5.685	180	150899	50.00	ppm	100
38) Naphthalene	5.540	128	491636	50.00	ppm	100
39) 4-Chloroaniline	5.605	127	234793	50.00	ppm	100
40) 2,3-Dichloroaniline	6.481	161	185344	50.00	ppm	100
41) Caprolactam	5.941	55	120732	50.00	ppm	100
42) Hexachlorobutadiene	5.679	225	98970	50.00	ppm	100
43) 4-Chloro-3-methylphenol	6.096	107	207192	50.00	ppm	100
44) 2-Methylnaphthalene	6.208	141	273827	50.00	ppm	100
45) 1-Methylnaphthalene	6.304	141	304749	50.00	ppm	100
46) Dimethylnaphthalene	6.817	156	300019	50.00	ppm	100
48) Hexachlorocyclopentadiene	6.374	237	226775	100.00	ppm	100
49) 2,4,6-Trichlorophenol	6.497	196	111201	50.00	ppm	100
50) 2,4,5-Trichlorophenol	6.529	196	119292	50.00	ppm	100
52) 2-Chloronaphthalene	6.678	162	309349	50.00	ppm	100
53) Biphenyl	6.668	154	424673	50.00	ppm	100
54) 2-Nitroaniline	6.785	65	168771	50.00	ppm	100
55) Dimethylphthalate	6.978	163	395956	50.00	ppm	100
56) Acenaphthylene	7.074	152	535101	50.00	ppm	100
57) 2,6-Dinitrotoluene	7.026	165	86566	50.00	ppm	100
58) 3-Nitroaniline	7.181	138	112929	50.00	ppm	100
59) Acenaphthene	7.245	153	319860	50.00	ppm	100
60) 2,4-Dinitrophenol	7.287	184	114161	100.00	ppm	100
61) 4-Nitrophenol	7.373	109	76042	50.00	ppm	100
62) Dibenzofuran	7.416	168	448453	50.00	ppm	100
63) 2,4-Dinitrotoluene	7.416	165	109935	50.00	ppm	100
64) 2,3,4,6-Tetrachlorophenol	7.544	232	104763	50.00	ppm	100
65) Diethylphthalate	7.667	149	432649	50.00	ppm	100
66) Fluorene	7.747	166	387925	50.00	ppm	100
67) 4-Chlorophenyl-phenyle...	7.758	204	178773	50.00	ppm	100
68) 4-Nitroaniline	7.779	138	107816	50.00	ppm	100
70) 4,6-Dinitro-2-methylph...	7.811	198	77537	50.00	ppm	100
71) n-Nitrosodiphenylamine	7.875	169	272611	50.00	ppm	100



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62567.D  
 Acq On : 6 Sep 2019 3:10 pm  
 Operator : hennys  
 Sample : icc2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 17:28:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

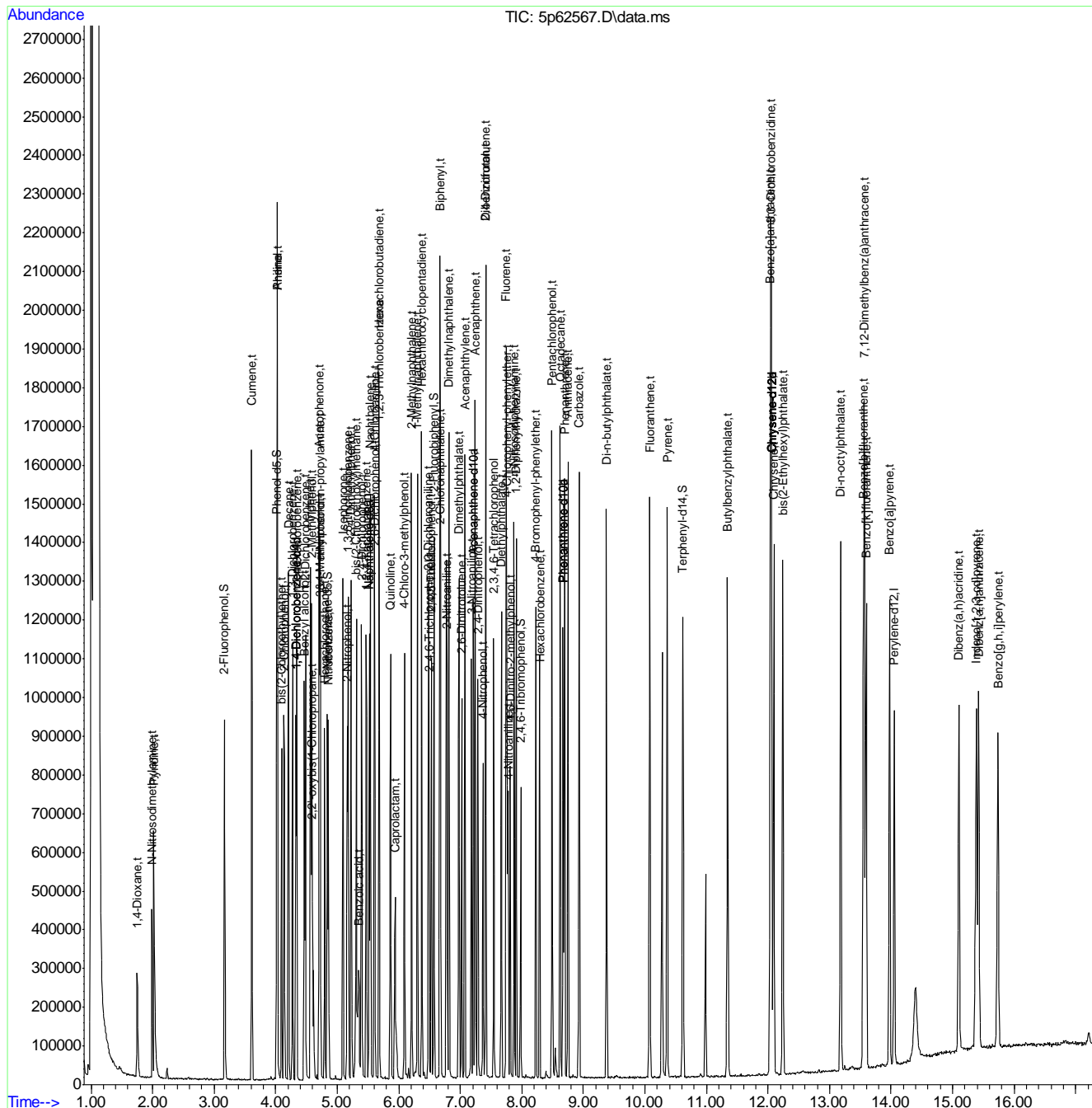
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.912	77	556207	50.00	ppm	100
74) 4-Bromophenyl-phenylether	8.228	248	118188	50.00	ppm	100
75) Hexachlorobenzene	8.292	284	144670	50.00	ppm	100
76) Pentachlorophenol	8.489	266	178864	100.00	ppm	100
77) Phenanthrene	8.698	178	503865	50.00	ppm	100
78) Anthracene	8.751	178	528331	50.00	ppm	100
79) Carbazole	8.933	167	567923	50.00	ppm	100
80) Di-n-butylphthalate	9.376	149	776619	50.00	ppm	100
81) Fluoranthene	10.076	202	662357	50.00	ppm	100
82) Octadecane	8.623	57	323994	50.00	ppm	100
84) Pyrene	10.365	202	663882	50.00	ppm	100
86) Butylbenzylphthalate	11.342	149	369141	50.00	ppm	100
87) Benzo[a]anthracene	12.042	228	622334	50.00	ppm	100
88) 3,3'-Dichlorobenzidine	12.053	252	257758	50.00	ppm	100
89) Chrysene	12.095	228	580980	50.00	ppm	100
90) bis(2-Ethylhexyl)phtha...	12.240	149	480157	50.00	ppm	100
92) Di-n-octylphthalate	13.180	149	887447	50.00	ppm	100
93) Benzo[b]fluoranthene	13.554	252	671082	50.00	ppm	100
94) Benzo[k]fluoranthene	13.597	252	613701	50.00	ppm	100
95) Benzo[a]pyrene	13.976	252	630430	50.00	ppm	100
96) Indeno[1,2,3-cd]pyrene	15.386	276	580317	50.00	ppm	100
97) Dibenz(a,h)acridine	15.103	279	533981	50.00	ppm	100
98) Dibenz[a,h]anthracene	15.429	278	577042	50.00	ppm	100
99) 7,12-Dimethylbenz(a)an...	13.565	256	303505	50.00	ppm	100
100) Benzo[g,h,i]perylene	15.739	276	566237	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62567.D  
 Acq On : 6 Sep 2019 3:10 pm  
 Operator : hennys  
 Sample : icc2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 17:28:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



# Manual Integration Approval Summary

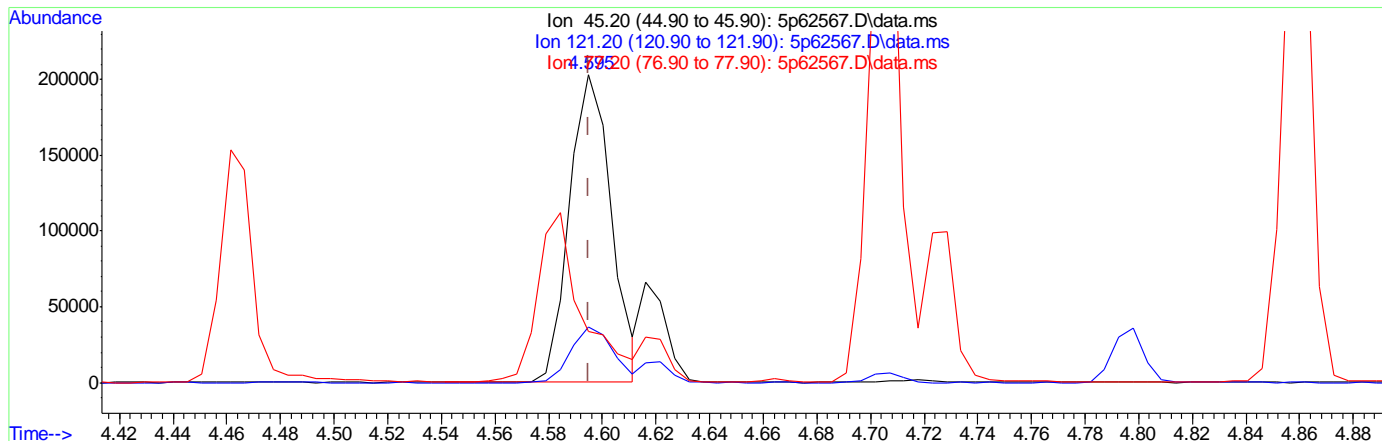
Sample Number: E5P2940-ICC2940      Method: SW846 8270D  
Lab FileID: 5P62567.D      Analyst approved: 09/09/19 12:42 Ying Li  
Injection Time: 09/06/19 15:10      Supervisor approved: 09/09/19 15:51 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.59	Split peak

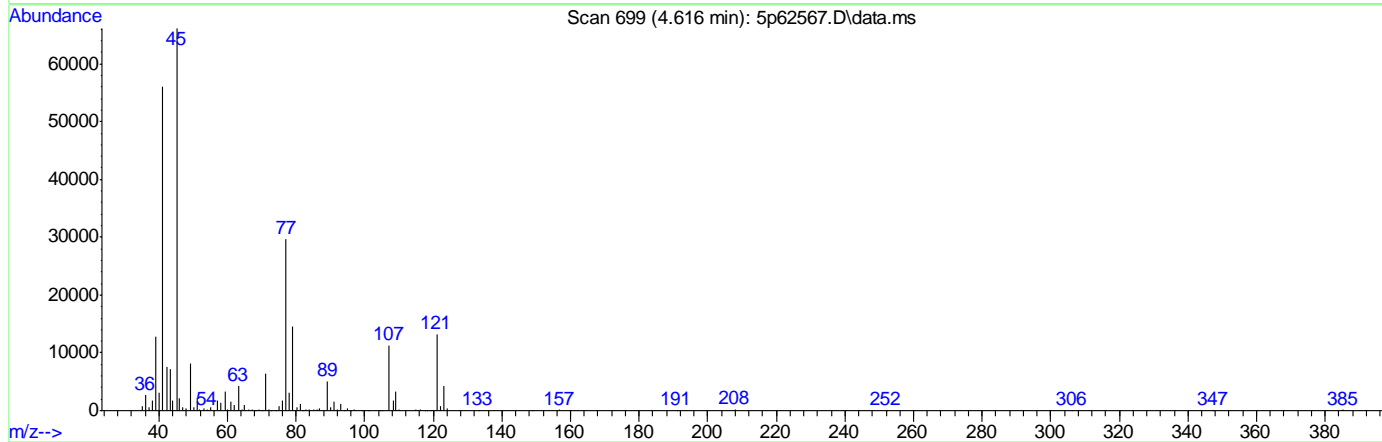
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62567.D  
 Acq On : 6 Sep 2019 3:10 pm  
 Operator : hennys  
 Sample : icc2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 16:12:14 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



9.6.4.2  
9



TIC: 5p62567.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (0.000) 50.00ppm

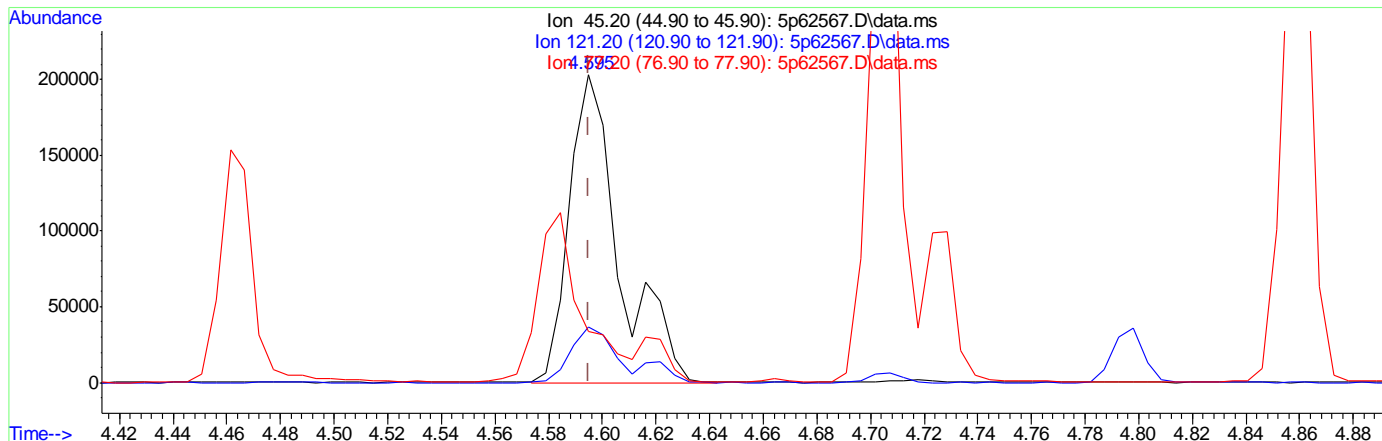
response 219326

Ion	Exp%	Act%
45.20	100	100
121.20	17.90	17.94
77.20	13.70	13.69
0.00	0.00	0.00

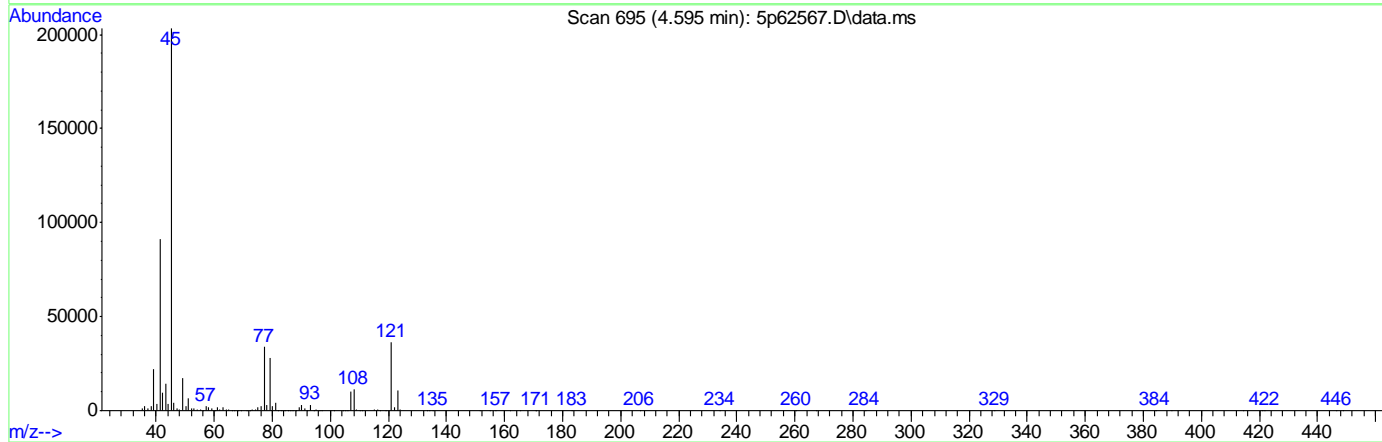
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62567.D  
 Acq On : 6 Sep 2019 3:10 pm  
 Operator : hennys  
 Sample : icc2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 06 16:12:14 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



9.6.4.3  
9



(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (0.000) 60.11ppm m

response 263665

Ion	Exp%	Act%
45.20	100	100
121.20	17.90	18.03
77.20	13.70	16.68
0.00	0.00	0.00

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62568.D  
 Acq On : 6 Sep 2019 3:35 pm  
 Operator : hennys  
 Sample : ic2940-25  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 17:29:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	114307	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	396131	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	213690	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	398538	40.00	ppm	0.00
83) Chrysene-d12	12.053	240	341300	40.00	ppm	0.00
91) Perylene-d12	14.051	264	417680	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	114307	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	213690	40.00	ppm	0.00
105) Chrysene-d12a	12.053	240	341300	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	398538	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	396131	40.00	ppm	0.00
112) Chrysene-d12b	12.053	240	341354	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	114307	40.00	ppm	0.00
116) Chrysene-d12c	12.053	240	341300	40.00	ppm	0.00
118) Chrysene-d12d	12.053	240	341354	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	398538	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.169	112	117468	25.16	ppm	0.00
Spiked Amount	50.000		Recovery	=	50.32%	
8) Phenol-d5	4.013	99	172310	25.66	ppm	0.00
Spiked Amount	50.000		Recovery	=	51.32%	
25) Nitrobenzene-d5	4.841	82	154597	28.36	ppm	0.00
Spiked Amount	50.000		Recovery	=	56.72%	
51) 2-Fluorobiphenyl	6.572	172	208329	28.12	ppm	0.00
Spiked Amount	50.000		Recovery	=	56.24%	
73) 2,4,6-Tribromophenol	7.977	330	40591	25.75	ppm	0.00
Spiked Amount	50.000		Recovery	=	51.50%	
85) Terphenyl-d14	10.616	244	231921	26.30	ppm	0.00
Spiked Amount	50.000		Recovery	=	52.60%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.748	88	58233	26.04	ppm	98
3) Pyridine	2.025	79	164078	27.17	ppm	99
4) N-Nitrosodimethylamine	1.988	74	90289	25.38	ppm	96
6) Indene	4.563	116	179780	26.38	ppm	100
7) Cumene	3.612	105	301518	26.16	ppm	99
9) Phenol	4.023	94	187183	27.01	ppm	94
10) Aniline	4.029	93	208436	27.05	ppm	93
11) bis(2-Chloroethyl)ether	4.093	93	129774	25.31	ppm	99
12) 2-Chlorophenol	4.136	128	110985	25.99	ppm	98
13) Decane	4.205	43	141115	27.44	ppm	98
14) 1,3-Dichlorobenzene	4.274	146	110766	26.13	ppm	99
15) 1,4-Dichlorobenzene	4.344	146	108386	25.94	ppm	98
16) Benzyl alcohol	4.461	108	78319	25.51	ppm	95

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62568.D  
 Acq On : 6 Sep 2019 3:35 pm  
 Operator : hennys  
 Sample : ic2940-25  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 17:29:30 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Fri Sep 06 16:10:41 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	107273	26.86	ppm	97
18) Acetophenone	4.702	105	182888	26.62	ppm	97
19) 2-Methylphenol	4.579	108	113537	27.02	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.595	45	155462m	32.51	ppm	
21) 3&4-Methylphenol	4.723	108	115925	26.93	ppm	99
22) n-Nitroso-di-n-propyla...	4.713	70	104972	27.58	ppm	98
23) Hexachloroethane	4.798	201	40483	24.97	ppm	93
26) Nitrobenzene	4.857	77	159169	28.03	ppm	96
27) Quinoline	5.861	129	207856	26.83	ppm	98
28) Isophorone	5.086	82	276968	27.56	ppm	98
29) 2-Nitrophenol	5.161	139	60629	26.75	ppm	96
30) 2,4-Dimethylphenol	5.225	107	125794	27.86	ppm	97
31) Benzoic acid	5.332	105	101174	24.70	ppm	90
32) bis(2-Chloroethoxy)met...	5.305	93	169413	28.04	ppm	100
33) 2,4-Dichlorophenol	5.396	162	86050	27.63	ppm	98
34) 2,6-Dichlorophenol	5.610	162	75201	26.67	ppm	96
35) 1,3,5-Trichlorobenzene	5.177	180	97732	28.87	ppm	98
36) 1,2,4-Trichlorobenzene	5.471	180	94223	27.46	ppm	93
37) 1,2,3-Trichlorobenzene	5.685	180	85546	27.61	ppm	98
38) Naphthalene	5.541	128	283695	28.10	ppm	100
39) 4-Chloroaniline	5.599	127	130791	27.13	ppm	96
40) 2,3-Dichloroaniline	6.481	161	104553	27.47	ppm	99
41) Caprolactam	5.925	55	65580	26.45	ppm	96
42) Hexachlorobutadiene	5.679	225	57772	28.43	ppm	96
43) 4-Chloro-3-methylphenol	6.091	107	117227	27.56	ppm	99
44) 2-Methylnaphthalene	6.208	141	155184	27.60	ppm	98
45) 1-Methylnaphthalene	6.299	141	175445	28.04	ppm	96
46) Dimethylnaphthalene	6.817	156	167109	27.13	ppm	98
48) Hexachlorocyclopentadiene	6.374	237	129696	57.00	ppm	98
49) 2,4,6-Trichlorophenol	6.491	196	62368	27.95	ppm	98
50) 2,4,5-Trichlorophenol	6.524	196	67885	28.36	ppm	95
52) 2-Chloronaphthalene	6.673	162	178168	28.70	ppm	97
53) Biphenyl	6.662	154	235756	27.67	ppm	98
54) 2-Nitroaniline	6.780	65	97525	28.80	ppm	97
55) Dimethylphthalate	6.972	163	216126	27.20	ppm	99
56) Acenaphthylene	7.074	152	302646	28.19	ppm	99
57) 2,6-Dinitrotoluene	7.020	165	45470	26.18	ppm	91
58) 3-Nitroaniline	7.175	138	59052	26.06	ppm	90
59) Acenaphthene	7.245	153	181183	28.23	ppm	98
60) 2,4-Dinitrophenol	7.282	184	59184	51.67	ppm	83
61) 4-Nitrophenol	7.368	109	42375	27.77	ppm	93
62) Dibenzofuran	7.410	168	254082	28.24	ppm	99
63) 2,4-Dinitrotoluene	7.410	165	63021	28.57	ppm	95
64) 2,3,4,6-Tetrachlorophenol	7.544	232	56056	26.67	ppm	99
65) Diethylphthalate	7.667	149	239298	27.56	ppm	98
66) Fluorene	7.742	166	216809	27.85	ppm	99
67) 4-Chlorophenyl-phenyle...	7.758	204	99146	27.64	ppm	100
68) 4-Nitroaniline	7.768	138	57998	26.81	ppm	87
70) 4,6-Dinitro-2-methylph...	7.806	198	40960	26.13	ppm	98
71) n-Nitrosodiphenylamine	7.870	169	151005	27.40	ppm	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62568.D  
 Acq On : 6 Sep 2019 3:35 pm  
 Operator : hennys  
 Sample : ic2940-25  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 17:29:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.907	77	321606	28.60	ppm	96
74) 4-Bromophenyl-phenylether	8.228	248	65472	27.40	ppm	91
75) Hexachlorobenzene	8.286	284	79518	27.19	ppm	94
76) Pentachlorophenol	8.489	266	91851	50.80	ppm	97
77) Phenanthrene	8.692	178	276796	27.17	ppm	99
78) Anthracene	8.746	178	291007	27.24	ppm	98
79) Carbazole	8.933	167	302164	26.31	ppm	99
80) Di-n-butylphthalate	9.376	149	423892	27.00	ppm	100
81) Fluoranthene	10.076	202	355493	26.54	ppm	100
82) Octadecane	8.623	57	190940	29.15	ppm	99
84) Pyrene	10.359	202	364171	27.26	ppm	98
86) Butylbenzylphthalate	11.342	149	193189	26.00	ppm	99
87) Benzo[a]anthracene	12.037	228	328998	26.27	ppm	97
88) 3,3'-Dichlorobenzidine	12.047	252	138462	26.69	ppm	99
89) Chrysene	12.090	228	307128	26.27	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.240	149	255180	26.41	ppm	100
92) Di-n-octylphthalate	13.180	149	468581	27.43	ppm	99
93) Benzo[b]fluoranthene	13.549	252	361780	28.01	ppm	97
94) Benzo[k]fluoranthene	13.591	252	322787	27.33	ppm	97
95) Benzo[a]pyrene	13.971	252	333888	27.52	ppm	99
96) Indeno[1,2,3-cd]pyrene	15.376	276	304015	27.22	ppm	98
97) Dibenz(a,h)acridine	15.098	279	283217	27.56	ppm	97
98) Dibenz[a,h]anthracene	15.418	278	304335	27.40	ppm	98
99) 7,12-Dimethylbenz(a)an...	13.559	256	162656	27.84	ppm	96
100) Benzo[g,h,i]perylene	15.728	276	290426	26.65	ppm	98

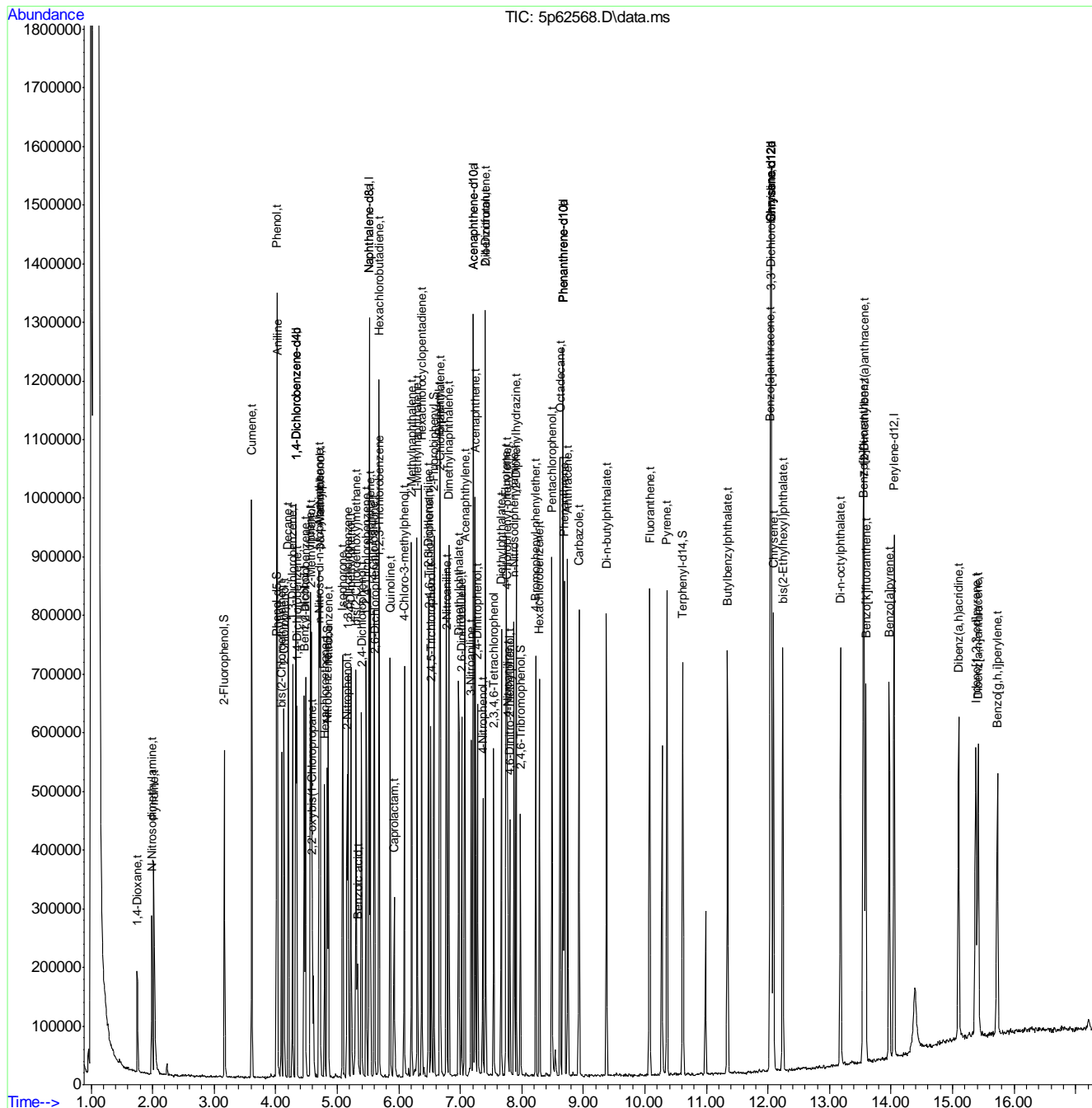
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\
Data File : 5p62568.D
Acq On : 6 Sep 2019 3:35 pm
Operator : hennys
Sample : ic2940-25
Misc : op22049,e5p2940,1000,,,1,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 17:29:30 2019
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Sep 06 16:10:41 2019
Response via : Initial Calibration



# Manual Integration Approval Summary

Sample Number: E5P2940-IC2940      Method: SW846 8270D  
Lab FileID: 5P62568.D      Analyst approved: 09/09/19 12:42 Ying Li  
Injection Time: 09/06/19 15:35      Supervisor approved: 09/09/19 15:51 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.59	Split peak

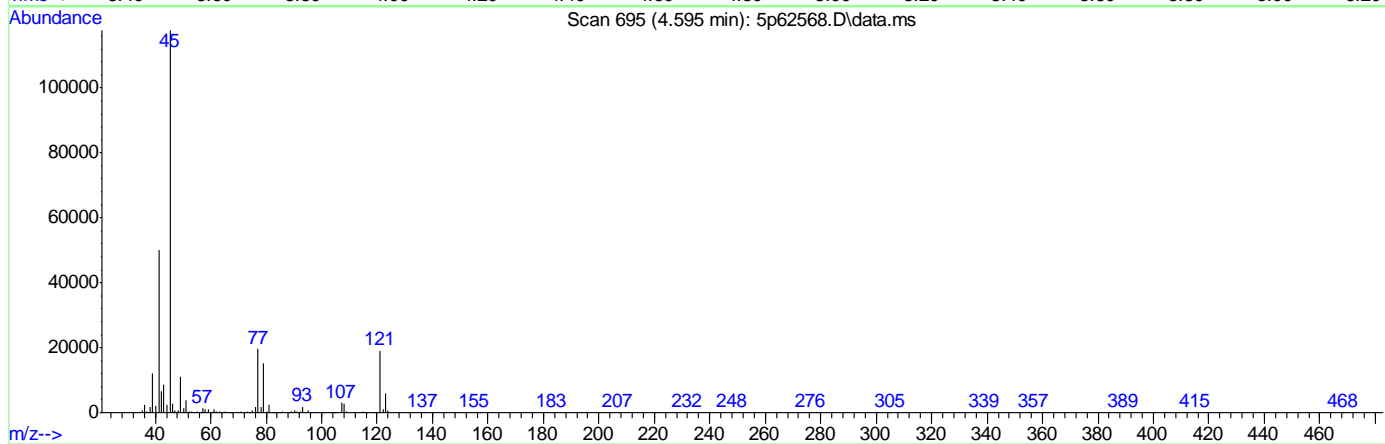
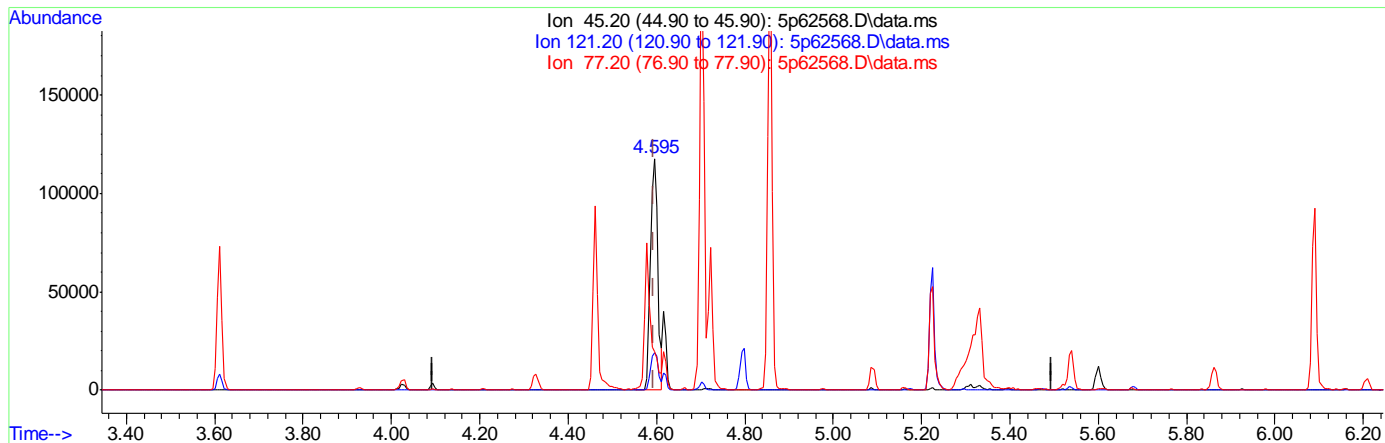
9.6.5.1

9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62568.D  
 Acq On : 6 Sep 2019 3:35 pm  
 Operator : hennys  
 Sample : ic2940-25  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 16:19:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (+0.000) 27.55ppm

response 131762

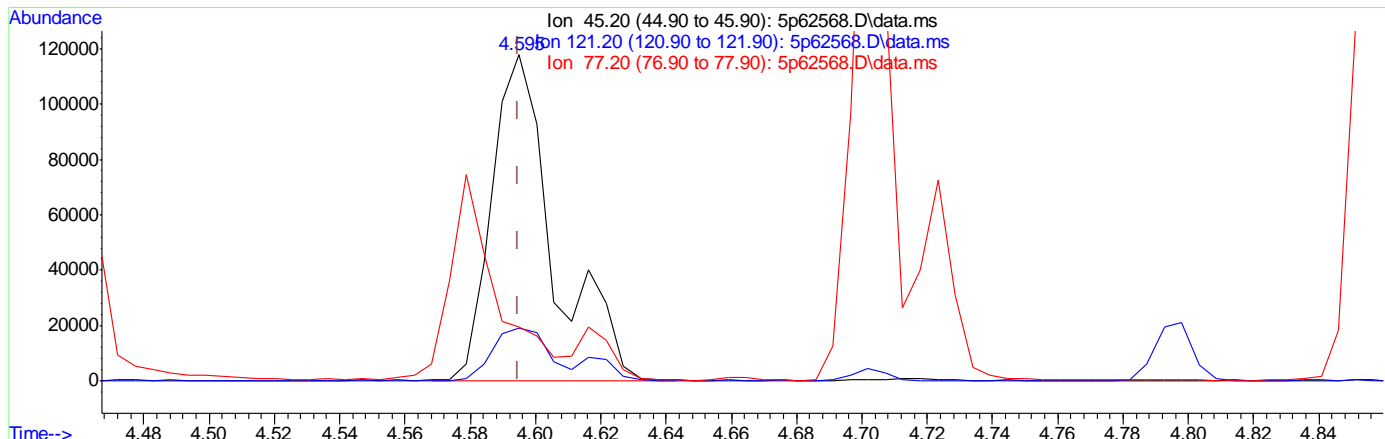
Ion	Exp%	Act%
45.20	100	100
121.20	17.90	15.87
77.20	13.70	13.79
0.00	0.00	0.00

9.6.5.2  
9

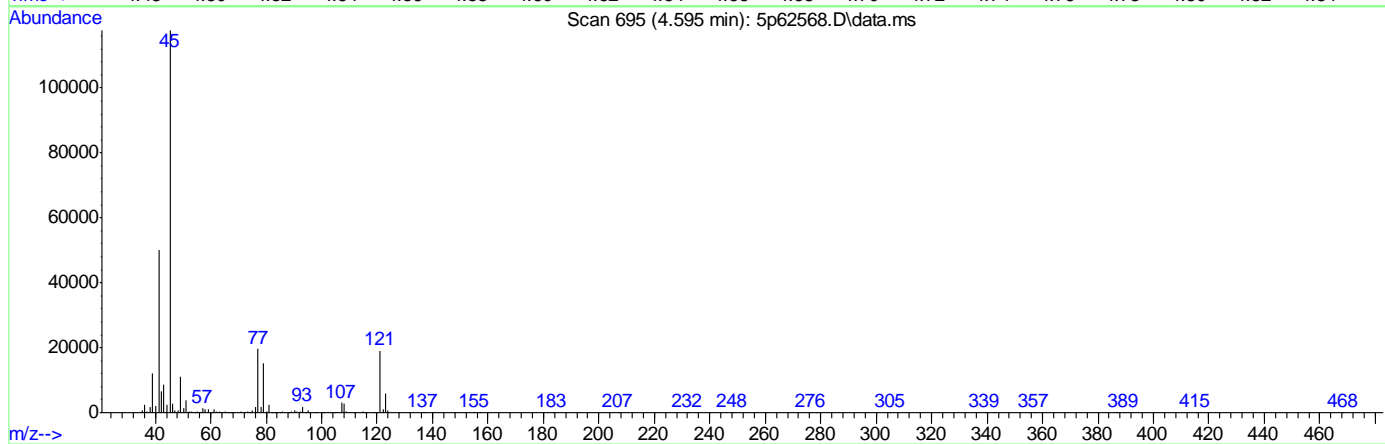
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62568.D  
 Acq On : 6 Sep 2019 3:35 pm  
 Operator : hennys  
 Sample : ic2940-25  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 06 16:19:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration



9.6.5.3  
9



(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (+0.000) 32.51ppm m

response 155462

Ion	Exp%	Act%
45.20	100	100
121.20	17.90	16.23
77.20	13.70	16.59
0.00	0.00	0.00

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62569.D  
 Acq On : 6 Sep 2019 3:59 pm  
 Operator : hennys  
 Sample : ic2940-10  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 06 16:21:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	112485	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	414424	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	226998	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	414521	40.00	ppm	0.00
83) Chrysene-d12	12.053	240	372651	40.00	ppm	0.00
91) Perylene-d12	14.051	264	442168	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	112485	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	226998	40.00	ppm	0.00
105) Chrysene-d12a	12.053	240	372651	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	414521	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	414424	40.00	ppm	0.00
112) Chrysene-d12b	12.053	240	372608	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	112485	40.00	ppm	0.00
116) Chrysene-d12c	12.053	240	372651	40.00	ppm	0.00
118) Chrysene-d12d	12.053	240	372608	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	414521	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.169	112	49586	10.79	ppm	0.00
Spiked Amount	50.000		Recovery	=	21.58%	
8) Phenol-d5	4.013	99	71679	10.85	ppm	0.00
Spiked Amount	50.000		Recovery	=	21.70%	
25) Nitrobenzene-d5	4.835	82	68058	11.93	ppm	0.00
Spiked Amount	50.000		Recovery	=	23.86%	
51) 2-Fluorobiphenyl	6.572	172	91615	11.64	ppm	0.00
Spiked Amount	50.000		Recovery	=	23.28%	
73) 2,4,6-Tribromophenol	7.977	330	16800	10.25	ppm	0.00
Spiked Amount	50.000		Recovery	=	20.50%	
85) Terphenyl-d14	10.616	244	95581	9.93	ppm	0.00
Spiked Amount	50.000		Recovery	=	19.86%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.753	88	24321	11.05	ppm	96
3) Pyridine	2.031	79	69582	11.71	ppm	98
4) N-Nitrosodimethylamine	1.988	74	38019	10.86	ppm	93
6) Indene	4.563	116	78413	11.69	ppm	99
7) Cumene	3.612	105	129793	11.44	ppm	98
9) Phenol	4.023	94	83471	12.24	ppm	95
10) Aniline	4.023	93	93392	12.31	ppm	95
11) bis(2-Chloroethyl)ether	4.093	93	56387	11.17	ppm	97
12) 2-Chlorophenol	4.136	128	49064	11.68	ppm	93
13) Decane	4.205	43	61768	12.20	ppm	92
14) 1,3-Dichlorobenzene	4.274	146	46115	11.06	ppm	99
15) 1,4-Dichlorobenzene	4.344	146	46669	11.35	ppm	98
16) Benzyl alcohol	4.461	108	33622	11.13	ppm	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62569.D  
 Acq On : 6 Sep 2019 3:59 pm  
 Operator : hennys  
 Sample : ic2940-10  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 06 16:21:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	45823	11.66	ppm	98
18) Acetophenone	4.702	105	79555	11.77	ppm	95
19) 2-Methylphenol	4.579	108	49696	12.02	ppm	97
20) 2,2'-oxybis(1-Chloropr...	4.595	45	67803	14.41	ppm	96
21) 3&4-Methylphenol	4.723	108	50048	11.81	ppm	93
22) n-Nitroso-di-n-propyla...	4.713	70	47990	12.81	ppm	96
23) Hexachloroethane	4.798	201	18189	11.40	ppm	89
26) Nitrobenzene	4.857	77	71925	12.11	ppm	96
27) Quinoline	5.856	129	89714	11.07	ppm	98
28) Isophorone	5.086	82	119792	11.40	ppm	99
29) 2-Nitrophenol	5.161	139	25658	10.82	ppm	95
30) 2,4-Dimethylphenol	5.220	107	57922	12.26	ppm	96
31) Benzoic acid	5.311	105	39303	9.17	ppm	95
32) bis(2-Chloroethoxy)met...	5.306	93	69055	10.92	ppm	98
33) 2,4-Dichlorophenol	5.391	162	35344	10.85	ppm	97
34) 2,6-Dichlorophenol	5.610	162	35172	11.92	ppm	93
35) 1,3,5-Trichlorobenzene	5.177	180	42688	12.06	ppm	100
36) 1,2,4-Trichlorobenzene	5.471	180	42519	11.84	ppm	96
37) 1,2,3-Trichlorobenzene	5.679	180	38154	11.77	ppm	91
38) Naphthalene	5.535	128	124340	11.77	ppm	98
39) 4-Chloroaniline	5.599	127	57515	11.40	ppm	98
40) 2,3-Dichloroaniline	6.481	161	44678	11.22	ppm	98
41) Caprolactam	5.909	55	29088	11.22	ppm	93
42) Hexachlorobutadiene	5.679	225	25476	11.98	ppm	97
43) 4-Chloro-3-methylphenol	6.085	107	49951	11.22	ppm	97
44) 2-Methylnaphthalene	6.208	141	65236	11.09	ppm	98
45) 1-Methylnaphthalene	6.299	141	74149	11.33	ppm	91
46) Dimethylnaphthalene	6.812	156	74982	11.63	ppm	93
48) Hexachlorocyclopentadiene	6.374	237	54595	22.59	ppm	98
49) 2,4,6-Trichlorophenol	6.491	196	27174	11.46	ppm	93
50) 2,4,5-Trichlorophenol	6.524	196	30015	11.80	ppm	95
52) 2-Chloronaphthalene	6.673	162	80094	12.15	ppm	95
53) Biphenyl	6.662	154	102698	11.35	ppm	98
54) 2-Nitroaniline	6.775	65	43498	12.09	ppm	80
55) Dimethylphthalate	6.972	163	90502	10.72	ppm	96
56) Acenaphthylene	7.068	152	126686	11.11	ppm	98
57) 2,6-Dinitrotoluene	7.020	165	21041	11.40	ppm	95
58) 3-Nitroaniline	7.175	138	24551	10.20	ppm	95
59) Acenaphthene	7.245	153	77842	11.42	ppm	99
60) 2,4-Dinitrophenol	7.282	184	22787	18.73	ppm #	71
61) 4-Nitrophenol	7.362	109	16947	10.46	ppm	87
62) Dibenzofuran	7.410	168	110134	11.52	ppm	96
63) 2,4-Dinitrotoluene	7.410	165	26875	11.47	ppm	99
64) 2,3,4,6-Tetrachlorophenol	7.539	232	23006	10.30	ppm	94
65) Diethylphthalate	7.661	149	98997	10.73	ppm	98
66) Fluorene	7.742	166	90022	10.89	ppm	97
67) 4-Chlorophenyl-phenyle...	7.758	204	45609	11.97	ppm	98
68) 4-Nitroaniline	7.763	138	25102	10.92	ppm	83
70) 4,6-Dinitro-2-methylph...	7.806	198	15059	9.24	ppm	89
71) n-Nitrosodiphenylamine	7.870	169	62919	10.98	ppm	98

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62569.D  
 Acq On : 6 Sep 2019 3:59 pm  
 Operator : hennys  
 Sample : ic2940-10  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 06 16:21:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:10:41 2019  
 Response via : Initial Calibration

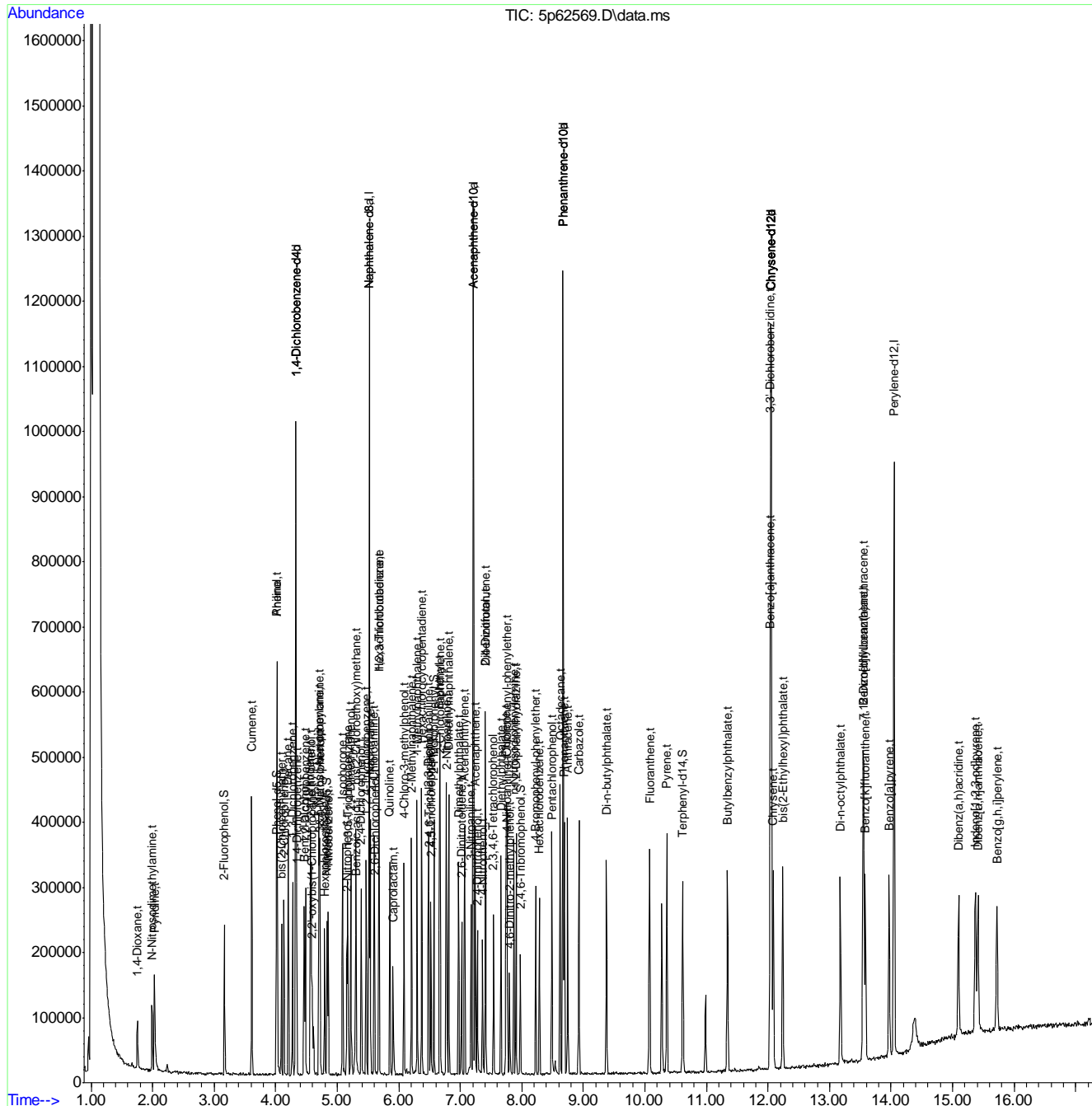
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.907	77	135032	11.54	ppm	96
74) 4-Bromophenyl-phenylether	8.228	248	26660	10.73	ppm	98
75) Hexachlorobenzene	8.286	284	32688	10.74	ppm	93
76) Pentachlorophenol	8.489	266	35755	19.01	ppm	92
77) Phenanthrene	8.692	178	119930	11.32	ppm	98
78) Anthracene	8.746	178	125523	11.30	ppm	98
79) Carbazole	8.928	167	131724	11.03	ppm	100
80) Di-n-butylphthalate	9.376	149	175447	10.74	ppm	99
81) Fluoranthene	10.076	202	151415	10.87	ppm	95
82) Octadecane	8.623	57	78831	11.57	ppm	97
84) Pyrene	10.359	202	154919	10.62	ppm	99
86) Butylbenzylphthalate	11.342	149	83567	10.30	ppm	93
87) Benzo[a]anthracene	12.037	228	135633	9.92	ppm	99
88) 3,3'-Dichlorobenzidine	12.042	252	57005	10.06	ppm	94
89) Chrysene	12.085	228	130083	10.19	ppm	97
90) bis(2-Ethylhexyl)phtha...	12.240	149	107456	10.18	ppm	100
92) Di-n-octylphthalate	13.175	149	192654	10.65	ppm	98
93) Benzo[b]fluoranthene	13.549	252	153043	11.19	ppm	98
94) Benzo[k]fluoranthene	13.586	252	140800	11.26	ppm	96
95) Benzo[a]pyrene	13.965	252	142131	11.06	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.370	276	129098	10.92	ppm	98
97) Dibenz(a,h)acridine	15.098	279	119556	10.99	ppm	98
98) Dibenz[a,h]anthracene	15.413	278	131546	11.19	ppm	92
99) 7,12-Dimethylbenz(a)an...	13.554	256	71215	11.52	ppm	97
100) Benzo[g,h,i]perylene	15.723	276	129644	11.24	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\
Data File : 5p62569.D
Acq On : 6 Sep 2019 3:59 pm
Operator : hennys
Sample : ic2940-10
Misc : op22049,e5p2940,1000,,1,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Sep 06 16:21:32 2019
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Sep 06 16:10:41 2019
Response via : Initial Calibration





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62570.D  
 Acq On : 6 Sep 2019 4:24 pm  
 Operator : hennys  
 Sample : ic2940-5  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 06 17:30:08 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:22:44 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	114069	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	413014	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	223266	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	425519	40.00	ppm	0.00
83) Chrysene-d12	12.053	240	366805	40.00	ppm	0.00
91) Perylene-d12	14.051	264	434611	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	114069	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	223266	40.00	ppm	0.00
105) Chrysene-d12a	12.053	240	366805	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	425519	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	413014	40.00	ppm	0.00
112) Chrysene-d12b	12.053	240	366663	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	114069	40.00	ppm	0.00
116) Chrysene-d12c	12.053	240	366805	40.00	ppm	0.00
118) Chrysene-d12d	12.053	240	366663	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	425519	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.168	112	25696	5.36	ppm	0.00
Spiked Amount	50.000		Recovery	=	10.72%	
8) Phenol-d5	4.012	99	38335	5.68	ppm	0.00
Spiked Amount	50.000		Recovery	=	11.36%	
25) Nitrobenzene-d5	4.835	82	36307	5.88	ppm	0.00
Spiked Amount	50.000		Recovery	=	11.76%	
51) 2-Fluorobiphenyl	6.571	172	49872	5.89	ppm	0.00
Spiked Amount	50.000		Recovery	=	11.78%	
73) 2,4,6-Tribromophenol	7.976	330	8612	5.05	ppm	0.00
Spiked Amount	50.000		Recovery	=	10.10%	
85) Terphenyl-d14	10.616	244	49135	5.12	ppm	0.00
Spiked Amount	50.000		Recovery	=	10.24%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.753	88	11551	4.74	ppm	89
3) Pyridine	2.031	79	35066	5.51	ppm	92
4) N-Nitrosodimethylamine	1.993	74	20782	5.83	ppm	91
6) Indene	4.563	116	41470	5.64	ppm	97
7) Cumene	3.612	105	65693	5.48	ppm	99
9) Phenol	4.023	94	44081	5.97	ppm	97
10) Aniline	4.023	93	50276	5.97	ppm	98
11) bis(2-Chloroethyl)ether	4.093	93	29859	5.58	ppm	98
12) 2-Chlorophenol	4.135	128	25208	5.56	ppm	94
13) Decane	4.205	43	33678	6.16	ppm	95
14) 1,3-Dichlorobenzene	4.274	146	26559	5.92	ppm	99
15) 1,4-Dichlorobenzene	4.344	146	24897	5.59	ppm	97
16) Benzyl alcohol	4.461	108	17280	5.56	ppm	84

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62570.D  
 Acq On : 6 Sep 2019 4:24 pm  
 Operator : hennys  
 Sample : ic2940-5  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 06 17:30:08 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Fri Sep 06 16:22:44 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	23153	5.52	ppm	96
18) Acetophenone	4.702	105	40247	5.56	ppm	98
19) 2-Methylphenol	4.579	108	26104	5.85	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.595	45	38378m	6.54	ppm	
21) 3&4-Methylphenol	4.718	108	25845	5.65	ppm	97
22) n-Nitroso-di-n-propyla...	4.712	70	23101	5.64	ppm	98
23) Hexachloroethane	4.798	201	9853	5.49	ppm	89
26) Nitrobenzene	4.857	77	39747	6.19	ppm	93
27) Quinoline	5.856	129	46856	5.47	ppm	99
28) Isophorone	5.086	82	63702	5.73	ppm	99
29) 2-Nitrophenol	5.161	139	13193	5.44	ppm	91
30) 2,4-Dimethylphenol	5.220	107	30253	5.97	ppm	98
31) Benzoic acid	5.289	105	19619	4.63	ppm	96
32) bis(2-Chloroethoxy)met...	5.305	93	37167	5.58	ppm	100
33) 2,4-Dichlorophenol	5.391	162	19432	5.73	ppm	98
34) 2,6-Dichlorophenol	5.604	162	17476	5.51	ppm	99
35) 1,3,5-Trichlorobenzene	5.177	180	21297	5.58	ppm	98
36) 1,2,4-Trichlorobenzene	5.471	180	22572	5.94	ppm	99
37) 1,2,3-Trichlorobenzene	5.679	180	20912	5.94	ppm	97
38) Naphthalene	5.535	128	62442	5.40	ppm	97
39) 4-Chloroaniline	5.599	127	30256	5.56	ppm	100
40) 2,3-Dichloroaniline	6.481	161	24085	5.68	ppm	95
41) Caprolactam	5.904	55	14473	5.19	ppm	96
42) Hexachlorobutadiene	5.679	225	13741	5.82	ppm	92
43) 4-Chloro-3-methylphenol	6.085	107	25016	5.39	ppm	96
44) 2-Methylnaphthalene	6.208	141	34554	5.61	ppm	96
45) 1-Methylnaphthalene	6.299	141	39822	5.70	ppm	98
46) Dimethylnaphthalene	6.812	156	39432	5.73	ppm	99
48) Hexachlorocyclopentadiene	6.374	237	26878	10.76	ppm	96
49) 2,4,6-Trichlorophenol	6.491	196	14284	5.61	ppm	97
50) 2,4,5-Trichlorophenol	6.523	196	14103	5.15	ppm	96
52) 2-Chloronaphthalene	6.673	162	42456	6.05	ppm	98
53) Biphenyl	6.662	154	54425	5.71	ppm	96
54) 2-Nitroaniline	6.774	65	23780	6.18	ppm	80
55) Dimethylphthalate	6.972	163	48204	5.57	ppm	99
56) Acenaphthylene	7.068	152	68716	5.78	ppm	98
57) 2,6-Dinitrotoluene	7.015	165	11271	5.99	ppm	91
58) 3-Nitroaniline	7.175	138	12534	5.27	ppm	96
59) Acenaphthene	7.239	153	41993	5.80	ppm	94
60) 2,4-Dinitrophenol	7.277	184	10364	9.17	ppm	87
61) 4-Nitrophenol	7.362	109	8144	4.96	ppm	92
62) Dibenzofuran	7.410	168	60270	5.87	ppm	98
63) 2,4-Dinitrotoluene	7.405	165	14093	5.61	ppm	85
64) 2,3,4,6-Tetrachlorophenol	7.538	232	11963	5.25	ppm	98
65) Diethylphthalate	7.661	149	53660	5.77	ppm	98
66) Fluorene	7.741	166	47771	5.74	ppm	98
67) 4-Chlorophenyl-phenyle...	7.752	204	24363	6.06	ppm	92
68) 4-Nitroaniline	7.763	138	13605	5.73	ppm	95
70) 4,6-Dinitro-2-methylph...	7.800	198	6987	4.44	ppm	93
71) n-Nitrosodiphenylamine	7.870	169	35326	5.73	ppm	97

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62570.D  
 Acq On : 6 Sep 2019 4:24 pm  
 Operator : hennys  
 Sample : ic2940-5  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 06 17:30:08 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:22:44 2019  
 Response via : Initial Calibration

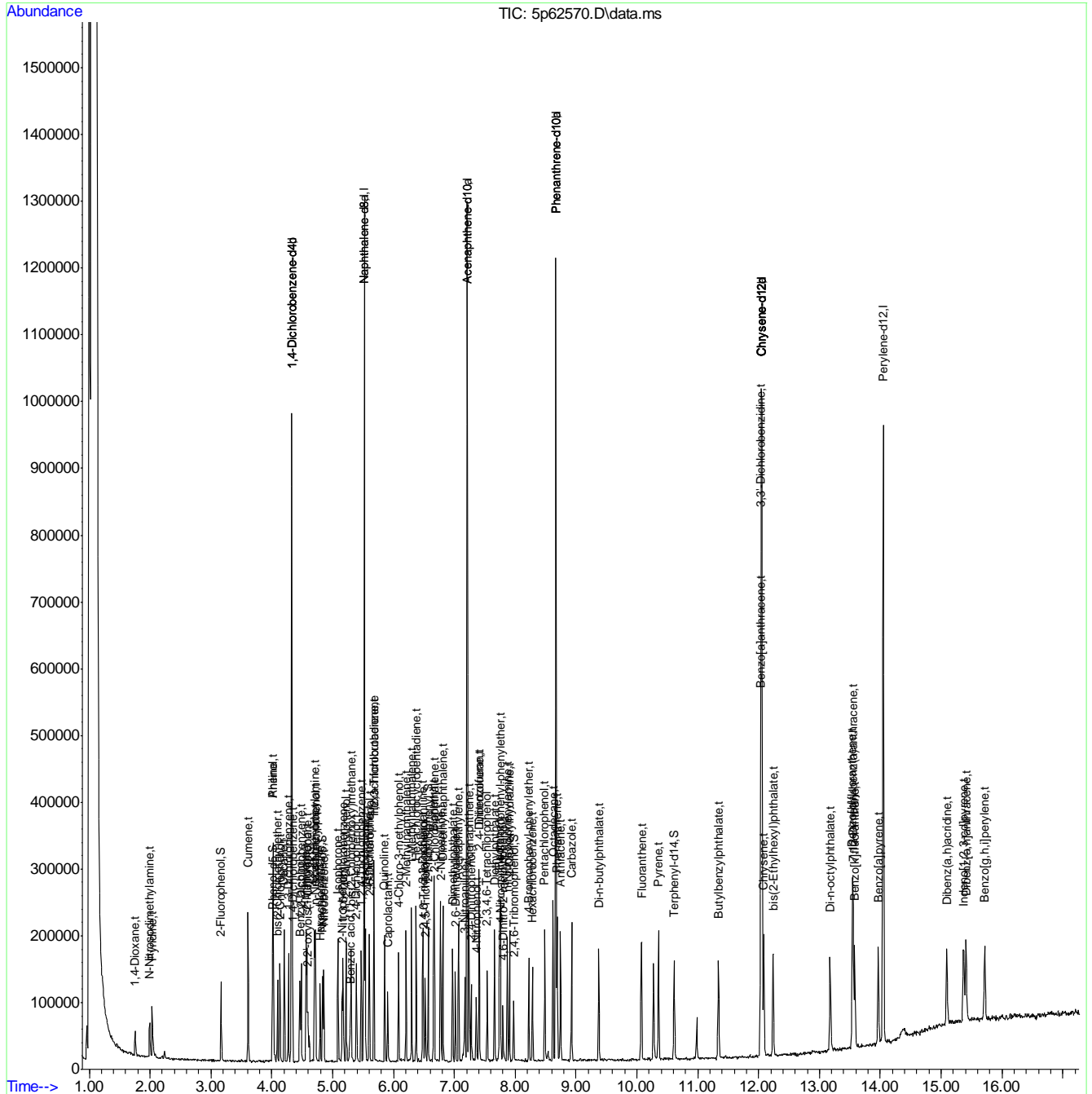
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.907	77	74793	5.88	ppm	98
74) 4-Bromophenyl-phenylether	8.228	248	14889	5.52	ppm	97
75) Hexachlorobenzene	8.286	284	17808	5.38	ppm	91
76) Pentachlorophenol	8.484	266	18045	9.63	ppm	96
77) Phenanthrene	8.692	178	64408	5.62	ppm	99
78) Anthracene	8.746	178	65321	5.41	ppm	97
79) Carbazole	8.927	167	68354	5.43	ppm	98
80) Di-n-butylphthalate	9.376	149	92573	5.42	ppm	98
81) Fluoranthene	10.076	202	78233	5.30	ppm	97
82) Octadecane	8.623	57	43395	5.97	ppm	99
84) Pyrene	10.359	202	83907	5.59	ppm	99
86) Butylbenzylphthalate	11.337	149	41807	5.16	ppm	94
87) Benzo[a]anthracene	12.037	228	72304	5.21	ppm	98
88) 3,3'-Dichlorobenzidine	12.042	252	29570	5.12	ppm	96
89) Chrysene	12.085	228	70913	5.49	ppm	97
90) bis(2-Ethylhexyl)phtha...	12.240	149	56046	5.24	ppm	96
92) Di-n-octylphthalate	13.174	149	99269	5.51	ppm	96
93) Benzo[b]fluoranthene	13.543	252	79872	5.45	ppm	94
94) Benzo[k]fluoranthene	13.580	252	76157	6.05	ppm	99
95) Benzo[a]pyrene	13.965	252	73188	5.55	ppm	95
96) Indeno[1,2,3-cd]pyrene	15.370	276	68069	5.57	ppm	94
97) Dibenz(a,h)acridine	15.092	279	64546	5.69	ppm	97
98) Dibenz[a,h]anthracene	15.408	278	69392	5.65	ppm	96
99) 7,12-Dimethylbenz(a)an...	13.554	256	35781	5.46	ppm	98
100) Benzo[g,h,i]perylene	15.717	276	66798	5.50	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\
Data File : 5p62570.D
Acq On : 6 Sep 2019 4:24 pm
Operator : hennys
Sample : ic2940-5
Misc : op22049,e5p2940,1000,,,1,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 06 17:30:08 2019
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um
QLast Update : Fri Sep 06 16:22:44 2019
Response via : Initial Calibration



# Manual Integration Approval Summary

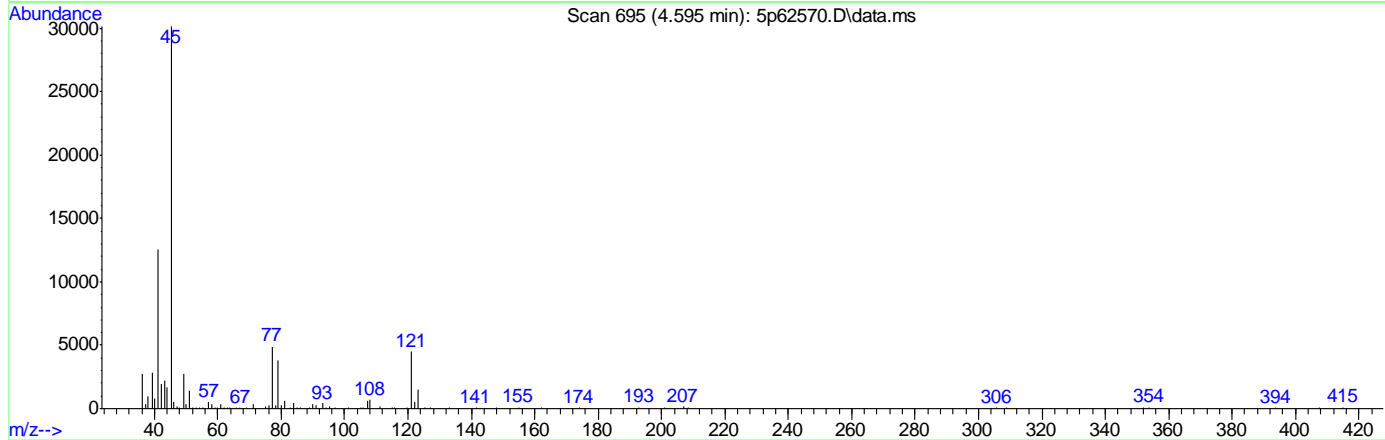
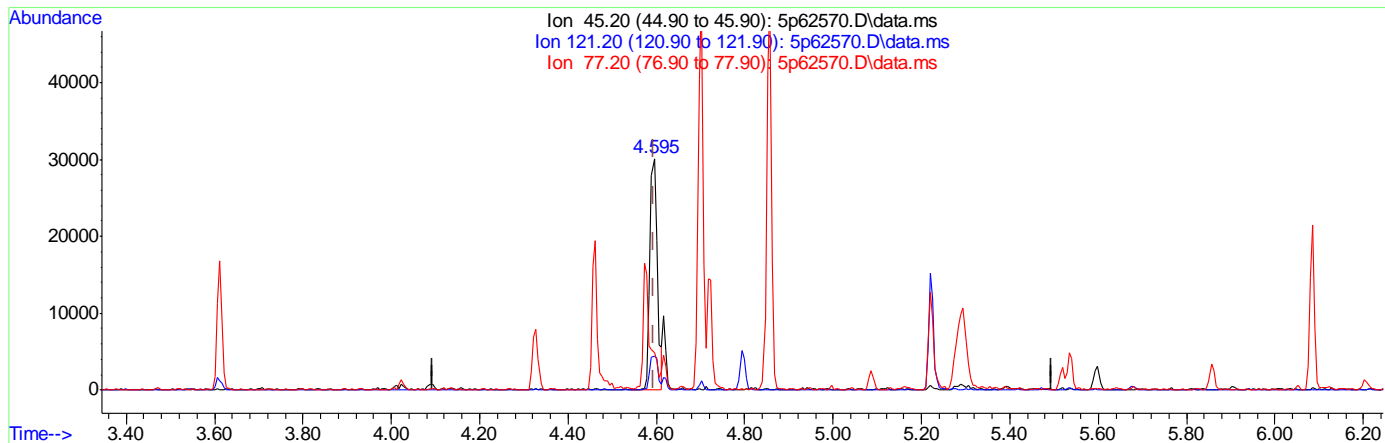
Sample Number: E5P2940-IC2940      Method: SW846 8270D  
Lab FileID: 5P62570.D      Analyst approved: 09/09/19 12:42 Ying Li  
Injection Time: 09/06/19 16:24      Supervisor approved: 09/09/19 15:51 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.59	Split peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62570.D  
 Acq On : 6 Sep 2019 4:24 pm  
 Operator : hennys  
 Sample : ic2940-5  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 06 16:45:56 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:22:44 2019  
 Response via : Initial Calibration



TIC: 5p62570.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (-0.000) 5.66ppm

response 33164

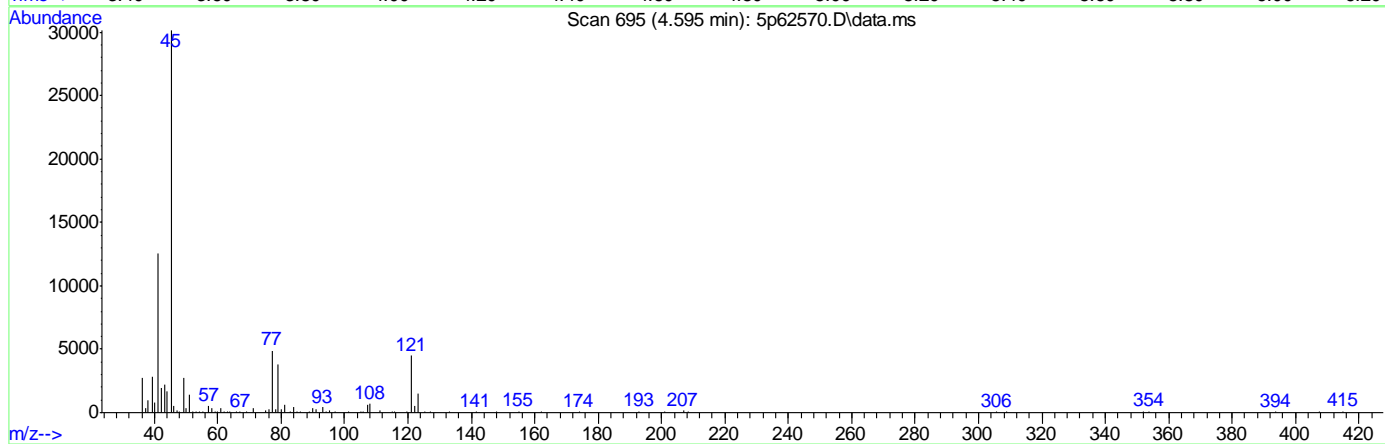
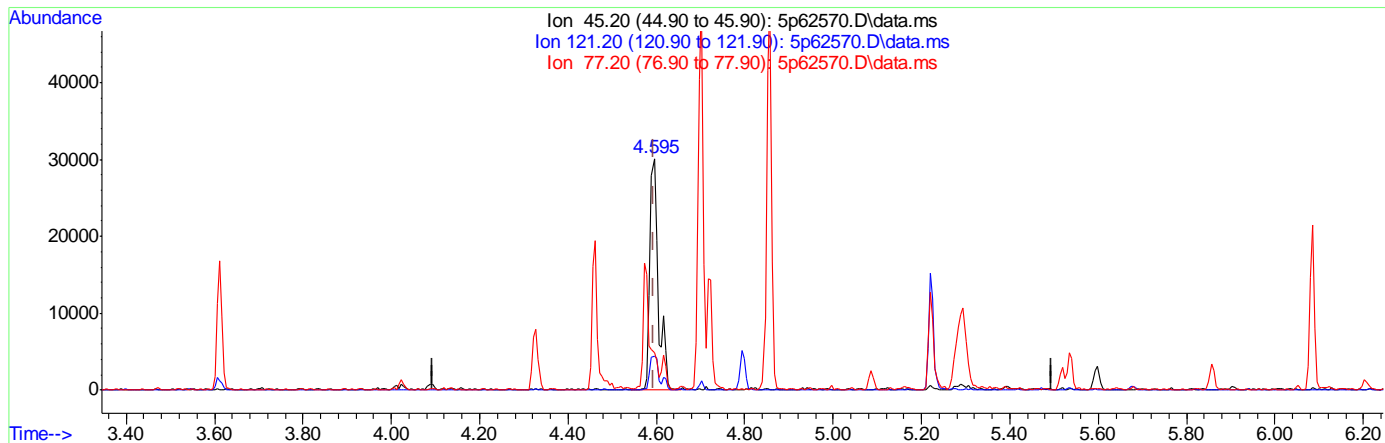
Ion	Exp%	Act%
45.20	100	100
121.20	17.90	14.95
77.20	13.70	12.69
0.00	0.00	0.00

9.6.7.2  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62570.D  
 Acq On : 6 Sep 2019 4:24 pm  
 Operator : hennys  
 Sample : ic2940-5  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 06 16:45:56 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:22:44 2019  
 Response via : Initial Calibration



TIC: 5p62570.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (-0.000) 6.54ppm m

response 38378

Ion	Exp%	Act%
45.20	100	100
121.20	17.90	14.83
77.20	13.70	16.15
0.00	0.00	0.00

9.6.7.3  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62571.D  
 Acq On : 6 Sep 2019 4:48 pm  
 Operator : hennys  
 Sample : ic2940-2  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 06 17:30:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:50:26 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	118250	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	421090	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	225335	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	433264	40.00	ppm	0.00
83) Chrysene-d12	12.053	240	375801	40.00	ppm	0.00
91) Perylene-d12	14.045	264	449461	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	118250	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	225335	40.00	ppm	0.00
105) Chrysene-d12a	12.053	240	375801	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	433264	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	421090	40.00	ppm	0.00
112) Chrysene-d12b	12.053	240	375801	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	118250	40.00	ppm	0.00
116) Chrysene-d12c	12.053	240	375801	40.00	ppm	0.00
118) Chrysene-d12d	12.053	240	375801	40.00	ppm	0.00
120) Phenanthrene-d10b	8.671	188	433227	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.169	112	10412	2.07	ppm	0.00
Spiked Amount	50.000		Recovery	=	4.14%	
8) Phenol-d5	4.013	99	15211	2.13	ppm	0.00
Spiked Amount	50.000		Recovery	=	4.26%	
25) Nitrobenzene-d5	4.835	82	14981	2.32	ppm	0.00
Spiked Amount	50.000		Recovery	=	4.64%	
51) 2-Fluorobiphenyl	6.572	172	20040	2.29	ppm	0.00
Spiked Amount	50.000		Recovery	=	4.58%	
73) 2,4,6-Tribromophenol	7.977	330	3563	2.05	ppm	0.00
Spiked Amount	50.000		Recovery	=	4.10%	
85) Terphenyl-d14	10.616	244	18392	1.87	ppm	0.00
Spiked Amount	50.000		Recovery	=	3.74%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.753	88	6081	2.42	ppm	89
3) Pyridine	2.041	79	13198	1.97	ppm	96
4) N-Nitrosodimethylamine	1.993	74	8148	2.15	ppm	89
6) Indene	4.563	116	17194	2.21	ppm	97
7) Cumene	3.612	105	28011	2.22	ppm	96
9) Phenol	4.023	94	18210	2.31	ppm	94
10) Aniline	4.023	93	20280	2.26	ppm	95
11) bis(2-Chloroethyl)ether	4.093	93	12454	2.21	ppm	94
12) 2-Chlorophenol	4.136	128	10050	2.10	ppm	85
13) Decane	4.205	43	13418	2.29	ppm	88
14) 1,3-Dichlorobenzene	4.274	146	11064	2.32	ppm	85
15) 1,4-Dichlorobenzene	4.339	146	11060	2.35	ppm	99
16) Benzyl alcohol	4.456	108	7063	2.16	ppm	91



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62571.D  
 Acq On : 6 Sep 2019 4:48 pm  
 Operator : hennys  
 Sample : ic2940-2  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 06 17:30:38 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Fri Sep 06 16:50:26 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.483	146	10056	2.28	ppm	92
18) Acetophenone	4.702	105	17135	2.25	ppm	96
19) 2-Methylphenol	4.579	108	11434	2.41	ppm	87
20) 2,2'-oxybis(1-Chloropr...	4.595	45	15693m	2.53	ppm	
21) 3&4-Methylphenol	4.718	108	10814	2.24	ppm	97
22) n-Nitroso-di-n-propyla...	4.713	70	10276	2.38	ppm	95
23) Hexachloroethane	4.793	201	3873	2.05	ppm	85
26) Nitrobenzene	4.857	77	16114	2.38	ppm	96
27) Quinoline	5.856	129	19705	2.22	ppm	97
28) Isophorone	5.086	82	25424	2.20	ppm	97
29) 2-Nitrophenol	5.161	139	6330	2.53	ppm	75
30) 2,4-Dimethylphenol	5.220	107	12273	2.31	ppm	97
31) Benzoic acid	5.279	105	7050	1.65	ppm	90
32) bis(2-Chloroethoxy)met...	5.305	93	15084	2.18	ppm	91
33) 2,4-Dichlorophenol	5.391	162	7668	2.17	ppm	96
34) 2,6-Dichlorophenol	5.605	162	7221	2.20	ppm	92
35) 1,3,5-Trichlorobenzene	5.172	180	9326	2.36	ppm	94
36) 1,2,4-Trichlorobenzene	5.471	180	8331	2.10	ppm	82
37) 1,2,3-Trichlorobenzene	5.679	180	9105	2.47	ppm	95
38) Naphthalene	5.535	128	27023	2.27	ppm	96
39) 4-Chloroaniline	5.599	127	11570	2.05	ppm	89
40) 2,3-Dichloroaniline	6.481	161	9501	2.16	ppm	96
41) Caprolactam	5.898	55	6523	2.28	ppm	94
42) Hexachlorobutadiene	5.679	225	4877	1.98	ppm	87
43) 4-Chloro-3-methylphenol	6.085	107	10895	2.28	ppm	90
44) 2-Methylnaphthalene	6.208	141	13411	2.10	ppm	98
45) 1-Methylnaphthalene	6.299	141	15338	2.11	ppm	94
46) Dimethylnaphthalene	6.812	156	16118	2.25	ppm	98
48) Hexachlorocyclopentadiene	6.374	237	10038	3.94	ppm	88
49) 2,4,6-Trichlorophenol	6.486	196	5502	2.10	ppm	92
50) 2,4,5-Trichlorophenol	6.518	196	6446	2.32	ppm	79
52) 2-Chloronaphthalene	6.673	162	16894	2.32	ppm	97
53) Biphenyl	6.662	154	22889	2.33	ppm	91
54) 2-Nitroaniline	6.775	65	9087	2.26	ppm	96
55) Dimethylphthalate	6.972	163	19764	2.23	ppm	99
56) Acenaphthylene	7.068	152	28252	2.30	ppm	95
57) 2,6-Dinitrotoluene	7.015	165	3689	1.89	ppm	80
58) 3-Nitroaniline	7.175	138	4930	2.04	ppm	94
59) Acenaphthene	7.239	153	17088	2.28	ppm	98
60) 2,4-Dinitrophenol	7.277	184	3559	3.16	ppm	79
61) 4-Nitrophenol	7.362	109	2970	1.79	ppm	90
62) Dibenzofuran	7.410	168	25391	2.39	ppm	96
63) 2,4-Dinitrotoluene	7.405	165	5322	2.06	ppm	79
64) 2,3,4,6-Tetrachlorophenol	7.539	232	4630	2.00	ppm	91
65) Diethylphthalate	7.661	149	22236	2.32	ppm	95
66) Fluorene	7.742	166	18657	2.17	ppm	92
67) 4-Chlorophenyl-phenyle...	7.752	204	10162	2.43	ppm	90
68) 4-Nitroaniline	7.763	138	5328	2.18	ppm	91
70) 4,6-Dinitro-2-methylph...	7.800	198	2398	1.52	ppm	94
71) n-Nitrosodiphenylamine	7.870	169	14177	2.21	ppm	95

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62571.D  
 Acq On : 6 Sep 2019 4:48 pm  
 Operator : hennys  
 Sample : ic2940-2  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 06 17:30:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:50:26 2019  
 Response via : Initial Calibration

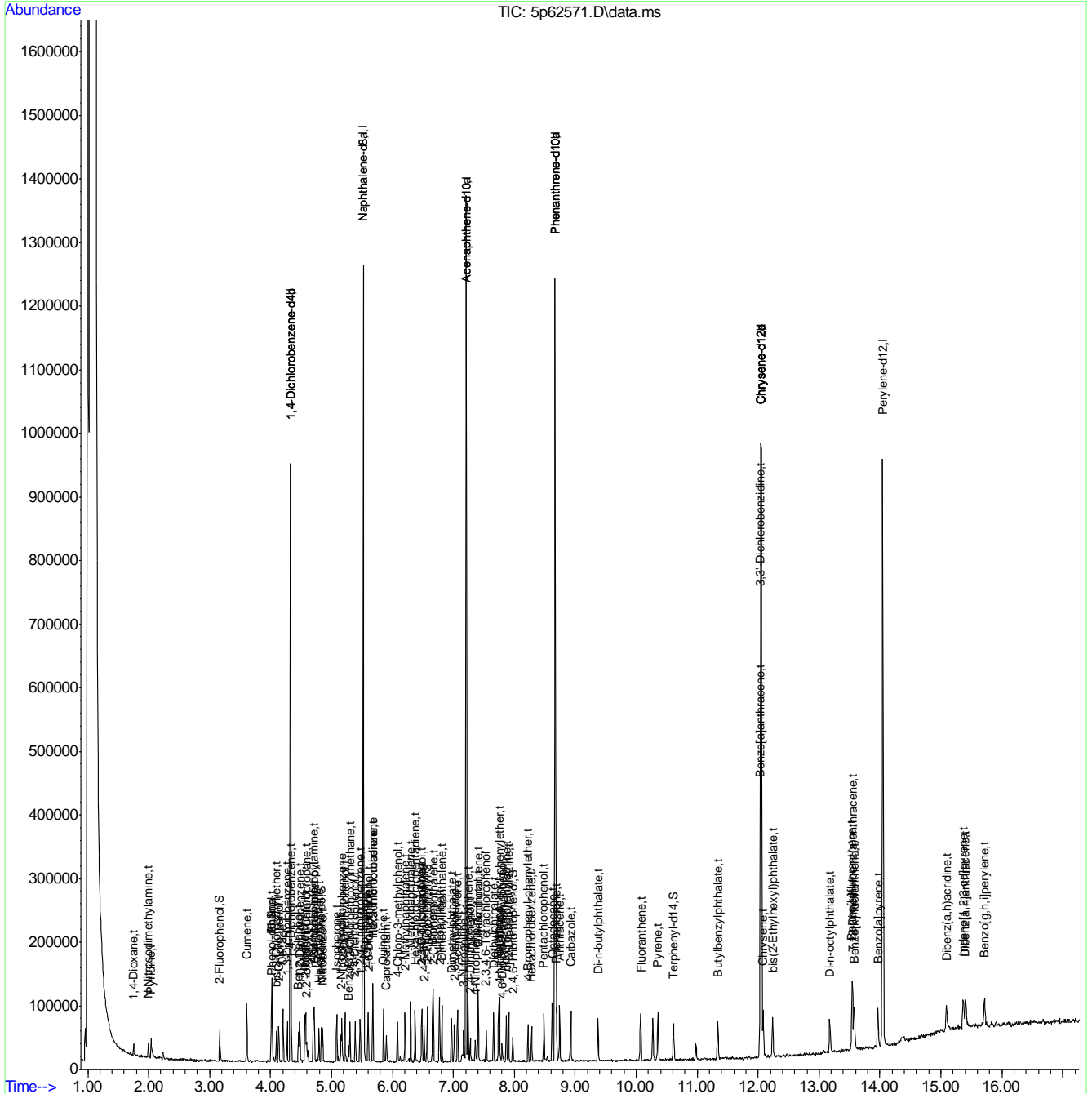
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.907	77	30687	2.31	ppm	94
74) 4-Bromophenyl-phenylether	8.228	248	5754	2.06	ppm	85
75) Hexachlorobenzene	8.281	284	7147	2.10	ppm	89
76) Pentachlorophenol	8.484	266	7116	3.75	ppm	97
77) Phenanthrene	8.692	178	26025	2.19	ppm	97
78) Anthracene	8.746	178	26520	2.13	ppm	97
79) Carbazole	8.928	167	26867	2.07	ppm	99
80) Di-n-butylphthalate	9.371	149	36301	2.06	ppm	96
81) Fluoranthene	10.076	202	31041	2.05	ppm	95
82) Octadecane	8.623	57	17493	2.30	ppm	96
84) Pyrene	10.359	202	33190	2.12	ppm	97
86) Butylbenzylphthalate	11.337	149	16397	1.97	ppm	90
87) Benzo[a]anthracene	12.037	228	29252	2.05	ppm	95
88) 3,3'-Dichlorobenzidine	12.042	252	11769	1.98	ppm	98
89) Chrysene	12.085	228	27652	2.06	ppm	96
90) bis(2-Ethylhexyl)phtha...	12.240	149	22457	2.04	ppm	99
92) Di-n-octylphthalate	13.180	149	36592	1.94	ppm	96
93) Benzo[b]fluoranthene	13.543	252	32880	2.14	ppm	99
94) Benzo[k]fluoranthene	13.581	252	29769	2.22	ppm	96
95) Benzo[a]pyrene	13.965	252	28448	2.05	ppm	94
96) Indeno[1,2,3-cd]pyrene	15.365	276	24378	1.90	ppm	94
97) Dibenz(a,h)acridine	15.092	279	24491	2.05	ppm	91
98) Dibenz[a,h]anthracene	15.402	278	26760	2.07	ppm	86
99) 7,12-Dimethylbenz(a)an...	13.554	256	15290	2.23	ppm	99
100) Benzo[g,h,i]perylene	15.712	276	28610	2.25	ppm	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62571.D  
 Acq On : 6 Sep 2019 4:48 pm  
 Operator : hennys  
 Sample : ic2940-2  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 06 17:30:38 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:50:26 2019  
 Response via : Initial Calibration



6 8'9'6

# Manual Integration Approval Summary

Sample Number: E5P2940-IC2940      Method: SW846 8270D  
Lab FileID: 5P62571.D      Analyst approved: 09/09/19 12:42 Ying Li  
Injection Time: 09/06/19 16:48      Supervisor approved: 09/09/19 15:51 Nina Pandya

Parameter	CAS	Sig#	R.T. (min.)	Reason
2,2'-Oxybis(1-chloropropane)	108-60-1		4.59	Split peak

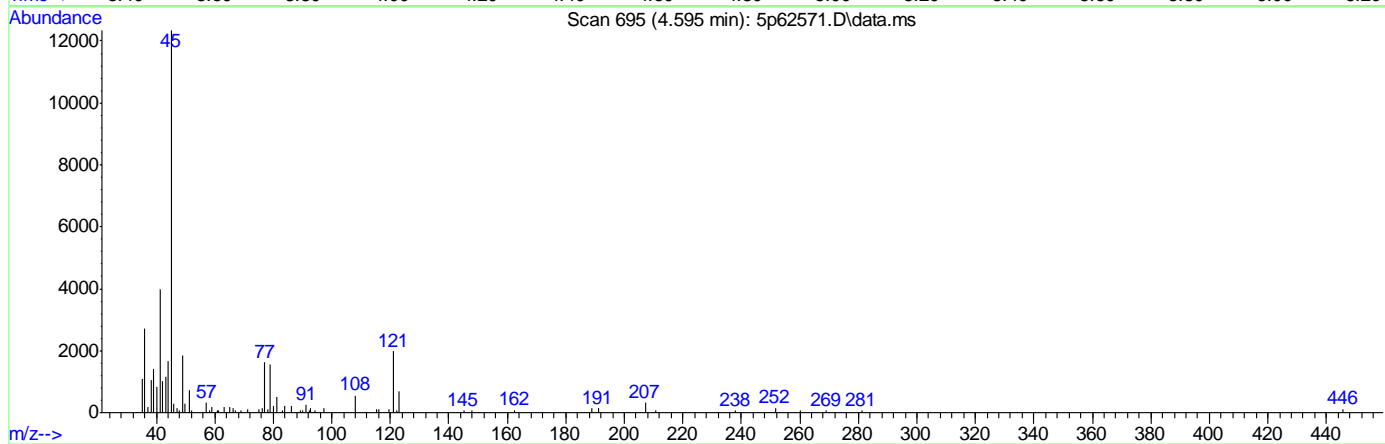
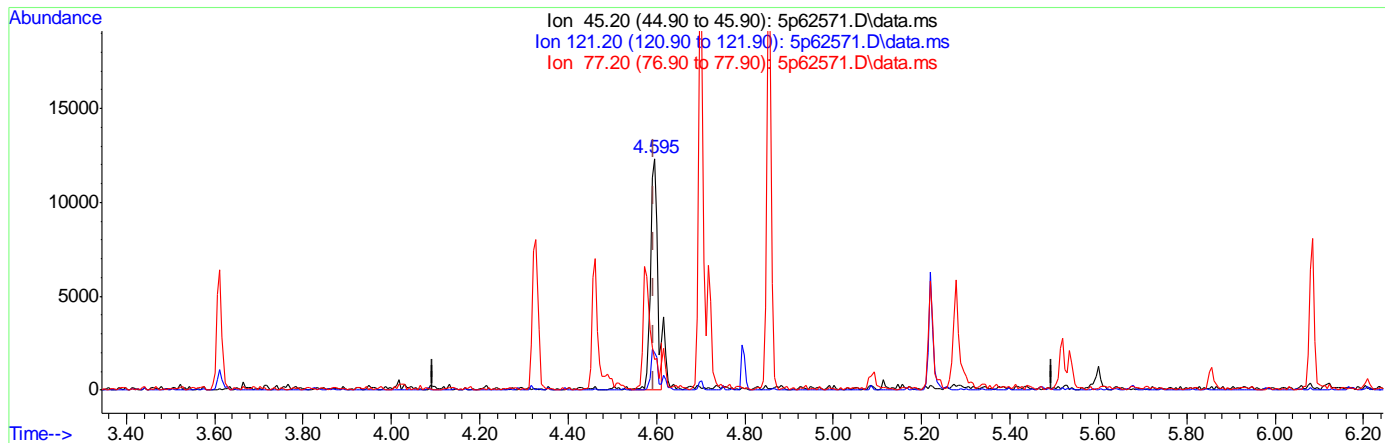
9.6.8.1

9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62571.D  
 Acq On : 6 Sep 2019 4:48 pm  
 Operator : hennys  
 Sample : ic2940-2  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 06 17:26:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:50:26 2019  
 Response via : Initial Calibration



(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (+0.000) 2.24ppm

response 13888

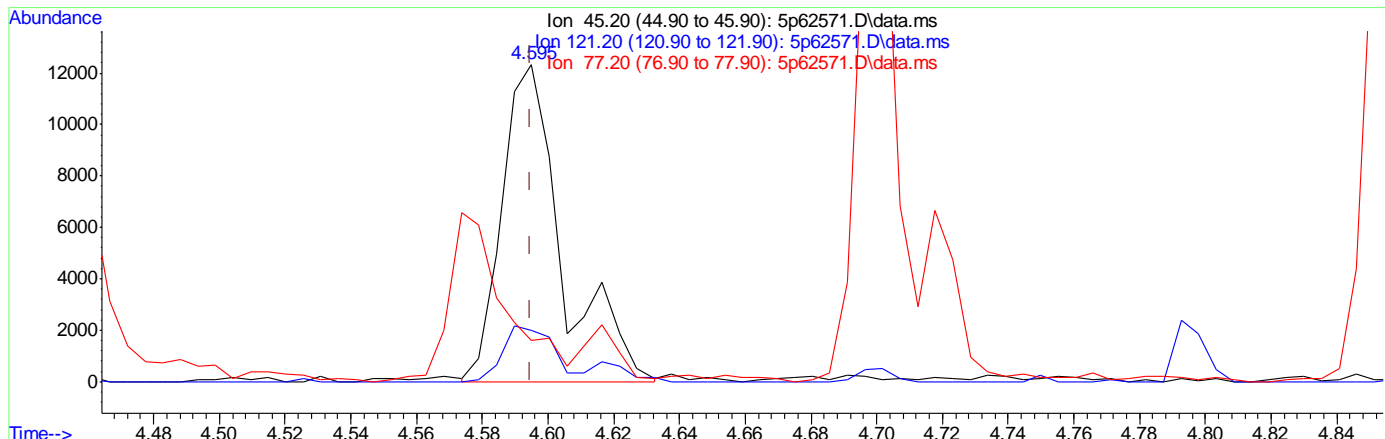
Ion	Exp%	Act%
45.20	100	100
121.20	17.90	16.32
77.20	13.70	8.07
0.00	0.00	0.00

9.6.8.2  
9

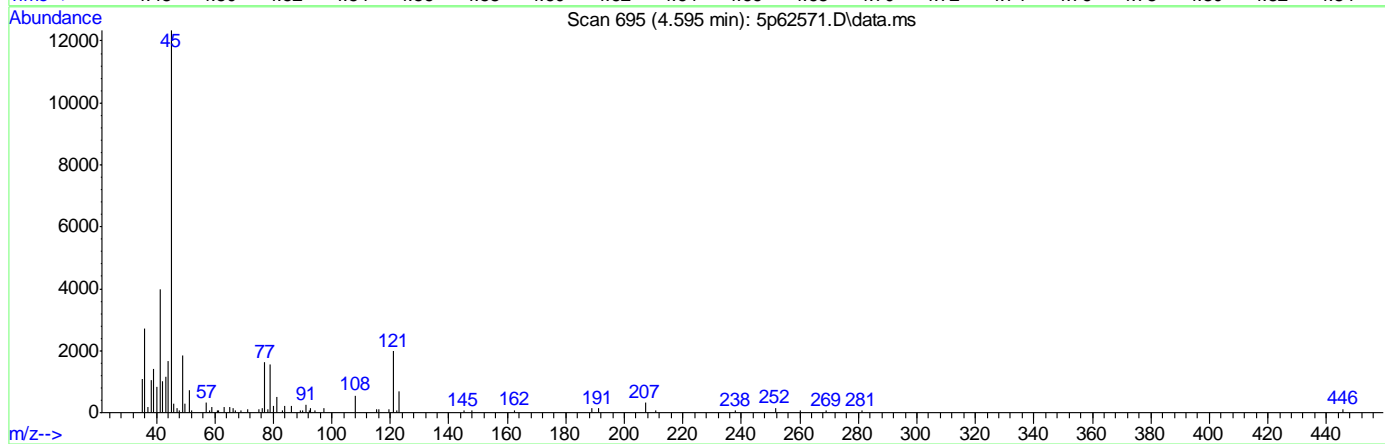
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62571.D  
 Acq On : 6 Sep 2019 4:48 pm  
 Operator : hennys  
 Sample : ic2940-2  
 Misc : op22049,e5p2940,1000,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 06 17:26:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 16:50:26 2019  
 Response via : Initial Calibration



9.683  
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TIC: 5p62571.D\data.ms

(20) 2,2'-oxybis(1-Chloropropane (t))

4.595min (+0.000) 2.53ppm m

response 15693

Ion	Exp%	Act%
45.20	100	100
121.20	17.90	16.02
77.20	13.70	13.11
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62574.D  
 Acq On : 6 Sep 2019 6:01 pm  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 09 08:15:42 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 17:39:49 2019  
 Response via : Initial Calibration

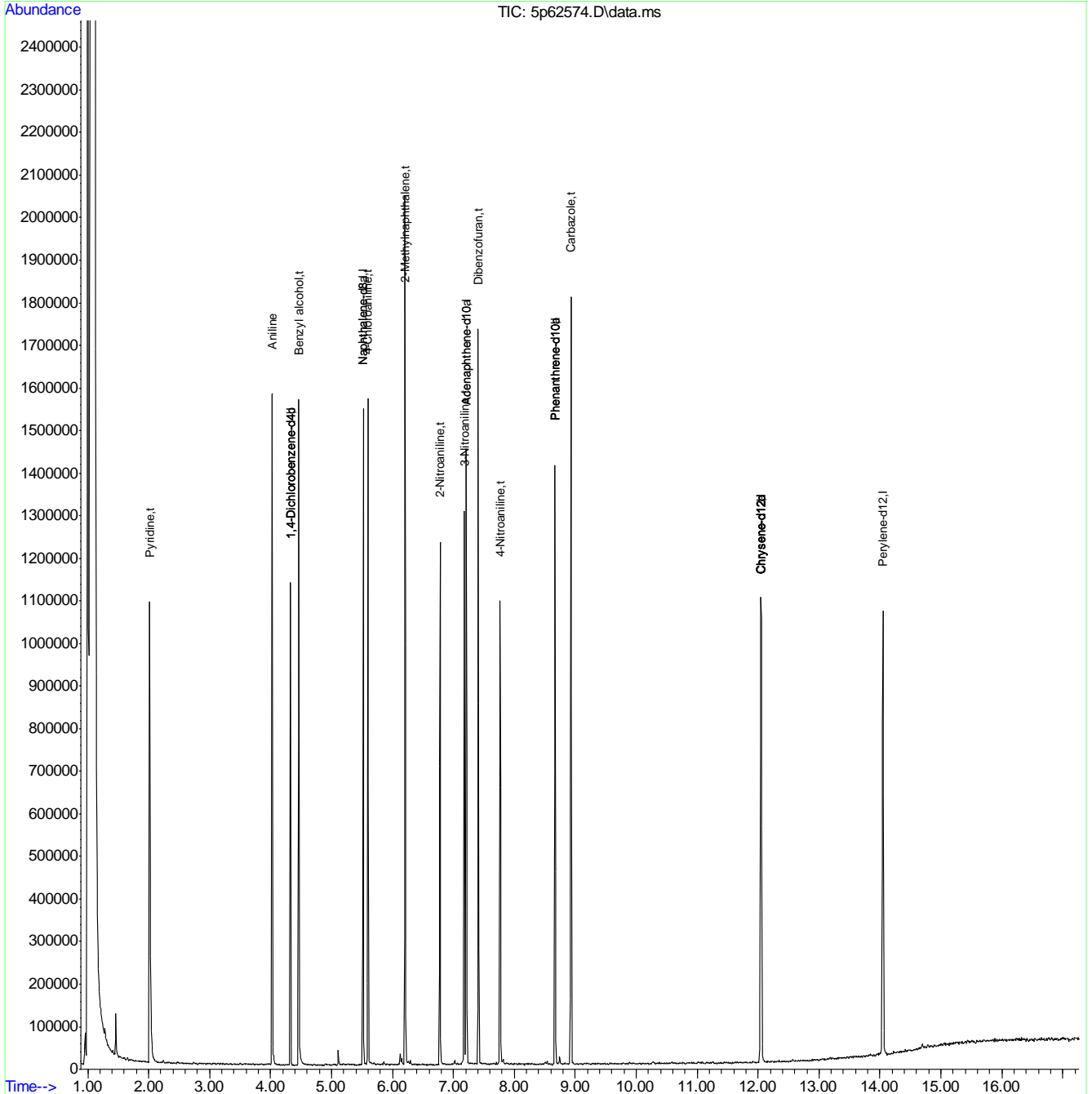
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	141987	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	504184	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	229762	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	490876	40.00	ppm	0.00
83) Chrysene-d12	12.053	240	470549	40.00	ppm	0.00
91) Perylene-d12	14.051	264	522318	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	141987	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	229762	40.00	ppm	0.00
105) Chrysene-d12a	12.053	240	470549	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	490876	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	504184	40.00	ppm	0.00
112) Chrysene-d12b	12.053	240	470526	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.328	152	141987	40.00	ppm	0.00
116) Chrysene-d12c	12.053	240	470549	40.00	ppm	0.00
118) Chrysene-d12d	12.053	240	470526	40.00	ppm	0.00
120) Phenanthrene-d10b	8.666	188	490876	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
3) Pyridine	2.015	79	377996	47.12	ppm	99
10) Aniline	4.029	93	513227	48.41	ppm	# 59
16) Benzyl alcohol	4.461	108	196557	49.50	ppm	98
39) 4-Chloroaniline	5.599	127	307090	45.33	ppm	99
44) 2-Methylnaphthalene	6.208	141	365131	47.46	ppm	97
54) 2-Nitroaniline	6.780	65	192055	46.18	ppm	95
58) 3-Nitroaniline	7.181	138	138706	56.08	ppm	99
62) Dibenzofuran	7.410	168	598121	53.95	ppm	98
68) 4-Nitroaniline	7.768	138	133516	52.91	ppm	91
79) Carbazole	8.933	167	675930	45.77	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62574.D  
 Acq On : 6 Sep 2019 6:01 pm  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2940,1000,,,1,1  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 09 08:15:42 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Sep 06 17:39:49 2019  
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62579.D  
 Acq On : 6 Sep 2019 7:48 pm  
 Operator : hennys  
 Sample : ic2941-100  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 09 08:45:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	141432	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	492106	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	262372	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	466943	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	427883	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	516821	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	141432	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	262372	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	427883	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.671	188	466943	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	492106	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	427883	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	141432	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	427883	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	427883	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.671	188	466652	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.927	105	412054	89.73	ppm	Qvalue 95
108) Atrazine	8.420	215	109757	92.82	ppm	95
109) Pentachloronitrobenzene	8.505	295	62313	92.73	ppm	93

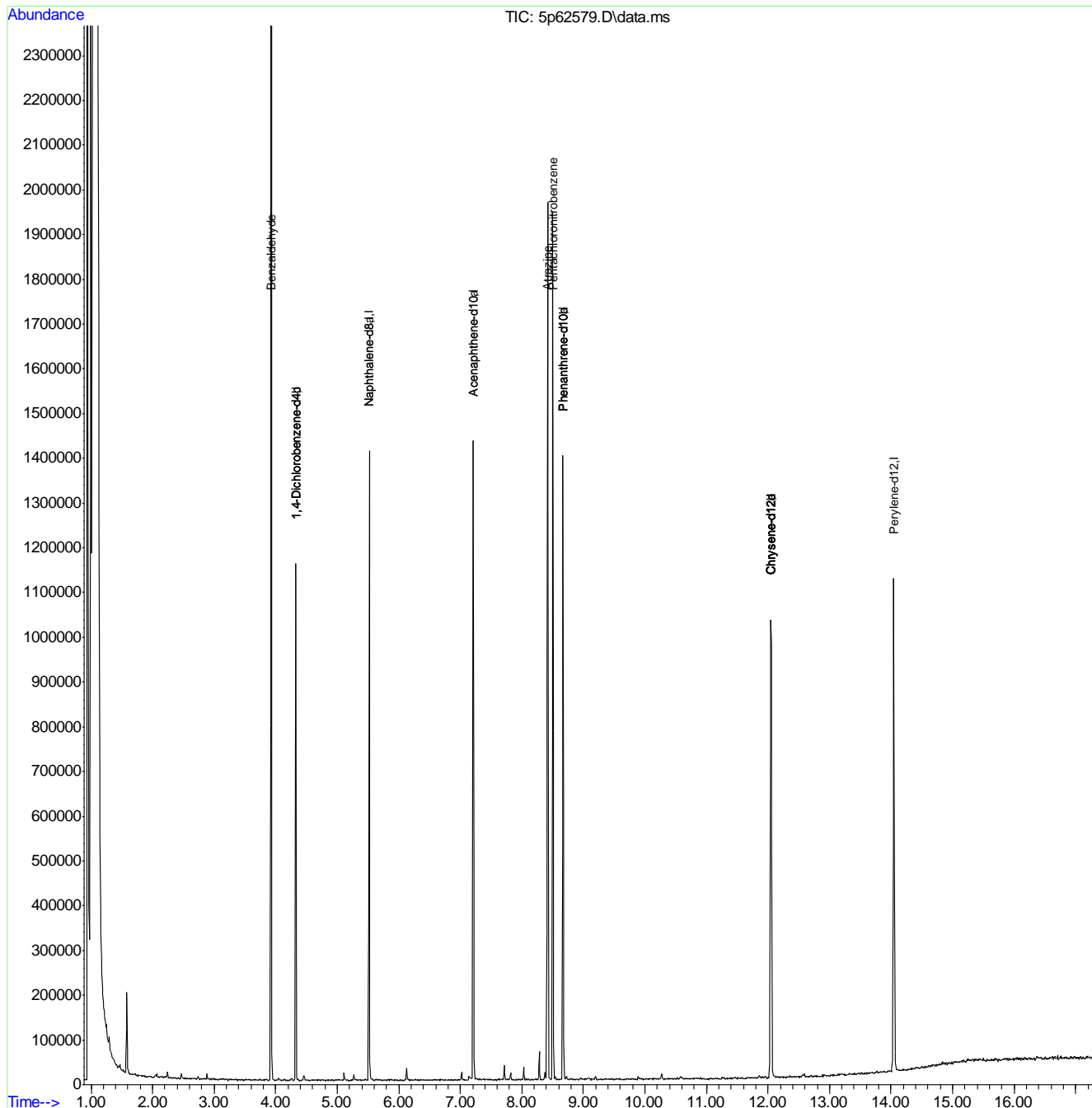
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.10  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62579.D  
 Acq On : 6 Sep 2019 7:48 pm  
 Operator : hennys  
 Sample : ic2941-100  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Sep 09 08:45:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration



9.6.10  
 9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62580.D  
 Acq On : 6 Sep 2019 8:12 pm  
 Operator : hennys  
 Sample : ic2941-80  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 09 08:47:19 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

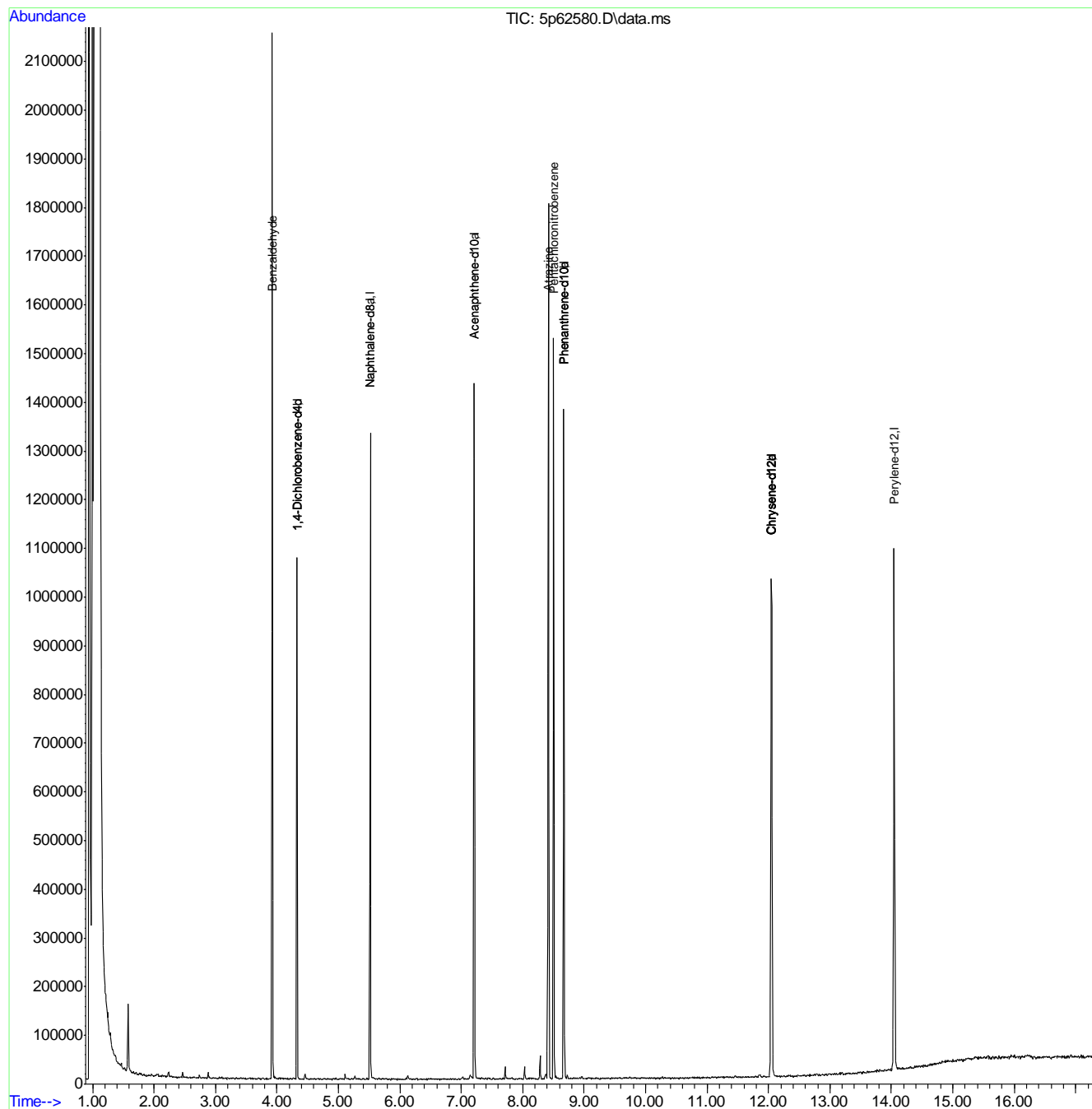
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	132300	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	477818	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	251892	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	464360	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	427254	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	506921	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	132300	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	251892	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	427254	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.671	188	464360	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	477818	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	427231	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	132300	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	427254	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	427231	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.671	188	464360	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	339562	79.05	ppm	98
108) Atrazine	8.420	215	89357	75.98	ppm	94
109) Pentachloronitrobenzene	8.505	295	51436	76.97	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62580.D  
Acq On : 6 Sep 2019 8:12 pm  
Operator : hennys  
Sample : ic2941-80  
Misc : op22049,e5p2941,1000,,,1,1  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Sep 09 08:47:19 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 08:42:07 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62581.D  
 Acq On : 6 Sep 2019 8:37 pm  
 Operator : hennys  
 Sample : icc2941-50  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 09 08:44:04 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

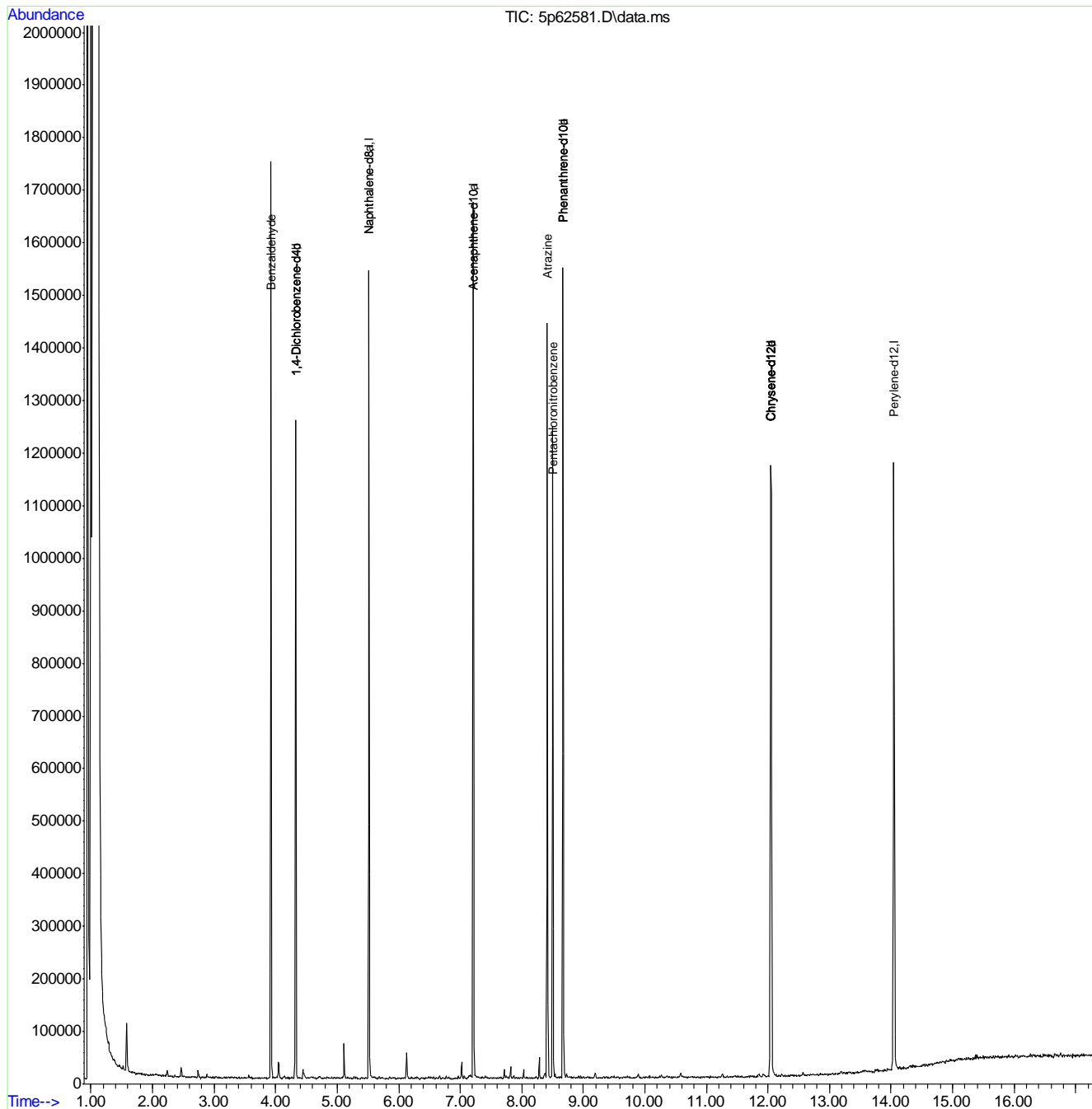
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	156481	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	561989	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	292465	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	530195	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	486065	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	581863	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	156481	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	292465	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	486065	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.671	188	530195	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	561989	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	486258	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	156481	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	486065	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	486258	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.671	188	530195	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	253901	49.97	ppm	Qvalue 100
108) Atrazine	8.415	215	67074	49.95	ppm	100
109) Pentachloronitrobenzene	8.506	295	38148	50.00	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62581.D  
Acq On : 6 Sep 2019 8:37 pm  
Operator : hennys  
Sample : icc2941-50  
Misc : op22049,e5p2941,1000,,,1,1  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 09 08:44:04 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 08:42:07 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62582.D  
 Acq On : 6 Sep 2019 9:01 pm  
 Operator : hennys  
 Sample : ic2941-25  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 09 08:48:21 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

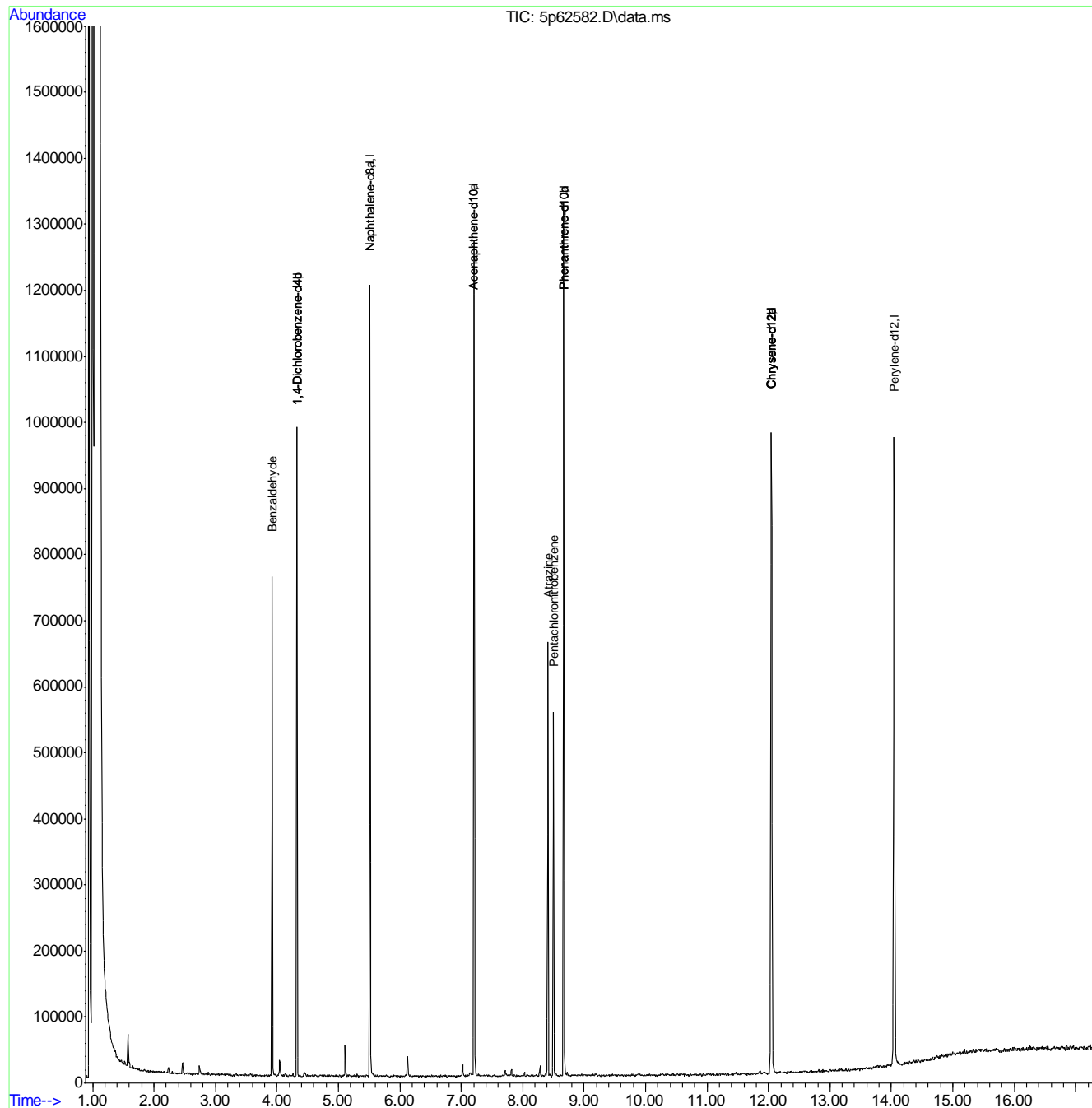
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	120067	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	437932	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	231512	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	424911	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	387372	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	459021	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	120067	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	231512	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	387372	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.666	188	424911	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	437932	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	386259	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	120067	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	387372	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	386259	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	424988	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	103260	26.49	ppm	96
108) Atrazine	8.409	215	27635	25.68	ppm	95
109) Pentachloronitrobenzene	8.500	295	15971	26.12	ppm	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62582.D  
Acq On : 6 Sep 2019 9:01 pm  
Operator : hennys  
Sample : ic2941-25  
Misc : op22049,e5p2941,1000,,,1,1  
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 09 08:48:21 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 08:42:07 2019  
Response via : Initial Calibration





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62583.D  
 Acq On : 6 Sep 2019 9:25 pm  
 Operator : hennys  
 Sample : ic2941-10  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 09 08:49:24 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

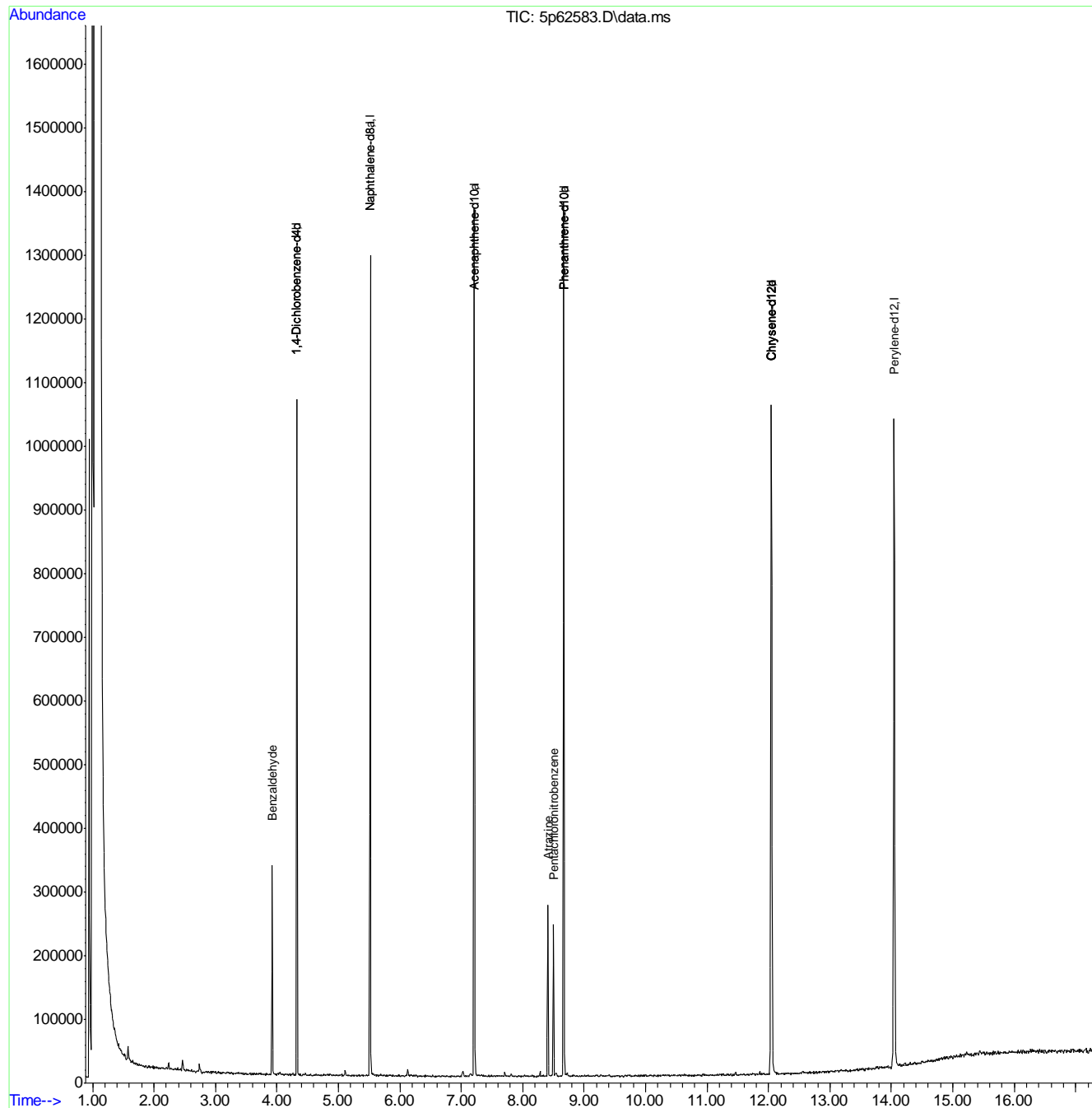
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	125590	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	470746	40.00	ppm	0.00
47) Acenaphthene-d10	7.212	164	241830	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	449669	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	408334	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	487771	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	125590	40.00	ppm	0.00
103) Acenaphthene-d10a	7.212	164	241830	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	408334	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.666	188	449669	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	470746	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	408312	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	125590	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	408334	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	408312	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	449669	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	44598	10.94	ppm	98
108) Atrazine	8.409	215	10916	9.59	ppm	95
109) Pentachloronitrobenzene	8.500	295	6622	10.23	ppm	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62583.D  
Acq On : 6 Sep 2019 9:25 pm  
Operator : hennys  
Sample : ic2941-10  
Misc : op22049,e5p2941,1000,,,1,1  
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Sep 09 08:49:24 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 08:42:07 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62584.D  
 Acq On : 6 Sep 2019 9:50 pm  
 Operator : hennys  
 Sample : ic2941-5  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 09 08:50:36 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

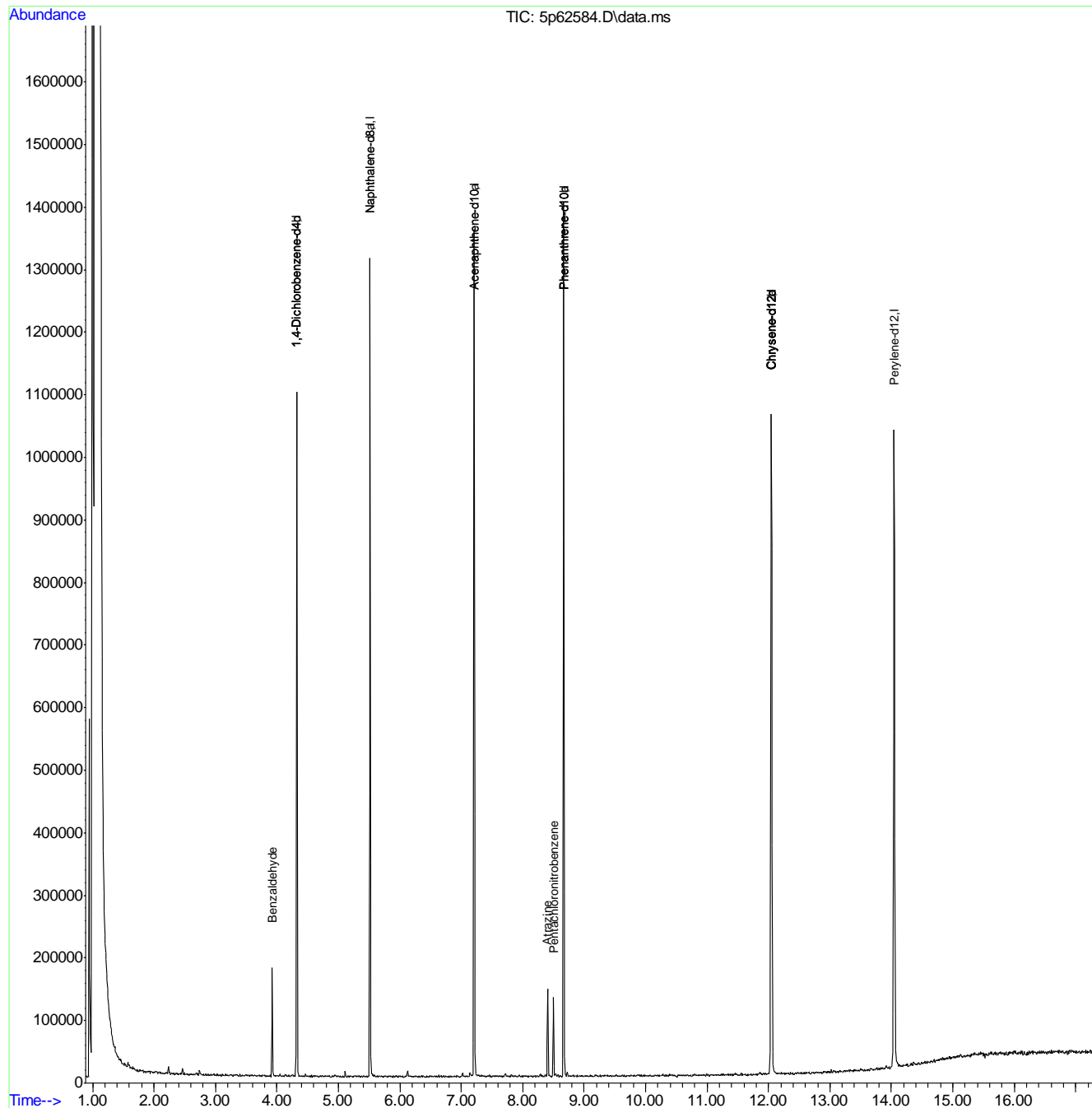
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.323	152	129842	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	474287	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	248966	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	468483	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	414275	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	490509	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.323	152	129842	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	248966	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	414275	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.666	188	468483	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	474287	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	414275	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.323	152	129842	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	414275	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	414275	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	468453	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	24616	5.84	ppm	93
108) Atrazine	8.404	215	5734	4.83	ppm	91
109) Pentachloronitrobenzene	8.500	295	3501	5.19	ppm	84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62584.D  
Acq On : 6 Sep 2019 9:50 pm  
Operator : hennys  
Sample : ic2941-5  
Misc : op22049,e5p2941,1000,,,1,1  
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 09 08:50:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 08:42:07 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62585.D  
 Acq On : 6 Sep 2019 10:13 pm  
 Operator : hennys  
 Sample : ic2941-2  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 09 08:51:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

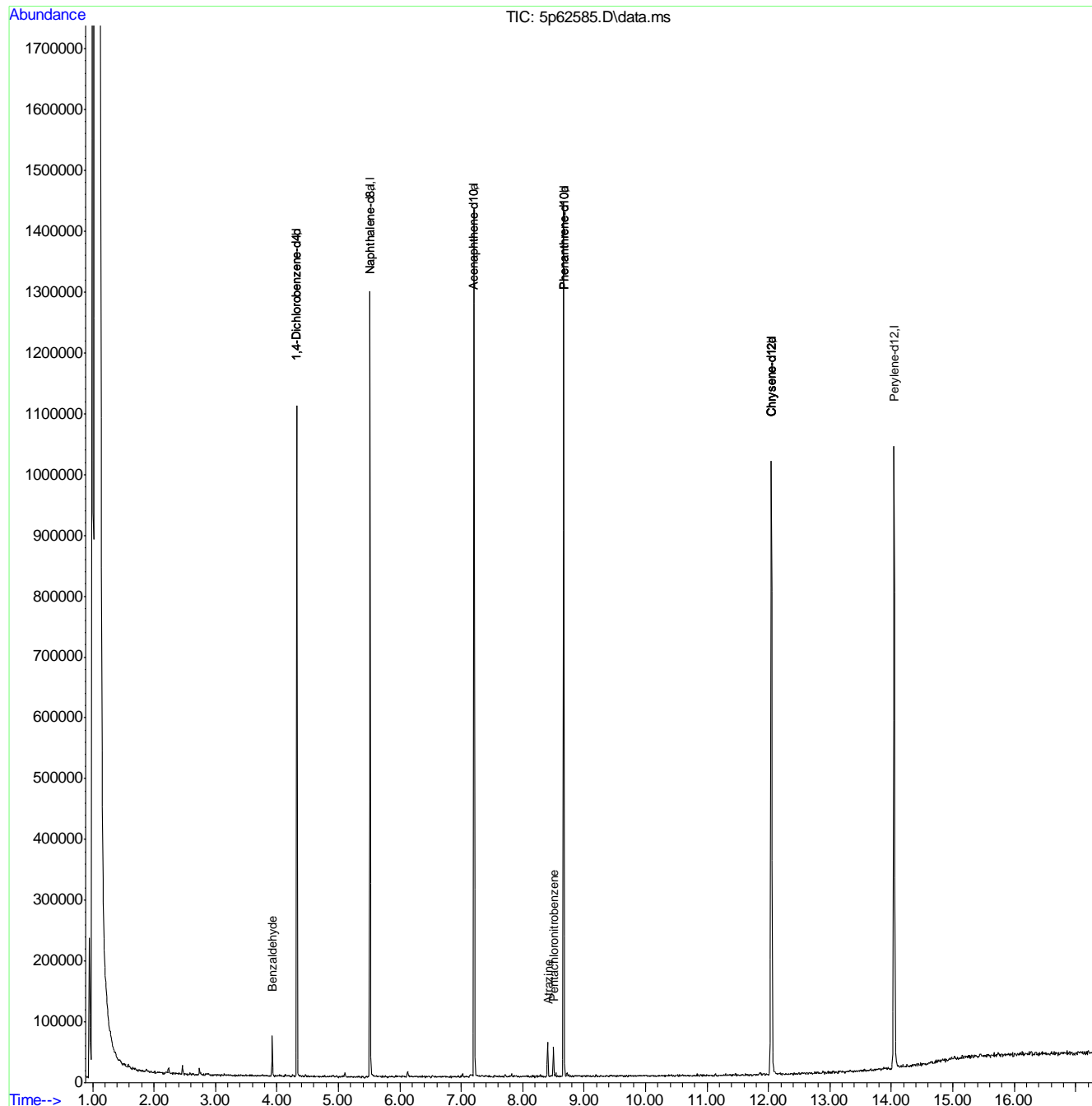
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	130994	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	473117	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	250344	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	459384	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	402372	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	485138	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	130994	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	250344	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	402372	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.666	188	459384	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	473117	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	402372	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	130994	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	402372	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	402372	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	459384	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	9733	2.29	ppm	93
108) Atrazine	8.409	215	2364	2.03	ppm	# 82
109) Pentachloronitrobenzene	8.500	295	1146	1.73	ppm	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62585.D  
 Acq On : 6 Sep 2019 10:13 pm  
 Operator : hennys  
 Sample : ic2941-2  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 09 08:51:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration



9.6.16  
 9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62586.D  
 Acq On : 6 Sep 2019 10:37 pm  
 Operator : hennys  
 Sample : ic2941-1  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 09 08:52:29 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 08:42:07 2019  
 Response via : Initial Calibration

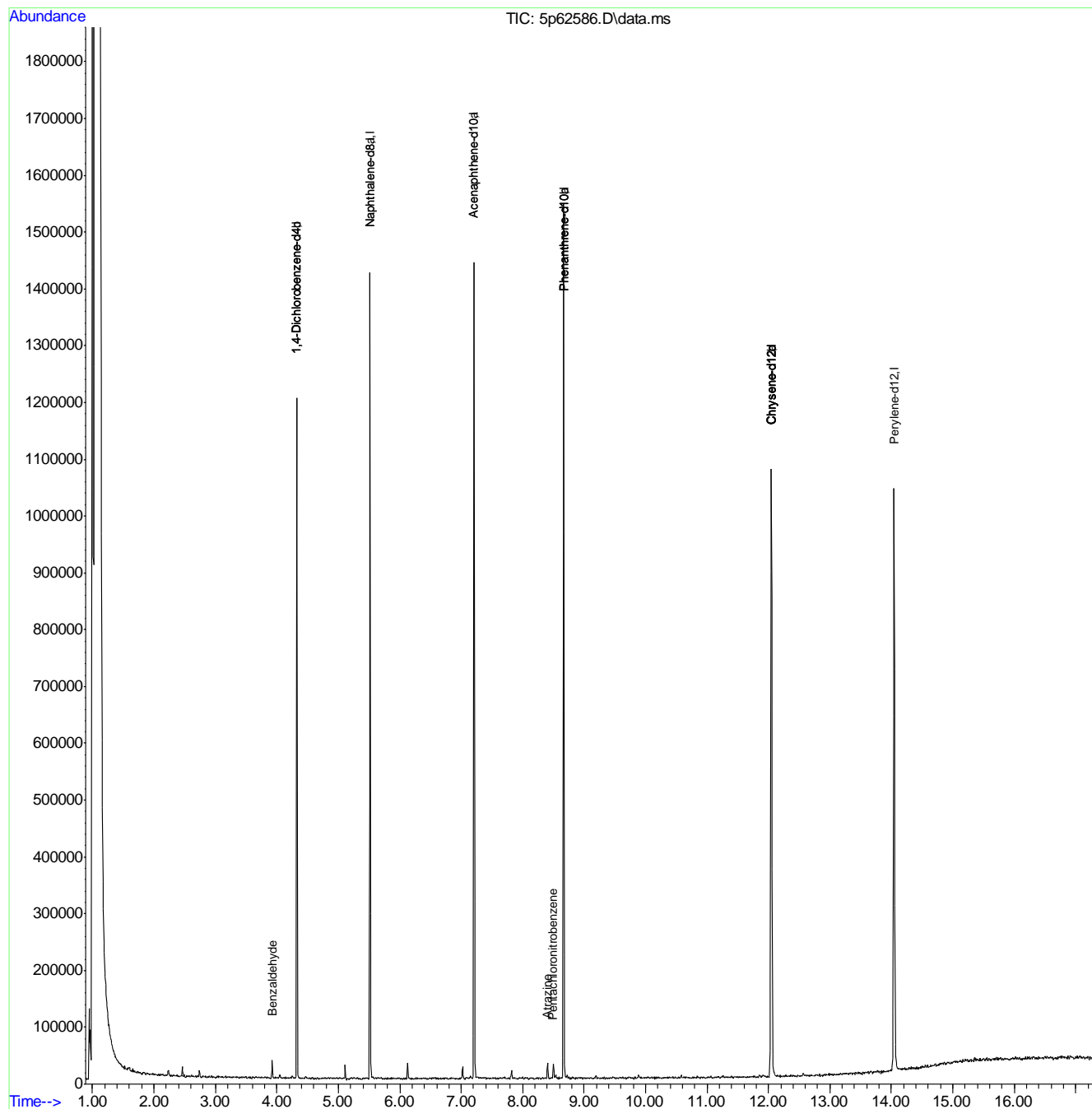
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.323	152	136476	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	485637	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	254795	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	488815	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	423722	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	492635	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.323	152	136476	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	254795	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	423722	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.666	188	488815	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	485637	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	423722	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.323	152	136476	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	423722	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	423722	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	488798	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	4849	1.09	ppm	Qvalue 92
108) Atrazine	8.404	215	908	0.73	ppm	# 82
109) Pentachloronitrobenzene	8.495	295	669	0.95	ppm	# 76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62586.D  
Acq On : 6 Sep 2019 10:37 pm  
Operator : hennys  
Sample : ic2941-1  
Misc : op22049,e5p2941,1000,,,1,1  
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Sep 09 08:52:29 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 08:42:07 2019  
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62587.D  
 Acq On : 6 Sep 2019 11:02 pm  
 Operator : hennys  
 Sample : icv2941-50  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 09 09:06:02 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:02:39 2019  
 Response via : Initial Calibration

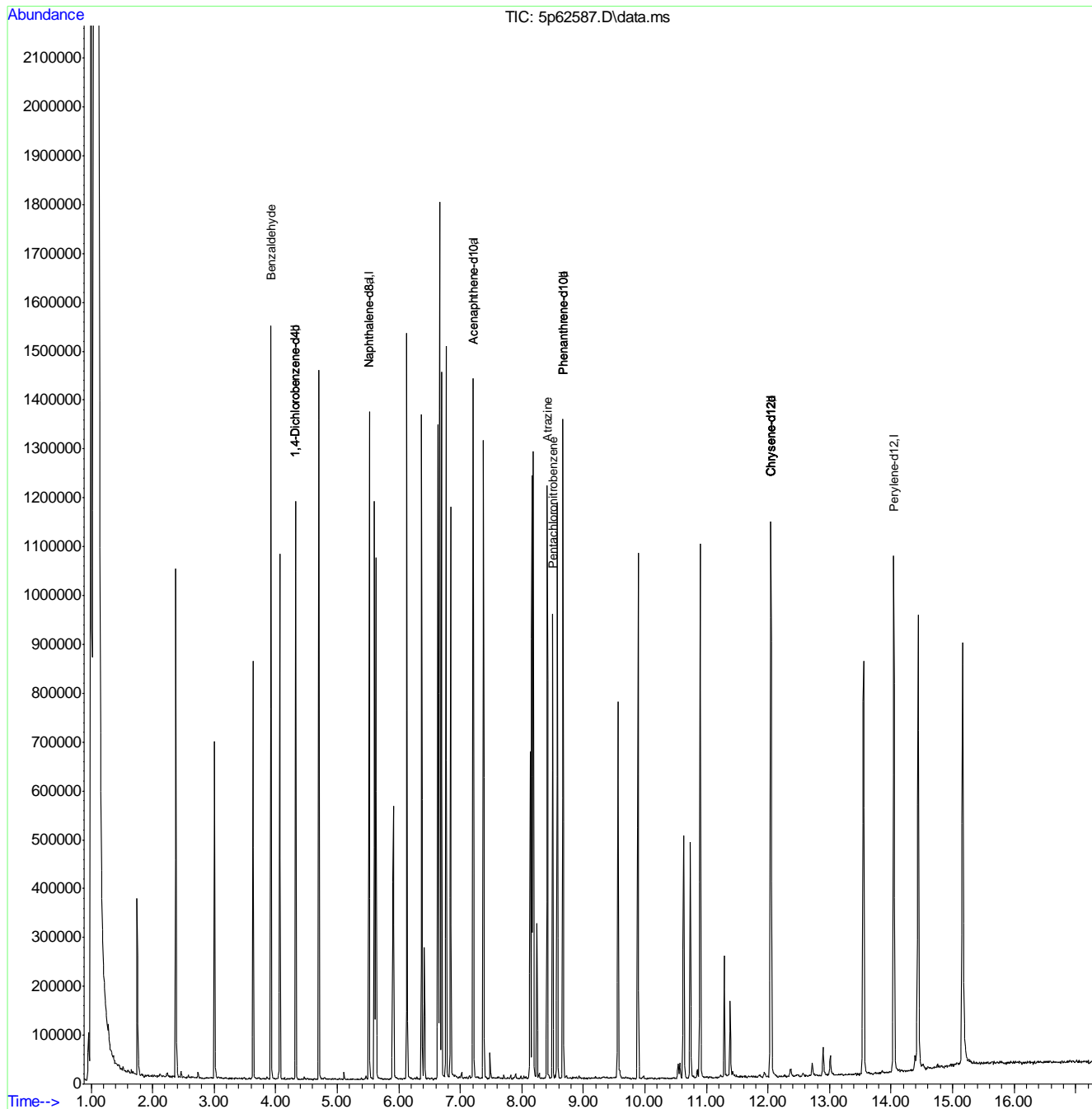
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	138252	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	502457	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	265209	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	464763	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	456399	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	505024	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	138252	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	265209	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	456399	40.00	ppm	-0.01
107) Phenanthrene-d10a	8.671	188	464763	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	502457	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	457056	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	138252	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	456399	40.00	ppm	-0.01
118) Chrysene-d12d	12.047	240	457056	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.671	188	464763	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.922	105	219727	46.37	ppm	Qvalue 97
108) Atrazine	8.415	215	56364	50.55	ppm	88
109) Pentachloronitrobenzene	8.500	295	27669	42.35	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62587.D  
 Acq On : 6 Sep 2019 11:02 pm  
 Operator : hennys  
 Sample : icv2941-50  
 Misc : op22049,e5p2941,1000,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 09 09:06:02 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:02:39 2019  
 Response via : Initial Calibration



9.6.18  
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62589.D  
 Acq On : 6 Sep 2019 11:34 pm  
 Operator : hennys  
 Sample : ic2942-100  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 09 09:25:41 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	133086	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	485789	40.00	ppm	0.00
47) Acenaphthene-d10	7.213	164	255983	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	480968	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	387240	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	512918	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.328	152	133086	40.00	ppm	0.00
103) Acenaphthene-d10a	7.213	164	255983	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	387240	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	480968	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	485789	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	387190	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	133086	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	387240	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	387190	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	480968	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	448766	91.15	ppm	0.00
Spiked Amount	50.000		Recovery	=	182.30%	
121) o-terphenyl	9.114	230	570662	93.88	ppm	0.00
Spiked Amount	50.000		Recovery	=	187.76%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	338446	92.38	ppm	98
111) Hydroquinone	5.957	110	463356	91.60	ppm	97
117) Benzidine	10.279	184	663639	77.21	ppm	100

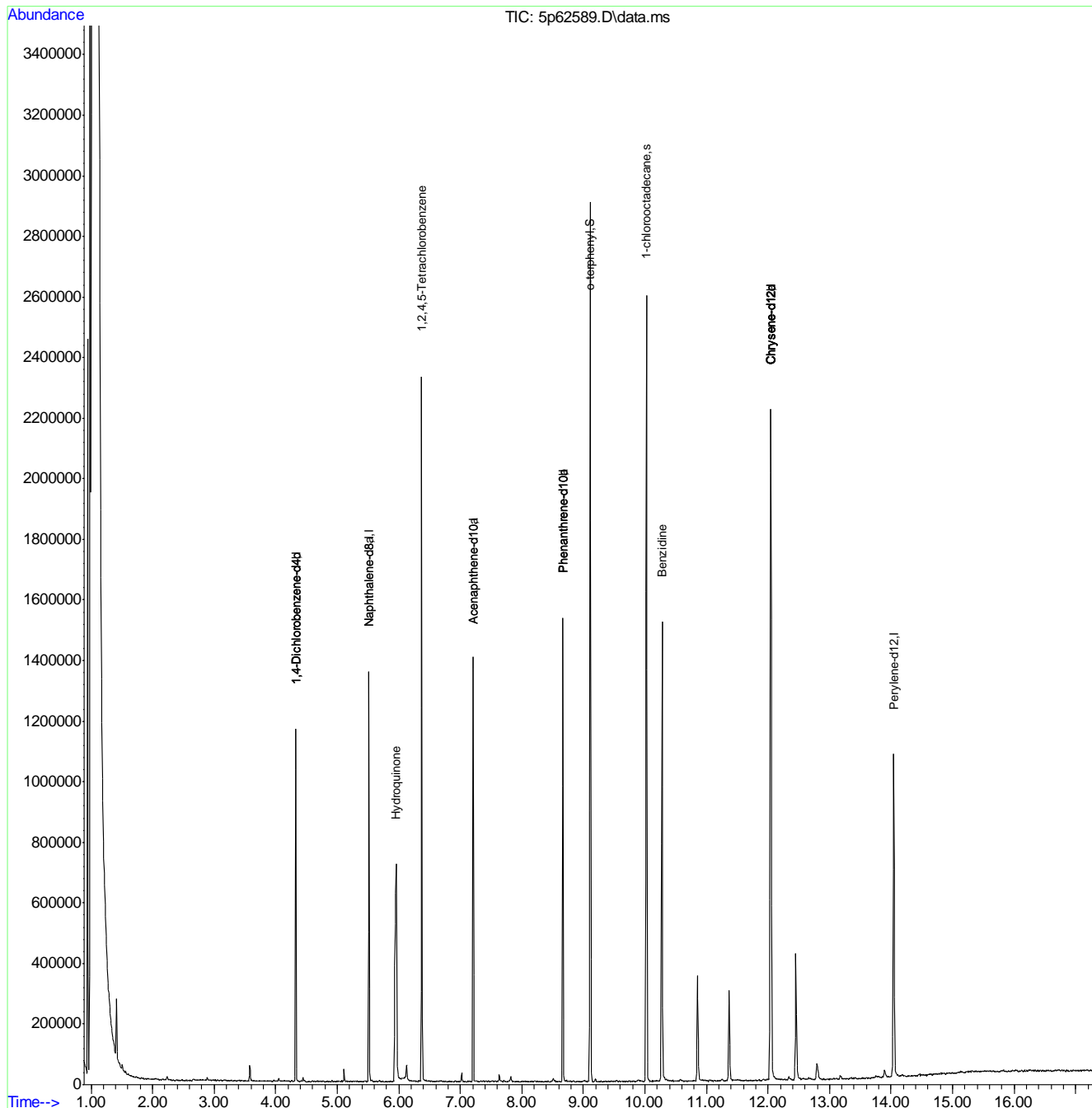
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.19  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62589.D  
 Acq On : 6 Sep 2019 11:34 pm  
 Operator : hennys  
 Sample : ic2942-100  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 09 09:25:41 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration



9.6.19  
 9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62590.D  
 Acq On : 6 Sep 2019 11:58 pm  
 Operator : hennys  
 Sample : ic2942-80  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 09 09:26:52 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

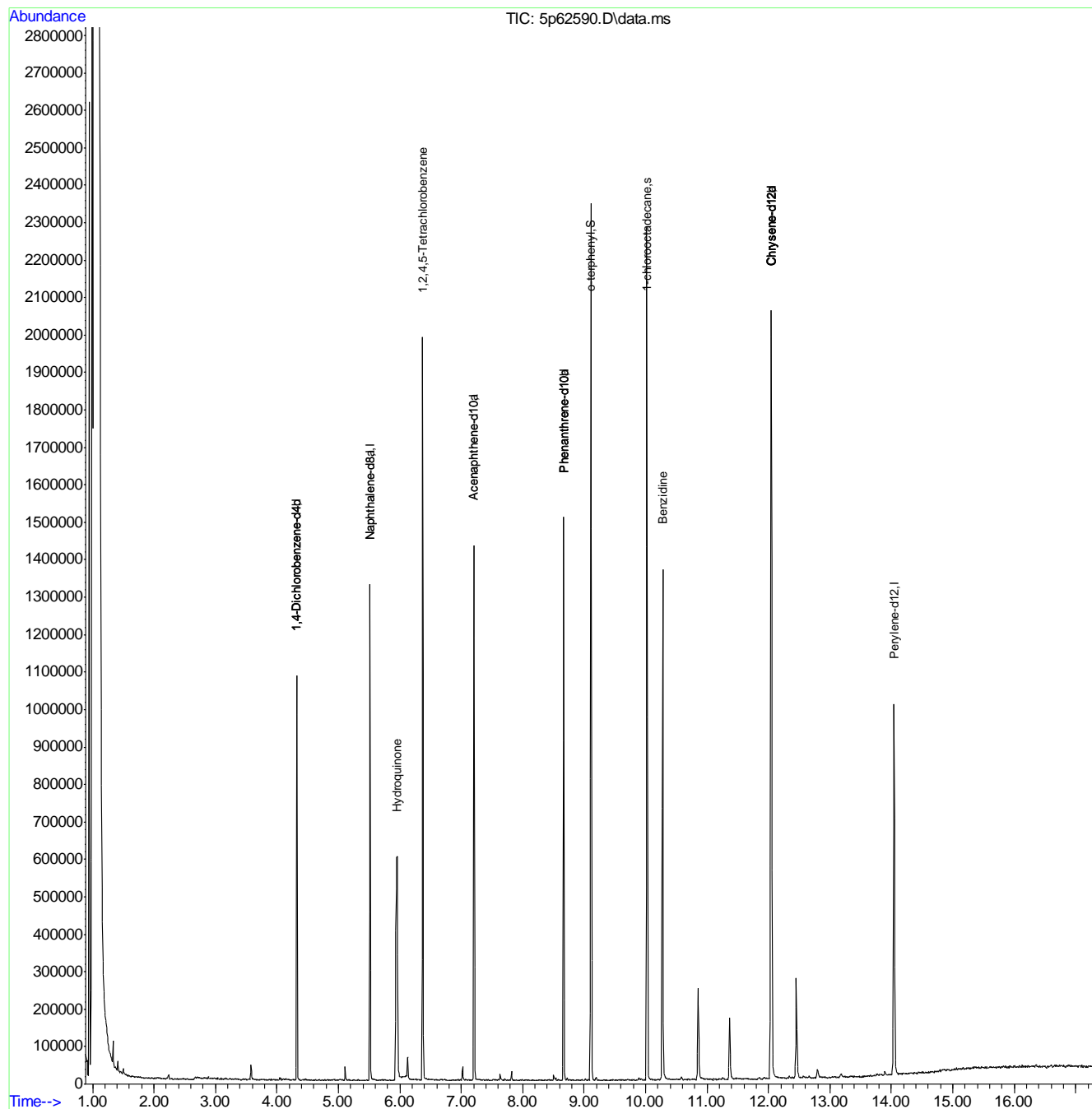
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	127695	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	462659	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	247970	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	470506	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	392914	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	494986	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	127695	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	247970	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	392914	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	470506	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	462659	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	392889	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	127695	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	392914	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	392889	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	470506	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.022	57	363608	72.79	ppm	0.00
Spiked Amount	50.000		Recovery	=	145.58%	
121) o-terphenyl	9.114	230	472828	79.51	ppm	0.00
Spiked Amount	50.000		Recovery	=	159.02%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	278779	78.55	ppm	99
111) Hydroquinone	5.957	110	367390	76.26	ppm	96
117) Benzidine	10.279	184	572872	65.69	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62590.D  
Acq On : 6 Sep 2019 11:58 pm  
Operator : hennys  
Sample : ic2942-80  
Misc : op22049,e5p2942,1000,,,1,1  
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 09 09:26:52 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 09:21:53 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62591.D  
 Acq On : 7 Sep 2019 12:22 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 09 09:23:35 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

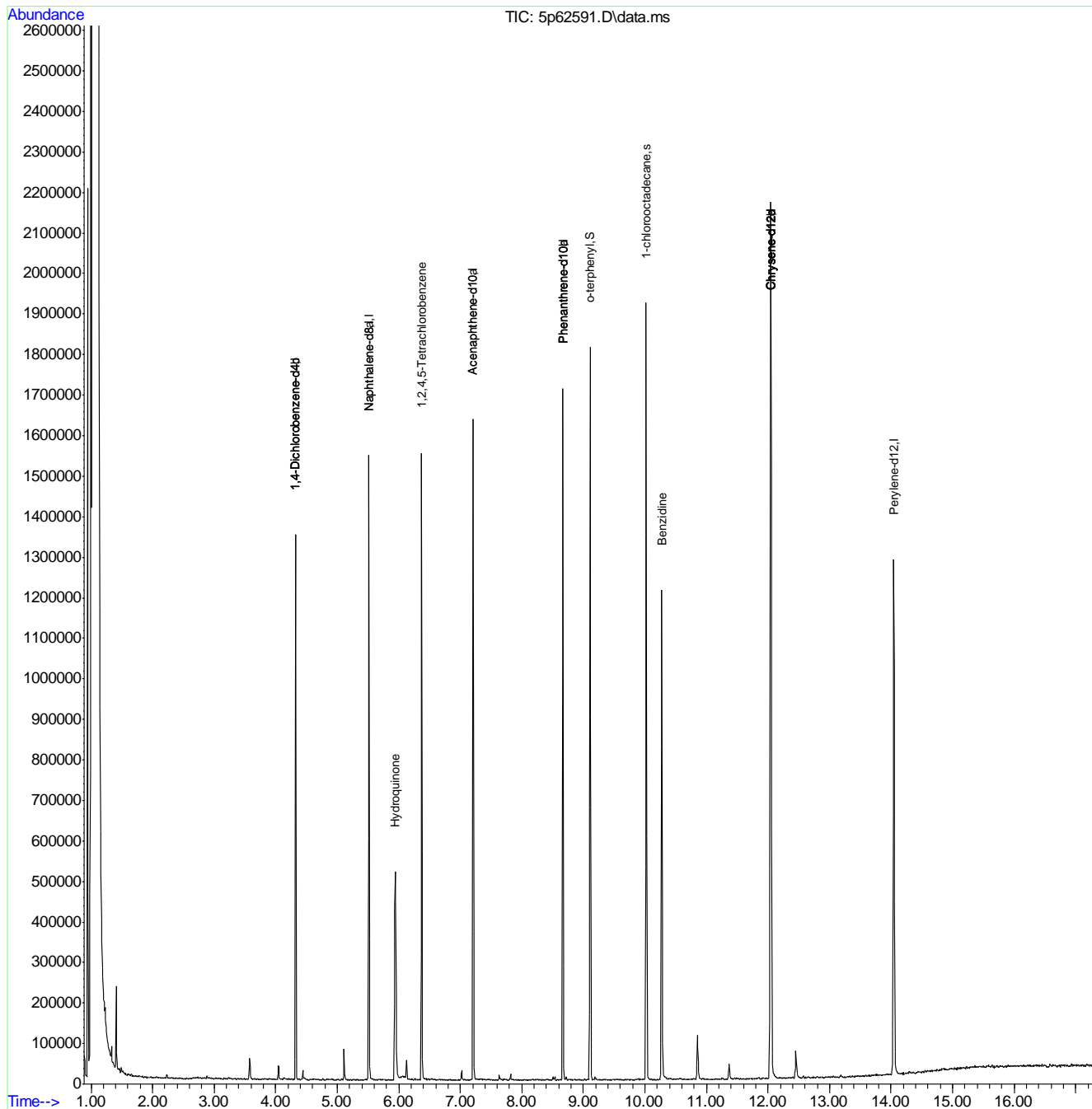
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	151779	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	543239	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	292770	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	549095	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	461234	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	587926	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	151779	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	292770	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	461234	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	549095	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	543239	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	461218	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	151779	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	461234	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	461218	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	548959	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	291923	49.78	ppm	0.00
Spiked Amount	50.000		Recovery	=	99.56%	
121) o-terphenyl	9.114	230	346432	49.93	ppm	0.00
Spiked Amount	50.000		Recovery	=	99.86%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	209333	49.96	ppm	Qvalue 100
111) Hydroquinone	5.946	110	267318	47.25	ppm	100
117) Benzidine	10.274	184	508153	49.64	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62591.D  
Acq On : 7 Sep 2019 12:22 am  
Operator : hennys  
Sample : icv2942-50  
Misc : op22049,e5p2942,1000,,,1,1  
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Sep 09 09:23:35 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 09:21:53 2019  
Response via : Initial Calibration





## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62592.D  
 Acq On : 7 Sep 2019 12:46 am  
 Operator : hennys  
 Sample : ic2942-25  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Sep 09 09:28:12 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

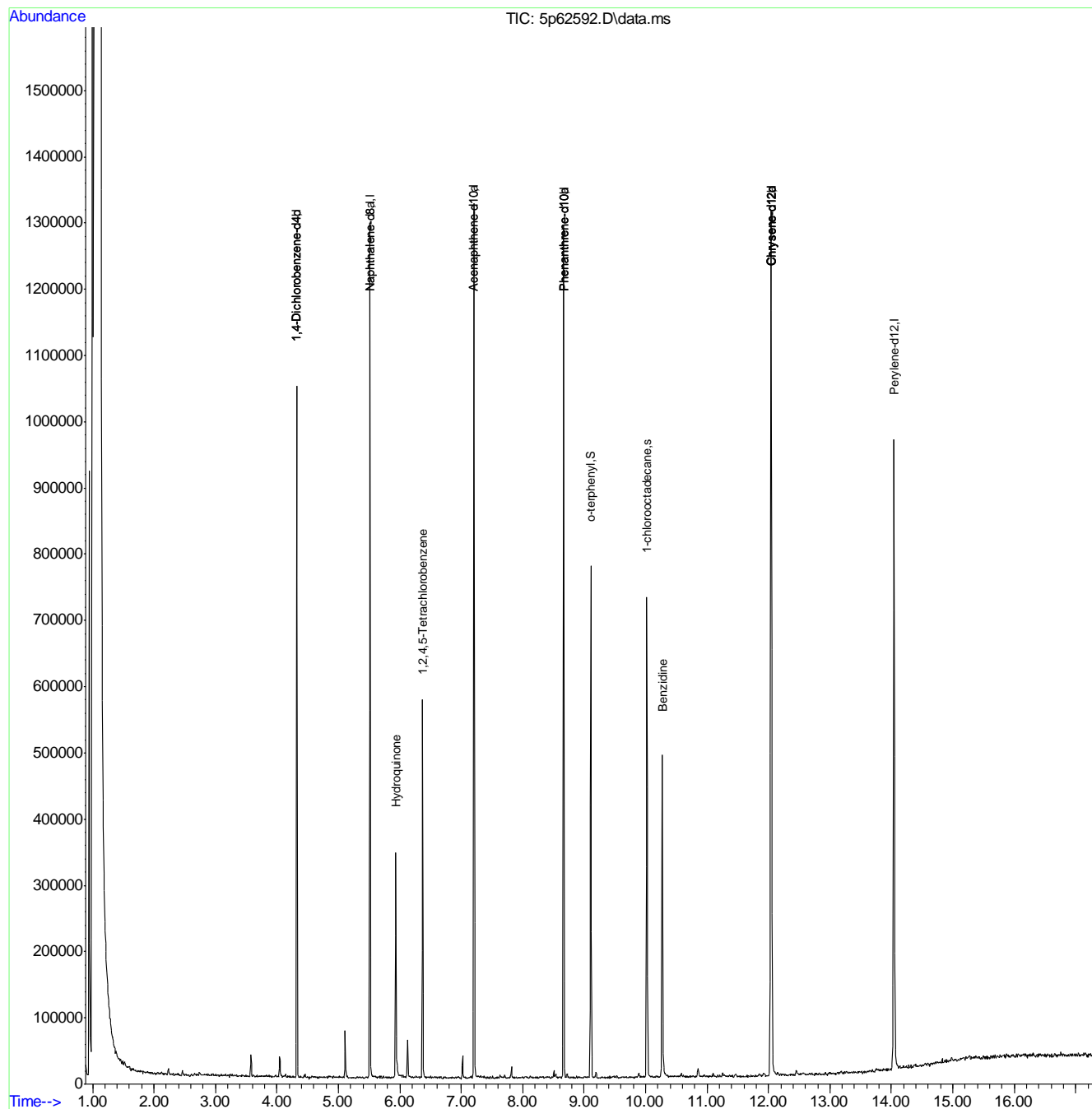
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	114234	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	421884	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	220037	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	409515	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	360980	40.00	ppm	-0.01
91) Perylene-d12	14.040	264	442039	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.322	152	114234	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	220037	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	360980	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	409515	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	421884	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	360922	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	114234	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	360980	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	360922	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	409515	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	118109	25.73	ppm	0.00
Spiked Amount	50.000		Recovery	=	51.46%	
121) o-terphenyl	9.109	230	140558	27.16	ppm	0.00
Spiked Amount	50.000		Recovery	=	54.32%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	82264	26.12	ppm	98
111) Hydroquinone	5.936	110	99457	22.64	ppm	98
117) Benzidine	10.274	184	208048	25.97	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62592.D  
Acq On : 7 Sep 2019 12:46 am  
Operator : hennys  
Sample : ic2942-25  
Misc : op22049,e5p2942,1000,,,1,1  
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Sep 09 09:28:12 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 09:21:53 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62593.D  
 Acq On : 7 Sep 2019 1:10 am  
 Operator : hennys  
 Sample : ic2942-10  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Sep 09 09:29:48 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

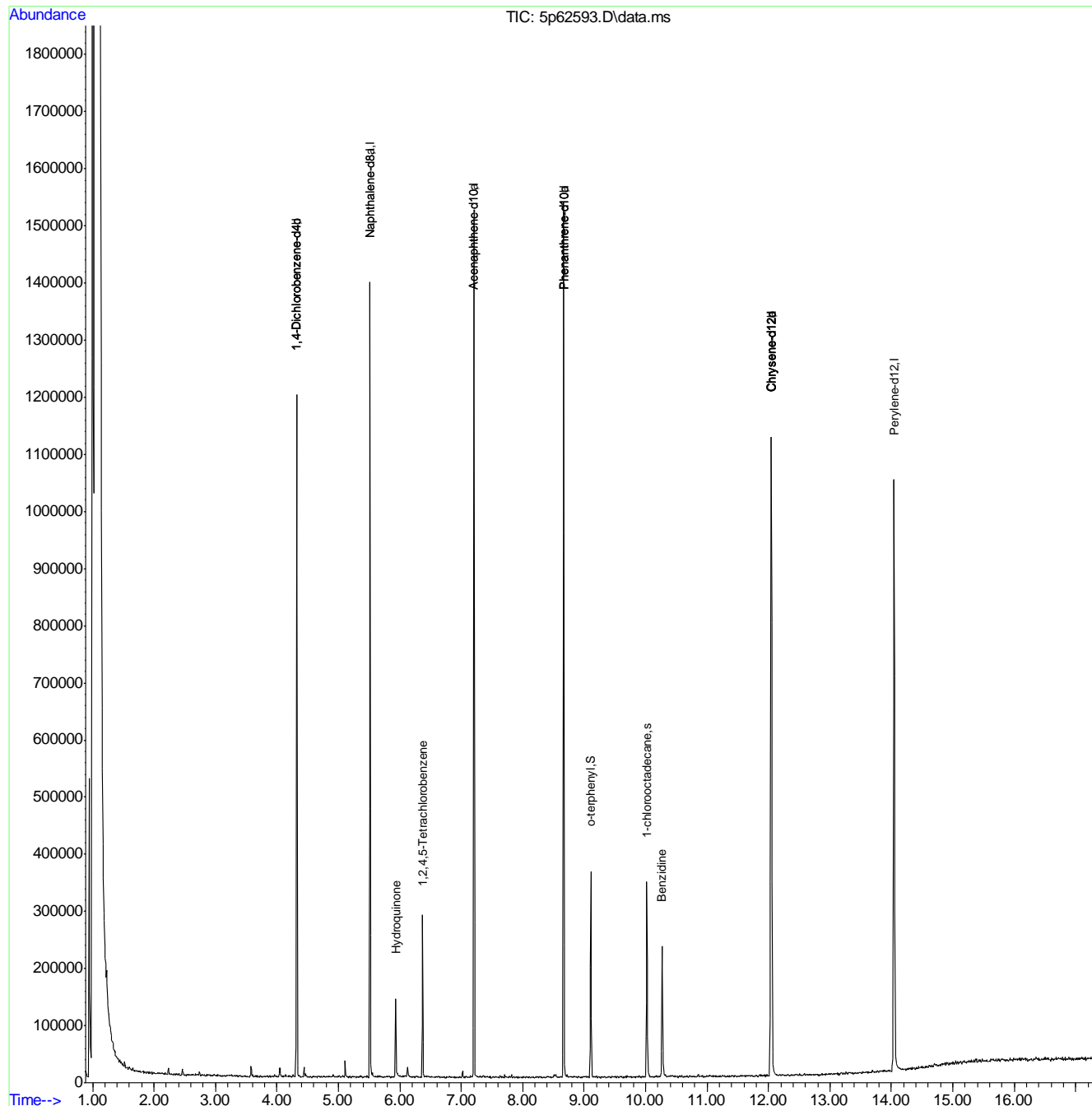
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	129000	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	463050	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	252034	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	480203	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	409364	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	489276	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	129000	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	252034	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	409364	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	480203	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	463050	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	409364	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	129000	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	409364	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	409364	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	480203	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	53428	10.27	ppm	0.00
Spiked Amount	50.000		Recovery	=	20.54%	
121) o-terphenyl	9.109	230	65675	10.82	ppm	0.00
Spiked Amount	50.000		Recovery	=	21.64%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	38868	10.78	ppm	98
111) Hydroquinone	5.936	110	41753	8.66	ppm	99
117) Benzidine	10.268	184	97333	10.71	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62593.D  
 Acq On : 7 Sep 2019 1:10 am  
 Operator : hennys  
 Sample : ic2942-10  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Sep 09 09:29:48 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration



9.6.23  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62594.D  
 Acq On : 7 Sep 2019 1:34 am  
 Operator : hennys  
 Sample : ic2942-5  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: Sep 09 09:31:05 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

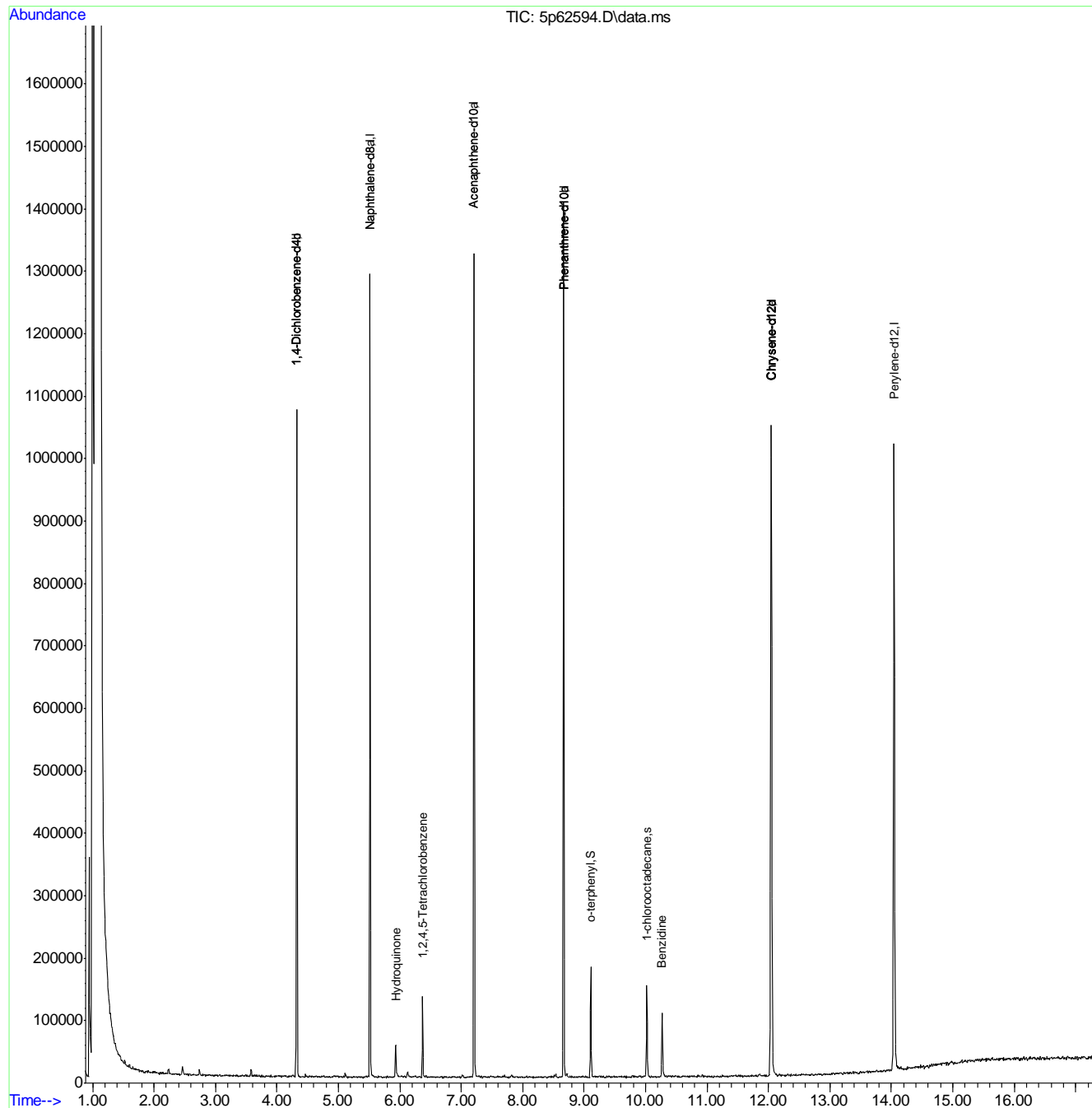
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.323	152	116736	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	429848	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	230733	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	446140	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	397563	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	475821	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.323	152	116736	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	230733	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	397563	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	446140	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	429848	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	397563	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.323	152	116736	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	397563	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	397563	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	446140	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	25211	4.99	ppm	0.00
Spiked Amount	50.000		Recovery	=	9.98%	
121) o-terphenyl	9.109	230	29886	5.30	ppm	0.00
Spiked Amount	50.000		Recovery	=	10.60%	
Target Compounds						
						Qvalue
104) 1,2,4,5-Tetrachloroben...	6.374	216	17730	5.37	ppm	97
111) Hydroquinone	5.936	110	16485	3.68	ppm	95
117) Benzidine	10.268	184	42219	4.78	ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
Data File : 5p62594.D  
Acq On : 7 Sep 2019 1:34 am  
Operator : hennys  
Sample : ic2942-5  
Misc : op22049,e5p2942,1000,,,1,1  
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Sep 09 09:31:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
QLast Update : Mon Sep 09 09:21:53 2019  
Response via : Initial Calibration



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62595.D  
 Acq On : 7 Sep 2019 1:58 am  
 Operator : hennys  
 Sample : ic2942-2  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: Sep 09 09:32:14 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

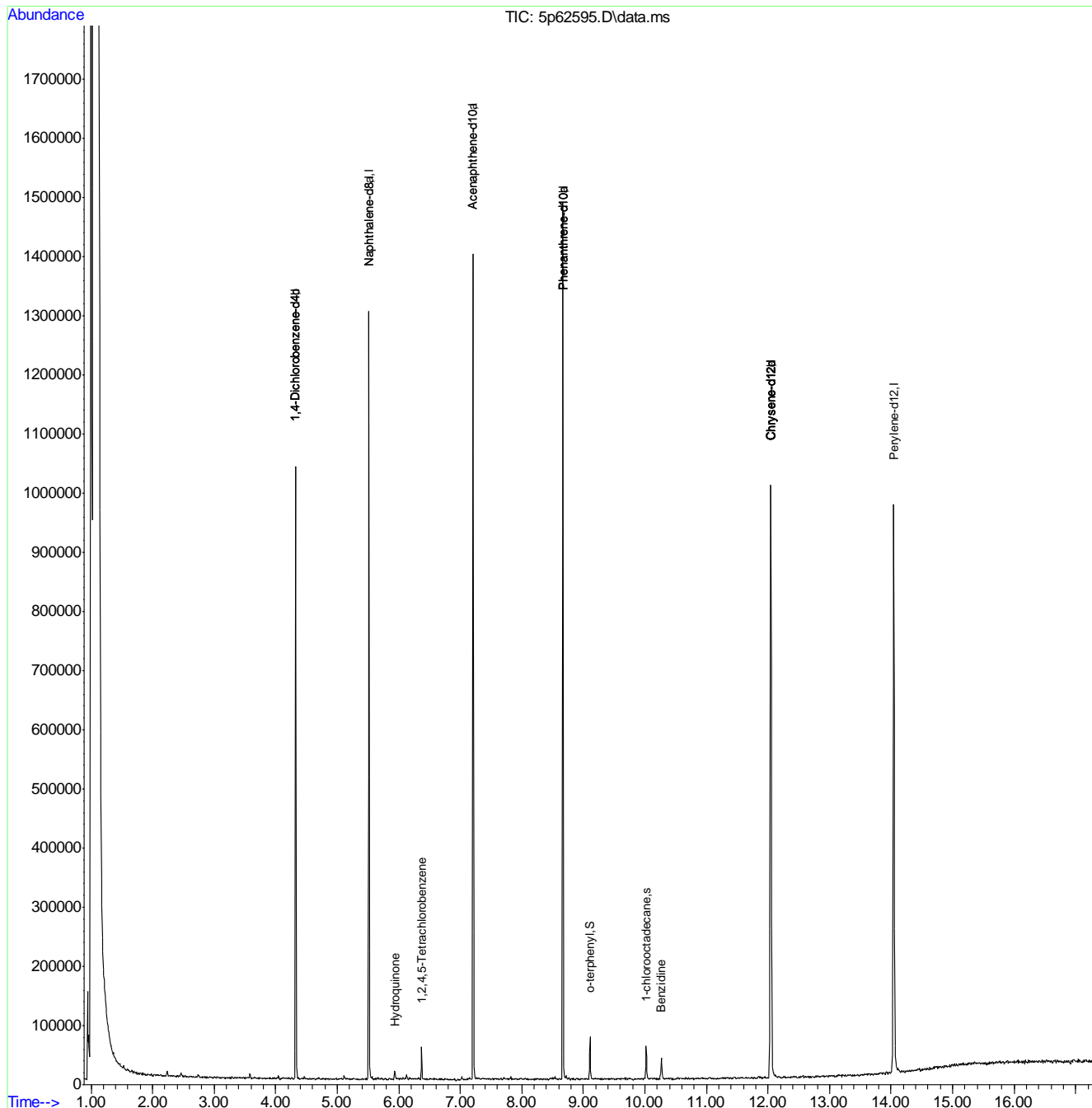
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.323	152	116394	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	429378	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	233433	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	449015	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	403758	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	469422	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.323	152	116394	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	233433	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	403758	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	449015	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	429378	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	403758	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.323	152	116394	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	403758	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	403758	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	449015	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	9553	1.86	ppm	0.00
Spiked Amount	50.000		Recovery	=	3.72%	
121) o-terphenyl	9.109	230	11641	2.05	ppm	0.00
Spiked Amount	50.000		Recovery	=	4.10%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	7854	2.35	ppm	Qvalue 94
111) Hydroquinone	5.936	110	5217	1.17	ppm	96
117) Benzidine	10.268	184	13977	1.56	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62595.D  
 Acq On : 7 Sep 2019 1:58 am  
 Operator : hennys  
 Sample : ic2942-2  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: Sep 09 09:32:14 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration



9.6.25  
9



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62596.D  
 Acq On : 7 Sep 2019 2:22 am  
 Operator : hennys  
 Sample : ic2942-1  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 09 09:33:37 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration

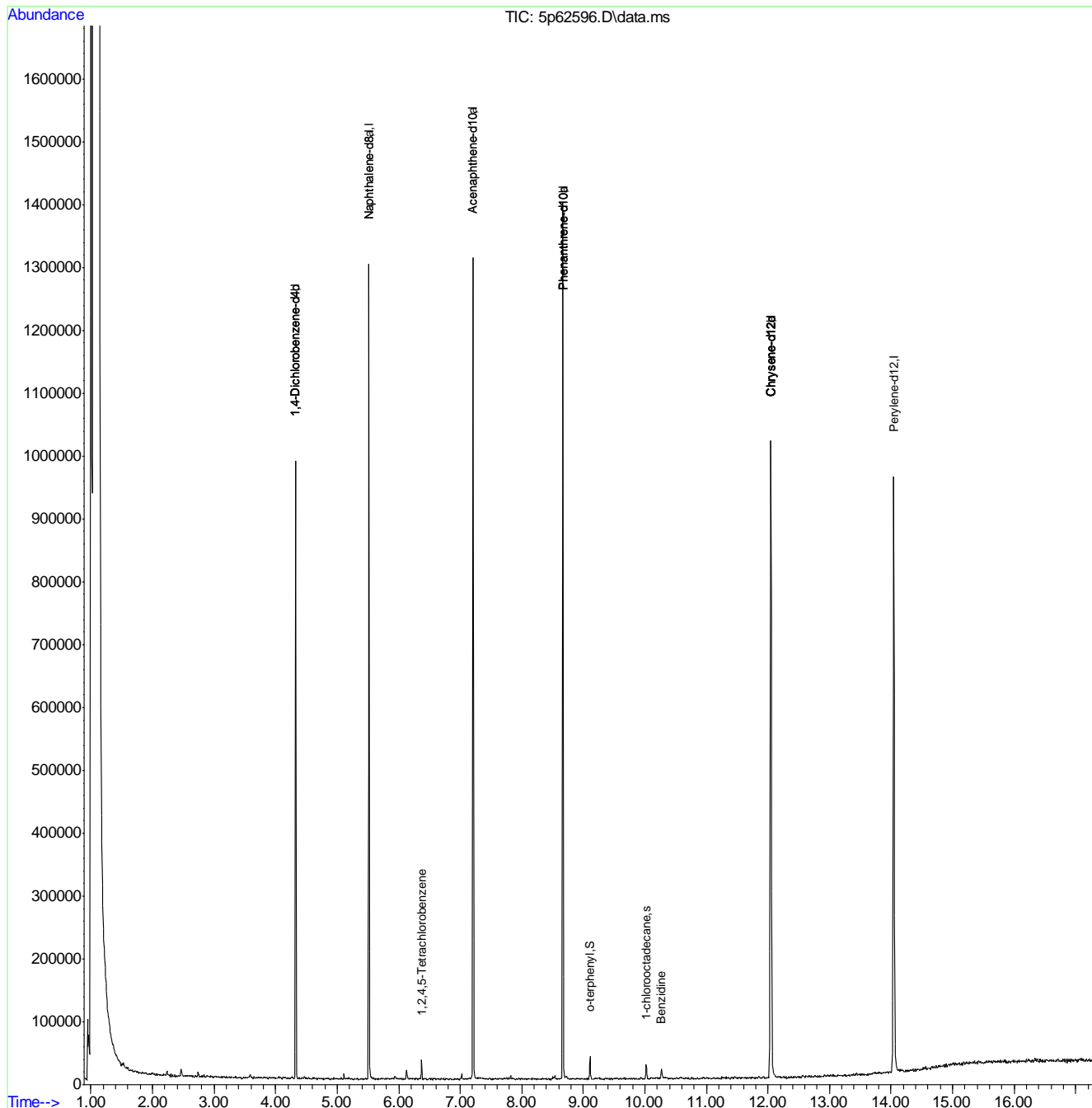
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.323	152	111366	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	416448	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	222862	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	429322	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	393412	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	465106	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.323	152	111366	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	222862	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	393412	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	429322	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	416448	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	393305	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.323	152	111366	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	393412	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	393305	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	429322	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	10.023	57	4060	0.81	ppm	0.00
Spiked Amount	50.000		Recovery	=	1.62%	
121) o-terphenyl	9.109	230	5713	1.05	ppm	0.00
Spiked Amount	50.000		Recovery	=	2.10%	
Target Compounds						
						Qvalue
104) 1,2,4,5-Tetrachloroben...	6.369	216	3657	1.15	ppm	95
117) Benzidine	10.268	184	5853	0.67	ppm	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62596.D  
 Acq On : 7 Sep 2019 2:22 am  
 Operator : hennys  
 Sample : ic2942-1  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 32 Sample Multiplier: 1

Quant Time: Sep 09 09:33:37 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:21:53 2019  
 Response via : Initial Calibration



9.6.26  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62597.D  
 Acq On : 7 Sep 2019 2:46 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 09 09:48:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	131597	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	494871	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	261003	40.00	ppm	0.00
69) Phenanthrene-d10	8.671	188	465483	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	436284	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	491984	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	131597	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	261003	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	436284	40.00	ppm	0.00
107) Phenanthrene-d10a	8.671	188	465483	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	494871	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	436284	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	131597	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	436284	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	436284	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.671	188	465483	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.374	216	178876	45.48	ppm	Qvalue 99

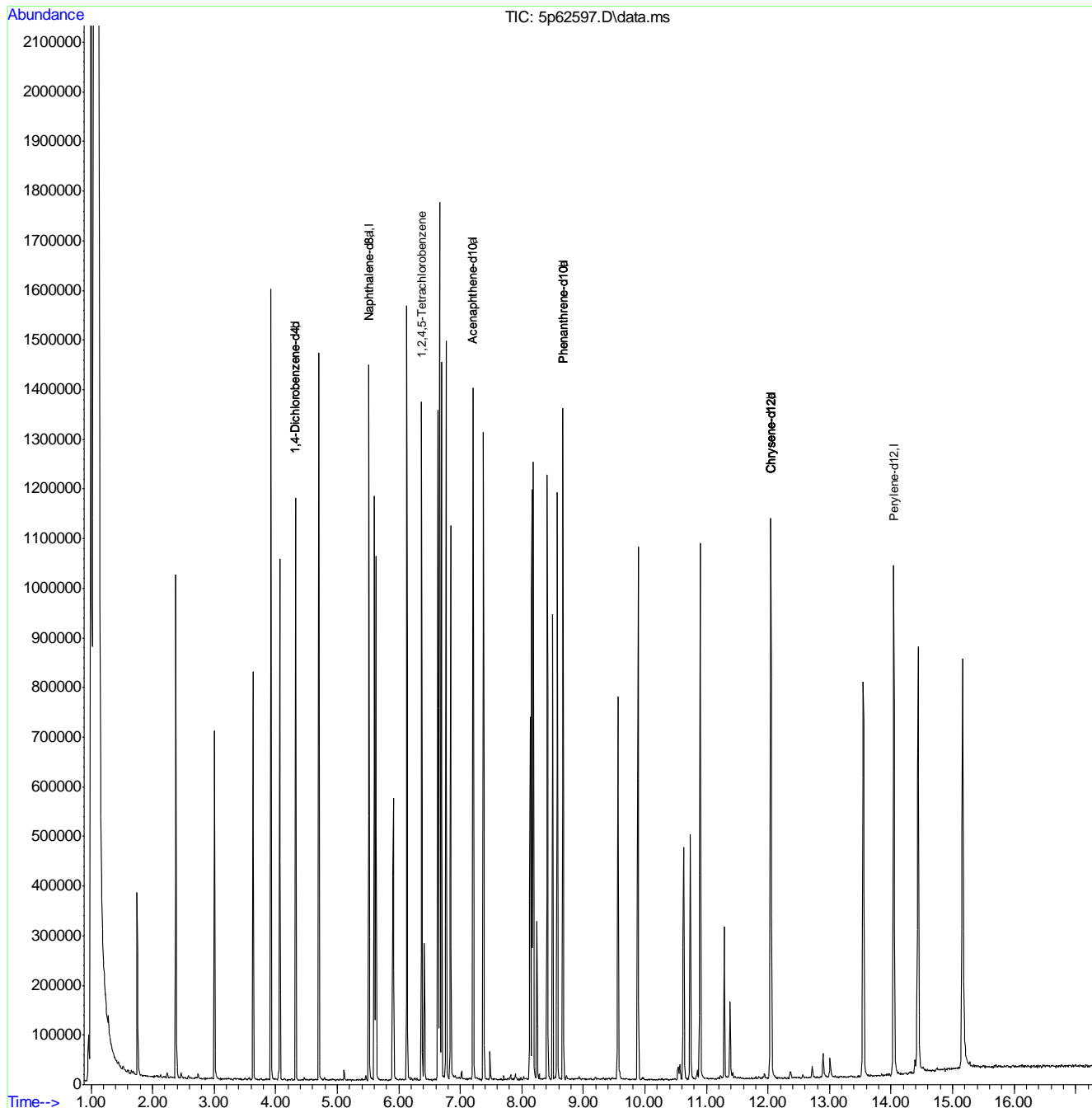
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.27  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62597.D  
 Acq On : 7 Sep 2019 2:46 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Sep 09 09:48:55 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration



9.6-27  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62598.D  
 Acq On : 7 Sep 2019 3:11 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 33 Sample Multiplier: 1

Quant Time: Sep 09 09:50:29 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	208025	40.00	ppm	0.00
24) Naphthalene-d8	5.519	136	730381	40.00	ppm	0.00
47) Acenaphthene-d10	7.212	164	358981	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	711760	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	673645	40.00	ppm	-0.01
91) Perylene-d12	14.051	264	715689	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.322	152	208025	40.00	ppm	0.00
103) Acenaphthene-d10a	7.212	164	358981	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	673645	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	711760	40.00	ppm	0.00
110) Naphthalene-d8a	5.519	136	730381	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	673661	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.322	152	208025	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	673645	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	673661	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	711760	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
111) Hydroquinone	5.957	110	372220	55.17	ppm	Qvalue 99

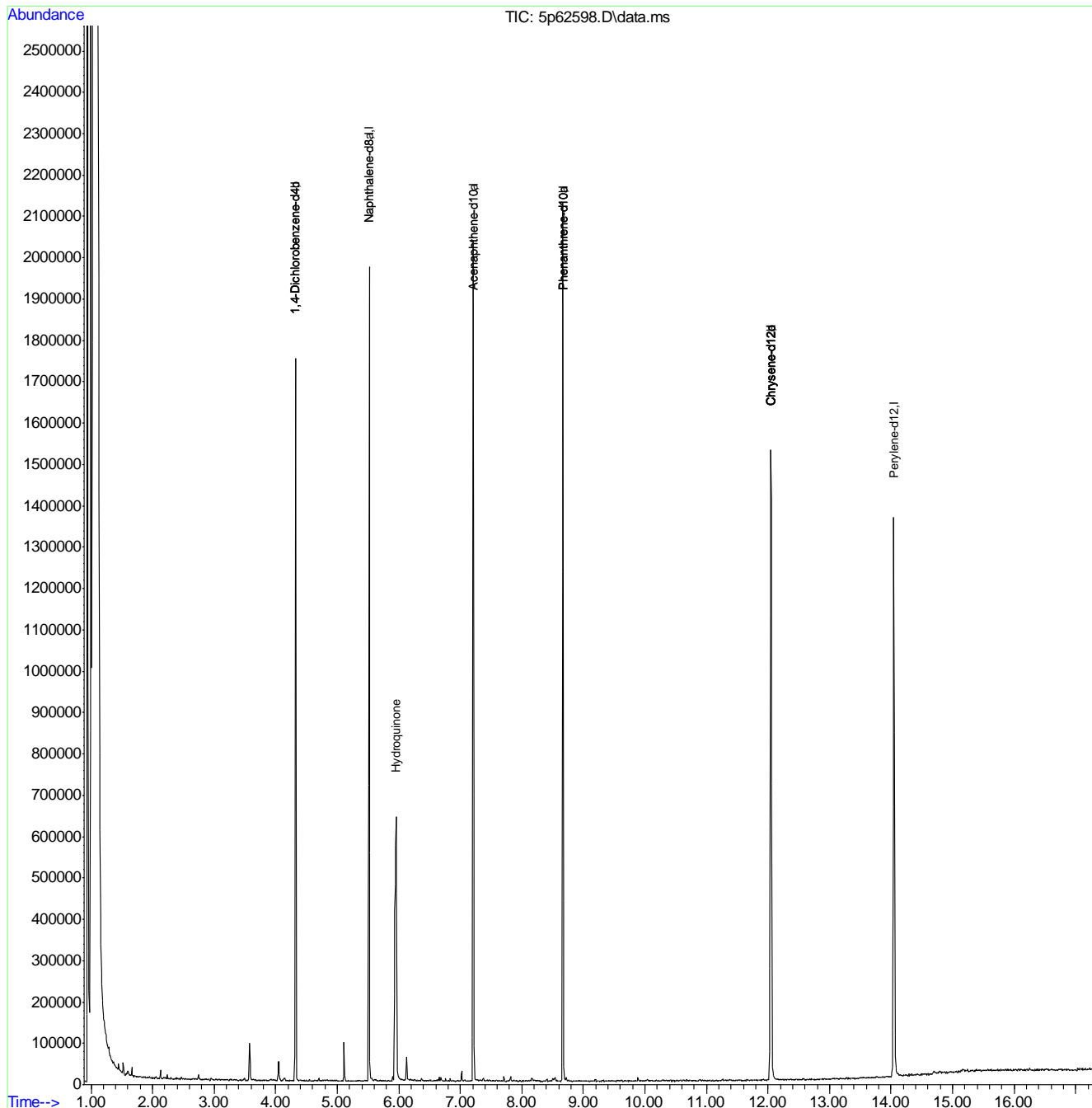
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.28  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62598.D  
 Acq On : 7 Sep 2019 3:11 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 33 Sample Multiplier: 1

Quant Time: Sep 09 09:50:29 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration



9.6.28  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62599.D  
 Acq On : 7 Sep 2019 3:35 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 34 Sample Multiplier: 1

Quant Time: Sep 09 10:12:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.323	152	157504	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	557511	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	273405	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	553397	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	500861	40.00	ppm	-0.01
91) Perylene-d12	14.045	264	570099	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.323	152	157504	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	273405	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	500861	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	553397	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	557511	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	500861	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.323	152	157504	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	500861	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	500861	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	553397	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
117) Benzidine	10.274	184	569240	55.72	ppm	Qvalue 98

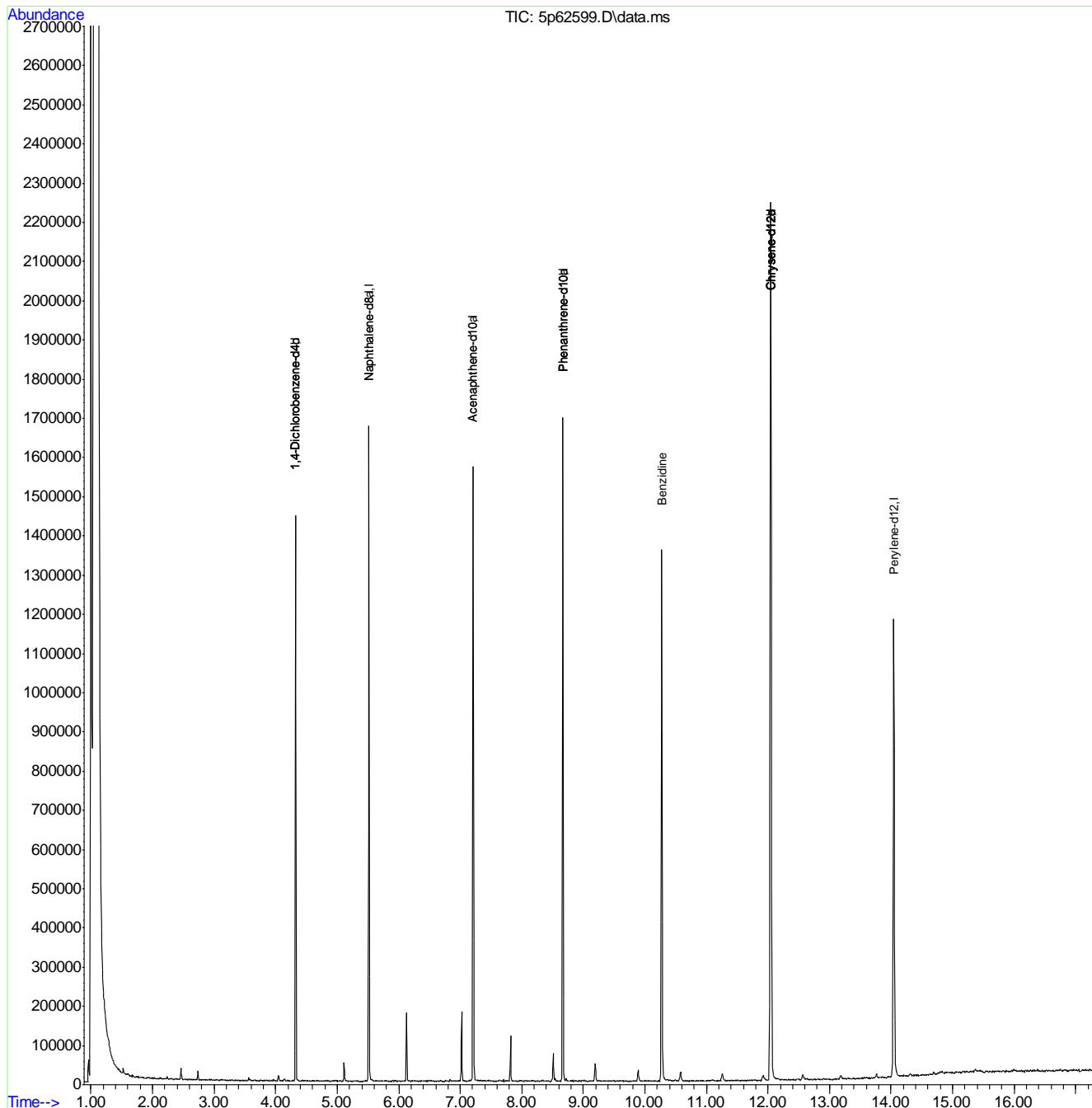
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.29  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2940\  
 Data File : 5p62599.D  
 Acq On : 7 Sep 2019 3:35 am  
 Operator : hennys  
 Sample : icv2942-50  
 Misc : op22049,e5p2942,1000,,,1,1  
 ALS Vial : 34 Sample Multiplier: 1

Quant Time: Sep 09 10:12:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 09:47:08 2019  
 Response via : Initial Calibration



9.6.29  
9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62602.D  
 Acq On : 9 Sep 2019 10:40 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 09 11:43:39 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	125191	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	424050	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	220117	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	417868	40.00	ppm	0.00
83) Chrysene-d12	12.047	240	309480	40.00	ppm	-0.01
91) Perylene-d12	14.040	264	376057	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.328	152	125191	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	220117	40.00	ppm	0.00
105) Chrysene-d12a	12.047	240	309480	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	417868	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	424050	40.00	ppm	0.00
112) Chrysene-d12b	12.047	240	309480	40.00	ppm	-0.01
114) 1,4-Dichlorobenzene-d4c	4.328	152	125191	40.00	ppm	0.00
116) Chrysene-d12c	12.047	240	309480	40.00	ppm	0.00
118) Chrysene-d12d	12.047	240	309480	40.00	ppm	-0.01
120) Phenanthrene-d10b	8.666	188	417868	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
4) N-Nitrosodimethylamine	1.999	74	196985	48.72	ppm	99
11) bis(2-Chloroethyl)ether	4.087	93	296511	49.03	ppm	98
14) 1,3-Dichlorobenzene	4.274	146	239995	46.59	ppm	98
15) 1,4-Dichlorobenzene	4.339	146	230056	45.26	ppm	97
17) 1,2-Dichlorobenzene	4.477	146	223902	47.10	ppm	96
20) 2,2'-oxybis(1-Chloropr...	4.590	45	399395	55.40	ppm	96
22) n-Nitroso-di-n-propyla...	4.713	70	217925	45.09	ppm	99
23) Hexachloroethane	4.793	201	86672	45.68	ppm	93
26) Nitrobenzene	4.857	77	308352	44.19	ppm	99
28) Isophorone	5.081	82	540748	45.85	ppm	99
32) bis(2-Chloroethoxy)met...	5.305	93	333694	47.42	ppm	98
36) 1,2,4-Trichlorobenzene	5.471	180	194544	48.30	ppm	97
38) Naphthalene	5.535	128	568317	46.56	ppm	98

9.6.30  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62602.D  
 Acq On : 9 Sep 2019 10:40 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 09 11:43:39 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration

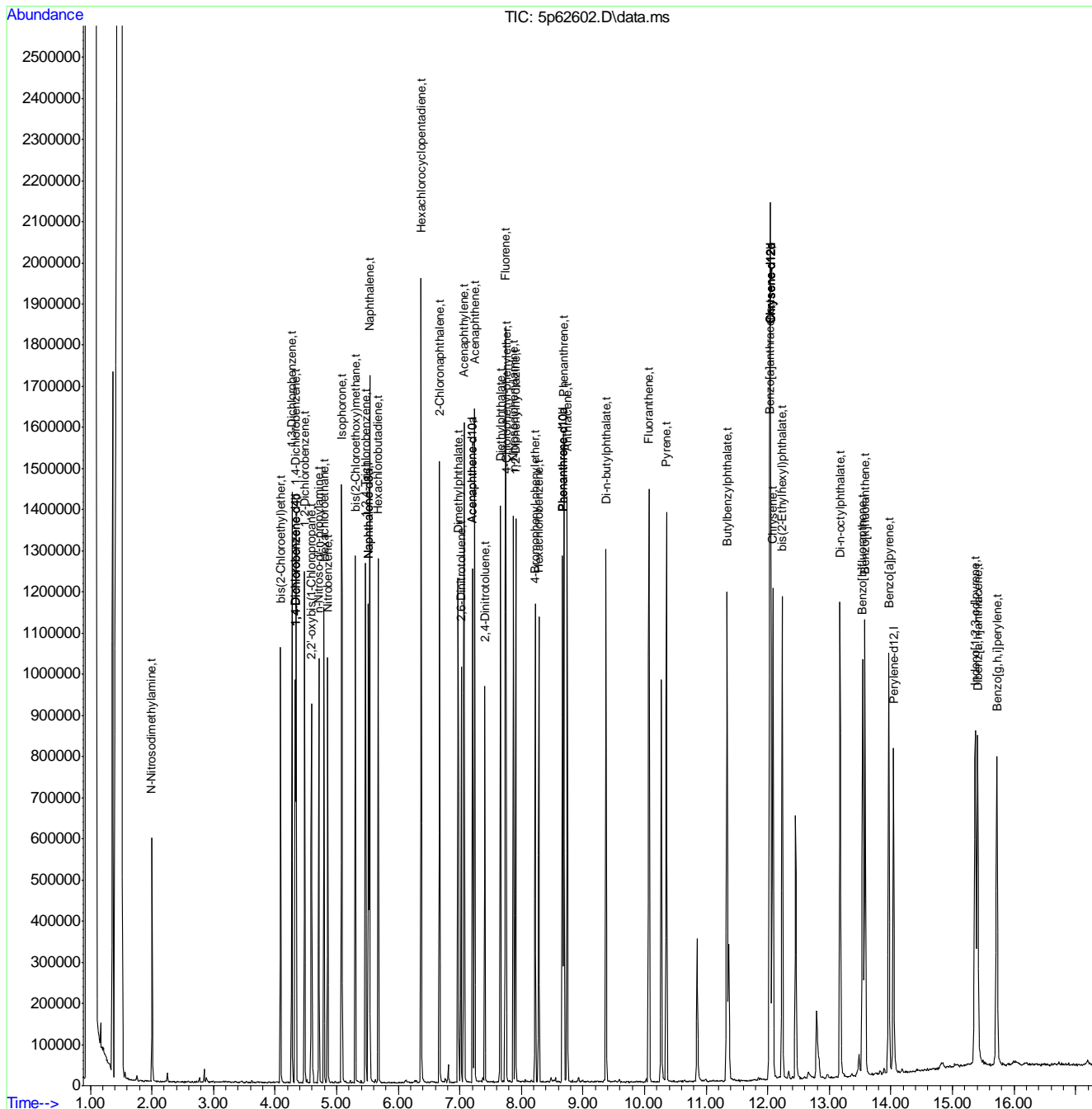
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) Hexachlorobutadiene	5.674	225	122029	49.24	ppm	99
48) Hexachlorocyclopentadiene	6.374	237	127085	51.13	ppm	99
52) 2-Chloronaphthalene	6.668	162	357777	49.26	ppm	98
55) Dimethylphthalate	6.972	163	395278	44.96	ppm	99
56) Acenaphthylene	7.068	152	552665	45.26	ppm	99
57) 2,6-Dinitrotoluene	7.020	165	81563	43.05	ppm	98
59) Acenaphthene	7.239	153	326027	43.85	ppm	93
63) 2,4-Dinitrotoluene	7.405	165	112460	44.47	ppm	87
65) Diethylphthalate	7.661	149	424790	44.48	ppm	99
66) Fluorene	7.742	166	398131	46.98	ppm	99
67) 4-Chlorophenyl-phenyle...	7.752	204	181758	43.33	ppm	97
71) n-Nitrosodiphenylamine	7.870	169	268777	42.92	ppm	99
72) 1,2-Diphenylhydrazine	7.907	77	542766	41.57	ppm	99
74) 4-Bromophenyl-phenylether	8.228	248	122815	45.49	ppm	88
75) Hexachlorobenzene	8.281	284	147555	44.66	ppm	89
77) Phenanthrene	8.692	178	510210	44.01	ppm	100
78) Anthracene	8.746	178	523761	43.32	ppm	98
80) Di-n-butylphthalate	9.371	149	712301	41.81	ppm	99
81) Fluoranthene	10.071	202	639694	43.60	ppm	99
84) Pyrene	10.354	202	635367	48.98	ppm	99
86) Butylbenzylphthalate	11.337	149	331523	48.38	ppm	99
87) Benzo[a]anthracene	12.031	228	568910	48.17	ppm	98
89) Chrysene	12.085	228	527311	47.51	ppm	99
90) bis(2-Ethylhexyl)phtha...	12.234	149	421204	46.28	ppm	99
92) Di-n-octylphthalate	13.175	149	743757	47.21	ppm	99
93) Benzo[b]fluoranthene	13.543	252	598690	46.23	ppm	97
94) Benzo[k]fluoranthene	13.581	252	553888	48.68	ppm	100
95) Benzo[a]pyrene	13.965	252	569847	49.00	ppm	98
96) Indeno[1,2,3-cd]pyrene	15.370	276	538181	50.42	ppm	97
98) Dibenz[a,h]anthracene	15.408	278	511786	47.08	ppm	97
100) Benzo[g,h,i]perylene	15.723	276	537256	49.67	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62602.D  
 Acq On : 9 Sep 2019 10:40 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 09 11:43:39 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration



9.6.30  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62603.D  
 Acq On : 9 Sep 2019 11:04 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 09 11:49:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	139422	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	494850	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	259968	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	429477	40.00	ppm	0.00
83) Chrysene-d12	12.042	240	384863	40.00	ppm	-0.02
91) Perylene-d12	14.035	264	412788	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4b	4.322	152	139422	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	259968	40.00	ppm	0.00
105) Chrysene-d12a	12.042	240	384863	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	429477	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	494850	40.00	ppm	0.00
112) Chrysene-d12b	12.042	240	384860	40.00	ppm	-0.02
114) 1,4-Dichlorobenzene-d4c	4.322	152	139422	40.00	ppm	0.00
116) Chrysene-d12c	12.042	240	384863	40.00	ppm	0.00
118) Chrysene-d12d	12.042	240	384860	40.00	ppm	-0.02
120) Phenanthrene-d10b	8.666	188	429477	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.769	88	137617	45.32	ppm	95
6) Indene	4.563	116	440409	47.47	ppm	98
7) Cumene	3.612	105	668063	44.35	ppm	99
13) Decane	4.205	43	293987	41.34	ppm	98
18) Acetophenone	4.696	105	388015	42.48	ppm	99
27) Quinoline	5.850	129	438739	41.57	ppm	99
40) 2,3-Dichloroaniline	6.481	161	193422	36.98	ppm	95
41) Caprolactam	5.909	55	118619	35.83	ppm	96
45) 1-Methylnaphthalene	6.299	141	345507	40.17	ppm	95
46) Dimethylnaphthalene	6.812	156	356036	41.65	ppm	98
53) Biphenyl	6.662	154	493680	42.73	ppm	98
82) Octadecane	8.623	57	358945	46.71	ppm	96
99) 7,12-Dimethylbenz(a)an...	13.549	256	301712	47.15	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62603.D  
 Acq On : 9 Sep 2019 11:04 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 09 11:49:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration

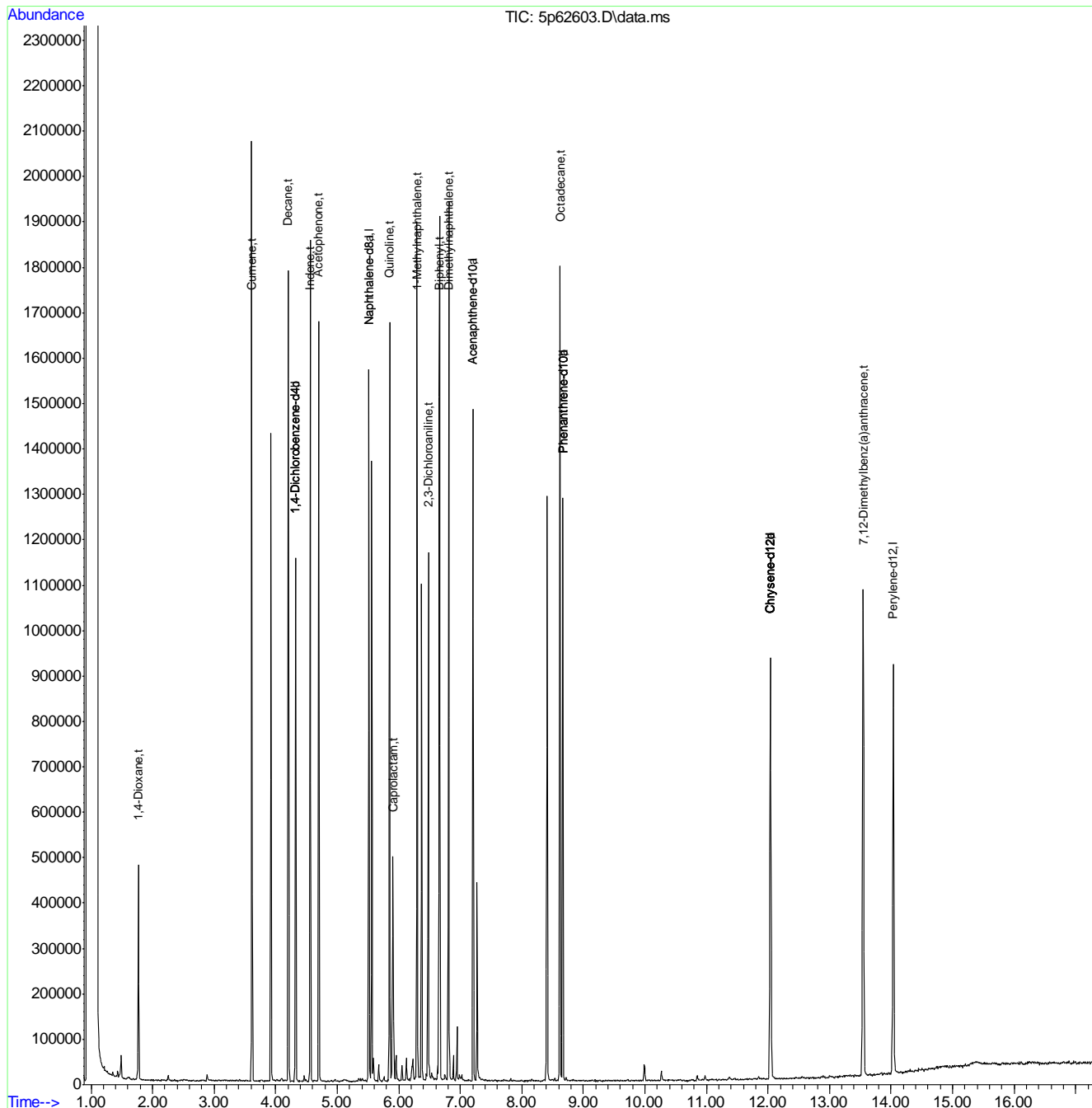
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62603.D  
 Acq On : 9 Sep 2019 11:04 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 09 11:49:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration



9.6.31  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62604.D  
 Acq On : 9 Sep 2019 11:28 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 11:52:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	152880	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	495550	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	280355	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	483733	40.00	ppm	0.00
83) Chrysene-d12	12.042	240	410829	40.00	ppm	-0.02
91) Perylene-d12	14.035	264	457775	40.00	ppm	-0.02
101) 1,4-Dichlorobenzene-d4b	4.328	152	152880	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	280355	40.00	ppm	0.00
105) Chrysene-d12a	12.042	240	410829	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	483733	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	495550	40.00	ppm	0.00
112) Chrysene-d12b	12.042	240	410829	40.00	ppm	-0.02
114) 1,4-Dichlorobenzene-d4c	4.328	152	152880	40.00	ppm	0.00
116) Chrysene-d12c	12.042	240	410829	40.00	ppm	0.00
118) Chrysene-d12d	12.042	240	410829	40.00	ppm	-0.02
120) Phenanthrene-d10b	8.666	188	483733	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
9) Phenol	4.023	94	394411	38.01	ppm	Qvalue # 66
12) 2-Chlorophenol	4.136	128	253313	40.74	ppm	91
19) 2-Methylphenol	4.574	108	255590	40.66	ppm	97
21) 3&4-Methylphenol	4.718	108	259505	40.95	ppm	98
29) 2-Nitrophenol	5.156	139	125642	41.28	ppm	94
30) 2,4-Dimethylphenol	5.220	107	269166	42.27	ppm	97
31) Benzoic acid	5.338	105	91358	18.57	ppm	96
33) 2,4-Dichlorophenol	5.391	162	184009	43.82	ppm	96
34) 2,6-Dichlorophenol	5.605	162	179349	45.88	ppm	99
43) 4-Chloro-3-methylphenol	6.080	107	239223	41.79	ppm	99
49) 2,4,6-Trichlorophenol	6.486	196	142051	43.39	ppm	99
50) 2,4,5-Trichlorophenol	6.518	196	139370	39.55	ppm	99
60) 2,4-Dinitrophenol	7.277	184	50357	36.89	ppm	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62604.D  
 Acq On : 9 Sep 2019 11:28 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 11:52:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
61) 4-Nitrophenol	7.357	109	75923	37.32	ppm	93
64) 2,3,4,6-Tetrachlorophenol	7.539	232	117043	40.60	ppm	95
70) 4,6-Dinitro-2-methylph...	7.800	198	76778	43.41	ppm	91
76) Pentachlorophenol	8.484	266	104844	49.88	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

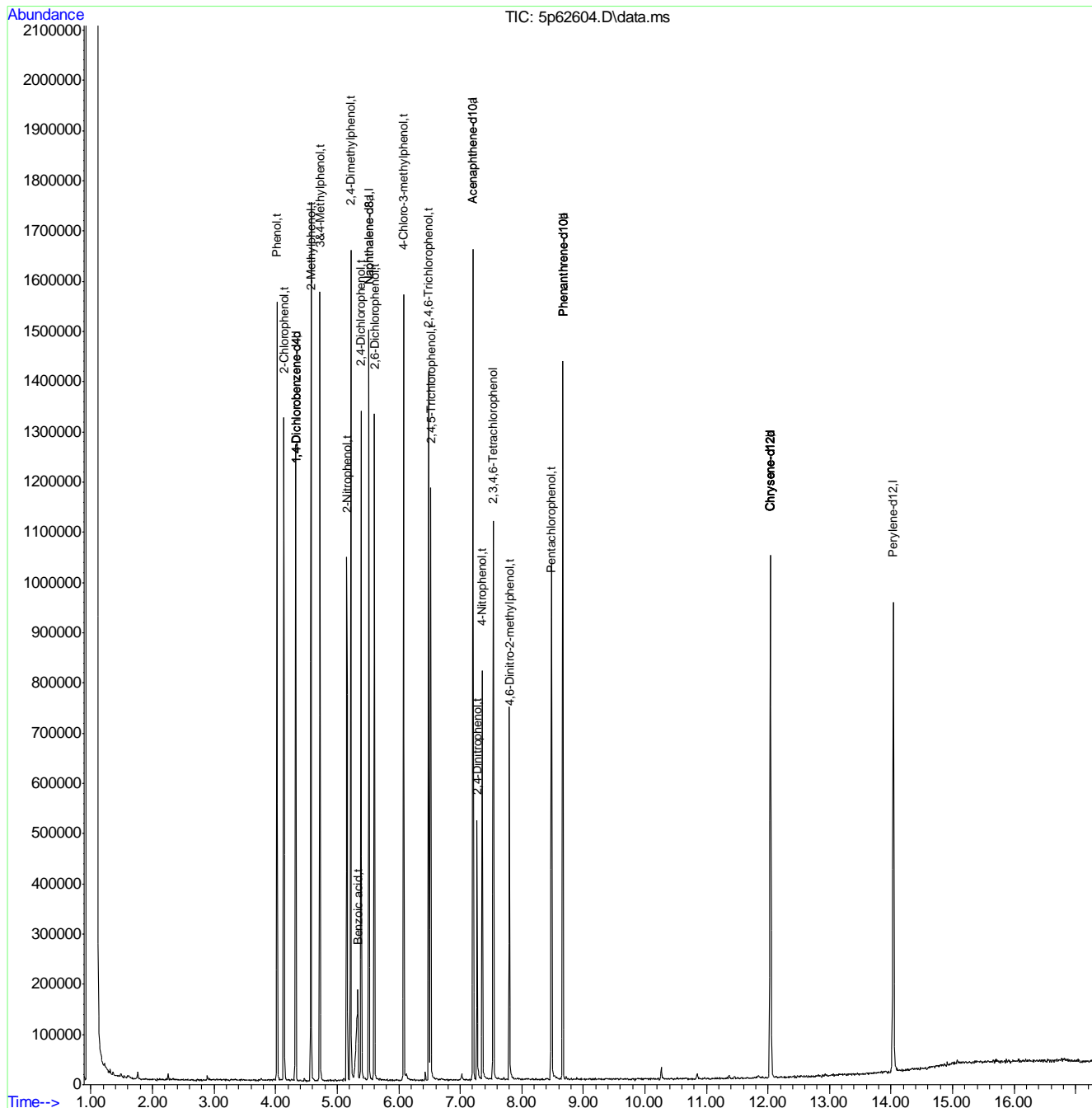
9.6.32  
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62604.D  
 Acq On : 9 Sep 2019 11:28 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 11:52:22 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 11:33:33 2019  
 Response via : Initial Calibration



9.6.32  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62605.D  
 Acq On : 9 Sep 2019 11:52 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 12:25:46 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 12:23:06 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.328	152	159976	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	568921	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	291315	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	527657	40.00	ppm	0.00
83) Chrysene-d12	12.042	240	426676	40.00	ppm	-0.02
91) Perylene-d12	14.040	264	476969	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.328	152	159976	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	291315	40.00	ppm	0.00
105) Chrysene-d12a	12.042	240	426676	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	527657	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	568921	40.00	ppm	0.00
112) Chrysene-d12b	12.042	240	426612	40.00	ppm	-0.02
114) 1,4-Dichlorobenzene-d4c	4.328	152	159976	40.00	ppm	0.00
116) Chrysene-d12c	12.042	240	426676	40.00	ppm	0.00
118) Chrysene-d12d	12.042	240	426612	40.00	ppm	-0.02
120) Phenanthrene-d10b	8.666	188	527657	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.174	112	279886	41.02	ppm	0.00
Spiked Amount	50.000		Recovery	=	82.04%	
8) Phenol-d5	4.012	99	384232	40.01	ppm	0.00
Spiked Amount	50.000		Recovery	=	80.02%	
25) Nitrobenzene-d5	4.835	82	366243	41.19	ppm	0.00
Spiked Amount	50.000		Recovery	=	82.38%	
51) 2-Fluorobiphenyl	6.571	172	497117	43.12	ppm	0.00
Spiked Amount	50.000		Recovery	=	86.24%	
73) 2,4,6-Tribromophenol	7.971	330	89788	42.25	ppm	-0.01
Spiked Amount	50.000		Recovery	=	84.50%	
85) Terphenyl-d14	10.610	244	533793	48.08	ppm	0.00
Spiked Amount	50.000		Recovery	=	96.16%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	

Target Compounds Qvalue

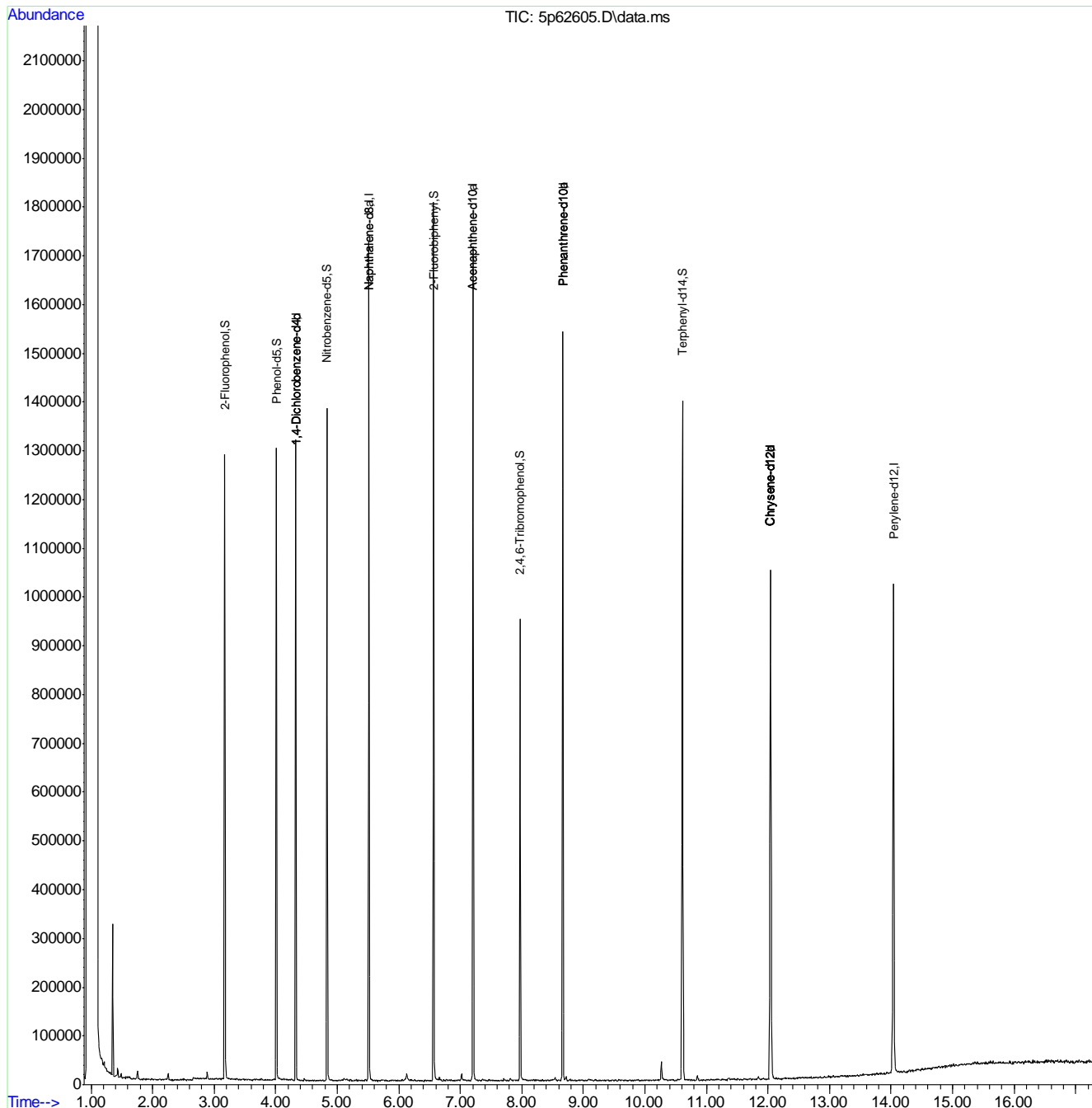
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.33  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62605.D  
 Acq On : 9 Sep 2019 11:52 am  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 12:25:46 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 12:23:06 2019  
 Response via : Initial Calibration



9.6.33  
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62606.D  
 Acq On : 9 Sep 2019 12:17 pm  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 09 12:38:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 12:23:06 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.322	152	130390	40.00	ppm	0.00
24) Naphthalene-d8	5.514	136	467468	40.00	ppm	0.00
47) Acenaphthene-d10	7.207	164	249745	40.00	ppm	0.00
69) Phenanthrene-d10	8.666	188	491122	40.00	ppm	0.00
83) Chrysene-d12	12.042	240	401883	40.00	ppm	-0.02
91) Perylene-d12	14.040	264	504380	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.322	152	130390	40.00	ppm	0.00
103) Acenaphthene-d10a	7.207	164	249745	40.00	ppm	0.00
105) Chrysene-d12a	12.042	240	401883	40.00	ppm	0.00
107) Phenanthrene-d10a	8.666	188	491122	40.00	ppm	0.00
110) Naphthalene-d8a	5.514	136	467468	40.00	ppm	0.00
112) Chrysene-d12b	12.042	240	401883	40.00	ppm	-0.02
114) 1,4-Dichlorobenzene-d4c	4.322	152	130390	40.00	ppm	0.00
116) Chrysene-d12c	12.042	240	401883	40.00	ppm	0.00
118) Chrysene-d12d	12.042	240	401883	40.00	ppm	-0.02
120) Phenanthrene-d10b	8.666	188	491152	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						Qvalue
88) 3,3'-Dichlorobenzidine	12.042	252	286685	45.23	ppm	97

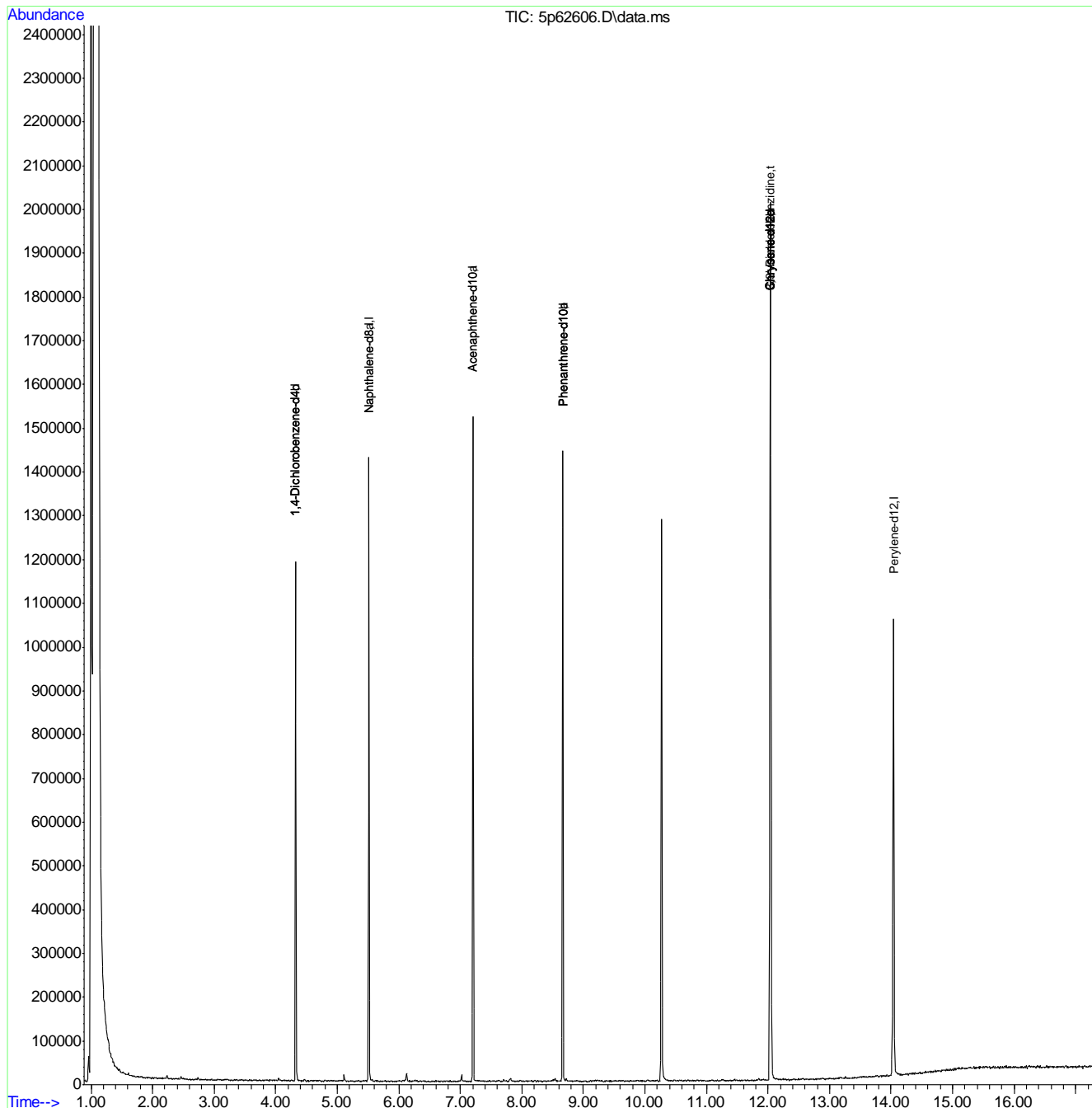
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.34  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2943\  
 Data File : 5p62606.D  
 Acq On : 9 Sep 2019 12:17 pm  
 Operator : hennys  
 Sample : icv2940-50  
 Misc : op22049,e5p2943,1000,,,1,1  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 09 12:38:10 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 09 12:23:06 2019  
 Response via : Initial Calibration



9.6.34  
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63434.D  
 Acq On : 1 Oct 2019 12:52 am  
 Operator : chriss2  
 Sample : cc2940-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 01 07:58:50 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 30 12:55:56 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.052	152	127242	40.00	ppm	-0.03
24) Naphthalene-d8	5.238	136	447480	40.00	ppm	-0.03
47) Acenaphthene-d10	6.921	164	247140	40.00	ppm	-0.03
69) Phenanthrene-d10	8.358	188	474654	40.00	ppm	-0.03
83) Chrysene-d12	11.638	240	421616	40.00	ppm	-0.05
91) Perylene-d12	13.610	264	526815	40.00	ppm	-0.05
101) 1,4-Dichlorobenzene-d4b	4.052	152	127242	40.00	ppm	-0.03
103) Acenaphthene-d10a	6.921	164	247140	40.00	ppm	-0.03
105) Chrysene-d12a	11.638	240	421616	40.00	ppm	-0.05
107) Phenanthrene-d10a	8.358	188	474654	40.00	ppm	-0.03
110) Naphthalene-d8a	5.238	136	447480	40.00	ppm	-0.03
112) Chrysene-d12b	11.638	240	421800	40.00	ppm	-0.05
114) 1,4-Dichlorobenzene-d4c	4.052	152	127242	40.00	ppm	-0.03
116) Chrysene-d12c	11.638	240	421616	40.00	ppm	-0.05
118) Chrysene-d12d	11.638	240	421800	40.00	ppm	-0.05
120) Phenanthrene-d10b	8.358	188	474654	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	2.904	112	267151	49.22	ppm	-0.03
Spiked Amount	50.000		Recovery	=	98.44%	
8) Phenol-d5	3.769	99	348532	45.63	ppm	-0.03
Spiked Amount	50.000		Recovery	=	91.26%	
25) Nitrobenzene-d5	4.571	82	336602	48.13	ppm	-0.03
Spiked Amount	50.000		Recovery	=	96.26%	
51) 2-Fluorobiphenyl	6.296	172	418350	42.77	ppm	-0.03
Spiked Amount	50.000		Recovery	=	85.54%	
73) 2,4,6-Tribromophenol	7.690	330	87443	45.74	ppm	-0.03
Spiked Amount	50.000		Recovery	=	91.48%	
85) Terphenyl-d14	10.233	244	507568	46.27	ppm	-0.05
Spiked Amount	50.000		Recovery	=	92.54%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
2) 1,4-Dioxane	1.472	88	138455	49.97	ppm	98
3) Pyridine	1.739	79	341090	47.45	ppm	96
4) N-Nitrosodimethylamine	1.712	74	210878	51.31	ppm	88
6) Indene	4.287	116	373078	44.06	ppm	96
7) Cumene	3.331	105	664421	48.33	ppm	98
9) Phenol	3.780	94	372409	43.13	ppm	75
10) Aniline	3.759	93	422853	44.51	ppm	63
11) bis(2-Chloroethyl)ether	3.828	93	276919	45.05	ppm	94
12) 2-Chlorophenol	3.865	128	226442	43.76	ppm	96
13) Decane	3.940	43	303596	46.78	ppm	98
14) 1,3-Dichlorobenzene	3.999	146	228458	43.63	ppm	98
15) 1,4-Dichlorobenzene	4.068	146	212236	41.08	ppm	97
16) Benzyl alcohol	4.202	108	155954	43.83	ppm	87

9.6.35  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63434.D  
 Acq On : 1 Oct 2019 12:52 am  
 Operator : chriss2  
 Sample : cc2940-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 01 07:58:50 2019

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M

Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um

QLast Update : Mon Sep 30 12:55:56 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.207	146	203684	42.16	ppm	98
18) Acetophenone	4.437	105	373267	44.78	ppm	95
19) 2-Methylphenol	4.330	108	219670	41.99	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.325	45	342076	46.69	ppm #	48
21) 3&4-Methylphenol	4.474	108	237695	45.07	ppm	97
22) n-Nitroso-di-n-propyla...	4.453	70	229728	46.76	ppm	95
23) Hexachloroethane	4.517	201	86747	44.99	ppm	91
26) Nitrobenzene	4.587	77	345989	46.99	ppm	92
27) Quinoline	5.591	129	447815	46.92	ppm	96
28) Isophorone	4.822	82	608503	48.89	ppm	98
29) 2-Nitrophenol	4.891	139	122213	44.46	ppm	87
30) 2,4-Dimethylphenol	4.966	107	261226	45.43	ppm	97
31) Benzoic acid	5.132	105	241142	54.29	ppm	92
32) bis(2-Chloroethoxy)met...	5.046	93	344077	46.34	ppm	99
33) 2,4-Dichlorophenol	5.132	162	171774	45.30	ppm	98
34) 2,6-Dichlorophenol	5.340	162	153251	43.41	ppm	94
35) 1,3,5-Trichlorobenzene	4.902	180	182644	42.53	ppm	98
36) 1,2,4-Trichlorobenzene	5.196	180	187505	44.11	ppm	97
37) 1,2,3-Trichlorobenzene	5.404	180	160721	39.86	ppm	97
38) Naphthalene	5.260	128	548224	42.56	ppm	99
39) 4-Chloroaniline	5.335	127	246783	41.04	ppm	94
40) 2,3-Dichloroaniline	6.205	161	213991	45.24	ppm	97
41) Caprolactam	5.682	55	162720	54.36	ppm	95
42) Hexachlorobutadiene	5.399	225	114445	43.76	ppm	99
43) 4-Chloro-3-methylphenol	5.837	107	253391	49.02	ppm	92
44) 2-Methylnaphthalene	5.928	141	305301	44.71	ppm	95
45) 1-Methylnaphthalene	6.018	141	328004	42.18	ppm	90
46) Dimethylnaphthalene	6.531	156	331862	42.94	ppm	97
48) Hexachlorocyclopentadiene	6.088	237	246409	88.30	ppm	99
49) 2,4,6-Trichlorophenol	6.221	196	127210	44.08	ppm	98
50) 2,4,5-Trichlorophenol	6.259	196	139070	44.77	ppm	99
52) 2-Chloronaphthalene	6.392	162	327828	40.20	ppm	96
53) Biphenyl	6.382	154	446997	40.70	ppm	98
54) 2-Nitroaniline	6.510	65	234433	52.40	ppm	92
55) Dimethylphthalate	6.702	163	460430	46.64	ppm	99
56) Acenaphthylene	6.782	152	581503	42.42	ppm	99
57) 2,6-Dinitrotoluene	6.750	165	98554	46.33	ppm	79
58) 3-Nitroaniline	6.905	138	124963	46.97	ppm	92
59) Acenaphthene	6.953	153	357292	42.80	ppm	97
60) 2,4-Dinitrophenol	7.012	184	137043	113.89	ppm #	54
61) 4-Nitrophenol	7.119	109	105233	58.68	ppm #	53
62) Dibenzofuran	7.124	168	501131	42.02	ppm	82
63) 2,4-Dinitrotoluene	7.140	165	130166	45.84	ppm	90
64) 2,3,4,6-Tetrachlorophenol	7.263	232	121813	47.93	ppm	98
65) Diethylphthalate	7.391	149	511087	47.66	ppm	99
66) Fluorene	7.455	166	426973	44.87	ppm	99
67) 4-Chlorophenyl-phenyle...	7.471	204	198850	42.22	ppm	96
68) 4-Nitroaniline	7.503	138	115153	42.43	ppm #	74
70) 4,6-Dinitro-2-methylph...	7.536	198	87844	50.62	ppm	97
71) n-Nitrosodiphenylamine	7.589	169	307311	43.20	ppm	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63434.D  
 Acq On : 1 Oct 2019 12:52 am  
 Operator : chriss2  
 Sample : cc2940-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 01 07:58:50 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 30 12:55:56 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.621	77	683319	46.07	ppm	94
74) 4-Bromophenyl-phenylether	7.936	248	139824	45.60	ppm	94
75) Hexachlorobenzene	7.990	284	162967	43.43	ppm	86
76) Pentachlorophenol	8.193	266	203545	98.70	ppm	98
77) Phenanthrene	8.380	178	558553	42.41	ppm	99
78) Anthracene	8.433	178	575117	41.88	ppm	99
79) Carbazole	8.615	167	645975	45.23	ppm	99
80) Di-n-butylphthalate	9.047	149	932703	48.19	ppm	98
81) Fluoranthene	9.704	202	792624	47.56	ppm	96
82) Octadecane	8.332	57	412569	48.57	ppm	96
84) Pyrene	9.977	202	786202	44.49	ppm	99
86) Butylbenzylphthalate	10.955	149	441725	47.31	ppm	95
87) Benzo[a]anthracene	11.622	228	746038	46.37	ppm	99
88) 3,3'-Dichlorobenzidine	11.638	252	280279	42.15	ppm	99
89) Chrysene	11.676	228	642896	42.51	ppm	98
90) bis(2-Ethylhexyl)phtha...	11.841	149	584376	47.14	ppm	99
92) Di-n-octylphthalate	12.771	149	1064911	48.25	ppm	95
93) Benzo[b]fluoranthene	13.118	252	814698	44.90	ppm	99
94) Benzo[k]fluoranthene	13.161	252	685681	43.02	ppm	98
95) Benzo[a]pyrene	13.535	252	737956	45.29	ppm	98
96) Indeno[1,2,3-cd]pyrene	14.892	276	716121	47.89	ppm	96
97) Dibenz(a,h)acridine	14.646	279	646938	46.00	ppm	100
98) Dibenz[a,h]anthracene	14.929	278	683994	44.91	ppm	100
99) 7,12-Dimethylbenz(a)an...	13.129	256	340503	41.69	ppm	98
100) Benzo[g,h,i]perylene	15.196	276	693398	45.76	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

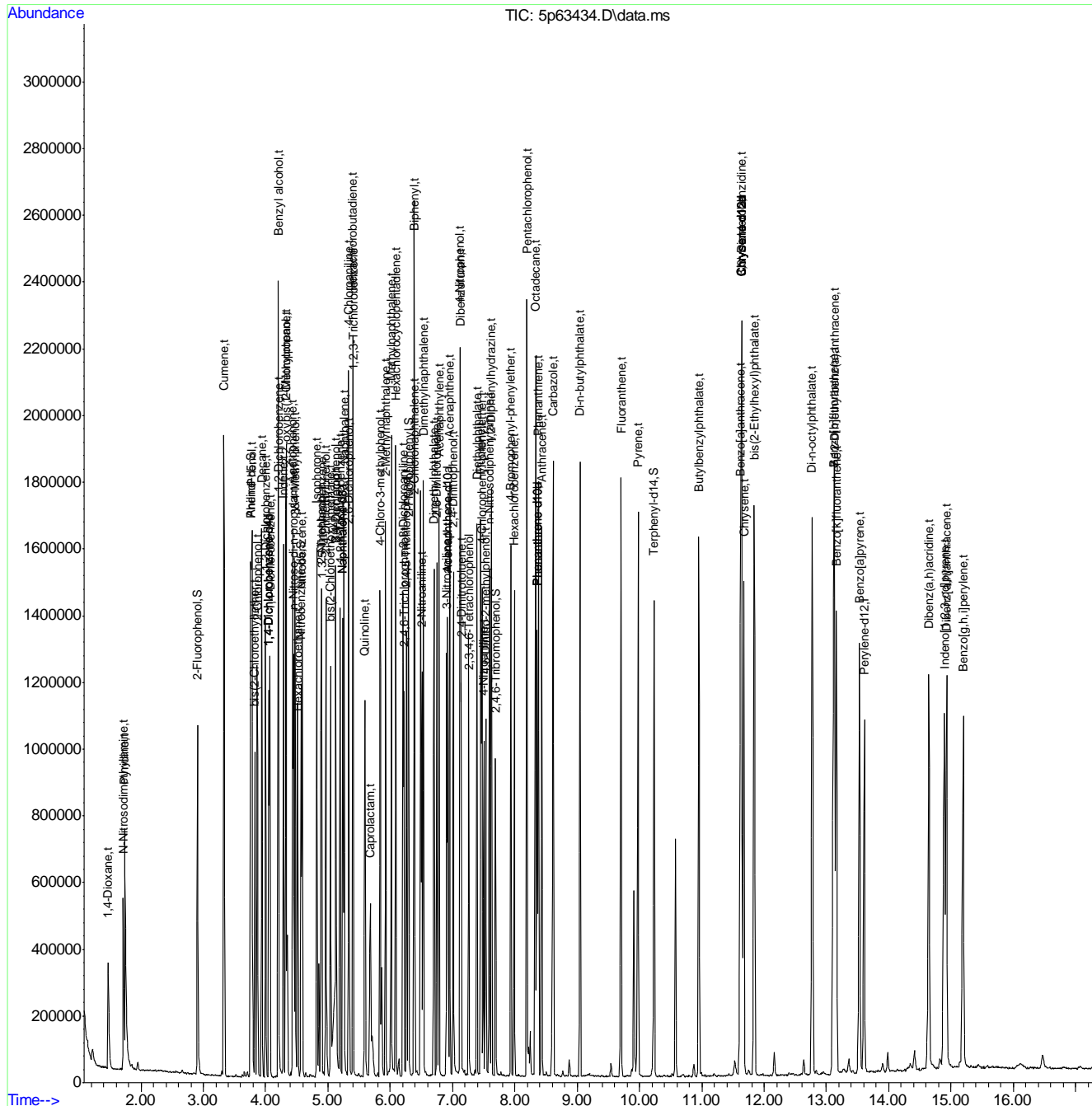
9.6.35  
9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63434.D  
 Acq On : 1 Oct 2019 12:52 am  
 Operator : chriss2  
 Sample : cc2940-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 01 07:58:50 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 30 12:55:56 2019  
 Response via : Initial Calibration



9.6.35  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63435.D  
 Acq On : 1 Oct 2019 1:16 am  
 Operator : chriss2  
 Sample : cc2941-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 01 08:01:13 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:00:16 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.052	152	157559	40.00	ppm	-0.03
24) Naphthalene-d8	5.238	136	565767	40.00	ppm	-0.03
47) Acenaphthene-d10	6.921	164	308106	40.00	ppm	-0.03
69) Phenanthrene-d10	8.353	188	545563	40.00	ppm	-0.04
83) Chrysene-d12	11.628	240	539105	40.00	ppm	-0.06
91) Perylene-d12	13.604	264	629435	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4b	4.052	152	157559	40.00	ppm	-0.03
103) Acenaphthene-d10a	6.921	164	308106	40.00	ppm	-0.03
105) Chrysene-d12a	11.628	240	539105	40.00	ppm	-0.06
107) Phenanthrene-d10a	8.353	188	545563	40.00	ppm	-0.04
110) Naphthalene-d8a	5.238	136	565767	40.00	ppm	-0.03
112) Chrysene-d12b	11.628	240	539189	40.00	ppm	-0.06
114) 1,4-Dichlorobenzene-d4c	4.052	152	157559	40.00	ppm	-0.03
116) Chrysene-d12c	11.628	240	539105	40.00	ppm	-0.06
118) Chrysene-d12d	11.628	240	539189	40.00	ppm	-0.06
120) Phenanthrene-d10b	8.353	188	545563	40.00	ppm	-0.04
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.652	105	253583	46.96	ppm	95
108) Atrazine	8.134	215	75086	57.37	ppm	# 82
109) Pentachloronitrobenzene	8.198	295	40220	52.45	ppm	89

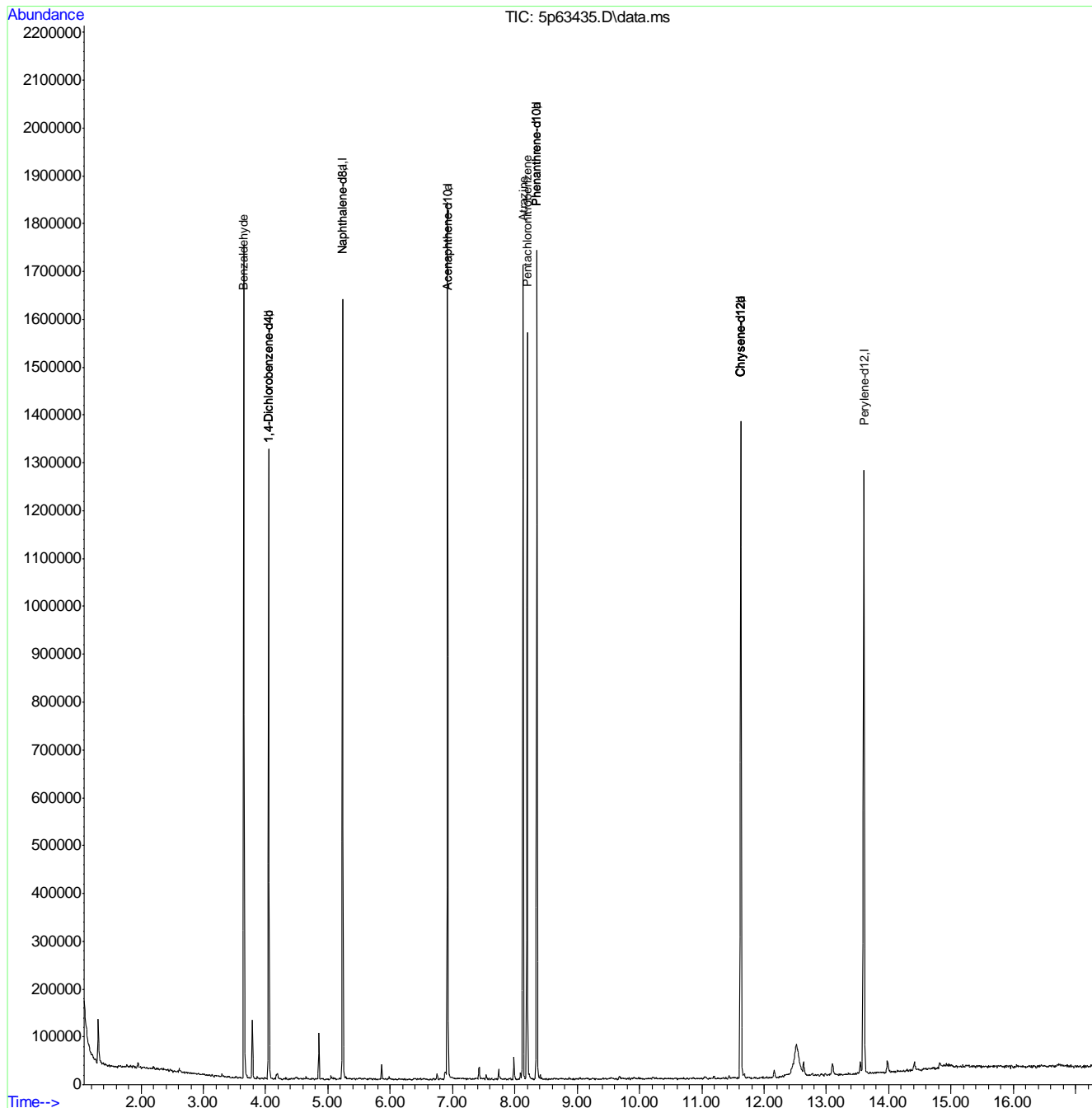
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.36  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63435.D  
 Acq On : 1 Oct 2019 1:16 am  
 Operator : chriss2  
 Sample : cc2941-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 01 08:01:13 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Tue Oct 01 08:00:16 2019  
 Response via : Initial Calibration



9.6.36  
 9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63436.D  
 Acq On : 1 Oct 2019 1:41 am  
 Operator : chriss2  
 Sample : cc2942-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 01 08:02:11 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 30 12:55:56 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.047	152	181567	40.00	ppm	-0.03
24) Naphthalene-d8	5.238	136	603624	40.00	ppm	-0.03
47) Acenaphthene-d10	6.921	164	332954	40.00	ppm	-0.03
69) Phenanthrene-d10	8.353	188	643318	40.00	ppm	-0.04
83) Chrysene-d12	11.628	240	563379	40.00	ppm	-0.06
91) Perylene-d12	13.604	264	709018	40.00	ppm	-0.06
101) 1,4-Dichlorobenzene-d4b	4.047	152	181567	40.00	ppm	-0.03
103) Acenaphthene-d10a	6.921	164	332954	40.00	ppm	-0.03
105) Chrysene-d12a	11.628	240	563379	40.00	ppm	-0.06
107) Phenanthrene-d10a	8.353	188	643318	40.00	ppm	-0.04
110) Naphthalene-d8a	5.238	136	603624	40.00	ppm	-0.03
112) Chrysene-d12b	11.628	240	563086	40.00	ppm	-0.06
114) 1,4-Dichlorobenzene-d4c	4.047	152	181567	40.00	ppm	-0.03
116) Chrysene-d12c	11.628	240	563379	40.00	ppm	-0.06
118) Chrysene-d12d	11.628	240	563086	40.00	ppm	-0.06
120) Phenanthrene-d10b	8.353	188	643241	40.00	ppm	-0.04
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	9.672	57	383555	56.27	ppm	-0.22
Spiked Amount	50.000		Recovery	=	112.54%	
121) o-terphenyl	8.786	230	423718	50.61	ppm	-0.21
Spiked Amount	50.000		Recovery	=	101.22%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.093	216	240926	48.02	ppm	99
111) Hydroquinone	5.709	110	361811	64.89	ppm	94
117) Benzidine	9.913	184	613082	53.35	ppm	99

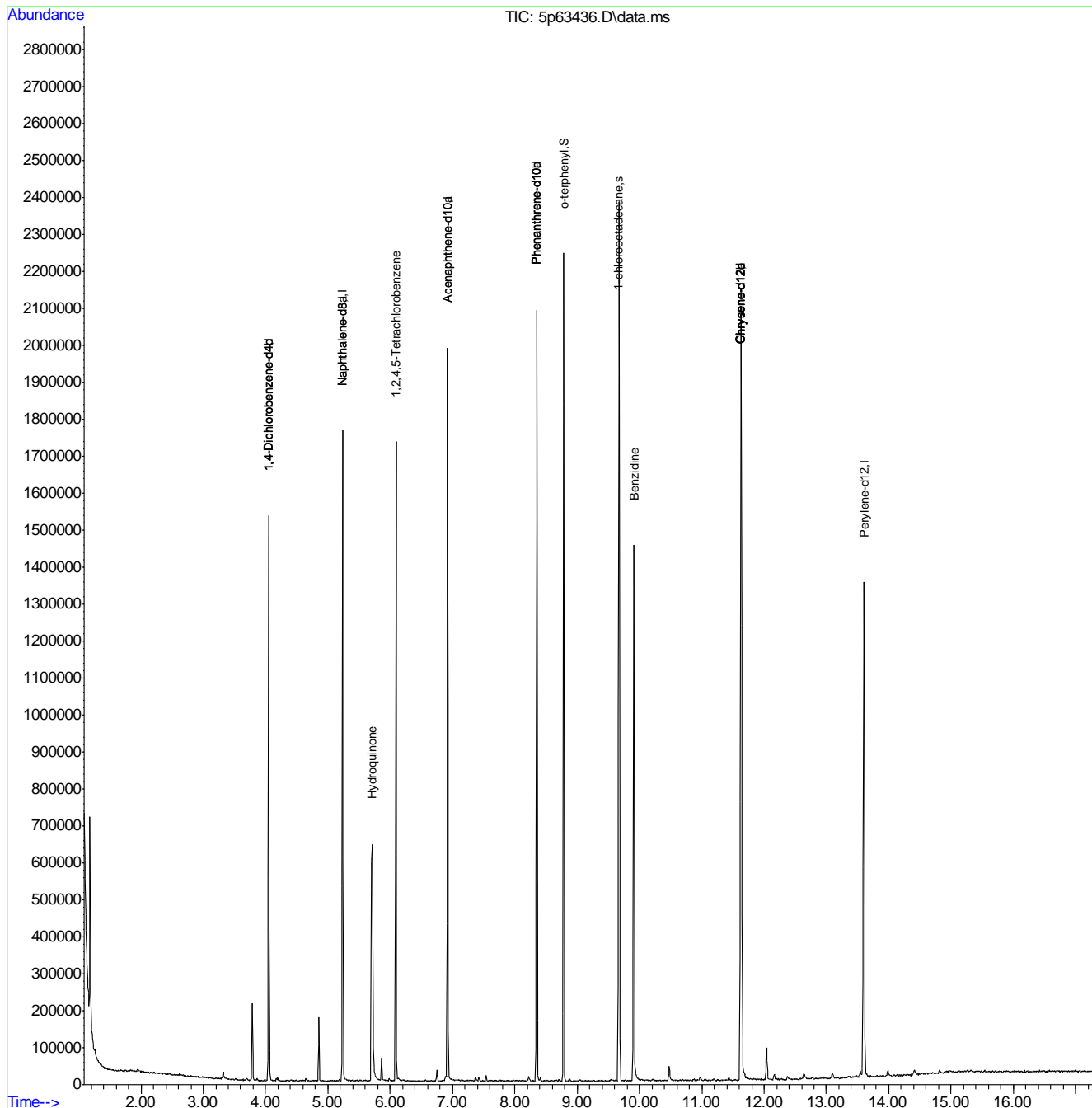
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.37  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2977\  
 Data File : 5p63436.D  
 Acq On : 1 Oct 2019 1:41 am  
 Operator : chriss2  
 Sample : cc2942-50  
 Misc : op22049,e5p2977,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 01 08:02:11 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Mon Sep 30 12:55:56 2019  
 Response via : Initial Calibration



9.6.37  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63466.d  
 Acq On : 1 Oct 2019 1:41 pm  
 Operator : hennys  
 Sample : cc2940-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 00:56:31 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:54:21 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	4.047	152	118155	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	418695	40.00	ppm	0.00
47) Acenaphthene-d10	6.921	164	232929	40.00	ppm	0.00
69) Phenanthrene-d10	8.353	188	450046	40.00	ppm	0.00
83) Chrysene-d12	11.638	240	399856	40.00	ppm	0.00
91) Perylene-d12	13.620	264	452191	40.00	ppm	0.00
101) 1,4-Dichlorobenzene-d4b	4.047	152	118155	40.00	ppm	0.00
103) Acenaphthene-d10a	6.921	164	232929	40.00	ppm	0.00
105) Chrysene-d12a	11.638	240	399856	40.00	ppm	0.00
107) Phenanthrene-d10a	8.353	188	450046	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	418695	40.00	ppm	0.00
112) Chrysene-d12b	11.638	240	399873	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.047	152	118155	40.00	ppm	0.00
116) Chrysene-d12c	11.638	240	399856	40.00	ppm	0.00
118) Chrysene-d12d	11.638	240	399873	40.00	ppm	0.00
120) Phenanthrene-d10b	8.353	188	450046	40.00	ppm	0.00
<b>System Monitoring Compounds</b>						
5) 2-Fluorophenol	2.909	112	116456	23.11	ppm	0.00
Spiked Amount	50.000		Recovery	=	46.22%	
8) Phenol-d5	3.769	99	170753	24.08	ppm	0.00
Spiked Amount	50.000		Recovery	=	48.16%	
25) Nitrobenzene-d5	4.565	82	167521	25.60	ppm	0.00
Spiked Amount	50.000		Recovery	=	51.20%	
51) 2-Fluorobiphenyl	6.291	172	212502	23.05	ppm	0.00
Spiked Amount	50.000		Recovery	=	46.10%	
73) 2,4,6-Tribromophenol	7.685	330	42329	23.35	ppm	0.00
Spiked Amount	50.000		Recovery	=	46.70%	
85) Terphenyl-d14	10.233	244	248567	23.89	ppm	0.00
Spiked Amount	50.000		Recovery	=	47.78%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
<b>Target Compounds</b>						
2) 1,4-Dioxane	1.472	88	56122	21.81	ppm	Qvalue 100
3) Pyridine	1.739	79	153917	23.06	ppm	100
4) N-Nitrosodimethylamine	1.712	74	88486	23.19	ppm	100
6) Indene	4.282	116	183613	23.35	ppm	100
7) Cumene	3.326	105	317851	24.90	ppm	100
9) Phenol	3.785	94	167957	20.95	ppm	100
10) Aniline	3.753	93	216395	24.53	ppm	100
11) bis(2-Chloroethyl)ether	3.822	93	132712	23.25	ppm	100
12) 2-Chlorophenol	3.865	128	109606	22.81	ppm	100
13) Decane	3.935	43	162013	26.88	ppm	100
14) 1,3-Dichlorobenzene	3.993	146	112232	23.08	ppm	100
15) 1,4-Dichlorobenzene	4.063	146	104828	21.85	ppm	100
16) Benzyl alcohol	4.196	108	77621	23.49	ppm	100
17) 1,2-Dichlorobenzene	4.202	146	103518	23.07	ppm	100
18) Acetophenone	4.432	105	188149	24.31	ppm	100
19) 2-Methylphenol	4.330	108	110296	22.70	ppm	100
20) 2,2'-oxybis(1-Chloropr...	4.319	45	170558	25.07	ppm	100
21) 3&4-Methylphenol	4.474	108	115560	23.60	ppm	100
22) n-Nitroso-di-n-propyla...	4.448	70	117616	25.78	ppm	100
23) Hexachloroethane	4.512	201	42408	23.68	ppm	100



9.6.38  
9

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\5p2978\  
 Data File : 5p63466.d  
 Acq On : 1 Oct 2019 1:41 pm  
 Operator : hennys  
 Sample : cc2940-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 00:56:31 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:54:21 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) Nitrobenzene	4.581	77	181596	26.36	ppm	100
27) Quinoline	5.580	129	213621	23.92	ppm	100
28) Isophorone	4.816	82	301599	25.90	ppm	100
29) 2-Nitrophenol	4.886	139	59671	23.20	ppm	100
30) 2,4-Dimethylphenol	4.966	107	132948	24.71	ppm	100
31) Benzoic acid	5.110	105	123583	29.74	ppm	100
32) bis(2-Chloroethoxy)met...	5.041	93	169084	24.34	ppm	100
33) 2,4-Dichlorophenol	5.126	162	88321	24.89	ppm	100
34) 2,6-Dichlorophenol	5.334	162	77724	23.53	ppm	100
35) 1,3,5-Trichlorobenzene	4.896	180	96284	23.96	ppm	100
36) 1,2,4-Trichlorobenzene	5.190	180	94981	23.88	ppm	100
37) 1,2,3-Trichlorobenzene	5.398	180	84857	22.49	ppm	100
38) Naphthalene	5.254	128	275685	22.87	ppm	100
39) 4-Chloroaniline	5.329	127	128644	22.87	ppm	100
40) 2,3-Dichloroaniline	6.200	161	104446	23.60	ppm	100
41) Caprolactam	5.666	55	77577	27.70	ppm	100
42) Hexachlorobutadiene	5.393	225	59992	24.52	ppm	100
43) 4-Chloro-3-methylphenol	5.837	107	126442	26.14	ppm	100
44) 2-Methylnaphthalene	5.922	141	158167	24.76	ppm	100
45) 1-Methylnaphthalene	6.013	141	175227	24.08	ppm	100
46) Dimethylnaphthalene	6.526	156	168595	23.31	ppm	100
48) Hexachlorocyclopentadiene	6.088	237	119907	45.59	ppm	100
49) 2,4,6-Trichlorophenol	6.216	196	63209	23.24	ppm	100
50) 2,4,5-Trichlorophenol	6.259	196	69910	23.88	ppm	100
52) 2-Chloronaphthalene	6.387	162	172859	22.49	ppm	100
53) Biphenyl	6.376	154	235080	22.71	ppm	100
54) 2-Nitroaniline	6.504	65	122361	29.02	ppm	100
55) Dimethylphthalate	6.697	163	224979	24.18	ppm	100
56) Acenaphthylene	6.777	152	299396	23.17	ppm	100
57) 2,6-Dinitrotoluene	6.745	165	50148	25.01	ppm	100
58) 3-Nitroaniline	6.905	138	62805	25.05	ppm	100
59) Acenaphthene	6.948	153	185657	23.59	ppm	100
60) 2,4-Dinitrophenol	7.012	184	64001	56.43	ppm	100
61) 4-Nitrophenol	7.124	109	51983	30.76	ppm	100
62) Dibenzofuran	7.119	168	261161	23.23	ppm	100
63) 2,4-Dinitrotoluene	7.135	165	65494	24.47	ppm	100
64) 2,3,4,6-Tetrachlorophenol	7.258	232	58403	24.38	ppm	100
65) Diethylphthalate	7.386	149	262338	25.96	ppm	100
66) Fluorene	7.450	166	221348	24.68	ppm	100
67) 4-Chlorophenyl-phenyle...	7.466	204	105807	23.84	ppm	100
68) 4-Nitroaniline	7.493	138	57098	22.32	ppm	100
70) 4,6-Dinitro-2-methylph...	7.535	198	42421	25.78	ppm	100
71) n-Nitrosodiphenylamine	7.583	169	156492	23.20	ppm	100
72) 1,2-Diphenylhydrazine	7.615	77	351935	25.03	ppm	100
74) 4-Bromophenyl-phenylether	7.936	248	67641	23.26	ppm	100
75) Hexachlorobenzene	7.989	284	82089	23.07	ppm	100
76) Pentachlorophenol	8.192	266	99638	50.96	ppm	100
77) Phenanthrene	8.379	178	282285	22.61	ppm	100
78) Anthracene	8.428	178	301773	23.18	ppm	100
79) Carbazole	8.614	167	323711	23.91	ppm	100
80) Di-n-butylphthalate	9.042	149	477105	26.00	ppm	100
81) Fluoranthene	9.704	202	393320	24.89	ppm	100
82) Octadecane	8.326	57	224829	27.92	ppm	100
84) Pyrene	9.977	202	385972	23.03	ppm	100
86) Butylbenzylphthalate	10.949	149	220856	24.94	ppm	100
87) Benzol[a]anthracene	11.622	228	358723	23.51	ppm	100
88) 3,3'-Dichlorobenzidine	11.638	252	134087	21.26	ppm	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63466.d  
 Acq On : 1 Oct 2019 1:41 pm  
 Operator : hennys  
 Sample : cc2940-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 00:56:31 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:54:21 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
89) Chrysene	11.676	228	318099	22.18	ppm	100
90) bis(2-Ethylhexyl)phtha...	11.841	149	293289	24.94	ppm	100
92) Di-n-octylphthalate	12.771	149	511644	27.01	ppm	100
93) Benzo[b]fluoranthene	13.123	252	369145	23.70	ppm	100
94) Benzo[k]fluoranthene	13.161	252	330911	24.19	ppm	100
95) Benzo[a]pyrene	13.535	252	333314	23.83	ppm	100
96) Indeno[1,2,3-cd]pyrene	14.902	276	303383	23.64	ppm	100
97) Dibenz(a,h)acridine	14.651	279	275894	22.86	ppm	100
98) Dibenz[a,h]anthracene	14.934	278	297222	22.74	ppm	100
99) 7,12-Dimethylbenz(a)an...	13.129	256	162613	23.20	ppm	100
100) Benzo[g,h,i]perylene	15.207	276	285196	21.93	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.38  
9

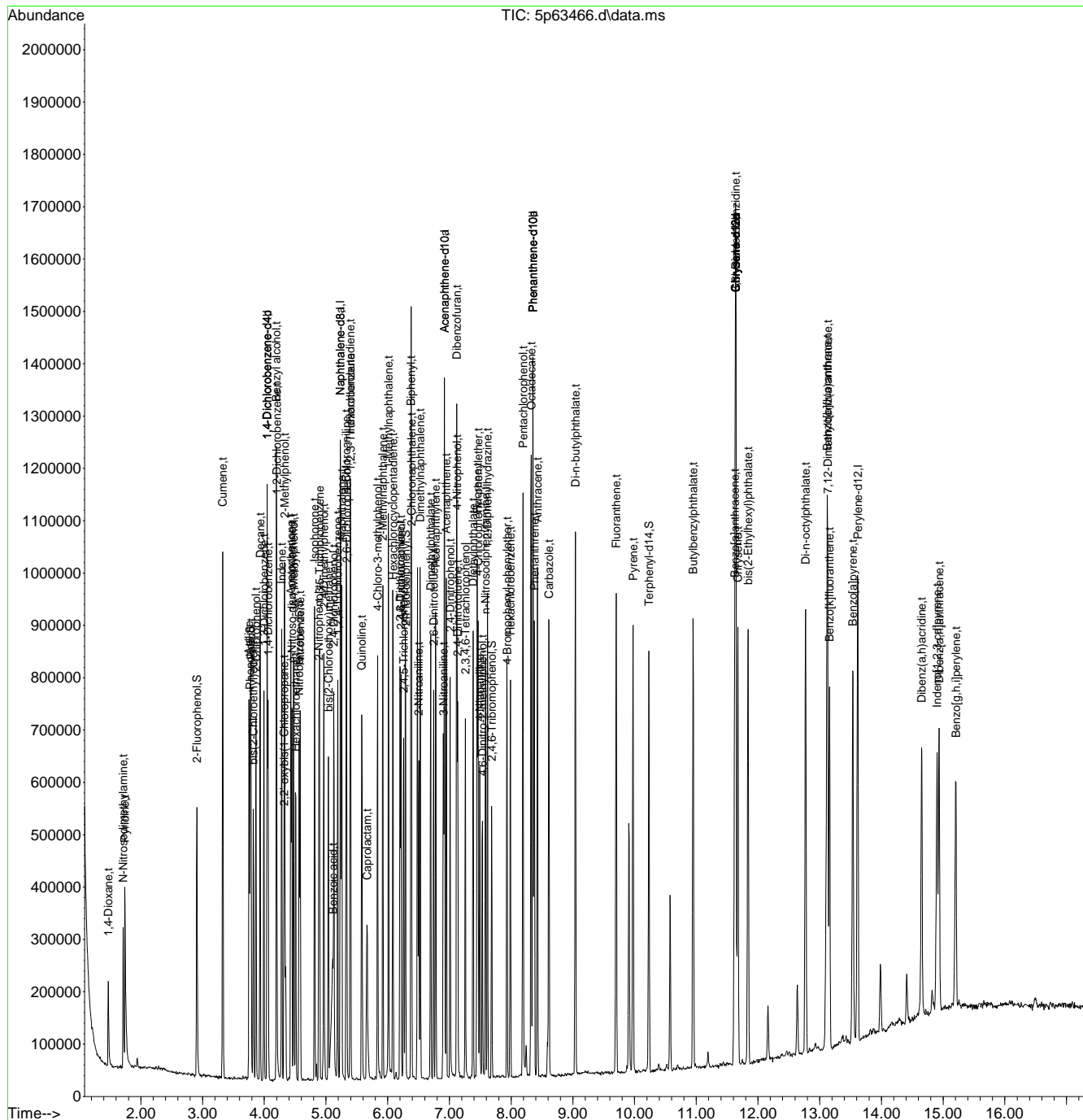


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\5p2978\  
 Data File : 5p63466.d  
 Acq On : 1 Oct 2019 1:41 pm  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,5p2978,1000,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 00:56:31 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:54:21 2019  
 Response via : Initial Calibration



9.6.38  
9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63467.d  
 Acq On : 1 Oct 2019 2:05 pm  
 Operator : hennys  
 Sample : cc2941-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 00:59:39 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:57:49 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.047	152	127281	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	446853	40.00	ppm	0.00
47) Acenaphthene-d10	6.916	164	253455	40.00	ppm	0.00
69) Phenanthrene-d10	8.353	188	463383	40.00	ppm	0.00
83) Chrysene-d12	11.633	240	420677	40.00	ppm	0.00
91) Perylene-d12	13.610	264	460469	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.047	152	127281	40.00	ppm	0.00
103) Acenaphthene-d10a	6.916	164	253455	40.00	ppm	0.00
105) Chrysene-d12a	11.633	240	420677	40.00	ppm	0.00
107) Phenanthrene-d10a	8.353	188	463383	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	446853	40.00	ppm	0.00
112) Chrysene-d12b	11.633	240	420633	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.047	152	127281	40.00	ppm	0.00
116) Chrysene-d12c	11.633	240	420677	40.00	ppm	0.00
118) Chrysene-d12d	11.633	240	420633	40.00	ppm	0.00
120) Phenanthrene-d10b	8.353	188	463323	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.646	105	110815	25.40	ppm	Qvalue 100
108) Atrazine	8.128	215	32684	29.40	ppm	100
109) Pentachloronitrobenzene	8.198	295	16990	26.09	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.39  
9

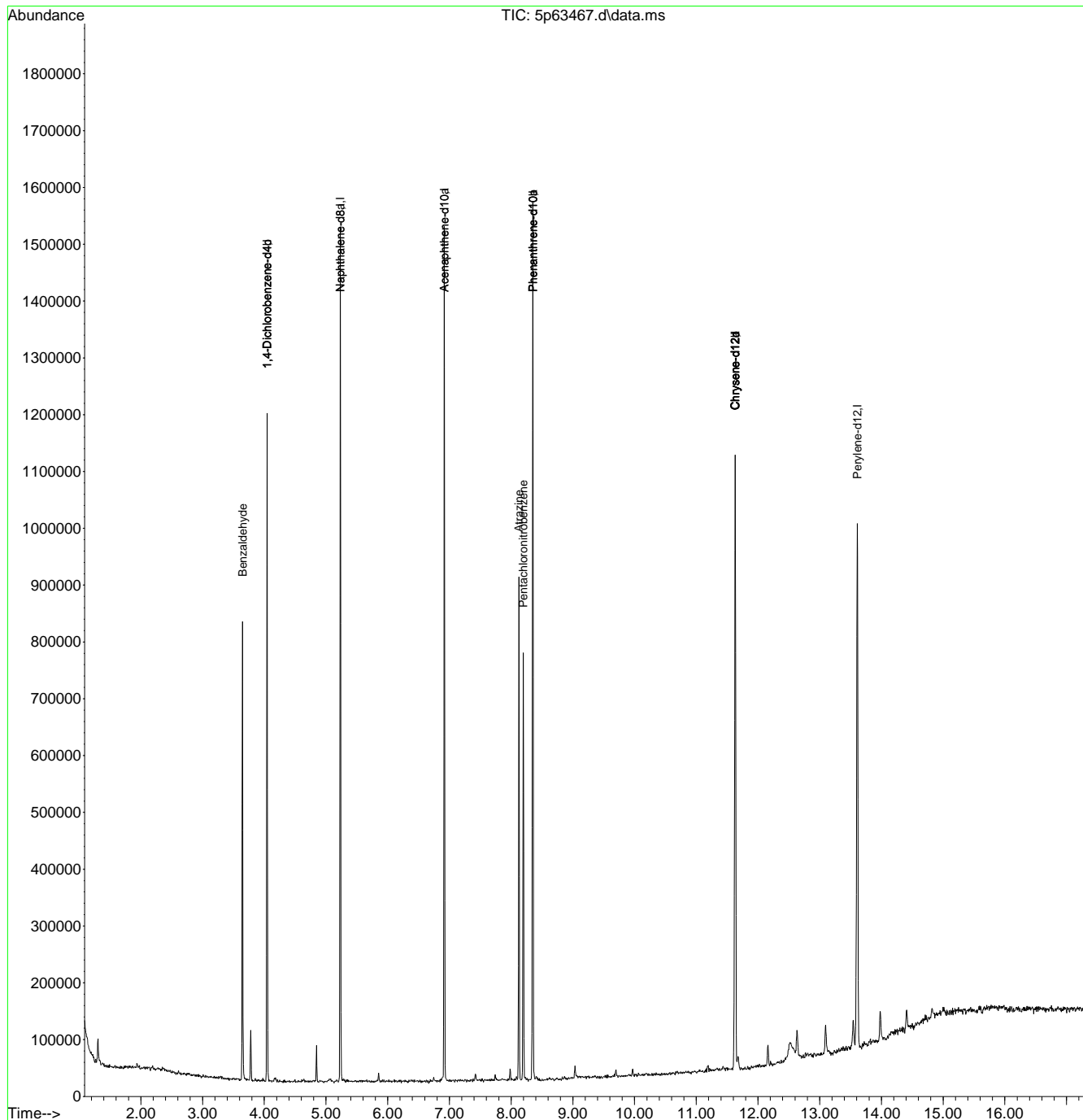


Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63467.d  
 Acq On : 1 Oct 2019 2:05 pm  
 Operator : hennys  
 Sample : cc2941-25  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Inst : MS5P

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 00:59:39 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 00:57:49 2019  
 Response via : Initial Calibration



9.6-39  
6

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63468.d  
 Acq On : 1 Oct 2019 2:30 pm  
 Operator : hennys  
 Sample : cc2942-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 01:02:03 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 01:00:37 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.047	152	112801	40.00	ppm	0.00
24) Naphthalene-d8	5.233	136	399441	40.00	ppm	0.00
47) Acenaphthene-d10	6.916	164	217420	40.00	ppm	0.00
69) Phenanthrene-d10	8.347	188	419433	40.00	ppm	0.00
83) Chrysene-d12	11.633	240	360081	40.00	ppm	0.00
91) Perylene-d12	13.610	264	412597	40.00	ppm	-0.01
101) 1,4-Dichlorobenzene-d4b	4.047	152	112801	40.00	ppm	0.00
103) Acenaphthene-d10a	6.916	164	217420	40.00	ppm	0.00
105) Chrysene-d12a	11.633	240	360081	40.00	ppm	0.00
107) Phenanthrene-d10a	8.347	188	419433	40.00	ppm	0.00
110) Naphthalene-d8a	5.233	136	399441	40.00	ppm	0.00
112) Chrysene-d12b	11.633	240	360081	40.00	ppm	0.00
114) 1,4-Dichlorobenzene-d4c	4.047	152	112801	40.00	ppm	0.00
116) Chrysene-d12c	11.633	240	360081	40.00	ppm	0.00
118) Chrysene-d12d	11.633	240	360081	40.00	ppm	0.00
120) Phenanthrene-d10b	8.347	188	419453	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	9.667	57	138502	31.79	ppm	0.00
Spiked Amount	50.000		Recovery	=	63.58%	
121) o-terphenyl	8.780	230	156737	28.71	ppm	0.00
Spiked Amount	50.000		Recovery	=	57.42%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.088	216	89317	27.26	ppm	Qvalue 100
111) Hydroquinone	5.698	110	106622	28.90	ppm	100
117) Benzidine	9.907	184	224261	30.54	ppm	100

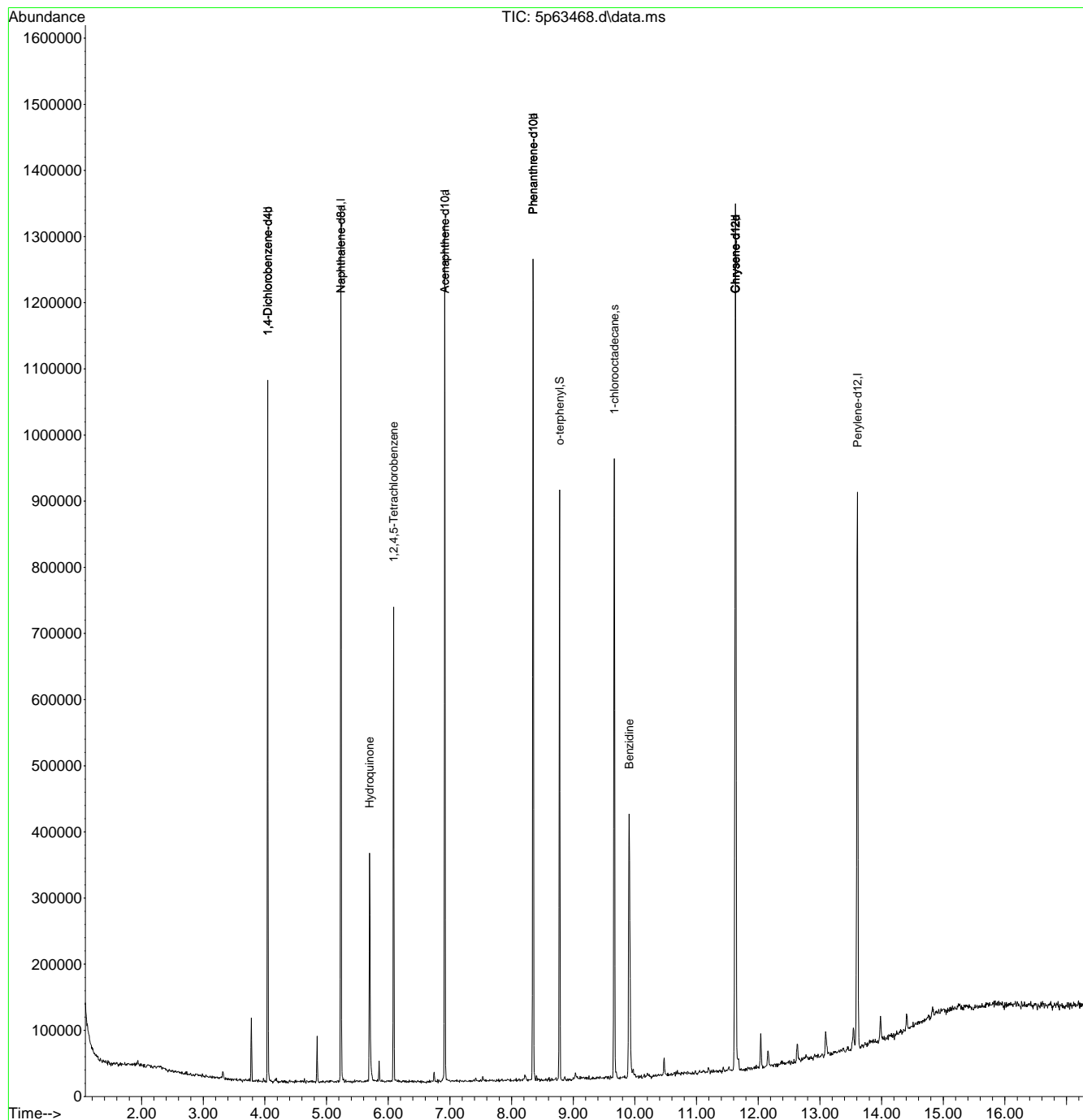
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.40  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\data\_aimeel\e5p2978\  
 Data File : 5p63468.d  
 Acq On : 1 Oct 2019 2:30 pm  
 Operator : hennys  
 Sample : cc2942-25 Inst : MS5P  
 Misc : op22049,e5p2978,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Results File: M5P2940.RES  
 Quant Time: Oct 02 01:02:03 2019  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Wed Oct 02 01:00:37 2019  
 Response via : Initial Calibration



9.6.40  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63669.D  
 Acq On : 7 Oct 2019 9:11 am  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 07 10:13:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) 1,4-Dichlorobenzene-d4	4.277	152	125595	40.00	ppm	-0.03
24) Naphthalene-d8	5.468	136	475773	40.00	ppm	-0.03
47) Acenaphthene-d10	7.161	164	274139	40.00	ppm	-0.03
69) Phenanthrene-d10	8.620	188	546748	40.00	ppm	-0.03
83) Chrysene-d12	11.996	240	468157	40.00	ppm	-0.04
91) Perylene-d12	13.999	264	553989	40.00	ppm	-0.03
101) 1,4-Dichlorobenzene-d4b	4.277	152	125595	40.00	ppm	-0.03
103) Acenaphthene-d10a	7.161	164	274139	40.00	ppm	-0.03
105) Chrysene-d12a	11.996	240	468157	40.00	ppm	-0.04
107) Phenanthrene-d10a	8.620	188	546748	40.00	ppm	-0.03
110) Naphthalene-d8a	5.468	136	475773	40.00	ppm	-0.03
112) Chrysene-d12b	11.996	240	468089	40.00	ppm	-0.04
114) 1,4-Dichlorobenzene-d4c	4.277	152	125595	40.00	ppm	-0.03
116) Chrysene-d12c	11.996	240	468157	40.00	ppm	-0.04
118) Chrysene-d12d	11.996	240	468089	40.00	ppm	-0.04
120) Phenanthrene-d10b	8.620	188	546725	40.00	ppm	-0.03
<b>System Monitoring Compounds</b>						
5) 2-Fluorophenol	3.133	112	113092	21.11	ppm	-0.03
Spiked Amount	50.000		Recovery	=	42.22%	
8) Phenol-d5	3.988	99	178509	23.68	ppm	-0.02
Spiked Amount	50.000		Recovery	=	47.36%	
25) Nitrobenzene-d5	4.795	82	187221	25.18	ppm	-0.03
Spiked Amount	50.000		Recovery	=	50.36%	
51) 2-Fluorobiphenyl	6.520	172	251551	23.19	ppm	-0.03
Spiked Amount	50.000		Recovery	=	46.38%	
73) 2,4,6-Tribromophenol	7.931	330	48170	21.88	ppm	-0.03
Spiked Amount	50.000		Recovery	=	43.76%	
85) Terphenyl-d14	10.554	244	320781	26.33	ppm	-0.03
Spiked Amount	50.000		Recovery	=	52.66%	
106) 1-chlorooctadecane	0.000	57	0d	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
<b>Target Compounds</b>						
2) 1,4-Dioxane	1.712	88	44154	16.14	ppm	83
3) Pyridine	1.985	79	129882	18.30	ppm	85
4) N-Nitrosodimethylamine	1.958	74	79189	19.52	ppm	75
6) Indene	4.512	116	200094	23.94	ppm	97
7) Cumene	3.561	105	328861	24.24	ppm	98
9) Phenol	3.999	94	196538	23.06	ppm	83
10) Aniline	3.983	93	201526	21.49	ppm	73
11) bis(2-Chloroethyl)ether	4.047	93	144951	23.89	ppm	98
12) 2-Chlorophenol	4.095	128	118676	23.23	ppm	97
13) Decane	4.154	43	182726	28.52	ppm	92
14) 1,3-Dichlorobenzene	4.223	146	121304	23.47	ppm	98
15) 1,4-Dichlorobenzene	4.293	146	117022	22.95	ppm	97
16) Benzyl alcohol	4.421	108	88342	25.15	ppm	83

9.6.41  
**9**

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63669.D  
 Acq On : 7 Oct 2019 9:11 am  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 07 10:13:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
17) 1,2-Dichlorobenzene	4.431	146	113963	23.90	ppm	97
18) Acetophenone	4.656	105	205945	25.03	ppm	89
19) 2-Methylphenol	4.544	108	121148	23.46	ppm	98
20) 2,2'-oxybis(1-Chloropr...	4.544	45	204337	28.25	ppm #	43
21) 3&4-Methylphenol	4.688	108	129490	24.87	ppm	99
22) n-Nitroso-di-n-propyla...	4.667	70	130617	26.94	ppm	88
23) Hexachloroethane	4.741	201	47862	25.15	ppm	96
26) Nitrobenzene	4.811	77	195652	24.99	ppm	91
27) Quinoline	5.820	129	250117	24.65	ppm	98
28) Isophorone	5.040	82	348775	26.36	ppm	95
29) 2-Nitrophenol	5.115	139	69891	23.92	ppm	86
30) 2,4-Dimethylphenol	5.185	107	140590	23.00	ppm	99
31) Benzoic acid	5.329	105	139869	29.62	ppm	85
32) bis(2-Chloroethoxy)met...	5.260	93	192922	24.44	ppm	98
33) 2,4-Dichlorophenol	5.356	162	97954	24.29	ppm	100
34) 2,6-Dichlorophenol	5.564	162	90070	24.00	ppm	95
35) 1,3,5-Trichlorobenzene	5.126	180	109227	23.92	ppm	99
36) 1,2,4-Trichlorobenzene	5.420	180	107899	23.87	ppm	97
37) 1,2,3-Trichlorobenzene	5.633	180	99342	23.17	ppm	97
38) Naphthalene	5.489	128	319550	23.33	ppm	99
39) 4-Chloroaniline	5.559	127	139386	21.80	ppm	91
40) 2,3-Dichloroaniline	6.435	161	124369	24.73	ppm	97
41) Caprolactam	5.901	55	95539	30.02	ppm	96
42) Hexachlorobutadiene	5.623	225	68054	24.47	ppm	99
43) 4-Chloro-3-methylphenol	6.061	107	144563	26.30	ppm	96
44) 2-Methylnaphthalene	6.157	141	185185	25.51	ppm	98
45) 1-Methylnaphthalene	6.248	141	210617	25.47	ppm	96
46) Dimethylnaphthalene	6.766	156	202245	24.61	ppm	99
48) Hexachlorocyclopentadiene	6.317	237	132704	42.87	ppm	98
49) 2,4,6-Trichlorophenol	6.451	196	75408	23.56	ppm	97
50) 2,4,5-Trichlorophenol	6.488	196	81928	23.78	ppm	92
52) 2-Chloronaphthalene	6.622	162	206711	22.85	ppm	95
53) Biphenyl	6.611	154	291991	23.97	ppm	99
54) 2-Nitroaniline	6.739	65	145257	29.27	ppm	85
55) Dimethylphthalate	6.926	163	268840	24.55	ppm	99
56) Acenaphthylene	7.022	152	356318	23.43	ppm	99
57) 2,6-Dinitrotoluene	6.980	165	59769	25.33	ppm	88
58) 3-Nitroaniline	7.140	138	71002	24.06	ppm	91
59) Acenaphthene	7.193	153	222914	24.07	ppm	98
60) 2,4-Dinitrophenol	7.252	184	81641	61.17	ppm	80
61) 4-Nitrophenol	7.348	109	59529	29.93	ppm	92
62) Dibenzofuran	7.359	168	309457	23.39	ppm	87
63) 2,4-Dinitrotoluene	7.375	165	78178	24.82	ppm	91
64) 2,3,4,6-Tetrachlorophenol	7.498	232	70969	25.18	ppm	96
65) Diethylphthalate	7.615	149	300931	25.30	ppm	98
66) Fluorene	7.690	166	266326	25.23	ppm	99
67) 4-Chlorophenyl-phenyle...	7.706	204	126864	24.28	ppm	99
68) 4-Nitroaniline	7.733	138	66113	21.96	ppm	74
70) 4,6-Dinitro-2-methylph...	7.776	198	53849	26.94	ppm	97
71) n-Nitrosodiphenylamine	7.824	169	191789	23.40	ppm	98

9.6.41  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63669.D  
 Acq On : 7 Oct 2019 9:11 am  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 07 10:13:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) 1,2-Diphenylhydrazine	7.856	77	397418	23.26	ppm	96
74) 4-Bromophenyl-phenylether	8.176	248	82913	23.47	ppm	98
75) Hexachlorobenzene	8.235	284	95984	22.20	ppm	84
76) Pentachlorophenol	8.444	266	119180	50.17	ppm	97
77) Phenanthrene	8.641	178	343919	22.67	ppm	99
78) Anthracene	8.695	178	366241	23.15	ppm	99
79) Carbazole	8.882	167	395565	24.05	ppm	99
80) Di-n-butylphthalate	9.314	149	553637	24.83	ppm	100
81) Fluoranthene	10.014	202	479229	24.97	ppm	96
82) Octadecane	8.561	57	266388	27.23	ppm	94
84) Pyrene	10.297	202	486859	24.81	ppm	99
86) Butylbenzylphthalate	11.275	149	265005	25.56	ppm	95
87) Benzo[a]anthracene	11.980	228	430418	24.09	ppm	98
88) 3,3'-Dichlorobenzidine	11.985	252	164161	22.23	ppm	98
89) Chrysene	12.034	228	405759	24.17	ppm	97
90) bis(2-Ethylhexyl)phtha...	12.162	149	340916	24.76	ppm	97
92) Di-n-octylphthalate	13.102	149	602199	25.95	ppm	93
93) Benzo[b]fluoranthene	13.497	252	455963	23.90	ppm	98
94) Benzo[k]fluoranthene	13.535	252	405636	24.20	ppm	99
95) Benzo[a]pyrene	13.919	252	409906	23.93	ppm	97
96) Indeno[1,2,3-cd]pyrene	15.324	276	366392m	23.30	ppm	
97) Dibenz(a,h)acridine	15.041	279	341610	23.10	ppm	100
98) Dibenz[a,h]anthracene	15.356	278	374773	23.40	ppm	97
99) 7,12-Dimethylbenz(a)an...	13.497	256	195715	22.79	ppm	95
100) Benzo[g,h,i]perylene	15.672	276	363071	22.78	ppm	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

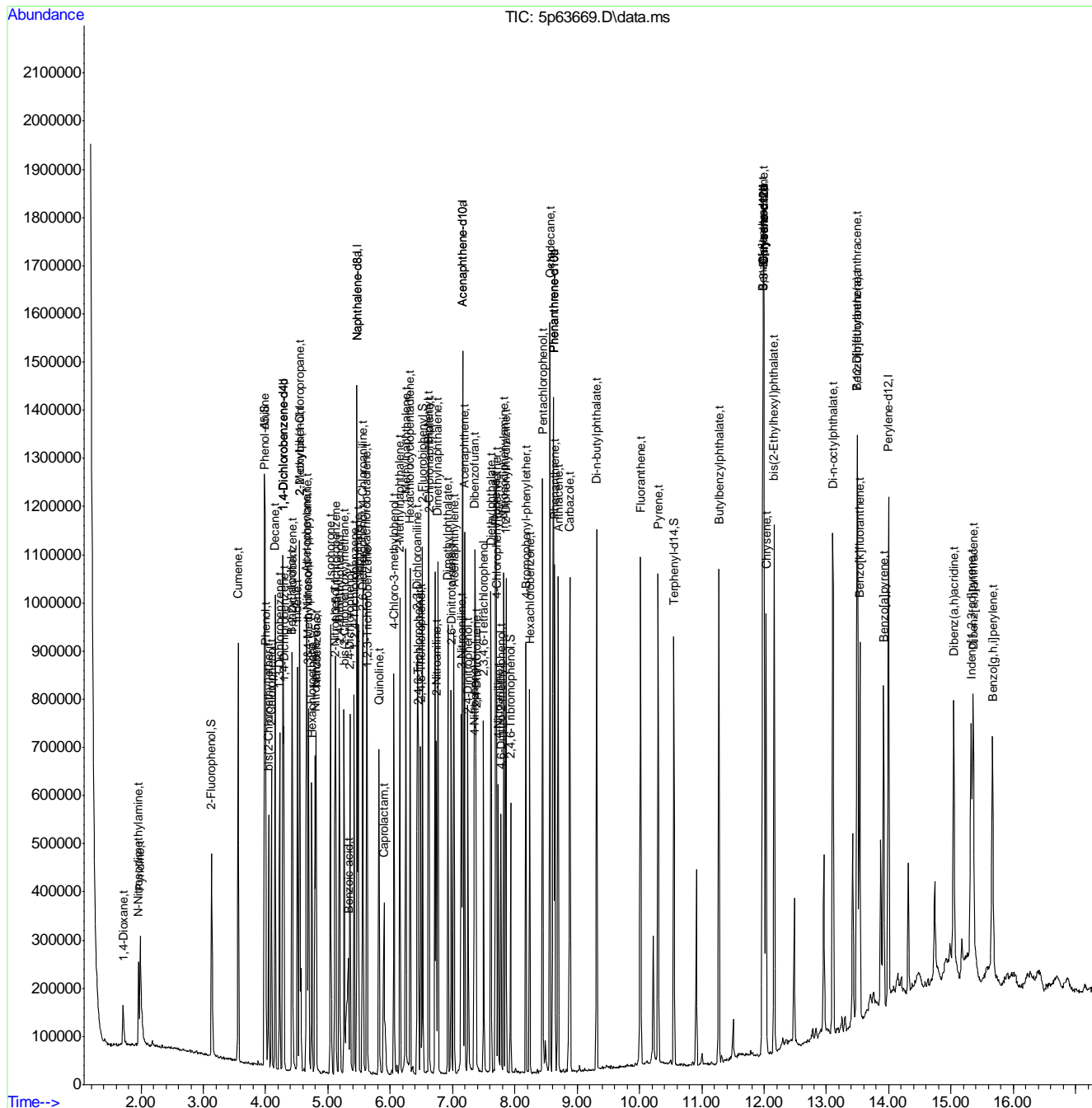
9.641  
9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63669.D  
 Acq On : 7 Oct 2019 9:11 am  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 07 10:13:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration



9.6/41  
9

# Manual Integration Approval Summary

Sample Number: E5P2987-CC2940      Method: SW846 8270D  
Lab FileID: 5P63669.D      Analyst approved: 10/07/19 10:22 Ying Li  
Injection Time: 10/07/19 09:11      Supervisor approved: 10/08/19 18:14 Kristi Schollenberger

Parameter	CAS	Sig#	R.T. (min.)	Reason
Indeno(1,2,3-cd)pyrene	193-39-5		15.32	Split peak

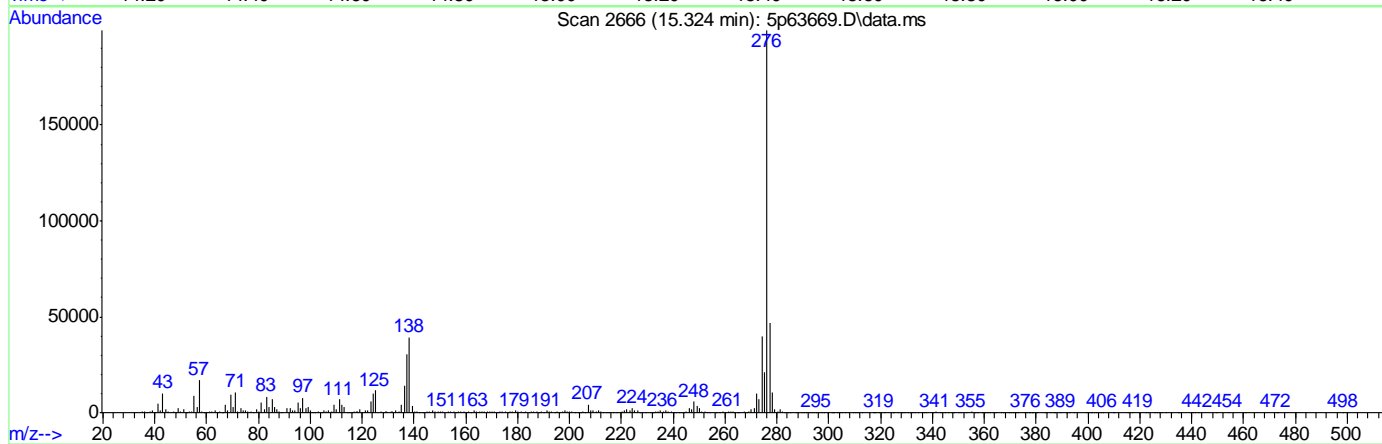
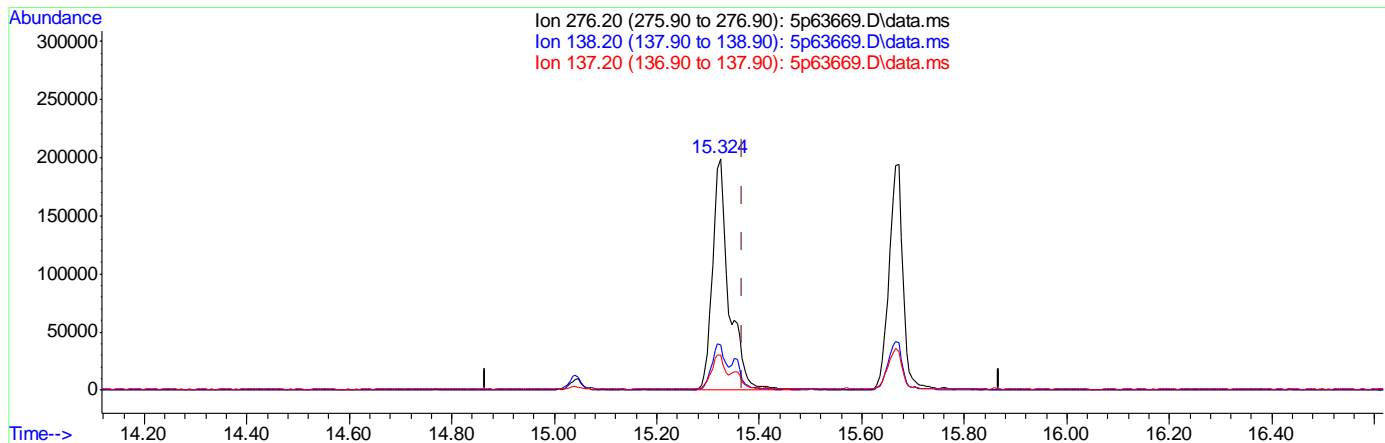
9.6.41.1

9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63669.D  
 Acq On : 7 Oct 2019 9:11 am  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 07 09:28:21 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration



(96) Indeno[1,2,3-cd]pyrene (t)

15.324min (-0.043) 28.51ppm

response 448304

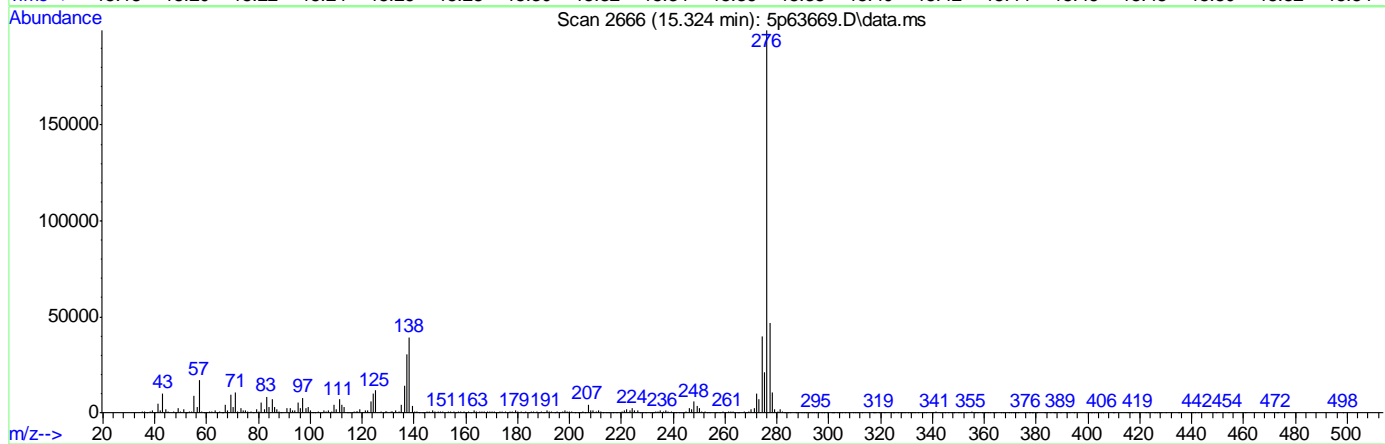
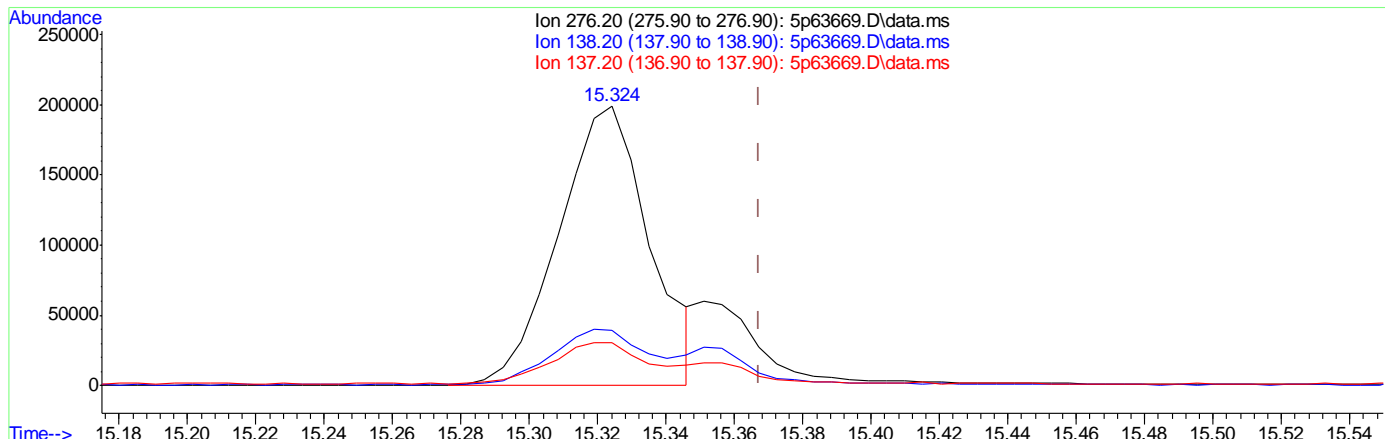
Ion	Exp%	Act%
276.20	100	100
138.20	20.90	19.45
137.20	14.20	14.73
0.00	0.00	0.00

9.6.41.2  
9

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63669.D  
 Acq On : 7 Oct 2019 9:11 am  
 Operator : hennys  
 Sample : cc2940-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 07 09:28:21 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration



(96) Indeno[1,2,3-cd]pyrene (t)

15.324min (-0.043) 23.30ppm m

response 366392

Ion	Exp%	Act%
276.20	100	100
138.20	20.90	19.72
137.20	14.20	15.33
0.00	0.00	0.00

9.6.41.3  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63670.D  
 Acq On : 7 Oct 2019 9:35 am  
 Operator : hennys  
 Sample : cc2941-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 10:14:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.277	152	104699	40.00	ppm	-0.03
24) Naphthalene-d8	5.468	136	405235	40.00	ppm	-0.03
47) Acenaphthene-d10	7.161	164	233503	40.00	ppm	-0.03
69) Phenanthrene-d10	8.614	188	446398	40.00	ppm	-0.03
83) Chrysene-d12	11.985	240	414976	40.00	ppm	-0.05
91) Perylene-d12	13.989	264	421332	40.00	ppm	-0.04
101) 1,4-Dichlorobenzene-d4b	4.277	152	104699	40.00	ppm	-0.03
103) Acenaphthene-d10a	7.161	164	233503	40.00	ppm	-0.03
105) Chrysene-d12a	11.985	240	414976	40.00	ppm	-0.05
107) Phenanthrene-d10a	8.614	188	446398	40.00	ppm	-0.03
110) Naphthalene-d8a	5.468	136	405235	40.00	ppm	-0.03
112) Chrysene-d12b	11.985	240	414950	40.00	ppm	-0.05
114) 1,4-Dichlorobenzene-d4c	4.277	152	104699	40.00	ppm	-0.03
116) Chrysene-d12c	11.985	240	414976	40.00	ppm	-0.05
118) Chrysene-d12d	11.985	240	414950	40.00	ppm	-0.05
120) Phenanthrene-d10b	8.614	188	446398	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	0.000	57	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
121) o-terphenyl	0.000	230	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
Target Compounds						
102) Benzaldehyde	3.876	105	89688	24.99	ppm	89
108) Atrazine	8.363	215	33691	31.46	ppm	# 79
109) Pentachloronitrobenzene	8.454	295	16426	26.18	ppm	87

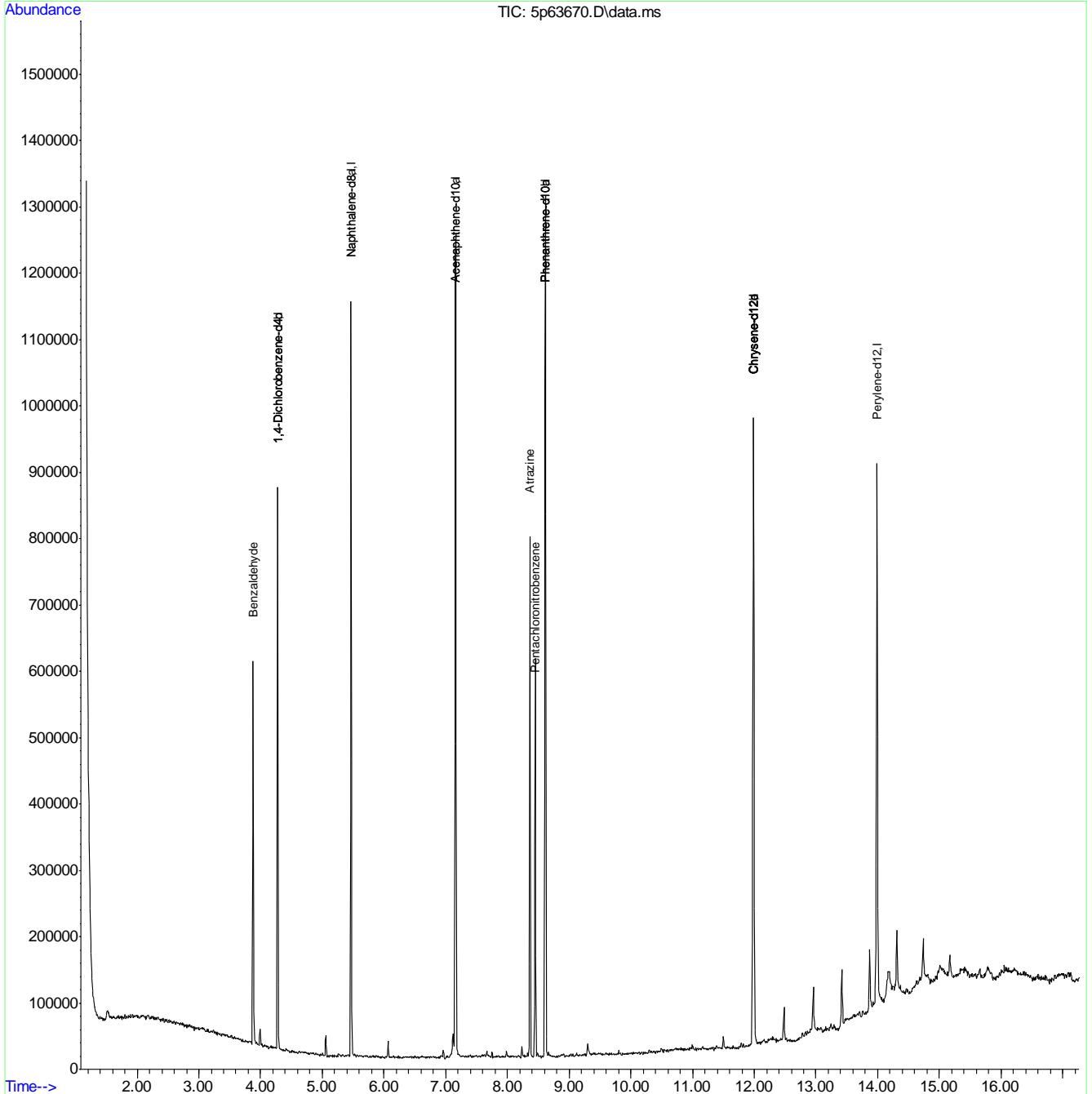
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.42  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63670.D  
 Acq On : 7 Oct 2019 9:35 am  
 Operator : hennys  
 Sample : cc2941-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 10:14:18 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration



9.6.42  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63671.D  
 Acq On : 7 Oct 2019 10:00 am  
 Operator : hennys  
 Sample : cc2942-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 07 10:21:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	4.277	152	134850	40.00	ppm	-0.03
24) Naphthalene-d8	5.468	136	483339	40.00	ppm	-0.03
47) Acenaphthene-d10	7.161	164	268853	40.00	ppm	-0.03
69) Phenanthrene-d10	8.615	188	550072	40.00	ppm	-0.03
83) Chrysene-d12	11.991	240	477363	40.00	ppm	-0.04
91) Perylene-d12	13.994	264	584843	40.00	ppm	-0.04
101) 1,4-Dichlorobenzene-d4b	4.277	152	134850	40.00	ppm	-0.03
103) Acenaphthene-d10a	7.161	164	268853	40.00	ppm	-0.03
105) Chrysene-d12a	11.991	240	477363	40.00	ppm	-0.04
107) Phenanthrene-d10a	8.615	188	550072	40.00	ppm	-0.03
110) Naphthalene-d8a	5.468	136	483339	40.00	ppm	-0.03
112) Chrysene-d12b	11.991	240	477363	40.00	ppm	-0.04
114) 1,4-Dichlorobenzene-d4c	4.277	152	134850	40.00	ppm	-0.03
116) Chrysene-d12c	11.991	240	477363	40.00	ppm	-0.04
118) Chrysene-d12d	11.991	240	477363	40.00	ppm	-0.04
120) Phenanthrene-d10b	8.615	188	550072	40.00	ppm	-0.03
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
8) Phenol-d5	0.000	99	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
25) Nitrobenzene-d5	0.000	82	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
51) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
73) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
85) Terphenyl-d14	0.000	244	0	0.00	ppm	
Spiked Amount	50.000		Recovery	=	0.00%	
106) 1-chlorooctadecane	9.955	57	193019	33.42	ppm	-0.06
Spiked Amount	50.000		Recovery	=	66.84%	
121) o-terphenyl	9.053	230	213494	29.82	ppm	0.21
Spiked Amount	50.000		Recovery	=	59.64%	
Target Compounds						
104) 1,2,4,5-Tetrachloroben...	6.323	216	107087	26.43	ppm	97
111) Hydroquinone	5.922	110	147334	33.00	ppm	89
117) Benzidine	10.223	184	288183	29.60	ppm	98

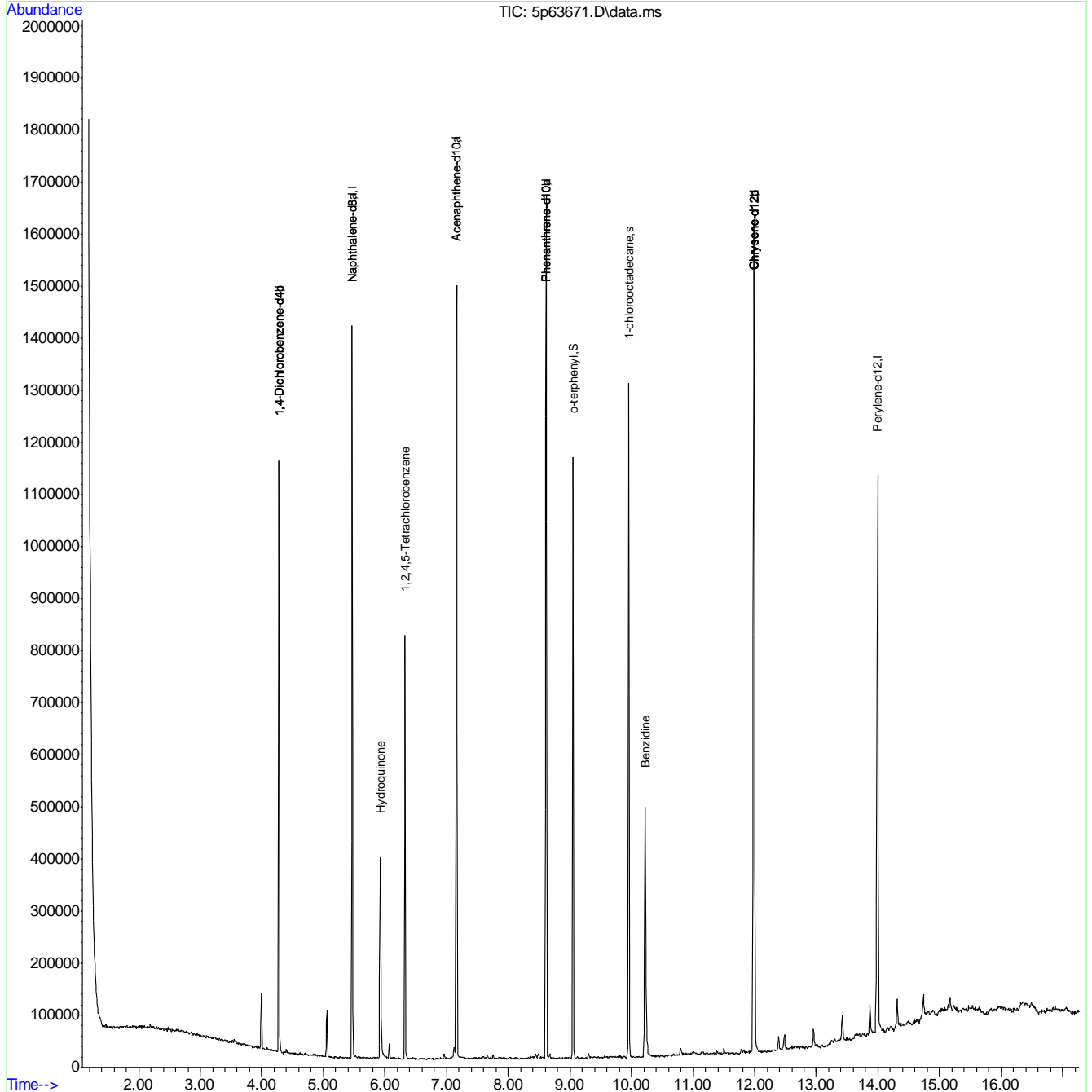
(#) = qualifier out of range (m) = manual integration (+) = signals summed

9.6.43  
9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\E5P2987\  
 Data File : 5p63671.D  
 Acq On : 7 Oct 2019 10:00 am  
 Operator : hennys  
 Sample : cc2942-25  
 Misc : op22049,e5p2987,1000,,,1,1  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 07 10:21:01 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\M5P2940.M  
 Quant Title : Semi Volatile GC/MS, zb-5msi 30mx .25mmx .25um  
 QLast Update : Fri Oct 04 14:36:57 2019  
 Response via : Initial Calibration



9.6.43  
**9**



GCMS Semi Volatile Run Log **SGS - Dayton** Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
bnA	sv192604-38a	100ppm	DCM-fisher	195025	---
bnA	sv192604-38b	80ppm	bnA	sv192604-38i	1ppm
bnA	sv192604-38c	50ppm	bn1	sv192397-56	50ppm
bnA	sv192604-38d	25ppm	bn2	sv192397-55	50ppm
bnA	sv192604-38e	10ppm	aniline	sv192573-33	50ppm
bnA	sv192604-38g	5ppm	acid	op192336-136	50ppm
bnA	sv192604-38h	2ppm	abnsurr	op192397-22	50ppm

<b>Run Batch:</b> E5P2940	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> hennys
<b>Date:</b> 9/6/2019	<b>Reference Method:</b> 8270d/625.1	<b>Data Processed By:</b> ying li
<b>Column:</b> Rxi 5 SII MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b> ninap
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b> 09/09/19

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baselin BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	Surr OK?	IS OK?	Run OK?	Comment
5P 62556	1			TEST-1PPM		bnA						not using	
5P 62557	1			DFTPP								ok	11:53am
5P 62558	2			IC2940-100		bnA						ok	**file # 5p62559-62564 skipped accidentally
5P 62565	3			IC2940-1		bnA						ok	
5P 62566	4			IC2940-80		bnA						ok	
5P 62567	5			ICC2940-50		bnA						ok	
5P 62568	6			IC2940-25		bnA						ok	
5P 62569	7			IC2940-10		bnA						ok	

## GCMS Semi Volatile Run Log

Data File	A L S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 62570	8	IC2940-5		bnA							ok	
5P 62571	9	IC2940-2		bnA							ok	
5P 62572	10	ICV2940-50		bn1							ng	rr
5P 62573	11	ICV2940-50		bn2							ng	rr
5P 62574	12	ICV2940-50		aniline							ok	
5P 62575	13	ICV2940-50		acid							ng	rr
5P 62576	14	ICV2940-50		abn surr							ng	rr
5P 62577	15	ICV2940-50		bzd 3rd							ng	rr sv192573-25 7:14pm

GCMS Semi Volatile Run Log **SGS - Dayton** Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
tcl42	sv192573-100a	100ppm	DCM-fisher	195025	---
tcl42	sv192573-100b	80ppm	tcl42	sv192573-100i	1ppm
tcl42	sv192573-100c	50ppm	ap9mix#2	sv192573-68	50ppm
tcl42	sv192573-100d	25ppm			
tcl42	sv192573-100e	10ppm			
tcl42	sv192573-100g	5ppm			
tcl42	sv192573-100h	2ppm			

<b>Run Batch:</b> E5P2941	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> hennys
<b>Date:</b> 9/6/2019	<b>Reference Method:</b> 8270d/625.1	<b>Data Processed By:</b> ying li
<b>Column:</b> Rxi 5 SII MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b> ninap
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b> 09/09/19

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baselin BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	Surr OK?	IS OK?	Run OK?	Comment
5P 62578	1			DFTPP								ok	7:35pm
5P 62579	16			IC2941-100		tcl42						ok	
5P 62580	17			IC2941-80		tcl42						ok	
5P 62581	18			IC2941-50		tcl42						ok	
5P 62582	19			IC2941-20		tcl42						ok	
5P 62583	20			IC2941-10		tcl42						ok	
5P 62584	21			IC2941-5		tcl42						ok	
5P 62585	22			IC2941-2		tcl42						ok	

### GCMS Semi Volatile Run Log

Data File	A L S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 62586	23	IC2941-1		tci42							ok	
5P 62587	24	ICV2941-50		ap9mix#2							ok	11:02pm

GCMS Semi Volatile Run Log **SGS - Dayton** Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
bzd	sv192573-101a	100ppm	DCM-fisher	195025	---
bzd	sv192573-101b	80ppm	bzd	sv192573-101i	1ppm
bzd	sv192573-101c	50ppm	ap9 mix#2	sv192573-68	50ppm
bzd	sv192573-101d	25ppm	hq 2nd	op192336-131	50ppm
bzd	sv192573-101e	10ppm	bzd 3rd	sv192573-25	50ppm
bzd	sv192573-101g	5ppm			
bzd	sv192573-101h	2ppm			

<b>Run Batch:</b> E5P2942	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> hennys
<b>Date:</b> 9/6/2019	<b>Reference Method:</b> 8270d/625.1	<b>Data Processed By:</b> ying li
<b>Column:</b> Rxi 5 SII MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b> ninap
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b> 09/09/19

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baselin BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 62588	1			DFTPP									ok	11:22pm
5P 62589	25			IC2942-100		bzd							ok	
5P 62590	26			IC2942-80		bzd							ok	
5P 62591	27			IC2942-50		bzd							ok	
5P 62592	28			IC2942-25		bzd							ok	
5P 62593	29			IC2942-10		bzd							ok	
5P 62594	30			IC2942-5		bzd							ok	
5P 62595	31			IC2942-2		bzd							ok	

## GCMS Semi Volatile Run Log

Data File	A L S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 62596	32	ICV2942-1		bzd							ok	
5P 62597	24	ICV2942-50		ap9 mix#2							ok	
5P 62598	33	ICV2942-50		hq 2hd							ok	
5P 62599	34	ICV2942-50		bzd 3rd							ok	3:35am

Instrument ID: GCMS5P

SGS - Dayton

GCMS Semi Volatile Run Log

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
			DCM-fisher	195025	---
			bn1	sv192397-56	50ppm
			bn2	sv192397-55	50ppm
			abnsurr	op19-2397-57	50ppm
			acid	op192397-60	50ppm
			bzd 3rd source	sv19-2573-25	50ppm

<b>Run Batch:</b> ESP2943	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> hennys
<b>Date:</b> 9/9/2019	<b>Reference Method:</b> 8270d/625.1	<b>Data Processed By:</b> ying li
<b>Column:</b> Rxi 5 SII MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b>
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b>

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baselin BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	Surr OK?	L+	IS OK?	Run OK?	Comment
5P 62600	1			DFTPP									ng	442 high reinject
5P 62601	1			DFTPP									ok	10:27am
5P 62602	2			ICV2940-50									ok	
5P 62603	3			ICV2940-50									ok	not good for DOD
5P 62604	4			ICV2940-50									ok	not good for DOD and benzoic acid fall
5P 62605	5			ICV2940-50									ok	
5P 62606	6			ICV2940-50									ok	12:17pm

GCMS Semi Volatile Run Log

SGS - Dayton

Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
bona	sv192604-43a	50ppm	DCM-fisher	195024	---
tcl42	sv192604-35a	50ppm			
bzd	sv192604-33a	50ppm			
bona verif	sv192604-43q	1ppm			

<b>Run Batch:</b> E5P2977	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> chriss2
<b>Date:</b> 10/1/2019	<b>Reference Method:</b> 8270D/625	<b>Data Processed By:</b> ying li
<b>Column:</b> Rxi 5 Sil MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b>
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b>

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baseline BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP	Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	Surr OK?	IS OK?	Run OK?	Comment
5P 63433				DFTPP									ok	12:36am
5P 63434				CC2940-50									ok	
5P 63435				CC2941-50									ok	
5P 63436				CC2942-50									ok	
5P 63437				BNA VERIF-1PPM									ok	
5P 63438				OP23015-MB1		OP23015	AB8270PPL+				X	Y	ok	
5P 63439				OP23015-BS1		OP23015	AB8270PPL+				X	Y	ok	
5P 63440				JC95509-6		OP23015	AB8270TCL20					Y	ok	



GCMS Semi Volatile Run Log

Data File	A L S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
63441	9	JC95595-1	OP23015	AB8270TCL20	SO				y	y	ok	
63442	10	JC95613-1	OP23015	B8270TCL20+	SO			X	y	y	ok	
63443	11	JC95613-2	OP23015	B8270TCL20+	SO			X	y	y	ok	
63444	12	JC95623-1	OP23015	B8270SL	SO				y	y	ok	
63445	13	JC95623-3	OP23015	B8270SL	SO		pll		y	y	ok	
63446	14	JC95516-1	OP23015	AB8270PPL+	SO			X	y	y	ok	
63447	15	JC95516-2	OP23015	AB8270PPL+	SO		pll	X	y	y	ok	
63448	16	JC95509-4	OP23015	AB8270TCL20	SO		pll		y	y	ok/r	rr 2x dl
63449	17	JC95555-4	OP23015	AB8270TCL20	SO		pll		y	y	ok	
63450	18	JC95509-3	OP23015	AB8270TCL20	SO		pll		y	y	ok	
63451	19	JC95509-7	OP23015	AB8270TCL20	SO		pll		y	y	ok	
63452	20	JC95555-2	OP23015	AB8270TCL20	SO				y	y	ok/r	rr 2x dl
63453	21	JC95509-8	OP23015	AB8270TCL20	SO		pll		y	y	ok	
63454	22	JC95509-5	OP23015	AB8270TCL20	SO				y	y	ok	
63455	23	JC95623-2	OP23015	B8270SL	SO				y	y	ok	
63456	24	OP23015-MS	OP23015	AB8270PPL+	SO			X	y	y	ok	
63457	25	OP23015-MSD	OP23015	AB8270PPL+	SO			X	y	y	ok	
63458	26	JC95509-2	OP23015	AB8270TCL20	SO				y	y	ok	
63459	27	JC95555-1	OP23015	AB8270TCL20	SO	5	pll		y	y	ok/dl	diluted for visc. Rr 200x

## GCMS Semi Volatile Run Log

Data File	AL S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 63460	28	JC95555-3	OP23015	AB8270TCL20	SO	5	pll		H	2 low	ok/dl	diluted for visc. Rr 200x
5P 63461	29	JC95629-1	OP23015	B8270PAH	SO	5			y	y	ok/r	diluted for visc. Rr 5x c/o
5P 63462	30	JC95509-4	OP23015	AB8270TCL20	SO	2			y	y	ok	12:15pm
5P 63463	31	JC95555-2	OP23015	AB8270TCL20	SO	2					not run	cut from sequence

GCMS Semi Volatile Run Log **SGS - Dayton** Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
bn	sv192604-43g	25ppm	DCM-fisher	195024	---
tlc42	sv192604-35d	25ppm			
bzd	sv192604-33d	25ppm			

<b>Run Batch:</b> E5P2978	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> hennys
<b>Date:</b> 10/1/2019	<b>Reference Method:</b> 8270d/625.1	<b>Data Processed By:</b> aimeel
<b>Column:</b> Rxi 5 Sil MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b>
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b>

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baselin BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP	Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	Surr OK?	L+	IS OK?	Run OK?	Comment
5P 63464	1			DFTPP										ng	441 high, re-inject
5P 63465	1			DFTPP										ok	1.27 pm
5P 63466	2			CC2940-25			bn							ok	High 61
5P 63467	3			CC2941-25			tlc42							ok	
5P 63468	4			CC2942-25			bzd							ok	High 106,117
5P 63469	5			OP23047-MB1		OP23047	AB8270NJTCL20+				X	Y	Y	ok	
5P 63470	6			OP23047-BS1		OP23047	AB8270NJTCL20+				X	Y	Y	ok	
5P 63471	7			JC95725-4		OP23047	AB8270RCP					X	Y	N	Surrout #5,8,73

GCMS Semi Volatile Run Log

Data File	A L S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 63472	8	JC95725-5	OP23047	AB8270RCP	AQ				y	y	ok	
5P 63473	9	JC95745-5	OP23047	AB8270SL	AQ				y	y	ok	
5P 63474	10	JC95745-6	OP23047	AB8270SL	AQ				y	y	ok	
5P 63475	11	JC95745-7	OP23047	AB8270SL	AQ				y	y	ok	
5P 63476	12	JC95745-8	OP23047	AB8270SL	AQ				y	y	ok	
5P 63477	13	JC95745-9	OP23047	AB8270SL	AQ				y	y	N	Needs Dilution
5P 63478	14	JC95745-10	OP23047	AB8270SL	AQ		pii		y	x	N	ISTD 2 out/Needs Dilution
5P 63479	15	JC95745-12	OP23047	AB8270SL	AQ				y	y	ok	
5P 63480	16	JC95778-1	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63481	17	JC95778-2	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63482	18	JC95778-3	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63483	19	JC95778-4	OP23047	B8270NAP+2MINAP	AQ			X	y	y	N	Needs Dilution
5P 63484	20	JC95778-5	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63485	21	JC95778-6	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63486	22	JC95778-7	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63487	23	JC95778-8	OP23047	B8270NAP+2MINAP	AQ			X	y	y	ok	
5P 63488	24	JC95817-1	OP23047	AB8270NJTCL20+	AQ			X	x	y	N	Surflow #85
5P 63489	25	JC95745-11	OP23047	AB8270SL	AQ		pii		y	x	N	ISTD 2 out/Needs Dilution
5P 63490	26	OP23047-MS	OP23047	AB8270NJTCL20+	AQ			X	y	y	ok	

### GCMS Semi Volatile Run Log

Data File	ALS	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 63491	27	OP23047-MSD	OP23047	AB8270NJTCL20+	AQ			X	Y	Y	ok	
5P 63492	28	JC955555-1	OP23015	AB8270TCL20	SO	200			Y	Y	ok	fv=5
5P 63493	29	JC955555-2	OP23015	AB8270TCL20	SO	2			Y	Y	ok	
5P 63494	30	JC955555-3	OP23015	AB8270TCL20	SO	200			Y	Y	ok	fv=5 1:01am
5P 63495	31	JC95629-1	OP23015	B8270PAH	SO	5	pii		Y	Y	RR	dlin due to visc. fv=5/ outside clocktime/ missing %solid

GCMS Semi Volatile Run Log **SGS - Dayton** Instrument ID: GCMS5P

Standard / Reagent	Lot #	Concentration	Standard / Reagent	Lot #	Concentration
DFTPP	sv192604-32	50ppm	ISTD	CL13615	4000ppm
bona	sv192604-43h	25ppm	DCM-fisher	195024	---
tcl42	sv192604-56c	25ppm			
bzd	sv192604-33d	25ppm			
bona	sv192604-43o	1ppm			

<b>Run Batch:</b> E5P2987	<b>ACQ. Method:</b> m5p2940	<b>Sequence Loaded By:</b> hennys
<b>Date:</b> 10/7/2019	<b>Reference Method:</b> 8270d/625.1	<b>Data Processed By:</b> ying li
<b>Column:</b> Rxi 5 Sil MS 30m x 0.25 mm x 0.25um	<b>Quant Methods:</b> m5p2940	<b>Approved By:</b> ninap
<b>Injection Volume:</b> 1 uL	<b>Initial Calib Date:</b> 9/6/19	<b>Approved Date:</b> 10/08/19

MP Missed Peak, OP Overlapping Peak SP Split Peak, PDB Poorly Defined Baselin BR Baseline Ripple PII Poor Instrument Integration

Data File	A	L	S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	Surr OK?	L+	IS OK?	Run OK?	Comment
5P 63668	1			DFTPP									ok	8:57am
5P 63669	2			CC2940-25				sp					ok	2 3 4 low
5P 63670	3			CC2941-25									ok	
5P 63671	4			CC2942-25									ok	
5P 63672	5			1PPM BNA VEF									ok	
5P 63673	6			ACID OP192397-84									ok	
5P 63674	7			OP23114-MB1	OP23114	AB8270ANILINE							ok	
5P 63675	8			JC95950-12	OP23114	B8270NSDIPAMINE							ok	

GCMS Semi Volatile Run Log

Data File	A L S	Sample ID	OP Batch ID	Test / Method	MTX	DF	Manually Integrated Peaks Rational Peak #	L+	Surr OK?	IS OK?	Run OK?	Comment
5P 63676	9	JC95950-2	OP23114	B8270ANILINE	AQ				y	y	ok	
5P 63677	10	JC95950-17	OP23114	B8270NJTCL20+	AQ		pll	X	y	y	ok	
5P 63678	11	JC95950-3	OP23114	B8270NJTCL20+	AQ		pll/op	X	y	34low	ok/r	rr 5x
5P 63679	12	JC95950-8	OP23114	B8270NSDIPAMINE	AQ		pll		6low	y	ok	dl 20x/200x
5P 63680	13	JC95950-9	OP23114	B8270NSDIPAMINE	AQ		pll		y	y	ok/r	rr 1x c/o
5P 63681	14	JC95950-13	OP23114	B8270NSDIPAMINE	AQ		pll		y	y	ok	
5P 63682	15	JC95950-5	OP23114	B8270NSDIPAMINE	AQ		pll		y	y	ok	dl 10x
5P 63683	16	JC95950-6	OP23114	B8270NSDIPAMINE	AQ		pll		all low	y	ok	dl 20x
5P 63684	17	JC95555-3	OP23015	AB8270TCL20	SO	2000	pll/op		n	y	ok	run after 5p63676
5P 63685	18	JC95950-8	OP23114	B8270NSDIPAMINE	AQ	20			y	y	ok	
5P 63686	19	JC95950-8	OP23114	B8270NSDIPAMINE	AQ	200			n	y	ok	
5P 63687	20	JC95950-5	OP23114	B8270NSDIPAMINE	AQ	10	pll		y	y	ok	
5P 63688	21	JC95950-6	OP23114	B8270NSDIPAMINE	AQ	20			low	y	ok	rx
5P 63689	13	JC95950-9	OP23114	B8270NSDIPAMINE	AQ				y	y	ok	
5P 63690	11	JC95950-3CFI	OP23114	B8270NJTCL20+	AQ		pll	X	y	34low	ok	5:56pm

LOGBOOK ID: 9-2443

ABN Extraction Log - Solids

Extract Method (CHECK OFF "✓" /DO NOT CIRCLE):  
Microwave SW3546 ✓  
Sonication SW3590C  
Waste Dil. SW3580A

Date started: 09/22/19 Time started: 2245  
Date finished: 09/26/19 Time finished: 0715

BATCH #	MS 0223015	RACK#	P-46
Weighted by:	CC		
Extracted by:	CC/INT		
Concentrated by:	INT		
Final Vol. Top-up:			
Supervisor Review:	M.T 09/28/19		
Equipment/Range	ID	Observed Temp (°C)	Corrected Temp (°C)
Buch (65-71°C)			
Buch Chiller			
Waterbath (70-80°C)	11	74.0	-1.0
Workshop Chiller (8PM)	14	4	-
NEVAF (02-38°C, LPM)	2	35.1	-
Balance	BS3	N/A	N/A
SURROGATE	LOT#	CONC (ppm)	AMT (mL)
ABN	192397-69	50	1.0
ABN DOD SIM			
WITNESS SIGN	CC	SPIKE SIGN	N/T
MATRIX SPIKE	LOT#	CONC (ppm)	AMT (mL)
Acid	192397-60	50	1.0
Acid (for SIM)			
Base #1	192397-71	50	1.0
Base #2	192397-72	50	1.0
Aniline	192397-67	50	1.0
BSDM			
WITNESS SIGN	CC	SPIKE SIGN	N/T
SOLVENT	LOT#	BRAND	AMT (mL)
1:1 METH CHLOR/ACETONE	194269	Fisher	30.0
METH CHLOR	LOT#	BAKE BATCH #	BRAND
REAGENT	6386022	Q-10-19	Agilent
HYDROMATRIX	190162	Q-20-19	Fisher
SODIUM SULFATE	10936442		
FILTER PAPER	LOT#	BAKE BATCH #	BRAND
MATRIX	94618041117A	17-19	Fisher
SAND			

Sample #	Analysis Type	Sample Description	Sample Wt. (g)	Sample Vol. (mL)	Final Extract Vol. (mL)	Dessat		Microwave Sonicator ID	Color	Comments
						Y	N			
1	MB1	SAND	30.0	1.0	1.0			15	BROWN	
2	BS1	SAND	30.0	1.0	1.0			15	BROWN	
3	MSD	SOIL	30.4	1.0	1.0			15	BROWN	
4	BS	SOIL	30.4	1.0	1.0			15	BROWN	
5	MS	SOIL	30.2	1.0	1.0			15	BROWN	
6	MSD	SOIL	30.1	1.0	1.0			15	BROWN	
7	MS	SOIL	30.3	1.0	1.0			15	BROWN	
8	MSD	SOIL	30.4	1.0	1.0			15	BROWN	
9	MS	SOIL	30.2	1.0	1.0			15	BROWN	
10	MSD	SOIL	30.5	1.0	1.0			15	BROWN	
11	MS	SOIL	30.0	1.0	1.0			15	BROWN	
12	MSD	SOIL	30.5	1.0	1.0			15	BROWN	
13	MS	SOIL	30.6	1.0	1.0			15	BROWN	
14	MSD	SOIL	30.9	1.0	1.0			15	BROWN	
15	MS	SOIL	30.5	1.0	1.0			15	BROWN	
16	MSD	SOIL	30.5	1.0	1.0			15	BROWN	
17	MS	SOIL	30.8	1.0	1.0			15	BROWN	
18	MSD	SOIL	30.9	1.0	1.0			15	BROWN	
19	MS	SOIL	30.5	1.0	1.0			15	BROWN	
20	MSD	SOIL	30.5	1.0	1.0			15	BROWN	

Comments:  
 X L&L N/A/MS/MS  
 \* Visited at 5:00, would not concentrate 1.0

**Special Client Spike Instructions**

QC ID# for Special Spike	Spike ID	Lot #	Conc.	Amt. Spiked

WITNESS SIGN: \_\_\_\_\_ SPIKE SIGN: \_\_\_\_\_  
 Manager/Supervisor/Team Lead Approval: \_\_\_\_\_

**SPECIAL PROCESSING INSTRUCTIONS**

Rx Reason: \_\_\_\_\_

Spiking: \_\_\_\_\_

Weights/Volumes: \_\_\_\_\_

Required MS/MSD: \_\_\_\_\_

Final Volume: \_\_\_\_\_

Other: \_\_\_\_\_

SGS Form: OP019A-10 Rev Date: 8/27/7

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## Metals Analysis

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### QC Data Summaries

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#### Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog  
 Inorganics Analyses

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
 Analyst: CH      Run ID: MA47516  
 Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:31	MA47516-STD1	1		B=1.3634E-004, C=-3.0549E-002. RHO=0.9997478
11:33	MA47516-STD2	1		STDB
11:34	MA47516-STD3	1		STDC
11:35	MA47516-STD4	1		STDD
11:37	MA47516-STD5	1		STDE
11:39	MA47516-STD6	1		STDF
11:42	ZZZZZ	1		
11:44	MA47516-ICV1	1		
11:46	MA47516-ICB1	1		
11:47	MA47516-CCV1	1		
11:49	MA47516-CCB1	1		
11:51	MA47516-CRI1	1		
11:52	MP17543-MB1	1		
11:53	MP17543-B1	1		
11:55	MP17543-S1	1		%Sol
11:56	MP17543-S2	1		%Sol
11:58	JC95565-7	1		(sample used for QC only; not part of login JC95555)
12:00	ZZZZZ	1		
12:01	ZZZZZ	1		
12:03	MA47516-CCV2	1		
12:04	MA47516-CCB2	1		
12:06	ZZZZZ	1		
12:07	ZZZZZ	1		
12:08	ZZZZZ	1		
12:10	ZZZZZ	1		
12:11	ZZZZZ	1		
12:13	ZZZZZ	1		
12:14	ZZZZZ	1		
12:15	ZZZZZ	1		
12:17	ZZZZZ	1		
12:18	MA47516-CCV3	1		
12:20	MA47516-CCB3	1		
12:21	ZZZZZ	1		

10.1  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
Analyst: CH      Run ID: MA47516  
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:23	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:28	JC95555-1	1		%Sol
12:30	JC95555-2	1		%Sol
12:31	JC95555-3	1		%Sol
12:33	JC95555-4	1		%Sol
12:35	MP17544-MB1	1		
12:37	MA47516-CCV4	1		
12:38	MA47516-CCB4	1		
12:40	MP17544-B1	1		
12:41	MP17544-S1	1		%Sol
12:43	MP17544-S2	1		%Sol
12:45	JC95596-3	1		(sample used for QC only; not part of login JC95555)
12:47	MP17544-LC1	1		
12:48	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:52	ZZZZZZ	1		
12:53	ZZZZZZ	1		
12:54	MA47516-CCV5	1		
12:56	MA47516-CCB5	1		
12:58	ZZZZZZ	1		
12:59	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:06	ZZZZZZ	1		
13:08	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:11	MA47516-CCV6	1		
13:12	MA47516-CCB6	1		
13:14	ZZZZZZ	1		

10.1  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
Analyst: CH      Run ID: MA47516  
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:15	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:23	MP17545-MB1	1		
13:25	MP17545-B1	1		
13:26	MP17545-S1	1		%Sol
13:28	MA47516-CCV7	1		
13:30	MA47516-CCB7	1		
13:32	MP17545-S2	1		%Sol
13:33	JC95327-8	1		(sample used for QC only; not part of login JC95555)
13:35	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:38	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:44	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:47	MA47516-CCV8	1		
13:49	MA47516-CCB8	1		
13:51	ZZZZZZ	1		
13:52	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:56	ZZZZZZ	1		
13:57	ZZZZZZ	1		
13:59	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:05	ZZZZZZ	1		
14:06	MA47516-CCV9	1		
14:08	MA47516-CCB9	1		
14:10	ZZZZZZ	1		

10.1  
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SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
Analyst: CH      Run ID: MA47516  
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:11	ZZZZZZ	1		
14:13	ZZZZZZ	1		
14:15	MA47516-CCV10	1		
14:17	MA47516-CCB10	1		
14:19	ZZZZZZ	2		
14:20	ZZZZZZ	2		
14:22	JC95555-3	10		%Sol
14:23	ZZZZZZ	5		
14:25	ZZZZZZ	10		
14:27	ZZZZZZ	5		
14:29	ZZZZZZ	5		
14:30	ZZZZZZ	5		
14:32	MA47516-CCV11	1		
14:34	MA47516-CCB11	1		
14:37	ZZZZZZ	1		
14:39	JC95555-2	2		%Sol
----->	Last reportable sample/prep for job JC95555			
14:45	ZZZZZZ	5		
14:50	MA47516-CRI2	1		
14:52	MA47516-CCV12	1		
----->	14:53 MA47516-CCB12 1			
----->	Last reportable CCB for job JC95555			
----->	Refer to raw data for calibration curve and standards.			

10.1  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 Analyst: CH Run ID: MA47516  
 Parameters: Hg

Time	Sample Description	Element:	H Dilution	g
11:42	ZZZZZZ		1	
11:44	MA47516-ICV1		1	X
11:46	MA47516-ICB1		1	X
11:47	MA47516-CCV1		1	X
11:49	MA47516-CCB1		1	X
11:51	MA47516-CRI1		1	X
11:52	MP17543-MB1		1	X
11:53	MP17543-B1		1	X
11:55	MP17543-S1		1	X
11:56	MP17543-S2		1	X
11:58	JC95565-7		1	X (a)
12:00	ZZZZZZ		1	
12:01	ZZZZZZ		1	
12:03	MA47516-CCV2		1	X
12:04	MA47516-CCB2		1	X
12:06	ZZZZZZ		1	
12:07	ZZZZZZ		1	
12:08	ZZZZZZ		1	
12:10	ZZZZZZ		1	
12:11	ZZZZZZ		1	
12:13	ZZZZZZ		1	
12:14	ZZZZZZ		1	
12:15	ZZZZZZ		1	
12:17	ZZZZZZ		1	
12:18	MA47516-CCV3		1	X
12:20	MA47516-CCB3		1	X
12:21	ZZZZZZ		1	
12:23	ZZZZZZ		1	
12:24	ZZZZZZ		1	
12:26	ZZZZZZ		1	
12:28	JC95555-1		1	X
12:30	JC95555-2		1	
12:31	JC95555-3		1	
		Element:	H	
			g	

10.1.1  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 Analyst: CH Run ID: MA47516  
 Parameters: Hg

Time	Sample Description	Element:	H Dilution g
12:33	JC95555-4	1	X
12:35	MP17544-MB1	1	X
12:37	MA47516-CCV4	1	X
12:38	MA47516-CCB4	1	X
12:40	MP17544-B1	1	X
12:41	MP17544-S1	1	X
12:43	MP17544-S2	1	X
12:45	JC95596-3	1	X (a)
12:47	MP17544-LC1	1	X
12:48	ZZZZZZ	1	
12:50	ZZZZZZ	1	
12:52	ZZZZZZ	1	
12:53	ZZZZZZ	1	
12:54	MA47516-CCV5	1	X
12:56	MA47516-CCB5	1	X
12:58	ZZZZZZ	1	
12:59	ZZZZZZ	1	
13:01	ZZZZZZ	1	
13:02	ZZZZZZ	1	
13:03	ZZZZZZ	1	
13:05	ZZZZZZ	1	
13:06	ZZZZZZ	1	
13:08	ZZZZZZ	1	
13:09	ZZZZZZ	1	
13:11	MA47516-CCV6	1	X
13:12	MA47516-CCB6	1	X
13:14	ZZZZZZ	1	
13:15	ZZZZZZ	1	
13:17	ZZZZZZ	1	
13:19	ZZZZZZ	1	
13:20	ZZZZZZ	1	
13:22	ZZZZZZ	1	
13:23	MP17545-MB1	1	X
		Element:	H g

10.1.1  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 Analyst: CH Run ID: MA47516  
 Parameters: Hg

Time	Sample Description	Element:	H Dilution g
13:25	MP17545-B1	1	X
13:26	MP17545-S1	1	X
13:28	MA47516-CCV7	1	X
13:30	MA47516-CCB7	1	X
13:32	MP17545-S2	1	X
13:33	JC95327-8	1	X (a)
13:35	ZZZZZ	1	
13:37	ZZZZZ	1	
13:38	ZZZZZ	1	
13:40	ZZZZZ	1	
13:42	ZZZZZ	1	
13:44	ZZZZZ	1	
13:45	ZZZZZ	1	
13:47	MA47516-CCV8	1	X
13:49	MA47516-CCB8	1	X
13:51	ZZZZZ	1	
13:52	ZZZZZ	1	
13:54	ZZZZZ	1	
13:56	ZZZZZ	1	
13:57	ZZZZZ	1	
13:59	ZZZZZ	1	
14:01	ZZZZZ	1	
14:03	ZZZZZ	1	
14:05	ZZZZZ	1	
14:06	MA47516-CCV9	1	X
14:08	MA47516-CCB9	1	X
14:10	ZZZZZ	1	
14:11	ZZZZZ	1	
14:13	ZZZZZ	1	
14:15	MA47516-CCV10	1	X
14:17	MA47516-CCB10	1	X
14:19	ZZZZZ	2	
14:20	ZZZZZ	2	
		Element:	H g

10.1.1  
10



REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 Analyst: CH Run ID: MA47516  
 Parameters: Hg

Time	Sample Description	Element: H Dilution g	
14:22	JC95555-3	10	X
14:23	ZZZZZZ	5	
14:25	ZZZZZZ	10	
14:27	ZZZZZZ	5	
14:29	ZZZZZZ	5	
14:30	ZZZZZZ	5	
14:32	MA47516-CCV11	1	X
14:34	MA47516-CCB11	1	X
14:37	ZZZZZZ	1	
14:39	JC95555-2	2	X
14:45	ZZZZZZ	5	
14:50	MA47516-CRI2	1	X
14:52	MA47516-CCV12	1	X
14:53	MA47516-CCB12	1	X

(a) Sample used for QC only; not part of login JC95555.

Element: H  
g

10.1.1  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 QC Limits: result < RL Run ID: MA47516 Units: ug/l

Time:			11:46		11:49		12:04		12:20	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.023	0.0747	<0.20	0.0769	<0.20	0.0739	<0.20	0.0798	<0.20

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.1.2  
 10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 QC Limits: result < RL Run ID: MA47516 Units: ug/l

	Time:		12:38		12:56		13:12		13:30	
	Sample ID:		CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.023	-0.0141	<0.20	-0.0164	<0.20	-0.0202	<0.20	-0.0157	<0.20

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.1.2  
 10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
 QC Limits: result < RL      Run ID: MA47516      Units: ug/l

	Time:		13:49		14:08		14:17		14:34	
	Sample ID:		CCB8		CCB9		CCB10		CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.023	-0.0102	<0.20	-0.0160	<0.20	-0.0237	<0.20	-0.0179	<0.20

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.1.2  
 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
QC Limits: result < RL      Run ID: MA47516      Units: ug/l

Time:			14:53	
Sample ID:			CCB12	
Metal	RL	IDL	raw	final

Mercury      0.20      .023      -0.0121      <0.20

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.2  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
QC Limits: 90 to 110 % Recovery      Run ID: MA47516      Units: ug/l

	Time:		11:44		11:47		12:03		
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.10	103.3	2.5	2.55	102.0	2.5	2.56	102.4

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
QC Limits: 90 to 110 % Recovery      Run ID: MA47516      Units: ug/l

	Time:	12:18		12:37		12:54			
Sample ID:	CCV	CCV3		CCV4		CCV5			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.56	102.4	2.5	2.59	103.6	2.5	2.60	104.0

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
QC Limits: 90 to 110 % Recovery      Run ID: MA47516      Units: ug/l

	Time:	13:11		13:28		13:47			
Sample ID:	CCV	CCV6	CCV	CCV7	CCV	CCV8	CCV	Results	% Rec
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.50	100.0	2.5	2.51	100.4	2.5	2.50	100.0

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
QC Limits: 90 to 110 % Recovery      Run ID: MA47516      Units: ug/l

	Time:	14:06		14:15		14:32			
Sample ID:	CCV	CCV9	CCV	CCV10	CCV	CCV11	Results	% Rec	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.53	101.2	2.5	2.50	100.0	2.5	2.52	100.8

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV      Date Analyzed: 09/27/19      Methods: SW846 7471B  
QC Limits: 90 to 110 % Recovery      Run ID: MA47516      Units: ug/l

Time:	14:52		
Sample ID: CCV	CCV12		
Metal	True	Results	% Rec

Mercury      2.5      2.51      100.4

(\*) Outside of QC limits  
(anr) Analyte not requested

10.1.3  
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: H8092719S1.CSV Date Analyzed: 09/27/19 Methods: SW846 7471B  
 QC Limits: 70 to 130 % Recovery Run ID: MA47516 Units: ug/l

	Time:		11:51		14:50	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.192	96.0	0.230	115.0

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.1.4  
 10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:23	MA47539-STD1	1		STDA
11:28	MA47539-STD2	1		STDB
11:33	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:43	MA47539-ICV1	1		
11:50	MA47539-ICB1	1		
11:58	MA47539-ICCV1	1		
12:04	MA47539-CCB1	1		
12:08	MA47539-CRID1	1		
12:13	MA47539-CRI1	1		
12:18	MA47539-CRID2	1		
12:23	MA47539-ICSA1	1		
12:29	MA47539-ICSAB1	1		
12:34	MA47539-HSTD1	1		
12:39	MA47539-HSTD2	1		
12:44	ZZZZZZ	1		
12:49	ZZZZZZ	1		
12:54	ZZZZZZ	1		
13:00	MA47539-CCV1	1		
13:04	MA47539-CCB2	1		
13:10	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:20	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:50	MP17477-PS1	1		
13:55	MA47539-CCV2	1		
14:00	MA47539-CCB3	1		
14:05	ZZZZZZ	2		
14:10	MP17555-MB1	1		

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47539  
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:15	MP17555-SD1	5		
14:20	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:30	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:40	ZZZZZZ	2		
14:45	ZZZZZZ	2		
14:50	MA47539-CCV3	1		
14:54	MA47539-CCB4	1		
15:00	ZZZZZZ	2		
15:05	ZZZZZZ	1		
15:10	ZZZZZZ	2		
15:14	ZZZZZZ	2		
15:19	ZZZZZZ	5		
15:25	ZZZZZZ	10		
15:30	MP17617-MB1	5		
15:35	MP17617-B1	5		
15:39	MP17617-S1	5		
15:44	MA47539-CCV4	1		
15:49	MA47539-CCB5	1		
15:54	MP17617-S2	5		
15:59	JC95671-2	5		(sample used for QC only; not part of login JC95555)
16:04	MP17617-SD1	25		
16:09	ZZZZZZ	5		
16:14	ZZZZZZ	5		
16:19	ZZZZZZ	5		
16:24	ZZZZZZ	5		
16:29	ZZZZZZ	5		
16:35	ZZZZZZ	5		
16:40	MA47539-CCV5	1		
16:45	MA47539-CCB6	1		
16:50	MA47539-ICSA2	1		
16:55	MA47539-ICSAB2	1		

10.2  
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SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47539  
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:00	MP17587-MB1	1		
17:05	MP17587-B1	1		
17:10	MP17587-S1	1		
17:15	MP17587-S2	1		
17:19	JC95494-1	1		(sample used for QC only; not part of login JC95555)
17:24	MP17587-SD1	5		rerun for confirmation
17:29	MA47539-CCV6	1		
17:34	MA47539-CCB7	1		
18:10	ZZZZZZ	1		
18:15	ZZZZZZ	1		
18:21	ZZZZZZ	1		
18:26	ZZZZZZ	1		
18:31	ZZZZZZ	1		
18:36	ZZZZZZ	1		
18:41	ZZZZZZ	1		
18:46	ZZZZZZ	1		
18:51	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:06	ZZZZZZ	1		
19:11	MA47539-CCV7	1		
19:16	MA47539-CCB8	1		
19:21	ZZZZZZ	1		
19:26	ZZZZZZ	1		
19:31	ZZZZZZ	1		
19:36	ZZZZZZ	1		
19:41	ZZZZZZ	1		
19:46	ZZZZZZ	1		
19:51	ZZZZZZ	1		
19:56	ZZZZZZ	1		
20:01	ZZZZZZ	1		
20:06	MA47539-CCV8	1		
20:11	MA47539-CCB9	1		

10.2  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47539  
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:16	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:26	ZZZZZZ	1		
20:31	ZZZZZZ	1		
20:36	ZZZZZZ	1		
20:41	ZZZZZZ	1		
20:46	ZZZZZZ	1		
20:51	ZZZZZZ	1		
20:57	MP17592-MB1	1		
21:02	MA47539-CCV9	1		
21:06	MA47539-CCB10	1		
21:12	MP17592-B1	1		S not spiked
21:16	MP17592-S1	1		needs post spike for Sb, Ni, K
21:21	MP17592-S2	1		
21:27	JC95495-2	1		(sample used for QC only; not part of login JC95555)
21:32	MP17592-SD1	5		
21:37	ZZZZZZ	1		
21:42	ZZZZZZ	1		
21:47	ZZZZZZ	1		
21:52	ZZZZZZ	1		
21:57	ZZZZZZ	1		
22:02	MA47539-CCV10	1		
22:07	MA47539-CCB11	1		
22:12	ZZZZZZ	1		
22:17	ZZZZZZ	1		
22:22	ZZZZZZ	1		
22:27	ZZZZZZ	1		
22:32	ZZZZZZ	1		
22:37	ZZZZZZ	1		
22:42	ZZZZZZ	1		
22:47	ZZZZZZ	1		
22:52	ZZZZZZ	1		
22:57	MA47539-CCV11	1		

10.2  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47539  
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:02	MA47539-CCB12	1		
23:07	ZZZZZZ	1		
23:12	JC95555-1	1		%sol
23:17	JC95555-2	1		%sol
23:22	JC95555-3	1		%sol FE high. Rerun straight for high rsd-s
23:27	JC95555-4	1		%sol FE high
----->	Last reportable sample/prep for job JC95555			
23:32	MP17599-B1	1		
23:37	MP17599-MB1	1		
23:42	MP17599-S1	1		
23:47	MP17599-S2	1		
23:52	JC95623-3	1		(sample used for QC only; not part of login JC95555)
23:57	MA47539-CCV12	1		
----->	Last reportable CCB for job JC95555			
00:02	MA47539-CCB13	1		
00:07	MP17599-SD1	5		
00:12	ZZZZZZ	1		
00:17	ZZZZZZ	1		
00:22	ZZZZZZ	1		
00:27	ZZZZZZ	1		
00:31	ZZZZZZ	1		
00:36	ZZZZZZ	1		
00:42	ZZZZZZ	1		
00:47	ZZZZZZ	1		
00:52	ZZZZZZ	1		
00:57	MA47539-CCV13	1		
01:02	MA47539-CCB14	1		
01:07	ZZZZZZ	1		
01:12	ZZZZZZ	1		
01:17	ZZZZZZ	1		
01:22	ZZZZZZ	1		
01:26	ZZZZZZ	1		
01:31	ZZZZZZ	1		
01:37	ZZZZZZ	1		
01:42	ZZZZZZ	2		



SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47539  
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:47	ZZZZZZ	2		
01:52	ZZZZZZ	2		
01:57	MA47539-CCV14	1		
02:02	MA47539-CCB15	1		
02:07	MP17593-MB1	1		
02:12	MP17593-B1	1		
02:17	MP17593-S1	1		
02:21	MP17593-S2	1		
02:26	JC95652-1	1		(sample used for QC only; not part of login JC95555)
02:31	MP17593-SD1	5		
02:36	ZZZZZZ	1		
02:41	ZZZZZZ	1		
02:46	ZZZZZZ	1		
02:51	MA47539-CCV15	1		
02:56	MA47539-CCB16	1		
03:01	ZZZZZZ	1		
03:06	ZZZZZZ	1		
03:11	ZZZZZZ	1		
03:16	ZZZZZZ	1		
03:21	ZZZZZZ	1		
03:26	ZZZZZZ	1		
03:31	ZZZZZZ	1		
03:36	ZZZZZZ	1		
03:41	MA47539-CCV16	1		
03:46	MA47539-CCB17	1		
03:51	ZZZZZZ	1		
03:56	ZZZZZZ	1		
04:01	ZZZZZZ	1		
04:06	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:16	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:26	ZZZZZZ	1		

10.2  
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SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
Analyst: ND      Run ID: MA47539  
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution PS		Comments
		Factor	Recov	

04:31 MA47539-CCV17 1

04:36 MA47539-CCB18 1

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element Dilution	A	S	A	B	B	C	C	C	C	F	P	M	M	N	K	S	A	N	T	V	Z
			l	b	s	a	e	d	a	r	o	u	e	b	g	n	i	e	g	a	l	n	
11:33	ZZZZZZ	1																					
11:38	ZZZZZZ	1																					
11:43	MA47539-ICV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:50	MA47539-ICB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11:58	MA47539-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:04	MA47539-CCB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:08	MA47539-CRID1	1																					
12:13	MA47539-CRI1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:18	MA47539-CRID2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:23	MA47539-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:29	MA47539-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:34	MA47539-HSTD1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:39	MA47539-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12:44	ZZZZZZ	1																					
12:49	ZZZZZZ	1																					
12:54	ZZZZZZ	1																					
13:00	MA47539-CCV1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:04	MA47539-CCB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13:10	ZZZZZZ	1																					
13:14	ZZZZZZ	1																					
13:20	ZZZZZZ	1																					
13:25	ZZZZZZ	1																					
13:30	ZZZZZZ	1																					
13:35	ZZZZZZ	1																					
13:40	ZZZZZZ	1																					
13:45	ZZZZZZ	1																					
13:50	MP17477-PS1	1			X																		
13:55	MA47539-CCV2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14:00	MA47539-CCB3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14:05	ZZZZZZ	2																					
14:10	MP17555-MB1	1																					X
14:15	MP17555-SD1	5	X																				
14:20	ZZZZZZ	1																					

Element: A S A B B C C C C F P M M N K S A N T V Z  
 l b s a e d a r o u e b g n i e g a l n

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element Dilution	A	S	A	B	B	C	C	C	C	F	P	M	M	N	K	S	A	N	T	V	Z
			l	b	s	a	e	d	a	r	o	u	e	b	g	n	i	e	g	a	l	n	
14:25	ZZZZZ	1																					
14:30	ZZZZZ	1																					
14:35	ZZZZZ	1																					
14:40	ZZZZZ	2																					
14:45	ZZZZZ	2																					
14:50	MA47539-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14:54	MA47539-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:00	ZZZZZ	2																					
15:05	ZZZZZ	1																					
15:10	ZZZZZ	2																					
15:14	ZZZZZ	2																					
15:19	ZZZZZ	5																					
15:25	ZZZZZ	10																					
15:30	MP17617-MB1	5			X	X		X		X			X					X	X				
15:35	MP17617-B1	5			X	X		X		X			X					X	X				
15:39	MP17617-S1	5			X	X		X		X			X					X	X				
15:44	MA47539-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:49	MA47539-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15:54	MP17617-S2	5			X	X		X		X			X					X	X				
15:59	JC95671-2	5			X	X		X		X			X					X	X				(a)
16:04	MP17617-SD1	25			X	X		X		X			X					X	X				
16:09	ZZZZZ	5																					
16:14	ZZZZZ	5																					
16:19	ZZZZZ	5																					
16:24	ZZZZZ	5																					
16:29	ZZZZZ	5																					
16:35	ZZZZZ	5																					
16:40	MA47539-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:45	MA47539-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:50	MA47539-ICSA2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16:55	MA47539-ICSAB2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:00	MP17587-MB1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
17:05	MP17587-B1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X

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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	A	S	A	B	B	C	C	C	C	F	P	M	M	N	K	S	A	N	T	V	Z
			l	b	s	a	e	d	a	r	o	u	e	b	g	n	i	e	g	a	l	n	
17:10	MP17587-S1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:15	MP17587-S2	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:19	JC95494-1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X (a)
17:24	MP17587-SD1	5	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:29	MA47539-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17:34	MA47539-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18:10	ZZZZZ	1																					
18:15	ZZZZZ	1																					
18:21	ZZZZZ	1																					
18:26	ZZZZZ	1																					
18:31	ZZZZZ	1																					
18:36	ZZZZZ	1																					
18:41	ZZZZZ	1																					
18:46	ZZZZZ	1																					
18:51	ZZZZZ	1																					
18:56	ZZZZZ	1																					
19:01	ZZZZZ	1																					
19:06	ZZZZZ	1																					
19:11	MA47539-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:16	MA47539-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19:21	ZZZZZ	1																					
19:26	ZZZZZ	1																					
19:31	ZZZZZ	1																					
19:36	ZZZZZ	1																					
19:41	ZZZZZ	1																					
19:46	ZZZZZ	1																					
19:51	ZZZZZ	1																					
19:56	ZZZZZ	1																					
20:01	ZZZZZ	1																					
20:06	MA47539-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:11	MA47539-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20:16	ZZZZZ	1																					
20:21	ZZZZZ	1																					

10.2.1  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Element: Dilution	A l	S b	A s	B a	B e	C d	C a	C r	C o	C u	F e	P b	M g	M n	N i	K	S e	A g	N a	T l	V	Z n
20:26	ZZZZZZ	1																						
20:31	ZZZZZZ	1																						
20:36	ZZZZZZ	1																						
20:41	ZZZZZZ	1																						
20:46	ZZZZZZ	1																						
20:51	ZZZZZZ	1																						
20:57	MP17592-MB1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:02	MA47539-CCV9	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:06	MA47539-CCB10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:12	MP17592-B1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:16	MP17592-S1	1	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:21	MP17592-S2	1	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
21:27	JC95495-2	1	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X (a)
21:32	MP17592-SD1	5	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21:37	ZZZZZZ	1																						
21:42	ZZZZZZ	1																						
21:47	ZZZZZZ	1																						
21:52	ZZZZZZ	1																						
21:57	ZZZZZZ	1																						
22:02	MA47539-CCV10	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
22:07	MA47539-CCB11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
22:12	ZZZZZZ	1																						
22:17	ZZZZZZ	1																						
22:22	ZZZZZZ	1																						
22:27	ZZZZZZ	1																						
22:32	ZZZZZZ	1																						
22:37	ZZZZZZ	1																						
22:42	ZZZZZZ	1																						
22:47	ZZZZZZ	1																						
22:52	ZZZZZZ	1																						
22:57	MA47539-CCV11	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23:02	MA47539-CCB12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23:07	ZZZZZZ	1																						

10.2.1  
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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element Dilution	A l	S b	A s	B a	B e	C d	C a	C r	C o	C u	F e	P b	M g	M n	N i	K	S e	A g	N a	T l	V	Z n
23:12	JC95555-1	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23:17	JC95555-2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23:22	JC95555-3	1		X			X	X	X					X		X	X				X		X	X
23:27	JC95555-4	1	X	X		X	X	X	X					X		X	X				X		X	X
23:32	MP17599-B1	1			X	X		X	X					X							X	X		
23:37	MP17599-MB1	1			X	X		X	X					X							X	X		
23:42	MP17599-S1	1				X		X	X															
23:47	MP17599-S2	1				X		X	X															
23:52	JC95623-3	1				X			X															(a)
23:57	MA47539-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
00:02	MA47539-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
00:07	MP17599-SD1	5				X		X	X															
00:12	ZZZZZZ	1																						
00:17	ZZZZZZ	1																						
00:22	ZZZZZZ	1																						
00:27	ZZZZZZ	1																						
00:31	ZZZZZZ	1																						
00:36	ZZZZZZ	1																						
00:42	ZZZZZZ	1																						
00:47	ZZZZZZ	1																						
00:52	ZZZZZZ	1																						
00:57	MA47539-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
01:02	MA47539-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
01:07	ZZZZZZ	1																						
01:12	ZZZZZZ	1																						
01:17	ZZZZZZ	1																						
01:22	ZZZZZZ	1																						
01:26	ZZZZZZ	1																						
01:31	ZZZZZZ	1																						
01:37	ZZZZZZ	1																						
01:42	ZZZZZZ	2																						
01:47	ZZZZZZ	2																						
01:52	ZZZZZZ	2																						

10.2.1  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Element: Dilution	A	S	A	B	B	C	C	C	C	F	P	M	M	N	K	S	A	N	T	V	Z
			l	b	s	a	e	d	a	r	o	u	e	b	g	n	i	e	g	a	l	n	
01:57	MA47539-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
02:02	MA47539-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
02:07	MP17593-MB1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
02:12	MP17593-B1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
02:17	MP17593-S1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
02:21	MP17593-S2	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
02:26	JC95652-1	1	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X (a)
02:31	MP17593-SD1	5	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
02:36	ZZZZZZ	1																					
02:41	ZZZZZZ	1																					
02:46	ZZZZZZ	1																					
02:51	MA47539-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
02:56	MA47539-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:01	ZZZZZZ	1																					
03:06	ZZZZZZ	1																					
03:11	ZZZZZZ	1																					
03:16	ZZZZZZ	1																					
03:21	ZZZZZZ	1																					
03:26	ZZZZZZ	1																					
03:31	ZZZZZZ	1																					
03:36	ZZZZZZ	1																					
03:41	MA47539-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:46	MA47539-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
03:51	ZZZZZZ	1																					
03:56	ZZZZZZ	1																					
04:01	ZZZZZZ	1																					
04:06	ZZZZZZ	1																					
04:11	ZZZZZZ	1																					
04:16	ZZZZZZ	1																					
04:21	ZZZZZZ	1																					
04:26	ZZZZZZ	1																					
04:31	MA47539-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
04:36	MA47539-CCB18	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Element: A S A B B C C C C F P M M N K S A N T V Z  
 l b s a e d a r o u e b g n i e g a l n



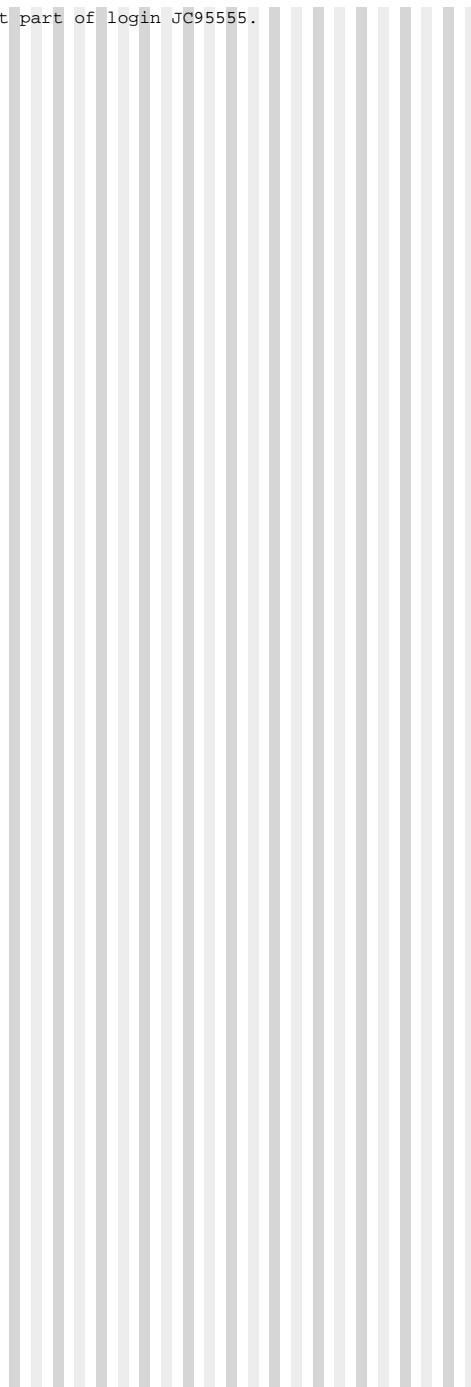
REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Sample	Element:	A	S	A	B	B	C	C	C	C	F	P	M	N	K	S	A	N	T	V	Z	
Time	Description	Dilution	l	b	s	a	e	d	a	r	o	u	e	b	g	n	i	e	g	a	l	n

(a) Sample used for QC only; not part of login JC95555.



Element: A S A B B C C C C F P M N K S A N T V Z  
 l b s a e d a r o u e b g n i e g a l n

INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:23	MA47539-STD1	4967 R	76066 R	12573 R	10094 R
11:28	MA47539-STD2	4750	71904	12326	9543
11:33	ZZZZZZ	4871	73098	12387	9712
11:38	ZZZZZZ	5001	75953	12373	10135
11:43	MA47539-ICV1	4900	73773	12343	9779
11:50	MA47539-ICB1	5003	75057	12319	10147
11:58	MA47539-ICCV1	4887	73389	12271	9783
12:04	MA47539-CCB1	4992	75719	12398	10185
12:08	MA47539-CRID1	No results reported for the elements associated with this internal standard.			
12:13	MA47539-CRI1	4987	75174	12393	10131
12:18	MA47539-CRID2	4997	75366	12350	10175
12:23	MA47539-ICSA1	4522	67928	12065	9103
12:29	MA47539-ICSAB1	4480	68474	11831	9011
12:34	MA47539-HSTD1	4892	74635	12188	10170
12:39	MA47539-HSTD2	4601	69407	11934	9120
12:44	ZZZZZZ	4958	75070	12204	10299
12:49	ZZZZZZ	4864	75861	12305	10118
12:54	ZZZZZZ	4990	75653	12190	10092
13:00	MA47539-CCV1	4865	73046	12048	9684
13:04	MA47539-CCB2	4960	76275	12122	10020
13:10	ZZZZZZ	4857	73051	999999 !	9678
13:14	ZZZZZZ	4967	74858	12459	9573
13:20	ZZZZZZ	5167	999999 !	999999 !	10306
13:25	ZZZZZZ	5063	75552	12229	10281
13:30	ZZZZZZ	14738 !	205620 !	27188 !	28916 !
13:35	ZZZZZZ	4875	69130	12064	9726
13:40	ZZZZZZ	4784	999999 !	12191	9330
13:45	ZZZZZZ	4918	75502	12153	9975
13:50	MP17477-PS1	4909	75103	12512	9695
13:55	MA47539-CCV2	4798	73427	12043	9582
14:00	MA47539-CCB3	4980	74767	12190	10081
14:05	ZZZZZZ	5215	78393	13035	9832
14:10	MP17555-MB1	4920	72750	12659	10020

10.2.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:15	MP17555-SD1	4936	75281	12192	9963
14:20	ZZZZZZ	4933	74915	12440	9918
14:25	ZZZZZZ	4878	74627	12237	9849
14:30	ZZZZZZ	4874	74634	12198	9729
14:35	ZZZZZZ	4904	74998	12280	9887
14:40	ZZZZZZ	4794	73184	12084	9536
14:45	ZZZZZZ	4774	72852	12056	9563
14:50	MA47539-CCV3	4845	73204	12049	9666
14:54	MA47539-CCB4	4942	75586	12024	10018
15:00	ZZZZZZ	4686	71488	11998	9234
15:05	ZZZZZZ	4665	69977	11873	9179
15:10	ZZZZZZ	4779	73129	11898	9467
15:14	ZZZZZZ	4798	73514	11793	9556
15:19	ZZZZZZ	4820	73011	11927	9469
15:25	ZZZZZZ	4888	73693	12026	9633
15:30	MP17617-MB1	4944	76423	12053	10017
15:35	MP17617-B1	4956	75603	12120	9953
15:39	MP17617-S1	4706	71447	11980	9174
15:44	MA47539-CCV4	4851	72441	11916	9679
15:49	MA47539-CCB5	4989	75935	12038	10106
15:54	MP17617-S2	4617	72382	12034	9012
15:59	JC95671-2	4732	72109	11935	9220
16:04	MP17617-SD1	4860	73757	11996	9674
16:09	ZZZZZZ	4806	72942	11954	9411
16:14	ZZZZZZ	4718	72332	11815	9224
16:19	ZZZZZZ	4848	73261	11988	9543
16:24	ZZZZZZ	4760	71675	11768	9307
16:29	ZZZZZZ	4884	72632	11934	9622
16:35	ZZZZZZ	4765	71870	11908	9389
16:40	MA47539-CCV5	4831	72662	11777	9652
16:45	MA47539-CCB6	5019	75903	11963	10197
16:50	MA47539-ICSA2	4467	67424	11574	8978
16:55	MA47539-ICSAB2	4497	68278	11656	8988

10.2.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:00	MP17587-MB1	4990	75503	12077	10085
17:05	MP17587-B1	4925	74028	11870	9855
17:10	MP17587-S1	4908	73722	12023	9836
17:15	MP17587-S2	4900	73615	12053	9841
17:19	JC95494-1	4996	75375	12091	10089
17:24	MP17587-SD1	5010	75638	12111	10137
17:29	MA47539-CCV6	4846	72970	11910	9674
17:34	MA47539-CCB7	4976	75220	11685	10087
18:10	ZZZZZZ	5008	75828	11841	10160
18:15	ZZZZZZ	4935	75928	11951	9964
18:21	ZZZZZZ	4947	75104	11818	9977
18:26	ZZZZZZ	4951	73711	11729	9995
18:31	ZZZZZZ	4884	75170	11752	9905
18:36	ZZZZZZ	5008	75650	11912	10112
18:41	ZZZZZZ	5032	75992	11935	10193
18:46	ZZZZZZ	4932	76578	11838	10001
18:51	ZZZZZZ	5014	76299	11810	10225
18:56	ZZZZZZ	4931	72345	12270	9506
19:01	ZZZZZZ	4718	72265	11527	9364
19:06	ZZZZZZ	4694	71503	11267	9298
19:11	MA47539-CCV7	4844	73325	11812	9650
19:16	MA47539-CCB8	4950	75903	11776	10017
19:21	ZZZZZZ	4941	75584	11953	9982
19:26	ZZZZZZ	4966	76212	11847	9948
19:31	ZZZZZZ	4782	74097	11681	9670
19:36	ZZZZZZ	4951	75255	12004	9963
19:41	ZZZZZZ	4971	75467	12063	10024
19:46	ZZZZZZ	4926	75498	11968	9911
19:51	ZZZZZZ	4957	76192	12099	9962
19:56	ZZZZZZ	4914	75791	12044	9969
20:01	ZZZZZZ	4971	76171	11912	10102
20:06	MA47539-CCV8	4864	73074	11891	9738
20:11	MA47539-CCB9	4954	75851	11779	10073

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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:16	ZZZZZZ	4583	70828	11518	9088
20:21	ZZZZZZ	4610	71853	11512	9147
20:26	ZZZZZZ	4739	71822	11505	9312
20:31	ZZZZZZ	4717	72148	11636	9224
20:36	ZZZZZZ	4702	72743	11691	9292
20:41	ZZZZZZ	4785	73626	11759	9425
20:46	ZZZZZZ	4671	72242	11395	9234
20:51	ZZZZZZ	4971	75895	11821	10087
20:57	MP17592-MB1	4924	75847	11870	9989
21:02	MA47539-CCV9	4853	73638	11778	9723
21:06	MA47539-CCB10	4914	75876	11793	9971
21:12	MP17592-B1	4907	74331	11813	9846
21:16	MP17592-S1	4918	76439	12144	9432
21:21	MP17592-S2	4848	75350	12266	9446
21:27	JC95495-2	4981	76249	12312	9443
21:32	MP17592-SD1	4988	74645	12038	9884
21:37	ZZZZZZ	5251	80023	12759	9795
21:42	ZZZZZZ	5062	76511	12068	9846
21:47	ZZZZZZ	5017	76727	11903	9951
21:52	ZZZZZZ	5028	75954	12459	9671
21:57	ZZZZZZ	5042	77239	12461	10092
22:02	MA47539-CCV10	4892	73826	11568	9782
22:07	MA47539-CCB11	4957	75744	11793	10051
22:12	ZZZZZZ	4995	75839	12648	9205
22:17	ZZZZZZ	5038	75479	12086	10012
22:22	ZZZZZZ	5501	83853	13433	10211
22:27	ZZZZZZ	4991	77842	11726	10149
22:32	ZZZZZZ	5159	77486	12233	10026
22:37	ZZZZZZ	4933	76735	12037	10544
22:42	ZZZZZZ	4854	74427	11962	9383
22:47	ZZZZZZ	4823	73556	11865	9407
22:52	ZZZZZZ	5015	76855	11752	10016
22:57	MA47539-CCV11	4865	72977	11454	9704

10.2.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:02	MA47539-CCB12	4971	75506	11396	10077
23:07	ZZZZZ	5152	77994	11822	10236
23:12	JC95555-1	5010	78130	11811	9974
23:17	JC95555-2	5244	79273	12370	10096
23:22	JC95555-3	4990	75719	11779	10392
23:27	JC95555-4	5117	78630	12392	9940
23:32	MP17599-B1	4918	74943	11507	9862
23:37	MP17599-MB1	5002	76204	11272	10132
23:42	MP17599-S1	5191	78578	12621	9908
23:47	MP17599-S2	5160	78085	12336	9865
23:52	JC95623-3	5450	83873	13218	9692
23:57	MA47539-CCV12	4870	74441	11409	9744
00:02	MA47539-CCB13	4941	75835	11375	10037
00:07	MP17599-SD1	5097	77410	11958	9956
00:12	ZZZZZ	5077	76484	11754	9893
00:17	ZZZZZ	5222	80972	12522	10066
00:22	ZZZZZ	5131	79098	12295	9952
00:27	ZZZZZ	5037	77985	11603	10005
00:31	ZZZZZ	5027	77420	11928	10738
00:36	ZZZZZ	4991	77012	11690	10733
00:42	ZZZZZ	4985	999999 !	11859	10042
00:47	ZZZZZ	4813	75996	11451	11246
00:52	ZZZZZ	5082	78254	11877	10065
00:57	MA47539-CCV13	4825	73956	11399	9645
01:02	MA47539-CCB14	5004	76381	11171	10139
01:07	ZZZZZ	4968	75999	12006	9539
01:12	ZZZZZ	5029	75661	11782	9870
01:17	ZZZZZ	5061	77351	11531	10113
01:22	ZZZZZ	5049	78774	11888	9947
01:26	ZZZZZ	4966	77120	11634	9857
01:31	ZZZZZ	5057	78285	12075	9459
01:37	ZZZZZ	5202	79987	12040	9901
01:42	ZZZZZ	5109	77102	11769	10014

10.2.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:47	ZZZZZZ	5701	86196	12974	9823
01:52	ZZZZZZ	5610	85064	12732	9894
01:57	MA47539-CCV14	4856	72601	10943	9712
02:02	MA47539-CCB15	4934	74840	10615	9998
02:07	MP17593-MB1	4948	76616	11094	10061
02:12	MP17593-B1	4819	73723	11010	9663
02:17	MP17593-S1	4807	73529	11010	9586
02:21	MP17593-S2	4788	73866	11010	9571
02:26	JC95652-1	4854	73587	10827	9767
02:31	MP17593-SD1	4923	74077	11011	9995
02:36	ZZZZZZ	4903	75361	11033	9880
02:41	ZZZZZZ	4856	74872	10921	9829
02:46	ZZZZZZ	4880	75434	11134	9788
02:51	MA47539-CCV15	4777	73235	10922	9542
02:56	MA47539-CCB16	4851	75412	10972	9870
03:01	ZZZZZZ	4887	75614	11035	9810
03:06	ZZZZZZ	4785	73953	11032	9559
03:11	ZZZZZZ	4854	75265	11104	9745
03:16	ZZZZZZ	4876	74889	10889	9745
03:21	ZZZZZZ	4757	74355	11041	9587
03:26	ZZZZZZ	4883	75942	11072	9863
03:31	ZZZZZZ	4871	75057	11010	9837
03:36	ZZZZZZ	4881	75101	11110	9885
03:41	MA47539-CCV16	4773	73519	11072	9577
03:46	MA47539-CCB17	4932	75599	11123	10019
03:51	ZZZZZZ	4884	75682	11129	9811
03:56	ZZZZZZ	4834	74123	11057	9718
04:01	ZZZZZZ	4938	75595	999999	10042
04:06	ZZZZZZ	4904	74001	11077	9912
04:11	ZZZZZZ	4902	76018	10990	9861
04:16	ZZZZZZ	4888	75305	10710	9847
04:21	ZZZZZZ	4911	75173	11152	9898
04:26	ZZZZZZ	4921	76232	11145	9961

10.2.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47539  
 Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:31	MA47539-CCV17	4792	73160	10593	9578
04:36	MA47539-CCB18	4884	75518	11037	9931

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

<u>Istd#</u>	<u>Parameter</u>	<u>Limits</u>
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

10.2.2  
10



BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: result < RL Run ID: MA47539 Units: ug/l

Metal	Time:		11:50		12:04		13:04		14:00	
	Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3
Aluminum	200	8.4	11.8	<200	22.0	<200	5.30	<200	9.00	<200
Antimony	6.0	1.2	-0.500	<6.0	-0.500	<6.0	-1.10	<6.0	-0.900	<6.0
Arsenic	3.0	1.6	-0.200	<3.0	0.100	<3.0	-0.100	<3.0	0.300	<3.0
Barium	200	.3	0.100	<200	0.300	<200	0.300	<200	0.300	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	0.100	<1.0	0.100	<1.0
Bismuth	20	2								
Boron	100	2	anr							
Cadmium	3.0	.3	0.400	<3.0	0.300	<3.0	0.300	<3.0	0.300	<3.0
Calcium	5000	4.1	-1.90	<5000	2.40	<5000	1.00	<5000	1.00	<5000
Cerium	100									
Chromium	10	.4	0.100	<10	0.200	<10	0.00	<10	0.300	<10
Cobalt	50	.4	-0.100	<50	0.100	<50	0.100	<50	0.00	<50
Copper	10	.3	0.200	<10	0.300	<10	-0.100	<10	0.100	<10
Iron	100	2.3	3.20	<100	1.50	<100	0.600	<100	3.40	<100
Lead	3.0	2.3	-0.600	<3.0	-0.100	<3.0	-0.400	<3.0	0.400	<3.0
Lithium	50	1.1								
Magnesium	5000	33	5.90	<5000	-4.40	<5000	11.5	<5000	9.80	<5000
Manganese	15	.1	0.00	<15	0.100	<15	0.100	<15	0.00	<15
Molybdenum	20	.9								
Nickel	10	.7	0.100	<10	0.00	<10	0.00	<10	0.100	<10
Phosphorus	50	1.1								
Potassium	10000	26	46.1	<10000	14.6	<10000	42.2	<10000	38.1	<10000
Selenium	10	2.2	-0.600	<10	0.200	<10	-0.900	<10	-0.700	<10
Silicon	200	8.7								
Silver	10	.3	-0.500	<10	0.200	<10	-0.300	<10	0.00	<10
Sodium	10000	6	-22.4	<10000	-21.9	<10000	-26.5	<10000	-6.40	<10000
Strontium	10	.1								
Sulfur	50	2.1	anr							
Thallium	10	4.8	0.800	<10	2.30	<10	2.10	<10	1.00	<10
Tin	10	1.6	anr							
Titanium	10	.5	anr							
Tungsten	50	1.4								
Vanadium	50	.3	0.00	<50	0.500	<50	0.100	<50	0.600	<50

10.2.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47539 Units: ug/l

Time:			11:50		12:04		13:04		14:00	
Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Metal			raw		raw		raw		raw	

Zinc	20	.3	-0.100	<20	0.00	<20	0.00	<20	-0.100	<20
Zirconium	10	.3								

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.2.3  
 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: result < RL Run ID: MA47539 Units: ug/l

Metal	Time:		14:54		15:49		16:45		17:34	
	Sample ID:	RL	IDL	CCB4	final	CCB5	final	CCB6	final	CCB7
Aluminum	200	8.4	6.70	<200	4.10	<200	14.1	<200	10.2	<200
Antimony	6.0	1.2	-0.500	<6.0	-0.800	<6.0	0.100	<6.0	0.00	<6.0
Arsenic	3.0	1.6	0.200	<3.0	-0.100	<3.0	0.200	<3.0	0.500	<3.0
Barium	200	.3	0.200	<200	0.700	<200	0.100	<200	0.100	<200
Beryllium	1.0	.1	0.200	<1.0	0.200	<1.0	0.100	<1.0	0.100	<1.0
Bismuth	20	2								
Boron	100	2	anr							
Cadmium	3.0	.3	0.200	<3.0	0.400	<3.0	0.200	<3.0	0.100	<3.0
Calcium	5000	4.1	3.30	<5000	1.50	<5000	-3.10	<5000	-1.60	<5000
Cerium	100									
Chromium	10	.4	0.200	<10	0.200	<10	0.00	<10	0.400	<10
Cobalt	50	.4	-0.100	<50	0.100	<50	0.100	<50	0.200	<50
Copper	10	.3	-0.400	<10	0.400	<10	0.200	<10	-0.100	<10
Iron	100	2.3	4.00	<100	5.20	<100	2.00	<100	3.20	<100
Lead	3.0	2.3	0.500	<3.0	0.300	<3.0	0.200	<3.0	0.00	<3.0
Lithium	50	1.1								
Magnesium	5000	33	9.40	<5000	23.5	<5000	1.00	<5000	11.1	<5000
Manganese	15	.1	0.100	<15	0.200	<15	0.100	<15	0.100	<15
Molybdenum	20	.9								
Nickel	10	.7	-0.100	<10	0.100	<10	0.100	<10	-0.100	<10
Phosphorus	50	1.1								
Potassium	10000	26	13.2	<10000	34.8	<10000	14.5	<10000	23.4	<10000
Selenium	10	2.2	-0.300	<10	-0.700	<10	-1.90	<10	-0.400	<10
Silicon	200	8.7								
Silver	10	.3	-0.100	<10	-0.400	<10	0.100	<10	-0.200	<10
Sodium	10000	6	-21.0	<10000	-9.40	<10000	12.2	<10000	-26.4	<10000
Strontium	10	.1								
Sulfur	50	2.1	anr							
Thallium	10	4.8	1.20	<10	2.40	<10	1.00	<10	2.00	<10
Tin	10	1.6	anr							
Titanium	10	.5	anr							
Tungsten	50	1.4								
Vanadium	50	.3	0.200	<50	0.100	<50	0.500	<50	0.200	<50

10.2.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47539 Units: ug/l

Metal	Time: Sample ID:	RL	IDL	14:54	15:49	16:45	17:34								
				CCB4	CCB5	CCB6	CCB7	raw	final	raw	final	raw	final		
Zinc		20	.3	0.00	<20	-0.100	<20	-0.200	<20	-0.200	<20				
Zirconium		10	.3												

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.2.3  
 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: result < RL Run ID: MA47539 Units: ug/l

Metal	Time:		19:16		20:11		21:06		22:07	
	Sample ID:	RL	IDL	CCB8	final	CCB9	final	CCB10	final	CCB11
Aluminum	200	8.4	10.1	<200	13.9	<200	2.70	<200	8.30	<200
Antimony	6.0	1.2	-1.30	<6.0	-0.400	<6.0	-0.100	<6.0	-1.20	<6.0
Arsenic	3.0	1.6	0.100	<3.0	0.500	<3.0	0.500	<3.0	0.00	<3.0
Barium	200	.3	0.200	<200	0.100	<200	0.300	<200	0.200	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	0.200	<1.0	0.100	<1.0
Bismuth	20	2								
Boron	100	2	anr							
Cadmium	3.0	.3	0.200	<3.0	0.200	<3.0	0.300	<3.0	0.300	<3.0
Calcium	5000	4.1	-5.40	<5000	-2.30	<5000	-4.30	<5000	-4.40	<5000
Cerium	100									
Chromium	10	.4	0.200	<10	0.200	<10	-0.100	<10	0.100	<10
Cobalt	50	.4	0.00	<50	0.100	<50	0.200	<50	0.00	<50
Copper	10	.3	0.00	<10	0.500	<10	0.200	<10	-0.100	<10
Iron	100	2.3	4.80	<100	2.60	<100	3.80	<100	2.80	<100
Lead	3.0	2.3	0.400	<3.0	0.900	<3.0	0.600	<3.0	0.00	<3.0
Lithium	50	1.1								
Magnesium	5000	33	5.20	<5000	15.9	<5000	14.2	<5000	-6.20	<5000
Manganese	15	.1	0.200	<15	0.100	<15	0.100	<15	0.100	<15
Molybdenum	20	.9								
Nickel	10	.7	-0.100	<10	-0.100	<10	-0.100	<10	-0.200	<10
Phosphorus	50	1.1								
Potassium	10000	26	-3.90	<10000	3.80	<10000	23.4	<10000	12.4	<10000
Selenium	10	2.2	-1.10	<10	-1.40	<10	-0.500	<10	-1.70	<10
Silicon	200	8.7								
Silver	10	.3	-0.400	<10	0.00	<10	-0.400	<10	-0.200	<10
Sodium	10000	6	-49.8	<10000	-42.7	<10000	-34.9	<10000	-44.2	<10000
Strontium	10	.1								
Sulfur	50	2.1	anr							
Thallium	10	4.8	3.00	<10	1.70	<10	1.40	<10	3.50	<10
Tin	10	1.6	anr							
Titanium	10	.5	anr							
Tungsten	50	1.4								
Vanadium	50	.3	0.200	<50	0.400	<50	0.200	<50	0.500	<50

10.2.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47539 Units: ug/l

Time:			19:16		20:11		21:06		22:07	
Sample ID:	RL	IDL	CCB8	final	CCB9	final	CCB10	final	CCB11	final
Metal			raw		raw		raw		raw	

Zinc	20	.3	-0.200	<20	-0.300	<20	-0.200	<20	-0.200	<20
Zirconium	10	.3								

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.2.3  
 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: result < RL Run ID: MA47539 Units: ug/l

Metal	Time:		23:02		00:02		
	Sample ID:	RL	IDL	CCB12	CCB13	final	
Aluminum		200	8.4	7.50	<200	9.70	<200
Antimony		6.0	1.2	-0.500	<6.0	-1.00	<6.0
Arsenic		3.0	1.6	0.00	<3.0	0.900	<3.0
Barium		200	.3	0.400	<200	0.300	<200
Beryllium		1.0	.1	0.200	<1.0	0.200	<1.0
Bismuth		20	2				
Boron		100	2	anr			
Cadmium		3.0	.3	0.300	<3.0	0.300	<3.0
Calcium		5000	4.1	-0.300	<5000	-5.60	<5000
Cerium		100					
Chromium		10	.4	-0.400	<10	-0.100	<10
Cobalt		50	.4	0.100	<50	0.00	<50
Copper		10	.3	0.200	<10	0.200	<10
Iron		100	2.3	5.30	<100	5.40	<100
Lead		3.0	2.3	-0.800	<3.0	0.400	<3.0
Lithium		50	1.1				
Magnesium		5000	33	2.20	<5000	6.40	<5000
Manganese		15	.1	0.100	<15	0.100	<15
Molybdenum		20	.9				
Nickel		10	.7	0.300	<10	-0.200	<10
Phosphorus		50	1.1				
Potassium		10000	26	43.0	<10000	89.5	<10000
Selenium		10	2.2	-0.600	<10	-0.900	<10
Silicon		200	8.7				
Silver		10	.3	-0.600	<10	-0.200	<10
Sodium		10000	6	-44.7	<10000	-47.6	<10000
Strontium		10	.1				
Sulfur		50	2.1	anr			
Thallium		10	4.8	3.20	<10	1.60	<10
Tin		10	1.6	anr			
Titanium		10	.5	anr			
Tungsten		50	1.4				
Vanadium		50	.3	0.00	<50	0.200	<50

10.2.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47539 Units: ug/l

Time:			23:02		00:02	
Sample ID:			CCB12		CCB13	
Metal	RL	IDL	raw	final	raw	final

Zinc	20	.3	-0.300	<20	-0.300	<20
Zirconium	10	.3				
(*) Outside of QC limits						
(anr) Analyte not requested						

10.2.3  
 10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial Continuing Calibration Check

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: to % Recovery      Run ID: MA47539      Units: ug/l

Time:	Sample ID:	ICCV	11:58 ICCV1	Results	% Rec
Metal	True				
Aluminum	40000		38500		96.3
Antimony	2000		1940		97.0
Arsenic	2000		1960		98.0
Barium	2000		1980		99.0
Beryllium	2000		1980		99.0
Bismuth					
Boron	anr				
Cadmium	2000		1950		97.5
Calcium	40000		38900		97.3
Cerium					
Chromium	2000		1970		98.5
Cobalt	2000		1970		98.5
Copper	2000		1970		98.5
Iron	40000		39200		98.0
Lead	2000		1960		98.0
Lithium					
Magnesium	40000		38800		97.0
Manganese	2000		2020		101.0
Molybdenum					
Nickel	2000		2000		100.0
Phosphorus					
Potassium	40000		38800		97.0
Selenium	2000		1960		98.0
Silicon					
Silver	250		245		98.0
Sodium	40000		38900		97.3
Strontium					
Sulfur	anr				
Thallium	2000		2020		101.0
Tin	anr				
Titanium	anr				
Tungsten					
Vanadium	2000		1990		99.5

10.2.4  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial Continuing Calibration Check

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: to % Recovery      Run ID: MA47539      Units: ug/l

Time:	11:58
Sample ID: ICCV	ICCV1
Metal	True
Results	% Rec

Zinc                    2000      2000      100.0

Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.2.4  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

Metal	Time:	11:43			13:00			13:55		
	Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	Results	% Rec	
	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	39100	97.8	40000	38600	96.5	40000	38900	97.3	
Antimony	2000	1940	97.0	2000	1960	98.0	2000	1990	99.5	
Arsenic	2000	1940	97.0	2000	1950	97.5	2000	1990	99.5	
Barium	2000	1980	99.0	2000	1970	98.5	2000	1980	99.0	
Beryllium	2000	2010	100.5	2000	1990	99.5	2000	2020	101.0	
Bismuth										
Boron	anr									
Cadmium	2000	1950	97.5	2000	1950	97.5	2000	1990	99.5	
Calcium	40000	38800	97.0	40000	38900	97.3	40000	39800	99.5	
Cerium										
Chromium	2000	1940	97.0	2000	1980	99.0	2000	1980	99.0	
Cobalt	2000	1950	97.5	2000	1980	99.0	2000	2020	101.0	
Copper	2000	1910	95.5	2000	1920	96.0	2000	1920	96.0	
Iron	40000	39100	97.8	40000	39100	97.8	40000	39800	99.5	
Lead	2000	1940	97.0	2000	1990	99.5	2000	2030	101.5	
Lithium										
Magnesium	40000	38800	97.0	40000	39000	97.5	40000	39800	99.5	
Manganese	2000	1980	99.0	2000	2030	101.5	2000	2050	102.5	
Molybdenum										
Nickel	2000	1990	99.5	2000	2010	100.5	2000	2040	102.0	
Phosphorus										
Potassium	40000	38700	96.8	40000	38600	96.5	40000	38700	96.8	
Selenium	2000	1940	97.0	2000	1950	97.5	2000	1990	99.5	
Silicon										
Silver	250	242	96.8	250	243	97.2	250	242	96.8	
Sodium	40000	39300	98.3	40000	38800	97.0	40000	38800	97.0	
Strontium										
Sulfur	anr									
Thallium	2000	2000	100.0	2000	2020	101.0	2000	2060	103.0	
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5	

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

	Time:		11:43		13:00		13:55		
Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	Results	% Rec	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc	2000	1960	98.0	2000	2000	100.0	2000	2040	102.0
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Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

Metal	Time:	14:50			15:44			16:40		
	Sample ID:	CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	40000	38500	96.3	40000	39100	97.8	40000	39300	98.3	
Antimony	2000	1970	98.5	2000	1970	98.5	2000	1990	99.5	
Arsenic	2000	1960	98.0	2000	1970	98.5	2000	1990	99.5	
Barium	2000	1970	98.5	2000	2000	100.0	2000	2020	101.0	
Beryllium	2000	1990	99.5	2000	2030	101.5	2000	2050	102.5	
Bismuth										
Boron	anr									
Cadmium	2000	1970	98.5	2000	1970	98.5	2000	1990	99.5	
Calcium	40000	39100	97.8	40000	39800	99.5	40000	40500	101.3	
Cerium										
Chromium	2000	1980	99.0	2000	2020	101.0	2000	2020	101.0	
Cobalt	2000	1990	99.5	2000	2000	100.0	2000	2020	101.0	
Copper	2000	1930	96.5	2000	1950	97.5	2000	1980	99.0	
Iron	40000	39100	97.8	40000	39800	99.5	40000	40400	101.0	
Lead	2000	2000	100.0	2000	2010	100.5	2000	2030	101.5	
Lithium										
Magnesium	40000	39000	97.5	40000	39900	99.8	40000	40300	100.8	
Manganese	2000	2040	102.0	2000	2070	103.5	2000	2070	103.5	
Molybdenum										
Nickel	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0	
Phosphorus										
Potassium	40000	38500	96.3	40000	38900	97.3	40000	39600	99.0	
Selenium	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0	
Silicon										
Silver	250	244	97.6	250	248	99.2	250	249	99.6	
Sodium	40000	38600	96.5	40000	38900	97.3	40000	39300	98.3	
Strontium										
Sulfur	anr									
Thallium	2000	2030	101.5	2000	2030	101.5	2000	2060	103.0	
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	2000	1980	99.0	2000	2010	100.5	2000	2020	101.0	

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

	Time:									
Sample ID:	CCV	14:50 CCV3		CCV	15:44 CCV4		CCV	16:40 CCV5		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	

Zinc	2000	2010	100.5	2000	2010	100.5	2000	2040	102.0	
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Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

Metal	Time:	17:29			19:11			20:06		
	Sample ID:	CCV	CCV6	% Rec	CCV	CCV7	% Rec	CCV	CCV8	% Rec
Aluminum	40000	38500	96.3	40000	38800	97.0	40000	38400	96.0	
Antimony	2000	1970	98.5	2000	1980	99.0	2000	1970	98.5	
Arsenic	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5	
Barium	2000	1980	99.0	2000	1980	99.0	2000	1990	99.5	
Beryllium	2000	2010	100.5	2000	2010	100.5	2000	2000	100.0	
Bismuth										
Boron	anr									
Cadmium	2000	1970	98.5	2000	1970	98.5	2000	1970	98.5	
Calcium	40000	39600	99.0	40000	39400	98.5	40000	39300	98.3	
Cerium										
Chromium	2000	2000	100.0	2000	1980	99.0	2000	1990	99.5	
Cobalt	2000	2000	100.0	2000	2000	100.0	2000	1990	99.5	
Copper	2000	1940	97.0	2000	1910	95.5	2000	1940	97.0	
Iron	40000	39400	98.5	40000	39200	98.0	40000	39300	98.3	
Lead	2000	2010	100.5	2000	2020	101.0	2000	2010	100.5	
Lithium										
Magnesium	40000	39500	98.8	40000	39500	98.8	40000	39500	98.8	
Manganese	2000	2030	101.5	2000	2030	101.5	2000	2040	102.0	
Molybdenum										
Nickel	2000	2020	101.0	2000	2030	101.5	2000	2020	101.0	
Phosphorus										
Potassium	40000	38600	96.5	40000	38700	96.8	40000	38700	96.8	
Selenium	2000	1980	99.0	2000	1960	98.0	2000	1960	98.0	
Silicon										
Silver	250	244	97.6	250	243	97.2	250	246	98.4	
Sodium	40000	38300	95.8	40000	38500	96.3	40000	38200	95.5	
Strontium										
Sulfur	anr									
Thallium	2000	2040	102.0	2000	2020	101.0	2000	2030	101.5	
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	2000	1990	99.5	2000	1970	98.5	2000	1980	99.0	

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

	Time:		17:29		19:11		20:06		
Sample ID:	CCV	CCV6	CCV	CCV7	CCV	CCV8			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc	2000	2020	101.0	2000	2010	100.5	2000	2010	100.5
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Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.2.5 10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

Metal	Time:	21:02			22:02			22:57		
	Sample ID:	CCV	CCV9	% Rec	CCV	CCV10	% Rec	CCV	CCV11	% Rec
Aluminum	40000	38400	96.0	40000	38500	96.3	40000	38500	96.3	
Antimony	2000	1980	99.0	2000	1950	97.5	2000	1960	98.0	
Arsenic	2000	1970	98.5	2000	1950	97.5	2000	1960	98.0	
Barium	2000	1980	99.0	2000	1990	99.5	2000	2000	100.0	
Beryllium	2000	1990	99.5	2000	1980	99.0	2000	1980	99.0	
Bismuth										
Boron	anr									
Cadmium	2000	1970	98.5	2000	1950	97.5	2000	1960	98.0	
Calcium	40000	39200	98.0	40000	38900	97.3	40000	38700	96.8	
Cerium										
Chromium	2000	1970	98.5	2000	1960	98.0	2000	1970	98.5	
Cobalt	2000	1990	99.5	2000	1980	99.0	2000	1990	99.5	
Copper	2000	1910	95.5	2000	1900	95.0	2000	1900	95.0	
Iron	40000	39000	97.5	40000	38500	96.3	40000	38400	96.0	
Lead	2000	2010	100.5	2000	1990	99.5	2000	2010	100.5	
Lithium										
Magnesium	40000	39300	98.3	40000	38900	97.3	40000	39000	97.5	
Manganese	2000	2020	101.0	2000	2030	101.5	2000	2040	102.0	
Molybdenum										
Nickel	2000	2030	101.5	2000	2010	100.5	2000	2020	101.0	
Phosphorus										
Potassium	40000	38500	96.3	40000	39000	97.5	40000	39100	97.8	
Selenium	2000	1960	98.0	2000	1940	97.0	2000	1950	97.5	
Silicon										
Silver	250	243	97.2	250	242	96.8	250	244	97.6	
Sodium	40000	38000	95.0	40000	38500	96.3	40000	38300	95.8	
Strontium										
Sulfur	anr									
Thallium	2000	2030	101.5	2000	2010	100.5	2000	2010	100.5	
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	2000	1960	98.0	2000	1950	97.5	2000	1970	98.5	

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

	Time:		21:02		22:02		22:57		
Sample ID:	CCV	CCV9	CCV	CCV10	CCV	CCV11	CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc	2000	2000	100.0	2000	1990	99.5	2000	2000	100.0
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Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.2.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

Time:	23:57		
Sample ID:	CCV12		
Metal	True	Results	% Rec
Aluminum	40000	38200	95.5
Antimony	2000	1970	98.5
Arsenic	2000	1980	99.0
Barium	2000	2010	100.5
Beryllium	2000	1960	98.0
Bismuth			
Boron	anr		
Cadmium	2000	1970	98.5
Calcium	40000	38700	96.8
Cerium			
Chromium	2000	1960	98.0
Cobalt	2000	2000	100.0
Copper	2000	1920	96.0
Iron	40000	38400	96.0
Lead	2000	2000	100.0
Lithium			
Magnesium	40000	38800	97.0
Manganese	2000	2010	100.5
Molybdenum			
Nickel	2000	2020	101.0
Phosphorus			
Potassium	40000	39200	98.0
Selenium	2000	1980	99.0
Silicon			
Silver	250	244	97.6
Sodium	40000	38000	95.0
Strontium			
Sulfur	anr		
Thallium	2000	2030	101.5
Tin	anr		
Titanium	anr		
Tungsten			
Vanadium	2000	1950	97.5

10.2.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP      Date Analyzed: 09/30/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47539      Units: ug/l

Time:	23:57		
Sample ID:	CCV	CCV12	
Metal	True	Results	% Rec

Zinc                      2000      2010      100.5

Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.2.5  
10

HIGH STANDARD CHECK SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 90 to 110 % Recovery Run ID: MA47539 Units: ug/l

Time:	12:34			12:39		
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum				300000	300000	100.0
Antimony	8000	7800	97.5			
Arsenic	8000	7750	96.9			
Barium	8000	8280	103.5			
Beryllium	8000	8260	103.3			
Bismuth						
Boron	anr					
Cadmium	8000	8020	100.3			
Calcium				200000	199000	99.5
Cerium						
Chromium	8000	8340	104.3			
Cobalt	8000	8220	102.8			
Copper	8000	8090	101.1			
Iron				200000	198000	99.0
Lead	8000	7770	97.1			
Lithium						
Magnesium				300000	301000	100.3
Manganese	8000	8200	102.5			
Molybdenum						
Nickel	8000	8220	102.8			
Phosphorus						
Potassium				200000	205000	102.5
Selenium	8000	8100	101.3			
Silicon						
Silver	625	618	98.9			
Sodium				200000	204000	102.0
Strontium						
Sulfur	anr					
Thallium	8000	8310	103.9			
Tin	anr					
Titanium	anr					
Tungsten						
Vanadium	8000	8240	103.0			

10.2.6  
10

HIGH STANDARD CHECK SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 90 to 110 % Recovery Run ID: MA47539 Units: ug/l

	Time:	12:34		12:39	
Sample ID:	HSTD	HSTD1	HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results

Zinc 8000 8420 105.3

Zirconium

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.2.6  
 10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47539 Units: ug/l

Time:	12:13	12:18					
Sample ID:	CRI1	CRID2					
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	200	100.0	97.5	97.5
Antimony	6.0	20	3.0	5.20	86.7		
Arsenic	8.0	20	3.0	8.40	105.0	2.60	86.7
Barium	200		4.0	198	99.0	4.20	105.0
Beryllium	2.0		1.0	2.00	100.0	1.00	100.0
Bismuth	20						
Boron	100		10	anr			
Cadmium	3.0		1.0	3.00	100.0	1.20	120.0
Calcium	5000	2000	1000	5100	102.0	1020	102.0
Cerium							
Chromium	10		2.0	9.80	98.0	2.00	100.0
Cobalt	50		3.0	49.0	98.0	2.90	96.7
Copper	10		2.0	10.6	106.0		
Iron	100	500		105	105.0		
Lead	3.0	20	2.5	3.20	106.7		
Lithium	50						
Magnesium	5000	2000	100	5060	101.2	115	115.0
Manganese	15		3.0	15.6	104.0	3.20	106.7
Molybdenum	20						
Nickel	10		4.0	10.1	101.0	4.10	102.5
Phosphorus	50						
Potassium	5000		2000	4850	97.0	1940	97.0
Selenium	10	20	5.0	9.80	98.0		
Silicon	200						
Silver	5.0		2.0	5.20	104.0		
Sodium	5000		1000	4870	97.4	943	94.3
Strontium	10						
Sulfur	50			anr			
Thallium	10		2.0	11.9	119.0		
Tin	10			anr			
Titanium	10			anr			
Tungsten	50						
Vanadium	50		2.0	50.4	100.8	2.30	115.0

10.2.7  
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LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47539 Units: ug/l

Time:				12:13				12:18
Sample ID:	CRI	CRIA	CRID	CRI1	% Rec	CRID2	% Rec	

Metal	True	True	True	Results	% Rec	Results	% Rec
Zinc	20		10	20.4	102.0	10.0	100.0
Zirconium	10						

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.2.7  
 10



INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
Part 1 - ICSA and ICSAB Standards

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: 80 to 120 % Recovery Run ID: MA47539 Units: ug/l

Metal	Time:		12:23		12:29		16:50		16:55	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSAB2	% Rec	ICSAB2	% Rec
Aluminum	500000	500000	492000	98.4	507000	101.4	499000	99.8	507000	101.4
Antimony		1000	-1.20		1030	103.0	2.00		1040	104.0
Arsenic		1000	0.200		1060	106.0	0.00		1060	106.0
Barium		500	0.800		497	99.4	0.800		494	98.8
Beryllium		500	0.200		487	97.4	0.300		490	98.0
Bismuth		500	-14.1		510	102.0	-15.2		510	102.0
Boron		500	1.90		503	100.6	1.00		503	100.6
Cadmium		1000	1.20		1020	102.0	0.900		1010	101.0
Calcium	400000	400000	394000	98.5	377000	94.3	396000	99.0	379000	94.8
Cerium			86.0		71.2		86.4		70.6	
Chromium		500	0.500		477	95.4	0.600		478	95.6
Cobalt		500	0.700		478	95.6	0.400		478	95.6
Copper		500	-1.10		530	106.0	0.500		521	104.2
Iron	200000	200000	200000	100.0	189000	94.5	201000	100.5	189000	94.5
Lead		1000	2.70		890	89.0	1.40		903	90.3
Lithium		500	-11.7		512	102.4	-11.9		498	99.6
Magnesium	500000	500000	507000	101.4	506000	101.2	515000	103.0	511000	102.2
Manganese		500	1.70		505	101.0	0.800		508	101.6
Molybdenum		500	3.30		501	100.2	3.20		496	99.2
Nickel		1000	-0.600		961	96.1	-1.00		968	96.8
Phosphorus		500	10.0		495	99.0	12.5		505	101.0
Potassium			72.7		75.6		5.50		-9.90	
Selenium		1000	-0.900		995	99.5	-2.50		983	98.3
Silicon		500	-7.60		503	100.6	-8.90		503	100.6
Silver		1000	1.30		1010	101.0	-0.100		1010	101.0
Sodium			18.4		37.9		43.7		14.5	
Strontium		500	-2.60		503	100.6	-2.40		502	100.4
Sulfur		500	-26.6		474	94.8	-26.9		469	93.8
Thallium		1000	2.10		976	97.6	-0.900		966	96.6
Tin		500	-2.70		478	95.6	-1.80		477	95.4
Titanium		500	6.00		511	102.2	5.40		511	102.2
Tungsten		500	10.0		496	99.2	9.80		494	98.8
Vanadium		500	-1.10		485	97.0	-1.00		485	97.0

10.2.8  
10

INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
 Part 1 - ICSA and ICSAB Standards

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF093019M1.ICP Date Analyzed: 09/30/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 80 to 120 % Recovery Run ID: MA47539 Units: ug/l

Time:		12:23		12:29		16:50		16:55		
Sample ID:	ICSAB	ICSAB	ICSAB1	ICSAB1	ICSAB1	ICSAB2	ICSAB2	ICSAB2	ICSAB2	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec

Zinc		1000	2.70		958	95.8	2.70		954	95.4
Zirconium		500	-1.40		502	100.4	-2.00		506	101.2

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.2.8  
 10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
Analyst: RP Run ID: MA47552  
Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:35	MA47552-STD1	1		STDA
12:40	MA47552-STD2	1		STDB
12:45	ZZZZZZ	1		
12:50	ZZZZZZ	1		
12:55	MA47552-ICV1	1		
12:59	MA47552-ICB1	1		
13:05	MA47552-ICCV1	1		
13:20	MA47552-CCB1	1		
13:25	MA47552-CRID1	1		
13:30	MA47552-CRI1	1		
13:35	MA47552-ICSA1	1		
13:40	MA47552-ICSAB1	1		
13:45	MA47552-HSTD1	1		
13:51	MA47552-HSTD2	1		
13:56	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:06	ZZZZZZ	1		
14:11	MA47552-CCV1	1		
14:16	MA47552-CCB2	1		
14:21	ZZZZZZ	1		
14:26	ZZZZZZ	1		
14:31	ZZZZZZ	1		
14:36	ZZZZZZ	1		
14:41	ZZZZZZ	1		
14:46	MP17587-SD1	5		
14:51	ZZZZZZ	2		
14:56	ZZZZZZ	2		
15:01	ZZZZZZ	2		
15:06	MA47552-CCV2	1		
15:10	MA47552-CCB3	1		
15:16	ZZZZZZ	5		
15:21	ZZZZZZ	2		
15:26	ZZZZZZ	1		

10.3  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
Analyst: RP Run ID: MA47552  
Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:31	ZZZZZZ	1		
15:35	MP17592-S1	2		
15:40	MP17592-S2	2		
15:45	JC95495-2	2		(sample used for QC only; not part of login JC95555)
15:49	MP17592-SD1	10		
15:54	ZZZZZZ	5		
15:59	MA47552-CCV3	1		
16:04	MA47552-CCB4	1		
16:09	ZZZZZZ	2		
16:14	ZZZZZZ	2		
16:19	ZZZZZZ	2		
16:24	ZZZZZZ	3		
16:29	ZZZZZZ	3		
16:34	ZZZZZZ	5		
16:39	ZZZZZZ	5		
16:44	ZZZZZZ	2		
16:49	ZZZZZZ	2		
16:54	MA47552-CCV4	1		
16:58	MA47552-CCB5	1		
17:03	JC95555-3	1		
17:08	JC95555-3	2		
17:13	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:23	MP17599-S1	2		
17:28	MP17599-S2	2		
17:33	JC95623-3	2		(sample used for QC only; not part of login JC95555)
17:38	MP17599-SD1	10		
17:43	ZZZZZZ	5		
17:48	MA47552-CCV5	1		
17:53	MA47552-CCB6	1		
17:58	ZZZZZZ	5		
18:03	ZZZZZZ	2		
18:07	ZZZZZZ	10		

10.3  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
Analyst: RP Run ID: MA47552  
Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:12	ZZZZZZ	2		
18:17	ZZZZZZ	5		
18:22	ZZZZZZ	2		
18:27	ZZZZZZ	10		
18:32	JC95555-4	2		
----->	Last reportable sample/prep for job JC95555			
18:37	MA47552-CCV6	1		
18:42	MA47552-CCB7	1		
----->	Last reportable CCB for job JC95555			
18:47	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:57	ZZZZZZ	1		
19:02	ZZZZZZ	1		
19:08	ZZZZZZ	1		
19:13	ZZZZZZ	1		
19:18	ZZZZZZ	1		
19:23	ZZZZZZ	1		
19:28	ZZZZZZ	1		
19:33	ZZZZZZ	1		
19:38	ZZZZZZ	1		
19:43	ZZZZZZ	1		
19:48	ZZZZZZ	1		
19:54	MA47552-CCV7	1		
19:58	MA47552-CCB8	1		
20:03	ZZZZZZ	10		
20:08	MA47552-CCV8	1		
20:13	MA47552-CCB9	1		

Refer to raw data for calibration curve and standards.

10.3  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: RP Run ID: MA47552  
 Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution	Element:	A	A	B	C	C	C	F	P	M	S	A	T
			Dilution	l	s	a	d	a	u	e	b	n	e	g	l
12:45	ZZZZZZ	1													
12:50	ZZZZZZ	1													
12:55	MA47552-ICV1	1		X	X	X	X	X	X	X	X	X	X	X	X
12:59	MA47552-ICB1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:05	MA47552-ICCV1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:20	MA47552-CCB1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:25	MA47552-CRID1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:30	MA47552-CRI1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:35	MA47552-ICSA1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:40	MA47552-ICSAB1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:45	MA47552-HSTD1	1		X	X	X	X	X	X	X	X	X	X	X	X
13:51	MA47552-HSTD2	1		X	X	X	X	X	X	X	X	X	X	X	X
13:56	ZZZZZZ	1													
14:01	ZZZZZZ	1													
14:06	ZZZZZZ	1													
14:11	MA47552-CCV1	1		X	X	X	X	X	X	X	X	X	X	X	X
14:16	MA47552-CCB2	1		X	X	X	X	X	X	X	X	X	X	X	X
14:21	ZZZZZZ	1													
14:26	ZZZZZZ	1													
14:31	ZZZZZZ	1													
14:36	ZZZZZZ	1													
14:41	ZZZZZZ	1													
14:46	MP17587-SD1	5													
14:51	ZZZZZZ	2													
14:56	ZZZZZZ	2													
15:01	ZZZZZZ	2													
15:06	MA47552-CCV2	1		X	X	X	X	X	X	X	X	X	X	X	X
15:10	MA47552-CCB3	1		X	X	X	X	X	X	X	X	X	X	X	X
15:16	ZZZZZZ	5													
15:21	ZZZZZZ	2													
15:26	ZZZZZZ	1													
15:31	ZZZZZZ	1													
15:35	MP17592-S1	2						X							

Element: A A B C C C F P M S A T  
 l s a d a u e b n e g l

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: RP Run ID: MA47552  
 Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Element: Dilution	A l	A s	B a	C d	C a	C u	F e	P b	M n	S e	A g	T l
15:40	MP17592-S2	2						X	X					
15:45	JC95495-2	2						X						(a)
15:49	MP17592-SD1	10						X						
15:54	ZZZZZZ	5												
15:59	MA47552-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	X
16:04	MA47552-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	X
16:09	ZZZZZZ	2												
16:14	ZZZZZZ	2												
16:19	ZZZZZZ	2												
16:24	ZZZZZZ	3												
16:29	ZZZZZZ	3												
16:34	ZZZZZZ	5												
16:39	ZZZZZZ	5												
16:44	ZZZZZZ	2												
16:49	ZZZZZZ	2												
16:54	MA47552-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	X
16:58	MA47552-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	X
17:03	JC95555-3	1	X	X										
17:08	JC95555-3	2		X	X	X	X	X	X	X	X	X	X	X
17:13	ZZZZZZ	1												
17:18	ZZZZZZ	1												
17:23	MP17599-S1	2		X					X	X	X			
17:28	MP17599-S2	2		X	X				X	X	X			
17:33	JC95623-3	2		X	X				X	X	X			(a)
17:38	MP17599-SD1	10		X					X	X	X			
17:43	ZZZZZZ	5												
17:48	MA47552-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	X
17:53	MA47552-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	X
17:58	ZZZZZZ	5												
18:03	ZZZZZZ	2												
18:07	ZZZZZZ	10												
18:12	ZZZZZZ	2												
18:17	ZZZZZZ	5												

Element: A A B C C F P M S A T  
 l s a d a u e b n e g l

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: RP Run ID: MA47552  
 Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Dilution	Element: l s a d a u e b n e g l	A	A	B	C	C	C	F	P	M	S	A	T
18:22	ZZZZZZ	2													
18:27	ZZZZZZ	10													
18:32	JC95555-4	2			X	X	X	X	X	X	X	X	X	X	X
18:37	MA47552-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	X	X
18:42	MA47552-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	X	X
18:47	ZZZZZZ	1													
18:52	ZZZZZZ	1													
18:57	ZZZZZZ	1													
19:02	ZZZZZZ	1													
19:08	ZZZZZZ	1													
19:13	ZZZZZZ	1													
19:18	ZZZZZZ	1													
19:23	ZZZZZZ	1													
19:28	ZZZZZZ	1													
19:33	ZZZZZZ	1													
19:38	ZZZZZZ	1													
19:43	ZZZZZZ	1													
19:48	ZZZZZZ	1													
19:54	MA47552-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	X	X
19:58	MA47552-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	X	X
20:03	ZZZZZZ	10													
20:08	MA47552-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	X	X
20:13	MA47552-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	X	X

(a) Sample used for QC only; not part of login JC95555.

Element:  
l s a d a u e b n e g l

10.3.1  
10



INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: RP Run ID: MA47552  
 Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:35	MA47552-STD1	4262 R	64464 R	9084 R	8602 R
12:40	MA47552-STD2	4058	61476	9059	8168
12:45	ZZZZZZ	4160	62882	9009	8289
12:50	ZZZZZZ	4257	65270	9042	8583
12:55	MA47552-ICV1	4114	62974	8924	8183
12:59	MA47552-ICB1	4241	64994	8944	8537
13:05	MA47552-ICCV1	4150	62852	8939	8249
13:20	MA47552-CCB1	4236	64659	8956	8553
13:25	MA47552-CRID1	4225	64946	9035	8516
13:30	MA47552-CRI1	4211	64600	8926	8465
13:35	MA47552-ICSA1	3835	58283	8700	7713
13:40	MA47552-ICSAB1	3851	59101	8846	7744
13:45	MA47552-HSTD1	4140	64293	9201	8622
13:51	MA47552-HSTD2	3921	59950	8829	7818
13:56	ZZZZZZ	4192	64814	8921	8723
14:01	ZZZZZZ	4096	64723	8881	8449
14:06	ZZZZZZ	4245	65382	9035	8546
14:11	MA47552-CCV1	4084	62943	8980	8129
14:16	MA47552-CCB2	4220	64743	9089	8512
14:21	ZZZZZZ	4219	65039	9062	8499
14:26	ZZZZZZ	4095	62754	8942	8160
14:31	ZZZZZZ	4199	64535	8936	8432
14:36	ZZZZZZ	4232	64523	9097	8526
14:41	ZZZZZZ	4143	62293	9005	8270
14:46	MP17587-SD1	4220	64872	9094	8490
14:51	ZZZZZZ	4035	63053	8818	7978
14:56	ZZZZZZ	4067	63752	8863	8068
15:01	ZZZZZZ	4116	63505	8954	8106
15:06	MA47552-CCV2	4106	62649	8776	8173
15:10	MA47552-CCB3	4177	64626	8831	8417
15:16	ZZZZZZ	4044	64353	999999 !	8026
15:21	ZZZZZZ	4119	63567	8854	8124
15:26	ZZZZZZ	4236	65008	9000	8515

10.3.2  
10

INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: RP Run ID: MA47552  
 Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:31	ZZZZZZ	4096	63121	8818	8164
15:35	MP17592-S1	4122	64135	9016	7965
15:40	MP17592-S2	4147	64398	9144	8094
15:45	JC95495-2	4188	64621	9188	8084
15:49	MP17592-SD1	4176	64031	8916	8280
15:54	ZZZZZZ	4138	63477	8714	8175
15:59	MA47552-CCV3	4067	62133	8671	8080
16:04	MA47552-CCB4	4217	64454	8879	8470
16:09	ZZZZZZ	4353	66500	9374	8311
16:14	ZZZZZZ	4187	64780	9063	8295
16:19	ZZZZZZ	4258	64734	9186	8458
16:24	ZZZZZZ	4212	63828	9162	8058
16:29	ZZZZZZ	4365	66608	9328	8422
16:34	ZZZZZZ	4227	65657	9030	8553
16:39	ZZZZZZ	4137	63911	8878	8117
16:44	ZZZZZZ	4116	63414	8943	8051
16:49	ZZZZZZ	4273	65706	9115	8493
16:54	MA47552-CCV4	4131	63097	8625	8219
16:58	MA47552-CCB5	4209	64827	8833	8459
17:03	JC95555-3	4216	64812	9094	8725
17:08	JC95555-3	4269	64456	9017	8673
17:13	ZZZZZZ	4269	65144	8958	8549
17:18	ZZZZZZ	4123	63273	8816	8200
17:23	MP17599-S1	4301	66160	9259	8286
17:28	MP17599-S2	4298	65759	9206	8300
17:33	JC95623-3	4468	67851	9609	8262
17:38	MP17599-SD1	4209	65208	8954	8239
17:43	ZZZZZZ	4219	64811	8896	8518
17:48	MA47552-CCV5	4120	62428	8647	8173
17:53	MA47552-CCB6	4182	64000	8555	8406
17:58	ZZZZZZ	4191	64447	8878	8507
18:03	ZZZZZZ	4253	64874	8878	8448
18:07	ZZZZZZ	4181	64116	8601	8546

10.3.2  
10

INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: RP Run ID: MA47552  
 Parameters: Al,As,Ba,Cd,Ca,Cu,Fe,Pb,Mn,Se,Ag,Tl

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:12	ZZZZZZ	4288	65617	8996	8455
18:17	ZZZZZZ	4246	65062	8795	8463
18:22	ZZZZZZ	4185	63743	8820	8265
18:27	ZZZZZZ	4163	63985	8550	8356
18:32	JC95555-4	4270	65761	9091	8348
18:37	MA47552-CCV6	4062	62372	8534	8081
18:42	MA47552-CCB7	4131	63966	8623	8314
18:47	ZZZZZZ	4162	64328	8551	8345
18:52	ZZZZZZ	4226	64502	8668	8459
18:57	ZZZZZZ	4153	64187	8659	8337
19:02	ZZZZZZ	4166	64379	8582	8367
19:08	ZZZZZZ	4170	64468	8629	8407
19:13	ZZZZZZ	4188	64153	8771	8386
19:18	ZZZZZZ	4168	64696	8548	8379
19:23	ZZZZZZ	4173	64154	8631	8411
19:28	ZZZZZZ	4140	64050	8634	8376
19:33	ZZZZZZ	4070	60441	8878	7810
19:38	ZZZZZZ	3907	61176	8329	7696
19:43	ZZZZZZ	3924	61487	8416	7739
19:48	ZZZZZZ	9893 !	141090 !	14766 !	19616 !
19:54	MA47552-CCV7	4043	62866	8463	8048
19:58	MA47552-CCB8	4144	64344	8539	8342
20:03	ZZZZZZ	4160	64784	8714	8307
20:08	MA47552-CCV8	4016	61668	8565	7981
20:13	MA47552-CCB9	4147	64333	8500	8347

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

10.3.2  
10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: result < RL Run ID: MA47552 Units: ug/l

Metal	RL	IDL	12:59 ICB1		13:20 CCB1		14:16 CCB2		15:10 CCB3	
			raw	final	raw	final	raw	final	raw	final
Aluminum	200	8.4	-7.00	<200	-1.90	<200	-10.2	<200	-5.30	<200
Antimony	6.0	1.2	anr							
Arsenic	3.0	1.6	0.800	<3.0	1.20	<3.0	1.20	<3.0	1.70	<3.0
Barium	200	.3	0.300	<200	0.200	<200	0.00	<200	0.300	<200
Beryllium	1.0	.1	anr							
Bismuth	20	2								
Boron	100	2								
Cadmium	3.0	.3	0.100	<3.0	-0.100	<3.0	0.00	<3.0	0.00	<3.0
Calcium	5000	4.1	-0.500	<5000	-0.500	<5000	1.80	<5000	-1.60	<5000
Cerium	100									
Chromium	10	.4								
Cobalt	50	.4								
Copper	10	.3	-0.100	<10	0.100	<10	0.00	<10	-0.100	<10
Iron	100	2.3	4.10	<100	0.200	<100	0.00	<100	1.20	<100
Lead	3.0	2.3	-0.700	<3.0	0.700	<3.0	-0.400	<3.0	0.700	<3.0
Lithium	50	1.1								
Magnesium	5000	33	anr							
Manganese	15	.1	0.100	<15	0.00	<15	0.00	<15	0.100	<15
Molybdenum	20	.9								
Nickel	10	.7								
Phosphorus	50	1.1								
Potassium	10000	26	anr							
Selenium	10	2.2	0.400	<10	1.30	<10	0.300	<10	0.700	<10
Silicon	200	8.7								
Silver	10	.3	-0.200	<10	0.200	<10	-0.100	<10	-0.600	<10
Sodium	10000	6	anr							
Strontium	10	.1								
Sulfur	50	2.1								
Thallium	10	4.8	0.700	<10	0.400	<10	1.10	<10	0.200	<10
Tin	10	1.6								
Titanium	10	.5	anr							
Tungsten	50	1.4								
Vanadium	50	.3	anr							

10.3.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47552 Units: ug/l

Time:	12:59	13:20	14:16	15:10
Sample ID:	ICB1	CCB1	CCB2	CCB3
Metal	raw	raw	raw	raw
	final	final	final	final
Zinc	20	.3	anr	
Zirconium	10	.3		

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.3.3  
 10

BLANK RESULTS SUMMARY  
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: result < RL Run ID: MA47552 Units: ug/l

Metal	Time:		16:04		16:58		17:53		18:42		
	Sample ID:	RL	IDL	CCB4	final	CCB5	final	CCB6	final	CCB7	final
Aluminum	200	8.4		-9.30	<200	-4.30	<200	-6.20	<200	-3.30	<200
Antimony	6.0	1.2		anr							
Arsenic	3.0	1.6		1.20	<3.0	2.10	<3.0	1.60	<3.0	0.600	<3.0
Barium	200	.3		0.100	<200	0.300	<200	0.500	<200	0.700	<200
Beryllium	1.0	.1		anr							
Bismuth	20	2									
Boron	100	2									
Cadmium	3.0	.3		0.100	<3.0	0.00	<3.0	0.100	<3.0	0.100	<3.0
Calcium	5000	4.1		3.50	<5000	1.80	<5000	5.80	<5000	3.20	<5000
Cerium	100										
Chromium	10	.4									
Cobalt	50	.4									
Copper	10	.3		0.200	<10	-0.100	<10	0.200	<10	-0.200	<10
Iron	100	2.3		4.10	<100	2.50	<100	5.70	<100	5.90	<100
Lead	3.0	2.3		0.100	<3.0	0.500	<3.0	-0.500	<3.0	0.200	<3.0
Lithium	50	1.1									
Magnesium	5000	33		anr							
Manganese	15	.1		0.200	<15	0.100	<15	0.200	<15	0.300	<15
Molybdenum	20	.9									
Nickel	10	.7									
Phosphorus	50	1.1									
Potassium	10000	26		anr							
Selenium	10	2.2		1.50	<10	1.10	<10	1.10	<10	0.500	<10
Silicon	200	8.7									
Silver	10	.3		-0.200	<10	-0.400	<10	-0.900	<10	-1.00	<10
Sodium	10000	6		anr							
Strontium	10	.1									
Sulfur	50	2.1									
Thallium	10	4.8		1.10	<10	-0.800	<10	0.700	<10	0.500	<10
Tin	10	1.6									
Titanium	10	.5		anr							
Tungsten	50	1.4									
Vanadium	50	.3		anr							

10.3.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47552 Units: ug/l

Time:	16:04	16:58	17:53	18:42
Sample ID:	CCB4	CCB5	CCB6	CCB7
Metal	raw	raw	raw	raw
	final	final	final	final

Zinc 20 .3  
 Zirconium 10 .3

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.3.3  
 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial Continuing Calibration Check

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: to % Recovery Run ID: MA47552 Units: ug/l

Time:	13:05		
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	40000	40000	100.0
Antimony	anr		
Arsenic	2000	1960	98.0
Barium	2000	2020	101.0
Beryllium	anr		
Bismuth			
Boron			
Cadmium	2000	1980	99.0
Calcium	40000	39800	99.5
Cerium			
Chromium			
Cobalt			
Copper	2000	1950	97.5
Iron	40000	39900	99.8
Lead	2000	2050	102.5
Lithium			
Magnesium	anr		
Manganese	2000	2050	102.5
Molybdenum			
Nickel			
Phosphorus			
Potassium	anr		
Selenium	2000	1970	98.5
Silicon			
Silver	250	245	98.0
Sodium	anr		
Strontium			
Sulfur			
Thallium	2000	2040	102.0
Tin			
Titanium	anr		
Tungsten			
Vanadium	anr		

10.3.4  
10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial Continuing Calibration Check

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP      Date Analyzed: 10/01/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: to % Recovery      Run ID: MA47552      Units: ug/l

Time:	13:05		
Sample ID: ICCV	ICCV1		
Metal	True	Results	% Rec

Zinc            anr

Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.3.4  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP      Date Analyzed: 10/01/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47552      Units: ug/l

Metal	Time:	12:55			14:11			15:06		
	Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	Results	% Rec	
	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	40000	40400	101.0	40000	40000	100.0	40000	40400	101.0	
Antimony	anr									
Arsenic	2000	1990	99.5	2000	2000	100.0	2000	1970	98.5	
Barium	2000	2030	101.5	2000	2030	101.5	2000	2060	103.0	
Beryllium	anr									
Bismuth										
Boron										
Cadmium	2000	1990	99.5	2000	2020	101.0	2000	2000	100.0	
Calcium	40000	38700	96.8	40000	39900	99.8	40000	39800	99.5	
Cerium										
Chromium										
Cobalt										
Copper	2000	1950	97.5	2000	1930	96.5	2000	1940	97.0	
Iron	40000	38800	97.0	40000	40100	100.3	40000	40000	100.0	
Lead	2000	1930	96.5	2000	2090	104.5	2000	2070	103.5	
Lithium										
Magnesium	anr									
Manganese	2000	1990	99.5	2000	2040	102.0	2000	2060	103.0	
Molybdenum										
Nickel										
Phosphorus										
Potassium	anr									
Selenium	2000	2010	100.5	2000	2010	100.5	2000	1980	99.0	
Silicon										
Silver	250	244	97.6	250	245	98.0	250	245	98.0	
Sodium	anr									
Strontium										
Sulfur										
Thallium	2000	2030	101.5	2000	2060	103.0	2000	2050	102.5	
Tin										
Titanium	anr									
Tungsten										
Vanadium	anr									

10.3.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP      Date Analyzed: 10/01/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47552      Units: ug/l

	Time:	12:55		14:11		15:06
Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2
Metal	True	Results	% Rec	True	Results	% Rec

Zinc                      anr

Zirconium

(\* ) Outside of QC limits  
(anr) Analyte not requested

10.3.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP      Date Analyzed: 10/01/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47552      Units: ug/l

Metal	Time:	15:59			16:54			17:48		
	Sample ID:	CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	40000	40500	101.3	40000	40700	101.8	40000	40200	100.5	
Antimony	anr									
Arsenic	2000	1970	98.5	2000	1950	97.5	2000	1950	97.5	
Barium	2000	2040	102.0	2000	2060	103.0	2000	2030	101.5	
Beryllium	anr									
Bismuth										
Boron										
Cadmium	2000	2010	100.5	2000	1980	99.0	2000	1980	99.0	
Calcium	40000	39800	99.5	40000	40000	100.0	40000	39600	99.0	
Cerium										
Chromium										
Cobalt										
Copper	2000	1910	95.5	2000	1910	95.5	2000	1900	95.0	
Iron	40000	39900	99.8	40000	40000	100.0	40000	39600	99.0	
Lead	2000	2090	104.5	2000	2060	103.0	2000	2080	104.0	
Lithium										
Magnesium	anr									
Manganese	2000	2060	103.0	2000	2040	102.0	2000	2060	103.0	
Molybdenum										
Nickel										
Phosphorus										
Potassium	anr									
Selenium	2000	1980	99.0	2000	1960	98.0	2000	1950	97.5	
Silicon										
Silver	250	245	98.0	250	243	97.2	250	244	97.6	
Sodium	anr									
Strontium										
Sulfur										
Thallium	2000	2050	102.5	2000	2030	101.5	2000	2020	101.0	
Tin										
Titanium	anr									
Tungsten										
Vanadium	anr									

10.3.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP      Date Analyzed: 10/01/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47552      Units: ug/l

	Time:		15:59		16:54		17:48		
Sample ID:	CCV	CCV3	CCV	CCV4	CCV	CCV5			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc                      anr

Zirconium

(\* ) Outside of QC limits  
(anr) Analyte not requested

10.3.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP      Date Analyzed: 10/01/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47552      Units: ug/l

Time: Sample ID: CCV	18:37 CCV6	Results	% Rec
Metal	True		
Aluminum	40000	40700	101.8
Antimony	anr		
Arsenic	2000	1980	99.0
Barium	2000	2060	103.0
Beryllium	anr		
Bismuth			
Boron			
Cadmium	2000	2000	100.0
Calcium	40000	39800	99.5
Cerium			
Chromium			
Cobalt			
Copper	2000	1890	94.5
Iron	40000	39700	99.3
Lead	2000	2100	105.0
Lithium			
Magnesium	anr		
Manganese	2000	2050	102.5
Molybdenum			
Nickel			
Phosphorus			
Potassium	anr		
Selenium	2000	1980	99.0
Silicon			
Silver	250	243	97.2
Sodium	anr		
Strontium			
Sulfur			
Thallium	2000	2030	101.5
Tin			
Titanium	anr		
Tungsten			
Vanadium	anr		

10.3.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery Run ID: MA47552 Units: ug/l

Time:	18:37		
Sample ID: CCV	CCV6		
Metal	True	Results	% Rec

Zinc anr

Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 90 to 110 % Recovery Run ID: MA47552 Units: ug/l

Metal	Time: 13:45		% Rec	Time: 13:51		% Rec
	HSTD	HSTD1		HSTD	HSTD2	
Aluminum	True	Results		300000	302000	100.7
Antimony	anr					
Arsenic	8000	7900	98.8			
Barium	8000	8210	102.6			
Beryllium	anr					
Bismuth						
Boron						
Cadmium	8000	8210	102.6			
Calcium				200000	198000	99.0
Cerium						
Chromium						
Cobalt						
Copper	8000	7990	99.9			
Iron				200000	198000	99.0
Lead	8000	8070	100.9			
Lithium						
Magnesium						
Manganese	8000	8220	102.8			
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	8000	8230	102.9			
Silicon						
Silver	625	615	98.4			
Sodium						
Strontium						
Sulfur						
Thallium	8000	8410	105.1			
Tin						
Titanium	anr					
Tungsten						
Vanadium	anr					

10.3.6  
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HIGH STANDARD CHECK SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 90 to 110 % Recovery Run ID: MA47552 Units: ug/l

Time:		13:45		13:51	
Sample ID:	HSTD	HSTD1	HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results % Rec

Zinc anr

Zirconium

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.3.6  
 10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47552 Units: ug/l

Time:				13:25			13:30		
Sample ID:	CRI	CRIA	CRID	CRID1	% Rec	Results	% Rec	Results	% Rec
Metal	True	True	True	True					
Aluminum	200	500	100	92.8	92.8	194	97.0		
Antimony	6.0	20	3.0						
Arsenic	8.0	20	3.0	3.10	103.3	7.90	98.8		
Barium	200		4.0	4.20	105.0	203	101.5		
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10						
Cadmium	3.0		1.0	1.00	100.0	2.90	96.7		
Calcium	5000	2000	1000	1010	101.0	5070	101.4		
Cerium									
Chromium	10		2.0						
Cobalt	50		3.0						
Copper	10		2.0			9.70	97.0		
Iron	100	500				103	103.0		
Lead	3.0	20	2.5			2.80	93.3		
Lithium	50								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	3.20	106.7	15.7	104.7		
Molybdenum	20								
Nickel	10		4.0						
Phosphorus	50								
Potassium	5000		2000	anr					
Selenium	10	20	5.0	5.40	108.0	10.4	104.0		
Silicon	200								
Silver	5.0		2.0			4.60	92.0		
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0			10.8	108.0		
Tin	10								
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					

10.3.7  
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47552 Units: ug/l

Time:				13:25			13:30
Sample ID:	CRI	CRIA	CRID	CRID1			CRI1
Metal	True	True	True	Results	% Rec	Results	% Rec

Zinc	20		10	anr			
Zirconium	10						

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.3.7  
 10

INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
Part 1 - ICSA and ICSAB Standards

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
QC Limits: 80 to 120 % Recovery Run ID: MA47552 Units: ug/l

Metal	Time:		13:35		13:40	
	Sample ID:	ICSAB	ICSAL	% Rec	ICSAB1	% Rec
Aluminum	500000	500000	510000	102.0	515000	103.0
Antimony		1000	-1.60		1040	104.0
Arsenic		1000	1.90		1070	107.0
Barium		500	0.800		504	100.8
Beryllium		500	0.100		498	99.6
Bismuth		500	-16.8		508	101.6
Boron		500	2.90		508	101.6
Cadmium		1000	0.500		1020	102.0
Calcium	400000	400000	394000	98.5	381000	95.3
Cerium			89.4		79.4	
Chromium		500	0.400		478	95.6
Cobalt		500	0.600		481	96.2
Copper		500	3.30		526	105.2
Iron	200000	200000	200000	100.0	190000	95.0
Lead		1000	2.20		914	91.4
Lithium		500	-9.50		508	101.6
Magnesium	500000	500000	513000	102.6	513000	102.6
Manganese		500	-1.70		508	101.6
Molybdenum		500	2.80		501	100.2
Nickel		1000	-0.700		975	97.5
Phosphorus		500	11.9		503	100.6
Potassium			90.3		53.2	
Selenium		1000	-8.90		987	98.7
Silicon		500	-8.50		511	102.2
Silver		1000	-1.20		1020	102.0
Sodium			22.4		21.0	
Strontium		500	-2.50		511	102.2
Sulfur		500	-23.8		470	94.0
Thallium		1000	0.500		968	96.8
Tin		500	-3.10		479	95.8
Titanium		500	5.50		510	102.0
Tungsten		500	11.6		500	100.0
Vanadium		500	0.900		488	97.6

10.3.8  
10

INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
 Part 1 - ICSA and ICSAB Standards

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SF100119M1.ICP Date Analyzed: 10/01/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 80 to 120 % Recovery Run ID: MA47552 Units: ug/l

Time:			13:35			13:40
Sample ID:	ICSA	ICSAB	ICSAL	% Rec	ICSAB1	% Rec
Metal	True	True	Results	% Rec	Results	% Rec

Zinc		1000	2.80		957	95.7
Zirconium		500	-4.20		511	102.2

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.3.8  
 10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47570  
Parameters: Sb,Ni,K

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:39	MA47570-STD1	1		STDA
11:44	MA47570-STD2	1		STDB
11:50	ZZZZZZ	1		
11:55	ZZZZZZ	1		
12:00	MA47570-ICV1	1		
12:08	MA47570-ICB1	1		
12:14	MA47570-ICCV1	1		
12:26	MA47570-CCB1	1		
12:31	MA47570-CRID1	1		See rerun
12:36	ZZZZZZ	1		tip missed cup
12:41	ZZZZZZ	1		tip missed cup
12:46	ZZZZZZ	1		tip missed cup
12:51	ZZZZZZ	1		tip missed cup
12:57	MA47570-HSTD1	1		
13:03	ZZZZZZ	1		
13:08	ZZZZZZ	1		Tip missed cup
13:28	MA47570-HSTD2	1		
13:34	ZZZZZZ	1		
13:39	MA47570-CCV1	1		
13:44	MA47570-CCB2	1		
13:49	MA47570-CRI1	1		
13:54	MA47570-CRID2	1		
13:59	MA47570-ICSA1	1		
14:04	MA47570-ICSAB1	1		
14:09	ZZZZZZ	1		
14:14	ZZZZZZ	1		
14:19	ZZZZZZ	500		
14:24	MP17641-PS1	10		
14:28	ZZZZZZ	5		
14:33	MA47570-CCV2	1		
14:38	MA47570-CCB3	1		
14:43	ZZZZZZ	2		
14:48	ZZZZZZ	2		

10.4  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
Analyst: ND      Run ID: MA47570  
Parameters: Sb,Ni,K

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:54	MP17641-SD1	50		
14:59	ZZZZZZ	10		
15:03	ZZZZZZ	1		
15:08	ZZZZZZ	2		
15:13	MP17641-SD1	500		
15:18	ZZZZZZ	1		
15:23	ZZZZZZ	5		
15:28	MA47570-CCV3	1		
15:33	MA47570-CCB4	1		
15:38	ZZZZZZ	2		
15:43	ZZZZZZ	1		
15:48	ZZZZZZ	1		
15:53	ZZZZZZ	5		
15:58	ZZZZZZ	1		
16:03	ZZZZZZ	5		
16:08	ZZZZZZ	2		
16:13	ZZZZZZ	1		
16:18	ZZZZZZ	2		
16:23	MA47570-CCV4	1		
16:28	MA47570-CCB5	1		
16:33	ZZZZZZ	10		
16:38	ZZZZZZ	2		
16:43	MA47570-ICSA2	1		
16:48	MA47570-ICSAB2	1		
16:53	MA47570-CCV5	1		
16:58	MA47570-CCB6	1		
17:03	ZZZZZZ	1		
17:08	ZZZZZZ	1		
17:13	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:34	ZZZZZZ	1		

10.4  
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SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47570  
Parameters: Sb,Ni,K

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:39	MP17697-MB1	5		
17:44	MP17697-B1	5		
17:49	MA47570-CCV6	1		
17:54	MA47570-CCB7	1		
17:59	MP17697-S1	5		
18:03	MP17697-S2	5		
18:08	JC95862-1	5		(sample used for QC only; not part of login JC95555)
18:13	MP17697-SD1	25		
18:18	ZZZZZZ	5		
18:23	ZZZZZZ	5		
18:28	ZZZZZZ	5		
18:33	ZZZZZZ	5		
18:38	ZZZZZZ	5		
18:43	MA47570-CCV7	1		
18:48	MA47570-CCB8	1		
18:53	ZZZZZZ	5		
18:58	ZZZZZZ	5		
19:03	ZZZZZZ	5		
19:08	ZZZZZZ	5		
19:13	MP17698-MB1	5		No ending QC
19:18	MP17698-B1	5		No ending QC
19:23	MP17698-B2	5		No ending QC
19:27	MP17698-S1	5		No ending QC
19:32	MP17698-S2	5		No ending QC
19:37	MA47570-CCV8	1		
19:42	MA47570-CCB9	1		
19:47	JC95531-1	5		(sample used for QC only; not part of login JC95555)
19:52	MP17698-SD1	25		No ending QC
19:57	MP17700-MB1	5		
20:02	MP17700-MB2	5		
20:07	MP17700-B1	5		
20:12	MP17700-B2	5		
20:16	MP17700-S1	5		

10.4  
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SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47570  
Parameters: Sb,Ni,K

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:21	MP17700-S2	5		
20:26	JC95821-11A	5		(sample used for QC only; not part of login JC95555)
20:31	MP17700-SD1	25		
20:36	MA47570-CCV9	1		
20:41	MA47570-CCB10	1		
20:46	ZZZZZZ	1		Tip missed cup
20:51	ZZZZZZ	1		
20:56	ZZZZZZ	1		
21:01	ZZZZZZ	1		
21:06	ZZZZZZ	1		
21:11	ZZZZZZ	1		
21:16	ZZZZZZ	1		
21:21	ZZZZZZ	1		
21:26	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:36	ZZZZZZ	1		
21:41	ZZZZZZ	1		
21:46	MA47570-CCV10	1		
21:51	MA47570-CCB11	1		
21:56	ZZZZZZ	5		
22:01	ZZZZZZ	5		
22:06	ZZZZZZ	5		
22:11	ZZZZZZ	5		
22:16	ZZZZZZ	5		
22:21	ZZZZZZ	5		
22:26	MP17692-MB1	1		
22:31	MP17692-B1	1		
22:36	MP17692-S1	1		
22:40	MP17692-S2	1		
22:45	MA47570-CCV11	1		
22:50	MA47570-CCB12	1		
22:55	DA20472-6	1		(sample used for QC only; not part of login JC95555)
23:00	MP17692-SD1	5		

10.4  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
Analyst: ND Run ID: MA47570  
Parameters: Sb,Ni,K

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:05	MP17691-MB1	5		
23:10	MP17691-B1	5		
23:15	MP17691-S1	5		
23:20	MP17691-S2	5		
23:24	JC95743-1	5		(sample used for QC only; not part of login JC95555)
23:29	MP17691-SD1	25		
23:34	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:44	MA47570-CCV12	1		
23:49	MA47570-CCB13	1		
23:54	ZZZZZZ	1		
23:59	ZZZZZZ	1		
00:04	ZZZZZZ	1		
00:09	ZZZZZZ	1		
00:14	ZZZZZZ	1		
00:19	MP17592-PS1	1		
----->	Last reportable sample/prep for job JC95555			
00:24	MP17699-B1	1		Batch to reanalysis, CCB tip missed cup
00:29	MP17699-MB1	1		
00:34	MP17699-S1	1		
00:39	MA47570-CCV13	1		
00:44	MA47570-CCB14	1		
----->	Last reportable CCB for job JC95555			
00:49	MP17699-S2	1		
00:53	JC95963-7F	1		(sample used for QC only; not part of login JC95555)
00:58	MP17699-SD1	5		
01:03	ZZZZZZ	1		
01:08	ZZZZZZ	1		
01:13	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:28	ZZZZZZ	1		
01:33	ZZZZZZ	1		
01:38	MA47570-CCV14	1		
01:43	MA47570-CCB15	1		Tip missed cup

10.4  
10

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
Analyst: ND      Run ID: MA47570  
Parameters: Sb,Ni,K

Time	Sample Description	Dilution Factor	PS Recov	Comments
01:48	ZZZZZZ	1		
01:52	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:02	ZZZZZZ	1		
02:07	ZZZZZZ	1		
02:12	ZZZZZZ	1		
02:17	ZZZZZZ	1		
02:22	ZZZZZZ	1		
02:27	ZZZZZZ	1		
02:32	ZZZZZZ	1		
02:37	MA47570-CCV15	1		
02:42	MA47570-CCB16	1		

Refer to raw data for calibration curve and standards.

10.4  
10

REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Element: Dilution	S b	N i	K
11:50	ZZZZZZ	1			
11:55	ZZZZZZ	1			
12:00	MA47570-ICV1	1	X	X	X
12:08	MA47570-ICB1	1	X	X	X
12:14	MA47570-ICCV1	1	X	X	X
12:26	MA47570-CCB1	1	X	X	X
12:31	MA47570-CRID1	1	See rerun		
12:36	ZZZZZZ	1			
12:41	ZZZZZZ	1			
12:46	ZZZZZZ	1			
12:51	ZZZZZZ	1			
12:57	MA47570-HSTD1	1			X
13:03	ZZZZZZ	1			
13:08	ZZZZZZ	1			
13:28	MA47570-HSTD2	1	X	X	
13:34	ZZZZZZ	1			
13:39	MA47570-CCV1	1	X	X	X
13:44	MA47570-CCB2	1	X	X	X
13:49	MA47570-CRI1	1	X	X	X
13:54	MA47570-CRID2	1	X	X	X
13:59	MA47570-ICSA1	1	X	X	X
14:04	MA47570-ICSAB1	1	X	X	X
14:09	ZZZZZZ	1			
14:14	ZZZZZZ	1			
14:19	ZZZZZZ	500			
14:24	MP17641-PS1	10	X		
14:28	ZZZZZZ	5			
14:33	MA47570-CCV2	1	X	X	X
14:38	MA47570-CCB3	1	X	X	X
14:43	ZZZZZZ	2			
14:48	ZZZZZZ	2			
14:54	MP17641-SD1	50			
14:59	ZZZZZZ	10			

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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Element: Dilution	S b	N i	K
15:03	ZZZZZZ	1			
15:08	ZZZZZZ	2			
15:13	MP17641-SD1	500			
15:18	ZZZZZZ	1			
15:23	ZZZZZZ	5			
15:28	MA47570-CCV3	1	X	X	X
15:33	MA47570-CCB4	1	X	X	X
15:38	ZZZZZZ	2			
15:43	ZZZZZZ	1			
15:48	ZZZZZZ	1			
15:53	ZZZZZZ	5			
15:58	ZZZZZZ	1			
16:03	ZZZZZZ	5			
16:08	ZZZZZZ	2			
16:13	ZZZZZZ	1			
16:18	ZZZZZZ	2			
16:23	MA47570-CCV4	1	X	X	X
16:28	MA47570-CCB5	1	X	X	X
16:33	ZZZZZZ	10			
16:38	ZZZZZZ	2			
16:43	MA47570-ICSA2	1	X	X	X
16:48	MA47570-ICSAB2	1	X	X	X
16:53	MA47570-CCV5	1	X	X	X
16:58	MA47570-CCB6	1	X	X	X
17:03	ZZZZZZ	1			
17:08	ZZZZZZ	1			
17:13	ZZZZZZ	1			
17:18	ZZZZZZ	1			
17:23	ZZZZZZ	1			
17:29	ZZZZZZ	1			
17:34	ZZZZZZ	1			
17:39	MP17697-MB1	5			
17:44	MP17697-B1	5			

10.4.1  
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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Element: Dilution	S b	N i	K
17:49	MA47570-CCV6	1	X	X	X
17:54	MA47570-CCB7	1	X	X	X
17:59	MP17697-S1	5			
18:03	MP17697-S2	5			
18:08	JC95862-1	5			(a)
18:13	MP17697-SD1	25			
18:18	ZZZZZ	5			
18:23	ZZZZZ	5			
18:28	ZZZZZ	5			
18:33	ZZZZZ	5			
18:38	ZZZZZ	5			
18:43	MA47570-CCV7	1	X	X	X
18:48	MA47570-CCB8	1	X	X	X
18:53	ZZZZZ	5			
18:58	ZZZZZ	5			
19:03	ZZZZZ	5			
19:08	ZZZZZ	5			
19:13	MP17698-MB1	5	No	ending	QC
19:18	MP17698-B1	5	No	ending	QC
19:23	MP17698-B2	5	No	ending	QC
19:27	MP17698-S1	5	No	ending	QC
19:32	MP17698-S2	5	No	ending	QC
19:37	MA47570-CCV8	1	X	X	X
19:42	MA47570-CCB9	1	X	X	X
19:47	JC95531-1	5	No	ending	QC
19:52	MP17698-SD1	25	No	ending	QC
19:57	MP17700-MB1	5		X	
20:02	MP17700-MB2	5		X	
20:07	MP17700-B1	5		X	
20:12	MP17700-B2	5		X	
20:16	MP17700-S1	5		X	
20:21	MP17700-S2	5		X	
20:26	JC95821-11A	5	X		(a)

Element: S N K  
 b i

10.4.1  
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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Element: Dilution	S b	N i	K
20:31	MP17700-SD1	25		X	
20:36	MA47570-CCV9	1	X	X	X
20:41	MA47570-CCB10	1	X	X	X
20:46	ZZZZZZ	1			
20:51	ZZZZZZ	1			
20:56	ZZZZZZ	1			
21:01	ZZZZZZ	1			
21:06	ZZZZZZ	1			
21:11	ZZZZZZ	1			
21:16	ZZZZZZ	1			
21:21	ZZZZZZ	1			
21:26	ZZZZZZ	1			
21:31	ZZZZZZ	1			
21:36	ZZZZZZ	1			
21:41	ZZZZZZ	1			
21:46	MA47570-CCV10	1	X	X	X
21:51	MA47570-CCB11	1	X	X	X
21:56	ZZZZZZ	5			
22:01	ZZZZZZ	5			
22:06	ZZZZZZ	5			
22:11	ZZZZZZ	5			
22:16	ZZZZZZ	5			
22:21	ZZZZZZ	5			
22:26	MP17692-MB1	1			
22:31	MP17692-B1	1			
22:36	MP17692-S1	1			
22:40	MP17692-S2	1			
22:45	MA47570-CCV11	1	X	X	X
22:50	MA47570-CCB12	1	X	X	X
22:55	DA20472-6	1			(a)
23:00	MP17692-SD1	5			
23:05	MP17691-MB1	5			
23:10	MP17691-B1	5			

10.4.1  
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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Element: Dilution	S b	N i	K
23:15	MP17691-S1	5			
23:20	MP17691-S2	5			
23:24	JC95743-1	5			(a)
23:29	MP17691-SD1	25			
23:34	ZZZZZZ	1			
23:39	ZZZZZZ	1			
23:44	MA47570-CCV12	1	X	X	X
23:49	MA47570-CCB13	1	X	X	X
23:54	ZZZZZZ	1			
23:59	ZZZZZZ	1			
00:04	ZZZZZZ	1			
00:09	ZZZZZZ	1			
00:14	ZZZZZZ	1			
00:19	MP17592-PS1	1	X	X	X
00:24	MP17699-B1	1	Batch to reanalysis, CCB tip missed cup		
00:29	MP17699-MB1	1			
00:34	MP17699-S1	1			
00:39	MA47570-CCV13	1	X	X	X
00:44	MA47570-CCB14	1	X	X	X
00:49	MP17699-S2	1			
00:53	JC95963-7F	1			
00:58	MP17699-SD1	5			
01:03	ZZZZZZ	1			
01:08	ZZZZZZ	1			
01:13	ZZZZZZ	1			
01:18	ZZZZZZ	1			
01:23	ZZZZZZ	1			
01:28	ZZZZZZ	1			
01:33	ZZZZZZ	1			
01:38	MA47570-CCV14	1			
01:43	MA47570-CCB15	1	Tip missed cup		
01:48	ZZZZZZ	1			
01:52	ZZZZZZ	1			

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REPORTED ELEMENTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Element: S N K Dilution b i
01:58	ZZZZZZ	1
02:02	ZZZZZZ	1
02:07	ZZZZZZ	1
02:12	ZZZZZZ	1
02:17	ZZZZZZ	1
02:22	ZZZZZZ	1
02:27	ZZZZZZ	1
02:32	ZZZZZZ	1
02:37	MA47570-CCV15	1
02:42	MA47570-CCB16	1

(a) Sample used for QC only; not part of login JC95555.

Element: S N K  
b i

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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
11:39	MA47570-STD1	7947 R	181180 R	28940 R	10819 R
11:44	MA47570-STD2	7488	170530	28142	9798
11:50	ZZZZZZ	7671	173640	28488	10037
11:55	ZZZZZZ	7956	180400	28874	10833
12:00	MA47570-ICV1	7694	173800	28734	10041
12:08	MA47570-ICB1	7940	180960	28712	10833
12:14	MA47570-ICCV1	7687	174620	28274	10052
12:26	MA47570-CCB1	7928	179080	28705	10815
12:31	MA47570-CRID1	No results reported for the elements associated with this internal standard.			
12:36	ZZZZZZ	No results reported for the elements associated with this internal standard.			
12:41	ZZZZZZ	No results reported for the elements associated with this internal standard.			
12:46	ZZZZZZ	No results reported for the elements associated with this internal standard.			
12:51	ZZZZZZ	No results reported for the elements associated with this internal standard.			
12:57	MA47570-HSTD1	7138	160580	27296	9134
13:03	ZZZZZZ	7775	176690	28438	10896
13:08	ZZZZZZ	No results reported for the elements associated with this internal standard.			
13:28	MA47570-HSTD2	7647	176140	27988	10644
13:34	ZZZZZZ	7732	179490	28609	10783
13:39	MA47570-CCV1	7645	173480	28443	9993
13:44	MA47570-CCB2	7932	180760	28619	10791
13:49	MA47570-CRI1	7832	178020	28373	10564
13:54	MA47570-CRID2	7892	179940	28507	10722
13:59	MA47570-ICSA1	7081	158300	27324	9109
14:04	MA47570-ICSAB1	7115	158480	27596	9144
14:09	ZZZZZZ	7974	181720	28710	10859
14:14	ZZZZZZ	7980	183090	29113	10865
14:19	ZZZZZZ	7908	181940	28694	10788
14:24	MP17641-PS1	7743	180930	28245	10720
14:28	ZZZZZZ	7928	180220	29551	10602
14:33	MA47570-CCV2	7654	173190	28272	10001
14:38	MA47570-CCB3	7942	180990	28639	10809
14:43	ZZZZZZ	8104	182290	29833	10396
14:48	ZZZZZZ	8135	182890	30290	10333

10.4.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
14:54	MP17641-SD1	7979	182800	28908	10860
14:59	ZZZZZZ	7998	182020	29506	10698
15:03	ZZZZZZ	8054	183770	29287	10956
15:08	ZZZZZZ	8234	184170	30458	10559
15:13	MP17641-SD1	8021	182820	28689	10948
15:18	ZZZZZZ	8064	183450	29262	10974
15:23	ZZZZZZ	7781	176700	28743	10301
15:28	MA47570-CCV3	7681	174430	28001	10087
15:33	MA47570-CCB4	7972	181720	28498	10892
15:38	ZZZZZZ	7555	171760	28376	9800
15:43	ZZZZZZ	8114	184360	29225	11013
15:48	ZZZZZZ	8290	186560	30702	10669
15:53	ZZZZZZ	7938	179020	28633	10977
15:58	ZZZZZZ	No results reported for the elements associated with this internal standard.			
16:03	ZZZZZZ	8906	199140	32093	10696
16:08	ZZZZZZ	7777	175410	29251	10201
16:13	ZZZZZZ	8064	182860	28857	11019
16:18	ZZZZZZ	No results reported for the elements associated with this internal standard.			
16:23	MA47570-CCV4	7720	172840	27696	10124
16:28	MA47570-CCB5	8007	179720	28035	10938
16:33	ZZZZZZ	8004	180710	28492	10955
16:38	ZZZZZZ	8065	180830	29153	10590
16:43	MA47570-ICSA2	7187	160630	27059	9247
16:48	MA47570-ICSAB2	7215	160030	27091	9298
16:53	MA47570-CCV5	7749	173670	27522	10163
16:58	MA47570-CCB6	8010	182220	27989	10967
17:03	ZZZZZZ	9058	202050	34092	9670
17:08	ZZZZZZ	8504	190530	31911	9738
17:13	ZZZZZZ	8454	190400	31668	9712
17:18	ZZZZZZ	7994	181330	29029	10509
17:23	ZZZZZZ	9124	205160	34320	9730
17:29	ZZZZZZ	8494	190450	31972	9755
17:34	ZZZZZZ	8452	190120	31841	9761

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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:39	MP17697-MB1	8083	183160	28832	11117
17:44	MP17697-B1	8046	183010	28669	10872
17:49	MA47570-CCV6	7760	175720	28095	10282
17:54	MA47570-CCB7	8055	180310	28645	11118
17:59	MP17697-S1	7300	166100	27682	9563
18:03	MP17697-S2	7288	166290	27652	9550
18:08	JC95862-1	7283	165270	27395	9569
18:13	MP17697-SD1	7759	176860	27983	10449
18:18	ZZZZZZ	7221	166750	27594	9447
18:23	ZZZZZZ	7317	167090	27561	9574
18:28	ZZZZZZ	7333	167810	27664	9621
18:33	ZZZZZZ	7342	167970	27777	9649
18:38	ZZZZZZ	7262	165930	27457	9484
18:43	MA47570-CCV7	7795	177160	27996	10349
18:48	MA47570-CCB8	8085	182950	28190	11178
18:53	ZZZZZZ	7339	168310	27736	9675
18:58	ZZZZZZ	7236	165160	27349	9456
19:03	ZZZZZZ	7393	167230	27606	9736
19:08	ZZZZZZ	7278	166110	27506	9572
19:13	MP17698-MB1	No results reported for the elements associated with this internal standard.			
19:18	MP17698-B1	No results reported for the elements associated with this internal standard.			
19:23	MP17698-B2	No results reported for the elements associated with this internal standard.			
19:27	MP17698-S1	No results reported for the elements associated with this internal standard.			
19:32	MP17698-S2	No results reported for the elements associated with this internal standard.			
19:37	MA47570-CCV8	7801	176390	27871	10370
19:42	MA47570-CCB9	8074	181020	28030	11197
19:47	JC95531-1	No results reported for the elements associated with this internal standard.			
19:52	MP17698-SD1	No results reported for the elements associated with this internal standard.			
19:57	MP17700-MB1	7632	170230	27655	9995
20:02	MP17700-MB2	8057	182730	28338	11161
20:07	MP17700-B1	7654	171500	27833	9954
20:12	MP17700-B2	8037	182270	28186	10930
20:16	MP17700-S1	7555	169300	27629	9758

10.4.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:21	MP17700-S2	7542	169700	27782	9758
20:26	JC95821-11A	7478	168410	27752	9728
20:31	MP17700-SD1	7786	176520	27752	10432
20:36	MA47570-CCV9	7722	174630	27649	10274
20:41	MA47570-CCB10	8024	182210	27912	11123
20:46	ZZZZZZ	No results reported for the elements associated with this internal standard.			
20:51	ZZZZZZ	8034	182470	27883	11081
20:56	ZZZZZZ	8030	182760	28061	11093
21:01	ZZZZZZ	8059	181010	28136	11131
21:06	ZZZZZZ	8074	179860	28067	11192
21:11	ZZZZZZ	8085	182430	28266	11152
21:16	ZZZZZZ	8030	181560	27909	11133
21:21	ZZZZZZ	8016	182650	27921	11189
21:26	ZZZZZZ	8027	180210	27922	11207
21:31	ZZZZZZ	8266	172790	28718	10217
21:36	ZZZZZZ	7434	167800	27117	9823
21:41	ZZZZZZ	7416	165290	27196	9832
21:46	MA47570-CCV10	7778	175470	27678	10327
21:51	MA47570-CCB11	8036	182100	27461	11125
21:56	ZZZZZZ	7265	164660	27030	9508
22:01	ZZZZZZ	7521	167320	27323	9792
22:06	ZZZZZZ	7530	168400	27377	9756
22:11	ZZZZZZ	7660	169860	27446	10022
22:16	ZZZZZZ	7587	168670	27304	9896
22:21	ZZZZZZ	7534	169280	27339	9820
22:26	MP17692-MB1	8117	182820	28433	11228
22:31	MP17692-B1	7836	176360	28057	10509
22:36	MP17692-S1	7675	173720	27106	10326
22:40	MP17692-S2	7695	173260	27275	10355
22:45	MA47570-CCV11	7832	176210	27982	10410
22:50	MA47570-CCB12	8118	184330	28475	11248
22:55	DA20472-6	8017	182260	27960	11152
23:00	MP17692-SD1	8095	182050	27870	11213

10.4.2  
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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:05	MP17691-MB1	8142	183200	28298	11263
23:10	MP17691-B1	8119	181660	28428	11028
23:15	MP17691-S1	7926	179730	28295	10706
23:20	MP17691-S2	7930	177670	27796	10716
23:24	JC95743-1	7956	180810	27953	10853
23:29	MP17691-SD1	8074	182390	28024	11151
23:34	ZZZZZ	8018	182660	28284	11021
23:39	ZZZZZ	7726	177720	28253	10852
23:44	MA47570-CCV12	7806	175520	27707	10393
23:49	MA47570-CCB13	8100	183280	28037	11248
23:54	ZZZZZ	7962	181030	28135	10969
23:59	ZZZZZ	7954	181580	28098	10956
00:04	ZZZZZ	6565	141810	26013	8243
00:09	ZZZZZ	7805	178300	27311	10585
00:14	ZZZZZ	8131	182390	28292	11277
00:19	MP17592-PS1	7986	180700	29273	10001
00:24	MP17699-B1	No results reported for the elements associated with this internal standard.			
00:29	MP17699-MB1	No results reported for the elements associated with this internal standard.			
00:34	MP17699-S1	No results reported for the elements associated with this internal standard.			
00:39	MA47570-CCV13	7835	176840	27520	10457
00:44	MA47570-CCB14	8105	182380	27903	11275
00:49	MP17699-S2	No results reported for the elements associated with this internal standard.			
00:53	JC95963-7F	No results reported for the elements associated with this internal standard.			
00:58	MP17699-SD1	No results reported for the elements associated with this internal standard.			
01:03	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:08	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:13	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:18	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:23	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:28	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:33	ZZZZZ	No results reported for the elements associated with this internal standard.			
01:38	MA47570-CCV14	No results reported for the elements associated with this internal standard.			
01:43	MA47570-CCB15	No results reported for the elements associated with this internal standard.			

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INTERNAL STANDARD SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 Analyst: ND Run ID: MA47570  
 Parameters: Sb,Ni,K

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
01:48	ZZZZZZ	No results reported for the elements associated with this internal standard.			
01:52	ZZZZZZ	No results reported for the elements associated with this internal standard.			
01:58	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:02	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:07	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:12	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:17	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:22	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:27	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:32	ZZZZZZ	No results reported for the elements associated with this internal standard.			
02:37	MA47570-CCV15	No results reported for the elements associated with this internal standard.			
02:42	MA47570-CCB16	No results reported for the elements associated with this internal standard.			

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

10.4.2  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Metal	Time:		12:08		12:26		13:44		14:38		
	Sample ID:	RL	IDL	ICB1	final	CCB1	final	CCB2	final	CCB3	final
Aluminum	200	14	anr								
Antimony	6.0	1.4	0.00	<6.0	0.00	<6.0	0.900	<6.0	0.300	<6.0	
Arsenic	3.0	1.5	anr								
Barium	200	.5	anr								
Beryllium	1.0	.1	anr								
Bismuth	20	1.8									
Boron	100	.8	anr								
Cadmium	3.0	.3	anr								
Calcium	5000	3.9	anr								
Cerium	100										
Chromium	10	.3	anr								
Cobalt	50	.3	anr								
Copper	10	.6	anr								
Iron	100	2.6	anr								
Lead	3.0	1.6	anr								
Lithium	50	2.1									
Magnesium	5000	16	anr								
Manganese	15	.1	anr								
Molybdenum	20	.4									
Nickel	10	.5	0.400	<10	0.800	<10	0.500	<10	0.600	<10	
Phosphorus	50	1.9									
Potassium	10000	79	36.5	<10000	44.3	<10000	33.5	<10000	-24.5	<10000	
Selenium	10	3	anr								
Silicon	200	1.2									
Silver	10	.5	anr								
Sodium	10000	9.9	anr								
Strontium	10	.3									
Sulfur	50	3.5									
Thallium	10	1.3	anr								
Tin	10	.7	anr								
Titanium	10	.5									
Tungsten	50	1.7									
Vanadium	50	.5	anr								

10.4.3  
10



BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Time:			12:08		12:26		13:44		14:38	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.2	anr							
Zirconium	10	.3								

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.4.3  
 10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Metal	RL	IDL	15:33	16:28		16:58		17:54		
			CCB4	raw	final	raw	final	raw	final	raw
Aluminum	200	14	anr							
Antimony	6.0	1.4	-0.400	<6.0	0.300	<6.0	0.600	<6.0	-1.00	<6.0
Arsenic	3.0	1.5	anr							
Barium	200	.5	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.8								
Boron	100	.8	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	3.9	anr							
Cerium	100									
Chromium	10	.3	anr							
Cobalt	50	.3	anr							
Copper	10	.6	anr							
Iron	100	2.6	anr							
Lead	3.0	1.6	anr							
Lithium	50	2.1								
Magnesium	5000	16	anr							
Manganese	15	.1	anr							
Molybdenum	20	.4								
Nickel	10	.5	0.500	<10	0.500	<10	0.700	<10	0.00	<10
Phosphorus	50	1.9								
Potassium	10000	79	-5.80	<10000	-3.00	<10000	-21.7	<10000	12.8	<10000
Selenium	10	3	anr							
Silicon	200	1.2								
Silver	10	.5	anr							
Sodium	10000	9.9	anr							
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	anr							
Tin	10	.7	anr							
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	anr							

10.4.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Time:	15:33	16:28	16:58	17:54						
Sample ID:	CCB4	CCB5	CCB6	CCB7						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.2	anr							
Zirconium	10	.3								

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.4.3  
 10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Metal	RL	IDL	18:48	19:42		20:41		21:51		
			CCB8	raw	final	raw	final	raw	final	raw
Aluminum	200	14	anr							
Antimony	6.0	1.4	-0.800	<6.0	-0.500	<6.0	-0.500	<6.0	-0.200	<6.0
Arsenic	3.0	1.5	anr							
Barium	200	.5	anr							
Beryllium	1.0	.1	anr							
Bismuth	20	1.8								
Boron	100	.8	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	3.9	anr							
Cerium	100									
Chromium	10	.3	anr							
Cobalt	50	.3	anr							
Copper	10	.6	anr							
Iron	100	2.6	anr							
Lead	3.0	1.6	anr							
Lithium	50	2.1								
Magnesium	5000	16	anr							
Manganese	15	.1	anr							
Molybdenum	20	.4								
Nickel	10	.5	0.200	<10	0.100	<10	-0.100	<10	0.00	<10
Phosphorus	50	1.9								
Potassium	10000	79	29.7	<10000	95.9	<10000	51.0	<10000	-3.10	<10000
Selenium	10	3	anr							
Silicon	200	1.2								
Silver	10	.5	anr							
Sodium	10000	9.9	anr							
Strontium	10	.3								
Sulfur	50	3.5								
Thallium	10	1.3	anr							
Tin	10	.7	anr							
Titanium	10	.5								
Tungsten	50	1.7								
Vanadium	50	.5	anr							

10.4.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Time:	18:48	19:42	20:41	21:51						
Sample ID:	CCB8	CCB9	CCB10	CCB11						
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.2	anr							
Zirconium	10	.3								

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.4.3  
 10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Metal	RL	IDL	22:50 CCB12		23:49 CCB13		00:44 CCB14	
			raw	final	raw	final	raw	final
Aluminum	200	14	anr					
Antimony	6.0	1.4	-0.700	<6.0	0.00	<6.0	-0.700	<6.0
Arsenic	3.0	1.5	anr					
Barium	200	.5	anr					
Beryllium	1.0	.1	anr					
Bismuth	20	1.8						
Boron	100	.8	anr					
Cadmium	3.0	.3	anr					
Calcium	5000	3.9	anr					
Cerium	100							
Chromium	10	.3	anr					
Cobalt	50	.3	anr					
Copper	10	.6	anr					
Iron	100	2.6	anr					
Lead	3.0	1.6	anr					
Lithium	50	2.1						
Magnesium	5000	16	anr					
Manganese	15	.1	anr					
Molybdenum	20	.4						
Nickel	10	.5	0.00	<10	0.100	<10	0.100	<10
Phosphorus	50	1.9						
Potassium	10000	79	15.1	<10000	-9.80	<10000	71.4	<10000
Selenium	10	3	anr					
Silicon	200	1.2						
Silver	10	.5	anr					
Sodium	10000	9.9	anr					
Strontium	10	.3						
Sulfur	50	3.5						
Thallium	10	1.3	anr					
Tin	10	.7	anr					
Titanium	10	.5						
Tungsten	50	1.7						
Vanadium	50	.5	anr					

10.4.3  
10

BLANK RESULTS SUMMARY  
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: result < RL Run ID: MA47570 Units: ug/l

Time:	22:50	23:49	00:44					
Sample ID:	CCB12	CCB13	CCB14					
Metal	RL	IDL	raw	final	raw	final	raw	final

Zinc 20 .2 anr  
 Zirconium 10 .3

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.4.3  
 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial Continuing Calibration Check

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: to % Recovery      Run ID: MA47570      Units: ug/l

Time:	12:14		
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	2000	1920	96.0
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Bismuth			
Boron	anr		
Cadmium	anr		
Calcium	anr		
Cerium			
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	2000	2030	101.5
Phosphorus			
Potassium	40000	39800	99.5
Selenium	anr		
Silicon			
Silver	anr		
Sodium	anr		
Strontium			
Sulfur			
Thallium	anr		
Tin	anr		
Titanium			
Tungsten			
Vanadium	anr		

10.4.4  
10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial Continuing Calibration Check

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: to % Recovery      Run ID: MA47570      Units: ug/l

Time:	12:14
Sample ID:	ICCV      ICCV1
Metal	True      Results      % Rec

Zinc      anr

Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.4.4  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

Metal	Time:	12:00			13:39			14:33		
	Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	Results	% Rec	
Aluminum	anr									
Antimony	2000	1900	95.0	2000	1930	96.5	2000	1920	96.0	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Bismuth										
Boron	anr									
Cadmium	anr									
Calcium	anr									
Cerium										
Chromium	anr									
Cobalt	anr									
Copper	anr									
Iron	anr									
Lead	anr									
Lithium										
Magnesium	anr									
Manganese	anr									
Molybdenum										
Nickel	2000	2020	101.0	2000	2040	102.0	2000	2030	101.5	
Phosphorus										
Potassium	40000	39400	98.5	40000	39800	99.5	40000	39600	99.0	
Selenium	anr									
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin	anr									
Titanium										
Tungsten										
Vanadium	anr									

10.4.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

	Time:		12:00		13:39		14:33		
Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc                      anr

Zirconium

(\* ) Outside of QC limits  
(anr) Analyte not requested

10.4.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

Metal	Sample ID	15:28			16:23			16:53		
		CCV	CCV3	% Rec	CCV	CCV4	% Rec	CCV	CCV5	% Rec
Aluminum	anr									
Antimony	2000	1920	96.0	2000	1910	95.5	2000	1900	95.0	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Bismuth										
Boron	anr									
Cadmium	anr									
Calcium	anr									
Cerium										
Chromium	anr									
Cobalt	anr									
Copper	anr									
Iron	anr									
Lead	anr									
Lithium										
Magnesium	anr									
Manganese	anr									
Molybdenum										
Nickel	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0	
Phosphorus										
Potassium	40000	39800	99.5	40000	39800	99.5	40000	39500	98.8	
Selenium	anr									
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin	anr									
Titanium										
Tungsten										
Vanadium	anr									

10.4.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

	Time:		15:28		16:23		16:53		
Sample ID:	CCV		CCV3	CCV	CCV4	CCV	CCV5		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc                      anr

Zirconium

(\* ) Outside of QC limits  
(anr) Analyte not requested

10.4.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

Metal	Sample ID	17:49			18:43			19:37		
		CCV	CCV6	% Rec	CCV	CCV7	% Rec	CCV	CCV8	% Rec
Aluminum	anr									
Antimony	2000	1900	95.0	2000	1900	95.0	2000	1900	95.0	
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Bismuth										
Boron	anr									
Cadmium	anr									
Calcium	anr									
Cerium										
Chromium	anr									
Cobalt	anr									
Copper	anr									
Iron	anr									
Lead	anr									
Lithium										
Magnesium	anr									
Manganese	anr									
Molybdenum										
Nickel	2000	2000	100.0	2000	2000	100.0	2000	1990	99.5	
Phosphorus										
Potassium	40000	39500	98.8	40000	39700	99.3	40000	39500	98.8	
Selenium	anr									
Silicon										
Silver	anr									
Sodium	anr									
Strontium										
Sulfur										
Thallium	anr									
Tin	anr									
Titanium										
Tungsten										
Vanadium	anr									

10.4.5 10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

	Time:		17:49		18:43		19:37		
Sample ID:	CCV	CCV6	CCV	CCV7	CCV	CCV8			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc                      anr

Zirconium

(\* ) Outside of QC limits  
(anr) Analyte not requested

10.4.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

Metal	Sample ID: CCV	20:36		CCV	21:46		CCV	22:45	
		CCV9	Results % Rec		CCV10	Results % Rec		CCV11	Results % Rec
Aluminum	anr								
Antimony	2000	1900	95.0	2000	1900	95.0	2000	1900	95.0
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Bismuth									
Boron	anr								
Cadmium	anr								
Calcium	anr								
Cerium									
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	2000	2000	100.0	2000	1990	99.5	2000	1990	99.5
Phosphorus									
Potassium	40000	39700	99.3	40000	39700	99.3	40000	39600	99.0
Selenium	anr								
Silicon									
Silver	anr								
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin	anr								
Titanium									
Tungsten									
Vanadium	anr								

10.4.5 10



CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

	Time:		20:36		21:46		22:45		
Sample ID:	CCV	CCV9	CCV	CCV10	CCV	CCV11			
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec

Zinc                      anr

Zirconium

(\* ) Outside of QC limits  
(anr) Analyte not requested

10.4.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

	Time:						
Sample ID:	CCV	23:44 CCV12		CCV	00:39 CCV13		
Metal	True	Results	% Rec	True	Results	% Rec	
Aluminum	anr						
Antimony	2000	1900	95.0	2000	1870	93.5	
Arsenic	anr						
Barium	anr						
Beryllium	anr						
Bismuth							
Boron	anr						
Cadmium	anr						
Calcium	anr						
Cerium							
Chromium	anr						
Cobalt	anr						
Copper	anr						
Iron	anr						
Lead	anr						
Lithium							
Magnesium	anr						
Manganese	anr						
Molybdenum							
Nickel	2000	1990	99.5	2000	1970	98.5	
Phosphorus							
Potassium	40000	39600	99.0	40000	39400	98.5	
Selenium	anr						
Silicon							
Silver	anr						
Sodium	anr						
Strontium							
Sulfur							
Thallium	anr						
Tin	anr						
Titanium							
Tungsten							
Vanadium	anr						

10.4.5  
10

CALIBRATION CHECK STANDARDS SUMMARY  
Initial and Continuing Calibration Checks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 95 to 105 % Recovery      Run ID: MA47570      Units: ug/l

	Time:	23:44		00:39	
Sample ID:	CCV	CCV12	CCV	CCV13	
Metal	True	Results	% Rec	True	Results % Rec

Zinc                    anr

Zirconium

(\*) Outside of QC limits  
(anr) Analyte not requested

10.4.5  
10

HIGH STANDARD CHECK SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 90 to 110 % Recovery Run ID: MA47570 Units: ug/l

	Time:	12:57		13:28	
Sample ID:	HSTD	HSTD1	HSTD	HSTD2	HSTD
Metal	True	Results	% Rec	True	Results
Aluminum	anr				
Antimony				8000	7650 95.6
Arsenic					
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium					
Calcium	anr				
Cerium					
Chromium					
Cobalt					
Copper					
Iron	anr				
Lead					
Lithium					
Magnesium	anr				
Manganese					
Molybdenum					
Nickel				8000	8270 103.4
Phosphorus					
Potassium	200000	201000	100.5		
Selenium					
Silicon					
Silver					
Sodium	anr				
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					

10.4.6  
10

HIGH STANDARD CHECK SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 90 to 110 % Recovery Run ID: MA47570 Units: ug/l

	Time:	12:57		13:28	
Sample ID:	HSTD	HSTD1	HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results

Zinc

Zirconium

(\* ) Outside of QC limits  
 (anr) Analyte not requested

10.4.6  
**10**

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47570 Units: ug/l

Time:				13:49			13:54		
Sample ID:	CRI	CRIA	CRID	CR11	% Rec	CRID2	% Rec		
Metal	True	True	True	Results		Results	% Rec		
Aluminum	200	500	100	anr					
Antimony	6.0	20	3.0	5.40	90.0	-0.400U	0.0* (a)		
Arsenic	8.0	20	3.0	anr					
Barium	200		4.0	anr					
Beryllium	2.0		1.0	anr					
Bismuth	20								
Boron	100		10	anr					
Cadmium	3.0		1.0	anr					
Calcium	5000	2000	1000	anr					
Cerium									
Chromium	10		2.0	anr					
Cobalt	50		3.0	anr					
Copper	10		2.0	anr					
Iron	100	500		anr					
Lead	3.0	20	2.5	anr					
Lithium	50								
Magnesium	5000	2000	100	anr					
Manganese	15		3.0	anr					
Molybdenum	20								
Nickel	10		4.0	10.4	104.0	4.10	102.5		
Phosphorus	50								
Potassium	5000		2000	5020	100.4	1970	98.5		
Selenium	10	20	5.0	anr					
Silicon	200								
Silver	5.0		2.0	anr					
Sodium	5000		1000	anr					
Strontium	10								
Sulfur	50								
Thallium	10		2.0	anr					
Tin	10			anr					
Titanium	10								
Tungsten	50								
Vanadium	50		2.0	anr					

10.4.7  
10

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA47570 Units: ug/l

Time:				13:49				13:54
Sample ID:	CRI	CRIA	CRID	CRI1			CRID2	
Metal	True	True	True	Results	% Rec	Results	% Rec	

Zinc	20		10	anr			
Zirconium	10						

(\* ) Outside of QC limits  
 (anr) Analyte not requested  
 (a) No samples reported for this element at this RL in the area bracketed by this QC.

10.4.7  
**10**

INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
Part 1 - ICSA and ICSAB Standards

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP      Date Analyzed: 10/04/19      Methods: EPA 200.7, SW846 6010D  
QC Limits: 80 to 120 % Recovery      Run ID: MA47570      Units: ug/l

Metal	Time:		13:59		14:04		16:43		16:48	
	Sample ID:	ICSA	ICSAB	ICSAL	% Rec	ICSAB1	% Rec	ICSA2	% Rec	ICSAB2
Aluminum	500000	500000	503000	100.6	497000	99.4	499000	99.8	497000	99.4
Antimony		1000	-4.20		971	97.1	-2.70		957	95.7
Arsenic		1000	1.10		1010	101.0	0.600		992	99.2
Barium		500	0.500		506	101.2	0.500		501	100.2
Beryllium		500	0.600		503	100.6	0.600		506	101.2
Bismuth		500	-3.70		499	99.8	-5.00		487	97.4
Boron		500	-1.50		484	96.8	-4.00		471	94.2
Cadmium		1000	0.400		1000	100.0	0.400		991	99.1
Calcium	400000	400000	403000	100.8	382000	95.5	400000	100.0	378000	94.5
Cerium			24.9		10.7		24.9		7.10	
Chromium		500	1.40		490	98.0	1.30		486	97.2
Cobalt		500	-0.400		488	97.6	-0.300		475	95.0
Copper		500	0.500		508	101.6	0.700		497	99.4
Iron	200000	200000	199000	99.5	185000	92.5	200000	100.0	186000	93.0
Lead		1000	0.600		888	88.8	0.200		876	87.6
Lithium		500	-10.3		505	101.0	-11.9		497	99.4
Magnesium	500000	500000	511000	102.2	500000	100.0	509000	101.8	499000	99.8
Manganese		500	0.100		508	101.6	0.100		507	101.4
Molybdenum		500	1.90		468	93.6	2.10		454	90.8
Nickel		1000	2.70		965	96.5	2.80		955	95.5
Phosphorus		500	-12.6		468	93.6	-14.7		453	90.6
Potassium			161		195		114		126	
Selenium		1000	0.700		999	99.9	1.20		971	97.1
Silicon		500	7.20		500	100.0	10.1		493	98.6
Silver		1000	-1.00		1050	105.0	2.50		1030	103.0
Sodium			87.2		98.9		11.4		29.2	
Strontium		500	-2.10		510	102.0	-2.20		507	101.4
Sulfur		500	5.40		485	97.0	6.90		467	93.4
Thallium		1000	-0.200		965	96.5	0.300		956	95.6
Tin		500	-2.00		449	89.8	-1.50		436	87.2
Titanium		500	-1.00		487	97.4	-0.900		478	95.6
Tungsten		500	-6.50		437	87.4	-7.40		425	85.0
Vanadium		500	-5.00		490	98.0	-5.10		482	96.4

10.4.8 10



INTERFERING ELEMENT CHECK STANDARDS SUMMARY  
 Part 1 - ICSA and ICSAB Standards

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

File ID: SC100419M1.ICP Date Analyzed: 10/04/19 Methods: EPA 200.7, SW846 6010D  
 QC Limits: 80 to 120 % Recovery Run ID: MA47570 Units: ug/l

Time:			13:59			14:04			16:43			16:48
Sample ID:	ICSA	ICSAB	ICSAB1	% Rec	ICSAB1	% Rec	ICSAB2	% Rec	ICSAB2	% Rec		
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec		

Zinc		1000	1.70		950	95.0	1.80		942	94.2
Zirconium		500	2.20		490	98.0	1.90		486	97.2

(\*) Outside of QC limits  
 (anr) Analyte not requested

10.4.8  
 10

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17543  
Matrix Type: SOLID

Methods: SW846 7471B  
Units: mg/kg

Prep Date: 09/27/19

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.033	.0038	.015	-0.0013	<0.033

Associated samples MP17543: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17543  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 09/27/19

Metal	JC95565-7 Original MS	SpikeLot HGPWS1	% Rec	QC Limits
Mercury	0.0089	0.38	0.334	111.3 80-120

Associated samples MP17543: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

10.5.2  
 10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17543  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 09/27/19

Metal	JC95565-7 Original MSD	SpikeLot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0089	0.38	0.329	112.8	0.0 20

Associated samples MP17543: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17543  
Matrix Type: SOLID

Methods: SW846 7471B  
Units: mg/kg

Prep Date: 09/27/19

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
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Mercury 0.37 0.333 111.0 80-120

Associated samples MP17543: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
Matrix Type: SOLID

Methods: SW846 6010D  
Units: mg/kg

Prep Date: 09/29/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	52	.87	8.3	2.3	<52
Antimony	2.1	.12	.42	-0.010	<2.1
Arsenic	2.1	.16	.29	-0.010	<2.1
Barium	21	.031	2	0.072	<21
Beryllium	0.21	.01	.082	0.010	<0.21
Bismuth	2.1	.21	.54		
Boron	10	.21	1.5		
Cadmium	0.52	.031	.072	0.010	<0.52
Calcium	520	.42	46	14.1	<520
Chromium	1.0	.041	.38	0.072	<1.0
Cobalt	5.2	.041	.29	0.0	<5.2
Copper	2.6	.031	.87	0.10	<2.6
Iron	52	.24	20	4.1	<52
Lead	2.1	.24	.42	0.0	<2.1
Lithium	5.2	.11	.95		
Magnesium	520	3.4	14	1.8	<520
Manganese	1.5	.01	.42	0.072	<1.5
Molybdenum	2.1	.093	.33		
Nickel	4.1	.072	.36	0.010	<4.1
Phosphorus	21	.11	3.4		
Potassium	1000	2.7	33	1.5	<1000
Selenium	2.1	.23	.67	-0.14	<2.1
Silicon	21	.9	11		
Silver	0.52	.031	.18	-0.021	<0.52
Sodium	1000	.62	80	3.7	<1000
Strontium	5.2	.01	.19		
Thallium	1.0	.49	.6	0.19	<1.0
Tin	21	.16	3.9		
Titanium	1.0	.052	.35		
Tungsten	5.2	.14	1.8		
Vanadium	5.2	.031	.2	0.031	<5.2
Zinc	5.2	.031	2.4	2.0	<5.2
Zirconium	2.1	.031	.24		

10.6.1  
10

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
Matrix Type: SOLID

Methods: SW846 6010D  
Units: mg/kg

Prep Date: 09/29/19

Metal	RL	IDL	MDL	MB raw	final
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Associated samples MP17592: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

10.6.1  
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: mg/kg

Prep Date: 09/29/19

Metal	JC95495-2 Original MS		SpikeLot MPSPK2	% Rec	QC Limits
Aluminum	9880	13400	2920	120.5	75-125
Antimony	0.42	123	234	52.4N(a)	75-125
Arsenic	17.3	236	234	93.6	75-125
Barium	85.7	311	234	96.4	75-125
Beryllium	0.62	212	234	90.4	75-125
Bismuth					
Boron	anr				
Cadmium	0.25	214	234	91.4	75-125
Calcium	30000	29900	2920	-3.4 (b)	75-125
Chromium	23.4	289	234	113.6	75-125
Cobalt	10	224	234	91.5	75-125
Copper	59.4	257	234	84.5	75-125
Iron	16500	18800	2920	78.7	75-125
Lead	70.1	279	234	89.4	75-125
Lithium					
Magnesium	12900	16700	2920	130.0(b)	75-125
Manganese	234	413	234	76.6	75-125
Molybdenum					
Nickel	33.5	258	234	96.0	75-125
Phosphorus					
Potassium	2880	6870	2920	136.5N(a)	75-125
Selenium	0.64	208	234	88.7	75-125
Silicon					
Silver	0.42	27.6	29.2	93.0	75-125
Sodium	604	3390	2920	95.3	75-125
Strontium					
Sulfur					
Thallium	0.0	216	234	92.4	75-125
Tin	anr				
Titanium	anr				
Tungsten					
Vanadium	35.6	249	234	91.3	75-125
Zinc	71.4	272	234	85.8	75-125

10.6.2  
10



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: mg/kg

Prep Date: 09/29/19

Metal	JC95495-2 Original MS	Spike/lot MPSPK2	% Rec	QC Limits
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Zirconium

Associated samples MP17592: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes

- (\*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- (b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

10.6.2  
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: mg/kg

Prep Date: 09/29/19

Metal	JC95495-2 Original MSD		SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	9880	13500	2980	121.4	0.7	20
Antimony	0.42	122	239	50.9N(a)	0.8	20
Arsenic	17.3	242	239	94.2	2.5	20
Barium	85.7	313	239	95.2	0.6	20
Beryllium	0.62	216	239	90.3	1.9	20
Bismuth						
Boron	anr					
Cadmium	0.25	221	239	92.5	3.2	20
Calcium	30000	29200	2980	-26.8(b)	2.4	20
Chromium	23.4	258	239	98.3	11.3	20
Cobalt	10	237	239	95.1	5.6	20
Copper	59.4	304	239	102.5	16.8	20
Iron	16500	26200	2980	325.2(b)	32.9 (c)	20
Lead	70.1	275	239	85.9	1.4	20
Lithium						
Magnesium	12900	16000	2980	103.9	4.3	20
Manganese	234	427	239	80.9	3.3	20
Molybdenum						
Nickel	33.5	358	239	136.0N(a)	32.5 (c)	20
Phosphorus						
Potassium	2880	6690	2980	127.7N(a)	2.7	20
Selenium	0.64	216	239	90.2	3.8	20
Silicon						
Silver	0.42	28.3	29.8	93.5	2.5	20
Sodium	604	3400	2980	93.7	0.3	20
Strontium						
Sulfur						
Thallium	0.0	219	239	91.8	1.4	20
Tin	anr					
Titanium	anr					
Tungsten						
Vanadium	35.6	251	239	90.3	0.8	20
Zinc	71.4	279	239	87.0	2.5	20

10.6.2  
10

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: mg/kg

Prep Date: 09/29/19

Metal	JC95495-2 Original MSD	SpikeLot MPSPK2	% Rec	MSD RPD	QC Limit
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Zirconium

Associated samples MP17592: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes

- (\*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- (b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (c) High rpd due to possible sample nonhomogeneity.

10.6.2 10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: mg/kg

Prep Date: 09/29/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2390	2530	94.6	80-120
Antimony	192	202	95.0	80-120
Arsenic	191	202	94.5	80-120
Barium	190	202	94.1	80-120
Beryllium	191	202	94.5	80-120
Bismuth				
Boron	anr			
Cadmium	185	202	91.6	80-120
Calcium	2430	2530	96.2	80-120
Chromium	186	202	92.1	80-120
Cobalt	188	202	93.1	80-120
Copper	179	202	88.6	80-120
Iron	2430	2530	96.2	80-120
Lead	187	202	92.6	80-120
Lithium				
Magnesium	2440	2530	96.6	80-120
Manganese	191	202	94.5	80-120
Molybdenum				
Nickel	192	202	95.0	80-120
Phosphorus				
Potassium	2400	2530	95.0	80-120
Selenium	183	202	90.6	80-120
Silicon				
Silver	23.4	25.3	92.7	80-120
Sodium	2380	2530	94.2	80-120
Strontium				
Thallium	192	202	95.0	80-120
Tin	anr			
Titanium	anr			
Tungsten				
Vanadium	185	202	91.6	80-120
Zinc	191	202	94.5	80-120
Zirconium				

10.6.3  
10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
Matrix Type: SOLID

Methods: SW846 6010D  
Units: mg/kg

Prep Date: 09/29/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
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Associated samples MP17592: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

10.6.3  
10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: ug/l

Prep Date: 09/29/19

Metal	JC95495-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	85400	88400	3.5	0-10
Antimony	3.60	0.00	100.0(a)	0-10
Arsenic	149	154	3.2	0-10
Barium	741	765	3.3	0-10
Beryllium	5.40	5.60	3.7	0-10
Bismuth				
Boron	anr			
Cadmium	2.20	3.00	36.4 (a)	0-10
Calcium	259000	275000	6.3	0-10
Chromium	202	220	8.9	0-10
Cobalt	86.3	86.5	0.2	0-10
Copper	514	526	2.4	0-10
Iron	143000	155000	8.9	0-10
Lead	606	624	3.0	0-10
Lithium				
Magnesium	111000	120000	7.4	0-10
Manganese	2030	2200	8.5	0-10
Molybdenum				
Nickel	290	295	1.8	0-10
Phosphorus				
Potassium	24900	24800	0.5	0-10
Selenium	5.50	0.00	100.0(a)	0-10
Silicon				
Silver	3.60	3.70	2.8	0-10
Sodium	5220	5020	3.9	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Titanium	anr			
Tungsten				
Vanadium	308	328	6.5	0-10
Zinc	618	744	20.5*(b)	0-10

10.6.4  
10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
Matrix Type: SOLID

Methods: SW846 6010D  
Units: ug/l

Prep Date: 09/29/19

Metal	JC95495-2	QC
	Original SDL 1:5	%DIF Limits

Zirconium

Associated samples MP17592: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) Serial dilution indicates possible matrix interference.

10.6.4  
10

POST DIGESTATE SPIKE SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: ug/l

Prep Date:

09/29/19

Metal	Sample ml	Final ml	JC95495-2 Raw	PS Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20	3.6	3.465	1883	0.2	200	2000	94.0	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel	19.25	20	289.8	278.9325	2173	0.2	200	2000	94.7	80-120
Phosphorus										
Potassium	19.25	20	24870	23937.38	47750	0.1	5000	25000	95.3	80-120
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

10.6.5  
10



POST DIGESTATE SPIKE SUMMARY

Login Number: JC95555  
 Account: BBLNYS - Arcadis  
 Project: National Grid, Philly Coke, Philadelphia, PA

QC Batch ID: MP17592  
 Matrix Type: SOLID

Methods: SW846 6010D  
 Units: ug/l

Prep Date:

09/29/19

Metal	Sample ml	Final ml	JC95495-2 Raw	PS Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
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Zirconium

Associated samples MP17592: JC95555-1, JC95555-2, JC95555-3, JC95555-4

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (\*\*) Corr. sample result = Raw \* (sample volume / final volume)  
 (anr) Analyte not requested

10.6.5  
 10

# Instrument Detection Limits

**Job Number:** JC95555  
**Account:** BBLNYS Arcadis  
**Project:** National Grid, Philly Coke, Philadelphia, PA

<b>Instrument ID:</b> LEEMANHG8	<b>Effective Date:</b> 08/01/19
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Analyte	IDL ug/l
Mercury	.023

The above applies to the following instrument runs:  
MA47516

10.7  
10

# Instrument Detection Limits

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE3	Effective Date: 02/18/19
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Analyte	IDL ug/l
Aluminum	14.3
Antimony	1.4
Arsenic	1.5
Barium	.5
Beryllium	.1
Bismuth	1.8
Boron	.8
Cadmium	.3
Calcium	3.9
Chromium	.3
Cobalt	.3
Copper	.6
Iron	2.6
Lead	1.6
Lithium	2.1
Magnesium	16.3
Manganese	.1
Molybdenum	.4
Nickel	.5
Phosphorus	1.9
Potassium	79
Selenium	3
Silicon	1.2
Silver	.5
Sodium	9.9
Sulfur	3.5
Strontium	.3
Thallium	1.3
Tin	.7
Titanium	.5
Tungsten	1.7
Vanadium	.5
Yttrium	5
Zinc	.2
Zirconium	.3

The above applies to the following instrument runs:  
MA47570

10.7  
10

# Instrument Detection Limits

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE6	Effective Date: 01/16/19
-------------------------	--------------------------

Analyte	IDL ug/l
Aluminum	8.4
Antimony	1.2
Arsenic	1.6
Barium	.3
Beryllium	.1
Bismuth	2
Boron	2
Cadmium	.3
Calcium	4.1
Chromium	.4
Cobalt	.4
Copper	.3
Iron	2.3
Lead	2.3
Lithium	1.1
Magnesium	32.6
Manganese	.1
Molybdenum	.9
Nickel	.7
Phosphorus	1.1
Potassium	26.4
Selenium	2.2
Silicon	8.7
Silver	.3
Sodium	6
Sulfur	2.1
Strontium	.1
Thallium	4.8
Tin	1.6
Titanium	.5
Tungsten	1.4
Vanadium	.3
Zinc	.3
Zirconium	.3

The above applies to the following instrument runs:  
MA47539,MA47552

10.7  
10

# Instrument Linear Ranges

**Job Number:** JC95555  
**Account:** BBLNYS Arcadis  
**Project:** National Grid, Philly Coke, Philadelphia, PA

<b>Instrument ID:</b> LEEMANHG8	<b>Effective Date:</b> 03/10/17
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Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:  
MA47516

10.7  
10

# Instrument Linear Ranges

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE3	Effective Date: 08/22/19
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Analyte	Linear Range ug/l
Aluminum	300000
Antimony	8000
Arsenic	8000
Barium	8000
Beryllium	8000
Bismuth	8000
Boron	8000
Cadmium	8000
Calcium	200000
Cerium	8000
Chromium	8000
Cobalt	8000
Copper	8000
Iron	200000
Lead	8000
Lithium	8000
Magnesium	300000
Manganese	8000
Molybdenum	8000
Nickel	8000
Palladium	8000
Phosphorus	8000
Potassium	200000
Selenium	8000
Silicon	25000
Silver	625
Sodium	200000
Sulfur	100000
Strontium	8000
Thallium	8000
Tin	8000
Titanium	8000
Tungsten	8000
Vanadium	8000
Zinc	8000
Zirconium	8000

The above applies to the following instrument runs:  
MA47570

10.7  
10

# Instrument Linear Ranges

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Instrument ID: SSTRACE6	Effective Date: 08/22/19
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Analyte	Linear Range ug/l
Aluminum	300000
Antimony	8000
Arsenic	8000
Barium	8000
Beryllium	8000
Bismuth	8000
Boron	8000
Cadmium	8000
Calcium	200000
Cerium	8000
Chromium	8000
Cobalt	8000
Copper	8000
Iron	200000
Lead	8000
Lithium	8000
Magnesium	300000
Manganese	8000
Molybdenum	8000
Nickel	8000
Palladium	8000
Phosphorus	8000
Potassium	200000
Selenium	8000
Silicon	25000
Silver	625
Sodium	200000
Sulfur	100000
Strontium	8000
Thallium	8000
Tin	8000
Titanium	8000
Tungsten	8000
Vanadium	8000
Zinc	8000
Zirconium	8000

The above applies to the following instrument runs:  
MA47539,MA47552

10.7  
10

**Metals Analysis**

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**Raw Data**

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## MA47516

Method: ACCUTEST

Operator: Admin

Date of Analysis: 27 Sep 2019 11:29:46

Sample ID	Date	Type	Units	Conc.	μ Abs.	Wt.	Vol.
STDA - 1	27 Sep 2019 11:31:42	Std	ug/l	-	639	1.000	1.000
STDB - 1	27 Sep 2019 11:33:00	Std	ug/l	-	1593	1.000	1.000
STDC - 1	27 Sep 2019 11:34:21	Std	ug/l	-	3933	1.000	1.000
STDD - 1	27 Sep 2019 11:35:50	Std	ug/l	-	7431	1.000	1.000
STDE - 1	27 Sep 2019 11:37:25	Std	ug/l	-	18075	1.000	1.000
STDF - 1	27 Sep 2019 11:39:05	Std	ug/l	-	37151	1.000	1.000
SAMPLECONF - 1	27 Sep 2019 11:42:43	CK STND	ug/l	(H)121.4% 3.6434	26947	1.000	1.000
ICV - 1	27 Sep 2019 11:44:49	CK STND	ug/l	103.3% 3.0981	22947	1.000	1.000
ICB - 1	27 Sep 2019 11:46:06	CK STND	ug/l	0.0747	772	1.000	1.000
CCV - 1	27 Sep 2019 11:47:54	CK STND	ug/l	101.8% 2.5459	18897	1.000	1.000
CCB - 1	27 Sep 2019 11:49:17	CK STND	ug/l	0.0769	788	1.000	1.000
CRI - 1	27 Sep 2019 11:51:04	CK STND	ug/l	95.9% 0.1918	1631	1.000	1.000
MP17543-MB1 - 1	27 Sep 2019 11:52:27	SMPL	ug/l	-0.0081	165	1.000	1.000
MP17543-B1 - 1	27 Sep 2019 11:53:54	SMPL	ug/l	2.2363	16626	1.000	1.000
MP17543-S1 - 1	27 Sep 2019 11:55:13	SMPL	ug/l	2.3048	17129	1.000	1.000
MP17543-S2 - 1	27 Sep 2019 11:56:59	SMPL	ug/l	2.3366	17362	1.000	1.000
JC95565-7 - 1	27 Sep 2019 11:58:44	SMPL	ug/l	0.0547	625	1.000	1.000
JC95565-1 - 1	27 Sep 2019 12:00:29	SMPL	ug/l	0.0525	609	1.000	1.000
JC95565-2 - 1	27 Sep 2019 12:01:49	SMPL	ug/l	0.0618	677	1.000	1.000
CCV - 1	27 Sep 2019 12:03:09	CK STND	ug/l	102.6% 2.5640	19030	1.000	1.000
CCB - 1	27 Sep 2019 12:04:30	CK STND	ug/l	0.0739	766	1.000	1.000
JC95565-3 - 1	27 Sep 2019 12:06:16	SMPL	ug/l	0.0311	452	1.000	1.000
JC95565-4 - 1	27 Sep 2019 12:07:37	SMPL	ug/l	0.0457	559	1.000	1.000
JC95565-5 - 1	27 Sep 2019 12:08:58	SMPL	ug/l	0.0977	941	1.000	1.000
JC95565-6 - 1	27 Sep 2019 12:10:18	SMPL	ug/l	0.1003	960	1.000	1.000
JC95565-8 - 1	27 Sep 2019 12:11:41	SMPL	ug/l	0.0281	430	1.000	1.000
JC95565-9 - 1	27 Sep 2019 12:13:02	SMPL	ug/l	0.0327	464	1.000	1.000
JC95565-10 - 1	27 Sep 2019 12:14:22	SMPL	ug/l	0.1162	1076	1.000	1.000
JC95384-2 - 1	27 Sep 2019 12:15:41	SMPL	ug/l	-0.0273	24	1.000	1.000
JC95384-3 - 1	27 Sep 2019 12:17:04	SMPL	ug/l	2.4045	17860	1.000	1.000
CCV - 1	27 Sep 2019 12:18:21	CK STND	ug/l	102.2% 2.5558	18970	1.000	1.000
CCB - 1	27 Sep 2019 12:20:06	CK STND	ug/l	0.0798	809	1.000	1.000
JC95384-4 - 1	27 Sep 2019 12:21:53	SMPL	ug/l	1.6811	12554	1.000	1.000
JC95384-5 - 1	27 Sep 2019 12:23:16	SMPL	ug/l	0.1172	1084	1.000	1.000
JC95384-7 - 1	27 Sep 2019 12:24:58	SMPL	ug/l	6.3918	47105	1.000	1.000
JC95384-8 - 1	27 Sep 2019 12:26:21	SMPL	ug/l	1.4283	10700	1.000	1.000
JC95555-1 - 1	27 Sep 2019 12:28:17	SMPL	ug/l	0.8032	6115	1.000	1.000
JC95555-2 - 1	27 Sep 2019 12:30:01	SMPL	ug/l	6.4875	47807	1.000	1.000
JC95555-3 - 1	27 Sep 2019 12:31:40	SMPL	ug/l	16.1063	118356	1.000	1.000
JC95555-4 - 1	27 Sep 2019 12:33:36	SMPL	ug/l	2.3887	17744	1.000	1.000
MP17544-MB1 - 1	27 Sep 2019 12:35:41	SMPL	ug/l	-0.0205	74	1.000	1.000
CCV - 1	27 Sep 2019 12:37:28	CK STND	ug/l	103.6% 2.5910	19228	1.000	1.000
CCB - 1	27 Sep 2019 12:38:48	CK STND	ug/l	-0.0141	121	1.000	1.000
MP17544-B1 - 1	27 Sep 2019 12:40:36	SMPL	ug/l	2.2746	16907	1.000	1.000
MP17544-S1 - 1	27 Sep 2019 12:41:55	SMPL	ug/l	2.3091	17160	1.000	1.000
MP17544-S2 - 1	27 Sep 2019 12:43:41	SMPL	ug/l	2.3389	17379	1.000	1.000
JC95596-3 - 1	27 Sep 2019 12:45:28	SMPL	ug/l	0.1249	1140	1.000	1.000
MP17544-LC1 - 1	27 Sep 2019 12:47:14	SMPL	ug/l	4.2656	31510	1.000	1.000
JC95596-1 - 1	27 Sep 2019 12:48:38	SMPL	ug/l	0.4029	3179	1.000	1.000
JC95596-2 - 1	27 Sep 2019 12:50:30	SMPL	ug/l	0.1543	1356	1.000	1.000
JC95596-4 - 1	27 Sep 2019 12:52:04	SMPL	ug/l	-0.0014	214	1.000	1.000
JC95596-5 - 1	27 Sep 2019 12:53:27	SMPL	ug/l	0.4961	3863	1.000	1.000
CCV - 1	27 Sep 2019 12:54:48	CK STND	ug/l	103.9% 2.5976	19276	1.000	1.000
CCB - 1	27 Sep 2019 12:56:21	CK STND	ug/l	-0.0164	104	1.000	1.000
JC95596-6 - 1	27 Sep 2019 12:58:10	SMPL	ug/l	0.3430	2740	1.000	1.000
JC95596-7 - 1	27 Sep 2019 12:59:31	SMPL	ug/l	0.2517	2070	1.000	1.000
JC95596-8 - 1	27 Sep 2019 13:01:00	SMPL	ug/l	0.1798	1543	1.000	1.000
JC95596-9 - 1	27 Sep 2019 13:02:28	SMPL	ug/l	0.1989	1683	1.000	1.000
JC95596-10 - 1	27 Sep 2019 13:03:56	SMPL	ug/l	0.3748	2973	1.000	1.000
JC95251-1 - 1	27 Sep 2019 13:05:24	SMPL	ug/l	0.0247	405	1.000	1.000
JC95251-3 - 1	27 Sep 2019 13:06:55	SMPL	ug/l	0.0890	877	1.000	1.000
JC95251-5 - 1	27 Sep 2019 13:08:15	SMPL	ug/l	0.4555	3565	1.000	1.000
JC95251-7 - 1	27 Sep 2019 13:09:39	SMPL	ug/l	0.1157	1073	1.000	1.000
CCV - 1	27 Sep 2019 13:11:14	CK STND	ug/l	100.0% 2.4989	18552	1.000	1.000
CCB - 1	27 Sep 2019 13:12:37	CK STND	ug/l	-0.0202	76	1.000	1.000
JC95321-1 - 1	27 Sep 2019 13:14:25	SMPL	ug/l	2.5372	18833	1.000	1.000
JC95321-3 - 1	27 Sep 2019 13:15:45	SMPL	ug/l	0.7171	5484	1.000	1.000
JC95321-5 - 1	27 Sep 2019 13:17:34	SMPL	ug/l	0.8472	6438	1.000	1.000
JC95569-5 - 1	27 Sep 2019 13:19:13	SMPL	ug/l	0.0601	665	1.000	1.000

## MA47516

Method: ACCUTEST

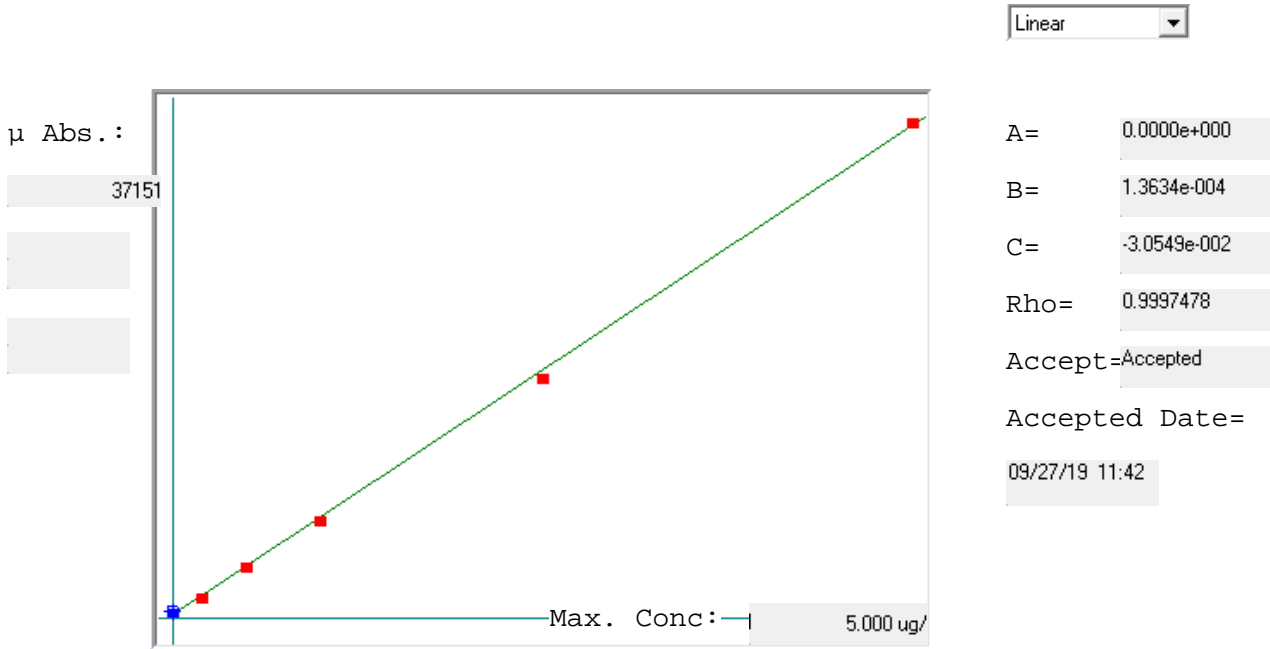
Operator: Admin

Date of Analysis: 27 Sep 2019 11:29:46

Sample ID	Date	Type	Units	Conc.	μ Abs.	Wt.	Vol.
JC95569-9 - 1	27 Sep 2019 13:20:53	SMPL	ug/l	0.0982	944	1.000	1.000
JC95568-9 - 1	27 Sep 2019 13:22:15	SMPL	ug/l	9.6359	70899	1.000	1.000
MP17545-MB1 - 1	27 Sep 2019 13:23:38	SMPL	ug/l	-0.0224	60	1.000	1.000
MP17545-B1 - 1	27 Sep 2019 13:25:39	SMPL	ug/l	2.1200	15773	1.000	1.000
MP17545-S1 - 1	27 Sep 2019 13:26:58	SMPL	ug/l	3.3085	24490	1.000	1.000
CCV - 1	27 Sep 2019 13:28:44	CK STND	ug/l	100.2%	2.5055	18601	1.000
CCB - 1	27 Sep 2019 13:30:34	CK STND	ug/l	-0.0157	109	1.000	1.000
MP17545-S2 - 1	27 Sep 2019 13:32:22	SMPL	ug/l	3.2881	24341	1.000	1.000
JC95327-8 - 1	27 Sep 2019 13:33:42	SMPL	ug/l	1.1562	8704	1.000	1.000
JC95327-1 - 1	27 Sep 2019 13:35:30	SMPL	ug/l	0.4093	3226	1.000	1.000
JC95327-2 - 1	27 Sep 2019 13:37:12	SMPL	ug/l	1.1292	8506	1.000	1.000
JC95327-3 - 1	27 Sep 2019 13:38:44	SMPL	ug/l	2.9463	21834	1.000	1.000
JC95327-4 - 1	27 Sep 2019 13:40:24	SMPL	ug/l	4.8591	35863	1.000	1.000
JC95327-5 - 1	27 Sep 2019 13:42:14	SMPL	ug/l	0.5766	4453	1.000	1.000
JC95327-6 - 1	27 Sep 2019 13:44:07	SMPL	ug/l	1.7727	13226	1.000	1.000
JC95327-7 - 1	27 Sep 2019 13:45:42	SMPL	ug/l	4.2099	31102	1.000	1.000
CCV - 1	27 Sep 2019 13:47:25	CK STND	ug/l	99.9%	2.4975	18542	1.000
CCB - 1	27 Sep 2019 13:49:18	CK STND	ug/l	-0.0102	149	1.000	1.000
JC95327-9 - 1	27 Sep 2019 13:51:06	SMPL	ug/l	0.9292	7039	1.000	1.000
JC95327-10 - 1	27 Sep 2019 13:52:26	SMPL	ug/l	17.1846	126265	1.000	1.000
JC95411-1 - 1	27 Sep 2019 13:54:05	SMPL	ug/l	1.1477	8642	1.000	1.000
JC95411-2 - 1	27 Sep 2019 13:56:11	SMPL	ug/l	8.0281	59106	1.000	1.000
JC95411-3 - 1	27 Sep 2019 13:57:51	SMPL	ug/l	4.0676	30058	1.000	1.000
JC95411-4 - 1	27 Sep 2019 13:59:49	SMPL	ug/l	3.4186	25298	1.000	1.000
JC95411-5 - 1	27 Sep 2019 14:01:42	SMPL	ug/l	2.0319	15127	1.000	1.000
JC95411-6 - 1	27 Sep 2019 14:03:32	SMPL	ug/l	-0.0494	-138	1.000	1.000
JC95411-7 - 1	27 Sep 2019 14:05:19	SMPL	ug/l	9.0865	66869	1.000	1.000
CCV - 1	27 Sep 2019 14:06:37	CK STND	ug/l	101.4%	2.5349	18816	1.000
CCB - 1	27 Sep 2019 14:08:35	CK STND	ug/l	-0.0160	107	1.000	1.000
JC95411-8 - 1	27 Sep 2019 14:10:22	SMPL	ug/l	1.1694	8801	1.000	1.000
JC95413-1 - 1	27 Sep 2019 14:11:43	SMPL	ug/l	1.5687	11730	1.000	1.000
JC95411-9 - 1	27 Sep 2019 14:13:25	SMPL	ug/l	11.6321	85540	1.000	1.000
CCV - 1	27 Sep 2019 14:15:47	CK STND	ug/l	99.9%	2.4963	18533	1.000
CCB - 1	27 Sep 2019 14:17:17	CK STND	ug/l	-0.0237	50	1.000	1.000
JC95384-7 - 1	27 Sep 2019 14:19:04	SMPL	ug/l	6.5207	24137	1.000	2.000
SAMPLECONF - 1	27 Sep 2019 14:20:25	SMPL	ug/l	0.8115	3200	1.000	2.000
JC95555-3 - 1	27 Sep 2019 14:22:15	SMPL	ug/l	17.3303	12935	1.000	10.000
JC95568-9 - 1	27 Sep 2019 14:23:49	SMPL	ug/l	9.9174	14772	1.000	5.000
JC95327-10 - 1	27 Sep 2019 14:25:35	SMPL	ug/l	18.8273	14033	1.000	10.000
JC95411-2 - 1	27 Sep 2019 14:27:21	SMPL	ug/l	8.2957	12393	1.000	5.000
JC95411-7 - 1	27 Sep 2019 14:29:08	SMPL	ug/l	9.2575	13804	1.000	5.000
SAMPLECONF - 1	27 Sep 2019 14:30:51	SMPL	ug/l	1.7881	2847	1.000	5.000
CCV - 1	27 Sep 2019 14:32:36	CK STND	ug/l	100.9%	2.5220	18722	1.000
CCB - 1	27 Sep 2019 14:34:08	CK STND	ug/l	-0.0179	93	1.000	1.000
JC95413-1 - 1	27 Sep 2019 14:37:48	SMPL	ug/l	1.5779	11797	1.000	1.000
JC95555-2 - 1	27 Sep 2019 14:39:06	SMPL	ug/l	6.1332	22716	1.000	2.000
JC95411-9 - 1	27 Sep 2019 14:45:41	SMPL	ug/l	12.3552	18348	1.000	5.000
CRI - 1	27 Sep 2019 14:50:39	CK STND	ug/l	114.7%	0.2295	1907	1.000
CCV - 1	27 Sep 2019 14:52:09	CK STND	ug/l	100.4%	2.5092	18628	1.000
CCB - 1	27 Sep 2019 14:53:29	CK STND	ug/l	-0.0121	135	1.000	1.000

11.1  
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ACCUTEST



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	0.057	0.057	639	0.000	639				
STDB	0.200	0.187	-0.013	1593	0.0 %	1593				
STDC	0.500	0.506	0.006	3933	0.0 %	3933				
STDD	1.000	0.983	-0.017	7431	0.0 %	7431				
STDE	2.500	2.434	-0.066	18075	0.0 %	18075				
STDF	5.000	5.035	0.035	37151	0.0 %	37151				

11.1.1  
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Sample Name: STDA Acquired: 9/30/2019 11:23:43 Type: Cal									
Method: SGS NO VALVE3(v320) Mode: IR Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.0001</b>	<b>-0.0000</b>	<b>-0.0002</b>	<b>-0.0000</b>	<b>.0001</b>	<b>.0037</b>	<b>-0.0000</b>	<b>-0.0008</b>	<b>-0.0024</b>
Stddev	.0010	.0001	.0001	.0001	.0000	.0000	.0000	.0001	.0000
%RSD	908.9	644.0	36.78	378.9	30.16	7.311	11.26	8.238	1.485
#1	.0002	-.0001	-.0001	.0001	.0001	.0038	-.0000	-.0008	-.0024
#2	.0010	-.0001	-.0002	-.0001	.0002	.0038	-.0000	-.0007	-.0024
#3	-.0009	.0001	-.0001	-.0001	.0001	.0037	-.0000	-.0008	-.0023
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-0.0011</b>	<b>.0009</b>	<b>-0.0007</b>	<b>-0.0002</b>	<b>-0.0004</b>	<b>.0004</b>	<b>.0006</b>	<b>.0013</b>	<b>.0054</b>
Stddev	.0001	.0002	.0001	.0000	.0003	.0000	.0002	.0006	.0001
%RSD	7.773	17.94	8.750	14.05	73.52	6.825	24.85	47.94	1.975
#1	-.0010	.0009	-.0007	-.0002	-.0007	.0004	.0007	.0011	.0055
#2	-.0012	.0010	-.0006	-.0002	-.0004	.0004	.0007	.0008	.0053
#3	-.0011	.0007	-.0007	-.0003	-.0001	.0005	.0004	.0020	.0054
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.0001</b>	<b>-0.0000</b>	<b>.0076</b>	<b>.0078</b>	<b>.0006</b>	<b>.0006</b>	<b>.0027</b>	<b>.0002</b>	<b>-0.0006</b>
Stddev	.0000	.0001	.0013	.0006	.0003	.0001	.0002	.0001	.0002
%RSD	57.35	22220.	17.24	8.126	52.12	16.78	7.596	29.77	36.30
#1	.0001	.0001	.0063	.0074	.0002	.0006	.0029	.0003	-.0008
#2	.0000	-.0000	.0075	.0085	.0006	.0006	.0025	.0002	-.0004
#3	.0001	-.0001	.0089	.0075	.0008	.0005	.0027	.0002	-.0006
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	<b>-0.0016</b>	<b>.0030</b>	<b>-0.0020</b>	<b>.0007</b>	<b>-0.0008</b>	<b>-0.0019</b>	<b>-0.0100</b>	<b>-0.0010</b>	
Stddev	.0001	.0002	.0001	.0002	.0002	.0012	.0001	.0000	
%RSD	6.694	7.688	2.862	26.23	25.68	61.80	1.273	4.633	
#1	-.0017	.0027	-.0020	.0009	-.0009	-.0031	-.0101	-.0010	
#2	-.0015	.0032	-.0020	.0005	-.0010	-.0019	-.0098	-.0009	
#3	-.0016	.0031	-.0019	.0006	-.0006	-.0007	-.0100	-.0010	

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Sample Name: STDA Acquired: 9/30/2019 11:23:43 Type: Cal				
Method: SGS NO VALVE3(v320) Mode: IR Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76066.	12573.	4967.2	10094.
Stddev	568.	26.	53.3	91.
%RSD	.74663	.20878	1.0734	.90594
#1	75431.	12583.	4908.2	9995.4
#2	76524.	12543.	5011.8	10176.
#3	76244.	12592.	4981.8	10110.

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Sample Name: STDB Acquired: 9/30/2019 11:28:45 Type: Cal									
Method: SGS NO VALVE3(v320) Mode: IR Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>11.56</b>	<b>11.99</b>	<b>4.818</b>	<b>2.394</b>	<b>.8699</b>	<b>1.309</b>	<b>2.294</b>	<b>1.776</b>	<b>.1412</b>
Stddev	.03	.02	.006	.002	.0100	.013	.034	.002	.0013
%RSD	.2433	.1685	.1260	.0666	1.146	.9727	1.485	.1153	.9419
#1	11.53	11.98	4.818	2.395	.8629	1.300	2.304	1.776	.1403
#2	11.57	11.98	4.823	2.395	.8813	1.323	2.323	1.778	.1427
#3	11.59	12.01	4.811	2.392	.8654	1.303	2.257	1.774	.1405
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>1.255</b>	<b>5.349</b>	<b>.6317</b>	<b>.2457</b>	<b>.7535</b>	<b>.4415</b>	<b>.7147</b>	<b>3.953</b>	<b>6.916</b>
Stddev	.013	.014	.0013	.0002	.0017	.0004	.0006	.006	.015
%RSD	1.031	.2537	.2111	.0967	.2214	.0825	.0848	.1643	.2120
#1	1.247	5.349	.6311	.2457	.7542	.4418	.7149	3.950	6.920
#2	1.270	5.363	.6333	.2460	.7546	.4415	.7153	3.948	6.900
#3	1.249	5.336	.6308	.2455	.7516	.4411	.7141	3.961	6.928
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>4.316</b>	<b>.6464</b>	<b>2.913</b>	<b>11.02</b>	<b>1.056</b>	<b>3.419</b>	<b>2.442</b>	<b>.7614</b>	<b>9.291</b>
Stddev	.006	.0012	.002	.002	.001	.004	.002	.0022	.083
%RSD	.1462	.1868	.0820	.1382	.0659	.1151	.0748	.2835	.8942
#1	4.311	.6455	2.911	11.01	1.056	3.418	2.441	.7614	9.326
#2	4.313	.6460	2.913	11.01	1.056	3.423	2.444	.7636	9.350
#3	4.323	.6478	2.915	11.03	1.055	3.415	2.441	.7593	9.196
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	<b>1.248</b>	<b>1.769</b>	<b>3.182</b>	<b>.3842</b>	<b>.9268</b>	<b>3.768</b>	<b>.6983</b>	<b>2.451</b>	
Stddev	.013	.001	.025	.0006	.0011	.007	.0007	.0024	
%RSD	1.028	.0790	.7914	.1559	.1155	.1951	.1052	.9760	
#1	1.240	1.769	3.168	.3844	.9267	3.762	.6988	2.435	
#2	1.263	1.770	3.211	.3848	.9279	3.766	.6987	2.478	
#3	1.242	1.767	3.168	.3836	.9258	3.776	.6974	2.440	

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Sample Name: STDB Acquired: 9/30/2019 11:28:45 Type: Cal				
Method: SGS NO VALVE3(v320) Mode: IR Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	71904.	12326.	4750.1	9542.5
Stddev	849.	53.	11.7	23.5
%RSD	1.1813	.43104	.24682	.24582
#1	72411.	12267.	4746.3	9528.7
#2	70924.	12369.	4740.7	9529.2
#3	72379.	12344.	4763.2	9569.6

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Sample Name: crid Acquired: 9/30/2019 12:08:49 Type: QC Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ag3280, V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

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Sample Name: crid Acquired: 9/30/2019 12:08:49 Type: QC Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Li6707, P\_1774, Ce4040.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Int. Std. Units, Y\_3600, Y\_3710, Y\_2243, In2306.

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Sample Name: cri Acquired: 9/30/2019 12:13:52 Type: QC Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

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Sample Name: cri Acquired: 9/30/2019 12:13:52 Type: QC Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Int. Std. Units, Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Y\_3600, Y\_3710, Y\_2243, In2306.

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Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element concentrations (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, etc.).

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Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element concentrations (Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, etc.).

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Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element concentrations (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, etc.).

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Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element concentrations (Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, etc.).

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Sample Name: ICSAB Acquired: 9/30/2019 12:29:02 Type: QC									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4967</b>	<b>4872</b>	<b>1.018</b>	<b>.4784</b>	<b>.4774</b>	<b>.5103</b>	<b>.5050</b>	<b>.9614</b>	<b>1.014</b>
Stddev	.0004	.0009	.022	.0098	.0026	.0005	.0016	.0187	.003
%RSD	.0862	.1841	2.213	2.039	.5514	.0996	.3070	1.943	.2659
#1	4963	.4871	1.007	.4726	.4756	.5102	.5042	.9512	1.013
#2	4968	.4864	1.003	.4729	.4804	.5109	.5068	.9501	1.017
#3	4971	.4881	1.044	.4897	.4761	.5099	.5040	.9830	1.011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4853</b>	<b>.9579</b>	<b>1.075</b>	<b>.9767</b>	<b>.8904</b>	<b>.9863</b>	<b>1.036</b>	<b>507.4</b>	<b>377.1</b>
Stddev	.0017	.0208	.023	.0166	.0161	.0173	.021	4.9	4.2
%RSD	.3524	2.169	2.176	1.695	1.809	1.755	2.080	.9608	1.104
#1	4851	.9470	1.064	.9681	.8780	.9799	1.025	504.0	381.8
#2	4872	.9448	1.059	.9663	.8846	.9732	1.021	513.0	375.2
#3	4838	.9818	1.101	.9958	.9086	1.006	1.060	505.1	374.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>189.1</b>	<b>505.7</b>	<b>.0756</b>	<b>.0379</b>	<b>.5026</b>	<b>.5011</b>	<b>.5031</b>	<b>4.778</b>	<b>5.031</b>
Stddev	.0	.5	.0538	.0076	.0104	.0108	.0138	.0105	.0007
%RSD	.0063	.0939	71.16	20.06	2.065	2.160	2.749	2.194	.1411
#1	189.1	506.3	.0955	.0447	.4974	.4952	.4977	4.745	5.023
#2	189.1	505.5	.1167	.0297	.4958	.4945	.4928	4.694	5.032
#3	189.1	505.5	.0147	.0393	.5145	.5136	5.188	4.895	5.038
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

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Sample Name: ICSAB Acquired: 9/30/2019 12:29:02 Type: QC									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.5111</b>	<b>.4962</b>	<b>.5018</b>	<b>.4736</b>	<b>.5102</b>	<b>.5117</b>	<b>.4946</b>	<b>.0712</b>	
Stddev	.0004	.0115	.0008	.0100	.0122	.0005	.0096	.0021	
%RSD	.0706	2.319	.1577	2.119	2.392	.0993	1.939	2.944	
#1	.5112	.4913	.5011	.4668	.5030	.5111	.4883	.0688	
#2	.5114	.4879	.5026	.4687	.5033	.5121	.4898	.0720	
#3	.5107	.5093	.5015	.4851	.5243	.5118	.5057	.0728	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range									
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	<b>68474.</b>	<b>11831.</b>	<b>4479.9</b>	<b>9010.5</b>					
Stddev	326.	53.	89.7	158.0					
%RSD	.47662	.45127	2.0026	1.7535					
#1	68721.	11774.	4518.8	9083.6					
#2	68104.	11841.	4543.5	9118.6					
#3	68597.	11879.	4377.2	8829.1					
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range									

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11.2  
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Sample Name: hstd 7 Acquired: 9/30/2019 12:34:04 Type: QC									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>8.278</b>	<b>8.258</b>	<b>8.019</b>	<b>8.218</b>	<b>8.340</b>	<b>8.109</b>	<b>8.197</b>	<b>8.221</b>	<b>6.178</b>
Stddev	.081	.136	.031	.036	.033	.087	.041	.027	.0011
%RSD	.9836	1.646	.3859	.4386	.3943	1.070	.5015	.3321	.1736
#1	8.272	8.407	8.048	8.253	8.371	8.110	8.191	8.245	.6183
#2	8.199	8.227	8.024	8.219	8.344	8.196	8.240	8.227	.6185
#3	8.361	8.140	7.986	8.181	8.305	8.022	8.159	8.191	.6166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>8.242</b>	<b>8.423</b>	<b>7.736</b>	<b>8.312</b>	<b>7.766</b>	<b>8.104</b>	<b>7.800</b>	<b>0.660</b>	<b>0.201</b>
Stddev	.022	.034	.024	.045	.030	.031	.019	.0075	.0035
%RSD	.2692	.3980	.3052	.5427	.3807	.3843	.2444	11.33	17.27
#1	8.262	8.445	7.757	8.354	7.794	8.136	7.821	.0747	.0177
#2	8.245	8.439	7.740	8.317	7.770	8.103	7.797	.0612	.0186
#3	8.218	8.384	7.711	8.264	7.735	8.074	7.783	.0622	.0241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0054</b>	<b>-.0275</b>	<b>.0359</b>	<b>.0122</b>	<b>8.039</b>	<b>7.894</b>	<b>24.71</b>	<b>7.995</b>	<b>8.137</b>
Stddev	.0020	.0121	.0130	.0064	.023	.028	.06	.029	.114
%RSD	37.53	43.93	36.14	53.06	.2881	.3496	.2427	.3651	1.405
#1	-.0033	-.0250	.0441	.0156	8.060	7.918	24.76	8.013	8.225
#2	-.0073	-.0169	.0427	.0161	8.043	7.900	24.71	8.011	8.008
#3	-.0054	-.0406	.0209	.0047	8.015	7.864	24.64	7.962	8.177
Check ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

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Sample Name: hstd 7 Acquired: 9/30/2019 12:34:04 Type: QC									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>7.867</b>	<b>8.088</b>	<b>7.826</b>	<b>95.35</b>	<b>8.034</b>	<b>7.917</b>	<b>8.077</b>	<b>7.585</b>	
Stddev	.026	.028	.086	.32	.025	.015	.021	.022	
%RSD	.3327	.3478	1.093	.3345	.3070	.1856	.2595	.2901	
#1	7.892	8.112	7.853	95.64	8.061	7.912	8.094	7.605	
#2	7.870	8.096	7.896	95.39	8.028	7.906	8.084	7.587	
#3	7.840	8.057	7.731	95.01	8.013	7.934	8.054	7.561	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range									
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	<b>74635.</b>	<b>12188.</b>	<b>4891.8</b>	<b>10170.</b>					
Stddev	408.	18.	11.2	23.					
%RSD	.54694	.14680	.22978	.23050					
#1	74388.	12177.	4893.4	10168.					
#2	74411.	12179.	4879.8	10147.					
#3	75106.	12209.	4902.1	10194.					
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range									

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Sample Name: hstd Acquired: 9/30/2019 12:39:44 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0013</b>	<b>.0003</b>	<b>.0008</b>	<b>.0002</b>	<b>.0019</b>	<b>-0.0209</b>	<b>.0021</b>	<b>-0.0002</b>	<b>.0029</b>
Stddev	.0001	.0000	.0002	.0003	.0005	.0001	.0001	.0001	.0001
%RSD	6.657	11.03	25.90	138.2	27.69	.4922	4.583	72.10	3.706
#1	.0014	.0003	.0010	.0002	.0023	-.0208	.0021	-.0000	.0027
#2	.0013	.0003	.0009	-.0001	.0022	-.0209	.0020	-.0002	.0029
#3	.0012	.0002	.0006	.0004	.0013	-.0210	.0022	-.0003	.0029
Check ?	None	None	None	None	None	None	None	None	None
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0009</b>	<b>.0023</b>	<b>.0140</b>	<b>.0031</b>	<b>-0.0001</b>	<b>-0.0101</b>	<b>.0011</b>	<b>300.1</b>	<b>198.8</b>
Stddev	.0004	.0002	.0008	.0031	.0016	.0028	.0031	1.1	.7
%RSD	45.68	6.721	5.905	101.8	2532.	27.67	276.0	.3505	.3771
#1	-.0010	.0023	.0135	.0063	-.0018	-.0131	.0044	299.8	198.6
#2	-.0004	.0021	.0134	.0001	.0011	-.0076	-.0018	299.3	198.2
#3	-.0011	.0024	.0149	.0028	.0005	-.0096	-.0008	301.3	199.6
Check ?	None	None	None	None	None	None	None	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>198.1</b>	<b>301.4</b>	<b>205.1</b>	<b>203.7</b>	<b>.0073</b>	<b>.0037</b>	<b>.0444</b>	<b>-0.0032</b>	<b>-0.0008</b>
Stddev	1.0	1.7	.7	2.8	.0007	.0005	.0024	.0004	.0002
%RSD	.5046	.5750	.3255	1.353	9.562	13.32	5.429	13.24	20.07
#1	197.6	301.2	205.1	206.9	.0065	.0043	.0471	-.0027	-.0010
#2	197.4	299.8	204.5	201.8	.0078	.0037	.0426	-.0032	-.0008
#3	199.2	303.2	205.8	202.4	.0075	.0033	.0434	-.0036	-.0007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None	None
Value Range									

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Sample Name: hstd Acquired: 9/30/2019 12:39:44 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0041</b>	<b>.0057</b>	<b>-0.0013</b>	<b>-0.0105</b>	<b>-0.0122</b>	<b>.0007</b>	<b>.0093</b>	<b>.0815</b>
Stddev	.0005	.0010	.0002	.0015	.0018	.0013	.0008	.0054
%RSD	12.68	17.60	11.53	14.27	15.17	188.5	8.254	6.618
#1	.0046	.0047	-.0012	-.0095	-.0106	.0004	.0094	.0877
#2	.0036	.0056	-.0013	-.0123	-.0142	.0022	.0085	.0788
#3	.0041	.0067	-.0015	-.0098	-.0118	-.0004	.0100	.0780
Check ?	None	None	None	None	None	None	None	None
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	<b>69407.</b>	<b>11934.</b>	<b>4600.7</b>	<b>9120.3</b>				
Stddev	287.	80.	23.8	48.2				
%RSD	.41337	.67023	.51745	.52862				
#1	69487.	11922.	4595.3	9102.1				
#2	69645.	12019.	4626.7	9175.0				
#3	69089.	11860.	4580.1	9083.8				

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Sample Name: feconf Acquired: 9/30/2019 12:44:49 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>.0002</b>	<b>.0003</b>	<b>.0001</b>	<b>.0001</b>	<b>F -0.0230</b>	<b>.0025</b>	<b>-0.0004</b>
Stddev	.0003	.0001	.0001	.0001	.0004	.0008	.0002	.0001
%RSD	176.7	26.19	22.92	78.76	301.3	3.599	6.175	38.00
#1	.0005	.0002	.0003	.0002	-.0003	-.0221	.0027	-.0002
#2	.0001	.0002	.0004	.0002	.0003	-.0237	.0024	-.0005
#3	-.0001	.0003	.0002	.0000	.0004	-.0232	.0026	-.0004
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0061</b>	<b>-0.0024</b>	<b>-0.0018</b>	<b>.0148</b>	<b>.0023</b>	<b>.0006</b>	<b>-0.0032</b>	<b>-0.0017</b>
Stddev	.0010	.0003	.0001	.0001	.0012	.0008	.0010	.0005
%RSD	16.18	11.82	6.530	87.99	53.98	135.2	31.63	28.64
#1	.0071	-.0027	-.0018	.0149	.0028	.0005	-.0043	-.0021
#2	.0051	-.0021	-.0018	.0148	.0032	-.0002	-.0025	-.0012
#3	.0062	-.0025	-.0016	.0146	.0009	.0014	-.0027	-.0018
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0334</b>	<b>.0106</b>	<b>F 207.4</b>	<b>.0418</b>	<b>.1614</b>	<b>.0376</b>	<b>.0018</b>	<b>.0008</b>
Stddev	.0158	.0076	.4	.0274	.0150	.0102	.0003	.0001
%RSD	47.38	72.00	.1698	65.54	9.312	27.23	15.73	11.26
#1	.0502	.0193	207.6	.0558	.1719	.0470	.0019	.0009
#2	.0187	.0070	207.0	.0594	.1681	.0267	.0020	.0007
#3	.0314	.0054	207.7	.0102	.1442	.0392	.0015	.0008
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0347</b>	<b>-0.0028</b>	<b>-0.0001</b>	<b>.0007</b>	<b>-0.0007</b>	<b>-0.0019</b>	<b>-0.0047</b>	<b>-0.0093</b>
Stddev	.0010	.0005	.0001	.0002	.0005	.0002	.0002	.0016
%RSD	2.761	18.71	106.6	32.30	79.50	11.16	5.071	17.46
#1	.0357	-.0022	-.0000	.0006	-.0002	-.0017	-.0048	-.0102
#2	.0346	-.0030	-.0001	.0009	-.0006	-.0019	-.0049	-.0102
#3	.0338	-.0031	-.0001	.0006	-.0012	-.0021	-.0045	-.0074

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Sample Name: feconf Acquired: 9/30/2019 12:44:49 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0015</b>	<b>.0014</b>	<b>.0780</b>	
Stddev	.0015	.0004	.0038	
%RSD	103.1	28.27	4.884	
#1	.0024	.0019	.0757	
#2	-.0003	.0011	.0824	
#3	.0024	.0013	.0758	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>75070.</b>	<b>12204.</b>	<b>4958.1</b>	<b>10299.</b>
Stddev	933.	79.	34.5	64.
%RSD	1.2425	.64486	.69668	.61972
#1	75903.	12115.	4933.0	10255.
#2	74063.	12264.	4943.8	10269.
#3	75245.	12232.	4997.5	10372.

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11.2  
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Sample Name: crconf Acquired: 9/30/2019 12:49:54 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0000	.0000	-.0011	F 10.20	.0014	-.0015	.0004	.0001
Stddev	.0001	.0000	.0001	.0002	.00	.0001	.0000	.0003	.0001
%RSD	35.69	134.1	465.4	22.18	.0392	9.352	2.527	67.98	130.1
#1	.0004	.0000	-.0000	-.0013	10.21	.0014	-.0015	.0004	.0000
#2	.0005	-.0000	-.0000	-.0008	10.20	.0013	-.0015	.0002	.0000
#3	.0003	.0000	.0001	-.0012	10.21	.0016	-.0014	.0008	.0001
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0163	-.0004	.0028	.0014	-.0023	-.0021	.0046	.0107	.0098
Stddev	.0005	.0002	.0011	.0017	.0008	.0018	.0027	.0083	.0012
%RSD	3.315	43.84	38.92	121.4	35.22	84.67	59.17	78.20	12.71
#1	-.0157	-.0005	.0037	.0015	-.0026	-.0024	.0029	.0072	.0107
#2	-.0165	-.0002	.0031	-.0003	-.0014	-.0038	.0032	.0202	.0084
#3	-.0168	-.0006	.0016	.0032	-.0029	-.0002	.0078	.0046	.0103
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078	.0195	.0428	-.0170	.0026	.0009	-.0041	.0002	.0001
Stddev	.0036	.0117	.0043	.0021	.0003	.0001	.0009	.0006	.0001
%RSD	46.58	59.89	10.15	12.48	11.82	9.642	22.64	383.8	70.72
#1	.0036	.0073	.0476	-.0145	.0024	.0010	-.0051	.0000	.0001
#2	.0099	.0306	.0418	-.0183	.0024	.0009	-.0035	.0008	.0002
#3	.0099	.0206	.0391	-.0180	.0029	.0009	-.0036	-.0004	.0000
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0015	.0005	-.0020	-.0046	-.0170	.0012	.0002	-.0015	
Stddev	.0003	.0009	.0001	.0009	.0011	.0014	.0003	.0017	
%RSD	17.13	190.3	4.202	19.43	6.756	121.6	155.5	116.8	
#1	.0015	.0016	-.0020	-.0038	-.0183	.0023	-.0001	-.0028	
#2	.0012	-.0001	-.0019	-.0055	-.0164	-.0004	.0006	.0005	
#3	.0017	.0000	-.0021	-.0043	-.0162	.0016	.0001	-.0022	

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Sample Name: crconf Acquired: 9/30/2019 12:49:54 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75861.	12305.	4864.2	10118.
Stddev	123.	156.	34.6	63.
%RSD	.16224	1.2685	.71125	.62677
#1	75724.	12398.	4880.2	10148.
#2	75961.	12392.	4887.9	10161.
#3	75899.	12125.	4824.5	10045.

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11.2  
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Sample Name: asconf Acquired: 9/30/2019 12:54:59 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0000	.0054	.0001	.0006	-.0003	.0000	.0000	-.0007
Stddev	.0001	.0000	.0002	.0003	.0002	.0001	.0000	.0003	.0003
%RSD	45.05	61.49	3.113	225.5	25.51	18.77	149.1	35230.	39.29
#1	.0001	-.0000	.0054	.0004	.0006	-.0002	-.0000	.0002	-.0010
#2	.0002	-.0000	.0053	-.0001	.0008	-.0003	.0000	-.0003	-.0005
#3	.0003	-.0000	.0056	.0000	.0005	-.0003	.0001	.0002	-.0007
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0003	5.156	.0022	.0011	-.0009	-.0010	.0049	.0076
Stddev	.0002	.0001	.010	.0005	.0006	.0018	.0008	.0087	.0048
%RSD	104.3	22.65	.1984	21.88	55.29	192.6	80.52	176.4	62.52
#1	.0002	-.0003	5.146	.0020	.0011	.0002	-.0002	-.0008	.0021
#2	.0003	-.0002	5.166	.0028	.0005	-.0030	-.0011	.0149	.0103
#3	-.0000	-.0002	5.157	.0020	.0016	.0000	-.0018	.0006	.0105
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0023	.0292	-.0247	.0021	-.0001	.0142	-.0002	-.0001
Stddev	.0024	.0272	.0311	.0026	.0004	.0002	.0012	.0004	.0001
%RSD	189.4	1186.	106.4	10.50	18.85	473.2	8.769	214.9	85.05
#1	-.0012	-.0183	.0163	-.0237	.0024	-.0003	.0155	.0001	-.0001
#2	.0036	.0331	.0647	-.0277	.0017	.0002	.0139	.0000	-.0000
#3	.0014	-.0079	.0067	-.0228	.0023	-.0000	.0131	-.0007	-.0002
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0005	-.0006	.0001	-.0066	.0017	-.0006	.0029	.0018	
Stddev	.0003	.0012	.0001	.0019	.0011	.0009	.0005	.0017	
%RSD	67.54	190.8	89.08	28.92	66.68	161.7	16.94	92.85	
#1	.0008	.0003	.0002	-.0072	.0008	.0005	.0028	.0007	
#2	.0006	-.0020	.0000	-.0045	.0013	-.0009	.0025	.0038	
#3	.0001	-.0001	.0001	-.0082	.0030	-.0012	.0035	.0010	

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Sample Name: asconf Acquired: 9/30/2019 12:54:59 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75653.	12190.	4989.8	10092.
Stddev	354.	328.	12.7	17.
%RSD	.46806	2.6927	.25366	.16712
#1	76055.	12533.	4990.7	10094.
#2	75389.	11879.	4976.7	10074.
#3	75513.	12159.	5002.0	10108.

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Sample Name: jc95491-5undconf Acquired: 9/30/2019 13:10:01 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0386</b>	<b>-0.001</b>	<b>.0002</b>	<b>.0010</b>	<b>.3017</b>	<b>.0052</b>	<b>-1.856</b>	<b>.0033</b>	<b>-0.003</b>
Stddev	.0009	.0001	.0001	.0001	.0038	.0002	.0020	.0001	.0005
%RSD	2.317	83.98	51.84	10.85	1.252	4.106	1.060	1.941	204.3
#1	.0393	-0.001	.0002	.0010	.3060	.0054	.1879	.0034	.0000
#2	.0390	-0.001	.0001	.0012	.2993	.0050	.1843	.0033	.0001
#3	.0376	-0.000	.0003	.0010	.2997	.0052	.1847	.0033	-0.009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.2626</b>	<b>.0027</b>	<b>.0038</b>	<b>-0.003</b>	<b>-0.004</b>	<b>.0017</b>	<b>.2382</b>	<b>136.7</b>
Stddev	.0009	.0017	.0012	.0019	.0007	.0022	.0048	.0104	3.3
%RSD	289.0	.6514	44.72	49.30	284.8	622.4	278.8	4.363	2.409
#1	.0009	.2631	.0031	.0038	-0.000	.0011	-.0023	.2500	138.5
#2	.0008	.2607	.0037	.0019	-.0011	.0008	.0004	.2341	138.8
#3	-.0007	.2641	.0014	.0057	.0003	-.0029	.0070	.2305	132.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5301</b>	<b>7.550</b>	<b>8.256</b>	<b>34.04</b>	<b>.0678</b>	<b>.0135</b>	<b>4.416</b>	<b>-0.011</b>	<b>.2206</b>
Stddev	.0136	.179	.163	.78	.0005	.0003	.035	.0007	.0038
%RSD	2.575	2.372	1.980	2.282	.6990	2.123	.8013	58.69	1.718
#1	.5354	7.604	8.328	34.42	.0677	.0136	4.433	-.0018	.2222
#2	.5403	7.696	8.371	34.55	.0673	.0132	4.375	-.0005	.2233
#3	.5146	7.350	8.069	33.15	.0683	.0137	4.439	-.0012	.2162

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0216</b>	<b>-0.0012</b>	<b>-0.0020</b>	<b>97.30</b>	<b>.0019</b>	<b>-0.0000</b>	<b>.0271</b>	<b>.0044</b>
Stddev	.0007	.0017	.0016	.68	.0009	.0070	.0007	.0005
%RSD	3.140	145.2	80.38	.7038	45.23	18440.	2.442	11.73
#1	.0221	-.0027	-.0029	97.77	.0009	-.0053	.0275	.0040
#2	.0208	-.0016	-.0030	96.51	.0022	-.0028	.0275	.0049
#3	.0219	.0007	-.0001	97.62	.0026	.0079	.0264	.0042

Sample Name: jc95491-5undconf Acquired: 9/30/2019 13:10:01 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73051.	*****	4857.3	9677.6
Stddev	548.	-----	41.4	74.2
%RSD	.74973	-----	.85293	.76688
#1	72431.	12035.	4836.0	9635.8
#2	73472.	12044.	4905.1	9763.3
#3	73249.	-----	4830.9	9633.8

Sample Name: jc95681-11fundconf Acquired: 9/30/2019 13:14:59 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2211</b>	<b>.0005</b>	<b>.0004</b>	<b>.0391</b>	<b>.0012</b>	<b>-0.047</b>	<b>7.364</b>	<b>.1553</b>	<b>.0017</b>
Stddev	.0004	.0001	.0003	.0022	.0002	.0007	.092	.0084	.0002
%RSD	.1935	12.00	74.29	5.668	18.76	15.36	1.255	5.379	13.46
#1	.2207	.0006	.0002	.0383	.0010	-.0046	7.401	.1518	.0015
#2	.2216	.0004	.0002	.0374	.0011	-.0054	7.432	.1493	.0015
#3	.2210	.0005	.0007	.0416	.0014	-.0040	7.259	.1648	.0019

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0196</b>	<b>.2192</b>	<b>.0102</b>	<b>.0048</b>	<b>.0019</b>	<b>.0063</b>	<b>.0026</b>	<b>.6123</b>	<b>62.45</b>
Stddev	.0001	.0139	.0003	.0011	.0006	.0014	.0008	.0080	.16
%RSD	.4909	6.339	2.738	22.29	30.68	22.96	31.37	1.309	.2536
#1	.0197	.2131	.0105	.0047	.0026	.0046	.0024	.6197	62.29
#2	.0195	.2094	.0102	.0059	.0018	.0068	.0019	.6038	62.60
#3	.0195	.2351	.0100	.0038	.0014	.0073	.0035	.6135	62.45

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>60.99</b>	<b>21.78</b>	<b>4.580</b>	<b>F 247.4</b>	<b>.0760</b>	<b>.0014</b>	<b>5.548</b>	<b>-0.0018</b>	<b>.3156</b>
Stddev	.10	.09	.034	3.9	.0058	.0001	.384	.0005	.0007
%RSD	.1578	.3957	.7309	1.563	7.640	8.702	6.926	29.37	.2173
#1	60.88	21.68	4.546	243.1	.0739	.0013	5.388	-.0020	.3149
#2	61.07	21.80	4.582	248.5	.0715	.0015	5.270	-.0021	.3163
#3	61.00	21.85	4.613	250.6	.0826	.0014	5.987	-.0012	.3157

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0020</b>	<b>.0167</b>	<b>-0.0008</b>	<b>F 242.8</b>	<b>-0.0003</b>	<b>.0009</b>	<b>-0.0022</b>	<b>.1006</b>
Stddev	.0001	.0009	.0002	17.2	.0006	.0007	.0014	.0009
%RSD	3.946	5.541	27.55	7.076	201.2	73.11	64.30	.8458
#1	.0020	.0178	-.0008	235.8	-.0003	.0003	-.0015	.1015
#2	.0019	.0161	-.0006	230.3	.0003	.0016	-.0013	.1004
#3	.0020	.0163	-.0010	262.4	-.0010	.0008	-.0039	.0998

Sample Name: jc95681-11fundconf Acquired: 9/30/2019 13:14:59 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	74858.	12459.	4966.5	9573.3
Stddev	736.	58.	286.9	479.4
%RSD	.98364	.46715	5.7775	5.0081
#1	74536.	12501.	5082.5	9764.4
#2	74338.	12393.	5177.3	9927.8
#3	75701.	12483.	4639.7	9027.8

Sample Name: jc95264-9undconf Acquired: 9/30/2019 13:20:12 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0381</b>	<b>.0000</b>	<b>.0001</b>	<b>.0003</b>	<b>.0000</b>	<b>.0038</b>	<b>.0022</b>	<b>.0012</b>	<b>-.0012</b>
Stddev	.0008	.0001	.0002	.0002	.0003	.0018	.0002	.0003	.0013
%RSD	2.124	302.3	104.7	82.25	8911.0	47.12	9.072	26.73	103.9
#1	.0380	-.0000	.0003	.0003	-.0002	.0018	.0020	.0015	.0002
#2	.0390	.0001	.0001	.0005	.0003	.0043	.0023	.0011	-.0015
#3	.0374	.0000	.0000	.0000	-.0000	.0053	.0023	.0009	-.0023

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0002</b>	<b>.0266</b>	<b>.0020</b>	<b>.0051</b>	<b>.0011</b>	<b>-.0026</b>	<b>-.0020</b>	<b>.0106</b>	<b>30.24</b>
Stddev	.0003	.0012	.0002	.0005	.0006	.0011	.0007	.0085	.63
%RSD	143.5	4.511	9.150	9.615	52.62	43.18	34.04	79.97	2.081
#1	.0001	.0259	.0022	.0055	.0005	-.0014	-.0015	.0204	30.01
#2	-.0002	.0259	.0019	.0046	.0017	-.0029	-.0028	.0064	30.95
#3	-.0006	.0280	.0021	.0053	.0012	-.0035	-.0017	.0051	29.76

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0464</b>	<b>8.015</b>	<b>2.501</b>	<b>16.75</b>	<b>.0031</b>	<b>-.0002</b>	<b>3.487</b>	<b>-.0009</b>	<b>.0982</b>
Stddev	.0007	.155	.057	.34	.0002	.0001	.178	.0004	.0020
%RSD	1.570	1.939	2.274	2.027	5.933	33.90	5.112	40.88	2.061
#1	.0459	7.955	2.495	16.64	.0034	-.0002	3.376	-.0005	.0977
#2	.0473	8.192	2.561	17.13	.0030	-.0002	3.392	-.0012	.1004
#3	.0461	7.899	2.447	16.47	.0031	-.0001	3.693	-.0010	.0964

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>.0008</b>	<b>-.0006</b>	<b>.0547</b>	<b>.0028</b>	<b>-.0008</b>	<b>.0076</b>	<b>.0032</b>
Stddev	.0004	.0015	.0003	.0038	.0009	.0006	.0006	.0017
%RSD	93.97	192.0	50.38	7.022	32.96	76.81	7.333	52.19
#1	.0010	-.0001	-.0003	.0556	.0031	-.0006	.0070	.0014
#2	.0003	.0025	-.0005	.0505	.0017	-.0004	.0079	.0035
#3	.0001	-.0001	-.0009	.0580	.0035	-.0016	.0080	.0047

Sample Name: jc95264-9undconf Acquired: 9/30/2019 13:20:12 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5166.5</b>	<b>5166.5</b>	<b>5166.5</b>	<b>10306.</b>
Stddev	-----	-----	230.5	403.
%RSD	-----	-----	4.4620	3.9104
#1	74059.	-----	5319.9	10574.
#2	-----	11651.	5278.2	10503.
#3	-----	12099.	4901.4	9842.9

11.2  
11

Sample Name: jc95384-1undconf Acquired: 9/30/2019 13:25:10 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0011</b>	<b>-.0001</b>	<b>-.0000</b>	<b>.0002</b>	<b>-.0002</b>	<b>.0005</b>	<b>.0007</b>	<b>.0006</b>	<b>-.0002</b>
Stddev	.0000	.0000	.0001	.0001	.0003	.0003	.0000	.0003	.0004
%RSD	3.290	40.02	768.4	56.29	115.1	56.67	1.301	41.95	213.6
#1	.0012	-.0000	-.0001	.0004	-.0003	.0004	.0007	.0004	-.0006
#2	.0011	-.0001	.0001	.0001	-.0005	.0003	.0008	.0009	-.0000
#3	.0011	-.0001	.0000	.0002	.0001	.0008	.0007	.0006	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0006</b>	<b>.0024</b>	<b>.0043</b>	<b>.0010</b>	<b>-.0008</b>	<b>-.0014</b>	<b>2.685</b>	<b>.6897</b>
Stddev	.0001	.0000	.0005	.0003	.0005	.0006	.0002	.0074	.0033
%RSD	39.50	7.266	20.73	6.531	53.68	72.47	16.58	2.773	48.28
#1	.0004	.0007	.0029	.0041	.0004	-.0003	-.0015	2.622	6.885
#2	.0002	.0006	.0019	.0042	.0011	-.0015	-.0011	2.767	6.872
#3	.0004	.0006	.0024	.0046	.0015	-.0007	-.0015	2.665	6.935

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0059</b>	<b>.0653</b>	<b>-.0090</b>	<b>.0397</b>	<b>.0097</b>	<b>-.0003</b>	<b>.4845</b>	<b>-.0011</b>	<b>.0052</b>
Stddev	.0030	.0105	.0408	.0034	.0009	.0000	.0131	.0003	.0001
%RSD	49.94	16.10	453.7	8.688	9.067	14.26	2.702	30.21	1.255
#1	.0055	.0533	-.0023	.0434	.0107	-.0003	.4972	-.0007	.0053
#2	.0032	.0728	.0280	.0390	.0094	-.0003	.4711	-.0013	.0053
#3	.0091	.0700	-.0527	.0366	.0090	-.0003	.4850	-.0012	.0052

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>-.0012</b>	<b>-.0005</b>	<b>.0334</b>	<b>.0039</b>	<b>-.0023</b>	<b>.0081</b>	<b>.0025</b>
Stddev	.0002	.0013	.0001	.0016	.0007	.0013	.0006	.0021
%RSD	34.42	112.6	15.16	4.730	18.79	57.29	7.855	82.27
#1	.0006	.0003	-.0004	.0344	.0041	-.0031	.0074	.0004
#2	.0003	-.0018	-.0005	.0316	.0030	-.0008	.0086	.0045
#3	.0006	-.0020	-.0005	.0343	.0044	-.0029	.0084	.0026

Sample Name: jc95384-1undconf Acquired: 9/30/2019 13:25:10 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>7555.2</b>	<b>12229.</b>	<b>5062.8</b>	<b>10281.</b>
Stddev	290.	5.	110.8	177.
%RSD	.38420	.04193	2.1882	1.7179
#1	75626.	12228.	4956.2	10108.
#2	75798.	12225.	5177.4	10461.
#3	75231.	12235.	5054.9	10275.

Sample Name: emptyconf Acquired: 9/30/2019 13:30:10 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0001	.0000	.0000	-0.0003	.0004	.0000	.0007	.0002
Stddev	.0000	.0000	.0001	.0000	.0001	.0003	.0000	.0002	.0001
%RSD	12.76	12.78	340.5	1439.	26.89	63.59	33.16	24.62	71.22
#1	.0002	-0.0002	-0.0001	.0000	-0.0003	.0007	.0000	.0009	.0001
#2	.0002	-0.0001	.0000	-0.0000	-0.0002	.0003	.0000	.0006	.0003
#3	.0002	-0.0002	.0001	-0.0000	-0.0004	.0002	.0000	.0006	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	-0.0004	.0027	.0020	.0014	-0.0025	-0.0023	-0.0092	-0.0073
Stddev	.0001	.0000	.0005	.0004	.0002	.0002	.0001	.0056	.0007
%RSD	9.120	5.319	16.81	22.85	13.14	8.859	5.121	60.75	9.564
#1	.0015	-0.0004	.0026	.0024	.0012	-0.0023	-0.0022	-0.0033	-0.0069
#2	.0018	-0.0004	.0032	.0019	.0016	-0.0026	-0.0023	-0.0100	-0.0069
#3	.0015	-0.0004	.0023	.0015	.0013	-0.0027	-0.0024	-0.0143	-0.0081

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0004	.0018	-0.0853	-0.0700	-0.0002	-0.0004	-0.0054	-0.0009	.0001
Stddev	.0009	.0084	.0180	.0013	.0002	.0001	.0001	.0001	.0001
%RSD	216.9	458.7	21.04	1.834	65.84	18.76	2.732	8.313	78.72
#1	-0.0014	.0063	-0.1008	-0.0693	-0.0003	-0.0003	-0.0055	-0.0009	.0000
#2	-0.0001	.0071	-0.0657	-0.0693	-0.0001	-0.0004	-0.0052	-0.0008	.0002
#3	.0003	-0.0079	-0.0894	-0.0715	-0.0004	-0.0005	-0.0055	-0.0009	.0001

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-0.0035	.0011	-0.0061	.0021	-0.0000	-0.0047	.0068
Stddev	.0002	.0005	.0001	.0005	.0005	.0004	.0002	.0018
%RSD	8.807	13.89	5.984	9.031	22.18	2229.	4.890	26.72
#1	.0029	-0.0039	.0011	-0.0061	.0021	-0.0004	-0.0050	.0063
#2	.0026	-0.0036	.0012	-0.0066	.0026	.0003	-0.0046	.0053
#3	.0024	-0.0030	.0011	-0.0055	.0016	.0001	-0.0046	.0088

Sample Name: emptyconf Acquired: 9/30/2019 13:30:10 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	205620.	27188.	14738.	28916.
Stddev	3468.	142.	43.	80.
%RSD	1.6864	.52204	.29184	.27767
#1	204060.	27347.	14785.	29007.
#2	209590.	27074.	14701.	28855.
#3	203200.	27145.	14728.	28886.

Sample Name: jc95491-5fundconf Acquired: 9/30/2019 13:35:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0410	.0000	.0001	.0008	.3762	.0036	.1834	.0031	-0.0000
Stddev	.0010	.0001	.0000	.0001	.0289	.0009	.0138	.0002	.0004
%RSD	2.513	292.0	51.56	15.17	7.693	24.93	7.532	7.359	2750.
#1	.0404	-0.0001	.0000	.0007	.4096	.0047	.1993	.0033	-0.0003
#2	.0422	.0001	.0001	.0007	.3606	.0031	.1760	.0030	-0.0001
#3	.0404	.0001	.0001	.0009	.3585	.0031	.1748	.0029	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0002	.2364	.0034	.0051	.0002	-0.0005	-0.0008	.0006	153.6
Stddev	.0004	.0136	.0007	.0013	.0010	.0005	.0018	.0035	4.5
%RSD	213.9	5.756	20.66	25.56	641.5	100.7	222.3	613.6	2.954
#1	-0.0003	.2216	.0027	.0055	.0011	-0.0005	-0.0027	.0046	150.2
#2	.0003	.2483	.0034	.0036	-0.0009	-0.0010	-0.0005	-0.0018	158.8
#3	-0.0006	.2395	.0041	.0061	.0002	.0000	.0008	-0.0011	151.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	8.408	8.765	38.63	.0730	.0138	4.222	-0.0006	.2447
Stddev	.0025	.260	.258	1.15	.0040	.0008	.257	.0006	.0071
%RSD	39.36	3.095	2.943	2.975	5.439	5.945	6.087	96.13	2.911
#1	.0079	8.210	8.583	37.81	.0691	.0130	3.943	-0.0010	.2397
#2	.0035	8.703	9.060	39.94	.0770	.0146	4.449	.0000	.2528
#3	.0078	8.312	8.651	38.14	.0730	.0139	4.273	-0.0008	.2415

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	-0.0029	-0.0031	F 104.9	.0019	-0.0044	.0080	.0056
Stddev	.0005	.0011	.0001	6.5	.0011	.0011	.0004	.0009
%RSD	25.64	39.92	2.344	6.239	56.84	23.95	5.518	15.92
#1	.0016	-0.0036	-0.0031	97.76	.0028	-0.0056	.0076	.0052
#2	.0026	-0.0015	-0.0032	110.6	.0020	-0.0036	.0085	.0049
#3	.0019	-0.0034	-0.0030	106.3	.0007	-0.0040	.0079	.0066

Sample Name: jc95491-5fundconf Acquired: 9/30/2019 13:35:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	69130.	12064.	4874.7	9725.5
Stddev	4736.	348.	262.3	454.3
%RSD	6.8504	2.8829	5.3809	4.6710
#1	63663.	12340.	5164.5	10229.
#2	71752.	11674.	4653.6	9346.2
#3	71975.	12179.	4806.0	9601.3



Sample Name: jc95681-11undconf Acquired: 9/30/2019 13:40:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1967</b>	<b>.0005</b>	<b>.0009</b>	<b>.0318</b>	<b>.0035</b>	<b>-.0038</b>	<b>7.058</b>	<b>.1237</b>
Stddev	.0006	.0000	.0001	.0007	.0009	.0014	.694	.0036
%RSD	2.933	1.315	15.68	2.132	25.88	35.93	9.825	2.879
#1	.1972	.0005	.0011	.0313	.0034	-.0047	6.407	.1223
#2	.1961	.0005	.0009	.0314	.0027	-.0022	6.981	.1211
#3	.1969	.0005	.0008	.0325	.0045	-.0044	7.788	.1278
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F -.0203</b>	<b>.0126</b>	<b>.2298</b>	<b>-.0004</b>	<b>.0116</b>	<b>.0057</b>	<b>.0003</b>	<b>.0002</b>
Stddev	.0020	.0008	.0073	.0004	.0016	.0011	.0008	.0003
%RSD	9.980	6.439	3.197	110.5	13.66	20.11	277.8	174.0
#1	-.0182	.0118	.2269	-.0007	.0106	.0055	.0011	.0000
#2	-.0205	.0125	.2244	-.0005	.0108	.0047	-.0004	-.0000
#3	-.0222	.0134	.2382	.0001	.0135	.0069	.0001	.0006
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.262</b>	<b>51.88</b>	<b>51.13</b>	<b>17.92</b>	<b>4.070</b>	<b>199.6</b>	<b>.0578</b>	<b>.0006</b>
Stddev	.003	.22	.14	.06	.006	2.5	.0023	.0000
%RSD	.1125	.4302	.2665	.3546	.1456	1.238	3.463	5.996
#1	2.261	51.74	51.14	17.98	4.072	198.1	.0677	.0006
#2	2.260	51.76	50.98	17.85	4.074	198.3	.0656	.0006
#3	2.265	52.13	51.26	17.92	4.063	202.5	.0703	.0006
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5.642</b>	<b>-.0000</b>	<b>.2691</b>	<b>.0150</b>	<b>.0116</b>	<b>.0007</b>	<b>F 204.6</b>	<b>.0068</b>
Stddev	.195	.0003	.0009	.0006	.0006	.0002	7.0	.0024
%RSD	3.449	1654.	.3409	3.713	5.066	24.67	3.405	35.33
#1	5.566	.0003	.2689	.0146	.0115	.0008	202.1	.0092
#2	5.498	-.0000	.2684	.0148	.0111	.0006	199.3	.0044
#3	5.864	-.0004	.2701	.0156	.0123	.0005	212.5	.0069

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Sample Name: jc95681-11undconf Acquired: 9/30/2019 13:40:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0051</b>	<b>.1092</b>	<b>.0770</b>	
Stddev	.0004	.0043	.0021	
%RSD	7.131	3.922	2.698	
#1	.0053	.1073	.0748	
#2	.0047	.1062	.0774	
#3	.0054	.1141	.0789	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	*****	12191.	4783.7	9329.6
Stddev	----	24.	136.0	226.4
%RSD	----	.19838	2.8421	2.4269
#1	----	12170.	4829.9	9398.8
#2	----	12218.	4890.6	9513.3
#3	----	12187.	4630.7	9076.6

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Sample Name: mp17477-mb1conf Acquired: 9/30/2019 13:45:33 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.0001</b>	<b>.0004</b>	<b>.0004</b>	<b>.0007</b>	<b>.0007</b>	<b>.0009</b>	<b>.0003</b>	<b>-.0002</b>
Stddev	.0002	.0000	.0001	.0003	.0002	.0003	.0001	.0002	.0004
%RSD	27.28	25.72	33.82	86.43	24.54	41.70	7.193	57.91	233.1
#1	.0005	.0001	.0002	.0007	.0009	.0004	.0010	.0001	-.0004
#2	.0008	.0002	.0004	.0004	.0005	.0011	.0009	.0005	-.0004
#3	.0005	.0001	.0005	.0000	.0007	.0007	.0009	.0003	.0003
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0340</b>	<b>.0002</b>	<b>.0020</b>	<b>.0015</b>	<b>.0011</b>	<b>-.0005</b>	<b>.0224</b>	<b>.0896</b>
Stddev	.0003	.0004	.0005	.0012	.0006	.0011	.0015	.0107	.0011
%RSD	95.98	1.214	244.1	59.01	42.94	98.18	281.1	47.72	1.220
#1	.0006	.0339	.0003	.0028	.0021	.0022	-.0023	.0299	.0890
#2	.0001	.0337	.0006	.0006	.0016	.0010	.0005	.0102	.0909
#3	.0002	.0345	-.0003	.0024	.0008	.0001	.0002	.0271	.0890
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0308</b>	<b>.0093</b>	<b>.0301</b>	<b>.1270</b>	<b>.0010</b>	<b>.0005</b>	<b>.0094</b>	<b>.0165</b>	<b>.0005</b>
Stddev	.0025	.0090	.0195	.0012	.0003	.0001	.0006	.0006	.0001
%RSD	8.072	97.39	64.85	.9632	28.69	16.89	6.897	3.691	18.44
#1	.0283	.0195	.0457	.1263	.0008	.0005	.0099	.0167	.0007
#2	.0309	.0024	.0082	.1284	.0010	.0004	.0087	.0159	.0005
#3	.0333	.0059	.0364	.1263	.0014	.0006	.0096	.0170	.0005
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0011</b>	<b>-.0013</b>	<b>.0008</b>	<b>.0230</b>	<b>-.0006</b>	<b>.0003</b>	<b>.0216</b>	<b>.0002</b>	
Stddev	.0003	.0005	.0001	.0020	.0015	.0003	.0005	.0019	
%RSD	24.16	34.42	12.60	8.791	275.2	110.4	2.384	989.9	
#1	.0012	-.0013	.0008	.0251	-.0023	.0004	.0216	.0021	
#2	.0008	-.0009	.0007	.0211	.0001	-.0001	.0211	.0001	
#3	.0013	-.0018	.0008	.0227	.0005	.0005	.0221	-.0017	

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Sample Name: mp17477-mb1conf Acquired: 9/30/2019 13:45:33 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75502.	12153.	4918.1	9975.2
Stddev	342.	52.	51.6	98.4
%RSD	.45276	.43058	1.0499	.98655
#1	75195.	12187.	4936.1	10019.
#2	75441.	12093.	4958.4	10044.
#3	75870.	12179.	4859.9	9862.5

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Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, and 9 elements (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280). Includes sub-tables for V\_2924, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 10 columns: Int. Std. Units, Avg, Stddev, %RSD, and 4 elements (Y\_3600, Y\_3710, Y\_2243, In2306). Includes sub-tables for Y\_3600, Y\_3710, Y\_2243, In2306.

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Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, and 9 elements (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280). Includes sub-tables for V\_2924, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, and 9 elements (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280). Includes sub-tables for V\_2924, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Sample Name: ccb Acquired: 9/30/2019 14:00:23 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0001	.0003	.0000	.0003	.0001	.0000	.0001	.0000
Stddev	.0001	.0001	.0002	.0002	.0004	.0002	.0000	.0004	.0005
%RSD	45.39	178.2	63.32	127.0	129.4	114.6	54.06	299.9	1777.
#1	.0002	-.0000	.0004	.0003	.0002	-.0000	.0001	-.0002	-.0003
#2	.0004	.0001	.0001	-.0000	-.0000	.0001	.0000	.0006	.0006
#3	.0002	.0001	.0004	-.0002	.0007	.0003	.0000	.0000	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0001	.0003	.0010	.0004	.0007	.0010	.0090	.0010
Stddev	.0004	.0001	.0003	.0007	.0006	.0005	.0007	.0081	.0028
%RSD	69.44	116.3	101.2	72.95	147.0	68.55	75.67	89.97	272.5
#1	.0001	-.0000	.0003	.0013	.0010	-.0007	-.0018	.0001	.0032
#2	.0009	-.0000	.0007	.0015	-.0000	-.0002	-.0004	.0158	-.0021
#3	.0009	-.0002	.0000	.0002	.0001	-.0011	-.0007	.0111	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0098	.0381	-.0064	.0027	.0016	.0006	.0001	.0001
Stddev	.0037	.0163	.0143	.0047	.0005	.0001	.0008	.0005	.0001
%RSD	108.5	166.7	37.61	73.62	18.12	5.328	125.0	565.6	182.6
#1	-.0007	.0210	.0415	-.0115	.0032	.0017	.0013	.0006	.0001
#2	.0044	-.0089	.0224	-.0053	.0023	.0017	.0008	.0001	.0002
#3	.0064	.0173	.0504	-.0023	.0025	.0015	-.0002	-.0005	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name: ccb Acquired: 9/30/2019 14:00:23 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	F_.0076	.0001	-.0021	.0012	.0015	.0024	-.0006
Stddev	.0004	.0011	.0002	.0011	.0020	.0011	.0003	.0030
%RSD	84.79	14.45	166.8	54.51	159.3	74.03	11.10	494.3
#1	.0008	.0085	.0000	-.0017	-.0009	.0005	.0022	.0003
#2	.0003	.0078	.0004	-.0033	.0015	.0013	.0027	.0018
#3	.0001	.0064	.0000	-.0012	.0031	.0027	.0025	-.0039
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit		.0054						
Low Limit		-.0054						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	74767.	12190.	4980.3	10081.				
Stddev	1654.	70.	49.3	97.				
%RSD	2.2117	.57272	.98998	.95736				
#1	75617.	12252.	4937.1	9994.7				
#2	75822.	12203.	4969.7	10064.				
#3	72861.	12114.	5034.0	10185.				
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass				
High Limit								
Low Limit								

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Sample Name: jc95234-2 Acquired: 9/30/2019 14:05:27 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4312	.0044	.0002	.0357	.0731	.0412	2.216	.0466	.0044
Stddev	.0030	.0001	.0001	.0001	.0011	.0005	.007	.0004	.0006
%RSD	6970	2.288	36.80	.3708	1.501	1.156	.3002	9.082	12.90
#1	.4347	.0044	.0001	.0359	.0727	.0408	2.208	.0471	.0049
#2	.4296	.0046	.0003	.0357	.0744	.0417	2.218	.0462	.0038
#3	.4295	.0044	.0001	.0356	.0723	.0411	2.221	.0466	.0046
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2021	.2906	.0322	.0110	.0756	-.0054	.0012	103.4	12.39
Stddev	.0014	.0008	.0010	.0008	.0014	.0026	.0019	.6	.09
%RSD	.7018	.2673	3.241	7.524	1.792	47.42	162.6	6.183	.7480
#1	.2013	.2912	.0333	.0109	.0757	-.0042	-.0006	104.2	12.49
#2	.2037	.2897	.0322	.0119	.0742	-.0037	.0009	103.2	12.35
#3	.2013	.2908	.0312	.0103	.0769	-.0084	.0031	103.0	12.32
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	121.6	24.48	30.35	2.808	.0102	.0038	.5068	.0211	.0694
Stddev	.8	.16	.19	.017	.004	.0003	.0014	.0001	.0004
%RSD	.6915	.6696	.6163	.5865	3.504	6.602	.2853	.5841	.5889
#1	122.6	24.67	30.56	2.827	.0106	.0039	.5066	.0213	.0699
#2	121.3	24.36	30.27	2.802	.0100	.0040	.5054	.0210	.0693
#3	121.0	24.41	30.21	2.796	.0099	.0035	.5083	.0211	.0691
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	7.350	.0063	.0252	.7869	.0270	.1034	2.911	.6801	
Stddev	.064	.0008	.0001	.0036	.0015	.0012	.009	.0064	
%RSD	.8712	12.75	.4052	.4601	5.441	1.151	.3276	.9345	
#1	7.295	.0055	.0251	.7905	.0257	.1047	2.912	.6758	
#2	7.420	.0062	.0253	.7833	.0286	.1033	2.901	.6874	
#3	7.335	.0071	.0251	.7869	.0268	.1023	2.920	.6771	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit									
Low Limit									

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Sample Name: jc95234-2 Acquired: 9/30/2019 14:05:27 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	78393.	13035.	5215.1	9831.7
Stddev	406.	113.	7.7	16.5
%RSD	.51796	.86872	.14763	.16825
#1	78792.	12904.	5209.0	9817.8
#2	77980.	13104.	5223.8	9850.0
#3	78408.	13096.	5212.4	9827.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				
Low Limit				

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Sample Name: mp17555-mb1 Acquired: 9/30/2019 14:10:27 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0000	.0000	.0001	-.0002	.0010	.0001	.0001	-.0002
Stddev	.0003	.0000	.0001	.0001	.0003	.0001	.0000	.0002	.0002
%RSD	417.0	153.1	379.5	78.47	136.9	6.773	32.56	368.2	86.51
#1	-.0003	.0000	.0001	.0003	.0001	.0010	.0001	-.0001	-.0001
#2	.0003	.0001	.0000	.0000	-.0002	.0011	.0002	.0000	-.0004
#3	.0002	-.0000	-.0001	.0001	-.0005	.0010	.0001	.0003	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0040	.0013	.0013	-.0001	-.0012	-.0001	.0209	.0012
Stddev	.0005	.0001	.0004	.0004	.0006	.0012	.0011	.0079	.0018
%RSD	896.5	2.998	34.05	31.23	567.6	102.1	897.7	37.89	148.0
#1	-.0005	.0039	.0010	.0018	.0006	-.0008	.0003	.0238	.0006
#2	.0002	.0041	.0018	.0010	-.0003	-.0026	-.0014	.0119	.0033
#3	.0004	.0040	.0011	.0012	-.0006	-.0003	.0007	.0269	-.0002

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0082	-.0098	-.0426	.0014	.0004	.0045	-.0010	-.0000
Stddev	.0036	.0032	.0728	.0094	.0004	.0002	.0009	.0003	.0001
%RSD	32.33	39.31	744.5	21.93	32.69	50.43	19.11	25.36	206.5
#1	.0133	.0113	-.0454	-.0337	.0012	.0004	.0041	-.0010	-.0001
#2	.0131	.0083	.0740	-.0523	.0019	.0002	.0039	-.0008	.0000
#3	.0070	.0049	-.0578	-.0420	.0010	.0006	.0055	-.0013	-.0001

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0022	-.0002	-.0049	.0019	-.0003	.0026	.0002
Stddev	.0005	.0006	.0002	.0007	.0003	.0006	.0005	.0014
%RSD	63.33	27.50	82.40	14.02	14.25	179.3	18.28	586.8
#1	.0006	.0021	-.0001	-.0052	.0016	-.0002	.0031	-.0012
#2	.0004	.0017	-.0001	-.0041	.0020	.0002	.0022	.0016
#3	.0013	.0029	-.0004	-.0054	.0022	-.0010	.0024	.0003

Sample Name: mp17555-mb1 Acquired: 9/30/2019 14:10:27 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72750.	12659.	4920.4	10020.
Stddev	3264.	1014.	17.0	33.
%RSD	4.4869	8.0072	.34505	.32488
#1	68983.	12208.	4911.6	10014.
#2	74747.	11949.	4939.9	10055.
#3	74520.	13820.	4909.6	9991.0

11.2  
11

Sample Name: mp17555-sd1 Acquired: 9/30/2019 14:15:27 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3069	.0004	.0012	.0013	.0041	.0035	.0931	.0017	.0006
Stddev	.0038	.0003	.0007	.0003	.0015	.0012	.0016	.0018	.0011
%RSD	1.234	84.99	58.00	27.39	35.60	33.23	1.725	107.4	182.8
#1	.3067	.0006	.0004	.0012	.0052	.0022	.0939	.0032	.0008
#2	.3107	.0005	.0017	.0010	.0047	.0038	.0941	.0022	-.0006
#3	.3032	.0000	.0015	.0016	.0025	.0045	.0912	-.0003	.0017

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.0102	-.0010	.0126	.0004	-.0082	-.0032	1.123	54.06
Stddev	.0023	.0005	.0028	.0061	.0015	.0049	.0016	.028	.42
%RSD	63.48	4.526	284.2	48.38	415.6	59.86	49.14	2.460	7840
#1	.0028	.0101	.0012	.0144	.0017	-.0116	-.0050	1.099	54.08
#2	.0061	.0098	-.0041	.0177	-.0012	-.0104	-.0022	1.118	54.48
#3	.0018	.0107	-.0000	.0058	.0006	-.0026	-.0024	1.153	53.63

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.934	14.14	10.11	52.52	.4358	.0038	6.661	-.0029	2.452
Stddev	.053	.05	.17	.34	.0020	.0009	.014	.0034	.016
%RSD	.8921	.3217	1.666	.6453	.4605	23.78	.2056	116.8	.6489
#1	5.938	14.12	10.09	52.55	.4335	.0031	6.649	.0009	2.455
#2	5.985	14.19	10.29	52.85	.4371	.0048	6.676	-.0038	2.466
#3	5.879	14.11	9.960	52.17	.4367	.0034	6.658	-.0057	2.435

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142	.0121	-.0021	20.49	.0003	.0099	.0925	.0205
Stddev	.0033	.0024	.0007	.01	.0055	.0065	.0049	.0144
%RSD	23.22	20.01	32.29	.0524	1918.	65.44	5.321	70.29
#1	.0109	.0105	-.0018	20.49	.0066	.0026	.0974	.0039
#2	.0144	.0108	-.0029	20.50	-.0037	.0149	.0876	.0286
#3	.0175	.0148	-.0016	20.48	-.0020	.0122	.0926	.0291

Sample Name: mp17555-sd1 Acquired: 9/30/2019 14:15:27 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75281.	12192.	4935.7	9963.2
Stddev	888.	98.	9.6	4.1
%RSD	1.1802	.80059	.19523	.04115
#1	74802.	12231.	4945.7	9962.9
#2	74733.	12081.	4926.5	9959.2
#3	76306.	12264.	4934.7	9967.4

Sample Name: jc95424-7 Acquired: 9/30/2019 14:20:23 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1487</b>	<b>.0002</b>	<b>.0003</b>	<b>.0004</b>	<b>.0030</b>	<b>.0009</b>	<b>.1508</b>	<b>.0011</b>	<b>.0000</b>
Stddev	.0004	.0000	.0001	.0001	.0002	.0000	.0002	.0002	.0002
%RSD	.2479	20.34	44.38	40.51	8.067	.8443	12.56	20.21	540.8
#1	.1489	.0002	.0002	.0002	.0033	.0009	.1507	.0012	-.0002
#2	.1483	.0003	.0003	.0004	.0028	.0009	.1510	.0012	.0002
#3	.1489	.0002	.0004	.0005	.0029	.0009	.1507	.0008	.0001
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0040</b>	<b>.1686</b>	<b>.0057</b>	<b>.0025</b>	<b>.0011</b>	<b>-.0006</b>	<b>-.0000</b>	<b>1.363</b>	<b>19.75</b>
Stddev	.0002	.0006	.0011	.0004	.0009	.0013	.0003	.018	.02
%RSD	4.010	.3813	18.39	17.95	81.31	217.2	624.7	1.358	.1077
#1	.0040	.1689	.0063	.0027	.0017	.0005	.0000	1.372	19.74
#2	.0041	.1690	.0063	.0020	.0016	-.0020	.0002	1.342	19.74
#3	.0038	.1679	.0045	.0028	.0001	-.0003	-.0003	1.376	19.78
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>13.28</b>	<b>6.988</b>	<b>5.415</b>	<b>20.06</b>	<b>.1257</b>	<b>.0009</b>	<b>9.031</b>	<b>-.0003</b>	<b>.5026</b>
Stddev	.02	.007	.017	.04	.0003	.0002	.029	.0006	.0010
%RSD	.1797	.0957	.3117	.2215	.2185	20.34	.3242	184.3	.1929
#1	13.26	6.981	5.398	20.09	.1259	.0010	9.052	-.0002	.5030
#2	13.27	6.988	5.432	20.01	.1258	.0010	9.043	-.0010	.5015
#3	13.30	6.994	5.415	20.08	.1254	.0007	8.997	.0002	.5033
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0139</b>	<b>.0015</b>	<b>-.0049</b>	<b>13.23</b>	<b>-.0006</b>	<b>.0204</b>	<b>.2212</b>	<b>.0130</b>	
Stddev	.0004	.0010	.0001	.04	.0007	.0017	.0016	.0016	
%RSD	2.803	63.70	1.632	.3387	112.0	8.117	.7080	12.32	
#1	.0135	.0008	-.0050	13.26	-.0013	.0188	.2222	.0121	
#2	.0139	.0012	-.0049	13.25	-.0005	.0202	.2219	.0120	
#3	.0143	.0026	-.0050	13.18	.0000	.0221	.2194	.0148	

Sample Name: jc95424-7 Acquired: 9/30/2019 14:20:23 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	74915.	12440.	4933.3	9918.1
Stddev	25.	35.	14.2	25.3
%RSD	.03395	.28236	.28867	.25481
#1	74908.	12480.	4928.9	9914.1
#2	74893.	12416.	4921.8	9895.0
#3	74943.	12423.	4949.3	9945.1

11.2  
11

Sample Name: jc95424-8 Acquired: 9/30/2019 14:25:19 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2141</b>	<b>.0002</b>	<b>.0002</b>	<b>-.0003</b>	<b>.0013</b>	<b>-.0004</b>	<b>.1329</b>	<b>-.0000</b>	<b>.0007</b>
Stddev	.0004	.0000	.0002	.0003	.0001	.0001	.0002	.0003	.0004
%RSD	.1912	10.05	99.74	128.8	10.50	22.76	.1214	.1915	64.67
#1	.2143	.0002	.0004	-.0000	.0011	-.0003	.1327	-.0003	.0011
#2	.2136	.0002	-.0000	-.0006	.0014	-.0005	.1330	.0001	.0006
#3	.2144	.0001	.0004	-.0001	.0014	-.0004	.1330	.0002	.0003
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0012</b>	<b>.0245</b>	<b>.0012</b>	<b>.0027</b>	<b>-.0005</b>	<b>-.0023</b>	<b>-.0004</b>	<b>.2808</b>	<b>26.31</b>
Stddev	.0001	.0000	.0006	.0022	.0006	.0018	.0011	.0070	.06
%RSD	11.08	.1487	52.99	79.43	134.6	76.84	260.5	2.502	.2397
#1	.0011	.0244	.0018	.0046	-.0002	-.0040	-.0000	.2886	26.35
#2	.0013	.0245	.0012	.0004	.0000	-.0024	-.0016	.2750	26.24
#3	.0011	.0245	.0006	.0031	-.0012	-.0005	.0004	.2787	26.34
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>11.80</b>	<b>8.087</b>	<b>5.987</b>	<b>22.62</b>	<b>.1628</b>	<b>.0005</b>	<b>8.540</b>	<b>-.0007</b>	<b>.8671</b>
Stddev	.01	.019	.034	.05	.0014	.0003	.029	.0001	.0010
%RSD	.0611	.2349	.5678	.2099	.8728	46.49	.3361	20.52	.1189
#1	11.81	8.108	6.025	22.67	.1640	.0005	8.541	-.0008	.8683
#2	11.80	8.070	5.960	22.57	.1631	.0008	8.567	-.0008	.8667
#3	11.80	8.084	5.975	22.62	.1612	.0003	8.510	-.0005	.8664
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0193</b>	<b>.0018</b>	<b>-.0047</b>	<b>15.47</b>	<b>.0008</b>	<b>.0199</b>	<b>.2210</b>	<b>.0084</b>	
Stddev	.0008	.0005	.0000	.06	.0005	.0004	.0010	.0043	
%RSD	4.317	30.98	.9493	.4011	69.52	1.829	.4314	51.01	
#1	.0199	.0024	-.0047	15.47	.0013	.0196	.2219	.0087	
#2	.0196	.0014	-.0048	15.53	.0008	.0197	.2210	.0125	
#3	.0183	.0015	-.0047	15.41	.0002	.0203	.2200	.0039	

Sample Name: jc95424-8 Acquired: 9/30/2019 14:25:19 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	74627.	12237.	4877.9	9848.8
Stddev	240.	65.	14.9	36.9
%RSD	.32094	.53414	.30592	.37426
#1	74885.	12189.	4865.4	9815.8
#2	74585.	12311.	4873.9	9842.1
#3	74411.	12211.	4894.4	9888.6

Sample Name: jc95492-4 Acquired: 9/30/2019 14:30:16 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0385</b>	<b>.0005</b>	<b>.0003</b>	<b>.0037</b>	<b>.0004</b>	<b>.0005</b>	<b>.0350</b>	<b>.0065</b>	<b>.0001</b>
Stddev	.0002	.0001	.0001	.0003	.0001	.0003	.0003	.0003	.0003
%RSD	.5932	10.93	47.04	7.276	30.75	67.74	7.306	4.460	209.4
#1	.0388	.0005	.0005	.0037	.0003	.0006	.0352	.0063	.0002
#2	.0383	.0005	.0002	.0034	.0004	.0001	.0347	.0068	.0003
#3	.0385	.0006	.0003	.0040	.0005	.0008	.0351	.0063	-.0002

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>.0338</b>	<b>.0016</b>	<b>.0005</b>	<b>.0015</b>	<b>.0010</b>	<b>-.0011</b>	<b>.3653</b>	<b>7.461</b>
Stddev	.0003	.0002	.0003	.0005	.0003	.0004	.0004	.0091	.018
%RSD	143.8	.6909	20.88	112.0	22.17	40.87	34.02	2.492	.2351
#1	.0004	.0337	.0015	-.0001	.0015	.0014	-.0014	.3738	7.479
#2	-.0001	.0336	.0013	.0005	.0013	.0006	-.0007	.3557	7.444
#3	.0003	.0341	.0019	.0010	.0019	.0010	-.0012	.3665	7.459

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2656</b>	<b>4.234</b>	<b>3.085</b>	<b>102.8</b>	<b>.0449</b>	<b>.0005</b>	<b>2.939</b>	<b>-.0003</b>	<b>.0333</b>
Stddev	.0026	.005	.024	.3	.0003	.0001	.011	.0006	.0001
%RSD	.9826	.1221	.7802	.2509	.6689	17.86	.3675	173.4	.4139
#1	.2639	4.231	3.071	103.0	.0452	.0005	2.928	-.0008	.0335
#2	.2686	4.231	3.071	102.5	.0446	.0007	2.938	-.0006	.0333
#3	.2643	4.240	3.113	102.7	.0448	.0005	2.949	.0003	.0333

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0008</b>	<b>.0014</b>	<b>-.0014</b>	<b>12.50</b>	<b>.0007</b>	<b>.0067</b>	<b>.0027</b>	<b>.0153</b>
Stddev	.0003	.0014	.0001	.05	.0008	.0007	.0003	.0015
%RSD	33.28	96.93	6.126	.3982	123.3	9.725	12.17	9.837
#1	.0005	.0011	-.0014	12.46	-.0003	.0064	.0028	.0155
#2	.0010	.0002	-.0015	12.48	.0012	.0075	.0023	.0167
#3	.0009	.0029	-.0014	12.55	.0011	.0062	.0030	.0137

Sample Name: jc95492-4 Acquired: 9/30/2019 14:30:16 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>74634.</b>	<b>12198.</b>	<b>4874.2</b>	<b>9729.3</b>
Stddev	450.	43.	7.8	16.3
%RSD	.60256	.35180	.15927	.16738
#1	74630.	12219.	4879.3	9745.9
#2	75086.	12227.	4878.0	9728.6
#3	74186.	12149.	4865.2	9713.4

Sample Name: jc95492-6 Acquired: 9/30/2019 14:35:14 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0361</b>	<b>.0003</b>	<b>.0004</b>	<b>.0143</b>	<b>.0021</b>	<b>.0003</b>	<b>.1752</b>	<b>.0142</b>	<b>.0006</b>
Stddev	.0002	.0001	.0001	.0002	.0002	.0003	.0022	.0003	.0003
%RSD	4.291	22.98	37.22	1.388	8.457	115.6	1.230	2.282	46.84
#1	.0360	.0003	.0002	.0141	.0019	-.0001	.1745	.0139	.0006
#2	.0360	.0004	.0004	.0145	.0021	.0004	.1776	.0141	.0003
#3	.0363	.0004	.0005	.0143	.0023	.0005	.1734	.0146	.0009

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0024</b>	<b>.0833</b>	<b>.0060</b>	<b>.0019</b>	<b>.0007</b>	<b>-.0009</b>	<b>-.0001</b>	<b>.8430</b>	<b>7.727</b>
Stddev	.0001	.0001	.0006	.0009	.0012	.0015	.0011	.0077	.017
%RSD	4.075	.0826	9.946	44.87	172.3	163.9	1877.	.9175	.2140
#1	.0023	.0832	.0066	.0011	.0007	-.0022	.0001	.8445	7.725
#2	.0025	.0833	.0055	.0019	-.0005	.0008	.0009	.8499	7.745
#3	.0023	.0833	.0058	.0028	.0019	-.0013	-.0013	.8347	7.712

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>11.30</b>	<b>4.906</b>	<b>4.142</b>	<b>19.54</b>	<b>.0625</b>	<b>.0005</b>	<b>4.875</b>	<b>-.0002</b>	<b>.1468</b>
Stddev	.01	.011	.019	.02	.0006	.0001	.010	.0007	.0002
%RSD	.0881	.2267	.4662	.0908	.8964	17.39	.2060	306.8	.1241
#1	11.29	4.917	4.155	19.55	.0621	.0004	4.871	-.0003	.1470
#2	11.31	4.895	4.151	19.52	.0623	.0005	4.887	.0005	.1467
#3	11.29	4.906	4.120	19.54	.0631	.0004	4.868	-.0008	.1467

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0489</b>	<b>.0011</b>	<b>-.0019</b>	<b>10.58</b>	<b>-.0014</b>	<b>.0071</b>	<b>.2230</b>	<b>.0092</b>
Stddev	.0018	.0002	.0001	.03	.0012	.0008	.0009	.0005
%RSD	3.603	18.56	5.842	.2659	90.00	11.45	.3987	5.030
#1	.0473	.0008	-.0018	10.57	-.0024	.0080	.2229	.0088
#2	.0508	.0012	-.0020	10.62	-.0017	.0069	.2239	.0097
#3	.0486	.0011	-.0019	10.57	.0000	.0064	.2222	.0090

Sample Name: jc95492-6 Acquired: 9/30/2019 14:35:14 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>74998.</b>	<b>12280.</b>	<b>4903.5</b>	<b>9886.5</b>
Stddev	803.	26.	2.8	8.0
%RSD	1.0701	.21271	.05761	.08059
#1	75222.	12251.	4906.5	9892.3
#2	74108.	12290.	4900.8	9877.4
#3	75665.	12300.	4903.2	9889.8

Sample Name: jc95621-1 Acquired: 9/30/2019 14:40:09 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3942</b>	<b>.0001</b>	<b>.0007</b>	<b>.0019</b>	<b>.0023</b>	<b>-0.0047</b>	<b>1.246</b>	<b>.0007</b>	<b>.0025</b>
Stddev	.0010	.0002	.0001	.0003	.0004	.0002	.003	.0003	.0005
%RSD	.2639	.3305	13.98	15.96	18.24	4.731	.2391	36.61	18.42
#1	.3937	-.0002	.0006	.0021	.0026	-.0047	1.249	.0004	.0022
#2	.3934	.0003	.0008	.0016	.0018	-.0045	1.246	.0009	.0023
#3	.3953	.0001	.0007	.0020	.0025	-.0049	1.243	.0009	.0030
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0027</b>	<b>.0062</b>	<b>.0069</b>	<b>.0053</b>	<b>.0023</b>	<b>-0.0038</b>	<b>-0.0010</b>	<b>-0.0153</b>	<b>235.1</b>
Stddev	.0005	.0002	.0008	.0031	.0018	.0033	.0019	.0107	.3
%RSD	20.32	3.630	11.61	57.64	77.54	86.25	198.0	69.56	.1317
#1	.0032	.0063	.0062	.0083	.0006	-.0002	-.0031	-.0244	235.2
#2	.0028	.0060	.0066	.0054	.0022	-.0066	-.0004	-.0180	234.7
#3	.0021	.0064	.0078	.0022	.0042	-.0048	.0006	-.0036	235.3
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>57.26</b>	<b>45.58</b>	<b>19.39</b>	<b>180.8</b>	<b>.8315</b>	<b>.0013</b>	<b>22.11</b>	<b>-0.0021</b>	<b>1.607</b>
Stddev	.09	.08	.07	.2	.0036	.0006	.02	.0002	.002
%RSD	.1555	.1768	.3688	.1109	.4304	46.04	.0857	9.941	.1269
#1	57.35	45.51	19.33	180.9	.8347	.0007	22.13	-.0020	1.609
#2	57.17	45.56	19.38	180.6	.8276	.0019	22.10	-.0021	1.605
#3	57.28	45.66	19.47	180.9	.8323	.0013	22.10	-.0024	1.608
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0053</b>	<b>.0030</b>	<b>-0.0130</b>	<b>2.298</b>	<b>-0.0042</b>	<b>.0650</b>	<b>1.533</b>	<b>.0309</b>	
Stddev	.0003	.0002	.0006	.005	.0021	.0008	.005	.0047	
%RSD	4.740	8.168	4.249	.2295	49.66	1.262	.3024	15.27	
#1	.0054	.0032	-.0133	2.298	-.0064	.0659	1.535	.0254	
#2	.0050	.0027	-.0124	2.293	-.0040	.0643	1.537	.0335	
#3	.0055	.0030	-.0133	2.303	-.0022	.0646	1.528	.0337	

Sample Name: jc95621-1 Acquired: 9/30/2019 14:40:09 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73184.	12084.	4793.9	9536.2
Stddev	198.	30.	4.3	15.4
%RSD	.27033	.24624	.09071	.16174
#1	72956.	12100.	4797.7	9554.0
#2	73282.	12101.	4789.2	9525.9
#3	73313.	12049.	4794.9	9528.8

Sample Name: jc95621-2 Acquired: 9/30/2019 14:45:05 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.086</b>	<b>.0000</b>	<b>.0011</b>	<b>.0004</b>	<b>.0019</b>	<b>.0002</b>	<b>.2896</b>	<b>.0013</b>	<b>-0.000</b>
Stddev	.0009	.0000	.0004	.0004	.0004	.0003	.0007	.0010	.0004
%RSD	.7911	75.24	36.79	90.93	23.76	114.1	2254	76.36	1309.
#1	.1087	.0000	.0010	.0001	.0024	.0002	.2895	.0024	.0004
#2	.1094	.0000	.0015	.0003	.0016	.0005	.2889	.0004	-.0004
#3	.1077	.0000	.0007	.0008	.0016	-.0000	.2902	.0011	-.0001
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0035</b>	<b>.0081</b>	<b>.0041</b>	<b>.0047</b>	<b>.0007</b>	<b>-0.0045</b>	<b>.0005</b>	<b>.0447</b>	<b>255.4</b>
Stddev	.0004	.0003	.0018	.0027	.0033	.0033	.0024	.0162	1.4
%RSD	11.33	3.131	44.79	57.93	462.8	72.77	471.9	36.29	.5456
#1	.0031	.0083	.0062	.0016	.0027	-.0080	-.0015	.0387	256.6
#2	.0036	.0078	.0036	.0056	.0026	-.0038	-.0002	.0630	255.7
#3	.0039	.0082	.0026	.0068	-.0031	-.0016	.0031	.0323	253.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>11.62</b>	<b>55.25</b>	<b>16.05</b>	<b>85.36</b>	<b>.6213</b>	<b>.0030</b>	<b>14.21</b>	<b>-0.0009</b>	<b>1.534</b>
Stddev	.05	.36	.14	.47	.0041	.0002	.08	.0016	.008
%RSD	.4205	.6595	.8867	.5482	.6560	7.182	.5405	179.1	.5426
#1	11.66	55.63	16.21	85.74	.6256	.0032	14.29	.0002	1.540
#2	11.63	55.19	16.01	85.52	.6208	.0027	14.18	-.0001	1.537
#3	11.56	54.91	15.93	84.84	.6175	.0030	14.14	-.0027	1.524
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0085</b>	<b>.0010</b>	<b>-0.0080</b>	<b>92.80</b>	<b>-0.0021</b>	<b>.0305</b>	<b>.3142</b>	<b>.0132</b>	
Stddev	.0007	.0005	.0003	.54	.0016	.0024	.0013	.0043	
%RSD	7.944	52.72	4.308	.5801	75.10	7.906	.4029	32.17	
#1	.0091	.0015	-.0083	93.40	-.0010	.0295	.3151	.0115	
#2	.0085	.0006	-.0076	92.67	-.0040	.0333	.3148	.0101	
#3	.0077	.0007	-.0081	92.34	-.0014	.0288	.3128	.0181	

Sample Name: jc95621-2 Acquired: 9/30/2019 14:45:05 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72852.	12056.	4773.9	9562.8
Stddev	365.	27.	16.6	31.3
%RSD	.50115	.22245	.34676	.32681
#1	73051.	12025.	4757.6	9533.5
#2	73074.	12069.	4773.2	9559.2
#3	72430.	12073.	4790.7	9595.7





Sample Name: jc95621-3 Acquired: 9/30/2019 15:00:01 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3165</b>	<b>.0001</b>	<b>.0007</b>	<b>.0031</b>	<b>.0059</b>	<b>-0.009</b>	<b>1.561</b>	<b>.0030</b>	<b>.0005</b>
Stddev	.0012	.0001	.0003	.0006	.0003	.0005	.005	.0007	.0008
%RSD	.3876	95.67	48.86	19.06	5.879	62.93	.3429	22.61	142.6
#1	.3163	.0002	.0005	.0037	.0064	-.0010	1.565	.0022	.0005
#2	.3178	.0000	.0011	.0026	.0057	-.0013	1.561	.0033	-.0002
#3	.3154	.0001	.0005	.0029	.0057	-.0003	1.555	.0035	.0013
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0098</b>	<b>.0048</b>	<b>.0099</b>	<b>.0055</b>	<b>-.0015</b>	<b>-.0025</b>	<b>.0031</b>	<b>.0349</b>	<b>329.6</b>
Stddev	.0004	.0002	.0009	.0011	.0014	.0040	.0029	.0111	.8
%RSD	4.188	4.776	9.490	20.54	98.39	157.4	93.15	31.93	2351
#1	.0101	.0049	.0091	.0042	-.0031	-.0023	.0061	.0472	329.8
#2	.0093	.0050	.0097	.0063	-.0005	.0013	.0027	.0319	330.2
#3	.0099	.0045	.0109	.0061	-.0008	-.0066	.0004	.0255	328.7
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>20.28</b>	<b>104.0</b>	<b>35.58</b>	<b>299.4</b>	<b>1.172</b>	<b>.0038</b>	<b>21.84</b>	<b>-0.004</b>	<b>1.900</b>
Stddev	.06	.2	.17	4.7	.006	.0003	.14	.0014	.006
%RSD	.2721	.1851	.4806	1.568	.4858	7.067	.6618	369.0	.3189
#1	20.27	104.1	35.64	303.1	1.178	.0036	22.00	-.0006	1.898
#2	20.34	104.1	35.71	300.9	1.168	.0036	21.82	-.0017	1.907
#3	20.24	103.8	35.39	294.1	1.168	.0041	21.71	.0011	1.895
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0124</b>	<b>.0109</b>	<b>-.0097</b>	<b>6.874</b>	<b>-.0054</b>	<b>.0584</b>	<b>2.531</b>	<b>.0184</b>	
Stddev	.0011	.0023	.0003	.051	.0020	.0044	.016	.0043	
%RSD	8.566	20.86	3.167	.7495	37.54	7.578	.6130	23.06	
#1	.0136	.0095	-.0100	6.927	-.0046	.0568	2.548	.0230	
#2	.0122	.0096	-.0094	6.869	-.0038	.0633	2.526	.0178	
#3	.0115	.0135	-.0097	6.824	-.0076	.0549	2.518	.0145	

Sample Name: jc95621-3 Acquired: 9/30/2019 15:00:01 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	71488.	11998.	4686.4	9234.2
Stddev	347.	9.	12.2	14.7
%RSD	.48559	.07823	.26111	.15915
#1	71757.	12007.	4675.7	9220.4
#2	71096.	11997.	4683.8	9232.6
#3	71612.	11988.	4699.7	9249.6

Sample Name: jc95621-4 Acquired: 9/30/2019 15:05:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2134</b>	<b>.0000</b>	<b>.0011</b>	<b>.0019</b>	<b>.0074</b>	<b>.0204</b>	<b>1.166</b>	<b>.0040</b>
Stddev	.0020	.0000	.0001	.0000	.0002	.0011	.047	.0002
%RSD	.9517	126.8	11.48	2.502	3.004	5.224	4.009	3.983
#1	.2121	.0000	.0011	.0019	.0075	.0199	1.139	.0040
#2	.2157	.0001	.0011	.0019	.0077	.0216	1.220	.0041
#3	.2124	-.0000	.0009	.0018	.0072	.0197	1.139	.0038
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.0066</b>	<b>.0551</b>	<b>.0078</b>	<b>.0039</b>	<b>.0416</b>	<b>-.0015</b>	<b>.0063</b>
Stddev	.0005	.0003	.0006	.0002	.0017	.0019	.0014	.0017
%RSD	82.71	4.636	1.160	2.603	42.79	4.485	90.23	26.44
#1	.0012	.0064	.0556	.0076	.0052	.0412	-.0007	.0049
#2	.0003	.0070	.0544	.0078	.0020	.0399	-.0008	.0059
#3	.0004	.0065	.0553	.0080	.0044	.0436	-.0031	.0082
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6346</b>	<b>F 272.3</b>	<b>17.26</b>	<b>36.90</b>	<b>13.94</b>	<b>77.65</b>	<b>.5909</b>	<b>.0087</b>
Stddev	.0188	1.9	.21	.45	.17	.94	.0065	.0004
%RSD	2.961	.6861	1.220	1.221	1.198	1.212	1.097	4.051
#1	.6232	271.3	17.15	36.74	13.88	77.26	.5966	.0085
#2	.6563	274.5	17.50	37.40	14.12	78.73	.5838	.0091
#3	.6244	271.2	17.12	36.55	13.80	76.98	.5922	.0085
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>23.19</b>	<b>.0043</b>	<b>1.931</b>	<b>.0325</b>	<b>.0153</b>	<b>F -.0137</b>	<b>6.523</b>	<b>-.0024</b>
Stddev	.23	.0005	.023	.0011	.0007	.0065	.065	.0013
%RSD	9856	11.14	1.203	3.514	4.454	1.499	.9987	54.31
#1	23.38	.0038	1.921	.0317	.0147	-.0139	6.585	-.0015
#2	22.93	.0047	1.957	.0338	.0160	-.0135	6.455	-.0018
#3	23.24	.0046	1.913	.0320	.0153	-.0137	6.528	-.0039

Sample Name: jc95621-4 Acquired: 9/30/2019 15:05:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0482</b>	<b>2.196</b>	<b>.0156</b>	
Stddev	.0002	.021	.0024	
%RSD	.3456	.9460	15.56	
#1	.0484	2.214	.0175	
#2	.0482	2.173	.0165	
#3	.0480	2.202	.0129	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>69977.</b>	<b>11873.</b>	<b>4665.4</b>	<b>9179.0</b>
Stddev	2294.	127.	44.5	86.1
%RSD	3.2788	1.0725	.95328	.93751
#1	71253.	11941.	4624.1	9098.1
#2	67328.	11726.	4712.5	9269.5
#3	71349.	11951.	4659.6	9169.4

Sample Name: jc95621-4 Acquired: 9/30/2019 15:10:07 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2188	0001	0014	0020	0076	0196	1169	0035	-0002
Stddev	0011	0000	0004	0003	0002	0003	012	0006	0008
%RSD	5153	37.37	28.56	15.25	2.453	1.754	1.059	16.38	349.5
#1	.2196	.0002	.0019	.0020	.0076	.0199	1.170	.0028	.0005
#2	.2193	.0001	.0011	.0017	.0074	.0193	1.156	.0036	-.0001
#3	.2175	.0001	.0012	.0023	.0077	.0194	1.181	.0039	-.0011
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0075	0560	0065	0037	0428	-0045	0069	6656	282.5
Stddev	0006	0007	0010	0044	0011	0010	0025	0088	1.9
%RSD	7.697	1.296	14.99	118.2	2.525	21.06	36.43	1.329	.6889
#1	.0081	.0568	.0070	.0025	.0416	-.0035	.0058	.6733	284.4
#2	.0070	.0557	.0072	.0001	.0429	-.0054	.0098	.6559	282.7
#3	.0073	.0554	.0054	.0085	.0438	-.0048	.0052	.6677	280.5
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.75	38.07	14.16	80.23	5880	0086	22.96	0022	1.987
Stddev	.12	.33	.08	.50	.0045	.0003	.19	.0014	.013
%RSD	.6589	.8733	.5316	.6178	.7570	2.989	.8330	63.88	.6321
#1	17.84	38.34	14.25	80.69	.5931	.0088	23.17	.0010	1.999
#2	17.80	38.16	14.13	80.30	.5850	.0087	22.89	.0018	1.989
#3	17.62	37.70	14.11	79.71	.5859	.0083	22.81	.0037	1.974
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	0340	0157	0135	6429	0022	0479	2176	0214	
Stddev	0008	0017	0004	.048	.0012	.0047	.012	.0075	
%RSD	2.306	11.14	3.085	.7445	56.07	9.822	.5601	34.97	
#1	.0331	.0147	-.0139	6.480	-.0031	.0438	2.189	.0156	
#2	.0347	.0146	-.0131	6.422	-.0027	.0530	2.173	.0299	
#3	.0342	.0177	-.0135	6.385	-.0008	.0468	2.165	.0189	

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Sample Name: jc95621-4 Acquired: 9/30/2019 15:10:07 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73129	11898	4778.8	9466.9
Stddev	861	54	2.9	8.0
%RSD	1.1767	.45332	.06163	.08423
#1	73343	11860	4782.0	9465.5
#2	73862	11875	4776.2	9459.7
#3	72182	11960	4778.1	9475.5

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Sample Name: jc95621-5 Acquired: 9/30/2019 15:14:59 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2982	-0000	0007	0010	0126	0004	4380	0019	-0001
Stddev	0021	0001	0003	0004	0002	0003	0017	0002	0004
%RSD	.7103	295.3	45.99	39.47	1.612	94.01	3882	11.21	703.2
#1	.3005	0000	0007	0011	0124	0002	4400	0019	-0005
#2	.2963	-0000	0009	0006	0128	0007	4368	0017	0001
#3	.2977	-0001	0003	0013	0126	0001	4374	0022	0003
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0141	0045	0164	0048	0026	0025	0012	0129	278.2
Stddev	0004	0001	0006	0007	0007	0013	0015	0167	2.5
%RSD	2.511	2.437	3.777	14.50	25.53	51.05	118.3	129.1	.9163
#1	.0137	.0044	.0167	.0045	-.0022	-.0011	.0002	.0016	281.1
#2	.0141	.0046	.0169	.0043	-.0022	-.0027	.0029	.0050	276.5
#3	.0144	.0046	.0157	.0056	-.0033	-.0036	.0007	.0321	276.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.006	50.62	23.39	126.1	.5111	0022	16.46	-0032	1.541
Stddev	.038	.39	.24	1.1	.0062	.0003	.18	.0002	.016
%RSD	.7521	.7744	1.037	.9089	1.216	13.89	1.076	6.865	1.019
#1	5.047	51.06	23.67	127.4	.5067	.0019	16.35	-.0034	1.559
#2	4.973	50.29	23.24	125.4	.5182	.0023	16.66	-.0031	1.532
#3	4.999	50.51	23.27	125.4	.5085	.0024	16.36	-.0030	1.531
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	0077	0044	0092	91.68	0005	0731	5538	0136	
Stddev	0007	0014	0002	.91	.0037	.0008	.0065	.0032	
%RSD	9.485	32.80	2.169	.9949	769.4	1.048	1.171	23.63	
#1	.0068	.0060	-.0094	91.17	-.0010	.0736	.5519	.0099	
#2	.0082	.0033	-.0090	92.74	-.0039	.0734	.5610	.0158	
#3	.0079	.0038	-.0092	91.15	.0035	.0722	.5485	.0150	

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Sample Name: jc95621-5 Acquired: 9/30/2019 15:14:59 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 2.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73514	11793	4798.0	9556.4
Stddev	249	49	46.0	82.8
%RSD	.33862	.41351	.95822	.86681
#1	73232	11739	4822.3	9591.8
#2	73606	11806	4745.0	9461.8
#3	73703	11834	4826.7	9615.7

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Sample Name: mp17583-mb1conf Acquired: 9/30/2019 15:19:52 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0073</b>	<b>.0003</b>	<b>.0013</b>	<b>.0006</b>	<b>.0012</b>	<b>.0087</b>	<b>.0018</b>	<b>.0056</b>	<b>-.0041</b>
Stddev	.0003	.0001	.0009	.0007	.0003	.0012	.0001	.0009	.0020
%RSD	3.980	28.29	69.86	121.3	22.50	13.83	3.106	15.68	47.46
#1	.0071	.0002	.0022	.0003	.0014	.0101	.0017	.0064	-.0027
#2	.0072	.0003	.0004	.0014	.0009	.0080	.0018	.0058	-.0063
#3	.0076	.0004	.0012	.0000	.0012	.0079	.0018	.0047	-.0033
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0015</b>	<b>.1413</b>	<b>.0038</b>	<b>.0055</b>	<b>.0043</b>	<b>-.0060</b>	<b>.0008</b>	<b>.1123</b>	<b>.1603</b>
Stddev	.0011	.0012	.0036	.0074	.0038	.0100	.0028	.0137	.0042
%RSD	73.52	.8697	93.82	132.9	88.49	167.6	340.9	12.16	2.628
#1	.0027	.1401	.0071	.0028	.0046	-.0059	.0003	.1145	.1637
#2	.0004	.1425	.0000	-.0000	.0080	.0040	-.0017	.1247	.1616
#3	.0014	.1413	.0042	.0139	.0004	-.0161	.0038	.0977	.1556
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1502</b>	<b>-.0085</b>	<b>3.361</b>	<b>F 1406.</b>	<b>.1562</b>	<b>-.0008</b>	<b>1.464</b>	<b>.0001</b>	<b>.0175</b>
Stddev	.0041	.1115	.010	.18.	.0064	.0010	.024	.0025	.0001
%RSD	2.712	1318.	.2923	1.246	4.073	124.7	1.629	3355.	.7426
#1	.1507	.0768	3.358	1426.	.1630	-.0016	1.438	-.0023	.0174
#2	.1540	-.1346	3.354	1394.	.1552	-.0010	1.471	-.0001	.0175
#3	.1459	.0325	3.373	1398.	.1503	.0003	1.484	.0027	.0177
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0011</b>	<b>-.0058</b>	<b>-.0015</b>	<b>.2513</b>	<b>.0085</b>	<b>.0270</b>	<b>.0196</b>	<b>.0063</b>	
Stddev	.0010	.0043	.0005	.0009	.0145	.0060	.0019	.0108	
%RSD	92.35	73.85	32.92	.3402	170.7	22.28	9.766	172.2	
#1	.0022	-.0097	-.0012	.2519	-.0080	.0211	.0215	.0044	
#2	.0011	-.0062	-.0012	.2518	.0140	.0268	.0177	.0180	
#3	.0001	-.0013	-.0020	.2504	.0195	.0331	.0196	-.0035	

Sample Name: mp17583-mb1conf Acquired: 9/30/2019 15:19:52 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73011.	11927.	4819.5	9469.2
Stddev	97.	82.	16.6	19.6
%RSD	.13234	.68537	.34406	.20660
#1	73093.	11880.	4825.9	9480.5
#2	73036.	11880.	4800.6	9446.6
#3	72905.	12022.	4831.8	9480.5

11.2  
11

Sample Name: jc95261-14a Acquired: 9/30/2019 15:25:00 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.081</b>	<b>.0014</b>	<b>.0669</b>	<b>.0845</b>	<b>.0366</b>	<b>.0052</b>	<b>2.127</b>	<b>6.863</b>	<b>-.0029</b>
Stddev	.004	.0003	.0009	.0012	.0022	.0013	.040	.051	.0013
%RSD	3.580	24.22	1.356	1.440	6.018	25.26	1.890	.7365	46.07
#1	1.084	.0016	.0658	.0859	.0340	.0066	2.085	6.902	-.0026
#2	1.084	.0016	.0672	.0838	.0378	.0040	2.165	6.881	-.0017
#3	1.077	.0010	.0675	.0838	.0379	.0050	2.131	6.806	-.0043
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0043</b>	<b>14.85</b>	<b>.0152</b>	<b>.0277</b>	<b>58.13</b>	<b>-.0173</b>	<b>-.0049</b>	<b>9.246</b>	<b>231.0</b>
Stddev	.0038	.12	.0064	.0067	.46	.0037	.0062	.115	.6
%RSD	89.07	.7840	42.19	24.17	.7969	21.22	125.4	1.244	.2689
#1	.0081	14.92	.0187	.0221	58.48	-.0170	-.0008	9.352	231.6
#2	.0005	14.91	.0078	.0351	58.30	-.0211	-.0120	9.262	230.4
#3	.0043	14.71	.0191	.0259	57.60	-.0137	-.0019	9.123	231.0
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>8.748</b>	<b>29.50</b>	<b>6.762</b>	<b>1390.</b>	<b>.4427</b>	<b>.0008</b>	<b>49.73</b>	<b>-.0062</b>	<b>.5332</b>
Stddev	.041	.14	.269	.26.	.0066	.0017	.32	.0052	.0017
%RSD	.4713	.4619	3.959	1.846	1.497	203.5	.6482	84.07	.3228
#1	8.778	29.66	6.506	1408.	.4474	-.0010	49.93	-.0086	.5352
#2	8.701	29.43	6.799	1361.	.4351	.0013	49.91	-.0099	.5323
#3	8.764	29.41	7.042	1401.	.4456	.0022	49.36	-.0002	.5321
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0119</b>	<b>-.0621</b>	<b>-.0283</b>	<b>4.636</b>	<b>-.0071</b>	<b>.0353</b>	<b>.0508</b>	<b>.0205</b>	
Stddev	.0062	.0019	.0013	.025	.0035	.0072	.0041	.0360	
%RSD	51.84	2.986	4.695	.5411	48.92	20.42	8.060	176.0	
#1	.0186	-.0643	-.0281	4.665	-.0043	.0280	.0470	.0023	
#2	.0107	-.0612	-.0297	4.619	-.0109	.0424	.0503	.0619	
#3	.0064	-.0609	-.0271	4.625	-.0059	.0356	.0552	-.0028	

Sample Name: jc95261-14a Acquired: 9/30/2019 15:25:00 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73693.	12026.	4887.7	9632.6
Stddev	1156.	34.	29.2	53.3
%RSD	1.5691	.28050	.59733	.55339
#1	74879.	11996.	4872.7	9597.4
#2	72569.	12063.	4869.0	9606.4
#3	73632.	12019.	4921.3	9693.9

Sample Name: mp17617-mb1 Acquired: 9/30/2019 15:30:02 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.0000	.0012	.0011	.0011	.0015	.0003	.0002	-.0010
Stddev	.0020	.0001	.0003	.0011	.0004	.0006	.0000	.0009	.0014
%RSD	55.94	208.9	23.44	99.73	37.93	37.06	13.31	578.5	136.5
#1	.0058	.0001	.0009	.0023	.0016	.0018	.0003	-.0007	.0006
#2	.0022	.0001	.0012	.0003	.0011	.0019	.0002	.0011	-.0019
#3	.0026	-.0001	.0014	.0006	.0007	.0009	.0002	.0000	-.0017
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0200	.0029	.0040	.0038	-.0029	-.0037	.0460	.0662
Stddev	.0016	.0004	.0031	.0065	.0024	.0062	.0076	.0109	.0162
%RSD	255.8	1.973	107.9	163.6	63.18	211.7	205.8	23.60	24.55
#1	-.0005	.0203	.0037	.0037	.0010	.0040	-.0103	.0585	.0830
#2	.0025	.0195	-.0005	.0106	.0054	-.0077	-.0046	.0402	.0505
#3	-.0001	.0201	.0056	-.0024	.0051	-.0050	-.0054	.0393	.0650
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0251	.0219	.0400	.1524	.0020	.0004	.1970	-.0002	.0010
Stddev	.0009	.0556	.1612	.0659	.0040	.0006	.0039	.0010	.0004
%RSD	3.473	254.0	403.4	43.24	197.4	136.1	1.994	620.7	37.92
#1	.0248	.0651	-.0029	.2193	-.0022	.0001	-.1973	-.0013	.0008
#2	.0261	.0414	.0995	.1501	.0058	.0011	.1929	.0007	.0014
#3	.0245	-.0408	-.2164	.0876	.0025	.0001	.2008	.0001	.0007
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0055	-.0027	.0005	-.0213	-.0017	.0000	.0182	-.0046	
Stddev	.0013	.0032	.0007	.0077	.0069	.0059	.0067	.0087	
%RSD	22.94	117.3	142.9	35.91	405.6	12810.	36.76	190.2	
#1	.0041	-.0018	.0012	-.0299	-.0088	-.0058	.0253	-.0135	
#2	.0064	-.0001	.0003	-.0189	-.0012	.0000	.0174	-.0042	
#3	.0060	-.0063	-.0001	-.0152	.0049	.0059	.0120	.0039	

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Sample Name: mp17617-mb1 Acquired: 9/30/2019 15:30:02 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76423.	12053.	4944.4	10017.
Stddev	1852.	72.	34.7	61.
%RSD	2.4232	.59739	.70110	.60784
#1	77419.	12033.	4914.6	9959.2
#2	74287.	11994.	4982.4	10080.
#3	77565.	12134.	4936.1	10011.

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Sample Name: mp17617-b1 Acquired: 9/30/2019 15:35:05 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.948	1.978	1.919	1.949	1.919	1.831	2.013	2.018	2.405
Stddev	.003	.001	.006	.005	.006	.006	.009	.006	.0007
%RSD	.1329	.0699	.3105	.2708	.3363	.3462	.4300	.2760	.2891
#1	1.946	1.976	1.914	1.943	1.926	1.838	2.023	2.013	2.413
#2	1.951	1.979	1.925	1.954	1.915	1.826	2.008	2.024	2.402
#3	1.947	1.979	1.918	1.950	1.915	1.830	2.008	2.017	2.400
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.905	2.018	1.967	1.999	1.965	1.902	1.985	25.01	25.32
Stddev	.009	.009	.015	.005	.011	.008	.008	.06	.04
%RSD	.4604	.4408	.7452	.2713	.5636	.4358	.4031	2.268	1.722
#1	1.915	2.009	1.951	1.999	1.952	1.892	1.977	24.96	25.27
#2	1.901	2.027	1.979	1.993	1.974	1.905	1.986	25.07	25.36
#3	1.899	2.019	1.972	2.004	1.967	1.908	1.993	25.00	25.33
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.67	25.55	24.12	24.47	1.909	2.040	2.044	2.060	1.990
Stddev	.09	.08	.10	.07	.009	.009	.0107	.010	.001
%RSD	.3346	.3165	.4206	.2822	.4773	.4642	5.236	.5001	.0563
#1	25.59	25.64	24.23	24.40	1.899	2.030	.1962	2.050	1.990
#2	25.76	25.49	24.04	24.54	1.914	2.049	.2165	2.071	1.991
#3	25.66	25.53	24.08	24.48	1.915	2.041	.2005	2.058	1.988
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.951	1.956	1.996	-.0221	-.0163	.0033	1.953	-.0248	
Stddev	.010	.009	.006	.0075	.0033	.0099	.010	.0043	
%RSD	.5271	.4866	.2865	34.06	20.45	296.8	.5087	17.51	
#1	1.963	1.945	2.002	-.0180	-.0162	.0033	1.942	-.0198	
#2	1.943	1.962	1.992	-.0176	-.0131	-.0065	1.961	-.0273	
#3	1.949	1.962	1.993	-.0308	-.0198	.0133	1.957	-.0273	

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Sample Name: mp17617-b1 Acquired: 9/30/2019 15:35:05 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75603.	12120.	4956.4	9953.3
Stddev	176.	74.	13.2	24.7
%RSD	23298	.61057	.26609	.24826
#1	75407.	12166.	4971.6	9981.8
#2	75748.	12035.	4949.1	9939.3
#3	75654.	12160.	4948.4	9938.8

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Sample Name: ccb Acquired: 9/30/2019 15:49:38 Type: QC  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
User: iTeva Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0002	.0004	.0001	.0002	.0004	.0002	.0001	.0004
Stddev	.0003	.0001	.0001	.0002	.0001	.0002	.0000	.0005	.0005
%RSD	37.99	27.58	35.11	141.7	53.55	50.00	12.96	549.3	111.0
#1	.0010	.0002	.0004	.0000	.0002	.0003	.0002	.0007	.0000
#2	.0005	.0002	.0005	.0000	.0002	.0002	.0002	-.0002	.0003
#3	.0005	.0001	.0002	.0003	.0001	.0006	.0002	-.0002	.0009

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	.0001	F .0024	.0003	-.0007	-.0008	.0041	.0015
Stddev	.0003	.0001	.0002	.0015	.0010	.0012	.0010	.0119	.0017
%RSD	261.4	48.51	351.5	62.57	372.7	170.4	125.0	287.7	107.1
#1	-.0002	-.0001	-.0002	.0033	-.0009	-.0002	-.0003	.0002	.0027
#2	.0003	-.0000	-.0003	.0007	-.0008	-.0021	-.0002	-.0053	-.0004
#3	.0002	-.0001	-.0000	.0032	.0007	.0002	-.0020	.0174	.0023

Check ? Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit .0020  
Low Limit -.0020

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0235	.0348	-.0094	.0020	.0003	.0008	.0003	.0002
Stddev	.0012	.0094	.0338	.0160	.0005	.0002	.0006	.0003	.0000
%RSD	22.08	39.95	96.96	169.7	26.95	94.95	71.86	99.78	10.38
#1	.0039	.0333	.0360	-.0001	.0021	.0005	.0015	.0006	.0002
#2	.0059	.0147	.0680	-.0279	.0025	.0000	.0004	.0002	.0002
#3	.0059	.0223	.0005	-.0003	.0014	.0002	.0005	.0000	.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

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Sample Name: mp17617-s2 Acquired: 9/30/2019 15:54:42 Type: Unk  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
User: iTeva Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.034	1.981	2.003	2.014	1.944	2.012	2.698	2.144	2.469
Stddev	.002	.006	.034	.031	.023	.023	.031	.033	.0025
%RSD	.0767	.2924	1.678	1.534	1.168	1.128	1.154	1.554	1.008
#1	2.036	1.986	2.040	2.049	1.932	2.000	2.681	2.180	2.453
#2	2.033	1.983	1.974	1.989	1.970	2.038	2.734	2.115	2.498
#3	2.034	1.975	1.996	2.005	1.930	1.998	2.680	2.136	2.457

Elem V\_2924 Zn2062 As1890 Tl1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179  
Units ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm  
Avg 1.915 3.439 2.075 2.016 2.029 1.996 2.095 26.71 687.3  
Stddev .020 .049 .021 .038 .037 .039 .033 .03 .15  
%RSD 1.038 1.423 1.019 1.872 1.821 1.965 1.551 .1256 .2161

#1 1.900 3.491 2.098 2.054 2.070 2.039 2.127 26.71 687.6  
#2 1.938 3.393 2.058 1.978 1.999 1.964 2.062 26.68 688.6  
#3 1.907 3.433 2.068 2.015 2.016 1.983 2.095 26.74 685.7

Elem Fe2599 Mg2790 K\_7664 Na5895 B\_2089 Mo2020 Si2124 Sn1899 Sr4077  
Units ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm  
Avg 26.72 42.54 104.3 1478. 2.671 2.090 1.739 2.106 2.870  
Stddev .04 .05 .2 9. .038 .028 .033 .007 .007  
%RSD .1600 .1267 .1730 .6094 1.425 1.592 1.592 1.584 .2602

#1 26.73 42.60 104.5 1468. 2.714 2.127 1.770 2.144 2.878  
#2 26.75 42.53 104.1 1481. 2.641 2.064 1.718 2.082 2.871  
#3 26.67 42.49 104.3 1486. 2.658 2.077 1.728 2.093 2.863

Elem Tl3349 W\_2079 Zr3391 S\_1820 Bi2230 Li6707 P\_1774 Ce4040  
Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
Avg 1.984 2.062 2.027 30.22 -.0182 .0195 9.821 -.0447  
Stddev .020 .030 .024 .43 .0065 .0012 .165 .0186  
%RSD 1.018 1.460 1.199 1.435 35.41 5.989 1.682 41.66

#1 1.969 2.094 2.014 30.70 -.0255 .0201 10.01 -.0334  
#2 2.007 2.034 2.055 29.85 -.0133 .0203 9.687 -.0662  
#3 1.975 2.059 2.013 30.11 -.0158 .0182 9.771 -.0345

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Sample Name: ccb Acquired: 9/30/2019 15:49:38 Type: QC  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
User: iTeva Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0003	.0001	-.0068	.0006	.0006	.0023	.0027
Stddev	.0001	.0003	.0001	.0003	.0014	.0007	.0006	.0017
%RSD	14.20	93.00	55.50	4.100	242.5	111.7	27.75	64.02
#1	.0005	.0000	.0002	-.0071	.0018	.0010	.0021	.0010
#2	.0006	.0005	.0002	-.0069	.0009	.0011	.0017	.0027
#3	.0004	.0003	.0000	-.0065	-.0010	-.0002	.0030	.0044

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass None  
High Limit  
Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75935	12038	4989.0	10106
Stddev	2532	39	46.2	81
%RSD	3.3350	.32273	.92543	.79965
#1	76294	12008	4979.4	10089
#2	78269	12082	4948.4	10035
#3	73243	12024	5039.3	10194

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Sample Name: mp17617-s2 Acquired: 9/30/2019 15:54:42 Type: Unk  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
User: iTeva Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72382	12034	4616.9	9011.5
Stddev	644	93	62.9	115.9
%RSD	.88975	.77081	1.3615	1.2861
#1	72637	12136	4548.7	8883.4
#2	71649	12013	4672.5	9109.0
#3	72859	11954	4629.4	9042.2

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Sample Name: jc95671-2 Acquired: 9/30/2019 15:59:34 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1284</b>	<b>-0.001</b>	<b>.0042</b>	<b>.0127</b>	<b>.0533</b>	<b>.1260</b>	<b>.7051</b>	<b>.0762</b>	<b>-0.0019</b>
Stddev	.0010	.0004	.0009	.0007	.0008	.0011	.0035	.0006	.0025
%RSD	.7793	496.4	20.26	5.142	1.466	.8994	.5030	.7337	131.2
#1	.1295	-.0005	.0035	.0121	.0536	.1247	.7091	.0767	-.0006
#2	.1282	-.0003	.0040	.0134	.0524	.1268	.7022	.0761	-.0049
#3	.1275	-.0001	.0052	.0127	.0538	.1265	.7042	.0756	-.0003
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0081</b>	<b>1.274</b>	<b>.0081</b>	<b>.0135</b>	<b>.0294</b>	<b>.0008</b>	<b>.0343</b>	<b>1.826</b>	<b>625.6</b>
Stddev	.0018	.004	.0022	.0064	.0018	.0064	.0057	.010	4.7
%RSD	21.78	.2849	27.56	47.22	6.032	751.3	16.64	.5678	.7443
#1	.0062	1.278	.0106	.0171	.0311	-.0065	.0392	1.833	629.8
#2	.0096	1.271	.0064	.0172	.0294	.0045	.0357	1.814	626.4
#3	.0083	1.274	.0073	.0061	.0276	.0046	.0280	1.831	620.6
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.398</b>	<b>17.13</b>	<b>76.08</b>	<b>F 1378.</b>	<b>.6339</b>	<b>.0209</b>	<b>1.517</b>	<b>.0469</b>	<b>.8883</b>
Stddev	.013	.12	.43	19.	.0048	.0003	.003	.0036	.0051
%RSD	.9232	.6872	.5650	1.403	.7592	1.476	.2257	7.726	.5786
#1	1.405	17.20	76.56	1397.	.6377	.0212	1.520	.0488	.8933
#2	1.407	17.19	75.96	1359.	.6285	.0208	1.516	.0491	.8886
#3	1.384	16.99	75.73	1377.	.6355	.0206	1.513	.0427	.8830
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0350</b>	<b>.0053</b>	<b>.0220</b>	<b>27.78</b>	<b>.0004</b>	<b>.0210</b>	<b>7.075</b>	<b>.0033</b>	
Stddev	.0012	.0034	.0003	.12	.0076	.0086	.024	.0046	
%RSD	3.397	64.94	1.227	44.70	1888.	40.91	.3351	137.5	
#1	.0362	.0026	.0220	27.88	.0035	.0181	7.096	.0067	
#2	.0338	.0092	.0217	27.64	-.0083	.0143	7.050	-.0019	
#3	.0351	.0042	.0223	27.81	.0060	.0307	7.079	.0051	

Sample Name: jc95671-2 Acquired: 9/30/2019 15:59:34 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>72109.</b>	<b>11935.</b>	<b>4731.5</b>	<b>9220.3</b>
Stddev	396.	152.	9.6	11.1
%RSD	.54859	1.2744	.20258	.12050
#1	71656.	11782.	4726.1	9216.6
#2	72381.	11938.	4742.6	9232.8
#3	72291.	12086.	4725.8	9211.5

Sample Name: mp17617-sd1 Acquired: 9/30/2019 16:04:39 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 25.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1351</b>	<b>.0011</b>	<b>.0058</b>	<b>.0117</b>	<b>.0559</b>	<b>.1465</b>	<b>.7449</b>	<b>.0753</b>	<b>-0.0093</b>
Stddev	.0084	.0012	.0053	.0065	.0056	.0033	.0245	.0027	.0095
%RSD	6.192	115.1	91.37	55.27	10.05	2.272	3.288	3.633	102.0
#1	.1314	.0007	.0120	.0186	.0620	.1444	.7698	.0743	-.0002
#2	.1447	.0025	.0035	.0106	.0549	.1503	.7441	.0784	-.0191
#3	.1293	.0001	.0020	.0058	.0509	.1448	.7208	.0732	-.0086
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0058</b>	<b>1.382</b>	<b>-0.0024</b>	<b>.0582</b>	<b>.0368</b>	<b>-0.0496</b>	<b>.0019</b>	<b>2.215</b>	<b>652.4</b>
Stddev	.0066	.010	.0137	.0316	.0255	.0456	.0201	.322	4.9
%RSD	113.3	.7191	573.6	54.28	69.25	91.93	1067.	14.53	.7494
#1	-.0017	1.383	-.0009	.0613	.0606	-.0983	-.0094	2.386	646.8
#2	.0105	1.371	-.0167	.0252	.0400	-.0079	-.0100	2.416	655.5
#3	.0087	1.391	.0105	.0881	.0099	-.0427	.0251	1.844	654.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.481</b>	<b>18.44</b>	<b>76.04</b>	<b>1480.</b>	<b>.6729</b>	<b>.0204</b>	<b>1.581</b>	<b>.0389</b>	<b>.9240</b>
Stddev	.061	.34	.36	10.	.0201	.0041	.030	.0159	.0115
%RSD	4.086	1.840	.4772	.6774	2.989	20.31	1.890	40.82	1.248
#1	1.422	18.08	76.36	1468.	.6581	.0212	1.612	.0571	.9110
#2	1.510	18.75	75.65	1486.	.6647	.0159	1.577	.0280	.9330
#3	1.539	18.47	76.12	1485.	.6958	.0240	1.553	.0316	.9279
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0501</b>	<b>.0118</b>	<b>.0287</b>	<b>27.99</b>	<b>.0396</b>	<b>.0362</b>	<b>7.277</b>	<b>.0943</b>	
Stddev	.0061	.0170	.0015	.14	.0296	.0236	.052	.0360	
%RSD	12.28	144.0	5.256	.4828	74.79	65.10	.7155	38.13	
#1	.0515	.0131	.0270	27.90	.0112	.0115	7.244	.0959	
#2	.0433	-.0058	.0295	27.92	.0703	.0584	7.251	.1294	
#3	.0553	.0280	.0297	28.14	.0373	.0388	7.337	.0576	

Sample Name: mp17617-sd1 Acquired: 9/30/2019 16:04:39 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 25.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>73757.</b>	<b>11996.</b>	<b>4859.7</b>	<b>9673.5</b>
Stddev	2162.	69.	21.3	39.3
%RSD	2.9314	.57288	.43882	.40594
#1	71655.	12072.	4871.9	9692.4
#2	73641.	11979.	4872.1	9699.9
#3	75975.	11938.	4835.1	9628.4

Sample Name: jc95415-15 Acquired: 9/30/2019 16:09:37 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7319	.0006	.0052	.0510	.0046	.0488	2.729	.2498	-.0021
Stddev	.0059	.0001	.0004	.0005	.0009	.0010	.008	.0012	.0005
%RSD	.8098	8.826	7.132	1.041	18.63	1.972	.2885	.4688	24.62
#1	.7329	.0006	.0050	.0514	.0052	.0478	2.726	.2494	-.0024
#2	.7374	.0006	.0049	.0512	.0036	.0496	2.738	.2489	-.0015
#3	.7256	.0005	.0056	.0504	.0050	.0492	2.724	.2511	-.0025

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	1.523	.0337	.0104	6.111	-.0127	.0036	.2491	119.2
Stddev	.0012	.002	.0027	.0061	.019	.0086	.0057	.0698	.8
%RSD	56.56	.1565	7.896	58.39	.3113	67.26	157.3	28.03	.6579
#1	.0019	1.526	.0341	.0150	6.101	-.0066	-.0003	.3177	119.6
#2	.0034	1.522	.0309	.0128	6.133	-.0225	.0010	.1782	119.8
#3	.0011	1.521	.0362	.0035	6.099	-.0090	.0102	.2513	118.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2097	11.84	10.45	F 1312	.2200	-.0001	4.159	-.0005	.5729
Stddev	.0104	.12	.27	20.	.0019	.0007	.018	.0001	.0046
%RSD	4.975	1.048	2.543	1.554	.8423	551.3	.4364	21.45	.8100
#1	.2173	11.86	10.66	1332.	.2191	.0002	4.177	-.0006	.5760
#2	.1978	11.96	10.53	1313.	.2187	-.0009	4.160	-.0005	.5751
#3	.2141	11.71	10.15	1291.	.2221	.0003	4.140	-.0004	.5675

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	-.0073	-.0026	3.073	-.0005	.0260	.0286	.0258
Stddev	.0015	.0014	.0005	.021	.0062	.0071	.0039	.0077
%RSD	31.34	19.35	19.64	6927	1322.	27.44	13.53	29.79
#1	.0044	-.0059	-.0026	3.095	-.0033	.0242	.0331	.0170
#2	.0033	-.0087	-.0031	3.073	-.0047	.0339	.0266	.0308
#3	.0062	-.0074	-.0021	3.052	.0066	.0200	.0262	.0298

Sample Name: jc95415-15 Acquired: 9/30/2019 16:09:37 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72942.	11954.	4806.2	9411.0
Stddev	271.	68.	7.4	10.2
%RSD	.37172	.57128	.15482	.10802
#1	73133.	11921.	4797.7	9401.5
#2	72631.	11907.	4811.1	9409.7
#3	73061.	12032.	4809.9	9421.7

11.2  
11

Sample Name: jc95671-1 Acquired: 9/30/2019 16:14:43 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1416	.0002	.0040	.0146	.0553	.1313	.7206	.0694	.0006
Stddev	.0049	.0002	.0008	.0002	.0012	.0011	.0018	.0009	.0009
%RSD	3.472	72.84	20.87	1.614	2.140	.8537	.2524	1.281	147.9
#1	.1473	.0003	.0047	.0145	.0550	.1300	.7185	.0704	.0014
#2	.1391	.0003	.0031	.0149	.0566	.1320	.7218	.0688	.0008
#3	.1385	.0000	.0042	.0145	.0542	.1318	.7214	.0690	-.0004

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	1.392	.0081	.0107	.0251	-.0075	.0436	1.807	657.9
Stddev	.0009	.002	.0018	.0017	.0041	.0050	.0055	.065	18.2
%RSD	9.373	.1599	22.62	15.80	16.20	66.01	12.64	3.586	2.771
#1	.0104	1.395	.0061	.0093	.0225	-.0120	.0389	1.863	678.9
#2	.0087	1.392	.0096	.0126	.0231	-.0084	.0422	1.822	648.9
#3	.0092	1.391	.0088	.0103	.0298	-.0022	.0497	1.736	645.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.369	18.15	80.66	F 1484.	.6750	.0209	1.444	.0497	.9264
Stddev	.027	.47	2.12	18.	.0057	.0003	.012	.0020	.0267
%RSD	1.947	2.565	2.633	1.222	.8432	1.494	.8083	4.042	2.883
#1	1.399	18.69	83.09	1505.	.6811	.0206	1.447	.0497	.9570
#2	1.350	17.88	79.70	1472.	.6698	.0212	1.454	.0477	.9141
#3	1.358	17.89	79.19	1475.	.6742	.0209	1.431	.0517	.9080

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0322	.0071	.0234	28.64	-.0017	.0209	7.372	.0100
Stddev	.0008	.0025	.0007	.05	.0027	.0014	.021	.0115
%RSD	2.437	35.12	2.843	.1818	163.4	6.762	.2808	114.9
#1	.0329	.0095	.0227	28.68	-.0037	.0202	7.392	.0043
#2	.0324	.0045	.0241	28.66	-.0026	.0200	7.374	.0025
#3	.0313	.0073	.0234	28.58	.0014	.0225	7.351	.0233

Sample Name: jc95671-1 Acquired: 9/30/2019 16:14:43 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72332.	11815.	4718.3	9223.9
Stddev	69.	239.	12.2	21.2
%RSD	.09480	2.0224	.25772	.23020
#1	72409.	11542.	4704.3	9199.7
#2	72309.	11918.	4725.2	9239.2
#3	72277.	11986.	4725.5	9233.0



Sample Name: jc95694-1 Acquired: 9/30/2019 16:19:48 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1084	.0001	.0030	.0062	.0046	.0151	.2514	.0230	-0.0009
Stddev	.0024	.0003	.0009	.0014	.0022	.0010	.0022	.0008	.0031
%RSD	2.211	268.7	28.74	23.17	48.68	6.857	8.905	3.569	357.7
#1	.1086	.0005	.0022	.0070	.0071	.0162	.2538	.0229	-0.0032
#2	.1107	.0001	.0030	.0071	.0036	.0143	.2493	.0223	-0.0021
#3	.1059	-.0002	.0039	.0046	.0030	.0147	.2512	.0239	.0027

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.4790	.0037	.0038	.0923	-.0037	-.0030	.2951	14.14
Stddev	.0009	.0036	.0040	.0061	.0037	.0149	.0046	.0325	.12
%RSD	18.31	.7439	109.1	160.3	4.000	397.5	151.6	11.03	.8628
#1	.0061	.4786	.0076	.0089	.0965	-.0001	-.0028	.2972	14.09
#2	.0050	.4757	.0040	.0055	.0910	.0090	.0015	.2616	14.27
#3	.0042	.4828	-.0005	-.0030	.0895	-.0201	-.0077	.3265	14.04

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2783	10.57	4.720	F 1018.	.1808	-.0002	1.108	-.0003	.1241
Stddev	.0136	.06	.213	.17	.0019	.0008	.005	.0044	.0012
%RSD	4.881	.5425	4.503	1.625	1.065	363.5	.4205	1292.	.9391
#1	.2660	10.56	4.499	1029.	.1793	.0005	1.113	-.0008	.1242
#2	.2928	10.63	4.739	1027.	.1830	-.0010	1.104	-.0044	.1253
#3	.2759	10.52	4.923	999.4	.1802	-.0001	1.108	.0043	.1229

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0140	-.0087	.0005	1.384	.0091	.0186	.3882	.0080
Stddev	.0010	.0021	.0003	.007	.0038	.0136	.0012	.0220
%RSD	7.190	24.50	50.26	5.435	41.14	73.10	.3096	274.9
#1	.0150	-.0071	.0005	1.379	.0107	.0310	.3872	-.0166
#2	.0130	-.0111	.0008	1.380	.0049	.0208	.3895	.0149
#3	.0139	-.0078	.0002	1.392	.0119	.0040	.3880	.0257

Sample Name: jc95694-1 Acquired: 9/30/2019 16:19:48 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73261.	11988.	4848.1	9542.7
Stddev	565.	123.	27.1	38.6
%RSD	.77083	1.0249	.55905	.40500
#1	72621.	12114.	4853.1	9549.4
#2	73690.	11868.	4872.4	9577.6
#3	73472.	11983.	4818.9	9501.1

Sample Name: jc95694-2 Acquired: 9/30/2019 16:24:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6256	.0007	.0082	.0048	.0153	.0499	.4905	.1109	-.0018
Stddev	.0017	.0003	.0008	.0026	.0007	.0029	.0037	.0022	.0008
%RSD	.2773	39.78	9.833	55.38	4.732	5.854	.7458	2.020	47.07
#1	.6265	.0005	.0076	.0025	.0159	.0533	.4863	.1100	-.0021
#2	.6267	.0006	.0091	.0077	.0145	.0483	.4927	.1135	-.0025
#3	.6236	.0011	.0079	.0042	.0154	.0482	.4925	.1094	-.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0172	.4821	.0269	.0157	.0506	.0034	.0038	1.881	213.5
Stddev	.0018	.0082	.0015	.0046	.0052	.0061	.0037	.072	.7
%RSD	10.47	1.703	5.739	29.12	10.26	178.3	96.65	3.820	.3493
#1	.0164	.4814	.0282	.0189	.0552	-.0013	.0051	1.949	213.7
#2	.0193	.4906	.0252	.0105	.0515	.0012	-.0003	1.890	214.1
#3	.0160	.4743	.0274	.0177	.0449	.0102	.0067	1.806	212.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1626	7.801	13.61	F 1380.	.9231	.0019	6.824	-.0040	1.245
Stddev	.0146	.041	.15	.21	.0132	.0016	.092	.0023	.003
%RSD	8.981	.5283	1.128	1.488	1.430	85.59	1.342	57.68	.2323
#1	.1729	7.760	13.77	1398.	.9206	.0010	6.806	-.0059	1.244
#2	.1459	7.842	13.60	1386.	.9374	.0037	6.923	-.0046	1.249
#3	.1690	7.800	13.46	1358.	.9114	.0009	6.742	-.0014	1.243

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	-.0053	-.0039	13.63	.0018	.0342	.1410	.0054
Stddev	.0018	.0044	.0007	.18	.0060	.0113	.0040	.0099
%RSD	25.42	82.96	18.81	1.337	338.7	33.10	2.828	183.5
#1	.0088	-.0005	-.0031	13.60	.0077	.0370	.1406	.0168
#2	.0071	-.0091	-.0046	13.83	-.0043	.0438	.1452	-.0018
#3	.0052	-.0064	-.0039	13.46	.0019	.0217	.1373	.0013

Sample Name: jc95694-2 Acquired: 9/30/2019 16:24:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	71675.	11768.	4759.7	9306.7
Stddev	423.	62.	63.5	114.2
%RSD	.58982	5.2594	1.3342	1.2270
#1	72115.	11751.	4770.1	9319.2
#2	71638.	11717.	4691.7	9186.8
#3	71272.	11837.	4817.4	9414.2

Zoom In  
Zoom Out

Sample Name: jc95765-2a Acquired: 9/30/2019 16:29:58 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2087	.0003	.0016	.0063	.0034	.0037	.4841	.0060	-.0002
Stddev	.0009	.0004	.0003	.0003	.0011	.0018	.0038	.0006	.0020
%RSD	.4464	137.3	20.78	4.899	33.28	48.17	.7856	9.507	932.2
#1	.2076	.0000	.0017	.0063	.0022	.0055	.4864	.0055	.0005
#2	.2092	.0008	.0013	.0060	.0044	.0020	.4862	.0059	-.0025
#3	.2093	.0001	.0019	.0066	.0035	.0036	.4797	.0066	.0014

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.1541	.0003	.0134	.0232	-.0101	-.0023	.7567	31.55
Stddev	.0014	.0016	.0039	.0052	.0040	.0025	.0029	.0326	.06
%RSD	44.88	1.043	1181.	38.92	17.18	24.65	129.1	4.302	.1994
#1	.0038	.1557	-.0037	.0074	.0278	-.0124	-.0009	.7338	31.56
#2	.0016	.1541	.0041	.0165	.0208	-.0104	-.0057	.7940	31.48
#3	.0042	.1525	.0006	.0164	.0210	-.0074	-.0003	.7422	31.60

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5301	3.271	12.71	F 1062.	.1956	-.0003	3.107	-.0022	.1189
Stddev	.0031	.064	.08	5.	.0044	.0005	.050	.0010	.0005
%RSD	.5854	1.946	.6457	.4336	2.226	200.6	1.610	47.72	.4243
#1	.5336	3.279	12.80	1063.	.1999	-.0006	3.161	-.0030	.1185
#2	.5281	3.204	12.66	1066.	.1958	-.0006	3.098	-.0026	.1186
#3	.5285	3.331	12.66	1057.	.1912	.0003	3.062	-.0010	.1194

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	-.0037	-.0022	1.273	.0049	.0114	.0296	.0137
Stddev	.0018	.0038	.0004	.015	.0033	.0067	.0042	.0233
%RSD	23.98	102.8	18.51	1.137	67.28	58.89	14.07	170.5
#1	.0063	.0006	-.0021	1.289	.0053	.0189	.0322	.0084
#2	.0067	-.0066	-.0019	1.271	.0081	.0060	.0318	.0391
#3	.0096	-.0050	-.0027	1.260	.0014	.0093	.0248	-.0066

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Zoom In  
Zoom Out

Sample Name: jc95765-2a Acquired: 9/30/2019 16:29:58 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72632.	11934.	4884.3	9622.4
Stddev	481.	66.	40.2	69.1
%RSD	.66165	.55640	.82379	.71845
#1	72551.	11978.	4838.1	9543.2
#2	72197.	11966.	4903.4	9653.8
#3	73148.	11857.	4911.4	9670.3

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11.2  
11

Sample Name: jc95773-1a Acquired: 9/30/2019 16:35:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2723	.0002	.0013	.0033	.0028	.0043	.8311	.0041	.0005
Stddev	.0019	.0003	.0006	.0005	.0012	.0025	.0025	.0006	.0013
%RSD	.6976	145.2	42.12	15.56	41.95	56.73	.3005	13.76	266.1
#1	.2702	.0005	.0012	.0039	.0021	.0070	.8340	.0047	.0008
#2	.2729	-.0001	.0020	.0030	.0041	.0040	.8294	.0036	.0016
#3	.2739	.0002	.0009	.0030	.0021	.0020	.8300	.0040	-.0009

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	.0482	-.0012	.0144	.0057	-.0121	-.0033	.0354	329.0
Stddev	.0007	.0007	.0028	.0054	.0027	.0056	.0060	.0703	.5
%RSD	15.57	1.400	227.2	37.37	47.68	46.11	179.2	198.9	.1634
#1	.0049	.0479	-.0005	.0119	.0078	-.0150	-.0102	.0264	329.1
#2	.0052	.0489	-.0043	.0107	.0067	-.0157	-.0009	.1098	329.4
#3	.0038	.0477	.0011	.0205	.0026	-.0057	-.0007	-.0301	328.4

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0377	177.9	8.304	F 1240.	.4011	.0024	2.596	-.0017	.1785
Stddev	.0123	.6	.150	18.	.0021	.0001	.025	.0026	.0004
%RSD	32.59	.3215	1.810	1.435	.5123	5.568	.9614	150.4	.2468
#1	.0237	178.6	8.471	1260.	.4024	.0023	2.596	-.0037	.1787
#2	.0464	177.4	8.178	1232.	.4021	.0023	2.620	.0012	.1788
#3	.0431	177.8	8.264	1227.	.3987	.0025	2.571	-.0028	.1780

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	-.0057	-.0015	2.759	.0052	.0122	.0289	.0346
Stddev	.0018	.0029	.0004	.028	.0148	.0027	.0029	.0217
%RSD	19.50	51.29	24.14	1.022	285.4	21.73	9.963	62.78
#1	.0105	-.0090	-.0013	2.753	.0187	.0121	.0322	.0177
#2	.0072	-.0043	-.0014	2.789	-.0106	.0096	.0269	.0591
#3	.0100	-.0036	-.0019	2.734	.0075	.0149	.0276	.0270

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Zoom In  
Zoom Out

Sample Name: jc95773-1a Acquired: 9/30/2019 16:35:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	71870.	11908.	4765.2	9389.4
Stddev	201.	73.	43.9	77.3
%RSD	.27952	.61160	.92079	.82317
#1	71642.	11824.	4785.9	9438.4
#2	71946.	11955.	4714.8	9300.3
#3	72021.	11945.	4794.9	9429.6

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Sample Name: icsa Acquired: 9/30/2019 16:50:11 Type: QC								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0008	F .0008	F .0008	F .0004	F .0006	F -.0216	F .0008	F -.0010
Stddev	.0001	.0001	.0001	.0002	.0002	.0007	.0003	.0003
%RSD	16.21	20.53	8.622	54.37	31.34	3.194	43.38	29.20
#1	.0007	.0003	.0008	.0002	.0006	-.0217	.0006	-.0014
#2	.0010	.0002	.0009	.0007	.0004	-.0223	.0006	-.0008
#3	.0008	.0002	.0007	.0004	.0007	-.0209	.0012	-.0010
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.5000	.5000	1.000	.5000	.5000	.5000	.5000	1.000
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0001	F -.0010	F .0027	F .0131	F .0011	F .0023	F -.0126	F .0021
Stddev	.0012	.0002	.0005	.0006	.0018	.0015	.0020	.0022
%RSD	1180.	23.75	16.83	4.482	159.9	64.97	15.52	108.8
#1	-.0007	-.0012	.0030	.0125	.0024	.0037	-.0147	.0037
#2	-.0009	-.0010	.0022	.0137	.0019	.0023	-.0125	-.0005
#3	.0013	-.0008	.0029	.0129	-.0009	.0008	-.0107	.0030
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	499.1	396.4	200.5	515.3	.0055	.0437	F .0010	F .0032
Stddev	6.5	5.2	2.3	5.7	.0178	.0027	.0007	.0002
%RSD	1.304	1.321	1.149	1.105	323.5	6.107	64.01	7.725
#1	504.3	392.7	197.9	508.8	.0048	.0423	.0009	.0034
#2	501.2	402.4	201.4	517.8	.0236	.0468	.0017	.0033
#3	491.8	394.2	202.3	519.4	-.0119	.0421	.0004	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	Chk Fail	Chk Fail
Value							.5000	.5000
Range							-20.00%	-20.00%

Sample Name: icsa Acquired: 9/30/2019 16:50:11 Type: QC								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0089	F -.0018	F -.0024	F .0054	F .0098	F -.0020	F -.0269	F -.0152
Stddev	.0031	.0009	.0001	.0003	.0020	.0003	.0003	.0018
%RSD	35.08	49.95	2.402	5.947	20.13	14.76	1.242	11.88
#1	-.0113	-.0020	-.0024	.0057	.0115	-.0021	-.0271	-.0138
#2	-.0054	-.0008	-.0024	.0053	.0076	-.0022	-.0270	-.0172
#3	-.0102	-.0025	-.0023	.0051	.0102	-.0017	-.0265	-.0146
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.5000	.5000	.5000	.5000	.5000	.5000	.5000	.5000
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%
Elem	Li6707	P_1774	Ce4040					
Units	ppm	ppm	ppm					
Avg	F -.0119	F .0126	.0864					
Stddev	.0017	.0006	.0030					
%RSD	13.99	5.049	3.435					
#1	-.0123	.0119	.0843					
#2	-.0134	.0132	.0850					
#3	-.0101	.0127	.0898					
Check ?	Chk Fail	Chk Fail	None					
Value	.5000	.5000						
Range	-20.00%	-20.00%						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	67424.	11574.	4466.7	8978.3				
Stddev	1175.	68.	10.2	12.2				
%RSD	1.7430	.58760	.22882	.13596				
#1	67236.	11652.	4472.6	8984.7				
#2	66354.	11531.	4454.9	8964.2				
#3	68682.	11539.	4472.6	8986.0				

Sample Name: ICSAB Acquired: 9/30/2019 16:55:19 Type: QC									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4941	.4902	1.010	.4778	.4775	.5009	.5084	.9682	1.013
Stddev	.0015	.0007	.009	.0046	.0059	.0071	.0066	.0090	.012
%RSD	.3034	.1326	.9109	.9695	1.235	1.408	1.298	.9331	1.204
#1	.4957	.4903	1.005	.4750	.4842	.5090	.5159	.9625	1.027
#2	.4939	.4907	1.004	.4754	.4732	.4958	.5034	.9635	1.005
#3	.4927	.4894	1.020	.4832	.4752	.4980	.5059	.9786	1.006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4854	.9537	1.070	.9668	.9037	.9746	1.043	506.9	379.2
Stddev	.0067	.0089	.010	.0069	.0059	.0098	.008	4.8	3.0
%RSD	1.372	.9290	.9410	.7088	.6526	1.002	.7937	.9473	8020
#1	.4929	.9470	1.065	.9669	.8995	.9728	1.037	507.8	376.1
#2	.4802	.9504	1.063	.9599	.9012	.9659	1.038	501.7	379.4
#3	.4831	.9638	1.081	.9736	.9104	.9852	1.052	511.1	382.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	188.9	511.3	-.0099	.0145	.5032	.4962	.5034	.4765	.5016
Stddev	.3	1.0	.0585	.0019	.0040	.0045	.0063	.0045	.0007
%RSD	.1528	.2052	592.8	13.38	.8039	.9119	1.251	.9392	.1346
#1	189.2	512.4	-.0773	.0130	.5023	.4944	.4987	.4739	.5023
#2	188.8	510.3	.0194	.0137	.4997	.4928	.5009	.4739	.5017
#3	188.6	511.0	.0283	.0167	.5076	.5013	.5106	.4817	.5009
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: ICSAB Acquired: 9/30/2019 16:55:19 Type: QC								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5105	.4943	.5062	.4693	.5102	.4981	.5054	.0706
Stddev	.0066	.0041	.0059	.0024	.0060	.0012	.0055	.0037
%RSD	1.295	.8301	1.156	.5087	1.176	.2442	1.079	5.264
#1	.5180	.4928	.5128	.4717	.5078	.4994	.5030	.0743
#2	.5054	.4913	.5015	.4669	.5058	.4970	.5016	.0707
#3	.5081	.4990	.5043	.4693	.5170	.4981	.5117	.0668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	68278.	11656.	4497.4	8987.6				
Stddev	816.	59.	38.6	70.7				
%RSD	1.1946	.50542	.85895	.78717				
#1	67336.	11622.	4527.9	9045.2				
#2	68726.	11724.	4510.4	9008.9				
#3	68771.	11623.	4453.9	8908.6				

Sample Name: mp17587-mb1 7 Acquired: 9/30/2019 17:00:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0000	.0002	.0000	.0004	.0006	.0001	-.0000	-.0006
Stddev	.0003	.0000	.0001	.0000	.0003	.0003	.0000	.0003	.0002
%RSD	966.1	42.50	25.96	238.4	62.38	45.88	15.49	822.5	37.57
#1	-.0001	-.0000	.0003	.0001	.0002	.0006	.0001	.0001	-.0004
#2	.0003	-.0000	.0002	-.0000	.0003	.0008	.0001	.0001	-.0008
#3	-.0001	-.0000	.0003	-.0000	.0007	.0003	.0001	-.0004	-.0006
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0000	.0042	.0002	.0015	-.0004	-.0014	.0006	.0085	.0053
Stddev	.0001	.0001	.0012	.0016	.0005	.0018	.0008	.0068	.0034
%RSD	510.1	1.941	504.5	108.9	126.1	127.5	146.2	79.28	63.40
#1	.0001	.0043	-.0003	-.0000	-.0003	-.0011	.0015	.0163	.0028
#2	-.0001	.0042	-.0006	.0013	-.0010	-.0034	-.0000	.0048	.0091
#3	-.0002	.0041	.0016	.0032	.0000	.0002	.0002	.0044	.0039
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114	-.0058	-.0017	-.0234	.0004	-.0000	.0077	-.0004	.0000
Stddev	.0012	.0220	.0108	.0047	.0006	.0002	.0008	.0002	.0001
%RSD	10.91	381.6	625.9	20.25	130.2	474.4	10.37	48.10	1261.
#1	.0125	-.0080	-.0098	-.0188	.0010	-.0002	.0071	-.0005	-.0000
#2	.0101	-.0265	.0105	-.0283	-.0002	-.0000	.0086	-.0005	.0001
#3	.0116	.0172	-.0059	-.0230	.0005	.0001	.0074	-.0002	-.0001
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0006	-.0004	.0022	-.0062	.0007	-.0025	.0034	-.0016	
Stddev	.0001	.0008	.0002	.0006	.0008	.0014	.0009	.0009	
%RSD	19.67	221.6	10.00	9.937	113.3	55.50	25.51	54.22	
#1	.0006	-.0012	.0022	-.0066	.0005	-.0009	.0028	-.0012	
#2	.0007	.0004	.0024	-.0055	.0015	-.0034	.0029	-.0010	
#3	.0005	-.0003	.0019	-.0064	-.0000	-.0031	.0044	-.0027	

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Sample Name: mp17587-mb1 7 Acquired: 9/30/2019 17:00:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75503.	12077.	4990.0	10085.
Stddev	258.	107.	6.1	4.
%RSD	.34124	.88990	.12277	.03740
#1	75235.	11992.	4997.1	10082.
#2	75524.	12041.	4986.6	10083.
#3	75749.	12197.	4986.3	10089.

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Sample Name: mp17587-b1 Acquired: 9/30/2019 17:05:22 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.934	1.973	1.894	1.935	1.936	1.875	1.999
Stddev	.004	.003	.002	.000	.004	.004	.009
%RSD	.1971	.1319	.0967	.0123	.2174	.2416	.4677
#1	1.936	1.974	1.894	1.934	1.933	1.874	1.996
#2	1.929	1.970	1.893	1.935	1.933	1.870	2.009
#3	1.936	1.975	1.896	1.935	1.941	1.879	1.991
Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.966	.2437	1.939	1.959	1.947	1.985	1.917
Stddev	.001	.0004	.004	.003	.004	.005	.001
%RSD	.0552	.1438	.2314	.1528	.2160	.2417	.0754
#1	1.967	.2439	1.936	1.959	1.943	1.990	1.919
#2	1.965	.2433	1.938	1.956	1.945	1.986	1.916
#3	1.966	.2439	1.944	1.962	1.951	1.981	1.918
Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.876	1.977	24.53	24.99	25.00	24.91	24.28
Stddev	.005	.004	.03	.05	.06	.12	.03
%RSD	.2708	.1785	.1387	.1849	.2424	.4889	.1032
#1	1.874	1.980	24.56	25.04	25.04	25.04	24.29
#2	1.873	1.973	24.50	24.95	24.93	24.79	24.25
#3	1.882	1.977	24.54	24.99	25.03	24.90	24.30
Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.39	1.896	2.003	.0371	2.014	1.955	1.984
Stddev	.03	.001	.003	.0002	.007	.004	.004
%RSD	.1364	.0514	.1404	.4773	.3404	.1916	.1829
#1	24.41	1.895	2.003	.0372	2.012	1.958	1.983
#2	24.35	1.897	2.000	.0372	2.009	1.951	1.981
#3	24.41	1.897	2.006	.0369	2.022	1.957	1.988

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Sample Name: mp17587-b1 Acquired: 9/30/2019 17:05:22 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.908	2.008	-.0240	-.0191	-.0031	1.919	W -.0387
Stddev	.007	.003	.0003	.0011	.0004	.002	.0024
%RSD	.3932	.1565	1.171	5.671	13.07	.1121	6.267
#1	1.902	2.007	-.0237	-.0179	-.0030	1.918	-.0370
#2	1.906	2.005	-.0242	-.0200	-.0036	1.918	-.0375
#3	1.916	2.011	-.0239	-.0195	-.0028	1.922	-.0415
Int. Std.	Y_3600	Y_3710	Y_2243	In2306			
Units	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	74028.	11870.	4924.5	9855.2			
Stddev	279.	65.	12.5	19.9			
%RSD	.37679	.54749	.25431	.20238			
#1	74344.	11795.	4925.5	9856.9			
#2	73923.	11905.	4936.5	9874.2			
#3	73816.	11911.	4911.5	9834.4			

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Sample Name: mp17587-s1 Acquired: 9/30/2019 17:10:14 Type: Unk  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.937</b>	<b>1.940</b>	<b>1.879</b>	<b>1.910</b>	<b>1.926</b>	<b>1.877</b>	<b>2.089</b>
Stddev	.010	.008	.002	.001	.004	.005	.020
%RSD	.4935	.4213	.1301	.0560	.2032	.2937	.9671
#1	1.927	1.932	1.882	1.910	1.925	1.879	2.089
#2	1.946	1.948	1.877	1.910	1.923	1.870	2.069
#3	1.938	1.941	1.878	1.909	1.930	1.881	2.109
Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.940</b>	<b>2.434</b>	<b>1.934</b>	<b>1.953</b>	<b>1.949</b>	<b>1.950</b>	<b>1.886</b>
Stddev	.001	.0006	.004	.002	.003	.007	.004
%RSD	.0611	.2510	.1859	.0784	.1258	.3471	.2115
#1	1.941	2.436	1.934	1.955	1.951	1.957	1.888
#2	1.939	2.427	1.930	1.953	1.946	1.948	1.888
#3	1.940	2.439	1.937	1.952	1.949	1.944	1.881
Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.873</b>	<b>1.967</b>	<b>24.60</b>	<b>27.59</b>	<b>52.67</b>	<b>28.00</b>	<b>27.54</b>
Stddev	.002	.002	.11	.11	.18	.12	.15
%RSD	.1239	.0953	.4335	.4163	.3437	.4171	.5475
#1	1.875	1.965	24.48	27.48	52.51	27.91	27.38
#2	1.871	1.966	24.69	27.71	52.87	28.13	27.68
#3	1.871	1.969	24.63	27.57	52.64	27.96	27.56
Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>33.16</b>	<b>1.894</b>	<b>1.986</b>	<b>8.864</b>	<b>1.998</b>	<b>1.954</b>	<b>1.991</b>
Stddev	.17	.000	.001	.010	.003	.008	.004
%RSD	.5142	.0121	.0650	.1154	.1257	.4092	.2079
#1	32.98	1.894	1.988	8.875	1.997	1.945	1.993
#2	33.32	1.894	1.985	8.855	1.996	1.961	1.986
#3	33.17	1.894	1.985	8.864	2.001	1.956	1.994

Sample Name: mp17587-s1 Acquired: 9/30/2019 17:10:14 Type: Unk  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.927</b>	<b>1.995</b>	<b>21.12</b>	<b>-0.0220</b>	<b>.0266</b>	<b>1.927</b>	<b>W -.0265</b>
Stddev	.002	.005	.02	.0016	.0001	.000	.0028
%RSD	.1119	.2468	.0755	7.417	.2131	.0218	10.44
#1	1.929	1.998	21.14	-.0204	.0265	1.927	-.0236
#2	1.928	1.989	21.11	-.0237	.0266	1.927	-.0291
#3	1.924	1.998	21.11	-.0220	.0266	1.928	-.0268
Int. Std.	Y_3600	Y_3710	Y_2243	In2306	Units		
Units	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	<b>73722.</b>	<b>74.</b>	<b>4907.5</b>	<b>9836.2</b>			
Stddev	278.	74.	3.4	8.0			
%RSD	.37657	.61828	.06944	.08125			
#1	73537.	12044.	4911.2	9841.6			
#2	74042.	11941.	4904.4	9827.0			
#3	73588.	12085.	4906.8	9840.0			

Sample Name: mp17587-s2 Acquired: 9/30/2019 17:15:05 Type: Unk  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.956</b>	<b>1.960</b>	<b>1.890</b>	<b>1.919</b>	<b>1.941</b>	<b>1.900</b>	<b>2.096</b>
Stddev	.007	.008	.004	.005	.015	.009	.011
%RSD	.3800	.3906	.1837	.2407	.7925	.4891	.5368
#1	1.961	1.963	1.893	1.925	1.934	1.895	2.102
#2	1.948	1.951	1.887	1.916	1.931	1.894	2.083
#3	1.959	1.965	1.891	1.918	1.959	1.911	2.102
Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.948</b>	<b>2.471</b>	<b>1.951</b>	<b>1.968</b>	<b>1.963</b>	<b>1.962</b>	<b>1.895</b>
Stddev	.004	.0010	.014	.005	.005	.003	.009
%RSD	.2247	.4156	.7158	.2579	.2392	.1294	.4881
#1	1.953	2.468	1.943	1.974	1.967	1.964	1.905
#2	1.945	2.463	1.942	1.965	1.958	1.959	1.892
#3	1.946	2.483	1.967	1.966	1.965	1.963	1.886
Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.861</b>	<b>1.982</b>	<b>24.77</b>	<b>27.92</b>	<b>53.44</b>	<b>28.37</b>	<b>27.77</b>
Stddev	.006	.002	.07	.07	.15	.08	.10
%RSD	.3153	.1214	.2869	.2544	.2778	.2981	.3540
#1	1.879	1.983	24.78	27.92	53.49	28.34	27.86
#2	1.877	1.979	24.69	27.85	53.28	28.30	27.67
#3	1.888	1.983	24.83	27.99	53.56	28.46	27.79
Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>33.43</b>	<b>1.899</b>	<b>2.005</b>	<b>8.941</b>	<b>2.022</b>	<b>1.970</b>	<b>2.014</b>
Stddev	.11	.004	.003	.014	.005	.007	.014
%RSD	.3209	.1902	.1577	.1579	.2489	.3689	.6710
#1	33.47	1.901	2.007	8.955	2.027	1.974	2.008
#2	33.31	1.895	2.002	8.927	2.017	1.961	2.005
#3	33.52	1.902	2.007	8.940	2.021	1.973	2.030

Sample Name: mp17587-s2 Acquired: 9/30/2019 17:15:05 Type: Unk  
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.948</b>	<b>2.014</b>	<b>21.31</b>	<b>F -.0215</b>	<b>.0253</b>	<b>1.934</b>	<b>W -.0257</b>
Stddev	.003	.011	.04	.0005	.0008	.002	.0022
%RSD	.1558	.5298	.1748	2.194	3.326	.1230	8.710
#1	1.949	2.009	21.35	-.0211	.0245	1.937	-.0238
#2	1.944	2.006	21.28	-.0220	.0251	1.932	-.0251
#3	1.950	2.026	21.31	-.0213	.0262	1.934	-.0282
Int. Std.	Y_3600	Y_3710	Y_2243	In2306	Units		
Units	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	<b>73615.</b>	<b>12053.</b>	<b>4900.0</b>	<b>9841.4</b>			
Stddev	547.	37.	12.8	29.8			
%RSD	.74329	.30940	.26193	.30298			
#1	73885.	12095.	4886.4	9807.9			
#2	73975.	12027.	4911.9	9865.0			
#3	72986.	12035.	4901.8	9851.3			

Sample Name: jc95494-1 Acquired: 9/30/2019 17:19:56 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0366</b>	<b>.0045</b>	<b>.0004</b>	<b>.0002</b>	<b>.0025</b>	<b>-0.011</b>	<b>.1172</b>	<b>.0026</b>	<b>.0011</b>
Stddev	.0001	.0000	.0001	.0000	.0003	.0002	.0007	.0003	.0002
%RSD	.2163	.4174	30.15	5.109	10.94	22.69	6.235	10.80	19.45
#1	.0367	.0045	.0002	.0002	.0024	-.0008	.1173	.0026	.0013
#2	.0365	.0045	.0004	.0002	.0023	-.0013	.1164	.0029	.0011
#3	.0367	.0044	.0005	.0002	.0028	-.0010	.1179	.0023	.0009
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0014</b>	<b>.0191</b>	<b>.0028</b>	<b>.0016</b>	<b>.0011</b>	<b>-0.021</b>	<b>-0.0009</b>	<b>.3609</b>	<b>3.074</b>
Stddev	.0001	.0002	.0010	.0012	.0002	.0007	.0010	.0033	.008
%RSD	4.508	.8739	34.49	75.89	21.50	34.05	114.0	9.155	2.522
#1	.0014	.0190	.0018	.0014	.0011	-.0029	-.0020	.3637	3.076
#2	.0013	.0193	.0028	.0028	.0014	-.0016	-.0004	.3616	3.080
#3	.0015	.0190	.0037	.0005	.0010	-.0017	-.0002	.3573	3.065
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>30.19</b>	<b>3.635</b>	<b>3.643</b>	<b>9.489</b>	<b>.0143</b>	<b>.0004</b>	<b>8.952</b>	<b>-0.008</b>	<b>.0345</b>
Stddev	.02	.011	.038	.017	.0004	.0002	.060	.0008	.0001
%RSD	.0585	.2996	1.033	.1749	2.797	55.55	.6659	93.18	.3966
#1	30.19	3.623	3.600	9.504	.0139	.0006	8.892	.0001	.0347
#2	30.21	3.644	3.665	9.493	.0144	.0003	9.011	-.0012	.0345
#3	30.18	3.638	3.664	9.471	.0146	.0002	8.954	-.0013	.0345
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0053</b>	<b>.0051</b>	<b>-0.0047</b>	<b>21.82</b>	<b>-0.0017</b>	<b>.0277</b>	<b>.0168</b>	<b>.0157</b>	
Stddev	.0002	.0007	.0000	.16	.0015	.0011	.0012	.0007	
%RSD	3.659	14.10	.9858	.7554	87.15	3.938	7.445	4.554	
#1	.0055	.0046	-.0046	21.66	-.0001	.0286	.0154	.0149	
#2	.0052	.0047	-.0047	21.99	-.0019	.0281	.0177	.0159	
#3	.0051	.0059	-.0047	21.81	-.0031	.0265	.0173	.0163	

Sample Name: jc95494-1 Acquired: 9/30/2019 17:19:56 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75375.	12091.	4996.2	10089.
Stddev	523.	70.	40.7	73.
%RSD	.69356	.57789	.81530	.72431
#1	75129.	12069.	5033.1	10153.
#2	75975.	12035.	4952.5	10009.
#3	75020.	12169.	5003.1	10104.

Sample Name: mp17587-sd1 Acquired: 9/30/2019 17:24:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0378</b>	<b>.0044</b>	<b>.0013</b>	<b>-0.0004</b>	<b>.0032</b>	<b>-0.011</b>	<b>.1198</b>	<b>.0024</b>	<b>.0000</b>
Stddev	.0005	.0002	.0010	.0015	.0006	.0015	.0013	.0011	.0003
%RSD	1.359	5.239	76.84	375.2	18.04	143.3	1.123	45.51	159.7
#1	.0384	.0045	.0013	.0000	.0031	-.0024	.1186	.0036	.0004
#2	.0373	.0041	.0003	.0008	.0037	-.0014	.1213	.0020	-.0003
#3	.0378	.0045	.0023	-.0020	.0026	.0006	.1196	.0016	-.0000
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0035</b>	<b>.1002</b>	<b>.0023</b>	<b>.0055</b>	<b>-0.0031</b>	<b>-0.0076</b>	<b>-0.0047</b>	<b>1.086</b>	<b>3.354</b>
Stddev	.0015	.0010	.0008	.0017	.0056	.0066	.0035	.019	.024
%RSD	41.28	.9687	34.66	30.80	183.0	85.87	72.82	1.813	.7250
#1	.0050	.1009	.0030	.0065	.0024	-.0001	-.0015	1.051	3.343
#2	.0035	.0990	.0014	.0065	-.0087	-.0108	-.0084	1.088	3.338
#3	.0021	.1006	.0024	.0036	-.0029	-.0120	-.0043	1.060	3.382
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>30.93</b>	<b>3.776</b>	<b>3.601</b>	<b>9.515</b>	<b>.0333</b>	<b>.0005</b>	<b>9.265</b>	<b>.0007</b>	<b>.0364</b>
Stddev	.04	.107	.047	.053	.0029	.0005	.016	.0026	.0003
%RSD	.1155	2.823	1.317	.5609	8.794	84.96	.1671	353.7	.8030
#1	30.97	3.809	3.591	9.462	.0367	.0006	9.269	-.0017	.0366
#2	30.91	3.657	3.653	9.514	.0316	.0000	9.247	.0035	.0361
#3	30.92	3.862	3.560	9.569	.0316	.0009	9.277	.0004	.0366
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0062</b>	<b>.0119</b>	<b>-0.0046</b>	<b>22.36</b>	<b>-0.0019</b>	<b>.0184</b>	<b>.0250</b>	<b>.0103</b>	
Stddev	.0015	.0022	.0002	.04	.0041	.0039	.0008	.0080	
%RSD	25.02	18.72	4.974	.1804	213.0	21.18	3.181	78.40	
#1	.0048	.0144	-.0046	22.37	.0010	.0219	.0242	.0094	
#2	.0060	.0108	-.0049	22.31	-.0066	.0190	.0250	.0027	
#3	.0078	.0104	-.0045	22.39	-.0001	.0142	.0258	.0187	

Sample Name: mp17587-sd1 Acquired: 9/30/2019 17:24:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75638.	12111.	5009.7	10137.
Stddev	490.	34.	12.0	25.
%RSD	.64762	.28146	.24014	.25044
#1	76028.	12145.	5009.7	10134.
#2	75088.	12112.	5021.7	10164.
#3	75797.	12077.	4997.7	10113.

11.2  
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Zoom In

Sample Name:	ccv	Acquired:	9/30/2019 17:29:54	Type:	QC				
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor:	1.000000				
User:	iTEVA Security	Custom ID1:		Custom ID2:					
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.975</b>	<b>2.006</b>	<b>1.972</b>	<b>2.000</b>	<b>1.998</b>	<b>1.940</b>	<b>2.034</b>	<b>2.022</b>	<b>2.444</b>
Stddev	.011	.011	.002	.003	.006	.001	.002	.001	.005
%RSD	.5734	.5694	.1017	.1301	.3216	.0522	.0849	.0470	.2089
#1	1.984	2.015	1.969	1.998	1.995	1.939	2.034	2.021	2.439
#2	1.980	2.011	1.973	2.001	2.005	1.941	2.035	2.022	2.449
#3	1.963	1.993	1.973	2.003	1.993	1.939	2.032	2.023	2.445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.988</b>	<b>2.021</b>	<b>1.971</b>	<b>2.039</b>	<b>2.005</b>	<b>1.978</b>	<b>1.968</b>	<b>38.51</b>	<b>39.61</b>
Stddev	.004	.001	.000	.001	.002	.003	.003	.22	.27
%RSD	.2190	.0278	.0044	.0291	.1198	.1365	.1339	.5811	.6935
#1	1.987	2.022	1.971	2.039	2.003	1.980	1.970	38.66	39.82
#2	1.993	2.021	1.971	2.039	2.007	1.975	1.968	38.61	39.71
#3	1.985	2.021	1.971	2.040	2.006	1.978	1.965	38.25	39.30
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>39.39</b>	<b>39.46</b>	<b>38.55</b>	<b>38.31</b>	<b>1.984</b>	<b>1.988</b>	<b>4.784</b>	<b>2.010</b>	<b>1.995</b>
Stddev	.24	.08	.20	.21	.003	.001	.011	.003	.010
%RSD	.6064	.2058	.5317	.5570	.1461	.0600	.2256	.1247	.5009
#1	39.56	39.51	38.69	38.45	1.981	1.987	4.772	2.008	2.002
#2	39.50	39.49	38.65	38.41	1.987	1.988	4.791	2.009	2.000
#3	39.12	39.36	38.32	38.06	1.985	1.990	4.790	2.013	1.984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

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11.2

Sample Name:	ccv	Acquired:	9/30/2019 17:29:54	Type:	QC			
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor:	1.000000			
User:	iTEVA Security	Custom ID1:		Custom ID2:				
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.974</b>	<b>1.956</b>	<b>1.992</b>	<b>1.968</b>	<b>1.981</b>	<b>1.939</b>	<b>2.016</b>	<b>1.962</b>
Stddev	.005	.002	.004	.002	.002	.013	.003	.003
%RSD	.2339	.1132	.1797	.1217	.1193	.6794	.1551	.1728
#1	1.973	1.957	1.991	1.966	1.984	1.948	2.012	1.963
#2	1.979	1.954	1.996	1.970	1.979	1.946	2.017	1.964
#3	1.971	1.957	1.989	1.968	1.981	1.924	2.017	1.958
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	72970.	11910.	4845.7	9674.1				
Stddev	306.	61.	3.8	4.6				
%RSD	.41965	.51382	.07814	.04802				
#1	73162.	11868.	4842.6	9670.9				
#2	72617.	11883.	4844.5	9672.1				
#3	73131.	11981.	4849.9	9679.4				
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass				
Value Range								

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Sample Name:	ccb	Acquired:	9/30/2019 17:34:45	Type:	QC				
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor:	1.000000				
User:	iTEVA Security	Custom ID1:		Custom ID2:					
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0001</b>	<b>.0001</b>	<b>.0001</b>	<b>.0002</b>	<b>.0004</b>	<b>-.0001</b>	<b>.0001</b>	<b>-.0001</b>	<b>-.0002</b>
Stddev	.0001	.0001	.0001	.0002	.0002	.0003	.0000	.0002	.0002
%RSD	162.7	92.76	53.90	99.05	40.74	286.3	63.40	263.1	79.84
#1	.0001	.0000	.0001	.0004	.0005	.0002	.0001	-.0001	-.0000
#2	.0002	.0001	.0001	.0001	.0002	-.0004	.0000	.0002	-.0003
#3	-.0001	.0003	.0002	.0001	.0004	-.0001	.0001	-.0002	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0020					
Low Limit				-.0020					
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>-.0002</b>	<b>.0005</b>	F . <b>0020</b>	<b>.0000</b>	<b>-.0004</b>	<b>.0000</b>	<b>.0102</b>	<b>-.0016</b>
Stddev	.0005	.0001	.0007	.0014	.0006	.0001	.0007	.0068	.0025
%RSD	264.9	48.08	137.9	67.81	3463.	39.22	2700.	65.90	158.0
#1	.0001	-.0003	.0003	.0007	.0005	-.0003	-.0008	.0027	-.0040
#2	-.0003	-.0001	.0014	.0019	-.0007	-.0006	.0002	.0158	-.0017
#3	.0007	-.0002	-.0000	.0034	.0003	-.0003	.0007	.0122	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.0020					
Low Limit				-.0020					
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0032</b>	<b>.0111</b>	<b>.0234</b>	<b>-.0264</b>	<b>.0026</b>	<b>.0001</b>	<b>.0008</b>	<b>.0007</b>	<b>.0001</b>
Stddev	.0036	.0129	.0405	.0109	.0009	.0001	.0007	.0003	.0000
%RSD	112.4	116.3	173.0	41.21	35.42	69.00	94.47	44.76	39.58
#1	-.0010	.0001	.0118	-.0381	.0022	.0001	.0008	.0007	.0001
#2	.0054	.0252	.0685	-.0247	.0019	.0002	.0016	.0004	.0001
#3	.0052	.0079	-.0100	-.0165	.0036	.0000	.0001	.0010	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name:	ccb	Acquired:	9/30/2019 17:34:45	Type:	QC			
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor:	1.000000			
User:	iTEVA Security	Custom ID1:		Custom ID2:				
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>-.0001</b>	<b>-.0000</b>	<b>-.0077</b>	<b>.0010</b>	<b>-.0008</b>	<b>.0017</b>	<b>.0014</b>
Stddev	.0005	.0008	.0001	.0005	.0002	.0002	.0004	.0028
%RSD	100.1	932.4	563.5	7.045	19.16	22.77	25.05	191.8
#1	.0011	-.0010	-.0001	-.0082	.0009	-.0006	.0016	-.0015
#2	.0002	.0003	-.0000	-.0078	.0009	-.0010	.0014	.0041
#3	.0003	.0005	.0001	-.0072	.0012	-.0008	.0022	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit								
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	75220.	11685.	4975.5	10087.				
Stddev	135.	212.	20.4	41.				
%RSD	.17921	1.8151	.41060	.40408				
#1	75299.	11826.	4991.5	10119.				
#2	75065.	11441.	4982.7	10100.				
#3	75298.	11788.	4952.5	10041.				
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass				
Value Range								

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Sample Name: vconf Acquired: 9/30/2019 18:10:41 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-0.0008	.0009	-0.0000	-0.0003	.0006	-0.0000	-0.0001
Stddev	.0000	.0001	.0001	.0001	.0001	.0002	.0000	.0002
%RSD	18.47	8.012	7.815	569.9	41.76	35.81	80.21	391.6
#1	.0002	-0.0008	.0009	-0.0000	-0.0004	.0004	-0.0001	-0.0001
#2	.0001	-0.0009	.0008	.0001	-0.0003	.0007	-0.0000	.0004
#3	.0001	-0.0008	.0008	-0.0001	-0.0002	.0008	-0.0000	-0.0001

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	F 10.56	.0008	.0011	F -.0057	.0006	-0.0005	.0007
Stddev	.0002	.07	.0001	.0007	.0008	.0008	.0009	.0002
%RSD	48.96	.6501	10.32	58.38	14.37	148.6	185.4	21.53
#1	.0003	10.58	.0008	.0014	-.0048	.0010	.0005	.0009
#2	.0005	10.61	.0009	.0016	-.0062	-.0004	-.0010	.0007
#3	.0002	10.48	.0007	.0004	-.0062	.0011	-.0009	.0006

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0005	.0045	.0073	.0009	-0.0547	-0.0427	.0001	-0.0002
Stddev	.0006	.0016	.0012	.0111	.0069	.0059	.0007	.0003
%RSD	133.7	36.27	15.98	1184.	12.68	13.76	593.0	176.9
#1	-0.0003	.0044	.0085	-.0084	-.0489	-.0495	-.0002	-.0005
#2	-0.0012	.0029	.0062	.0133	-.0623	-.0387	-.0004	-.0002
#3	.0001	.0062	.0072	-.0021	-.0527	-.0401	.0009	.0002

Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0787	-0.0003	.0000	.0000	-0.0006	.0010	-0.0057	.0007
Stddev	.0013	.0001	.0001	.0004	.0005	.0005	.0011	.0021
%RSD	1.592	48.42	289.8	1431.	80.16	52.66	19.90	297.8
#1	.0774	-0.0001	-0.0000	.0003	-0.0001	.0011	-.0057	.0027
#2	.0790	-0.0003	-0.0000	.0002	-0.0008	.0014	-.0068	.0009
#3	.0798	-0.0004	.0002	-.0004	-.0010	.0004	-.0046	-.0015

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Sample Name: vconf Acquired: 9/30/2019 18:10:41 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	-0.0014	-0.0035	.0047
Stddev	.0004	.0006	.0034
%RSD	30.70	17.88	73.10
#1	-.0018	-.0042	.0012
#2	-.0014	-.0032	.0048
#3	-.0009	-.0031	.0080

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75828.	11841.	5008.1	10160.
Stddev	232.	77.	38.2	78.
%RSD	.30644	.65156	.76299	.76934
#1	75600.	11756.	4986.8	10114.
#2	75821.	11859.	4985.3	10114.
#3	76064.	11908.	5052.2	10250.

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Sample Name: ticonf Acquired: 9/30/2019 18:15:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0004	-0.0005	-0.0008	-0.0005	.0010	.0000	-0.0001	.0022
Stddev	.0001	.0001	.0000	.0002	.0004	.0003	.0000	.0003	.0002
%RSD	72.12	20.87	8.917	19.83	73.86	30.05	24.04	349.9	7.098
#1	.0002	-0.0003	-0.0004	-0.0008	-0.0003	.0014	.0000	-0.0001	.0021
#2	.0001	-0.0005	-0.0005	-0.0006	-0.0009	.0008	.0000	.0002	.0021
#3	.0004	-0.0003	-0.0005	-0.0009	-0.0002	.0008	.0001	-0.0004	.0024

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0005	-0.0009	-0.0004	.0095	.0024	-0.0010	.0017	.0038	.0025
Stddev	.0004	.0001	.0009	.0012	.0007	.0008	.0008	.0017	.0011
%RSD	98.84	7.643	249.7	12.11	31.55	84.23	44.79	44.79	43.02
#1	-0.0009	-0.0010	.0005	.0108	.0015	-.0002	.0018	.0031	.0017
#2	.0000	-0.0010	-0.0002	.0091	.0028	-.0009	.0024	.0026	.0038
#3	-0.0005	-0.0009	-0.0014	.0086	.0028	-.0018	.0009	.0058	.0021

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	-0.0365	-0.0381	-0.0420	.0010	-0.0005	-0.0397	.0123	.0000
Stddev	.0004	.0102	.0395	.0021	.0004	.0001	.0011	.0003	.0001
%RSD	5.961	27.90	103.8	5.012	37.14	12.59	2.813	2.054	179.0
#1	.0070	-0.0479	-0.0780	-0.0421	.0011	-.0005	-0.0409	.0125	.0000
#2	.0079	-0.0329	-0.0111	-0.0441	.0013	-.0005	-0.0388	.0120	.0001
#3	.0075	-0.0286	-0.0374	-0.0399	.0006	-.0006	-0.0392	.0123	-.0000

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.91	-0.0009	.0001	-0.0079	.0597	-0.0006	.0024	-0.0010
Stddev	.13	.0004	.0001	.0020	.0030	.0007	.0001	.0018
%RSD	1.163	47.81	75.29	25.71	4.957	109.2	3.559	171.3
#1	10.91	-0.0004	.0000	-0.0060	.0584	-0.0001	.0024	-.0031
#2	10.78	-0.0013	.0002	-0.0100	.0575	-.0014	.0024	-.0002
#3	11.04	-0.0010	.0002	-0.0077	.0630	-.0004	.0023	-.0002

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Sample Name: ticonf Acquired: 9/30/2019 18:15:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75928.	11951.	4935.4	9964.0
Stddev	140.	54.	17.0	33.7
%RSD	.18415	.45572	.34393	.33817
#1	76077.	12009.	4955.0	10001.
#2	75800.	11902.	4925.2	9955.7
#3	75908.	11941.	4926.0	9935.3

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Sample Name: snconf Acquired: 9/30/2019 18:21:07 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-0.0002	.0000	.0002	-0.0005	-0.0006	-0.0000	.0002	-0.0005
Stddev	.0001	.0000	.0002	.0001	.0000	.0001	.0000	.0002	.0002
%RSD	16.58	24.97	16.39	47.07	9.638	20.10	125.9	161.8	36.65
#1	.0005	-0.0002	-0.0001	.0001	-0.0005	-0.0005	-0.0000	.0003	-0.0007
#2	.0006	-0.0001	-0.0001	.0002	-0.0005	-0.0006	-0.0000	.0003	-0.0005
#3	.0004	-0.0002	.0002	.0002	-0.0006	-0.0007	.0000	-0.0001	-0.0003
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0009	.0007	-0.0006	-0.0011	.0011	-0.0052	.0076	-0.0038
Stddev	.0002	.0001	.0002	.0021	.0009	.0009	.0008	.0067	.0004
%RSD	77.82	14.61	29.95	330.8	75.44	81.39	15.28	87.89	11.26
#1	.0005	-0.0009	.0004	.0012	-0.0018	.0011	-0.0054	.0138	-0.0040
#2	.0002	-0.0007	.0007	-0.0002	-0.0002	.0020	-0.0043	.0086	-0.0040
#3	.0001	-0.0010	.0008	-0.0029	-0.0015	.0002	-0.0059	.0005	-0.0033
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0068	-0.0357	-0.0484	.0049	-0.0001	.0117	F 10.88	-0.0000
Stddev	.0009	.0242	.0290	.0019	.0004	.0002	.0002	.02	.0002
%RSD	50.21	358.0	81.33	4.015	8.390	232.1	1.995	.1610	1031.
#1	.0028	.0281	-.0151	-.0506	.0054	.0002	.0115	10.90	-0.0000
#2	.0013	.0118	-.0689	-.0469	.0046	-0.0002	.0120	10.86	-0.0002
#3	.0012	-.0196	-.0230	-.0477	.0047	-0.0002	.0116	10.89	.0002
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0008	-0.0009	-0.0002	-0.0087	.0006	-0.0009	.0031	.0014	
Stddev	.0002	.0007	.0000	.0001	.0014	.0012	.0008	.0032	
%RSD	27.57	78.31	16.09	1.280	221.8	134.6	24.83	229.6	
#1	.0010	-0.0004	-0.0002	-0.0087	.0017	-0.0011	.0038	-0.0021	
#2	.0006	-0.0006	-0.0003	-0.0088	.0010	-0.0020	.0030	.0042	
#3	.0010	-0.0016	-0.0002	-0.0086	-0.0009	.0004	.0023	.0021	

Sample Name: snconf Acquired: 9/30/2019 18:21:07 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75104.	11818.	4947.3	9977.1
Stddev	128.	111.	7.0	19.5
%RSD	.17067	.93665	.14144	.19512
#1	74979.	11891.	4943.3	9965.1
#2	75098.	11691.	4955.3	9999.6
#3	75235.	11872.	4943.1	9966.7

11.2  
11

Sample Name: mnconf Acquired: 9/30/2019 18:26:10 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0001	.0004	-0.0001	.0004	.0012	F 10.55	.0005	-0.0003
Stddev	.0000	.0000	.0001	.0003	.0002	.0002	.34	.0001	.0003
%RSD	19.98	41.50	33.29	390.9	53.88	18.49	3.253	15.71	106.9
#1	.0002	-0.0000	.0004	.0003	.0006	.0014	10.37	.0006	-0.0000
#2	.0002	-0.0001	.0003	-0.0002	.0002	.0010	10.34	.0004	-0.0002
#3	.0003	-0.0000	.0006	-0.0003	.0005	.0012	10.95	.0005	-0.0005
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	.0010	-0.0007	.0055	.0008	-0.0008	-0.0003	.0069	-0.0013
Stddev	.0002	.0000	.0005	.0014	.0009	.0008	.0006	.0109	.0021
%RSD	4.582	3.067	64.18	25.00	105.3	91.35	182.2	159.1	153.8
#1	.0043	.0010	-0.0006	.0050	-0.0001	-0.0017	-0.0007	.0145	-0.0019
#2	.0046	.0010	-0.0003	.0070	.0017	-0.0003	.0003	-0.0056	.0010
#3	.0043	.0010	-0.0012	.0044	.0010	-0.0005	-0.0005	.0118	-0.0030
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0089	-0.0390	-0.0333	-0.0429	-0.0002	-0.0002	.0038	-0.0002	.0000
Stddev	.0005	.0277	.0269	.0107	.0000	.0000	.0003	.0007	.0001
%RSD	5.709	71.05	80.68	25.03	15.30	15.57	6.580	379.6	663.8
#1	-0.0094	-0.0595	-0.0145	-0.0347	-0.0002	-0.0002	.0037	-0.0004	.0001
#2	-0.0090	-0.0075	-0.0640	-0.0389	-0.0002	-0.0002	.0037	.0006	.0001
#3	-0.0084	-0.0500	-0.0213	-0.0551	-0.0002	-0.0002	.0041	-0.0008	-0.0001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0003	-0.0011	-0.0008	.0069	.0003	-0.0017	-0.0186	.0317	
Stddev	.0005	.0013	.0002	.0006	.0011	.0007	.0008	.0025	
%RSD	165.6	112.7	28.26	9.287	335.8	40.46	4.363	7.983	
#1	.0002	-0.0026	-0.0006	.0069	.0016	-0.0020	-0.0192	.0295	
#2	.0008	-0.0003	-0.0009	.0075	.0001	-0.0009	-0.0189	.0344	
#3	-0.0002	-0.0005	-0.0011	.0062	-0.0006	-0.0023	-0.0176	.0311	

Sample Name: mnconf Acquired: 9/30/2019 18:26:10 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73711.	11729.	4950.9	9995.0
Stddev	2081.	33.	19.3	27.6
%RSD	2.8236	.27916	.39082	.27663
#1	73991.	11694.	4934.9	9965.8
#2	75638.	11733.	4945.4	9998.4
#3	71503.	11759.	4972.4	10021.

Sample Name: moconf Acquired: 9/30/2019 18:31:23 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0000	.0004	.0022	-.0001	-.0032	-.0004	.0003	.0019
Stddev	.0001	.0001	.0001	.0002	.0001	.0002	.0001	.0001	.0004
%RSD	50.75	383.8	26.21	11.04	98.44	6.398	20.88	24.01	19.93
#1	.0001	.0001	.0005	.0019	-.0002	-.0030	-.0003	.0002	.0020
#2	.0004	-.0001	.0005	.0024	-.0001	-.0032	-.0003	.0004	.0015
#3	.0003	.0000	.0003	.0023	.0000	-.0034	-.0004	.0004	.0022
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0015	.0032	.0075	.0015	.0000	-.0045	-.0082	.0020
Stddev	.0001	.0000	.0011	.0023	.0004	.0018	.0009	.0049	.0015
%RSD	27.35	1.971	35.27	30.34	27.38	5059.	18.72	60.24	75.73
#1	-.0006	.0015	.0036	.0054	.0015	-.0011	-.0047	-.0027	.0038
#2	-.0006	.0016	.0020	.0099	.0019	.0021	-.0036	-.0097	.0010
#3	-.0003	.0016	.0042	.0073	.0011	-.0009	-.0053	-.0121	.0013
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0489	.0643	-.0351	-.0257	-.0044	F 9.915	-.0183	-.0001	.0001
Stddev	.0004	.0129	.0223	.0092	.0006	.163	.0005	.0003	.0001
%RSD	.8980	20.13	63.55	35.89	12.62	1.640	2.531	277.6	64.01
#1	.0488	.0640	-.0226	-.0184	-.0038	9.831	-.0186	-.0004	.0001
#2	.0486	.0515	-.0609	-.0360	-.0045	9.811	-.0185	.0002	.0001
#3	.0494	.0774	-.0218	-.0226	-.0050	10.10	-.0178	-.0001	.0002
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0004	.0010	.0009	-.0019	-.0013	-.0005	.0034	-.0018	
Stddev	.0007	.0006	.0001	.0005	.0014	.0015	.0013	.0019	
%RSD	180.4	64.51	9.699	24.40	103.5	280.6	38.85	106.0	
#1	.0011	.0011	.0009	-.0024	-.0028	-.0008	.0025	.0003	
#2	-.0001	.0015	.0010	-.0019	-.0012	-.0018	.0049	-.0035	
#3	.0001	.0003	.0009	-.0014	-.0000	.0011	.0027	-.0023	

Sample Name: moconf Acquired: 9/30/2019 18:31:23 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75170.	11752.	4883.6	9904.7
Stddev	1134.	34.	69.1	125.3
%RSD	1.5087	28842	1.4156	1.2646
#1	74853.	11767.	4906.0	9942.2
#2	76429.	11713.	4938.8	10007.
#3	74228.	11775.	4806.1	9765.0

Sample Name: siconf Acquired: 9/30/2019 18:36:25 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0000	.0002	-.0002	.0002	-.0003	.0001	.0000	-.0002
Stddev	.0002	.0001	.0002	.0003	.0001	.0004	.0001	.0002	.0003
%RSD	55.49	304.3	136.4	206.1	57.71	120.0	38.94	618.3	110.9
#1	.0003	-.0000	.0001	-.0003	.0003	-.0007	.0001	-.0000	-.0005
#2	.0006	.0000	.0004	.0002	.0001	.0001	.0002	.0002	-.0000
#3	.0002	.0001	.0000	-.0003	.0003	-.0004	.0001	-.0001	-.0001
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0000	.0005	.0022	.0001	-.0010	-.0005	.0068	-.0028
Stddev	.0002	.0001	.0007	.0020	.0004	.0010	.0008	.0089	.0015
%RSD	100.9	216.6	133.6	88.84	390.4	97.31	156.4	131.0	52.62
#1	.0000	-.0001	-.0001	.0020	.0001	-.0009	.0002	.0167	-.0040
#2	-.0004	.0001	.0003	.0004	.0005	-.0021	-.0014	-.0005	-.0012
#3	-.0003	-.0001	.0013	.0043	-.0003	-.0001	-.0004	.0041	-.0031
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0277	-.0059	-.0486	-.0527	.0045	.0018	10.26	.0002	.0001
Stddev	.0009	.0057	.0294	.0062	.0005	.0003	.01	.0011	.0001
%RSD	3.227	97.61	60.43	11.73	10.29	14.59	.0658	660.4	254.6
#1	.0273	.0005	-.0484	-.0519	.0050	.0021	10.26	.0013	.0002
#2	.0288	-.0105	-.0781	-.0469	.0043	.0018	10.27	.0000	.0001
#3	.0271	-.0076	-.0194	-.0592	.0041	.0016	10.25	-.0008	-.0001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0033	-.0010	-.0025	-.0065	.0000	-.0000	.0118	-.0001	
Stddev	.0002	.0009	.0001	.0022	.0009	.0013	.0003	.0002	
%RSD	7.339	94.14	3.467	33.73	2048.	5424.	2.497	161.5	
#1	.0031	-.0006	-.0025	-.0090	-.0001	.0014	.0117	-.0001	
#2	.0036	-.0003	-.0025	-.0050	-.0008	-.0011	.0122	-.0003	
#3	.0033	-.0021	-.0024	-.0055	.0009	-.0004	.0117	.0001	

Sample Name: siconf Acquired: 9/30/2019 18:36:25 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75650.	11912.	5007.9	10112.
Stddev	163.	33.	14.2	27.
%RSD	21575	27353	28402	26951
#1	75666.	11942.	5017.9	10126.
#2	75805.	11917.	4991.6	10081.
#3	75479.	11878.	5014.3	10130.

Sample Name: sconf									
Method: SGS NO VALVE3(v320)									
User: iTEVA Security									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0000	.0001	.0001	-0.0001	-0.0003	.0000	-0.0002	-0.0005
Stddev	.0002	.0001	.0000	.0001	.0003	.0002	.0000	.0001	.0003
%RSD	72.38	433.2	6.718	200.0	301.6	80.77	173.3	76.21	59.66
#1	.0003	-0.0001	.0001	-0.0000	-0.0000	-0.0005	-0.0000	-0.0000	-0.0002
#2	.0004	.0000	.0001	.0002	-0.0004	-0.0004	.0000	-0.0002	-0.0008
#3	.0000	-0.0000	.0001	.0000	.0002	-0.0000	.0000	-0.0002	-0.0004
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0007	.0006	.0010	.0009	.0004	.0012	.0075	-0.0111
Stddev	.0004	.0001	.0006	.0004	.0003	.0006	.0005	.0126	.0039
%RSD	164.0	9.173	93.76	40.73	35.81	149.0	42.77	167.7	361.0
#1	.0004	.0007	.0012	.0015	.0010	-0.0003	.0017	.0081	-0.0055
#2	.0004	.0007	.0001	.0009	.0012	.0006	.0006	-0.0054	.0020
#3	-0.0002	.0006	.0005	.0007	.0006	.0009	.0013	.0199	.0003
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-0.0015	-0.0483	-0.0500	-0.0005	.0004	.0043	-0.0003	.0000
Stddev	.0016	.0247	.0300	.0048	.0008	.0000	.0010	.0004	.0000
%RSD	226.3	1632.	62.17	9.542	144.9	3.180	22.27	129.0	46.40
#1	.0024	-0.0300	-0.161	-0.472	-0.0004	.0003	.0035	.0001	.0000
#2	.0007	.0148	-0.0533	-0.472	-0.0014	.0003	.0053	-0.0004	.0000
#3	-0.0009	.0107	-0.0756	-0.0555	.0002	.0004	.0041	-0.0007	.0001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0002	-0.0012	-0.0001	96.66	.0005	-0.0016	.0030	-0.0010	
Stddev	.0003	.0000	.0001	.77	.0012	.0009	.0003	.0009	
%RSD	149.2	1.906	169.0	.7934	256.5	55.82	8.711	93.35	
#1	.0006	-0.0012	.0000	97.54	-0.0009	-0.0025	.0032	-0.0006	
#2	.0001	-0.0012	-0.0002	96.28	.0014	-0.0007	.0029	-0.0020	
#3	.0000	-0.0012	-0.0000	96.15	.0008	-0.0017	.0027	-0.0003	

Sample Name: sconf				
Method: SGS NO VALVE3(v320)				
User: iTEVA Security				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75992.	11935.	5032.2	10193.
Stddev	1467.	20.	37.7	70.
%RSD	1.9300	.16568	.74833	.68739
#1	77515.	11913.	4989.3	10112.
#2	74588.	11950.	5047.4	10232.
#3	75874.	11943.	5059.8	10235.

11.2  
11

Sample Name: niconf									
Method: SGS NO VALVE3(v320)									
User: iTEVA Security									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-0.0000	.0046	.0013	.0001	-0.0009	.0001	F 11.27	-0.0006
Stddev	.0002	.0001	.0002	.0002	.0000	.0002	.0000	.07	.0003
%RSD	117.6	841.5	4.588	12.77	29.60	27.89	41.14	.6171	55.09
#1	.0002	-0.0000	.0048	.0013	.0001	-0.0006	.0001	11.23	-0.0005
#2	-0.0000	-0.0000	.0044	.0012	.0001	-0.0009	.0001	11.23	-0.0003
#3	.0002	.0001	.0044	.0015	.0002	-0.0011	.0001	11.35	-0.0010
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-0.0001	.0010	.0023	.0007	-0.0010	-0.0028	-0.0016	-0.0021
Stddev	.0002	.0001	.0008	.0009	.0002	.0008	.0011	.0056	.0026
%RSD	53.06	149.3	79.22	41.33	36.06	79.10	38.91	344.9	125.7
#1	.0006	-0.0001	.0006	.0014	.0004	-0.0001	-0.0026	.0016	-0.0047
#2	.0002	.0001	.0018	.0032	.0009	-0.0014	-0.0040	.0016	.0005
#3	.0003	-0.0002	.0004	.0022	.0008	-0.0014	-0.0019	-0.0082	-0.0021
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0112	-0.0394	-0.0505	-0.0004	.0004	-0.0012	-0.0006	.0000
Stddev	.0007	.0174	.0187	.0047	.0004	.0003	.0004	.0005	.0000
%RSD	58.36	155.3	47.59	9.224	100.3	77.87	33.94	76.22	179.2
#1	.0006	.0313	-0.0590	-0.479	-0.0003	.0007	-0.0016	-0.0001	.0001
#2	.0011	.0017	-0.0376	-0.0559	-0.0008	.0005	-0.0008	-0.0007	.0000
#3	.0021	.0006	-0.0216	-0.478	-0.0001	.0001	-0.0011	-0.0010	-0.0000
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0000	-0.0016	-0.0003	-0.0048	-0.0016	-0.0015	.0151	-0.0012	
Stddev	.0003	.0003	.0002	.0021	.0012	.0001	.0004	.0022	
%RSD	779.8	21.82	60.88	43.61	78.60	4.461	2.853	182.7	
#1	.0004	-0.0018	-0.0001	-0.0045	-0.0018	-0.0014	.0147	.0012	
#2	-0.0002	-0.0016	-0.0004	-0.0070	-0.0026	-0.0015	.0155	-0.0016	
#3	-0.0001	-0.0012	-0.0004	-0.0029	-0.0002	-0.0015	.0149	-0.0033	

Sample Name: niconf				
Method: SGS NO VALVE3(v320)				
User: iTEVA Security				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76578.	11838.	4932.4	10001.
Stddev	2199.	94.	30.2	46.
%RSD	2.8713	.79368	.61169	.46446
#1	78198.	11933.	4950.9	10034.
#2	74075.	11745.	4948.7	10022.
#3	77460.	11837.	4897.6	9948.0

Sample Name: coconf Acquired: 9/30/2019 18:51:35 Type: Unk								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0000	-.0022	F 10.34	.0003	-.0045	-.0000	.0015
Stddev	.0001	.0000	.0001	.09	.0001	.0002	.0000	.0003
%RSD	105.5	204.1	3.739	.8296	15.61	4.984	83.43	22.97
#1	.0001	-.0000	-.0023	10.39	.0003	-.0048	-.0000	.0019
#2	.0003	.0000	-.0023	10.38	.0004	-.0043	-.0000	.0012
#3	.0000	.0000	-.0021	10.24	.0003	-.0046	-.0000	.0013
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0001	.0027	.0022	F -.0070	.0015	-.0019	.0022
Stddev	.0002	.0001	.0001	.0002	.0004	.0006	.0017	.0013
%RSD	35.70	139.8	2.139	10.44	5.647	42.30	86.46	57.34
#1	-.0008	-.0001	.0028	.0021	-.0074	.0008	-.0020	.0022
#2	-.0004	-.0002	.0027	.0021	-.0069	.0017	-.0002	.0009
#3	-.0006	.0000	.0027	.0025	-.0067	.0019	-.0035	.0035
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0173	.0018	.0217	-.0579	-.0598	-.0012	.0001
Stddev	.0119	.0010	.0021	.0167	.0180	.0081	.0001	.0001
%RSD	442.1	5.615	116.1	76.98	31.14	13.60	8.925	82.11
#1	.0128	-.0173	.0007	.0403	-.0754	-.0688	-.0011	.0001
#2	-.0104	-.0163	.0005	.0080	-.0589	-.0530	-.0013	.0002
#3	.0056	-.0183	.0042	.0168	-.0394	-.0577	-.0012	.0001
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	-.0003	.0000	.0006	-.0023	.0000	-.0002	.0210
Stddev	.0011	.0003	.0000	.0002	.0005	.0000	.0004	.0009
%RSD	39.76	123.6	91.60	34.25	22.38	123.3	212.7	4.323
#1	.0025	-.0006	.0000	.0004	-.0018	-.0000	-.0001	.0207
#2	.0019	.0000	.0001	.0008	-.0028	.0001	.0001	.0203
#3	.0041	-.0002	.0000	.0005	-.0022	.0001	-.0007	.0220

Sample Name: coconf Acquired: 9/30/2019 18:51:35 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	-.0007	.0024	.0064	
Stddev	.0007	.0003	.0021	
%RSD	99.48	13.51	33.20	
#1	-.0010	.0025	.0040	
#2	-.0011	.0026	.0081	
#3	.0001	.0020	.0069	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76299.	11810.	5013.6	10225.
Stddev	131.	175.	31.6	64.
%RSD	.17218	1.4825	.63126	.62211
#1	76207.	11622.	4997.4	10183.
#2	76450.	11839.	4993.4	10193.
#3	76241.	11968.	5050.1	10298.

Sample Name:alconf Acquired: 9/30/2019 18:56:38 Type: Unk								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0000	.0007	.0005	.0027	.0046	.0001	-.0002
Stddev	.0002	.0000	.0001	.0001	.0001	.0001	.0000	.0001
%RSD	33.07	121.9	15.26	22.30	2.555	2.311	5.902	68.39
#1	.0005	-.0000	.0008	.0005	.0026	.0047	.0001	-.0002
#2	.0008	-.0000	.0007	.0004	.0027	.0046	.0001	-.0001
#3	.0005	-.0001	.0006	.0006	.0026	.0045	.0001	-.0004
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0003	.0005	.0009	.0023	F -.0038	-.0039	.0031
Stddev	.0004	.0002	.0002	.0006	.0006	.0040	.0022	.0012
%RSD	502.6	62.92	50.80	63.53	26.99	106.3	54.46	39.49
#1	-.0004	-.0003	.0004	.0014	.0030	.0002	-.0058	.0027
#2	-.0003	-.0001	.0003	.0003	.0019	-.0037	-.0045	.0021
#3	.0004	-.0005	.0008	.0011	.0019	-.0078	-.0016	.0045
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 514.7	.0047	.0272	-.0036	-.0482	.0328	.0015	.0003
Stddev	8.7	.0005	.0012	.0056	.0179	.0118	.0009	.0005
%RSD	1.691	11.26	4.375	155.4	37.08	35.91	57.66	154.5
#1	524.1	.0047	.0261	.0014	-.0571	.0425	.0005	.0004
#2	507.0	.0052	.0269	-.0096	-.0276	.0197	.0018	.0007
#3	513.1	.0041	.0284	-.0026	-.0599	.0361	.0022	-.0002
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	.0001	.0006	.0015	.0087	-.0006	.0059	-.0041
Stddev	.0033	.0006	.0001	.0010	.0008	.0001	.0024	.0007
%RSD	14.64	567.5	18.28	64.65	9.312	20.02	39.94	16.07
#1	.0196	-.0005	.0005	.0025	.0086	-.0006	.0051	-.0034
#2	.0214	.0007	.0006	.0014	.0079	-.0007	.0040	-.0045
#3	.0259	.0001	.0007	.0006	.0096	-.0005	.0085	-.0046

Sample Name:alconf Acquired: 9/30/2019 18:56:38 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	-.0007	.0145	.0003	
Stddev	.0006	.0012	.0007	
%RSD	88.70	8.389	240.0	
#1	-.0011	.0131	.0001	
#2	.0000	.0155	.0010	
#3	-.0011	.0148	-.0003	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72345.	12270.	4931.3	9506.1
Stddev	366.	32.	115.1	199.3
%RSD	.50588	.26031	2.3337	2.0967
#1	72270.	12250.	5003.5	9624.6
#2	72743.	12307.	4991.9	9617.6
#3	72023.	12253.	4798.6	9275.9

Sample Name: mgconf Acquired: 9/30/2019 19:01:45 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	.0001	-.0001	-.0003	.0001	.0013	.0000	-.0005
Stddev	.0002	.0001	.0000	.0001	.0003	.0004	.0001	.0003	.0001
%RSD	46.47	134.3	31.66	99.24	115.4	376.4	4.034	8842.	19.79
#1	.0005	.0001	.0002	-.0002	-.0005	-.0004	.0013	.0002	-.0004
#2	.0002	-.0000	.0001	.0000	.0001	.0003	.0013	-.0004	-.0005
#3	.0003	.0002	.0001	-.0002	-.0003	.0004	.0014	.0002	-.0006
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0057	.0002	.0040	-.0018	.0009	-.0002	.0488	.0271
Stddev	.0002	.0000	.0010	.0007	.0008	.0009	.0023	.0076	.0020
%RSD	16.04	.7769	396.8	17.01	41.34	100.4	1093.	15.66	7.461
#1	.0012	.0057	.0008	.0045	-.0015	.0016	.0002	.0401	.0288
#2	.0017	.0057	-.0009	.0042	-.0027	-.0001	-.0027	.0546	.0249
#3	.0014	.0057	.0007	.0032	-.0013	.0010	.0018	.0517	.0277
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	F 580.6	-.0875	-.0343	.0002	.0039	.0100	-.0001	-.0000
Stddev	.0011	1.4	.0224	.0050	.0009	.0002	.0002	.0008	.0001
%RSD	16.84	.2569	33.13	14.45	514.4	4.352	1.537	636.3	3446.
#1	.0079	561.8	-.0821	-.0371	-.0002	.0039	.0098	.0008	-.0000
#2	.0062	560.9	-.0787	-.0286	.0012	.0038	.0101	-.0007	.0001
#3	.0058	559.0	-.0417	-.0372	-.0004	.0041	.0100	-.0004	-.0001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0007	.0043	-.0001	.0207	.0009	-.0002	.0041	.0009	
Stddev	.0003	.0007	.0001	.0011	.0015	.0011	.0005	.0019	
%RSD	37.95	16.84	217.3	5.519	174.1	503.2	11.19	217.6	
#1	.0009	.0036	-.0002	.0194	.0025	-.0014	.0037	-.0010	
#2	.0004	.0051	.0001	.0210	-.0005	-.0002	.0046	.0009	
#3	.0008	.0044	-.0001	.0216	.0005	.0009	.0039	.0027	

Sample Name: mgconf Acquired: 9/30/2019 19:01:45 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72265.	11527.	4717.7	9364.0
Stddev	537.	8.	15.0	28.7
%RSD	.74307	.07286	.31810	.30687
#1	72812.	11533.	4734.5	9397.0
#2	71739.	11517.	4713.2	9350.0
#3	72245.	11530.	4705.5	9344.8

Sample Name: caconf Acquired: 9/30/2019 19:06:47 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0036	.0038	.0046	.0029	.0033	.0041	.0037	.0012
Stddev	.0001	.0001	.0001	.0004	.0001	.0001	.0001	.0003	.0002
%RSD	5.736	2.611	3.153	9.405	4.146	2.534	1.988	7.987	15.96
#1	.0016	.0036	.0037	.0044	.0028	.0032	.0042	.0039	.0014
#2	.0015	.0035	.0039	.0043	.0029	.0034	.0041	.0034	.0010
#3	.0016	.0037	.0038	.0051	.0030	.0034	.0041	.0039	.0011
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0269	-.0001	.0054	-.0025	.0008	-.0044	.0103	F 434.6
Stddev	.0002	.0001	.0003	.0011	.0006	.0006	.0008	.0014	6.8
%RSD	9.902	.1966	536.5	20.95	22.09	79.76	17.22	13.33	1.554
#1	.0017	.0269	-.0000	.0058	-.0029	.0011	-.0046	.0104	429.0
#2	.0016	.0270	-.0004	.0063	-.0028	.0001	-.0036	.0089	432.7
#3	.0020	.0269	.0002	.0041	-.0019	.0011	-.0051	.0117	442.1
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0464	-.0228	-.0415	.0025	.0009	.0550	.0002	.0035
Stddev	.0033	.0197	.0099	.0087	.0003	.0000	.0001	.0004	.0001
%RSD	189.7	42.43	43.63	21.01	11.55	4.003	.2670	219.8	2.142
#1	.0009	.0688	-.0166	-.0355	.0028	.0009	.0552	.0007	.0034
#2	.0054	.0383	-.0342	-.0515	.0023	.0009	.0550	-.0001	.0035
#3	-.0011	.0320	-.0174	-.0376	.0023	.0010	.0549	-.0000	.0036
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0051	.0002	.0004	-.0050	-.0003	-.0154	.0043	.0017	
Stddev	.0003	.0009	.0001	.0008	.0007	.0009	.0002	.0031	
%RSD	5.371	420.3	36.35	15.14	205.9	5.700	5.345	185.3	
#1	.0050	.0012	.0005	-.0053	.0000	-.0164	.0042	.0027	
#2	.0049	-.0002	.0003	-.0042	-.0012	-.0152	.0041	-.0018	
#3	.0054	-.0004	.0003	-.0057	.0001	-.0147	.0046	.0041	

Sample Name: caconf Acquired: 9/30/2019 19:06:47 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	71503.	11267.	4694.2	9298.0
Stddev	829.	226.	18.0	35.0
%RSD	1.1600	2.0020	.38444	.37687
#1	70559.	11333.	4674.9	9262.3
#2	72113.	11453.	4697.0	9299.2
#3	71838.	11016.	4710.6	9332.4

Sample Name:	ccv	Acquired: 9/30/2019 19:11:58		Type: QC					
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor: 1.000000					
User:	iTEVA Security	Custom ID1:	Custom ID2:	Custom ID3:					
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.984</b>	<b>2.010</b>	<b>1.969</b>	<b>1.996</b>	<b>1.978</b>	<b>1.905</b>	<b>2.032</b>	<b>2.033</b>	<b>2.430</b>
Stddev	.003	.002	.003	.003	.019	.017	.008	.003	.0026
%RSD	.1538	.1014	.1463	.1687	.9389	.9135	.3794	.1372	1.050
#1	1.984	2.011	1.972	1.996	1.967	1.897	2.040	2.034	2.419
#2	1.980	2.008	1.968	1.999	1.999	1.925	2.028	2.035	2.459
#3	1.987	2.011	1.967	1.992	1.967	1.892	2.026	2.029	2.411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.971</b>	<b>2.006</b>	<b>1.967</b>	<b>2.020</b>	<b>2.023</b>	<b>1.964</b>	<b>1.982</b>	<b>38.81</b>	<b>39.36</b>
Stddev	.017	.005	.004	.005	.001	.003	.004	.05	.07
%RSD	.8441	.2323	.2102	.2556	.0713	.1522	.1897	.1264	.1880
#1	1.961	2.009	1.970	2.014	2.023	1.967	1.985	38.86	39.43
#2	1.990	2.009	1.967	2.022	2.025	1.962	1.982	38.76	39.29
#3	1.962	2.001	1.962	2.023	2.022	1.963	1.978	38.81	39.35
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>39.18</b>	<b>39.52</b>	<b>38.67</b>	<b>38.52</b>	<b>1.983</b>	<b>1.983</b>	<b>4.806</b>	<b>2.006</b>	<b>2.004</b>
Stddev	.05	.10	.03	.09	.005	.005	.005	.003	.004
%RSD	.1223	.2590	.0659	.2312	.2336	.2459	.1015	.1463	.1846
#1	39.23	39.62	38.70	38.58	1.985	1.988	4.812	2.010	2.004
#2	39.13	39.53	38.66	38.42	1.986	1.981	4.803	2.005	2.000
#3	39.19	39.42	38.66	38.56	1.978	1.979	4.804	2.004	2.007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

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Sample Name:	ccv	Acquired: 9/30/2019 19:11:58		Type: QC				
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor: 1.000000				
User:	iTEVA Security	Custom ID1:	Custom ID2:	Custom ID3:				
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.959</b>	<b>1.950</b>	<b>1.999</b>	<b>1.973</b>	<b>1.986</b>	<b>1.932</b>	<b>2.029</b>	<b>1.948</b>
Stddev	.017	.004	.018	.002	.003	.004	.006	.012
%RSD	.8463	.1798	.9095	.1105	.1278	.1840	.3066	.6389
#1	1.950	1.953	1.988	1.973	1.986	1.932	2.035	1.942
#2	1.978	1.951	2.020	1.971	1.984	1.928	2.029	1.962
#3	1.949	1.946	1.989	1.975	1.989	1.935	2.023	1.940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	73325.	11812.	4844.1	9649.9				
Stddev	570.	116.	11.6	19.5				
%RSD	.77770	.97884	.23849	.20181				
#1	73679.	11682.	4834.7	9640.4				
#2	72667.	11850.	4840.7	9637.0				
#3	73628.	11903.	4857.0	9672.3				
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass				
Value Range								

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Sample Name:	ccb	Acquired: 9/30/2019 19:16:52		Type: QC					
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor: 1.000000					
User:	iTEVA Security	Custom ID1:	Custom ID2:	Custom ID3:					
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>.0001</b>	<b>.0002</b>	<b>.0000</b>	<b>.0002</b>	<b>-0.0000</b>	<b>.0002</b>	<b>-0.0001</b>	<b>-0.0004</b>
Stddev	.0002	.0001	.0002	.0001	.0001	.0001	.0000	.0001	.0003
%RSD	91.02	132.4	80.99	302.2	64.14	4569.	20.82	111.6	65.60
#1	-0.000	-0.000	.0000	-0.000	.0003	.0001	.0002	-0.001	-0.003
#2	.0003	.0001	.0002	.0002	.0002	.0000	.0001	-0.003	-0.007
#3	.0004	.0002	.0003	-0.000	.0001	-0.001	.0001	.0000	-0.002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>-0.0002</b>	<b>.0001</b>	<b>F .0030</b>	<b>.0004</b>	<b>-0.011</b>	<b>-0.013</b>	<b>.0101</b>	<b>-0.0054</b>
Stddev	.0003	.0001	.0006	.0007	.0014	.0024	.0004	.0082	.0011
%RSD	116.5	73.03	521.1	21.70	311.8	222.7	33.04	81.48	20.40
#1	-0.000	-0.001	.0007	.0027	.0009	.0011	-0.010	.0067	-0.063
#2	.0005	-0.003	.0002	.0038	.0015	-0.007	-0.010	.0195	-0.059
#3	.0002	-0.001	-0.002	.0026	-0.011	-0.036	-0.017	.0042	-0.042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0048</b>	<b>.0052</b>	<b>-0.0039</b>	<b>-0.0498</b>	<b>.0014</b>	<b>.0003</b>	<b>.0009</b>	<b>.0004</b>	<b>.0001</b>
Stddev	.0010	.0162	.0346	.0043	.0007	.0002	.0012	.0006	.0001
%RSD	20.85	314.5	892.1	8.645	52.33	59.98	130.0	159.1	59.38
#1	.0053	-0.121	-0.076	-0.540	.0021	.0004	.0022	.0003	.0001
#2	.0036	.0202	.0324	-0.502	.0015	.0001	.0006	.0010	.0001
#3	.0053	.0074	-0.364	-0.454	.0006	.0003	-0.001	-0.002	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name:	ccb	Acquired: 9/30/2019 19:16:52		Type: QC				
Method:	SGS NO VALVE3(v320)	Mode:	CONC	Corr. Factor: 1.000000				
User:	iTEVA Security	Custom ID1:	Custom ID2:	Custom ID3:				
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>-0.0009</b>	<b>.0002</b>	<b>-0.0094</b>	<b>.0005</b>	<b>-0.0008</b>	<b>.0020</b>	<b>-0.0002</b>
Stddev	.0001	.0003	.0001	.0012	.0017	.0004	.0006	.0010
%RSD	22.80	33.63	42.76	12.49	325.9	54.01	32.38	545.1
#1	.0006	-0.0006	.0003	-0.104	-0.014	-0.009	.0021	.0001
#2	.0004	-0.012	.0002	-0.096	.0012	-0.012	.0013	.0006
#3	.0005	-0.0009	.0001	-0.081	.0017	-0.004	.0026	-0.013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit								
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	75903.	11776.	4950.1	10017.				
Stddev	144.	61.	13.7	17.				
%RSD	.18991	.51709	.27675	.16493				
#1	76015.	11710.	4957.9	10028.				
#2	75954.	11830.	4958.1	10024.				
#3	75740.	11788.	4934.3	9998.0				
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass				
Value Range								

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Sample Name: jc95494-2 Acquired: 9/30/2019 19:21:57 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2564</b>	<b>.0001</b>	<b>.0003</b>	<b>.0000</b>	<b>.0024</b>	<b>-0.0015</b>	<b>.1272</b>	<b>.0004</b>	<b>.0006</b>
Stddev	.0011	.0000	.0001	.0004	.0001	.0002	.0002	.0001	.0005
%RSD	.4124	25.70	21.82	3309.	4.425	10.49	.1879	18.08	82.03
#1	.2555	.0001	.0003	-.0002	.0022	-.0015	.1274	.0004	.0007
#2	.2575	.0001	.0003	.0004	.0024	-.0013	.1269	.0003	.0001
#3	.2562	.0002	.0002	-.0002	.0024	-.0015	.1272	.0004	.0011
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0009</b>	<b>.0061</b>	<b>.0014</b>	<b>.0006</b>	<b>.0001</b>	<b>-0.0028</b>	<b>-0.0005</b>	<b>.1791</b>	<b>12.74</b>
Stddev	.0001	.0002	.0004	.0009	.0006	.0003	.0013	.0011	.05
%RSD	6.213	2.590	28.88	145.2	551.5	12.27	252.5	6343	.3909
#1	.0009	.0060	.0010	.0015	-.0003	-.0027	.0009	.1793	12.71
#2	.0009	.0062	.0016	-.0003	-.0002	-.0032	-.0008	.1779	12.80
#3	.0010	.0063	.0017	.0006	.0008	-.0025	-.0016	.1802	12.72
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>19.19</b>	<b>2.720</b>	<b>3.754</b>	<b>6.754</b>	<b>.0100</b>	<b>.0002</b>	<b>10.04</b>	<b>-0.0003</b>	<b>.1075</b>
Stddev	.08	.009	.032	.039	.0005	.0002	.03	.0001	.0006
%RSD	.4404	.3264	.8539	.5699	5.013	95.92	.2743	35.21	.5308
#1	19.11	2.710	3.719	6.727	.0104	.0003	10.03	-.0002	.1070
#2	19.28	2.727	3.762	6.798	.0101	.0002	10.02	-.0004	.1082
#3	19.17	2.722	3.781	6.736	.0094	.0000	10.08	-.0003	.1074
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0044</b>	<b>.0012</b>	<b>-0.0053</b>	<b>8.653</b>	<b>-0.0009</b>	<b>.0233</b>	<b>.3405</b>	<b>.0111</b>	
Stddev	.0003	.0012	.0001	.037	.0010	.0007	.0014	.0024	
%RSD	6.236	95.24	2.472	.4306	113.7	2.878	.4184	21.89	
#1	.0041	.0014	-.0053	8.641	-.0001	.0240	.3415	.0095	
#2	.0044	.0024	-.0054	8.624	-.0006	.0227	.3389	.0139	
#3	.0047	-.0000	-.0052	8.695	-.0021	.0234	.3411	.0100	

Sample Name: jc95494-2 Acquired: 9/30/2019 19:21:57 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75584.	11953.	4940.6	9982.4
Stddev	66.	62.	14.9	26.5
%RSD	.08722	.52279	.30198	.26501
#1	75658.	12008.	4946.3	9991.3
#2	75534.	11885.	4951.7	10003.
#3	75559.	11966.	4923.6	9952.7

11.2  
11

Sample Name: jc95494-3 Acquired: 9/30/2019 19:26:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0468</b>	<b>.0002</b>	<b>.0002</b>	<b>.0001</b>	<b>.0015</b>	<b>.0001</b>	<b>.0407</b>	<b>.0041</b>	<b>-0.0005</b>
Stddev	.0012	.0001	.0000	.0003	.0005	.0004	.0001	.0003	.0002
%RSD	2.531	37.86	21.85	335.3	31.92	338.9	.2247	7.156	44.15
#1	.0457	.0002	.0002	.0004	.0010	-.0000	.0408	.0038	-.0007
#2	.0465	.0001	.0003	-.0002	.0014	-.0002	.0406	.0043	-.0003
#3	.0481	.0002	.0002	.0000	.0019	.0006	.0407	.0043	-.0005
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0025</b>	<b>.0137</b>	<b>.0001</b>	<b>.0011</b>	<b>.0005</b>	<b>-0.0027</b>	<b>.0003</b>	<b>1.029</b>	<b>2.947</b>
Stddev	.0003	.0001	.0011	.0011	.0008	.0003	.0019	.019	.084
%RSD	11.93	.4490	722.5	107.6	172.8	10.80	612.6	1.851	2.837
#1	.0022	.0137	-.0003	.0019	.0004	-.0026	-.0018	1.012	2.869
#2	.0026	.0138	-.0006	.0015	-.0003	-.0030	.0009	1.027	2.938
#3	.0027	.0137	.0013	-.0002	.0013	-.0025	.0018	1.050	3.035
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.142</b>	<b>1.328</b>	<b>2.852</b>	<b>25.26</b>	<b>.3609</b>	<b>.0000</b>	<b>6.919</b>	<b>-0.0008</b>	<b>.0206</b>
Stddev	.159	.039	.052	.65	.0006	.0002	.008	.0003	.0004
%RSD	2.584	2.927	1.818	2.588	.1599	548.8	.1199	32.69	1.777
#1	5.992	1.310	2.794	24.66	.3602	-.0002	6.926	-.0006	.0203
#2	6.127	1.302	2.871	25.16	.3611	.0002	6.921	-.0011	.0206
#3	6.308	1.373	2.893	25.95	.3613	.0001	6.910	-.0007	.0210
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0013</b>	<b>-0.0015</b>	<b>-0.0031</b>	<b>21.16</b>	<b>-0.0003</b>	<b>.0012</b>	<b>.0050</b>	<b>.0283</b>	
Stddev	.0003	.0006	.0001	.03	.0009	.0018	.0013	.0003	
%RSD	20.81	38.26	4.814	.1496	300.1	155.4	26.44	1.225	
#1	.0011	-.0010	-.0030	21.19	-.0005	.0025	.0036	.0279	
#2	.0016	-.0014	-.0031	21.17	-.0011	.0020	.0051	.0285	
#3	.0013	-.0021	-.0033	21.13	.0007	-.0009	.0062	.0284	

Sample Name: jc95494-3 Acquired: 9/30/2019 19:26:54 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76212.	11847.	4966.2	9947.8
Stddev	170.	268.	11.4	18.0
%RSD	.22267	2.2583	.23032	.18054
#1	76131.	12102.	4955.0	9930.7
#2	76407.	11869.	4965.6	9946.1
#3	76097.	11569.	4977.9	9966.5



Sample Name: jc95494-4 Acquired: 9/30/2019 19:31:52 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0335</b>	<b>.0001</b>	<b>.0006</b>	<b>.0004</b>	<b>.0033</b>	<b>-0.0096</b>	<b>.3026</b>	<b>.0008</b>	<b>.0030</b>
Stddev	.0002	.0000	.0002	.0002	.0007	.0002	.0006	.0002	.0004
%RSD	.6808	31.82	35.05	56.56	20.94	2.558	2103	23.32	14.86
#1	.0333	.0001	.0004	.0006	.0036	-.0098	.3019	.0006	.0034
#2	.0337	.0001	.0008	.0006	.0038	-.0097	.3031	.0010	.0026
#3	.0334	.0001	.0006	.0002	.0025	-.0093	.3027	.0008	.0030
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0011</b>	<b>.0067</b>	<b>.0145</b>	<b>.0015</b>	<b>-0.0005</b>	<b>-0.0049</b>	<b>-0.0011</b>	<b>2.360</b>	<b>97.04</b>
Stddev	.0001	.0001	.0007	.0022	.0003	.0010	.0009	.0027	.26
%RSD	7.497	1.816	5.099	148.5	65.08	20.69	76.12	1.161	.2693
#1	.0011	.0069	.0153	.0039	-.0002	-.0053	-.0021	2.345	96.97
#2	.0012	.0067	.0141	-.0003	-.0009	-.0057	-.0009	2.343	97.33
#3	.0010	.0066	.0140	.0008	-.0005	-.0038	-.0004	2.391	96.82
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>111.4</b>	<b>16.33</b>	<b>8.497</b>	<b>29.36</b>	<b>.0962</b>	<b>.0023</b>	<b>1.689</b>	<b>-0.0024</b>	<b>.6219</b>
Stddev	.4	.04	.029	.08	.0007	.0000	.005	.0004	.0027
%RSD	.3325	.2692	.3441	.2766	.6973	1.749	.2781	17.21	.4359
#1	111.2	16.37	8.492	29.33	.0955	.0023	1.683	-.0024	.6206
#2	111.8	16.34	8.528	29.46	.0968	.0023	1.690	-.0020	.6250
#3	111.1	16.28	8.470	29.30	.0963	.0023	1.692	-.0028	.6200
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0053</b>	<b>.0001</b>	<b>.0103</b>	<b>6.474</b>	<b>-0.0030</b>	<b>-0.0054</b>	<b>.0370</b>	<b>.0503</b>	
Stddev	.0003	.0008	.0001	.009	.0012	.0014	.0009	.0020	
%RSD	5.732	721.4	.9429	.1373	40.64	25.62	2.377	3.915	
#1	.0056	.0006	.0104	6.469	-.0023	-.0052	.0362	.0517	
#2	.0050	-.0008	.0103	6.484	-.0023	-.0040	.0368	.0481	
#3	.0053	.0005	.0102	6.468	-.0045	-.0068	.0379	.0512	

Sample Name: jc95494-4 Acquired: 9/30/2019 19:31:52 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>74097.</b>	<b>11681.</b>	<b>4782.1</b>	<b>9669.8</b>
Stddev	435.	42.	11.9	27.0
%RSD	.58695	.36374	.24788	.27876
#1	74559.	11634.	4776.1	9658.0
#2	73696.	11716.	4774.5	9650.7
#3	74034.	11694.	4795.8	9700.6

Sample Name: jc95494-5 Acquired: 9/30/2019 19:36:49 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0216</b>	<b>.0001</b>	<b>.0013</b>	<b>.0021</b>	<b>.0078</b>	<b>-0.0012</b>	<b>.4734</b>	<b>.0014</b>	<b>.0004</b>
Stddev	.0002	.0000	.0002	.0002	.0003	.0002	.0009	.0002	.0001
%RSD	.8897	25.38	14.43	7.356	3.266	14.69	1.900	11.81	13.27
#1	.0215	.0001	.0011	.0019	.0081	-.0011	.4737	.0016	.0004
#2	.0215	.0001	.0013	.0022	.0078	-.0010	.4724	.0014	.0005
#3	.0218	.0001	.0015	.0021	.0076	-.0013	.4741	.0012	.0004
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0078</b>	<b>.0091</b>	<b>.0033</b>	<b>.0012</b>	<b>.0005</b>	<b>-0.0029</b>	<b>-0.0008</b>	<b>1.594</b>	<b>34.62</b>
Stddev	.0006	.0001	.0008	.0008	.0009	.0014	.0009	.014	.24
%RSD	7.140	.8288	22.79	70.80	185.1	48.39	113.3	8752	6834
#1	.0079	.0092	.0033	.0008	.0004	-.0013	-.0002	1.602	34.52
#2	.0071	.0090	.0025	.0021	.0013	-.0038	-.0004	1.577	34.44
#3	.0082	.0090	.0041	.0006	-.0004	-.0036	-.0019	1.602	34.88
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>25.10</b>	<b>6.945</b>	<b>1.760</b>	<b>4.913</b>	<b>.3265</b>	<b>.0011</b>	<b>6.947</b>	<b>-0.0010</b>	<b>.0683</b>
Stddev	.17	.101	.030	.025	.0008	.0001	.012	.0000	.0004
%RSD	.6577	1.458	1.735	.5039	.2427	7.859	.1649	2.923	.5468
#1	25.05	6.946	1.791	4.924	.3267	.0010	6.957	-.0010	.0682
#2	24.96	6.844	1.730	4.885	.3272	.0011	6.934	-.0010	.0680
#3	25.28	7.046	1.761	4.931	.3257	.0011	6.949	-.0010	.0687
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0220</b>	<b>-0.0004</b>	<b>.0032</b>	<b>1.488</b>	<b>-0.0011</b>	<b>-0.0020</b>	<b>.0264</b>	<b>.0151</b>	
Stddev	.0005	.0004	.0000	.004	.0011	.0008	.0006	.0058	
%RSD	2.205	92.58	1.305	.2360	102.1	41.55	2.349	38.28	
#1	.0223	-.0005	.0031	1.492	-.0021	-.0010	.0268	.0168	
#2	.0215	-.0007	.0032	1.485	-.0012	-.0025	.0266	.0199	
#3	.0223	.0000	.0032	1.487	.0001	-.0024	.0256	.0087	

Sample Name: jc95494-5 Acquired: 9/30/2019 19:36:49 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>75255.</b>	<b>12004.</b>	<b>4951.3</b>	<b>9962.5</b>
Stddev	141.	91.	6.7	6.3
%RSD	.18773	.75832	.13543	.06288
#1	75092.	12028.	4953.3	9961.6
#2	75336.	12081.	4956.8	9969.1
#3	75337.	11904.	4943.8	9956.7

Sample Name: jc95494-6 Acquired: 9/30/2019 19:41:44 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0161</b>	<b>.0000</b>	<b>.0003</b>	<b>.0002</b>	<b>.0018</b>	<b>.0052</b>	<b>.0058</b>	<b>.0009</b>	<b>-.0003</b>
Stddev	.0002	.0000	.0001	.0002	.0000	.0005	.0001	.0001	.0001
%RSD	1.181	1263.	48.86	101.3	1.914	10.43	1.553	10.69	39.92
#1	.0159	.0001	.0002	.0002	.0018	.0050	.0058	.0009	-.0002
#2	.0163	-.0000	.0002	.0005	.0018	.0058	.0057	.0010	-.0002
#3	.0160	-.0000	.0004	.0000	.0018	.0047	.0058	.0009	-.0004
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0034</b>	<b>.0137</b>	<b>.0025</b>	<b>.0016</b>	<b>.0017</b>	<b>.0039</b>	<b>-.0007</b>	<b>.8173</b>	<b>18.70</b>
Stddev	.0003	.0001	.0003	.0002	.0013	.0011	.0011	.0048	.03
%RSD	7.500	.9191	11.23	9.648	76.58	28.09	156.6	.5934	.1851
#1	.0037	.0136	.0023	.0017	.0031	.0031	.0005	.8134	18.74
#2	.0031	.0138	.0028	.0014	.0007	.0051	-.0018	.8157	18.70
#3	.0035	.0136	.0023	.0017	.0012	.0035	-.0008	.8227	18.67
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.356</b>	<b>2.355</b>	<b>3.998</b>	<b>5.136</b>	<b>.0839</b>	<b>.0016</b>	<b>4.453</b>	<b>.0009</b>	<b>.1262</b>
Stddev	.009	.000	.036	.010	.0004	.0001	.006	.0005	.0005
%RSD	.6342	.0095	.8919	.2024	.4896	5.842	.1279	57.91	.3959
#1	1.365	2.355	4.037	5.141	.0843	.0017	4.451	.0009	.1267
#2	1.356	2.355	3.989	5.124	.0835	.0015	4.460	.0013	.1264
#3	1.348	2.355	3.968	5.143	.0839	.0017	4.449	.0004	.1257
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0127</b>	<b>.0065</b>	<b>-.0003</b>	<b>14.05</b>	<b>.0012</b>	<b>-.0008</b>	<b>.0577</b>	<b>.0039</b>	
Stddev	.0002	.0002	.0002	.02	.0019	.0011	.0009	.0019	
%RSD	1.966	2.908	82.89	.1083	155.8	141.8	1.527	48.13	
#1	.0127	.0063	-.0003	14.04	.0020	-.0005	.0567	.0037	
#2	.0124	.0066	-.0005	14.06	-.0009	-.0015	.0583	.0022	
#3	.0129	.0066	-.0001	14.03	.0026	-.0014	.0581	.0059	

Sample Name: jc95494-6 Acquired: 9/30/2019 19:41:44 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75467.	12063.	4971.1	10024.
Stddev	339.	20.	15.8	30.
%RSD	.44893	.16319	.31687	.29477
#1	75278.	12065.	4974.9	10033.
#2	75858.	12042.	4953.7	9990.5
#3	75266.	12081.	4984.5	10047.

Sample Name: jc95494-7 Acquired: 9/30/2019 19:46:41 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0286</b>	<b>.0000</b>	<b>.0003</b>	<b>-.0003</b>	<b>.0025</b>	<b>-.0000</b>	<b>.0225</b>	<b>.0005</b>
Stddev	.0001	.0000	.0001	.0002	.0003	.0001	.0001	.0002
%RSD	3.785	65.89	31.18	54.97	11.01	669.8	2242	32.59
#1	.0286	.0000	.0004	-.0003	.0021	.0000	.0226	.0006
#2	.0287	.0000	.0002	-.0002	.0025	-.0002	.0225	.0006
#3	.0285	.0001	.0003	-.0005	.0027	.0001	.0225	.0003
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0004</b>	<b>.0004</b>	<b>.0231</b>	<b>.0050</b>	<b>.0023</b>	<b>.0001</b>	<b>-.0022</b>	<b>-.0003</b>
Stddev	.0001	.0002	.0001	.0004	.0009	.0007	.0016	.0009
%RSD	26.10	52.22	4.002	7.490	37.73	725.9	71.79	326.5
#1	.0005	.0004	.0231	.0054	.0017	.0005	-.0010	-.0001
#2	.0003	.0002	.0230	.0048	.0033	-.0007	-.0016	-.0013
#3	.0005	.0006	.0231	.0047	.0018	.0004	-.0041	.0005
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0534</b>	<b>34.54</b>	<b>8.238</b>	<b>4.998</b>	<b>5.660</b>	<b>15.10</b>	<b>.3130</b>	<b>.0009</b>
Stddev	.0069	.18	.037	.070	.020	.07	.0019	.0001
%RSD	12.91	.5099	.4535	1.393	.3543	.4546	.6103	12.48
#1	.0544	34.69	8.269	5.076	5.652	15.15	.3148	.0010
#2	.0598	34.59	8.248	4.973	5.683	15.12	.3133	.0008
#3	.0461	34.34	8.196	4.944	5.645	15.02	.3110	.0009
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>18.49</b>	<b>-.0011</b>	<b>.1646</b>	<b>.0017</b>	<b>.0005</b>	<b>F -.0111</b>	<b>26.47</b>	<b>-.0022</b>
Stddev	.05	.0003	.0005	.0005	.0006	.0001	.07	.0009
%RSD	.2727	25.77	.3149	28.72	110.1	1.180	.2687	38.59
#1	18.53	-.0008	.1649	.0018	-.0001	-.0112	26.54	-.0012
#2	18.43	-.0014	.1648	.0011	.0007	-.0110	26.40	-.0026
#3	18.50	-.0011	.1640	.0021	.0009	-.0110	26.47	-.0028

Sample Name: jc95494-7 Acquired: 9/30/2019 19:46:41 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>-.0013</b>	<b>.0144</b>	<b>.0065</b>	
Stddev	.0002	.0001	.0026	
%RSD	13.69	.9885	39.63	
#1	-.0015	.0142	.0038	
#2	-.0013	.0145	.0090	
#3	-.0012	.0144	.0066	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>75498.</b>	<b>11968.</b>	<b>4926.0</b>	<b>9910.6</b>
Stddev	120.	94.	13.2	22.4
%RSD	.15875	.78386	.26841	.22558
#1	75418.	11915.	4914.1	9884.9
#2	75441.	11913.	4940.2	9925.2
#3	75636.	12076.	4923.7	9921.8

Sample Name: jc95494-8 Acquired: 9/30/2019 19:51:37 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0356</b>	<b>.0000</b>	<b>.0010</b>	<b>.0006</b>	<b>.0007</b>	<b>.0015</b>	<b>.0138</b>	<b>.0033</b>	<b>-.0002</b>
Stddev	.0005	.0001	.0001	.0002	.0000	.0001	.0000	.0005	.0004
%RSD	1.502	159.3	6.634	37.37	5.632	4.460	2059	15.45	296.3
#1	.0351	.0000	.0011	.0007	.0007	.0014	.0138	.0039	-.0000
#2	.0362	.0001	.0009	.0007	.0006	.0015	.0138	.0032	-.0007
#3	.0355	.0000	.0010	.0003	.0007	.0015	.0138	.0029	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0004</b>	<b>-1.089</b>	<b>.0010</b>	<b>.0020</b>	<b>.0014</b>	<b>.0038</b>	<b>-.0011</b>	<b>1.714</b>	<b>13.48</b>
Stddev	.0001	.0002	.0004	.0015	.0008	.0016	.0015	.025	.16
%RSD	30.98	.1947	43.58	75.43	56.20	40.92	143.5	1.488	1.197
#1	.0004	.1097	.0005	.0004	.0020	.0021	.0006	1.693	13.33
#2	.0003	.1100	.0014	.0023	.0017	.0042	-.0013	1.742	13.65
#3	.0006	.1101	.0011	.0034	.0005	.0052	-.0025	1.706	13.44

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.555</b>	<b>1.782</b>	<b>3.393</b>	<b>9.261</b>	<b>1.245</b>	<b>.0000</b>	<b>14.56</b>	<b>-.0002</b>	<b>.1035</b>
Stddev	.025	.032	.034	.114	.0003	.0001	.04	.0008	.0015
%RSD	.9841	1.782	.9879	1.226	.2266	257.5	.2511	530.8	1.463
#1	2.530	1.765	3.371	9.151	.1245	.0000	14.60	-.0006	.1020
#2	2.580	1.819	3.431	9.378	.1243	.0002	14.57	-.0000	.1051
#3	2.554	1.763	3.377	9.253	.1248	-.0001	14.52	-.0010	.1035

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0009</b>	<b>-.0010</b>	<b>-.0088</b>	<b>18.70</b>	<b>-.0005</b>	<b>.0014</b>	<b>.0042</b>	<b>.0052</b>
Stddev	.0003	.0008	.0001	.05	.0008	.0013	.0004	.0018
%RSD	28.83	74.55	.8933	.2849	162.9	92.24	10.51	35.21
#1	.0011	-.0002	-.0088	18.74	.0004	.0026	.0037	.0066
#2	.0006	-.0012	-.0087	18.72	-.0009	.0000	.0042	.0058
#3	.0010	-.0017	-.0089	18.64	-.0010	.0017	.0046	.0031

Sample Name: jc95494-8 Acquired: 9/30/2019 19:51:37 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76192.	12099.	4956.9	9962.0
Stddev	189.	114.	10.2	14.7
%RSD	.24792	.93873	.20676	.14715
#1	76122.	12221.	4968.7	9978.6
#2	76048.	11997.	4952.2	9950.8
#3	76406.	12078.	4949.9	9956.7

Sample Name: jc95494-9 Acquired: 9/30/2019 19:56:34 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0323</b>	<b>.0001</b>	<b>.0006</b>	<b>.0000</b>	<b>.0107</b>	<b>-.0073</b>	<b>-.1610</b>	<b>.0034</b>	<b>.0026</b>
Stddev	.0004	.0000	.0001	.0002	.0001	.0003	.0009	.0004	.0002
%RSD	1.160	30.64	17.11	302.1	1.150	4.378	5665	11.39	9.136
#1	.0321	.0001	.0005	.0000	.0106	-.0076	-.1610	.0037	.0025
#2	.0321	.0001	.0006	.0002	.0107	-.0074	-.1619	.0035	.0024
#3	.0327	.0001	.0007	-.0002	.0109	-.0070	-.1601	.0029	.0029

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0018</b>	<b>.0368</b>	<b>.0129</b>	<b>.0023</b>	<b>.0011</b>	<b>-.0032</b>	<b>-.0010</b>	<b>.5271</b>	<b>22.80</b>
Stddev	.0001	.0003	.0004	.0013	.0014	.0007	.0003	.0102	.06
%RSD	6.724	.6809	2.905	56.40	127.6	22.19	27.76	1.933	.2604
#1	.0016	.0367	.0132	.0033	.0022	-.0038	-.0009	.5370	22.74
#2	.0018	.0371	.0129	.0027	-.0005	-.0035	-.0008	.5166	22.86
#3	.0019	.0367	.0125	.0008	.0016	-.0024	-.0013	.5276	22.81

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>87.91</b>	<b>3.764</b>	<b>2.585</b>	<b>8.041</b>	<b>.1051</b>	<b>.0009</b>	<b>2.849</b>	<b>-.0020</b>	<b>.1363</b>
Stddev	.15	.010	.007	.009	.0000	.0001	.009	.0002	.0003
%RSD	.1743	.2570	.2608	.1132	.0354	9.005	.3181	11.13	.1845
#1	87.74	3.754	2.581	8.041	.1051	.0009	2.841	-.0018	.1360
#2	88.03	3.774	2.580	8.050	.1051	.0010	2.849	-.0023	.1364
#3	87.95	3.764	2.592	8.032	.1051	.0009	2.859	-.0020	.1365

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0084</b>	<b>-.0001</b>	<b>.0007</b>	<b>.8490</b>	<b>-.0051</b>	<b>-.0017</b>	<b>.0857</b>	<b>.0378</b>
Stddev	.0005	.0005	.0001	.0045	.0007	.0007	.0022	.0006
%RSD	5.422	736.3	11.67	.5322	13.05	40.31	2.624	1.613
#1	.0090	.0002	.0006	.8458	-.0056	-.0011	.0831	.0374
#2	.0083	-.0007	.0008	.8471	-.0053	-.0025	.0873	.0385
#3	.0081	.0003	.0008	.8542	-.0043	-.0015	.0866	.0375

Sample Name: jc95494-9 Acquired: 9/30/2019 19:56:34 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75791.	12044.	4913.9	9968.6
Stddev	338.	71.	.8	13.1
%RSD	.44581	.58754	.01550	.13124
#1	75763.	12117.	4913.7	9983.7
#2	75469.	11976.	4913.3	9960.9
#3	76143.	12038.	4914.7	9961.2

Sample Name: jc95494-10 Acquired: 9/30/2019 20:01:30 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0013</b>	<b>-0.0000</b>	<b>.0002</b>	<b>.0001</b>	<b>.0001</b>	<b>.0019</b>	<b>.0002</b>	<b>.0002</b>	<b>-0.0004</b>
Stddev	.0002	.0001	.0001	.0002	.0002	.0000	.0000	.0002	.0001
%RSD	16.79	817.2	49.53	161.6	381.9	1.327	22.57	131.9	24.46
#1	.0016	-0.0000	.0001	-0.0001	-0.0002	.0019	.0002	-0.0001	-0.0003
#2	.0012	-0.0000	.0002	.0003	.0003	.0019	.0002	.0004	-0.0004
#3	.0012	.0001	.0001	.0001	.0001	.0019	.0002	.0003	-0.0005
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0000</b>	<b>.0040</b>	<b>-0.0005</b>	<b>.0015</b>	<b>.0001</b>	<b>-0.0012</b>	<b>-0.0009</b>	<b>.0029</b>	<b>.0618</b>
Stddev	.0001	.0001	.0004	.0009	.0002	.0010	.0005	.0072	.0014
%RSD	195.9	3.279	87.88	60.56	146.3	81.91	63.39	249.4	2.227
#1	.0001	.0040	-0.0009	.0022	.0001	-0.0009	-0.0014	-.0054	.0634
#2	-0.0000	.0038	-0.0003	.0005	-0.0000	-0.0004	-0.0009	.0060	.0608
#3	.0000	.0041	-0.0002	.0017	.0003	-0.0022	-0.0003	.0080	.0612
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0019</b>	<b>.0010</b>	<b>-0.0557</b>	<b>-0.0259</b>	<b>.0010</b>	<b>.0001</b>	<b>.1533</b>	<b>-0.0022</b>	<b>.0015</b>
Stddev	.0013	.0095	.0382	.0033	.0003	.0002	.0016	.0002	.0002
%RSD	68.26	948.6	68.49	12.67	30.77	324.1	1.076	111.1	11.14
#1	.0032	-0.0006	-.0443	-.0222	.0013	.0003	.1550	-.0004	.0013
#2	.0006	-0.0076	-.0246	-.0286	.0009	-0.0000	.1517	-0.0001	.0017
#3	.0019	.0113	-.0983	-.0267	.0007	-0.0001	.1531	-0.0000	.0015
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0002</b>	<b>-0.0011</b>	<b>-0.0000</b>	<b>-0.0052</b>	<b>.0001</b>	<b>-0.0008</b>	<b>.0026</b>	<b>.0045</b>	
Stddev	.0000	.0001	.0000	.0007	.0004	.0009	.0006	.0061	
%RSD	12.72	8.767	56.42	14.03	454.9	109.5	21.98	135.1	
#1	.0002	-0.0011	-0.0000	-0.0043	-0.0004	-0.0014	.0030	-.0014	
#2	.0002	-0.0010	-0.0000	-0.0056	.0005	.0002	.0019	.0107	
#3	.0002	-0.0011	-0.0001	-0.0056	.0002	-0.0012	.0028	.0042	

Sample Name: jc95494-10 Acquired: 9/30/2019 20:01:30 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76171.	11912.	4971.1	10102.
Stddev	157.	224.	53.0	103.
%RSD	.20670	1.8778	1.0669	1.0217
#1	76307.	11998.	4910.7	9983.2
#2	75998.	11658.	5009.9	10167.
#3	76206.	12080.	4992.7	10156.

Sample Name: ccv Acquired: 9/30/2019 20:06:33 Type: QC									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.990</b>	<b>1.999</b>	<b>1.972</b>	<b>1.994</b>	<b>1.988</b>	<b>1.939</b>	<b>2.039</b>	<b>2.024</b>	<b>2.459</b>
Stddev	.001	.002	.002	.002	.020	.022	.013	.003	.0029
%RSD	.0680	.0756	.1198	.1094	.9997	1.139	.6210	.1644	1.171
#1	1.991	2.001	1.974	1.995	2.008	1.960	2.025	2.025	2.487
#2	1.989	1.998	1.972	1.995	1.968	1.916	2.040	2.027	2.429
#3	1.988	2.000	1.970	1.991	1.990	1.942	2.050	2.020	2.461
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.981</b>	<b>2.005</b>	<b>1.968</b>	<b>2.029</b>	<b>2.005</b>	<b>1.960</b>	<b>1.969</b>	<b>38.43</b>	<b>39.32</b>
Stddev	.021	.004	.006	.003	.007	.008	.005	.01	.02
%RSD	1.087	.1841	.3064	.1233	.3406	.4272	.2348	.0292	.0615
#1	2.002	2.006	1.972	2.028	2.012	1.963	1.973	38.44	39.34
#2	1.959	2.007	1.971	2.032	2.003	1.967	1.970	38.42	39.29
#3	1.982	2.000	1.961	2.027	1.999	1.951	1.964	38.44	39.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>39.32</b>	<b>39.52</b>	<b>38.68</b>	<b>38.20</b>	<b>1.984</b>	<b>1.996</b>	<b>4.789</b>	<b>2.004</b>	<b>2.001</b>
Stddev	.04	.14	.07	.02	.006	.003	.008	.005	.002
%RSD	.1008	.3546	.1832	.0631	.2902	.1348	.1612	.2518	.0847
#1	39.35	39.65	38.76	38.22	1.990	1.997	4.797	2.009	2.003
#2	39.33	39.54	38.67	38.17	1.985	1.998	4.788	2.006	2.000
#3	39.27	39.37	38.62	38.20	1.979	1.993	4.781	1.999	1.999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

Sample Name: ccv Acquired: 9/30/2019 20:06:33 Type: QC								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.974</b>	<b>1.950</b>	<b>2.008</b>	<b>1.968</b>	<b>1.987</b>	<b>1.919</b>	<b>2.022</b>	<b>1.965</b>
Stddev	.022	.004	.022	.006	.007	.002	.003	.023
%RSD	1.117	.2130	1.108	.2989	.3413	.1042	.1413	1.171
#1	1.996	1.953	2.030	1.974	1.992	1.920	2.025	1.988
#2	1.952	1.953	1.986	1.963	1.989	1.917	2.021	1.942
#3	1.974	1.946	2.009	1.965	1.979	1.921	2.019	1.966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	73074.	11891.	4863.9	9737.9				
Stddev	524.	40.	7.6	12.8				
%RSD	.71752	.33727	.15678	.13141				
#1	72588.	11865.	4858.0	9732.3				
#2	73630.	11871.	4861.2	9728.9				
#3	73006.	11937.	4872.5	9752.6				

Sample Name: ccb Acquired: 9/30/2019 20:11:28 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	.0002	.0001	.0002	.0005	.0001	-.0001	.0000
Stddev	.0002	.0000	.0001	.0001	.0004	.0002	.0001	.0001	.0002
%RSD	377.6	27.66	64.38	45.50	217.0	34.08	42.94	155.7	3080.
#1	-.0002	.0001	.0000	.0001	-.0003	.0007	.0001	-.0002	-.0000
#2	.0001	.0001	.0003	.0002	.0003	.0004	.0002	-.0001	-.0002
#3	.0002	.0001	.0002	.0002	.0005	.0005	.0001	.0001	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0003	.0005	.0017	.0009	-.0014	-.0004	.0139	-.0023
Stddev	.0002	.0001	.0001	.0016	.0002	.0014	.0001	0.158	.0012
%RSD	57.28	22.19	29.36	93.20	25.26	99.33	29.71	113.1	53.87
#1	.0002	-.0002	.0006	.0001	.0010	-.0019	-.0004	.0223	-.0037
#2	.0006	-.0002	.0006	.0018	.0007	.0002	-.0006	-.0042	-.0015
#3	.0003	-.0003	.0003	.0033	.0011	-.0025	-.0003	.0238	-.0016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0159	.0038	-.0427	.0015	.0002	.0013	.0003	.0000
Stddev	.0001	.0060	.0297	.0070	.0003	.0001	.0013	.0003	.0001
%RSD	3.897	37.95	776.2	16.44	19.36	34.31	103.5	93.28	3592.
#1	.0027	.0091	.0358	-.0351	.0016	.0002	.0028	.0007	-.0001
#2	.0027	.0183	-.0013	-.0440	.0017	.0003	.0008	.0001	.0000
#3	.0025	.0204	-.0230	-.0490	.0012	.0001	.0003	.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name: jc95564-1 Acquired: 9/30/2019 20:16:31 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2862	.0000	.0003	.0007	.0025	.0009	.3391	.0015	.0004
Stddev	.0038	.0001	.0002	.0003	.0004	.0001	.0044	.0003	.0002
%RSD	1.313	376.6	66.01	51.23	14.43	5.934	1.287	20.73	39.10
#1	.2894	.0001	.0003	.0011	.0029	.0009	.3441	.0016	.0005
#2	.2872	.0000	.0001	.0005	.0022	.0010	.3373	.0011	.0005
#3	.2821	-.0001	.0005	.0004	.0025	.0008	.3360	.0017	.0002
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0011	.0019	.0020	-.0023	-.0025	-.0010	.0056	F 234.7
Stddev	.0001	.0001	.0007	.0023	.0008	.0007	.0004	.0063	2.8
%RSD	4.685	8.481	37.94	118.7	34.76	29.13	44.55	113.2	1.186
#1	.0032	.0010	.0011	.0024	-.0032	-.0028	-.0015	-.0016	237.7
#2	.0030	.0012	.0024	-.0005	-.0020	-.0029	-.0008	.0083	234.2
#3	.0031	.0011	.0022	.0041	-.0017	-.0016	-.0007	.0100	232.3
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1643	.66.11	.22.71	.144.0	.6614	.0008	.15.49	-.0003	.1.508
Stddev	.0023	.69	.28	1.2	.0047	.0000	.09	.0005	.021
%RSD	1.416	1.044	1.251	.8200	.7084	4.913	.5846	157.3	1.403
#1	.1654	66.64	22.96	145.4	.6602	.0008	15.48	-.0005	1.528
#2	.1658	66.35	22.75	143.2	.6575	.0008	15.41	-.0008	1.511
#3	.1616	65.33	22.40	143.5	.6666	.0007	15.59	.0002	1.486
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0047	.0009	-.0089	51.04	-.0009	.1289	1.202	.0054	
Stddev	.0002	.0008	.0000	.34	.0003	.0021	.008	.0045	
%RSD	4.971	98.75	.4935	6641	34.69	1.662	.6475	83.84	
#1	.0045	.0014	-.0090	51.02	-.0005	.1306	1.201	.0030	
#2	.0046	-.0001	-.0089	50.71	-.0011	.1296	1.194	.0106	
#3	.0050	.0013	-.0089	51.39	-.0010	.1265	1.210	.0025	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit									
Low Limit									

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Sample Name: ccb Acquired: 9/30/2019 20:11:28 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0005	.0001	-.0082	.0005	-.0007	.0008	.0002
Stddev	.0003	.0014	.0001	.0016	.0009	.0009	.0003	.0017
%RSD	35.34	281.9	178.2	19.07	195.0	126.8	37.79	728.8
#1	.0010	-.0014	.0002	-.0098	.0003	-.0018	.0007	-.0000
#2	.0005	-.0012	.0000	-.0081	.0015	.0000	.0005	-.0013
#3	.0007	.0011	-.0000	-.0067	-.0003	-.0004	.0011	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								None
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	7585.1	11779.	4953.6	10073.				
Stddev	329.	246.	13.5	20.				
%RSD	.43357	2.0903	.27205	.19853				
#1	76230.	11497.	4966.9	10087.				
#2	75640.	11950.	4953.9	10081.				
#3	75683.	11892.	4939.9	10050.				

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Sample Name: jc95564-1 Acquired: 9/30/2019 20:16:31 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	70828.	11518.	4583.3	9087.8
Stddev	780.	104.	36.1	65.1
%RSD	1.1016	.90626	.78675	.71637
#1	69945.	11440.	4576.3	9083.2
#2	71118.	11477.	4622.4	9155.1
#3	71422.	11637.	4551.3	9025.1

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11.2  
 11

Table with 10 columns (Elem, Units, Avg, Stddev, %RSD) and 10 rows of data for various elements like Ba4554, Be3130, Cd2288, etc.

Table with 10 columns (Int. Std., Units, Avg, Stddev, %RSD) and 10 rows of data for various elements like Y\_3600, Y\_3710, Y\_2243, etc.

Table with 10 columns (Elem, Units, Avg, Stddev, %RSD) and 10 rows of data for various elements like Ba4554, Be3130, Cd2288, etc.

Table with 10 columns (Int. Std., Units, Avg, Stddev, %RSD) and 10 rows of data for various elements like Y\_3600, Y\_3710, Y\_2243, etc.

Sample Name: jc95564-4 Acquired: 9/30/2019 20:31:51 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1211	.0002	.0003	.0025	.0048	.0078	.3460	.0072	-0.0001
Stddev	.0003	.0000	.0002	.0001	.0002	.0001	.0033	.0005	.0002
%RSD	.2224	28.38	48.15	2.532	3.273	1.104	.9646	7.522	184.4
#1	.1214	.0001	.0003	.0025	.0049	.0079	.3490	.0072	-0.0004
#2	.1210	.0002	.0002	.0026	.0046	.0078	.3424	.0066	.0001
#3	.1209	.0002	.0005	.0025	.0048	.0077	.3466	.0077	-0.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0100	.0184	.0037	.0035	.0021	-0.0005	.0002	2.870	9.977
Stddev	.0006	.0003	.0010	.0008	.0006	.0016	.0010	.009	.017
%RSD	5.514	1.822	28.31	23.71	29.35	329.2	445.0	.3065	.1661
#1	.0106	.0183	.0027	.0038	.0021	.0011	.0010	2.880	9.996
#2	.0099	.0181	.0048	.0041	.0027	-0.0004	-0.0009	2.865	9.974
#3	.0095	.0188	.0037	.0025	.0015	-0.0021	.0006	2.865	9.963

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.101	26.21	25.99	353.8	8.135	.0070	12.98	.0001	.2174
Stddev	.011	.06	.07	5.3	.0190	.0003	.30	.0006	.0004
%RSD	.2596	.2459	.2600	1.503	2.331	4.348	2.335	634.2	.1794
#1	4.112	26.28	26.06	359.5	.8025	.0068	12.83	.0002	.2175
#2	4.091	26.15	25.94	352.8	.8027	.0069	12.78	.0006	.2176
#3	4.099	26.20	25.95	349.0	.8354	.0073	13.33	-.0005	.2169

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1028	-0.0010	-0.0065	41.15	.0002	.0146	.1440	.0113
Stddev	.0025	.0020	.0002	.92	.0005	.0003	.0029	.0001
%RSD	2.453	192.2	3.497	2.230	311.8	2.335	1.981	.8620
#1	.1057	-0.0016	-0.0066	40.69	-0.0002	.0148	.1427	.0113
#2	.1008	.0012	-0.0063	40.55	.0008	.0147	.1421	.0114
#3	.1020	-0.0027	-0.0067	42.20	-0.0001	.0142	.1473	.0113

Sample Name: jc95564-4 Acquired: 9/30/2019 20:31:51 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72148.	11636.	4717.3	9224.2
Stddev	531.	53.	91.6	163.7
%RSD	.73570	.45911	1.9410	1.7745
#1	71565.	11583.	4761.8	9297.5
#2	72602.	11690.	4778.1	9338.5
#3	72278.	11634.	4612.0	9036.7

Sample Name: jc95564-5 Acquired: 9/30/2019 20:36:57 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.234	.0001	.0005	.0024	.0051	.0302	.5061	.0103
Stddev	.008	.0000	.0000	.0001	.0001	.0002	.0014	.0002
%RSD	.6389	45.32	6.830	5.332	2.500	.5074	.2705	1.540
#1	1.225	.0001	.0005	.0023	.0050	.0300	.5049	.0105
#2	1.240	.0001	.0005	.0023	.0052	.0302	.5076	.0101
#3	1.238	.0001	.0006	.0025	.0052	.0303	.5059	.0103

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0064	.0949	.0076	.0022	.1352	-0.0020	-0.0007
Stddev	.0003	.0002	.0001	.0008	.0008	.0013	.0022	.0016
%RSD	61.05	2.377	.0863	10.97	33.75	.9872	106.2	217.7
#1	.0002	.0065	.0949	.0069	.0014	.1363	-.0045	-.0025
#2	.0008	.0063	.0950	.0074	.0024	.1337	-.0009	.0000
#3	.0005	.0063	.0948	.0085	.0029	.1356	-.0007	.0003

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.018	180.7	20.75	66.67	23.60	66.18	.4817	.0015
Stddev	.014	1.1	.15	.48	.17	.44	.0003	.0001
%RSD	1.419	.6141	.7436	.7136	.7386	.6675	.0680	6.755
#1	1.004	179.5	20.57	66.12	23.40	65.67	.4821	.0014
#2	1.016	181.4	20.85	66.96	23.70	66.46	.4815	.0016
#3	1.033	181.3	20.83	66.93	23.70	66.41	.4815	.0015

Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.84	.0077	.9949	.0317	.0015	F -0.0102	1.547	-.0047
Stddev	.04	.0007	.0066	.0003	.0007	.0001	.002	.0016
%RSD	.2135	8.469	.6671	.9655	44.37	1.366	.1333	33.35
#1	17.85	.0084	.9873	.0319	.0012	-.0101	1.544	-.0029
#2	17.88	.0076	.9996	.0313	.0023	-.0102	1.549	-.0060
#3	17.80	.0071	.9978	.0317	.0010	-.0103	1.547	-.0051

Sample Name: jc95564-5 Acquired: 9/30/2019 20:36:57 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	.2044	.6551	.0205
Stddev	.0023	.0005	.0017
%RSD	1.136	.0728	8.393
#1	.2028	.6556	.0214
#2	.2071	.6552	.0216
#3	.2034	.6546	.0185

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72743.	11691.	4701.8	9292.2
Stddev	235.	76.	5.8	12.8
%RSD	.32352	.65148	.12402	.13823
#1	73010.	11778.	4698.7	9282.2
#2	72567.	11653.	4698.2	9287.8
#3	72652.	11641.	4708.5	9306.7

Sample Name: jc95564-6 Acquired: 9/30/2019 20:41:51 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0689</b>	<b>.0000</b>	<b>.0004</b>	<b>.0002</b>	<b>.0090</b>	<b>.0035</b>	<b>.8782</b>	<b>.0024</b>	<b>-0.0006</b>
Stddev	.0003	.0000	.0001	.0003	.0002	.0002	.0034	.0001	.0001
%RSD	.3718	23.19	17.77	156.4	2.054	6.657	.3922	5.832	13.16
#1	.0687	.0000	.0005	.0001	.0089	.0038	.8816	.0023	-.0007
#2	.0689	.0001	.0004	.0005	.0089	.0035	.8782	.0026	-.0006
#3	.0692	.0000	.0003	-.0000	.0092	.0034	.8747	.0023	-.0006
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0054</b>	<b>.0728</b>	<b>.0346</b>	<b>.0029</b>	<b>.0019</b>	<b>-.0024</b>	<b>.0018</b>	<b>1.047</b>	<b>23.81</b>
Stddev	.0002	.0003	.0007	.0016	.0015	.0011	.0006	.004	.02
%RSD	3.097	.3498	1.948	56.18	79.47	48.39	35.74	.4046	.0970
#1	.0054	.0728	.0350	.0036	.0033	-.0012	.0025	1.045	23.80
#2	.0055	.0730	.0338	.0010	.0003	-.0035	.0012	1.052	23.80
#3	.0052	.0725	.0350	.0041	.0021	-.0023	.0017	1.044	23.84
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.210</b>	<b>31.54</b>	<b>23.25</b>	<b>F 202.6</b>	<b>3.898</b>	<b>.0044</b>	<b>13.86</b>	<b>.0004</b>	<b>.3007</b>
Stddev	.007	.03	.05	1.4	.0025	.0001	.06	.0002	.0003
%RSD	.1574	.1080	.2050	6691	.6432	1.253	.4583	54.46	.0972
#1	4.208	31.50	23.20	202.3	.3919	.0044	13.92	.0007	.3008
#2	4.206	31.54	23.30	201.4	.3905	.0044	13.88	.0004	.3004
#3	4.218	31.57	23.26	204.1	.3870	.0045	13.79	.0002	.3009
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0415</b>	<b>.0001</b>	<b>-.0081</b>	<b>9.314</b>	<b>-.0017</b>	<b>.0070</b>	<b>1.659</b>	<b>.0099</b>	
Stddev	.0003	.0007	.0002	.041	.0013	.0014	.004	.0026	
%RSD	.8072	567.6	2.841	4415	73.71	20.09	.2738	26.26	
#1	.0416	-.0006	-.0081	9.349	-.0025	.0079	1.662	.0115	
#2	.0417	.0002	-.0084	9.323	-.0003	.0077	1.662	.0113	
#3	.0411	.0008	-.0079	9.269	-.0025	.0054	1.654	.0069	

Sample Name: jc95564-6 Acquired: 9/30/2019 20:41:51 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	73626.	11759.	4785.1	9424.9
Stddev	372.	70.	18.0	27.7
%RSD	.50577	.59696	.37609	.29347
#1	73234.	11834.	4780.5	9426.7
#2	73669.	11749.	4769.9	9396.3
#3	73975.	11695.	4805.0	9451.6

Sample Name: jc95564-7 Acquired: 9/30/2019 20:46:53 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3775</b>	<b>.0000</b>	<b>.0004</b>	<b>.0005</b>	<b>.0017</b>	<b>-.0001</b>	<b>.6309</b>	<b>.0012</b>	<b>.0001</b>
Stddev	.0014	.0001	.0000	.0001	.0001	.0001	.0025	.0004	.0003
%RSD	.3692	311.8	4.317	12.42	5.413	95.49	.3923	30.08	254.9
#1	.3768	-.0000	.0004	.0005	.0017	-.0003	.6296	.0009	.0000
#2	.3791	-.0000	.0005	.0005	.0016	-.0000	.6338	.0012	.0005
#3	.3765	.0001	.0004	.0004	.0018	-.0001	.6294	.0016	-.0001
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0030</b>	<b>.0028</b>	<b>.0018</b>	<b>.0035</b>	<b>-.0007</b>	<b>-.0037</b>	<b>-.0010</b>	<b>.0046</b>	<b>166.7</b>
Stddev	.0004	.0001	.0012	.0021	.0002	.0006	.0006	.0091	.6
%RSD	12.77	4.801	65.12	59.23	31.83	17.47	55.90	197.1	.3894
#1	.0028	.0030	.0007	.0016	-.0005	-.0029	-.0016	-.0053	166.5
#2	.0034	.0027	.0016	.0057	-.0007	-.0040	-.0009	.0125	167.4
#3	.0027	.0027	.0030	.0032	-.0009	-.0040	-.0005	.0067	166.1
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>7.419</b>	<b>54.57</b>	<b>21.18</b>	<b>175.4</b>	<b>.4612</b>	<b>.0004</b>	<b>15.22</b>	<b>-.0008</b>	<b>1.050</b>
Stddev	.029	.12	.07	1.0	.0023	.0002	.03	.0003	.004
%RSD	.3944	.2185	.3121	.5791	.4972	49.57	.2196	33.46	.4156
#1	7.406	54.68	21.11	174.3	.4631	.0004	15.25	-.0008	1.049
#2	7.452	54.58	21.24	176.3	.4587	.0006	15.18	-.0006	1.055
#3	7.398	54.44	21.19	175.6	.4619	.0002	15.22	-.0011	1.047
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0035</b>	<b>.0004</b>	<b>-.0086</b>	<b>6.078</b>	<b>-.0008</b>	<b>.1428</b>	<b>1.213</b>	<b>.0083</b>	
Stddev	.0005	.0008	.0000	.012	.0010	.0018	.003	.0020	
%RSD	15.65	192.1	.2368	.1990	127.5	1.255	.2183	24.06	
#1	.0029	.0007	-.0086	6.090	-.0019	.1431	1.216	.0101	
#2	.0036	-.0005	-.0086	6.066	-.0000	.1445	1.212	.0061	
#3	.0039	.0010	-.0086	6.078	-.0004	.1409	1.211	.0087	

Sample Name: jc95564-7 Acquired: 9/30/2019 20:46:53 Type: Unk				
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72242.	11395.	4671.3	9233.9
Stddev	206.	19.	6.1	10.0
%RSD	.28470	.17060	.12964	.10856
#1	72194.	11402.	4664.4	9223.9
#2	72064.	11374.	4674.0	9233.9
#3	72467.	11411.	4675.6	9244.0



Sample Name: jc95564-8 Acquired: 9/30/2019 20:51:57 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0016</b>	<b>.0000</b>	<b>.0002</b>	<b>-0.0000</b>	<b>.0001</b>	<b>.0048</b>	<b>.0006</b>	<b>.0003</b>	<b>-0.0004</b>
Stddev	.0002	.0001	.0001	.0002	.0002	.0002	.0001	.0002	.0003
%RSD	9.893	356.3	38.77	710.7	195.4	3.439	11.89	55.59	80.36
#1	.0016	.0001	.0003	-.0001	.0003	.0047	.0006	.0003	-.0002
#2	.0014	-.0000	.0001	-.0001	.0002	.0047	.0007	.0002	-.0007
#3	.0017	-.0000	.0003	.0002	-.0001	.0050	.0007	.0005	-.0002
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>.0015</b>	<b>-0.0004</b>	<b>.0006</b>	<b>-0.0000</b>	<b>.0011</b>	<b>.0005</b>	<b>-0.0041</b>	<b>.1256</b>
Stddev	.0002	.0001	.0003	.0016	.0003	.0008	.0005	.0023	.0038
%RSD	34.12	6.724	99.10	287.6	2655.	70.52	105.3	55.47	3.010
#1	.0006	.0016	.0000	-.0012	.0002	.0018	.0009	-.0059	.1213
#2	.0003	.0016	-.0006	.0008	.0000	.0003	.0006	-.0049	.1284
#3	.0006	.0014	-.0005	.0021	-.0003	.0012	-.0001	-.0015	.1271
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0043</b>	<b>.0126</b>	<b>.0159</b>	<b>.0671</b>	<b>.0026</b>	<b>.0001</b>	<b>.0528</b>	<b>-0.0004</b>	<b>.0011</b>
Stddev	.0017	.0111	.0404	.0049	.0004	.0001	.0003	.0001	.0000
%RSD	38.40	87.58	254.3	7.236	14.83	108.2	.5726	30.22	2.910
#1	.0029	.0008	.0062	.0727	.0025	-.0000	.0528	-.0003	.0012
#2	.0062	.0145	.0602	.0649	.0030	.0001	.0525	-.0004	.0011
#3	.0040	.0227	-.0188	.0637	.0022	.0002	.0531	-.0005	.0011
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0004</b>	<b>.0065</b>	<b>.0006</b>	<b>.0092</b>	<b>-0.0007</b>	<b>-0.0013</b>	<b>.0082</b>	<b>-0.0020</b>	
Stddev	.0005	.0010	.0001	.0002	.0014	.0011	.0010	.0016	
%RSD	113.7	16.16	17.26	2.229	203.9	83.87	11.97	80.78	
#1	-.0001	.0056	.0005	.0091	.0008	-.0022	.0090	-.0024	
#2	.0009	.0062	.0005	.0091	-.0008	-.0016	.0071	-.0002	
#3	.0004	.0076	.0007	.0095	-.0020	-.0001	.0086	-.0033	

Sample Name: jc95564-8 Acquired: 9/30/2019 20:51:57 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75895.	11821.	4970.6	10087.
Stddev	363.	38.	5.2	8.
%RSD	.47881	.32160	.10484	.08250
#1	75929.	11810.	4964.6	10078.
#2	75516.	11790.	4974.5	10091.
#3	76240.	11864.	4972.5	10094.

11.2  
11

Sample Name: mp17592-mb1 Acquired: 9/30/2019 20:57:00 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0007</b>	<b>.0001</b>	<b>.0001</b>	<b>.0000</b>	<b>.0007</b>	<b>.0010</b>	<b>.0007</b>	<b>.0001</b>	<b>-0.0002</b>
Stddev	.0002	.0001	.0002	.0002	.0002	.0002	.0001	.0001	.0001
%RSD	25.80	107.6	121.5	697.0	25.71	20.22	10.28	70.62	59.77
#1	.0009	.0002	.0001	.0003	.0009	.0009	.0007	.0001	-.0002
#2	.0005	.0000	.0000	.0000	.0008	.0010	.0008	.0002	-.0004
#3	.0007	.0000	.0003	-.0002	.0005	.0013	.0006	.0001	-.0001
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0196</b>	<b>-0.0001</b>	<b>.0018</b>	<b>.0000</b>	<b>-0.0014</b>	<b>-0.0001</b>	<b>.0221</b>	<b>.1368</b>
Stddev	.0002	.0006	.0004	.0007	.0006	.0003	.0006	.0158	.0033
%RSD	56.14	3.263	701.0	37.89	1492.	24.29	488.6	71.28	2.429
#1	.0001	.0203	.0001	.0016	-.0006	-.0013	-.0003	.0039	.1391
#2	.0005	.0194	.0002	.0012	.0001	-.0011	.0006	.0302	.1330
#3	.0003	.0191	-.0005	.0026	.0006	-.0018	-.0006	.0322	.1384
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0385</b>	<b>.0176</b>	<b>.0142</b>	<b>.0360</b>	<b>.0012</b>	<b>.0001</b>	<b>.0156</b>	<b>.0215</b>	<b>.0007</b>
Stddev	.0032	.0264	.0295	.0044	.0003	.0003	.0015	.0005	.0001
%RSD	8.036	149.4	207.0	12.23	22.18	228.5	9.757	2.372	12.58
#1	.0362	.0262	-.0062	.0396	.0009	-.0002	.0172	.0220	.0006
#2	.0399	.0386	.0480	.0311	.0013	.0001	.0143	.0214	.0007
#3	.0425	-.0119	.0009	.0373	.0013	.0004	.0151	.0210	.0008
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0012</b>	<b>.0029</b>	<b>.0002</b>	<b>.0099</b>	<b>.0002</b>	<b>-0.0010</b>	<b>.0254</b>	<b>-0.0009</b>	
Stddev	.0001	.0002	.0001	.0016	.0004	.0006	.0011	.0014	
%RSD	8.519	6.163	63.34	15.83	183.7	65.50	4.142	149.3	
#1	.0011	.0027	.0001	.0090	.0001	-.0003	.0262	.0006	
#2	.0012	.0031	.0003	.0090	-.0001	-.0016	.0258	-.0021	
#3	.0013	.0030	.0003	.0117	.0007	-.0010	.0242	-.0013	

Sample Name: mp17592-mb1 Acquired: 9/30/2019 20:57:00 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75847.	11870.	4924.0	9989.1
Stddev	400.	108.	144.4	274.1
%RSD	.52713	.90588	2.9327	2.7442
#1	76074.	11750.	4767.3	9690.7
#2	76081.	11959.	4953.2	10047.
#3	75385.	11900.	5051.6	10230.

Table with 10 columns (Elem, Units, Avg, Stddev, %RSD) and 10 rows for various elements (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Ca3179). Includes 'Check ? Value Range' and 'Raw Data MA47539 page 217 of 290'.

Table with 10 columns (Elem, Units, Avg, Stddev, %RSD) and 10 rows for various elements (Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040, In2306, Sr4077). Includes 'Check ? Value Range' and 'Raw Data MA47539 page 218 of 290'.

Table with 10 columns (Elem, Units, Avg, Stddev, %RSD) and 10 rows for various elements (Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280, Ca3179). Includes 'Check ? High Limit Low Limit' and 'Raw Data MA47539 page 219 of 290'.

Table with 10 columns (Elem, Units, Avg, Stddev, %RSD) and 10 rows for various elements (Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040, In2306, Sr4077). Includes 'Check ? High Limit Low Limit' and 'Raw Data MA47539 page 220 of 290'.

Sample Name: mp17592-b1 Acquired: 9/30/2019 21:12:02 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.881</b>	<b>1.888</b>	<b>1.829</b>	<b>1.865</b>	<b>1.845</b>	<b>1.778</b>	<b>1.895</b>
Stddev	.005	.004	.008	.005	.002	.004	.006
%RSD	.2490	.2243	.4559	.2870	.1054	.2232	.3063
#1	1.884	1.889	1.822	1.860	1.846	1.774	1.902
#2	1.875	1.884	1.838	1.871	1.843	1.779	1.893
#3	1.883	1.892	1.829	1.866	1.846	1.782	1.890

Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.899</b>	<b>2.315</b>	<b>1.828</b>	<b>1.892</b>	<b>1.892</b>	<b>1.899</b>	<b>1.853</b>
Stddev	.007	.0004	.003	.010	.009	.006	.005
%RSD	.3736	.1627	.1510	.5057	.4541	.3173	.2934
#1	1.892	.2311	1.827	1.884	1.883	1.894	1.849
#2	1.906	.2316	1.826	1.902	1.899	1.906	1.859
#3	1.899	.2318	1.831	1.888	1.894	1.898	1.851

Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.808</b>	<b>1.909</b>	<b>23.68</b>	<b>24.04</b>	<b>24.07</b>	<b>24.20</b>	<b>23.75</b>
Stddev	.006	.008	.11	.11	.10	.12	.02
%RSD	.3137	.3970	.4442	.4516	.4153	.5132	.0772
#1	1.801	1.901	23.69	24.04	24.10	24.22	23.75
#2	1.812	1.916	23.56	23.93	23.96	24.06	23.73
#3	1.809	1.910	23.77	24.14	24.15	24.31	23.76

Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>23.53</b>	<b>1.800</b>	<b>1.919</b>	<b>0.187</b>	<b>1.968</b>	<b>1.888</b>	<b>1.893</b>
Stddev	.06	.007	.006	.0010	.007	.005	.002
%RSD	.2672	.3757	.2944	5.104	.3678	.2591	.0884
#1	23.54	1.792	1.914	.0189	1.961	1.891	1.893
#2	23.46	1.805	1.925	.0196	1.976	1.883	1.892
#3	23.59	1.801	1.919	.0177	1.967	1.892	1.895

Raw Data MA47539 page 221 of 290

Sample Name: mp17592-b1 Acquired: 9/30/2019 21:12:02 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.403</b>	<b>1.930</b>	<b>-0.115</b>	<b>-0.110</b>	<b>-0.004</b>	<b>1.894</b>	<b>W -.0374</b>
Stddev	.009	.002	.0016	.0004	.0011	.008	.0021
%RSD	.6314	.0964	13.94	3.251	316.2	4.347	5.534
#1	1.393	1.929	-0.126	-0.106	.0000	1.887	-.0363
#2	1.407	1.929	-0.097	-0.111	.0005	1.903	-.0398
#3	1.409	1.932	-0.123	-0.113	-0.016	1.891	-.0361

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	74331.	11813.	4907.0	9846.2
Stddev	410.	131.	24.9	36.4
%RSD	.55111	1.1078	.50735	.37011
#1	73870.	11844.	4922.3	9864.5
#2	74653.	11925.	4878.3	9804.3
#3	74471.	11669.	4920.5	9869.9

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Sample Name: mp17592-s1 Acquired: 9/30/2019 21:16:51 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.657</b>	<b>1.817</b>	<b>1.828</b>	<b>1.915</b>	<b>2.474</b>	<b>2.184</b>	<b>3.535</b>	<b>2.210</b>	<b>2358</b>
Stddev	.019	.012	.004	.003	.020	.013	.033	.001	.0020
%RSD	.7046	.6653	.2186	.1561	.8072	.5902	.9387	.0599	.8542
#1	2.677	1.830	1.833	1.918	2.477	2.191	3.509	2.211	2369
#2	2.656	1.817	1.826	1.915	2.492	2.192	3.522	2.211	2371
#3	2.639	1.805	1.826	1.912	2.453	2.169	3.572	2.208	2335

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.131</b>	<b>2.330</b>	<b>2.031</b>	<b>1.855</b>	<b>2.384</b>	<b>1.775</b>	<b>1.052</b>	<b>115.0</b>	<b>F 237.4</b>
Stddev	.016	.004	.005	.004	.006	.006	.002	.8	1.1
%RSD	.7445	.1865	.2545	.2121	.2336	.3273	.1463	.6842	.4504
#1	2.135	2.334	2.037	1.859	2.390	1.782	1.054	115.8	238.1
#2	2.145	2.329	2.028	1.853	2.383	1.771	1.051	115.0	238.0
#3	2.114	2.326	2.027	1.853	2.379	1.774	1.052	114.3	236.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>161.2</b>	<b>143.3</b>	<b>58.76</b>	<b>29.01</b>	<b>1.822</b>	<b>1.836</b>	<b>3.426</b>	<b>1.833</b>	<b>2.330</b>
Stddev	1.2	1.2	.44	.18	.005	.003	.012	.003	.016
%RSD	.7383	.8224	.7434	.6100	.2511	.1492	.3592	.1743	.6657
#1	162.5	144.5	59.23	29.20	1.828	1.839	3.440	1.836	2.346
#2	161.0	143.1	58.69	28.99	1.820	1.835	3.421	1.831	2.330
#3	160.2	142.2	58.36	28.85	1.820	1.834	3.416	1.831	2.315

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 8.637</b>	<b>1.050</b>	<b>1.932</b>	<b>14.20</b>	<b>.0081</b>	<b>.0964</b>	<b>5.815</b>	<b>.5888</b>
Stddev	.073	.004	.013	.03	.0010	.0011	.014	.0073
%RSD	.8478	.3840	.6602	.2377	12.52	1.183	.2340	1.233
#1	8.715	1.054	1.936	14.24	.0086	.0970	5.831	.5896
#2	8.628	1.051	1.942	14.19	.0088	.0970	5.811	.5956
#3	8.569	1.046	1.917	14.17	.0070	.0950	5.805	.5812

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Sample Name: mp17592-s1 Acquired: 9/30/2019 21:16:51 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76439.	12144.	4918.2	9431.7
Stddev	625.	100.	7.6	8.0
%RSD	.81779	.82188	.15361	.08437
#1	76303.	12029.	4909.8	9426.9
#2	75894.	12204.	4920.3	9427.3
#3	77122.	12200.	4924.5	9440.9

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11.2  
11

Sample Name: mp17592-s2 Acquired: 9/30/2019 21:21:59 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.625</b>	<b>1.810</b>	<b>1.849</b>	<b>1.987</b>	<b>2.164</b>	<b>2.529</b>	<b>3.580</b>	<b>3.000</b>	<b>2.368</b>
Stddev	.017	.011	.037	.037	.013	.018	.044	.057	.0013
%RSD	.6284	.6165	1.996	1.889	.5913	.6900	1.219	1.907	.5433
#1	2.609	1.800	1.889	2.028	2.162	2.527	3.558	3.062	.2359
#2	2.642	1.822	1.842	1.979	2.177	2.548	3.630	2.989	.2383
#3	2.624	1.809	1.816	1.954	2.151	2.513	3.552	2.949	.2362

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.100</b>	<b>2.340</b>	<b>2.035</b>	<b>1.846</b>	<b>2.302</b>	<b>1.800</b>	<b>1.025</b>	<b>112.9</b>	<b>F 229.2</b>
Stddev	.012	.049	.039	.033	.046	.035	.023	.7	3.2
%RSD	.5490	2.074	1.895	1.759	2.001	1.915	2.244	.5854	1.386
#1	2.098	2.393	2.077	1.880	2.353	1.838	1.050	112.3	229.9
#2	2.112	2.330	2.026	1.842	2.292	1.790	1.020	113.6	232.0
#3	2.089	2.297	2.001	1.816	2.262	1.772	1.004	112.8	225.7

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 206.0</b>	<b>133.9</b>	<b>56.10</b>	<b>28.48</b>	<b>1.827</b>	<b>1.876</b>	<b>3.341</b>	<b>1.835</b>	<b>2.317</b>
Stddev	1.3	.8	.31	.14	.035	.035	.062	.036	.014
%RSD	.6204	.5694	.5526	.4792	1.942	1.888	1.869	1.952	.6076
#1	204.7	133.0	55.81	28.34	1.866	1.913	3.404	1.874	2.304
#2	207.3	134.5	56.43	28.62	1.820	1.871	3.339	1.829	2.332
#3	206.1	134.1	56.07	28.49	1.796	1.843	3.279	1.804	2.315

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 8.126</b>	<b>1.124</b>	<b>1.937</b>	<b>34.62</b>	<b>.0106</b>	<b>.0894</b>	<b>5.019</b>	<b>.4653</b>
Stddev	.086	.020	.013	.68	.0017	.0012	.097	.0030
%RSD	1.062	1.807	.6752	1.966	16.04	1.300	1.938	.6453
#1	8.219	1.145	1.936	35.36	.0106	.0900	5.123	.4655
#2	8.113	1.122	1.950	34.50	.0089	.0903	5.004	.4682
#3	8.048	1.105	1.924	34.02	.0124	.0881	4.930	.4622

Sample Name: mp17592-s2 Acquired: 9/30/2019 21:21:59 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75350.	12266.	4847.9	9446.2
Stddev	510.	61.	85.8	159.3
%RSD	.67636	.49324	1.7696	1.6869
#1	75311.	12330.	4756.2	9273.8
#2	74861.	12258.	4861.3	9476.4
#3	75878.	12210.	4926.2	9588.2

Sample Name: jc95495-2 Acquired: 9/30/2019 21:27:07 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.7409</b>	<b>.0053</b>	<b>.0024</b>	<b>.0863</b>	<b>.2022</b>	<b>.4991</b>	<b>2.026</b>	<b>.2898</b>	<b>.0036</b>
Stddev	.0037	.0002	.0001	.0017	.0008	.0009	.026	.0039	.0003
%RSD	.4991	3.293	3.718	1.960	.3879	.1872	1.263	1.363	8.682
#1	.7433	.0053	.0024	.0863	.2030	.4999	1.997	.2907	.0040
#2	.7427	.0052	.0023	.0846	.2014	.4993	2.032	.2855	.0034
#3	.7366	.0055	.0025	.0880	.2022	.4981	2.047	.2933	.0035

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3078</b>	<b>.6175</b>	<b>.1583</b>	<b>.0103</b>	<b>.6065</b>	<b>-.0017</b>	<b>.0037</b>	<b>85.41</b>	<b>F 244.4</b>
Stddev	.0005	.0090	.0023	.0017	.0069	.0011	.0013	.45	3.0
%RSD	.1482	1.464	1.425	16.96	1.136	67.73	36.10	.5306	1.234
#1	.3081	.6177	.1584	.0123	.6079	-.0019	.0023	85.67	245.4
#2	.3073	.6083	.1559	.0096	.5990	-.0005	.0038	85.67	246.9
#3	.3081	.6264	.1604	.0090	.6126	-.0027	.0049	84.89	241.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>142.7</b>	<b>111.4</b>	<b>24.87</b>	<b>5.223</b>	<b>.0722</b>	<b>.0100</b>	<b>1.922</b>	<b>.0469</b>	<b>.6951</b>
Stddev	.8	.7	.13	.035	.0010	.0003	.037	.0003	.0027
%RSD	.5701	.6717	.5090	.6640	1.330	3.057	1.928	.7447	.3929
#1	143.1	111.7	24.93	5.234	.0717	.0103	1.926	.0466	.6973
#2	143.1	111.9	24.95	5.251	.0716	.0097	1.883	.0467	.6959
#3	141.7	110.5	24.72	5.184	.0733	.0100	1.956	.0473	.6921

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.850</b>	<b>.0057</b>	<b>.1018</b>	<b>14.17</b>	<b>.0292</b>	<b>.1051</b>	<b>4.000</b>	<b>.5363</b>
Stddev	.009	.0009	.0004	.22	.0005	.0006	.062	.0015
%RSD	.1314	16.43	.4116	1.534	1.619	.5461	1.542	.2756
#1	6.858	.0064	.1022	14.20	.0294	.1045	4.007	.5379
#2	6.851	.0059	.1018	13.94	.0286	.1052	3.935	.5350
#3	6.840	.0046	.1014	14.37	.0295	.1056	4.058	.5358

Sample Name: jc95495-2 Acquired: 9/30/2019 21:27:07 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76249.	12312.	4980.8	9443.4
Stddev	211.	98.	68.6	109.4
%RSD	.27659	.79400	1.3779	1.1589
#1	76060.	12336.	4981.0	9434.5
#2	76477.	12204.	5049.3	9557.0
#3	76211.	12395.	4912.1	9338.7

Sample Name: mp17592-sd1 Acquired: 9/30/2019 21:32:15 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.7652</b>	<b>.0056</b>	<b>.0031</b>	<b>.0865</b>	<b>.2202</b>	<b>.5099</b>	<b>2.199</b>	<b>2.949</b>	<b>.0037</b>
Stddev	.0008	.0003	.0009	.0015	.0065	.0151	.071	.0005	.0018
%RSD	.1068	5.929	27.24	1.792	2.968	2.966	3.217	1.601	47.98
#1	.7661	.0059	.0035	.0878	.2277	.5274	2.281	2.946	.0022
#2	.7651	.0053	.0037	.0848	.2163	.5020	2.164	2.954	.0032
#3	.7644	.0056	.0022	.0868	.2166	.5004	2.153	2.947	.0056

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3280</b>	<b>.7441</b>	<b>.1639</b>	<b>.0231</b>	<b>.6249</b>	<b>-.0112</b>	<b>-.0012</b>	<b>88.37</b>	<b>267.6</b>
Stddev	.0086	.0020	.0050	.0087	.0042	.0056	.0075	.05	.1
%RSD	2.631	.2656	3.071	37.81	.6795	50.08	620.5	.0541	.0514
#1	.3373	.7442	.1691	.0151	.6209	-.0173	-.0091	88.32	267.7
#2	.3265	.7421	.1591	.0324	.6244	-.0102	-.0059	88.41	267.7
#3	.3202	.7460	.1635	.0218	.6294	-.0062	-.0005	88.37	267.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>155.4</b>	<b>119.6</b>	<b>24.75</b>	<b>5.019</b>	<b>.0949</b>	<b>.0103</b>	<b>2.078</b>	<b>.0447</b>	<b>.7266</b>
Stddev	.1	.2	.04	.023	.0019	.0009	.007	.0035	.0017
%RSD	.0576	.1368	.1550	.4600	1.957	8.732	.3458	7.921	.2338
#1	155.5	119.6	24.79	4.995	.0930	.0100	2.084	.0442	.7283
#2	155.4	119.7	24.71	5.041	.0951	.0114	2.070	.0485	.7266
#3	155.3	119.4	24.75	5.020	.0967	.0097	2.081	.0415	.7249

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>7.246</b>	<b>.0220</b>	<b>.1074</b>	<b>14.31</b>	<b>.0311</b>	<b>.0970</b>	<b>4.122</b>	<b>.5744</b>
Stddev	.234	.0050	.0030	.02	.0090	.0011	.007	.0146
%RSD	3.229	22.61	2.750	.1625	28.97	1.121	.1733	2.544
#1	7.516	.0200	.1108	14.32	.0415	.0977	4.124	.5910
#2	7.123	.0184	.1055	14.29	.0272	.0957	4.115	.5686
#3	7.100	.0277	.1060	14.33	.0248	.0975	4.129	.5636

Sample Name: mp17592-sd1 Acquired: 9/30/2019 21:32:15 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>74645.</b>	<b>12038.</b>	<b>4988.1</b>	<b>9884.4</b>
Stddev	2293.	56.	19.9	34.7
%RSD	3.0723	.46381	.39948	.35153
#1	72008.	12101.	4987.1	9873.6
#2	75754.	12017.	5008.5	9923.3
#3	76174.	11995.	4968.7	9856.4

11.2  
11

Sample Name: jc95411-1 Acquired: 9/30/2019 21:37:09 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.021</b>	<b>.0090</b>	<b>.0044</b>	<b>.1085</b>	<b>.1942</b>	<b>.2766</b>	<b>7.184</b>	<b>.1972</b>	<b>.0046</b>
Stddev	.002	.0001	.0001	.0039	.0032	.0037	.109	.0052	.0009
%RSD	.1729	1.513	2.048	3.576	1.626	1.327	1.519	2.625	20.17
#1	1.023	.0089	.0045	.1127	.1915	.2739	7.086	.2027	.0053
#2	1.020	.0089	.0043	.1079	.1935	.2751	7.165	.1963	.0048
#3	1.020	.0091	.0045	.1050	.1976	.2808	7.301	.1925	.0035

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3893</b>	<b>.8461</b>	<b>.0281</b>	<b>.0124</b>	<b>.1129</b>	<b>-.0069</b>	<b>.0032</b>	<b>101.4</b>	<b>20.50</b>
Stddev	.0062	.0249	.0011	.0028	.0025	.0013	.0009	.2	.06
%RSD	1.595	2.945	3.988	22.24	2.185	19.40	27.43	.1883	.2706
#1	.3841	.8738	.0293	.0129	.1156	-.0084	.0032	101.6	20.56
#2	.3875	.8390	.0279	.0094	.1125	-.0057	.0023	101.3	20.46
#3	.3962	.8255	.0271	.0148	.1107	-.0067	.0040	101.3	20.49

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>173.0</b>	<b>60.89</b>	<b>65.50</b>	<b>1.078</b>	<b>.0090</b>	<b>.0008</b>	<b>1.749</b>	<b>.0286</b>	<b>.2188</b>
Stddev	.3	.14	.16	.006	.0003	.0001	.052	.0006	.0002
%RSD	.1629	.2238	.2514	.5445	3.306	10.00	2.961	2.199	.1143
#1	173.3	61.03	65.69	1.085	.0092	.0007	1.806	.0292	.2191
#2	172.8	60.76	65.39	1.075	.0091	.0009	1.734	.0288	.2187
#3	172.8	60.88	65.43	1.075	.0086	.0008	1.706	.0279	.2186

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 8.983</b>	<b>.0015</b>	<b>.0124</b>	<b>.4419</b>	<b>.0332</b>	<b>.0966</b>	<b>3.801</b>	<b>.8482</b>
Stddev	.128	.0007	.0002	.0119	.0053	.0019	.106	.0160
%RSD	1.425	46.26	1.566	2.702	16.10	1.919	2.797	1.883
#1	8.849	.0022	.0122	.4552	.0279	.0987	3.919	.8349
#2	8.997	.0008	.0123	.4383	.0332	.0959	3.771	.8438
#3	9.104	.0014	.0125	.4322	.0386	.0952	3.712	.8660

Sample Name: jc95411-1 Acquired: 9/30/2019 21:37:09 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>80023.</b>	<b>12759.</b>	<b>5251.2</b>	<b>9794.9</b>
Stddev	990.	45.	124.8	228.8
%RSD	1.2368	.35140	2.3775	2.3357
#1	81067.	12709.	5113.3	9539.3
#2	79904.	12796.	5283.5	9864.9
#3	79098.	12772.	5356.7	9980.4

Sample Name: jc95411-2 Acquired: 9/30/2019 21:42:17 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5664</b>	<b>.0055</b>	<b>.0016</b>	<b>.0583</b>	<b>.1994</b>	<b>.1518</b>	<b>2.205</b>	<b>.1080</b>	<b>.0030</b>
Stddev	.0012	.0001	.0000	.0003	.0011	.0007	.001	.0013	.0002
%RSD	.2123	1.020	2.747	.5310	.5549	.4727	.0523	1.236	5.270
#1	.5678	.0055	.0016	.0586	.1998	.1527	2.205	.1092	.0028
#2	.5656	.0055	.0016	.0584	.1981	.1515	2.204	.1066	.0029
#3	.5668	.0056	.0015	.0580	.2002	.1514	2.207	.1081	.0031
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2532</b>	<b>.6685</b>	<b>.0636</b>	<b>.0039</b>	<b>.9834</b>	<b>-.0074</b>	<b>.0585</b>	<b>121.9</b>	<b>55.81</b>
Stddev	.0007	.0055	.0010	.0016	.0059	.0025	.0009	.2	.08
%RSD	.2698	.8198	1.560	41.14	.5964	34.28	1.575	.1566	.1373
#1	.2540	.6730	.0639	.0034	.9865	-.0096	.0591	122.1	55.88
#2	.2527	.6624	.0624	.0025	.9766	-.0046	.0574	122.0	55.82
#3	.2530	.6700	.0643	.0056	.9871	-.0079	.0589	121.7	55.73
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>187.1</b>	<b>24.45</b>	<b>12.84</b>	<b>1.988</b>	<b>.0239</b>	<b>.0053</b>	<b>2.160</b>	<b>.0365</b>	<b>.3096</b>
Stddev	.4	.05	.04	.014	.0010	.0001	.013	.0010	.0007
%RSD	.2302	.1925	.3460	.7123	4.218	1.865	.6008	2.672	.2105
#1	187.5	24.50	12.87	2.004	.0244	.0054	2.169	.0363	.3104
#2	187.2	24.42	12.79	1.981	.0227	.0053	2.145	.0356	.3093
#3	186.7	24.42	12.85	1.978	.0245	.0052	2.167	.0376	.3092
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.699</b>	<b>.0020</b>	<b>.0755</b>	<b>.9867</b>	<b>-.0043</b>	<b>.1317</b>	<b>3.963</b>	<b>.5346</b>	
Stddev	.008	.0006	.0002	.0089	.0024	.0019	.029	.0014	
%RSD	.4870	29.46	.2869	.9036	55.36	1.411	.7407	.2593	
#1	1.708	.0020	.0757	.9940	-.0028	.1327	3.985	.5339	
#2	1.696	.0026	.0755	.9768	-.0071	.1295	3.930	.5362	
#3	1.692	.0014	.0753	.9895	-.0030	.1328	3.975	.5337	

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Sample Name: jc95411-2 Acquired: 9/30/2019 21:42:17 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76511.	12068.	5061.6	9845.9
Stddev	295.	66.	41.6	66.4
%RSD	.38588	.54581	.82216	.67403
#1	76205.	12011.	5030.0	9795.3
#2	76795.	12054.	5108.7	9921.0
#3	76534.	12140.	5046.0	9821.2

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Sample Name: jc95411-3 Acquired: 9/30/2019 21:47:18 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.9282</b>	<b>.0055</b>	<b>.0078</b>	<b>.0651</b>	<b>.3646</b>	<b>2.143</b>	<b>2.510</b>	<b>.2239</b>	<b>.0089</b>
Stddev	.0370	.0001	.0004	.0007	.0035	.013	.032	.0024	.0041
%RSD	3.981	2.424	4.983	1.122	9.652	6.024	1.265	1.092	46.52
#1	.9011	.0054	.0081	.0652	.3677	2.156	2.529	.2255	.0057
#2	.9133	.0055	.0079	.0657	.3654	2.143	2.528	.2250	.0074
#3	.9703	.0057	.0074	.0643	.3608	2.131	2.473	.2211	.0136
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2635</b>	<b>8.705</b>	<b>.1380</b>	<b>.0059</b>	<b>1.680</b>	<b>-.0082</b>	<b>.0174</b>	<b>134.4</b>	<b>115.2</b>
Stddev	.0031	.072	.0002	.0008	.013	.0051	.0012	5.5	4.7
%RSD	1.191	1.076	.1710	13.18	.7884	62.96	6.888	4.113	4.073
#1	.2658	6.742	.1382	.0063	1.686	-.0119	.0187	130.3	111.7
#2	.2648	6.750	.1378	.0050	1.688	-.0103	.0171	132.2	113.5
#3	.2600	6.622	.1381	.0065	1.664	-.0023	.0164	140.6	120.6
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 269.7</b>	<b>32.12</b>	<b>15.00</b>	<b>1.805</b>	<b>.0694</b>	<b>.0185</b>	<b>2.629</b>	<b>.2564</b>	<b>.6167</b>
Stddev	10.9	1.42	.60	.073	.0017	.0004	.026	.0031	.0247
%RSD	4.059	4.418	4.024	4.056	2.397	1.929	.9960	1.228	4.013
#1	261.4	30.98	14.52	1.747	.0707	.0181	2.645	.2580	.5981
#2	265.5	31.67	14.81	1.781	.0699	.0188	2.643	.2585	.6073
#3	282.1	33.71	15.68	1.887	.0675	.0187	2.598	.2528	.6448
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>3.270</b>	<b>-.0125</b>	<b>.0898</b>	<b>9.585</b>	<b>.0051</b>	<b>.1038</b>	<b>4.342</b>	<b>.5139</b>	
Stddev	.026	.0012	.0002	.084	.0033	.0043	.037	.0028	
%RSD	.8068	9.382	.1887	.8753	65.96	4.135	.8610	.5451	
#1	3.295	-.0138	.0900	9.628	.0080	.0994	4.358	.5160	
#2	3.272	-.0116	.0898	9.638	.0058	.1039	4.370	.5149	
#3	3.242	-.0121	.0897	9.488	.0014	.1080	4.300	.5107	

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Sample Name: jc95411-3 Acquired: 9/30/2019 21:47:18 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76727.	11903.	5017.4	9951.1
Stddev	651.	453.	49.2	86.9
%RSD	.84809	3.8045	.98057	.87364
#1	76075.	12246.	4990.5	9905.3
#2	76729.	12072.	4987.5	9896.7
#3	77377.	11390.	5074.2	10051.

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Sample Name: jc95411-4 Acquired: 9/30/2019 21:52:16 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5777</b>	<b>.0059</b>	<b>.0027</b>	<b>.0521</b>	<b>.2224</b>	<b>.2345</b>	<b>1.633</b>	<b>.1125</b>	<b>.0030</b>
Stddev	.0090	.0001	.0002	.0011	.0024	.0025	.015	.0018	.0012
%RSD	1.556	1.694	7.603	2.147	1.066	1.069	.8861	1.590	40.05
#1	.5828	.0058	.0027	.0527	.2227	.2352	1.634	.1136	.0032
#2	.5829	.0060	.0025	.0527	.2199	.2317	1.618	.1135	.0041
#3	.5673	.0058	.0029	.0508	.2246	.2366	1.647	.1105	.0017
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2475</b>	<b>1.187</b>	<b>.0515</b>	<b>.0063</b>	<b>1.103</b>	<b>-.0051</b>	<b>.0027</b>	<b>113.5</b>	<b>171.6</b>
Stddev	.0020	.020	.0016	.0029	.018	.0006	.0016	1.9	2.9
%RSD	.8097	1.676	3.025	45.01	1.647	11.46	59.53	1.692	1.718
#1	.2476	1.192	.0525	.0055	1.111	-.0047	.0011	114.6	173.1
#2	.2454	1.204	.0522	.0040	1.117	-.0049	.0043	114.7	173.4
#3	.2494	1.165	.0497	.0095	1.083	-.0058	.0026	111.3	168.2
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>163.9</b>	<b>60.85</b>	<b>13.06</b>	<b>.8610</b>	<b>.0459</b>	<b>.0057</b>	<b>2.534</b>	<b>.0509</b>	<b>.7074</b>
Stddev	2.8	1.06	.22	.0141	.0011	.0001	.048	.0011	.0116
%RSD	1.711	1.747	1.685	1.639	2.341	1.188	1.905	2.103	1.642
#1	165.3	61.35	13.17	.8679	.0463	.0056	2.558	.0512	.7145
#2	165.7	61.58	13.20	.8703	.0467	.0057	2.565	.0517	.7138
#3	160.7	59.63	12.80	.8447	.0447	.0056	2.478	.0497	.6940
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>2.628</b>	<b>.0016</b>	<b>.0864</b>	<b>1.663</b>	<b>.0034</b>	<b>.1024</b>	<b>2.983</b>	<b>.5368</b>	
Stddev	.026	.0010	.0010	.029	.0033	.0020	.046	.0070	
%RSD	1.002	60.68	1.136	1.740	94.61	1.936	1.551	1.313	
#1	2.628	.0025	.0864	1.674	.0030	.1018	2.996	.5360	
#2	2.601	.0017	.0854	1.686	.0004	.1046	3.022	.5301	
#3	2.654	.0006	.0874	1.631	.0069	.1008	2.932	.5442	

Sample Name: jc95411-4 Acquired: 9/30/2019 21:52:16 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75954.	12459.	5028.0	9671.3
Stddev	529.	239.	72.4	132.9
%RSD	.69626	1.9169	1.4404	1.3740
#1	75826.	12381.	5005.9	9624.3
#2	76536.	12269.	4969.2	9568.2
#3	75501.	12727.	5108.9	9821.2

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Sample Name: jc95411-5 Acquired: 9/30/2019 21:57:08 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6240</b>	<b>.0064</b>	<b>.0069</b>	<b>.0575</b>	<b>.1683</b>	<b>.5247</b>	<b>2.523</b>	<b>.1326</b>	<b>.0038</b>
Stddev	.0007	.0001	.0003	.0010	.0005	.0013	.011	.0019	.0003
%RSD	.1089	1.173	4.958	1.781	2.767	2.414	4.498	1.443	7.179
#1	.6246	.0064	.0069	.0569	.1687	.5253	2.536	.1315	.0039
#2	.6241	.0065	.0073	.0586	.1678	.5257	2.514	.1348	.0040
#3	.6233	.0063	.0066	.0569	.1684	.5233	2.520	.1315	.0035
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2346</b>	<b>1.160</b>	<b>1.192</b>	<b>.0044</b>	<b>.7320</b>	<b>.0054</b>	<b>.0345</b>	<b>85.08</b>	<b>58.98</b>
Stddev	.0005	.015	.013	.0012	.0081	.0006	.0017	.10	.02
%RSD	.2307	1.280	1.116	27.72	1.101	11.15	4.971	.1182	.0371
#1	.2351	1.151	1.186	.0043	.7301	.0061	.0341	85.11	58.99
#2	.2348	1.177	1.208	.0057	.7408	.0049	.0363	85.17	58.99
#3	.2340	1.151	1.183	.0033	.7250	.0053	.0330	84.97	58.95
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 336.2</b>	<b>23.44</b>	<b>9.000</b>	<b>.9860</b>	<b>.0493</b>	<b>.0234</b>	<b>2.556</b>	<b>.0533</b>	<b>.3564</b>
Stddev	.4	.06	.033	.0109	.0007	.0001	.036	.0009	.0006
%RSD	.1276	.2385	.3636	1.104	1.392	.5130	1.405	1.623	.1711
#1	338.6	23.49	9.038	.9839	.0493	.0233	2.539	.0537	.3568
#2	338.2	23.43	8.981	.9977	.0499	.0234	2.598	.0539	.3568
#3	337.8	23.38	8.982	.9763	.0486	.0235	2.532	.0523	.3557
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>2.491</b>	<b>.0071</b>	<b>.0618</b>	<b>34.22</b>	<b>-.0023</b>	<b>.1076</b>	<b>3.160</b>	<b>.4815</b>	
Stddev	.007	.0006	.0002	.42	.0013	.0014	.040	.0009	
%RSD	.2645	7.840	.3858	1.227	58.74	1.318	1.251	.1955	
#1	2.494	.0078	.0620	34.00	-.0038	.1063	3.140	.4824	
#2	2.495	.0067	.0619	34.70	-.0012	.1091	3.205	.4805	
#3	2.483	.0069	.0616	33.95	-.0018	.1074	3.133	.4816	

Sample Name: jc95411-5 Acquired: 9/30/2019 21:57:08 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	77239.	12461.	5042.3	10092.
Stddev	277.	26.	54.2	91.
%RSD	.35805	.20738	1.0742	.90623
#1	76928.	12453.	5071.7	10140.
#2	77332.	12490.	4979.8	9986.5
#3	77458.	12440.	5075.4	10149.

Table with columns: Sample Name, Acquired, Type, Method, User, Comment, Elem, Units, Avg, Stdev, %RSD, #1, #2, #3. Includes data for elements like Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

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Table with columns: Sample Name, Acquired, Type, Method, User, Comment, Elem, Units, Avg, Stdev, %RSD, #1, #2, #3. Includes data for elements like Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

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Table with columns: Sample Name, Acquired, Type, Method, User, Comment, Elem, Units, Avg, Stdev, %RSD, #1, #2, #3. Includes data for elements like Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

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Table with columns: Sample Name, Acquired, Type, Method, User, Comment, Elem, Units, Avg, Stdev, %RSD, #1, #2, #3. Includes data for elements like Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

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Sample Name: jc95411-6 Acquired: 9/30/2019 22:12:07 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.996</b>	<b>.0107</b>	<b>.0011</b>	<b>.0267</b>	<b>.1605</b>	<b>.1907</b>	<b>F 14.08</b>	<b>.0790</b>	<b>.0024</b>
Stddev	.004	.0001	.0002	.0003	.0016	.0024	.16	.0013	.0006
%RSD	.2027	.7421	15.53	1.108	.9844	1.261	1.148	1.635	23.70
#1	1.997	.0108	.0010	.0263	.1624	.1934	14.24	.0781	.0018
#2	1.991	.0107	.0013	.0269	.1597	.1888	14.07	.0805	.0029
#3	1.998	.0106	.0011	.0268	.1596	.1899	13.92	.0784	.0026
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3605</b>	<b>.2324</b>	<b>.0697</b>	<b>.0129</b>	<b>.3181</b>	<b>.0084</b>	<b>.0017</b>	<b>104.9</b>	<b>F 350.8</b>
Stddev	.0038	.0031	.0008	.0012	.0025	.0010	.0001	.2	4.0
%RSD	1.054	1.355	1.141	9.149	.7947	12.26	5.942	.1544	1.153
#1	.3649	.2311	.0689	.0131	.3175	.0086	.0016	105.0	347.0
#2	.3587	.2360	.0704	.0140	.3208	.0073	.0018	104.7	350.3
#3	.3580	.2301	.0699	.0117	.3159	.0093	.0017	104.9	355.0
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>94.56</b>	<b>142.1</b>	<b>18.21</b>	<b>5.258</b>	<b>.1914</b>	<b>.0108</b>	<b>2.154</b>	<b>.0358</b>	<b>1.236</b>
Stddev	.17	.4	.10	.008	.0021	.0005	.028	.0006	.003
%RSD	.1746	.3140	.5474	.1483	1.097	4.225	1.288	1.795	2.101
#1	94.58	142.3	18.23	5.257	.1906	.0108	2.139	.0357	1.238
#2	94.38	141.6	18.10	5.251	.1938	.0112	2.186	.0365	1.233
#3	94.71	142.5	18.29	5.266	.1899	.0103	2.138	.0353	1.238
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>6.758</b>	<b>.0035</b>	<b>.1704</b>	<b>24.56</b>	<b>.0328</b>	<b>.1294</b>	<b>1.416</b>	<b>.4878</b>	
Stddev	.084	.0008	.0024	.33	.0026	.0010	.020	.0053	
%RSD	1.238	23.50	1.415	1.327	7.819	.7562	1.377	1.084	
#1	6.854	.0027	.1732	24.40	.0354	.1283	1.409	.4936	
#2	6.704	.0036	.1687	24.93	.0302	.1294	1.439	.4832	
#3	6.715	.0043	.1694	24.34	.0328	.1303	1.402	.4866	

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Sample Name: jc95411-6 Acquired: 9/30/2019 22:12:07 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75839.	12648.	4995.3	9205.1
Stddev	886.	29.	63.0	116.2
%RSD	1.1676	.23131	1.2613	1.2626
#1	74907.	12656.	5017.9	9250.3
#2	75941.	12672.	4924.1	9073.0
#3	76669.	12615.	5043.9	9291.8

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Sample Name: jc95411-7 Acquired: 9/30/2019 22:17:14 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6385</b>	<b>.0063</b>	<b>.0030</b>	<b>.0695</b>	<b>.1091</b>	<b>.8114</b>	<b>2.091</b>	<b>.1410</b>	<b>.0029</b>
Stddev	.0004	.0001	.0002	.0004	.0029	.0201	.037	.0004	.0014
%RSD	.0618	.9289	5.120	.5899	2.684	2.479	1.750	2.577	50.11
#1	.6381	.0062	.0028	.0700	.1125	.8346	2.133	.1414	.0012
#2	.6386	.0063	.0030	.0695	.1073	.7982	2.077	.1408	.0037
#3	.6389	.0062	.0031	.0692	.1076	.8015	2.063	.1407	.0037
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1589</b>	<b>1.492</b>	<b>.0641</b>	<b>.0044</b>	<b>1.874</b>	<b>-.0009</b>	<b>.0092</b>	<b>59.06</b>	<b>30.66</b>
Stddev	.0037	.011	.0014	.0026	.012	.0024	.0008	.17	.13
%RSD	2.327	.7203	2.155	58.78	.6355	273.8	9.189	2840	4084
#1	.1630	1.499	.0657	.0053	1.885	-.0002	.0094	59.19	30.77
#2	.1577	1.498	.0630	.0063	1.875	-.0035	.0100	59.12	30.68
#3	.1560	1.480	.0637	.0015	1.862	.0011	.0083	58.87	30.52
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>180.1</b>	<b>17.30</b>	<b>6.397</b>	<b>.9768</b>	<b>.0606</b>	<b>.0096</b>	<b>2.224</b>	<b>.0747</b>	<b>.2082</b>
Stddev	.5	.05	.052	.0029	.0001	.0002	.011	.0010	.0006
%RSD	.2515	.2840	.8148	.2933	.1081	1.912	.4774	1.384	.2807
#1	180.4	17.34	6.359	.9800	.0606	.0097	2.229	.0744	.2085
#2	180.3	17.31	6.376	.9743	.0606	.0094	2.232	.0759	.2085
#3	179.6	17.25	6.457	.9762	.0607	.0096	2.212	.0738	.2075
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.924</b>	<b>-.0001</b>	<b>.0518</b>	<b>12.93</b>	<b>.0032</b>	<b>.1148</b>	<b>3.246</b>	<b>2548</b>	
Stddev	.050	.0010	.0012	.07	.0008	.0009	.018	.0077	
%RSD	2.608	955.5	2.229	.5113	25.56	.7859	.5630	3.034	
#1	1.982	.0010	.0532	12.97	.0035	.1157	3.263	2636	
#2	1.895	-.0008	.0512	12.96	.0023	.1139	3.247	2494	
#3	1.895	-.0006	.0512	12.85	.0039	.1150	3.227	2513	

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Sample Name: jc95411-7 Acquired: 9/30/2019 22:17:14 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75479.	12086.	5038.2	10012.
Stddev	1714.	138.	35.8	63.
%RSD	2.2714	1.1428	.70976	.62752
#1	73511.	11948.	5019.3	9973.3
#2	76270.	12086.	5015.8	9978.1
#3	76655.	12224.	5079.4	10084.

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Sample Name: jc95411-8 Acquired: 9/30/2019 22:22:15 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3041</b>	<b>.0501</b>	<b>.0100</b>	<b>.1719</b>	<b>.2442</b>	<b>2.236</b>	<b>5.023</b>	<b>.3989</b>	<b>*****</b>
Stddev	.0037	.0006	.0004	.0014	.0035	.032	.073	.0031	----
%RSD	1.201	1.120	4.236	.7905	1.422	1.434	1.450	.7721	----
#1	.3063	.0505	.0095	.1704	.2475	2.264	5.085	.3953	----
#2	.3062	.0504	.0104	.1731	.2445	2.243	5.040	.4007	----
#3	.2999	.0495	.0101	.1723	.2406	2.201	4.943	.4006	----
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2825</b>	<b>2.395</b>	<b>.0937</b>	<b>.0010</b>	<b>.7624</b>	<b>-.0034</b>	<b>.0018</b>	<b>140.9</b>	<b>34.56</b>
Stddev	.0042	.018	.0012	.0018	.0061	.0006	.0020	1.7	.41
%RSD	1.495	.7429	1.332	172.7	8003	16.42	114.0	1.219	1.182
#1	.2864	2.377	.0930	.0005	.7555	-.0027	.0009	142.0	34.82
#2	.2831	2.412	.0952	-.0004	.7673	-.0037	.0041	141.9	34.78
#3	.2780	2.397	.0930	.0030	.7644	-.0036	.0004	139.0	34.09
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 398.3</b>	<b>59.17</b>	<b>9.919</b>	<b>.5273</b>	<b>.0219</b>	<b>.0053</b>	<b>2.348</b>	<b>.0602</b>	<b>.1459</b>
Stddev	4.3	.74	.133	.0096	.0001	.0004	.024	.0007	.0014
%RSD	1.070	1.243	1.341	1.829	.6594	7.873	1.007	1.120	.9636
#1	402.2	59.69	10.01	.5287	.0220	.0057	2.321	.0595	.1465
#2	399.0	59.48	9.977	.5362	.0219	.0049	2.366	.0603	.1469
#3	393.8	58.33	9.767	.5171	.0217	.0054	2.356	.0608	.1443
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>3.468</b>	<b>-.0009</b>	<b>.0284</b>	<b>18.28</b>	<b>.0016</b>	<b>.1154</b>	<b>5.318</b>	<b>.9068</b>	
Stddev	.051	.0009	.0004	.15	.0011	.0015	.044	.0118	
%RSD	1.466	105.7	1.451	.7951	67.05	1.336	.8263	1.301	
#1	3.512	-.0002	.0288	18.12	.0027	.1161	5.271	.9173	
#2	3.480	-.0020	.0283	18.40	.0006	.1166	5.358	.9090	
#3	3.412	-.0005	.0280	18.32	.0014	.1137	5.324	.8941	

Sample Name: jc95411-8 Acquired: 9/30/2019 22:22:15 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>83853.</b>	<b>13433.</b>	<b>5500.7</b>	<b>10211.</b>
Stddev	860.	183.	36.0	68.
%RSD	1.0255	1.3594	.65379	.66567
#1	83096.	13291.	5534.2	10276.
#2	83675.	13370.	5462.7	10141.
#3	84788.	13639.	5505.2	10216.

11.2  
11

Sample Name: jc95411-9 Acquired: 9/30/2019 22:27:22 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3824</b>	<b>.0033</b>	<b>.0007</b>	<b>.0200</b>	<b>.0335</b>	<b>.1455</b>	<b>2.760</b>	<b>.0596</b>	<b>.0049</b>
Stddev	.0014	.0001	.0002	.0006	.0015	.0055	.079	.0005	.0022
%RSD	.3531	3.751	24.39	2.767	4.536	3.797	2.873	.7668	45.73
#1	.3834	.0032	.0005	.0207	.0318	.1392	2.670	.0601	.0074
#2	.3809	.0035	.0008	.0196	.0346	.1498	2.820	.0597	.0032
#3	.3829	.0033	.0008	.0198	.0342	.1474	2.791	.0592	.0040
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0633</b>	<b>.5855</b>	<b>.0872</b>	<b>.0015</b>	<b>.1403</b>	<b>.0041</b>	<b>.0034</b>	<b>12.37</b>	<b>12.64</b>
Stddev	.0020	.0048	.0014	.0008	.0015	.0021	.0006	.03	.05
%RSD	3.203	.8228	1.621	53.38	1.051	51.46	18.85	.2094	.3980
#1	.0610	.5903	.0889	.0021	.1420	.0060	.0041	12.39	12.69
#2	.0645	.5855	.0865	.0006	.1396	.0018	.0028	12.34	12.60
#3	.0645	.5807	.0863	.0018	.1394	.0045	.0032	12.36	12.61
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>170.4</b>	<b>2.135</b>	<b>1.215</b>	<b>.4208</b>	<b>.0059</b>	<b>.0174</b>	<b>1.090</b>	<b>.0536</b>	<b>.1090</b>
Stddev	5	.021	.020	.0108	.0004	.0001	.006	.0003	.0007
%RSD	.3108	.9609	1.628	2.574	6.791	.7647	.5635	.4912	.6238
#1	171.0	2.152	1.236	.4306	.0054	.0175	1.095	.0535	.1098
#2	170.0	2.141	1.198	.4225	.0061	.0173	1.093	.0539	.1084
#3	170.2	2.112	1.210	.4092	.0061	.0174	1.083	.0534	.1089
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>2.080</b>	<b>.0024</b>	<b>.0249</b>	<b>F 125.4</b>	<b>.0049</b>	<b>.0075</b>	<b>.6636</b>	<b>.1403</b>	
Stddev	.081	.0007	.0006	.8	.0016	.0002	.0025	.0056	
%RSD	3.896	28.12	2.521	.6289	32.18	2.249	.3781	3.958	
#1	1.987	.0026	.0242	126.2	.0032	.0077	.6660	.1341	
#2	2.137	.0016	.0254	125.3	.0063	.0075	.6640	.1449	
#3	2.116	.0030	.0251	124.6	.0053	.0074	.6610	.1418	

Sample Name: jc95411-9 Acquired: 9/30/2019 22:27:22 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>77842.</b>	<b>11726.</b>	<b>4991.1</b>	<b>10149.</b>
Stddev	2363.	93.	33.7	76.
%RSD	3.0360	.78884	.67566	.75131
#1	80534.	11678.	4957.6	10073.
#2	76107.	11668.	4990.8	10148.
#3	76885.	11833.	5025.0	10226.

Sample Name: jc95489-1 Acquired: 9/30/2019 22:32:23 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.8182</b>	<b>.0045</b>	<b>.0009</b>	<b>.0600</b>	<b>.1336</b>	<b>.1881</b>	<b>3.585</b>	<b>.1223</b>	<b>.0030</b>
Stddev	.0301	.0001	.0001	.0008	.0001	.0002	.036	.0010	.0018
%RSD	3.680	1.625	13.33	1.313	.0981	.1063	.9971	.8309	61.62
#1	.7861	.0044	.0008	.0595	.1337	.1880	3.566	.1213	.0009
#2	.8458	.0045	.0010	.0595	.1335	.1879	3.626	.1222	.0044
#3	.8227	.0045	.0010	.0609	.1336	.1883	3.562	.1233	.0036

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1815</b>	<b>.5353</b>	<b>.0350</b>	<b>.0053</b>	<b>3.511</b>	<b>-.0042</b>	<b>.0009</b>	<b>88.41</b>	<b>23.01</b>
Stddev	.0004	.0066	.0012	.0008	.042	.0028	.0016	3.23	.84
%RSD	.2448	1.236	3.354	15.09	1.183	65.88	174.1	3.648	3.670
#1	.1810	.5306	.0345	.0060	3.483	-.0074	-.0001	84.98	22.12
#2	.1819	.5324	.0364	.0055	3.492	-.0023	.0001	91.38	23.80
#3	.1815	.5429	.0342	.0045	3.559	-.0029	.0028	88.87	23.12

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>143.1</b>	<b>30.01</b>	<b>12.27</b>	<b>.8227</b>	<b>.0596</b>	<b>.0043</b>	<b>1.889</b>	<b>.0302</b>	<b>.1163</b>
Stddev	5.2	1.11	.44	.0248	.0006	.0003	.020	.0004	.0043
%RSD	3.667	3.701	3.612	3.019	1.000	6.800	1.063	1.254	3.671
#1	137.5	28.83	11.80	.7975	.0597	.0044	1.880	.0302	.1118
#2	147.9	31.03	12.68	.8472	.0590	.0040	1.876	.0298	.1203
#3	143.8	30.18	12.34	.8235	.0602	.0046	1.912	.0306	.1168

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.092</b>	<b>.0030</b>	<b>.0434</b>	<b>1.144</b>	<b>.0020</b>	<b>.1175</b>	<b>4.075</b>	<b>.3676</b>
Stddev	.002	.0011	.0001	.009	.0011	.0043	.046	.0028
%RSD	.1137	36.24	.3007	.7965	56.06	3.660	1.133	.7727
#1	2.090	.0042	.0432	1.141	.0020	.1132	4.047	.3692
#2	2.094	.0023	.0435	1.137	.0032	.1218	4.050	.3693
#3	2.090	.0024	.0435	1.154	.0009	.1174	4.128	.3643

Sample Name: jc95489-1 Acquired: 9/30/2019 22:32:23 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>77486.</b>	<b>12233.</b>	<b>5159.1</b>	<b>10026.</b>
Stddev	411.	399.	45.8	92.
%RSD	.53032	3.2627	.88836	.91360
#1	77938.	12646.	5190.8	10093.
#2	77134.	11849.	5179.9	10063.
#3	77387.	12204.	5106.6	9921.5

Sample Name: jc95489-5 Acquired: 9/30/2019 22:37:24 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5524</b>	<b>.0023</b>	<b>.0107</b>	<b>.5496</b>	<b>.2202</b>	<b>.9771</b>	<b>1.556</b>	<b>F 14.82</b>
Stddev	.0025	.0001	.0003	.0019	.0035	.0150	.026	.05
%RSD	.4481	3.241	2.599	.3397	1.610	1.537	1.698	.3686
#1	.5502	.0024	.0106	.5517	.2225	.9853	1.572	14.88
#2	.5551	.0023	.0105	.5491	.2220	.9863	1.570	14.81
#3	.5518	.0022	.0110	.5481	.2162	.9598	1.525	14.77

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	****	<b>.3172</b>	<b>1.146</b>	<b>.2540</b>	<b>F -.0022</b>	<b>.7718</b>	<b>F -.0170</b>	<b>.0236</b>
Stddev	----	.0061	.005	.0013	.0006	.0035	.0020	.0013
%RSD	----	1.932	4.769	.4961	25.83	4.531	12.01	5.352
#1	----	.3208	1.153	.2529	-.0028	.7758	-.0193	.0234
#2	----	.3206	1.144	.2537	-.0023	.7700	-.0163	.0224
#3	----	.3101	1.142	.2553	-.0016	.7695	-.0154	.0249

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>43.18</b>	<b>31.96</b>	<b>F 530.9</b>	<b>17.43</b>	<b>8.328</b>	<b>.9601</b>	<b>.0337</b>	<b>.0198</b>
Stddev	.18	.14	2.4	.06	.040	.0068	.0003	.0003
%RSD	.4095	.4385	.4466	.3555	.4765	.7086	1.005	1.390
#1	43.02	31.84	528.5	17.37	8.288	.9544	.0333	.0198
#2	43.37	32.11	530.8	17.50	8.367	.9584	.0339	.0200
#3	43.14	31.91	533.3	17.42	8.329	.9676	.0338	.0195

Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.282</b>	<b>.1132</b>	<b>.2104</b>	<b>2.746</b>	<b>.0109</b>	<b>.0548</b>	<b>F 442.7</b>	<b>-.0086</b>
Stddev	.008	.0004	.0009	.045	.0011	.0005	2.0	.0026
%RSD	.3527	.3323	.4304	1.641	9.879	.8722	.4453	29.71
#1	2.289	.1128	.2095	2.774	.0116	.0551	444.9	-.0062
#2	2.284	.1135	.2113	2.771	.0096	.0550	442.1	-.0084
#3	2.273	.1132	.2103	2.694	.0113	.0543	441.1	-.0113

Sample Name: jc95489-5 Acquired: 9/30/2019 22:37:24 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>.0775</b>	<b>2.494</b>	<b>.3826</b>
Stddev	.0011	.012	.0057
%RSD	1.373	.4624	1.482
#1	.0771	2.508	.3885
#2	.0787	2.489	.3821
#3	.0767	2.487	.3772

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>76735.</b>	<b>12037.</b>	<b>4932.7</b>	<b>10544.</b>
Stddev	1226.	39.	23.2	41.
%RSD	1.5982	.32305	.46942	.38918
#1	75976.	12077.	4906.2	10498.
#2	76079.	11999.	4942.3	10555.
#3	78150.	12036.	4949.4	10577.

Sample Name: jc95495-1 Acquired: 9/30/2019 22:42:21 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.436</b>	<b>.0056</b>	<b>.0069</b>	<b>.0474</b>	<b>.2643</b>	<b>.6616</b>	<b>1.710</b>	<b>1.303</b>	<b>.0040</b>
Stddev	.032	.0000	.0004	.0004	.0035	.0080	.019	.004	.0009
%RSD	.7220	.3808	5.542	8.708	1.315	1.204	1.132	.2879	22.32
#1	4.473	.0055	.0071	.0478	.2617	.6560	1.695	1.307	.0046
#2	4.416	.0056	.0071	.0474	.2683	.6707	1.732	1.303	.0030
#3	4.419	.0055	.0064	.0470	.2631	.6580	1.704	1.299	.0044
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5811</b>	<b>2.007</b>	<b>.3300</b>	<b>.0065</b>	<b>1.721</b>	<b>.0004</b>	<b>.0155</b>	<b>92.72</b>	<b>F 456.2</b>
Stddev	.0064	.005	.0011	.0021	.006	.0010	.0003	.65	1.7
%RSD	1.106	.2481	.3398	31.84	.3505	280.6	2.094	.7033	.3828
#1	.5766	2.010	.3288	.0043	1.726	-.0004	.0157	93.46	457.3
#2	.5884	2.010	.3310	.0084	1.722	.0000	.0156	92.25	454.2
#3	.5782	2.001	.3301	.0068	1.714	.0015	.0151	92.44	457.1
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>166.0</b>	<b>64.15</b>	<b>7.193</b>	<b>12.62</b>	<b>.0861</b>	<b>.0230</b>	<b>1.608</b>	<b>.0904</b>	<b>1.021</b>
Stddev	1.1	.59	.043	.09	.0009	.0001	.003	.0006	.007
%RSD	.6777	.9155	.5968	6922	1.055	.3900	.1820	.6630	.7014
#1	167.3	64.80	7.222	12.72	.0867	.0230	1.609	.0901	1.029
#2	165.1	63.65	7.143	12.55	.0865	.0230	1.610	.0911	1.016
#3	165.7	64.00	7.212	12.58	.0850	.0229	1.604	.0900	1.017
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>3.511</b>	<b>.0005</b>	<b>.2497</b>	<b>59.77</b>	<b>.0135</b>	<b>.0390</b>	<b>7.808</b>	<b>.3682</b>	
Stddev	.040	.0005	.0030	.12	.0012	.0014	.021	.0036	
%RSD	1.140	107.3	1.182	2021	9.001	3.713	.2730	.9711	
#1	3.481	.0010	.2474	59.85	.0123	.0406	7.823	.3658	
#2	3.557	.0001	.2530	59.84	.0147	.0383	7.817	.3723	
#3	3.495	.0003	.2486	59.63	.0134	.0380	7.784	.3666	

Sample Name: jc95495-1 Acquired: 9/30/2019 22:42:21 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>74427.</b>	<b>11962.</b>	<b>4854.3</b>	<b>9382.9</b>
Stddev	754.	104.	10.3	25.8
%RSD	1.0133	.86938	.21167	.27513
#1	75141.	11910.	4846.6	9356.8
#2	73638.	12082.	4850.3	9383.7
#3	74501.	11895.	4866.0	9408.4

11.2  
11

Sample Name: jc95495-3 Acquired: 9/30/2019 22:47:18 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5827</b>	<b>.0048</b>	<b>.0014</b>	<b>.0530</b>	<b>.1836</b>	<b>.0158</b>	<b>2.140</b>	<b>.2193</b>	<b>.0008</b>
Stddev	.0031	.0000	.0001	.0004	.0003	.0002	.009	.0012	.0009
%RSD	.5339	.1996	8.603	7.435	.1540	1.338	.4445	.5335	113.9
#1	.5853	.0048	.0013	.0527	.1834	.0160	2.150	.2180	.0018
#2	.5793	.0048	.0013	.0534	.1839	.0158	2.131	.2194	.0001
#3	.5835	.0048	.0015	.0528	.1835	.0156	2.139	.2203	.0005
Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1662</b>	<b>.2446</b>	<b>.0457</b>	<b>.0066</b>	<b>.0245</b>	<b>-.0093</b>	<b>.0019</b>	<b>122.5</b>	<b>F 305.2</b>
Stddev	.0003	.0010	.0014	.0010	.0014	.0032	.0018	.6	5.8
%RSD	.1631	.4172	3.116	15.73	5.742	34.32	92.83	.4795	1.884
#1	.1659	.2440	.0443	.0054	.0248	-.0081	-.0001	122.9	310.7
#2	.1665	.2458	.0472	.0073	.0257	-.0129	.0034	121.8	299.3
#3	.1663	.2441	.0456	.0070	.0229	-.0068	.0025	122.7	305.5
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>191.4</b>	<b>154.4</b>	<b>34.33</b>	<b>.5952</b>	<b>.1948</b>	<b>.0061</b>	<b>3.431</b>	<b>.0192</b>	<b>7.581</b>
Stddev	1.0	.9	.15	.0017	.0008	.0003	.010	.0008	.082
%RSD	.5372	.5636	.4381	.2923	.4174	5.380	.2870	4.293	1.079
#1	192.1	155.2	34.47	.5966	.1951	.0063	3.427	.0197	7.486
#2	190.2	153.5	34.17	.5958	.1954	.0063	3.443	.0197	7.633
#3	191.8	154.7	34.34	.5933	.1939	.0057	3.424	.0183	7.622
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.4871</b>	<b>.0027</b>	<b>.0857</b>	<b>F 113.6</b>	<b>-.0114</b>	<b>.2962</b>	<b>2.714</b>	<b>.1850</b>	
Stddev	.0012	.0006	.0003	.3	.0013	.0014	.006	.0017	
%RSD	2.397	20.55	.3067	2903	11.24	4.761	.2386	.9213	
#1	.4873	.0021	.0857	113.3	-.0121	.2972	2.709	.1839	
#2	.4858	.0031	.0854	113.9	-.0099	.2946	2.721	.1869	
#3	.4881	.0030	.0860	113.5	-.0122	.2969	2.711	.1841	

Sample Name: jc95495-3 Acquired: 9/30/2019 22:47:18 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>73556.</b>	<b>11865.</b>	<b>4823.1</b>	<b>9407.4</b>
Stddev	358.	62.	15.7	15.3
%RSD	.48677	.52201	.32513	.16226
#1	73542.	11820.	4834.7	9423.5
#2	73922.	11936.	4805.3	9393.1
#3	73206.	11840.	4829.5	9405.6

Sample Name: jc95516-1 Acquired: 9/30/2019 22:52:33 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0355</b>	<b>.0002</b>	<b>.0004</b>	<b>.0010</b>	<b>.0413</b>	<b>.0152</b>	<b>.0810</b>	<b>.0064</b>	<b>.0008</b>
Stddev	.0003	.0001	.0002	.0002	.0006	.0001	.0005	.0003	.0002
%RSD	.7257	26.76	51.71	25.00	1.419	.8047	6.040	4.028	24.97
#1	.0356	.0003	.0004	.0008	.0407	.0153	.0809	.0067	.0010
#2	.0352	.0002	.0002	.0008	.0419	.0152	.0815	.0063	.0006
#3	.0356	.0003	.0006	.0012	.0413	.0151	.0805	.0061	.0008

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0745</b>	<b>.0560</b>	<b>.0237</b>	<b>.0030</b>	<b>.1776</b>	<b>-.0008</b>	<b>.0020</b>	<b>5.897</b>	<b>3.260</b>
Stddev	.0002	.0017	.0008	.0009	.0046	.0003	.0001	.031	.0048
%RSD	.3029	3.026	3.512	29.83	2.596	37.23	4.095	.5271	1.463
#1	.0745	.0556	.0228	.0028	.1759	-.0008	.0021	5.915	3.281
#2	.0748	.0546	.0236	.0022	.1741	-.0005	.0019	5.862	3.294
#3	.0743	.0579	.0245	.0039	.1828	-.0011	.0021	5.916	3.205

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>15.62</b>	<b>.6228</b>	<b>1.276</b>	<b>.0765</b>	<b>.0107</b>	<b>.0047</b>	<b>1.343</b>	<b>.0230</b>	<b>.0094</b>
Stddev	.04	.0286	.020	.0041	.0008	.0004	.035	.0009	.0001
%RSD	.2576	4.588	1.559	5.370	7.159	8.538	2.619	3.767	1.108
#1	15.65	.6082	1.255	.0747	.0102	.0047	1.333	.0229	.0094
#2	15.58	.6557	1.294	.0736	.0104	.0042	1.314	.0223	.0096
#3	15.64	.6045	1.278	.0812	.0116	.0050	1.382	.0240	.0094

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.255</b>	<b>-.0006</b>	<b>.0231</b>	<b>.9136</b>	<b>.0040</b>	<b>.0015</b>	<b>.7132</b>	<b>3.689</b>
Stddev	.006	.0008	.0002	.0244	.0004	.0006	.0196	.0010
%RSD	.4927	125.2	.7836	2.670	11.04	43.00	2.751	2728
#1	1.253	.0002	.0232	.9074	.0044	.0011	.7053	3.688
#2	1.262	-.0014	.0232	.8929	.0041	.0022	.6989	3.700
#3	1.250	-.0006	.0229	.9405	.0035	.0011	.7356	3.680

Sample Name: jc95516-1 Acquired: 9/30/2019 22:52:33 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	76855.	11752.	5015.2	10016.
Stddev	376.	68.	113.6	214.
%RSD	.48943	.57789	2.2657	2.1374
#1	76801.	11716.	5052.8	10082.
#2	76509.	11709.	5105.3	10190.
#3	77256.	11830.	4887.5	9776.9

11.2  
11

Sample Name: ccv Acquired: 9/30/2019 22:57:30 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.996</b>	<b>1.975</b>	<b>1.959</b>	<b>1.986</b>	<b>1.970</b>	<b>1.903</b>	<b>2.039</b>	<b>2.021</b>	<b>2.437</b>
Stddev	.004	.005	.009	.010	.027	.022	.026	.009	.0020
%RSD	.1906	.2373	.4780	.5245	1.379	1.155	1.266	.4618	.8042
#1	1.998	1.978	1.950	1.976	2.002	1.929	2.068	2.012	2.459
#2	1.999	1.977	1.969	1.997	1.958	1.892	2.024	2.031	2.427
#3	1.992	1.969	1.957	1.985	1.951	1.890	2.023	2.020	2.424

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.965</b>	<b>2.001</b>	<b>1.959</b>	<b>2.012</b>	<b>2.008</b>	<b>1.953</b>	<b>1.963</b>	<b>38.53</b>	<b>38.74</b>
Stddev	.028	.011	.009	.008	.009	.008	.010	.08	.08
%RSD	1.429	.5593	.4411	.3833	.4314	.4116	.4911	2.149	.2116
#1	1.997	1.990	1.954	2.007	1.999	1.947	1.955	38.57	38.81
#2	1.951	2.012	1.969	2.021	2.016	1.962	1.974	38.59	38.77
#3	1.947	1.999	1.954	2.009	2.009	1.951	1.961	38.44	38.65

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>38.41</b>	<b>38.99</b>	<b>39.05</b>	<b>38.34</b>	<b>1.974</b>	<b>1.973</b>	<b>4.770</b>	<b>1.998</b>	<b>2.001</b>
Stddev	.11	.07	.07	.10	.008	.008	.025	.014	.004
%RSD	.2989	.1842	.1754	.2635	.4166	.4091	.5212	.6874	.2110
#1	38.45	39.04	39.06	38.43	1.966	1.966	4.749	1.987	2.004
#2	38.51	39.02	39.11	38.36	1.983	1.982	4.797	2.013	2.004
#3	38.28	38.91	38.97	38.23	1.973	1.970	4.763	1.994	1.996

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ccv Acquired: 9/30/2019 22:57:30 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.948</b>	<b>1.941</b>	<b>1.995</b>	<b>1.968</b>	<b>1.972</b>	<b>1.921</b>	<b>2.030</b>	<b>1.935</b>
Stddev	.026	.010	.025	.007	.008	.004	.009	.023
%RSD	1.342	.5121	1.278	.3754	.4019	.2151	.4481	1.169
#1	1.978	1.933	2.025	1.963	1.964	1.926	2.022	1.961
#2	1.936	1.952	1.982	1.977	1.980	1.921	2.040	1.924
#3	1.930	1.937	1.979	1.965	1.971	1.917	2.028	1.920

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	72977.	11454.	4864.8	9704.4
Stddev	992.	18.	20.7	39.2
%RSD	1.3587	.15769	.42618	.40349
#1	71845.	11434.	4884.9	9745.9
#2	73394.	11469.	4843.5	9668.2
#3	73692.	11459.	4866.0	9699.2

Sample Name: ccb Acquired: 9/30/2019 23:02:24 Type: QC										
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0004	.0002	.0003	.0001	-.0004	.0002	.0001	.0003	-.0006	
Stddev	.0002	.0001	.0001	.0001	.0002	.0001	.0000	.0003	.0006	
%RSD	42.42	35.81	28.35	72.42	45.98	71.70	25.15	126.8	112.2	
#1	.0005	.0003	.0004	.0002	-.0005	.0000	.0002	.0004	-.0000	
#2	.0002	.0002	.0002	.0000	-.0002	.0003	.0001	.0004	-.0012	
#3	.0005	.0002	.0003	.0001	-.0004	.0002	.0001	-.0001	-.0004	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit										
Low Limit										
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0000	-.0003	-.0000	F .0032	-.0008	-.0006	-.0005	.0075	-.0003	
Stddev	.0003	.0001	.0002	.0005	.0005	.0014	.0008	.0118	.0026	
%RSD	862.0	40.12	508.7	16.22	56.68	231.7	154.8	156.9	743.2	
#1	-.0002	-.0003	-.0003	.0027	-.0012	.0008	.0003	.0162	.0003	
#2	.0004	-.0004	-.0001	.0031	-.0003	-.0021	-.0007	-.0059	-.0032	
#3	-.0001	-.0002	.0001	.0037	-.0009	-.0006	-.0012	.0124	.0018	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit				.0020						
Low Limit				-.0020						
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0053	.0022	.0430	-.0447	.0018	.0001	.0027	-.0001	.0002	
Stddev	.0039	.0035	.0219	.0068	.0002	.0001	.0008	.0001	.0002	
%RSD	72.99	157.6	50.98	15.23	9.647	57.41	29.68	129.4	99.64	
#1	.0080	-.0018	.0537	-.0425	.0019	.0002	.0020	.0000	.0004	
#2	.0009	.0037	.0574	-.0524	.0016	.0001	.0036	-.0002	.0001	
#3	.0071	.0047	.0178	-.0393	.0019	.0001	.0025	-.0002	.0000	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit										
Low Limit										

Sample Name: ccb Acquired: 9/30/2019 23:02:24 Type: QC										
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.0003	.0001	.0001	-.0063	.0008	-.0010	.0014	.0046		
Stddev	.0002	.0005	.0002	.0013	.0013	.0011	.0009	.0030		
%RSD	72.63	601.3	198.4	20.27	171.0	103.5	64.06	66.61		
#1	.0006	-.0002	.0003	-.0069	.0000	-.0010	.0015	.0011		
#2	.0001	-.0002	.0001	-.0048	.0023	.0000	.0022	.0063		
#3	.0004	.0006	-.0001	-.0071	.0000	-.0021	.0005	.0064		
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	
High Limit										
Low Limit										
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	75506.	11396.	4970.9	10077.						
Stddev	158.	175.	47.9	84.						
%RSD	20887	1.5356	.96330	.83600						
#1	75549.	11341.	5014.6	10152.						
#2	75331.	11592.	4919.7	9985.5						
#3	75637.	11256.	4978.3	10093.						

Sample Name: jc95516-2 Acquired: 9/30/2019 23:07:29 Type: Unk										
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0350	.0001	.0003	.0008	.0370	.0102	.1021	.0049	.0008	
Stddev	.0002	.0000	.0001	.0002	.0005	.0000	.0003	.0003	.0002	
%RSD	6.145	27.66	23.32	25.45	1.296	.3043	2.951	5.872	28.30	
#1	.0347	.0002	.0002	.0009	.0373	.0103	.1020	.0051	.0006	
#2	.0351	.0001	.0003	.0006	.0365	.0102	.1019	.0046	.0008	
#3	.0351	.0001	.0002	.0009	.0373	.0102	.1025	.0049	.0010	
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0756	.0460	.0221	.0033	.1262	-.0024	.0015	6.401	.2592	
Stddev	.0004	.0003	.0002	.0006	.0013	.0003	.0007	.029	.0009	
%RSD	.5796	.5474	.7423	17.17	1.019	10.47	45.11	4.599	.3651	
#1	.0752	.0459	.0219	.0040	.1255	-.0022	.0008	6.378	.2583	
#2	.0761	.0463	.0223	.0031	.1277	-.0024	.0016	6.390	.2593	
#3	.0754	.0459	.0221	.0029	.1254	-.0027	.0021	6.434	.2601	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	11.85	.3689	.5731	.0705	.0131	.0057	1.594	.0214	.0097	
Stddev	.02	.0065	.0390	.0097	.0002	.0001	.006	.0004	.0001	
%RSD	.1315	1.753	6.814	13.74	1.547	1.481	.3506	1.848	.9615	
#1	11.83	.3695	.6015	.0790	.0128	.0056	1.597	.0217	.0097	
#2	11.86	.3750	.5286	.0599	.0131	.0057	1.597	.0210	.0096	
#3	11.84	.3621	.5892	.0726	.0132	.0056	1.587	.0214	.0098	
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	1.981	-.0001	.0878	.6517	-.0010	.0011	.6776	.9207		
Stddev	.004	.0003	.0003	.0037	.0008	.0013	.0019	.0047		
%RSD	.2196	179.8	.2851	.5626	86.56	112.0	.2841	.5069		
#1	1.977	-.0000	.0876	.6540	-.0020	.0026	.6779	.9155		
#2	1.981	-.0004	.0878	.6536	-.0006	.0005	.6793	.9219		
#3	1.986	.0000	.0881	.6474	-.0004	.0003	.6755	.9246		

Sample Name: jc95516-2 Acquired: 9/30/2019 23:07:29 Type: Unk										
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	77994.	11822.	5152.3	10236.						
Stddev	137.	116.	8.5	21.						
%RSD	.17598	.98163	.16453	.20170						
#1	77976.	11860.	5144.0	10213.						
#2	77866.	11915.	5151.8	10244.						
#3	78139.	11692.	5161.0	10251.						

Sample Name: jc95555-1 Acquired: 9/30/2019 23:12:25 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2966</b>	<b>.0027</b>	<b>.0017</b>	<b>.0408</b>	<b>.1128</b>	<b>2255</b>	<b>1.522</b>	<b>.0859</b>	<b>.0031</b>
Stddev	.0035	.0001	.0003	.0011	.0034	.0068	.050	.0028	.0010
%RSD	1.180	3.570	17.30	2.649	3.022	3.032	3.267	3.261	30.82
#1	.2954	.0029	.0021	.0421	.1126	.2247	1.522	.0891	.0033
#2	.3005	.0027	.0015	.0403	.1163	.2326	1.572	.0848	.0021
#3	.2938	.0027	.0017	.0401	.1094	.2190	1.473	.0839	.0040
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0786</b>	<b>.6689</b>	<b>.0563</b>	<b>.0032</b>	<b>.5005</b>	<b>.0007</b>	<b>.0022</b>	<b>39.88</b>	<b>8.065</b>
Stddev	.0027	.0213	.0011	.0014	.0137	.0018	.0018	.54	.099
%RSD	3.380	3.185	1.869	43.46	2.738	258.3	79.92	1.365	1.227
#1	.0789	.6934	.0572	.0019	.5163	-.0010	.0041	39.73	8.050
#2	.0812	.6586	.0552	.0047	.4936	.0025	.0007	40.48	8.171
#3	.0759	.6547	.0565	.0031	.4916	.0006	.0017	39.42	7.975
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>100.5</b>	<b>13.23</b>	<b>5.537</b>	<b>.5804</b>	<b>.0212</b>	<b>.0034</b>	<b>1.655</b>	<b>.0463</b>	<b>.0601</b>
Stddev	1.3	.18	.065	.0136	.0008	.0002	.052	.0015	.0008
%RSD	1.270	1.353	1.178	2.340	3.914	5.319	3.151	3.160	1.369
#1	100.2	13.20	5.510	.5698	.0221	.0035	1.714	.0479	.0596
#2	101.9	13.42	5.611	.5957	.0206	.0034	1.634	.0450	.0611
#3	99.43	13.06	5.490	.5757	.0209	.0032	1.616	.0460	.0597
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.359</b>	<b>-.0007</b>	<b>.0408</b>	<b>17.93</b>	<b>-.0008</b>	<b>.0773</b>	<b>2.166</b>	<b>.2620</b>	
Stddev	.044	.0015	.0012	.55	.0019	.0007	.064	.0087	
%RSD	3.261	204.4	2.926	3.048	242.5	.8704	2.972	3.336	
#1	1.357	-.0023	.0408	18.56	-.0010	.0780	2.240	.2641	
#2	1.404	-.0005	.0419	17.68	.0012	.0767	2.135	.2696	
#3	1.315	.0006	.0395	17.55	-.0025	.0771	2.122	.2525	

Sample Name: jc95555-1 Acquired: 9/30/2019 23:12:25 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	78130	11811	5009.7	9973.8
Stddev	2063	162	132.9	245.9
%RSD	2.6401	1.3730	2.6521	2.4652
#1	77840	11770	4857.1	9691.1
#2	76228	11673	5072.4	10092
#3	80323	11990	5099.6	10138

11.2  
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Sample Name: jc95555-2 Acquired: 9/30/2019 23:17:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.118</b>	<b>.0076</b>	<b>.0097</b>	<b>.0994</b>	<b>1.070</b>	<b>.5854</b>	<b>5.673</b>	<b>2.018</b>	<b>.0081</b>
Stddev	.004	.0001	.0000	.0014	.028	0.141	.136	.0033	.0011
%RSD	.3715	.7290	.3655	1.445	2.598	2.406	2.390	1.613	13.98
#1	1.119	.0075	.0097	.0986	1.042	.5719	5.524	.2005	.0094
#2	1.114	.0076	.0097	.1011	1.069	.5843	5.708	.2055	.0078
#3	1.122	.0076	.0097	.0986	1.098	.6000	5.789	.1994	.0072
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2147</b>	<b>3.326</b>	<b>.2291</b>	<b>.0069</b>	<b>1.222</b>	<b>.0005</b>	<b>.0045</b>	<b>115.5</b>	<b>23.60</b>
Stddev	.0057	.058	.0037	.0010	.019	.0017	.0012	.6	.12
%RSD	2.666	1.747	1.626	14.97	1.555	312.6	25.85	5.373	.5215
#1	.2091	3.292	.2257	.0064	1.212	.0007	.0055	115.5	23.59
#2	.2145	3.393	.2331	.0081	1.244	-.0012	.0048	114.9	23.49
#3	.2206	3.292	.2284	.0062	1.210	.0021	.0032	116.2	23.73
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>186.2</b>	<b>31.36</b>	<b>12.89</b>	<b>1.516</b>	<b>.0470</b>	<b>.0044</b>	<b>2.169</b>	<b>.1740</b>	<b>.1308</b>
Stddev	.9	.15	.07	.005	.0012	.0004	.041	.0035	.0006
%RSD	.4728	.4821	.5628	.3172	2.496	8.177	1.901	1.995	.4425
#1	186.1	31.35	12.92	1.514	.0477	.0043	2.144	.1717	.1309
#2	185.4	31.21	12.81	1.513	.0477	.0048	2.216	.1780	.1302
#3	187.2	31.52	12.95	1.522	.0457	.0041	2.146	.1723	.1313
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>2.799</b>	<b>-.0035</b>	<b>.0642</b>	<b>20.23</b>	<b>.0088</b>	<b>.1716</b>	<b>6.071</b>	<b>.5628</b>	
Stddev	.072	.0010	.0016	.35	.0012	.0008	.107	.0141	
%RSD	2.577	27.96	2.538	1.722	13.13	4.415	1.767	2.508	
#1	2.729	-.0043	.0627	20.03	.0090	.1724	6.002	.5478	
#2	2.795	-.0024	.0641	20.63	.0099	.1715	6.194	.5649	
#3	2.873	-.0037	.0659	20.02	.0076	.1709	6.016	.5758	

Sample Name: jc95555-2 Acquired: 9/30/2019 23:17:19 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	79273	12370	5244.2	10096
Stddev	1844	108	78.5	136
%RSD	2.3256	.87128	1.4960	1.3424
#1	81131	12421	5289.1	10167
#2	79245	12444	5153.6	9940.2
#3	77444	12247	5289.8	10182



Sample Name: jc95555-3 Acquired: 9/30/2019 23:22:16 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.530</b>	<b>.0013</b>	<b>.0052</b>	<b>.0331</b>	<b>1.469</b>	<b>.7076</b>	<b>.9089</b>	<b>.2586</b>	<b>.0043</b>
Stddev	.078	.0000	.0003	.0007	.004	.0002	.0020	.0027	.0034
%RSD	5.094	2.330	5.380	2.042	.2599	.0232	.2154	1.056	78.95
#1	1.543	.0013	.0054	.0337	1.474	.7075	.9111	.2599	.0047
#2	1.446	.0013	.0054	.0324	1.468	.7076	.9076	.2554	.0007
#3	1.600	.0013	.0049	.0333	1.467	.7078	.9079	.2604	.0075
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0687</b>	<b>.7462</b>	<b>.1400</b>	<b>.0024</b>	<b>1.102</b>	<b>.0178</b>	<b>.0206</b>	<b>8.511</b>	<b>17.39</b>
Stddev	.0003	.0099	.0029	.0025	.015	.0009	.0011	.428	.87
%RSD	.4329	1.328	2.051	104.6	1.332	5.087	5.506	5.025	5.024
#1	.0689	.7533	.1423	.0026	1.114	.0168	.0220	8.595	17.56
#2	.0689	.7349	.1368	.0047	1.086	.0184	.0200	8.047	16.45
#3	.0684	.7505	.1409	-.0002	1.107	.0183	.0200	8.890	18.17
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 217.1</b>	<b>1.969</b>	<b>1.375</b>	<b>.3531</b>	<b>.0071</b>	<b>.3731</b>	<b>2.020</b>	<b>.1756</b>	<b>.0932</b>
Stddev	11.0	.105	.078	.0220	.0001	.0049	.028	.0022	.0047
%RSD	5.074	5.307	5.680	6.244	.8069	1.310	1.369	1.247	5.055
#1	219.1	2.007	1.400	.3548	.0072	.3760	2.041	.1759	.0939
#2	205.3	1.850	1.287	.3303	.0071	.3675	1.989	.1733	.0881
#3	227.1	2.048	1.437	.3743	.0071	.3760	2.031	.1777	.0975
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.6621</b>	<b>.0265</b>	<b>.0170</b>	<b>F 512.7</b>	<b>.0093</b>	<b>.0084</b>	<b>.6292</b>	<b>.1254</b>	
Stddev	.0014	.0008	.0003	8.1	.0026	.0020	.0089	.0017	
%RSD	.2082	3.073	1.512	1.577	28.47	24.27	1.409	1.391	
#1	.6636	.0271	.0172	516.3	.0084	.0092	.6351	.1236	
#2	.6609	.0256	.0167	503.4	.0122	.0099	.6190	.1254	
#3	.6617	.0269	.0171	518.3	.0071	.0061	.6336	.1271	

Sample Name: jc95555-3 Acquired: 9/30/2019 23:22:16 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	75719.	11779.	4989.6	10392.
Stddev	157.	484.	57.5	104.
%RSD	.20713	4.1131	1.1523	.99704
#1	75546.	11684.	4948.8	10320.
#2	75758.	12304.	5055.4	10511.
#3	75853.	11350.	4964.6	10346.

11.2  
11

Sample Name: jc95555-4 Acquired: 9/30/2019 23:27:13 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.415</b>	<b>.0091</b>	<b>.0096</b>	<b>.0986</b>	<b>.7971</b>	<b>.5668</b>	<b>4.517</b>	<b>.2484</b>	<b>.0045</b>
Stddev	.019	.0001	.0002	.0009	.0018	.0009	.043	.0025	.0014
%RSD	1.354	.9279	2.351	8968	2.226	.1637	.9490	1.010	30.26
#1	1.424	.0090	.0094	.0979	.7950	.5666	4.549	.2471	.0048
#2	1.428	.0092	.0098	.0996	.7981	.5659	4.468	.2513	.0056
#3	1.393	.0090	.0095	.0983	.7980	.5678	4.533	.2468	.0030
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2837</b>	<b>3.327</b>	<b>.1475</b>	<b>.0048</b>	<b>1.054</b>	<b>-.0079</b>	<b>.0053</b>	<b>154.4</b>	<b>24.49</b>
Stddev	.0007	.042	.0012	.0036	.008	.0006	.0007	2.0	.29
%RSD	.2612	1.263	.8337	74.96	.7740	7.177	13.07	1.268	1.171
#1	.2828	3.298	.1480	.0009	1.052	-.0073	.0061	155.2	24.60
#2	.2843	3.375	.1483	.0055	1.063	-.0080	.0047	155.8	24.71
#3	.2839	3.309	.1461	.0080	1.048	-.0084	.0052	152.2	24.17
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 286.5</b>	<b>40.89</b>	<b>20.73</b>	<b>1.441</b>	<b>.0770</b>	<b>.0082</b>	<b>2.725</b>	<b>.1336</b>	<b>.3132</b>
Stddev	3.4	.39	.27	.017	.0011	.0001	.027	.0025	.0045
%RSD	1.182	.9546	1.325	1.153	1.451	1.722	.9822	1.860	1.441
#1	287.7	41.00	20.88	1.445	.0759	.0080	2.707	.1319	.3148
#2	289.1	41.21	20.91	1.455	.0782	.0082	2.756	.1365	.3166
#3	282.7	40.46	20.42	1.422	.0769	.0083	2.713	.1324	.3080
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>3.915</b>	<b>.0001</b>	<b>.0947</b>	<b>9.292</b>	<b>.0094</b>	<b>.2690</b>	<b>5.662</b>	<b>.6333</b>	
Stddev	.009	.0017	.0002	.093	.0019	.0032	.064	.0048	
%RSD	.2240	1229.	.2127	9994	19.83	1.178	1.127	.7590	
#1	3.905	-.0015	.0945	9.230	.0076	.2699	5.623	.6343	
#2	3.916	-.0001	.0949	9.398	.0093	.2717	5.736	.6281	
#3	3.923	.0020	.0947	9.247	.0113	.2655	5.628	.6376	

Sample Name: jc95555-4 Acquired: 9/30/2019 23:27:13 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	78630.	12392.	5116.9	9940.2
Stddev	63.	66.	59.6	105.6
%RSD	.08046	.52986	1.1643	1.0621
#1	78700.	12414.	5161.5	10013.
#2	78576.	12318.	5049.3	9819.1
#3	78616.	12443.	5140.1	9988.7



Sample Name: mp17599-b1 Acquired: 9/30/2019 23:32:11 Type: Unk							
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000							
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:							
Comment:							
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.927</b>	<b>1.910</b>	<b>1.871</b>	<b>1.906</b>	<b>1.869</b>	<b>1.798</b>	<b>1.927</b>
Stddev	.004	.005	.003	.003	.020	.019	.017
%RSD	.1970	.2432	.1715	.1440	1.043	1.052	8566
#1	1.927	1.912	1.874	1.910	1.847	1.777	1.908
#2	1.931	1.913	1.871	1.904	1.884	1.812	1.940
#3	1.923	1.904	1.867	1.905	1.874	1.807	1.932
Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.943</b>	<b>2.366</b>	<b>1.853</b>	<b>1.930</b>	<b>1.924</b>	<b>1.937</b>	<b>1.901</b>
Stddev	.001	.0028	.021	.002	.003	.005	.001
%RSD	.0656	1.183	1.110	.0980	.1753	.2370	.0449
#1	1.945	2.335	1.830	1.930	1.928	1.941	1.900
#2	1.943	2.390	1.868	1.931	1.922	1.937	1.901
#3	1.943	2.372	1.861	1.928	1.923	1.932	1.901
Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.842</b>	<b>1.943</b>	<b>24.12</b>	<b>24.30</b>	<b>24.14</b>	<b>24.31</b>	<b>24.28</b>
Stddev	.004	.005	.05	.07	.03	.12	.07
%RSD	.2110	.2732	.2106	.3023	.1081	.4772	.3044
#1	1.844	1.946	24.15	24.33	24.14	24.19	24.33
#2	1.838	1.945	24.14	24.36	24.16	24.42	24.32
#3	1.845	1.936	24.06	24.22	24.11	24.30	24.20
Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Tl3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>24.00</b>	<b>1.836</b>	<b>1.949</b>	<b>0.164</b>	<b>2.001</b>	<b>1.928</b>	<b>1.912</b>
Stddev	.05	.003	.002	.0017	.003	.004	.021
%RSD	.2020	.1590	.1058	10.65	.1406	.2079	1.118
#1	24.04	1.839	1.950	0.160	1.999	1.930	1.888
#2	24.02	1.834	1.949	0.182	2.004	1.931	1.929
#3	23.95	1.834	1.946	0.148	1.999	1.923	1.918

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Sample Name: mp17599-b1 Acquired: 9/30/2019 23:32:11 Type: Unk							
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000							
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:							
Comment:							
Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.325</b>	<b>1.952</b>	<b>0.088</b>	<b>-0.098</b>	<b>-0.017</b>	<b>1.937</b>	<b>W -0.339</b>
Stddev	.006	.023	.0006	.0002	.0006	.005	.0039
%RSD	.4614	1.169	6.706	2.335	36.43	.2759	11.55
#1	1.323	1.926	.0085	-.0098	-.0023	1.942	-.0380
#2	1.320	1.970	.0085	-.0096	-.0017	1.938	-.0303
#3	1.332	1.961	.0095	-.0101	-.0011	1.931	-.0334
Int. Std.	Y_3600	Y_3710	Y_2243	In2306			
Units	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	74943.	11507.	4918.1	9861.5			
Stddev	771.	26.	3.4	4.9			
%RSD	1.0286	.22193	.06976	.05006			
#1	75800.	11525.	4921.4	9866.5			
#2	74307.	11478.	4914.5	9861.2			
#3	74723.	11520.	4918.4	9856.7			

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Sample Name: mp17599-mb1 Acquired: 9/30/2019 23:37:03 Type: Unk									
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0007</b>	<b>.0001</b>	<b>.0002</b>	<b>.0000</b>	<b>.0007</b>	<b>.0008</b>	<b>.0005</b>	<b>.0004</b>	<b>-.0003</b>
Stddev	.0001	.0000	.0001	.0004	.0002	.0002	.0001	.0003	.0002
%RSD	21.43	1.389	31.28	1042.	31.04	25.85	17.32	84.41	72.55
#1	.0007	.0001	.0002	-.0002	.0004	.0006	.0006	.0000	-.0001
#2	.0008	.0001	.0001	.0005	.0008	.0008	.0006	.0005	-.0005
#3	.0005	.0001	.0003	-.0002	.0008	.0010	.0004	.0005	-.0003
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0009</b>	<b>.0039</b>	<b>.0002</b>	<b>.0015</b>	<b>.0003</b>	<b>-.0004</b>	<b>.0000</b>	<b>.0422</b>	<b>.0587</b>
Stddev	.0001	.0002	.0010	.0006	.0004	.0005	.0009	.0179	.0018
%RSD	17.44	4.022	485.0	41.03	136.5	115.9	2869.	42.54	3.028
#1	.0008	.0038	.0013	.0009	.0005	-.0006	-.0004	.0508	.0571
#2	.0008	.0041	-.0006	.0021	.0006	-.0009	.0011	.0216	.0585
#3	.0010	.0039	-.0001	.0015	-.0002	.0001	-.0006	.0542	.0606
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0389</b>	<b>.0300</b>	<b>.0101</b>	<b>-.0195</b>	<b>.0020</b>	<b>.0009</b>	<b>.0173</b>	<b>.0169</b>	<b>.0004</b>
Stddev	.0026	.0108	.0221	.0074	.0005	.0002	.0004	.0008	.0001
%RSD	6.591	36.01	220.2	54.48	23.95	21.05	2.565	4.567	17.07
#1	.0359	.0197	.0351	-.0151	.0026	.0011	.0176	.0175	.0004
#2	.0407	.0291	-.0069	-.0200	.0017	.0009	.0175	.0171	.0005
#3	.0399	.0413	.0019	-.0055	.0018	.0008	.0168	.0160	.0003
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0013</b>	<b>.0102</b>	<b>.0013</b>	<b>.0070</b>	<b>.0009</b>	<b>-.0001</b>	<b>.0214</b>	<b>-.0002</b>	
Stddev	.0006	.0020	.0002	.0014	.0014	.0005	.0006	.0018	
%RSD	44.57	19.42	15.13	19.81	159.7	997.4	2.874	1185.	
#1	.0011	.0125	.0011	.0061	.0006	.0003	.0218	-.0007	
#2	.0009	.0087	.0014	.0062	-.0004	-.0007	.0217	-.0016	
#3	.0020	.0095	.0015	.0085	.0023	.0002	.0207	.0019	

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Sample Name: mp17599-mb1 Acquired: 9/30/2019 23:37:03 Type: Unk								
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	76204.	11272.	5002.0	10132.				
Stddev	313.	192.	9.9	7.				
%RSD	.41036	1.7023	.19695	.06893				
#1	75847.	11353.	5012.5	10135.				
#2	76428.	11409.	4992.9	10124.				
#3	76338.	11053.	5000.8	10138.				

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Sample Name: mp17599-s1 Acquired: 9/30/2019 23:42:06 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.989</b>	<b>1.714</b>	<b>1.728</b>	<b>1.932</b>	<b>2.142</b>	<b>2.543</b>	<b>5.326</b>	<b>2.064</b>	<b>2.259</b>
Stddev	.012	.005	.007	.004	.015	.021	.019	.003	.0008
%RSD	.2914	.2723	.3882	.2238	.7024	.8235	.3647	.1535	.3638
#1	4.001	1.719	1.727	1.930	2.139	2.543	5.344	2.065	.2266
#2	3.978	1.710	1.735	1.937	2.158	2.564	5.305	2.067	.2261
#3	3.988	1.712	1.721	1.929	2.128	2.522	5.328	2.061	.2250
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.780</b>	<b>5.137</b>	<b>1.840</b>	<b>1.775</b>	<b>1.895</b>	<b>1.660</b>	<b>.7540</b>	<b>F 340.9</b>	<b>34.17</b>
Stddev	.019	.016	.007	.005	.006	.005	.0037	.8	.07
%RSD	.6955	.3032	.3918	.2960	.3062	.2851	.4872	.2370	.2025
#1	2.780	5.144	1.840	1.774	1.897	1.662	.7549	341.8	34.25
#2	2.799	5.148	1.847	1.781	1.900	1.664	.7571	340.1	34.12
#3	2.760	5.119	1.833	1.771	1.889	1.655	.7499	340.9	34.14
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 363.8</b>	<b>114.9</b>	<b>100.4</b>	<b>29.53</b>	<b>1.635</b>	<b>1.722</b>	<b>2.488</b>	<b>1.662</b>	<b>1.837</b>
Stddev	.8	.2	.3	.09	.007	.007	.028	.004	.005
%RSD	.2120	.2025	.2867	.3051	.4465	.4163	1.111	.2393	.2951
#1	364.4	114.9	100.7	29.63	1.636	1.720	2.499	1.662	1.843
#2	362.9	114.6	100.2	29.46	1.642	1.730	2.509	1.666	1.832
#3	364.1	115.1	100.3	29.49	1.627	1.716	2.457	1.658	1.835
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>F 19.85</b>	<b>1.042</b>	<b>1.777</b>	<b>1.027</b>	<b>.0484</b>	<b>.1681</b>	<b>7.223</b>	<b>.6321</b>	
Stddev	.10	.005	.013	.002	.0030	.0018	.023	.0058	
%RSD	.5105	.4742	.7563	.2133	6.145	1.043	.3141	.9184	
#1	19.96	1.043	1.775	1.025	.0500	.1671	7.225	.6337	
#2	19.84	1.047	1.791	1.029	.0449	.1701	7.244	.6370	
#3	19.75	1.037	1.764	1.027	.0502	.1671	7.199	.6257	

Sample Name: mp17599-s1 Acquired: 9/30/2019 23:42:06 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>78578.</b>	<b>12621.</b>	<b>5191.3</b>	<b>9907.6</b>
Stddev	329.	54.	9.0	10.1
%RSD	.41848	.43157	.17319	.10184
#1	78637.	12665.	5187.1	9896.5
#2	78223.	12637.	5185.2	9910.0
#3	78873.	12560.	5201.6	9916.2

11.2  
11

Sample Name: mp17599-s2 Acquired: 9/30/2019 23:47:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.171</b>	<b>1.727</b>	<b>1.729</b>	<b>1.960</b>	<b>1.977</b>	<b>2.400</b>	<b>5.326</b>	<b>2.055</b>	<b>2.271</b>
Stddev	.007	.005	.010	.012	.016	.016	.027	.012	.0021
%RSD	.2084	.3168	.6039	.5925	.7936	.6784	.5015	.5824	.9031
#1	3.173	1.729	1.721	1.948	1.995	2.419	5.353	2.044	.2294
#2	3.176	1.731	1.726	1.959	1.965	2.392	5.327	2.052	.2261
#3	3.163	1.721	1.741	1.971	1.971	2.389	5.299	2.068	.2257
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.443</b>	<b>3.315</b>	<b>1.850</b>	<b>1.781</b>	<b>1.902</b>	<b>1.666</b>	<b>.7909</b>	<b>F 308.7</b>	<b>33.33</b>
Stddev	.019	.025	.008	.009	.014	.008	.0077	.9	.13
%RSD	.7600	.7398	.4433	.5244	.7291	.4627	.9756	.3062	.4031
#1	2.464	3.295	1.844	1.770	1.889	1.661	.7825	309.1	33.42
#2	2.431	3.308	1.846	1.784	1.901	1.662	.7926	309.3	33.40
#3	2.434	3.342	1.859	1.787	1.917	1.675	.7977	307.6	33.18
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 308.4</b>	<b>94.83</b>	<b>85.04</b>	<b>28.03</b>	<b>1.647</b>	<b>1.720</b>	<b>2.561</b>	<b>1.672</b>	<b>1.850</b>
Stddev	.9	.26	.25	.10	.013	.011	.024	.012	.005
%RSD	.3049	.2763	.2923	.3699	.7736	.6241	.9467	.7027	.2931
#1	309.0	94.80	85.12	28.09	1.637	1.710	2.534	1.664	1.853
#2	308.9	95.11	85.24	28.09	1.643	1.718	2.570	1.665	1.854
#3	307.4	94.59	84.76	27.91	1.661	1.731	2.580	1.685	1.844
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>F 16.54</b>	<b>1.000</b>	<b>1.771</b>	<b>1.161</b>	<b>.0436</b>	<b>.1315</b>	<b>6.685</b>	<b>.6056</b>	
Stddev	.24	.007	.014	.008	.0036	.0019	.040	.0052	
%RSD	1.449	.7184	.7804	.7154	8.264	1.415	.6022	.8655	
#1	16.82	.9930	1.787	1.156	.0477	.1295	6.650	.6116	
#2	16.42	.9997	1.763	1.156	.0423	.1319	6.676	.6026	
#3	16.39	1.007	1.763	1.170	.0408	.1332	6.729	.6024	

Sample Name: mp17599-s2 Acquired: 9/30/2019 23:47:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>78085.</b>	<b>12336.</b>	<b>5160.1</b>	<b>9865.3</b>
Stddev	690.	50.	33.1	54.4
%RSD	.88396	.40827	.64090	.55185
#1	77348.	12300.	5186.8	9914.0
#2	78716.	12315.	5170.3	9875.3
#3	78190.	12394.	5123.1	9806.5

Sample Name: jc95623-3 Acquired: 9/30/2019 23:52:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.683	0.135	0.040	0.1741	2.554	5.118	5.429	2.521
Stddev	.003	.0000	.0002	.0016	.0037	.0083	.106	.0023
%RSD	.1629	.2859	4.389	.9244	1.447	1.624	1.951	.9038
#1	1.680	.0135	.0041	.1732	.2575	.5162	5.495	.2507
#2	1.684	.0135	.0041	.1760	.2511	.5022	5.307	.2548
#3	1.685	.0136	.0038	.1732	.2575	.5170	5.485	.2509

Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.014	0.6273	1.394	1.053	0.015	2.412	F -0.134	0.031
Stddev	.0017	.0096	.011	.0003	.0032	.0014	.0007	.0015
%RSD	121.6	1.536	.8178	.3094	27.40	.5841	5.339	48.91
#1	.0002	.6328	1.391	.1051	.0085	2.411	-0.138	.0025
#2	.0033	.6161	1.407	.1051	.0114	2.426	-0.138	.0048
#3	.0006	.6329	1.385	.1057	.0148	2.398	-0.126	.0020

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	261.5	196.9	F 289.0	82.86	60.34	8.528	0.582	0.077
Stddev	.4	2.6	.8	.27	.07	.015	.0005	.0003
%RSD	.1540	1.300	.2671	.3240	.1159	.1778	.9224	3.700
#1	261.0	194.4	288.3	82.73	60.27	8.511	.0576	.0078
#2	261.5	196.7	289.0	82.67	60.34	8.537	.0587	.0079
#3	261.8	199.5	289.8	83.16	60.41	8.537	.0582	.0074

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.745	0.0374	4.488	F 14.33	0.071	0.0864	6.783	0.460
Stddev	.034	.0005	.0006	.18	.0009	.0013	.065	.0035
%RSD	1.252	1.297	.1360	1.279	12.01	1.538	.9510	7.672
#1	2.729	.0369	4.482	14.36	.0079	.0873	6.755	.0471
#2	2.784	.0376	4.487	14.13	.0062	.0849	6.857	.0420
#3	2.720	.0378	4.494	14.49	.0072	.0871	6.738	.0488

Sample Name: jc95623-3 Acquired: 9/30/2019 23:52:05 Type: Unk  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	0.1514	4.975	0.9912
Stddev	.0015	.039	.0126
%RSD	.9730	.7838	1.276
#1	.1502	4.961	.9973
#2	.1511	5.019	.9766
#3	.1531	4.945	.9996

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	83873.	13218.	5450.2	9691.7
Stddev	1022.	62.	35.8	53.4
%RSD	1.2185	.46769	.65657	.55084
#1	83315.	13258.	5462.3	9705.9
#2	85052.	13248.	5409.9	9632.7
#3	83251.	13146.	5478.4	9736.6

Sample Name: ccv Acquired: 9/30/2019 23:57:17 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.012	1.962	1.972	1.996	1.957	1.915	2.014	2.024	2.436
Stddev	.002	.002	.002	.002	.004	.004	.002	.003	.0010
%RSD	.1002	.0910	.1037	.1226	.2247	.1978	.0831	.1264	.3963
#1	2.011	1.962	1.974	1.995	1.956	1.913	2.015	2.023	2.430
#2	2.015	1.963	1.972	1.999	1.954	1.913	2.015	2.027	2.430
#3	2.012	1.960	1.970	1.994	1.962	1.920	2.012	2.022	2.447

Check ? Value Range

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.952	2.009	1.978	2.025	2.003	1.975	1.966	38.24	38.68
Stddev	.004	.001	.002	.004	.001	.002	.003	.05	.08
%RSD	.2214	.0666	.0756	.1834	.0667	.1063	.1597	.1317	.2053
#1	1.948	2.010	1.979	2.029	2.004	1.976	1.968	38.19	38.65
#2	1.950	2.008	1.979	2.026	2.002	1.977	1.968	38.29	38.77
#3	1.956	2.009	1.976	2.021	2.004	1.973	1.963	38.24	38.62

Check ? Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.41	38.78	39.19	38.04	1.990	1.993	4.796	2.003	2.004
Stddev	.06	.07	.11	.05	.004	.005	.005	.004	.002
%RSD	.1552	.1764	.2747	.1211	.1809	.2592	.1100	.1760	.0910
#1	38.34	38.73	39.07	38.04	1.993	1.997	4.799	2.005	2.004
#2	38.45	38.85	39.25	38.09	1.992	1.994	4.799	2.005	2.006
#3	38.43	38.75	39.25	38.00	1.986	1.987	4.790	1.999	2.003

Check ? Value Range

Sample Name: ccv Acquired: 9/30/2019 23:57:17 Type: QC  
 Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.940	1.954	1.980	1.989	1.981	1.909	2.041	1.939
Stddev	.004	.004	.003	.002	.005	.002	.004	.004
%RSD	.2120	.2202	.1500	.0794	.2421	.1129	.1710	.1984
#1	1.937	1.959	1.977	1.990	1.982	1.908	2.045	1.936
#2	1.939	1.953	1.979	1.988	1.985	1.911	2.040	1.937
#3	1.945	1.951	1.983	1.987	1.975	1.908	2.039	1.943

Check ? Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	74441.	11409.	4869.7	9744.2
Stddev	70.	60.	2.5	12.5
%RSD	.09368	.52929	.05139	.12834
#1	74431.	11465.	4872.6	9758.6
#2	74515.	11345.	4868.5	9737.9
#3	74376.	11418.	4868.1	9736.0

Sample Name: ccb Acquired: 10/1/2019 0:02:12 Type: QC										
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0002	.0003	.0000	.0001	.0002	.0001	.0002	.0002	.0002
Stddev	.0003	.0000	.0001	.0003	.0001	.0004	.0000	.0002	.0003	.0003
%RSD	93.60	12.53	28.29	1650.	168.0	216.7	27.52	129.4	198.8	
#1	-0.000	.0001	.0003	-0.001	.0001	.0004	.0001	-0.004	-0.004	
#2	.0005	.0002	.0002	-0.003	-0.001	-0.003	.0001	-0.001	.0002	
#3	.0004	.0002	.0004	.0003	-0.002	.0004	.0001	.0000	-0.003	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0003	.0009	.0016	.0004	.0009	.0011	.0097	.0056	
Stddev	.0005	.0001	.0006	.0022	.0003	.0018	.0005	.0042	.0007	
%RSD	277.7	36.85	63.00	141.0	73.05	200.2	44.50	43.58	11.88	
#1	-0.004	-0.002	.0003	.0006	.0002	-0.026	-0.013	.0117	-0.054	
#2	.0006	-0.004	.0014	.0042	.0002	.0010	-0.014	.0125	-0.050	
#3	.0004	-0.004	.0011	.0001	.0007	-0.011	-0.005	.0048	-0.063	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	.0064	.0895	.0476	.0027	.0003	.0029	.0000	.0001	
Stddev	.0026	.0124	.0145	.0069	.0002	.0002	.0013	.0002	.0001	
%RSD	47.75	194.5	16.18	14.52	5.496	51.63	45.13	544.1	121.0	
#1	.0083	-0.080	.0906	-0.050	.0029	.0005	.0027	.0000	-0.000	
#2	.0039	.0131	.0745	-0.064	.0027	.0002	.0017	-0.003	.0002	
#3	.0039	.0140	.1034	-0.043	.0026	.0002	.0043	.0001	.0001	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Sample Name: ccb Acquired: 10/1/2019 0:02:12 Type: QC										
Method: SGS NO VALVE3(v320) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0011	.0002	.0055	.0008	.0014	.0009	.0026		
Stddev	.0004	.0007	.0001	.0006	.0009	.0006	.0003	.0015		
%RSD	72.73	65.66	36.99	11.20	107.1	43.89	35.05	57.41		
#1	.0009	.0019	.0002	-0.0059	-0.002	.0021	.0010	.0013		
#2	.0005	.0010	.0002	-0.0048	.0012	.0012	.0012	.0042		
#3	.0002	.0005	.0001	-0.0057	.0014	.0009	.0006	.0023		
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit										
Low Limit										
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	75835.	11375.	4940.7	10037.						
Stddev	540.	169.	11.7	26.						
%RSD	.71218	1.4825	.23762	.26322						
#1	75979.	11514.	4952.9	10059.						
#2	76288.	11187.	4939.6	10044.						
#3	75237.	11424.	4929.5	10008.						

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	<input checked="" type="checkbox"/>	2	Al	0.000000	0.000000	No
			Zr	0.000824	0.000000	No
Be 313.042 {108}	<input checked="" type="checkbox"/>	11	V	0.000222	0.000000	No
			Mo	-0.000040	0.000000	No
			Ti	-0.000650	0.000000	No
			Mn	0.000006	0.000000	No
			Ba	-0.000013	0.000000	No
			Zn	0.000010	0.000000	No
			Sb	-0.000021	0.000000	No
			Ag	0.000060	0.000000	No
			Sn	0.000010	0.000000	No
			Fe	-0.000001	0.000000	No
			K	0.000000	0.000000	No
Cd 228.802 {448}	<input checked="" type="checkbox"/>	14	As	0.008180	0.000000	No
			Ni	-0.000377	0.000000	No
			Fe	0.000010	0.000000	No
			Ba	0.000100	0.000000	No
			Co	-0.000718	0.000000	No
			Al	0.000000	0.000000	No
			Mg	0.000000	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	-0.000014	0.000000	No
			Ti	0.000051	0.000000	No
			Cu	0.000009	0.000000	No
			Sr	-0.000050	0.000000	No
			W	-0.000194	0.000000	No
			Cr	0.000010	0.000000	No
Co 228.616 {448}	<input checked="" type="checkbox"/>	5	Fe	-0.000001	0.000000	No
			Ca	-0.000003	0.000000	No
			Mg	0.000001	0.000000	No
			Ti	0.001922	0.000000	No
			Mo	-0.000963	0.000000	No
Cr 267.716 {126}	<input checked="" type="checkbox"/>	8	Mn	0.000098	0.000000	No
			Mo	-0.000053	0.000000	No
			Co	0.000007	0.000000	No
			Al	0.000000	0.000000	No
			Sn	0.000032	0.000000	No
			Ti	0.000042	0.000000	No
			Ca	0.000000	0.000000	No
			Fe	-0.000003	0.000000	No
Cu 324.754 {104}2	<input checked="" type="checkbox"/>	12	Cr	-0.000091	0.000000	No
			Mo	0.000395	0.000000	No
			Ti	-0.000174	0.000000	No
			Mn	-0.000130	0.000000	No
			Co	-0.000902	0.000000	No
			Zn	0.000037	0.000000	No
			Fe	-0.000205	0.000000	No
			Zr	-0.000007	0.000000	No
			V	-0.000457	0.000000	No
			Al	0.000000	0.000000	No
			Ni	0.000032	0.000000	No
			W	-0.010000	0.000000	No
Mn 257.610 {131}	<input checked="" type="checkbox"/>	2	Fe	-0.000073	0.000000	No
			Mo	0.000011	0.000000	No
Ni 231.604 {446}	<input checked="" type="checkbox"/>	7	Cr	-0.000028	0.000000	No
			Mo	-0.000041	0.000000	No
			Fe	0.000020	0.000000	No
			Zn	0.000017	0.000000	No
			Co	-0.000329	0.000000	No
			Ti	0.000010	0.000000	No
			W	-0.000073	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	<input checked="" type="checkbox"/>	16	Mn	0.000056	0.000000	No
			Mo	-0.000279	0.000000	No
			Ti	-0.000439	0.000000	No
			V	-0.000659	0.000000	No
			Zr	0.004712	0.000000	No
			Sb	-0.000013	0.000000	No
			Mg	0.000001	0.000000	No
			Ca	-0.000002	0.000000	No
			Fe	-0.000325	0.000000	No
			Al	-0.000001	0.000000	No
			Zn	-0.000090	0.000000	No
			Ba	-0.000087	0.000000	No
			Ni	-0.000021	0.000000	No
			Cr	0.000013	0.000000	No
			As	0.000081	0.000000	No
			Ce	-0.000182	0.000000	No
V 292.402 {115}	<input checked="" type="checkbox"/>	6	Fe	0.000025	0.000000	No
			Ti	0.000746	0.000000	No
			Mo	-0.000244	0.000000	No
			Co	0.000015	0.000000	No
			Cr	-0.006408	0.000000	No
			Mn	-0.001520	0.000000	No
Zn 206.200 {464}	<input checked="" type="checkbox"/>	13	Cr	-0.000600	0.000000	No
			Mo	-0.000376	0.000000	No
			Fe	0.000011	0.000000	No
			Co	0.000122	0.000000	No
			Ni	0.000058	0.000000	No
			Se	0.000849	0.000000	No
			Ca	0.000003	0.000000	No
			Ti	0.000131	0.000000	No
			Sn	0.000068	0.000000	No
			V	-0.000012	0.000000	No
			Al	0.000001	0.000000	No
			Si	0.000017	0.000000	No
			Zr	0.000269	0.000000	No
As 189.042 {478}	<input checked="" type="checkbox"/>	23	Al	-0.000001	0.000000	No
			Fe	-0.000062	0.000000	No
			Ca	-0.000000	0.000000	No
			Mn	-0.000048	0.000000	No
			Mo	0.000480	0.000000	No
			Cr	-0.002564	0.000000	No
			Co	-0.000223	0.000000	No
			Si	-0.000047	0.000000	No
			Cu	0.000120	0.000000	No
			Mg	0.000001	0.000000	No
			Cd	-0.000103	0.000000	No
			Sn	-0.000017	0.000000	No
			Zn	-0.000045	0.000000	No
			Zr	-0.000145	0.000000	No
			Sb	0.000022	0.000000	No
			Ti	0.000017	0.000000	No
			Ni	-0.000069	0.000000	No
			W	0.000000	0.000000	No
			S	-0.000010	0.000000	No
			Ba	-0.000070	0.000000	No
			Sr	0.000000	0.000000	No
			V	-0.000014	0.000000	No
			Ce	-0.000636	0.000000	No
Tl 190.856 {477}	<input checked="" type="checkbox"/>	31	Cr	0.000116	0.000000	No
			Mo	-0.011460	0.000000	No
			Al	0.000010	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			V	-0.020540	0.000000	No
			Mn	0.001618	0.000000	No
			Si	-0.000021	0.000000	No
			Ca	0.000005	0.000000	No
			Ti	-0.002239	0.000000	No
			Cu	0.000040	0.000000	No
			Co	0.006140	0.000000	No
			Sr	-0.000233	0.000000	No
			Zn	-0.000131	0.000000	No
			Pb	-0.000116	0.000000	No
			Mg	-0.000005	0.000000	No
			Ba	-0.000014	0.000000	No
			W	-0.030000	0.000000	No
			B	-0.000349	0.000000	No
			Ni	-0.000034	0.000000	No
			Sn	0.000110	0.000000	No
			Fe	-0.000048	0.000000	No
			Li	-0.000199	0.000000	No
			S	0.000013	0.000000	No
			As	0.000056	0.000000	No
			Bi	-0.000040	0.000000	No
			P	0.000021	0.000000	No
			Cd	0.000117	0.000000	No
			Sb	0.000034	0.000000	No
			K	0.000000	0.000000	No
			Zr	0.000059	0.000000	No
			Be	-0.000289	0.000000	No
			Ce	-0.000500	0.000000	No
Pb 220.353 {453}	<input checked="" type="checkbox"/>	21	Al	-0.000163	0.000000	No
			Ca	0.000002	0.000000	No
			Mn	-0.000034	0.000000	No
			Zn	0.000027	0.000000	No
			Mo	-0.001000	0.000000	No
			Ni	0.000136	0.000000	No
			Cu	0.000381	0.000000	No
			V	-0.000103	0.000000	No
			Co	-0.000084	0.000000	No
			Ti	-0.000051	0.000000	No
			Si	0.000054	0.000000	No
			Mg	0.000004	0.000000	No
			Sb	0.000041	0.000000	No
			Cr	0.000017	0.000000	No
			Sn	0.000130	0.000000	No
			Fe	0.000030	0.000000	No
			W	-0.010000	0.000000	No
			Sr	-0.000036	0.000000	No
			Zr	-0.000181	0.000000	No
			S	-0.000001	0.000000	No
			Ce	0.000364	0.000000	No
Se 196.090 {472}	<input checked="" type="checkbox"/>	19	Al	0.000015	0.000000	No
			Ca	-0.000010	0.000000	No
			Mn	0.000649	0.000000	No
			Mo	0.000066	0.000000	No
			Co	-0.000296	0.000000	No
			Cu	-0.000107	0.000000	No
			Mg	-0.000001	0.000000	No
			Ti	-0.000093	0.000000	No
			Zn	-0.000077	0.000000	No
			Fe	-0.000273	0.000000	No
			Si	0.000068	0.000000	No
			B	-0.000043	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ba	0.000050	0.000000	No
			S	0.000000	0.000000	No
			Zr	-0.000206	0.000000	No
			V	0.000082	0.000000	No
			W	0.000000	0.000000	No
			Sn	-0.000113	0.000000	No
Sb 206.833 {463}	<input checked="" type="checkbox"/>	18	Ce	-0.000845	0.000000	No
			Fe	0.000028	0.000000	No
			Al	0.000006	0.000000	No
			Ca	0.000006	0.000000	No
			Ni	-0.000583	0.000000	No
			Cr	0.020400	0.000000	No
			V	-0.001740	0.000000	No
			Zn	-0.000104	0.000000	No
			Mo	-0.000100	0.000000	No
			Ti	0.000740	0.000000	No
			Sn	-0.012500	0.000000	No
			Mn	-0.000040	0.000000	No
			Co	-0.000336	0.000000	No
			Se	-0.000075	0.000000	No
			Zr	0.000000	0.000000	No
			W	0.000000	0.000000	No
			Mg	-0.000001	0.000000	No
			S	-0.000017	0.000000	No
Al 396.152 {85}	<input checked="" type="checkbox"/>	9	Ce	-0.001909	0.000000	No
			Ca	0.000067	0.000000	No
			Mo	0.044823	0.000000	No
			Ti	0.000037	0.000000	No
			Si	0.000228	0.000000	No
			Co	-0.000115	0.000000	No
			Li	-0.001000	0.000000	No
			Ba	0.000725	0.000000	No
			Zr	0.004878	0.000000	No
Ca 317.933 {106}	<input checked="" type="checkbox"/>	5	Ce	-0.005773	0.000000	No
			Al	0.000043	0.000000	No
			Fe	0.000046	0.000000	No
			Mg	0.000071	0.000000	No
			Ti	-0.000042	0.000000	No
			Co	0.001523	0.000000	No
Fe 259.940 {130}	<input checked="" type="checkbox"/>	11	Cr	0.000237	0.000000	No
			Zn	0.000466	0.000000	No
			Al	0.000022	0.000000	No
			Co	0.000318	0.000000	No
			Cd	0.000700	0.000000	No
			Sn	-0.000019	0.000000	No
			Ti	-0.000710	0.000000	No
			Si	0.000053	0.000000	No
			Ca	0.000012	0.000000	No
			Ba	0.000400	0.000000	No
			Mn	-0.000272	0.000000	No
Mg 279.079 {121}	<input checked="" type="checkbox"/>	3	Mo	-0.021115	0.000000	No
			Pb	-0.000017	0.000000	No
			Fe	-0.000081	0.000000	No
K 766.490 {44}	<input checked="" type="checkbox"/>	None				
Na 589.592 {57}	<input checked="" type="checkbox"/>	1	Al	0.000039	0.000000	No
B 208.959 {462}	<input checked="" type="checkbox"/>	1	Mo	0.040842	0.000000	No
Mo 202.030 {467}	<input checked="" type="checkbox"/>	6	Ti	0.000050	0.000000	No
			Mg	-0.000005	0.000000	No
			Ca	0.000000	0.000000	No
			Fe	-0.000006	0.000000	No
			V	-0.000100	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Si 212.412 {459}	<input checked="" type="checkbox"/>	12	W	-0.000612	0.000000	No
			Mn	0.000152	0.000000	No
			Fe	0.000021	0.000000	No
			Ca	0.000041	0.000000	No
			Ni	0.000391	0.000000	No
			Cd	0.001794	0.000000	No
			Cr	0.001112	0.000000	No
			Mo	0.029007	0.000000	No
			Ti	0.007395	0.000000	No
			Ba	0.000825	0.000000	No
			Sn	0.005204	0.000000	No
			V	0.001738	0.000000	No
Sn 189.989 {478}	<input checked="" type="checkbox"/>	4	Zr	0.001561	0.000000	No
			Ti	-0.002059	0.000000	No
			Fe	0.000017	0.000000	No
			Mo	0.000058	0.000000	No
Sr 407.771 {83}	<input checked="" type="checkbox"/>	2	Zr	0.000976	0.000000	No
			Ca	0.000019	0.000000	No
Ti 334.904 {101}	<input checked="" type="checkbox"/>	5	Zr	-0.000004	0.000000	No
			Cr	0.000072	0.000000	No
			Mo	0.002014	0.000000	No
			Zr	0.000002	0.000000	No
			W	0.000004	0.000000	No
V	0.000064	0.000000	No			
Y 360.073 {94}* Y 371.030 {91}* Y 224.306 {451}* In 230.606 {446}* W 207.911 {462}	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	None None None None 3				
Zr 339.198 {99}	<input checked="" type="checkbox"/>	14	V	0.000064	0.000000	No
			Zn	0.016225	0.000000	No
			Fe	0.000002	0.000000	No
			Fe	-0.000037	0.000000	No
			Si	0.000631	0.000000	No
			Ba	-0.000049	0.000000	No
			Sn	0.000046	0.000000	No
			Sb	-0.000067	0.000000	No
			V	0.000226	0.000000	No
			W	0.000000	0.000000	No
			Ti	0.000007	0.000000	No
			Al	0.000001	0.000000	No
			Ca	-0.000001	0.000000	No
			Li	-0.000097	0.000000	No
Bi	0.000607	0.000000	No			
S 182.034 {485}	<input checked="" type="checkbox"/>	10	Mn	0.000059	0.000000	No
			Mo	0.000401	0.000000	No
			Ca	0.000060	0.000000	No
			Mo	0.000978	0.000000	No
			Al	-0.000024	0.000000	No
			Fe	0.000008	0.000000	No
			Mn	0.002516	0.000000	No
			W	-0.018006	0.000000	No
			Mg	0.000012	0.000000	No
			Cr	0.000119	0.000000	No
V	0.000018	0.000000	No			
Bi 223.061 {451}	<input checked="" type="checkbox"/>	8	B	-0.000196	0.000000	No
			Fe	0.000158	0.000000	No
			Ti	-0.017590	0.000000	No
			Co	-0.003172	0.000000	No
			Cr	0.003172	0.000000	No
			Cu	-0.001562	0.000000	No
			V	-0.000498	0.000000	No

11.2.1  
11

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			W	0.015000	0.000000	No
			Ce	-0.007545	0.000000	No
Li 670.784 { 50}	<input checked="" type="checkbox"/>	2	Ca	0.000072	0.000000	No
			W	0.000000	0.000000	No
P 177.495 {490}	<input checked="" type="checkbox"/>	2	Mn	-0.001748	0.000000	No
			Cu	0.004091	0.000000	No
Ce 404.076 { 83}	<input checked="" type="checkbox"/>	1	Mn	-0.002972	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ba 455.403 { 74}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000105	2.888546	0.000000	1.000000
Be 313.042 {108}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000022	2.998656	0.000000	1.000000
Cd 228.802 {448}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000157	1.195804	0.000000	1.000000
Co 228.616 {448}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000029	0.597987	0.000000	1.000000
Cr 267.716 {126}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000115	0.217422	0.000000	1.000000
Cu 324.754 {104}2	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.003744	0.331312	0.000000	1.000000
Mn 257.610 {131}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000031	0.574437	0.000000	1.000000
Ni 231.604 {446}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000755	0.444199	0.000000	1.000000
Ag 328.068 {103}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.002387	0.295236	0.000000	1.000000
V 292.402 {115}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.001070	0.316299	0.000000	1.000000
Zn 206.200 {464}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000861	1.335920	0.000000	1.000000
As 189.042 {478}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000687	0.158842	0.000000	1.000000
Tl 190.856 {477}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000248	0.065324	0.000000	1.000000
Pb 220.353 {453}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000394	0.190911	0.000000	1.000000
Se 196.090 {472}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000440	0.110940	0.000000	1.000000
Sb 206.833 {463}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000630	0.177728	0.000000	1.000000
Al 396.152 { 85}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.001274	0.049286	0.000000	1.000000
Ca 317.933 {106}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.005419	0.086359	0.000000	1.000000
Fe 259.940 {130}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000075	0.053942	0.000000	1.000000
Mg 279.079 {121}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000001	0.008090	0.000000	1.000000
K 766.490 { 44}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.007569	0.036316	0.000000	1.000000
Na 589.592 { 57}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.007793	0.137626	0.000000	1.000000
B 208.959 {462}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000550	0.253453	0.000000	1.000000
Mo 202.030 {467}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000564	0.855355	0.000000	1.000000
Si 212.412 {459}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.002693	0.239098	0.000000	1.000000
Sn 189.989 {478}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000230	0.190431	0.000000	1.000000
Sr 407.771 { 83}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000586	2.321966	0.000000	1.000000
Ti 334.904 {101}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.001594	0.311782	0.000000	1.000000
Y 360.073 { 94}*	10/1/2019 8:46:33	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	10/1/2019 8:46:33	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	10/1/2019 8:46:33	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	10/1/2019 8:46:33	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.003004	0.434322	0.000000	1.000000
Zr 339.198 { 99}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.002008	0.794529	0.000000	1.000000
S 182.034 {485}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	0.000677	0.097199	0.000000	1.000000
Bi 223.061 {451}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.000809	0.234012	0.000000	1.000000
Li 670.784 { 50}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	None	-0.001903	0.941146	0.000000	1.000000
P 177.495 {490}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	1/Conc	-0.009975	0.176650	0.000000	1.000000
Ce 404.076 { 83}	10/1/2019 8:46:33	9/30/2019 11:33:50	Linear	1/Conc	-0.000973	0.061696	0.000000	1.000000

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ba 455.403 { 74}	1.000000	0.000000	0.000261	0.000870	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000075	0.000250	OK.	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000192	0.000639	OK.	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000295	0.000983	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000311	0.001038	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000340	0.001134	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000044	0.000147	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000354	0.001181	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000385	0.001284	OK.	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000367	0.001223	OK.	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000138	0.000461	OK.	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.000985	0.003284	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001732	0.005773	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.001164	0.003880	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.001806	0.006021	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001419	0.004731	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.011143	0.037142	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.003044	0.010145	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.002556	0.008519	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.020501	0.068337	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.032513	0.108376	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.008605	0.028684	OK.	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000666	0.002221	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000255	0.000849	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.001031	0.003438	OK.	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000661	0.002203	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000123	0.000409	OK.	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000417	0.001390	OK.	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	0.000796	0.002654	Warnin	1.000000	0.000000	1	0
Y 371.030 { 91}*	0.000000	0.000000	0.002186	0.007287	Warnin	1.000000	0.000000	1	0
Y 224.306 {451}*	0.000000	0.000000	0.004215	0.014050	Warnin	1.000000	0.000000	1	0
In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
W 207.911 {462}	1.000000	0.000000	0.001012	0.003374	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000172	0.000575	OK.	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.001742	0.005806	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001494	0.004980	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.001361	0.004538	OK.	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.000980	0.003267	OK.	1.000000	0.000000	1	0
Ce 404.076 { 83}	1.000000	0.000000	0.002950	0.009834	OK.	1.000000	0.000000	1	0

Sample Name: STDA Acquired: 10/1/2019 12:35:20 Type: Cal  
 Method: SGS NO VALVE3(v324) Mode: IR Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.0012</b>	<b>.0001</b>	<b>.0001</b>	<b>.0000</b>	<b>.0002</b>	<b>.0033</b>	<b>-.0000</b>	<b>-.0011</b>	<b>-.0030</b>
Stddev	.0009	.0004	.0001	.0002	.0001	.0001	.0000	.0001	.0002
%RSD	73.41	375.6	142.4	3252.	37.76	3.269	24.10	7.463	5.931
#1	.0015	.0005	.0002	-.0002	.0003	.0032	-.0000	-.0011	-.0032
#2	.0018	.0002	-.0001	.0001	.0002	.0034	-.0000	-.0010	-.0030
#3	.0002	-.0004	.0002	.0001	.0001	.0033	-.0000	-.0011	-.0028

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-.0013</b>	<b>.0007</b>	<b>-.0009</b>	<b>-.0002</b>	<b>-.0004</b>	<b>.0002</b>	<b>.0008</b>	<b>.0022</b>	<b>.0049</b>
Stddev	.0001	.0002	.0001	.0001	.0002	.0001	.0002	.0002	.0002
%RSD	7.310	28.26	15.07	46.82	50.05	33.46	24.97	9.127	4.015
#1	-.0013	.0005	-.0010	-.0003	-.0006	.0003	.0011	.0021	.0051
#2	-.0012	.0009	-.0009	-.0001	-.0005	.0002	.0007	.0020	.0047
#3	-.0013	.0005	-.0007	-.0001	-.0002	.0002	.0008	.0024	.0049

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.0002</b>	<b>.0000</b>	<b>.0077</b>	<b>-.0035</b>	<b>.0004</b>	<b>.0005</b>	<b>.0032</b>	<b>.0004</b>	<b>-.0004</b>
Stddev	.0001	.0001	.0012	.0010	.0002	.0004	.0003	.0002	.0004
%RSD	73.55	204.7	15.13	28.09	57.25	75.91	8.393	39.79	87.81
#1	.0002	-.0000	.0090	-.0040	.0005	.0007	.0033	.0003	-.0005
#2	.0000	.0001	.0068	-.0043	.0002	.0008	.0033	.0006	-.0000
#3	.0003	.0001	.0072	-.0024	.0006	.0001	.0029	.0003	-.0008

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-.0018</b>	<b>.0026</b>	<b>-.0026</b>	<b>-.0001</b>	<b>-.0009</b>	<b>-.0026</b>	<b>-.0090</b>	<b>-.0011</b>
Stddev	.0001	.0003	.0001	.0001	.0004	.0008	.0000	.0002
%RSD	4.003	10.89	2.597	101.9	50.53	32.23	.5318	17.13
#1	-.0017	.0024	-.0025	-.0000	-.0012	-.0031	-.0091	-.0013
#2	-.0018	.0029	-.0026	-.0003	-.0004	-.0031	-.0090	-.0010
#3	-.0018	.0025	-.0025	-.0001	-.0010	-.0016	-.0090	-.0010

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Sample Name: STDA Acquired: 10/1/2019 12:35:20 Type: Cal  
 Method: SGS NO VALVE3(v324) Mode: IR Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64464.</b>	<b>9084.0</b>	<b>4262.2</b>	<b>8601.8</b>
Stddev	611.	24.9	7.0	11.3
%RSD	.94708	.27461	.16450	.13166
#1	64513.	9112.3	4265.4	8603.8
#2	63830.	9074.8	4254.1	8589.6
#3	65049.	9065.0	4267.0	8612.0

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Sample Name: STDB Acquired: 10/1/2019 12:40:22 Type: Cal  
 Method: SGS NO VALVE3(v324) Mode: IR Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>12.72</b>	<b>13.48</b>	<b>5.302</b>	<b>2.611</b>	<b>.9633</b>	<b>1.337</b>	<b>2.554</b>	<b>1.987</b>	<b>1.515</b>
Stddev	.08	.07	.024	.011	0.144	.018	.046	.010	.0020
%RSD	.6444	.5187	.4448	.4312	1.4981	1.359	1.784	.4951	1.305
#1	12.74	13.51	5.287	2.604	.9528	1.324	2.522	1.980	1.499
#2	12.80	13.54	5.291	2.605	.9797	1.358	2.606	1.983	1.537
#3	12.63	13.40	5.329	2.624	.9573	1.329	2.533	1.998	1.509

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>1.387</b>	<b>5.945</b>	<b>.6914</b>	<b>.2628</b>	<b>.8523</b>	<b>.4783</b>	<b>.8137</b>	<b>4.560</b>	<b>7.717</b>
Stddev	.020	.031	.0030	.0012	.0043	.0019	.0041	.026	.041
%RSD	1.407	.5228	.4352	.4646	.5015	.4035	.5051	.5785	.5270
#1	1.372	5.926	.6892	.2625	.8501	.4767	.8108	4.569	7.724
#2	1.409	5.928	.6901	.2617	.8497	.4778	.8119	4.581	7.753
#3	1.379	5.981	.6948	.2641	.8573	.4804	.8184	4.531	7.673

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>4.560</b>	<b>.7077</b>	<b>3.308</b>	<b>12.70</b>	<b>1.166</b>	<b>3.732</b>	<b>2.713</b>	<b>.8543</b>	<b>10.42</b>
Stddev	.023	.0025	.016	.06	.007	.017	.015	.0041	.06
%RSD	.4993	.3523	.4882	.4816	.5896	.4412	.5381	.4788	.5802
#1	4.559	.7077	3.305	12.70	1.163	3.723	2.704	.8508	10.44
#2	4.584	.7102	3.325	12.76	1.166	3.721	2.706	.8533	10.48
#3	4.538	.7052	3.293	12.63	1.176	3.751	2.730	.8588	10.36

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>1.368</b>	<b>1.963</b>	<b>3.526</b>	<b>.4322</b>	<b>1.038</b>	<b>4.320</b>	<b>.8087</b>	<b>2.656</b>
Stddev	.019	.010	.069	.0017	.005	.024	.0044	.0035
%RSD	1.420	.5023	1.963	.3880	.4570	.5561	.5399	1.313
#1	1.354	1.957	3.448	.4312	1.034	4.327	.8057	2.633
#2	1.390	1.958	3.581	.4312	1.036	4.341	.8067	2.696
#3	1.360	1.974	3.548	.4341	1.043	4.294	.8137	2.639

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Sample Name: STDB Acquired: 10/1/2019 12:40:22 Type: Cal  
 Method: SGS NO VALVE3(v324) Mode: IR Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>61476.</b>	<b>9059.3</b>	<b>4057.5</b>	<b>8167.5</b>
Stddev	895.	31.2	18.0	34.9
%RSD	1.4551	.34481	.44291	.42774
#1	62188.	9082.8	4068.7	8189.2
#2	60472.	9023.8	4067.0	8186.1
#3	61769.	9071.2	4036.8	8127.2

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Sample Name: icv 1 Acquired: 10/1/2019 12:55:13 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.029</b>	<b>2.049</b>	<b>1.992</b>	<b>1.955</b>	<b>1.976</b>	<b>1.952</b>	<b>1.991</b>	<b>2.020</b>	<b>2.443</b>
Stddev	.002	.001	.002	.003	.003	.004	.002	.003	.004
%RSD	.0739	.0325	.0959	.1572	.1388	.2162	.1011	.1468	.1727
#1	2.028	2.050	1.992	1.954	1.976	1.956	1.991	2.018	2.441
#2	2.028	2.049	1.990	1.952	1.974	1.950	1.989	2.018	2.447
#3	2.030	2.048	1.994	1.958	1.979	1.948	1.993	2.023	2.439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.034</b>	<b>1.989</b>	<b>1.989</b>	<b>2.033</b>	<b>1.931</b>	<b>2.009</b>	<b>1.986</b>	<b>40.44</b>	<b>38.70</b>
Stddev	.002	.000	.002	.009	.002	.003	.005	.10	.05
%RSD	.1097	.0133	.0852	.4255	.1129	.1525	.2587	.2371	.1285
#1	2.034	1.989	1.990	2.042	1.928	2.006	1.982	40.49	38.74
#2	2.033	1.990	1.987	2.024	1.932	2.008	1.984	40.50	38.72
#3	2.037	1.989	1.990	2.032	1.932	2.012	1.992	40.33	38.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>38.81</b>	<b>38.52</b>	<b>39.90</b>	<b>40.92</b>	<b>2.032</b>	<b>1.972</b>	<b>5.011</b>	<b>1.985</b>	<b>2.025</b>
Stddev	.03	.18	.06	.05	.002	.001	.005	.002	.002
%RSD	.0881	.4731	.1544	.1199	.0875	.0539	.0946	.1114	.0907
#1	38.82	38.61	39.94	40.94	2.032	1.971	5.010	1.986	2.023
#2	38.83	38.65	39.94	40.96	2.030	1.972	5.006	1.983	2.026
#3	38.77	38.31	39.83	40.87	2.034	1.973	5.016	1.987	2.026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

Sample Name: icv 1 Acquired: 10/1/2019 12:55:13 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.002</b>	<b>1.914</b>	<b>2.002</b>	<b>1.924</b>	<b>1.993</b>	<b>2.067</b>	<b>1.944</b>	<b>-0.215</b>
Stddev	.003	.005	.002	.000	.003	.003	.001	.0026
%RSD	.1689	.2697	.0756	.0102	.1701	.1564	.0666	12.30
#1	2.005	1.910	2.001	1.924	1.990	2.063	1.944	-0.234
#2	1.998	1.912	2.002	1.924	1.993	2.069	1.943	-0.185
#3	2.002	1.920	2.004	1.924	1.997	2.069	1.946	-0.227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	<b>62974.</b>	<b>8924.2</b>	<b>4114.0</b>	<b>8182.8</b>				
Stddev	254.	69.9	4.5	8.9				
%RSD	.40256	.78288	.11058	.10883				
#1	62960.	8879.0	4118.3	8193.0				
#2	63234.	8888.9	4109.3	8178.9				
#3	62727.	9004.7	4114.4	8176.5				

Sample Name: icb 7 Acquired: 10/1/2019 12:59:59 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0001</b>	<b>.0001</b>	<b>.0003</b>	<b>-.0002</b>	<b>-.0001</b>	<b>.0001</b>	<b>.0004</b>	<b>-.0002</b>
Stddev	.0002	.0000	.0001	.0004	.0005	.0001	.0000	.0003	.0002
%RSD	75.70	8.420	191.4	143.8	193.3	141.5	32.07	76.96	102.7
#1	.0000	.0001	.0002	.0002	.0002	-.0001	.0001	.0001	-.0002
#2	.0004	.0001	-.0001	.0007	-.0007	.0000	.0001	.0004	.0000
#3	.0005	.0001	.0001	-.0001	-.0003	-.0002	.0001	.0008	-.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0003</b>	<b>.0002</b>	<b>.0008</b>	<b>.0007</b>	<b>-.0007</b>	<b>.0004</b>	<b>.0005</b>	<b>-.0070</b>	<b>-.0005</b>
Stddev	.0003	.0002	.0005	.0009	.0009	.0020	.0011	.0066	.0021
%RSD	118.2	75.12	58.67	125.8	141.1	443.5	225.7	94.48	472.6
#1	-.0004	.0001	.0003	.0009	-.0016	.0015	-.0004	.0001	.0020
#2	-.0005	.0004	.0011	.0015	.0002	.0017	.0001	-.0080	-.0019
#3	.0001	.0002	.0010	-.0003	-.0006	-.0018	.0017	-.0130	-.0015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0041</b>	<b>.0082</b>	<b>.0655</b>	<b>.0199</b>	<b>.0043</b>	<b>.0003</b>	<b>.0005</b>	<b>-.0008</b>	<b>.0001</b>
Stddev	.0033	.0269	.0307	.0112	.0006	.0001	.0007	.0001	.0001
%RSD	78.83	330.6	46.84	56.56	13.29	40.11	153.6	10.45	182.5
#1	.0075	.0367	.0484	.0326	.0049	.0003	-.0002	-.0009	.0000
#2	.0041	.0046	.0472	.0112	.0038	.0004	.0003	-.0008	.0002
#3	.0009	-.0169	-.1009	.0158	.0043	.0002	.0012	-.0007	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: icb 7 Acquired: 10/1/2019 12:59:59 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0001</b>	<b>F_0084</b>	<b>.0006</b>	<b>-.0001</b>	<b>.0007</b>	<b>.0016</b>	<b>.0015</b>	<b>.0005</b>
Stddev	.0002	.0003	.0001	.0001	.0009	.0008	.0007	.0054
%RSD	220.9	3.380	10.73	110.1	133.1	53.64	45.71	1052.
#1	.0003	.0087	.0007	-.0001	.0014	.0006	.0007	-.0057
#2	-.0001	.0083	.0006	-.0003	.0011	.0023	.0018	.0036
#3	.0000	.0082	.0006	-.0000	-.0004	.0017	.0019	.0037
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit		.0053						
Low Limit		-.0053						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	<b>64994.</b>	<b>8943.8</b>	<b>4240.5</b>	<b>8537.2</b>				
Stddev	419.	116.8	2.2	7.0				
%RSD	6.4505	1.3062	.05132	.08170				
#1	65478.	8974.5	4239.5	8541.8				
#2	64746.	8814.7	4239.1	8529.2				
#3	64758.	9042.3	4243.0	8540.7				

11.3  
11











Sample Name: feconf Acquired: 10/1/2019 13:56:22 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0002	-0.0000	.0004	-0.0005	.0021	.0052	.0002	.0048
Stddev	.0001	.0000	.0002	.0001	.0002	.0003	.0002	.0002	.0006
%RSD	85.99	22.28	88.16	31.30	44.74	13.86	2.925	70.74	11.96
#1	.0001	.0001	-.0002	.0005	-.0008	.0024	.0051	.0002	.0041
#2	.0003	.0002	.0002	.0004	-.0003	.0021	.0052	.0001	.0051
#3	.0001	.0002	.0000	.0003	-.0005	.0018	.0054	.0004	.0051
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0013	-0.0006	.0030	-0.0012	-0.0007	.0002	.0005	.0002	.0066
Stddev	.0001	.0000	.0014	.0012	.0009	.0008	.0007	.0023	.0045
%RSD	9.100	6.182	47.91	96.19	136.9	343.7	128.0	1130.	68.27
#1	-.0013	-.0007	.0041	-.0003	-.0017	.0004	.0009	-.0008	.0039
#2	-.0013	-.0007	.0036	-.0025	-.0004	.0010	-.0002	.0029	.0119
#3	-.0011	-.0006	.0014	-.0008	.0001	-.0006	.0009	-.0014	.0042
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 204.9	.0249	.1968	.0747	.0046	.0007	-0.0000	-0.0037	-0.0001
Stddev	.5	.0217	.0475	.0091	.0002	.0004	.0008	.0003	.0001
%RSD	.2575	87.20	24.13	12.14	4.745	59.09	53490.	8.966	91.07
#1	204.8	.0217	.2446	.0689	.0046	.0011	.0009	-.0034	-.0000
#2	205.4	.0480	.1496	.0851	.0048	.0003	-.0007	-.0040	-.0002
#3	204.4	.0050	.1964	.0700	.0044	.0009	-.0002	-.0038	-.0001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	-0.0004	.0016	-0.0031	.0343	-0.0100	.0030	-0.0002	.0828	
Stddev	.0002	.0004	.0002	.0023	.0033	.0017	.0004	.0018	
%RSD	44.00	24.55	5.230	6.825	32.94	55.88	183.8	2.157	
#1	-.0005	.0020	-.0032	.0319	-.0065	.0025	.0003	.0809	
#2	-.0002	.0015	-.0029	.0365	-.0106	.0049	-.0005	.0830	
#3	-.0003	.0012	-.0031	.0346	-.0130	.0016	-.0005	.0845	

Sample Name: feconf Acquired: 10/1/2019 13:56:22 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	64814.	8920.9	4192.0	8723.4
Stddev	148.	68.2	12.4	14.0
%RSD	.22866	.76402	.29585	.16063
#1	64930.	8913.5	4199.9	8735.7
#2	64866.	8856.7	4198.4	8726.3
#3	64647.	8992.4	4177.7	8708.2

Sample Name: crconf Acquired: 10/1/2019 14:01:26 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-0.0000	-0.0000	-0.0014	F 9.846	.0013	-0.0013	.0003	-0.0000
Stddev	.0002	.0000	.0001	.0002	.065	.0002	.0000	.0003	.0005
%RSD	79.11	38.91	251.7	13.35	6.559	12.66	1.218	77.87	47.21
#1	.0001	-0.0001	-0.0001	-.0012	9.784	.0014	-.0014	.0002	-.0005
#2	.0006	-0.0000	-0.0000	-.0015	9.842	.0015	-.0013	.0002	.0004
#3	.0003	-0.0000	-0.0000	-.0015	9.913	.0011	-.0013	.0006	.0001
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	-0.0010	-0.0004	.0015	-0.0018	.0010	.0000	-0.0032	.0042
Stddev	.0003	.0001	.0008	.0005	.0011	.0009	.0026	.0089	.0029
%RSD	4.341	5.414	231.5	30.65	57.07	99.26	5976.	275.6	68.70
#1	.0075	-.0010	-.0012	.0010	-.0029	-.0001	.0023	.0044	.0041
#2	.0081	-.0009	.0004	.0019	-.0019	.0017	.0007	-.0129	.0014
#3	.0075	-.0010	-.0003	.0016	-.0008	.0013	-.0028	-.0011	.0071
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	-0.0032	.0572	.0187	.0049	.0007	-0.0027	-0.0010	.0001
Stddev	.0036	.0115	.0110	.0062	.0002	.0002	.0010	.0002	.0001
%RSD	39.87	360.3	19.22	33.34	4.107	22.88	38.59	21.37	109.2
#1	.0101	-.0097	.0683	.0221	.0051	.0006	-.0039	-.0012	.0001
#2	.0051	-.0100	.0464	.0115	.0049	.0009	-.0018	-.0010	-.0000
#3	.0121	.0101	.0568	.0226	.0047	.0006	-.0024	-.0007	.0001
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0010	.0013	-0.0017	.0009	-0.0163	.0022	.0000	-0.0012	
Stddev	.0004	.0005	.0001	.0009	.0009	.0005	.0005	.0008	
%RSD	39.68	40.97	5.669	100.9	5.416	21.54	2306.	64.70	
#1	.0006	.0011	-.0017	.0003	-.0169	.0026	-.0002	-.0016	
#2	.0014	.0009	-.0018	.0019	-.0166	.0022	-.0003	-.0003	
#3	.0012	.0018	-.0016	.0004	-.0153	.0017	.0006	-.0018	

Sample Name: crconf Acquired: 10/1/2019 14:01:26 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	64723.	8881.1	4095.5	8449.4
Stddev	285.	70.0	2.2	9.5
%RSD	.44023	.78842	.05398	.11221
#1	64738.	8962.0	4096.1	8460.3
#2	65001.	8842.6	4093.0	8444.5
#3	64431.	8838.8	4097.3	8443.3

Sample Name: asconf Acquired: 10/1/2019 14:06:31 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>-0.0000</b>	<b>-0.0003</b>	<b>-0.0002</b>	<b>-0.0001</b>	<b>.0001</b>	<b>-0.0000</b>	<b>.0001</b>	<b>-0.0008</b>
Stddev	.0002	.0000	.0002	.0003	.0004	.0001	.0000	.0001	.0003
%RSD	33.19	96.22	55.40	196.9	391.2	122.5	30.67	92.77	40.13
#1	.0007	.0000	-.0005	-.0005	-.0002	-.0000	-.0000	-.0000	-.0012
#2	.0003	-.0001	-.0004	.0001	.0003	.0001	-.0000	.0001	-.0008
#3	.0005	-.0001	-.0001	-.0001	-.0004	.0001	-.0000	.0002	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0000</b>	<b>.0001</b>	<b>5.120</b>	<b>-0.0008</b>	<b>.0013</b>	<b>.0010</b>	<b>-0.0008</b>	<b>.0021</b>	<b>-0.0037</b>
Stddev	.0001	.0001	.017	.0021	.0009	.0028	.0009	.0017	.0028
%RSD	146.1	241.3	.3325	263.5	74.46	285.4	116.6	80.22	75.10
#1	.0002	.0002	5.101	-.0028	.0023	.0028	.0001	.0010	-.0039
#2	-.0001	-.0001	5.128	.0014	.0009	-.0022	-.0018	.0012	-.0063
#3	-.0001	.0001	5.132	-.0010	.0006	.0023	-.0007	.0040	-.0008

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0012</b>	<b>-0.0006</b>	<b>.0627</b>	<b>.0078</b>	<b>.0033</b>	<b>-0.0001</b>	<b>.0023</b>	<b>-0.0012</b>	<b>-0.0000</b>
Stddev	.0017	.0179	.0216	.0058	.0005	.0001	.0009	.0005	.0002
%RSD	141.9	2946.	34.48	74.78	15.15	99.64	39.42	39.69	877.0
#1	.0016	-.0049	.0378	.0011	.0035	.0000	.0030	-.0007	-.0001
#2	-.0007	-.0160	.0752	.0113	.0037	-.0001	.0026	-.0016	-.0002
#3	.0028	.0191	.0753	.0110	.0027	-.0001	.0013	-.0013	-.0001

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0001</b>	<b>-0.0001</b>	<b>.0001</b>	<b>.0001</b>	<b>.0012</b>	<b>.0025</b>	<b>.0013</b>	<b>.0018</b>
Stddev	.0001	.0002	.0003	.0020	.0012	.0008	.0005	.0032
%RSD	113.1	153.5	195.1	1409.	100.1	32.94	40.95	178.1
#1	.0003	.0001	.0005	.0022	.0000	.0034	.0019	.0048
#2	-.0000	-.0003	-.0001	-.0000	.0012	.0024	.0013	-.0016
#3	.0001	-.0003	.0000	-.0017	.0025	.0017	.0008	.0022

Sample Name: asconf Acquired: 10/1/2019 14:06:31 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>65382.</b>	<b>9035.3</b>	<b>4245.0</b>	<b>8545.8</b>
Stddev	740.	29.5	15.3	26.3
%RSD	1.1324	.32598	.36013	.30773
#1	65125.	9032.3	4262.6	8575.6
#2	64804.	9066.2	4235.1	8525.9
#3	66216.	9007.5	4237.2	8535.9

Sample Name: CCV Acquired: 10/1/2019 14:11:34 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.034</b>	<b>2.040</b>	<b>2.015</b>	<b>2.046</b>	<b>1.994</b>	<b>1.934</b>	<b>2.042</b>	<b>2.084</b>	<b>2.452</b>
Stddev	.002	.002	.001	.004	.004	.006	.029	.003	.0009
%RSD	.0974	.1009	.0515	.1754	.2006	.3166	1.438	.1420	.3476
#1	2.033	2.043	2.015	2.045	1.999	1.930	2.072	2.081	2.442
#2	2.032	2.038	2.017	2.044	1.992	1.930	2.013	2.084	2.454
#3	2.036	2.040	2.015	2.051	1.992	1.941	2.040	2.087	2.459
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.988</b>	<b>2.044</b>	<b>1.999</b>	<b>2.055</b>	<b>2.086</b>	<b>2.005</b>	<b>2.009</b>	<b>40.00</b>	<b>39.91</b>
Stddev	.003	.001	.003	.007	.002	.002	.001	.05	.04
%RSD	.1356	.0302	.1653	.3507	.1123	.1065	.0504	.1290	.1014
#1	1.991	2.044	1.995	2.052	2.089	2.003	2.010	40.03	39.95
#2	1.985	2.044	2.002	2.051	2.084	2.007	2.009	39.94	39.87
#3	1.987	2.045	2.000	2.064	2.086	2.005	2.008	40.03	39.91
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.07</b>	<b>40.19</b>	<b>39.54</b>	<b>39.77</b>	<b>2.039</b>	<b>2.012</b>	<b>4.985</b>	<b>2.032</b>	<b>2.047</b>
Stddev	.03	.15	.08	.03	.003	.000	.005	.004	.001
%RSD	.0632	.3696	.2119	.0651	.1377	.0034	.0914	.1982	.0597
#1	40.06	40.22	39.56	39.77	2.036	2.012	4.980	2.030	2.046
#2	40.05	40.03	39.45	39.75	2.041	2.012	4.987	2.029	2.045
#3	40.10	40.33	39.61	39.80	2.041	2.012	4.989	2.036	2.048
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Sample Name: CCV Acquired: 10/1/2019 14:11:34 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.963</b>	<b>1.980</b>	<b>2.028</b>	<b>1.986</b>	<b>2.015</b>	<b>1.964</b>	<b>2.036</b>	<b>1.974</b>
Stddev	.004	.001	.002	.001	.001	.002	.002	.003
%RSD	.1889	.0707	.0859	.0545	.0619	.0846	.0719	.1577
#1	1.965	1.982	2.029	1.987	2.014	1.965	2.035	1.976
#2	1.959	1.980	2.026	1.985	2.016	1.962	2.037	1.970
#3	1.966	1.979	2.029	1.986	2.016	1.965	2.038	1.975
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>62943.</b>	<b>8980.1</b>	<b>4083.6</b>	<b>8128.7</b>
Stddev	329.	7.4	6.8	13.7
%RSD	.52203	.08195	.16725	.16882
#1	62598.	8988.3	4075.7	8115.8
#2	63252.	8978.2	4087.6	8143.1
#3	62980.	8973.9	4087.5	8127.3

Sample Name: CCB Acquired: 10/1/2019 14:16:29 Type: QC									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0000</b>	<b>-0.0000</b>	<b>.0000</b>	<b>-0.0001</b>	<b>-0.0003</b>	<b>-0.0000</b>	<b>-0.0000</b>	<b>.0001</b>	<b>-0.0001</b>
Stddev	.0003	.0000	.0000	.0002	.0001	.0003	.0000	.0002	.0000
%RSD	1442.	280.9	311.5	225.6	37.04	815.4	157.1	289.3	17.30
#1	.0003	-0.0000	.0001	.0000	-0.0004	.0002	-0.0000	-0.0000	-0.0000
#2	-0.0001	.0000	-0.0000	.0000	-0.0003	-0.0003	-0.0000	-0.0001	-0.0001
#3	-0.0002	-0.0001	-0.0000	-0.0003	-0.0002	.0000	.0000	.0003	-0.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0002</b>	<b>.0002</b>	<b>.0012</b>	<b>.0011</b>	<b>-0.0004</b>	<b>.0003</b>	<b>.0001</b>	<b>-0.0102</b>	<b>.0018</b>
Stddev	.0002	.0001	.0006	.0011	.0005	.0020	.0010	.0039	.0007
%RSD	80.96	44.25	53.08	97.52	129.1	715.6	1017.	38.24	42.21
#1	-0.0001	.0001	.0017	.0003	.0001	.0025	-0.0005	-0.0062	.0023
#2	-0.0001	.0002	.0005	.0008	-0.0004	-0.0003	.0012	-0.0103	.0020
#3	-0.0004	.0003	.0013	.0024	-0.0008	-0.0014	-0.0005	-0.0140	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0000</b>	<b>.0144</b>	<b>.0636</b>	<b>.0221</b>	<b>.0046</b>	<b>.0004</b>	<b>.0024</b>	<b>-0.0006</b>	<b>-0.0000</b>
Stddev	.0016	.0149	.0119	.0051	.0008	.0001	.0018	.0002	.0000
%RSD	3310.	103.8	18.78	23.03	17.65	14.37	73.07	39.28	1158.
#1	.0017	.0243	.0771	.0203	.0053	.0005	.0013	-0.0005	-0.0000
#2	-0.0001	.0216	.0593	.0279	.0049	.0004	.0045	-0.0009	-0.0000
#3	-0.0015	-0.0028	.0544	.0182	.0037	.0004	.0015	-0.0005	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB Acquired: 10/1/2019 14:16:29 Type: QC								
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000								
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0004</b>	<b>.0002</b>	<b>-0.0006</b>	<b>-0.0002</b>	<b>.0031</b>	<b>.0015</b>	<b>.0002</b>
Stddev	.0003	.0005	.0001	.0016	.0013	.0008	.0008	.0017
%RSD	110.6	143.8	41.18	253.6	679.2	27.07	51.85	895.7
#1	.0006	.0007	.0002	-0.0015	-0.0016	.0022	.0010	-0.0013
#2	.0000	.0006	.0004	.0012	.0009	.0037	.0023	.0021
#3	.0002	-0.0002	.0002	-0.0015	.0001	.0035	.0010	-0.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit								
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	64743.	9088.9	4220.0	8512.2				
Stddev	387.	32.5	17.0	21.5				
%RSD	.59735	.35756	.40169	.25294				
#1	64825.	9064.6	4235.9	8533.7				
#2	64322.	9125.8	4202.2	8490.6				
#3	65082.	9076.2	4221.9	8512.2				

Sample Name: MP17593-MB1CONF Acquired: 10/1/2019 14:21:33 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>-0.0000</b>	<b>.0001</b>	<b>.0000</b>	<b>-0.0003</b>	<b>.0003</b>	<b>-0.0000</b>	<b>.0001</b>	<b>-0.0006</b>
Stddev	.0001	.0001	.0001	.0004	.0001	.0002	.0000	.0001	.0002
%RSD	32.23	135.7	195.5	844.3	51.10	61.94	368.4	64.80	31.45
#1	.0003	-0.0001	-0.0001	.0000	-0.0003	.0001	-0.0000	.0002	-0.0004
#2	.0006	-0.0001	.0002	-0.0003	-0.0004	.0004	.0000	.0002	-0.0006
#3	.0004	.0000	.0001	.0004	-0.0001	.0003	.0000	.0000	-0.0008
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0000</b>	<b>.0015</b>	<b>.0017</b>	<b>-0.0010</b>	<b>.0009</b>	<b>.0015</b>	<b>.0003</b>	<b>.0031</b>	<b>.0131</b>
Stddev	.0002	.0001	.0011	.0004	.0002	.0012	.0014	.0060	.0009
%RSD	679.3	3.398	64.69	40.88	16.75	81.13	403.1	195.1	7.003
#1	-0.0002	.0016	.0016	-0.0006	.0011	.0023	-0.0010	.0037	.0138
#2	-0.0001	.0015	.0028	-0.0014	.0009	.0021	.0003	.0086	.0121
#3	.0002	.0015	.0006	-0.0012	.0008	.0001	.0018	-0.0032	.0133
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0029</b>	<b>-0.0050</b>	<b>.0369</b>	<b>.0098</b>	<b>.0044</b>	<b>.0000</b>	<b>.0109</b>	<b>-0.0005</b>	<b>.0000</b>
Stddev	.0017	.0083	.0508	.0031	.0005	.0003	.0006	.0004	.0001
%RSD	58.06	165.6	137.5	32.22	10.27	2414.	5.142	73.44	422.6
#1	.0047	-0.0112	-0.0191	.0115	.0048	-0.0000	.0113	-0.0003	-0.0000
#2	.0029	-0.0082	.0498	.0061	.0039	-0.0002	.0103	-0.0009	.0001
#3	.0013	.0044	.0800	.0117	.0046	.0003	.0110	-0.0003	.0000
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0000</b>	<b>.0013</b>	<b>.0044</b>	<b>.0034</b>	<b>-0.0007</b>	<b>.0019</b>	<b>.0021</b>	<b>-0.0005</b>	
Stddev	.0002	.0003	.0002	.0001	.0011	.0011	.0007	.0010	
%RSD	4588.	24.96	3.614	4.232	150.0	58.98	34.23	177.1	
#1	-0.0002	.0011	.0044	.0034	.0005	.0030	.0015	-0.0016	
#2	.0000	.0017	.0042	.0033	-0.0011	.0019	.0018	.0001	
#3	.0002	.0012	.0046	.0036	-0.0015	.0008	.0029	-0.0001	

Sample Name: MP17593-MB1CONF Acquired: 10/1/2019 14:21:33 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65039.	9061.7	4218.9	8499.3
Stddev	312.	54.9	12.3	21.8
%RSD	.47989	.60615	.29130	.25597
#1	64720.	9083.6	4206.3	8484.1
#2	65344.	9102.2	4230.9	8524.2
#3	65051.	8999.1	4219.4	8489.7

Sample Name: MP17593-B1CONF Acquired: 10/1/2019 14:26:35 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.035	2.053	1.987	2.028	1.998	1.927	2.053
Stddev	.037	.038	.003	.003	.044	.043	.049
%RSD	1.831	1.857	.1724	.1534	2.206	2.203	2.364
#1	2.076	2.096	1.991	2.031	1.986	1.913	2.038
#2	2.005	2.023	1.985	2.025	2.047	1.975	2.107
#3	2.023	2.041	1.985	2.028	1.961	1.893	2.013

Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.067	2.525	1.996	2.022	2.044	2.042	2.036
Stddev	.003	.0052	.043	.005	.003	.006	.004
%RSD	.1338	2.046	2.170	.2560	.1396	.3190	.2225
#1	2.070	.2503	1.983	2.027	2.048	2.049	2.042
#2	2.067	.2583	2.044	2.022	2.044	2.040	2.034
#3	2.065	.2487	1.960	2.017	2.042	2.037	2.033

Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.958	2.078	26.03	25.82	26.02	25.88	25.40
Stddev	.004	.007	.49	.47	.49	.54	.44
%RSD	.2096	.3612	1.875	1.803	1.870	2.068	1.747
#1	1.961	2.086	26.57	26.34	26.57	26.47	25.88
#2	1.960	2.076	25.64	25.45	25.64	25.42	25.01
#3	1.953	2.071	25.87	25.67	25.86	25.75	25.30

Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.80	1.999	2.084	0.418	2.105	2.047	2.055
Stddev	.45	.003	.004	.0005	.005	.037	.047
%RSD	1.763	.1488	.1706	1.301	.2365	1.829	2.296
#1	26.31	2.002	2.088	.0413	2.110	2.089	2.043
#2	25.43	1.997	2.082	.0424	2.101	2.017	2.107
#3	25.65	1.997	2.083	.0416	2.103	2.036	2.014

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Zoom In  
Zoom Out

Sample Name: MP17593-B1CONF Acquired: 10/1/2019 14:26:35 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.014	2.117	-0.150	-0.155	.0023	1.998	W -.0326
Stddev	.001	.048	.0011	.0011	.0009	.006	.0038
%RSD	.0642	2.258	7.553	7.025	36.62	.3085	11.65
#1	2.013	2.103	-0.151	-0.167	.0033	2.005	-.0283
#2	2.015	2.170	-0.161	-0.150	.0021	1.998	-.0339
#3	2.015	2.078	-0.139	-0.146	.0016	1.992	-.0355

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6275.4	8942.1	4095.3	8180.3
Stddev	124.2	161.6	7.9	11.1
%RSD	1.9796	1.8073	.19394	.13586
#1	6309.2	8763.7	4089.0	8152.6
#2	6137.8	9078.7	4092.6	8155.3
#3	6379.3	8983.9	4104.2	8173.0

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Zoom In  
Zoom Out

Sample Name: JC95566-14 Acquired: 10/1/2019 14:31:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	-0.0000	.0001	.0001	.0001	.0020	.0002	.0003	-0.0004
Stddev	.0002	.0001	.0001	.0001	.0003	.0001	.0000	.0001	.0001
%RSD	11.47	152.7	76.86	95.68	307.4	6.402	1.896	45.70	14.96
#1	.0015	-0.0000	.0001	.0000	-0.0002	.0019	.0002	.0002	-0.0004
#2	.0018	.0000	.0001	.0001	.0003	.0022	.0002	.0004	-0.0003
#3	.0015	-0.0001	.0000	.0003	.0002	.0020	.0002	.0002	-0.0005

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0039	.0007	.0001	-0.0002	.0010	.0001	-0.0003	.0574
Stddev	.0001	.0000	.0005	.0006	.0009	.0007	.0009	.0073	.0035
%RSD	44.14	.6824	69.84	602.6	436.1	67.76	188.2	209.3	6.098
#1	.0002	.0039	.0013	.0007	.0001	.0002	-0.0004	.0030	.0599
#2	.0002	.0038	.0005	.0001	.0005	.0013	-0.0006	-.0087	.0534
#3	.0001	.0039	.0004	-0.0005	-0.0012	.0014	.0011	.0046	.0589

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-0.0039	.0575	.0355	.0066	.0003	-0.1469	-0.0010	.0015
Stddev	.0016	.0101	.0256	.0028	.0002	.0001	.0011	.0002	.0001
%RSD	153.8	260.2	44.51	7.951	2.544	34.93	.7391	18.40	3.461
#1	-0.0006	.0066	.0870	.0387	.0065	.0003	-.1459	-0.0010	.0015
#2	.0026	-0.047	.0447	.0334	.0065	.0004	-.1480	-0.0008	.0014
#3	.0011	-0.135	.0408	.0344	.0068	.0002	-.1469	-0.0011	.0015

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0059	.0010	.0052	-0.0009	.0019	.0032	.0020
Stddev	.0003	.0001	.0000	.0004	.0015	.0018	.0003	.0040
%RSD	574.2	2.391	3.852	7.966	173.4	91.26	10.46	193.6
#1	.0003	.0058	.0011	.0054	-0.0024	.0032	.0033	.0061
#2	-0.0001	.0058	.0011	.0048	-0.0007	-0.0001	.0028	-0.0017
#3	-0.0001	.0061	.0010	.0056	-0.0009	.0027	.0034	.0017

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Zoom In  
Zoom Out

Sample Name: JC95566-14 Acquired: 10/1/2019 14:31:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6453.5	8935.7	4199.1	8431.5
Stddev	47.8	114.7	6.6	10.6
%RSD	.74029	1.2834	.15628	.12547
#1	6399.1	9016.3	4192.6	8423.3
#2	6473.2	8986.4	4205.7	8443.4
#3	6488.3	8804.4	4198.9	8427.8

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Zoom In  
Zoom Out

Sample Name: MP17587-MB1CONF Acquired: 10/1/2019 14:36:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>-0.0001</b>	<b>.0001</b>	<b>-0.0000</b>	<b>-0.0001</b>	<b>.0008</b>	<b>.0000</b>	<b>.0007</b>	<b>-0.0007</b>
Stddev	.0004	.0001	.0001	.0002	.0001	.0002	.0000	.0002	.0003
%RSD	179.2	93.64	71.01	46750.	129.4	21.98	105.3	30.86	47.07
#1	-0.0001	.0000	.0002	-0.0001	-0.0002	.0008	-0.0000	.0009	-0.0011
#2	.0001	-0.0001	.0001	.0003	-0.0000	.0006	.0000	.0006	-0.0006
#3	.0007	-0.0001	.0000	-0.0001	-0.0000	.0010	.0000	.0005	-0.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>.0045</b>	<b>.0016</b>	<b>.0003</b>	<b>-0.0008</b>	<b>.0011</b>	<b>-0.0003</b>	<b>-0.0024</b>	<b>.0088</b>
Stddev	.0003	.0001	.0009	.0015	.0003	.0013	.0012	.0017	.0022
%RSD	49.68	1.290	54.52	569.7	36.60	121.3	362.3	68.83	24.85
#1	.0002	.0045	.0022	.0020	-0.0005	.0026	-0.0003	-0.0041	.0064
#2	.0006	.0046	.0006	-0.0004	-0.0010	.0004	.0009	-0.0022	.0094
#3	.0008	.0045	.0020	-0.0007	-0.0008	.0003	-0.0016	-0.0008	.0106

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0069</b>	<b>.0016</b>	<b>-0.165</b>	<b>.0088</b>	<b>.0033</b>	<b>.0001</b>	<b>.0093</b>	<b>-0.0011</b>	<b>.0000</b>
Stddev	.0039	.0219	.0197	.0060	.0004	.0001	.0003	.0005	.0000
%RSD	56.43	1397.	119.1	68.48	13.38	102.2	3.230	41.84	4418.
#1	.0037	-0.0016	-0.387	.0133	.0037	.0000	.0096	-0.0008	-0.0000
#2	.0113	-0.0185	-0.0012	.0020	.0029	.0002	.0090	-0.0016	.0000
#3	.0057	.0249	-0.0096	.0110	.0032	.0000	.0092	-0.0009	-0.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0001</b>	<b>.0023</b>	<b>.0005</b>	<b>.0049</b>	<b>.0007</b>	<b>.0013</b>	<b>.0028</b>	<b>-0.0030</b>
Stddev	.0003	.0002	.0002	.0005	.0008	.0012	.0007	.0021
%RSD	379.0	10.62	39.35	9.302	126.7	94.36	23.50	67.63
#1	.0001	.0021	.0003	.0051	-0.0001	.0001	.0022	-0.0041
#2	-0.0005	.0023	.0006	.0051	.0005	.0012	.0028	-0.0007
#3	.0001	.0026	.0006	.0043	.0016	.0025	.0035	-0.0044

Sample Name: MP17587-MB1CONF Acquired: 10/1/2019 14:36:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64523.</b>	<b>9096.8</b>	<b>4232.0</b>	<b>8525.8</b>
Stddev	1065.	97.1	5.1	5.3
%RSD	1.6509	1.0679	.11983	.06214
#1	63316.	9039.3	4227.1	8522.2
#2	64922.	9209.0	4237.2	8531.8
#3	65332.	9042.2	4231.5	8523.3

Sample Name: MP17587-B1CONF Acquired: 10/1/2019 14:41:25 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.009</b>	<b>2.002</b>	<b>1.962</b>	<b>2.007</b>	<b>2.004</b>	<b>1.940</b>	<b>2.063</b>
Stddev	.003	.001	.001	.001	.087	.079	.102
%RSD	.1285	.0662	.0348	.0226	4.323	4.058	4.956
#1	2.012	2.001	1.961	2.007	1.949	1.890	1.995
#2	2.008	2.002	1.962	2.007	1.959	1.898	2.014
#3	2.007	2.004	1.963	2.007	2.104	2.030	2.181

Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.042</b>	<b>.2529</b>	<b>2.000</b>	<b>2.003</b>	<b>2.014</b>	<b>2.031</b>	<b>2.006</b>
Stddev	.001	.0103	.086	.002	.001	.002	.001
%RSD	.0669	4.089	4.279	.0981	.0575	.0814	.0291
#1	2.040	.2464	1.946	2.001	2.013	2.031	2.006
#2	2.042	.2476	1.955	2.003	2.015	2.030	2.006
#3	2.043	.2649	2.099	2.004	2.015	2.033	2.005

Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.941</b>	<b>2.041</b>	<b>25.18</b>	<b>24.92</b>	<b>25.25</b>	<b>25.10</b>	<b>24.90</b>
Stddev	.002	.002	.05	.03	.02	.01	.01
%RSD	.0984	.0945	.1909	.1323	.0777	.0549	.0450
#1	1.942	2.040	25.12	24.89	25.28	25.12	24.89
#2	1.939	2.039	25.21	24.91	25.24	25.09	24.91
#3	1.942	2.043	25.20	24.96	25.25	25.10	24.91

Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>25.16</b>	<b>1.971</b>	<b>2.059</b>	<b>.0570</b>	<b>2.071</b>	<b>2.011</b>	<b>2.050</b>
Stddev	.03	.004	.001	.0019	.003	.001	.085
%RSD	.1210	.2105	.0675	3.300	.1190	.0454	4.148
#1	25.13	1.968	2.058	.0549	2.068	2.010	1.998
#2	25.16	1.970	2.058	.0586	2.072	2.010	2.005
#3	25.19	1.976	2.060	.0575	2.072	2.012	2.149

Sample Name: MP17587-B1CONF Acquired: 10/1/2019 14:41:25 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.934</b>	<b>2.113</b>	<b>-0.0099</b>	<b>-0.0149</b>	<b>.0021</b>	<b>1.968</b>	<b>W -.0368</b>
Stddev	.002	.087	.0012	.0013	.0012	.002	.0034
%RSD	.1221	4.100	12.12	8.835	55.05	.1183	9.198
#1	1.931	2.060	-0.0111	-0.0153	.0014	1.966	-0.0350
#2	1.935	2.067	-0.0099	-0.0159	.0016	1.969	-0.0348
#3	1.935	2.213	-0.0087	-0.0134	.0035	1.970	-0.0407

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>62293.</b>	<b>9005.0</b>	<b>4143.0</b>	<b>8269.7</b>
Stddev	2525.	21.1	3.2	6.5
%RSD	4.0527	.23427	.07648	.07887
#1	64045.	9029.0	4145.5	8267.5
#2	63435.	8989.5	4139.5	8264.6
#3	59399.	8996.4	4144.1	8277.0



Sample Name: MP17587-SD1 Acquired: 10/1/2019 14:46:14 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0403</b>	<b>.0045</b>	<b>-0.004</b>	<b>-0.001</b>	<b>.0004</b>	<b>.0032</b>	<b>.1199</b>	<b>.0044</b>	<b>-0.011</b>
Stddev	.0007	.0004	.0006	.0004	.0005	.0014	.0003	.0013	.0007
%RSD	1.827	9.434	141.2	500.9	115.7	42.26	2703	30.49	61.74
#1	.0408	.0049	-.0011	.0004	.0000	.0045	.1202	.0042	-.0003
#2	.0395	.0041	-.0001	-.0004	.0009	.0034	.1195	.0032	-.0013
#3	.0406	.0045	-.0003	-.0002	.0002	.0018	.1199	.0058	-.0017

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0016</b>	<b>.0208</b>	<b>.0072</b>	<b>-0.0025</b>	<b>-0.002</b>	<b>.0064</b>	<b>-0.0034</b>	<b>.3539</b>	<b>3.116</b>
Stddev	.0006	.0001	.0027	.0021	.0024	.0033	.0034	.0356	.023
%RSD	38.66	.2677	36.81	84.06	1570.	50.79	99.53	10.07	.7477
#1	.0012	.0208	.0068	-.0001	-.0029	.0036	-.0014	.3949	3.099
#2	.0023	.0208	.0100	-.0036	.0010	.0057	-.0014	.3310	3.107
#3	.0012	.0209	.0048	-.0037	.0015	.0100	-.0073	.3357	3.143

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>30.89</b>	<b>3.752</b>	<b>4.015</b>	<b>9.943</b>	<b>.0361</b>	<b>.0017</b>	<b>9.344</b>	<b>-0.0033</b>	<b>.0357</b>
Stddev	.04	.095	.220	.045	.0019	.0008	.048	.0040	.0004
%RSD	.1258	2.518	5.469	.4495	5.407	49.53	.5094	121.2	1.208
#1	30.92	3.651	3.883	9.968	.0361	.0027	9.397	-.0077	.0360
#2	30.90	3.766	3.893	9.892	.0380	.0013	9.330	.0001	.0358
#3	30.84	3.838	4.268	9.970	.0341	.0011	9.305	-.0022	.0352

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0038</b>	<b>.0304</b>	<b>-0.0020</b>	<b>22.22</b>	<b>-0.0052</b>	<b>.0345</b>	<b>.0254</b>	<b>.0119</b>
Stddev	.0002	.0013	.0008	.11	.0017	.0041	.0043	.0096
%RSD	4.967	4.382	40.84	.5058	32.49	11.77	16.93	80.94
#1	.0037	.0306	-.0027	22.32	-.0071	.0353	.0207	.0225
#2	.0037	.0291	-.0011	22.24	-.0038	.0382	.0263	.0095
#3	.0040	.0317	-.0021	22.10	-.0047	.0301	.0291	.0037

Sample Name: MP17587-SD1 Acquired: 10/1/2019 14:46:14 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64872.</b>	<b>9094.1</b>	<b>4219.6</b>	<b>8490.2</b>
Stddev	80.	20.6	9.9	11.7
%RSD	.12332	.22621	.23444	.13832
#1	64781.	9076.2	4218.2	8482.6
#2	64933.	9116.6	4230.1	8503.7
#3	64901.	9089.5	4210.4	8484.2

Sample Name: JC95564-1 Acquired: 10/1/2019 14:51:13 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2914</b>	<b>-0.0002</b>	<b>.0000</b>	<b>.0008</b>	<b>.0020</b>	<b>.0004</b>	<b>.3396</b>	<b>.0011</b>	<b>-0.0007</b>
Stddev	.0007	.0002	.0003	.0002	.0003	.0008	.0002	.0007	.0010
%RSD	.2430	87.67	772.3	18.10	14.14	197.0	0.707	62.90	134.2
#1	.2920	-.0002	.0004	.0007	.0017	.0004	.3394	.0005	-.0018
#2	.2906	-.0000	-.0002	.0010	.0020	.0012	.3399	.0008	.0001
#3	.2916	-.0003	-.0001	.0009	.0023	-.0004	.3395	.0018	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0040</b>	<b>.0017</b>	<b>.0038</b>	<b>.0031</b>	<b>-0.0042</b>	<b>-0.0010</b>	<b>.0006</b>	<b>-0.0200</b>	<b>239.0</b>
Stddev	.0002	.0001	.0026	.0032	.0013	.0026	.0035	.0228	.2
%RSD	5.181	3.854	68.01	104.9	30.16	254.7	532.4	113.7	.0660
#1	.0040	.0017	.0027	.0031	-.0043	-.0018	.0045	-.0139	239.2
#2	.0042	.0017	.0067	.0062	-.0029	.0019	-.0004	-.0009	239.0
#3	.0038	.0018	.0019	-.0002	-.0054	-.0032	-.0021	-.0452	238.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1589</b>	<b>67.17</b>	<b>22.38</b>	<b>148.6</b>	<b>.6655</b>	<b>.0006</b>	<b>15.54</b>	<b>-0.0025</b>	<b>1.541</b>
Stddev	.0018	.34	.08	.1	.0039	.0002	.09	.0004	.002
%RSD	1.148	.5108	.3623	.0995	.5892	37.75	.5626	15.90	.1420
#1	.1574	67.56	22.48	148.8	.6646	.0007	15.51	-.0027	1.543
#2	.1609	66.91	22.33	148.5	.6698	.0007	15.64	-.0027	1.538
#3	.1583	67.05	22.34	148.6	.6621	.0003	15.48	-.0020	1.542

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0053</b>	<b>.0104</b>	<b>-0.0078</b>	<b>49.35</b>	<b>-0.0046</b>	<b>.1353</b>	<b>1.172</b>	<b>.0074</b>
Stddev	.0006	.0010	.0005	.28	.0044	.0030	.006	.0060
%RSD	11.65	9.533	6.063	.5754	96.22	2.199	.5420	81.15
#1	.0053	.0113	-.0075	49.24	-.0064	.1330	1.168	.0026
#2	.0059	.0094	-.0083	49.67	-.0004	.1387	1.179	.0141
#3	.0047	.0106	-.0075	49.13	-.0077	.1343	1.168	.0054

Sample Name: JC95564-1 Acquired: 10/1/2019 14:51:13 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63053.</b>	<b>8818.2</b>	<b>4034.8</b>	<b>7977.8</b>
Stddev	26.	46.1	24.2	43.5
%RSD	.04125	.52327	.59869	.54576
#1	63036.	8775.8	4042.8	7994.7
#2	63083.	8811.5	4007.7	7928.4
#3	63040.	8867.3	4054.0	8010.4

Sample Name: JC95564-2 Acquired: 10/1/2019 14:56:09 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1303</b>	<b>-0.0000</b>	<b>.0002</b>	<b>.0009</b>	<b>.0024</b>	<b>.0009</b>	<b>.1529</b>	<b>.0016</b>	<b>-0.0008</b>
Stddev	.0009	.0000	.0004	.0004	.0006	.0003	.0002	.0003	.0002
%RSD	.6775	241.8	194.8	48.40	23.51	34.33	1542	18.81	26.46
#1	.1301	-0.0000	.0006	.0013	.0021	.0006	.1529	.0018	-0.0009
#2	.1313	-0.0001	.0001	.0009	.0021	.0012	.1527	.0013	-0.0010
#3	.1296	.0000	-0.0001	.0004	.0031	.0008	.1531	.0017	-0.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0036</b>	<b>.0037</b>	<b>.3196</b>	<b>.0041</b>	<b>-0.0047</b>	<b>.0019</b>	<b>.0001</b>	<b>-0.0149</b>	<b>253.8</b>
Stddev	.0003	.0001	.0017	.0036	.0020	.0013	.0012	.0135	1.4
%RSD	8.980	3.744	.5261	89.01	42.30	69.00	1563.	90.53	.5639
#1	.0038	.0038	.3194	.0017	-.0030	.0032	.0009	.0006	253.1
#2	.0038	.0035	.3180	.0023	-.0068	.0018	.0006	-.0218	255.4
#3	.0032	.0036	.3214	.0083	-.0042	.0006	-.0013	-.0236	252.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5205</b>	<b>54.74</b>	<b>19.30</b>	<b>107.9</b>	<b>.8363</b>	<b>.0011</b>	<b>16.40</b>	<b>-0.0025</b>	<b>1.721</b>
Stddev	.0066	.45	.15	.7	.0042	.0001	.03	.0014	.011
%RSD	1.273	.8249	.8024	.6058	.5033	9.921	.1712	57.30	.6350
#1	.5227	54.45	19.26	107.6	.8402	.0012	16.41	-.0013	1.715
#2	.5257	55.26	19.48	108.7	.8369	.0010	16.43	-.0021	1.734
#3	.5130	54.52	19.18	107.5	.8318	.0011	16.37	-.0041	1.714

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0067</b>	<b>.0089</b>	<b>-0.0078</b>	<b>51.93</b>	<b>-0.0015</b>	<b>.0759</b>	<b>.9907</b>	<b>.0105</b>
Stddev	.0007	.0022	.0003	.08	.0030	.0015	.0036	.0008
%RSD	10.35	25.09	3.346	.1517	198.0	1.970	.3586	7.240
#1	.0063	.0101	-.0079	51.94	-.0038	.0774	.9934	.0109
#2	.0075	.0102	-.0075	52.01	-.0027	.0744	.9920	.0097
#3	.0063	.0063	-.0081	51.85	.0019	.0759	.9867	.0111

Sample Name: JC95564-2 Acquired: 10/1/2019 14:56:09 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63752.</b>	<b>8862.5</b>	<b>4066.9</b>	<b>8067.6</b>
Stddev	331.	1.6	8.7	16.9
%RSD	.51906	.01759	.21423	.20906
#1	63432.	8862.1	4058.2	8049.2
#2	64093.	8864.3	4066.9	8071.2
#3	63731.	8861.2	4075.7	8082.4

11.3  
11

Sample Name: JC95564-3 Acquired: 10/1/2019 15:01:04 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0982</b>	<b>-0.0001</b>	<b>-0.0004</b>	<b>-0.0007</b>	<b>.0254</b>	<b>.0008</b>	<b>.0411</b>	<b>.0013</b>	<b>-0.0009</b>
Stddev	.0004	.0001	.0003	.0002	.0005	.0004	.0001	.0006	.0002
%RSD	.3675	169.8	70.01	24.43	2.073	48.79	2672	44.36	26.68
#1	.0985	-.0002	-.0006	-.0007	.0258	.0012	.0411	.0007	-.0011
#2	.0982	-.0001	-.0007	-.0005	.0248	.0005	.0410	.0016	-.0009
#3	.0978	.0001	-.0001	-.0008	.0257	.0006	.0412	.0018	-.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0052</b>	<b>.0067</b>	<b>.0050</b>	<b>.0019</b>	<b>-0.0010</b>	<b>-0.0008</b>	<b>-0.0004</b>	<b>-0.0260</b>	<b>47.82</b>
Stddev	.0005	.0001	.0004	.0008	.0017	.0039	.0021	.0145	.19
%RSD	10.25	2.050	7.395	43.85	165.0	489.7	524.8	55.82	.3961
#1	.0058	.0067	.0046	.0016	-.0012	-.0018	.0015	-.0335	48.04
#2	.0051	.0068	.0050	.0012	-.0007	.0035	-.0000	-.0093	47.74
#3	.0048	.0065	.0053	.0028	-.0027	-.0042	-.0027	-.0353	47.69

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3062</b>	<b>15.18</b>	<b>214.9</b>	<b>230.1</b>	<b>.6620</b>	<b>.0318</b>	<b>7.666</b>	<b>-0.0007</b>	<b>1.554</b>
Stddev	.0055	.01	.6	.7	.0045	.0004	.052	.0003	.004
%RSD	1.791	.0891	.2758	.2948	.6841	1.134	.6745	40.29	.2396
#1	.3107	15.16	215.6	230.9	.6572	.0316	7.610	-.0005	1.558
#2	.3078	15.19	214.5	229.7	.6662	.0315	7.711	-.0007	1.552
#3	.3001	15.18	214.6	229.6	.6626	.0322	7.678	-.0010	1.551

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0009</b>	<b>.0040</b>	<b>-0.0039</b>	<b>48.69</b>	<b>-0.0018</b>	<b>.1745</b>	<b>.0571</b>	<b>.0065</b>
Stddev	.0002	.0004	.0003	.30	.0040	.0017	.0028	.0111
%RSD	22.71	9.374	6.802	.6166	222.5	.9516	4.864	170.7
#1	.0009	.0039	-.0036	48.37	-.0043	.1726	.0563	-.0036
#2	.0007	.0037	-.0040	48.97	-.0040	.1750	.0602	.0048
#3	.0012	.0044	-.0042	48.73	.0028	.1758	.0548	.0184

Sample Name: JC95564-3 Acquired: 10/1/2019 15:01:04 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63505.</b>	<b>8953.8</b>	<b>4115.8</b>	<b>8106.1</b>
Stddev	294.	65.6	28.1	43.1
%RSD	.46230	.73257	.68268	.53166
#1	63606.	8889.6	4147.3	8155.8
#2	63735.	9020.7	4093.5	8082.0
#3	63174.	8951.2	4106.5	8080.3

Sample Name: CCV Acquired: 10/1/2019 15:06:04 Type: QC										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000										
User: iT-EVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	2.057	2.038	2.002	2.034	2.001	1.939	2.057	2.070	2.448	
Stddev	.002	.003	.004	.002	.003	.005	.012	.004	.009	
%RSD	.0968	.1631	.1843	.0727	.1311	.2477	.5799	.1951	.3505	
#1	2.059	2.037	2.000	2.035	2.004	1.941	2.070	2.073	2.458	
#2	2.055	2.036	2.006	2.035	1.999	1.942	2.047	2.072	2.447	
#3	2.056	2.042	1.999	2.032	2.000	1.933	2.056	2.066	2.441	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value Range										
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.994	2.028	1.974	2.051	2.073	1.980	1.996	40.37	39.77	
Stddev	.001	.006	.006	.001	.002	.008	.006	.06	.05	
%RSD	.0637	.3158	.2891	.0545	.1034	.4138	.2939	.1371	.1245	
#1	1.995	2.030	1.974	2.051	2.075	1.979	1.994	40.35	39.80	
#2	1.994	2.032	1.980	2.051	2.072	1.988	2.003	40.33	39.71	
#3	1.993	2.020	1.968	2.053	2.071	1.972	1.992	40.44	39.80	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value Range										
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	39.96	40.17	40.33	40.46	2.024	2.004	4.947	2.022	2.061	
Stddev	.08	.10	.05	.07	.003	.003	.015	.004	.001	
%RSD	.1946	.2415	.1209	.1825	.1414	.1551	.3032	.2080	.0541	
#1	40.02	40.28	40.37	40.46	2.025	2.004	4.938	2.026	2.060	
#2	39.87	40.12	40.27	40.39	2.026	2.007	4.964	2.023	2.059	
#3	39.98	40.11	40.35	40.53	2.021	2.001	4.938	2.017	2.062	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value Range										

Sample Name: CCV Acquired: 10/1/2019 15:06:04 Type: QC										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000										
User: iT-EVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	1.971	1.976	2.030	1.953	2.006	2.000	2.011	1.983		
Stddev	.001	.006	.004	.008	.005	.002	.004	.001		
%RSD	.0718	.2846	.1717	.3984	.2734	.0907	.1982	.0691		
#1	1.972	1.974	2.033	1.954	2.001	1.999	2.011	1.981		
#2	1.971	1.982	2.029	1.961	2.012	1.998	2.014	1.983		
#3	1.969	1.971	2.026	1.945	2.006	2.002	2.006	1.983		
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass		
Value Range										
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	62649.	8775.6	4105.5	8172.6						
Stddev	225.	32.9	9.3	14.7						
%RSD	.35938	.37489	.22733	.18022						
#1	62412.	8744.6	4103.1	8159.3						
#2	62859.	8810.1	4097.6	8170.0						
#3	62678.	8772.2	4115.8	8188.4						
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass						
Value Range										

Sample Name: CCB Acquired: 10/1/2019 15:10:59 Type: QC										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000										
User: iT-EVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0003	-.0000	.0000	-.0002	-.0002	-.0001	-.0001	-.0000	-.0006	
Stddev	.0002	.0001	.0002	.0001	.0002	.0003	.0001	.0003	.0003	
%RSD	69.54	681.6	1264.	70.97	91.75	604.1	73.81	107500.	58.98	
#1	.0003	.0001	-.0002	-.0001	.0000	.0001	.0000	-.0003	-.0007	
#2	.0001	-.0000	.0001	-.0002	-.0003	.0002	.0001	.0000	-.0002	
#3	.0006	-.0001	.0002	-.0003	-.0004	-.0004	.0001	.0003	-.0009	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit										
Low Limit										
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	-.0002	.0004	.0017	.0002	.0007	.0007	-.0006	-.0003	-.0016	
Stddev	.0002	.0001	.0008	.0002	.0002	.0004	.0014	.0032	.0016	
%RSD	142.3	13.82	45.02	96.65	26.32	59.15	236.7	60.21	99.87	
#1	-.0003	.0004	.0026	-.0000	.0007	.0002	-.0006	-.0040	-.0027	
#2	-.0003	.0003	.0011	.0004	.0006	.0010	-.0019	-.0090	.0002	
#3	.0001	.0004	.0014	.0004	.0009	.0009	.0008	-.0030	-.0024	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit										
Low Limit										
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0012	-.0054	.0964	.0224	.0045	.0002	.0019	.0001	.0001	
Stddev	.0016	.0209	.0204	.0068	.0005	.0001	.0005	.0009	.0001	
%RSD	136.0	389.2	21.15	30.48	11.49	33.12	23.62	1587.	71.31	
#1	.0030	-.0029	.0729	.0256	.0051	.0003	.0023	.0003	.0001	
#2	-.0002	-.0275	.1084	.0145	.0043	.0002	.0021	-.0010	.0000	
#3	.0008	.0142	.1080	.0269	.0041	.0002	.0014	.0008	.0001	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit										
Low Limit										

Sample Name: CCB Acquired: 10/1/2019 15:10:59 Type: QC										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000										
User: iT-EVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	-.0002	.0017	.0004	-.0009	-.0006	.0034	.0018	-.0005		
Stddev	.0003	.0003	.0001	.0013	.0011	.0011	.0001	.0025		
%RSD	173.8	20.60	26.95	146.4	177.8	33.42	3.592	504.0		
#1	-.0001	.0015	.0005	-.0023	-.0016	.0039	.0018	.0024		
#2	-.0002	.0015	.0003	.0002	-.0009	.0041	.0019	-.0020		
#3	-.0004	.0021	.0005	-.0005	.0006	.0021	.0019	-.0018		
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass		None
High Limit										
Low Limit										
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	64626.	8831.4	4177.0	8416.5						
Stddev	150.	16.3	1.7	10.0						
%RSD	.23141	.18486	.04184	.11876						
#1	64586.	8850.2	4177.8	8427.4						
#2	64792.	8822.2	4175.0	8407.7						
#3	64501.	8821.6	4178.1	8414.5						
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass						
Value Range										

Sample Name: sampleconf Acquired: 10/1/2019 15:16:04 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1427</b>	<b>-0.001</b>	<b>.0002</b>	<b>.0018</b>	<b>.0020</b>	<b>.0062</b>	<b>.3533</b>	<b>.0089</b>	<b>-0.0038</b>
Stddev	.0265	.0000	.0003	.0007	.0013	.0020	.0031	.0025	.0012
%RSD	18.56	6.456	211.8	35.89	66.15	32.07	8794	27.50	32.33
#1	.1733	-.0001	-.0001	.0014	.0034	.0043	.3559	.0100	-.0030
#2	.1262	-.0001	.0005	.0015	.0008	.0083	.3542	.0061	-.0033
#3	.1287	-.0001	.0001	.0026	.0018	.0060	.3499	.0107	-.0052

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>0097</b>	<b>.0193</b>	<b>.0050</b>	<b>.0094</b>	<b>.0061</b>	<b>.0022</b>	<b>-0.0014</b>	<b>3.321</b>	<b>11.78</b>
Stddev	.0016	.0006	.0063	.0014	.0046	.0083	.0054	.647	2.32
%RSD	16.15	2.920	124.5	14.42	75.97	379.2	390.0	19.49	19.71
#1	.0094	.0198	-.0021	.0109	.0099	.0117	.0049	4.069	14.46
#2	.0083	.0187	.0098	.0085	.0009	-.0026	-.0045	2.930	10.42
#3	.0114	.0194	.0074	.0087	.0075	-.0026	-.0046	2.966	10.45

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.724</b>	<b>30.33</b>	<b>29.04</b>	<b>436.5</b>	<b>.8537</b>	<b>.0089</b>	<b>13.47</b>	<b>-0.049</b>	<b>2545</b>
Stddev	.907	5.76	5.55	83.3	.0291	.0011	.49	.0037	.0492
%RSD	19.19	18.98	19.11	19.09	3.413	12.83	3.652	76.17	19.33
#1	5.771	36.97	35.44	532.7	.8873	.0097	14.04	-.0007	.3113
#2	4.209	26.78	25.84	388.0	.8366	.0076	13.24	-.0078	2.260
#3	4.191	27.25	25.82	388.8	.8371	.0094	13.15	-.0063	2.262

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1002</b>	<b>.0127</b>	<b>-0.0013</b>	<b>41.17</b>	<b>.0024</b>	<b>.0284</b>	<b>-.1525</b>	<b>.0194</b>
Stddev	.0011	.0011	.0044	1.50	.0014	.0026	.0041	.0042
%RSD	1.126	8.321	334.2	3.653	56.05	9.334	2.675	21.80
#1	.1009	.0138	.0037	42.91	.0009	.0269	-.1567	.0168
#2	.1009	.0117	-.0032	40.39	.0029	.0314	-.1485	.0243
#3	.0989	.0125	-.0045	40.22	.0034	.0268	-.1524	.0171

Sample Name: sampleconf Acquired: 10/1/2019 15:16:04 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	64353.	*****	4043.6	8025.5
Stddev	618.	----	125.5	218.0
%RSD	.96083	----	3.1031	2.7167
#1	63767.	----	3898.8	7773.9
#2	64293.	8691.2	4110.5	8146.1
#3	64999.	8821.5	4121.4	8156.7

11.3  
11

Sample Name: JC95564-6 Acquired: 10/1/2019 15:21:03 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0718</b>	<b>-0.001</b>	<b>-0.0002</b>	<b>-0.0001</b>	<b>.0083</b>	<b>.0051</b>	<b>.9022</b>	<b>.0026</b>	<b>-0.012</b>
Stddev	.0002	.0002	.0004	.0004	.0006	.0003	.0031	.0000	.0004
%RSD	.3241	160.4	184.7	262.5	7.083	6.356	3430	1.447	37.86
#1	.0718	-.0003	.0001	-.0006	.0082	.0047	.9031	.0026	-.0013
#2	.0720	.0001	-.0000	.0002	.0090	.0054	.9047	.0025	-.0007
#3	.0715	-.0002	-.0006	-.0000	.0079	.0050	.8987	.0026	-.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0048</b>	<b>.0774</b>	<b>.0358</b>	<b>.0009</b>	<b>.0026</b>	<b>-0.0000</b>	<b>-0.0025</b>	<b>1.137</b>	<b>24.76</b>
Stddev	.0004	.0002	.0031	.0030	.0007	.0027	.0014	.012	.03
%RSD	7.425	.2054	8.552	343.1	26.79	6032.	55.78	1.069	1.250
#1	.0044	.0774	.0355	.0015	.0034	-.0025	-.0038	1.132	24.78
#2	.0051	.0776	.0389	.0034	.0021	-.0005	-.0028	1.151	24.73
#3	.0047	.0773	.0328	-.0024	.0023	.0028	-.0010	1.128	24.78

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.291</b>	<b>32.31</b>	<b>23.50</b>	<b>215.8</b>	<b>.3997</b>	<b>.0048</b>	<b>14.27</b>	<b>-0.013</b>	<b>.3125</b>
Stddev	.021	.15	.07	.1	.0022	.0003	.03	.0007	.0007
%RSD	.4876	.4687	.2983	.0509	.5465	6.981	.1877	53.70	.2262
#1	4.269	32.20	23.43	215.8	.3978	.0050	14.25	-.0016	.3118
#2	4.295	32.26	23.51	215.6	.4021	.0050	14.30	-.0017	.3132
#3	4.310	32.49	23.57	215.9	.3993	.0044	14.26	-.0005	.3125

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0419</b>	<b>.0089</b>	<b>-0.0076</b>	<b>9.272</b>	<b>-0.0007</b>	<b>.0126</b>	<b>1.656</b>	<b>.0064</b>
Stddev	.0009	.0014	.0004	.011	.0027	.0038	.003	.0071
%RSD	2.076	15.75	5.913	.1218	380.6	30.26	.1639	111.3
#1	.0425	.0074	-.0071	9.259	.0021	.0169	1.653	.0069
#2	.0409	.0091	-.0077	9.281	-.0033	.0095	1.658	.0132
#3	.0423	.0102	-.0079	9.275	-.0009	.0114	1.657	-.0010

Sample Name: JC95564-6 Acquired: 10/1/2019 15:21:03 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	63567.	8854.4	4118.7	8123.5
Stddev	369.	36.7	1.1	10.6
%RSD	.58106	.41455	.02763	.13067
#1	63895.	8812.6	4117.6	8114.9
#2	63167.	8881.0	4119.9	8135.4
#3	63640.	8869.7	4118.7	8120.4

Sample Name: MP17592-MB1CONF Acquired: 10/1/2019 15:26:00 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0007</b>	<b>-0.0000</b>	<b>.0000</b>	<b>-0.0001</b>	<b>.0005</b>	<b>.0005</b>	<b>.0005</b>	<b>.0007</b>	<b>-0.0005</b>
Stddev	.0001	.0000	.0003	.0001	.0000	.0003	.0000	.0004	.0001
%RSD	14.78	31.26	3863.	54.58	6.772	61.33	9.080	55.68	9.780
#1	.0008	-0.0000	.0001	-0.0001	.0005	.0003	.0004	.0011	-0.0006
#2	.0007	-0.0000	.0002	-0.0001	.0005	.0004	.0005	.0007	-0.0005
#3	.0006	-0.0000	-0.0003	-0.0002	.0006	.0009	.0004	.0003	-0.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0001</b>	<b>.0186</b>	<b>.0011</b>	<b>-0.0016</b>	<b>.0005</b>	<b>.0006</b>	<b>-0.0003</b>	<b>.0113</b>	<b>.0788</b>
Stddev	.0002	.0001	.0010	.0005	.0011	.0014	.0010	.0094	.0010
%RSD	306.8	.3600	89.04	31.21	230.7	253.4	316.6	82.93	1.249
#1	.0001	.0186	.0006	-0.0014	-0.0004	.0008	-0.0012	.0105	.0779
#2	-0.0002	.0186	.0005	-0.0013	.0001	-0.0010	-0.0004	.0210	.0798
#3	.0000	.0187	.0023	-0.0022	.0017	.0018	.0007	.0024	.0787

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0237</b>	<b>.0148</b>	<b>.0710</b>	<b>.0994</b>	<b>.0028</b>	<b>.0003</b>	<b>.0114</b>	<b>.0198</b>	<b>.0005</b>
Stddev	.0023	.0165	.0388	.0053	.0003	.0002	.0011	.0002	.0000
%RSD	9.717	111.5	54.56	5.372	12.23	84.41	9.371	.9734	9.101
#1	.0232	.0088	.1139	.0934	.0028	.0005	.0108	.0196	.0005
#2	.0217	.0021	.0606	.1036	.0025	.0002	.0108	.0200	.0006
#3	.0262	.0335	.0386	.1011	.0031	.0001	.0126	.0199	.0005

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.0046</b>	<b>.0006</b>	<b>.0116</b>	<b>.0007</b>	<b>.0019</b>	<b>.0247</b>	<b>.0014</b>
Stddev	.0002	.0005	.0002	.0008	.0012	.0009	.0005	.0040
%RSD	33.72	10.85	30.14	7.166	178.3	46.42	1.823	280.9
#1	.0006	.0050	.0005	.0107	-0.0001	.0029	.0252	.0054
#2	.0004	.0048	.0008	.0121	.0001	.0013	.0243	.0013
#3	.0009	.0040	.0005	.0121	.0021	.0014	.0246	-.0025

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Sample Name: MP17592-MB1CONF Acquired: 10/1/2019 15:26:00 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>65008.</b>	<b>8999.7</b>	<b>4236.3</b>	<b>8515.4</b>
Stddev	223.	21.2	17.7	30.3
%RSD	.34369	.23507	.41891	.35534
#1	65124.	8979.1	4246.6	8536.3
#2	64751.	9021.4	4246.5	8529.2
#3	65151.	8998.7	4215.8	8480.7

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11.3  
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Sample Name: MP17592-B1CONF Acquired: 10/1/2019 15:31:03 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.936</b>	<b>1.950</b>	<b>1.889</b>	<b>1.929</b>	<b>1.877</b>	<b>1.787</b>	<b>1.943</b>
Stddev	.007	.007	.004	.003	.026	.022	.025
%RSD	.3491	.3712	.1836	.1726	1.413	1.254	1.273
#1	1.931	1.947	1.893	1.933	1.871	1.780	1.936
#2	1.934	1.945	1.889	1.928	1.906	1.813	1.970
#3	1.944	1.959	1.886	1.927	1.854	1.770	1.922

Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.977</b>	<b>.2341</b>	<b>1.865</b>	<b>1.943</b>	<b>1.937</b>	<b>1.944</b>	<b>1.948</b>
Stddev	.002	.0028	.025	.004	.002	.005	.002
%RSD	.1082	1.212	1.333	.2066	.1010	.2599	.1228
#1	1.979	.2334	1.856	1.948	1.939	1.945	1.951
#2	1.975	.2372	1.893	1.942	1.937	1.949	1.947
#3	1.976	.2317	1.846	1.940	1.935	1.939	1.947

Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.846</b>	<b>1.973</b>	<b>24.79</b>	<b>24.36</b>	<b>24.51</b>	<b>24.58</b>	<b>24.30</b>
Stddev	.005	.001	.10	.11	.11	.09	.09
%RSD	.2957	.0367	.3874	.4450	.4769	.3718	.3640
#1	1.852	1.974	24.71	24.29	24.43	24.48	24.23
#2	1.841	1.974	24.77	24.31	24.44	24.64	24.27
#3	1.844	1.972	24.90	24.48	24.64	24.63	24.40

Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>24.72</b>	<b>1.859</b>	<b>1.958</b>	<b>.0291</b>	<b>2.021</b>	<b>1.950</b>	<b>1.925</b>
Stddev	.11	.005	.004	.0009	.005	.007	.028
%RSD	.4328	.2594	.2086	2.967	.2407	.3612	1.454
#1	24.64	1.863	1.963	.0301	2.027	1.947	1.919
#2	24.66	1.860	1.956	.0287	2.019	1.946	1.955
#3	24.84	1.854	1.956	.0286	2.018	1.959	1.900

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Sample Name: MP17592-B1CONF Acquired: 10/1/2019 15:31:03 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.458</b>	<b>1.997</b>	<b>.0019</b>	<b>-0.0068</b>	<b>.0010</b>	<b>1.919</b>	<b>W -.0296</b>
Stddev	.006	.026	.0030	.0010	.0013	.002	.0014
%RSD	.4191	1.321	16.1	15.30	131.3	.0912	4.668
#1	1.451	1.989	.0051	-.0074	.0006	1.920	-.0294
#2	1.460	2.026	-.0008	-.0056	-.0001	1.917	-.0311
#3	1.463	1.975	.0013	-.0075	.0024	1.920	-.0284

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63121.</b>	<b>8818.2</b>	<b>4096.1</b>	<b>8163.9</b>
Stddev	730.	62.8	3.1	8.7
%RSD	1.1569	.71168	.07586	.10678
#1	63193.	8879.3	4095.9	8169.3
#2	62358.	8821.3	4099.3	8168.5
#3	63813.	8753.9	4093.1	8153.8

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Sample Name: MP17592-S1 Acquired: 10/1/2019 15:35:45 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.809</b>	<b>1.958</b>	<b>1.905</b>	<b>1.994</b>	<b>2.595</b>	<b>2.208</b>	<b>3.808</b>	<b>2.355</b>	<b>2.412</b>
Stddev	.056	.039	.001	.003	.047	.038	.070	.001	.0007
%RSD	1.992	2.008	.0406	.1469	1.825	1.707	1.849	.0405	.2841
#1	2.852	1.989	1.905	1.995	2.545	2.169	3.735	2.356	2.405
#2	2.746	1.914	1.904	1.990	2.639	2.244	3.875	2.354	2.411
#3	2.828	1.972	1.906	1.996	2.600	2.212	3.813	2.354	2.419

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.231</b>	<b>2.483</b>	<b>2.099</b>	<b>1.934</b>	<b>2.578</b>	<b>1.847</b>	<b>1.101</b>	<b>122.5</b>	<b>255.7</b>
Stddev	.043	.005	.003	.006	.001	.003	.003	2.5	5.0
%RSD	1.919	.2164	.1349	.2889	.0289	.1438	.2597	2.006	1.969
#1	2.186	2.488	2.099	1.927	2.577	1.850	1.100	124.3	259.6
#2	2.271	2.498	2.097	1.936	2.578	1.847	1.104	119.7	250.0
#3	2.235	2.494	2.102	1.938	2.579	1.845	1.099	123.5	257.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>174.7</b>	<b>153.6</b>	<b>60.29</b>	<b>30.51</b>	<b>1.920</b>	<b>1.921</b>	<b>3.669</b>	<b>1.941</b>	<b>2.492</b>
Stddev	3.5	3.0	1.09	.60	.001	.001	.002	.002	.051
%RSD	2.001	1.963	1.814	1.956	.0456	.0658	.0448	.0856	2.028
#1	177.5	156.0	61.17	30.97	1.920	1.922	3.668	1.942	2.531
#2	170.8	150.2	59.07	29.84	1.919	1.922	3.668	1.942	2.435
#3	176.0	154.5	60.64	30.74	1.920	1.920	3.671	1.939	2.508

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.024</b>	<b>1.132</b>	<b>2.050</b>	<b>14.48</b>	<b>.0408</b>	<b>.1032</b>	<b>6.056</b>	<b>.6184</b>
Stddev	.173	.003	.037	.02	.0048	.0063	.002	.0131
%RSD	1.914	.2731	1.830	.1649	11.72	6.058	.0380	2.121
#1	8.844	1.128	2.011	14.51	.0369	.1101	6.058	6037
#2	9.188	1.134	2.086	14.46	.0462	.0980	6.054	6288
#3	9.040	1.133	2.052	14.48	.0395	.1015	6.057	6227

Sample Name: MP17592-S1 Acquired: 10/1/2019 15:35:45 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64135.</b>	<b>9016.0</b>	<b>4121.7</b>	<b>7964.9</b>
Stddev	1103.	142.7	6.6	8.6
%RSD	1.7201	1.5826	.16114	.10842
#1	65259.	8901.7	4127.4	7972.2
#2	63054.	9176.0	4114.4	7955.4
#3	64093.	8970.4	4123.2	7967.1

11.3  
11

Sample Name: MP17592-S2 Acquired: 10/1/2019 15:40:26 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.733</b>	<b>1.910</b>	<b>1.877</b>	<b>2.031</b>	<b>2.234</b>	<b>2.520</b>	<b>3.779</b>	<b>3.139</b>	<b>2385</b>
Stddev	.004	.005	.009	.008	.008	.008	.012	.013	.0013
%RSD	.1434	.2425	.4523	.3943	.3380	.3133	.3179	.4186	.5599
#1	2.734	1.915	1.870	2.022	2.234	2.518	3.777	3.125	2390
#2	2.737	1.908	1.887	2.037	2.242	2.529	3.792	3.151	2395
#3	2.729	1.906	1.875	2.033	2.227	2.513	3.768	3.142	2370

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.163</b>	<b>2.445</b>	<b>2.049</b>	<b>1.901</b>	<b>2.443</b>	<b>1.824</b>	<b>1.049</b>	<b>118.4</b>	<b>244.8</b>
Stddev	.008	.016	.011	.007	.011	.010	.003	.4	.5
%RSD	.3858	.6463	.5458	.3644	.4311	.5498	.3250	.3122	.2152
#1	2.165	2.433	2.039	1.893	2.434	1.816	1.046	118.7	245.3
#2	2.171	2.462	2.061	1.906	2.455	1.835	1.053	118.4	244.7
#3	2.154	2.438	2.047	1.905	2.442	1.821	1.048	118.0	244.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>219.3</b>	<b>140.1</b>	<b>57.14</b>	<b>29.69</b>	<b>1.879</b>	<b>1.919</b>	<b>3.428</b>	<b>1.898</b>	<b>2.434</b>
Stddev	.4	.2	.14	.07	.007	.011	.024	.012	.003
%RSD	.1788	.1167	.2407	.2420	.3928	.5825	.6880	.6554	.1303
#1	219.6	140.3	57.12	29.73	1.872	1.911	3.410	1.889	2.437
#2	219.5	140.1	57.29	29.73	1.887	1.931	3.455	1.913	2.434
#3	218.9	140.0	57.02	29.61	1.878	1.914	3.420	1.893	2.430

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>8.425</b>	<b>1.140</b>	<b>2.020</b>	<b>34.36</b>	<b>.0356</b>	<b>.0908</b>	<b>5.083</b>	<b>4880</b>
Stddev	.028	.004	.006	.17	.0032	.0022	.023	.0021
%RSD	.3337	.3437	.3058	.4865	8.863	2.424	.4584	.4280
#1	8.424	1.138	2.021	34.23	.0343	.0921	5.067	4879
#2	8.453	1.145	2.026	34.55	.0333	.0920	5.110	4901
#3	8.397	1.138	2.013	34.30	.0392	.0883	5.073	4860

Sample Name: MP17592-S2 Acquired: 10/1/2019 15:40:26 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64398.</b>	<b>9143.6</b>	<b>4147.0</b>	<b>8093.9</b>
Stddev	224.	9.3	20.3	34.8
%RSD	.34754	.10174	.49008	.43033
#1	64585.	9132.9	4162.5	8130.8
#2	64150.	9149.7	4124.0	8061.6
#3	64460.	9148.1	4154.6	8089.4

Sample Name: JC95495-2 Acquired: 10/1/2019 15:45:07 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 5

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.7708</b>	<b>.0064</b>	<b>.0017</b>	<b>.0892</b>	<b>.2119</b>	<b>.5228</b>	<b>2.147</b>	<b>.3046</b>	<b>.0028</b>
Stddev	.0011	.0002	.0004	.0006	.0031	.0056	.026	.0012	.0011
%RSD	.1434	3.294	25.51	.6263	1.479	1.076	1.221	.3855	41.30
#1	.7703	.0067	.0016	.0892	.2148	.5281	2.170	.3057	.0019
#2	.7720	.0064	.0013	.0898	.2085	.5169	2.119	.3046	.0041
#3	.7699	.0062	.0021	.0886	.2123	.5235	2.151	.3034	.0024
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3231</b>	<b>.6579</b>	<b>.1566</b>	<b>.0054</b>	<b>.6361</b>	<b>-.0021</b>	<b>.0059</b>	<b>89.00</b>	<b>259.0</b>
Stddev	.0047	.0010	.0008	.0010	.0042	.0023	.0012	.16	2
%RSD	1.446	.1503	.5391	18.58	.6620	108.0	20.05	.1771	.0845
#1	.3273	.6589	.1572	.0064	.6374	-.0047	.0072	88.86	258.8
#2	.3181	.6578	.1569	.0044	.6426	-.0002	.0050	88.97	259.2
#3	.3240	.6569	.1556	.0055	.6343	-.0015	.0054	89.17	259.2
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>151.4</b>	<b>116.9</b>	<b>25.01</b>	<b>5.458</b>	<b>.0790</b>	<b>.0106</b>	<b>2.041</b>	<b>.0434</b>	<b>.7267</b>
Stddev	.1	.1	.13	.007	.0010	.0006	.005	.0014	.0004
%RSD	.0507	.1114	.5184	.1373	1.218	5.545	.2535	3.245	.0601
#1	151.4	116.8	24.96	5.451	.0796	.0111	2.046	.0419	.7264
#2	151.4	116.9	25.15	5.458	.0779	.0099	2.042	.0447	.7267
#3	151.5	117.1	24.90	5.466	.0794	.0108	2.036	.0437	.7272
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>7.116</b>	<b>.0130</b>	<b>.1083</b>	<b>14.26</b>	<b>.0500</b>	<b>.1069</b>	<b>4.083</b>	<b>.5568</b>	
Stddev	.082	.0007	.0016	.01	.0016	.0017	.004	.0034	
%RSD	1.158	5.583	1.447	.0781	3.267	1.597	.0975	.6034	
#1	7.190	.0125	.1096	14.27	.0514	.1088	4.086	.5591	
#2	7.027	.0138	.1066	14.25	.0482	.1055	4.078	.5530	
#3	7.131	.0126	.1088	14.25	.0505	.1064	4.084	.5585	

Sample Name: JC95495-2 Acquired: 10/1/2019 15:45:07 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 5

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64621.</b>	<b>9188.0</b>	<b>4188.0</b>	<b>8084.4</b>
Stddev	915.	26.0	4.8	14.7
%RSD	1.4156	.28325	.11373	.18169
#1	63818.	9166.6	4183.9	8075.2
#2	65617.	9217.0	4186.9	8076.5
#3	64426.	9180.4	4193.2	8101.3

11.3  
11

Sample Name: MP17592-SD1 Acquired: 10/1/2019 15:49:59 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 6

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.8175</b>	<b>.0057</b>	<b>.0007</b>	<b>.0894</b>	<b>.2178</b>	<b>.5313</b>	<b>2.275</b>	<b>.3153</b>	<b>.0001</b>
Stddev	.0049	.0002	.0017	.0008	.0005	.0046	.004	.0027	.0037
%RSD	.6007	4.067	245.9	.9033	.2110	.8738	.1655	.8613	5920.
#1	.8226	.0059	-.0013	.0902	.2174	.5287	2.272	.3122	.0035
#2	.8128	.0054	.0017	.0886	.2176	.5285	2.274	.3163	-.0038
#3	.8171	.0058	.0017	.0894	.2183	.5367	2.279	.3173	.0004
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3377</b>	<b>.7087</b>	<b>.1660</b>	<b>.0064</b>	<b>.6687</b>	<b>.0066</b>	<b>.0092</b>	<b>93.88</b>	<b>275.2</b>
Stddev	.0061	.0040	.0032	.0058	.0079	.0063	.0142	.25	1.2
%RSD	1.804	.5653	1.955	89.67	1.189	96.46	154.1	2.708	4.300
#1	.3401	.7069	.1656	.0023	.6773	.0015	.0035	94.11	276.4
#2	.3421	.7060	.1695	.0039	.6616	.0046	.0254	93.92	275.0
#3	.3307	.7133	.1630	.0130	.6672	.0137	-.0012	93.61	274.1
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>162.7</b>	<b>124.7</b>	<b>26.45</b>	<b>6.167</b>	<b>.1064</b>	<b>.0114</b>	<b>2.141</b>	<b>.0361</b>	<b>.7748</b>
Stddev	.5	.4	.28	.178	.0013	.0010	.020	.0051	.0007
%RSD	.3309	.3005	1.062	2.885	1.200	8.631	.9468	14.23	.0911
#1	163.3	124.7	26.50	6.163	.1057	.0120	2.123	.0328	.7755
#2	162.4	125.1	26.15	6.347	.1078	.0103	2.137	.0420	.7741
#3	162.3	124.3	26.71	5.991	.1055	.0119	2.163	.0336	.7747
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>7.337</b>	<b>.0415</b>	<b>.1096</b>	<b>14.76</b>	<b>.0439</b>	<b>.1254</b>	<b>4.252</b>	<b>.5801</b>	
Stddev	.019	.0027	.0010	.11	.0141	.0137	.021	.0041	
%RSD	.2642	6.469	.8927	.7398	32.17	10.90	.4850	.7085	
#1	7.319	.0446	.1086	14.70	.0585	.1113	4.244	.5755	
#2	7.335	.0398	.1106	14.69	.0430	.1385	4.237	.5814	
#3	7.357	.0401	.1096	14.88	.0303	.1263	4.276	.5834	

Sample Name: MP17592-SD1 Acquired: 10/1/2019 15:49:59 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 6

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64031.</b>	<b>8915.8</b>	<b>4175.7</b>	<b>8280.1</b>
Stddev	233.	46.2	33.3	63.1
%RSD	.36465	.51809	.79656	.76189
#1	64045.	8966.3	4198.2	8330.5
#2	64258.	8905.7	4191.5	8300.4
#3	63791.	8875.6	4137.5	8209.4

Sample Name: JC95564-4 Acquired: 10/1/2019 15:54:52 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.269</b>	<b>-0.002</b>	<b>.0001</b>	<b>.0025</b>	<b>.0028</b>	<b>.0062</b>	<b>.3536</b>	<b>.0070</b>	<b>-0.0035</b>
Stddev	.0020	.0001	.0009	.0004	.0021	.0018	.0020	.0011	.0012
%RSD	1.548	37.63	1686.	16.81	75.06	28.59	5521	15.94	33.94
#1	.1251	-.0003	.0003	.0023	.0051	.0078	.3518	.0083	-.0042
#2	.1290	-.0001	-.0010	.0022	.0024	.0043	.3557	.0066	-.0042
#3	.1265	-.0002	.0008	.0030	.0010	.0066	.3533	.0062	-.0021

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0114</b>	<b>.0210</b>	<b>.0052</b>	<b>.0026</b>	<b>.0002</b>	<b>.0108</b>	<b>-0.0024</b>	<b>2.898</b>	<b>10.29</b>
Stddev	.0012	.0009	.0057	.0114	.0058	.0061	.0054	.054	.04
%RSD	10.27	4.112	110.4	415.7	3076.	56.45	225.0	1.879	.3595
#1	.0112	.0200	.0087	-.0090	-.0005	.0041	-.0040	2.838	10.26
#2	.0127	.0217	-.0014	.0139	-.0052	.0161	-.0036	2.912	10.33
#3	.0104	.0213	.0083	.0034	.0063	.0121	-.0068	2.944	10.28

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.217</b>	<b>26.83</b>	<b>25.42</b>	<b>386.6</b>	<b>.8198</b>	<b>.0082</b>	<b>13.08</b>	<b>-0.0031</b>	<b>2.247</b>
Stddev	.009	.08	.14	1.2	.0061	.0006	.05	.0048	.0010
%RSD	.2140	.3073	.5666	.3035	.7494	7.099	.3659	154.0	.4414
#1	4.211	26.77	25.33	385.9	.8192	.0089	13.13	-.0011	.2236
#2	4.227	26.93	25.58	387.9	.8262	.0080	13.09	-.0021	.2256
#3	4.214	26.80	25.34	385.9	.8140	.0078	13.03	-.0084	.2248

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1028</b>	<b>.0211</b>	<b>-0.0053</b>	<b>39.60</b>	<b>-0.0006</b>	<b>.0142</b>	<b>-1.483</b>	<b>.0041</b>
Stddev	.0040	.0037	.0004	.13	.0050	.0092	.0017	.0229
%RSD	3.936	17.73	8.295	.3386	892.0	64.85	1.155	558.0
#1	.0987	.0201	-.0051	39.69	-.0058	.0239	-.1466	.0047
#2	.1068	.0252	-.0058	39.66	-.0002	.0132	-.1481	-.0191
#3	.1028	.0180	-.0050	39.45	.0042	.0056	-.1500	.0267

Sample Name: JC95564-4 Acquired: 10/1/2019 15:54:52 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63477.</b>	<b>8714.0</b>	<b>4138.1</b>	<b>8175.4</b>
Stddev	380.	60.7	14.2	21.7
%RSD	.59852	.69615	.34374	.26560
#1	63873.	8775.4	4134.9	8173.3
#2	63115.	8654.1	4125.7	8154.8
#3	63444.	8712.5	4153.6	8198.1

11.3  
11

Sample Name: CCV Acquired: 10/1/2019 15:59:53 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.042</b>	<b>2.049</b>	<b>2.007</b>	<b>2.037</b>	<b>1.982</b>	<b>1.914</b>	<b>2.055</b>	<b>2.081</b>	<b>2.445</b>
Stddev	.003	.001	.005	.005	.003	.001	.001	.006	.0001
%RSD	.1399	.0415	.2445	.2662	.1534	.0610	.0305	.2749	.0609
#1	2.045	2.049	2.001	2.031	1.980	1.914	2.055	2.076	.2446
#2	2.042	2.050	2.009	2.037	1.981	1.914	2.055	2.080	.2443
#3	2.039	2.048	2.010	2.042	1.986	1.916	2.056	2.087	.2445

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.990</b>	<b>2.031</b>	<b>1.974</b>	<b>2.051</b>	<b>2.086</b>	<b>1.981</b>	<b>2.009</b>	<b>40.50</b>	<b>39.84</b>
Stddev	.001	.003	.006	.003	.006	.007	.005	.00	.08
%RSD	.0420	.1431	.3087	.1429	.2872	.3745	.2706	.0110	.1902
#1	1.990	2.029	1.967	2.049	2.079	1.973	2.005	40.50	39.83
#2	1.991	2.030	1.975	2.049	2.088	1.983	2.007	40.50	39.93
#3	1.991	2.034	1.979	2.054	2.090	1.988	2.015	40.49	39.78

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>39.91</b>	<b>40.36</b>	<b>39.91</b>	<b>40.31</b>	<b>2.027</b>	<b>1.999</b>	<b>4.979</b>	<b>2.024</b>	<b>2.059</b>
Stddev	.08	.02	.11	.05	.009	.005	.012	.008	.001
%RSD	.2119	.0520	.2877	.1278	.4303	.2494	.2352	.3803	.0678
#1	39.97	40.34	39.90	40.33	2.019	1.994	4.969	2.017	2.060
#2	39.96	40.38	40.04	40.36	2.025	2.001	4.976	2.025	2.059
#3	39.82	40.37	39.81	40.26	2.036	2.004	4.992	2.032	2.057

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: CCV Acquired: 10/1/2019 15:59:53 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.952</b>	<b>1.983</b>	<b>2.028</b>	<b>1.963</b>	<b>2.021</b>	<b>1.974</b>	<b>2.023</b>	<b>1.964</b>
Stddev	.001	.003	.002	.005	.004	.004	.005	.006
%RSD	.0408	.1537	.1117	.2636	.2093	.1942	.2440	.2934
#1	1.953	1.981	2.027	1.958	2.017	1.977	2.017	1.960
#2	1.953	1.982	2.027	1.962	2.024	1.974	2.024	1.960
#3	1.952	1.987	2.031	1.968	2.024	1.970	2.027	1.970

Check ? Value Range  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>62133.</b>	<b>8671.0</b>	<b>4067.3</b>	<b>8080.1</b>
Stddev	73.	54.4	2.1	3.8
%RSD	.11751	.62686	.05196	.04707
#1	62161.	8718.2	4068.7	8084.4
#2	62188.	8611.6	4068.2	8079.1
#3	62051.	8683.2	4064.9	8076.9



Sample Name: CCB Acquired: 10/1/2019 16:04:41 Type: QC									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0002	.0001	.0002	-.0003	.0002	.0002	.0004	-.0002
Stddev	.0003	.0000	.0001	.0003	.0002	.0002	.0000	.0005	.0003
%RSD	217.3	17.81	228.2	178.0	93.79	89.60	22.91	128.5	144.9
#1	.0004	.0002	.0002	.0005	-.0004	.0002	.0002	.0004	-.0002
#2	.0002	.0002	.0001	.0000	-.0004	-.0000	.0001	-.0001	-.0006
#3	-.0002	.0002	-.0001	-.0000	.0000	.0003	.0002	.0008	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0003	.0012	.0011	.0001	.0015	-.0012	-.0083	.0035
Stddev	.0002	.0001	.0008	.0001	.0010	.0028	.0013	.0082	.0017
%RSD	306.2	34.57	71.78	9.632	154.1	181.2	104.9	88.93	49.03
#1	.0003	.0002	.0018	.0011	.0012	.0001	.0002	-.0003	.0054
#2	.0000	.0003	.0014	.0010	-.0004	-.0003	-.0023	-.0165	.0023
#3	-.0001	.0004	.0002	.0012	-.0006	.0047	-.0015	-.0110	.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0184	.0420	.0335	.0032	.0003	.0016	-.0004	.0003
Stddev	.0042	.0035	.0081	.0069	.0009	.0002	.0006	.0007	.0001
%RSD	102.1	18.90	19.33	20.61	26.90	68.32	35.53	173.3	22.54
#1	.0080	.0191	.0337	.0312	.0042	.0005	.0020	.0004	.0003
#2	.0047	.0147	.0499	.0280	.0028	.0001	.0009	-.0007	.0003
#3	-.0003	.0216	.0424	.0412	.0026	.0004	.0019	-.0009	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name: CCB Acquired: 10/1/2019 16:04:41 Type: QC									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0000	.0025	.0003	-.0010	.0003	.0013	.0018	-.0000	
Stddev	.0004	.0012	.0000	.0012	.0016	.0012	.0002	.0024	
%RSD	853.9	48.59	3.147	118.3	470.1	89.34	13.35	9090.	
#1	-.0004	.0036	.0003	-.0012	.0020	.0008	.0021	-.0028	
#2	-.0002	.0026	.0003	-.0020	.0002	.0004	.0017	.0013	
#3	.0004	.0012	.0003	.0003	-.0012	.0026	.0017	.0015	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	64454.	8879.1	4216.8	8469.6					
Stddev	107.	47.1	1.8	9					
%RSD	.16583	.53082	.04199	.01111					
#1	64557.	8933.2	4217.1	8470.4					
#2	64344.	8847.2	4218.3	8468.5					
#3	64459.	8856.8	4214.8	8469.8					

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11.3  
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Sample Name: JC95411-1 Acquired: 10/1/2019 16:09:45 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment: 7									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.063	.0104	.0040	.1096	.2031	.3064	7.642	.2019	.0052
Stddev	.013	.0001	.0004	.0004	.0015	.0019	.079	.0005	.0001
%RSD	1.217	.8824	8.726	.3327	.7383	6.359	1.037	2.370	2.772
#1	1.061	.0104	.0036	.1100	.2039	.3077	7.716	.2018	.0053
#2	1.051	.0103	.0041	.1095	.2014	.3041	7.652	.2014	.0051
#3	1.077	.0105	.0043	.1092	.2040	.3073	7.588	.2024	.0054
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4078	.8884	.0197	.0043	.1164	.0008	-.0008	105.8	21.30
Stddev	.0008	.0022	.0014	.0032	.0014	.0016	.0018	1.3	.26
%RSD	.1884	.2485	7.111	75.81	1.161	189.5	234.0	1.230	1.225
#1	.4077	.8863	.0213	.0013	.1174	-.0005	.0013	105.9	21.24
#2	.4087	.8907	.0190	.0077	.1149	.0004	-.0016	104.5	21.07
#3	.4071	.8883	.0187	.0038	.1170	.0026	-.0020	107.1	21.59
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	183.0	63.23	67.10	1.194	.0122	.0006	1.900	.0253	.2289
Stddev	2.2	.67	.63	.010	.0025	.0004	.007	.0014	.0024
%RSD	1.185	1.067	.9381	.8743	20.27	65.64	.3944	5.418	1.055
#1	183.0	63.25	66.99	1.206	.0136	.0007	1.909	.0269	.2291
#2	180.8	62.54	66.53	1.188	.0093	.0009	1.897	.0242	.2264
#3	185.1	63.89	67.77	1.188	.0135	.0002	1.895	.0249	.2312
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.409	.0041	.0119	.4515	.0679	.1044	3.864	.8795	
Stddev	.018	.0017	.0002	.0023	.0024	.0018	.003	.0057	
%RSD	.1883	41.38	1.754	.5082	3.462	1.684	.0835	.6528	
#1	9.429	.0053	.0116	.4536	.0705	.1024	3.863	.8861	
#2	9.397	.0049	.0120	.4518	.0659	.1058	3.868	.8772	
#3	9.401	.0022	.0120	.4490	.0673	.1051	3.863	.8754	

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Sample Name: JC95411-1 Acquired: 10/1/2019 16:09:45 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment: 7									
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	66500.	9373.7	4352.9	8310.7					
Stddev	234.	107.3	16.7	23.3					
%RSD	.35190	1.1449	.38439	.28078					
#1	66334.	9368.7	4372.2	8337.4					
#2	66768.	9483.4	4343.5	8300.1					
#3	66399.	9269.0	4343.0	8294.5					

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Sample Name: JC95411-3 Acquired: 10/1/2019 16:14:47 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 8

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.9227</b>	<b>.0060</b>	<b>.0076</b>	<b>.0667</b>	<b>.3766</b>	<b>2.149</b>	<b>2.621</b>	<b>2.358</b>	<b>.0072</b>
Stddev	.0122	.0002	.0004	.0007	.0071	.036	.047	.0010	.0024
%RSD	1.322	3.721	5.435	1.076	1.892	1.664	1.786	4.293	32.73
#1	.9124	.0057	.0071	.0673	.3701	2.116	2.579	2.353	.0072
#2	.9194	.0062	.0076	.0659	.3842	2.187	2.671	2.351	.0049
#3	.9362	.0061	.0080	.0669	.3756	2.145	2.612	2.369	.0096
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2744</b>	<b>7.048</b>	<b>.1251</b>	<b>.0006</b>	<b>1.791</b>	<b>-.0053</b>	<b>.0161</b>	<b>135.0</b>	<b>114.0</b>
Stddev	.0058	.021	.0022	.0041	.005	.0002	.0033	1.7	1.3
%RSD	2.118	.2919	1.739	684.2	.2882	4.142	20.77	1.240	1.135
#1	.2702	7.072	.1226	.0044	1.796	-.0053	.0166	133.8	113.0
#2	.2811	7.033	.1265	-.0038	1.786	-.0051	.0125	134.4	113.5
#3	.2720	7.040	.1262	.0012	1.791	-.0055	.0192	136.9	115.4
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>274.4</b>	<b>32.07</b>	<b>14.73</b>	<b>1.884</b>	<b>.0755</b>	<b>.0194</b>	<b>2.712</b>	<b>2617</b>	<b>.6173</b>
Stddev	3.1	.43	.20	.005	.0008	.0003	.011	.0029	.0080
%RSD	1.119	1.330	1.325	.2725	1.093	1.560	.3976	1.107	1.296
#1	272.3	31.98	14.55	1.884	.0750	.0196	2.724	2632	.6107
#2	272.9	31.70	14.70	1.889	.0750	.0197	2.708	2584	.6151
#3	277.9	32.54	14.93	1.879	.0764	.0191	2.703	2636	.6262
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>3.339</b>	<b>-.0088</b>	<b>.0896</b>	<b>9.508</b>	<b>.0149</b>	<b>.1080</b>	<b>4.383</b>	<b>.5346</b>	
Stddev	.057	.0019	.0018	.022	.0003	.0012	.012	.0138	
%RSD	1.692	21.53	1.965	.2318	1.850	1.151	.2807	2.582	
#1	3.290	-.0076	.0879	9.534	.0146	.1069	4.396	5272	
#2	3.400	-.0079	.0914	9.496	.0151	.1078	4.371	5506	
#3	3.325	-.0110	.0896	9.495	.0150	.1093	4.382	5262	

Sample Name: JC95411-3 Acquired: 10/1/2019 16:14:47 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 8

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64780.</b>	<b>9062.9</b>	<b>4187.2</b>	<b>8295.4</b>
Stddev	1084.	59.1	13.5	15.6
%RSD	1.6734	.65201	.32305	.18806
#1	65669.	9050.4	4172.4	8277.4
#2	63573.	9127.3	4190.4	8303.5
#3	65099.	9011.1	4198.8	8305.3

Sample Name: JC95411-5 Acquired: 10/1/2019 16:19:39 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 9

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6343</b>	<b>.0068</b>	<b>.0050</b>	<b>.0595</b>	<b>.1723</b>	<b>.5673</b>	<b>2.646</b>	<b>1.385</b>	<b>.0049</b>
Stddev	.0095	.0001	.0002	.0010	.0032	.0096	.048	.0013	.0023
%RSD	1.490	1.829	4.243	1.672	1.857	1.687	1.815	9.109	47.55
#1	.6234	.0067	.0053	.0603	.1709	.5609	2.618	1.399	.0041
#2	.6395	.0068	.0050	.0598	.1701	.5627	2.618	1.380	.0075
#3	.6401	.0070	.0048	.0584	.1760	.5783	2.702	1.376	.0030
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2450</b>	<b>1.202</b>	<b>1.173</b>	<b>.0025</b>	<b>.7745</b>	<b>.0173</b>	<b>.0324</b>	<b>87.37</b>	<b>59.35</b>
Stddev	.0049	.007	.003	.0036	.0063	.0058	.0017	1.24	.80
%RSD	2.012	.5936	.2825	143.4	.8110	33.74	5.101	1.422	1.350
#1	.2425	1.210	1.177	-.0016	.7816	.0121	.0325	85.94	58.43
#2	.2418	1.198	1.170	.0051	.7696	.0236	.0340	88.06	59.82
#3	.2507	1.198	1.173	.0040	.7724	.0162	.0307	88.12	59.81
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>355.1</b>	<b>24.01</b>	<b>9.048</b>	<b>1.100</b>	<b>.0539</b>	<b>.0237</b>	<b>2.698</b>	<b>.0508</b>	<b>.3633</b>
Stddev	5.2	.33	.076	.012	.0012	.0004	.030	.0003	.0046
%RSD	1.458	1.388	.8393	1.045	2.218	1.868	1.121	.5559	1.274
#1	349.1	23.64	8.960	1.087	.0550	.0236	2.732	.0506	.3580
#2	357.7	24.11	9.090	1.109	.0540	.0233	2.685	.0511	.3658
#3	358.4	24.29	9.094	1.104	.0526	.0241	2.676	.0508	.3662
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>2.533</b>	<b>.0101</b>	<b>.0612</b>	<b>34.03</b>	<b>.0030</b>	<b>.1084</b>	<b>3.151</b>	<b>.5005</b>	
Stddev	.045	.0015	.0003	.20	.0030	.0024	.020	.0118	
%RSD	1.772	14.49	.5516	.5934	97.93	2.217	.6416	2.349	
#1	2.510	.0115	.0608	34.26	.0063	.1077	3.174	.4975	
#2	2.504	.0086	.0613	33.91	.0004	.1110	3.143	.4905	
#3	2.585	.0103	.0614	33.92	.0024	.1064	3.136	.5134	

Sample Name: JC95411-5 Acquired: 10/1/2019 16:19:39 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 9

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64734.</b>	<b>9185.7</b>	<b>4258.3</b>	<b>8457.5</b>
Stddev	1177.	87.7	20.4	48.9
%RSD	1.8176	.95509	.47828	.57796
#1	65411.	9286.7	4235.0	8401.0
#2	65415.	9142.0	4266.9	8486.1
#3	63375.	9128.3	4272.9	8485.2

Sample Name: JC95411-6 Acquired: 10/1/2019 16:24:30 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 3.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 10

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.101</b>	<b>.0120</b>	<b>.0007</b>	<b>.0267</b>	<b>.1685</b>	<b>.2037</b>	<b>15.72</b>	<b>.0808</b>	<b>.0016</b>
Stddev	.016	.0001	.0003	.0003	.0017	.0006	.25	.0004	.0002
%RSD	.7530	.8650	.4279	1.062	.9945	.2780	1.588	.5510	12.74
#1	2.090	.0121	.0010	.0264	.1666	.2031	15.46	.0803	.0016
#2	2.119	.0120	.0004	.0270	.1697	.2042	15.95	.0810	.0014
#3	2.095	.0119	.0007	.0267	.1692	.2039	15.75	.0812	.0018

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3810</b>	<b>.2556</b>	<b>.0673</b>	<b>.0112</b>	<b>.3304</b>	<b>.0145</b>	<b>-.0019</b>	<b>110.7</b>	<b>381.6</b>
Stddev	.0045	.0012	.0020	.0059	.0035	.0091	.0051	.9	2.9
%RSD	1.182	.4768	2.946	52.85	1.066	62.43	271.3	.7904	.7594
#1	.3766	.2564	.0683	.0163	.3345	.0078	-.0011	110.3	380.1
#2	.3856	.2542	.0687	.0127	.3286	.0248	-.0028	111.7	385.0
#3	.3808	.2561	.0651	.0047	.3281	.0109	-.0074	110.2	379.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>102.7</b>	<b>152.9</b>	<b>18.67</b>	<b>5.604</b>	<b>.2000</b>	<b>.0112</b>	<b>2.301</b>	<b>.0305</b>	<b>1.317</b>
Stddev	.8	1.2	.15	.064	.0012	.0006	.007	.0021	.010
%RSD	.7738	.7901	.8248	1.132	.6037	4.947	.3252	6.809	.7864
#1	102.2	152.3	18.56	5.587	.2002	.0115	2.301	.0319	1.309
#2	103.6	154.2	18.85	5.675	.1987	.0106	2.293	.0281	1.328
#3	102.3	152.1	18.60	5.551	.2011	.0115	2.308	.0315	1.313

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.995</b>	<b>.0071</b>	<b>.1790</b>	<b>24.32</b>	<b>.0527</b>	<b>.1315</b>	<b>1.431</b>	<b>.5105</b>
Stddev	.050	.0006	.0012	.08	.0063	.0043	.008	.0092
%RSD	.7077	7.922	.6651	.3418	11.95	3.260	.5409	1.795
#1	6.945	.0076	.1777	24.32	.0455	.1361	1.430	.5091
#2	7.044	.0065	.1800	24.24	.0573	.1309	1.424	.5203
#3	6.997	.0073	.1793	24.40	.0553	.1276	1.439	.5022

Sample Name: JC95411-6 Acquired: 10/1/2019 16:24:30 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 3.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 10

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63828.</b>	<b>9161.9</b>	<b>4212.0</b>	<b>8057.6</b>
Stddev	843.	113.0	13.5	18.7
%RSD	1.3203	1.2330	.32118	.23226
#1	64609.	9148.3	4212.3	8066.1
#2	62935.	9056.3	4225.4	8070.5
#3	63939.	9281.0	4198.3	8036.1

11.3  
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Sample Name: JC95411-8 Acquired: 10/1/2019 16:29:34 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 3.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 11

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3446</b>	<b>.0568</b>	<b>.0105</b>	<b>.1873</b>	<b>.2749</b>	<b>2.471</b>	<b>5.806</b>	<b>.4400</b>	<b>.0078</b>
Stddev	.0008	.0002	.0008	.0034	.0014	.011	.009	.0077	.0004
%RSD	.2436	.4203	7.376	1.794	.4965	.4397	.1466	1.753	5.274
#1	.3448	.0566	.0110	.1852	.2756	2.471	5.797	.4365	.0083
#2	.3453	.0570	.0096	.1854	.2733	2.460	5.814	.4347	.0078
#3	.3437	.0568	.0109	.1912	.2758	2.482	5.806	.4489	.0074

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3212</b>	<b>2.795</b>	<b>.0817</b>	<b>.0008</b>	<b>.8467</b>	<b>.0148</b>	<b>.0002</b>	<b>158.8</b>	<b>38.60</b>
Stddev	.0014	.058	.0053	.0023	.0146	.0103	.0040	.3	.09
%RSD	.4240	2.069	6.483	295.1	1.722	69.57	2450.	.2015	.2414
#1	.3214	2.761	.0756	-.0014	.8372	.0207	-.0045	158.4	38.51
#2	.3197	2.763	.0856	.0005	.8395	.0209	.0021	159.1	38.70
#3	.3224	2.862	.0838	.0032	.8635	.0029	.0029	158.7	38.59

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>476.7</b>	<b>67.22</b>	<b>10.98</b>	<b>.7152</b>	<b>.0303</b>	<b>.0055</b>	<b>3.267</b>	<b>.0610</b>	<b>.1655</b>
Stddev	1.2	.19	.03	.0390	.0022	.0005	.064	.0012	.0004
%RSD	.2556	.2896	.3124	5.453	7.288	9.070	1.951	1.976	.2345
#1	475.6	67.17	10.96	.7440	.0279	.0058	3.228	.0611	.1655
#2	478.0	67.43	10.96	.6708	.0308	.0049	3.233	.0597	.1658
#3	476.6	67.06	11.02	.7307	.0322	.0058	3.341	.0621	.1651

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.845</b>	<b>.0029</b>	<b>.0283</b>	<b>19.77</b>	<b>.0027</b>	<b>.1237</b>	<b>5.851</b>	<b>1.011</b>
Stddev	.013	.0060	.0006	.36	.0063	.0041	.115	.009
%RSD	.3373	203.2	2.221	1.836	228.5	3.279	1.962	.8501
#1	3.846	.0076	.0278	19.54	.0003	.1278	5.776	1.018
#2	3.831	-.0038	.0290	19.58	.0099	.1197	5.793	1.001
#3	3.857	.0050	.0280	20.18	-.0019	.1235	5.983	1.014

Sample Name: JC95411-8 Acquired: 10/1/2019 16:29:34 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 3.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 11

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>66608.</b>	<b>9327.5</b>	<b>4365.0</b>	<b>8421.5</b>
Stddev	133.	39.0	78.7	134.3
%RSD	.19918	.41809	1.8041	1.5950
#1	66706.	9371.3	4411.4	8496.7
#2	66661.	9296.4	4409.5	8501.4
#3	66457.	9315.0	4274.0	8266.4

Sample Name: JC95489-5 Acquired: 10/1/2019 16:34:30 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 12

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5618</b>	<b>.0022</b>	<b>.0008</b>	<b>.5994</b>	<b>.2268</b>	<b>1.029</b>	<b>1.613</b>	<b>16.34</b>	<b>.0178</b>
Stddev	.0028	.0001	.0008	.0050	.0026	.007	.012	.12	.0023
%RSD	.5020	5.978	91.63	.8371	1.138	.7001	.7440	.7564	13.17
#1	.5621	.0023	.0013	.5976	.2296	1.033	1.621	16.33	.0177
#2	.5589	.0023	-.0000	.6051	.2263	1.033	1.619	16.48	.0155
#3	.5645	.0021	.0013	.5956	.2246	1.021	1.599	16.23	.0201

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.3271</b>	<b>1.208</b>	<b>.2266</b>	<b>-.0085</b>	<b>.8630</b>	<b>-.0006</b>	<b>.0248</b>	<b>44.42</b>	<b>32.35</b>
Stddev	.0015	.012	.0067	.0115	.0038	.0163	.0036	.18	.04
%RSD	.4559	.9563	2.950	135.1	.4442	2789.	14.56	.4136	.1303
#1	.3281	1.208	.2268	-.0209	.8669	-.0001	.0219	44.22	32.35
#2	.3279	1.219	.2332	-.0064	.8628	-.0171	.0288	44.48	32.31
#3	.3254	1.196	.2199	.0018	.8593	.0155	.0237	44.57	32.40

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>582.7</b>	<b>17.95</b>	<b>8.462</b>	<b>1.096</b>	<b>.0426</b>	<b>.0210</b>	<b>2.584</b>	<b>.1078</b>	<b>2154</b>
Stddev	1.0	.28	.166	.026	.0021	.0014	.018	.0026	.0013
%RSD	.1801	1.540	1.956	2.420	4.954	6.692	.6954	2.384	6.061
#1	581.8	17.69	8.293	1.070	.0405	.0196	2.576	.1088	2158
#2	582.4	17.93	8.624	1.095	.0425	.0224	2.605	.1097	2139
#3	583.8	18.24	8.469	1.123	.0447	.0208	2.572	.1049	2164

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.757</b>	<b>.0163</b>	<b>.0539</b>	<b>469.7</b>	<b>-.0171</b>	<b>.0772</b>	<b>2.453</b>	<b>.3932</b>
Stddev	.019	.0019	.0007	4.1	.0026	.0131	.014	.0106
%RSD	.6956	11.80	1.239	.8642	15.24	16.99	.5839	2.697
#1	2.772	.0148	.0532	469.8	-.0155	.0624	2.457	.4019
#2	2.763	.0185	.0539	473.7	-.0202	.0819	2.464	.3965
#3	2.735	.0157	.0545	465.6	-.0158	.0874	2.437	.3814

Sample Name: JC95489-5 Acquired: 10/1/2019 16:34:30 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 12

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65657.	9029.6	4227.3	8552.6
Stddev	452.	22.7	27.8	50.5
%RSD	.68854	.25098	.65834	.59020
#1	65186.	9014.8	4229.7	8563.2
#2	65698.	9055.7	4198.4	8497.7
#3	66087.	9018.3	4253.9	8597.0

11.3  
11

Sample Name: JC95495-1 Acquired: 10/1/2019 16:39:26 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 13

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.513</b>	<b>.0059</b>	<b>.0044</b>	<b>.0471</b>	<b>.2789</b>	<b>.6582</b>	<b>1.785</b>	<b>1.376</b>	<b>-.0000</b>
Stddev	.021	.0003	.0008	.0006	.0022	.0056	.011	.005	.0022
%RSD	.4656	4.286	17.63	1.291	.7791	.8558	.6321	.3915	4948.
#1	4.536	.0061	.0053	.0465	.2765	.6557	1.785	1.370	-.0009
#2	4.507	.0056	.0038	.0478	.2797	.6542	1.774	1.377	-.0025
#3	4.495	.0059	.0043	.0471	.2806	.6646	1.797	1.381	-.0017

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5947</b>	<b>2.242</b>	<b>.3203</b>	<b>.0027</b>	<b>1.848</b>	<b>.0007</b>	<b>.0080</b>	<b>95.37</b>	<b>485.2</b>
Stddev	.0046	.012	.0011	.0044	.011	.0154	.0080	.34	1.5
%RSD	.7762	.5121	.3289	159.9	.5944	2157.	99.95	.3539	.3032
#1	.5929	2.229	.3192	.0068	1.835	.0090	.0128	95.66	486.9
#2	.5913	2.245	.3204	-.0019	1.853	.0103	-.0012	95.44	484.4
#3	.6000	2.251	.3214	.0033	1.856	-.0171	.0124	95.00	484.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>177.2</b>	<b>68.02</b>	<b>6.988</b>	<b>12.84</b>	<b>.0938</b>	<b>.0244</b>	<b>1.802</b>	<b>.0864</b>	<b>1.056</b>
Stddev	.8	.35	.116	.06	.0013	.0005	.007	.0018	.004
%RSD	.4364	.5184	1.659	.4567	1.388	1.977	.4188	2.053	.3472
#1	178.0	68.33	7.019	12.90	.0945	.0238	1.796	.0881	1.060
#2	176.7	67.64	6.860	12.81	.0946	.0245	1.799	.0866	1.056
#3	176.7	68.08	7.085	12.79	.0923	.0248	1.811	.0845	1.053

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.511</b>	<b>.0090</b>	<b>.2511</b>	<b>57.87</b>	<b>.0191</b>	<b>.0360</b>	<b>7.786</b>	<b>.3962</b>
Stddev	.018	.0021	.0008	.25	.0048	.0023	.042	.0019
%RSD	.5021	23.38	.3207	.4340	25.43	6.261	.5337	.4913
#1	3.506	.0087	.2519	57.61	.0147	.0357	7.743	.3940
#2	3.496	.0113	.2503	57.89	.0181	.0339	7.790	.3975
#3	3.530	.0071	.2512	58.11	.0243	.0384	7.826	.3972

Sample Name: JC95495-1 Acquired: 10/1/2019 16:39:26 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 13

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	63911.	8878.4	4137.4	8117.2
Stddev	468.	54.7	24.0	45.2
%RSD	.73241	.61575	.57917	.55657
#1	63686.	8928.2	4161.1	8163.7
#2	64449.	8887.2	4138.0	8114.3
#3	63598.	8819.9	4113.2	8073.5

Sample Name: JC95495-3 Acquired: 10/1/2019 16:44:20 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 14

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5992</b>	<b>.0049</b>	<b>.0006</b>	<b>.0540</b>	<b>.1851</b>	<b>.0408</b>	<b>2.183</b>	<b>2.295</b>	<b>.0028</b>
Stddev	.0021	.0002	.0002	.0013	.0013	.0010	.016	.0014	.0015
%RSD	.3470	4.415	37.67	2.358	.7042	2.425	.7530	.6191	53.27
#1	.5968	.0051	.0005	.0548	.1843	.0419	2.191	2.302	.0017
#2	.6008	.0050	.0005	.0547	.1866	.0400	2.193	2.304	.0022
#3	.5998	.0046	.0009	.0526	.1843	.0405	2.164	2.279	.0044

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1689</b>	<b>.2575</b>	<b>.0366</b>	<b>.0033</b>	<b>.0282</b>	<b>-.0059</b>	<b>.0011</b>	<b>126.7</b>	<b>319.2</b>
Stddev	.0004	.0009	.0017	.0008	.0010	.0023	.0019	.3	.8
%RSD	.2530	.3611	4.530	25.22	3.582	39.39	172.6	2723	2.396
#1	.1690	.2573	.0363	.0037	.0271	-.0039	.0032	126.3	318.3
#2	.1693	.2585	.0351	.0038	.0289	-.0053	.0009	126.9	319.8
#3	.1684	.2567	.0384	.0023	.0287	-.0085	-.0007	126.8	319.5

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>201.4</b>	<b>160.1</b>	<b>34.13</b>	<b>.6783</b>	<b>.2008</b>	<b>.0065</b>	<b>3.331</b>	<b>.0173</b>	<b>7.901</b>
Stddev	.5	.5	.03	.0171	.0014	.0004	.018	.0005	.026
%RSD	.2555	.3374	.0791	2.524	.7062	5.802	.5367	3.034	.3350
#1	200.9	159.5	34.14	.6966	.2007	.0069	3.342	.0167	7.875
#2	201.7	160.3	34.10	.6756	.2023	.0063	3.341	.0173	7.928
#3	201.8	160.6	34.15	.6627	.1995	.0063	3.311	.0178	7.901

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.4843</b>	<b>.0070</b>	<b>.0840</b>	<b>111.8</b>	<b>-.0096</b>	<b>.2984</b>	<b>2.694</b>	<b>.1901</b>
Stddev	.0027	.0029	.0005	.5	.0030	.0031	.011	.0081
%RSD	.5612	40.72	.6465	.4470	31.46	1.055	4.059	4.274
#1	.4852	.0040	.0843	111.9	-.0097	.2994	2.692	.1808
#2	.4865	.0073	.0844	112.3	-.0126	.3009	2.705	.1952
#3	.4813	.0097	.0834	111.3	-.0066	.2949	2.684	.1944

Sample Name: JC95495-3 Acquired: 10/1/2019 16:44:20 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 14

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>63414.</b>	<b>8943.4</b>	<b>4116.1</b>	<b>8051.3</b>
Stddev	573.	102.0	20.0	43.8
%RSD	.90351	1.1400	4.8520	.54352
#1	62975.	8972.8	4112.7	8040.7
#2	63204.	9027.5	4098.0	8013.7
#3	64062.	8830.0	4137.5	8099.3

Sample Name: JC95555-3CONF Acquired: 10/1/2019 16:49:11 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 16

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6232</b>	<b>.0068</b>	<b>.0049</b>	<b>.0614</b>	<b>.1721</b>	<b>.5599</b>	<b>2.628</b>	<b>.1434</b>	<b>.0032</b>
Stddev	.0216	.0003	.0004	.0006	.0024	.0066	.026	.0013	.0029
%RSD	3.460	3.807	8.883	.9617	1.414	1.171	1.001	.9430	92.47
#1	.5992	.0065	.0051	.0608	.1694	.5525	2.599	.1421	.0006
#2	.6410	.0070	.0051	.0619	.1728	.5622	2.635	.1448	.0064
#3	.6293	.0069	.0044	.0614	.1741	.5650	2.650	.1434	.0025

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2430</b>	<b>1.244</b>	<b>1.222</b>	<b>-.0005</b>	<b>.7979</b>	<b>.0099</b>	<b>.0323</b>	<b>86.03</b>	<b>58.12</b>
Stddev	.0024	.015	.014	.0022	.0086	.0032	.0050	2.69	1.87
%RSD	.9948	1.195	1.106	434.0	1.080	32.76	15.40	3.130	3.225
#1	.2404	1.228	1.208	-.0015	.7886	.0080	.0374	83.07	56.03
#2	.2433	1.258	1.234	.0020	.8056	.0136	.0275	88.33	59.65
#3	.2452	1.245	1.224	-.0021	.7995	.0080	.0319	86.69	58.68

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>347.5</b>	<b>23.58</b>	<b>8.879</b>	<b>1.039</b>	<b>.0541</b>	<b>.0244</b>	<b>2.732</b>	<b>.0532</b>	<b>.3581</b>
Stddev	11.2	.75	.344	.030	.0006	.0003	.032	.0006	.0123
%RSD	3.235	3.162	3.878	2.880	1.144	1.138	1.185	1.147	3.442
#1	335.1	22.78	8.489	1.004	.0536	.0242	2.704	.0539	.3444
#2	357.1	24.26	9.141	1.057	.0548	.0247	2.767	.0527	.3682
#3	350.4	23.70	9.007	1.055	.0539	.0243	2.726	.0531	.3618

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.515</b>	<b>.0126</b>	<b>.0617</b>	<b>35.51</b>	<b>.0022</b>	<b>.1095</b>	<b>3.278</b>	<b>.5009</b>
Stddev	.025	.0003	.0007	.41	.0053	.0023	.039	.0076
%RSD	.9809	2.053	1.077	1.153	246.7	2.112	1.194	1.517
#1	2.490	.0126	.0610	35.09	.0061	.1072	3.237	.4951
#2	2.516	.0128	.0624	35.91	-.0039	.1119	3.315	.4982
#3	2.539	.0123	.0617	35.54	.0042	.1094	3.281	.5095

Sample Name: JC95555-3CONF Acquired: 10/1/2019 16:49:11 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 16

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>65706.</b>	<b>9115.2</b>	<b>4273.0</b>	<b>8493.2</b>
Stddev	127.	173.3	34.2	62.6
%RSD	.19335	1.9014	.80064	.73679
#1	65753.	9249.7	4298.3	8542.1
#2	65563.	8919.6	4234.1	8422.7
#3	65804.	9176.2	4286.7	8514.9

11.3  
11

Zoom In  
Zoom Out

Sample Name:	CCV	Acquired:	10/1/2019 16:54:03	Type:	QC				
Method:	SGS NO VALVE3(v324)	Mode:	CONC	Corr. Factor:	1.000000				
User:	iTEVA Security	Custom ID1:		Custom ID2:		Custom ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.061</b>	<b>2.052</b>	<b>1.983</b>	<b>2.019</b>	<b>1.988</b>	<b>1.910</b>	<b>2.038</b>	<b>2.058</b>	<b>2.425</b>
Stddev	.021	.023	.016	.017	.044	.039	.040	.018	.0050
%RSD	1.044	1.111	.8273	.8375	2.227	2.032	1.951	.8730	2.057
#1	2.036	2.026	2.000	2.038	1.944	1.871	1.996	2.078	2.373
#2	2.076	2.067	1.981	2.015	1.987	1.912	2.041	2.053	2.430
#3	2.069	2.064	1.968	2.004	2.033	1.948	2.075	2.043	2.473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.984</b>	<b>2.016</b>	<b>1.954</b>	<b>2.033</b>	<b>2.062</b>	<b>1.960</b>	<b>1.984</b>	<b>40.66</b>	<b>40.02</b>
Stddev	.042	.017	.017	.023	.016	.014	.021	.45	.45
%RSD	2.098	.8268	.8433	1.110	.7665	.7343	1.053	1.115	1.132
#1	1.941	2.033	1.971	2.058	2.080	1.975	2.007	40.14	39.49
#2	1.985	2.015	1.953	2.030	2.056	1.959	1.976	40.91	40.28
#3	2.024	1.999	1.938	2.013	2.051	1.947	1.968	40.94	40.27
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.01</b>	<b>40.23</b>	<b>40.38</b>	<b>40.65</b>	<b>1.999</b>	<b>1.984</b>	<b>4.911</b>	<b>2.009</b>	<b>2.069</b>
Stddev	.41	.38	.42	.44	.021	.016	.044	.019	.023
%RSD	1.021	.9459	1.033	1.072	1.032	.8167	8974	.9460	1.125
#1	39.54	39.79	39.90	40.14	2.022	2.002	4.959	2.030	2.043
#2	40.25	40.45	40.62	40.91	1.995	1.980	4.903	2.004	2.085
#3	40.25	40.45	40.62	40.89	1.981	1.970	4.872	1.993	2.081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

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11.3  
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Sample Name:	CCV	Acquired:	10/1/2019 16:54:03	Type:	QC			
Method:	SGS NO VALVE3(v324)	Mode:	CONC	Corr. Factor:	1.000000			
User:	iTEVA Security	Custom ID1:		Custom ID2:		Custom ID3:		
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.956</b>	<b>1.966</b>	<b>2.014</b>	<b>1.933</b>	<b>1.996</b>	<b>1.995</b>	<b>1.995</b>	<b>1.964</b>
Stddev	.043	.019	.043	.020	.015	.023	.015	.041
%RSD	2.205	.9530	2.144	1.041	.7598	1.164	.7461	2.084
#1	1.913	1.985	1.971	1.954	2.012	1.969	2.011	1.923
#2	1.956	1.964	2.015	1.933	1.992	2.008	1.993	1.966
#3	1.999	1.948	2.057	1.913	1.982	2.009	1.982	2.004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	<b>63097.</b>	<b>8625.0</b>	<b>4131.2</b>	<b>8219.0</b>				
Stddev	1234.	106.5	20.2	41.0				
%RSD	1.9552	1.2349	.48835	.49863				
#1	64394.	8740.7	4109.5	8173.3				
#2	62960.	8603.4	4134.7	8231.4				
#3	61938.	8531.0	4149.4	8252.4				

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Sample Name:	CCB	Acquired:	10/1/2019 16:58:51	Type:	QC				
Method:	SGS NO VALVE3(v324)	Mode:	CONC	Corr. Factor:	1.000000				
User:	iTEVA Security	Custom ID1:		Custom ID2:		Custom ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0000</b>	<b>-0.0000</b>	<b>-0.0001</b>	<b>-0.0002</b>	<b>-0.0001</b>	<b>.0001</b>	<b>.0005</b>	<b>-0.0004</b>
Stddev	.0001	.0000	.0001	.0002	.0001	.0001	.0000	.0000	.0006
%RSD	21.93	175.8	669.9	372.9	75.05	92.69	50.26	7.168	133.4
#1	.0003	.0000	.0001	-0.0001	-0.0003	-0.0002	.0000	.0005	-0.0003
#2	.0002	-0.0000	-0.0000	.0002	-0.0000	.0000	.0001	.0004	-0.0010
#3	.0004	.0000	-0.0002	-0.0003	-0.0002	-0.0001	.0001	.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>.0005</b>	<b>.0021</b>	<b>-0.0008</b>	<b>.0005</b>	<b>.0011</b>	<b>.0001</b>	<b>-0.0043</b>	<b>.0018</b>
Stddev	.0000	.0002	.0004	.0015	.0011	.0019	.0012	.0054	.0012
%RSD	17.76	38.20	18.59	196.0	213.7	171.6	2038.	125.9	67.00
#1	.0002	.0003	.0022	-0.0020	-0.0002	.0009	.0008	-0.0078	.0017
#2	.0003	.0007	.0016	-0.0012	-0.0001	-0.0007	-0.0013	.0019	.0006
#3	.0002	.0006	.0024	.0009	.0019	.0031	.0007	-0.0070	.0030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0025</b>	<b>.0205</b>	<b>.0443</b>	<b>.0082</b>	<b>.0025</b>	<b>.0001</b>	<b>.0035</b>	<b>-0.0008</b>	<b>.0000</b>
Stddev	.0009	.0152	.0350	.0078	.0007	.0001	.0006	.0001	.0000
%RSD	34.53	74.41	78.95	95.70	27.29	103.1	17.76	16.54	442.0
#1	.0033	.0034	.0042	.0172	.0032	.0003	.0036	-0.0008	-0.0000
#2	.0026	.0252	.0605	.0036	.0018	.0001	.0040	-0.0007	.0001
#3	.0016	.0327	.0683	.0038	.0026	.0001	.0028	-0.0010	-0.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

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Sample Name:	CCB	Acquired:	10/1/2019 16:58:51	Type:	QC			
Method:	SGS NO VALVE3(v324)	Mode:	CONC	Corr. Factor:	1.000000			
User:	iTEVA Security	Custom ID1:		Custom ID2:		Custom ID3:		
Comment:								
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0001</b>	<b>.0014</b>	<b>.0002</b>	<b>-0.0002</b>	<b>.0000</b>	<b>.0009</b>	<b>.0025</b>	<b>.0031</b>
Stddev	.0006	.0004	.0000	.0016	.0004	.0007	.0010	.0016
%RSD	467.1	26.37	22.28	767.0	14000.	75.77	41.60	51.01
#1	-0.0008	.0011	.0002	-0.0016	-0.0004	.0014	.0025	.0013
#2	.0003	.0018	.0001	.0016	.0000	.0001	.0014	.0043
#3	.0001	.0013	.0002	-0.0006	.0004	.0012	.0034	.0035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit								
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	<b>64827.</b>	<b>8832.5</b>	<b>4208.7</b>	<b>8459.4</b>				
Stddev	687.	296.0	6.9	19.2				
%RSD	1.0596	3.3519	.16486	.22731				
#1	64573.	8888.8	4210.8	8472.9				
#2	64303.	8512.3	4201.0	8437.4				
#3	65605.	9096.3	4214.4	8467.8				

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Sample Name: JC95555-3 Acquired: 10/1/2019 17:03:55 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 15

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.537	.0014	.0049	.0342	1.478	.7337	.9149	.2649
Stddev	.003	.0000	.0002	.0004	.004	.0020	.0023	.0012
%RSD	.1803	2.454	3.178	1.317	.2982	.2713	.2521	.4501
#1	1.539	.0014	.0048	.0338	1.479	.7348	.9153	.2643
#2	1.534	.0014	.0048	.0341	1.473	.7314	.9125	.2641
#3	1.539	.0013	.0051	.0347	1.482	.7349	.9170	.2662
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	.0750	.7547	.1285	F -.0046	1.134	.0219	.0207
Stddev	.0003	.0001	.0036	.0006	.0007	.003	.0013	.0013
%RSD	4.539	.1685	.4754	.5056	15.94	.2468	5.867	6.056
#1	.0059	.0751	.7529	.1289	-.0045	1.132	.0208	.0208
#2	.0054	.0750	.7524	.1278	-.0054	1.133	.0217	.0219
#3	.0057	.0749	.7588	.1289	-.0039	1.137	.0233	.0194
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.731	17.66	F 222.1	1.986	1.396	4.316	.0103	3.750
Stddev	.017	.04	.4	.023	.039	.0075	.0007	.0016
%RSD	.1998	.2124	.1947	1.155	2.788	1.746	7.271	4.185
#1	8.713	17.70	222.3	1.961	1.364	.4402	.0096	.3735
#2	8.732	17.63	221.6	1.993	1.384	.4263	.0111	.3749
#3	8.748	17.66	222.5	2.005	1.439	.4282	.0102	.3766
Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.053	.1768	.0944	.6653	.0263	.0160	F 506.6	.0080
Stddev	.009	.0009	.0005	.0032	.0007	.0002	2.4	.0014
%RSD	.4623	.4888	.5577	.4855	2.838	1.531	.4758	17.29
#1	2.049	.1767	.0943	.6667	.0272	.0162	504.8	.0080
#2	2.045	.1761	.0939	.6616	.0260	.0159	505.6	.0093
#3	2.063	.1778	.0950	.6676	.0258	.0158	509.3	.0066

Sample Name: JC95555-3 Acquired: 10/1/2019 17:03:55 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 15

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	.0084	.6255	.1300	
Stddev	.0013	.0014	.0017	
%RSD	15.22	.2223	1.331	
#1	.0070	.6246	.1318	
#2	.0091	.6247	.1297	
#3	.0093	.6271	.1284	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	64812.4812	9084.3	4216.3	8725.3
Stddev	264.	37.9	10.5	13.5
%RSD	.40795	.41666	.25008	.15423
#1	64847.	9083.0	4225.6	8736.5
#2	65058.	9136.5	4218.4	8729.2
#3	64532.	9063.3	4204.8	8710.4

11.3  
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Sample Name: JC95555-3 Acquired: 10/1/2019 17:08:46 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 17

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.536	.0013	.0045	.0343	1.475	.7335	.9236	.2677	.0053
Stddev	.001	.0002	.0000	.0003	.015	.0056	.0083	.0022	.0012
%RSD	.0684	.1445	.6897	.8163	.9867	.7569	.8991	.8215	22.20
#1	1.537	.0012	.0045	.0342	1.478	.7357	.9265	.2677	.0046
#2	1.536	.0013	.0044	.0342	1.488	.7376	.9301	.2655	.0047
#3	1.535	.0015	.0045	.0346	1.460	.7272	.9142	.2699	.0067
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0741	.7547	.1268	-.0012	1.149	.0222	.0193	8.711	17.69
Stddev	.0009	.0059	.0009	.0017	.009	.0013	.0012	.012	.02
%RSD	1.252	.7838	.6800	143.5	.7524	6.072	6.438	.1408	.1360
#1	.0743	.7561	.1277	-.0001	1.145	.0210	.0200	8.706	17.67
#2	.0749	.7482	.1260	-.0032	1.144	.0219	.0179	8.725	17.72
#3	.0730	.7598	.1266	-.0004	1.159	.0237	.0201	8.702	17.68
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	225.1	2.031	1.397	4.466	.0107	.3705	2.095	.1741	.0944
Stddev	.3	.045	.038	.0236	.0012	.0026	.015	.0017	.0001
%RSD	.1498	2.228	2.712	5.292	11.11	.7139	.7187	1.004	.1220
#1	225.1	2.032	1.372	4.569	.0118	.3698	2.092	.1742	.0945
#2	225.5	2.076	1.440	4.633	.0108	.3682	2.081	.1722	.0945
#3	224.8	1.985	1.378	4.196	.0094	.3734	2.111	.1757	.0943
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.6648	.0278	.0160	F 529.6	.0062	.0093	.6104	.1304	
Stddev	.0043	.0007	.0005	3.8	.0010	.0037	.0039	.0078	
%RSD	.6498	2.607	3.431	.7201	16.16	39.57	.6332	5.946	
#1	.6656	.0281	.0166	528.7	.0072	.0087	.6097	.1248	
#2	.6687	.0284	.0155	526.3	.0062	.0133	.6069	.1392	
#3	.6602	.0270	.0158	533.8	.0052	.0060	.6145	.1270	

Sample Name: JC95555-3 Acquired: 10/1/2019 17:08:46 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 17

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	64456.	9017.0	4268.8	8673.3
Stddev	695.	15.5	29.6	50.7
%RSD	1.0779	.17195	.69339	.58466
#1	64696.	9014.0	4261.3	8666.8
#2	63673.	9003.2	4301.4	8727.0
#3	65000.	9033.8	4243.7	8626.2



Sample Name: MP17599-MB1 Acquired: 10/1/2019 17:13:38 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 1

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-0.0001	.0001	-0.0001	.0003	.0004	.0003	.0005	-0.0003
Stddev	.0000	.0001	.0002	.0001	.0002	.0001	.0000	.0003	.0003
%RSD	4.572	142.8	170.9	119.7	63.40	23.16	7.263	63.21	93.95
#1	.0005	.0000	.0003	.0000	.0005	.0003	.0003	.0004	.0000
#2	.0005	-0.0001	.0000	-0.0002	.0002	.0003	.0003	.0008	-0.0005
#3	.0005	-0.0001	-0.0000	-0.0001	.0002	.0005	.0004	.0002	-0.0003

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0144	.0010	-0.0005	.0008	-0.0000	-0.0009	-0.0031	.0549
Stddev	.0004	.0001	.0004	.0010	.0015	.0003	.0008	.0077	.0025
%RSD	75.93	.7709	37.56	215.0	185.8	2094.	92.41	247.2	4.472
#1	.0007	.0145	.0010	-0.0015	.0014	.0002	-0.0014	-0.0025	.0567
#2	.0007	.0143	.0006	.0005	-0.0009	.0002	-0.0013	-0.0110	.0521
#3	.0001	.0145	.0013	-0.0005	.0020	-0.0004	.0001	.0043	.0558

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0427	.0099	.0060	.0506	.0018	.0003	.0125	.0161	.0003
Stddev	.0010	.0103	.0067	.0092	.0005	.0000	.0001	.0007	.0000
%RSD	2.283	104.0	110.5	18.18	30.50	10.40	.7144	4.194	8.870
#1	.0415	.0104	-0.0013	.0539	.0022	.0003	.0124	.0159	.0003
#2	.0432	.0200	.0076	.0402	.0018	.0002	.0126	.0169	.0003
#3	.0433	-0.0006	.0118	.0576	.0012	.0003	.0125	.0156	.0003

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0031	.0004	.0262	-0.0004	.0001	.0217	.0028
Stddev	.0001	.0010	.0002	.0015	.0007	.0021	.0002	.0039
%RSD	9.524	31.91	59.74	5.606	185.7	1605.	.9480	137.7
#1	.0012	.0022	.0005	.0251	-0.0011	.0004	.0217	.0023
#2	.0012	.0041	.0005	.0257	-0.0002	-0.0020	.0219	.0069
#3	.0010	.0030	.0001	.0279	.0002	.0021	.0215	-0.0008

Sample Name: MP17599-MB1 Acquired: 10/1/2019 17:13:38 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 1

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65144.	8958.2	4269.2	8549.3
Stddev	317.	63.7	61.5	105.0
%RSD	.48625	.71104	1.4396	1.2287
#1	65240.	8935.1	4237.0	8497.1
#2	65402.	9030.2	4340.0	8670.2
#3	64791.	8909.2	4230.5	8480.5

11.3  
11

Sample Name: MP17599-B1 Acquired: 10/1/2019 17:18:40 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 2

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.951	1.975	1.908	1.949	1.901	1.804	1.970
Stddev	.007	.005	.008	.007	.033	.033	.035
%RSD	.3693	.2776	.4391	.3793	1.727	1.800	1.766
#1	1.955	1.979	1.907	1.948	1.923	1.824	1.991
#2	1.955	1.977	1.917	1.957	1.917	1.822	1.988
#3	1.943	1.969	1.900	1.942	1.863	1.767	1.930

Elem	Ni2316	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.998	2.395	1.892	1.964	1.938	1.970	1.975
Stddev	.006	.0040	.033	.010	.007	.010	.007
%RSD	.2778	1.680	1.757	.5161	.3622	.5233	.3781
#1	1.995	.2419	1.912	1.965	1.939	1.964	1.974
#2	2.004	.2418	1.910	1.973	1.945	1.982	1.983
#3	1.995	.2349	1.853	1.953	1.931	1.965	1.968

Elem	Se1960	Sb2068	Al3961	Ca3179	Fe2599	Mg2790	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.862	1.988	24.88	24.63	24.75	24.81	24.24
Stddev	.007	.008	.07	.06	.06	.10	.06
%RSD	.3573	.4235	.2999	.2576	.2459	.4005	.2516
#1	1.866	1.988	24.92	24.66	24.81	24.91	24.27
#2	1.867	1.997	24.92	24.67	24.74	24.71	24.29
#3	1.855	1.980	24.79	24.55	24.69	24.81	24.17

Elem	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.60	1.868	1.963	.0235	2.030	1.965	1.941
Stddev	.04	.009	.007	.0010	.009	.006	.033
%RSD	.1829	.4955	.3667	4.423	.4402	.3030	1.717
#1	24.63	1.871	1.963	.0227	2.030	1.968	1.963
#2	24.62	1.875	1.970	.0247	2.038	1.968	1.957
#3	24.55	1.858	1.956	.0232	2.021	1.958	1.902

Sample Name: MP17599-B1 Acquired: 10/1/2019 17:18:40 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 2

Elem	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.340	2.014	0.172	-0.052	.0004	1.932	W -.0330
Stddev	.006	.036	.0024	.0013	.0007	.009	.0018
%RSD	.4307	1.782	13.91	25.02	171.6	4.909	5.405
#1	1.335	2.036	.0175	-0.0051	.0001	1.930	-.0315
#2	1.346	2.034	.0146	-0.0066	.0012	1.942	-.0350
#3	1.339	1.973	.0193	-0.0040	-0.0001	1.923	-.0324

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	63273.	8815.6	4122.6	8199.5
Stddev	879.	31.5	22.5	37.2
%RSD	1.3889	.35696	.54536	.45405
#1	62702.	8821.4	4123.9	8213.0
#2	62832.	8843.7	4099.5	8157.4
#3	64285.	8781.6	4144.4	8228.1



Sample Name: MP17599-S1 Acquired: 10/1/2019 17:23:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 3

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.136</b>	<b>1.836</b>	<b>1.790</b>	<b>1.994</b>	<b>2.198</b>	<b>2.533</b>	<b>5.668</b>	<b>2.190</b>	<b>2.338</b>
Stddev	.008	.004	.005	.004	.007	.013	.040	.004	.0001
%RSD	.1961	.2127	.2923	.1908	.3265	.5248	.7107	.1738	.0432
#1	4.131	1.835	1.788	1.989	2.195	2.525	5.714	2.188	.2337
#2	4.145	1.840	1.795	1.996	2.192	2.526	5.652	2.194	.2339
#3	4.131	1.832	1.785	1.995	2.206	2.549	5.639	2.187	.2338

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.855</b>	<b>5.477</b>	<b>1.870</b>	<b>1.836</b>	<b>2.048</b>	<b>1.709</b>	<b>.7912</b>	<b>363.0</b>	<b>35.76</b>
Stddev	.011	.006	.006	.004	.006	.009	.0087	.9	.11
%RSD	.3766	.1164	.3098	.2386	.2885	.5228	1.095	.2434	.3013
#1	2.850	5.472	1.866	1.831	2.047	1.699	.7821	362.8	35.74
#2	2.848	5.484	1.876	1.840	2.054	1.716	.7993	363.9	35.87
#3	2.868	5.475	1.867	1.837	2.042	1.712	.7921	362.2	35.66

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 400.0</b>	<b>122.9</b>	<b>102.2</b>	<b>30.96</b>	<b>1.720</b>	<b>1.798</b>	<b>2.598</b>	<b>1.756</b>	<b>1.930</b>
Stddev	1.1	.7	.2	.05	.003	.004	.006	.002	.003
%RSD	.2708	.5765	.1942	.1484	.1661	.2186	.2395	.0985	.1711
#1	399.6	122.5	102.1	30.95	1.721	1.797	2.593	1.754	1.930
#2	401.3	123.7	102.4	31.01	1.722	1.802	2.605	1.758	1.933
#3	399.2	122.4	102.1	30.92	1.716	1.794	2.597	1.755	1.927

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 20.36</b>	<b>1.118</b>	<b>1.848</b>	<b>1.044</b>	<b>1.139</b>	<b>.1733</b>	<b>7.430</b>	<b>.6559</b>
Stddev	.29	.003	.007	.004	.0055	.0013	.013	.0120
%RSD	1.436	.2729	.3823	.3923	4.092	.7641	.1733	1.829
#1	20.60	1.118	1.844	1.040	1.137	.1740	7.430	.6470
#2	20.03	1.121	1.844	1.045	1.129	.1742	7.442	.6512
#3	20.44	1.114	1.856	1.048	1.151	.1718	7.417	.6696

Sample Name: MP17599-S1 Acquired: 10/1/2019 17:23:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 3

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	66160.	9259.0	4300.8	8285.9
Stddev	239.	58.0	2.0	6.8
%RSD	.36146	.62689	.04763	.08257
#1	65885.	9253.4	4302.1	8293.0
#2	66323.	9204.0	4298.4	8279.3
#3	66272.	9319.7	4301.8	8285.4

11.3  
11

Sample Name: MP17599-S2 Acquired: 10/1/2019 17:28:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 4

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.283</b>	<b>1.847</b>	<b>1.799</b>	<b>2.033</b>	<b>2.047</b>	<b>2.420</b>	<b>5.618</b>	<b>2.180</b>	<b>2.338</b>
Stddev	.037	.022	.011	.010	.011	.012	.045	.013	.0021
%RSD	1.119	1.200	.5947	4.953	5.446	4.759	.8052	.5740	.9063
#1	3.253	1.829	1.798	2.031	2.060	2.433	5.649	2.180	2.346
#2	3.324	1.872	1.788	2.024	2.040	2.411	5.566	2.168	2.353
#3	3.273	1.840	1.810	2.044	2.041	2.415	5.638	2.193	2.313

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.533</b>	<b>3.540</b>	<b>1.891</b>	<b>1.865</b>	<b>2.054</b>	<b>1.731</b>	<b>.8279</b>	<b>327.0</b>	<b>35.12</b>
Stddev	.011	.014	.008	.011	.012	.012	.0089	3.7	.39
%RSD	.4366	.4025	.4395	.5711	.5702	.7111	1.079	1.127	1.099
#1	2.545	3.542	1.885	1.862	2.054	1.734	.8296	324.0	34.85
#2	2.523	3.525	1.888	1.856	2.042	1.718	.8182	331.1	35.56
#3	2.531	3.554	1.901	1.877	2.066	1.742	.8358	325.9	34.95

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>336.1</b>	<b>101.3</b>	<b>86.37</b>	<b>29.26</b>	<b>1.733</b>	<b>1.806</b>	<b>2.686</b>	<b>1.767</b>	<b>1.942</b>
Stddev	3.8	1.2	.89	.33	.009	.009	.018	.010	.022
%RSD	1.123	1.180	1.036	1.114	.5127	.5146	.6813	.5625	1.151
#1	335.1	100.2	85.73	29.00	1.730	1.805	2.687	1.770	1.923
#2	342.4	102.6	87.39	29.62	1.726	1.798	2.668	1.755	1.967
#3	336.9	101.0	85.99	29.15	1.743	1.816	2.704	1.774	1.935

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 17.28</b>	<b>1.104</b>	<b>1.846</b>	<b>1.180</b>	<b>.1111</b>	<b>.1368</b>	<b>6.892</b>	<b>.6261</b>
Stddev	.27	.003	.009	.011	.0038	.0041	.036	.0054
%RSD	1.585	.2405	.4651	.9093	3.421	2.981	.5175	.8656
#1	17.59	1.102	1.856	1.183	.1153	.1337	6.887	.6322
#2	17.19	1.103	1.839	1.168	.1102	.1414	6.858	.6238
#3	17.06	1.107	1.844	1.189	.1079	.1353	6.929	.6221

Sample Name: MP17599-S2 Acquired: 10/1/2019 17:28:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 4

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65759.	9206.2	4298.2	8299.8
Stddev	221.	56.0	15.1	27.0
%RSD	.33610	.60861	.35020	.32493
#1	65504.	9257.5	4295.2	8294.5
#2	65895.	9146.4	4314.6	8329.0
#3	65878.	9214.6	4284.9	8275.9

Sample Name: JC95623-3 Acquired: 10/1/2019 17:33:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 5

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.779</b>	<b>.0165</b>	<b>.0031</b>	<b>.1748</b>	<b>.2771</b>	<b>.5715</b>	<b>6.022</b>	<b>2.600</b>	<b>.0054</b>
Stddev	.003	.0000	.0004	.0011	.0019	.0027	.061	.0001	.0015
%RSD	.1572	.2875	11.27	.6312	.6956	.4762	1.018	.0203	26.78
#1	1.775	.0165	.0034	.1754	.2782	.5741	6.070	2.599	.0040
#2	1.780	.0165	.0032	.1736	.2749	.5686	5.953	2.600	.0069
#3	1.780	.0166	.0027	.1755	.2783	.5718	6.043	2.600	.0054
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6743</b>	<b>1.527</b>	<b>.0936</b>	<b>.0034</b>	<b>.2559</b>	<b>-.0057</b>	<b>-.0014</b>	<b>280.3</b>	<b>214.0</b>
Stddev	.0030	.005	.0014	.0022	.0015	.0030	.0020	4	5
%RSD	.4497	.3487	1.471	64.77	.6001	53.42	139.9	.1523	.2245
#1	.6772	1.532	.0921	.0038	.2574	-.0072	-.0008	279.8	213.4
#2	.6712	1.522	.0948	.0053	.2543	-.0076	-.0019	280.6	214.3
#3	.6746	1.526	.0940	.0010	.2561	-.0022	-.0031	280.5	214.3
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>323.9</b>	<b>90.30</b>	<b>62.70</b>	<b>9.115</b>	<b>.0647</b>	<b>.0077</b>	<b>3.097</b>	<b>.0326</b>	<b>.4796</b>
Stddev	.5	.13	.11	.018	.0009	.0005	.028	.0007	.0013
%RSD	.1599	.1412	.1816	.1947	1.381	6.458	.8982	2.142	.2738
#1	323.3	90.21	62.58	9.094	.0637	.0079	3.129	.0331	.4781
#2	324.1	90.25	62.73	9.124	.0653	.0080	3.084	.0318	.4804
#3	324.2	90.45	62.80	9.126	.0652	.0071	3.079	.0328	.4803
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>15.27</b>	<b>.0114</b>	<b>.0915</b>	<b>6.829</b>	<b>.1103</b>	<b>.1540</b>	<b>5.109</b>	<b>1.054</b>	
Stddev	.08	.0007	.0004	.023	.0013	.0017	.021	.009	
%RSD	.5453	6.473	.4809	.3364	1.193	1.090	.4065	.8137	
#1	15.23	.0117	.0918	6.853	.1093	.1522	5.129	1.060	
#2	15.21	.0106	.0910	6.807	.1118	.1555	5.087	1.044	
#3	15.36	.0120	.0916	6.829	.1098	.1543	5.109	1.059	

Sample Name: JC95623-3 Acquired: 10/1/2019 17:33:22 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 5

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>67851.</b>	<b>9609.1</b>	<b>4467.5</b>	<b>8261.8</b>
Stddev	199.	13.7	17.3	19.8
%RSD	.29343	.14214	.38704	24.810
#1	67687.	9609.3	4453.2	8242.1
#2	68073.	9595.4	4486.7	8281.8
#3	67794.	9622.7	4462.6	8261.4

11.3  
11

Sample Name: MP17599-SD1 Acquired: 10/1/2019 17:38:30 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 6

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.925</b>	<b>.0175</b>	<b>.0042</b>	<b>.1807</b>	<b>.2982</b>	<b>.5945</b>	<b>6.670</b>	<b>2.704</b>	<b>.0019</b>
Stddev	.006	.0003	.0002	.0012	.0088	.0081	.070	.0020	.0057
%RSD	.2945	1.731	5.496	.6475	2.952	1.355	1.047	.7392	297.5
#1	1.931	.0177	.0042	.1808	.2960	.5991	6.698	2.691	.0022
#2	1.921	.0172	.0040	.1795	.3079	.5992	6.722	2.695	.0075
#3	1.923	.0177	.0045	.1818	.2908	.5852	6.591	2.727	-.0039
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.7310</b>	<b>1.699</b>	<b>.1168</b>	<b>.0232</b>	<b>.2733</b>	<b>.0140</b>	<b>.0006</b>	<b>304.1</b>	<b>234.1</b>
Stddev	.0059	.010	.0142	.0010	.0060	.0163	.0072	1.5	1.3
%RSD	.8016	.5793	12.16	4.232	2.204	116.2	1111.	4.990	.5696
#1	.7307	1.706	.1249	.0236	.2801	.0303	-.0011	305.7	235.5
#2	.7370	1.688	.1251	.0220	.2686	-.0023	-.0056	302.8	232.9
#3	.7253	1.704	.1004	.0238	.2711	.0142	.0085	303.7	234.0
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>360.9</b>	<b>99.87</b>	<b>66.76</b>	<b>9.747</b>	<b>.0869</b>	<b>.0076</b>	<b>3.436</b>	<b>.0257</b>	<b>.5258</b>
Stddev	1.8	.49	.09	.095	.0037	.0033	.061	.0040	.0027
%RSD	.4977	.4871	.1373	.9728	4.242	42.95	1.773	15.35	.5225
#1	362.8	100.4	66.68	9.820	.0838	.0103	3.455	.0302	.5289
#2	359.3	99.48	66.86	9.781	.0910	.0040	3.485	.0225	.5235
#3	360.4	99.72	66.74	9.640	.0859	.0086	3.368	.0245	.5251
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>16.52</b>	<b>.0365</b>	<b>.1020</b>	<b>7.347</b>	<b>.1178</b>	<b>.1860</b>	<b>5.606</b>	<b>1.151</b>	
Stddev	.20	.0057	.0012	.069	.0077	.0088	.018	.023	
%RSD	1.192	15.54	1.178	.9328	6.537	4.741	.3278	2.017	
#1	16.59	.0351	.1031	7.384	.1140	.1959	5.619	1.135	
#2	16.68	.0427	.1023	7.268	.1267	.1788	5.585	1.178	
#3	16.30	.0316	.1007	7.389	.1128	.1835	5.614	1.141	

Sample Name: MP17599-SD1 Acquired: 10/1/2019 17:38:30 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 6

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>65208.</b>	<b>8953.6</b>	<b>4209.2</b>	<b>8239.2</b>
Stddev	282.	56.1	29.2	41.5
%RSD	.43278	.62629	.69280	50318
#1	65127.	8894.2	4204.0	8228.4
#2	64975.	9005.7	4240.6	8285.0
#3	65522.	8960.8	4183.0	8204.2

Sample Name: JC95415-5 Acquired: 10/1/2019 17:43:25 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 7

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.617</b>	<b>.0054</b>	<b>.2094</b>	<b>.1917</b>	<b>.6863</b>	<b>2.136</b>	<b>5.080</b>	<b>5.990</b>	<b>.0280</b>
Stddev	.009	.0005	.0004	.0006	.0036	.011	.017	.018	.0007
%RSD	.2045	9.595	.1695	.3314	.5181	.4955	.3378	.2997	2.548
#1	4.609	.0048	.2094	.1923	.6895	2.140	5.090	5.969	.0288
#2	4.615	.0055	.2091	.1918	.6869	2.144	5.091	5.999	.0273
#3	4.627	.0059	.2098	.1910	.6825	2.124	5.061	6.002	.0280
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.468</b>	<b>34.04</b>	<b>.5043</b>	<b>.0097</b>	<b>19.68</b>	<b>.0188</b>	<b>.0291</b>	<b>51.09</b>	<b>31.15</b>
Stddev	.0010	.13	.0054	.0015	.08	.0083	.0060	.00	.11
%RSD	.4108	.3923	1.068	15.35	.3843	44.03	20.46	.0094	.3662
#1	.2456	33.89	.5042	.0081	19.59	.0093	.0224	51.09	31.12
#2	.2474	34.09	.4990	.0100	19.72	.0247	.0312	51.09	31.05
#3	.2473	34.14	.5097	.0110	19.71	.0222	.0337	51.10	31.27
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>646.0</b>	<b>9.409</b>	<b>4.868</b>	<b>1.701</b>	<b>.0563</b>	<b>.0327</b>	<b>2.521</b>	<b>1.236</b>	<b>.3212</b>
Stddev	1.5	.063	.111	.026	.0029	.0006	.014	.003	.0005
%RSD	.2262	.6731	2.286	1.543	5.142	1.937	.5373	.2659	.1506
#1	644.7	9.442	4.790	1.704	.0545	.0333	2.510	1.235	.3213
#2	645.8	9.449	4.819	1.674	.0597	.0321	2.536	1.233	.3206
#3	647.6	9.336	4.996	1.726	.0549	.0326	2.517	1.239	.3216
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.721</b>	<b>-.0351</b>	<b>.0344</b>	<b>71.61</b>	<b>-.0125</b>	<b>.0763</b>	<b>5.319</b>	<b>4.606</b>	
Stddev	.007	.0059	.0008	.29	.0059	.0068	.028	.0068	
%RSD	.4155	16.88	2.266	.4053	47.08	8.857	.5277	1.475	
#1	1.728	-.0334	.0349	71.28	-.0176	.0703	5.287	4.675	
#2	1.721	-.0301	.0347	71.71	-.0140	.0836	5.329	4.603	
#3	1.714	-.0416	.0335	71.84	-.0061	.0750	5.341	4.539	

Sample Name: JC95415-5 Acquired: 10/1/2019 17:43:25 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 7

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	64811.	8896.2	4219.4	8517.6
Stddev	146.	41.9	14.2	20.2
%RSD	.22561	.47106	.33728	.23769
#1	64665.	8926.9	4235.8	8540.6
#2	64957.	8913.3	4211.0	8502.5
#3	64812.	8848.5	4211.3	8509.7

11.3  
11

Sample Name: CCV Acquired: 10/1/2019 17:48:18 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.034</b>	<b>2.036</b>	<b>1.982</b>	<b>2.015</b>	<b>1.982</b>	<b>1.898</b>	<b>2.057</b>	<b>2.063</b>	<b>2.436</b>
Stddev	.018	.018	.017	.015	.004	.002	.009	.015	.0007
%RSD	.8879	.8626	.8397	.7642	.2220	.1218	.4590	.7425	.2903
#1	2.015	2.018	1.991	2.022	1.985	1.899	2.067	2.071	.2441
#2	2.050	2.053	1.963	1.997	1.985	1.896	2.056	2.046	.2441
#3	2.037	2.036	1.993	2.025	1.977	1.901	2.048	2.073	.2428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.980</b>	<b>2.007</b>	<b>1.952</b>	<b>2.018</b>	<b>2.075</b>	<b>1.952</b>	<b>1.985</b>	<b>40.23</b>	<b>39.59</b>
Stddev	.006	.018	.018	.014	.016	.018	.018	.32	.37
%RSD	.3191	.9122	.9306	.6672	.7798	.9168	.9162	.7838	.9462
#1	1.983	2.017	1.962	2.025	2.081	1.962	1.994	39.90	39.19
#2	1.984	1.986	1.931	2.002	2.056	1.931	1.964	40.53	39.93
#3	1.972	2.018	1.964	2.025	2.087	1.962	1.996	40.26	39.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>39.64</b>	<b>40.24</b>	<b>39.64</b>	<b>39.88</b>	<b>2.002</b>	<b>1.974</b>	<b>4.912</b>	<b>2.003</b>	<b>2.047</b>
Stddev	.42	.44	.34	.34	.017	.018	.043	.017	.017
%RSD	1.049	1.085	.8582	.8409	.8664	.9085	.8727	.8305	.8250
#1	39.21	39.79	39.25	39.51	2.011	1.983	4.935	2.009	2.029
#2	40.03	40.66	39.88	40.17	1.982	1.953	4.863	1.984	2.063
#3	39.69	40.28	39.79	39.95	2.012	1.985	4.939	2.015	2.050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									

Sample Name: CCV Acquired: 10/1/2019 17:48:18 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.947</b>	<b>1.958</b>	<b>2.030</b>	<b>1.944</b>	<b>1.988</b>	<b>1.944</b>	<b>2.008</b>	<b>1.955</b>
Stddev	.005	.017	.005	.018	.019	.016	.019	.008
%RSD	.2712	.8602	.2671	.9381	.9595	.8431	.9557	.3884
#1	1.949	1.967	2.032	1.953	2.000	1.929	2.018	1.961
#2	1.951	1.938	2.034	1.923	1.966	1.962	1.986	1.957
#3	1.941	1.968	2.024	1.956	1.999	1.942	2.021	1.947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	62428.	8646.8	4120.4	8173.0				
Stddev	109.	115.6	33.1	56.0				
%RSD	.17527	1.3374	.80268	.68528				
#1	62303.	8763.1	4101.0	8138.5				
#2	62474.	8531.8	4158.6	8237.6				
#3	62506.	8645.5	4101.6	8142.8				

Sample Name: CCB Acquired: 10/1/2019 17:53:07 Type: QC									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0002	.0001	-0.0000	-0.0004	.0002	.0002	.0003	-0.0009
Stddev	.0001	.0001	.0000	.0000	.0001	.0004	.0001	.0002	.0003
%RSD	27.36	48.59	21.59	2526.	29.39	175.5	25.33	85.81	36.68
#1	.0004	.0003	.0001	-0.0000	-0.0003	-0.0001	.0002	.0005	-0.0010
#2	.0006	.0003	.0002	.0001	-0.0003	.0001	.0003	.0003	-0.0006
#3	.0005	.0001	.0001	-0.0000	-0.0005	.0007	.0001	.0000	-0.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0007	.0016	.0007	-0.0005	.0011	-0.0004	-0.0062	.0058
Stddev	.0003	.0001	.0003	.0012	.0006	.0003	.0006	.0102	.0016
%RSD	121.2	18.31	15.79	163.5	104.8	31.56	127.0	165.3	27.74
#1	.0004	.0008	.0018	.0015	-0.0003	.0010	-0.0001	-0.0094	.0072
#2	.0005	.0007	.0018	-0.0006	-0.0012	.0015	-0.0011	.0053	.0063
#3	-0.0001	.0006	.0014	.0012	-0.0002	.0008	-0.0001	-0.0144	.0040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	-0.0077	.0865	.0082	.0036	.0005	.0014	-0.0009	.0002
Stddev	.0053	.0027	.0083	.0080	.0005	.0001	.0012	.0006	.0001
%RSD	92.90	35.05	9.633	98.13	14.52	19.83	84.01	67.45	53.68
#1	.0082	-0.0081	.0960	.0173	.0034	.0006	.0027	-0.0016	.0001
#2	.0094	-0.0048	.0807	.0025	.0042	.0004	.0011	-0.0008	.0003
#3	-0.0004	-0.0102	.0827	.0047	.0032	.0006	.0004	-0.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB Acquired: 10/1/2019 17:53:07 Type: QC									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0003	.0024	.0005	.0015	-0.0002	.0025	.0027	.0009	
Stddev	.0004	.0012	.0002	.0007	.0004	.0019	.0005	.0009	
%RSD	110.3	51.94	32.43	50.54	211.2	73.55	19.40	103.6	
#1	.0005	.0026	.0006	.0023	-0.0001	.0013	.0023	.0000	
#2	.0005	.0035	.0006	.0008	.0001	.0016	.0032	.0018	
#3	-0.0001	.0010	.0003	.0013	-0.0006	.0047	.0024	.0007	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	64000.	8564.5	4182.4	8405.9					
Stddev	928.	262.3	21.5	33.1					
%RSD	1.4505	3.0662	.51499	.39415					
#1	64142.	8266.3	4203.8	8437.9					
#2	63009.	8617.9	4160.7	8371.7					
#3	64849.	8779.2	4182.7	8408.0					

11.3  
11

Sample Name: JC95415-6 Acquired: 10/1/2019 17:58:12 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment: 8									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.37	.0024	.0151	.0876	.8589	1.317	3.084	4.620	0.160
Stddev	.03	.0001	.0009	.0011	.0077	.013	.028	.006	.0011
%RSD	.2363	4.973	6.211	1.212	.9009	.9825	.9219	.1338	6.951
#1	11.38	.0025	.0141	.0885	.8569	1.316	3.084	4.617	.0154
#2	11.34	.0023	.0155	.0864	.8523	1.305	3.056	4.615	.0154
#3	11.38	.0023	.0158	.0879	.8674	1.330	3.113	4.627	.0173
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1691	8.182	.1629	-0.0029	12.35	-0.0067	.1111	31.48	42.88
Stddev	.0028	.018	.0031	.0030	.02	.0039	.0023	.12	.22
%RSD	1.666	2.250	1.907	101.6	.1706	58.68	2.054	.3798	.5092
#1	.1702	8.180	.1602	-0.0010	12.35	-0.0028	.1137	31.48	43.01
#2	.1659	8.165	.1663	-0.0014	12.34	-0.0066	.1104	31.36	42.62
#3	.1712	8.201	.1623	-0.0064	12.38	-0.0107	.1093	31.60	42.99
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	574.0	8.589	2.515	1.039	.0334	.1678	1.963	8.284	.3625
Stddev	2.6	.167	.332	.072	.0038	.0010	.010	.015	.0018
%RSD	.4500	1.945	13.21	6.923	11.36	.5814	.5223	.1827	.4938
#1	575.5	8.711	2.465	.9625	.0376	.1671	1.952	8.271	.3639
#2	571.0	8.399	2.210	1.050	.0302	.1675	1.973	8.281	.3605
#3	575.4	8.658	2.869	1.105	.0325	.1689	1.965	8.301	.3632
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.768	.1496	.0373	43.03	-0.0220	.0496	4.096	.3577	
Stddev	.013	.0029	.0005	.05	.0031	.0083	.003	.0050	
%RSD	.7325	1.972	1.351	.1244	13.90	16.75	.0836	1.404	
#1	1.767	.1525	.0378	43.03	-0.0196	.0563	4.092	.3619	
#2	1.755	.1496	.0368	42.97	-0.0254	.0522	4.099	.3590	
#3	1.781	.1466	.0375	43.08	-0.0209	.0403	4.096	.3521	

Sample Name: JC95415-6 Acquired: 10/1/2019 17:58:12 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment: 8									
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	64447.	8878.4	4191.4	8507.1					
Stddev	572.	105.9	11.1	23.4					
%RSD	.88703	1.1928	.26463	.27556					
#1	64107.	8836.3	4189.8	8502.5					
#2	65107.	8998.8	4203.3	8532.5					
#3	64128.	8800.0	4181.3	8486.2					

Sample Name: JC95415-7 Acquired: 10/1/2019 18:03:04 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 9

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.022</b>	<b>.0099</b>	<b>.0427</b>	<b>.1510</b>	<b>.4680</b>	<b>8.264</b>	<b>2.453</b>	<b>4.822</b>	<b>.0083</b>
Stddev	.017	.0002	.0002	.0011	.0070	.136	.044	.024	.0025
%RSD	1.677	1.958	.4613	.7139	1.497	1.645	1.794	.4957	30.69
#1	1.015	.0098	.0426	.1510	.4761	8.421	2.503	4.830	.0059
#2	1.009	.0098	.0429	.1520	.4641	8.178	2.423	4.840	.0080
#3	1.041	.0101	.0425	.1499	.4639	8.194	2.432	4.795	.0110

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2706</b>	<b>5.141</b>	<b>2891</b>	<b>-.0017</b>	<b>4.120</b>	<b>.0200</b>	<b>.0084</b>	<b>70.86</b>	<b>25.84</b>
Stddev	.0045	.035	.0019	.0026	.020	.0045	.0040	1.31	.45
%RSD	1.666	.6724	.6543	156.1	.4739	22.58	47.57	1.850	1.739
#1	2756	5.163	2884	-.0046	4.119	.0253	.0058	70.41	25.69
#2	2671	5.160	2912	-.0004	4.139	.0176	.0063	69.83	25.48
#3	2690	5.101	2876	-.0008	4.100	.0173	.0130	72.33	26.35

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>217.7</b>	<b>9.376</b>	<b>4.651</b>	<b>1.698</b>	<b>.0423</b>	<b>.0267</b>	<b>2.519</b>	<b>.3745</b>	<b>.4537</b>
Stddev	3.8	.144	.080	.023	.0017	.0003	.020	.0045	.0087
%RSD	1.740	1.540	1.713	1.330	4.086	1.028	.7994	1.205	1.917
#1	216.6	9.335	4.650	1.714	.0410	.0270	2.537	.3765	.4506
#2	214.6	9.258	4.572	1.672	.0443	.0264	2.521	.3776	.4470
#3	221.9	9.537	4.731	1.707	.0416	.0267	2.497	.3693	.4635

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.782</b>	<b>.0007</b>	<b>.0372</b>	<b>49.70</b>	<b>.0048</b>	<b>.0680</b>	<b>6.539</b>	<b>.2709</b>
Stddev	.028	.0014	.0008	.25	.0026	.0025	.039	.0069
%RSD	1.559	209.1	2.059	.5043	53.29	3.666	.5944	2.546
#1	1.814	.0009	.0380	49.82	.0072	.0693	6.559	.2743
#2	1.764	-.0008	.0366	49.86	.0021	.0651	6.563	.2629
#3	1.768	.0019	.0369	49.41	.0052	.0694	6.494	.2754

Sample Name: JC95415-7 Acquired: 10/1/2019 18:03:04 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 9

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64874.</b>	<b>8877.8</b>	<b>4252.8</b>	<b>8448.3</b>
Stddev	1267.	108.1	29.0	45.8
%RSD	1.9527	1.2173	.68150	.54265
#1	63436.	8864.2	4236.1	8432.3
#2	65826.	8992.0	4236.0	8412.5
#3	65360.	8777.2	4286.3	8499.9

11.3  
11

Sample Name: JC95415-8 Acquired: 10/1/2019 18:07:55 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 10

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.105</b>	<b>.0045</b>	<b>.0250</b>	<b>.0961</b>	<b>.4126</b>	<b>5.089</b>	<b>6.582</b>	<b>2.448</b>
Stddev	.004	.0006	.0027	.0016	.0042	.070	.093	.004
%RSD	.3990	14.19	10.79	1.648	1.009	1.374	1.413	.1656
#1	1.103	.0038	.0256	.0944	.4174	5.151	6.660	2.444
#2	1.103	.0050	.0273	.0975	.4106	5.101	6.605	2.452
#3	1.110	.0046	.0220	.0965	.4098	5.013	6.479	2.446

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0480</b>	<b>.1608</b>	<b>7.349</b>	<b>.4596</b>	<b>F -.0257</b>	<b>66.76</b>	<b>-.0172</b>	<b>.7225</b>
Stddev	.0125	.0028	.004	.0043	.0043	.06	.0090	.0156
%RSD	26.10	1.749	.0485	.9299	16.91	.0968	52.05	2.164
#1	.0365	.1593	7.346	.4548	-.0281	66.74	-.0199	.7045
#2	.0462	.1591	7.353	.4628	-.0282	66.83	-.0072	.7306
#3	.0614	.1641	7.348	.4613	-.0206	66.71	-.0245	.7324

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>52.47</b>	<b>30.44</b>	<b>1483.</b>	<b>5.113</b>	<b>2.898</b>	<b>1.176</b>	<b>.0429</b>	<b>.0559</b>
Stddev	.05	.15	2.	.152	.304	.147	.0059	.0039
%RSD	.0963	.5048	.1199	2.968	10.49	12.53	13.77	7.010
#1	52.43	30.27	1481.	5.179	3.232	1.331	.0384	.0601
#2	52.53	30.52	1484.	5.221	2.824	1.037	.0496	.0553
#3	52.46	30.54	1484.	4.940	2.637	1.160	.0407	.0524

Elem	Si2124	Sn1899	Sr4077	Tl3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.668</b>	<b>52.43</b>	<b>2553</b>	<b>1.146</b>	<b>.0335</b>	<b>-.0049</b>	<b>55.08</b>	<b>.0706</b>
Stddev	.018	.11	.0009	.027	.0080	.0005	.10	.0028
%RSD	.4893	.2077	.3402	2.385	24.03	9.892	.1813	3.925
#1	3.684	52.49	2543	1.165	.0248	-.0043	55.04	.0674
#2	3.670	52.50	2559	1.158	.0406	-.0051	55.19	.0726
#3	3.648	52.31	2556	1.115	.0350	-.0053	55.01	.0718

Sample Name: JC95415-8 Acquired: 10/1/2019 18:07:55 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment: 10

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>.0523</b>	<b>3.045</b>	<b>.7842</b>
Stddev	.0141	.009	.0383
%RSD	26.98	.2807	4.880
#1	.0382	3.045	.8091
#2	.0664	3.036	.8035
#3	.0522	3.053	.7402

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>64116.</b>	<b>8601.3</b>	<b>4181.0</b>	<b>8545.9</b>
Stddev	861.	70.9	3.0	8.5
%RSD	1.3431	.82373	.07293	.09985
#1	63482.	8551.7	4177.5	8536.6
#2	63770.	8682.5	4183.1	8553.4
#3	65096.	8569.7	4182.3	8547.6

Sample Name: JC95415-9 Acquired: 10/1/2019 18:12:45 Type: Unk										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment: 11										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.7781</b>	<b>.0047</b>	<b>.0029</b>	<b>.0984</b>	<b>.5177</b>	<b>.7280</b>	<b>4.567</b>	<b>1.109</b>	<b>.0065</b>	
Stddev	.0075	.0000	.0001	.0007	.0060	.0080	.022	.001	.0007	
%RSD	.9600	1.051	3.925	.7033	1.155	1.098	.4895	.0709	10.93	
#1	.7801	.0048	.0027	.0990	.5165	.7262	4.542	1.110	.0073	
#2	.7699	.0047	.0030	.0977	.5124	.7210	4.578	1.108	.0060	
#3	.7844	.0047	.0029	.0986	.5242	.7367	4.583	1.109	.0062	
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.7944</b>	<b>1.641</b>	<b>.3640</b>	<b>.0003</b>	<b>.9569</b>	<b>.0000</b>	<b>.0075</b>	<b>81.95</b>	<b>37.03</b>	
Stddev	.0086	.003	.0009	.0035	.0029	.0038	.0021	.87	.38	
%RSD	1.078	.1631	.2425	1358.	.2979	18790.	27.74	1.065	1.030	
#1	.7925	1.644	.3650	-.0031	.9550	.0002	.0054	82.19	37.10	
#2	.7869	1.641	.3633	.0038	.9601	-.0039	.0075	80.98	36.62	
#3	.8037	1.638	.3638	.0001	.9554	.0037	.0095	82.68	37.38	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>250.6</b>	<b>33.45</b>	<b>10.91</b>	<b>3.644</b>	<b>.3580</b>	<b>.0308</b>	<b>2.108</b>	<b>.1800</b>	<b>.2187</b>	
Stddev	2.5	.32	.10	.040	.0008	.0003	.012	.0016	.0024	
%RSD	.9879	.9639	.9207	1.099	.2240	1.080	.5861	.8637	1.100	
#1	251.1	33.47	10.93	3.658	.3573	.0311	2.120	.1801	.2194	
#2	247.9	33.11	10.80	3.599	.3579	.0304	2.109	.1784	.2161	
#3	252.8	33.76	11.00	3.675	.3588	.0309	2.096	.1815	.2207	
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	<b>3.254</b>	<b>.0400</b>	<b>.0654</b>	<b>39.74</b>	<b>.0141</b>	<b>.1492</b>	<b>4.169</b>	<b>.3672</b>		
Stddev	.029	.0021	.0009	.04	.0034	.0023	.003	.0027		
%RSD	.8876	5.178	1.313	.1082	24.09	1.556	.0766	.7374		
#1	3.245	.0420	.0654	39.76	.0102	.1519	4.169	.3683		
#2	3.231	.0402	.0645	39.78	.0166	.1478	4.172	.3641		
#3	3.286	.0379	.0662	39.69	.0156	.1479	4.166	.3692		

Sample Name: JC95415-9 Acquired: 10/1/2019 18:12:45 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment: 11				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65617.	8996.2	4287.9	8455.1
Stddev	576.	92.6	10.2	19.6
%RSD	.87837	1.0293	.23852	.23187
#1	65823.	8996.9	4277.2	8436.4
#2	66062.	9088.5	4297.6	8475.5
#3	64966.	8903.3	4288.8	8453.4

11.3  
11

Sample Name: JC95415-12 Acquired: 10/1/2019 18:17:44 Type: Unk										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment: 12										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>5.081</b>	<b>.0044</b>	<b>.0053</b>	<b>.0778</b>	<b>.4678</b>	<b>1.214</b>	<b>1.049</b>	<b>.3691</b>	<b>.0161</b>	
Stddev	.049	.0001	.0008	.0007	.0072	.018	.016	.0031	.0010	
%RSD	.9666	2.253	15.12	.9002	1.547	1.521	1.524	.8496	6.204	
#1	5.137	.0045	.0061	.0773	.4615	1.198	1.037	.3662	.0158	
#2	5.046	.0043	.0053	.0786	.4662	1.209	1.042	.3687	.0172	
#3	5.061	.0044	.0045	.0775	.4757	1.234	1.067	.3724	.0153	
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.1667</b>	<b>1.796</b>	<b>.3307</b>	<b>.0097</b>	<b>21.25</b>	<b>.0523</b>	<b>.0419</b>	<b>54.45</b>	<b>12.81</b>	
Stddev	.0024	.015	.0058	.0046	.20	.0042	.0040	.64	.13	
%RSD	1.444	.8159	1.751	47.84	.9389	8.026	9.598	1.176	.9764	
#1	.1670	1.784	.3243	.0044	21.09	.0529	.0373	55.13	12.94	
#2	.1641	1.792	.3321	.0119	21.19	.0479	.0448	53.86	12.69	
#3	.1689	1.813	.3357	.0128	21.47	.0562	.0435	54.35	12.82	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>177.6</b>	<b>11.68</b>	<b>5.630</b>	<b>1.267</b>	<b>.0411</b>	<b>.0178</b>	<b>2.243</b>	<b>2.470</b>	<b>.2950</b>	
Stddev	2.1	.02	.228	.035	.0017	.0006	.012	.0032	.0040	
%RSD	1.156	.2084	4.041	2.771	4.145	3.499	.5409	1.297	1.351	
#1	180.0	11.69	5.873	1.290	.0429	.0172	2.243	2.453	.2993	
#2	176.1	11.70	5.423	1.226	.0409	.0184	2.230	2.450	.2914	
#3	176.7	11.65	5.595	1.284	.0395	.0178	2.254	2.507	.2943	
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	<b>2.286</b>	<b>.0200</b>	<b>.0542</b>	<b>20.46</b>	<b>.0181</b>	<b>.0809</b>	<b>4.815</b>	<b>2343</b>		
Stddev	.036	.0034	.0004	.18	.0048	.0044	.042	.0109		
%RSD	1.572	17.06	.8173	.8931	26.48	5.424	.8609	4.664		
#1	2.257	.0186	.0547	20.33	.0149	.0764	4.778	2304		
#2	2.276	.0175	.0538	20.39	.0236	.0811	4.807	2259		
#3	2.326	.0239	.0542	20.67	.0158	.0851	4.860	2467		

Sample Name: JC95415-12 Acquired: 10/1/2019 18:17:44 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 5.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment: 12				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65062.	8795.3	4245.8	8462.9
Stddev	793.	140.6	34.3	70.5
%RSD	1.2187	1.5984	.80794	.83295
#1	65800.	8674.4	4275.5	8526.2
#2	65161.	8949.6	4253.6	8475.4
#3	64224.	8761.8	4208.2	8386.9

Sample Name: JC95415-14conf									
Acquired: 10/1/2019 18:22:39 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment: 13									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.40	.0038	.1410	.0546	.7095	.4851	.7133	.3209	.0072
Stddev	.12	.0002	.0007	.0003	.0257	.0144	.0228	.0022	.0005
%RSD	1.146	4.113	.5160	.4635	3.616	2.970	3.198	.6855	7.147
#1	10.53	.0039	.1410	.0546	.6887	.4740	.6960	.3209	.0077
#2	10.30	.0037	.1403	.0544	.7016	.4799	.7048	.3187	.0070
#3	10.37	.0040	.1418	.0549	.7381	.5014	.7392	.3231	.0068
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3378	15.70	.1952	.0063	F 47.46	.0156	.0133	48.04	62.36
Stddev	.0107	.10	.0025	.0065	.23	.0008	.0023	.52	.65
%RSD	3.177	.6569	1.281	102.2	4870	5.286	17.37	1.081	1.047
#1	.3300	15.72	.1943	-.0003	47.53	.0147	.0160	48.61	63.07
#2	.3334	15.59	.1933	.0067	47.20	.0159	.0121	47.60	61.79
#3	.3500	15.80	.1980	.0125	47.65	.0162	.0119	47.90	62.20
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	94.13	19.95	5.528	1.378	.0393	.0111	5.540	.1583	.3341
Stddev	1.03	.29	.120	.032	.0005	.0003	.019	.0021	.0038
%RSD	1.097	1.470	2.164	2.309	1.346	2.391	.3426	1.323	1.138
#1	95.29	20.29	5.627	1.405	.0387	.0109	5.533	.1582	.3381
#2	93.30	19.74	5.561	1.343	.0394	.0111	5.525	.1563	.3306
#3	93.81	19.84	5.395	1.387	.0397	.0114	5.561	.1605	.3336
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	2.888	-.0213	.0595	26.47	.0387	.0728	1.978	.1916	
Stddev	.091	.0013	.0014	.16	.0026	.0035	.015	.0030	
%RSD	3.167	6.094	2.437	5883	6.819	4.778	.7773	1.589	
#1	2.818	-.0228	.0581	26.49	.0358	.0750	1.983	.1932	
#2	2.853	-.0204	.0594	26.30	.0394	.0688	1.960	.1881	
#3	2.991	-.0208	.0610	26.61	.0409	.0746	1.990	.1935	

Sample Name: JC95415-14conf				
Acquired: 10/1/2019 18:22:39 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment: 13				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	63743.	8819.9	4184.8	8264.7
Stddev	2119.	95.7	29.3	49.3
%RSD	3.3247	1.0851	.7009	.59711
#1	65390.	8709.3	4188.8	8269.2
#2	64488.	8874.7	4211.9	8311.6
#3	61352.	8875.5	4153.7	8213.2

Sample Name: JC95555-3conf									
Acquired: 10/1/2019 18:27:30 Type: Unk									
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000									
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:									
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.589	.0008	.0022	.0341	1.493	.7193	.9434	2834	-.0066
Stddev	.006	.0010	.0023	.0016	.018	.0034	.0081	.0019	.0023
%RSD	.3624	136.7	104.2	4.797	1.179	4.792	8564	6.718	35.24
#1	1.595	.0014	-.0004	.0353	1.486	.7177	.9372	2826	-.0059
#2	1.589	.0014	.0039	.0347	1.513	.7233	.9525	2856	-.0092
#3	1.583	-.0004	.0031	.0322	1.480	.7170	.9405	2820	-.0047
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0751	.7835	.1346	-.0003	1.239	.0374	.0248	9.217	18.28
Stddev	.0029	.0049	.0042	.0107	.005	.0020	.0080	.026	.11
%RSD	3.817	.6290	3.126	3122.	.3984	5.433	32.06	2829	.6016
#1	.0742	.7874	.1392	.0033	1.244	.0351	.0288	9.244	18.32
#2	.0783	.7852	.1337	-.0124	1.234	.0381	.0300	9.192	18.36
#3	.0727	.7780	.1310	.0081	1.238	.0390	.0157	9.216	18.15
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	231.8	1.942	1.401	.3513	.0142	.3795	2.156	.1761	.0964
Stddev	1.4	.108	.279	.0517	.0019	.0026	.009	.0034	.0015
%RSD	.5899	5.579	19.94	14.71	13.34	.6917	.3932	1.955	1.583
#1	232.7	2.017	1.261	.4054	.0123	.3807	2.164	.1755	.0962
#2	232.4	1.818	1.722	.3461	.0160	.3765	2.155	.1730	.0981
#3	230.2	1.992	1.219	.3025	.0142	.3813	2.147	.1798	.0950
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.6675	.0361	.0210	572.3	-.0040	.0121	.6604	.1489	
Stddev	.0036	.0062	.0011	2.4	.0079	.0097	.0033	.0253	
%RSD	.5370	17.27	5.355	.4249	198.6	80.10	.4950	16.99	
#1	.6645	.0299	.0205	574.1	.0023	.0048	.6629	.1777	
#2	.6715	.0360	.0223	573.4	-.0128	.0232	.6617	.1306	
#3	.6664	.0424	.0202	569.6	-.0014	.0084	.6567	.1382	

Sample Name: JC95555-3conf				
Acquired: 10/1/2019 18:27:30 Type: Unk				
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 10.000000				
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	63985.	8550.3	4162.6	8355.7
Stddev	486.	24.1	16.2	33.3
%RSD	.75968	.28140	.38804	.39826
#1	64239.	8532.4	4153.0	8324.9
#2	63425.	8540.9	4153.6	8351.2
#3	64293.	8577.7	4181.3	8391.0



Sample Name: JC95555-4 Acquired: 10/1/2019 18:32:26 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.475</b>	<b>.0102</b>	<b>.0085</b>	<b>.1014</b>	<b>.8292</b>	<b>.6046</b>	<b>4.784</b>	<b>2.598</b>	<b>.0103</b>
Stddev	.011	.0001	.0006	.0008	.0019	.0014	.017	.0004	.0013
%RSD	.7284	.8666	6.822	.7925	.2335	.2362	.3575	.1687	12.76
#1	1.463	.0101	.0091	.1021	.8311	.6035	4.765	2.593	.0088
#2	1.476	.0103	.0083	.1015	.8293	.6062	4.798	2.600	.0107
#3	1.485	.0102	.0080	.1005	.8272	.6040	4.789	2.601	.0113

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.983</b>	<b>3.484</b>	<b>.1375</b>	<b>.0014</b>	<b>1.118</b>	<b>.0010</b>	<b>.0039</b>	<b>164.8</b>	<b>26.06</b>
Stddev	.0008	.004	.0025	.0039	.001	.0068	.0017	1.3	.22
%RSD	.2720	.1222	1.837	289.2	.0745	664.0	44.77	.7985	.8515
#1	.2974	3.480	.1355	-.0011	1.118	-.0047	.0057	163.3	25.80
#2	.2990	3.485	.1366	-.0059	1.117	-.0008	.0022	165.2	26.18
#3	.2984	3.488	.1403	-.0007	1.119	.0085	.0038	165.9	26.20

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>315.4</b>	<b>44.14</b>	<b>21.07</b>	<b>1.579</b>	<b>.0806</b>	<b>.0085</b>	<b>2.904</b>	<b>.1346</b>	<b>.3317</b>
Stddev	2.3	.09	.06	.016	.0008	.0004	.019	.0012	.0026
%RSD	.7152	.2082	.2815	1.039	.9535	4.147	.6546	.8622	.7840
#1	312.8	44.04	21.03	1.576	.0814	.0084	2.924	.1338	.3287
#2	316.0	44.20	21.03	1.597	.0806	.0083	2.887	.1341	.3326
#3	317.2	44.19	21.13	1.564	.0799	.0089	2.902	.1360	.3337

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.032</b>	<b>.0068</b>	<b>.0971</b>	<b>9.316</b>	<b>.0156</b>	<b>.2784</b>	<b>5.765</b>	<b>.6604</b>
Stddev	.008	.0005	.0002	.010	.0014	.0018	.008	.0087
%RSD	.2055	7.688	.1955	.1112	8.793	.6615	.1355	1.320
#1	4.040	.0063	.0971	9.305	.0170	.2764	5.756	.6639
#2	4.032	.0074	.0973	9.319	.0142	.2788	5.767	.6669
#3	4.023	.0068	.0970	9.325	.0155	.2801	5.771	.6505

Sample Name: JC95555-4 Acquired: 10/1/2019 18:32:26 Type: Unk  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 2.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	65761.	9091.4	4269.9	8348.3
Stddev	226.	68.0	11.1	14.0
%RSD	.34380	.74821	.25993	.16785
#1	65756.	9157.9	4279.1	8356.8
#2	65537.	9022.0	4273.0	8356.0
#3	65989.	9094.2	4257.6	8332.1

11.3  
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Sample Name: CCV Acquired: 10/1/2019 18:37:29 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.057</b>	<b>2.046</b>	<b>2.003</b>	<b>2.035</b>	<b>1.984</b>	<b>1.888</b>	<b>2.052</b>	<b>2.085</b>	<b>2.432</b>
Stddev	.004	.002	.007	.006	.017	.018	.020	.005	.0016
%RSD	.1739	.1089	.3588	.2939	.8598	.9621	.9738	.2563	.6452
#1	2.056	2.046	2.000	2.034	1.985	1.890	2.050	2.082	2.435
#2	2.060	2.049	1.997	2.030	1.966	1.869	2.073	2.081	2.414
#3	2.053	2.044	2.011	2.041	2.000	1.906	2.033	2.091	2.445

Check ? Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.979</b>	<b>2.032</b>	<b>1.978</b>	<b>2.031</b>	<b>2.095</b>	<b>1.977</b>	<b>2.011</b>	<b>40.65</b>	<b>39.75</b>
Stddev	.018	.007	.007	.005	.007	.008	.006	.05	.04
%RSD	.9018	.3328	.3654	.2569	.3133	.3937	.2960	.1184	.0897
#1	1.979	2.029	1.976	2.026	2.092	1.978	2.013	40.70	39.72
#2	1.961	2.027	1.972	2.032	2.091	1.969	2.005	40.63	39.79
#3	1.996	2.039	1.986	2.036	2.103	1.985	2.016	40.62	39.76

Check ? Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>39.74</b>	<b>40.39</b>	<b>40.20</b>	<b>40.41</b>	<b>2.024</b>	<b>1.999</b>	<b>4.967</b>	<b>2.024</b>	<b>2.068</b>
Stddev	.03	.05	.03	.03	.011	.009	.018	.007	.003
%RSD	.0713	.1136	.0835	.0675	.5218	.4346	.3580	.3531	.1544
#1	39.77	40.34	40.17	40.41	2.019	1.997	4.960	2.021	2.069
#2	39.76	40.40	40.18	40.44	2.017	1.992	4.953	2.020	2.070
#3	39.71	40.43	40.23	40.39	2.036	2.009	4.987	2.033	2.064

Check ? Value Range

Sample Name: CCV Acquired: 10/1/2019 18:37:29 Type: QC  
 Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000  
 User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.947</b>	<b>1.978</b>	<b>2.027</b>	<b>1.969</b>	<b>2.008</b>	<b>1.971</b>	<b>2.030</b>	<b>1.956</b>
Stddev	.018	.011	.018	.009	.008	.003	.009	.024
%RSD	.9002	.5533	.8752	.4384	.3788	.1578	.4249	1.201
#1	1.947	1.975	2.031	1.962	2.005	1.971	2.026	1.955
#2	1.929	1.968	2.008	1.965	2.002	1.974	2.024	1.934
#3	1.965	1.989	2.043	1.978	2.017	1.967	2.040	1.981

Check ? Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	62372.	8534.3	4062.1	8080.8
Stddev	195.	38.7	7.6	9.9
%RSD	.31279	.45344	.18807	.12265
#1	62242.	8548.4	4069.1	8091.4
#2	62596.	8563.9	4063.3	8079.5
#3	62278.	8490.5	4053.9	8071.7



Sample Name: CCB Acquired: 10/1/2019 18:42:24 Type: QC										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0002	.0001	.0004	-0.001	-0.002	.0003	.0005	-0.010	
Stddev	.0002	.0000	.0002	.0002	.0002	.0002	.0000	.0001	.0005	
%RSD	32.23	26.42	133.9	42.35	223.7	74.50	11.89	32.01	49.87	
#1	.0005	.0002	-0.001	.0002	.0001	-0.003	.0003	.0005	-0.004	
#2	.0007	.0002	.0002	.0004	-0.001	-0.003	.0002	.0003	-0.012	
#3	.0009	.0001	.0002	.0006	-0.003	-0.000	.0002	.0006	-0.014	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0006	.0006	.0005	.0002	.0005	.0002	-0.033	.0032	
Stddev	.0002	.0002	.0004	.0019	.0014	.0026	.0016	.0054	.0033	
%RSD	42.69	31.20	71.76	421.9	607.2	506.8	1013.	166.4	103.8	
#1	.0007	.0005	.0010	.0002	.0019	.0002	.0019	.0030	.0048	
#2	.0006	.0004	.0004	.0025	-0.007	.0032	-0.007	-0.065	-0.006	
#3	.0003	.0007	.0003	-0.013	-0.005	-0.019	-0.008	-0.062	.0053	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.0118	.0438	.0186	.0033	.0004	.0039	-0.008	.0003	
Stddev	.0033	.0123	.0433	.0017	.0002	.0003	.0007	.0001	.0001	
%RSD	55.87	104.2	98.86	9.376	7.056	65.11	17.45	9.425	35.32	
#1	.0053	.0256	.0141	.0188	.0031	.0006	.0045	-0.007	.0002	
#2	.0095	.0018	.0239	.0168	.0035	.0005	.0041	-0.009	.0003	
#3	.0030	.0081	.0935	.0203	.0034	.0001	.0031	-0.009	.0003	
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Sample Name: CCB Acquired: 10/1/2019 18:42:24 Type: QC										
Method: SGS NO VALVE3(v324) Mode: CONC Corr. Factor: 1.000000										
User: iTEVA Security Custom ID1: Custom ID2: Custom ID3:										
Comment:										
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0015	.0004	.0010	-0.0007	.0009	.0031	.0032		
Stddev	.0007	.0011	.0001	.0015	.0009	.0010	.0007	.0049		
%RSD	11290.	73.81	21.92	145.9	137.2	113.6	24.18	155.9		
#1	-0.0005	.0016	.0004	.0021	-0.0017	.0005	.0039	-0.010		
#2	.0008	.0004	.0003	.0015	-0.0005	.0020	.0025	.0019		
#3	-0.0003	.0026	.0005	-0.0007	.0001	.0001	.0028	.0086		
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
High Limit										
Low Limit										
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Units	Cts/S	Cts/S	Cts/S	Cts/S						
Avg	63966.	8623.1	4130.6	8313.8						
Stddev	183.	102.1	72.8	125.1						
%RSD	.28563	1.1839	1.7629	1.5051						
#1	64130.	8710.1	4177.3	8401.8						
#2	63769.	8510.7	4167.7	8369.1						
#3	63998.	8648.4	4046.7	8170.5						

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	<input checked="" type="checkbox"/>	2	Al	0.000000	0.000000	No
			Zr	0.000824	0.000000	No
Be 313.042 {108}	<input checked="" type="checkbox"/>	11	V	0.000222	0.000000	No
			Mo	-0.000040	0.000000	No
			Ti	-0.000650	0.000000	No
			Mn	0.000006	0.000000	No
			Ba	-0.000013	0.000000	No
			Zn	0.000010	0.000000	No
			Sb	-0.000021	0.000000	No
			Ag	0.000060	0.000000	No
			Sn	0.000010	0.000000	No
			Fe	-0.000001	0.000000	No
			K	0.000000	0.000000	No
Cd 228.802 {448}	<input checked="" type="checkbox"/>	14	As	0.006580	0.000000	No
			Ni	-0.000377	0.000000	No
			Fe	0.000010	0.000000	No
			Ba	0.000100	0.000000	No
			Co	-0.000718	0.000000	No
			Al	0.000000	0.000000	No
			Mg	0.000000	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	-0.000014	0.000000	No
			Ti	0.000051	0.000000	No
			Cu	0.000009	0.000000	No
			Sr	-0.000050	0.000000	No
			W	-0.000194	0.000000	No
			Cr	0.000010	0.000000	No
Co 228.616 {448}	<input checked="" type="checkbox"/>	5	Fe	-0.000001	0.000000	No
			Ca	-0.000003	0.000000	No
			Mg	0.000001	0.000000	No
			Ti	0.001922	0.000000	No
			Mo	-0.000963	0.000000	No
Cr 267.716 {126}	<input checked="" type="checkbox"/>	8	Mn	0.000098	0.000000	No
			Mo	-0.000053	0.000000	No
			Co	0.000007	0.000000	No
			Al	0.000000	0.000000	No
			Sn	0.000032	0.000000	No
			Ti	0.000042	0.000000	No
			Ca	0.000000	0.000000	No
			Fe	-0.000003	0.000000	No
Cu 324.754 {104}2	<input checked="" type="checkbox"/>	12	Cr	-0.000091	0.000000	No
			Mo	0.000395	0.000000	No
			Ti	-0.000174	0.000000	No
			Mn	-0.000130	0.000000	No
			Co	-0.000902	0.000000	No
			Zn	0.000037	0.000000	No
			Fe	-0.000205	0.000000	No
			Zr	-0.000007	0.000000	No
			V	-0.000457	0.000000	No
			Al	0.000000	0.000000	No
			Ni	0.000032	0.000000	No
			W	-0.010000	0.000000	No
Mn 257.610 {131}	<input checked="" type="checkbox"/>	2	Fe	-0.000073	0.000000	No
			Mo	0.000011	0.000000	No
Ni 231.604 {446}	<input checked="" type="checkbox"/>	7	Cr	-0.000028	0.000000	No
			Mo	-0.000041	0.000000	No
			Fe	0.000020	0.000000	No
			Zn	0.000017	0.000000	No
			Co	-0.000329	0.000000	No
			Ti	0.000010	0.000000	No
			W	-0.000073	0.000000	No

11.3.1  
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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	<input checked="" type="checkbox"/>	16	Mn	0.000056	0.000000	No
			Mo	-0.000279	0.000000	No
			Ti	-0.000439	0.000000	No
			V	-0.000659	0.000000	No
			Zr	0.004712	0.000000	No
			Sb	-0.000013	0.000000	No
			Mg	0.000001	0.000000	No
			Ca	-0.000002	0.000000	No
			Fe	-0.000325	0.000000	No
			Al	-0.000001	0.000000	No
			Zn	-0.000090	0.000000	No
			Ba	-0.000087	0.000000	No
			Ni	-0.000021	0.000000	No
			Cr	0.000013	0.000000	No
			As	0.000081	0.000000	No
			Ce	-0.000182	0.000000	No
V 292.402 {115}	<input checked="" type="checkbox"/>	6	Fe	0.000025	0.000000	No
			Ti	0.000746	0.000000	No
			Mo	-0.000244	0.000000	No
			Co	0.000015	0.000000	No
			Cr	-0.006408	0.000000	No
			Mn	-0.001520	0.000000	No
Zn 206.200 {464}	<input checked="" type="checkbox"/>	13	Cr	-0.000600	0.000000	No
			Mo	-0.000376	0.000000	No
			Fe	0.000011	0.000000	No
			Co	0.000122	0.000000	No
			Ni	0.000058	0.000000	No
			Se	0.000849	0.000000	No
			Ca	0.000003	0.000000	No
			Ti	0.000131	0.000000	No
			Sn	0.000068	0.000000	No
			V	-0.000012	0.000000	No
			Al	0.000001	0.000000	No
			Si	0.000017	0.000000	No
			Zr	0.000269	0.000000	No
As 189.042 {478}	<input checked="" type="checkbox"/>	23	Al	-0.000001	0.000000	No
			Fe	-0.000062	0.000000	No
			Ca	-0.000000	0.000000	No
			Mn	-0.000048	0.000000	No
			Mo	0.000480	0.000000	No
			Cr	-0.002864	0.000000	No
			Co	-0.000223	0.000000	No
			Si	-0.000047	0.000000	No
			Cu	0.000120	0.000000	No
			Mg	0.000001	0.000000	No
			Cd	-0.000103	0.000000	No
			Sn	-0.000017	0.000000	No
			Zn	-0.000045	0.000000	No
			Zr	-0.000145	0.000000	No
			Sb	0.000022	0.000000	No
			Ti	0.000017	0.000000	No
			Ni	-0.000069	0.000000	No
			W	0.000000	0.000000	No
			S	-0.000010	0.000000	No
			Ba	-0.000070	0.000000	No
Tl 190.856 {477}	<input checked="" type="checkbox"/>	31	Sr	0.000000	0.000000	No
			V	-0.000014	0.000000	No
			Ce	-0.000636	0.000000	No
			Cr	0.000116	0.000000	No
			Mo	-0.011460	0.000000	No
			Al	0.000010	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			V	-0.018340	0.000000	No
			Mn	0.001618	0.000000	No
			Si	-0.000021	0.000000	No
			Ca	0.000005	0.000000	No
			Ti	-0.003239	0.000000	No
			Cu	0.000040	0.000000	No
			Co	0.006140	0.000000	No
			Sr	-0.000233	0.000000	No
			Zn	-0.000131	0.000000	No
			Pb	-0.000116	0.000000	No
			Mg	-0.000005	0.000000	No
			Ba	-0.000014	0.000000	No
			W	-0.030000	0.000000	No
			B	-0.000349	0.000000	No
			Ni	-0.000034	0.000000	No
			Sn	0.000110	0.000000	No
			Fe	-0.000048	0.000000	No
			Li	-0.000199	0.000000	No
			S	0.000013	0.000000	No
			As	0.000056	0.000000	No
			Bi	-0.000040	0.000000	No
			P	0.000021	0.000000	No
			Cd	0.000117	0.000000	No
			Sb	0.000034	0.000000	No
			K	0.000000	0.000000	No
			Zr	0.000059	0.000000	No
			Be	-0.000289	0.000000	No
			Ce	-0.000500	0.000000	No
Pb 220.353 {453}	<input checked="" type="checkbox"/>	21	Al	-0.000159	0.000000	No
			Ca	0.000002	0.000000	No
			Mn	-0.000034	0.000000	No
			Zn	0.000027	0.000000	No
			Mo	-0.001000	0.000000	No
			Ni	0.000136	0.000000	No
			Cu	0.000381	0.000000	No
			V	-0.000103	0.000000	No
			Co	-0.000084	0.000000	No
			Ti	-0.000051	0.000000	No
			Si	0.000054	0.000000	No
			Mg	0.000004	0.000000	No
			Sb	0.000041	0.000000	No
			Cr	0.000017	0.000000	No
			Sn	0.000130	0.000000	No
			Fe	0.000030	0.000000	No
			W	-0.010000	0.000000	No
			Sr	-0.000036	0.000000	No
			Zr	-0.000181	0.000000	No
			S	-0.000001	0.000000	No
			Ce	0.000364	0.000000	No
Se 196.090 {472}	<input checked="" type="checkbox"/>	19	Al	0.000015	0.000000	No
			Ca	-0.000010	0.000000	No
			Mn	0.000649	0.000000	No
			Mo	0.000066	0.000000	No
			Co	-0.000296	0.000000	No
			Cu	-0.000107	0.000000	No
			Mg	-0.000001	0.000000	No
			Ti	-0.000093	0.000000	No
			Zn	-0.000077	0.000000	No
			Fe	-0.000273	0.000000	No
			Si	0.000068	0.000000	No
			B	-0.000043	0.000000	No

11.3.1  
11

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ba	0.000050	0.000000	No
			S	0.000000	0.000000	No
			Zr	-0.000206	0.000000	No
			V	0.000082	0.000000	No
			W	0.000000	0.000000	No
			Sn	-0.000113	0.000000	No
Sb 206.833 {463}	<input checked="" type="checkbox"/>	18	Ce	-0.000845	0.000000	No
			Fe	0.000028	0.000000	No
			Al	0.000006	0.000000	No
			Ca	0.000006	0.000000	No
			Ni	-0.000583	0.000000	No
			Cr	0.019800	0.000000	No
			V	-0.001740	0.000000	No
			Zn	-0.000104	0.000000	No
			Mo	-0.000100	0.000000	No
			Ti	0.000740	0.000000	No
			Sn	-0.012500	0.000000	No
			Mn	-0.000040	0.000000	No
			Co	-0.000336	0.000000	No
			Se	-0.000075	0.000000	No
			Zr	0.000000	0.000000	No
			W	0.000000	0.000000	No
			Mg	-0.000001	0.000000	No
			S	-0.000017	0.000000	No
Al 396.152 {85}	<input checked="" type="checkbox"/>	9	Ce	-0.001909	0.000000	No
			Ca	0.000067	0.000000	No
			Mo	0.044823	0.000000	No
			Ti	0.000037	0.000000	No
			Si	0.000228	0.000000	No
			Co	-0.000115	0.000000	No
			Li	-0.001000	0.000000	No
			Ba	0.000725	0.000000	No
			Zr	0.004878	0.000000	No
Ca 317.933 {106}	<input checked="" type="checkbox"/>	5	Ce	-0.005773	0.000000	No
			Al	0.000043	0.000000	No
			Fe	0.000046	0.000000	No
			Mg	0.000071	0.000000	No
			Ti	-0.000042	0.000000	No
			Co	0.001523	0.000000	No
Fe 259.940 {130}	<input checked="" type="checkbox"/>	11	Cr	0.000237	0.000000	No
			Zn	0.000466	0.000000	No
			Al	0.000022	0.000000	No
			Co	0.000318	0.000000	No
			Cd	0.000700	0.000000	No
			Sn	-0.000019	0.000000	No
			Ti	-0.000710	0.000000	No
			Si	0.000053	0.000000	No
			Ca	0.000012	0.000000	No
			Ba	0.000400	0.000000	No
			Mn	-0.000272	0.000000	No
Mg 279.079 {121}	<input checked="" type="checkbox"/>	3	Mo	-0.021115	0.000000	No
			Pb	-0.000017	0.000000	No
			Fe	-0.000081	0.000000	No
K 766.490 {44}	<input checked="" type="checkbox"/>	None				
Na 589.592 {57}	<input checked="" type="checkbox"/>	1	Al	0.000039	0.000000	No
B 208.959 {462}	<input checked="" type="checkbox"/>	1	Mo	0.040842	0.000000	No
Mo 202.030 {467}	<input checked="" type="checkbox"/>	6	Ti	0.000050	0.000000	No
			Mg	-0.000005	0.000000	No
			Ca	0.000000	0.000000	No
			Fe	-0.000006	0.000000	No
			V	-0.000100	0.000000	No

11.3.1  
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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Si 212.412 {459}	<input checked="" type="checkbox"/>	12	W	-0.000612	0.000000	No
			Mn	0.000152	0.000000	No
			Fe	0.000021	0.000000	No
			Ca	0.000041	0.000000	No
			Ni	0.000391	0.000000	No
			Cd	0.001794	0.000000	No
			Cr	0.001112	0.000000	No
			Mo	0.029007	0.000000	No
			Ti	0.007395	0.000000	No
			Ba	0.000825	0.000000	No
			Sn	0.005204	0.000000	No
			V	0.001738	0.000000	No
Sn 189.989 {478}	<input checked="" type="checkbox"/>	4	Zr	0.001561	0.000000	No
			Ti	-0.002059	0.000000	No
			Fe	0.000017	0.000000	No
			Mo	0.000058	0.000000	No
Sr 407.771 {83}	<input checked="" type="checkbox"/>	2	Zr	0.000976	0.000000	No
			Ca	0.000019	0.000000	No
Ti 334.904 {101}	<input checked="" type="checkbox"/>	5	Zr	-0.000004	0.000000	No
			Cr	0.000072	0.000000	No
			Mo	0.002014	0.000000	No
			Zr	0.000002	0.000000	No
			W	0.000004	0.000000	No
V	0.000064	0.000000	No			
Y 360.073 {94}* Y 371.030 {91}* Y 224.306 {451}* In 230.606 {446}* W 207.911 {462}	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	None None None None 3				
Zr 339.198 {99}	<input checked="" type="checkbox"/>	14	V	0.000064	0.000000	No
			Zn	0.016225	0.000000	No
			Fe	0.000002	0.000000	No
			Fe	-0.000037	0.000000	No
			Si	0.000631	0.000000	No
			Ba	-0.000049	0.000000	No
			Sn	0.000046	0.000000	No
			Sb	-0.000067	0.000000	No
			V	0.000226	0.000000	No
			W	0.000000	0.000000	No
			Ti	0.000007	0.000000	No
			Al	0.000001	0.000000	No
			Ca	-0.000001	0.000000	No
			Li	-0.000097	0.000000	No
Bi	0.000607	0.000000	No			
S 182.034 {485}	<input checked="" type="checkbox"/>	10	Mn	0.000059	0.000000	No
			Mo	0.000401	0.000000	No
			Ca	0.000060	0.000000	No
			Mo	0.000978	0.000000	No
			Al	-0.000024	0.000000	No
			Fe	0.000008	0.000000	No
			Mn	0.002516	0.000000	No
			W	-0.018006	0.000000	No
			Mg	0.000012	0.000000	No
			Cr	0.000119	0.000000	No
Bi 223.061 {451}	<input checked="" type="checkbox"/>	8	V	0.000018	0.000000	No
			B	-0.000196	0.000000	No
			Fe	0.000158	0.000000	No
			Ti	-0.017590	0.000000	No
			Co	-0.003172	0.000000	No
			Cr	0.003172	0.000000	No
			Cu	-0.001562	0.000000	No
			V	-0.000498	0.000000	No

11.3.1  
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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			W	0.015000	0.000000	No
			Ce	-0.007545	0.000000	No
Li 670.784 { 50}	<input checked="" type="checkbox"/>	2	Ca	0.000072	0.000000	No
			W	0.000000	0.000000	No
P 177.495 {490}	<input checked="" type="checkbox"/>	2	Mn	-0.001748	0.000000	No
			Cu	0.004091	0.000000	No
Ce 404.076 { 83}	<input checked="" type="checkbox"/>	1	Mn	-0.002972	0.000000	No

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ba 455.403 { 74}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.001183	3.177824	0.000000	1.000000
Be 313.042 {108}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000118	3.372663	0.000000	1.000000
Cd 228.802 {448}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000089	1.318177	0.000000	1.000000
Co 228.616 {448}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000005	0.652147	0.000000	1.000000
Cr 267.716 {126}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000222	0.240747	0.000000	1.000000
Cu 324.754 {104}2	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.003296	0.338596	0.000000	1.000000
Mn 257.610 {131}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.000036	0.639370	0.000000	1.000000
Ni 231.604 {446}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.001069	0.497040	0.000000	1.000000
Ag 328.068 {103}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.003000	0.317786	0.000000	1.000000
V 292.402 {115}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.001250	0.349389	0.000000	1.000000
Zn 206.200 {464}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000652	1.484735	0.000000	1.000000
As 189.042 {478}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.000880	0.173924	0.000000	1.000000
Tl 190.856 {477}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.000176	0.069741	0.000000	1.000000
Pb 220.353 {453}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	-0.000428	0.215937	0.000000	1.000000
Se 196.090 {472}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000247	0.120256	0.000000	1.000000
Sb 206.833 {463}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000833	0.202420	0.000000	1.000000
Al 396.152 { 85}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.002155	0.056845	0.000000	1.000000
Ca 317.933 {106}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.004915	0.096375	0.000000	1.000000
Fe 259.940 {130}	10/2/2019 8:39:52	10/1/2019 12:45:14	Linear	None	0.000161	0.056995	0.000000	1.000000
Mg 279.079 {121}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.000041	0.008856	0.000000	1.000000
K 766.490 { 44}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.007664	0.041248	0.000000	1.000000
Na 589.592 { 57}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.003544	0.158762	0.000000	1.000000
B 208.959 {462}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.000420	0.280518	0.000000	1.000000
Mo 202.030 {467}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.000538	0.933578	0.000000	1.000000
Si 212.412 {459}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.003182	0.265671	0.000000	1.000000
Sn 189.989 {478}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.000390	0.213627	0.000000	1.000000
Sr 407.771 { 83}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.000441	2.604766	0.000000	1.000000
Ti 334.904 {101}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.001752	0.341733	0.000000	1.000000
Y 360.073 { 94}*	10/2/2019 8:39:52	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	10/2/2019 8:39:52	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	10/2/2019 8:39:52	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	10/2/2019 8:39:52	5/1/2013 13:59:18	Linear	None	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	0.002568	0.482210	0.000000	1.000000
Zr 339.198 { 99}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.002571	0.880300	0.000000	1.000000
S 182.034 {485}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.000126	0.109547	0.000000	1.000000
Bi 223.061 {451}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.000882	0.261997	0.000000	1.000000
Li 670.784 { 50}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	None	-0.002613	1.079187	0.000000	1.000000
P 177.495 {490}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	1/Conc	-0.009037	0.203959	0.000000	1.000000
Ce 404.076 { 83}	10/2/2019 8:39:52	10/1/2019 12:45:15	Linear	1/Conc	-0.001124	0.066885	0.000000	1.000000



Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ba 455.403 { 74}	1.000000	0.000000	0.000307	0.001024	OK.	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000086	0.000288	OK.	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000203	0.000676	OK.	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000320	0.001068	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000337	0.001124	OK.	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000396	0.001319	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000047	0.000157	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000376	0.001253	OK.	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000423	0.001411	OK.	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000397	0.001323	OK.	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000145	0.000484	OK.	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.001047	0.003488	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.001912	0.006374	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.001218	0.004062	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.001945	0.006485	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001455	0.004850	OK.	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.012435	0.041449	OK.	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.003547	0.011825	OK.	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.003085	0.010284	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.023945	0.079816	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.037700	0.125665	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.009744	0.032479	OK.	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000702	0.002339	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000272	0.000907	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.001082	0.003608	OK.	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000687	0.002290	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000141	0.000471	OK.	1.000000	0.000000	1	0
Ti 334.904 {101}	1.000000	0.000000	0.000455	0.001517	OK.	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	0.000796	0.002654	Warnin	1.000000	0.000000	1	0
Y 371.030 { 91}*	0.000000	0.000000	0.002186	0.007287	Warnin	1.000000	0.000000	1	0
Y 224.306 {451}*	0.000000	0.000000	0.004215	0.014050	Warnin	1.000000	0.000000	1	0
In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
W 207.911 {462}	1.000000	0.000000	0.001065	0.003550	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000185	0.000617	OK.	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.001796	0.005985	OK.	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001561	0.005205	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.001549	0.005163	OK.	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.000955	0.003182	OK.	1.000000	0.000000	1	0
Ce 404.076 { 83}	1.000000	0.000000	0.003256	0.010854	OK.	1.000000	0.000000	1	0

Sample Name: STDA Acquired: 10/4/2019 11:39:33 Type: Cal  
 Method: SGS 3 NO Valve(v273) Mode: IR Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>0106</b>	<b>-0014</b>	<b>0004</b>	<b>0001</b>	<b>-0001</b>	<b>0028</b>	<b>-0001</b>	<b>-0001</b>	<b>-0005</b>
Stddev	.0002	.0001	.0001	.0000	.0000	.0000	.0000	.0001	.0000
%RSD	1.654	9.670	38.43	40.08	39.20	2156	60.65	116.1	5.231

#1	.0108	-0.014	.0002	.0000	-.0001	.0028	-.0000	-.0000	-.0005
#2	.0104	-.0013	.0005	.0001	-.0001	.0028	-.0001	-.0001	-.0005
#3	.0106	-.0016	.0004	.0001	-.0001	.0028	-.0001	-.0002	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>0006</b>	<b>0004</b>	<b>-0005</b>	<b>0000</b>	<b>0003</b>	<b>-0000</b>	<b>0003</b>	<b>0006</b>	<b>0094</b>
Stddev	.0000	.0001	.0001	.0001	.0002	.0001	.0001	.0003	.0002
%RSD	5.970	25.36	13.89	614.1	61.33	18860.	18.42	51.37	2.533

#1	.0006	.0005	-.0005	.0001	.0002	-.0002	.0003	.0009	.0095
#2	.0005	.0003	-.0006	-.0000	.0001	.0001	.0003	.0003	.0091
#3	.0006	.0005	-.0006	.0000	.0004	.0001	.0004	.0008	.0094

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>0002</b>	<b>-0001</b>	<b>-0037</b>	<b>0005</b>	<b>0003</b>	<b>0011</b>	<b>0003</b>	<b>-0012</b>	<b>-0012</b>
Stddev	.0000	.0001	.0003	.0005	.0001	.0001	.0001	.0000	.0002
%RSD	11.59	87.99	181.4	12.47	26.85	22.90	6.240	13.05	14.85

#1	.0001	-.0000	-.0001	-.0035	.0005	.0002	.0012	.0003	-.0014
#2	.0002	-.0002	.0002	-.0034	.0006	.0003	.0011	.0003	-.0010
#3	.0002	-.0001	.0004	-.0043	.0003	.0003	.0011	.0003	-.0012

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-0000</b>	<b>0046</b>	<b>-0001</b>	<b>-0016</b>	<b>0000</b>	<b>-0023</b>	<b>-0114</b>	<b>0007</b>
Stddev	.0001	.0002	.0000	.0001	.0002	.0006	.0000	.0000
%RSD	294.5	3.612	33.85	3.635	492.7	27.55	.0677	5.730

#1	-.0000	.0047	-.0001	-.0016	.0003	-.0020	-.0114	.0007
#2	.0001	.0046	-.0001	-.0015	-.0001	-.0031	-.0114	.0008
#3	-.0001	.0044	-.0002	-.0016	-.0000	-.0020	-.0114	.0007

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Sample Name: STDA Acquired: 10/4/2019 11:39:33 Type: Cal  
 Method: SGS 3 NO Valve(v273) Mode: IR Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181180.	28940.	7946.7	10819.
Stddev	959.	197.	4.2	5.
%RSD	.52927	.68205	.05224	.04624

#1	182020.	28716.	7951.2	10817.
#2	181380.	29088.	7945.9	10816.
#3	180140.	29015.	7943.0	10825.

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Sample Name: STDb Acquired: 10/4/2019 11:44:30 Type: Cal  
 Method: SGS 3 NO Valve(v273) Mode: IR Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>8.967</b>	<b>13.52</b>	<b>4.710</b>	<b>3.173</b>	<b>6.744</b>	<b>1.146</b>	<b>3.476</b>	<b>2.594</b>	<b>0.801</b>
Stddev	.183	.16	.003	.002	.0011	.001	.017	.002	.0001
%RSD	2.040	1.212	.0569	.0615	.1643	.0513	.4783	.0604	.0975

#1	9.161	13.70	4.713	3.173	6.757	1.146	3.495	2.595	.0802
#2	8.945	13.48	4.708	3.171	6.737	1.146	3.463	2.594	.0801
#3	8.797	13.38	4.710	3.175	6.738	1.147	3.471	2.592	.0800

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.8926</b>	<b>6.708</b>	<b>.5580</b>	<b>4.055</b>	<b>1.222</b>	<b>4.257</b>	<b>.6972</b>	<b>3.964</b>	<b>10.12</b>
Stddev	.0002	.015	.0011	.0004	.001	.0003	.0003	.016	.12
%RSD	.0234	.2212	.1903	.0874	.0481	.0748	.0448	.3922	1.154

#1	.8928	6.723	.5589	4.058	1.222	4.255	.6969	3.982	10.25
#2	.8927	6.709	.5568	4.051	1.222	4.255	.6971	3.957	10.06
#3	.8924	6.693	.5582	4.056	1.221	4.260	.6976	3.953	10.04

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>6.235</b>	<b>1.049</b>	<b>1.973</b>	<b>6.858</b>	<b>1.075</b>	<b>3.688</b>	<b>2.318</b>	<b>1.121</b>	<b>14.95</b>
Stddev	.021	.005	.008	.133	.001	.003	.001	.001	.37
%RSD	.3411	.4869	.4024	1.935	.0572	.0770	.0445	.0832	2.503

#1	6.260	1.055	1.982	7.005	1.075	3.691	2.319	1.122	15.19
#2	6.223	1.047	1.969	6.821	1.074	3.686	2.317	1.121	15.15
#3	6.223	1.045	1.967	6.747	1.076	3.685	2.318	1.120	14.52

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.7694</b>	<b>1.767</b>	<b>2.216</b>	<b>2.585</b>	<b>.7479</b>	<b>2.246</b>	<b>.6300</b>	<b>.1577</b>
Stddev	.0012	.001	.003	.0002	.0008	.007	.0003	.0004
%RSD	.1521	.0393	.1391	.0768	.1004	.2970	.0467	.2264

#1	.7702	1.768	2.218	2.586	.7482	2.253	.6302	.1576
#2	.7681	1.767	2.213	2.585	.7470	2.243	.6301	.1574
#3	.7699	1.766	2.218	2.582	.7484	2.241	.6296	.1581

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Sample Name: STDb Acquired: 10/4/2019 11:44:30 Type: Cal  
 Method: SGS 3 NO Valve(v273) Mode: IR Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	170530.	28142.	7487.5	9798.1
Stddev	773.	299.	23.5	23.1
%RSD	.45342	1.0616	.31383	.23545

#1	169660.	27800.	7467.2	9780.2
#2	170800.	28278.	7481.9	9790.0
#3	171130.	28349.	7513.2	9824.1

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Sample Name: CCVCONF Acquired: 10/4/2019 11:50:09 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Check ? Value Range

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include V\_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Check ? Value Range

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Check ? Value Range

Sample Name: CCVCONF Acquired: 10/4/2019 11:50:09 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Check ? Value Range

Table with 10 columns: Int. Std. Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Y\_3600, Y\_3710, Y\_2243, In2306.

11.4

Sample Name: CCBCONF Acquired: 10/4/2019 11:55:08 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Check ? High Limit Low Limit

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include V\_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Check ? High Limit Low Limit

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Check ? High Limit Low Limit

Sample Name: CCBCONF Acquired: 10/4/2019 11:55:08 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Check ? High Limit Low Limit

Table with 10 columns: Int. Std. Units, Avg, Stddev, %RSD, #1, #2, #3. Rows include Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: ICV 1 Acquired: 10/4/2019 12:00:08 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Ag3280, V\_2924, Zn2062, As1890, TI1908, Pb2203, Se1960, Sb2068.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ICV 1 Acquired: 10/4/2019 12:00:08 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail 2.000 -5.000% Chk Pass Chk Pass Chk Pass

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Li6707, P\_1774, Ce4040.

Check ? Value Range Chk Pass Chk Pass Chk Fail 2.000 -5.000%

Table with 9 columns: Int. Std. Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: ICB 7 Acquired: 10/4/2019 12:08:08 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for V\_2924, Zn2062, As1890, TI1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: ICB 7 Acquired: 10/4/2019 12:08:08 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Check ? High Limit Low Limit Chk Pass Chk Fail .0050 -0.0050 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Table with 10 columns: Int. Std. Units, Avg, Stddev, %RSD, #1, #2, #3. Values for Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: iccv 1 Acquired: 10/4/2019 12:14:35 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.008</b>	<b>2.053</b>	<b>1.979</b>	<b>2.018</b>	<b>2.009</b>	<b>1.980</b>	<b>2.030</b>	<b>2.030</b>	<b>2.501</b>
Stddev	.004	.005	.006	.007	.009	.009	.018	.005	.0008
%RSD	.1863	.2302	.2860	.3270	.4441	.4660	.8624	.2498	.3114
#1	2.008	2.055	1.971	2.009	2.019	1.987	2.055	2.023	2.502
#2	2.003	2.046	1.981	2.022	2.012	1.986	2.026	2.032	2.507
#3	2.010	2.057	1.985	2.024	2.006	1.981	2.023	2.034	2.504
#4	2.012	2.054	1.980	2.019	1.998	1.967	2.015	2.033	2.489

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.003</b>	<b>2.023</b>	<b>1.920</b>	<b>2.057</b>	<b>2.011</b>	<b>1.977</b>	<b>1.919</b>	<b>39.62</b>	<b>40.81</b>
Stddev	.006	.003	.006	.008	.006	.007	.007	.05	.04
%RSD	.3244	.1633	.2962	.3825	.3233	.3440	.3615	.1263	.1046
#1	2.009	2.019	1.912	2.047	2.002	1.968	1.909	39.62	40.82
#2	2.005	2.024	1.922	2.064	2.015	1.975	1.921	39.55	40.74
#3	2.003	2.027	1.925	2.062	2.017	1.983	1.923	39.66	40.84
#4	1.993	2.023	1.921	2.055	2.011	1.982	1.923	39.65	40.82

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Sample Name: iccv 1 Acquired: 10/4/2019 12:14:35 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.29</b>	<b>40.23</b>	<b>39.75</b>	<b>40.01</b>	<b>2.001</b>	<b>1.949</b>	<b>5.075</b>	<b>1.967</b>	<b>2.037</b>
Stddev	.06	.07	.05	.06	.005	.005	.016	.004	.027
%RSD	.1428	.1701	.1165	.1530	.2299	.2565	.3061	.1928	1.347
#1	40.25	40.28	39.72	39.96	1.994	1.941	5.054	1.961	2.050
#2	40.23	40.20	39.70	39.97	2.002	1.950	5.077	1.968	2.048
#3	40.35	40.15	39.80	40.09	2.003	1.952	5.091	1.968	1.996
#4	40.31	40.30	39.77	40.03	2.003	1.951	5.081	1.970	2.053

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.936</b>	<b>1.905</b>	<b>1.954</b>	<b>1.930</b>	<b>1.988</b>	<b>1.983</b>	<b>1.980</b>	<b>2.000</b>
Stddev	.009	.005	.008	.005	.005	.006	.005	.011
%RSD	.4508	.2598	.3961	.2633	.2476	.2945	.2316	.5253
#1	1.945	1.899	1.960	1.922	1.981	1.985	1.973	2.009
#2	1.942	1.911	1.957	1.930	1.991	1.975	1.983	2.008
#3	1.932	1.904	1.956	1.934	1.993	1.989	1.982	1.996
#4	1.926	1.906	1.943	1.932	1.989	1.983	1.980	1.987

Check ? Value Range Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

11.4  
11

Sample Name: iccv 1 Acquired: 10/4/2019 12:14:35 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	<b>174620.</b>	<b>28274.</b>	<b>7686.8</b>	<b>10052.</b>
Stddev	748.	103.	9.5	18.
%RSD	.42807	.36265	.12303	.17658
#1	173600.	28267.	7697.8	10070.
#2	174570.	28163.	7680.2	10034.
#3	174990.	28411.	7677.8	10039.
#4	175320.	28256.	7691.4	10064.

Sample Name: ccb 7 Acquired: 10/4/2019 12:26:04 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0010</b>	<b>F .0009</b>	<b>.0006</b>	<b>.0007</b>	<b>.0011</b>	<b>.0007</b>	<b>.0008</b>	<b>.0008</b>	<b>-.0002</b>
Stddev	.0004	.0003	.0001	.0003	.0001	.0003	.0000	.0003	.0000
%RSD	37.31	30.54	9.411	38.81	9.584	37.20	6.298	35.87	22.30
#1	.0007	.0007	.0005	.0007	.0010	.0010	.0008	.0010	-.0002
#2	.0010	.0009	.0006	.0010	.0012	.0004	.0007	.0010	-.0001
#3	.0015	.0012	.0006	.0004	.0011	.0007	.0008	.0005	-.0002

Check ? High Limit Low Limit Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.0004</b>	<b>.0016</b>	<b>-.0001</b>	<b>.0006</b>	<b>.0005</b>	<b>-.0000</b>	<b>.0122</b>	<b>.0175</b>
Stddev	.0000	.0000	.0003	.0007	.0002	.0007	.0009	.0096	.0057
%RSD	6.938	11.20	21.60	597.9	38.77	131.5	2155.	78.76	32.88
#1	.0007	.0004	.0017	-.0002	.0006	.0004	.0009	.0024	.0128
#2	.0007	.0003	.0018	-.0008	.0004	.0013	-.0002	.0126	.0158
#3	.0006	.0004	.0012	.0007	.0009	-.0001	-.0009	.0217	.0239

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0192</b>	<b>.0304</b>	<b>.0443</b>	<b>.0252</b>	<b>.0024</b>	<b>.0005</b>	<b>.0008</b>	<b>.0004</b>	<b>F .0010</b>
Stddev	.0047	.0052	.0238	.0103	.0003	.0001	.0005	.0002	.0003
%RSD	24.65	17.12	53.77	40.85	14.28	11.55	55.44	67.61	27.55
#1	.0152	.0355	.0650	.0172	.0025	.0005	.0003	.0003	.0007
#2	.0181	.0305	.0496	.0215	.0027	.0006	.0011	.0006	.0010
#3	.0244	.0251	.0183	.0368	.0020	.0005	.0011	.0002	.0013

Check ? High Limit Low Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail



◀ Zoom In ▶

Zoom Out

Sample Name: CRlconfc Acquired: 10/4/2019 12:36:19 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0035	F -.0009	F .0001	F .0001	F -.0091	F -.0003	F .0115	F .0004
Stddev	.0002	.0001	.0000	.0000	.0001	.0000	.0005	.0004
%RSD	7.079	10.80	28.42	39.12	1.060	13.02	4.755	101.3
#1	-.0034	-.0009	.0001	.0001	-.0092	-.0003	.0109	.0003
#2	-.0037	-.0008	.0001	.0002	-.0090	-.0003	.0120	.0008
#3	-.0033	-.0010	.0001	.0001	-.0091	-.0003	.0115	.0001
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.2000	.0100	.0100	.0100	.0500	.0100	.0500	.0200
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Li6707	P_1774	Ce4040					
Units	ppm	ppm	ppm					
Avg	F -.0013	F -.0058	F .0073					
Stddev	.0003	.0003	.0007					
%RSD	19.25	5.338	9.705					
#1	-.0015	-.0057	-.0068					
#2	-.0015	-.0056	-.0071					
#3	-.0010	-.0062	-.0081					
Check ?	Chk Fail	Chk Fail	None					
Value	.0500	.0500						
Range	-20.00%	-20.00%						

Int. Std.	Y_3600	Y_3710	Y_2243	In2306			
Units	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	403560.	49723.	19416.	25780.			
Stddev	3749.	184.	56.	57.			
%RSD	.92886	.36919	.28797	.22275			
#1	405400.	49935.	19474.	25838.			
#2	406040.	49614.	19362.	25723.			
#3	399250.	49620.	19411.	25780.			

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◀ Zoom In ▶

Zoom Out

Sample Name: ICSAconf Acquired: 10/4/2019 12:41:19 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s -.0008	s -.0002	k -.0003	k -.0001	k .0004	k .0008	k -.0004	k -.0005
Stddev	.0012	.0002	.0000	.0001	.0001	.0061	.0006	.0006
%RSD	151.0	78.30	18.30	88.28	29.69	730.6	127.9	128.3
#1	s .0006	s -.0003	k -.0003	k .0000	k .0004	k -.0047	k .0002	k -.0000
#2	-.0016	-.0000	-.0003	-.0002	.0005	-.0074	-.0009	-.0012
#3	-.0013	-.0002	-.0002	-.0002	.0003	-.0002	-.0005	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	kF .0055	k -.0015	k -.0007	kF .0052	k .0011	kF .0077	k .0035	k -.0013
Stddev	.0093	.0009	.0006	.0033	.0016	.0076	.0048	.0004
%RSD	169.5	58.64	89.71	64.82	149.6	98.95	135.9	30.59
#1	k -.0028	k -.0007	k -.0001	k .0021	k -.0001	k -.0008	k -.0005	k -.0014
#2	.0156	-.0024	-.0014	.0087	.0028	.0139	.0088	-.0008
#3	.0038	-.0012	-.0006	.0047	.0005	.0099	.0022	-.0016
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit	.0050			.0030		.0030		
Low Limit	-.0050			-.0030		-.0030		

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF 205.6	sF 181.0	sF 83.20	sF 193.8	s .0541	s .0374	k -.0007	k .0002
Stddev	205.6	166.5	83.03	199.4	.0430	.0757	.0002	.0005
%RSD	91.33	91.95	99.80	102.9	79.43	202.6	28.91	272.0
#1	s 461.3	s 370.6	s 176.4	s 420.2	s .0965	s .1222	k -.0006	k -.0004
#2	128.6	114.0	56.01	117.0	.0533	.0133	-.0009	.0006
#3	85.55	58.52	17.17	44.30	.0105	-.0234	-.0005	.0003
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	600.0	480.0	240.0	600.0				
Low Limit	400.0	320.0	160.0	400.0				

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11.4

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◀ Zoom In ▶

Zoom Out

Sample Name: ICSAconf Acquired: 10/4/2019 12:41:19 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k -.0020	k -.0010	s .0008	k -.0000	k -.0093	k .0005	k .0223	k -.0039
Stddev	.0004	.0001	.0026	.0001	.0002	.0010	.0109	.0054
%RSD	18.24	10.09	345.5	5663.	2.245	207.6	49.06	137.3
#1	k -.0022	k -.0010	s .0038	k .0001	k -.0091	k -.0004	k .0108	k .0005
#2	-.0016	-.0011	-.0009	-.0000	-.0095	.0015	.0326	-.0099
#3	-.0023	-.0009	-.0006	-.0001	-.0093	.0002	.0235	-.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Li6707	P_1774	Ce4040					
Units	ppm	ppm	ppm					
Avg	s .0021	k -.0082	k -.0105					
Stddev	.0074	.0025	.0056					
%RSD	348.6	30.80	53.29					
#1	s .0105	k -.0053	k -.0058					
#2	-.0034	-.0101	-.0167					
#3	-.0008	-.0091	-.0090					
Check ?	Chk Pass	Chk Pass	None					
High Limit								
Low Limit								

Int. Std.	Y_3600	Y_3710	Y_2243	In2306			
Units	Cts/S	Cts/S	Cts/S	Cts/S			
Avg	379610.	^ *****	19365.	25247.			
Stddev	11893.	-----	189.	205.			
%RSD	3.1329	-----	.97563	.81117			
#1	392010.	^ -----	19404.	25201.			
#2	368300.	51100.	19532.	25470.			
#3	378510.	49895.	19160.	25068.			

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◀ Zoom In ▶

Zoom Out

Sample Name: ICSABconf Acquired: 10/4/2019 12:46:39 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0013	F -.0003	F .0003	F .0000	F .0001	F -.0031	F .0000	F .0001
Stddev	.0001	.0000	.0001	.0000	.0001	.0001	.0000	.0001
%RSD	8.245	6.374	26.82	178.3	119.6	4.090	514.0	130.4
#1	-.0013	-.0003	-.0002	-.0000	.0001	-.0032	.0000	.0001
#2	-.0014	-.0003	-.0003	-.0000	.0002	-.0029	-.0000	.0002
#3	-.0012	-.0003	-.0002	.0001	-.0000	-.0031	-.0000	-.0000
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	5000	5000	1000	5000	5000	5000	5000	1000
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0007	F -.0010	F -.0002	F .0025	F -.0006	F -.0005	F -.0005	F -.0013
Stddev	.0002	.0000	.0000	.0003	.0002	.0003	.0005	.0002
%RSD	21.73	3.485	13.88	10.54	34.34	52.96	96.62	19.61
#1	-.0005	-.0010	-.0003	.0023	-.0008	-.0008	-.0006	-.0013
#2	-.0007	-.0009	-.0003	.0025	-.0005	-.0005	.0000	-.0015
#3	-.0008	-.0009	-.0002	.0028	-.0005	-.0002	-.0010	-.0010
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1000	5000	1000	1000	1000	1000	1000	1000
Range	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%	-20.00%

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0111	F -.0040	F -.0003	F .0044	F -.0065	F -.0452	F -.0009	F -.0004
Stddev	.0037	.0012	.0001	.0070	.0111	.0022	.0001	.0001
%RSD	33.49	29.60	21.47	159.0	171.6	4.815	8.716	23.68
#1	-.0119	-.0043	-.0003	-.0000	-.0180	-.0464	-.0009	-.0004
#2	-.0070	-.0027	-.0004	.0124	.0041	-.0427	-.0009	-.0006
#3	-.0143	-.0050	-.0004	.0007	-.0056	-.0466	-.0008	-.0004
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	None	None	Chk Fail	Chk Fail
Value	500.0	400.0	200.0	500.0			.5000	.5000
Range	-20.00%	-20.00%	-20.00%	-20.00%			-20.00%	-20.00%

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Sample Name: ICSABconf Acquired: 10/4/2019 12:46:39 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Li6707, P\_1774, Ce4040.

Table with 9 columns: Int. Std. Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: HSTDconf Acquired: 10/4/2019 12:51:39 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Ag3280, V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

Sample Name: HSTDconf Acquired: 10/4/2019 12:51:39 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Li6707, P\_1774, Ce4040.

Table with 9 columns: Int. Std. Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: HSTD Acquired: 10/4/2019 12:57:39 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD, #1, #2, #3, Check? Value, Range. Data for Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.



Sample Name: HSTD Acquired: 10/4/2019 12:57:39 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.002	-0.046	0.020	-0.094	-0.030	-0.0102	-0.0077	0.200
Stddev	0.001	0.012	0.002	0.019	0.003	0.009	0.010	0.012
%RSD	54.99	25.66	8.161	20.08	11.06	8.697	12.40	5.924
#1	-0.001	-0.033	0.020	-0.072	-0.033	-0.0107	-0.0073	0.202
#2	-0.001	-0.053	0.022	-0.104	-0.026	-0.092	-0.070	0.210
#3	-0.003	-0.054	0.019	-0.105	-0.030	-0.108	-0.088	0.187
Check ?	None	None	None	None	None	None	None	None
Value								
Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	160580.	27296.	7137.8	9133.8				
Stddev	106.	137.	6.3	6.0				
%RSD	0.6590	0.50250	0.08826	0.6554				
#1	160550.	27173.	7133.6	9127.8				
#2	160690.	27272.	7145.0	9133.9				
#3	160490.	27444.	7134.8	9139.8				

Sample Name: FECONF Acquired: 10/4/2019 13:03:00 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.000	0.002	0.002	-0.003	0.006	0.013	0.016	0.034	0.011
Stddev	0.000	0.000	0.000	0.002	0.002	0.005	0.000	0.004	0.004
%RSD	131.5	6.539	20.04	67.50	43.76	36.48	2.594	12.33	32.67
#1	0.000	0.003	0.002	-0.005	0.005	0.015	0.016	0.032	0.014
#2	-0.000	0.003	0.001	-0.001	0.003	0.008	0.017	0.030	0.007
#3	0.001	0.002	0.002	-0.003	0.008	0.016	0.016	0.038	0.012
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.040	0.250	0.012	-0.006	0.024	-0.034	-0.023	0.064	0.787
Stddev	0.002	0.042	0.009	0.003	0.007	0.012	0.005	0.051	0.203
%RSD	4.368	16.65	81.71	49.06	29.38	34.43	19.47	80.56	25.78
#1	-0.042	0.205	0.019	0.003	0.028	-0.037	-0.020	0.067	0.675
#2	-0.038	0.288	0.001	0.009	0.016	-0.043	-0.021	0.113	0.665
#3	-0.041	0.257	0.015	0.007	0.028	-0.021	-0.028	0.011	1.021
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	199.2	0.188	1.489	0.588	-0.002	0.014	0.067	-0.003	0.001
Stddev	1.0	0.064	0.202	0.099	0.003	0.001	0.007	0.005	0.001
%RSD	5.162	33.87	13.58	16.79	126.9	4.193	10.42	146.6	125.7
#1	199.4	0.161	1.620	0.660	0.001	0.014	0.074	0.001	-0.000
#2	198.1	0.142	1.256	0.475	-0.004	0.014	0.068	-0.003	0.001
#3	200.1	0.260	1.591	0.628	-0.004	0.013	0.060	-0.009	0.001
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	0.004	-0.005	0.021	-0.145	0.018	-0.019	-0.054	0.222	
Stddev	0.001	0.003	0.001	0.024	0.014	0.005	0.004	0.002	
%RSD	30.03	3.883	5.044	16.85	78.46	3.084	8.083	1.000	
#1	0.003	-0.068	0.020	-0.117	0.032	-0.015	-0.054	0.224	
#2	0.005	-0.064	0.021	-0.163	0.017	-0.014	-0.059	0.220	
#3	0.006	-0.063	0.023	-0.155	0.004	-0.012	-0.050	0.220	

Sample Name: FECONF Acquired: 10/4/2019 13:03:00 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176690.	28438.	7774.6	10896.
Stddev	718.	86.	11.1	12.
%RSD	0.40629	0.30191	0.14234	0.11067
#1	177480.	28426.	7763.8	10884.
#2	176500.	28360.	7785.9	10908.
#3	176080.	28530.	7774.2	10895.

Sample Name: missedconf Acquired: 10/4/2019 13:08:00 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	kF 2970	kF 3076	kF 0246	kF 0269	kF 0544	kF 0429	^F ****	kF 0272
Stddev	24.17	2.499	0.028	0.029	0.223	0.193	----	0.029
%RSD	81.36	81.24	11.45	10.69	41.01	45.06	----	10.82
#1	k 5648	k 5847	k 0277	k 0301	k 0601	k 0477	^ ----	k 0304
#2	k 2312	k 2385	k 0238	k 0260	k 0732	k 0593	^ ----	k 0264
#3	0.951	0.995	0.222	0.245	0.297	0.216	0.293	0.247
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000
Range	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	kF 0031	kF 0502	kF 0298	kF 0247	kF 0181	kF 0250	kF 0228	kF 0210
Stddev	0.015	0.208	0.032	0.026	0.026	0.030	0.024	0.023
%RSD	49.00	41.43	10.80	10.43	14.28	12.12	10.55	11.10
#1	k 0036	k 0557	k 0334	k 0275	k 0210	k 0285	k 0252	k 0232
#2	k 0043	k 0677	k 0288	k 0239	k 0160	k 0237	k 0228	k 0211
#3	0.014	0.272	0.272	0.225	0.174	0.228	0.204	0.186
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	6250	8.000	8.000	8.000	8.000	8.000	8.000	8.000
Range	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 0094	k -0031	k 0049	k -0007	k 0091	k -0146	kF 0260	kF 0223
Stddev	0.124	0.018	0.015	0.010	0.178	0.075	0.038	0.027
%RSD	131.1	58.36	31.43	149.0	196.1	51.68	14.51	11.92
#1	k 0228	k -0022	k 0063	k 0001	k -0077	k -0061	k 0299	k 0252
#2	k 0072	k -0019	k 0051	k -0003	k 0071	k -0205	k 0255	k 0215
#3	-0.017	-0.052	0.033	-0.019	0.278	-0.172	0.225	0.201
Check ?	None	None	None	None	None	None	Chk Fail	Chk Fail
Value							8.000	8.000
Range							-10.00%	-10.00%



Zoom In  
Zoom Out

Sample Name: CRCONF Acquired: 10/4/2019 13:34:17 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	179490.	28609.	7732.4	10783.
Stddev	2805.	95.	13.0	10.
%RSD	1.5628	.33098	.16813	.09042
#1	181540.	28719.	7719.0	10773.
#2	176290.	28557.	7733.2	10782.
#3	180640.	28552.	7744.9	10793.

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Zoom In  
Zoom Out

Sample Name: CCV Acquired: 10/4/2019 13:39:23 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.014</b>	<b>2.042</b>	<b>1.988</b>	<b>2.042</b>	<b>2.024</b>	<b>1.998</b>	<b>2.032</b>	<b>2.044</b>	<b>2.512</b>
Stddev	.002	.003	.004	.002	.004	.001	.008	.002	.0009
%RSD	.0929	.1457	.1852	.1125	.1999	.0537	.3945	.0988	.3401
#1	2.013	2.039	1.986	2.042	2.027	1.998	2.023	2.047	2.503
#2	2.014	2.043	1.993	2.039	2.019	1.996	2.039	2.043	2.512
#3	2.016	2.044	1.987	2.044	2.025	1.998	2.035	2.043	2.520

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.019</b>	<b>2.040</b>	<b>1.938</b>	<b>2.062</b>	<b>2.029</b>	<b>1.999</b>	<b>1.930</b>	<b>39.60</b>	<b>40.98</b>
Stddev	.001	.004	.001	.004	.001	.002	.003	.06	.09
%RSD	.0482	.1729	.0624	.2194	.0394	.1172	.1456	.1394	.2162
#1	2.020	2.043	1.939	2.067	2.029	1.996	1.929	39.56	40.88
#2	2.018	2.042	1.939	2.060	2.028	1.998	1.934	39.58	40.98
#3	2.019	2.036	1.937	2.059	2.029	1.998	1.928	39.66	41.06

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.24</b>	<b>40.32</b>	<b>39.80</b>	<b>39.94</b>	<b>2.018</b>	<b>1.969</b>	<b>5.113</b>	<b>1.986</b>	<b>2.010</b>
Stddev	.05	.07	.07	.04	.001	.001	.007	.002	.016
%RSD	.1205	.1655	.1787	.1051	.0690	.0536	.1347	.1006	.8115
#1	40.19	40.26	39.73	39.93	2.016	1.970	5.106	1.988	2.028
#2	40.27	40.30	39.79	39.91	2.019	1.969	5.120	1.985	2.008
#3	40.27	40.39	39.87	39.99	2.018	1.968	5.113	1.984	1.995

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range

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11.4

11

Zoom In  
Zoom Out

Sample Name: CCV Acquired: 10/4/2019 13:39:23 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.960</b>	<b>1.913</b>	<b>1.955</b>	<b>1.955</b>	<b>2.005</b>	<b>1.993</b>	<b>2.007</b>	<b>2.015</b>
Stddev	.005	.001	.002	.001	.003	.002	.002	.001
%RSD	.2454	.0738	.0831	.0606	.1630	.0826	.1179	.0510
#1	1.964	1.915	1.954	1.956	2.001	1.991	2.007	2.015
#2	1.955	1.913	1.955	1.954	2.007	1.994	2.004	2.016
#3	1.960	1.913	1.957	1.955	2.007	1.994	2.009	2.014

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	173480.	28443.	7645.4	9992.7
Stddev	596.	149.	12.7	15.8
%RSD	.34346	.52342	.16646	.15848
#1	173170.	28561.	7633.0	9976.2
#2	174170.	28493.	7644.9	10008.
#3	173110.	28276.	7658.4	9994.0

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Zoom In  
Zoom Out

Sample Name: CCB Acquired: 10/4/2019 13:44:22 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.0005</b>	<b>.0005</b>	<b>.0005</b>	<b>.0008</b>	<b>.0003</b>	<b>.0006</b>	<b>.0005</b>
Stddev	.0001	.0000	.0000	.0001	.0001	.0003	.0000	.0002
%RSD	22.54	8.862	7.629	16.68	13.29	108.2	5.106	36.27
#1	.0005	.0005	.0005	.0006	.0008	.0001	.0006	.0004
#2	.0005	.0005	.0005	.0004	.0007	.0007	.0006	.0003
#3	.0007	.0005	.0005	.0006	.0009	.0001	.0006	.0007

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.002</b>	<b>.0004</b>	<b>.0004</b>	<b>.0006</b>	<b>.0007</b>	<b>.0006</b>	<b>-0.000</b>	<b>.0009</b>
Stddev	.0001	.0002	.0001	.0009	.0009	.0008	.0009	.0004
%RSD	53.34	51.90	17.59	154.4	125.2	130.2	33040.	49.27
#1	-0.001	.0006	.0003	.0014	.0002	.0002	-0.0006	.0004
#2	-0.003	.0004	.0003	.0006	.0018	.0001	-0.0004	.0011
#3	-0.003	.0002	.0005	-0.003	.0003	.0015	.0010	.0012

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.002</b>	<b>.0076</b>	<b>.0109</b>	<b>.0160</b>	<b>.0335</b>	<b>-0.014</b>	<b>.0046</b>	<b>.0012</b>
Stddev	.0111	.0018	.0009	.0043	.0123	.0007	.0004	.0002
%RSD	4540.	23.13	8.450	27.01	36.69	53.86	9.607	14.15
#1	-0.069	.0056	.0107	.0116	.0258	-0.021	.0050	.0011
#2	-0.126	.0087	.0101	.0161	.0271	-0.014	.0044	.0013
#3	-0.064	.0085	.0119	.0202	.0477	-0.006	.0042	.0011

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit Low Limit

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Sample Name: CCB Acquired: 10/4/2019 13:44:22 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0007	.0005	.0008	F -.0073	.0001	.0017	.0004
Stddev	.0005	.0005	.0000	.0001	.0004	.0002	.0008	.0006
%RSD	17.89	71.47	5.619	16.58	5.634	184.0	46.90	127.2
#1	.0023	.0002	.0005	.0007	-.0074	.0002	.0018	.0003
#2	.0032	.0012	.0005	.0010	-.0068	-.0001	.0009	.0011
#3	.0033	.0006	.0006	.0008	-.0076	.0003	.0025	-.0000

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Chk Pass  
 High Limit  
 Value  
 Range

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	.0009	.0003	-.0025
Stddev	.0003	.0004	.0027
%RSD	31.01	133.0	104.9
#1	.0010	.0007	.0002
#2	.0006	.0001	-.0028
#3	.0011	.0000	-.0051

Check ? Chk Pass Chk Pass Chk Pass  
 High Limit  
 Value  
 Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180760.	28619.	7931.8	10791.
Stddev	828.	139.	14.5	12.
%RSD	45800	48549	18309	11216
#1	180390.	28461.	7936.2	10798.
#2	180190.	28679.	7943.7	10798.
#3	181710.	28719.	7915.7	10777.

Sample Name: cri Acquired: 10/4/2019 13:49:21 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2030	.0021	.0029	.0516	.0105	.0095	.0159	.0104	.0048
Stddev	.0002	.0000	.0001	.0002	.0002	.0004	.0000	.0002	.0004
%RSD	.1223	.4813	3.297	.4165	2.106	3.831	.0510	1.580	8.121
#1	.2030	.0021	.0028	.0516	.0107	.0099	.0159	.0102	.0049
#2	.2032	.0021	.0029	.0514	.0103	.0093	.0159	.0104	.0052
#3	.2027	.0021	.0030	.0518	.0106	.0093	.0159	.0105	.0044

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0514	.0210	.0076	.0103	.0027	.0105	.0054	.2038	5.237
Stddev	.0003	.0000	.0004	.0006	.0006	.0004	.0008	.0046	.002
%RSD	.5291	.0329	5.642	5.350	21.73	4.114	14.97	2.258	.0376
#1	.0517	.0210	.0081	.0098	.0031	.0101	.0063	.1991	5.235
#2	.0514	.0210	.0072	.0102	.0020	.0105	.0055	.2083	5.237
#3	.0512	.0210	.0077	.0109	.0029	.0110	.0046	.2038	5.238

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1060	5.242	5.022	5.132	.1044	.0203	.2144	.0102	.0104
Stddev	.0014	.006	.009	.008	.0007	.0001	.0017	.0005	.0001
%RSD	1.279	.1109	.1873	.1540	6.655	3.285	.7708	5.316	8.279
#1	.1075	5.240	5.030	5.141	.1051	.0203	.2163	.0097	.0104
#2	.1056	5.238	5.011	5.130	.1041	.0203	.2132	.0100	.0104
#3	.1049	5.249	5.024	5.126	.1038	.0204	.2137	.0108	.0103

11.4  
11

Sample Name: cri Acquired: 10/4/2019 13:49:21 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	.0411	.0111	.0536	.0212	.0529	.0497	-.0016
Stddev	.0003	.0002	.0001	.0006	.0011	.0008	.0003	.0016
%RSD	3.536	.3804	1.221	1.094	5.073	1.451	.6534	99.80
#1	.0095	.0411	.0112	.0536	.0220	.0525	.0500	-.0021
#2	.0099	.0410	.0111	.0541	.0216	.0537	.0494	.0002
#3	.0102	.0413	.0109	.0530	.0200	.0524	.0497	-.0030

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass None  
 Value  
 Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	178020.	28373.	7832.2	10564.
Stddev	492.	50.	13.6	15.
%RSD	.27642	.17570	.17409	.13839
#1	177900.	28318.	7822.5	10560.
#2	177590.	28416.	7847.8	10580.
#3	178560.	28384.	7826.3	10552.

Sample Name: crid Acquired: 10/4/2019 13:54:12 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0010	.0009	.0030	.0023	F -.0002	.0032	.0041
Stddev	.0001	.0000	.0001	.0001	.0001	.0001	.0000	.0002
%RSD	2.202	3.170	9.527	4.327	5.524	29.90	1.273	5.851
#1	.0041	.0010	.0010	.0031	.0024	-.0002	.0032	.0040
#2	.0041	.0011	.0010	.0029	.0022	-.0001	.0031	.0044
#3	.0043	.0011	.0008	.0031	.0022	-.0002	.0032	.0039

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass  
 Value  
 Range

Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.0004	.0020	.0103	.0031	.0018	F -.0006	.0046	F -.0004
Stddev	.0001	.0003	.0000	.0001	.0011	.0006	.0008	.0012
%RSD	36.01	13.18	.3590	4.770	58.36	94.35	16.89	280.5
#1	-.0006	.0019	.0103	.0030	.0029	-.0009	.0055	-.0004
#2	-.0003	.0023	.0102	.0033	.0019	-.0009	.0042	-.0008
#3	-.0004	.0018	.0103	.0030	.0007	.0001	.0041	-.0017

Check ? Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Fail  
 Value  
 Range

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0953	1.040	.0036	.1057	1.969	1.017	.0016	-.0000
Stddev	.0018	.006	.0010	.0104	.030	.005	.0004	.0000
%RSD	1.916	.6011	28.08	9.878	1.511	.4611	25.56	187.1
#1	.0969	1.047	.0035	.1005	2.003	1.019	.0021	.0000
#2	.0933	1.035	.0046	.1177	1.949	1.021	.0013	-.0000
#3	.0957	1.039	.0026	.0989	1.954	1.012	.0015	-.0001



Sample Name: ICSAB Acquired: 10/4/2019 14:04:14 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4872	.4373	.4896	.4847	.4990	.5054	.4676	.0107
Stddev	.0008	.0006	.0012	.0028	.0015	.0011	.0012	.0014
%RSD	.1668	.1359	.2420	.5792	.2943	.2097	.2493	12.95

#1	.4881	.4373	.4884	.4829	.5007	.5065	.4689	.0101
#2	.4865	.4367	.4898	.4833	.4981	.5043	.4666	.0123
#3	.4871	.4379	.4908	.4880	.4982	.5055	.4674	.0098

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass None  
 Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	158480.	27596.	7115.2	9143.8
Stddev	633.	147.	14.5	12.5
%RSD	.39964	.53191	.20315	.13669

#1	157860.	27761.	7100.2	9131.5
#2	158470.	27480.	7129.0	9156.5
#3	159120.	27547.	7116.5	9143.4

Sample Name: ASCONF Acquired: 10/4/2019 14:09:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0000	-.0004	.0001	.0002	-.0000	.0001	.0005	-.0004
Stddev	.0002	.0000	.0001	.0000	.0001	.0002	.0000	.0002	.0001
%RSD	71.86	1083.	40.28	44.30	75.81	1354.	58.35	37.27	15.24

#1	.0002	-.0000	-.0002	.0001	.0003	-.0002	.0001	.0006	-.0003
#2	.0002	.0001	-.0004	.0001	.0001	.0002	.0000	.0006	-.0004
#3	.0005	-.0000	-.0004	.0000	.0001	.0000	.0001	.0003	-.0004

Elem V\_2924 Zn2062 As1890 Tl1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg -.0001 -.0003 4.888 -.0012 -.0001 -.0012 -.0004 .0239 -.0225  
 Stddev .0003 .0001 .004 .0008 .0007 .0006 .0010 .0234 .0212  
 %RSD 242.9 43.14 .0799 67.29 582.8 50.85 285.9 97.84 94.23

#1	-.0005	-.0005	4.885	-.0003	-.0008	-.0005	.0005	.0100	-.0381
#2	-.0001	-.0002	4.892	-.0019	-.0001	-.0017	-.0015	.0108	-.0309
#3	.0002	-.0004	4.886	-.0014	.0006	-.0013	-.0001	.0510	.0016

Elem Fe2599 Mg2790 K\_7664 Na5895 B\_2089 Mo2020 Si2124 Sn1899 Sr4077  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg .0132 .0365 -.0149 -.0043 .0003 -.0001 .0044 -.0007 -.0000  
 Stddev .0099 .0273 .0311 .0034 .0007 .0002 .0028 .0003 .0001  
 %RSD 74.94 74.91 208.7 79.95 267.4 223.7 63.17 45.51 1948.

#1	.0065	.0109	.0168	-.0062	.0002	-.0002	.0077	-.0011	-.0001
#2	.0085	.0332	-.0453	-.0003	.0010	.0001	.0030	-.0005	.0000
#3	.0245	.0653	-.0162	-.0062	-.0004	-.0002	.0026	-.0007	.0001

Elem Ti3349 W\_2079 Zr3391 S\_1820 Bi2230 Li6707 P\_1774 Ce4040  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg .0000 -.0081 .0013 -.0006 .0016 -.0006 -.0005 -.0012  
 Stddev .0003 .0006 .0001 .0003 .0013 .0014 .0004 .0012  
 %RSD 805.0 7.969 7.063 47.85 80.46 241.7 70.82 98.03

#1	-.0002	-.0074	.0014	-.0010	.0030	-.0018	-.0001	-.0014
#2	.0004	-.0085	.0013	-.0005	.0015	-.0010	-.0007	.0000
#3	-.0001	-.0084	.0012	-.0004	.0004	.0010	-.0008	-.0024

Sample Name: ASCONF Acquired: 10/4/2019 14:09:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181720.	28710.	7973.7	10859.
Stddev	835.	146.	8.4	8.
%RSD	.45951	.50983	.10534	.07597

#1	180760.	28645.	7965.4	10851.
#2	182220.	28878.	7973.5	10860.
#3	182190.	28607.	7982.2	10867.

Sample Name: mp17641-mb1conf Acquired: 10/4/2019 14:14:10 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0003	.0002	.0004	.0010	.0343	.0006	.0010	.0001
Stddev	.0000	.0000	.0001	.0001	.0002	.0006	.0001	.0003	.0003
%RSD	9.492	4.270	36.61	23.86	21.20	1.742	8.147	29.30	193.3

#1	.0004	.0003	.0003	.0005	.0011	.0341	.0007	.0011	.0000
#2	.0004	.0003	.0001	.0004	.0011	.0350	.0006	.0012	-.0000
#3	.0004	.0003	.0002	.0004	.0007	.0338	.0006	.0007	.0005

Elem V\_2924 Zn2062 As1890 Tl1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg .0001 .0230 .0024 .0003 .0002 -.0003 -.0007 .0086 .0542  
 Stddev .0001 .0000 .0002 .0004 .0003 .0013 .0005 .0099 .0010  
 %RSD 87.30 .0615 8.295 119.3 134.3 371.0 77.10 114.4 1.859

#1	.0000	.0231	.0025	.0006	-.0001	.0000	-.0011	-.0027	.0545
#2	.0001	.0231	.0025	-.0001	.0004	.0007	-.0010	.0135	.0531
#3	.0002	.0230	.0022	.0003	.0004	-.0018	-.0009	.0151	.0550

Elem Fe2599 Mg2790 K\_7664 Na5895 B\_2089 Mo2020 Si2124 Sn1899 Sr4077  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg .0283 .0296 .0020 .0357 .0014 .0053 .0064 .0201 .0006  
 Stddev .0007 .0121 .0112 .0045 .0004 .0001 .0007 .0003 .0000  
 %RSD 2.305 40.97 565.8 12.47 32.09 1.443 10.82 1.442 2.324

#1	.0281	.0303	.0144	.0371	.0013	.0054	.0071	.0198	.0006
#2	.0278	.0171	-.0011	.0307	.0018	.0052	.0063	.0202	.0006
#3	.0290	.0413	-.0073	.0393	.0010	.0053	.0057	.0204	.0006

Elem Ti3349 W\_2079 Zr3391 S\_1820 Bi2230 Li6707 P\_1774 Ce4040  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg .0008 -.0087 .0015 .0105 .0022 -.0015 .0222 -.0018  
 Stddev .0002 .0004 .0001 .0007 .0007 .0008 .0006 .0001  
 %RSD 18.35 4.028 4.827 7.046 30.17 54.12 2.528 6.830

#1	.0010	-.0085	.0016	.0097	.0024	-.0006	.0217	-.0017
#2	.0007	-.0091	.0015	.0104	.0014	-.0018	.0222	-.0019
#3	.0008	-.0086	.0014	.0112	.0027	-.0020	.0228	-.0019

Sample Name: mp17641-mb1conf Acquired: 10/4/2019 14:14:10 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	183090.	29113.	7980.2	10865.
Stddev	867.	100.	37.8	47.
%RSD	.47336	.34330	.47385	.43678
#1	184080.	29077.	7953.4	10836.
#2	182740.	29037.	7963.7	10838.
#3	182450.	29227.	8023.4	10919.

Sample Name: mp17641-sd1conf Acquired: 10/4/2019 14:19:03 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 500.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.546	.0580	.0844	.7598	.0729	F 4343.	2949	1.686	33.82
Stddev	.386	.0207	.0618	.2381	.0982	734.	.0345	.397	5.13
%RSD	24.95	35.78	73.21	31.34	134.7	16.89	11.71	23.54	15.18
#1	1.176	.0443	.0337	.5468	.0789	3615.	2687	1.270	28.63
#2	1.516	.0478	.0662	.7158	.1679	4334.	2820	1.728	33.95
#3	1.946	.0818	.1532	1.017	-.0281	5082.	3321	2.061	38.89
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7449	.3838	1.213	.2422	.6502	.6179	-3662	-18.60	27.24
Stddev	.1293	.0489	.142	.0300	.3639	.6359	.3468	3.28	6.48
%RSD	17.35	12.74	11.73	12.37	55.97	102.9	94.71	17.64	23.81
#1	.6492	.3711	1.203	.2469	.2306	.1095	-.0001	-22.23	20.79
#2	.6935	.3425	1.075	.2102	.8792	.4133	-.6898	-15.84	27.18
#3	.8919	.4378	1.359	.2696	.8409	1.331	-.4086	-17.73	33.75
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.76	20.40	41.15	21.67	6.254	1813.	12.34	.6138	2.500
Stddev	12.69	6.62	5.54	7.57	.988	346.	2.38	.1084	.646
%RSD	24.52	32.46	13.47	34.93	15.80	19.10	19.32	17.66	25.86
#1	38.85	14.34	35.82	17.61	5.440	1499.	10.54	.6384	1.872
#2	52.21	19.41	40.77	17.00	5.969	1756.	11.44	.4953	2.465
#3	64.22	27.47	46.88	30.40	7.354	2184.	15.05	.7078	3.164
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	11.54	-2.651	-5.777	1161.	-3.974	-3274	129.4	-6622	
Stddev	1.62	.378	.1420	222.	1.203	.1685	22.1	1.597	
%RSD	14.03	14.28	24.58	19.14	30.27	51.47	17.09	24.12	
#1	9.861	-3.080	-5.068	959.2	-2.685	-.3820	107.5	-.4257	
#2	11.67	-2.507	-4.851	1125.	-4.171	-.4619	128.9	.8034	
#3	13.09	-2.366	-7.412	1399.	-5.066	-.1384	151.7	-2.364	

11.4  
11

Sample Name: mp17641-sd1conf Acquired: 10/4/2019 14:19:03 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 500.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181940.	28694.	7907.5	10788.
Stddev	790.	74.	16.0	38.
%RSD	.43435	.25698	.20265	.35194
#1	181040.	28611.	7909.3	10766.
#2	182290.	28717.	7890.7	10766.
#3	182500.	28753.	7922.6	10832.

Sample Name: mp17641-ps1 Acquired: 10/4/2019 14:24:02 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 10.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.511	2.135	2.148	2.193	2.110	F 615.5	2.208	2.273	3.397
Stddev	.124	.107	.020	.022	.003	2.0	.006	.022	.005
%RSD	4.940	5.005	.9254	.9886	.1458	.3323	.2611	.9577	.1456
#1	2.418	2.057	2.157	2.206	2.110	617.8	2.211	2.281	3.393
#2	2.651	2.257	2.125	2.168	2.107	613.8	2.202	2.248	3.396
#3	2.463	2.092	2.161	2.206	2.113	614.8	2.212	2.289	3.403
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.129	2.193	2.237	2.195	2.233	2.182	2.157	36.47	33.89
Stddev	.003	.022	.017	.033	.022	.025	.017	2.15	1.67
%RSD	.1424	.9943	.7547	1.481	1.008	1.162	.7732	5.907	4.912
#1	2.127	2.206	2.249	2.215	2.249	2.188	2.170	34.98	32.62
#2	2.127	2.168	2.218	2.158	2.207	2.154	2.138	38.94	35.78
#3	2.132	2.205	2.244	2.213	2.243	2.203	2.163	35.50	33.29
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.57	28.53	34.61	33.04	2.823	F 160.4	1.054	2.306	2.809
Stddev	1.98	1.37	1.33	1.57	.016	1.6	.037	.021	.136
%RSD	4.885	4.791	3.846	4.756	.5596	.9935	3.501	.9196	4.844
#1	39.09	27.45	33.63	31.93	2.828	161.4	1.066	2.316	2.708
#2	42.83	30.07	36.12	34.84	2.806	158.6	1.012	2.281	2.964
#3	39.80	28.07	34.07	32.35	2.836	161.3	1.082	2.320	2.754
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	3.871	.9793	2.119	104.6	.0037	.0119	18.91	.0108	
Stddev	.011	.0227	.002	1.0	.0126	.0061	.08	.0219	
%RSD	.2813	2.321	.0914	.9381	341.1	50.94	.3974	202.2	
#1	3.861	.9697	2.117	105.1	-.0044	.0132	18.97	-.0018	
#2	3.882	.9630	2.121	103.5	.0182	.0053	18.83	.0361	
#3	3.870	1.005	2.119	105.2	-.0027	.0172	18.92	-.0018	



Sample Name: mp17641-ps1 Acquired: 10/4/2019 14:24:02 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 10.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180930.	28245.	7742.9	10720.
Stddev	159.	1400.	61.0	79.
%RSD	.08772	4.9558	.78767	.73611
#1	180840.	29413.	7691.6	10655.
#2	181110.	26694.	7810.4	10808.
#3	180840.	28629.	7726.8	10696.

Sample Name: jc95362-7r Acquired: 10/4/2019 14:28:49 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.402	.0146	.1856	.1708	1.915	21.85	14.46	1.388	.0437
Stddev	.028	.0002	.0006	.0015	.011	.06	.14	.000	.0036
%RSD	.2929	1.570	.3305	.8971	.5632	.2576	.9729	.0251	8.123
#1	9.420	.0144	.1851	.1710	1.912	21.83	14.43	1.388	.0396
#2	9.370	.0148	.1863	.1723	1.927	21.91	14.61	1.388	.0460
#3	9.415	.0145	.1855	.1692	1.906	21.81	14.33	1.388	.0456

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4957	46.37	2.904	.0051	22.56	.0070	.1396	114.4	266.4
Stddev	.0032	.04	.0057	.0030	.01	.0040	.0079	.2	.4
%RSD	.6374	.0816	1.962	59.10	.0420	56.93	5.673	.1857	.1516
#1	.4947	46.42	2.932	.0028	22.55	.0098	.1481	114.6	266.7
#2	.4993	46.35	2.941	.0039	22.57	.0024	.1323	114.2	266.0
#3	.4932	46.36	2.838	.0085	22.55	.0087	.1384	114.5	266.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	931.1	71.09	12.46	6.862	1.157	1.946	4.594	1.946	1.145
Stddev	11.4	.03	.11	.010	.006	.0011	.017	.004	.002
%RSD	1.219	.0434	.8920	.1498	.4906	.5738	.3596	.2000	.1941
#1	918.2	71.11	12.48	6.858	1.163	.1956	4.613	1.950	1.147
#2	939.6	71.09	12.55	6.854	1.155	.1948	4.583	1.944	1.143
#3	935.4	71.05	12.33	6.873	1.152	.1934	4.587	1.943	1.146

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.237	-.0292	4.381	25.49	3.518	0.347	5.662	6.395
Stddev	.025	.0056	.0027	.02	.0078	.0048	.007	.0120
%RSD	.3945	19.08	6.133	0.761	0.229	13.75	0.1168	1.875
#1	6.244	-.0268	4.371	25.51	.3471	.0293	5.670	6.517
#2	6.258	-.0252	4.412	25.48	.3608	.0364	5.660	6.278
#3	6.210	-.0355	4.361	25.48	.3474	.0384	5.657	6.390

Sample Name: jc95362-7r Acquired: 10/4/2019 14:28:49 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180220.	29551.	7928.3	10602.
Stddev	1267.	74.	6.6	8.
%RSD	.70302	.25132	.08277	.07844
#1	180790.	29637.	7926.3	10608.
#2	178770.	29503.	7935.6	10605.
#3	181100.	29514.	7923.0	10592.

Sample Name: ccv Acquired: 10/4/2019 14:33:54 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.999	2.033	1.978	2.035	2.016	1.984	2.037	2.031	2.502
Stddev	.003	.004	.002	.001	.003	.005	.015	.000	.0003
%RSD	.1230	.1880	.1086	.0667	.1424	.2543	.7171	.0198	.1211
#1	1.996	2.029	1.980	2.036	2.016	1.981	2.028	2.030	2.499
#2	2.000	2.033	1.977	2.033	2.013	1.982	2.029	2.031	2.502
#3	2.001	2.037	1.976	2.034	2.018	1.990	2.054	2.031	2.505

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.010	2.028	1.926	2.054	2.017	1.987	1.919	39.39	40.74
Stddev	.001	.001	.001	.002	.000	.004	.003	.06	.06
%RSD	.0693	.0428	.0562	.1141	.0206	.2246	.1360	.1624	.1556
#1	2.011	2.029	1.927	2.056	2.018	1.984	1.919	39.32	40.67
#2	2.008	2.027	1.926	2.055	2.017	1.992	1.921	39.42	40.74
#3	2.010	2.029	1.925	2.051	2.017	1.984	1.916	39.43	40.80

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.02	40.15	39.58	39.72	2.003	1.958	5.066	1.979	2.017
Stddev	.04	.07	.06	.04	.001	.002	.005	.002	.028
%RSD	.0913	.1793	.1531	.0993	.0703	.0758	.0966	.1088	1.399
#1	39.98	40.07	39.52	39.67	2.005	1.958	5.066	1.977	1.985
#2	40.05	40.20	39.58	39.75	2.002	1.960	5.071	1.981	2.038
#3	40.03	40.18	39.64	39.73	2.002	1.957	5.061	1.979	2.028

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value Range



Zoom In Zoom Out

Sample Name: ccv		Acquired: 10/4/2019 14:33:54		Type: QC				
Method: SGS 3 NO Valve(v273)		Mode: CONC		Corr. Factor: 1.000000				
User: admin	Custom ID1:	Custom ID2:	Custom ID3:					
Comment:								
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.946	1.907	1.946	1.947	1.990	1.979	1.998	2.002
Stddev	.008	.001	.002	.002	.002	.003	.003	.004
%RSD	.3993	.0619	.0811	.1218	.1105	.1556	.1661	.1775

#1	1.943	1.906	1.947	1.945	1.993	1.976	1.997	1.999
#2	1.940	1.907	1.946	1.949	1.989	1.982	2.001	2.000
#3	1.955	1.908	1.944	1.945	1.990	1.978	1.995	2.006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

High Limit

Low Limit

Elem	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	173190.	28272.	7654.1	10001.
Stddev	270.	93.	.5	4.
%RSD	.15582	.32746	.00604	.03505

#1	172890.	28339.	7654.6	9998.9
#2	173410.	28167.	7654.0	10005.
#3	173270.	28311.	7653.7	9998.3

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Zoom In Zoom Out

Sample Name: ccb		Acquired: 10/4/2019 14:38:50		Type: QC					
Method: SGS 3 NO Valve(v273)		Mode: CONC		Corr. Factor: 1.000000					
User: admin	Custom ID1:	Custom ID2:	Custom ID3:						
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0005	.0004	.0005	.0007	.0003	.0006	.0006	.0004
Stddev	.0001	.0000	.0000	.0001	.0001	.0002	.0000	.0002	.0002
%RSD	18.53	6.145	11.65	10.45	8.948	76.92	3.843	32.32	66.01

#1	.0008	.0005	.0004	.0005	.0006	.0003	.0006	.0007	-.0005
#2	.0009	.0005	.0004	.0004	.0007	.0001	.0006	.0007	-.0001
#3	.0006	.0005	.0003	.0005	.0008	.0006	.0005	.0004	-.0005

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

High Limit

Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0004	.0015	-.0003	-.0004	.0009	.0003	.0080	.0075
Stddev	.0002	.0001	.0003	.0008	.0005	.0008	.0005	.0005	.0013
%RSD	29.35	14.16	18.38	239.4	111.2	87.24	138.2	6.789	16.80

#1	.0007	.0004	.0012	.0003	-.0009	.0005	.0002	.0086	.0061
#2	.0006	.0004	.0016	-.0000	.0001	.0004	-.0001	.0075	.0085
#3	.0004	.0003	.0017	-.0012	-.0006	.0018	.0009	.0079	.0080

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Zoom In Zoom Out

Sample Name: ccb		Acquired: 10/4/2019 14:38:50		Type: QC				
Method: SGS 3 NO Valve(v273)		Mode: CONC		Corr. Factor: 1.000000				
User: admin	Custom ID1:	Custom ID2:	Custom ID3:					
Comment:								
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0045	.0002	.0003	.0010	-.0000	.0000	.0005
Stddev	.0001	.0005	.0001	.0024	.0005	.0002	.0004	.0004
%RSD	15.53	11.28	28.81	810.5	49.13	8165.	1805.	93.53

#1	.0007	-.0041	.0002	.0022	.0006	-.0002	.0003	.0005
#2	.0007	-.0043	.0002	.0011	.0015	.0002	.0002	.0000
#3	.0005	-.0051	.0001	-.0024	.0009	-.0001	-.0005	.0009

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

High Limit

Low Limit

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180990.	28639.	7842.0	10809.
Stddev	742.	249.	22.5	27.
%RSD	.40981	.86835	.28362	.25135

#1	181410.	28902.	7916.9	10779.
#2	181440.	28408.	7960.6	10832.
#3	180140.	28607.	7948.4	10817.

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Zoom In Zoom Out

Sample Name: jc95821-5		Acquired: 10/4/2019 14:43:45		Type: Unk					
Method: SGS 3 NO Valve(v273)		Mode: CONC		Corr. Factor: 2.000000					
User: admin	Custom ID1:	Custom ID2:	Custom ID3:						
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7848	.0061	.0002	.1113	.2210	.2647	7.529	.2032	.0020
Stddev	.0052	.0001	.0003	.0003	.0017	.0029	.087	.0008	.0012
%RSD	.6664	.9753	119.4	2.981	.7719	1.087	1.155	.4104	59.49

#1	.7799	.0060	-.0001	.1116	.2196	.2629	7.515	.2029	.0013
#2	.7840	.0061	.0002	.1110	.2229	.2681	7.621	.2026	.0014
#3	.7903	.0061	.0004	.1115	.2206	.2632	7.449	.2042	.0034

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4753	.4930	.0423	.0037	.0808	-.0044	-.0028	124.5	68.84
Stddev	.0062	.0007	.0011	.0016	.0001	.0016	.0014	.8	.44
%RSD	1.312	.1445	2.642	42.13	.1567	37.27	49.45	.6494	.6439

#1	.4713	.4924	.0417	.0048	.0807	-.0056	-.0017	123.7	68.46
#2	.4825	.4929	.0416	.0044	.0808	-.0025	-.0023	124.4	68.73
#3	.4721	.4938	.0436	.0019	.0810	-.0051	-.0044	125.3	69.32

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	244.5	59.27	15.63	3.625	.0779	.0077	1.524	.0341	2.487
Stddev	4.4	.40	.14	.030	.0005	.0002	.002	.0009	.0016
%RSD	1.810	.6786	.8839	.8162	.6896	2.026	.1545	2.755	.6622

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Sample Name: jc95821-5 Acquired: 10/4/2019 14:43:45 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182290.	29833.	8103.6	10396.
Stddev	1239.	154.	8.4	4.
%RSD	.67945	.51744	.10319	.03881
#1	182360.	29911.	8113.2	10398.
#2	181020.	29933.	8098.1	10392.
#3	183500.	29656.	8099.5	10399.

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Sample Name: jc95821-11 Acquired: 10/4/2019 14:48:56 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>7540</b>	<b>0078</b>	<b>0003</b>	<b>1289</b>	<b>2682</b>	<b>2829</b>	<b>5493</b>	<b>2552</b>
Stddev	.0036	.0001	.0002	.0003	.0014	.0023	.021	.0002
%RSD	.4744	.6949	50.29	.2009	.5222	.8141	.3833	.0927
#1	7507	.0078	.0001	.1286	.2698	.2854	5.476	2552
#2	7578	.0078	.0004	.1289	.2670	.2810	5.487	2550
#3	7534	.0079	.0004	.1291	.2679	.2822	5.517	2554
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>0026</b>	<b>.4571</b>	<b>.5779</b>	<b>.0410</b>	<b>.0023</b>	<b>.0910</b>	<b>-.0050</b>	<b>F -.0069</b>
Stddev	.0010	.0020	.0015	.0008	.0017	.0019	.0027	.0043
%RSD	37.29	.4423	.2572	1.846	72.12	2.119	53.09	62.66
#1	.0018	.4591	.5785	.0415	.0026	.0922	-.0063	-.0019
#2	.0037	.4551	.5762	.0415	.0005	.0920	-.0019	-.0095
#3	.0023	.4571	.5789	.0401	.0038	.0888	-.0068	-.0093
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>157.6</b>	<b>84.14</b>	<b>285.7</b>	<b>79.66</b>	<b>21.22</b>	<b>3.173</b>	<b>.0963</b>	<b>.0066</b>
Stddev	.6	.31	1.6	.19	.08	.007	.0008	.0002
%RSD	.3882	.3628	.5765	.2408	.3872	.2248	.8395	3.714
#1	157.3	83.91	287.4	79.65	21.18	3.167	.0954	.0064
#2	158.3	84.48	285.5	79.86	21.32	3.171	.0967	.0067
#3	157.2	84.01	284.2	79.47	21.18	3.181	.0968	.0068
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.534</b>	<b>.0311</b>	<b>.2839</b>	<b>6.000</b>	<b>-.0146</b>	<b>.1334</b>	<b>.9818</b>	<b>.3212</b>
Stddev	.002	.0005	.0005	.040	.0019	.0010	.0072	.0036
%RSD	.1232	1.761	.1747	.6688	12.83	.7348	.7317	1.105
#1	1.533	.0315	.2836	6.041	-.0134	.1344	.9783	.3234
#2	1.533	.0305	.2845	5.961	-.0136	.1325	.9770	.3171
#3	1.536	.0313	.2837	5.999	-.0168	.1334	.9901	.3231

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Sample Name: jc95821-11 Acquired: 10/4/2019 14:48:56 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>2200</b>	<b>3.885</b>	<b>.6590</b>	
Stddev	.0006	.004	.0080	
%RSD	.2522	.1075	1.209	
#1	.2194	3.881	.6669	
#2	.2205	3.890	.6509	
#3	.2200	3.885	.6593	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182890.	30290.	8135.4	10333.
Stddev	679.	180.	15.6	15.
%RSD	.37115	.59582	.19225	.14828
#1	182280.	30282.	8121.2	10323.
#2	183620.	30114.	8152.1	10351.
#3	182770.	30474.	8132.8	10326.

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Sample Name: mp17641-sd1 Acquired: 10/4/2019 14:54:05 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 50.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.4151</b>	<b>.0068</b>	<b>.0168</b>	<b>.0658</b>	<b>-.0093</b>	<b>F 660.0</b>	<b>.0475</b>	<b>.1446</b>	<b>4.814</b>
Stddev	.0041	.0034	.0035	.0051	.0170	6.8	.0028	.0036	.010
%RSD	.9943	49.79	20.70	7.720	183.9	1.027	5.808	2.490	.2005
#1	.4126	.0031	.0206	.0642	.0102	656.0	.0471	.1442	4.825
#2	.4129	.0098	.0137	.0617	-.0168	656.2	.0450	.1484	4.813
#3	.4199	.0074	.0161	.0715	-.0212	667.6	.0505	.1412	4.806
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1073</b>	<b>.1305</b>	<b>.1191</b>	<b>-.0388</b>	<b>-.0215</b>	<b>.0740</b>	<b>-.0332</b>	<b>10.16</b>	<b>7.533</b>
Stddev	.0078	.0028	.0093	.0192	.0370	.0845	.0726	.15	.078
%RSD	7.254	2.137	7.834	49.52	172.0	114.2	218.8	1.439	1.037
#1	.1018	.1315	.1285	-.0175	-.0603	.0949	.0507	10.21	7.510
#2	.1162	.1274	.1191	-.0440	.0135	.1461	-.0750	9.993	7.470
#3	.1038	.1327	.1098	-.0548	-.0178	-.0190	-.0752	10.27	7.621
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>13.62</b>	<b>1.717</b>	<b>7.886</b>	<b>5.210</b>	<b>.5122</b>	<b>156.9</b>	<b>1.062</b>	<b>.0474</b>	<b>.6660</b>
Stddev	.03	.106	.749	.383	.0344	.2	.017	.0128	.0023
%RSD	.2448	6.175	9.501	7.355	6.707	.1504	1.613	27.03	.3490
#1	13.65	1.829	7.069	5.157	.5342	156.9	1.042	.0525	.6675
#2	13.60	1.618	8.047	4.857	.5297	156.7	1.074	.0328	.6633
#3	13.59	1.703	8.541	5.618	.4726	157.2	1.069	.0568	.6672
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.769</b>	<b>-.2172</b>	<b>.0351</b>	<b>101.4</b>	<b>-.0327</b>	<b>-.0357</b>	<b>17.86</b>	<b>-.0680</b>	
Stddev	.008	.0376	.0064	0	.0241	.0187	.16	.0810	
%RSD	.4662	17.29	18.19	.0446	73.58	52.31	.9005	119.1	
#1	1.763	-.2407	.0381	101.3	.0064	-.0430	17.76	-.0894	
#2	1.767	-.2369	.0393	101.4	.0537	-.0145	17.77	.0215	
#3	1.779	-.1738	.0277	101.4	.0380	-.0497	18.04	-.1363	

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Sample Name: mp17641-sd1 Acquired: 10/4/2019 14:54:05 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 50.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182800.	28908.	7978.6	10860.
Stddev	1020.	60.	8.7	14.
%RSD	.55810	.20897	.10894	.13199
#1	182520.	28975.	7976.6	10852.
#2	183930.	28857.	7988.1	10877.
#3	181950.	28894.	7971.1	10853.

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Sample Name: jc95362-7r Acquired: 10/4/2019 14:59:01 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 10.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.766	.0151	.1952	.1821	2.013	22.56	15.36	1.478	.0544
Stddev	.042	.0002	.0013	.0009	.003	.03	.13	.002	.0037
%RSD	.4286	1.366	.6664	.4803	.1608	.1511	.8622	.1358	6.839
#1	9.808	.0149	.1939	.1830	2.014	22.60	15.37	1.476	.0556
#2	9.764	.0153	.1951	.1813	2.016	22.54	15.50	1.477	.0502
#3	9.725	.0152	.1965	.1821	2.010	22.55	15.23	1.480	.0573

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.172	49.96	.3017	-0.019	23.78	.0066	.1514	119.8	280.6
Stddev	.0033	.04	.0012	.0060	.02	.0156	.0058	.4	1.1
%RSD	.6354	.0737	.4014	313.0	.0783	237.2	3.857	.3467	.3794
#1	.5155	50.00	.3003	-.0065	23.76	.0120	.1523	120.2	281.7
#2	.5152	49.92	.3023	-.0042	23.80	-.0110	.1567	119.7	280.6
#3	.5210	49.96	.3026	-.0049	23.77	.0187	.1451	119.4	279.6

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1005.	75.46	12.82	7.186	1.206	.1918	4.871	2.053	1.201
Stddev	3.	.18	.24	.051	.003	.0028	.020	.003	.003
%RSD	.2551	.2350	1.892	.7047	.2509	1.454	4.089	.1208	2.199
#1	1008.	75.65	12.86	7.129	1.206	.1900	4.858	2.052	1.203
#2	1005.	75.43	13.03	7.209	1.203	.1950	4.861	2.051	1.198
#3	1003.	75.30	12.55	7.222	1.209	.1904	4.894	2.056	1.200

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.456	-.1039	.4623	26.55	.3642	.0285	5.900	.6537
Stddev	.022	.0039	.0013	.06	.0092	.0035	.005	.0074
%RSD	.3385	3.709	.2735	.2171	2.527	12.41	.0789	1.131
#1	6.479	-.1012	.4628	26.48	.3697	.0248	5.899	.6582
#2	6.454	-.1022	.4633	26.59	.3536	.0319	5.896	.6578
#3	6.435	-.1083	.4609	26.57	.3694	.0287	5.905	.6452

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11.4  
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Sample Name: jc95362-7r Acquired: 10/4/2019 14:59:01 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 10.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182020.	29506.	7997.7	10698.
Stddev	991.	142.	11.2	18.
%RSD	.54447	.48186	.13958	.17144
#1	181780.	29345.	8001.2	10713.
#2	181160.	29556.	8006.7	10705.
#3	183100.	29616.	7985.2	10678.

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Sample Name: mp17601-mb1conf Acquired: 10/4/2019 15:03:53 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0000	-0.001	.0001	.0008	.0005	.0003	.0004	-0.0002
Stddev	.0001	.0001	.0002	.0000	.0001	.0002	.0000	.0001	.0004
%RSD	28.87	323.8	127.9	34.15	11.03	53.76	8.155	24.66	174.7
#1	.0003	.0000	-.0000	.0001	.0008	.0007	.0004	.0005	-.0005
#2	.0002	-.0000	-.0000	.0001	.0007	.0003	.0003	.0004	-.0004
#3	.0003	.0001	-.0003	.0002	.0008	.0003	.0003	.0003	.0002

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.001	.0254	.0002	-0.011	.0000	.0006	-0.0008	.0073	.0435
Stddev	.0001	.0001	.0004	.0005	.0002	.0014	.0011	.0035	.0005
%RSD	202.3	.3999	231.0	47.19	3303.	211.6	135.7	48.42	1.245
#1	-.0000	.0254	-.0003	-.0017	.0002	.0022	-.0015	.0035	.0441
#2	-.0002	.0256	.0004	-.0008	-.0000	-.0004	-.0014	.0079	.0431
#3	.0000	.0254	.0004	-.0009	-.0002	.0002	.0005	.0105	.0434

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0.260	.0154	-0.0051	.0231	.0000	.0004	.0069	.0173	.0002
Stddev	.0015	.0018	.0265	.0082	.0001	.0002	.0014	.0002	.0001
%RSD	5.622	11.91	523.2	35.67	451.7	43.75	21.09	1.291	38.29
#1	.0246	.0147	.0110	.0154	-.0001	.0005	.0056	.0176	.0003
#2	.0260	.0174	-.0357	.0222	.0002	.0006	.0084	.0172	.0001
#3	.0275	.0140	.0095	.0317	.0000	.0002	.0066	.0171	.0003

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-0.0064	.0001	.0055	.0010	-0.0004	.0186	-0.0030
Stddev	.0000	.0006	.0001	.0006	.0007	.0007	.0002	.0017
%RSD	3.607	9.375	85.56	11.26	63.54	175.8	1.218	54.72
#1	.0009	-.0063	.0001	.0053	.0013	-.0011	.0184	-.0028
#2	.0009	-.0070	.0001	.0050	.0003	-.0003	.0185	-.0015
#3	.0010	-.0058	.0003	.0062	.0015	-.0004	.0188	-.0048

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Sample Name: mp17601-mb1conf Acquired: 10/4/2019 15:03:53 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	183770.	29287.	8054.4	10956.
Stddev	1691.	65.	9.6	19.
%RSD	.92012	.22037	.11891	.17305
#1	182610.	29233.	8051.8	10955.
#2	183000.	29358.	8046.4	10938.
#3	185710.	29270.	8065.0	10975.

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Sample Name: jc95741-7 Acquired: 10/4/2019 15:08:50 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.240	.0137	.0026	.1672	.3096	2.898	7.804	.3120	.0029
Stddev	.002	.0001	.0001	.0002	.0015	.0017	.039	.0004	.0023
%RSD	.1244	.6699	3.242	.1196	.4802	.5738	.5016	.1439	76.59
#1	1.240	.0137	.0027	.1674	.3085	2.890	7.796	.3124	.0043
#2	1.241	.0138	.0026	.1673	.3090	2.887	7.770	.3115	.0042
#3	1.238	.0137	.0026	.1670	.3113	.2918	7.847	.3120	.0003
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3555	1.068	.0629	.0067	.2100	-.0046	-.0031	197.9	13.91
Stddev	.0033	.003	.0019	.0018	.0012	.0008	.0011	.2	.02
%RSD	.9416	.2469	3.087	27.33	5.890	17.88	34.56	.0846	.1117
#1	.3527	1.066	.0640	.0080	.2106	-.0041	-.0039	197.9	13.91
#2	.3546	1.068	.0642	.0046	.2086	-.0056	-.0034	198.1	13.92
#3	.3592	1.071	.0607	.0075	.2109	-.0041	-.0019	197.7	13.89
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	338.7	71.27	22.27	1.113	1.1274	.0089	1.793	.0292	1.230
Stddev	5.4	.02	.05	.004	.0007	.0002	.006	.0006	.0002
%RSD	1.605	.0237	.2439	.3976	.5238	1.985	.3170	2.191	.1699
#1	342.4	71.25	22.28	1.110	.1277	.0089	1.799	.0299	.1233
#2	341.2	71.27	22.32	1.111	.1279	.0091	1.791	.0289	.1229
#3	332.5	71.28	22.22	1.118	.1267	.0088	1.788	.0287	.1229
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	4.429	-.0158	.0528	.7862	.2275	.3884	4.204	1.095	
Stddev	.039	.0022	.0002	.0048	.0050	.0024	.008	.009	
%RSD	.8778	13.69	.3370	.6155	2.188	6.099	.1849	.7921	
#1	4.406	-.0136	.0529	.7917	.2219	.3898	4.201	1.087	
#2	4.407	-.0159	.0529	.7826	.2314	.3857	4.199	1.094	
#3	4.474	-.0179	.0526	.7843	.2293	.3899	4.213	1.104	

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Sample Name: jc95741-7 Acquired: 10/4/2019 15:08:50 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	184170.	30458.	8233.5	10559.
Stddev	1297.	106.	30.0	31.
%RSD	.70402	.34922	.36498	.29227
#1	185160.	30377.	8259.9	10577.
#2	184640.	30419.	8239.8	10577.
#3	182700.	30578.	8200.8	10524.

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Sample Name: mp17641-sd1 Acquired: 10/4/2019 15:13:59 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 500.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.847	-.0168	-.0401	.0735	.0206	702.5	1.544	.2626	4.911
Stddev	.0828	.0075	.0277	.0403	.0689	2.1	.0173	.0655	.153
%RSD	17.09	44.54	69.21	54.83	334.0	.3016	11.22	24.96	3.123
#1	5.489	-.0191	-.0686	.1190	.0225	704.9	1.347	.3129	5.042
#2	3.912	-.0085	-.0385	.0594	.0885	701.6	1.610	.2865	4.950
#3	5.140	-.0229	-.0131	.0422	-.0492	701.0	1.674	.1885	4.742
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.114	.4714	.3897	-.4677	-.2221	.0635	-.4011	11.09	12.28
Stddev	.0637	.0528	.4975	.2047	.2645	.3297	.2778	4.57	.81
%RSD	57.18	11.20	127.7	43.77	119.1	519.5	69.25	41.21	6.587
#1	.0793	.5148	.5781	-.4416	-.2869	-.0910	-.0929	14.68	12.96
#2	1.847	.4126	-.1745	-.6842	.0688	.4420	-.4783	5.945	12.48
#3	.0701	.4869	.7655	-.2773	-.4481	-.1606	-.6322	12.65	11.39
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.97	.0804	-.1417	-.8.867	.0062	164.9	2.022	-.1416	.7460
Stddev	.65	1.640	15.45	5.807	.3212	1.0	.599	1323.	.0380
%RSD	3.622	2040.	109.0	65.49	5161.	.6341	29.61	93.48	5.090
#1	18.52	1.353	3.258	-14.28	-.3642	165.3	1.684	-.0347	.7781
#2	17.25	-1.771	-26.18	-9.596	.2069	165.6	2.713	-.1005	.7041
#3	18.14	.6589	-19.58	-2.730	.1760	163.7	1.669	-.2896	.7558
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.926	-.4014	-.1372	106.0	.2346	-.1290	18.39	-.6538	
Stddev	.029	.320	.0632	1.3	.2337	.576	.03	.8257	
%RSD	1.480	7.969	46.05	1.243	99.60	44.64	.1416	126.3	
#1	1.953	-3.667	-2100	107.2	-.1432	-1.267	18.40	-1.412	
#2	1.896	-4.078	-1037	106.2	.0604	-.7262	18.40	.2259	
#3	1.929	-4.297	-.0978	104.6	.5002	-1.877	18.36	-.7755	

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Sample Name: mp17641-sd1 Acquired: 10/4/2019 15:13:59 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 500.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 5 columns: Int. Std., Y\_3600, Y\_3710, Y\_2243, ln2306. Rows include Units, Avg, Stddev, %RSD, and sample numbers #1, #2, #3.

Sample Name: mp17643-mb1conf Acquired: 10/4/2019 15:18:50 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Units, Avg, Stddev, %RSD, and sample numbers #1, #2, #3.

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Sample Name: mp17643-mb1conf Acquired: 10/4/2019 15:18:50 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 5 columns: Int. Std., Y\_3600, Y\_3710, Y\_2243, ln2306. Rows include Units, Avg, Stddev, %RSD, and sample numbers #1, #2, #3.

Sample Name: jc95574-2 Acquired: 10/4/2019 15:23:49 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 11 columns: Elem, Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Rows include Units, Avg, Stddev, %RSD, and sample numbers #1, #2, #3.

Zoom In  
Zoom Out

Sample Name: jc95574-2 Acquired: 10/4/2019 15:23:49 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176700.	28743.	7781.4	10301.
Stddev	424.	255.	20.0	23.
%RSD	.24019	.88720	.25721	.22753
#1	176960.	28922.	7795.0	10315.
#2	176920.	28857.	7790.7	10314.
#3	176210.	28451.	7758.4	10274.

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
Ba4554	ppm	2.010	.005	.257	2.016	2.008	2.006
Be3130	ppm	2.057	.006	.273	2.064	2.054	2.054
Cd2288	ppm	1.984	.001	.059	1.983	1.985	1.984
Co2286	ppm	2.008	.002	.105	2.006	2.010	2.007
Cr2677	ppm	2.013	.002	.081	2.014	2.011	2.014
Cu3247	ppm	1.979	.003	.124	1.979	1.977	1.982
Mn2576	ppm	2.033	.012	.565	2.022	2.032	2.045
Ni2316	ppm	2.031	.002	.087	2.029	2.032	2.031
Ag3280	ppm	2.499	.001	.024	2.498	2.499	2.500

Sample Name: ccv Acquired: 10/4/2019 15:28:41 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
V_2924	ppm	1.997	.000	.021	1.997	1.997	1.997
Zn2062	ppm	2.039	.001	.047	2.040	2.039	2.039
As1890	ppm	1.920	.003	.137	1.920	1.923	1.917
Tl1908	ppm	2.058	.003	.145	2.056	2.062	2.056
Pb2203	ppm	2.015	.001	.063	2.014	2.014	2.016
Se1960	ppm	1.974	.001	.027	1.974	1.974	1.973
Sb2068	ppm	1.918	.001	.067	1.920	1.917	1.918
Al3961	ppm	39.75	.06	.157	39.82	39.71	39.71
Ca3179	ppm	40.89	.10	.254	41.00	40.87	40.80

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
Fe2599	ppm	40.31	.06	.157	40.38	40.28	40.26
Mg2790	ppm	40.34	.09	.224	40.44	40.30	40.27
K_7664	ppm	39.80	.06	.158	39.86	39.74	39.79
Na5895	ppm	39.85	.04	.094	39.89	39.81	39.84
B_2089	ppm	1.996	.001	.037	1.996	1.996	1.995
Mo2020	ppm	1.944	.001	.071	1.946	1.943	1.943
Si2124	ppm	5.076	.002	.031	5.078	5.076	5.075
Sn1899	ppm	1.963	.001	.052	1.964	1.962	1.963
Sr4077	ppm	2.025	.020	.976	2.048	2.011	2.016

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Sample Name: ccv Acquired: 10/4/2019 15:28:41 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
Tl3349	ppm	1.943	.004	.198	1.942	1.939	1.947
W_2079	ppm	1.891	.000	.015	1.892	1.891	1.891
Zr3391	ppm	1.951	.001	.067	1.952	1.950	1.950
S_1820	ppm	1.918	.003	.159	1.918	1.914	1.920
Bi2230	ppm	1.983	.001	.043	1.983	1.982	1.984
Li6707	ppm	1.980	.003	.141	1.982	1.980	1.977
P_1774	ppm	1.986	.003	.134	1.987	1.988	1.983
Ce4040	ppm	2.004	.004	.205	2.002	2.001	2.008

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
Ag3280	ppm	0.002	.002	129.7	-0.000	-0.002	-0.003
V_2924	ppm	0.002	.001	33.16	.003	.002	.003
Zn2062	ppm	0.001	.001	49.50	.001	.002	.001
As1890	ppm	0.005	.001	285.7	.002	-0.003	-0.003
Tl1908	ppm	-0.006	.005	91.60	-0.006	-0.000	-0.010
Pb2203	ppm	0.001	.005	386.6	.000	-0.003	.006
Se1960	ppm	0.006	.004	69.15	.001	.009	.009
Sb2068	ppm	-0.004	.007	159.8	-0.004	-0.002	-0.011

Sample Name: ccb Acquired: 10/4/2019 15:33:38 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
Al3961	ppm	-0.011	.084	796.2	.032	.044	-.017
Ca3179	ppm	0.048	.010	20.54	.058	.049	.038
Fe2599	ppm	0.054	.007	12.32	.061	.047	.055
Mg2790	ppm	0.062	.010	164.1	.038	.017	-.002
K_7664	ppm	-0.058	.023	411.9	-.031	.017	.051
Na5895	ppm	-0.123	.066	53.63	-.072	-.018	-.010
B_2089	ppm	0.012	.004	29.09	.016	.012	.009
Mo2020	ppm	0.005	.002	38.71	.007	.005	.003

Elem	Units	Avg	Stddev	%RSD	#1	#2	#3
Al3961	ppm	-0.011	.084	796.2	.032	.044	-.017
Ca3179	ppm	0.048	.010	20.54	.058	.049	.038
Fe2599	ppm	0.054	.007	12.32	.061	.047	.055
Mg2790	ppm	0.062	.010	164.1	.038	.017	-.002
K_7664	ppm	-0.058	.023	411.9	-.031	.017	.051
Na5895	ppm	-0.123	.066	53.63	-.072	-.018	-.010
B_2089	ppm	0.012	.004	29.09	.016	.012	.009
Mo2020	ppm	0.005	.002	38.71	.007	.005	.003

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Sample Name: ccb Acquired: 10/4/2019 15:33:38 Type: QC Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 8 columns: Elem, Units, Avg, Stddev, %RSD. Values for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 8 columns: #1, #2, #3. Values for various elements.

Table with 8 columns: Check?, High Limit, Low Limit. Values for various elements.

Table with 4 columns: Elem, Units, Avg, Stddev, %RSD. Values for Li6707, P\_1774, Ce4040.

Table with 4 columns: #1, #2, #3. Values for various elements.

Table with 4 columns: Check?, High Limit, Low Limit. Values for various elements.

Table with 5 columns: Int. Std., Units, Avg, Stddev, %RSD. Values for Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 5 columns: #1, #2, #3. Values for various elements.

Sample Name: jc95791-2 Acquired: 10/4/2019 15:38:37 Type: Unk Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Table with 10 columns: #1, #2, #3. Values for various elements.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Table with 10 columns: #1, #2, #3. Values for various elements.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Table with 10 columns: #1, #2, #3. Values for various elements.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 10 columns: #1, #2, #3. Values for various elements.

Sample Name: jc95791-2 Acquired: 10/4/2019 15:38:37 Type: Unk Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 5 columns: Int. Std., Units, Avg, Stddev, %RSD. Values for Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 5 columns: #1, #2, #3. Values for various elements.

Sample Name: mp17667-mb1conf Acquired: 10/4/2019 15:43:41 Type: Unk Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Table with 10 columns: #1, #2, #3. Values for various elements.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Table with 10 columns: #1, #2, #3. Values for various elements.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Table with 10 columns: #1, #2, #3. Values for various elements.

Table with 10 columns: Elem, Units, Avg, Stddev, %RSD. Values for Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 10 columns: #1, #2, #3. Values for various elements.



Sample Name: mp17667-mb1conf Acquired: 10/4/2019 15:43:41 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	184360.	29225.	8113.7	11013.
Stddev	614.	147.	6.0	17.
%RSD	.33279	.50359	.07341	.15213
#1	184040.	29185.	8115.4	11020.
#2	185070.	29103.	8107.1	10994.
#3	183980.	29389.	8118.6	11026.

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Sample Name: jc95815-12 Acquired: 10/4/2019 15:48:36 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2130	.0026	.0007	.0236	.0851	.0579	.5291	.0588	.0021
Stddev	.0007	.0000	.0002	.0004	.0001	.0005	.0024	.0001	.0002
%RSD	.3449	1.293	27.76	1.624	.1271	.7953	.4530	.1295	11.60
#1	.2134	.0026	.0006	.0235	.0852	.0584	.5306	.0588	.0020
#2	.2134	.0027	.0009	.0240	.0851	.0578	.5263	.0589	.0024
#3	.2121	.0026	.0005	.0232	.0850	.0575	.5304	.0588	.0020
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1515	.3041	.0699	.0005	.2461	.0016	.0003	73.70	11.96
Stddev	.0004	.0002	.0006	.0005	.0007	.0020	.0005	.22	.03
%RSD	.2553	.0592	.8977	104.9	2.756	123.3	133.5	.2954	2518
#1	.1519	.3043	.0703	.0011	.2455	.0038	.0003	73.81	11.98
#2	.1511	.3039	.0691	.0004	.2460	.0006	.0008	73.84	11.97
#3	.1514	.3042	.0702	.0001	.2469	.0003	-.0001	73.45	11.93
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	86.11	8.176	4.508	2.999	.0207	.0042	1.876	.0206	.0683
Stddev	.19	.012	.004	.0026	.0006	.0002	.004	.0002	.0000
%RSD	.2241	.1447	.0947	.8567	2.699	4.867	.2171	.8061	.0468
#1	86.20	8.180	4.509	.3022	.0204	.0042	1.879	.0205	.0684
#2	86.24	8.185	4.511	.2971	.0204	.0040	1.877	.0205	.0683
#3	85.89	8.163	4.503	.3002	.0214	.0044	1.871	.0208	.0683
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.6038	-.0089	.0073	5.907	.0306	.0441	3.501	.2520	
Stddev	.0030	.0004	.0002	.008	.0004	.0007	.004	.0017	
%RSD	.4979	4.928	2.410	.1374	1.349	1.592	.1163	.6805	
#1	.6070	-.0087	.0073	5.905	.0301	.0447	3.501	.2538	
#2	.6010	-.0094	.0074	5.916	.0309	.0443	3.505	.2518	
#3	.6033	-.0086	.0071	5.900	.0307	.0433	3.497	.2504	

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Sample Name: jc95815-12 Acquired: 10/4/2019 15:48:36 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	186500.	30702.	8289.6	10669.
Stddev	842.	67.	14.8	10.
%RSD	.45117	.21959	.17847	.09731
#1	186190.	30654.	8278.1	10658.
#2	187520.	30673.	8306.3	10677.
#3	185960.	30779.	8284.5	10673.

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Sample Name: jc95815-19 Acquired: 10/4/2019 15:53:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1644	.0025	.0024	.1006	.3194	.9289	3.328	.5157	.0200
Stddev	.0005	.0000	.0001	.0010	.0005	.0023	.002	.0015	.0019
%RSD	.3289	1.869	4.058	1.044	.1702	.2513	.0604	.2947	9.506
#1	.1648	.0025	.0025	.1016	.3199	.9311	3.327	.5166	.0222
#2	.1646	.0025	.0025	.1095	.3195	.9265	3.326	.5139	.0185
#3	.1638	.0024	.0023	.1006	.3188	.9291	3.330	.5165	.0195
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0764	.5188	.0800	.0079	.1214	-.0153	.0095	49.42	31.18
Stddev	.0008	.0006	.0050	.0014	.0016	.0016	.0013	.22	.14
%RSD	1.102	.1188	6.223	17.10	1.336	10.43	13.41	.4389	.4386
#1	.0766	.5194	.0855	.0064	.1225	-.0135	.0080	49.64	31.33
#2	.0755	.5182	.0757	.0090	.1195	-.0158	.0103	49.21	31.06
#3	.0772	.5187	.0789	.0084	.1220	-.0165	.0103	49.40	31.17
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 1033.	12.16	2.732	0.654	.0043	.1254	2.586	.0842	.1778
Stddev	6.	.06	.222	.0251	.0018	.0006	.003	.0011	.0005
%RSD	.6167	.5312	8.125	38.43	41.68	.5055	.1004	1.264	.3034
#1	1040.	12.23	2.588	0.365	.0051	.1254	2.583	.0841	.1782
#2	1027.	12.11	2.620	0.777	.0055	.1260	2.585	.0832	.1780
#3	1030.	12.14	2.987	.0821	.0022	.1247	2.589	.0853	.1772
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.7703	-.0382	.0245	26.83	.0403	-.0608	2.896	.2343	
Stddev	.0004	.0022	.0002	.05	.0063	.0006	.006	.0085	
%RSD	.0568	5.842	.8055	.1983	15.53	1.051	.2128	3.633	
#1	.7706	-.0408	.0244	26.79	.0331	-.0611	2.892	.2305	
#2	.7705	-.0372	.0244	26.82	.0441	-.0611	2.893	.2283	
#3	.7698	-.0367	.0247	26.89	.0438	-.0600	2.903	.2440	

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Sample Name: jc95815-19 Acquired: 10/4/2019 15:53:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	179020.	28633.	7937.7	10977.
Stddev	628.	233.	25.0	24.
%RSD	.35080	.81322	.31482	.22184
#1	179560.	28439.	7909.1	10955.
#2	179180.	28570.	7955.4	11003.
#3	178330.	28891.	7948.6	10974.

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Sample Name: jc95949-2 Acquired: 10/4/2019 15:58:23 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1192</b>	<b>.0032</b>	<b>.0000</b>	<b>.1050</b>	<b>.1223</b>	<b>.1554</b>	<b>.8577</b>	<b>.0889</b>
Stddev	.0002	.0001	.0001	.0001	.0007	.0004	.0030	.0003
%RSD	.1632	1.896	1204.	.1276	.5325	.2891	.3458	.3914
#1	.1193	.0032	-.0001	.1048	.1225	.1549	.8569	.0887
#2	.1194	.0031	.0001	.1050	.1216	.1555	.8552	.0886
#3	.1190	.0031	-.0000	.1051	.1229	.1558	.8609	.0893
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.1614</b>	<b>.1078</b>	<b>.0718</b>	<b>F -.0111</b>	<b>.0220</b>	<b>-.0007</b>	<b>F -.0039</b>
Stddev	.0004	.0006	.0000	.0009	.0009	.0007	.0008	.0002
%RSD	151.8	.4022	.0199	1.300	8.181	3.159	118.0	5.691
#1	.0004	.1616	.1078	.0724	-.0105	.0224	-.0016	-.0038
#2	.0006	.1606	.1078	.0708	-.0122	.0212	-.0003	-.0041
#3	-.0002	.1619	.1078	.0724	-.0108	.0223	-.0002	-.0037
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>29.98</b>	<b>140.2</b>	<b>120.1</b>	<b>26.35</b>	<b>14.12</b>	<b>2.547</b>	<b>.0053</b>	<b>.0051</b>
Stddev	.04	2.3	1.3	.07	.02	.003	.0004	.0002
%RSD	.1431	1.663	1.064	.2688	.1374	.1055	6.927	3.005
#1	30.03	140.5	120.6	26.43	14.13	2.550	.0055	.0052
#2	29.94	137.7	121.1	26.29	14.10	2.545	.0049	.0053
#3	29.97	142.4	118.6	26.33	14.12	2.548	.0055	.0050
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.319</b>	<b>.0197</b>	<b>.1091</b>	<b>2.573</b>	<b>.1085</b>	<b>.0247</b>	<b>6.034</b>	<b>.1281</b>
Stddev	.008	.0004	.0001	.014	.0006	.0001	.004	.0011
%RSD	.6026	1.873	1.082	.5598	.5859	.5790	.0723	8.361
#1	1.327	.0198	.1090	2.576	.1079	.0246	6.031	.1291
#2	1.311	.0194	.1090	2.558	.1085	.0245	6.033	.1269
#3	1.319	.0201	.1092	2.587	.1092	.0248	6.039	.1282

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Sample Name: jc95949-2 Acquired: 10/4/2019 15:58:23 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0365</b>	<b>F 43.27</b>	<b>1.984</b>	
Stddev	.0004	.05	.013	
%RSD	1.188	.1077	.6303	
#1	.0365	43.30	1.987	
#2	.0361	43.31	1.970	
#3	.0370	43.22	1.995	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>265430.</b>	<b>44468.</b>	<b>11752.</b>	<b>10157.</b>
Stddev	954.	309.	10.	18.
%RSD	.35958	.69517	.08643	.17438
#1	264690.	44152.	11746.	10151.
#2	266510.	44770.	11746.	10144.
#3	265100.	44483.	11764.	10177.

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Sample Name: jc95949-2 Acquired: 10/4/2019 16:03:33 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1673</b>	<b>.0045</b>	<b>-.0006</b>	<b>.1062</b>	<b>.1762</b>	<b>.2174</b>	<b>1.237</b>	<b>.0908</b>	<b>.0030</b>
Stddev	.0013	.0001	.0005	.0018	.0017	.0032	.008	.0019	.0008
%RSD	.7728	2.684	84.11	1.722	.9546	1.487	.6137	2.080	28.78
#1	.1684	.0046	-.0006	.1078	.1743	.2143	1.232	.0913	.0034
#2	.1675	.0045	-.0001	.1042	.1768	.2170	1.233	.0887	.0035
#3	.1659	.0044	-.0011	.1067	.1775	.2208	1.245	.0923	.0020
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2286</b>	<b>.1611</b>	<b>.1012</b>	<b>-.0047</b>	<b>.0193</b>	<b>-.0047</b>	<b>-.0083</b>	<b>42.30</b>	<b>206.7</b>
Stddev	.0026	.0013	.0016	.0046	.0043	.0046	.0039	.10	.4
%RSD	1.130	.8083	1.606	97.60	22.30	97.71	47.50	.2339	.2019
#1	.2282	.1617	.1003	-.0062	.0229	-.0094	-.0106	42.35	206.9
#2	.2262	.1596	.1002	.0004	.0204	-.0042	-.0105	42.36	207.0
#3	.2313	.1619	.1031	-.0083	.0145	-.0003	-.0037	42.18	206.2
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>178.8</b>	<b>38.62</b>	<b>19.28</b>	<b>3.492</b>	<b>.0060</b>	<b>.0070</b>	<b>1.831</b>	<b>.0248</b>	<b>.1542</b>
Stddev	.3	.07	.11	.027	.0013	.0001	.022	.0019	.0002
%RSD	.1917	.1751	.5801	.7642	21.79	1.453	1.217	7.704	.1421
#1	179.0	38.65	19.33	3.478	.0075	.0071	1.850	0.268	.1539
#2	179.1	38.67	19.36	3.523	.0056	.0070	1.807	0.245	.1543
#3	178.4	38.54	19.15	3.475	.0050	.0070	1.836	0.230	.1543
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>3.642</b>	<b>.1222</b>	<b>.0341</b>	<b>8.267</b>	<b>.1738</b>	<b>F 65.39</b>	<b>2.821</b>		
Stddev	.031	.0040	.0004	.101	.0039	.0008	.80	.031	
%RSD	.8557	3.254	1.139	1.224	2.254	2.064	1.226		
#1	3.610	.1266	.0341	8.334	.1783	.0416	65.88	2.788	
#2	3.642	.1189	.0337	8.151	.1713	.0400	64.47	2.825	
#3	3.673	.1211	.0345	8.316	.1718	.0405	65.83	2.851	

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Sample Name: jc95949-2 Acquired: 10/4/2019 16:03:33 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	199140.	32093.	8906.3	10696.
Stddev	1243.	129.	95.3	108.
%RSD	.62406	.40156	1.0701	1.0109
#1	200200.	32114.	8859.9	10638.
#2	199450.	31955.	9016.0	10821.
#3	197770.	32210.	8843.1	10629.

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Sample Name: jc95952-3 Acquired: 10/4/2019 16:08:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.730	.0094	.0227	.1230	2.202	6.506	6.116	.6714	.0094
Stddev	.003	.0001	.0002	.0004	.025	.067	.097	.0012	.0022
%RSD	.1748	.6756	.7257	.3653	1.141	1.025	1.591	.1722	23.12
#1	1.731	.0094	.0228	.1228	2.229	6.580	6.206	.6700	.0071
#2	1.726	.0094	.0226	.1235	2.180	6.450	6.013	.6720	.0114
#3	1.732	.0095	.0225	.1227	2.197	6.489	6.129	.6721	.0098

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8167	10.03	.0732	.0009	1.970	.0044	.0010	97.53	337.8
Stddev	.0116	.01	.0020	.0003	.003	.0007	.0020	.20	8.9
%RSD	1.422	.0995	2.768	27.91	.1597	15.80	189.6	.2013	2.622
#1	.8299	10.04	.0730	.0011	1.969	.0051	.0005	97.71	337.8
#2	.8084	10.03	.0753	.0006	1.973	.0041	.0032	97.32	346.7
#3	.8117	10.02	.0712	.0010	1.967	.0038	-.0006	97.56	329.0

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	349.6	136.8	18.34	4.800	2.681	.0424	3.509	.6072	.7076
Stddev	1.8	.1	.03	.011	.0022	.0005	.012	.0007	.0010
%RSD	.5247	.0964	.1882	.2302	.8335	1.115	.3474	.1211	.1348
#1	347.5	137.0	18.36	4.810	2.658	.0419	3.519	.6079	.7086
#2	350.9	136.8	18.30	4.788	2.702	.0429	3.512	.6064	.7067
#3	350.3	136.7	18.35	4.801	2.685	.0423	3.496	.6071	.7074

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.070	.1100	.1065	13.60	2.631	.0961	3.598	.3422
Stddev	.052	.0014	.0011	.02	.0064	.0048	.006	.0033
%RSD	1.034	1.289	1.070	1.274	2.433	4.960	.1624	.9769
#1	5.125	.1084	.1078	13.58	2.704	.0974	3.605	.3446
#2	5.021	.1108	.1056	13.62	2.584	.0909	3.593	.3384
#3	5.065	.1109	.1061	13.60	2.606	.1001	3.597	.3437

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Sample Name: jc95952-3 Acquired: 10/4/2019 16:08:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	175410.	29251.	7776.8	10201.
Stddev	2109.	79.	7.0	7.
%RSD	1.2022	.27156	.08973	.06809
#1	173510.	29284.	7775.8	10193.
#2	177680.	29161.	7770.4	10203.
#3	175050.	29310.	7784.3	10207.

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Sample Name: mp17669-mb1conf Acquired: 10/4/2019 16:13:41 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0000	-.0001	-.0001	.0004	.0002	.0001	-.0000	.0000
Stddev	.0002	.0000	.0001	.0001	.0001	.0001	.0000	.0001	.0005
%RSD	108.9	127.1	229.0	75.04	28.47	39.58	13.40	385.2	2693.
#1	-.0003	.0001	.0000	-.0000	.0004	.0002	.0001	.0000	.0005
#2	-.0000	-.0000	.0000	-.0002	.0004	.0001	.0001	-.0001	.0001
#3	-.0002	.0000	-.0002	-.0001	.0002	.0002	.0001	.0000	-.0005

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0033	-.0001	-.0015	-.0003	.0001	-.0005	.0060	.0062
Stddev	.0002	.0000	.0007	.0006	.0002	.0002	.0006	.0057	.0003
%RSD	191.4	.8085	920.4	44.01	76.72	161.4	113.6	95.59	4.855
#1	.0000	.0033	-.0008	-.0010	-.0002	-.0000	.0001	.0002	.0065
#2	-.0004	.0033	.0003	-.0012	-.0001	.0003	-.0007	.0062	.0059
#3	-.0000	.0033	.0003	-.0022	-.0005	.0001	-.0011	.0115	.0061

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060	.0007	-.0259	-.0254	-.0003	-.0001	.0055	-.0005	.0000
Stddev	.0008	.0115	.0259	.0096	.0002	.0002	.0006	.0003	.0000
%RSD	12.71	1675.	100.0	37.78	70.97	198.4	11.58	66.58	323.5
#1	.0055	.0100	-.0074	-.0359	-.0004	-.0002	.0061	-.0003	.0001
#2	.0068	.0042	-.0147	-.0233	-.0005	.0001	.0055	-.0009	-.0000
#3	.0055	-.0122	-.0554	-.0171	-.0001	-.0002	.0049	-.0003	.0000

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0078	-.0002	.0039	.0003	-.0011	-.0009	-.0028
Stddev	.0001	.0009	.0001	.0008	.0005	.0010	.0003	.0021
%RSD	82.31	11.76	38.40	19.82	181.5	89.67	33.23	74.72
#1	.0001	-.0084	-.0003	.0043	.0008	-.0015	-.0009	-.0011
#2	.0000	-.0083	-.0001	.0030	-.0001	.0000	-.0011	-.0021
#3	.0003	-.0068	-.0002	.0043	.0000	-.0020	-.0006	-.0051

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Zoom In  
Zoom Out

Sample Name: mp17669-mb1conf Acquired: 10/4/2019 16:13:41 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182860.	28857.	8063.5	11019.
Stddev	1298.	119.	13.7	24.
%RSD	.70954	.41192	.16986	.22221
#1	183210.	28785.	8066.2	11026.
#2	183940.	28995.	8048.6	10992.
#3	181420.	28792.	8075.6	11039.

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Zoom In  
Zoom Out

Sample Name: jc95653-1 Acquired: 10/4/2019 16:18:43 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1682	.0032	.0009	.0157	.0771	.0224	.1303	.0604	-.0040
Stddev	.0589	.0008	.0002	.0002	.0021	.0058	.0021	.0007	.0101
%RSD	34.98	26.00	26.45	1.326	2.700	25.86	1.576	1.241	254.0
#1	.2362	.0041	.0006	.0160	.0795	.0157	.1326	.0613	-.0156
#2	.1346	.0026	.0011	.0157	.0757	.0263	.1290	.0600	.0020
#3	.1339	.0028	.0010	.0156	.0761	.0251	.1291	.0599	.0017
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	.3547	.0079	-.0017	.0516	-.0050	.0059	*****	*****
Stddev	.0009	.0013	.0029	.0019	.0023	.0052	.0014	----	----
%RSD	4.862	.3692	37.43	110.1	4.440	103.4	24.43	----	----
#1	.0197	.3560	.0046	-.0039	.0538	-.0109	.0073	----	----
#2	.0185	.3547	.0102	-.0003	.0517	-.0012	.0060	20.12	20.13
#3	.0179	.3533	.0088	-.0010	.0492	-.0029	.0044	20.11	20.16
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	*****	14.25	5.326	*****	.1327	.0039	28.62	.0002	*****
Stddev	----	4.19	1.684	----	.0008	.0004	.03	.0028	----
%RSD	----	29.40	31.62	----	.6158	9.890	1.090	1344.	----
#1	----	19.08	7.271	----	.1320	.0035	28.65	.0031	----
#2	51.64	11.84	4.331	50.30	.1336	.0038	28.60	-.0024	.1632
#3	51.70	11.82	4.377	50.29	.1325	.0043	28.60	-.0001	.1633
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.1224	-.0185	.0024	36.57	.0042	.0059	.2084	.1254	
Stddev	.0022	.0053	.0001	.05	.0032	.0066	.0325	.0116	
%RSD	1.774	28.60	2.942	.1434	76.49	111.7	15.62	9.216	
#1	.1249	-.0124	.0024	36.57	.0025	.0132	.1708	.1384	
#2	.1211	-.0217	.0023	36.52	.0079	.0040	.2280	.1163	
#3	.1211	-.0214	.0025	36.62	.0022	.0005	.2263	.1216	

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Zoom In  
Zoom Out

Sample Name: jc95653-1 Acquired: 10/4/2019 16:18:43 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	179800.	*****	8005.8	10577.
Stddev	2647.	----	18.5	15.
%RSD	1.4723	----	.23146	.14086
#1	176750.	----	7986.0	10563.
#2	181120.	28254.	8008.6	10576.
#3	181520.	28472.	8022.8	10592.

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 16:23:35 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.003	2.065	1.975	1.991	2.024	1.967	2.048	2.019	.2495
Stddev	.004	.003	.002	.001	.004	.003	.004	.000	.0001
%RSD	.1775	.1599	.1098	.0657	.1899	.1634	.2010	.0144	.0385
#1	2.001	2.063	1.977	1.992	2.027	1.967	2.046	2.020	.2495
#2	2.007	2.069	1.975	1.990	2.020	1.970	2.045	2.019	.2494
#3	2.002	2.064	1.972	1.990	2.026	1.964	2.053	2.019	.2496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.991	2.025	1.902	2.056	2.000	1.949	1.907	39.80	40.74
Stddev	.001	.002	.004	.001	.002	.003	.003	.04	.05
%RSD	.0688	.1176	.1976	.0701	.0767	.1287	.1658	.0948	.1192
#1	1.992	2.026	1.905	2.057	1.998	1.951	1.908	39.76	40.69
#2	1.990	2.026	1.903	2.054	2.000	1.950	1.910	39.84	40.79
#3	1.993	2.022	1.897	2.056	2.001	1.946	1.904	39.80	40.73
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.32	40.33	39.78	39.91	1.981	1.911	5.034	1.939	2.041
Stddev	.05	.04	.06	.03	.002	.002	.003	.002	.001
%RSD	.1329	.1001	.1512	.0687	.1197	.0825	.0502	.1247	.0630
#1	40.29	40.31	39.75	39.94	1.982	1.911	5.034	1.941	2.042
#2	40.38	40.37	39.85	39.89	1.983	1.912	5.036	1.940	2.042
#3	40.29	40.30	39.73	39.90	1.978	1.909	5.031	1.936	2.040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

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Sample Name: ccv Acquired: 10/4/2019 16:23:35 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.937</b>	<b>1.864</b>	<b>1.949</b>	<b>1.884</b>	<b>1.955</b>	<b>1.971</b>	<b>1.957</b>	<b>2.010</b>
Stddev	.004	.003	.001	.003	.001	.003	.002	.002
%RSD	.2100	.1431	.0401	.1325	.0599	.1442	.1139	.1186
#1	1.942	1.864	1.950	1.884	1.956	1.970	1.956	2.012
#2	1.936	1.867	1.948	1.887	1.954	1.974	1.959	2.011
#3	1.934	1.861	1.949	1.882	1.954	1.968	1.955	2.007

Check ?  
Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>172840.</b>	<b>27696.</b>	<b>7720.4</b>	<b>10124.</b>
Stddev	206.	87.	2.5	6.
%RSD	.11909	.31572	.03183	.06060
#1	172970.	27777.	7720.5	10126.
#2	172950.	27706.	7717.9	10128.
#3	172610.	27603.	7722.8	10117.

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Sample Name: ccb Acquired: 10/4/2019 16:28:25 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>.0005</b>	<b>.0005</b>	<b>.0006</b>	<b>.0012</b>	<b>.0007</b>	<b>.0008</b>	<b>.0005</b>
Stddev	.0003	.0002	.0001	.0001	.0001	.0001	.0000	.0003
%RSD	53.95	31.34	22.18	8.916	9.065	19.84	3.889	55.78
#1	.0007	.0004	.0006	.0006	.0012	.0005	.0007	.0005
#2	.0002	.0004	.0004	.0006	.0013	.0007	.0008	.0003
#3	.0006	.0007	.0004	.0007	.0011	.0008	.0008	.0009

Check ?  
High Limit  
Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0009</b>	<b>.0003</b>	<b>.0006</b>	<b>.0000</b>	<b>.0003</b>	<b>.0003</b>	<b>.0003</b>
Stddev	.0003	.0004	.0001	.0002	.0004	.0004	.0017	.0015
%RSD	90.11	47.37	19.82	25.96	10750.	158.3	625.0	474.0
#1	.0006	.0009	.0003	.0008	.0004	-.0000	.0018	.0017
#2	.0000	.0005	.0003	.0005	-.0005	.0001	.0006	-.0013
#3	.0004	.0013	.0002	.0005	.0001	.0008	-.0016	.0006

Check ?  
High Limit  
Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0013</b>	<b>.0107</b>	<b>.0113</b>	<b>.0143</b>	<b>-.0030</b>	<b>-.0315</b>	<b>.0004</b>	<b>.0007</b>
Stddev	.0046	.0025	.0018	.0085	.0218	.0024	.0007	.0000
%RSD	362.6	23.00	16.30	59.09	720.9	7.498	155.3	6.193
#1	-.0038	.0084	.0098	.0124	.0182	-.0337	.0004	.0008
#2	.0025	.0105	.0107	.0070	-.0020	-.0290	.0011	.0007
#3	.0052	.0133	.0133	.0236	-.0253	-.0316	-.0002	.0008

Check ?  
High Limit  
Low Limit

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Sample Name: ccb Acquired: 10/4/2019 16:28:25 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0008</b>	<b>.0002</b>	<b>.0005</b>	<b>.0010</b>	<b>F_0077</b>	<b>.0000</b>	<b>.0001</b>	<b>.0012</b>
Stddev	.0004	.0002	.0000	.0003	.0001	.0001	.0018	.0009
%RSD	46.86	102.6	9.672	25.43	1.254	153.5	1730.	77.65
#1	.0013	.0002	.0005	.0007	-.0078	.0001	.0011	.0002
#2	.0007	.0004	.0005	.0011	-.0077	.0001	.0012	.0014
#3	.0006	-.0000	.0006	.0012	-.0076	-.0000	-.0020	.0020

Check ?  
High Limit  
Low Limit

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>-.0009</b>	<b>-.0017</b>	<b>.0019</b>
Stddev	.0010	.0008	.0016
%RSD	107.5	45.89	82.57
#1	-.0000	-.0013	.0013
#2	-.0020	-.0027	.0007
#3	-.0008	-.0012	.0037

Check ?  
High Limit  
Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>179720.</b>	<b>28035.</b>	<b>8006.9</b>	<b>10938.</b>
Stddev	2302.	82.	11.4	15.
%RSD	1.2807	.29076	.14289	.13946
#1	180860.	27948.	8018.5	10955.
#2	177070.	28047.	8006.7	10932.
#3	181230.	28110.	7995.6	10927.

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Sample Name: jc95815-19 Acquired: 10/4/2019 16:33:23 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 10.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.1721</b>	<b>.0033</b>	<b>.0036</b>	<b>.1083</b>	<b>.3362</b>	<b>.9580</b>	<b>3.452</b>	<b>.5458</b>	<b>.0299</b>
Stddev	.0029	.0008	.0012	.0009	.0031	.0025	.006	.0027	.0040
%RSD	1.701	22.90	33.51	.8051	9.227	.2574	.1663	.4932	13.32
#1	.1738	.0031	.0030	.1075	.3356	.9607	3.447	.5437	.0320
#2	.1687	.0028	.0029	.1092	.3334	.9575	3.449	.5448	.0323
#3	.1739	.0042	.0050	.1083	.3395	.9559	3.458	.5488	.0253

Elem V\_2924 Zn2062 As1890 Tl1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg **.0802** **.5381** **.0883** **.0026** **.1274** **-.0139** **.0047** **51.55** **32.58**  
 Stddev .0019 .0004 .0007 .0073 .0021 .0044 .0057 .21 .12  
 %RSD 2.431 .0775 .7747 286.1 1.619 31.77 123.3 .4057 .3755

#1 0.824 .5378 .0879 .0099 .1297 -.0114 -.0016 51.69 32.67  
 #2 0.793 .5380 .0891 .0025 .1256 -.0189 .0059 51.65 32.63  
 #3 0.789 .5386 .0880 -.0048 .1270 -.0112 .0097 51.31 32.44

Elem Fe2599 Mg2790 K\_7664 Na5895 B\_2089 Mo2020 Si2124 Sn1899 Sr4077  
 Units ppm ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg **1090.** **12.80** **2.451** **-.2435** **.0036** **.1318** **2.869** **.0792** **1.854**  
 Stddev 7.15 .290 .0939 .0054 .0022 .018 .6124 1.955 .4008  
 %RSD 6.592 1.148 11.82 38.54 15.14 1.655 .6124 1.955 .4008

#1 1087. 12.64 2.581 -.1380 -.0024 .1301 2.889 .0810 .1850  
 #2 1098. 12.92 2.119 -.3177 .0082 .1342 2.856 .0782 .1849  
 #3 1084. 12.85 2.654 -.2749 .0049 .1309 2.862 .0784 .1862

Elem Ti3349 W\_2079 Zr3391 S\_1820 Bi2230 Li6707 P\_1774 Ce4040  
 Units ppm ppm ppm ppm ppm ppm ppm ppm  
 Avg **8039** **-.0864** **.0278** **27.62** **.0541** **-.0800** **2.959** **.2330**  
 Stddev .0014 .0054 .0012 .05 .0101 .0101 .007 .0402  
 %RSD .1756 6.240 4.141 .1754 18.57 12.62 .2471 17.25

#1 8035 -.0836 .0274 27.56 .0534 -.0898 2.951 .2242  
 #2 8055 -.0829 .0291 27.66 .0645 -.0696 2.963 .1980  
 #3 8027 -.0926 .0269 27.63 .0444 -.0805 2.964 .2769

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Sample Name: jc95815-19 Acquired: 10/4/2019 16:33:23 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 10.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180710.	28492.	8004.1	10955.
Stddev	1104.	113.	6.9	16.
%RSD	.61111	.39540	.08634	.14681
#1	181220.	28551.	8009.3	10971.
#2	181470.	28362.	8006.8	10955.
#3	179440.	28563.	7996.3	10939.

Sample Name: jc95653-1 Acquired: 10/4/2019 16:38:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1315	.0026	.0008	.0156	.0779	.0266	.1291	.0607	.0015
Stddev	.0031	.0001	.0002	.0003	.0012	.0006	.0014	.0003	.0001
%RSD	2.358	3.985	21.21	1.715	1.527	2.104	1.093	.5553	6.525
#1	.1333	.0026	.0008	.0154	.0766	.0263	.1278	.0607	.0015
#2	.1332	.0027	.0006	.0154	.0790	.0272	.1306	.0610	.0016
#3	.1279	.0025	.0009	.0159	.0780	.0262	.1290	.0603	.0014
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	.3454	.0089	.0006	.0507	-.0023	.0063	19.70	19.81
Stddev	.0008	.0006	.0008	.0006	.0008	.0015	.0021	.55	.54
%RSD	4.078	.1603	9.059	103.4	1.524	63.50	33.38	2.769	2.744
#1	.0184	.3459	.0084	.0003	.0501	-.0029	.0076	20.03	20.14
#2	.0197	.3448	.0098	.0012	.0515	-.0035	.0075	20.00	20.11
#3	.0184	.3454	.0085	.0002	.0504	-.0007	.0039	19.07	19.18
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.70	11.58	4.307	49.40	1.325	.0044	28.47	-.0016	1.600
Stddev	1.37	.31	.092	1.25	.0011	.0004	.05	.0002	.0044
%RSD	2.705	2.649	2.136	2.523	8.253	8.450	1.607	14.49	2.776
#1	51.57	11.74	4.325	50.16	.1337	.0040	28.51	-.0017	1.625
#2	51.41	11.77	4.388	50.07	.1318	.0047	28.42	-.0017	1.626
#3	49.12	11.23	4.207	47.96	.1319	.0046	28.48	-.0013	1.548
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.1224	-.0200	.0024	36.51	.0052	.0031	.2263	.1215	
Stddev	.0007	.0014	.0001	.08	.0029	.0022	.0015	.0044	
%RSD	.6050	6.808	5.095	.2101	55.66	70.08	.6440	3.585	
#1	.1225	-.0189	.0023	36.53	.0036	.0042	.2277	.1213	
#2	.1231	-.0215	.0025	36.43	.0086	.0046	.2265	.1260	
#3	.1216	-.0194	.0023	36.58	.0035	.0006	.2248	.1173	

11.4  
11

Sample Name: jc95653-1 Acquired: 10/4/2019 16:38:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 2.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180830.	29153.	8064.6	10590.
Stddev	2212.	702.	11.7	11.
%RSD	1.2234	2.4073	.14504	.10217
#1	182750.	28756.	8058.6	10592.
#2	178410.	28739.	8078.1	10600.
#3	181340.	29963.	8057.2	10578.

Sample Name: iccsa Acquired: 10/4/2019 16:43:11 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0006	.0004	-.0003	.0013	.0007	.0001	.0028	.0025
Stddev	.0000	.0000	.0002	.0002	.0003	.0005	.0000	.0002	.0009
%RSD	9.755	2.340	42.15	70.59	23.57	82.40	41.81	5.486	34.03
#1	.0005	.0006	.0006	-.0001	.0014	.0012	.0001	.0027	.0035
#2	.0004	.0006	.0002	-.0002	.0015	.0006	.0001	.0027	.0023
#3	.0004	.0006	.0005	-.0006	.0009	.0001	.0002	.0029	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0051	.0018	.0006	.0003	.0002	.0012	-.0027	498.2	400.1
Stddev	.0003	.0000	.0012	.0017	.0020	.0008	.0011	5.8	3.3
%RSD	5.434	1.937	202.5	587.1	843.2	69.37	39.84	1.166	.8348
#1	-.0049	.0018	.0020	.0022	-.0013	.0020	-.0021	504.1	402.3
#2	-.0049	.0018	-.0001	-.0010	-.0005	.0003	-.0039	492.7	401.8
#3	-.0054	.0019	-.0001	-.0003	.0025	.0013	-.0021	500.7	396.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	199.9	508.7	.1143	.0114	-.0040	.0021	.0101	-.0015	-.0022
Stddev	2.0	.8	.0106	.0097	.0005	.0002	.0015	.0007	.0001
%RSD	.9873	.1636	9.264	85.05	12.14	7.693	14.67	45.66	4.322
#1	202.1	509.6	.1242	.0082	-.0044	.0023	.0107	-.0010	-.0021
#2	199.3	508.3	.1032	.0037	-.0042	.0020	.0084	-.0023	-.0023
#3	198.3	508.1	.1155	.0223	-.0035	.0020	.0112	-.0013	-.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: icsa Acquired: 10/4/2019 16:43:11 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.009</b>	<b>-0.074</b>	<b>0.019</b>	<b>0.069</b>	<b>-0.050</b>	<b>-0.019</b>	<b>-0.017</b>	<b>0.249</b>
Stddev	.0002	.0008	.0001	.0034	.0010	.0011	.0008	.0011
%RSD	22.02	11.12	5.171	49.45	20.37	9.566	5.757	4.310

#1 -0.008 -0.072 .0020 .0108 -0.060 -0.029 -0.0143 .0243  
 #2 -0.011 -0.084 .0018 .0046 -0.040 -0.017 -0.0141 .0243  
 #3 -0.007 -0.068 .0018 .0052 -0.051 -0.022 -0.0157 .0262

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass None  
 High Limit  
 Low Limit

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	160630.	27059.	7187.3	9247.3
Stddev	958.	179.	5.9	6.4
%RSD	.59652	.66296	.08241	.06947

#1 160120. 26852. 7193.5 9248.7  
 #2 161730. 27151. 7181.6 9240.3  
 #3 160030. 27173. 7186.8 9252.9

Sample Name: ICSAB Acquired: 10/4/2019 16:48:19 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5.009</b>	<b>.5063</b>	<b>.9909</b>	<b>4.746</b>	<b>4.861</b>	<b>4.971</b>	<b>5.073</b>	<b>.9549</b>	<b>1.031</b>
Stddev	.0009	.0009	.0017	.0009	.0012	.0006	.0005	.0010	.0012
%RSD	.1802	.1874	.1763	.1990	.2465	.1171	.0936	.1071	.1611

#1 5.019 .5073 .9929 .4757 4.851 4.971 5.072 .9558 1.031  
 #2 5.004 .5061 .9903 .4740 4.874 4.978 5.079 .9552 1.032  
 #3 5.004 .5055 .9896 .4741 4.857 4.966 .5070 .9538 1.029

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.823</b>	<b>.9417</b>	<b>.9924</b>	<b>.9561</b>	<b>8.758</b>	<b>9.711</b>	<b>.9573</b>	<b>4.972</b>	<b>3.779</b>
Stddev	.0007	.0012	.0010	.0014	.0022	.0052	.0019	4.2	5.6
%RSD	.1460	.1259	.1044	.1502	.2552	.5406	.2006	.8447	1.484

#1 4.822 .9410 .9933 .9551 8.784 .9695 .9566 500.7 376.1  
 #2 4.831 .9410 .9913 .9578 8.742 .9668 .9558 492.5 384.2  
 #3 4.817 .9430 .9927 .9555 8.748 .9769 .9594 498.4 373.4

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>186.0</b>	<b>499.0</b>	<b>.1255</b>	<b>0.292</b>	<b>4.713</b>	<b>4.541</b>	<b>4.927</b>	<b>.4360</b>	<b>5.065</b>
Stddev	1.7	.4	.0059	.0040	.0017	.0010	.0009	.0007	.0004
%RSD	.9341	.0838	4.669	13.69	3.640	2.149	1.852	1.665	0.743

#1 185.1 499.5 .1320 .0246 4.721 4.544 4.931 4.365 .5061  
 #2 188.0 498.8 .1207 .0313 4.693 4.530 4.917 4.351 .5064  
 #3 185.0 498.8 .1237 .0317 4.724 4.549 4.934 4.363 .5069

Check ? Chk Pass Chk Pass None None Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

11.4  
11

Sample Name: ICSAB Acquired: 10/4/2019 16:48:19 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.4784</b>	<b>.4246</b>	<b>4.862</b>	<b>4.666</b>	<b>4.889</b>	<b>4.974</b>	<b>.4532</b>	<b>.0071</b>
Stddev	.0010	.0034	.0013	.0036	.0006	.0019	.0002	.0013
%RSD	.2101	.8091	2.632	7.804	1.160	.3878	.0381	17.72

#1 .4778 .4207 4.850 4.671 4.871 4.990 .4534 .0085  
 #2 .4796 .4266 4.876 4.699 4.874 4.952 4.532 .0069  
 #3 .4779 .4266 4.861 4.627 4.863 4.979 4.530 .0060

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass None  
 Value  
 Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	160030.	27091.	7214.7	9298.1
Stddev	369.	48.	9.5	12.3
%RSD	.23038	.17862	.13163	.13229

#1 160370. 27064. 7208.6 9284.7  
 #2 159640. 27062. 7225.6 9308.9  
 #3 160100. 27147. 7209.8 9300.6

Sample Name: cvv Acquired: 10/4/2019 16:53:25 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.982</b>	<b>2.055</b>	<b>1.960</b>	<b>1.982</b>	<b>2.013</b>	<b>1.954</b>	<b>2.040</b>	<b>2.016</b>	<b>.2479</b>
Stddev	.008	.007	.000	.002	.001	.000	.010	.001	.0003
%RSD	4.180	.3326	.0118	.1022	.0679	.0188	4.715	.0261	.1015

#1 1.992 2.062 1.960 1.981 2.014 1.954 2.038 2.016 .2477  
 #2 1.975 2.049 1.960 1.980 2.014 1.955 2.050 2.015 .2482  
 #3 1.981 2.053 1.959 1.984 2.011 1.954 2.031 2.016 .2478

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.990</b>	<b>2.016</b>	<b>1.887</b>	<b>2.045</b>	<b>1.988</b>	<b>1.933</b>	<b>1.896</b>	<b>39.61</b>	<b>40.62</b>
Stddev	.001	.003	.001	.002	.002	.001	.002	.12	.12
%RSD	.0492	.1334	.0635	.1156	.1079	.0622	.0834	.2960	.2911

#1 1.990 2.019 1.887 2.042 1.987 1.933 1.894 39.74 40.75  
 #2 1.991 2.016 1.889 2.047 1.991 1.933 1.897 39.52 40.52  
 #3 1.989 2.014 1.886 2.045 1.987 1.935 1.896 39.58 40.58

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.27</b>	<b>40.45</b>	<b>39.54</b>	<b>40.01</b>	<b>1.968</b>	<b>1.906</b>	<b>5.016</b>	<b>1.930</b>	<b>2.028</b>
Stddev	.11	.03	.08	.04	.001	.001	.001	.001	.009
%RSD	.2665	.0624	.1951	.0982	.0300	.0573	.0250	.0354	.4455

#1 40.38 40.47 39.63 40.05 1.968 1.907 5.017 1.931 2.038  
 #2 40.18 40.46 39.49 40.00 1.967 1.905 5.014 1.930 2.028  
 #3 40.24 40.42 39.50 39.97 1.968 1.907 5.016 1.931 2.020

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value  
 Range

Sample Name: ccv Acquired: 10/4/2019 16:53:25 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.920	1.857	1.942	1.871	1.948	1.955	1.955	1.993
Stddev	.003	.003	.001	.003	.002	.006	.002	.003
%RSD	.1409	.1492	.0645	.1766	.1024	.3019	.0859	.1393
#1	1.922	1.860	1.943	1.872	1.948	1.957	1.954	1.990
#2	1.917	1.857	1.941	1.867	1.947	1.948	1.955	1.993
#3	1.920	1.854	1.941	1.873	1.950	1.959	1.957	1.995

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	173670	27522	7749.1	10163
Stddev	234	90	12.9	12
%RSD	.13492	.32839	.16671	.12138
#1	173900	27557	7752.8	10173
#2	173430	27419	7734.7	10150
#3	173680	27589	7759.7	10167

Sample Name: ccb Acquired: 10/4/2019 16:58:20 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0007	.0005	.0006	.0010	.0008	.0008	.0007
Stddev	.0002	.0002	.0000	.0000	.0001	.0001	.0000	.0001
%RSD	18.94	27.58	4.789	8.265	12.65	16.35	3.840	18.31
#1	.0007	.0005	.0005	.0006	.0009	.0007	.0008	.0006
#2	.0009	.0006	.0005	.0005	.0011	.0009	.0008	.0008
#3	.0010	.0009	.0004	.0006	.0011	.0007	.0008	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0008	.0004	.0014	-.0004	-.0003	.0005	.0006
Stddev	.0003	.0002	.0002	.0001	.0002	.0005	.0006	.0006
%RSD	89.42	21.54	45.30	9.670	53.98	180.7	126.1	92.77
#1	.0006	.0009	.0006	.0013	-.0003	-.0002	.0005	.0006
#2	.0001	.0006	.0003	.0014	-.0003	-.0008	-.0001	.0001
#3	.0002	.0008	.0003	.0015	-.0007	.0002	.0010	.0013

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0138	.0140	.0211	-.0217	-.0107	.0009	.0008
Stddev	.0030	.0031	.0030	.0117	.0142	.0079	.0005	.0001
%RSD	30.29	22.68	21.18	55.48	65.75	74.32	51.17	13.91
#1	.0080	.0109	.0106	.0078	-.0062	-.0152	.0008	.0009
#2	.0133	.0134	.0157	.0297	-.0246	-.0153	.0014	.0008
#3	.0082	.0171	.0156	.0260	-.0342	-.0015	.0005	.0006

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit

Sample Name: ccb Acquired: 10/4/2019 16:58:20 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0005	.0006	.0006	F -.0078	.0002	-.0001	.0008
Stddev	.0008	.0002	.0002	.0002	.0008	.0001	.0012	.0009
%RSD	53.03	33.95	28.47	25.97	9.944	46.44	906.3	111.3
#1	.0008	.0007	.0004	.0005	-.0074	.0003	-.0008	.0019
#2	.0024	.0004	.0007	.0008	-.0074	.0001	-.0008	.0002
#3	.0014	.0005	.0008	.0006	-.0087	.0002	.0012	.0004

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail .0050 Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit -0.0050

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	-.0010	-.0020	-.0020
Stddev	.0005	.0002	.0003
%RSD	52.65	9.349	13.42
#1	-.0010	-.0019	-.0020
#2	-.0014	-.0020	-.0023
#3	-.0004	-.0022	-.0017

Check ? Chk Pass Chk Pass Chk Pass

Int. Std. Units	Y_3600	Y_3710	Y_2243	In2306
Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182220	27989	8009.9	10967
Stddev	694	233	28.1	29
%RSD	.38106	.83194	.35138	.26738
#1	182950	27858	7990.7	10950
#2	181570	27850	7996.7	10951
#3	182130	28258	8042.2	11001

Sample Name: jc95653-8 Acquired: 10/4/2019 17:03:21 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3586	.0038	.0053	.0713	.0047	.0249	1.494	.0990	-.0002
Stddev	.0012	.0000	.0001	.0004	.0002	.0004	.006	.0002	.0001
%RSD	.3470	.7252	1.676	4.946	4.214	1.528	4.058	.2083	44.19
#1	.3599	.0038	.0054	.0717	.0045	.0245	1.489	.0991	-.0002
#2	.3585	.0039	.0053	.0711	.0047	.0252	1.500	.0992	-.0004
#3	.3574	.0038	.0053	.0710	.0049	.0248	1.492	.0988	-.0002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.7268	.0091	.0001	.0067	-.0008	-.0001	8.009	41.92
Stddev	.0002	.0010	.0001	.0004	.0014	.0008	.0002	.023	.11
%RSD	6.360	.1357	8375	464.0	21.19	94.77	124.5	.2914	.2595
#1	.0027	.7261	.0091	.0003	.0084	-.0015	-.0002	8.010	42.04
#2	.0029	.7280	.0091	-.0004	.0057	-.0009	-.0003	8.032	41.90
#3	.0026	.7265	.0090	.0003	.0061	.0000	.0001	7.986	41.82

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.211	41.58	5.174	F 226.0	.0770	.0001	4.935	-.0015	.4639
Stddev	.001	.06	.004	.8	.0003	.0002	.002	.0004	.0006
%RSD	.0902	.1398	.0856	.3420	.4442	194.7	.0399	25.82	.1386
#1	1.210	41.64	5.179	226.8	.0773	.0001	4.937	-.0018	.4641
#2	1.212	41.57	5.173	225.4	.0772	.0002	4.935	-.0017	.4632
#3	1.212	41.52	5.170	225.6	.0767	-.0001	4.933	-.0011	.4645

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Value High Limit Low Limit



Sample Name: jc95653-8 Acquired: 10/4/2019 17:03:21 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	202050.	34092.	9058.3	9670.4
Stddev	1103.	201.	16.6	15.1
%RSD	.54582	.58974	.18313	.15627
#1	203280.	34042.	9066.2	9670.8
#2	201160.	33920.	9039.2	9655.1
#3	201720.	34313.	9069.4	9685.3

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Sample Name: jc95653-10 Acquired: 10/4/2019 17:08:34 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7660	.0029	.0064	.0361	.0026	.0190	.5429	.1077	-.0002
Stddev	.0021	.0000	.0001	.0003	.0002	.0002	.0021	.0002	.0002
%RSD	.2727	1.402	1.447	.8798	7.816	1.024	.3850	.1981	107.0
#1	.7667	.0029	.0063	.0362	.0027	.0192	.5445	.1079	.0000
#2	.7677	.0029	.0064	.0364	.0026	.0188	.5436	.1076	-.0002
#3	.7637	.0028	.0065	.0357	.0023	.0189	.5405	.1075	-.0004
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.9603	.0106	-.0005	.0141	-.0006	-.0004	7.118	72.96
Stddev	.0002	.0004	.0003	.0005	.0009	.0006	.0010	.015	.38
%RSD	20.83	.0429	2.479	113.0	6.645	98.17	225.0	.2137	.5144
#1	.0010	.9598	.0109	-.0000	.0151	-.0002	-.0010	7.127	73.14
#2	.0009	.9606	.0104	-.0010	.0132	-.0003	.0007	7.127	73.22
#3	.0013	.9603	.0104	-.0004	.0142	-.0012	-.0010	7.100	72.53
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2434	45.91	5.839	199.5	.0387	.0002	4.659	-.0015	.5397
Stddev	.0009	.07	.037	1.8	.0001	.0002	.005	.0001	.0005
%RSD	.3744	.1499	.6375	.8922	.1791	127.2	.1168	9.118	.0861
#1	.2433	45.94	5.852	198.3	.0387	.0004	4.664	-.0015	.5395
#2	.2426	45.97	5.869	201.5	.0387	.0000	4.660	-.0014	.5402
#3	.2444	45.84	5.797	198.7	.0386	.0001	4.653	-.0016	.5393
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0012	-.0097	.0014	4.197	-.0004	.0120	.0148	.6987	
Stddev	.0003	.0003	.0001	.007	.0006	.0009	.0002	.0026	
%RSD	23.03	3.530	7.441	.1663	134.9	7.281	1.255	.3707	
#1	.0012	-.0093	.0013	4.195	-.0011	.0126	.0149	.7017	
#2	.0015	-.0100	.0014	4.204	.0001	.0110	.0150	.6977	
#3	.0009	-.0097	.0015	4.190	-.0003	.0123	.0146	.6968	

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Sample Name: jc95653-10 Acquired: 10/4/2019 17:08:34 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	190530.	31911.	8503.5	9737.8
Stddev	560.	76.	7.2	2.6
%RSD	.29395	.23804	.08420	.02709
#1	189890.	31883.	8510.9	9740.7
#2	190760.	31854.	8496.6	9737.1
#3	190940.	31997.	8502.8	9735.6

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Sample Name: jc95653-11 Acquired: 10/4/2019 17:13:48 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7549	.0029	.0070	.0361	.0029	.0210	.5391	.1117	-.0001
Stddev	.0004	.0001	.0001	.0003	.0002	.0002	.0011	.0002	.0001
%RSD	.0500	2.920	1.959	.7125	6.477	1.127	.1971	.1748	117.8
#1	.7553	.0030	.0069	.0360	.0028	.0208	.5379	.1115	-.0003
#2	.7546	.0028	.0070	.0359	.0027	.0211	.5393	.1117	-.0000
#3	.7549	.0029	.0072	.0364	.0031	.0212	.5400	.1119	-.0000
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.9741	.0109	-.0009	.0137	-.0013	-.0006	7.253	72.39
Stddev	.0004	.0014	.0010	.0014	.0010	.0008	.0007	.018	.21
%RSD	31.05	.1470	9.358	151.6	7.314	61.48	115.8	.2524	.2955
#1	.0008	.9728	.0120	-.0006	.0131	-.0005	-.0011	7.253	72.62
#2	.0015	.9756	.0102	-.0013	.0132	-.0012	.0002	7.235	72.21
#3	.0013	.9739	.0104	-.0021	.0149	-.0021	-.0009	7.272	72.34
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5056	45.55	5.896	197.2	.0382	.0001	4.854	-.0014	.5370
Stddev	.0007	.10	.037	4.7	.0002	.0000	.012	.0003	.0007
%RSD	.1352	.2226	.6249	2.381	.5804	23.99	.2549	18.28	.1301
#1	.5056	45.48	5.886	193.9	.0383	.0001	4.840	-.0013	.5370
#2	.5049	45.51	5.865	195.2	.0380	.0001	4.859	-.0017	.5363
#3	.5063	45.67	5.937	202.6	.0384	.0001	4.863	-.0012	.5377
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0027	-.0093	.0015	4.226	-.0010	.0118	.0160	.6959	
Stddev	.0004	.0005	.0001	.007	.0024	.0008	.0008	.0071	
%RSD	15.89	5.087	7.340	.1769	242.6	6.425	4.915	1.020	
#1	.0028	-.0089	.0014	4.218	-.0013	.0126	.0151	.6883	
#2	.0031	-.0098	.0014	4.231	-.0033	.0113	.0167	.7023	
#3	.0022	-.0093	.0016	4.230	.0016	.0113	.0161	.6970	

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Sample Name: jc95653-11 Acquired: 10/4/2019 17:13:48 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	190400.	31668.	8453.5	9712.4
Stddev	1006.	328.	15.4	8.9
%RSD	.52819	1.0349	.18253	.09123
#1	191370.	32031.	8453.1	9706.2
#2	189360.	31581.	8438.3	9708.4
#3	190470.	31393.	8469.2	9722.5

Sample Name: jc95653-1f Acquired: 10/4/2019 17:18:58 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0441	.0018	.0008	.0140	.0039	.0070	.0934	.0356	.0001
Stddev	.0005	.0001	.0001	.0001	.0002	.0002	.0001	.0002	.0004
%RSD	1.139	4.178	8.531	.7044	5.740	2.860	.0855	.6658	493.8
#1	.0438	.0017	.0009	.0139	.0037	.0068	.0934	.0359	.0003
#2	.0447	.0018	.0007	.0141	.0041	.0072	.0935	.0357	.0003
#3	.0438	.0018	.0009	.0141	.0038	.0069	.0933	.0354	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.1980	.0011	-.0005	.0023	-.0005	.0014	3.084	19.83
Stddev	.0004	.0000	.0004	.0004	.0006	.0012	.0001	.032	.13
%RSD	291.0	.0030	36.30	82.15	27.02	232.5	6.937	1.021	.6689
#1	-.0002	.1980	.0006	-.0010	.0016	-.0018	.0014	3.054	19.72
#2	.0006	.1980	.0013	-.0003	.0026	.0007	.0015	3.117	19.97
#3	.0000	.1980	.0013	-.0002	.0027	-.0006	.0013	3.080	19.79

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.517	9.955	2.381	51.02	.1285	.0002	5.706	-.0016	1.563
Stddev	.013	.091	.008	.42	.0005	.0000	.003	.0005	.0014
%RSD	.8777	.9132	.3409	.8171	.3980	20.00	.0592	29.22	.8851
#1	1.505	9.891	2.379	50.68	.1286	.0002	5.709	-.0021	.1551
#2	1.532	10.06	2.389	51.49	.1279	.0003	5.703	-.0012	.1578
#3	1.514	9.916	2.373	50.91	.1289	.0003	5.707	-.0016	.1560

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0091	.0000	35.91	-.0013	.0086	.0161	.0401
Stddev	.0004	.0008	.0001	.04	.0020	.0008	.0002	.0020
%RSD	131.8	8.440	153.8	.0988	147.9	9.032	1.300	4.861
#1	-.0004	-.0099	.0001	35.95	-.0031	.0081	.0159	.0397
#2	-.0006	-.0086	.0001	35.90	.0008	.0081	.0162	.0422
#3	.0001	-.0086	-.0000	35.88	-.0018	.0095	.0163	.0384

11.4  
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Sample Name: jc95653-1f Acquired: 10/4/2019 17:18:58 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181330.	29029.	7993.8	10509.
Stddev	664.	226.	15.5	18.
%RSD	.36622	.77945	.19376	.17403
#1	182100.	29054.	8010.5	10530.
#2	181000.	28792.	7991.0	10496.
#3	180900.	29242.	7979.9	10502.

Sample Name: jc95653-8f Acquired: 10/4/2019 17:23:46 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3721	.0039	.0054	.0736	.0025	.0226	1.545	.1023	.0000
Stddev	.0010	.0000	.0000	.0002	.0001	.0001	.009	.0004	.0001
%RSD	.2730	.5250	.9127	.2629	5.543	.4829	.5856	.3664	273.9
#1	.3718	.0039	.0054	.0739	.0027	.0225	1.535	.1026	.0000
#2	.3712	.0039	.0054	.0735	.0025	.0225	1.548	.1023	.0002
#3	.3732	.0039	.0054	.0735	.0024	.0227	1.553	.1019	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.7467	.0087	.0008	.0070	-.0008	.0001	7.795	43.54
Stddev	.0001	.0011	.0001	.0005	.0004	.0007	.0009	.019	.11
%RSD	19.37	.1420	.9889	58.82	5.482	78.20	640.1	.2472	.2607
#1	.0007	.7479	.0088	.0003	.0068	-.0012	-.0001	7.799	43.54
#2	.0006	.7463	.0086	.0009	.0074	-.0001	.0011	7.775	43.42
#3	.0009	.7458	.0087	.0012	.0067	-.0013	-.0006	7.813	43.65

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1863	42.94	5.258	F 230.9	.0783	.0001	3.870	-.0012	.4817
Stddev	.0016	.11	.024	4.4	.0005	.0001	.007	.0001	.0002
%RSD	.8365	.2612	.4629	1.917	.6058	107.9	.1740	6.969	.0323
#1	.1845	42.92	5.233	228.0	.0779	.0001	3.876	-.0013	.4815
#2	.1870	42.84	5.282	228.8	.0789	.0000	3.871	-.0012	.4818
#3	.1874	43.06	5.260	236.0	.0782	.0002	3.863	-.0011	.4818

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0098	.0018	15.94	.0003	.0096	.0164	4.171
Stddev	.0001	.0009	.0000	.04	.0005	.0011	.0010	.0017
%RSD	33.65	9.543	.6721	.2432	156.1	11.77	6.164	4.105
#1	-.0002	-.0107	.0018	15.98	.0003	.0087	.0171	4.190
#2	-.0003	-.0089	.0018	15.93	.0009	.0093	.0169	4.158
#3	-.0005	-.0099	.0018	15.90	-.0001	.0109	.0153	4.165

Sample Name: jc95653-8f Acquired: 10/4/2019 17:23:46 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	205160.	34320.	9123.6	9729.8
Stddev	372.	250.	7.8	19.6
%RSD	.18141	.72944	.08602	.20142
#1	205390.	34388.	9115.2	9709.4
#2	205360.	34529.	9125.0	9731.6
#3	204730.	34043.	9130.7	9748.4

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Sample Name: jc95653-10f Acquired: 10/4/2019 17:29:00 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7713	.0030	.0059	.0356	.0016	.0217	.5282	.0999	-.0001
Stddev	.0009	.0000	.0000	.0001	.0001	.0000	.0020	.0002	.0002
%RSD	.1105	.7086	.7481	.2829	6.203	.2274	.3855	.2425	420.2
#1	.7721	.0030	.0059	.0356	.0015	.0217	.5268	.1002	-.0003
#2	.7714	.0030	.0059	.0356	.0015	.0217	.5306	.0998	.0001
#3	.7704	.0029	.0059	.0355	.0017	.0218	.5273	.0998	.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.9256	.0101	-.0002	.0146	-.0017	.0000	7.542	78.43
Stddev	.0003	.0014	.0003	.0003	.0007	.0014	.0005	.007	1.11
%RSD	93.39	.1481	2.642	101.4	4.712	80.41	595.9	.0917	1.413
#1	.0002	.9254	.0098	-.0005	.0145	-.0033	.0006	7.546	78.12
#2	.0001	.9270	.0104	-.0001	.0139	-.0013	-.0003	7.545	77.50
#3	.0007	.9243	.0100	-.0001	.0153	-.0006	-.0002	7.534	79.65

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0259	45.52	5.767	F 201.0	.0376	.0000	4.429	-.0015	.5436
Stddev	.0009	.02	.021	3.9	.0004	.0000	.006	.0003	.0005
%RSD	3.283	.0354	.3558	1.961	1.045	167.3	.1280	.0231	.0977
#1	.0249	45.50	5.761	198.9	.0381	.0000	4.436	-.0018	.5435
#2	.0264	45.54	5.790	198.6	.0375	-.0000	4.424	-.0012	.5441
#3	.0264	45.52	5.750	205.6	.0374	.0001	4.428	-.0015	.5431

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0103	.0016	4.256	.0005	.0134	.0114	.7505
Stddev	.0002	.0007	.0001	.007	.0013	.0006	.0001	.0032
%RSD	28.11	7.193	8.898	.1634	272.4	4.766	1.037	4.242
#1	-.0008	-.0110	.0015	4.264	.0010	.0141	.0113	.7513
#2	-.0005	-.0104	.0017	4.253	.0015	.0132	.0115	.7532
#3	-.0005	-.0095	.0018	4.251	-.0010	.0128	.0114	.7470

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Sample Name: jc95653-10f Acquired: 10/4/2019 17:29:00 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	190450.	31972.	8494.1	9755.4
Stddev	621.	82.	17.8	19.0
%RSD	.32610	.25649	.20979	.19488
#1	190920.	31969.	8500.9	9759.4
#2	189750.	32056.	8473.9	9734.7
#3	190680.	31892.	8507.6	9772.1

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Sample Name: jc95653-11f Acquired: 10/4/2019 17:34:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7674	.0029	.0060	.0350	.0018	.0194	.5337	.1014	-.0001
Stddev	.0009	.0001	.0001	.0003	.0002	.0006	.0006	.0006	.0001
%RSD	.1209	2.452	1.153	.8521	12.39	3.279	1.568	.5516	79.05
#1	.7668	.0029	.0060	.0351	.0021	.0199	.5377	.1021	-.0000
#2	.7670	.0028	.0061	.0347	.0018	.0198	.5393	.1012	-.0001
#3	.7685	.0030	.0060	.0353	.0016	.0187	.5241	.1010	-.0001

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.9355	.0099	-.0005	.0144	-.0005	-.0000	7.170	73.92
Stddev	.0003	.0030	.0003	.0012	.0005	.0008	.0006	.022	1.34
%RSD	76.20	.3240	3.508	255.4	3.761	150.7	4286.	.3072	1.806
#1	.0005	.9389	.0095	-.0007	.0141	-.0011	-.0002	7.145	72.40
#2	.0006	.9331	.0102	-.0008	.0150	-.0008	-.0005	7.176	74.49
#3	.0001	.9344	.0101	-.0015	.0140	.0004	.0006	7.188	74.88

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0222	45.36	5.804	194.4	.0379	.0001	4.423	-.0015	.5394
Stddev	.0007	.04	.007	2.8	.0005	.0002	.011	.0004	.0004
%RSD	3.174	.0885	.1139	1.451	1.340	409.3	.2489	24.16	.0757
#1	.0217	45.33	5.804	192.7	.0384	.0003	4.435	-.0013	.5394
#2	.0218	45.40	5.797	197.6	.0374	-.0001	4.419	-.0013	.5391
#3	.0230	45.35	5.810	192.8	.0380	-.0001	4.414	-.0019	.5399

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0103	.0012	4.131	-.0001	.0131	.0114	.7151
Stddev	.0002	.0006	.0000	.010	.0008	.0004	.0005	.0109
%RSD	35.52	6.023	.9387	.2475	101.7	2.797	4.123	1.528
#1	-.0007	-.0102	.0012	4.143	-.0008	.0131	.0114	.7199
#2	-.0006	-.0098	.0012	4.124	-.0002	.0128	.0119	.7229
#3	-.0003	-.0110	.0012	4.126	-.0009	.0135	.0109	.7027

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Sample Name: jc95653-11f Acquired: 10/4/2019 17:34:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	190120.	31841.	8451.6	9761.3
Stddev	2894.	346.	24.1	21.3
%RSD	1.5220	1.0858	.28524	.21809
#1	189130.	32094.	8424.2	9740.1
#2	187850.	31447.	8469.8	9782.6
#3	193380.	31981.	8460.6	9761.2

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Sample Name: mp17697-mb1 Acquired: 10/4/2019 17:39:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.0002	-0.003	.0001	.0016	.1680	.0069	.0010	.0007
Stddev	.0007	.0001	.0004	.0001	.0013	.0023	.0002	.0008	.0003
%RSD	13.81	32.84	111.4	100.1	80.93	1.399	2.977	76.69	40.53
#1	.0051	.0001	.0001	-0.000	.0016	.1703	.0068	.0002	.0009
#2	.0041	.0002	-0.004	.0002	.0004	.1681	.0071	.0012	.0004
#3	.0053	.0003	-0.007	.0002	.0030	.1656	.0068	.0016	.0009
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0007	.5366	-0.0000	-0.0040	-0.0222	.0016	-0.0031	.1279	.4082
Stddev	.0003	.0010	.0018	.0063	.0013	.0069	.0042	.0104	.0049
%RSD	48.17	.1930	17580.	156.4	59.99	441.9	137.7	8.118	1.193
#1	-.0011	.5367	-.0017	-.0010	-.0009	.0081	-.0013	.1388	.4055
#2	-.0005	.5376	-.0003	-.0112	-.0021	.0023	.0000	.1182	.4053
#3	-.0006	.5356	.0019	.0002	-.0035	-.0057	-.0079	.1268	.4138
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4107	.0897	.5904	.8786	.0277	-0.0008	1.375	.0009	.0024
Stddev	.0042	.0225	.0820	.0517	.0007	.0008	.003	.0015	.0002
%RSD	1.017	25.11	13.88	5.880	2.447	90.42	.1876	155.9	6.321
#1	.4154	.0918	.6851	.9361	.0269	-.0009	1.372	.0020	.0024
#2	.4092	.1111	.5416	.8362	.0281	-.0016	1.375	-.0007	.0025
#3	.4074	.0662	.5447	.8635	.0282	-.0001	1.377	.0016	.0022
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0008	-0.0462	-0.0026	.0945	.0060	.0162	-0.0108	-0.0169	
Stddev	.0007	.0021	.0005	.0048	.0031	.0065	.0038	.0105	
%RSD	94.14	4.471	21.38	5.062	50.94	39.91	35.52	62.10	
#1	.0013	-.0480	-.0030	.0935	.0043	.0092	-.0077	-.0092	
#2	.0010	-.0467	-.0028	.0997	.0096	.0175	-.0151	-.0126	
#3	-.0000	-.0440	-.0019	.0903	.0042	.0219	-.0095	-.0289	

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11.4  
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Sample Name: mp17697-mb1 Acquired: 10/4/2019 17:39:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	183160.	28832.	8082.7	11117.
Stddev	1908.	145.	18.1	22.
%RSD	1.0419	.50320	.22401	.19605
#1	181330.	28666.	8066.0	11095.
#2	183000.	28893.	8080.1	11116.
#3	185140.	28937.	8101.9	11139.

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Sample Name: mp17697-b1 Acquired: 10/4/2019 17:44:28 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.122	2.210	2.115	2.084	2.142	2.031	2.238	2.157	.2688
Stddev	.004	.003	.002	.001	.017	.010	.017	.001	.0011
%RSD	.1684	.1136	.0788	.0529	.7776	.4724	.7435	.0394	.3954
#1	2.126	2.213	2.114	2.083	2.162	2.042	2.257	2.156	.2701
#2	2.120	2.209	2.117	2.085	2.131	2.029	2.227	2.156	.2681
#3	2.120	2.208	2.114	2.083	2.134	2.023	2.230	2.158	.2684
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.082	2.269	1.989	2.238	2.122	2.074	2.031	26.43	31.59
Stddev	.016	.003	.005	.009	.001	.003	.006	.03	.02
%RSD	.7575	.1219	.2454	.3888	.0595	.1652	.2978	.1047	.0582
#1	2.100	2.267	1.990	2.231	2.121	2.076	2.031	26.44	31.58
#2	2.074	2.269	1.994	2.236	2.124	2.075	2.038	26.40	31.61
#3	2.072	2.272	1.984	2.248	2.122	2.070	2.026	26.45	31.57
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.96	26.88	26.53	27.42	2.077	2.046	4.469	2.091	2.177
Stddev	.01	.11	.12	.04	.004	.004	.0021	.003	.002
%RSD	.0489	.4223	.4639	.1436	.1891	.2036	.4755	.1633	.0875
#1	26.96	26.82	26.65	27.42	2.074	2.042	4.462	2.093	2.179
#2	26.95	27.01	26.40	27.46	2.081	2.050	4.453	2.092	2.176
#3	26.98	26.81	26.53	27.39	2.076	2.048	4.493	2.087	2.175
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	2.015	1.900	2.046	3.246	0.564	0.057	2.025	-0.0895	
Stddev	.013	.005	.013	.0061	.0061	.0060	.007	.0063	
%RSD	.6435	.2816	.6469	1.887	10.81	104.6	3.264	7.019	
#1	2.030	1.894	2.062	3.233	.0576	.0104	2.019	-.0964	
#2	2.009	1.900	2.037	3.313	.0498	.0078	2.025	-.0879	
#3	2.006	1.905	2.040	3.192	.0618	-.0010	2.032	-.0842	

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Sample Name: mp17697-b1 Acquired: 10/4/2019 17:44:28 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	183010.	28669.	8045.7	10872.
Stddev	1858.	227.	13.3	13.
%RSD	1.0155	.79028	.16530	.12099

#1 180870. 28917. 8048.6 10872.  
#2 184200. 28619. 8057.4 10886.  
#3 183950. 28473. 8031.2 10859.

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.946	2.034	1.888	2.044	1.989	1.939	1.904	39.70	40.28
Stddev	.004	.005	.005	.004	.003	.005	.004	.05	.08
%RSD	.1923	.2673	.2624	.2109	.1440	.2584	.2337	.1176	.1943

#1 1.950 2.037 1.892 2.049 1.990 1.936 1.905 39.72 40.29  
#2 1.943 2.036 1.890 2.042 1.991 1.945 1.908 39.65 40.20  
#3 1.945 2.027 1.883 2.042 1.986 1.937 1.900 39.74 40.35

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.24	39.90	39.47	39.57	1.968	1.890	5.046	1.913	2.033
Stddev	.04	.09	.02	.01	.003	.003	.009	.002	.002
%RSD	.0959	.2241	.0613	.0323	.1507	.1816	.1811	.1240	.0922

#1 40.25 39.85 39.50 39.56 1.970 1.891 5.048 1.913 2.034  
#2 40.19 39.86 39.45 39.57 1.969 1.893 5.054 1.916 2.031  
#3 40.27 40.01 39.48 39.59 1.964 1.887 5.036 1.911 2.034

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

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11.4

11

Sample Name: ccv Acquired: 10/4/2019 17:49:12 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.897	1.849	1.945	1.854	1.943	1.941	1.949	1.978
Stddev	.007	.003	.003	.003	.005	.003	.004	.009
%RSD	.3825	.1507	.1468	.1797	.2415	.1320	.2006	.4531

#1 1.906 1.851 1.948 1.855 1.948 1.942 1.953 1.989  
#2 1.893 1.851 1.942 1.856 1.943 1.938 1.948 1.974  
#3 1.893 1.846 1.944 1.850 1.939 1.942 1.946 1.972

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	175720.	28095.	7759.8	10282.
Stddev	147.	76.	22.5	20.
%RSD	.08343	.27102	.28988	.19377

#1 175610. 28122. 7741.1 10263.  
#2 175660. 28154. 7753.5 10280.  
#3 175890. 28009. 7784.7 10303.

Check ? High Limit Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.005	0.000	-0.004	0.002	-0.008	0.001	-0.006	-0.010
Stddev	0.001	0.002	0.000	0.004	0.010	0.005	0.005	0.009
%RSD	25.31	1113.	10.19	270.6	130.1	394.6	74.88	95.26

#1 .0005 .0001 -0.0003 .0006 -0.001 -0.000 -0.002 .001  
#2 .0004 -0.002 -0.004 -0.002 -0.002 -0.003 -0.006 -0.017  
#3 .0007 .0001 -0.003 .0001 -0.003 .0007 -0.011 -0.014

Check ? High Limit Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.022	0.011	0.020	0.056	0.128	0.547	0.009	0.001
Stddev	.0061	.0013	.0006	.0025	.0179	.0056	.0007	.001
%RSD	272.0	119.8	31.04	44.50	140.0	10.31	76.10	65.69

#1 .0019 -0.0003 .0026 .0062 -0.0033 .0542 .0013 .001  
#2 .0006 .0022 .0014 .0029 .0096 .0607 .0011 .0000  
#3 -.0092 .0014 .0020 .0078 .0321 .0494 .0001 .001

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Sample Name: ccb Acquired: 10/4/2019 17:54:02 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns for Element (Si, Sn, Sr, Ti, W, Zr, S, Bi), Units, and various metrics (Avg, Stddev, %RSD).

Table with 3 rows (#1, #2, #3) and 8 columns for different element measurements.

Check High Limit / Low Limit table with 8 columns for element measurements.

Table with columns for Element (Li, P, Ce), Units, and various metrics (Avg, Stddev, %RSD).

Table with 3 rows (#1, #2, #3) and 4 columns for element measurements.

Check High Limit / Low Limit table with 4 columns for element measurements.

Table with columns for Int. Std. Units, Y\_3600, Y\_3710, Y\_2243, In2306, and various metrics.

Table with 3 rows (#1, #2, #3) and 5 columns for element measurements.

Sample Name: mp17697-s1 Acquired: 10/4/2019 17:59:06 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns for Element (Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Ag), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 11 columns for element measurements.

Table with columns for Element (V, Zn, As, Ti, Pb, Se, Sb, Al, Ca), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 10 columns for element measurements.

Table with columns for Element (Fe, Mg, K, Na, B, Mo, Si, Sn, Sr), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 10 columns for element measurements.

Table with columns for Element (Ti, W, Zr, S, Bi, Li, P, Ce), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 10 columns for element measurements.

Sample Name: mp17697-s1 Acquired: 10/4/2019 17:59:06 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns for Int. Std. Units, Y\_3600, Y\_3710, Y\_2243, In2306, and various metrics.

Table with 3 rows (#1, #2, #3) and 5 columns for element measurements.

Sample Name: mp17697-s2 Acquired: 10/4/2019 18:03:52 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns for Element (Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Ag), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 11 columns for element measurements.

Table with columns for Element (V, Zn, As, Ti, Pb, Se, Sb, Al, Ca), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 10 columns for element measurements.

Table with columns for Element (Fe, Mg, K, Na, B, Mo, Si, Sn, Sr), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 10 columns for element measurements.

Table with columns for Element (Ti, W, Zr, S, Bi, Li, P, Ce), Units, and various metrics.

Table with 3 rows (#1, #2, #3) and 10 columns for element measurements.

Zoom In  
Zoom Out

Sample Name: mp17697-s2 Acquired: 10/4/2019 18:03:52 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	166290.	27652.	7288.1	9549.8
Stddev	374.	222.	10.5	9.8
%RSD	.22513	.80273	.14458	.10279

#1	166620.	27401.	7295.1	9547.9
#2	166370.	27734.	7293.3	9560.5
#3	165890.	27822.	7276.0	9541.1

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Zoom In  
Zoom Out

Sample Name: jc95862-1 Acquired: 10/4/2019 18:08:38 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4783	.0003	.0125	.0611	.0046	.0116	1.498	.1216	-.0002
Stddev	.0014	.0002	.0005	.0010	.0008	.0010	.004	.0008	.0011
%RSD	.2968	49.98	3.757	1.637	17.54	8.521	.2594	.6732	505.5

#1	.4799	.0005	.0128	.0621	.0047	.0120	1.502	.1225	-.0003
#2	.4774	.0003	.0119	.0610	.0053	.0123	1.497	.1210	-.0013
#3	.4776	.0002	.0127	.0601	.0037	.0105	1.494	.1213	.0010

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	1.637	.0161	-.0012	-.0139	-.0016	.6133	.3049	F 2488.
Stddev	.0003	.001	.0016	.0008	.0055	.0139	.0046	.0082	.39
%RSD	7.543	.0584	9.948	63.25	39.70	860.0	.7514	2.687	1.584

#1	.0046	1.638	.0149	-.0018	-.0089	-.0135	.6100	.3054	2485.
#2	.0040	1.636	.0179	-.0003	-.0130	.0136	.6114	.2965	2450.
#3	.0040	1.637	.0154	-.0014	-.0198	-.0050	.6186	.3128	2529.

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1784	109.3	133.9	263.3	1.795	.0804	10.42	-.0018	4.417
Stddev	.0009	.2	.2	.4	.002	.0006	.01	.0004	.006
%RSD	.5222	.1967	.1663	.1372	.1090	.7415	.1219	24.25	1.479

#1	.1788	109.5	134.1	263.7	1.797	.0803	10.44	-.0013	4.424
#2	.1791	109.1	133.7	263.0	1.794	.0810	10.41	-.0022	4.414
#3	.1773	109.2	133.9	263.4	1.795	.0798	10.42	-.0017	4.412

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0325	.0063	301.1	.0147	.1524	.1521	.0181
Stddev	.0012	.0047	.0003	.2	.0021	.0034	.0018	.0103
%RSD	89.96	14.32	4.933	.0550	14.56	2.202	1.187	57.03

#1	-.0024	-.0364	.0062	301.3	.0126	.1485	.1502	.0109
#2	-.0015	-.0274	.0066	300.9	.0169	.1541	.1523	.0135
#3	-.0001	-.0338	.0060	301.1	.0147	.1545	.1538	.0299

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Zoom In  
Zoom Out

Sample Name: jc95862-1 Acquired: 10/4/2019 18:08:38 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	165270.	27395.	7282.7	9568.9
Stddev	913.	149.	18.7	16.4
%RSD	.55226	.54270	.25610	.17164

#1	164230.	27423.	7262.8	9552.5
#2	165930.	27528.	7285.6	9568.9
#3	165650.	27234.	7299.7	9585.3

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Zoom In  
Zoom Out

Sample Name: mp17697-sd1 Acquired: 10/4/2019 18:13:34 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4701	.0024	.0081	.0565	.0126	.0206	1.476	.1207	.0112
Stddev	.0043	.0004	.0030	.0046	.0031	.0024	.001	.0054	.0098
%RSD	.9158	15.18	37.11	8.105	24.71	11.53	.0928	4.458	87.43

#1	.4664	.0025	.0115	.0512	.0106	.0185	1.476	.1151	.0131
#2	.4691	.0027	.0072	.0592	.0111	.0232	1.477	.1212	.0006
#3	.4748	.0020	.0057	.0590	.0163	.0201	1.474	.1258	.0199

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	1.676	.0116	-.0326	-.0195	-.0546	.5883	1.012	2477.
Stddev	.0105	.003	.0236	.0122	.0182	.0450	.0116	.141	.39
%RSD	209.7	.1754	202.9	37.40	93.62	82.34	1.973	13.92	1.564

#1	.0141	1.678	.0295	-.0187	-.0015	-.1020	.5977	1.124	2521.
#2	-.0065	1.673	.0205	-.0373	-.0315	-.0493	.5918	.8539	2463.
#3	.0074	1.676	-.0151	-.0417	-.0284	-.0125	.5753	1.059	2447.

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2020	111.5	128.8	260.4	1.737	.0752	10.39	-.0137	4.288
Stddev	.0315	.5	.9	.2	.009	.0051	.03	.0059	.003
%RSD	15.62	.4060	.6744	.0931	.5193	6.740	.3083	43.34	.0760

#1	.1656	111.7	129.7	260.6	1.737	.0798	10.36	-.0133	4.290
#2	.2221	111.8	128.5	260.2	1.728	.0698	10.40	-.0079	4.285
#3	.2183	111.0	128.0	260.6	1.746	.0762	10.43	-.0198	4.290

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.1912	.0026	285.5	.0462	.1564	.0052	.0005
Stddev	.0060	.0187	.0016	.4	.0404	.0119	.0077	.0745
%RSD	86.60	9.787	60.34	.1490	87.34	7.632	14.03	14250.

#1	.0045	-.1720	.0012	285.2	.0130	.1601	.0505	.0864
#2	.0025	-.2094	.0043	285.2	.0346	.1660	.0509	-.0464
#3	.0137	-.1921	.0024	285.9	.0911	.1430	.0641	-.0384

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Zoom In  
Zoom Out

Sample Name: mp17697-sd1 Acquired: 10/4/2019 18:13:34 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176860.	27983.	7758.8	10449.
Stddev	103.	185.	9.7	9.
%RSD	.05821	.66072	.12541	.08345
#1	176740.	27901.	7751.3	10445.
#2	176890.	27853.	7755.4	10443.
#3	176940.	28194.	7769.8	10459.

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Zoom In  
Zoom Out

Sample Name: jc95862-2 Acquired: 10/4/2019 18:18:31 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.405	.0004	-0.0007	-0.0002	.0033	.0087	.0157	.0020	-0.012
Stddev	.016	.0000	.0003	.0008	.0007	.0009	.0002	.0009	.0005
%RSD	1.139	6.112	49.78	329.0	20.24	9.913	1.379	43.95	39.78
#1	1.421	.0005	-0.003	-0.011	.0038	.0093	.0160	.0010	-0.017
#2	1.404	.0004	-0.008	.0001	.0036	.0090	.0157	.0026	-0.012
#3	1.389	.0004	-0.010	.0004	.0025	.0077	.0155	.0024	-0.007
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0266	.0141	-0.0052	-0.0134	-0.0078	.0014	.6837	F 2640.
Stddev	.0004	.0019	.0030	.0007	.0022	.0036	.0041	.0583	44.
%RSD	15.41	7.081	21.64	14.37	16.48	46.60	288.7	8.521	16.70
#1	.0031	.0259	.0106	-.0060	-.0119	-.0064	.0030	.6891	2690.
#2	.0022	.0288	.0157	-.0050	-.0125	-.0119	-.0032	.7391	2626.
#3	.0026	.0253	.0160	-.0045	-.0160	-.0051	.0045	.6230	2605.
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0219	1.445	186.1	297.4	.0382	.0666	2.516	-0.020	4.839
Stddev	.0035	.076	1.9	2.7	.0007	.0023	.055	.0042	.045
%RSD	15.94	5.255	.9963	.9152	1.744	3.492	2.180	211.0	.9300
#1	-.0226	1.429	187.8	300.4	.0379	.0658	2.483	-.0035	4.886
#2	-.0181	1.379	186.2	296.7	.0378	.0692	2.579	.0028	4.835
#3	-.0250	1.528	184.1	295.1	.0390	.0648	2.485	-.0052	4.796
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	-0.0083	-0.0282	-0.0004	150.1	.0133	.1425	.0619	.0128	
Stddev	.0021	.0028	.0004	2.9	.0063	.0078	.0018	.0114	
%RSD	25.71	9.908	115.8	1.959	47.37	5.446	2.943	89.05	
#1	-.0062	-.0287	-.0003	148.6	.0187	.1488	.0626	.0258	
#2	-.0084	-.0253	-.0000	153.5	.0150	.1449	.0633	.0086	
#3	-.0105	-.0308	-.0008	148.2	.0064	.1339	.0598	.0041	

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Zoom In  
Zoom Out

Sample Name: jc95862-2 Acquired: 10/4/2019 18:18:31 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	166750.	27594.	7220.7	9446.8
Stddev	415.	206.	142.1	171.8
%RSD	.24909	.74765	1.9677	1.8184
#1	166480.	27368.	7296.8	9542.8
#2	167230.	27772.	7056.8	9248.5
#3	166540.	27641.	7308.6	9549.1

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Zoom In  
Zoom Out

Sample Name: jc95862-3 Acquired: 10/4/2019 18:23:31 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9193	.0003	-0.0003	-0.0003	.0031	.0125	.0008	.0023
Stddev	.0047	.0001	.0009	.0005	.0014	.0004	.0003	.0006
%RSD	.5127	23.73	365.3	200.6	45.62	3.431	32.50	24.04
#1	.9239	.0002	-.0002	-.0001	.0031	.0129	.0008	.0019
#2	.9145	.0002	-.0012	-.0008	.0017	.0127	.0006	.0030
#3	.9194	.0003	.0006	-.0000	.0045	.0121	.0011	.0022
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0006	.0042	.0109	.0121	-0.0037	F -.0167	-0.0033	.0107
Stddev	.0008	.0002	.0003	.0006	.0012	.0044	.0012	.0039
%RSD	147.1	4.879	2.850	5.153	32.05	26.42	36.83	36.93
#1	-.0004	.0043	.0105	.0127	-.0044	-.0141	-.0026	.0148
#2	-.0015	.0044	.0110	.0115	-.0044	-.0142	-.0026	.0070
#3	.0002	.0040	.0111	.0121	-.0023	-.0218	-.0047	.0102
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.272	F 2483.	.0122	1.507	174.7	272.6	.2033	.0564
Stddev	.022	.37	.0050	.043	.9	1.1	.0026	.0001
%RSD	1.703	1.478	41.33	2.826	.5002	.3914	1.283	.2485
#1	1.282	2503.	.0168	1.516	175.5	273.8	.2022	.0565
#2	1.287	2505.	.0068	1.544	173.7	271.7	.2014	.0563
#3	1.247	2440.	.0128	1.460	174.8	272.4	.2062	.0565
Elem	Si2124	Sr1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.713	-0.0026	4.186	-0.0085	-0.0273	.0004	204.2	.0129
Stddev	.005	.0027	.022	.0012	.0036	.0003	.4	.0017
%RSD	.1846	103.4	5.187	13.66	13.32	70.15	.2050	12.81
#1	2.707	.0004	4.209	-.0094	-.0231	.0005	203.8	.0123
#2	2.717	-.0033	4.165	-.0072	-.0294	.0001	204.7	.0116
#3	2.714	-.0049	4.184	-.0089	-.0294	.0005	204.2	.0148

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Sample Name: jc95862-3 Acquired: 10/4/2019 18:23:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>.1198</b>	<b>.0795</b>	<b>.0164</b>
Stddev	.0075	.0050	.0063
%RSD	6.267	6.303	38.51
#1	.1113	.0779	.0145
#2	.1254	.0851	.0112
#3	.1228	.0755	.0234

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	167090.	27561.	7317.1	9573.7
Stddev	588.	92.	26.1	23.7
%RSD	.35180	.33496	.35607	.24773
#1	167530.	27649.	7334.9	9589.6
#2	167330.	27465.	7287.2	9546.4
#3	166420.	27569.	7329.2	9585.0

Sample Name: jc95862-4 Acquired: 10/4/2019 18:28:32 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.8489</b>	<b>.0005</b>	<b>.0014</b>	<b>-0.0004</b>	<b>.0029</b>	<b>.0180</b>	<b>.0011</b>	<b>.0012</b>
Stddev	.0033	.0001	.0007	.0004	.0011	.0020	.0001	.0013
%RSD	.3902	18.73	50.15	98.47	36.19	11.23	8.480	104.1
#1	.8527	.0004	.0011	.0001	.0020	.0204	.0010	.0025
#2	.8466	.0004	.0021	-.0007	.0041	.0172	.0012	-.0001
#3	.8473	.0006	.0008	-.0006	.0028	.0166	.0011	.0014

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0000</b>	<b>.0110</b>	<b>-0.0018</b>	<b>.0156</b>	<b>-0.0059</b>	<b>F -.0200</b>	<b>.0002</b>	<b>.4031</b>
Stddev	.0033	.0004	.0002	.0030	.0023	.0032	.0041	.0025
%RSD	2375.0	3.276	9.247	18.96	38.85	15.89	1699.	6266
#1	-0.0039	.0114	-.0018	.0128	-.0079	-.0236	.0047	.4011
#2	.0019	.0107	-.0020	.0154	-.0063	-.0183	-.0032	.4059
#3	.0019	.0109	-.0016	.0187	-.0034	-.0180	-.0009	.4022

11.4  
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Sample Name: jc95862-4 Acquired: 10/4/2019 18:28:32 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>.1208</b>	<b>.0828</b>	<b>.0082</b>
Stddev	.0056	.0043	.0159
%RSD	4.597	5.196	195.1
#1	.1221	.0783	-.0054
#2	.1255	.0834	.0042
#3	.1147	.0868	.0257

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	167810.	27664.	7333.0	9620.7
Stddev	82.	24.	2.5	7.5
%RSD	.04880	.08495	.03414	.07818
#1	167750.	27675.	7332.4	9615.1
#2	167780.	27637.	7335.8	9629.3
#3	167910.	27679.	7330.9	9617.9

Sample Name: jc95862-5 Acquired: 10/4/2019 18:33:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.8984</b>	<b>.0004</b>	<b>-0.0008</b>	<b>-0.0005</b>	<b>.0045</b>	<b>.0099</b>	<b>.0015</b>	<b>.0013</b>
Stddev	.0105	.0001	.0005	.0003	.0008	.0010	.0004	.0005
%RSD	1.171	32.06	70.95	50.92	16.68	9.745	25.40	39.02
#1	.9102	.0004	-.0008	-.0004	.0045	.0098	.0016	.0018
#2	.8952	.0006	-.0013	-.0003	.0052	.0109	.0010	.0008
#3	.8899	.0003	-.0002	-.0008	.0037	.0090	.0017	.0015

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0013</b>	<b>.0134</b>	<b>.0081</b>	<b>.0175</b>	<b>-0.0047</b>	<b>F -.0256</b>	<b>-0.0018</b>	<b>.0558</b>
Stddev	.0005	.0004	.0002	.0012	.0049	.0021	.0017	.0024
%RSD	40.79	2.907	2.023	6.779	10.4	8.345	95.35	4.282
#1	-0.0009	.0137	.0080	.0184	-.0028	-.0248	-.0025	.0539
#2	-.0011	.0136	.0083	.0161	-.0104	-.0280	.0002	.0584
#3	-.0019	.0130	.0080	.0179	-.0010	-.0240	-.0029	.0549



Sample Name: jc95862-5 Acquired: 10/4/2019 18:33:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>.1282</b>	<b>.0731</b>	<b>.0094</b>
Stddev	.0047	.0012	.0176
%RSD	3.678	1.675	186.9
#1	.1293	.0733	.0248
#2	.1323	.0717	.0131
#3	.1231	.0742	-.0097

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>167970.</b>	<b>27777.</b>	<b>7341.7</b>	<b>9649.1</b>
Stddev	407.	127.	6.5	13.1
%RSD	2.4214	4.5800	.08903	.13603
#1	168440.	27701.	7337.6	9644.3
#2	167720.	27705.	7338.4	9639.0
#3	167750.	27924.	7349.3	9663.9

Sample Name: jc95862-6 Acquired: 10/4/2019 18:38:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.561</b>	<b>.0005</b>	<b>-.0006</b>	<b>-.0010</b>	<b>.0036</b>	<b>.0403</b>	<b>.0004</b>	<b>-.0008</b>	<b>-.0025</b>
Stddev	.004	.0002	.0002	.0006	.0014	.0008	.0001	.0006	.0017
%RSD	.2780	45.64	33.88	65.40	39.61	1.969	11.75	74.09	68.43
#1	1.566	.0005	-.0009	-.0017	.0052	.0398	.0004	-.0004	-.0043
#2	1.559	.0006	-.0005	-.0006	.0026	.0412	.0004	-.0014	-.0009
#3	1.558	.0002	-.0005	-.0007	.0029	.0399	.0005	-.0005	-.0024

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0009</b>	<b>.7004</b>	<b>.0138</b>	<b>-.0083</b>	<b>3.187</b>	<b>-.0064</b>	<b>-.0013</b>	<b>.2291</b>	<b>F 2931.</b>
Stddev	.0012	.0003	.0017	.0011	.007	.0063	.0022	.0152	.12
%RSD	130.1	.0485	12.48	13.25	.2091	98.06	169.9	6.643	4.164
#1	.0014	.7002	.0131	-.0072	3.183	-.0041	.0004	.2458	2941.
#2	-.0004	.7008	.0125	-.0094	3.183	-.0016	-.0039	.2253	2918.
#3	.0018	.7001	.0157	-.0083	3.194	-.0135	-.0005	.2161	2936.

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0455</b>	<b>.1429</b>	<b>180.1</b>	<b>260.5</b>	<b>.0233</b>	<b>.0453</b>	<b>.8108</b>	<b>-.0010</b>	<b>5.716</b>
Stddev	.0035	.0373	.2	.1	.0005	.0002	.0088	.0007	.007
%RSD	7.676	26.06	.0906	.0479	2.281	.4282	1.083	67.49	.1156
#1	-.0486	.1404	180.3	260.6	.0227	.0454	.8055	-.0003	5.724
#2	-.0461	.1814	180.0	260.5	.0235	.0453	.8060	-.0016	5.712
#3	-.0417	.1070	180.0	260.4	.0237	.0451	.8210	-.0011	5.713

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0079</b>	<b>-.0364</b>	<b>-.0016</b>	<b>160.1</b>	<b>.0135</b>	<b>.1267</b>	<b>.0505</b>	<b>.0072</b>
Stddev	.0008	.0026	.0003	.4	.0028	.0056	.0018	.0016
%RSD	10.61	7.053	21.39	.2188	20.61	4.418	3.551	22.55
#1	-.0071	-.0340	-.0014	160.3	.0156	.1314	.0522	.0083
#2	-.0088	-.0391	-.0014	160.2	.0144	.1205	.0506	.0078
#3	-.0078	-.0359	-.0020	159.7	.0103	.1282	.0486	.0053

Sample Name: jc95862-6 Acquired: 10/4/2019 18:38:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>165930.</b>	<b>27457.</b>	<b>7262.0</b>	<b>9483.6</b>
Stddev	456.	106.	4.9	5.6
%RSD	.27468	.38511	.06745	.05888
#1	165960.	27570.	7258.8	9482.1
#2	166370.	27361.	7259.6	9479.0
#3	165460.	27441.	7267.6	9489.8

Sample Name: ccv Acquired: 10/4/2019 18:43:31 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.004</b>	<b>2.097</b>	<b>1.988</b>	<b>1.922</b>	<b>1.983</b>	<b>1.934</b>	<b>2.040</b>	<b>1.997</b>	<b>.2474</b>
Stddev	.001	.002	.004	.004	.000	.002	.006	.004	.0002
%RSD	.0569	.0757	.2221	.1839	.0051	.1103	.2903	.1747	.0642
#1	2.004	2.096	1.985	1.922	1.983	1.934	2.044	1.997	.2473
#2	2.006	2.099	1.993	1.925	1.983	1.932	2.034	2.000	.2476
#3	2.004	2.096	1.986	1.918	1.983	1.936	2.044	1.993	.2473

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.932</b>	<b>2.032</b>	<b>1.884</b>	<b>2.047</b>	<b>1.983</b>	<b>1.938</b>	<b>1.904</b>	<b>40.02</b>	<b>40.40</b>
Stddev	.000	.004	.004	.004	.004	.004	.005	.04	.03
%RSD	.0090	.2110	.1969	.1766	.1888	.2221	.2742	.0904	.0798
#1	1.932	2.030	1.880	2.049	1.980	1.939	1.904	40.01	40.38
#2	1.932	2.037	1.888	2.049	1.987	1.942	1.910	40.06	40.44
#3	1.932	2.029	1.884	2.043	1.981	1.933	1.900	39.98	40.38

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.49</b>	<b>39.94</b>	<b>39.69</b>	<b>39.69</b>	<b>1.966</b>	<b>1.879</b>	<b>5.046</b>	<b>1.901</b>	<b>2.036</b>
Stddev	.04	.06	.07	.02	.003	.004	.012	.004	.002
%RSD	.1033	.1550	.1773	.0461	.1431	.2254	.2362	.2284	.1129
#1	40.47	39.91	39.65	39.68	1.966	1.877	5.041	1.899	2.038
#2	40.54	40.01	39.77	39.71	1.969	1.884	5.059	1.906	2.034
#3	40.47	39.90	39.64	39.69	1.963	1.876	5.037	1.899	2.038

Zoom In Zoom Out

Sample Name: ccv Acquired: 10/4/2019 18:43:31 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.893	1.844	1.946	1.854	1.936	1.950	1.938	1.983
Stddev	.001	.005	.001	.006	.005	.002	.009	.000
%RSD	.0733	.2945	.0646	.3204	.2556	.1202	.4361	.0218
#1	1.894	1.843	1.945	1.848	1.932	1.950	1.933	1.983
#2	1.892	1.850	1.947	1.860	1.941	1.952	1.948	1.984
#3	1.891	1.839	1.946	1.854	1.935	1.948	1.934	1.983

Check ?  
Value Range

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	177160.	27996.	7795.0	10349.
Stddev	225.	52.	9.7	8.
%RSD	.12699	.18590	.12404	.07896
#1	177410.	28034.	7799.7	10352.
#2	177070.	27937.	7783.9	10340.
#3	176990.	28018.	7801.5	10356.

Zoom In Zoom Out

Sample Name: ccb Acquired: 10/4/2019 18:48:23 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0002	-.0001	.0001	.0001	.0006	.0001	.0002
Stddev	.0002	.0000	.0001	.0001	.0002	.0002	.0001	.0001
%RSD	130.5	17.67	70.99	228.9	186.9	35.33	74.61	87.09
#1	.0003	.0002	-.0002	.0002	.0003	.0007	.0002	-.0000
#2	-.0001	.0002	-.0000	-.0001	-.0001	.0007	.0000	.0002
#3	.0002	.0002	-.0001	.0000	.0003	.0003	.0001	.0003

Check ?  
High Limit  
Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0001	-.0003	.0002	-.0004	-.0000	.0014	-.0008
Stddev	.0002	.0005	.0000	.0004	.0001	.0002	.0008	.0010
%RSD	24.80	1002.	10.07	199.0	15.99	416.9	56.12	122.8
#1	.0008	.0004	-.0003	-.0001	-.0005	.0002	.0018	.0003
#2	.0007	-.0005	-.0003	.0006	-.0005	-.0001	.0005	-.0010
#3	.0005	.0003	-.0003	.0000	-.0004	-.0002	.0018	-.0018

Check ?  
High Limit  
Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0038	.0033	.0092	.0297	.0768	.0007	.0002
Stddev	.0062	.0003	.0006	.0027	.0143	.0087	.0003	.0000
%RSD	535.6	6.841	19.25	28.97	48.17	11.29	47.31	23.35
#1	.0066	.0035	.0040	.0061	.0185	.0821	.0004	.0002
#2	.0025	.0040	.0027	.0110	.0248	.0668	.0008	.0002
#3	-.0056	.0037	.0032	.0104	.0458	.0814	.0011	.0001

Check ?  
High Limit  
Low Limit

11.4  
1

Zoom In Zoom Out

Sample Name: ccb Acquired: 10/4/2019 18:48:23 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0002	-.0000	-.0001	F .0085	-.0003	.0027	.0010
Stddev	.0002	.0004	.0000	.0002	.0004	.0001	.0011	.0004
%RSD	62.97	166.7	122.5	295.3	4.987	51.09	41.94	39.20
#1	-.0005	-.0003	.0000	-.0002	-.0085	-.0004	.0035	.0007
#2	-.0005	-.0005	-.0000	-.0002	-.0090	-.0001	.0014	.0009
#3	-.0001	.0002	-.0000	.0002	-.0081	-.0003	.0033	.0014

Check ?  
High Limit  
Low Limit

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	.0003	-.0062	-.0005
Stddev	.0006	.0006	.0013
%RSD	197.8	9.738	258.4
#1	.0006	-.0066	.0007
#2	-.0004	-.0055	-.0018
#3	.0007	-.0066	-.0003

Check ?  
High Limit  
Low Limit

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	182950.	28190.	8084.7	11178.
Stddev	798.	101.	17.0	13.
%RSD	.43620	.35849	.21081	.11370
#1	182810.	28131.	8099.5	11192.
#2	183800.	28132.	8088.6	11171.
#3	182220.	28307.	8066.1	11170.

Zoom In Zoom Out

Sample Name: jc95862-7 Acquired: 10/4/2019 18:53:25 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7798	.0006	.0098	.0180	.0043	.0135	.5162	.0630	-.0012
Stddev	.0032	.0001	.0004	.0008	.0013	.0018	.0011	.0003	.0003
%RSD	.4053	23.61	3.981	4.423	30.23	13.35	.2142	.5388	24.82
#1	.7761	.0007	.0101	.0189	.0037	.0155	.5168	.0626	-.0014
#2	.7814	.0004	.0100	.0176	.0033	.0129	.5168	.0633	-.0008
#3	.7818	.0006	.0094	.0175	.0057	.0120	.5149	.0631	-.0013

Check ?  
High Limit  
Low Limit

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	.0072	.0209	-.0085	.0341	-.0084	1.015	.0961	F 2263.
Stddev	.0005	.0001	.0048	.0039	.0039	.0029	.001	.0321	15.
%RSD	6.379	1.695	23.18	46.22	11.31	34.28	.0744	33.43	.6574
#1	.0070	.0073	.0175	-.0092	.0335	-.0083	1.015	.1294	2275.
#2	.0069	.0073	.0187	-.0043	.0382	-.0114	1.016	.0654	2246.
#3	.0077	.0071	.0265	-.0121	.0305	-.0056	1.014	.0934	2267.

Check ?  
High Limit  
Low Limit

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0454	93.03	119.5	192.0	1.274	.0687	7.520	-.0025	5.136
Stddev	.0688	.19	.2	.1	.003	.0003	.003	.0016	.007
%RSD	15.08	.1991	.1586	.0386	.2206	.4972	.0395	65.37	.1393
#1	-.0521	92.84	119.4	192.0	1.277	.0687	7.521	-.0023	5.128
#2	-.0458	93.21	119.7	192.1	1.272	.0691	7.521	-.0009	5.142
#3	-.0384	93.04	119.4	192.0	1.273	.0684	7.516	-.0041	5.137

Check ?  
High Limit  
Low Limit

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0085	-.0275	.0014	247.8	.0169	-.1442	.0984	.0177
Stddev	.0017	.0041	.0006	.3	.0034	.0013	.0028	.0115
%RSD	14.02	15.00	41.22	.1185	20.29	.8677	2.833	65.07
#1	-.0086	-.0284	.0020	248.0	.0185	-.1454	.1016	.0046
#2	-.0073	-.0230	.0008	247.8	.0129	-.1429	.0973	.0261
#3	-.0097	-.0310	.0015	247.5	.0192	-.1442	.0963	.0223

Sample Name: jc95862-7 Acquired: 10/4/2019 18:53:25 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	168310.	27736.	7338.6	9675.3
Stddev	384.	142.	10.0	16.0
%RSD	.22792	.51289	.13567	.16510
#1	167880.	27726.	7344.9	9681.8
#2	168420.	27599.	7343.7	9687.0
#3	168620.	27883.	7327.1	9657.1

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Sample Name: jc95862-8 Acquired: 10/4/2019 18:58:21 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.908</b>	<b>.0004</b>	<b>-0.006</b>	<b>-0.008</b>	<b>.0050</b>	<b>.0575</b>	<b>.0055</b>	<b>.0011</b>	<b>-0.027</b>
Stddev	.002	.0002	.0001	.0002	.0004	.0021	.0002	.0009	.0007
%RSD	.0875	40.45	15.42	23.43	8.577	3.718	3.907	87.78	25.21
#1	1.910	.0002	-0.007	-0.008	.0046	.0554	.0052	.0016	-0.031
#2	1.907	.0005	-0.006	-0.006	.0055	.0575	.0056	-0.000	-0.030
#3	1.908	.0005	-0.005	-0.010	.0049	.0597	.0056	.0016	-0.019

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0024</b>	<b>.3052</b>	<b>.0194</b>	<b>-0.0031</b>	<b>.9487</b>	<b>-0.0033</b>	<b>.0109</b>	<b>.2609</b>	<b>F 3037.</b>
Stddev	.0003	.0000	.0033	.0019	.0078	.0013	.0029	.0464	.16
%RSD	13.30	.0095	17.24	61.62	.8226	40.49	26.14	17.79	.5178
#1	.0023	.3052	.0232	-.0053	.9417	-.0028	.0083	.2094	3023.
#2	.0022	.3051	.0170	-.0018	.9571	-.0048	.0140	.2995	3054.
#3	.0028	.3052	.0180	-.0022	.9472	-.0023	.0104	.2736	3034.

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0402</b>	<b>1.450</b>	<b>196.4</b>	<b>285.9</b>	<b>.0385</b>	<b>.0496</b>	<b>1.435</b>	<b>-0.0007</b>	<b>5.840</b>
Stddev	.0090	.030	.3	.3	.0012	.0015	.005	.0015	.002
%RSD	22.40	2.067	.1710	.1164	3.051	2.929	.3834	.2014	.0375
#1	-.0431	1.463	196.8	285.8	.0377	.0513	1.439	-.0014	5.840
#2	-.0474	1.472	196.4	286.2	.0379	.0486	1.429	-.0018	5.842
#3	-.0301	1.416	196.1	285.6	.0399	.0489	1.438	.0010	5.838

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0112</b>	<b>-0.0346</b>	<b>-0.0001</b>	<b>101.6</b>	<b>.0222</b>	<b>.1475</b>	<b>.0883</b>	<b>.0095</b>
Stddev	.0004	.0016	.0004	.1	.0078	.0037	.0026	.0069
%RSD	3.632	4.572	437.4	.0517	35.33	2.511	2.971	72.63
#1	-.0108	-.0347	.0002	101.6	.0229	.1502	.0854	.0153
#2	-.0116	-.0361	-.0006	101.7	.0297	.1433	.0903	.0018
#3	-.0111	-.0330	.0001	101.6	.0140	.1489	.0893	.0115

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11.4  
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Sample Name: jc95862-8 Acquired: 10/4/2019 18:58:21 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>165160.</b>	<b>27349.</b>	<b>7235.7</b>	<b>9456.3</b>
Stddev	433.	143.	13.3	16.9
%RSD	.26234	.52197	.18351	.17900
#1	165250.	27191.	7232.2	9451.0
#2	165540.	27467.	7250.4	9475.2
#3	164680.	27391.	7224.5	9442.6

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Sample Name: jc95862-9 Acquired: 10/4/2019 19:03:17 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.6139</b>	<b>.0005</b>	<b>.4133</b>	<b>.1038</b>	<b>.0027</b>	<b>.1203</b>	<b>10.47</b>	<b>1.718</b>	<b>.0043</b>
Stddev	.0050	.0001	.0105	.0019	.0009	.0004	.05	.0034	.0011
%RSD	.8188	10.06	2.542	1.790	33.28	.3660	4.377	1.960	25.58
#1	.6184	.0006	.4199	.1057	.0032	.1208	10.52	1.736	.0033
#2	.6149	.0005	.4012	.1020	.0017	.1201	10.45	1.680	.0054
#3	.6085	.0005	.4188	.1039	.0033	.1201	10.43	1.740	.0041

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0122</b>	<b>36.38</b>	<b>.0271</b>	<b>.0003</b>	<b>1.327</b>	<b>-0.0142</b>	<b>.9550</b>	<b>.2206</b>	<b>F 2358.</b>
Stddev	.0026	.85	.0024	.0034	.035	.0010	.0267	.0106	.28
%RSD	21.39	2.337	8.885	1243.	2.625	7.329	2.799	4.826	1.195
#1	.0117	36.90	.0243	.0032	1.348	-.0134	.9701	.2146	2356.
#2	.0100	35.39	.0285	.0011	1.286	-.0154	.9241	.2329	2387.
#3	.0151	36.84	.0284	-.0035	1.345	-.0138	.9708	.2142	2331.

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0767</b>	<b>94.72</b>	<b>136.4</b>	<b>268.3</b>	<b>1.423</b>	<b>.0620</b>	<b>32.12</b>	<b>-0.0054</b>	<b>4.378</b>
Stddev	.0055	.96	1.1	2.0	.028	.0013	.80	.0011	.037
%RSD	7.223	1.011	.7813	.7390	1.998	2.079	2.478	19.69	.8487
#1	.0761	95.78	137.3	270.4	1.443	.0621	32.62	-.0064	4.414
#2	.0826	94.47	136.6	268.2	1.391	.0607	31.20	-.0056	4.381
#3	.0715	93.92	135.2	266.4	1.437	.0632	32.54	-.0043	4.340

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0020</b>	<b>-1.199</b>	<b>-0.0007</b>	<b>254.0</b>	<b>.0156</b>	<b>.1388</b>	<b>.2018</b>	<b>.0123</b>
Stddev	.0007	.0030	.0003	5.9	.0054	.0022	.0022	.0150
%RSD	36.65	2.489	46.57	2.319	34.36	1.610	1.084	122.2
#1	-.0029	-1.172	-.0006	257.6	.0197	.1407	.2040	-.0049
#2	-.0018	-1.231	-.0010	247.2	.0176	.1393	.1996	.0191
#3	-.0015	-1.194	-.0004	257.1	.0095	.1363	.2018	.0227

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Sample Name: jc95862-9 Acquired: 10/4/2019 19:03:17 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	167230.	27606.	7393.2	9736.4
Stddev	542.	57.	152.0	180.3
%RSD	.32412	.20608	2.0562	1.8514
#1	167030.	27551.	7305.8	9629.3
#2	166820.	27665.	7568.7	9944.5
#3	167850.	27603.	7305.1	9635.4

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Sample Name: jc95862-10 Acquired: 10/4/2019 19:08:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6621	.0006	.6873	.0665	.0034	.2657	1.752	.0806	.0043
Stddev	.0032	.0000	.0014	.0009	.0001	.0007	.003	.0009	.0020
%RSD	.4764	.9206	.2028	1.325	2.372	.2605	.1535	1.128	47.33
#1	.6657	.0006	.6879	.0673	.0033	.2665	1.755	.0803	.0055
#2	.6601	.0006	.6882	.0666	.0035	.2654	1.751	.0816	.0054
#3	.6604	.0006	.6857	.0656	.0035	.2652	1.750	.0799	.0019
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076	20.97	.0255	-.0066	.3886	-.0046	1.076	.2050	F 2551.
Stddev	.0007	.04	.0023	.0027	.0040	.0002	.002	.0488	46.
%RSD	9.800	.2031	9.003	40.80	1.033	5.137	.1424	23.82	1.798
#1	.0084	21.01	.0235	-.0071	.3902	-.0045	1.078	.2127	2598.
#2	.0070	20.93	.0280	-.0090	.3841	-.0044	1.076	.2495	2549.
#3	.0073	20.97	.0249	-.0037	.3916	-.0049	1.075	.1528	2507.
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0507	79.78	178.1	331.5	1.506	.0672	22.99	-.0060	5.224
Stddev	.0046	.33	.8	.9	.000	.0010	.05	.0030	.023
%RSD	9.023	.4123	.4401	.2769	.0112	1.424	.1985	50.67	.4381
#1	-.0466	80.13	179.0	332.5	1.506	.0671	23.03	-.0050	5.250
#2	-.0556	79.73	177.7	331.4	1.506	.0663	23.01	-.0093	5.216
#3	-.0500	79.48	177.5	330.7	1.506	.0682	22.94	-.0035	5.206
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	-.0090	-.0842	-.0022	250.1	.0137	.1524	.1515	.0096	
Stddev	.0011	.0011	.0003	.6	.0041	.0013	.0043	.0025	
%RSD	11.92	1.362	12.97	.2265	30.20	8.263	2.848	26.54	
#1	-.0097	-.0832	-.0025	250.6	.0159	.1510	.1488	.0091	
#2	-.0095	-.0854	-.0021	250.2	.0089	.1525	.1565	.0073	
#3	-.0078	-.0838	-.0020	249.5	.0163	.1536	.1492	.0123	

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Sample Name: jc95862-10 Acquired: 10/4/2019 19:08:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	166110.	27506.	7278.0	9571.7
Stddev	245.	55.	23.6	26.0
%RSD	.14737	.20123	.32487	.27131
#1	166380.	27551.	7277.7	9574.8
#2	165900.	27522.	7301.9	9595.9
#3	166050.	27444.	7254.6	9544.3

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Sample Name: mp17698-mb1 Acquired: 10/4/2019 19:13:13 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0003	-.0000	.0004	.0015	.0080	.0002	.0154	.0038
Stddev	.0002	.0002	.0005	.0005	.0011	.0006	.0003	.0008	.0014
%RSD	5.680	48.36	498.2	124.3	74.85	7.089	154.4	5.118	35.87
#1	.0028	.0002	-.0005	.0002	.0019	.0079	.0004	.0164	.0054
#2	.0031	.0002	.0003	.0000	.0025	.0085	.0002	.0150	.0030
#3	.0029	.0005	.0002	.0009	.0003	.0074	-.0001	.0150	.0031
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0119	-.0032	-.0029	-.0028	.0025	-.0035	.0103	.2065
Stddev	.0004	.0003	.0024	.0030	.0012	.0015	.0051	.0294	.0143
%RSD	57.47	2.748	74.44	103.0	41.74	60.99	146.4	286.4	6.918
#1	.0003	.0122	-.0059	-.0045	-.0042	.0016	-.0044	.0119	2.209
#2	.0011	.0120	-.0017	.0005	-.0020	.0043	-.0081	-.0199	.2063
#3	.0006	.0116	-.0019	-.0047	-.0023	.0017	.0020	.0388	.1923
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0443	.0112	1.539	F 1293.	.0094	.0017	5.015	.0032	.0032
Stddev	.0041	.0606	.124	.31.	.0011	.0011	.0023	.0006	.0002
%RSD	9.203	540.8	8.073	2.368	11.27	68.00	.4606	18.38	4.758
#1	.0490	.0650	1.489	1328.	.0089	.0014	.5040	.0033	.0031
#2	.0424	-.0545	1.447	1272.	.0106	.0007	.5011	.0037	.0032
#3	.0416	.0231	1.680	1280.	.0086	.0029	.4994	.0026	.0034
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0015	-.0298	-.0023	.0705	.0059	.0199	-.0189	-.0089	
Stddev	.0007	.0020	.0008	.0132	.0020	.0037	.0022	.0077	
%RSD	51.22	6.702	33.32	18.68	33.61	18.72	11.61	87.17	
#1	.0019	-.0321	-.0016	.0828	.0078	.0200	-.0194	-.0090	
#2	.0018	-.0283	-.0020	.0720	.0058	.0236	-.0165	-.0011	
#3	.0006	-.0289	-.0031	.0566	.0039	.0161	-.0207	-.0165	

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Sample Name: mp17698-mb1 Acquired: 10/4/2019 19:13:13 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	171890.	27959.	7674.8	10051.
Stddev	53.	209.	3.6	7.
%RSD	.03080	.74906	.04628	.06762
#1	171880.	27741.	7671.4	10058.
#2	171950.	27975.	7674.4	10052.
#3	171840.	28159.	7678.5	10044.

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Sample Name: mp17698-b1 Acquired: 10/4/2019 19:18:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.031</b>	<b>2.160</b>	<b>2.066</b>	<b>2.022</b>	<b>2.048</b>	<b>1.913</b>	<b>2.132</b>	<b>2.134</b>	<b>.2622</b>
Stddev	.004	.001	.004	.003	.003	.002	.002	.002	.0013
%RSD	.2130	.0459	.1954	.1556	.1275	.0804	.0800	.1047	.4955
#1	2.026	2.160	2.062	2.019	2.049	1.915	2.134	2.131	.2618
#2	2.033	2.161	2.069	2.023	2.050	1.912	2.132	2.135	.2612
#3	2.034	2.159	2.068	2.025	2.045	1.913	2.131	2.136	.2637

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.997</b>	<b>2.172</b>	<b>1.976</b>	<b>2.105</b>	<b>2.058</b>	<b>2.041</b>	<b>1.966</b>	<b>25.46</b>	<b>25.81</b>
Stddev	.006	.005	.004	.004	.005	.000	.004	.02	.05
%RSD	.3157	.2271	.1992	.1933	.2443	.0119	.2134	.0651	.2107
#1	2.001	2.170	1.971	2.106	2.061	2.041	1.966	25.46	25.75
#2	1.999	2.168	1.979	2.109	2.052	2.041	1.962	25.45	25.86
#3	1.989	2.177	1.977	2.100	2.060	2.042	1.970	25.48	25.81

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>26.08</b>	<b>25.58</b>	<b>27.06</b>	<b>1363.0</b>	<b>2.008</b>	<b>1.945</b>	<b>.3390</b>	<b>1.963</b>	<b>2.070</b>
Stddev	.04	.09	.16	11.	.004	.004	.0030	.008	.004
%RSD	.1559	.3535	.5728	.8408	.1940	.2075	.8834	.4130	.1736
#1	26.03	25.48	26.98	1367.	2.004	1.942	.3400	1.956	2.066
#2	26.10	25.60	26.96	1350.	2.011	1.945	.3357	1.962	2.069
#3	26.11	25.65	27.24	1372.	2.010	1.950	.3414	1.972	2.074

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.933</b>	<b>1.836</b>	<b>1.988</b>	<b>.0201</b>	<b>.0406</b>	<b>.0271</b>	<b>2.009</b>	<b>-.0775</b>
Stddev	.003	.004	.000	.0017	.0064	.0032	.005	.0040
%RSD	.1417	.1922	.0224	8.567	15.67	12.00	.2742	5.101
#1	1.930	1.834	1.989	.0188	.0451	.0235	2.004	-.0759
#2	1.933	1.835	1.989	.0194	.0435	.0278	2.010	-.0820
#3	1.936	1.840	1.988	.0220	.0333	.0299	2.014	-.0746

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Sample Name: mp17698-b1 Acquired: 10/4/2019 19:18:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>172700.</b>	<b>27935.</b>	<b>7679.6</b>	<b>9971.4</b>
Stddev	317.	112.	14.0	13.4
%RSD	.18372	.40171	.18250	.13397
#1	172490.	28065.	7677.1	9963.4
#2	173070.	27870.	7694.7	9986.8
#3	172550.	27870.	7667.0	9964.0

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Sample Name: mp17698-b2 Acquired: 10/4/2019 19:23:04 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.053</b>	<b>2.183</b>	<b>2.092</b>	<b>2.051</b>	<b>2.073</b>	<b>1.937</b>	<b>2.156</b>	<b>2.159</b>	<b>.2672</b>
Stddev	.004	.004	.004	.007	.004	.005	.003	.003	.0017
%RSD	.1692	.1727	.1652	.3392	.1891	.2461	.1528	.1589	.6301
#1	2.056	2.186	2.093	2.058	2.068	1.932	2.153	2.160	.2654
#2	2.052	2.186	2.088	2.044	2.075	1.939	2.159	2.155	.2674
#3	2.049	2.179	2.094	2.051	2.075	1.940	2.157	2.162	.2687

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.019</b>	<b>2.198</b>	<b>1.997</b>	<b>2.132</b>	<b>2.083</b>	<b>2.072</b>	<b>1.982</b>	<b>25.70</b>	<b>26.26</b>
Stddev	.001	.004	.010	.007	.007	.009	.003	.06	.05
%RSD	.0507	.1736	.5072	.3465	.3510	.4325	.1332	.2298	.2036
#1	2.018	2.198	1.994	2.130	2.087	2.077	1.983	25.76	26.32
#2	2.020	2.194	1.988	2.127	2.074	2.078	1.984	25.69	26.24
#3	2.019	2.201	2.008	2.141	2.089	2.062	1.979	25.65	26.22

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>26.37</b>	<b>25.77</b>	<b>27.40</b>	<b>F 1330.</b>	<b>2.036</b>	<b>1.969</b>	<b>.2804</b>	<b>1.987</b>	<b>2.092</b>
Stddev	.05	.03	.15	9.	.005	.002	.0099	.005	.002
%RSD	.1960	.1104	.5483	.6741	.2629	.0946	3.520	.2594	.0772
#1	26.36	25.80	27.57	1336.	2.042	1.970	.2758	1.991	2.092
#2	26.43	25.74	27.37	1320.	2.034	1.966	.2917	1.982	2.093
#3	26.33	25.78	27.28	1333.	2.032	1.969	.2736	1.990	2.090

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.962</b>	<b>1.865</b>	<b>2.014</b>	<b>.0088</b>	<b>.0471</b>	<b>.0327</b>	<b>2.033</b>	<b>-.0869</b>
Stddev	.006	.005	.005	.0042	.0052	.0085	.009	.0046
%RSD	.2916	.2841	.2672	47.95	11.00	25.87	4.192	5.317
#1	1.955	1.866	2.008	.0087	.0506	.0276	2.043	-.0834
#2	1.964	1.871	2.016	.0046	.0411	.0424	2.026	-.0921
#3	1.966	1.860	2.018	.0131	.0495	.0280	2.031	-.0851

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Sample Name: mp17698-b2 Acquired: 10/4/2019 19:23:04 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	172950.	28094.	7707.7	10001.
Stddev	544.	243.	26.7	31.
%RSD	.31472	.86621	.34583	.30950
#1	172710.	27839.	7707.1	9991.1
#2	172570.	28323.	7734.7	10035.
#3	173570.	28121.	7681.4	9975.5

Sample Name: mp17698-s1 Acquired: 10/4/2019 19:27:52 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.304</b>	<b>2.189</b>	<b>2.104</b>	<b>2.058</b>	<b>2.071</b>	<b>1.933</b>	<b>4.456</b>	<b>2.152</b>	<b>.2650</b>
Stddev	.001	.003	.009	.004	.004	.002	.001	.006	.0012
%RSD	.0602	.1294	.4073	.2188	.2128	.0999	.0206	.2623	.4463
#1	2.305	2.189	2.114	2.063	2.074	1.934	4.457	2.159	.2638
#2	2.303	2.192	2.100	2.057	2.073	1.935	4.455	2.150	.2662
#3	2.303	2.186	2.098	2.055	2.066	1.931	4.457	2.148	.2650
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.023</b>	<b>2.318</b>	<b>1.970</b>	<b>2.113</b>	<b>2.097</b>	<b>2.041</b>	<b>1.984</b>	<b>25.74</b>	<b>84.14</b>
Stddev	.001	.007	.005	.006	.008	.012	.009	.05	.18
%RSD	.0410	.3161	.2792	.2913	.3837	.5834	.4405	.1807	.2108
#1	2.023	2.326	1.977	2.120	2.104	2.053	1.992	25.77	84.25
#2	2.024	2.313	1.968	2.110	2.099	2.040	1.986	25.77	84.23
#3	2.023	2.314	1.966	2.109	2.088	2.030	1.975	25.69	83.93
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>26.33</b>	<b>28.05</b>	<b>43.24</b>	<b>1892.</b>	<b>2.421</b>	<b>1.932</b>	<b>3.620</b>	<b>1.976</b>	<b>2.314</b>
Stddev	.03	.07	.12	10.	.011	.009	.004	.009	.003
%RSD	.1279	.2486	.2817	.5387	.4585	.4826	.1037	.4611	.1191
#1	26.36	28.04	43.13	1889.	2.434	1.942	3.624	1.986	2.312
#2	26.31	28.13	43.37	1884.	2.415	1.930	3.616	1.968	2.317
#3	26.30	27.99	43.22	1904.	2.414	1.924	3.619	1.974	2.312
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.948</b>	<b>1.687</b>	<b>2.006</b>	<b>3.233</b>	<b>.0532</b>	<b>.0767</b>	<b>2.090</b>	<b>-.0719</b>	
Stddev	.004	.009	.001	.020	.0016	.0039	.003	.0159	
%RSD	.1852	.5055	.0685	.6161	2.955	5.059	.1293	22.06	
#1	1.952	1.697	2.007	3.253	.0514	.0765	2.093	-.0645	
#2	1.944	1.681	2.005	3.235	.0536	.0729	2.088	-.0611	
#3	1.948	1.682	2.007	3.213	.0545	.0807	2.089	-.0901	

11.4  
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Sample Name: mp17698-s1 Acquired: 10/4/2019 19:27:52 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>169920.</b>	<b>27893.</b>	<b>7571.6</b>	<b>9754.6</b>
Stddev	508.	225.	20.9	17.2
%RSD	.29890	.80537	.27558	.17582
#1	169360.	27801.	7548.4	9735.7
#2	170060.	27729.	7588.9	9769.2
#3	170340.	28149.	7577.5	9758.8

Sample Name: mp17698-s2 Acquired: 10/4/2019 19:32:39 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.245</b>	<b>2.133</b>	<b>2.021</b>	<b>1.976</b>	<b>1.955</b>	<b>1.818</b>	<b>4.182</b>	<b>2.071</b>	<b>.2534</b>
Stddev	.015	.015	.002	.001	.004	.059	.142	.003	.0068
%RSD	.6444	.7119	.0808	.0365	3.256	3.250	3.408	.1538	2.686
#1	2.260	2.149	2.022	1.976	1.882	1.750	4.018	2.071	.2455
#2	2.242	2.129	2.022	1.976	1.984	1.847	4.254	2.075	.2566
#3	2.232	2.120	2.019	1.975	1.999	1.856	4.274	2.068	.2579
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.911</b>	<b>2.232</b>	<b>1.936</b>	<b>2.039</b>	<b>2.015</b>	<b>2.002</b>	<b>1.919</b>	<b>25.14</b>	<b>81.35</b>
Stddev	.063	.002	.004	.007	.001	.006	.007	.26	.56
%RSD	3.303	.0680	.2009	.3548	.0663	.3011	.3441	1.046	.6856
#1	1.838	2.233	1.939	2.032	2.015	2.004	1.915	25.42	81.96
#2	1.942	2.232	1.932	2.040	2.014	1.996	1.926	25.10	81.22
#3	1.952	2.230	1.938	2.046	2.017	2.007	1.915	24.90	80.86
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>25.67</b>	<b>27.30</b>	<b>42.29</b>	<b>1827.</b>	<b>2.330</b>	<b>1.895</b>	<b>3.408</b>	<b>1.897</b>	<b>2.250</b>
Stddev	.21	.22	.22	16.	.005	.001	.006	.005	.019
%RSD	.8264	.8188	.5225	.8860	.1995	.0589	.1713	.2445	.8586
#1	25.90	27.55	42.54	1843.	2.335	1.895	3.402	1.895	2.271
#2	25.61	27.24	42.23	1811.	2.329	1.896	3.412	1.903	2.245
#3	25.49	27.11	42.11	1828.	2.326	1.894	3.412	1.894	2.233
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>1.849</b>	<b>1.800</b>	<b>1.901</b>	<b>3.061</b>	<b>.0428</b>	<b>.0801</b>	<b>2.003</b>	<b>-.0697</b>	
Stddev	.060	.004	.067	.009	.0098	.0033	.001	.0099	
%RSD	3.274	.2198	3.497	.3105	22.88	4.065	.0391	14.27	
#1	1.779	1.799	1.825	3.050	.0324	.0767	2.003	-.0806	
#2	1.878	1.796	1.934	3.066	.0519	.0802	2.004	-.0674	
#3	1.889	1.804	1.945	3.068	.0441	.0832	2.002	-.0611	

Zoom In  
Zoom Out

Sample Name: mp17698-s2 Acquired: 10/4/2019 19:32:39 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	173130.	28091.	7590.9	9794.3
Stddev	4749.	10.	6.9	10.9
%RSD	2.7429	.03567	.09028	.11101

#1 178610. 28080. 7583.6 9782.6  
#2 170590. 28093. 7597.2 9804.2  
#3 170190. 28099. 7591.8 9796.0

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 19:37:28 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.993	2.094	1.981	1.910	1.976	1.926	2.025	1.992	2.466
Stddev	.005	.003	.003	.002	.002	.002	.017	.001	.0003
%RSD	.2432	.1505	.1464	.1235	.0936	.1015	.8497	.0575	.1375

#1 1.991 2.095 1.979 1.909 1.974 1.924 2.006 1.991 2.463  
#2 1.998 2.097 1.981 1.909 1.978 1.926 2.032 1.992 2.470  
#3 1.989 2.091 1.984 1.913 1.976 1.928 2.038 1.993 2.466

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Elem	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.923	2.030	1.876	2.042	1.976	1.926	1.896	39.92	40.20
Stddev	.001	.002	.004	.001	.004	.003	.003	.05	.04
%RSD	.0675	.1009	.1970	.0676	.2063	.1732	.1617	.1233	.1117

#1 1.924 2.032 1.876 2.040 1.973 1.922 1.893 39.92 40.24  
#2 1.923 2.028 1.872 2.043 1.976 1.927 1.897 39.97 40.22  
#3 1.921 2.029 1.879 2.042 1.981 1.928 1.898 39.97 40.15

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.42	39.89	39.45	39.39	1.961	1.873	5.031	1.891	2.037
Stddev	.02	.09	.04	.02	.002	.001	.008	.003	.003
%RSD	.0588	.2271	.1028	.0541	.1011	.0509	.1537	.1347	.1221

#1 40.44 39.97 39.47 39.41 1.959 1.872 5.024 1.891 2.039  
#2 40.43 39.79 39.48 39.38 1.962 1.872 5.030 1.888 2.037  
#3 40.39 39.90 39.41 39.37 1.962 1.874 5.040 1.893 2.034

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

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11.4  
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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 19:37:28 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.882	1.834	1.942	1.829	1.926	1.946	1.929	1.972
Stddev	.004	.000	.001	.002	.002	.002	.002	.002
%RSD	.1989	.0179	.0681	.1182	.1174	.0764	.1012	.0965

#1 1.878 1.834 1.943 1.829 1.924 1.945 1.928 1.970  
#2 1.882 1.834 1.942 1.826 1.927 1.948 1.927 1.973  
#3 1.886 1.833 1.940 1.831 1.928 1.945 1.931 1.974

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value  
Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176390.	27871.	7801.1	10370.
Stddev	203.	115.	11.4	7.
%RSD	.11501	.41279	.14636	.07002

#1 176470. 27741. 7788.1 10363.  
#2 176160. 27959. 7805.6 10370.  
#3 176540. 27912. 7809.5 10377.

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Zoom In  
Zoom Out

Sample Name: ccb Acquired: 10/4/2019 19:42:18 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.000	.0001	.0000	.0001	.0001	.0008	.0001	.0001
Stddev	.0002	.0000	.0001	.0002	.0001	.0002	.0000	.0002
%RSD	705.0	9.379	150.0	178.5	119.6	21.22	37.38	168.2

#1 -0.002 .0001 .0001 -0.001 .0003 .0010 .0001 .0001  
#2 -0.002 .0001 .0001 .0001 .0000 .0006 .0002 .0003  
#3 -0.000 .0002 .0000 .0003 .0001 .0009 .0001 .0001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Ti1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0001	-0.002	.0001	-0.003	-0.002	.0001	-0.005
Stddev	.0002	.0003	.0001	.0007	.0008	.0010	.0007	.0010
%RSD	19.17	240.4	24.45	1031.	272.5	470.3	1286.	192.4

#1 .0007 .0002 .0002 .0002 .0006 .0014 .0007 .0004  
#2 .0010 .0002 .0003 .0005 .0008 .0001 .0006 .0004  
#3 .0009 .0003 .0003 .0009 .0007 .0006 .0000 .0016

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0046	.0025	.0019	.0123	.0959	.1986	.0009	.0001
Stddev	.0042	.0022	.0011	.0033	.0139	.0153	.0003	.0000
%RSD	92.33	85.92	56.66	27.05	14.48	7.717	33.17	60.97

#1 -.0095 .0049 .0031 .0131 .0953 .2147 .0010 .0000  
#2 -.0021 .0007 .0010 .0152 .0823 .1842 .0011 .0001  
#3 -.0021 .0020 .0017 .0087 .1100 .1968 .0005 .0001

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit  
Low Limit

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Sample Name: ccb Acquired: 10/4/2019 19:42:18 Type: QC								
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000								
User: admin Custom ID1: Custom ID2: Custom ID3:								
Comment:								
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.007	-0.002	.0001	.0001	F -.0086	-0.003	-0.003	.0007
Stddev	.0004	.0003	.0001	.0005	.0001	.0001	.0012	.0013
%RSD	53.71	157.1	77.69	618.4	1.652	26.87	409.2	170.4
#1	-0.003	-0.004	.0000	.0006	-.0087	-.0003	.0006	-.0006
#2	-.0009	-.0001	.0000	-.0004	-.0084	-.0004	.0001	.0019
#3	-.0009	-.0002	.0001	.0001	-.0085	-.0002	-.0016	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit					.0050			
Low Limit					-.0050			
Elem	Li6707	P_1774	Ce4040					
Units	ppm	ppm	ppm					
Avg	.0017	-0.0066	-0.0023					
Stddev	.0008	.0004	.0030					
%RSD	46.49	5.658	129.9					
#1	.0012	-.0063	.0005					
#2	.0026	-.0070	-.0020					
#3	.0013	-.0065	-.0054					
Check ?	Chk Pass	Chk Pass	Chk Pass					
High Limit								
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	181020.	28030.	8074.3	11197.				
Stddev	3429.	122.	12.3	14.				
%RSD	1.8940	.43509	.15174	.12167				
#1	177990.	27923.	8080.7	11206.				
#2	184740.	28003.	8060.2	11182.				
#3	180330.	28163.	8082.1	11205.				

Sample Name: jc95531-1 Acquired: 10/4/2019 19:47:20 Type: Unk											
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000											
User: admin Custom ID1: Custom ID2: Custom ID3:											
Comment:											
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.2591	.0004	.0013	.0075	.0014	.0090	2.314	.0098	.0033		
Stddev	.0033	.0001	.0003	.0008	.0007	.0013	.009	.0010	.0007		
%RSD	1.277	31.98	21.63	10.42	51.52	14.98	.3705	10.55	22.01		
#1	.2624	.0005	.0013	.0077	.0014	.0075	2.324	.0093	.0037		
#2	.2591	.0005	.0010	.0066	.0007	.0100	2.308	.0110	.0037		
#3	.2558	.0003	.0015	.0082	.0022	.0095	2.310	.0091	.0025		
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.0037	.1321	.0030	.0005	.0076	-.0014	-.0048	.1428	.59.12		
Stddev	.0007	.0005	.0020	.0049	.0003	.0057	.0015	.0099	.74		
%RSD	18.68	.3747	66.43	1071.	3.294	413.7	30.27	6.918	1.256		
#1	.0043	.1325	.0013	-.0050	.0077	-.0034	-.0064	.1542	59.94		
#2	.0040	.1323	.0053	.0044	.0079	-.0058	-.0036	.1377	58.92		
#3	.0030	.1315	.0025	.0020	.0074	.0050	-.0044	.1365	58.49		
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.1235	2.602	17.40	F 1923.	.3945	.0001	3.135	-.0010	.2347		
Stddev	.0049	.024	.12	55.	.0007	.0007	.018	.0021	.0027		
%RSD	3.989	.9178	.6779	2.841	.1864	512.0	.5683	221.7	1.167		
#1	.1178	2.629	17.51	1983.	.3943	.0001	3.135	-.0030	.2377		
#2	.1264	2.593	17.28	1875.	.3953	.0008	3.153	-.0012	.2337		
#3	.1262	2.584	17.40	1911.	.3939	-.0005	3.117	.0013	.2325		
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040			
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm			
Avg	.0020	-.0430	-.0009	3.216	.0034	.0698	.0028	-.0045			
Stddev	.0011	.0035	.0005	.007	.0023	.0064	.0045	.0055			
%RSD	52.41	8.072	50.24	2.111	67.14	9.138	159.5	121.2			
#1	.0011	-.0449	-.0004	3.222	.0048	.0640	-.0014	-.0095			
#2	.0032	-.0390	-.0012	3.216	.0008	.0686	.0024	-.0053			
#3	.0018	-.0451	-.0012	3.209	.0047	.0766	.0075	.0013			

Sample Name: jc95531-1 Acquired: 10/4/2019 19:47:20 Type: Unk				
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000				
User: admin Custom ID1: Custom ID2: Custom ID3:				
Comment:				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	168620.	27716.	7533.7	9797.6
Stddev	309.	141.	40.9	33.4
%RSD	.18311	.50943	.54273	.34042
#1	168830.	27606.	7499.8	9769.4
#2	168760.	27875.	7522.2	9789.0
#3	168260.	27667.	7579.1	9834.4

Sample Name: mp17698-sd1 Acquired: 10/4/2019 19:52:20 Type: Unk											
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000											
User: admin Custom ID1: Custom ID2: Custom ID3:											
Comment:											
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.2585	.0026	-.0016	.0091	.0114	.0484	2.317	.0131	.0182		
Stddev	.0066	.0015	.0023	.0039	.0040	.0009	.004	.0090	.0043		
%RSD	2.545	55.71	140.8	43.04	34.77	1.921	.1636	68.87	23.71		
#1	.2519	.0026	-.0026	.0136	.0158	.0473	2.319	.0154	.0151		
#2	.2585	.0012	.0010	.0072	.0081	.0488	2.320	.0032	.0163		
#3	.2651	.0041	-.0032	.0065	.0102	.0490	2.313	.0208	.0231		
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	-.0026	.2091	.0052	-.0085	.0281	-.0153	-.0022	.2955	.59.19		
Stddev	.0006	.0009	.0136	.0103	.0176	.0182	.0119	.0377	.07		
%RSD	23.62	.4247	263.0	122.0	62.50	118.6	530.7	12.76	.1112		
#1	-.0020	.2101	.0139	-.0169	.0223	.0041	-.0083	.3093	59.25		
#2	-.0026	.2084	-.0105	-.0031	.0479	-.0319	-.0099	.3243	59.12		
#3	-.0033	.2089	.0121	-.0115	.0142	-.0181	.0114	.2528	59.20		
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.1934	2.880	19.17	2003.	.3981	-.0011	3.318	-.0023	.2305		
Stddev	.0164	.179	.24	2.	.0064	.0013	.017	.0028	.0022		
%RSD	8.477	6.226	1.229	.0911	1.618	122.5	.5089	123.8	.9401		
#1	.2116	3.059	19.08	2004.	4.054	-.0008	3.323	-.0018	.2280		
#2	.1800	2.700	19.44	2003.	.3933	-.0026	3.333	-.0053	.2320		
#3	.1885	2.882	19.00	2001.	.3955	.0001	3.300	-.0003	.2316		
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040			
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm			
Avg	.0123	-.2160	-.0053	3.136	.0326	.1261	-.1151	-.0352			
Stddev	.0013	.0081	.0034	.031	.0045	.0104	.0170	.0512			
%RSD	10.54	3.744	64.12	.9787	13.82	8.241	14.78	145.4			
#1	.0120	-.2217	-.0028	3.133	.0299	.1283	-.0954	-.0934			
#2	.0111	-.2196	-.0039	3.168	.0301	.1353	-.1257	-.0148			
#3	.0137	-.2068	-.0091	3.107	.0378	.1148	-.1240	.0027			



Sample Name: mp17698-sd1 Acquired: 10/4/2019 19:52:20 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	175960.	27696.	7807.4	10452.
Stddev	322.	124.	19.0	11.
%RSD	.18319	.44699	.24361	.10587
#1	176270.	27814.	7789.2	10445.
#2	175630.	27708.	7805.9	10448.
#3	175990.	27567.	7827.1	10465.

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Sample Name: mp17700-mb1 Acquired: 10/4/2019 19:57:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0004	-.0003	.0008	.0023	.0084	.0003	.0172	.0031
Stddev	.0017	.0000	.0003	.0005	.0006	.0007	.0002	.0011	.0026
%RSD	62.78	9.504	95.50	59.55	24.26	8.521	78.31	6.286	81.87
#1	.0018	.0004	-.0000	.0003	.0026	.0085	.0006	.0178	.0033
#2	.0017	.0004	-.0007	.0009	.0017	.0091	.0001	.0160	.0056
#3	.0047	.0003	-.0003	.0012	.0027	.0076	.0002	.0179	.0005
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0061	.0006	-.0026	-.0033	-.0026	.0009	.0157	.0781
Stddev	.0013	.0004	.0010	.0032	.0010	.0031	.0022	.0505	.0092
%RSD	138.9	5.858	173.4	124.8	29.21	120.8	257.9	321.7	11.76
#1	.0012	.0057	-.0002	-.0003	-.0026	-.0008	.0014	-.0008	.0738
#2	.0021	.0064	.0002	-.0011	-.0043	-.0062	.0027	.0724	.0886
#3	-.0005	.0062	.0018	-.0062	-.0029	-.0008	-.0016	-.0245	.0718
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114	.0086	1.524	F 1335.	.0079	-.0005	.0070	-.0006	.0034
Stddev	.0050	.0449	.170	9.	.0030	.0012	.0018	.0013	.0004
%RSD	44.34	519.8	11.18	.6888	37.82	261.0	2.044	194.4	10.87
#1	.0064	-.0296	1.327	1345.	.0112	-.0008	.0883	-.0021	.0035
#2	.0113	-.0026	1.626	1331.	.0073	.0009	.0850	.0001	.0030
#3	.0164	.0580	1.618	1328.	.0053	-.0015	.0878	.0000	.0037
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0008	-.0393	-.0009	.0161	.0052	.0327	-.0241	-.0077	
Stddev	.0013	.0027	.0002	.0098	.0014	.0067	.0013	.0051	
%RSD	159.4	6.869	17.40	60.78	27.67	20.33	5.204	66.63	
#1	-.0006	-.0375	-.0010	.0262	.0068	.0251	-.0231	-.0103	
#2	.0019	-.0424	-.0011	.0152	.0046	.0375	-.0255	-.0111	
#3	.0011	-.0381	-.0008	.0068	.0041	.0356	-.0238	-.0018	

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Sample Name: mp17700-mb1 Acquired: 10/4/2019 19:57:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	170230.	27655.	7631.9	9994.5
Stddev	336.	153.	19.6	24.4
%RSD	.19718	.55226	.25638	.24384
#1	169930.	27580.	7609.4	9966.4
#2	170150.	27831.	7645.3	10010.
#3	170590.	27555.	7640.9	10007.

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Sample Name: mp17700-mb2 Acquired: 10/4/2019 20:02:17 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0003	-.0013	.0003	.0015	.0027	.0001	.0003	.0025
Stddev	.0008	.0001	.0004	.0007	.0014	.0015	.0001	.0003	.0013
%RSD	102.4	18.20	28.30	255.4	88.64	55.93	198.3	90.96	51.32
#1	-.0017	.0003	-.0009	.0010	.0022	.0044	.0002	-.0000	.0011
#2	-.0005	.0003	-.0015	-.0005	.0024	.0022	-.0000	.0005	.0036
#3	-.0002	.0004	-.0015	.0004	-.0000	.0015	-.0000	.0005	.0026
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0085	.0011	-.0068	-.0052	-.0015	.0003	-.0443	.0930
Stddev	.0006	.0001	.0014	.0027	.0023	.0019	.0059	.0422	.0110
%RSD	163.5	1.682	127.1	39.75	44.22	124.8	2008.	95.33	11.86
#1	.0001	.0085	.0027	-.0071	-.0028	.0007	-.0061	-.0552	.0951
#2	-.0011	.0083	.0009	-.0040	-.0054	-.0025	.0015	-.0800	.0811
#3	-.0001	.0086	-.0002	-.0094	-.0074	-.0027	.0055	.0023	.1028
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183	.0128	.4577	3.265	-.0028	-.0020	.0200	-.0001	-.0003
Stddev	.0018	.0268	.0726	.049	.0003	.0004	.0037	.0012	.0002
%RSD	9.629	209.9	15.86	1.501	11.71	21.13	18.27	1163.	93.98
#1	.0187	-.0098	.4248	3.321	-.0028	-.0024	.0162	-.0015	-.0003
#2	.0199	.0424	.4074	3.240	-.0032	-.0020	.0203	.0008	.0000
#3	.0164	.0058	.5408	3.233	-.0025	-.0015	.0235	.0004	-.0005
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0012	-.0446	-.0010	.0092	.0036	.0133	-.0311	-.0136	
Stddev	.0006	.0032	.0003	.0031	.0032	.0058	.0024	.0095	
%RSD	51.69	7.103	32.46	33.69	88.90	43.64	7.706	70.24	
#1	.0007	-.0483	-.0012	.0065	.0071	.0078	-.0325	-.0241	
#2	.0018	-.0429	-.0011	.0086	.0010	.0193	-.0283	-.0109	
#3	.0009	-.0426	-.0006	.0126	.0026	.0126	-.0324	-.0056	

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Sample Name: mp17700-mb2 Acquired: 10/4/2019 20:02:17 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182730.	28338.	8056.6	11161.
Stddev	1511.	19.	3.8	10.
%RSD	.82671	.06586	.04753	.09048
#1	181220.	28349.	8052.1	11149.
#2	182740.	28316.	8058.9	11165.
#3	184240.	28348.	8058.6	11168.

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Sample Name: mp17700-b1 Acquired: 10/4/2019 20:07:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.005	2.136	2.044	1.999	2.031	1.887	2.107	2.105	2.596
Stddev	.005	.004	.002	.003	.012	.007	.010	.005	.0020
%RSD	.2650	.1656	.0828	.1546	.6075	.3975	.4628	.2488	.7815
#1	2.001	2.133	2.046	2.000	2.036	1.888	2.113	2.105	2.589
#2	2.003	2.134	2.042	1.995	2.040	1.894	2.112	2.100	2.618
#3	2.011	2.140	2.045	2.001	2.017	1.879	2.095	2.111	2.580
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.974	2.155	1.944	2.085	2.037	2.012	1.936	25.08	25.58
Stddev	.012	.005	.004	.005	.006	.006	.002	.10	.06
%RSD	.6058	.2364	.1818	.2192	.3215	.2867	.0862	.3820	.2275
#1	1.980	2.161	1.948	2.090	2.044	2.012	1.936	24.98	25.55
#2	1.981	2.150	1.941	2.081	2.035	2.006	1.935	25.10	25.55
#3	1.960	2.155	1.943	2.085	2.031	2.017	1.938	25.17	25.65
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.73	25.26	26.27	1331.	1.985	1.924	4.035	1.940	2.048
Stddev	.05	.11	.13	15.	.003	.005	.0055	.007	.002
%RSD	.2024	.4420	.5046	1.108	.1694	.2380	1.355	.3506	.1133
#1	25.69	25.36	26.15	1318.	1.989	1.929	.3994	1.946	2.047
#2	25.71	25.14	26.41	1329.	1.982	1.919	.4015	1.933	2.048
#3	25.79	25.28	26.25	1347.	1.984	1.923	.4097	1.941	2.051
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.912	1.804	1.959	-0.111	.0488	.0269	1.988	-0.0864	
Stddev	.011	.009	.008	.0042	.0028	.0026	.006	.0078	
%RSD	.5736	.4915	.4041	37.69	5.838	9.825	2.855	9.082	
#1	1.915	1.814	1.963	-.0064	.0465	.0299	1.995	-.0904	
#2	1.921	1.797	1.964	-.0124	.0480	.0254	1.983	-.0773	
#3	1.900	1.802	1.950	-.0145	.0520	.0253	1.988	-.0914	

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Sample Name: mp17700-b1 Acquired: 10/4/2019 20:07:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	171500.	27833.	7654.3	9954.4
Stddev	1093.	169.	15.4	12.6
%RSD	.63711	.60715	.20067	.12629
#1	170760.	27978.	7639.5	9943.7
#2	171000.	27874.	7670.2	9968.2
#3	172760.	27648.	7653.2	9951.4

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Sample Name: mp17700-b2 Acquired: 10/4/2019 20:12:05 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.984	2.087	1.979	1.912	1.996	1.879	2.096	1.999	2.503
Stddev	.004	.003	.003	.001	.007	.007	.010	.004	.0020
%RSD	.2063	.1588	.1358	.0506	.3692	.3830	.4737	.2166	.8164
#1	1.988	2.090	1.982	1.911	2.004	1.887	2.108	1.999	2.526
#2	1.981	2.087	1.977	1.913	1.994	1.875	2.090	2.004	2.492
#3	1.981	2.084	1.977	1.911	1.990	1.874	2.092	1.995	2.490
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.922	2.060	1.843	2.094	1.966	1.909	1.881	24.70	25.04
Stddev	.009	.004	.004	.007	.001	.005	.003	.05	.05
%RSD	.4638	.2128	.2299	.3463	.0608	.2753	.1605	.2122	.2089
#1	1.932	2.065	1.847	2.091	1.967	1.913	1.882	24.75	25.10
#2	1.915	2.056	1.842	2.090	1.965	1.903	1.883	24.69	25.03
#3	1.919	2.059	1.839	2.103	1.965	1.911	1.877	24.65	24.99
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.21	25.11	24.71	27.57	1.924	1.890	1.690	1.933	2.027
Stddev	.05	.11	.08	.05	.001	.004	.0022	.004	.003
%RSD	.2071	.4292	.3104	.1668	.0604	.2361	1.306	.2046	.1393
#1	25.26	25.13	24.71	27.60	1.924	1.894	1.666	1.934	2.030
#2	25.23	25.21	24.79	27.59	1.922	1.891	1.694	1.936	2.027
#3	25.16	25.00	24.64	27.52	1.925	1.886	1.709	1.929	2.025
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.871	1.739	1.918	-0.032	.0434	.0067	1.866	-0.0798	
Stddev	.005	.004	.007	.0033	.0031	.0081	.005	.0069	
%RSD	.2594	.2110	.3549	101.1	7.161	121.6	.2823	8.638	
#1	1.877	1.740	1.926	-.0068	.0469	.0129	1.871	-.0866	
#2	1.869	1.735	1.914	-.0003	.0418	.0097	1.861	-.0800	
#3	1.868	1.743	1.915	-.0026	.0414	-.0025	1.866	-.0728	

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Sample Name: mp17700-b2 Acquired: 10/4/2019 20:12:05 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182270.	28186.	8036.7	10930.
Stddev	280.	127.	4.7	7.
%RSD	.15382	.44963	.05856	.06212
#1	181950.	28055.	8033.8	10929.
#2	182450.	28195.	8034.1	10923.
#3	182410.	28308.	8042.1	10937.

Sample Name: mp17700-s1 Acquired: 10/4/2019 20:16:47 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.486	2.140	2.046	2.004	2.021	1.890	6.893	2.090	2.601
Stddev	.008	.006	.002	.003	.004	.003	.008	.004	.008
%RSD	.3151	.2964	.1062	.1503	.1913	.1481	.1221	.2089	.2965
#1	2.481	2.137	2.047	2.004	2.023	1.891	6.902	2.086	.2610
#2	2.495	2.148	2.043	2.006	2.024	1.892	6.889	2.094	.2596
#3	2.481	2.136	2.043	2.000	2.017	1.886	6.887	2.090	.2598

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.989	2.130	1.962	2.069	2.068	2.015	1.947	25.20	251.6
Stddev	.004	.003	.004	.003	.004	.008	.009	.03	.7
%RSD	.2141	.1500	.2254	.1365	.2102	.4108	.4867	.1073	.2614
#1	1.993	2.133	1.957	2.070	2.063	2.022	1.936	25.17	251.2
#2	1.987	2.127	1.965	2.070	2.071	2.006	1.952	25.21	252.3
#3	1.985	2.131	1.962	2.065	2.069	2.017	1.952	25.21	251.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.65	83.87	33.12	1607.	2.219	1.928	3.592	1.925	2.667
Stddev	.04	.16	.22	16.	.000	.002	.005	.002	.002
%RSD	.1446	.1850	.6637	1.017	.0167	.1152	.1417	.1209	.0821
#1	25.62	83.78	33.02	1588.	2.219	1.928	3.598	1.923	2.668
#2	25.69	84.05	33.37	1614.	2.218	1.926	3.589	1.925	2.668
#3	25.63	83.77	32.96	1618.	2.219	1.930	3.590	1.927	2.664

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.914	1.823	1.968	5.539	.0473	.0581	2.046	-.0679
Stddev	.005	.004	.003	.0079	.0039	.0006	.002	.0093
%RSD	.2802	.2174	.1262	1.420	8.243	1.035	.0860	13.66
#1	1.913	1.820	1.971	5.468	.0473	.0575	2.044	-.0670
#2	1.919	1.821	1.968	5.526	.0512	.0580	2.047	-.0591
#3	1.909	1.827	1.966	5.623	.0434	.0587	2.045	-.0776

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Sample Name: mp17700-s1 Acquired: 10/4/2019 20:16:47 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	169300.	27629.	7554.8	9758.4
Stddev	239.	158.	14.0	5.0
%RSD	.14107	.57268	.18512	.05119
#1	169310.	27797.	7546.3	9755.2
#2	169060.	27482.	7570.9	9764.1
#3	169540.	27609.	7547.1	9755.9

Sample Name: mp17700-s2 Acquired: 10/4/2019 20:21:33 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.431	2.099	2.011	1.967	1.985	1.857	6.693	2.053	2.552
Stddev	.004	.004	.003	.002	.006	.004	.007	.001	.0015
%RSD	.1777	.2094	.1232	.0985	.3007	.2026	.0980	.0686	.6073
#1	2.427	2.094	2.009	1.965	1.981	1.853	6.686	2.052	.2534
#2	2.435	2.100	2.014	1.969	1.992	1.860	6.694	2.054	.2559
#3	2.433	2.102	2.009	1.966	1.983	1.858	6.699	2.054	.2563

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.949	2.094	1.919	2.029	2.031	1.982	1.906	24.72	243.8
Stddev	.002	.003	.003	.008	.001	.007	.010	.12	.3
%RSD	.0768	.1568	.1452	.3852	.0474	.3689	.5305	.4688	.1284
#1	1.947	2.094	1.917	2.032	2.030	1.985	1.918	24.59	243.4
#2	1.950	2.096	1.922	2.036	2.031	1.974	1.899	24.74	244.0
#3	1.950	2.090	1.917	2.021	2.032	1.988	1.901	24.82	243.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.18	81.46	32.76	1555.	2.172	1.898	3.480	1.894	2.603
Stddev	.04	.08	.10	18.	.002	.002	.003	.006	.003
%RSD	.1611	.0982	.3003	1.171	.0853	.1085	.0837	.3345	.1250
#1	25.15	81.49	32.71	1571.	2.170	1.897	3.481	1.893	2.599
#2	25.17	81.52	32.70	1535.	2.173	1.900	3.482	1.900	2.605
#3	25.22	81.37	32.87	1560.	2.173	1.896	3.477	1.888	2.605

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.878	1.801	1.930	5.390	.0406	.0660	2.001	-.0584
Stddev	.009	.007	.003	.0065	.0029	.0047	.001	.0137
%RSD	.4658	.4057	.1426	1.211	7.239	7.176	.0490	23.47
#1	1.873	1.800	1.927	5.448	.0408	.0698	2.002	-.0709
#2	1.888	1.809	1.931	5.319	.0375	.0675	2.001	-.0604
#3	1.873	1.795	1.932	5.401	.0434	.0607	2.000	-.0438

Sample Name: mp17700-s2 Acquired: 10/4/2019 20:21:33 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	169700.	27782.	7542.4	9758.3
Stddev	730.	128.	17.6	13.7
%RSD	.43008	.46065	.23399	.13999
#1	170340.	27658.	7527.6	9744.9
#2	168910.	27775.	7537.7	9757.8
#3	169860.	27914.	7562.0	9772.2

Sample Name: jc95821-11a Acquired: 10/4/2019 20:26:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5059	.0006	.0001	.0124	.0008	.0098	4.810	.0148	.0036
Stddev	.0081	.0001	.0006	.0009	.0004	.0005	.068	.0005	.0034
%RSD	1.593	11.18	822.3	7.529	45.81	5.240	1.414	3.394	93.19
#1	.5126	.0006	-.0002	.0116	.0008	.0092	4.887	.0143	.0018
#2	.5082	.0007	-.0003	.0135	.0005	.0101	4.789	.0149	.0075
#3	.4970	.0006	.0007	.0122	.0012	.0101	4.756	.0153	.0015

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0144	.0037	-.0055	.0402	-.0050	.0008	.0214	238.2
Stddev	.0005	.0004	.0024	.0045	.0023	.0089	.0052	.0428	4.5
%RSD	8.342	2.521	65.16	81.07	5.663	179.8	620.2	200.2	1.874
#1	.0069	.0140	.0010	-.0097	.0382	.0008	-.0046	.0518	241.8
#2	.0060	.0145	.0045	-.0008	.0427	-.0005	.0012	-.0275	239.4
#3	.0061	.0147	.0057	-.0061	.0398	-.0152	.0058	.0399	233.2

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0258	62.13	9.050	1649.	.2278	-.0009	3.455	-.0021	.6573
Stddev	.0033	1.18	.343	27.	.0012	.0006	.023	.0032	.0113
%RSD	12.69	1.896	3.787	1.609	.5071	67.61	.6631	156.6	1.725
#1	.0263	63.07	9.024	1662.	.2265	-.0015	3.442	.0016	.6672
#2	.0287	62.50	9.405	1666.	.2285	-.0008	3.442	-.0033	.6597
#3	.0223	60.81	8.721	1618.	.2285	-.0003	3.482	-.0045	.6449

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0373	-.0001	.6830	.0029	.0702	.0066	.0089
Stddev	.0010	.0046	.0010	.0064	.0095	.0045	.0003	.0098
%RSD	188.4	12.40	761.7	9398	330.3	6.394	4.155	110.0
#1	-.0015	-.0342	.0005	.6827	-.0038	.0697	.0063	.0010
#2	.0004	-.0351	-.0012	.6767	.0137	.0749	.0068	.0199
#3	-.0004	-.0426	.0003	.6895	-.0013	.0660	.0067	.0058

11.4  
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Sample Name: jc95821-11a Acquired: 10/4/2019 20:26:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	168410.	27752.	7478.0	9728.3
Stddev	1219.	90.	29.0	37.1
%RSD	.72366	.32345	.38739	.38094
#1	167020.	27705.	7507.1	9759.1
#2	168920.	27696.	7477.8	9738.7
#3	169290.	27855.	7449.2	9687.2

Sample Name: mp17700-sd1 Acquired: 10/4/2019 20:31:19 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4919	.0016	-.0035	.0146	.0063	.0400	4.918	.0195	.0166
Stddev	.0026	.0006	.0022	.0005	.0020	.0038	.005	.0052	.0060
%RSD	5.250	37.02	61.23	3.418	31.73	9.502	.1020	26.43	36.06
#1	.4928	.0014	-.0041	.0148	.0057	.0427	4.923	.0241	.0110
#2	.4890	.0023	-.0053	.0141	.0085	.0357	4.920	.0205	.0229
#3	.4939	.0011	-.0011	.0150	.0047	.0417	4.913	.0139	.0158

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	.0483	-.0004	-.0033	.0372	-.0246	-.0141	.0881	232.8
Stddev	.0037	.0029	.0039	.0161	.0132	.0203	.0273	.1795	.5
%RSD	47.00	6.045	936.7	485.1	35.45	82.54	192.9	203.8	.2111
#1	.0110	.0471	-.0011	-.0172	.0242	-.0095	-.0198	.2692	233.3
#2	.0038	.0517	.0038	-.0072	.0506	-.0477	-.0382	-.0898	232.3
#3	.0090	.0462	-.0039	.0144	.0367	-.0167	.0155	.0848	232.8

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sr1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0641	60.98	11.35	1688.	.2272	-.0061	3.531	-.0039	.6413
Stddev	.0053	.21	.58	2.	.0047	.0017	.016	.0043	.0017
%RSD	8.196	.3420	5.090	.1414	2.089	27.86	.4598	109.6	.2676
#1	.0611	61.18	11.44	1688.	.2296	-.0062	3.521	-.0054	.6394
#2	.0611	60.76	10.73	1685.	.2217	-.0043	3.550	-.0073	.6419
#3	.0702	61.00	11.88	1690.	.2302	-.0077	3.523	.0009	.6426

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	-.2259	-.0084	.6057	.0328	.1283	-.1113	-.0168
Stddev	.0052	.0136	.0036	.0263	.0271	.0190	.0098	.0375
%RSD	621.5	6.031	42.79	4.335	82.56	14.83	8.826	223.2
#1	-.0049	-.2416	-.0067	.5926	.0299	.1143	-.1005	-.0217
#2	.0023	-.2192	-.0126	.6359	.0612	.1207	-.1197	.0229
#3	.0052	-.2169	-.0060	.5886	.0073	.1500	-.1138	-.0516

Zoom In  
Zoom Out

Sample Name: mp17700-sd1 Acquired: 10/4/2019 20:31:19 Type: Conc  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176520.	27752.	7785.5	10432.
Stddev	281.	91.	2.5	4.
%RSD	.15900	.32896	.03230	.03578
#1	176800.	27853.	7785.9	10435.
#2	176240.	27725.	7787.8	10434.
#3	176510.	27677.	7782.8	10428.

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 20:36:13 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.006	2.103	1.992	1.922	1.995	1.942	2.048	1.997	2.487
Stddev	.005	.006	.002	.001	.002	.002	.025	.000	.0004
%RSD	.2711	.3094	.0752	.0639	.0889	.1049	1.217	.0169	.1702
#1	2.010	2.110	1.992	1.920	1.995	1.945	2.019	1.997	2.484
#2	2.007	2.102	1.993	1.921	1.997	1.941	2.063	1.997	2.486
#3	2.000	2.097	1.990	1.923	1.993	1.941	2.062	1.997	2.492

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.941	2.043	1.885	2.047	1.985	1.935	1.904	40.19	40.55
Stddev	.001	.002	.004	.003	.001	.006	.002	.10	.12
%RSD	.0538	.0841	.1849	.1375	.0646	.3343	.0813	.2444	.2843
#1	1.940	2.044	1.888	2.048	1.986	1.931	1.902	40.26	40.68
#2	1.942	2.045	1.884	2.044	1.986	1.943	1.906	40.22	40.54
#3	1.941	2.041	1.882	2.049	1.984	1.931	1.904	40.08	40.45

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.68	40.20	39.73	39.69	1.969	1.882	5.042	1.908	2.046
Stddev	.06	.07	.12	.02	.002	.001	.003	.001	.001
%RSD	.1473	.1631	.2934	.0602	.0108	.0292	.0678	.0363	.0507
#1	40.73	40.27	39.84	39.71	1.968	1.883	5.041	1.907	2.046
#2	40.70	40.16	39.75	39.70	1.971	1.883	5.046	1.909	2.046
#3	40.62	40.16	39.61	39.67	1.967	1.882	5.039	1.908	2.045

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

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11.4  
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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 20:36:13 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.901	1.847	1.953	1.835	1.934	1.958	1.946	1.986
Stddev	.003	.002	.001	.001	.004	.007	.004	.002
%RSD	.1439	.1141	.0428	.0719	.2294	.3506	.2102	.0750
#1	1.904	1.846	1.952	1.835	1.932	1.965	1.944	1.987
#2	1.901	1.849	1.952	1.835	1.939	1.959	1.950	1.987
#3	1.898	1.845	1.954	1.837	1.930	1.951	1.943	1.984

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	174630.	27649.	7722.1	10274.
Stddev	339.	73.	11.6	11.
%RSD	.19406	.26411	.15038	.10699
#1	174900.	27593.	7710.6	10261.
#2	174250.	27623.	7721.9	10280.
#3	174720.	27732.	7733.8	10281.

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Zoom In  
Zoom Out

Sample Name: ccb Acquired: 10/4/2019 20:41:04 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0002	-0.001	.0000	.0003	.0006	.0001	-0.001
Stddev	.0001	.0000	.0000	.0001	.0002	.0001	.0000	.0003
%RSD	56.92	5.807	20.59	218.6	55.72	13.16	49.03	319.5
#1	.0004	.0002	-0.001	.0001	.0001	.0005	.0000	.0001
#2	.0002	.0002	-0.002	.0000	.0005	.0006	.0001	.0001
#3	.0001	.0002	-0.001	-0.0000	.0003	.0006	.0001	-0.0005

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit Low Limit

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.006	.0002	-0.003	.0003	-0.006	-0.004	-0.004	-0.005
Stddev	.0001	.0002	.0001	.0007	.0005	.0004	.0016	.0008
%RSD	16.11	131.0	26.06	251.5	92.36	93.96	385.2	157.7
#1	-0.007	-0.0000	-0.002	-0.0005	-0.010	-0.003	-0.012	-0.000
#2	.0005	.0001	-0.004	.0004	-0.007	-0.001	-0.014	-0.001
#3	.0006	.0004	-0.003	.0009	.0000	-0.009	.0014	-0.013

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit Low Limit

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.024	.0026	.0034	.0065	.0510	.1745	.0004	-0.001
Stddev	.0030	.0010	.0006	.0069	.0061	.0021	.0002	.0001
%RSD	127.9	37.16	18.79	106.9	11.96	1.213	52.28	114.0
#1	-0.037	.0036	.0028	.0123	.0451	.1759	.0004	-0.000
#2	-0.045	.0027	.0041	-0.012	.0573	.1755	.0002	-0.000
#3	.0011	.0016	.0033	.0083	.0506	.1721	.0007	-0.002

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
High Limit Low Limit

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Sample Name: ticonf Acquired: 10/4/2019 20:51:09 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182470.	27883.	8034.1	11081.
Stddev	927.	147.	41.9	49.
%RSD	.50813	.52785	.52102	.44494
#1	183330.	27933.	8008.1	11055.
#2	181490.	27998.	8082.4	11138.
#3	182610.	27717.	8011.8	11049.

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Sample Name: mnconf Acquired: 10/4/2019 20:56:18 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-0.0000	-0.0005	-0.0000	-0.0006	.0003	F 10.56	.0000	.0018
Stddev	.0001	.0000	.0001	.0002	.0002	.0003	.06	.0003	.0005
%RSD	118.9	92.48	19.28	24790.	32.17	91.40	.6041	2469.	29.01
#1	-0.0000	-0.0000	-0.0005	.0002	-0.0005	.0004	10.52	-0.0000	.0013
#2	.0001	-0.0001	-0.0004	.0000	-0.0004	.0005	10.52	.0004	.0016
#3	.0002	-0.0000	-0.0006	-0.0002	-0.0008	-0.0000	10.63	-0.0003	.0023

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0013	.0013	-0.0001	.0004	-0.0013	-0.0014	.0146	.0079
Stddev	.0007	.0001	.0008	.0003	.0006	.0009	.0001	.0248	.0025
%RSD	43.48	10.26	61.32	331.3	156.9	71.25	6.949	169.5	31.70
#1	.0012	.0013	.0020	-0.0004	.0007	-0.0006	-0.0013	.0152	.0059
#2	.0012	.0014	.0005	-0.0001	.0009	-0.0008	-0.0013	-0.0105	.0071
#3	.0024	.0012	.0013	.0002	-0.0003	-0.0023	-0.0015	.0390	.0107

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0018	.0007	.0950	.0995	-0.0006	-0.0000	.0027	-0.0005	-0.0000
Stddev	.0008	.0059	.0086	.0081	.0001	.0003	.0002	.0003	.0000
%RSD	43.89	873.2	9.005	8.138	26.71	154.3	5.699	71.09	351.0
#1	-0.0023	.0001	.0934	.0973	-0.0004	.0002	.0029	-0.0008	-0.0001
#2	-0.0021	.0068	.1042	.0926	-0.0006	-0.0003	.0027	-0.0003	.0000
#3	-0.0009	-0.0049	.0873	.1084	-0.0007	.0001	.0026	-0.0003	.0000

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-0.0096	-0.0006	-0.0080	.0000	.0003	.0001	-0.0024
Stddev	.0002	.0001	.0001	.0015	.0013	.0003	.0008	.0025
%RSD	72.62	1.483	11.64	18.61	11550.	89.09	704.9	107.6
#1	.0006	-0.0096	-0.0006	-0.0069	-0.0012	.0002	-0.0002	.0005
#2	.0002	-0.0097	-0.0005	-0.0074	.0015	.0001	-0.0005	-0.0034
#3	.0002	-0.0094	-0.0006	-0.0097	-0.0003	.0006	.0011	-0.0042

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11.4  
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Sample Name: mnconf Acquired: 10/4/2019 20:56:18 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182760.	28061.	8030.3	11093.
Stddev	1209.	47.	7.4	6.
%RSD	.66122	.16713	.09206	.05569
#1	183670.	28019.	8037.3	11100.
#2	183220.	28112.	8022.6	11087.
#3	181390.	28053.	8030.9	11092.

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Sample Name: snconf Acquired: 10/4/2019 21:01:24 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-0.0001	-0.0000	.0000	.0006	.0001	.0001	.0004
Stddev	.0002	.0000	.0002	.0001	.0003	.0004	.0000	.0002	.0003
%RSD	283.8	25.17	205.0	831.8	517.9	60.65	16.29	134.1	73.70
#1	.0001	.0001	.0001	-0.0001	-0.0001	.0010	.0001	.0001	.0001
#2	.0003	.0001	-0.0001	-0.0000	.0003	.0005	.0001	-0.0000	.0005
#3	-0.0001	.0001	-0.0003	.0001	-0.0000	.0003	.0001	.0003	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0003	.0014	-0.0003	.0000	-0.0002	.0004	.0024	.0059
Stddev	.0002	.0000	.0001	.0004	.0006	.0009	.0003	.0057	.0007
%RSD	182.4	9.405	9.092	151.6	4530.	395.5	76.97	235.6	11.39
#1	.0003	.0003	.0013	-0.0008	.0005	.0006	.0001	-0.0040	.0052
#2	-0.0000	.0003	.0013	-0.0000	.0001	-0.0011	.0007	.0045	.0064
#3	.0000	.0004	.0015	-0.0000	-0.0006	-0.0002	.0004	.0068	.0063

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0049	.0439	.0894	.0045	-0.0002	-0.0002	F 10.37	-0.0001
Stddev	.0003	.0113	.0044	.0038	.0002	.0002	.0006	.01	.0001
%RSD	44.86	232.1	10.07	4.225	3.864	64.86	2.393	.0923	83.17
#1	.0005	-0.0017	.0444	.0919	.0043	-0.0003	-0.0047	10.36	-0.0001
#2	.0005	-0.0017	.0481	.0850	.0046	-0.0001	-0.0259	10.37	-0.0000
#3	.0011	.0180	.0393	.0912	.0045	-0.0004	-0.0250	10.37	-0.0001

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0215	.0002	-0.0002	.0005	-0.0017	-0.0061	-0.0026
Stddev	.0002	.0008	.0001	.0020	.0003	.0005	.0005	.0022
%RSD	122.5	3.948	39.97	942.1	70.31	27.86	8.830	83.75
#1	.0001	-0.0224	.0001	-0.0025	.0007	-0.0021	-0.0061	-0.0024
#2	.0000	-0.0207	.0003	.0009	.0001	-0.0018	-0.0055	-0.0006
#3	.0004	-0.0213	.0002	.0010	.0007	-0.0012	-0.0066	-0.0049

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Sample Name: snconf Acquired: 10/4/2019 21:01:24 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	ln2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181010.	28136.	8058.7	11131.
Stddev	1102.	103.	8.4	16.
%RSD	.60886	.36518	.10427	.14400

#1 181910. 28194. 8055.4 11127.  
 #2 181350. 28197. 8052.4 11117.  
 #3 179780. 28018. 8068.2 11148.

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Sample Name: moconf Acquired: 10/4/2019 21:06:28 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.002	.0002	-0.000	-0.008	-0.006	.0016	.0000	-0.009
Stddev	.0002	.0000	.0000	.0000	.0002	.0002	.0000	.0002
%RSD	106.8	9.727	302.5	4.470	28.35	11.85	242.9	23.65

#1 -0.001 .0002 -0.000 -0.008 -0.008 .0014 -0.000 -0.010  
 #2 -0.005 .0002 -0.000 -0.007 -0.004 .0016 .0000 -0.010  
 #3 -0.001 .0002 .0000 -0.008 -0.007 .0017 .0000 -0.006

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0008	-0.021	.0046	.0085	.0011	.0007	-0.024
Stddev	.0002	.0004	.0001	.0007	.0005	.0003	.0004	.0024
%RSD	38.73	50.12	3.620	15.57	6.241	23.61	49.04	97.68

#1 .0009 .0006 -.0022 .0046 .0079 .0014 .0010 -0.003  
 #2 .0005 .0005 -.0021 .0039 .0090 .0012 .0009 -0.020  
 #3 .0005 .0013 -.0020 .0054 .0087 .0008 .0003 -0.050

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112	.0107	.0030	.0212	-0.008	.0075	.0186	9.794
Stddev	.0088	.0008	.0006	.0108	.0150	.0079	.0004	.082
%RSD	9.594	7.803	18.72	51.02	1858.	8.143	2.177	8.384

#1 .0880 .0115 .0032 .0330 -.0180 .0889 .0181 9.846  
 #2 .0846 .0098 .0024 .0185 .0089 .1045 .0188 9.837  
 #3 .1011 .0108 .0034 .0120 .0067 .0991 .0188 9.700

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	.0003	-0.000	-0.004	-0.051	-0.002	-.0630	-0.005
Stddev	.0017	.0005	.0001	.0002	.0003	.0001	.0013	.0003
%RSD	21.39	167.3	2122.	56.54	5.177	65.95	2.141	66.33

#1 .0094 -0.001 .0000 -0.007 -0.052 -0.003 -0.0644 -0.002  
 #2 .0084 .0008 .0000 -0.002 -0.053 -0.001 -0.0618 -0.005  
 #3 .0061 .0002 -0.001 -0.004 -0.048 -0.004 -0.0628 -0.008

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Sample Name: moconf Acquired: 10/4/2019 21:06:28 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	.0001	.0129	-0.0047
Stddev	.0002	.0007	.0028
%RSD	174.7	5.765	59.61

#1 .0002 .0128 -.0025  
 #2 -0.001 .0137 -.0078  
 #3 .0004 .0122 -.0036

Int. Std.	Y_3600	Y_3710	Y_2243	ln2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	179860.	28067.	8074.3	11192.
Stddev	1920.	142.	70.6	88.
%RSD	1.0675	.50441	.87492	.78194

#1 179060. 28021. 8018.8 11124.  
 #2 178480. 28225. 8050.3 11160.  
 #3 182060. 27954. 8153.8 11291.

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Sample Name: siconf Acquired: 10/4/2019 21:11:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.000	.0001	-0.001	-0.000	.0006	.0003	-0.000	.0002	.0007
Stddev	.0001	.0000	.0000	.0001	.0003	.0002	.0000	.0001	.0003
%RSD	519.0	18.89	85.09	258.6	44.06	60.45	177.2	83.48	46.56

#1 -0.000 .0001 -0.000 -0.001 .0010 .0004 -0.000 .0001 .0011  
 #2 -0.001 .0001 -0.001 -0.001 -0.005 .0002 .0000 .0001 .0007  
 #3 -0.001 .0001 -0.000 .0001 .0005 .0001 -0.000 .0003 .0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.000	-0.001	.000	-0.009	-0.014	-0.003	.0015	-0.0085	.0031
Stddev	.0004	.0001	.0002	.0004	.0010	.0010	.0007	.0038	.0018
%RSD	1342.	77.53	899.4	46.75	70.64	332.6	50.72	44.13	59.14

#1 -0.001 -0.001 -0.002 -0.008 -0.019 -0.009 .0006 -0.078 .0049  
 #2 .0004 -0.000 -0.000 -0.014 -0.003 .0009 .0019 -0.051 .0032  
 #3 -0.004 -0.001 .0002 -0.006 -0.021 -0.009 .0019 -0.126 .0012

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.068	-0.015	.0276	.0788	-0.035	.0022	10.07	-0.0018	-0.003
Stddev	.0008	.0143	.0273	.0088	.0004	.0005	.01	.0004	.0000
%RSD	11.62	927.0	98.79	11.17	11.23	21.21	.0803	20.29	9.758

#1 -0.076 -0.069 .0518 .0687 .0032 .0027 .0106 -0.017 -0.003  
 #2 -0.067 .0146 -0.020 .0835 .0039 .0022 .0108 -0.014 -0.003  
 #3 -0.061 -0.124 .0331 .0842 .0033 .0017 .0107 -0.021 -0.004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.002	-0.110	.0002	.0005	-0.003	-0.004	.0100	-0.0020
Stddev	.0003	.0008	.0001	.0012	.0013	.0002	.0004	.0012
%RSD	164.2	6.881	32.97	248.4	415.3	45.26	3.961	63.86

#1 .0001 -0.110 .0003 .0017 .0011 -0.006 .0102 -0.016  
 #2 -0.002 -0.102 .0002 -0.007 -0.005 -0.003 .0102 -0.034  
 #3 -0.004 -0.117 .0002 .0005 -0.016 -0.002 .0095 -0.010

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Sample Name: siconf Acquired: 10/4/2019 21:11:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182430.	28266.	8084.9	11152.
Stddev	2176.	40.	13.7	12.
%RSD	1.1927	.14024	.16917	.11009
#1	180290.	28309.	8086.2	11153.
#2	184640.	28231.	8070.6	11140.
#3	182360.	28258.	8097.9	11165.

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Sample Name: siconf Acquired: 10/4/2019 21:16:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	-0.001	-0.001	.0002	.0005	.0001	.0001	.0006
Stddev	.0001	.0000	.0002	.0002	.0003	.0003	.0000	.0003	.0002
%RSD	240.4	26.27	339.6	277.6	158.1	50.93	33.07	283.2	27.75
#1	.0002	.0000	-0.003	-0.001	-0.001	.0006	.0001	.0001	.0008
#2	-0.000	.0001	.0000	-0.002	.0002	.0007	.0001	.0004	.0005
#3	-0.000	.0001	.0001	.0001	.0006	.0002	.0001	-0.002	.0006
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.000	.0004	.0010	-0.013	-0.020	.0008	-0.007	.0000	.0057
Stddev	.0003	.0001	.0003	.0004	.0005	.0013	.0001	.0031	.0007
%RSD	2765.	11.71	28.89	30.50	24.96	171.2	11.40	844.1	12.83
#1	-0.003	.0004	.0007	-0.017	-0.018	-0.007	-0.006	-0.019	.0049
#2	.0000	.0005	.0012	-0.010	-0.026	.0011	-0.007	.0036	.0059
#3	.0003	.0004	.0012	-0.012	-0.017	.0019	-0.008	-0.016	.0064
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0031	-0.024	.0666	-0.009	.0003	.0018	-0.006	-0.000
Stddev	.0008	.0063	.0465	.0078	.0002	.0002	.0006	.0002	.0001
%RSD	37.77	203.0	207.3	11.64	22.63	82.31	36.17	37.47	141.5
#1	.0013	.0083	-0.762	.0577	-0.011	.0005	.0025	-0.003	.0000
#2	.0029	.0049	.0044	.0721	-0.007	.0001	.0013	-0.006	-0.001
#3	.0023	-0.0039	.0045	.0699	-0.008	.0002	.0015	-0.008	-0.001
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0001	-0.0097	-0.003	92.24	.0012	.0001	.0111	-0.025	
Stddev	.0002	.0001	.0001	.55	.0002	.0003	.0003	.0023	
%RSD	132.5	1.223	27.60	.6015	18.09	417.0	2.881	89.98	
#1	-0.000	-0.096	-0.004	92.88	.0011	-0.003	.0115	-0.001	
#2	.0003	-0.097	-0.003	91.88	.0015	.0003	.0109	-0.0046	
#3	.0001	-0.098	-0.003	91.96	.0011	.0002	.0109	-0.0029	

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11.4  
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Sample Name: siconf Acquired: 10/4/2019 21:16:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181580.	27909.	8030.2	11133.
Stddev	1689.	64.	86.2	101.
%RSD	.93019	.22905	1.0738	.90415
#1	179670.	27910.	7931.5	11017.
#2	182920.	27845.	8068.3	11185.
#3	182090.	27973.	8090.8	11197.

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Sample Name: niconf Acquired: 10/4/2019 21:21:32 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	.0030	.0000	.0002	.0003	-0.002	F 10.90
Stddev	.0002	.0000	.0000	.0001	.0001	.0002	.0000	.01
%RSD	131.0	66.11	.7012	543.9	65.37	82.02	9.754	.0788
#1	-0.001	.0001	.0030	-0.001	.0004	.0004	-0.003	10.89
#2	.0002	.0001	.0030	.0001	.0001	.0004	-0.003	10.90
#3	.0002	.0000	.0029	.0000	.0002	.0000	-0.002	10.91
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	.0019	.0002	-0.004	-0.010	.0003	F -.0034
Stddev	.0003	.0004	.0001	.0007	.0008	.0006	.0009	.0001
%RSD	63.08	265.8	6.023	421.4	196.1	62.95	341.7	3.791
#1	.0003	.0005	.0018	.0005	-0.001	-0.017	.0006	-0.035
#2	.0002	-0.002	.0020	.0006	.0002	-0.005	-0.007	-0.035
#3	.0007	.0001	.0018	-0.006	-0.013	-0.007	.0009	-0.033
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	.0024	.0019	-0.007	.0996	.0614	-0.013	-0.000
Stddev	.0029	.0024	.0013	.0017	.0199	.0072	.0006	.0001
%RSD	51.15	98.75	70.56	233.1	20.01	11.68	44.80	411.3
#1	.0023	.0030	.0011	.0005	.0771	.0598	-0.010	.0001
#2	.0072	-0.002	.0034	.0000	.1149	.0551	-0.009	-0.001
#3	.0074	.0045	.0011	-0.027	.1069	.0692	-0.020	-0.000
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0210	-0.0006	-0.000	.0003	.0242	-0.006	.0088	-0.001
Stddev	.0008	.0003	.0000	.0001	.0006	.0001	.0003	.0012
%RSD	3.810	42.81	89.05	24.09	2.605	22.45	3.690	111.1
#1	-0.201	-0.007	-0.000	.0003	.0246	-0.007	.0087	-0.003
#2	-0.212	-0.003	-0.001	.0004	.0235	-0.004	.0091	-0.012
#3	-0.216	-0.009	-0.000	.0002	.0245	-0.006	.0085	.0011

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Sample Name: niconf Acquired: 10/4/2019 21:21:32 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	-0.006	0.046	-0.021	
Stddev	.0018	.0006	.0019	
%RSD	322.0	12.18	89.95	
#1	-0.010	.0049	-0.008	
#2	-0.021	.0049	-0.042	
#3	.0014	.0039	-0.012	

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182650.	27921.	8016.3	11189.
Stddev	1635.	64.	10.8	7.
%RSD	.89517	.22775	.13508	.06313
#1	180760.	27885.	8008.1	11185.
#2	183620.	27994.	8028.6	11197.
#3	183570.	27883.	8012.3	11185.

Sample Name: coconf Acquired: 10/4/2019 21:26:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	W -.0022	F 9.788	.0007	-0.028	.0004	-0.012
Stddev	.0000	.0000	.0001	.010	.0001	.0003	.0000	.0003
%RSD	51.19	32.67	3.068	.1058	14.53	10.25	6.924	25.51
#1	.0001	.0001	-.0022	9.778	.0008	-.0031	.0004	-.0009
#2	.0001	.0001	-.0021	9.788	.0006	-.0025	.0004	-.0012
#3	.0000	.0001	-.0023	9.799	.0006	-.0027	.0004	-.0015

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0002	.0035	.0006	F -.0028	.0009	.0051	.0003
Stddev	.0002	.0000	.0001	.0009	.0010	.0002	.0010	.0000
%RSD	36.87	22.09	2.344	161.0	37.20	17.79	20.15	7.019
#1	.0004	.0001	.0034	-.0005	-.0017	.0008	.0056	.0003
#2	.0005	.0002	.0035	.0011	-.0037	.0010	.0058	.0003
#3	.0008	.0002	.0036	.0011	-.0029	.0011	.0039	.0003

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0071	-0.0099	.0058	.0086	-0.272	.0626	-0.0015	-0.001
Stddev	.0067	.0012	.0009	.0052	.0309	.0044	.0002	.0001
%RSD	94.41	12.00	15.85	60.14	113.6	6.986	15.96	124.5
#1	-.0101	.0110	.0068	.0143	.0084	.0670	-.0017	-.0000
#2	.0006	.0102	.0051	.0041	-.0431	.0582	-.0014	-.0002
#3	-.0118	.0086	.0055	.0075	-.0468	.0626	-.0013	-.0000

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0025	-0.0003	-0.0000	-0.0002	-0.0005	-0.0005	.0155	-0.174
Stddev	.0004	.0007	.0001	.0002	.0005	.0001	.0012	.0007
%RSD	15.87	202.2	105.1	95.81	97.94	27.59	7.575	3.823
#1	-.0029	-.0012	-.0001	.0000	-.0000	-.0004	.0168	-.0176
#2	-.0024	.0001	.0001	-.0003	-.0010	-.0004	.0152	-.0180
#3	-.0021	.0000	.0000	-.0003	-.0005	-.0007	.0145	-.0167

Sample Name: coconf Acquired: 10/4/2019 21:26:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	-0.0013	0.0154	0.0663
Stddev	.0014	.0009	.0026
%RSD	111.0	6.029	40.86
#1	-.0004	.0149	.0079
#2	-.0029	.0165	.0078
#3	-.0005	.0149	.0034

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180210.	27922.	8026.7	11207.
Stddev	782.	81.	14.7	17.
%RSD	.43367	.28929	.18341	.15325
#1	181070.	27942.	8012.6	11191.
#2	179550.	27991.	8042.0	11225.
#3	180010.	27833.	8025.7	11204.

Sample Name:alconf Acquired: 10/4/2019 21:31:31 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0005	.0004	.0006	.0026	.0034	-0.0006	.0000	.0014
Stddev	.0003	.0000	.0002	.0000	.0001	.0002	.0001	.0002	.0004
%RSD	39.88	3.948	36.92	1.257	3.265	5.500	9.171	85480.	29.74
#1	.0008	.0005	.0003	.0006	.0025	.0035	-.0006	-.0001	.0010
#2	.0008	.0005	.0004	.0006	.0026	.0032	-.0006	-.0001	.0014
#3	.0004	.0005	.0006	.0006	.0026	.0035	-.0005	.0002	.0018

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0021	.0002	-0.0002	.0010	-0.0027	.0036	.0019	F 509.7	.0312
Stddev	.0000	.0001	.0003	.0023	.0015	.0034	.0013	3.7	.0014
%RSD	.3028	35.92	154.9	239.2	55.38	93.07	67.09	.7222	4.623
#1	-.0021	.0001	-.0001	-.0011	-.0039	.0000	.0031	507.1	.0312
#2	-.0021	.0003	-.0006	.0005	-.0010	.0041	.0022	513.9	.0298
#3	-.0021	.0002	.0000	.0035	-.0031	.0067	.0005	508.0	.0327

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0360	.0051	-0.386	.2011	-0.0021	.0011	-0.144	-0.0023	.0005
Stddev	.0004	.0075	.0206	.0031	.0008	.0003	.0001	.0006	.0001
%RSD	1.071	148.5	53.31	1.535	37.36	25.67	.6809	27.37	13.45
#1	.0356	-.0002	-.0478	.2028	-.0015	.0014	.0144	-.0026	.0005
#2	.0360	.0017	-.0531	.1976	-.0018	.0010	.0145	-.0028	.0005
#3	.0364	.0137	-.0151	.2030	-.0030	.0009	.0143	-.0016	.0004

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0010	-0.0085	-0.0005	-0.160	-0.0041	-0.0003	-0.168	-0.0004
Stddev	.0002	.0010	.0002	.0023	.0006	.0015	.0010	.0020
%RSD	17.29	11.60	32.51	14.36	15.28	593.4	5.947	455.1
#1	.0010	-.0093	-.0004	-.0158	-.0036	.0002	-.0159	-.0027
#2	.0008	-.0089	-.0006	-.0138	-.0039	.0018	-.0165	.0004
#3	.0012	-.0074	-.0004	-.0184	-.0048	-.0013	-.0178	.0010

Zoom In  
Zoom Out

Sample Name:alconf Acquired: 10/4/2019 21:31:31 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	172790.	28718.	8265.8	10217.
Stddev	580.	51.	10.2	11.
%RSD	.33546	.17705	.12356	.10466
#1	173210.	28740.	8254.3	10207.
#2	172130.	28659.	8269.3	10216.
#3	173030.	28753.	8273.8	10228.

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Zoom In  
Zoom Out

Sample Name:mgconf Acquired: 10/4/2019 21:36:26 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0001	.0000	.0006	.0001	.0009	.0014	-.0001	.0012
Stddev	.0001	.0000	.0001	.0003	.0001	.0002	.0000	.0002	.0004
%RSD	78.02	29.61	316.0	48.36	59.56	23.04	2.749	196.0	34.96
#1	.0000	.0001	.0000	.0009	.0001	.0011	.0014	-.0002	.0017
#2	.0003	.0001	-.0001	.0003	.0002	.0007	.0014	.0001	.0010
#3	.0002	.0001	.0002	.0005	.0001	.0009	.0014	-.0002	.0009
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0065	-.0019	-.0004	-.0022	.0000	-.0016	.0209	.0801
Stddev	.0002	.0001	.0008	.0004	.0003	.0014	.0011	.0052	.0022
%RSD	12.11	1.082	40.15	96.49	14.86	2975.	69.18	25.02	2.765
#1	.0012	.0065	-.0014	-.0009	-.0023	-.0015	-.0021	.0148	.0781
#2	.0015	.0064	-.0015	-.0003	-.0024	.0003	-.0024	.0242	.0825
#3	.0013	.0065	-.0028	-.0001	-.0018	.0013	-.0003	.0236	.0799
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	F 544.9	-.0044	.1450	-.0002	.0001	.0033	-.0003	-.0000
Stddev	.0007	1.4	.0209	.0037	.0004	.0002	.0006	.0003	.0001
%RSD	33.72	.2565	473.1	2.518	179.3	317.7	18.71	100.4	248.1
#1	.0017	545.3	-.0241	.1417	-.0006	.0000	.0031	.0000	.0000
#2	.0019	546.0	-.0066	.1445	-.0001	.0003	.0028	-.0004	-.0001
#3	.0031	543.3	.0175	.1489	.0001	-.0001	.0040	-.0007	-.0000
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	-.0002	-.0085	-.0007	.0238	.0004	.0007	-.0013	-.0016	
Stddev	.0002	.0008	.0001	.0010	.0011	.0014	.0005	.0018	
%RSD	80.42	9.204	9.772	4.007	316.3	207.3	41.41	110.2	
#1	-.0000	-.0076	-.0006	.0228	.0016	.0006	-.0010	-.0018	
#2	-.0004	-.0088	-.0006	.0238	-.0006	.0021	-.0020	.0002	
#3	-.0003	-.0090	-.0007	.0247	.0001	-.0007	-.0011	-.0034	

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11.4  
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Zoom In  
Zoom Out

Sample Name:mgconf Acquired: 10/4/2019 21:36:26 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	167800.	27117.	7433.5	9822.7
Stddev	794.	23.	10.1	10.8
%RSD	.47299	.08600	.13576	.11009
#1	168720.	27094.	7441.5	9827.2
#2	167300.	27117.	7422.2	9810.3
#3	167400.	27140.	7436.9	9830.5

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Zoom In  
Zoom Out

Sample Name:caconf Acquired: 10/4/2019 21:41:19 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0001	.0001	.0001	.0007	.0012	.0001	.0006
Stddev	.0001	.0000	.0002	.0001	.0004	.0002	.0000	.0001
%RSD	25.28	53.20	220.0	136.4	60.18	13.35	20.24	24.99
#1	.0004	-.0001	-.0001	-.0000	.0010	.0013	.0001	.0006
#2	.0006	-.0001	.0003	.0001	.0002	.0010	.0001	.0004
#3	.0006	-.0000	.0000	.0001	.0009	.0013	.0002	.0007
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0002	-.0000	.0023	-.0004	F -.0035	-.0005	-.0005
Stddev	.0001	.0002	.0001	.0008	.0011	.0004	.0010	.0014
%RSD	608.6	102.8	277.8	36.09	242.4	12.78	182.3	248.1
#1	-.0001	.0001	.0001	.0013	-.0003	-.0030	-.0012	-.0016
#2	-.0001	.0001	-.0002	.0028	.0005	-.0038	.0006	.0010
#3	.0001	.0004	-.0001	.0027	-.0016	-.0036	-.0010	-.0011
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0347	F 395.4	-.0018	.0274	.0671	.0560	-.0004	-.0005
Stddev	.0061	5.9	.0022	.0107	.0116	.0048	.0005	.0001
%RSD	17.46	1.486	121.6	39.01	17.28	8.595	129.4	28.39
#1	.0281	389.0	-.0005	.0152	.0620	.0507	-.0005	-.0004
#2	.0360	396.9	-.0044	.0348	.0590	.0599	.0002	-.0006
#3	.0400	400.4	-.0006	.0323	.0804	.0575	-.0009	-.0004
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0009	-.0023	-.0006	-.0092	-.0005	.0457	.0031
Stddev	.0009	.0004	.0001	.0000	.0009	.0002	.0013	.0008
%RSD	32.86	42.70	6.375	2.982	9.743	32.47	2.796	24.35
#1	.0018	-.0012	-.0022	-.0007	-.0082	-.0006	.0443	.0025
#2	.0036	-.0009	-.0022	-.0006	-.0093	-.0005	.0460	.0040
#3	.0028	-.0005	-.0024	-.0007	-.0100	-.0003	.0468	.0029

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Zoom In  
Zoom Out

Sample Name: caconf Acquired: 10/4/2019 21:41:19 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>.0018</b>	<b>-0.0034</b>	<b>.0013</b>
Stddev	.0002	.0006	.0004
%RSD	9.408	17.64	34.09
#1	.0018	-0.0039	.0008
#2	.0016	-0.0027	.0017
#3	.0020	-0.0036	.0013

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	165290.	27196.	7416.1	9831.5
Stddev	4098.	141.	9.5	16.4
%RSD	2.4795	.51756	.12785	.16688
#1	168220.	27279.	7425.9	9850.2
#2	160610.	27034.	7415.4	9819.5
#3	167050.	27277.	7407.0	9824.8

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 21:46:23 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.998</b>	<b>2.095</b>	<b>1.985</b>	<b>1.918</b>	<b>1.991</b>	<b>1.932</b>	<b>2.047</b>	<b>1.994</b>	<b>2.479</b>
Stddev	.002	.001	.001	.001	.008	.007	.008	.002	.0008
%RSD	.1149	.0639	.0599	.0520	.3801	.3662	.3688	.0812	.3381
#1	1.997	2.093	1.985	1.918	1.998	1.938	2.052	1.994	2.488
#2	1.996	2.096	1.984	1.917	1.983	1.924	2.039	1.993	2.471
#3	2.000	2.096	1.987	1.919	1.992	1.934	2.051	1.996	2.477

Check ?	Value	Range	Check ?	Value	Range	Check ?	Value	Range	Check ?	Value	Range
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179		
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	<b>1.940</b>	<b>2.036</b>	<b>1.875</b>	<b>2.046</b>	<b>1.983</b>	<b>1.930</b>	<b>1.899</b>	<b>40.07</b>	<b>40.49</b>		
Stddev	.005	.004	.003	.004	.003	.002	.002	.06	.05		
%RSD	.2480	.1747	.1668	.1948	.1329	.1141	.0822	.1390	.1253		
#1	1.943	2.037	1.872	2.045	1.984	1.932	1.898	40.04	40.44		
#2	1.934	2.032	1.878	2.043	1.980	1.927	1.897	40.04	40.48		
#3	1.942	2.038	1.876	2.051	1.985	1.930	1.900	40.14	40.54		

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 21:46:23 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.890</b>	<b>1.837</b>	<b>1.945</b>	<b>1.831</b>	<b>1.923</b>	<b>1.951</b>	<b>1.939</b>	<b>1.975</b>
Stddev	.011	.005	.005	.002	.002	.003	.002	.010
%RSD	.5800	.2537	.2774	.0946	.1184	.1493	.1178	.5196
#1	1.901	1.837	1.950	1.832	1.921	1.948	1.940	1.985
#2	1.879	1.833	1.939	1.829	1.925	1.950	1.937	1.964
#3	1.890	1.842	1.946	1.831	1.925	1.954	1.941	1.975

Check ?	Value	Range	Check ?	Value	Range	Check ?	Value	Range
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	175470.	27678.	7777.5	10327.				
Stddev	620.	151.	16.3	19.				
%RSD	.35341	.54573	.21018	.18188				
#1	174880.	27851.	7776.9	10328.				
#2	176120.	27611.	7794.1	10346.				
#3	175390.	27572.	7761.4	10309.				

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Zoom In  
Zoom Out

Sample Name: ccb Acquired: 10/4/2019 21:51:13 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0002</b>	<b>.0000</b>	<b>.0002</b>	<b>.0003</b>	<b>.0004</b>	<b>.0001</b>	<b>.0000</b>
Stddev	.0002	.0001	.0001	.0002	.0001	.0002	.0001	.0002
%RSD	70.25	27.04	7103.	142.4	31.98	50.60	72.14	2458.
#1	.0006	.0002	.0000	.0002	.0004	.0006	.0002	.0002
#2	.0002	.0002	.0001	.0001	.0003	.0006	.0001	.0001
#3	.0002	.0001	.0001	.0003	.0002	.0002	.0000	.0001

Check ?	Value	Range	Check ?	Value	Range	Check ?	Value	Range
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.005</b>	<b>.0000</b>	<b>-0.001</b>	<b>-0.000</b>	<b>-0.009</b>	<b>-0.005</b>	<b>.0000</b>	<b>-0.002</b>
Stddev	.0001	.0000	.0000	.0007	.0001	.0002	.0002	.0008
%RSD	27.18	136.0	47.59	17480.	15.42	34.65	1184.	542.3
#1	.0007	.0000	.0000	.0007	.0011	.0003	.0002	.0000
#2	.0005	.0000	.0001	.0006	.0009	.0005	.0001	.0010
#3	.0004	.0001	.0001	.0001	.0008	.0006	.0001	.0006

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Sample Name: ccb Acquired: 10/4/2019 21:51:13 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD for elements Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 9 columns: #1, #2, #3 for various elements.

Check ? High Limit Low Limit table with 9 columns: Chk Pass, Chk Pass, Chk Pass, Chk Pass, Chk Fail, Chk Pass, Chk Pass, Chk Pass.

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD for elements Li6707, P\_1774, Ce4040.

Table with 9 columns: #1, #2, #3 for various elements.

Check ? High Limit Low Limit table with 4 columns: Chk Pass, Chk Pass, Chk Pass.

Int. Std. Units Avg Stddev %RSD table with 4 columns: Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 4 columns: #1, #2, #3 for various elements.

Sample Name: fa68314-1 Acquired: 10/4/2019 21:56:09 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 12 columns: #1, #2, #3 for various elements.

Sample Name: fa68314-1 Acquired: 10/4/2019 21:56:09 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std. Units Avg Stddev %RSD table with 4 columns: Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 4 columns: #1, #2, #3 for various elements.

Sample Name: jc95610-1 Acquired: 10/4/2019 22:01:10 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements V\_2924, Zn2062, As1890, Ti1908, Pb2203, Se1960, Sb2068, Al3961, Ca3179.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020, Si2124, Sn1899, Sr4077.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD for elements Ti3349, W\_2079, Zr3391, S\_1820, Bi2230, Li6707, P\_1774, Ce4040.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: #1, #2, #3 for various elements.

Table with 12 columns: #1, #2, #3 for various elements.

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Sample Name: jc95610-1 Acquired: 10/4/2019 22:01:10 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	167320.	27323.	7520.5	9791.8
Stddev	359.	90.	12.4	13.7
%RSD	.21435	.32956	.16444	.13968
#1	166930.	27389.	7514.2	9791.3
#2	167640.	27221.	7534.7	9805.6
#3	167390.	27360.	7512.5	9778.3

Sample Name: jc95639-5a Acquired: 10/4/2019 22:06:09 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5887	.0007	.0054	.0167	.0050	.0433	1.170	.0264	.0033
Stddev	.0007	.0003	.0003	.0004	.0005	.0021	.001	.0013	.0011
%RSD	.1216	36.58	5.682	2.571	10.26	4.808	.0805	4.959	34.22
#1	.5896	.0004	.0057	.0172	.0054	.0447	1.171	.0270	.0032
#2	.5884	.0009	.0052	.0163	.0044	.0409	1.169	.0249	.0022
#3	.5883	.0007	.0051	.0166	.0051	.0444	1.170	.0274	.0044

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	1.039	.0015	-.0008	8.161	-.0077	.0127	.1792	321.8
Stddev	.0010	.001	.0012	.0014	.005	.0068	.0066	.0216	.3
%RSD	33.42	.1243	78.94	183.3	.0570	87.62	51.70	12.08	.0994
#1	.0043	1.038	.0028	-.0023	8.159	-.0143	.0052	.1765	322.0
#2	.0027	1.040	.0014	-.0004	8.157	-.0081	.0172	.2020	321.4
#3	.0023	1.039	.0004	.0004	8.166	-.0008	.0158	.1590	321.9

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1999	9.586	11.56	F 1579.	.2512	.0011	24.67	-.0036	1.114
Stddev	.0033	.080	.08	22.	.0034	.0007	.01	.0010	.001
%RSD	1.639	.8339	.6703	1.406	1.348	64.00	.0464	26.84	.0834
#1	.1978	9.540	11.48	1557.	.2518	.0004	24.66	-.0030	1.115
#2	.1982	9.540	11.58	1578.	.2541	.0010	24.67	-.0047	1.115
#3	.2036	9.678	11.63	1601.	.2475	.0018	24.68	-.0031	1.113

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	-.0487	-.0038	4.212	.0011	.0538	.0382	.0295
Stddev	.0009	.0019	.0002	.017	.0045	.0025	.0036	.0139
%RSD	48.76	3.847	4.174	3.984	411.3	4.627	9.511	47.22
#1	.0026	-.0507	-.0036	4.222	-.0020	.0543	.0340	.0369
#2	.0008	-.0470	-.0040	4.193	-.0009	.0512	.0400	.0382
#3	.0020	-.0485	-.0038	4.221	.0062	.0561	.0406	.0134

11.4  
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Sample Name: jc95639-5a Acquired: 10/4/2019 22:06:09 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	168400.	27377.	7529.5	9756.0
Stddev	284.	155.	14.6	11.0
%RSD	.16891	.56621	.19342	.11298
#1	168220.	27308.	7546.0	9767.2
#2	168730.	27554.	7518.4	9745.2
#3	168250.	27268.	7524.0	9755.5

Sample Name: jc95649-1a Acquired: 10/4/2019 22:11:07 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1246	.0009	-.0006	.0024	.0016	.0139	.5222	.0136	.0035
Stddev	.0009	.0002	.0005	.0010	.0003	.0007	.0007	.0012	.0012
%RSD	.7453	18.43	82.47	41.60	20.00	5.356	.1426	8.572	34.44
#1	.1235	.0011	-.0001	.0034	.0017	.0130	.5216	.0131	.0040
#2	.1253	.0010	-.0010	.0025	.0012	.0145	.5219	.0127	.0044
#3	.1249	.0007	-.0007	.0014	.0018	.0141	.5230	.0149	.0021

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.1037	.0094	-.0063	.0320	-.0006	.0012	.5867	8.307
Stddev	.0014	.0002	.0029	.0049	.0038	.0017	.0060	.0281	.011
%RSD	127.2	.2234	31.34	76.64	11.86	288.4	490.5	4.787	.1359
#1	-.0002	.1034	.0060	-.0117	.0348	.0008	.0057	6.168	8.296
#2	.0025	.1038	.0106	-.0049	.0277	-.0025	.0036	5.820	8.319
#3	.0009	.1038	.0115	-.0023	.0337	-.0001	-.0056	5.613	8.307

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.386	1.904	5.126	F 1294.	.1010	-.0011	1.458	.0006	.0287
Stddev	.008	.012	.101	11.	.0012	.0008	.007	.0001	.0002
%RSD	.1040	.6416	1.964	.8606	1.152	70.59	4.708	19.51	.7103
#1	7.381	1.898	5.224	1281.	.1002	-.0010	1.456	.0008	.0285
#2	7.382	1.918	5.023	1298.	.1023	-.0019	1.452	.0006	.0287
#3	7.395	1.895	5.130	1303.	.1004	-.0004	1.465	.0005	.0289

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0109	-.0298	-.0007	3.703	.0014	.0187	-.0065	.0554
Stddev	.0010	.0042	.0011	.0015	.0010	.0022	.0005	.0156
%RSD	9.070	14.10	159.7	4.058	76.10	11.93	8.122	28.19
#1	.0103	-.0334	-.0007	3.719	.0020	.0207	-.0063	.0549
#2	.0103	-.0252	-.0004	3.689	.0002	.0189	-.0071	.0712
#3	.0120	-.0309	-.0018	3.700	.0019	.0163	-.0061	.0400

Sample Name: jc95649-1a Acquired: 10/4/2019 22:11:07 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	169860.	27446.	7660.1	10022.
Stddev	588.	59.	6.0	7.
%RSD	.34640	.21645	.07813	.07115
#1	170540.	27481.	7657.0	10025.
#2	169480.	27480.	7656.3	10014.
#3	169570.	27378.	7667.0	10027.

Sample Name: jc95902-5a Acquired: 10/4/2019 22:16:08 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3704	.0009	-.0002	.0193	.0013	.0074	.6985	.0300	.0015
Stddev	.0022	.0001	.0001	.0002	.0008	.0009	.0013	.0008	.0011
%RSD	.5856	6.146	32.41	.9465	59.32	11.86	.1917	2.676	75.71
#1	.3704	.0009	-.0002	.0191	.0004	.0065	.6999	.0306	.0005
#2	.3683	.0008	-.0004	.0193	.0019	.0083	.6983	.0304	.0011
#3	.3726	.0010	-.0003	.0195	.0016	.0073	.6973	.0291	.0027

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0359	.0008	-.0041	.0079	-.0019	.0014	.1812	12.94
Stddev	.0003	.0002	.0020	.0069	.0030	.0074	.0047	.0156	.03
%RSD	21.60	.5826	250.0	167.9	38.30	394.4	346.5	8.634	.2158
#1	.0011	.0360	.0028	-.0109	.0044	.0057	.0015	.1959	12.93
#2	.0017	.0361	.0007	.0029	.0093	-.0024	-.0034	.1648	12.93
#3	.0017	.0357	-.0012	-.0043	.0100	-.0089	.0060	.1830	12.97

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.215	4.627	7.352	F 1592.	.1940	-.0009	1.971	.0006	.0620
Stddev	.018	.020	.150	16.	.0022	.0006	.008	.0015	.0003
%RSD	.2250	.4297	2.042	.9884	1.127	62.05	.3844	274.3	.5431
#1	8.204	4.607	7.258	1609.	.1916	-.0009	1.974	-.0000	.0624
#2	8.206	4.626	7.273	1590.	.1946	-.0015	1.978	.0023	.0618
#3	8.237	4.647	7.525	1578.	.1958	-.0004	1.963	-.0006	.0617

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0454	-.0024	.4737	.0072	.0540	-.0164	.0143
Stddev	.0018	.0034	.0004	.0094	.0022	.0072	.0005	.0100
%RSD	63.24	7.488	16.62	1.975	30.48	13.38	2.955	70.02
#1	.0012	-.0462	-.0021	.4725	.0059	.0519	-.0161	.0052
#2	.0049	-.0417	-.0028	.4650	.0097	.0480	-.0162	.0250
#3	.0027	-.0484	-.0022	.4836	.0059	.0620	-.0170	.0127

Sample Name: jc95902-5a Acquired: 10/4/2019 22:16:08 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	168670.	27304.	7586.6	9895.5
Stddev	480.	95.	3.2	6.8
%RSD	.28480	.34702	.04165	.06870
#1	168170.	27397.	7586.2	9887.9
#2	169130.	27308.	7583.7	9897.9
#3	168710.	27207.	7590.0	9900.8

Sample Name: jc95993-2a Acquired: 10/4/2019 22:21:08 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7724	.0006	.0083	-.0004	.0189	.0291	1.594	.0121	.0020
Stddev	.0005	.0002	.0006	.0010	.0010	.0019	.002	.0003	.0004
%RSD	.0663	37.28	7.462	278.0	5.137	6.446	.1067	2.700	20.66
#1	.7724	.0004	.0076	-.0002	.0200	.0274	1.594	.0119	.0021
#2	.7730	.0008	.0085	-.0015	.0185	.0311	1.595	.0118	.0024
#3	.7719	.0005	.0088	.0005	.0181	.0287	1.592	.0124	.0016

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.4143	.0028	-.0031	.0054	-.0052	.0061	.0522	523.4
Stddev	.0011	.0008	.0026	.0023	.0024	.0049	.0043	.0235	2.9
%RSD	14.08	.2005	92.64	74.76	45.45	95.24	70.34	44.93	.5527
#1	.0085	.4148	.0000	-.0031	.0076	-.0039	.0089	.0398	525.2
#2	.0064	.4133	.0051	-.0055	.0028	-.0010	.0081	.0793	525.1
#3	.0076	.4147	.0032	-.0008	.0058	-.0107	.0012	.0376	520.1

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2738	32.13	6.777	F 1269.	.6158	.0020	14.49	-.0042	1.166
Stddev	.0051	.07	.067	23.	.0021	.0006	.03	.0026	.001
%RSD	1.850	.2107	.9943	1.845	.3376	30.53	.2267	62.31	.1056
#1	.2685	32.19	6.831	1291.	.6176	.0015	14.52	-.0038	1.167
#2	.2742	32.15	6.799	1271.	.6162	.0019	14.49	-.0018	1.165
#3	.2786	32.06	6.701	1245.	.6135	.0027	14.46	-.0070	1.165

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	-.0465	-.0030	7.801	.0091	.0521	.0723	.0076
Stddev	.0009	.0030	.0009	.021	.0032	.0028	.0031	.0132
%RSD	52.49	6.434	29.02	.2725	35.28	5.368	4.309	174.5
#1	-.0024	-.0496	-.0038	7.825	.0066	.0491	.0689	.0010
#2	-.0017	-.0463	-.0021	7.792	.0080	.0546	.0750	.0227
#3	-.0007	-.0436	-.0029	7.785	.0128	.0527	.0730	-.0011

Sample Name: jc95993-2a Acquired: 10/4/2019 22:21:08 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	169280.	27339.	7534.1	9820.4
Stddev	644.	171.	11.4	5.5
%RSD	.38056	.62538	.15069	.05646
#1	168580.	27359.	7523.5	9814.1
#2	169400.	27160.	7546.1	9822.9
#3	169850.	27500.	7532.9	9824.4

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Sample Name: mp17692-mb1 Acquired: 10/4/2019 22:26:14 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0001	-.0002	.0002	.0011	.0010	.0002	.0004	.0008
Stddev	.0001	.0000	.0001	.0001	.0001	.0002	.0000	.0003	.0002
%RSD	18.85	21.60	48.86	37.80	10.35	24.23	11.89	75.16	29.41
#1	.0005	.0001	-.0001	.0002	.0012	.0009	.0002	.0007	.0011
#2	.0005	.0001	-.0002	.0001	.0010	.0013	.0002	.0004	.0007
#3	.0003	.0002	-.0002	.0002	.0012	.0008	.0002	.0001	.0006
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0146	.0003	-.0010	-.0002	.0004	-.0004	-.0024	.1007
Stddev	.0003	.0000	.0006	.0009	.0002	.0006	.0001	.0045	.0008
%RSD	314.4	.2701	180.4	90.71	66.06	165.0	27.52	186.5	8056
#1	-.0002	.0145	.0007	-.0001	-.0001	.0001	-.0003	-.0075	.1004
#2	.0002	.0145	-.0003	-.0019	-.0003	-.0000	-.0005	.0007	.1016
#3	.0003	.0146	.0006	-.0009	-.0004	.0011	-.0005	-.0003	.1000
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113	.0185	.1053	.3001	-.0008	.0000	.0159	.0182	.0007
Stddev	.0010	.0029	.0228	.0063	.0004	.0001	.0007	.0002	.0000
%RSD	8.530	15.87	21.62	2.091	47.00	822.4	4.176	.8821	1.663
#1	.0113	.0213	.1067	.3071	-.0007	-.0000	.0166	.0182	.0008
#2	.0103	.0154	.1273	.2980	-.0005	-.0001	.0160	.0180	.0007
#3	.0122	.0189	.0819	.2951	-.0013	.0002	.0152	.0183	.0007
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0008	-.0084	-.0003	.0076	.0010	.0017	.0123	-.0036	
Stddev	.0003	.0007	.0001	.0007	.0006	.0013	.0005	.0018	
%RSD	34.46	8.203	32.86	8.605	61.12	79.01	3.832	50.68	
#1	.0008	-.0077	-.0004	.0073	.0008	.0011	.0119	-.0058	
#2	.0006	-.0085	-.0002	.0072	.0018	.0032	.0122	-.0025	
#3	.0011	-.0090	-.0003	.0084	.0006	.0007	.0129	-.0027	

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11.4  
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Sample Name: mp17692-mb1 Acquired: 10/4/2019 22:26:14 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182820.	28433.	8116.5	11228.
Stddev	1113.	103.	19.1	22.
%RSD	.60866	.36116	.23534	.20017
#1	183000.	28315.	8103.3	11213.
#2	181620.	28492.	8138.4	11254.
#3	183830.	28494.	8107.8	11217.

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Sample Name: mp17692-b1 Acquired: 10/4/2019 22:31:14 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.983	2.093	1.973	1.908	2.009	1.957	2.068	1.988
Stddev	.001	.002	.004	.002	.035	.029	.021	.002
%RSD	.0559	.0783	.1975	.1010	1.765	1.505	.9891	.1001
#1	1.983	2.093	1.976	1.910	1.991	1.943	2.090	1.990
#2	1.982	2.095	1.976	1.907	2.049	1.991	2.062	1.988
#3	1.984	2.091	1.969	1.907	1.985	1.937	2.050	1.987
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.499	1.945	2.056	1.869	2.061	1.949	1.901	1.891
Stddev	.0040	.035	.004	.002	.003	.004	.004	.004
%RSD	1.607	1.788	.1925	.1124	.1573	.2263	.2090	.1847
#1	.2477	1.927	2.054	1.871	2.063	1.954	1.903	1.895
#2	.2545	1.985	2.060	1.867	2.062	1.949	1.903	1.890
#3	.2475	1.924	2.053	1.868	2.057	1.945	1.896	1.888
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.04	25.54	25.45	25.18	24.88	25.06	1.883	1.870
Stddev	.02	.01	.01	.02	.03	.00	.002	.001
%RSD	.0610	.0310	.0217	.0780	.1146	.0074	.1215	.0411
#1	25.02	25.54	25.46	25.21	24.85	25.06	1.884	1.870
#2	25.05	25.54	25.45	25.17	24.91	25.05	1.884	1.871
#3	25.05	25.53	25.45	25.17	24.87	25.06	1.880	1.870
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0724	1.933	2.019	1.917	1.279	1.962	.0000	.0568
Stddev	.0015	.003	.009	.028	.005	.033	.0015	.0019
%RSD	2.048	.1374	.4445	1.468	.4305	1.687	4090.	3.275
#1	.0732	1.934	2.026	1.907	1.274	1.943	.0001	.0559
#2	.0707	1.934	2.023	1.948	1.279	2.001	-.0015	.0589
#3	.0733	1.929	2.009	1.895	1.285	1.944	.0015	.0555

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Sample Name: mp17692-b1 Acquired: 10/4/2019 22:31:14 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>-0.012</b>	<b>1.923</b>	<b>W -0.730</b>	
Stddev	.0004	.002	.0023	
%RSD	33.97	.1189	3.137	
#1	-0.016	1.924	-0.713	
#2	-0.008	1.925	-0.720	
#3	-0.011	1.920	-0.756	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	176360.	28057.	7835.9	10509.
Stddev	3478.	56.	19.5	15.
%RSD	1.9719	.20133	.24875	.13929
#1	177880.	27996.	7847.0	10514.
#2	172380.	28067.	7813.4	10492.
#3	178820.	28108.	7847.3	10520.

Sample Name: mp17692-s1 Acquired: 10/4/2019 22:36:07 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.981</b>	<b>2.099</b>	<b>1.949</b>	<b>1.897</b>	<b>1.992</b>	<b>1.948</b>	<b>2.034</b>	<b>1.970</b>
Stddev	.001	.001	.001	.002	.002	.004	.017	.001
%RSD	.0275	.0438	.0438	.1084	.0850	.2162	.8311	.0522
#1	1.982	2.100	1.950	1.898	1.993	1.952	2.027	1.970
#2	1.981	2.098	1.949	1.898	1.991	1.943	2.053	1.971
#3	1.980	2.099	1.948	1.894	1.990	1.949	2.022	1.969
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.443</b>	<b>1.929</b>	<b>2.043</b>	<b>1.837</b>	<b>2.013</b>	<b>1.910</b>	<b>1.904</b>	<b>1.765</b>
Stddev	.0007	.002	.003	.001	.003	.002	.001	.003
%RSD	.2870	.1125	.1365	.0494	.1549	.1087	.0430	.1510
#1	2.450	1.930	2.046	1.838	2.016	1.913	1.904	1.762
#2	2.443	1.931	2.040	1.837	2.015	1.909	1.904	1.767
#3	2.436	1.927	2.043	1.837	2.010	1.909	1.903	1.764
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>24.83</b>	<b>25.42</b>	<b>25.18</b>	<b>25.13</b>	<b>24.85</b>	<b>24.91</b>	<b>1.881</b>	<b>1.869</b>
Stddev	.01	.01	.03	.03	.08	.01	.002	.001
%RSD	.0527	.0507	.1169	.1261	.3047	.0376	.0839	.0294
#1	24.81	25.43	25.15	25.09	24.82	24.90	1.883	1.870
#2	24.84	25.42	25.20	25.16	24.94	24.92	1.881	1.868
#3	24.83	25.40	25.19	25.13	24.80	24.91	1.880	1.869
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 53.83</b>	<b>1.898</b>	<b>2.015</b>	<b>1.884</b>	<b>1.805</b>	<b>1.895</b>	<b>8.834</b>	<b>.0394</b>
Stddev	.04	.002	.001	.004	.002	.002	.015	.0015
%RSD	.0749	.0828	.0459	.1967	.0895	.0789	.1637	3.776
#1	53.88	1.899	2.016	1.886	1.806	1.897	8.848	.0395
#2	53.81	1.896	2.015	1.880	1.806	1.895	8.835	.0379
#3	53.81	1.898	2.014	1.887	1.803	1.894	8.819	.0408

Sample Name: mp17692-s1 Acquired: 10/4/2019 22:36:07 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0014</b>	<b>2.233</b>	<b>W -.0675</b>	
Stddev	.0009	.001	.0021	
%RSD	68.92	.0362	3.178	
#1	.0003	2.234	-0.663	
#2	.0020	2.232	-0.662	
#3	.0018	2.232	-0.700	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	173720.	27106.	7674.6	10326.
Stddev	732.	96.	18.9	18.
%RSD	.42146	.35331	.24602	.17603
#1	174190.	27093.	7657.4	10306.
#2	172870.	27017.	7694.8	10342.
#3	174090.	27208.	7671.6	10329.

Sample Name: mp17692-s2 Acquired: 10/4/2019 22:40:52 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.977</b>	<b>2.096</b>	<b>1.944</b>	<b>1.891</b>	<b>1.994</b>	<b>1.948</b>	<b>2.056</b>	<b>1.967</b>
Stddev	.008	.007	.001	.002	.010	.010	.026	.002
%RSD	.3924	.3529	.0270	.0834	.5192	.5160	1.268	.0898
#1	1.986	2.104	1.944	1.891	1.990	1.947	2.026	1.967
#2	1.971	2.089	1.943	1.890	2.006	1.958	2.075	1.965
#3	1.976	2.096	1.944	1.893	1.987	1.938	2.068	1.969
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.444</b>	<b>1.931</b>	<b>2.039</b>	<b>1.839</b>	<b>2.011</b>	<b>1.907</b>	<b>1.897</b>	<b>1.765</b>
Stddev	.0008	.009	.002	.003	.002	.002	.004	.003
%RSD	.3229	.4763	.0890	.1601	.0895	.0879	.1957	.1728
#1	2.445	1.930	2.038	1.841	2.010	1.908	1.897	1.762
#2	2.451	1.940	2.041	1.835	2.009	1.905	1.893	1.765
#3	2.436	1.922	2.037	1.840	2.013	1.907	1.900	1.768
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>24.84</b>	<b>25.39</b>	<b>25.23</b>	<b>25.14</b>	<b>24.77</b>	<b>24.89</b>	<b>1.877</b>	<b>1.873</b>
Stddev	.06	.10	.06	.03	.08	.01	.002	.001
%RSD	.2276	.3849	.2276	.1360	.3396	.0534	.0920	.0663
#1	24.90	25.48	25.28	25.18	24.86	24.91	1.875	1.871
#2	24.79	25.29	25.17	25.12	24.69	24.88	1.876	1.873
#3	24.84	25.39	25.24	25.13	24.77	24.89	1.879	1.874
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 53.25</b>	<b>1.897</b>	<b>2.011</b>	<b>1.893</b>	<b>1.801</b>	<b>1.901</b>	<b>9.042</b>	<b>.0395</b>
Stddev	.02	.002	.003	.011	.001	.009	.016	.0011
%RSD	.0394	.1166	.1304	.6022	.0385	.4960	.1709	2.874
#1	53.26	1.895	2.014	1.891	1.800	1.901	9.040	.0398
#2	53.23	1.898	2.010	1.905	1.801	1.910	9.028	.0405
#3	53.26	1.898	2.009	1.883	1.801	1.891	9.059	.0383

Zoom In  
Zoom Out

Sample Name: mp17692-s2 Acquired: 10/4/2019 22:40:52 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0011</b>	<b>2.233</b>	<b>W -.0670</b>	
Stddev	.0016	.002	.0025	
%RSD	143.7	.1005	3.725	
#1	.0029	2.235	-.0671	
#2	.0004	2.230	-.0645	
#3	-.0000	2.233	-.0695	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	173260.	27275.	7694.5	10355.
Stddev	728.	69.	15.7	13.
%RSD	.41988	.25345	.20346	.12660
#1	174080.	27197.	7698.3	10358.
#2	172690.	27328.	7677.3	10341.
#3	173020.	27300.	7707.9	10367.

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 22:45:42 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.994</b>	<b>2.096</b>	<b>1.988</b>	<b>1.910</b>	<b>1.992</b>	<b>1.950</b>	<b>2.059</b>	<b>1.987</b>	<b>2.492</b>
Stddev	.004	.003	.003	.003	.021	.020	.025	.002	.0019
%RSD	.1982	.1489	.1512	.1539	1.040	1.015	1.202	.0909	.7575
#1	1.994	2.095	1.986	1.907	1.980	1.940	2.051	1.985	.2482
#2	1.999	2.100	1.985	1.912	1.979	1.938	2.039	1.988	.2480
#3	1.991	2.094	1.991	1.912	2.016	1.973	2.086	1.989	.2513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.940</b>	<b>2.031</b>	<b>1.871</b>	<b>2.045</b>	<b>1.977</b>	<b>1.926</b>	<b>1.899</b>	<b>40.01</b>	<b>40.32</b>
Stddev	.021	.003	.003	.003	.004	.001	.003	.04	.07
%RSD	1.070	.1575	.1339	.1410	.1807	.0710	.1356	.1115	.1670
#1	1.930	2.027	1.868	2.041	1.973	1.925	1.896	39.98	40.26
#2	1.926	2.033	1.872	2.047	1.979	1.925	1.899	40.06	40.40
#3	1.964	2.032	1.872	2.045	1.979	1.928	1.901	40.00	40.31
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>40.49</b>	<b>40.00</b>	<b>39.63</b>	<b>39.79</b>	<b>1.962</b>	<b>1.870</b>	<b>F 6.985</b>	<b>1.897</b>	<b>2.037</b>
Stddev	.04	.06	.08	.01	.000	.003	.142	.000	.002
%RSD	.0957	.1503	.2037	.0234	.0216	.1641	2.033	.0203	.1066
#1	40.49	39.95	39.56	39.79	1.962	1.867	7.128	1.896	2.037
#2	40.53	40.07	39.72	39.78	1.961	1.869	6.981	1.896	2.040
#3	40.45	39.99	39.61	39.80	1.962	1.873	6.844	1.897	2.035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value							5.000		
Range							10.00%		

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11.4

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/4/2019 22:45:42 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.893</b>	<b>1.840</b>	<b>1.953</b>	<b>1.829</b>	<b>1.926</b>	<b>1.947</b>	<b>1.939</b>	<b>1.985</b>
Stddev	.019	.003	.020	.004	.002	.004	.004	.019
%RSD	1.010	.1564	1.026	.2268	.1018	.2166	.2249	.9435
#1	1.884	1.838	1.945	1.825	1.926	1.943	1.936	1.975
#2	1.880	1.839	1.938	1.828	1.924	1.951	1.937	1.974
#3	1.915	1.843	1.975	1.833	1.928	1.947	1.944	2.007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	176210.	27982.	7832.0	10410.				
Stddev	2023.	88.	4.6	13.				
%RSD	1.1481	.31397	.05862	.12582				
#1	177330.	28078.	7837.1	10422.				
#2	177420.	27962.	7828.1	10396.				
#3	173870.	27906.	7831.0	10413.				

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Zoom In  
Zoom Out

Sample Name: ccb Acquired: 10/4/2019 22:50:37 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.000</b>	<b>.0002</b>	<b>.0001</b>	<b>.0001</b>	<b>.0002</b>	<b>.0007</b>	<b>.0001</b>	<b>-0.000</b>
Stddev	.0002	.0000	.0001	.0000	.0003	.0001	.0001	.0002
%RSD	376.4	11.40	187.3	21.95	139.2	19.63	65.86	755.2
#1	-0.000	.0002	.0002	.0001	.0002	.0008	.0000	.0002
#2	-0.002	.0002	-0.000	.0001	-0.001	.0008	.0002	-0.003
#3	.0001	.0002	.0000	.0002	.0004	.0006	.0001	-0.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
High Limit								
Low Limit								
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.006</b>	<b>.0000</b>	<b>-0.002</b>	<b>.0001</b>	<b>-0.005</b>	<b>-0.011</b>	<b>.0007</b>	<b>-0.007</b>
Stddev	.0002	.0003	.0000	.0004	.0011	.0003	.0009	.0006
%RSD	39.90	709.1	10.27	759.0	232.1	28.90	121.4	86.30
#1	.0008	.0002	-.0002	-.0004	.0007	-.0014	.0006	-.0002
#2	.0004	.0002	-.0002	.0001	-.0015	-.0013	.0017	-.0005
#3	.0005	-.0003	-.0002	.0004	-.0006	-.0008	-.0001	-.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
High Limit								
Low Limit								
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0041</b>	<b>.0019</b>	<b>.0025</b>	<b>.0014</b>	<b>.0151</b>	<b>.1083</b>	<b>.0011</b>	<b>.0001</b>
Stddev	.0094	.0018	.0001	.0087	.0126	.0037	.0003	.0002
%RSD	229.3	96.38	4.757	608.8	83.40	3.434	23.77	124.9
#1	-.0057	.0000	.0024	-.0022	.0281	.1063	.0013	.0002
#2	-.0127	.0019	.0026	-.0049	.0145	.1060	.0008	-.0002
#3	.0060	.0037	.0025	.0114	.0029	.1126	.0011	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
High Limit								
Low Limit								

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Sample Name: ccb Acquired: 10/4/2019 22:50:37 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element symbols like Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230. Includes rows for #1, #2, #3 and Check? High/Low Limit.

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Sample Name: da20472-6 Acquired: 10/4/2019 22:55:41 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element symbols like Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316. Includes rows for #1, #2, #3 and Check? High/Low Limit.

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Sample Name: da20472-6 Acquired: 10/4/2019 22:55:41 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element symbols like Li6707, P\_1774, Ce4040. Includes rows for #1, #2, #3 and Int. Std. Units, Avg, Stddev, %RSD.

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Sample Name: mp17692-sd1 Acquired: 10/4/2019 23:00:38 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with columns: Elem, Units, Avg, Stddev, %RSD, and various element symbols like Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316, Ag3280. Includes rows for #1, #2, #3 and Int. Std. Units, Avg, Stddev, %RSD.

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11.4

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Sample Name: mp17692-sd1 Acquired: 10/4/2019 23:00:38 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182050.	27870.	8094.6	11213.
Stddev	537.	218.	25.0	30.
%RSD	.29501	.78247	.30924	.26543
#1	181850.	27620.	8074.7	11189.
#2	182660.	27967.	8086.5	11205.
#3	181650.	28023.	8122.7	11246.

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Sample Name: mp17691-mb1 Acquired: 10/4/2019 23:05:39 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203	.0006	-0.010	.0004	.0023	.0032	.0016	.0018	.0027
Stddev	.0010	.0002	.0010	.0010	.0011	.0007	.0002	.0007	.0007
%RSD	4.705	25.87	95.60	227.2	48.22	20.69	10.15	39.82	25.47
#1	.0192	.0005	-0.009	.0015	.0030	.0028	.0017	.0022	.0033
#2	.0208	.0006	-0.020	.0004	.0028	.0028	.0014	.0010	.0020
#3	.0209	.0008	-0.001	-0.005	.0010	.0039	.0017	.0022	.0028
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0077	-0.007	-0.038	-0.003	.0004	-0.0013	.0029	.2513
Stddev	.0015	.0002	.0010	.0028	.0022	.0029	.0045	.0596	.0018
%RSD	1393.	2.604	140.3	72.98	65.05	782.4	337.5	2035.	.7024
#1	-0.0006	.0079	-0.007	-0.055	-0.011	-0.028	.0029	-0.0352	.2495
#2	-0.0009	.0075	-0.018	-0.055	-0.034	.0010	-0.0061	-0.0276	.2516
#3	.0018	.0078	.0003	-0.006	-0.055	.0029	-0.0008	.0716	.2529
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	.0319	-0.1247	.4183	.0018	-0.0010	1.055	-0.0011	.0493
Stddev	.0033	.0369	.0552	.0181	.0005	.0004	.048	.0010	.0003
%RSD	74.89	115.7	44.30	4.334	28.54	37.52	4.548	87.52	.5303
#1	.0006	.0743	-0.0913	.4027	.0023	-0.0010	1.102	-0.0008	.0491
#2	.0061	.0080	-0.1885	.4141	.0016	-0.0006	1.057	-0.0022	.0496
#3	.0066	.0132	-0.0943	.4382	.0014	-0.0013	1.006	-0.0003	.0492
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0016	-0.0394	-0.0025	.0263	.0012	-0.0020	-0.0306	-0.0054	
Stddev	.0014	.0002	.0005	.0083	.0038	.0049	.0054	.0049	
%RSD	88.15	.6122	21.66	31.53	304.9	238.3	17.60	91.87	
#1	.0010	-0.0392	-0.0020	.0330	.0011	.0021	-0.0325	-0.0085	
#2	.0032	-0.0396	-0.0025	.0287	.0051	-0.0074	-0.0348	-0.0080	
#3	.0006	-0.0396	-0.0031	.0170	-0.0025	-0.0008	-0.0246	.0003	

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Sample Name: mp17691-mb1 Acquired: 10/4/2019 23:05:39 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	183200.	28298.	8141.9	11263.
Stddev	1937.	185.	20.0	23.
%RSD	1.0575	.65310	.24508	.20103
#1	183730.	28265.	8121.3	11243.
#2	184820.	28496.	8143.2	11259.
#3	181060.	28131.	8161.1	11288.

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Sample Name: mp17691-b1 Acquired: 10/4/2019 23:10:41 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.012	2.102	1.947	1.875	1.991	1.877	2.097	1.960	.2543
Stddev	.023	.024	.003	.003	.017	.016	.019	.002	.0031
%RSD	1.148	1.160	.1297	.1411	.8357	.8368	.9151	.1196	1.231
#1	2.038	2.129	1.950	1.878	2.008	1.893	2.117	1.958	.2572
#2	2.006	2.098	1.946	1.872	1.992	1.877	2.097	1.962	.2548
#3	1.993	2.080	1.945	1.875	1.974	1.861	2.078	1.959	.2510
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.920	2.022	1.815	2.071	1.943	1.877	1.858	25.42	25.82
Stddev	.019	.002	.002	.008	.007	.007	.005	.31	.29
%RSD	1.002	.0950	.0884	.3793	.3549	.3809	.2586	1.220	1.115
#1	1.940	2.022	1.817	2.065	1.937	1.873	1.860	25.74	26.14
#2	1.920	2.020	1.814	2.080	1.942	1.885	1.861	25.40	25.74
#3	1.901	2.024	1.816	2.067	1.950	1.872	1.852	25.13	25.58
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.92	25.80	25.02	26.09	1.899	1.854	1.768	1.906	2.059
Stddev	.29	.30	.19	.22	.002	.002	.062	.003	.024
%RSD	1.115	1.178	.7630	.8477	.0790	.0874	3.508	.1428	1.150
#1	26.23	26.09	25.20	26.31	1.901	1.853	1.832	1.907	2.084
#2	25.87	25.82	25.03	26.09	1.898	1.856	1.764	1.903	2.058
#3	25.66	25.48	24.82	25.87	1.898	1.853	1.708	1.908	2.036
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	1.871	1.705	1.908	-0.007	.0418	-0.0029	1.830	-0.0776	
Stddev	.016	.004	.016	.0061	.0019	.0055	.005	.0075	
%RSD	.8495	.2153	.8601	918.6	4.448	188.9	.2511	9.715	
#1	1.885	1.705	1.924	-0.059	.0402	-0.0005	1.831	-0.0806	
#2	1.873	1.701	1.908	-0.061	.0413	.0010	1.825	-0.0690	
#3	1.854	1.708	1.891	-0.018	.0438	-0.0092	1.834	-0.0832	

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Sample Name: mp17691-b1 Acquired: 10/4/2019 23:10:41 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181660.	28428.	8119.0	11028.
Stddev	1273.	83.	19.3	27.
%RSD	.70074	.29327	.23740	.24358
#1	180560.	28400.	8126.1	11039.
#2	181370.	28362.	8133.7	11048.
#3	183060.	28521.	8097.2	10997.

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Sample Name: mp17691-s1 Acquired: 10/4/2019 23:15:28 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.184	2.174	2.082	2.000	2.088	1.966	3.747	2.091	2.618
Stddev	.003	.003	.002	.001	.020	.023	.034	.004	.0023
%RSD	.1322	.1207	.1161	.0446	.9421	1.177	.9165	.1817	.8689
#1	2.187	2.174	2.085	2.000	2.084	1.957	3.734	2.095	2.596
#2	2.185	2.176	2.080	1.999	2.071	1.949	3.720	2.087	2.615
#3	2.181	2.171	2.082	2.001	2.110	1.993	3.786	2.089	2.642

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.026	2.171	1.952	2.182	2.052	2.009	1.994	26.01	106.4
Stddev	.021	.001	.002	.004	.009	.003	.008	.02	.1
%RSD	1.010	.0486	.0855	.2056	.4169	.1439	.3976	.0858	.0914
#1	2.019	2.172	1.950	2.177	2.043	2.012	2.003	26.00	106.5
#2	2.010	2.170	1.953	2.181	2.060	2.006	1.987	26.04	106.5
#3	2.049	2.170	1.952	2.186	2.052	2.008	1.991	26.00	106.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.43	51.93	37.35	120.4	2.092	1.981	8.315	2.030	2.724
Stddev	.04	.07	.15	.2	.003	.003	.047	.002	.006
%RSD	.1368	.1323	.4010	.1693	.1428	.1455	.5595	.0974	.2090
#1	27.44	51.96	37.18	120.4	2.089	1.984	8.367	2.033	2.728
#2	27.46	51.97	37.45	120.6	2.093	1.980	8.302	2.029	2.727
#3	27.39	51.85	37.42	120.2	2.094	1.979	8.277	2.030	2.717

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.963	1.826	2.011	86.46	0.412	0.196	2.026	-0.0780
Stddev	.020	.003	.021	.16	.0068	.0032	.010	.0140
%RSD	1.020	.1828	1.036	.1871	16.44	16.29	4.760	17.95
#1	1.957	1.827	2.002	86.64	0.334	0.230	2.022	-0.0621
#2	1.947	1.828	1.996	86.39	0.454	0.189	2.019	-0.0883
#3	1.986	1.822	2.034	86.34	0.449	0.167	2.037	-0.0836

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11.4  
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Sample Name: mp17691-s1 Acquired: 10/4/2019 23:15:28 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	179730.	28295.	7925.5	10708.
Stddev	1555.	35.	12.6	16.
%RSD	.86515	.12409	.15868	.14957
#1	180230.	28335.	7935.0	10719.
#2	180980.	28273.	7930.2	10710.
#3	177990.	28275.	7911.2	10688.

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Sample Name: mp17691-s2 Acquired: 10/4/2019 23:20:13 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.173	2.161	2.063	1.980	2.088	1.957	3.770	2.073	2.621
Stddev	.002	.006	.001	.001	.017	.021	.033	.000	.0023
%RSD	.0886	.2877	.0336	.0416	.8209	1.077	.8772	.0194	.8774
#1	2.173	2.159	2.063	1.980	2.069	1.933	3.733	2.073	2.598
#2	2.172	2.156	2.062	1.979	2.097	1.969	3.783	2.073	2.621
#3	2.176	2.168	2.063	1.981	2.099	1.970	3.795	2.072	2.644

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.033	2.149	1.942	2.162	2.032	1.987	1.974	25.95	107.0
Stddev	.018	.002	.005	.006	.001	.012	.005	.11	.3
%RSD	.9024	.0752	.2611	.2651	.0424	.5853	.2424	.4052	.2778
#1	2.012	2.151	1.939	2.165	2.033	1.999	1.976	25.91	106.9
#2	2.041	2.149	1.948	2.166	2.033	1.985	1.978	25.87	106.8
#3	2.047	2.147	1.938	2.156	2.031	1.976	1.969	26.07	107.3

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.30	52.11	37.48	120.9	2.077	1.965	7.996	2.010	2.713
Stddev	.10	.12	.20	.1	.004	.003	.025	.002	.005
%RSD	.3529	.2365	.5366	.1058	.1819	.1538	.3181	.0924	.1949
#1	27.25	52.01	37.51	120.9	2.077	1.968	8.024	2.009	2.714
#2	27.24	52.07	37.26	120.8	2.081	1.966	7.990	2.012	2.707
#3	27.41	52.25	37.66	121.0	2.073	1.962	7.974	2.009	2.717

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.961	1.820	2.015	86.53	0.457	0.212	2.000	-0.0760
Stddev	.015	.003	.020	.09	.0061	.0024	.004	.0030
%RSD	.7641	.1786	.9864	.1055	13.37	11.46	.2213	4.015
#1	1.944	1.816	1.992	86.47	0.396	0.216	2.005	-0.0724
#2	1.972	1.822	2.022	86.47	0.458	0.186	1.996	-0.0778
#3	1.967	1.821	2.030	86.63	0.518	0.234	1.999	-0.0776

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Sample Name: mp17691-s2 Acquired: 10/4/2019 23:20:13 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	177670.	27796.	7929.5	10716.
Stddev	991.	70.	8.1	10.
%RSD	.55780	.25323	.10158	.09469
#1	178810.	27875.	7930.4	10716.
#2	177050.	27772.	7921.0	10706.
#3	177140.	27741.	7937.0	10726.

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Sample Name: jc95743-1 Acquired: 10/4/2019 23:24:58 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1269</b>	<b>.0004</b>	<b>-0.005</b>	<b>0.013</b>	<b>.0004</b>	<b>.0027</b>	<b>1.559</b>	<b>.0035</b>	<b>.0025</b>
Stddev	.0007	.0001	.0009	.0005	.0008	.0008	.002	.0007	.0008
%RSD	.5556	30.42	178.4	37.08	205.9	28.71	.1212	18.76	33.79
#1	.1275	.0004	-.0000	.0019	-.0005	.0024	1.560	.0029	.0020
#2	.1270	.0005	.0000	.0011	.0009	.0036	1.557	.0035	.0020
#3	.1261	.0003	-.0015	.0010	.0008	.0022	1.559	.0042	.0035
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0028</b>	<b>.0091</b>	<b>.0044</b>	<b>-0.017</b>	<b>-0.001</b>	<b>-0.029</b>	<b>.0019</b>	<b>-0.146</b>	<b>80.98</b>
Stddev	.0013	.0003	.0037	.0021	.0051	.0062	.0053	.0209	.08
%RSD	46.90	3.569	84.71	122.8	481.8	215.2	284.1	143.0	.1008
#1	.0014	.0091	.0045	-.0037	-.0056	.0038	.0073	-.0388	80.89
#2	.0029	.0088	.0006	-.0018	.0009	-.0085	-.0032	-.0031	81.02
#3	.0041	.0095	.0081	.0004	.0045	-.0039	.0014	-.0020	81.04
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.7853</b>	<b>25.96</b>	<b>11.80</b>	<b>95.50</b>	<b>.0618</b>	<b>.0027</b>	<b>7.493</b>	<b>-0.0039</b>	<b>.6255</b>
Stddev	.0072	.12	.10	.13	.0012	.0003	.008	.0018	.0003
%RSD	.9177	.4537	.8312	.1378	1.941	10.63	.1015	45.70	.0437
#1	.7892	25.85	11.90	95.56	.0617	.0025	7.485	-.0057	.6257
#2	.7769	25.94	11.70	95.60	.0631	.0026	7.499	-.0036	.6252
#3	.7897	26.08	11.79	95.35	.0607	.0030	7.496	-.0022	.6255
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0001</b>	<b>-0.0349</b>	<b>.0003</b>	<b>86.65</b>	<b>.0025</b>	<b>.0188</b>	<b>-0.0005</b>	<b>-0.0027</b>	
Stddev	.0016	.0020	.0007	.06	.0053	.0011	.0011	.0082	
%RSD	2165.	5.606	199.6	.0694	210.2	5.786	193.0	307.8	
#1	-.0008	-.0366	-.0004	86.66	.0060	.0196	-.0017	-.0111	
#2	-.0009	-.0327	.0008	86.70	-.0036	.0175	-.0002	-.0021	
#3	.0019	-.0354	.0007	86.59	.0052	.0191	.0003	.0052	

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Sample Name: jc95743-1 Acquired: 10/4/2019 23:24:58 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 5.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>1800810.</b>	<b>27953.</b>	<b>7955.6</b>	<b>10853.</b>
Stddev	498.	77.	13.7	13.
%RSD	.27564	.27674	.17198	.11817
#1	180590.	27916.	7944.3	10841.
#2	180470.	27900.	7970.8	10867.
#3	181360.	28041.	7951.6	10851.

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Sample Name: mp17691-sd1 Acquired: 10/4/2019 23:29:53 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1392</b>	<b>.0012</b>	<b>-0.0027</b>	<b>.0009</b>	<b>.0057</b>	<b>.0115</b>	<b>1.596</b>	<b>.0049</b>	<b>.0219</b>
Stddev	.0020	.0004	.0039	.0028	.0042	.0012	.014	.0011	.0117
%RSD	1.468	33.02	143.7	313.6	73.90	10.59	.8490	21.60	53.50
#1	.1415	.0009	-.0054	.0025	.0105	.0105	1.592	.0048	.0288
#2	.1384	.0011	-.0046	-.0024	.0030	.0128	1.586	.0039	.0286
#3	.1377	.0017	.0018	.0026	.0035	.0111	1.612	.0060	.0084
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0012</b>	<b>.0297</b>	<b>-0.173</b>	<b>-0.207</b>	<b>-0.081</b>	<b>-0.363</b>	<b>-0.0231</b>	<b>.1959</b>	<b>82.08</b>
Stddev	.0103	.0007	.0199	.0113	.0254	.0223	.0205	.1205	.17
%RSD	831.6	2.388	114.9	54.89	312.9	61.56	88.50	61.52	.2012
#1	.0035	.0297	-.0387	-.0196	-.0300	-.0582	-.0425	.2818	82.24
#2	-.0100	.0290	.0005	-.0325	.0197	-.0372	-.0017	.2477	82.08
#3	.0102	.0304	-.0136	-.0099	-.0141	-.0135	-.0251	.0581	81.91
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>8137</b>	<b>26.45</b>	<b>11.32</b>	<b>98.60</b>	<b>.0503</b>	<b>.0022</b>	<b>7.850</b>	<b>.0029</b>	<b>.6349</b>
Stddev	.0182	.30	.54	.49	.0089	.0040	.010	.0023	.0022
%RSD	2.236	1.148	4.733	.4986	17.65	180.8	.1217	78.73	.3411
#1	.8253	26.78	11.94	98.14	.0482	-.0002	7.839	.0039	.6325
#2	.8230	26.19	11.02	99.12	.0601	.0001	7.857	.0044	.6367
#3	.7927	26.36	11.02	98.54	.0427	.0068	7.853	.0003	.6354
Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0151</b>	<b>-1.786</b>	<b>-0.008</b>	<b>86.94</b>	<b>.0427</b>	<b>.0031</b>	<b>-1.383</b>	<b>-0.736</b>	
Stddev	.0069	.0097	.0021	.15	.0129	.0105	.0118	.0376	
%RSD	45.46	5.452	263.6	.1767	30.19	341.4	8.510	51.10	
#1	.0190	-.1835	.0017	86.77	.0290	.0027	-.1401	-.0908	
#2	.0191	-.1674	-.0021	86.98	.0445	-.0072	-.1490	-.0996	
#3	.0072	-.1850	-.0020	87.07	.0546	.0138	-.1257	-.0305	

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Sample Name: mp17691-sd1 Acquired: 10/4/2019 23:29:53 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 25.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	182390.	28024.	8073.7	11151.
Stddev	958.	211.	11.9	19.
%RSD	.52540	.75459	.14679	.17086
#1	182390.	28084.	8078.3	11160.
#2	183340.	27789.	8082.7	11164.
#3	181420.	28199.	8060.3	11129.

Sample Name: da20472-1 Acquired: 10/4/2019 23:34:55 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.000</b>	<b>.0001</b>	<b>-0.001</b>	<b>.0001</b>	<b>.0011</b>	<b>.0062</b>	<b>.0002</b>	<b>.0001</b>
Stddev	.0002	.0001	.0001	.0000	.0001	.0001	.0000	.0001
%RSD	11970.	67.54	72.76	26.90	11.36	1.304	13.41	102.1
#1	-0.001	.0001	-0.000	.0001	.0011	.0063	.0003	-0.000
#2	-0.002	.0002	-0.002	.0002	.0009	.0062	.0002	.0002
#3	-0.000	.0001	-0.001	.0001	.0012	.0061	.0003	.0001
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.0000</b>	<b>.0053</b>	<b>.0019</b>	F <b>-0.036</b>	<b>-0.002</b>	<b>.0029</b>	<b>.0024</b>
Stddev	.0001	.0004	.0000	.0002	.0005	.0004	.0008	.0008
%RSD	15.44	6464.	.7360	9.100	14.75	179.3	27.83	34.80
#1	.0007	-0.003	.0052	.0017	-0.039	.0002	.0022	.0015
#2	.0006	.0005	.0053	.0021	-0.040	-0.004	.0026	.0025
#3	.0005	-0.002	.0052	.0020	-0.030	-0.005	.0038	.0032
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.004</b>	<b>.0243</b>	<b>.0037</b>	<b>.0036</b>	<b>37.17</b>	<b>11.35</b>	<b>1.248</b>	<b>.0107</b>
Stddev	.0032	.0010	.0007	.0051	.09	.02	.001	.0003
%RSD	901.9	4.089	19.68	143.6	.2319	.1847	.0886	2.405
#1	-0.014	.0254	.0030	-0.016	37.25	11.37	1.247	.0104
#2	-0.032	.0241	.0044	.0086	37.17	11.32	1.247	.0108
#3	-0.029	.0234	.0036	.0037	37.08	11.35	1.249	.0109
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3852</b>	<b>.0012</b>	<b>.0000</b>	<b>.0002</b>	<b>-0.081</b>	<b>.0040</b>	<b>.1025</b>	<b>-0.001</b>
Stddev	.0004	.0001	.0001	.0001	.0001	.0005	.0018	.0006
%RSD	.1027	11.03	678.7	57.99	1.354	11.67	1.750	507.7
#1	3848	.0011	-0.000	.0003	-0.080	.0045	.1042	.0001
#2	3856	.0013	-0.000	.0001	-0.081	.0037	.1028	-0.008
#3	3852	.0013	.0001	.0001	-0.082	.0036	.1006	.0003

Sample Name: da20472-1 Acquired: 10/4/2019 23:34:55 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	
Avg	<b>.0000</b>	F <b>11.37</b>	<b>-0.020</b>	
Stddev	.0009	.02	.0029	
%RSD	1956.	.1819	141.3	
#1	.0008	11.35	-0.053	
#2	.0002	11.37	-0.001	
#3	-0.009	11.39	-0.007	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>182660.</b>	<b>28284.</b>	<b>8018.1</b>	<b>11021.</b>
Stddev	663.	169.	21.5	26.
%RSD	.36283	.59796	.26857	.23432
#1	183410.	28099.	8009.9	11008.
#2	182140.	28322.	8042.6	11050.
#3	182450.	28431.	8002.0	11003.

Sample Name: da20472-2 Acquired: 10/4/2019 23:39:47 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.001</b>	<b>.0001</b>	<b>.0001</b>	<b>.0006</b>	<b>.0019</b>	<b>.0043</b>	<b>.0605</b>	<b>.0067</b>
Stddev	.0001	.0001	.0000	.0002	.0001	.0002	.0001	.0001
%RSD	134.5	61.05	34.02	41.12	3.876	4.999	.1694	2.038
#1	-0.001	.0000	.0002	.0008	.0019	.0044	.0605	.0066
#2	-0.000	.0001	.0001	.0005	.0019	.0041	.0606	.0067
#3	-0.000	.0001	.0001	.0004	.0018	.0045	.0605	.0069
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0010</b>	<b>-0.002</b>	<b>.0160</b>	<b>-0.0015</b>	F <b>-0.085</b>	<b>-0.007</b>	<b>.0083</b>	<b>.0047</b>
Stddev	.0004	.0004	.0000	.0004	.0007	.0003	.0022	.0014
%RSD	36.40	222.1	.2569	30.38	7.716	51.30	26.32	30.46
#1	.0007	.0003	.0160	-0.018	-0.092	-0.008	.0058	.0037
#2	.0009	-0.003	.0160	-0.016	-0.084	-0.009	.0097	.0064
#3	.0014	-0.005	.0159	-0.010	-0.079	-0.003	.0093	.0042
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0107</b>	<b>.0361</b>	<b>3.125</b>	<b>.0144</b>	<b>.1165</b>	<b>97.54</b>	<b>.0015</b>	<b>.0018</b>
Stddev	.0067	.0009	.004	.0075	.0162	1.97	.0004	.0002
%RSD	62.32	2.556	.1198	51.97	13.89	2.022	24.86	10.58
#1	.0158	.0351	3.120	.0230	.1342	98.86	.0015	.0019
#2	.0131	.0369	3.128	.0097	.1125	98.47	.0018	.0018
#3	.0032	.0363	3.125	.0104	.1026	95.27	.0011	.0015
Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0247</b>	<b>.0067</b>	<b>.0001</b>	<b>.0006</b>	<b>-0.133</b>	<b>.0010</b>	<b>10.18</b>	<b>-0.003</b>
Stddev	.0006	.0000	.0000	.0002	.0009	.0000	.02	.0017
%RSD	2.312	.2902	47.70	38.41	6.931	3.831	.1773	544.8
#1	.0245	.0067	.0001	.0008	-0.124	.0010	10.16	-0.022
#2	.0244	.0067	.0001	.0004	-0.142	.0010	10.19	.0004
#3	.0254	.0067	.0000	.0007	-0.135	.0010	10.19	.0009



Sample Name: da20472-2 Acquired: 10/4/2019 23:39:47 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	<b>0.000</b>	<b>0.0216</b>	<b>-0.0025</b>
Stddev	.0008	.0009	.0022
%RSD	1787.	4.189	89.24
#1	-0.007	.0225	-0.033
#2	.0009	.0216	-0.041
#3	-0.000	.0207	.0000

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	177720.	28253.	7726.3	10852.
Stddev	275.	148.	3.3	8.
%RSD	.15446	.52379	.04283	.07537
#1	177490.	28150.	7724.0	10860.
#2	177640.	28186.	7730.1	10852.
#3	178020.	28422.	7724.7	10844.

Sample Name: ccv Acquired: 10/4/2019 23:44:46 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.986</b>	<b>2.090</b>	<b>1.989</b>	<b>1.905</b>	<b>1.994</b>	<b>1.936</b>	<b>2.059</b>	<b>1.988</b>	<b>2.480</b>
Stddev	.002	.001	.005	.006	.019	.016	.031	.004	.0023
%RSD	.1148	.0621	.2713	.3421	.9456	.8460	1.494	.2285	.9456
#1	1.988	2.092	1.988	1.900	1.983	1.927	2.046	1.986	2.462
#2	1.983	2.089	1.984	1.902	1.984	1.925	2.037	1.985	2.471
#3	1.987	2.090	1.994	1.913	2.016	1.955	2.094	1.993	2.506

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.938</b>	<b>2.038</b>	<b>1.869</b>	<b>2.048</b>	<b>1.979</b>	<b>1.927</b>	<b>1.896</b>	<b>39.95</b>	<b>40.22</b>
Stddev	.017	.009	.006	.005	.007	.007	.006	.02	.00
%RSD	.9003	.4295	.3141	.2681	.3367	.3425	.3315	.0378	.0101
#1	1.927	2.037	1.865	2.044	1.977	1.927	1.895	39.96	40.23
#2	1.928	2.030	1.867	2.045	1.973	1.921	1.891	39.93	40.22
#3	1.958	2.048	1.876	2.054	1.986	1.934	1.903	39.95	40.23

11.4  
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Sample Name: ccv Acquired: 10/4/2019 23:44:46 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.887</b>	<b>1.832</b>	<b>1.950</b>	<b>1.828</b>	<b>1.917</b>	<b>1.939</b>	<b>1.934</b>	<b>1.982</b>
Stddev	.017	.005	.016	.004	.006	.000	.007	.017
%RSD	.9057	.2879	.8025	.2392	.3124	.0143	.3823	.8664
#1	1.878	1.831	1.941	1.824	1.915	1.938	1.931	1.975
#2	1.876	1.827	1.942	1.827	1.913	1.939	1.928	1.969
#3	1.907	1.838	1.969	1.833	1.924	1.939	1.942	2.001

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	175520.	27707.	7805.6	10393.
Stddev	2079.	53.	32.6	36.
%RSD	1.1844	.18987	.41746	.34974
#1	176720.	27672.	7816.2	10415.
#2	176720.	27681.	7831.6	10413.
#3	173120.	27767.	7769.1	10351.

Sample Name: ccb Acquired: 10/4/2019 23:49:38 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>0.002</b>	<b>0.002</b>	<b>-0.001</b>	<b>0.002</b>	<b>0.000</b>	<b>0.003</b>	<b>0.001</b>	<b>0.001</b>
Stddev	.0001	.0000	.0001	.0001	.0001	.0001	.0000	.0003
%RSD	53.55	14.33	179.1	44.79	365.9	36.00	23.15	313.2
#1	.0003	.0002	.0000	.0003	.0001	.0002	.0001	.0002
#2	.0001	.0002	.0000	.0001	.0001	.0002	.0001	.0004
#3	.0003	.0002	.0001	.0002	.0001	.0003	.0001	.0001

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>0.009</b>	<b>0.001</b>	<b>-0.002</b>	<b>0.009</b>	<b>-0.003</b>	<b>-0.004</b>	<b>0.004</b>	<b>0.000</b>
Stddev	.0002	.0002	.0000	.0007	.0006	.0008	.0012	.0006
%RSD	21.12	172.0	20.14	75.89	201.6	170.7	313.3	281.1
#1	.0010	-.0001	-.0002	.0004	-.0004	-.0010	.0008	-.0001
#2	.0007	.0003	-.0002	.0016	-.0008	.0004	-.0010	-.0005
#3	.0008	.0002	-.0002	.0006	.0003	-.0007	.0012	.0007



Sample Name: ccb Acquired: 10/4/2019 23:49:38 Type: QC
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 9 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 9 columns: #1, #2, #3. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 9 columns: Check?, High Limit, Low Limit. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 4 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Li6707, P\_1774, Ce4040.

Table with 4 columns: #1, #2, #3. Rows for Li6707, P\_1774, Ce4040.

Table with 4 columns: Check?, High Limit, Low Limit. Rows for Li6707, P\_1774, Ce4040.

Table with 5 columns: Int. Std, Units, Avg, Stddev, %RSD. Rows for Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 5 columns: #1, #2, #3. Rows for Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: da20472-3 Acquired: 10/4/2019 23:54:34 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Table with 12 columns: #1, #2, #3. Rows for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Ag3280, V\_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068.

Table with 12 columns: #1, #2, #3. Rows for Ag3280, V\_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

Table with 12 columns: #1, #2, #3. Rows for Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 12 columns: #1, #2, #3. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Sample Name: da20472-3 Acquired: 10/4/2019 23:54:34 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 4 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Li6707, P\_1774, Ce4040.

Table with 4 columns: #1, #2, #3. Rows for Li6707, P\_1774, Ce4040.

Table with 5 columns: Int. Std, Units, Avg, Stddev, %RSD. Rows for Y\_3600, Y\_3710, Y\_2243, In2306.

Table with 5 columns: #1, #2, #3. Rows for Y\_3600, Y\_3710, Y\_2243, In2306.

Sample Name: da20472-4 Acquired: 10/4/2019 23:59:29 Type: Unk
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Table with 12 columns: #1, #2, #3. Rows for Ba4554, Be3130, Cd2288, Co2286, Cr2677, Cu3247, Mn2576, Ni2316.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Ag3280, V\_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068.

Table with 12 columns: #1, #2, #3. Rows for Ag3280, V\_2924, Zn2062, As1890, Tl1908, Pb2203, Se1960, Sb2068.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

Table with 12 columns: #1, #2, #3. Rows for Al3961, Ca3179, Fe2599, Mg2790, K\_7664, Na5895, B\_2089, Mo2020.

Table with 12 columns: Elem, Units, Avg, Stddev, %RSD. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Table with 12 columns: #1, #2, #3. Rows for Si2124, Sn1899, Sr4077, Ti3349, W\_2079, Zr3391, S\_1820, Bi2230.

Sample Name: da20472-4 Acquired: 10/4/2019 23:59:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	-0.004	F 12.05	-0.032
Stddev	.0009	.03	.0005
%RSD	199.4	.2088	16.38
#1	.0004	12.08	-.0026
#2	-.0014	12.03	-.0033
#3	-.0003	12.03	-.0037

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	181580.	28098.	7953.6	10956.
Stddev	2392.	72.	21.6	19.
%RSD	1.3172	.25517	.27106	.17778
#1	183070.	28019.	7948.5	10948.
#2	182850.	28114.	7935.0	10942.
#3	178820.	28160.	7977.2	10979.

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Sample Name: da20472-5 Acquired: 10/5/2019 0:04:21 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0001	-0.000	.0003	.0021	.0029	.0074	.0044	.0004
Stddev	.0002	.0000	.0001	.0002	.0001	.0002	.0000	.0004	.0002
%RSD	5.355	31.92	235.8	89.10	6.708	8.613	.5008	9.121	56.90
#1	.0030	.0001	-.0001	.0003	.0020	.0028	.0074	.0049	.0001
#2	.0028	.0001	-.0001	.0005	.0022	.0027	.0074	.0041	.0004
#3	.0031	.0001	-.0001	.0000	.0022	.0032	.0075	.0043	.0006

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0261	-0.004	-0.015	-0.001	.0002	.0011	.2392	.1464
Stddev	.0004	.0001	.0001	.0006	.0007	.0014	.0010	.0076	.0008
%RSD	42.15	.5103	33.32	39.98	873.5	783.5	96.29	3.186	5515
#1	.0009	.0261	-.0003	-.0009	.0002	-.0004	.0022	.2428	.1461
#2	.0011	.0260	-.0005	-.0015	-.0009	-.0008	.0009	.2305	.1473
#3	.0004	.0263	-.0005	-.0005	.0004	.0017	.0002	.2444	.1457

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1087	.0284	9.695	*****	.1267	.0013	.6876	.0000	.0023
Stddev	.0008	.0120	.152	----	.0006	.0000	.0015	.0004	.0001
%RSD	.7392	42.14	1.565	----	.4654	2.927	.2130	1368.	4.584
#1	.1084	.0170	9.538	----	.1263	.0013	.6866	.0003	.0023
#2	.1082	.0409	9.707	----	.1274	.0012	.6893	-.0005	.0025
#3	.1097	.0273	9.841	----	.1264	.0013	.6870	.0002	.0023

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	-0.0078	.0001	8.189	.0016	.0435	.0063	-0.001
Stddev	.0001	.0009	.0001	.015	.0017	.0025	.0004	.0019
%RSD	1.646	11.26	81.82	.1877	103.6	5.734	6.613	1552.
#1	.0035	-.0070	.0001	8.179	.0035	.0406	.0067	.0011
#2	.0034	-.0088	.0000	8.182	.0003	.0451	.0062	.0008
#3	.0034	-.0077	.0002	8.207	.0010	.0447	.0059	-.0023

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Sample Name: da20472-5 Acquired: 10/5/2019 0:04:21 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	141810.	28013.	6564.9	8242.8
Stddev	308.	141.	7.8	14.4
%RSD	.21735	.54056	.11892	.17445
#1	141470.	26161.	6557.5	8228.0
#2	141890.	25997.	6573.1	8256.8
#3	142070.	25881.	6564.1	8243.5

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Sample Name: jc95743-2 Acquired: 10/5/2019 0:09:15 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	.0001	-0.002	.0031	.0005	.0006	.9619	.0019	.0005
Stddev	.0002	.0000	.0000	.0001	.0001	.0002	.0007	.0002	.0002
%RSD	3.212	14.23	2.125	3.249	10.89	35.29	.0692	11.43	36.86
#1	.0069	.0001	-.0002	.0030	.0005	.0005	.9613	.0018	.0004
#2	.0073	.0001	-.0002	.0030	.0005	.0005	.9626	.0022	.0007
#3	.0068	.0002	-.0002	.0032	.0004	.0009	.9620	.0018	.0004

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0099	.0013	-0.018	-0.011	-0.014	.0001	.0291	36.80
Stddev	.0001	.0002	.0005	.0010	.0009	.0006	.0013	.0044	.09
%RSD	13.96	2.204	36.45	57.72	84.86	40.51	1088.	15.02	2318
#1	.0008	.0099	.0009	-.0011	-.0005	-.0010	.0001	.0242	36.76
#2	.0010	.0097	.0012	-.0030	-.0021	-.0013	-.0012	.0307	36.74
#3	.0011	.0101	.0018	-.0014	-.0006	-.0021	.0015	.0325	36.90

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4236	10.55	3.534	37.34	.0131	.0005	2.385	-0.008	2792
Stddev	.0012	.02	.043	.09	.0002	.0001	.042	.0002	.0003
%RSD	.2897	.1917	1.222	.2365	1.297	24.32	1.752	22.58	.1179
#1	.4245	10.53	3.584	37.44	.0131	.0004	2.359	-.0011	2792
#2	.4242	10.57	3.511	37.33	.0130	.0006	2.363	-.0008	2790
#3	.4222	10.56	3.507	37.26	.0133	.0004	2.433	-.0007	2796

Elem	Tl3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	-0.0068	-0.003	47.13	.0002	.0174	.0101	-0.010
Stddev	.0002	.0003	.0001	.80	.0002	.0012	.0006	.0037
%RSD	8.179	4.196	20.16	1.706	125.5	6.732	5.790	372.7
#1	.0022	-.0070	-.0002	46.66	-.0003	.0183	.0100	-.0012
#2	.0023	-.0065	-.0003	46.68	-.0001	.0179	.0096	-.0046
#3	.0020	-.0069	-.0003	48.06	.0002	.0161	.0108	.0028

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Zoom In  
Zoom Out

Sample Name: jc95743-2 Acquired: 10/5/2019 0:09:15 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	178300.	27311.	7804.6	10585.
Stddev	474.	617.	133.7	148.
%RSD	.26599	2.2590	1.7135	1.3973
#1	178070.	26600.	7872.1	10659.
#2	178840.	27618.	7891.1	10680.
#3	177970.	27713.	7650.6	10414.

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Zoom In  
Zoom Out

Sample Name: mp17592-mb1conf Acquired: 10/5/2019 0:14:06 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0003</b>	<b>.0001</b>	<b>-0.000</b>	<b>.0002</b>	<b>.0012</b>	<b>.0014</b>	<b>.0005</b>	<b>.0004</b>	<b>.0007</b>
Stddev	.0001	.0000	.0002	.0001	.0001	.0003	.0000	.0002	.0003
%RSD	25.47	40.77	436.9	34.84	11.33	19.93	7.932	45.62	46.30
#1	.0004	.0001	-.0001	.0001	.0013	.0015	.0005	.0004	.0007
#2	.0003	.0001	-.0002	.0002	.0011	.0017	.0006	.0002	.0004
#3	.0003	.0002	.0002	.0001	.0011	.0011	.0005	.0005	.0010
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0001</b>	<b>.0244</b>	<b>.0004</b>	<b>-0.0007</b>	<b>-0.0001</b>	<b>-0.0003</b>	<b>-0.0007</b>	<b>.0140</b>	<b>.0862</b>
Stddev	.0003	.0001	.0003	.0004	.0006	.0007	.0013	.0037	.0020
%RSD	324.7	.3638	72.87	58.75	729.7	238.1	190.3	26.18	2.267
#1	-.0001	.0245	.0001	-.0007	-.0001	-.0009	.0007	.0098	.0853
#2	.0000	.0243	.0004	-.0011	-.0005	-.0005	-.0020	.0166	.0849
#3	.0004	.0244	.0006	-.0003	-.0007	.0005	-.0008	.0155	.0885
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0270</b>	<b>.0237</b>	<b>.3278</b>	<b>.8650</b>	<b>.0006</b>	<b>.0001</b>	<b>.0117</b>	<b>.0191</b>	<b>.0005</b>
Stddev	.0019	.0128	.0293	.0196	.0002	.0001	.0008	.0004	.0000
%RSD	7.108	53.99	8.950	2.269	43.21	116.8	6.661	2.335	8.389
#1	.0261	.0246	.3474	.8876	.0006	.0002	.0112	.0195	.0005
#2	.0257	.0105	.3420	.8519	.0008	.0002	.0114	.0193	.0004
#3	.0292	.0360	.2941	.8555	.0003	-.0000	.0126	.0186	.0005
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>.0009</b>	<b>-0.0066</b>	<b>-0.0003</b>	<b>.0172</b>	<b>.0005</b>	<b>.0045</b>	<b>.0135</b>	<b>-0.0005</b>	
Stddev	.0001	.0006	.0001	.0009	.0011	.0005	.0010	.0011	
%RSD	11.59	9.632	40.85	5.262	205.1	10.96	7.230	206.4	
#1	.0008	-.0062	-.0004	.0182	.0002	.0040	.0124	.0002	
#2	.0008	-.0062	-.0002	.0164	.0018	.0049	.0138	-.0018	
#3	.0010	-.0073	-.0002	.0171	-.0004	.0048	.0142	.0001	

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Zoom In  
Zoom Out

Sample Name: mp17592-mb1conf Acquired: 10/5/2019 0:14:06 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>182390.</b>	<b>28292.</b>	<b>8131.2</b>	<b>11277.</b>
Stddev	2192.	126.	5.9	13.
%RSD	1.2020	4.4454	.07245	.11141
#1	183140.	28423.	8135.0	11289.
#2	179920.	28281.	8134.3	11264.
#3	184110.	28172.	8124.5	11278.

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Zoom In  
Zoom Out

Sample Name: mp17592-ps1 Acquired: 10/5/2019 0:19:08 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.568</b>	<b>1.967</b>	<b>1.891</b>	<b>1.899</b>	<b>2.015</b>	<b>2.334</b>	<b>3.786</b>	<b>2.173</b>	<b>.2476</b>
Stddev	.004	.002	.021	.018	.005	.005	.028	.022	.0007
%RSD	.1367	.1138	1.085	.9725	.2403	.2252	.7271	1.015	.2954
#1	2.572	1.970	1.878	1.890	2.014	2.332	3.794	2.161	.2482
#2	2.567	1.966	1.879	1.887	2.020	2.340	3.808	2.159	.2480
#3	2.565	1.967	1.914	1.920	2.010	2.330	3.755	2.198	.2468
Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.068</b>	<b>2.416</b>	<b>2.010</b>	<b>1.932</b>	<b>2.532</b>	<b>1.795</b>	<b>1.883</b>	<b>107.7</b>	<b>F 258.7</b>
Stddev	.003	.026	.023	.021	.022	.017	.021	.1	1.1
%RSD	.1212	1.065	1.146	1.069	.8903	.9299	1.134	.0863	.4193
#1	2.066	2.399	1.995	1.922	2.520	1.786	1.871	107.8	258.6
#2	2.071	2.404	2.000	1.919	2.519	1.786	1.870	107.7	257.8
#3	2.066	2.446	2.037	1.956	2.558	1.815	1.907	107.6	259.9
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>161.6</b>	<b>130.2</b>	<b>47.75</b>	<b>29.29</b>	<b>1.858</b>	<b>1.771</b>	<b>1.815</b>	<b>1.843</b>	<b>2.558</b>
Stddev	1.8	.1	.08	.03	.021	.018	.018	.019	.021
%RSD	1.130	.0671	.1722	.0861	1.149	1.043	1.011	1.017	.8275
#1	163.4	130.3	47.84	29.28	1.845	1.759	1.804	1.830	2.583
#2	161.8	130.1	47.72	29.31	1.846	1.761	1.805	1.834	2.545
#3	159.7	130.3	47.69	29.26	1.882	1.792	1.836	1.864	2.548
Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	<b>F 8.067</b>	<b>1.521</b>	<b>2.008</b>	<b>12.57</b>	<b>.3284</b>	<b>.1017</b>	<b>5.369</b>	<b>4162</b>	
Stddev	.007	.022	.001	.13	.0032	.0005	.058	.0017	
%RSD	.0895	1.469	.0297	1.070	.9643	.5400	1.075	.4024	
#1	8.073	1.503	2.007	12.49	.3306	.1011	5.331	4159	
#2	8.059	1.514	2.008	12.49	.3299	.1020	5.340	4180	
#3	8.070	1.546	2.007	12.72	.3248	.1021	5.435	4146	

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Zoom In  
Zoom Out

Sample Name: mp17592-ps1 Acquired: 10/5/2019 0:19:08 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	180700.	29273.	7985.7	10001.
Stddev	475.	40.	74.9	87.
%RSD	.26309	.13738	.93840	.87377

#1	180580.	29318.	8042.6	10058.
#2	180290.	29262.	8013.7	10045.
#3	181220.	29239.	7900.8	9900.4

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Zoom In  
Zoom Out

Sample Name: mp17699-b1 Acquired: 10/5/2019 0:24:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.010	2.135	2.008	1.919	2.016	1.956	2.079	2.013
Stddev	.002	.002	.002	.000	.003	.000	.018	.001
%RSD	.0980	.0689	.0906	.0218	.1255	.0224	.8837	.0655

#1	2.013	2.136	2.006	1.918	2.016	1.956	2.084	2.011
#2	2.010	2.136	2.007	1.919	2.018	1.956	2.094	2.013
#3	2.009	2.134	2.009	1.919	2.013	1.955	2.059	2.013

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.514	1.959	2.072	1.877	2.089	1.977	1.930	1.917
Stddev	.0006	.003	.003	.001	.002	.001	.000	.002
%RSD	.2393	.1393	.1207	.0748	.0936	.0546	.0172	.1275

#1	.2507	1.958	2.070	1.876	2.087	1.978	1.930	1.914
#2	.2518	1.962	2.072	1.879	2.088	1.977	1.930	1.919
#3	.2516	1.956	2.075	1.877	2.091	1.976	1.930	1.918

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.41	25.58	25.81	25.51	25.17	25.29	1.944	1.895
Stddev	.02	.02	.02	.04	.01	.03	.004	.001
%RSD	.0620	.0755	.0940	.1552	.0351	.1130	.2278	.0451

#1	25.42	25.57	25.79	25.46	25.18	25.29	1.940	1.895
#2	25.42	25.60	25.84	25.54	25.18	25.27	1.948	1.896
#3	25.39	25.58	25.80	25.52	25.16	25.32	1.945	1.894

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.284	1.932	2.056	1.907	1.863	1.976	-0.189	0.392
Stddev	.0005	.001	.002	.003	.000	.002	.004	.0012
%RSD	.3652	.0501	.0812	.1336	.0216	.0850	2.310	3.110

#1	.1279	1.931	2.057	1.909	1.863	1.975	-0.186	0.391
#2	.1285	1.932	2.054	1.907	1.863	1.978	-0.194	0.405
#3	.1289	1.932	2.055	1.904	1.863	1.974	-0.188	0.381

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Zoom In  
Zoom Out

Sample Name: mp17699-b1 Acquired: 10/5/2019 0:24:29 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	.0021	1.930	W -0.0709
Stddev	.0010	.001	.0009
%RSD	47.53	.0348	1.201

#1	.0027	1.929	-0.0704
#2	.0027	1.930	-0.0718
#3	.0010	1.930	-0.0703

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	178350.	27833.	7865.2	10572.
Stddev	552.	145.	7.0	13.
%RSD	.30955	.52270	.08874	.12267

#1	178470.	27994.	7860.2	10558.
#2	177750.	27712.	7873.2	10584.
#3	178830.	27794.	7862.1	10574.

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Zoom In  
Zoom Out

Sample Name: mp17699-mb1 Acquired: 10/5/2019 0:29:17 Type: Unk  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0001	-0.0000	.0001	.0008	.0011	.0002	.0000	.0008
Stddev	.0001	.0000	.0001	.0001	.0000	.0002	.0000	.0002	.0001
%RSD	68.66	6.970	158.4	122.1	5.510	21.94	17.31	912.3	16.36

#1	.0002	.0001	-0.0001	.0002	.0007	.0011	.0001	.0003	.0008
#2	.0003	.0001	-0.0000	-0.0000	.0008	.0009	.0002	.0000	.0010
#3	.0000	.0001	.0000	.0001	.0008	.0014	.0002	-0.0002	.0007

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0035	.0003	-0.0002	-0.0004	-0.0001	.0006	.0005	.0083
Stddev	.0002	.0000	.0003	.0004	.0005	.0013	.0011	.0040	.0019
%RSD	115.3	1.217	132.1	164.7	138.9	958.2	187.6	867.6	23.06

#1	.0003	.0035	.0003	-0.0004	-0.0009	-0.0011	.0005	.0042	.0097
#2	.0004	.0035	-0.0001	-0.0005	-0.0001	.0013	.0005	.0022	.0061
#3	-0.0001	.0034	.0006	.0002	-0.0001	-0.0006	.0018	.0033	.0091

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0132	.0037	.0644	.2641	.0015	.0010	.0118	-0.0004	.0000
Stddev	.0007	.0025	.0142	.0071	.0004	.0002	.0004	.0002	.0000
%RSD	5.097	68.08	21.99	2.681	29.30	17.12	3.157	36.24	452.7

#1	.0139	.0066	.0642	.2719	.0020	.0012	.0116	-0.0004	.0000
#2	.0126	.0018	.0504	.2622	.0012	.0008	.0122	-0.0003	.0001
#3	.0131	.0028	.0787	.2581	.0013	.0010	.0116	-0.0006	-0.0000

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-0.0023	.0001	.0021	.0007	.0003	-0.0077	-0.0015
Stddev	.0001	.0013	.0002	.0015	.0007	.0010	.0004	.0033
%RSD	34.70	55.89	157.1	71.53	88.66	316.9	4.724	225.6

#1	.0003	-0.0010	.0002	.0035	.0015	.0001	-0.0078	-0.0037
#2	.0003	-0.0023	.0003	.0006	.0004	-0.0006	-0.0080	.0023
#3	.0002	-0.0036	-0.0001	.0021	.0004	.0014	-0.0073	-0.0030

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Zoom In  
Zoom Out

Sample Name: mp17699-mb1 Acquired: 10/5/2019 0:29:17 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	183420.	28229.	8184.3	11368.
Stddev	485.	177.	29.4	25.
%RSD	.26432	.62580	.35960	.21918

#1	183980.	28076.	8218.0	11397.
#2	183170.	28190.	8163.5	11358.
#3	183110.	28422.	8171.5	11350.

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Zoom In  
Zoom Out

Sample Name: mp17699-s1 Acquired: 10/5/2019 0:34:19 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.121	2.103	1.980	1.874	1.991	1.941	2.143	1.965
Stddev	.004	.004	.002	.002	.012	.012	.021	.001
%RSD	.1744	.1987	.0928	.0867	.5772	.6128	.9980	.0448

#1	2.125	2.107	1.981	1.876	2.003	1.954	2.166	1.966
#2	2.118	2.099	1.981	1.874	1.988	1.939	2.140	1.964
#3	2.119	2.102	1.978	1.873	1.981	1.930	2.124	1.965

Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.514	1.940	2.033	1.858	2.030	1.922	1.900	1.894
Stddev	.0010	.009	.002	.002	.004	.002	.001	.003
%RSD	.3998	.4868	.1136	.0826	.1739	.0813	.0476	.1590

#1	.2525	1.951	2.035	1.860	2.034	1.923	1.899	1.898
#2	.2513	1.936	2.034	1.858	2.027	1.924	1.900	1.893
#3	.2505	1.933	2.031	1.857	2.029	1.921	1.901	1.892

Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.08	39.19	55.39	27.71	29.86	29.52	1.938	1.865
Stddev	.05	.06	.08	.04	.07	.03	.003	.002
%RSD	.2076	.1478	.1429	.1374	.2178	.1116	.1504	.1071

#1	25.14	39.24	55.48	27.75	29.92	29.56	1.942	1.866
#2	25.04	39.12	55.33	27.68	29.79	29.50	1.937	1.867
#3	25.06	39.20	55.36	27.72	29.87	29.51	1.936	1.863

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.42	1.897	2.079	1.886	1.838	1.955	8.992	.0402
Stddev	.01	.001	.003	.013	.002	.009	.011	.0019
%RSD	.1096	.0364	.1633	.7119	.0847	.4819	.1212	4.826

#1	12.43	1.898	2.083	1.899	1.837	1.965	8.997	.0406
#2	12.43	1.897	2.077	1.888	1.840	1.951	9.000	.0419
#3	12.40	1.897	2.078	1.872	1.837	1.948	8.980	.0381

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Zoom In  
Zoom Out

Sample Name: mp17699-s1 Acquired: 10/5/2019 0:34:19 Type: Unk  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm
Avg	.0034	3.254	W -.0704
Stddev	.0004	.005	.0014
%RSD	10.35	.1582	1.998

#1	.0031	3.250	-0.698
#2	.0038	3.260	-0.694
#3	.0034	3.251	-0.720

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	177560.	27922.	7846.7	10594.
Stddev	1054.	26.	12.0	20.
%RSD	.59361	.09138	.15248	.18667

#1	176420.	27919.	7832.9	10573.
#2	177760.	27899.	7854.6	10612.
#3	178500.	27949.	7852.5	10597.

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Zoom In  
Zoom Out

Sample Name: ccv Acquired: 10/5/2019 0:39:11 Type: QC  
Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
User: admin Custom ID1: Custom ID2: Custom ID3:  
Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.972	2.086	1.970	1.875	1.970	1.906	2.049	1.967	2.450
Stddev	.005	.004	.003	.004	.003	.003	.022	.002	.0002
%RSD	.2492	.2049	.1461	.1994	.1262	.1544	1.065	.1096	.0902

#1	1.966	2.082	1.973	1.876	1.972	1.906	2.039	1.969	2.449
#2	1.976	2.090	1.967	1.871	1.967	1.903	2.033	1.965	2.452
#3	1.973	2.087	1.971	1.879	1.970	1.909	2.074	1.968	2.448

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.911	2.022	1.844	2.026	1.955	1.892	1.874	39.86	39.98
Stddev	.002	.004	.003	.001	.002	.003	.003	.09	.07
%RSD	.1173	.1937	.1556	.0543	.0835	.1610	.1588	.2197	.1800

#1	1.913	2.026	1.847	2.027	1.956	1.895	1.877	39.76	39.90
#2	1.909	2.019	1.841	2.025	1.953	1.890	1.873	39.93	40.04
#3	1.912	2.021	1.845	2.025	1.956	1.890	1.872	39.89	40.00

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Si2124	Sn1899	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.35	39.87	39.36	39.48	1.932	1.838	4.960	1.876	2.019
Stddev	.06	.05	.10	.04	.004	.003	.005	.003	.002
%RSD	.1552	.1302	.2493	.1051	.1858	.1427	.0988	.1415	.1029

#1	40.29	39.82	39.25	39.45	1.934	1.840	4.957	1.878	2.017
#2	40.41	39.92	39.43	39.53	1.928	1.835	4.957	1.873	2.021
#3	40.34	39.86	39.41	39.47	1.935	1.840	4.966	1.878	2.020

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

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Sample Name: ccv Acquired: 10/5/2019 0:39:11 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ti3349	W_2079	Zr3391	S_1820	Bi2230	Li6707	P_1774	Ce4040
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.857	1.815	1.933	F 1.786	1.887	1.928	1.904	1.955
Stddev	.004	.003	.002	.000	.001	.005	.003	.006
%RSD	.1910	.1630	.1129	.0126	.0759	.2434	.1384	.3014
#1	1.859	1.818	1.934	1.786	1.889	1.922	1.906	1.962
#2	1.853	1.812	1.930	1.786	1.887	1.931	1.901	1.950
#3	1.859	1.813	1.934	1.786	1.886	1.929	1.905	1.953
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000				
Range				-10.00%				
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	176840.	27520.	7834.8	10457.				
Stddev	463.	33.	16.1	14.				
%RSD	.26208	.12152	.20524	.13472				
#1	176920.	27495.	7816.2	10443.				
#2	177250.	27558.	7845.1	10471.				
#3	176340.	27508.	7842.9	10457.				

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Sample Name: ccb Acquired: 10/5/2019 0:44:01 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0002	-0.000	.0001	.0002	.0008	.0001	.0001
Stddev	.0001	.0000	.0001	.0001	.0001	.0002	.0000	.0003
%RSD	23.83	17.92	1031.	117.4	73.06	22.89	2.932	434.6
#1	.0003	.0002	-0.001	.0000	.0001	.0009	.0001	.0004
#2	.0002	.0002	-0.000	.0000	.0003	.0006	.0001	-0.001
#3	.0003	.0002	.0001	.0002	.0002	.0009	.0001	-0.001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								
Elem	Ag3280	V_2924	Zn2062	As1890	Tl1908	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0001	-0.002	.0007	-0.007	-0.005	-0.003	-0.007
Stddev	.0002	.0001	.0000	.0007	.0010	.0005	.0021	.0004
%RSD	20.64	67.89	4.933	96.82	137.1	87.90	648.8	60.82
#1	.0010	.0001	-0.002	.0005	.0004	-0.005	.0021	-0.002
#2	.0010	.0001	-0.002	.0001	-0.010	-0.001	-0.017	-0.008
#3	.0007	.0000	-0.002	.0014	-0.015	-0.010	-0.014	-0.010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								
Elem	Al3961	Ca3179	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.003	.0025	.0033	-0.0023	.0714	.2260	.0014	.0004
Stddev	.0037	.0010	.0011	.0050	.0092	.0057	.0004	.0002
%RSD	1404.	42.34	34.19	214.7	12.89	2.541	30.73	47.03
#1	-0.004	.0030	.0044	-0.009	.0652	.2323	.0018	.0007
#2	-0.038	.0031	.0021	-0.078	.0670	.2245	.0010	.0003
#3	.0035	.0013	.0034	.0018	.0820	.2211	.0013	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

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Sample Name: ccb Acquired: 10/5/2019 0:44:01 Type: QC  
 Method: SGS 3 NO Valve(v273) Mode: CONC Corr. Factor: 1.000000  
 User: admin Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Si2124	Sn1899	Sr4077	Ti3349	W_2079	Zr3391	S_1820	Bi2230
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-0.0002	.0001	.0004	F -0.0065	-0.0002	-0.0004	.0015
Stddev	.0005	.0002	.0000	.0002	.0014	.0001	.0018	.0009
%RSD	85.22	146.2	49.37	41.40	21.41	60.90	437.7	55.80
#1	.0009	.0000	.0000	.0005	-0.006	-0.002	.0014	.0012
#2	.0000	-0.0004	.0001	.0005	-0.0050	-0.002	-0.0023	.0009
#3	.0009	-0.0001	.0001	.0002	-0.0078	-0.004	-0.0004	.0025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit					.0050			
Low Limit					-0.0050			
Elem	Li6707	P_1774	Ce4040					
Units	ppm	ppm	ppm					
Avg	.0012	-0.0084	-0.0011					
Stddev	.0015	.0001	.0017					
%RSD	122.8	1.727	151.8					
#1	.0018	-0.0086	.0007					
#2	.0023	-0.0084	-0.0026					
#3	-0.0005	-0.0083	-0.0015					
Check ?	Chk Pass	Chk Pass	Chk Pass					
High Limit								
Low Limit								
Int. Std.	Y_3600	Y_3710	Y_2243	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	182380.	27903.	8105.4	11275.				
Stddev	2283.	110.	34.7	29.				
%RSD	1.2516	.39511	.42772	.25795				
#1	179760.	27940.	8068.8	11242.				
#2	183930.	27990.	8109.4	11283.				
#3	183440.	27779.	8137.8	11299.				

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ba 455.403 { 74}	<input checked="" type="checkbox"/>	1	Zr	0.001245	0.000000	No
Be 313.042 {108}	<input checked="" type="checkbox"/>	11	V	0.001800	0.000000	No
			Mo	-0.000047	0.000000	No
			Ti	-0.000151	0.000000	No
			Mn	0.000010	0.000000	No
			Cu	0.000014	0.000000	No
			Bi	0.000060	0.000000	No
			Fe	-0.000001	0.000000	No
			Al	-0.000001	0.000000	No
			Mg	0.000000	0.000000	No
			Ca	0.000000	0.000000	No
			Sr	-0.000200	0.000000	No
Cd 228.802 {448}	<input checked="" type="checkbox"/>	11	As	0.006680	0.000000	No
			Ni	-0.000878	0.000000	No
			Fe	-0.000003	0.000000	No
			V	0.000091	0.000000	No
			Ba	0.000064	0.000000	No
			Co	-0.000650	0.000000	No
			Sr	-0.000020	0.000000	No
			Mn	0.000050	0.000000	No
			Cu	-0.000026	0.000000	No
			Zn	-0.000018	0.000000	No
			W	-0.000482	0.000000	No
Co 228.616 {448}	<input checked="" type="checkbox"/>	7	Fe	0.000004	0.000000	No
			Mo	-0.001710	0.000000	No
			Ni	0.000091	0.000000	No
			Ti	0.002390	0.000000	No
			Ba	0.000140	0.000000	No
			W	0.000327	0.000000	No
			Cd	-0.000510	0.000000	No
Cr 267.716 {126}	<input checked="" type="checkbox"/>	9	Mn	0.000458	0.000000	No
			V	-0.000010	0.000000	No
			Mo	-0.000082	0.000000	No
			Fe	-0.000010	0.000000	No
			Ti	0.000060	0.000000	No
			Ba	0.000045	0.000000	No
			Cu	0.000100	0.000000	No
			Sr	-0.000100	0.000000	No
			W	0.000404	0.000000	No
Cu 324.754 {104}2	<input checked="" type="checkbox"/>	14	Cr	-0.000099	0.000000	No
			V	-0.000306	0.000000	No
			Mo	0.000544	0.000000	No
			Ti	-0.000208	0.000000	No
			Fe	-0.000204	0.000000	No
			Zn	-0.000041	0.000000	No
			Co	-0.000860	0.000000	No
			Si	0.000016	0.000000	No
			Mn	0.000003	0.000000	No
			Se	0.000050	0.000000	No
			Sb	0.000069	0.000000	No
			W	0.000000	0.000000	No
			Al	0.000002	0.000000	No
			Zr	-0.002300	0.000000	No
Mn 257.610 {131}	<input checked="" type="checkbox"/>	5	Fe	0.000005	0.000000	No
			Si	0.000010	0.000000	No
			Ba	0.000004	0.000000	No
			Ni	0.000028	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ni 231.604 {446}	<input checked="" type="checkbox"/>	8	Al	0.000006	0.000000	No
			Fe	0.000023	0.000000	No
			Zn	-0.000013	0.000000	No
			Be	0.000213	0.000000	No
			Co	-0.000220	0.000000	No
			Ti	0.000209	0.000000	No
			Mo	0.000026	0.000000	No
			Cu	0.000050	0.000000	No
Ag 328.068 {103}	<input checked="" type="checkbox"/>	15	Se	0.000100	0.000000	No
			Mn	0.000052	0.000000	No
			Mo	0.000012	-0.000003	No
			Ti	-0.000190	0.000000	No
			Fe	-0.000310	0.000000	No
			Zn	-0.000120	0.000000	No
			Ca	0.000001	0.000000	No
			Zr	0.006915	0.000000	No
			Sr	-0.000020	0.000000	No
			Mg	0.000000	0.000000	No
			Ba	0.000071	0.000000	No
			Cr	0.000022	0.000000	No
			V	-0.001900	0.000000	No
			Al	-0.000002	0.000000	No
			W	0.000000	0.000000	No
V 292.402 {115}	<input checked="" type="checkbox"/>	7	Ce	-0.001100	0.000000	No
			Ti	0.000689	0.000000	No
			Mo	-0.000100	0.000000	No
			Fe	0.000019	0.000000	No
			Sr	-0.000100	0.000000	No
			Cr	-0.011700	0.000000	No
			Mn	-0.001250	0.000000	No
Zn 206.200 {464}	<input checked="" type="checkbox"/>	10	Al	0.000004	0.000000	No
			Cr	-0.004225	0.000000	No
			Fe	0.000011	0.000000	No
			Si	0.000015	0.000000	No
			Mn	-0.000045	0.000000	No
			Ba	-0.000060	0.000000	No
			Sn	-0.000023	0.000000	No
			Cu	0.000148	0.000000	No
			As	0.000055	0.000000	No
			Be	0.000058	0.000000	No
As 189.042 {478}	<input checked="" type="checkbox"/>	20	Ca	0.000005	0.000000	No
			Al	-0.000004	0.000000	No
			Fe	-0.000105	0.000000	No
			Ca	-0.000005	0.000000	No
			Mo	0.001740	0.000000	No
			Cr	-0.000700	0.000000	No
			Ba	-0.000114	0.000000	No
			Sn	-0.000130	0.000000	No
			Cd	-0.000328	0.000000	No
			Si	0.000024	0.000000	No
			Zn	-0.000082	0.000000	No
			Sr	-0.000045	0.000000	No
			W	0.001546	0.000000	No
			Cu	-0.000058	0.000000	No
			Co	-0.000045	0.000000	No
Zr	0.000036	0.000000	No			
Mn	-0.000158	0.000000	No			

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			S	-0.000008	0.000000	No
			Ti	0.000100	0.000000	No
			Mg	0.000006	0.000000	No
			Ce	-0.000600	0.000000	No
Tl 190.856 {477}	<input checked="" type="checkbox"/>	25	Cr	0.000182	0.000000	No
			Mo	-0.011000	0.000000	No
			Al	-0.000001	0.000000	No
			Fe	-0.000055	0.000000	No
			V	-0.023400	0.000000	No
			Mn	0.001741	0.000000	No
			Si	-0.000018	0.000000	No
			Ca	0.000000	0.000000	No
			Ti	-0.002890	0.000000	No
			Mg	0.000000	0.000000	No
			Co	0.005080	0.000000	No
			Sr	0.000010	0.000000	No
			B	-0.000003	0.000000	No
			Ba	0.000034	0.000000	No
			Zn	-0.000053	0.000000	No
			As	0.000068	0.000000	No
			W	-0.025182	0.000000	No
			Cu	0.000142	0.000000	No
			Pb	-0.000020	0.000000	No
			S	0.000010	0.000000	No
			Sn	-0.000086	0.000000	No
			Li	0.000000	0.000000	No
			K	0.000000	0.000000	No
			Zr	0.000000	0.000000	No
			Ce	-0.000600	0.000000	No
Pb 220.353 {453}	<input checked="" type="checkbox"/>	21	Al	-0.000143	0.000000	No
			Fe	0.000033	0.000000	No
			Ca	0.000008	0.000000	No
			Mn	0.000024	0.000000	No
			Mo	-0.000690	0.000000	No
			Cu	0.000145	0.000000	No
			Co	0.000064	0.000000	No
			Ti	-0.000200	0.000000	No
			Si	0.000133	0.000000	No
			Ba	-0.000022	0.000000	No
			Sb	-0.000084	0.000000	No
			Sr	-0.000033	0.000000	No
			W	-0.010000	0.000000	No
			Mg	0.000003	0.000000	No
			Cd	0.000012	0.000000	No
			Cr	-0.000031	0.000000	No
			Zr	-0.000281	0.000000	No
			Ni	0.000371	0.000000	No
			S	0.000010	0.000000	No
			Zn	-0.000106	0.000000	No
			Ce	0.000300	0.000000	No
Se 196.090 {472}	<input checked="" type="checkbox"/>	24	Al	-0.000008	0.000000	No
			Ca	0.000003	0.000000	No
			Mn	0.000924	0.000000	No
			Mo	0.000100	0.000000	No
			Fe	-0.000149	0.000000	No
			Co	-0.000473	0.000000	No
			Sr	-0.000011	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cu	-0.000087	0.000000	No
			W	0.000000	0.000000	No
			Si	0.000054	0.000000	No
			Be	-0.000347	0.000000	No
			Zn	0.000050	0.000000	No
			B	0.000028	0.000000	No
			Ti	-0.000020	0.000000	No
			Cd	0.000090	0.000000	No
			Zr	-0.000297	0.000000	No
			Ba	-0.000046	0.000000	No
			Mg	-0.000000	0.000000	No
			Pb	-0.000078	0.000000	No
			Ni	-0.000100	0.000000	No
			Cr	-0.000024	0.000000	No
			S	-0.000014	0.000000	No
			V	0.000188	0.000000	No
			Ce	-0.001400	0.000000	No
Sb 206.833 {463}	<input checked="" type="checkbox"/>	18	Fe	0.000001	0.000000	No
			Al	-0.000001	0.000000	No
			Ca	0.000001	0.000000	No
			Ni	-0.000116	0.000000	No
			Cr	0.017000	0.000000	No
			V	-0.003658	0.000000	No
			Zn	-0.000115	0.000000	No
			Mo	0.000969	0.000000	No
			Ti	0.000630	0.000000	No
			Sn	-0.010400	0.000000	No
			Mg	0.000001	0.000000	No
			Zr	-0.000463	0.000000	No
			Sr	0.000031	0.000000	No
			B	-0.000100	0.000000	No
			Co	-0.000142	0.000000	No
			W	0.000000	0.000000	No
			Si	-0.000170	0.000000	No
			Ce	-0.001300	0.000000	No
Al 396.152 {85}	<input checked="" type="checkbox"/>	5	Si	0.000652	0.000000	No
			Ca	0.000018	0.000000	No
			Mo	0.043916	0.000000	No
			Zr	0.005268	0.000000	No
			Ti	-0.000583	0.000000	No
Ca 317.933 {106}	<input checked="" type="checkbox"/>	14	Fe	0.000012	0.000000	No
			W	0.003960	0.000000	No
			Tl	-0.000152	0.000000	No
			Be	0.001840	0.000000	No
			Ba	-0.001224	0.000000	No
			Cu	-0.000822	0.000000	No
			Cd	-0.007593	0.000000	No
			Ni	0.000667	0.000000	No
			B	-0.000210	0.000000	No
			Se	0.000923	0.000000	No
			Co	-0.000408	0.000000	No
			Cr	0.000640	0.000000	No
			Al	-0.000000	0.000000	No
			As	0.010000	0.000000	No
Fe 259.940 {130}	<input checked="" type="checkbox"/>	10	Si	0.000819	0.000000	No
			Tl	-0.000051	0.000000	No
			Cr	0.000310	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Mn	-0.000196	0.000000	No
			V	-0.000064	0.000000	No
			Cu	-0.000015	0.000000	No
			Zn	0.000046	0.000000	No
			Ti	-0.000631	0.000000	No
			Ca	0.000020	0.000000	No
			Ba	0.001000	0.000000	No
Mg 279.079 {121}	<input checked="" type="checkbox"/>	3	Mo	-0.013702	0.000000	No
			W	-0.006578	0.000000	No
			Mn	-0.002445	0.000000	No
K 766.490 { 44}	<input checked="" type="checkbox"/>	11	Fe	-0.000440	0.000000	No
			Al	0.000077	0.000000	No
			Ca	-0.000121	0.000000	No
			Mn	-0.007074	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Sn	-0.004700	0.000000	No
			Ba	-0.010574	0.000000	No
			Mo	-0.000850	0.000000	No
			Cu	-0.011483	0.000000	No
			Ni	-0.010000	0.000000	No
Na 589.592 { 57}	<input checked="" type="checkbox"/>	4	K	-0.000560	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000180	0.000000	No
			V	-0.005000	0.000000	No
B 208.959 {462}	<input checked="" type="checkbox"/>	1	Mo	0.045137	0.000000	No
Mo 202.030 {467}	<input checked="" type="checkbox"/>	2	Al	-0.000004	0.000000	No
			Fe	-0.000010	0.000000	No
Si 212.412 {459}	<input checked="" type="checkbox"/>	12	Sr	0.000366	0.000000	No
			Ni	0.002092	0.000000	No
			Mo	0.034932	0.000000	No
			V	0.002950	0.000000	No
			Ti	0.004593	0.000000	No
			Al	-0.000010	0.000000	No
			Cd	0.001043	0.000000	No
			Ba	0.001987	0.000000	No
			Sn	0.007500	0.000000	No
			Zn	0.000385	0.000000	No
			Be	-0.000048	0.000000	No
			W	0.000000	0.000000	No
Sn 189.989 {478}	<input checked="" type="checkbox"/>	4	Ti	-0.002964	0.000000	No
			Fe	0.000004	0.000000	No
			Si	0.000131	0.000000	No
			Zr	0.000908	0.000000	No
Sr 407.771 { 83}	<input checked="" type="checkbox"/>	2	Ca	0.000018	0.000000	No
			Si	0.000033	0.000000	No
Ti 334.904 {101}	<input checked="" type="checkbox"/>	3	Cr	0.000189	0.000000	No
			Mo	0.001351	0.000000	No
			Si	0.000035	0.000000	No
Y 360.073 { 94}* Y 371.030 { 91}* Y 224.306 {451}* In 230.606 {446}* W 207.911 {462}	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	None None None None 20				
			Si	0.000105	0.000000	No
			As	0.000100	0.000000	No
			Mn	0.000066	0.000000	No
			Mo	-0.000300	0.000000	No

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No
			Zn	0.013026	0.000000	No
			Sn	0.001300	0.000000	No
			Zr	0.000061	0.000000	No
			B	0.000009	0.000000	No
			Sb	-0.000300	0.000000	No
			Co	-0.001000	0.000000	No
			Ni	-0.003000	0.000000	No
			Be	-0.000185	0.000000	No
			Se	-0.000105	0.000000	No
			Cu	-0.000138	0.000000	No
			Tl	-0.000220	0.000000	No
Zr 339.198 { 99}	<input checked="" type="checkbox"/>	6	Mo	0.001069	0.000000	No
			Ti	0.000203	0.000000	No
			Fe	-0.000035	0.000000	No
			Si	0.000074	0.000000	No
			S	-0.000002	0.000000	No
			Cr	-0.000700	0.000000	No
S 182.034 {485}	<input checked="" type="checkbox"/>	7	Mo	0.001779	0.000000	No
			Al	-0.000033	0.000000	No
			Fe	0.000117	0.000000	No
			Mn	0.004620	0.000000	No
			W	-0.032564	0.000000	No
			Ca	-0.000218	0.000000	No
			Mg	0.000005	0.000000	No
Bi 223.061 {451}	<input checked="" type="checkbox"/>	10	Tl	-0.072020	0.000000	No
			V	-0.000704	0.000000	No
			Co	-0.002380	0.000000	No
			Ca	-0.000002	0.000000	No
			Mg	-0.000000	0.000000	No
			Fe	0.000187	0.000000	No
			Cr	0.001595	0.000000	No
			Cu	-0.001148	0.000000	No
			W	0.020000	0.000000	No
			Ce	-0.007100	0.000000	No
Li 670.784 { 50}	<input checked="" type="checkbox"/>	2	Ca	0.000023	0.000000	No
			Fe	0.000081	0.000000	No
P 177.495 {490}	<input checked="" type="checkbox"/>	9	Mn	-0.006184	0.000000	No
			Al	0.000040	0.000000	No
			V	-0.001953	0.000000	No
			Si	-0.001622	0.000000	No
			Ti	0.000000	-0.001185	No
			Mo	-0.001880	0.000000	No
			S	-0.000189	0.000000	No
			Co	-0.002198	0.000000	No
			Cu	-0.023500	0.000000	No
Ce 404.076 { 83}	<input checked="" type="checkbox"/>	2	Mn	-0.005600	0.000000	No
			Fe	0.000250	0.000000	No

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Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ba 455.403 { 74}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.010599	2.236387	0.000000	1.000000
Be 313.042 {108}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.001416	3.375228	0.000000	1.000000
Cd 228.802 {448}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000373	1.171901	0.000000	1.000000
Co 228.616 {448}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000070	0.792573	0.000000	1.000000
Cr 267.716 {126}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000076	0.168503	0.000000	1.000000
Cu 324.754 {104}2	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.002819	0.287972	0.000000	1.000000
Mn 257.610 {131}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000062	0.868824	0.000000	1.000000
Ni 231.604 {446}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000096	0.647945	0.000000	1.000000
Ag 328.068 {103}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000484	0.164473	0.000000	1.000000
V 292.402 {115}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000584	0.225715	0.000000	1.000000
Zn 206.200 {464}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000417	1.683226	0.000000	1.000000
As 189.042 {478}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000541	0.139762	0.000000	1.000000
Tl 190.856 {477}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000009	0.107523	0.000000	1.000000
Pb 220.353 {453}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000256	0.309151	0.000000	1.000000
Se 196.090 {472}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000001	0.106894	0.000000	1.000000
Sb 206.833 {463}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000318	0.173882	0.000000	1.000000
Al 396.152 { 85}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000641	0.049420	0.000000	1.000000
Ca 317.933 {106}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.009352	0.126338	0.000000	1.000000
Fe 259.940 {130}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000159	0.077925	0.000000	1.000000
Mg 279.079 {121}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000126	0.013131	0.000000	1.000000
K 766.490 { 44}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000147	0.024737	0.000000	1.000000
Na 589.592 { 57}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.003730	0.085817	0.000000	1.000000
B 208.959 {462}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000467	0.257009	0.000000	1.000000
Mo 202.030 {467}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000283	0.922081	0.000000	1.000000
Si 212.412 {459}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.001147	0.226614	0.000000	1.000000
Sn 189.989 {478}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000308	0.280658	0.000000	1.000000
Sr 407.771 { 83}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.001171	3.736593	0.000000	1.000000
Ti 334.904 {101}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000025	0.192046	0.000000	1.000000
Y 360.073 { 94}*	10/7/2019 8:22:11	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	10/7/2019 8:22:11	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	10/7/2019 8:22:11	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
In 230.606 {446}*	10/7/2019 8:22:11	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
W 207.911 {462}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.004595	0.437270	0.000000	1.000000
Zr 339.198 { 99}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.000134	0.554120	0.000000	1.000000
S 182.034 {485}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.001593	0.066935	0.000000	1.000000
Bi 223.061 {451}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	0.000041	0.198480	0.000000	1.000000
Li 670.784 { 50}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	None	-0.002331	0.560822	0.000000	1.000000
P 177.495 {490}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	1/Conc	-0.011377	0.167696	0.000000	1.000000
Ce 404.076 { 83}	10/7/2019 8:22:11	10/4/2019 11:50:04	Linear	1/Conc	0.000721	0.039270	0.000000	1.000000

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ba 455.403 { 74}	1.000000	0.000000	0.000194	0.000648	OK	1.000000	0.000000	1	0
Be 313.042 {108}	1.000000	0.000000	0.000052	0.000174	OK	1.000000	0.000000	1	0
Cd 228.802 {448}	1.000000	0.000000	0.000152	0.000507	OK	1.000000	0.000000	1	0
Co 228.616 {448}	1.000000	0.000000	0.000191	0.000636	OK	1.000000	0.000000	1	0
Cr 267.716 {126}	1.000000	0.000000	0.000232	0.000775	OK	1.000000	0.000000	1	0
Cu 324.754 {104}2	1.000000	0.000000	0.000307	0.001025	OK	1.000000	0.000000	1	0
Mn 257.610 {131}	1.000000	0.000000	0.000050	0.000166	OK	1.000000	0.000000	1	0
Ni 231.604 {446}	1.000000	0.000000	0.000271	0.000904	OK	1.000000	0.000000	1	0
Ag 328.068 {103}	1.000000	0.000000	0.000354	0.001180	OK	1.000000	0.000000	1	0
V 292.402 {115}	1.000000	0.000000	0.000284	0.000946	OK	1.000000	0.000000	1	0
Zn 206.200 {464}	1.000000	0.000000	0.000089	0.000297	OK	1.000000	0.000000	1	0
As 189.042 {478}	1.000000	0.000000	0.000814	0.002713	OK	1.000000	0.000000	1	0
Tl 190.856 {477}	1.000000	0.000000	0.000937	0.003122	OK	1.000000	0.000000	1	0
Pb 220.353 {453}	1.000000	0.000000	0.000801	0.002669	OK	1.000000	0.000000	1	0
Se 196.090 {472}	1.000000	0.000000	0.001467	0.004891	OK	1.000000	0.000000	1	0
Sb 206.833 {463}	1.000000	0.000000	0.001120	0.003732	OK	1.000000	0.000000	1	0
Al 396.152 { 85}	1.000000	0.000000	0.007437	0.024791	OK	1.000000	0.000000	1	0
Ca 317.933 {106}	1.000000	0.000000	0.001698	0.005662	OK	1.000000	0.000000	1	0
Fe 259.940 {130}	1.000000	0.000000	0.001405	0.004682	OK	1.000000	0.000000	1	0
Mg 279.079 {121}	1.000000	0.000000	0.010361	0.034537	OK	1.000000	0.000000	1	0
K 766.490 { 44}	1.000000	0.000000	0.026504	0.088345	OK	1.000000	0.000000	1	0
Na 589.592 { 57}	1.000000	0.000000	0.007969	0.026565	OK	1.000000	0.000000	1	0
B 208.959 {462}	1.000000	0.000000	0.000530	0.001766	OK	1.000000	0.000000	1	0
Mo 202.030 {467}	1.000000	0.000000	0.000186	0.000620	OK	1.000000	0.000000	1	0
Si 212.412 {459}	1.000000	0.000000	0.000850	0.002833	OK	1.000000	0.000000	1	0
Sn 189.989 {478}	1.000000	0.000000	0.000408	0.001361	OK	1.000000	0.000000	1	0
Sr 407.771 { 83}	1.000000	0.000000	0.000079	0.000265	OK	1.000000	0.000000	1	0
Tl 334.904 {101}	1.000000	0.000000	0.000265	0.000883	OK	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 224.306 {451}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
W 207.911 {462}	1.000000	0.000000	0.000762	0.002539	OK	1.000000	0.000000	1	0
Zr 339.198 { 99}	1.000000	0.000000	0.000131	0.000436	OK	1.000000	0.000000	1	0
S 182.034 {485}	1.000000	0.000000	0.001838	0.006127	OK	1.000000	0.000000	1	0
Bi 223.061 {451}	1.000000	0.000000	0.001298	0.004325	OK	1.000000	0.000000	1	0
Li 670.784 { 50}	1.000000	0.000000	0.001237	0.004122	OK	1.000000	0.000000	1	0
P 177.495 {490}	1.000000	0.000000	0.000807	0.002688	OK	1.000000	0.000000	1	0
Ce 404.076 { 83}	1.000000	0.000000	0.002431	0.008102	OK	1.000000	0.000000	1	0



**Mercury Digestion Log**

Product: **HG /HGLIQ**  
 Matrix: **Soil / Oil / SL / Wipes**

MA Batch #: MA47516  
 Analyst: CH  
 Date: 9/27/2019  
 Balance ID: B24  
 Reagents: See attached sheet  
 Auto pipet ID: M72

**Method: SW846 7471B**

Required corrected Temp. Range is 95C. +/- 3C.

Hot Block # 7 Start Time: 9:29 End Time: 9:59 Tube # 1-24

Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658

End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Hot Block # 7 Start Time: 10:02 End Time: 10:32 Tube # 25-73

Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658

End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Bot #	Sample ID	Initial Sample Wt. (am)	Final Vol. (ml)	Spike Used		Spikelot and Conc. (mg/L)	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N			
1	MP17543-MB1	0.6001	100				MP17543	
2	MP17543-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-147-430-HGA1, IN. V.
3	MP17543-S1	0.6182	100	2.0 ml	Y	0.1		JC95565-7, HG-19-147-430-HGA1, IN. V.
4	MP17543-S2	0.6267	100	2.0 ml	Y	0.1		JC95565-7, HG-19-147-430-HGA1, IN. V.
5	JC95565-7	0.6310	100					
6	JC95565-1	0.6263	100					
7	JC95565-2	0.6458	100					
8	JC95565-3	0.6351	100					
9	JC95565-4	0.6208	100					
10	JC95565-5	0.6065	100					
11	JC95565-6	0.6545	100					
12	JC95565-8	0.6096	100					
13	JC95565-9	0.6143	100					
14	JC95565-10	0.6202	100					
15	JC95384-2	0.6299	100					
16	JC95384-3	0.6178	100					
17	JC95384-4	0.6488	100					
18	JC95384-5	0.6044	100					
19	JC95384-7	0.6036	100					
20	JC95384-8	0.6148	100					
21	JC95555-1	0.6208	100					
22	JC95555-2	0.6679	100					
23	JC95555-3	0.6272	100					
24	JC95555-4	0.6621	100					
25	MP17544-MB1	0.6001	100				MP17544	
26	MP17544-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-147-430-HGA1, IN. V.
27	MP17544-S1	0.6346	100	2.0 ml	Y	0.1		JC95596-3, HG-19-147-430-HGA1, IN. V.
28	MP17544-S2	0.6313	100	2.0 ml	Y	0.1		JC95596-3, HG-19-147-430-HGA1, IN. V.
29	JC95596-3	0.6237	100					
30	MP17544-LC1	0.1206	100					
31	JC95596-1	0.6353	100					
32	JC95596-2	0.6449	100					
33	JC95596-4	0.6433	100					
34	JC95596-5	0.6253	100					
35	JC95596-6	0.6293	100					

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Form: **HG-022F-02**  
 Revision Date: **08/24/15**

ANALYST: CH  
 SPIKE WITNESS: LC  
 QC REVIERER: [Signature]

DATE: 9/27/19  
 DATE: 9/27/19  
 DATE: 9/27/19





Mercury Digestion Log

Product: **HG /HGLIQ**  
 Matrix: **Soil / Oil / SL / Wipes**

MA Batch #: MA47516  
 Analyst: CH  
 Date: 9/27/2019  
 Balance ID: B24  
 Reagents: See attached sheet  
 Auto pipet ID: M72

Method: **SW846 7471B**

Required corrected Temp. Range is 95C. +/- 3C.

Hot Block # 7 Start Time: 9:29 End Time: 9:59 Tube # 1-24

Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658

End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Hot Block # 7 Start Time: 10:02 End Time: 10:32 Tube # 25-73

Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658

End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Bot #	Sample ID	Initial Sample Wt. (am)	Final Vol. (ml)	Spike Used		Spike lot and Conc. (mg/L)	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N			
36	JC95596-7	0.6174	100					
37	JC95596-8	0.6252	100					
38	JC95596-9	0.6422	100					
39	JC95596-10	0.6035	100					
40	JC95251-1	0.6897	100					
41	JC95251-3	0.6104	100					
42	JC95251-5	0.6212	100					
43	JC95251-7	0.6355	100					
44	JC95321-1	0.6550	100					
45	JC95321-3	0.6135	100					
46	JC95321-5	0.6510	100					
47	JC95569-5	0.6475	100					
48	JC95569-9	0.6055	100					
49	JC95568-9	0.6150	100					
50	MP17545-MB1	0.6001	100				MP17545	
51	MP17545-B1	0.6001	100	2.0 ml	Y	0.1		HG-19-147-430-HGA1, IN. V.
52	MP17545-S1	0.6118	100	2.0 ml	Y	0.1		JC95327-8, HG-19-147-430-HGA1, IN. V.
53	MP17545-S2	0.6257	100	2.0 ml	Y	0.1		JC95327-8, HG-19-147-430-HGA1, IN. V.
54	JC95327-8	0.6150	100					
55	JC95327-1	0.6404	100					
56	JC95327-2	0.6235	100					
57	JC95327-3	0.6535	100					
58	JC95327-4	0.6385	100					
59	JC95327-5	0.6198	100					
60	JC95327-6	0.6181	100					
61	JC95327-7	0.6080	100					
62	JC95327-9	0.6358	100					
63	JC95327-10	0.6320	100					
64	JC95411-1	0.6114	100					
65	JC95411-2	0.6632	100					
66	JC95411-3	0.6340	100					
67	JC95411-4	0.6383	100					
68	JC95411-5	0.6088	100					
69	JC95411-6	0.6587	100					
70	JC95411-7	0.6581	100					

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Form: **HG-022F-02**  
 Revision Date: **08/24/15**

ANALYST: CH  
 SPIKE WITNESS: LL  
 QC REVIEWER: \_\_\_\_\_

DATE: 9/27/19  
 DATE: 9/27/19  
 DATE: \_\_\_\_\_





**Mercury Digestion Log**

Product: **HG /HGLIQ**  
 Matrix: **Soil / Oil / SL / Wipes**

MA Batch #: MA47516  
 Analyst: CH  
 Date: 9/27/2019  
 Balance ID: B24  
 Reagents: See attached sheet  
 Auto pipet ID: M72

**Method: SW846 7471B**

Required corrected Temp. Range is 95C. +/- 3C.

Hot Block # 7 Start Time: 9:29 End Time: 9:59 Tube # 1-24

Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658

End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Hot Block # 7 Start Time: 10:02 End Time: 10:32 Tube # 25-73

Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658

End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spike lot and Conc. (mg/L)	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N			
71	JC95411-8	0.6633	100					
72	JC95411-9	0.6764	100					
73	JC95413-1	0.6234	100					
74			100					
75			100					
76			100					
77			100					
78			100					
79			100					
80			100					
81			100					
82			100					
83			100					
84			100					
85			100					
86			100					
87			100					
88			100					
89			100					
90			100					
91			100					
92			100					
93			100					
94			100					
95			100					
96			100					
97			100					
98			100					
99			100					
100			100					
101			100					
102			100					
103			100					
104			100					
105			100					

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Form: HG-022F-02  
 Revision Date: 08/24/15

ANALYST: CH  
 SPIKE WITNESS: LL  
 QC REVIEWER: \_\_\_\_\_

DATE: 9/27/19  
 DATE: 9/27/19  
 DATE: \_\_\_\_\_



Mercury Hot Block Digestion Product: HG /HGLIQ  
 Matrix: Soil / Oil / SL / Wipes

MA Batch #: MA47516  
 Analyst: CH  
 Date: 9/27/19 ~~9/26/2019~~  
 Balance ID: B24 ~~CH 912719~~  
 Reagents: See attached sheet  
 Auto pipet ID: M72

Method: SW846 7471B

Required corrected Temp. Range is 95C. +/- 3 C.

Hot Block # 7 Start Time: 9:29 End Time: 9:59 Tube # S1-CRI  
 Start Temp: 94 Corrected Start Temp: 94 Correction: 0 Thermometer ID: 3107658  
 End Temp: 95 Corrected Start Temp: 95 Correction: 0 Thermometer ID: 3107658

Bot #	Sample ID	Initial Sample Wt. (gm)	Final Vol. (ml)	Spike Used		Spikelot and Conc. (mg/L)	MP Number	Comments/Lot # and Vendor
				Amount Spiked	Added Y or N			
S-1	Calibration Blank	0.6	100 ml	0.0 ml	N	N/A	N/A	N/A
S-2	0.20 ug/l Standard	0.6	100 ml	2.0 ml	Y	0.0100	N/A	HG-19-147-431-HGA2, IN. V.
S-3	0.50 ug/l Standard	0.6	100 ml	5.0 ml	Y	0.0100	N/A	HG-19-147-431-HGA2, IN. V.
S-4	1.00 ug/l Standard	0.6	100 ml	1.0 ml	Y	0.1000	N/A	HG-19-147-430-HGA1, IN. V.
S-5	2.50 ug/l Standard	0.6	100 ml	2.5 ml	Y	0.1000	N/A	HG-19-147-430-HGA1, IN. V.
S-6	5.00 ug/l Standard	0.6	100 ml	5.0 ml	Y	0.1000	N/A	HG-19-147-430-HGA1, IN. V.
ICV	ICV_MA47516	0.6	100 ml	3.0 ml	Y	0.1		HG-19-147-432-HGB1, ULTRA
ICB	ICB_MA47516	0.6	100 ml	0.0 ml	N	N/A	N/A	
CCV	CCV_MA47516	0.6	100 ml	2.5 ml	Y	0.1		HG-19-147-430-HGA1, IN. V.
CCB	CCB_MA47516	0.6	100 ml	0.0 ml	N	N/A	N/A	
CRI	CRI_MA47516	0.6	100 ml	2.0 ml	Y	0.01		HG-19-147-431-HGA2, IN. V.

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## Reagent Information Log- Hg Soil

MA # 47516

Reagents	Exp. Date	Reagent # or manufacturer lot #
<u>Conc. HydroChloric Acid</u>	<u>3/12/2022</u>	<u>Fisher 4119020</u>
<u>Conc. Nitric Acid</u>	<u>9/6/2021</u>	<u>Baker 234822</u>
<u>Sodium Chloride-Hydroxylamine Hydrochloride</u>	<u>3/23/2020</u>	<u>HG-19-147 411 -HGHCL</u>
<u>Potassium Permanganate</u>	<u>3/23/2020</u>	<u>HG-19-147 409 -HGKM2</u>
<u>Stannous Chloride</u>	<u>9/28/2019</u>	<u>HG-19-147 433 -HGS</u>
<u>STD Hg standard solution 1000 ppm</u>	<u>3/1/2020</u>	<u>Inorganic Ventures N2-HG669550</u>
<u>STD Hg standard solution 100 ppb</u>	<u>9/28/2019</u>	<u>HG-19-147 430 -HGA1</u>
<u>STD Hg standard solution 10 ppb</u>	<u>9/28/2019</u>	<u>HG-19-147 431 -HGA2</u>
<u>ICV Hg standard solution 1000 ppm</u>	<u>6/30/2021</u>	<u>Ultra-T00601</u>
<u>ICV Hg standard solution 100 ppb</u>	<u>9/28/2019</u>	<u>HG-19-147 432 -HGB1</u>
<u>Solid Lab control/Soil LC</u>	<u>10/31/2021</u>	<u>ERA D101-540</u>
<u>Aqua Regia</u>	<u>9/28/2019</u>	<u>HG-19-147 434 -HGKAQ</u>
<u>Dilution acid</u>	<u>3/23/2020</u>	<u>HG-19-147 412 -HGD1</u>
<u>Digestion Tubes</u>	<u>N/A</u>	<u>Environmental Express 1904119</u>
<u>Teflon Chips (For Soil MB)</u>	<u>N/A</u>	<u>Chemware , Lot: 24635764</u>

Form: GN087A80-04

Rev.Date: 06/06/17

**Solids/Soil Metals Digestion Form**

Batch Information							
Batch ID	Start Date	Start Time	End Date	End time	QC Samp 1	QC Samp 2	
MP17592	9/29/2019	4:40	9/29/2019	9:40	JC95495-2		
Temperature							
		Block ID	Therm. ID#	Balance ID	Temperature	Correction	Corrected Temp
1	Start	1	1109781	B-41	93	-1	92
1	End	1	1109781	NA	93	-1	92
2	Start						
2	End			NA			
Methods and Equipment							
	Dig. Method	Heating Method		Auto Pipette #	Digestion Tube Lot #		
	SW846 3050B	Digestion Block		M-74	1904119		
Sample ID	Bottle ID	Final Volume (ML)	Wet Weight (G)	Reagent Groups Added	Spike Groups Added	Comments	
MP17592-MB1	N/A	100	0.97	ABCDE			
MP17592-B1	N/A	100	0.99	ABCDE	ABCDE		
MP17592-S1	4	100	0.98	ABCDE	ABCDE		
MP17592-S2	4	100	0.96	ABCDE	ABCDE		
MP17592-SD1	4	100	0.99	ABCDE			
JC95411-1	2	100	0.98	ABCD			
JC95411-2	2	100	0.97	ABCD			
JC95411-3	2	100	0.99	ABCD			
JC95411-4	1	100	0.98	ABCD			
JC95411-5	2	100	1.03	ABCD			
JC95411-6	2	100	1.05	ABCD			
JC95411-7	2	100	0.97	ABCD			
JC95411-8	2	100	0.98	ABCD			
JC95411-9	2	100	0.98	ABCD			
JC95489-1	3	100	1.03	ABCD			
JC95489-5	3	100	1.02	ABCD			
JC95495-1	4	100	0.97	ABCDE			
JC95495-2	4	100	0.99	ABCDE			
JC95495-3	1	100	1.01	ABCDE			
JC95516-1	2	100	0.9	ABCD			
JC95516-2	2	100	1.05	ABCD			
JC95555-1	2	100	1.03	ABCD			
JC95555-2	2	100	1.04	ABCD			
JC95555-3	2	100	1.00	ABCD			
JC95555-4	2	100	1.03	ABCD			

Reagents Groups		
Group	Description	MLs Used
A	CONC HNO3	5
B	1:1 HNO3	10
C	H2O2	5
D	CONC HCL	10
E	H2O2	2
F		
G		
H		

Spike Groups		
Group	Description	MLs Used
A	ACCUTEST 13A REV1	1
B	ACCUTEST 14A REV1	1
C	MINERALS 5000PPM	0.5
D	AG 20PPM	1.25
E	SULFUR	0.2
F		
G		
H		

Comments: \_\_\_\_\_

Analyst MOUSTAFR Approved by Wendyz Approved on 9/30/2019

Note: Reagent traceability for batch Start Date can be seen on the reagent traceability page for this batch.  
 Serial Dilution samples shown for QC purposes only.  
 Acceptable Temperature range is 90-95 degrees C unless otherwise noted



### Metals Digestion Reagents Information Log

Digestion Batch ID: MP 17592 Date: 9/29/19  
 Matrix: ALL

<u>Standard/Reagent Type</u>	<u>Exp. Date</u>	<u>Standard/Reagent ID</u>
<u>Spiking Solution - (ACCUTEST-13A REV1)</u>	<u>3/18/2020</u>	<u>MP-015-1222</u>
<u>Spiking Solution - (ACCUTEST-14A REV1)</u>	<u>3/18/2020</u>	<u>MP-015-1221</u>
<u>Spiking Solution - 5000 mg/l Minerals</u>	<u>8/21/2020</u>	<u>P2-MEB681527 MFG: INO. VENT.</u>
<u>Spiking Solution - Sulfur 1000ppm</u>	<u>9/25/2021</u>	<u>LOT: 092518 MFG: ABS. STANDARDS</u>
<u>Spiking Solution - Si 1000ppm</u>	<u>9/24/2020</u>	<u>P2-SI676242 MFG: INO. VENT.</u>
<u>Spiking Solution - Bi 1000ppm</u>	<u>8/29/2020</u>	<u>N2-BI669548 MFG: INO. VENT.</u>
<u>Spiking Solution - Se 20ppm</u>	<u>3/18/2020</u>	<u>MP-015-1226</u>
<u>Spiking Solution - Li 1000ppm</u>	<u>8/23/2020</u>	<u>P2-LI675235 MFG: INO. VENT.</u>
<u>Spiking Solution- Ag 20 ppm</u>	<u>3/18/2020</u>	<u>MP-015-1223</u>
<u>Spiking Solution - (ACCUTEST-13B REV1)</u>	<u>3/18/2020</u>	<u>MP-015-1225</u>
<u>Spiking Solution - (ACCUTEST-14B REV1)</u>	<u>1/23/2020</u>	<u>MP-015-1204</u>
<u>Spiking Solution - 1000ppm Minerals</u>	<u>2/22/2020</u>	<u>MP-015-1213</u>
<u>Spiking Solution- P</u>		
<u>Nitric Acid</u>	<u>9/26/2021</u>	<u>LOT: 243822 MFG: J.T. BAKER</u>
<u>Nitric Acid (1:1)</u>	<u>3/24/2020</u>	<u>MP-018-42-310 1:1 HNO3</u>
<u>Hydrochloric Acid</u>	<u>5/17/2022</u>	<u>LOT:4119040 MFG: FISHER</u>
<u>Hydrochloric Acid (1:1)</u>	<u>3/24/2020</u>	<u>MP-018-42-311 1:1 HCL</u>
<u>Hydrogen Peroxide</u>	<u>9/25/2021</u>	<u>LOT: 191365 MFG: FISHER</u>
<u>Soil Lab Control/Soil LC</u>	<u>10/31/2021</u>	<u>LOT: D101-540 MFG: ERA</u>
<u>Teflon Chips(For Soil MB and Blank Spike)</u>	<u>N/A</u>	<u>LOT: 24635764 MFG: SAINT-GOBAIN</u>
<u>Digestion Tubes</u>	<u>N/A</u>	<u>LOT: 1904119 MFG: ENV. EXPRESS</u>
<u>pH Paper</u>	<u>11/1/2021</u>	<u>LOT: 231018 MFG: HYDRION</u>
<u>Filter paper Q8</u>	<u>N/A</u>	<u>LOT: 16939084 MFG: FISHER</u>
<u>Filter paper 0.45µm</u>	<u>N/A</u>	<u>LOT: F9BA55973E MFG: FISHER</u>

Spike witnessed By: \_\_\_\_\_

Validated By: \_\_\_\_\_

Validated On: \_\_\_\_\_

17641  
MP # 17592

Date 9/15/19 Analyst NY

Post spike for ICP Method 6010D

Spiking solution	Elements	Spike added (Y/N)	Vendor	Intermediate Lot #	Exp. Date	Conc. (mg/l)	Amt of Spike added (ml)	Digestate sample volume (ml)	Final Digestate volume in ml (Spike+ Sample)	Final Conc at the instrument (mg/l)
Mixed ICP intermediate Metals Solution (ACCUTEST-13A-REV1)	Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, P, Se, Sr, TL, V, Zn	Yes	Inhouse	MA-18-354-153	11/28/19	200	0.2			2
Mixed ICP intermediate Metals Solution (ACCUTEST-14A-REV1)	Sb, As, Mo, Sn, Ti, W, Zr	Yes	Inhouse	MA-18-354-154	11/28/19	200	0.2	19.25	20	2
Ag Spike Intermediate	Ag	Yes	Inhouse	MA-18-354-152	11/28/19	20	0.25			0.25
Metals Mix	Ca, Al, Fe, Mg, K, Na	Yes	ThermoFisher	P2-MEB 678659	4/25/20	5000	0.1			25
S spike	S					200	0.2			2
Bi Spike	Bi					200	0.2			2
Li Spike	Li					200	0.2			2
Si spike	Si					1000	0.1			5

Form: DAYT-MET-0095-01-FORM  
Rev. Date: 7/10/2018

Reviewed by

## General Chemistry

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### QC Data Summaries

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#### Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide	GP24094/GN773	0.23	0.0	mg/kg	2.08	2.28	109.5	90-110%

Associated Samples:

Batch GP24094: JC95555-1, JC95555-2, JC95555-3, JC95555-4

(\*) Outside of QC limits

12.1  
**12**



DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide	GP24094/GN773	JC95958-1	mg/kg	0.16	0.22	31.6	0-49%
Solids, Percent	GN705	JC95396-8	%	76.4	76.1	0.4	0-5%

Associated Samples:

Batch GN705: JC95555-1, JC95555-2, JC95555-3, JC95555-4  
Batch GP24094: JC95555-1, JC95555-2, JC95555-3, JC95555-4  
(\* ) Outside of QC limits

12.2  
12

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Cyanide	GP24094/GN773	JC95958-1	mg/kg	0.16	3.35	2.6	72.7N(a)	75-125%

Associated Samples:

Batch GP24094: JC95555-1, JC95555-2, JC95555-3, JC95555-4

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference.

12.3  
12

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E100319W1.CN      Date Analyzed: 10/03/19      Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT  
Analyst: KI      Run ID: GN773  
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:42	GN773-STD1	1		STDA
15:44	GN773-STD2	1		STDB
15:45	GN773-STD3	1		STDC
15:46	GN773-STD4	1		STDD
15:48	GN773-STD5	1		STDE
15:49	GN773-STD6	1		STDF
15:51	GN773-STD7	1		STDG
15:52	GN773-ICV1	1		
15:53	GN773-ICB1	1		
15:55	GN773-CCV1	1		
15:56	GN773-CCB1	1		
15:57	GP24043-MB2	1		
15:59	GP24043-B2	1		
16:00	GP24043-S1	1		
16:01	GP24094-MB1	1		
16:03	GP24094-B1	1		
16:04	GP24094-S1	1		
16:05	GP24094-S2	1		
16:07	GP24094-D1	1		
16:08	JC95958-1	1		(sample used for QC only; not part of login JC95555)
16:10	ZZZZZZ	1		
16:11	GN773-CCV2	1		
16:12	GN773-CCB2	1		
16:14	ZZZZZZ	1		
16:15	JC95958-4	1		(sample used for QC only; not part of login JC95555)
16:16	ZZZZZZ	1		
16:18	ZZZZZZ	1		
16:19	ZZZZZZ	1		
16:20	ZZZZZZ	1		
16:22	ZZZZZZ	1		
16:23	ZZZZZZ	1		
16:25	JC95555-1	1		
16:26	JC95555-2	1		

12.4  
12

SGS Instrument Runlog  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E100319W1.CN      Date Analyzed: 10/03/19      Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT  
Analyst: KI      Run ID: GN773  
Parameters: Cyanide

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:27	GN773-CCV3	1		
16:29	GN773-CCB3	1		
16:30	JC95555-3	1		
16:31	JC95555-4	1		
16:33	ZZZZZZ	1		
16:34	ZZZZZZ	1		
16:35	ZZZZZZ	1		
16:37	ZZZZZZ	1		
16:38	ZZZZZZ	1		
16:40	ZZZZZZ	1		
16:41	GN773-STD8	1		STDACONF
16:42	GN773-STD9	1		STDBCONF
16:44	GN773-CCV4	1		
16:45	GN773-CCB4	1		
16:46	GN773-STD10	1		STDCCONF
16:48	GN773-STD11	1		STDGCONF
16:51	GN773-CCV5	1		
16:52	GN773-CCB5	1		

Refer to raw data for calibration curve and standards.

12.4  
12

Instrument QC Summary  
Inorganics Analyses

Login Number: JC95555  
Account: BBLNYS - Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

File ID: E100319W1.CN      Date Analyzed: 10/03/19      Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT  
Run ID: GN773      Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN773-ICV1	Cyanide	0.327	0.010	0.0041	.3	109.0	90-110
GN773-ICB1	Cyanide	0.0041 U	0.010	0.0041			
GN773-CCV1	Cyanide	0.426	0.010	0.0041	.4	106.5	90-110
GN773-CCB1	Cyanide	-0.00761	0.010	0.0041			
GN773-CCV2	Cyanide	0.426	0.010	0.0041	.4	106.5	90-110
GN773-CCB2	Cyanide	-0.00581	0.010	0.0041			
GN773-CCV3	Cyanide	0.427	0.010	0.0041	.4	106.8	90-110
GN773-CCB3	Cyanide	0.0041 U	0.010	0.0041			
GN773-CCV4	Cyanide	0.429	0.010	0.0041	.4	107.3	90-110
GN773-CCB4	Cyanide	0.0041 U	0.010	0.0041			
GN773-CCV5	Cyanide	0.430	0.010	0.0041	.4	107.5	90-110
GN773-CCB5	Cyanide	-0.00545	0.010	0.0041			

(!) Outside of QC limits

12.4  
12

# Percent Solids Raw Data Summary

Job Number: JC95555  
Account: BBLNYS Arcadis  
Project: National Grid, Philly Coke, Philadelphia, PA

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Sample: JC95555-1 Analyzed: 02-OCT-19 by BG Method: SM2540 G 18TH ED MOD  
ClientID: MW-111(11-13)

Wet Weight (Total)	35.06	g
Tare Weight	26.39	g
Dry Weight (Total)	33.99	g
Solids, Percent	87.7	%

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Sample: JC95555-2 Analyzed: 02-OCT-19 by BG Method: SM2540 G 18TH ED MOD  
ClientID: MW-111(13-15)

Wet Weight (Total)	25.94	g
Tare Weight	17.91	g
Dry Weight (Total)	23	g
Solids, Percent	63.4	%

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Sample: JC95555-3 Analyzed: 02-OCT-19 by BG Method: SM2540 G 18TH ED MOD  
ClientID: MW-108(5-7)

Wet Weight (Total)	33.88	g
Tare Weight	25.54	g
Dry Weight (Total)	32.16	g
Solids, Percent	79.4	%

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Sample: JC95555-4 Analyzed: 02-OCT-19 by BG Method: SM2540 G 18TH ED M  
ClientID: MW-108(10-12)

Wet Weight (Total)	28.94	g
Tare Weight	19.27	g
Dry Weight (Total)	26.29	g
Solids, Percent	72.6	%

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12.5  
12

**General Chemistry**

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**Raw Data**

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LABORATORY REVIEW SIGNATURE FORM  
(To be stored with the raw data)

File ID: E100319W1.CN  
Analyst: KI

Date Analyzed: 10/03/19  
Run ID: GN773

Methods: EPA 335.4/LACHAT, SW846 9012B/LACHAT

The following analyst(s) have reviewed this run and attest that, to the best of their knowledge, this documentation is complete and correct:

Analyst:     KI     Date   10/3/19  

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

Analyst: \_\_\_\_\_ Date \_\_\_\_\_

The following supervisor or their designee has reviewed this run and attests that, to the best of their knowledge, this documentation is complete and correct:

Supervisor (or designee):     *[Signature]*     Date   10/2/19



1100319w1.cn

GN773

Author: Chemistry

Date : 10/3/2019

Original Run Filename: OM\_10-3-2019\_03-41-41PM.OMN Created: 10/3/2019 3:41:41 PM  
 Original Run Author's Signature: [Chemistry]  
 Current Run Filename: OM\_10-3-2019\_03-41-41PM.OMN Last Modified: 10/3/2019 4:54:42 PM  
 Current Run Author's Signature: [Chemistry]  
 Description: Default new Run

Sample	Rep.	Cup No.	Channel 1 CN	Detection Time	MDF
STDA	1	1	0.800	10/3/2019@3:42:51 PM	
STDB	1	2	0.600	10/3/2019@3:44:13 PM	
STDC	1	3	0.400	10/3/2019@3:45:35 PM	
STDD	1	4	0.100	10/3/2019@3:46:57 PM	
STDE	1	5	0.0200	10/3/2019@3:48:19 PM	
STDF	1	6	0.0100	10/3/2019@3:49:41 PM	
STDG	1	7	0.00	10/3/2019@3:51:03 PM	
ICV	1	8	0.327	10/3/2019@3:52:25 PM	
Known Conc:			0.300		
Calibration:			Table/Fig. : 1		
ICB	1	9	-3.05e-3	10/3/2019@3:53:46 PM	
Known Conc:			0.00		
CCV	1	S9	0.426	10/3/2019@3:55:08 PM	
Known Conc:			0.400		
CCB	1	S10	-7.61e-3	10/3/2019@3:56:30 PM	
Known Conc:			0.00		
GP24043-MB2	1	10	-1.27e-3	10/3/2019@3:57:51 PM	
GP24043-B2	1	11	0.0909	10/3/2019@3:59:12 PM	
GP24043-S1	1	12	0.0712	10/3/2019@4:00:34 PM	
GP24094-MB1	1	13	3.87e-3	10/3/2019@4:01:55 PM	
GP24094-B1	1	14	0.0912	10/3/2019@4:03:16 PM	
GP24094-S1	1	15	0.0638	10/3/2019@4:04:36 PM	
GP24094-S2	1	16	0.0550	10/3/2019@4:05:58 PM	
GP24094-D1	1	17	6.59e-3	10/3/2019@4:07:21 PM	
JC95958-1	1	18	5.11e-3	10/3/2019@4:08:43 PM	
JC95958-2	1	19	9.12e-3	10/3/2019@4:10:05 PM	
CCV	1	S9	0.426	10/3/2019@4:11:26 PM	
Known Conc:			0.400		
CCB	1	S10	-5.81e-3	10/3/2019@4:12:48 PM	
Known Conc:			0.00		
JC95958-3	1	20	8.03e-3	10/3/2019@4:14:10 PM	
JC95958-4	1	21	0.0118	10/3/2019@4:15:32 PM	
JC95958-5	1	22	5.01e-3	10/3/2019@4:16:54 PM	
JC95958-6	1	23	7.66e-3	10/3/2019@4:18:15 PM	
JC95958-7	1	24	8.72e-3	10/3/2019@4:19:37 PM	
JC95958-8	1	25	0.0110	10/3/2019@4:20:58 PM	
JC95516-1	1	26	2.25e-3	10/3/2019@4:22:19 PM	
JC95516-2	1	27	-1.46e-3	10/3/2019@4:23:40 PM	
JC95555-1	1	28	9.24e-3	10/3/2019@4:25:01 PM	
JC95555-2	1	29	0.0239	10/3/2019@4:26:22 PM	
CCV	1	S9	0.427	10/3/2019@4:27:44 PM	
Known Conc:			0.400		
CCB	1	S10	-2.82e-3	10/3/2019@4:29:06 PM	
Known Conc:			0.00		
JC95555-3	1	30	0.423	10/3/2019@4:30:27 PM	
JC95555-4	1	31	0.0101	10/3/2019@4:31:49 PM	
JC95949-2	1	32	-2.30e-3	10/3/2019@4:33:11 PM	
JC95615-1	1	33	0.0702	10/3/2019@4:34:33 PM	
JC95615-2	1	34	0.226	10/3/2019@4:35:55 PM	
JC95615-3	1	35	0.276	10/3/2019@4:37:17 PM	
JC95615-4	1	36	0.346	10/3/2019@4:38:39 PM	
JC95639-5	1	37	0.0840	10/3/2019@4:40:01 PM	
STDA	1	38	0.803	10/3/2019@4:41:23 PM	
STDB	1	39	0.601	10/3/2019@4:42:44 PM	
CCV	1	S9	0.429	10/3/2019@4:44:05 PM	
Known Conc:			0.400		
CCB	1	S10	-3.67e-3	10/3/2019@4:45:27 PM	
Known Conc:			0.00		
STDC	1	40	0.399	10/3/2019@4:46:49 PM	
STDG	1	41	-7.88e-4	10/3/2019@4:48:10 PM	

h rec

w9

w6.5

w9.1

w9.4

w6.5

w6.75

> linear range

w7.25

> linear range

13.1  
13

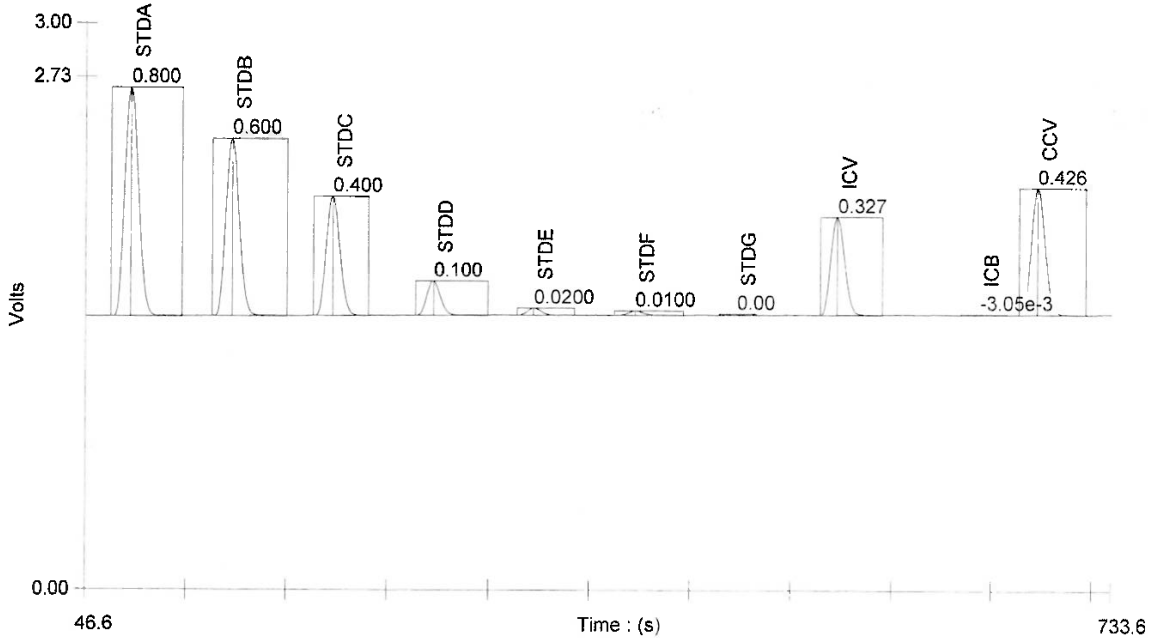
Author: Chemistry

Date : 10/3/2019

CCV	1	S9	0.430	10/3/2019@4:51:14 PM
		Known Conc:	0.400	
CCB	1	S10	-5.45e-3	10/3/2019@4:52:35 PM
		Known Conc:	0.00	

LOT 5

Channel 1 - Set: 1 / 6

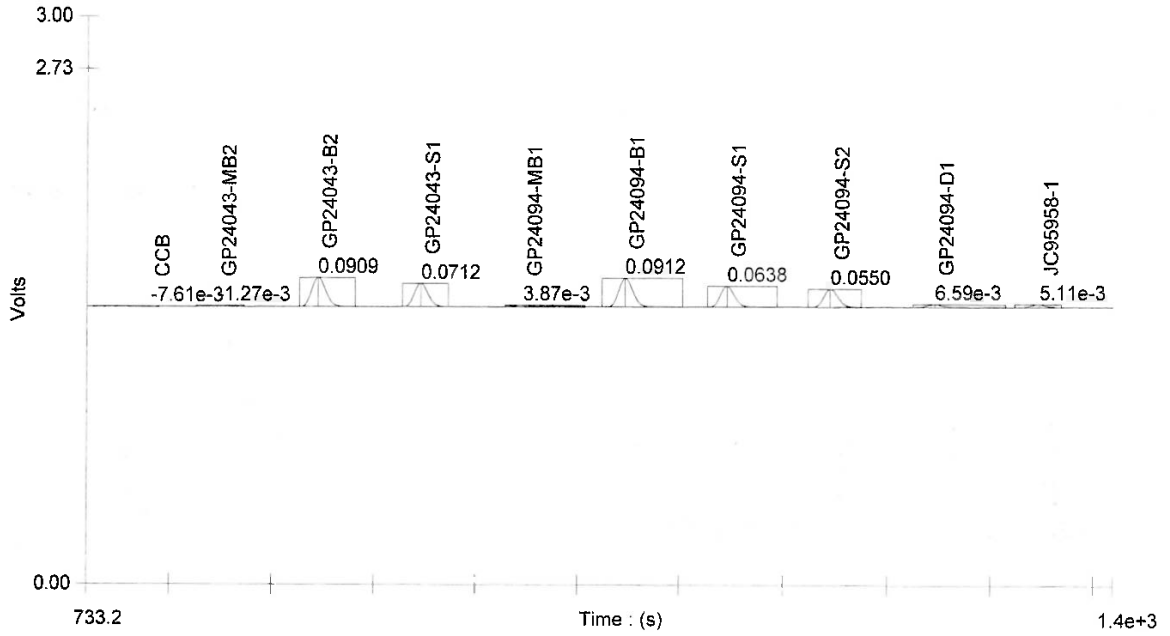


13.1  
13

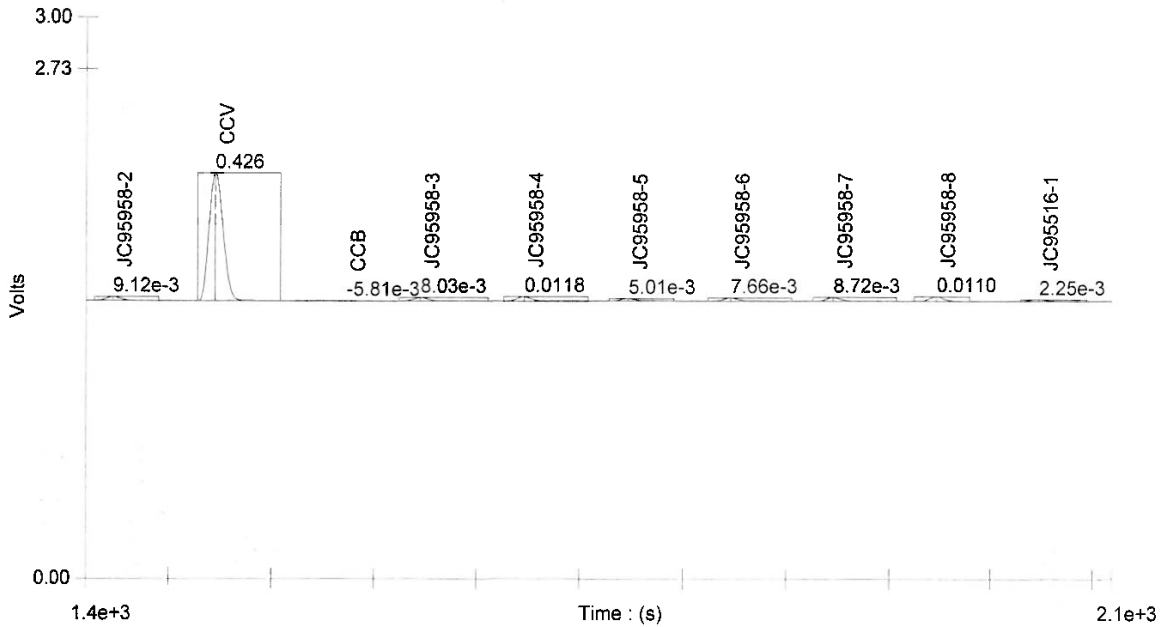
Author: Chemistry

Date : 10/3/2019

Channel 1 - Set: 2 / 6



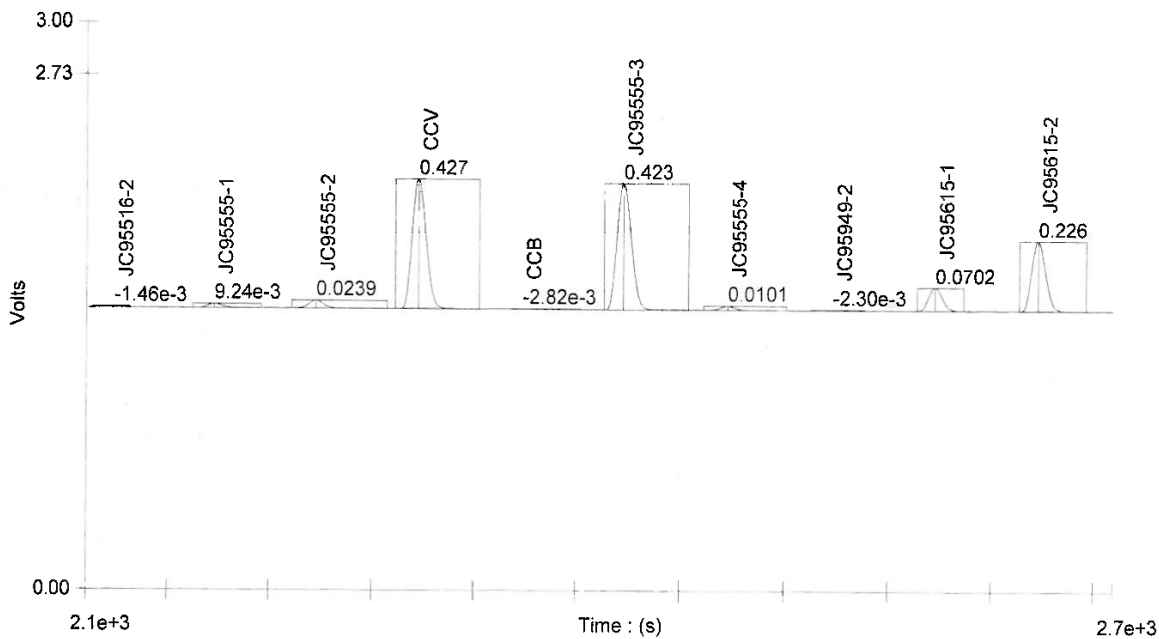
Channel 1 - Set: 3 / 6



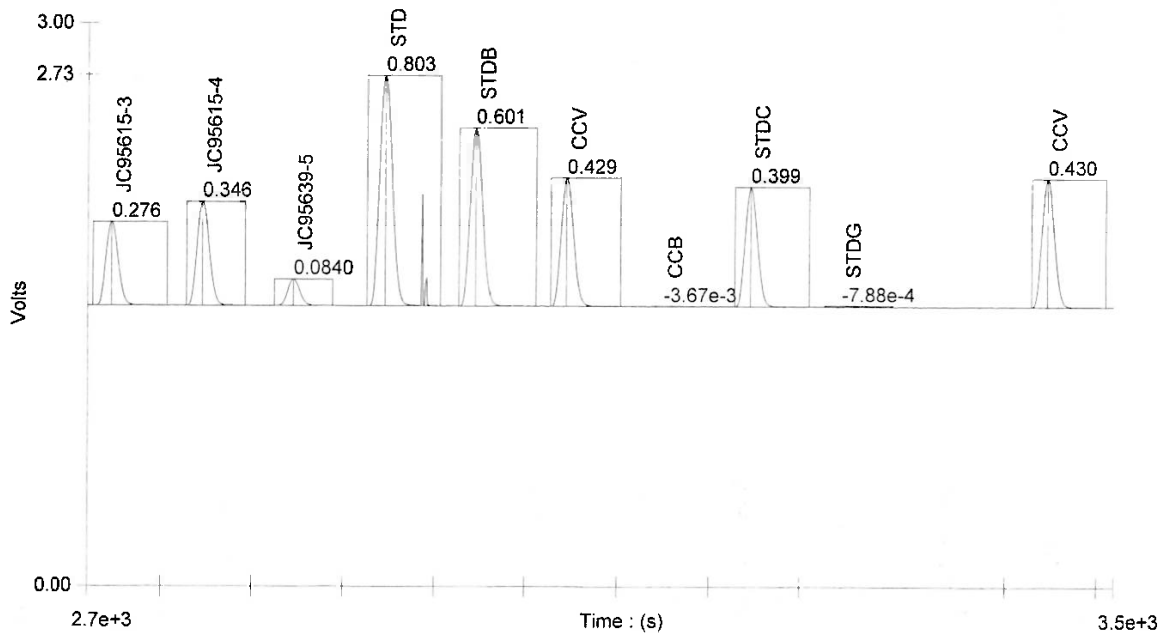
Author: Chemistry

Date : 10/3/2019

Channel 1 - Set: 4 / 6



Channel 1 - Set: 5 / 6



13.1 13

Author: Chemistry

Date : 10/3/2019

Channel 1 - Set: 6 / 6

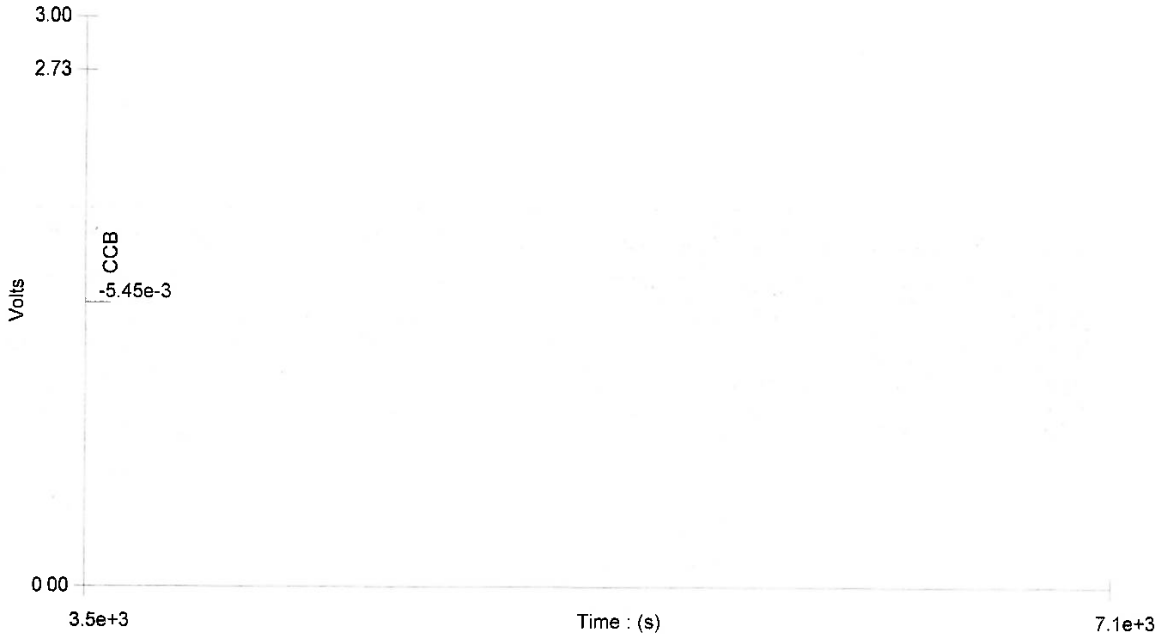
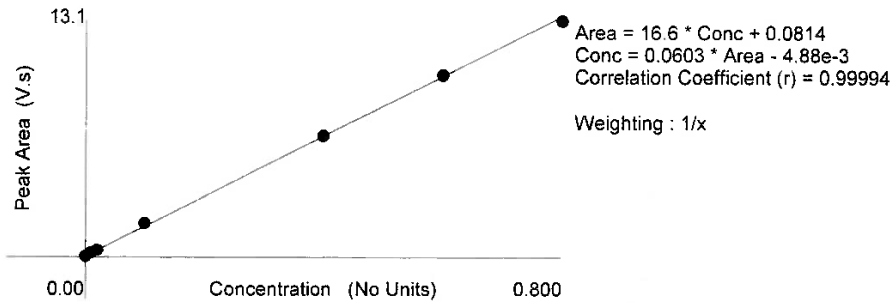


Table 1 (CN)

	Known Conc. ( )	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc ( )	Detection Date	Detection Time
1	0.800	1	13.1	1.22	0.0	2.0	0.783	10/3/2019	3:42:51 PM
2	0.600	1	10.1	0.948	0.0	-0.7	0.603	10/3/2019	3:44:13 PM
3	0.400	1	6.73	0.640	0.0	-0.2	0.400	10/3/2019	3:45:35 PM
4	0.100	1	1.92	0.183	0.0	-10.5	0.111	10/3/2019	3:46:57 PM
5	0.0200	1	0.395	0.0369	0.0	4.4	0.0189	10/3/2019	3:48:19 PM
6	0.0100	1	0.268	0.0229	0.0	-8.5	0.0113	10/3/2019	3:49:41 PM
7	0.00	1	0.0531	4.89e-3			-1.68e-3	10/3/2019	3:51:03 PM

Figure 1 (CN)





## Reagent Information Log - CN Lachat Autoanalyzer

GN Number: \_\_\_\_\_

GN773

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Pyridine-Bartituristic Acid Reagent	GNE9-59070-CN	3/16/2020
Chloramine-T	GNE10-59241-CN	10/9/2019
Phosphate Buffer Solution, 1.0 M	GNE6-58339-CN	12/20/2019
0.25 N Sodium Hydroxide Carrier Solution	GNE10-59248-CN	4/2/2020

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

Form: GN087A-27  
Rev. Date: 7/19/06

13.1  
13



*GP24043*  
*redo*

Batch ID: \_\_\_\_\_  
Autopipette ID: *13197/c/less1*  
Balance ID: *NA*

**CYANIDE DISTILLATION LOG (WATERS - MICRO DISTILLATION)**  
Method: EPA 335.4 or SW-846 9012 M (Circle Method)

Bin #	Block #	Sample ID	pH	Cd added?	Add (a)	Initial Volume (ml)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
		<i>MB2</i>	<i>12.00</i>	<i>N</i>	<i>Y</i>	<i>6</i>	<i>6</i>	<i>12.0</i>	<i>1129</i>	<i>1159</i>	<i>10/3/19</i>	<i>GP</i>	<i>-MB1</i>		
		<i>B2</i>													
		<i>SI-JC958 95-1</i>													<i>JLW</i>

Check if sulfamic acid was added.  
Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.  
If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mg/l for one and 0.15 ml of 20.0 mg/l for the other.  
Comments:





## Reagent Information Log - CN - Distillation

GP Numbers:

GP24043

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE6-58369-CN	12/24/2019
Magnesium Chloride Solution	GNE9-59176-CN	3/27/2020
Sulfamic Acid	A0369642	7/15/2022
Sulfuric Acid	FISHER 190956	6/3/2024
	GNE8-58757-CN	2/8/2020
Sodium Hydroxide 1.25N/0.25N	GNE9-59100-CN	3/19/2020
Cadmium Carbonate, Powder	GN180814A	9/13/2023
Acetic acid buffer	GNE6-58370-CN	12/20/2019
Micro Distillation tubes	914050-9157-JS	NA
.95 NaOH	GNE7-58576-CN	1/17/2020
Cyanide Stock Solution A - spiking/standards	GNE9-58967-CN	3/3/2020
Cyanide Stock Solution B- externals	GNE7-58581-CN	12/18/2019
Lead Acetate Test Paper	FISHER : 12/8/2016	12/8/2021
pH paper - range 12.5 to 14	FISHER : 203117A	1/30/2021
pH paper - range 1 to 12	FISHER : 231018	11/1/2021
Benzalrhodanine	ricca 4810T07	10/1/2019
silica sand A	GNE1-53352-XCRA	12/20/2021

Form: GN087A-28  
Rev. Date: 03/19/13





**GENERAL CHEMISTRY STANDARD PREPARATION LOG**

Product: CN  
 GN or GP Number: GP24043

Intermediate Standard Description	Stock used to prepare standard	Standardization Date	Stock concentration in mg/l	Stock volume used in ml (a)	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. of Intermediate (mg/l)	Expiration Date (c)	Analyst	Date
5 PPM Intermediate	5.0 ppm CN STD	9/27/19	1000	1.000	43	.25 N NaOH	200	5.00	10/4/19	JKW	9/27/19
5 PPM ext.	5.0 ppm CN STD	9/27/19	996	1	43	.25 N NaOH	200	5.00	10/4/19	JKW	9/27/19
Standard Description	Intermediate or Stock used to prepare standard	Standardization Date	Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)	Expiration Date (c)	Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	10/4/19	JKW	9/27/19
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	10/4/19	JKW	9/27/19
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	10/4/19	JKW	9/27/19
D	5.0 ppm CN STD		5.0	2.00	43	.25 N NaOH	100	0.10	10/4/19	JKW	9/27/19
E	5.0 ppm CN STD		5.0	0.40	43	.25 N NaOH	100	0.02	10/4/19	JKW	9/27/19
F	5.0 ppm CN STD	0.3	5.0	0.20	43	.25 N NaOH	100	0.01	10/4/19	JKW	9/27/19
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	43	.25 N NaOH	100	0.30	10/4/19	JKW	9/27/19
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18		8.00	43	.25 N NaOH	100	0.40	10/4/19	JKW	9/27/19

(a) Concentration will change with standardization concentration.

(b) Diluent reagent reference number: SEE ATTACHED

Expiration Date: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maximum of 28 days before analysis.  
 \*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.  
 Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error



Batch ID: \_\_\_\_\_

GP 24094

Autopipette ID: 43/47 Class A

Balance ID: B-27

**CYANIDE DISTILLATION LOG (SOILS- MICRO DISTILLATION)**

Method: SW8469012B M

Boile #	Block #	Sample ID	pH	S2-	Add (a)	Initial Weight (g)	Final Volume (ml)	Temp. in Deg. C (b)	Start Time	End Time	Date	QC ID	Spike Amounts and Comments	Spike Lot	Analyst
		MB1	12.00	N	V	0.24	6	120	11:29	11:59	10/3/14	GP -MB1			JRW
		B1				0.24						GP	0.10 ml of 5.0 mg/l (c)		
		S1-JC95958-1				0.20						GP	0.10 ml of 5.0 mg/l		
		S2-JC95958-4				0.26						GP	0.10 ml of 5.0 mg/l		
		D1-JC95958-1				0.24						GP			
		JC95958-1				0.26						GP			
		-2				0.21									
		-3				0.24									
		-4				0.23									
		-5				0.26									
		-6				0.24									
		-7				0.26									
		-8				0.28									
		JC95516-1				0.24									
		-2				0.30									
		JC95555-1				0.24									
		-2				0.26									
		-3				0.25									
		-4				0.21									
		JC95949-2				0.25									
		JC95615-1				0.22									
		-2				0.26									
		-3				0.29									
		-4				0.21									
		JC95639-5				0.28									

(a) Check if sulfamic acid was added.

(b) Record temp. from the LED readout on the distillation block. Temperatures verified with an external thermometer a min. of once per quarter.

(c) If the calibration curve is not distilled, then in addition to the blank spike, the analyst must also prepare two distilled standards using 0.12 ml of 1.0 mg/l for one and 0.15 ml of 20.0 mg/l for the other.

QC Reviewer: \_\_\_\_\_

Form: SW8692-05  
Rev. Date: 06/1/13

Date: \_\_\_\_\_



## Reagent Information Log - CN - Distillation

GP Numbers:

GP24094

Reagent	Reagent # or Manufacturer/Lot	Expiration date
Silver Nitrate Solution 0.0192 N	GNE6-58369-CN	12/24/2019
Magnesium Chloride Solution	GNE9-59176-CN	3/27/2020
Sulfamic Acid	A0369642	7/15/2022
Sulfuric Acid	FISHER 190956	6/3/2024
	GNE8-58757-CN	2/8/2020
Sodium Hydroxide 1.25N/0.25N	GNE9-59100-CN	3/19/2020
Cadmium Carbonate, Powder	GN180814A	9/13/2023
Acetic acid buffer	GNE6-58370-CN	12/20/2019
Micro Distillation tubes	914050-9157-JS	NA
.95 NaOH	GNE7-58576-CN	1/17/2020
Cyanide Stock Solution A - spiking/standards	GNE9-58967-CN	3/3/2020
Cyanide Stock Solution B- externals	GNE7-58581-CN	12/18/2019
Lead Acetate Test Paper	FISHER : 12/8/2016	12/8/2021
pH paper - range 12.5 to 14	FISHER : 203117A	1/30/2021
pH paper - range 1 to 12	FISHER : 231018	11/1/2021
Benzalrhodanine	ricca 4810T07	10/1/2019
silica sand A	GNE1-53352-XCRA	12/20/2021

Form: GN087A-28  
Rev. Date: 03/19/13



**GENERAL CHEMISTRY STANDARD PREPARATION LOG**

Product: CN  
 GN or GP Number: GP04094

Intermediate Standard Description	Stock used to prepare standard	Standardization Date	Stock concentration in mg/l	Stock volume used in ml (a)	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. of Intermediate (mg/l)	Expiration Date (c)	Analyst	Date
5 PPM intermediate	GEN9-58967-CN	9/27/19	1000	1.000	43	.25 N NaOH	200	5.00	10/4/19	JKW	9/27/19
5 PPM ext.	GEN7-58581-CN	9/27/19	996	1	43	.25 N NaOH	200	5.00	10/4/19	JKW	9/27/19
Standard Description	Intermediate or Stock used to prepare standard		Intermediate or Stock concentration in mg/l	Intermediate or Stock volume used in ml	Autopipet ID	Diluent (b)	Final Volume in ml	Final Conc. Of Standard (mg/l)		Analyst	Date
A	5.0 ppm CN STD		5.0	16.00	A	.25 N NaOH	100	0.80	10/4/19	JKW	9/27/19
B	5.0 ppm CN STD		5.0	12.00	A	.25 N NaOH	100	0.60	10/4/19	JKW	9/27/19
C	5.0 ppm CN STD		5.0	8.00	A	.25 N NaOH	100	0.40	10/4/19	JKW	9/27/19
D	5.0 ppm CN STD		5.0	2.00	43	.25 N NaOH	100	0.10	10/4/19	JKW	9/27/19
E	5.0 ppm CN STD		5.0	0.40	43	.25 N NaOH	100	0.02	10/4/19	JKW	9/27/19
F	5.0 ppm CN STD	0.3	5.0	0.20	43	.25 N NaOH	100	0.01	10/4/19	JKW	9/27/19
Undistilled ICV Int.	5 PPM EXT STD	11/4/18	0.3	6.00	43	.25 N NaOH	100	0.30	10/4/19	JKW	9/27/19
Undistilled CCV Int.	5.0 ppm CN STD	11/4/18		8.00	43	.25 N NaOH	100	0.40	10/4/19	JKW	9/27/19

(a) Concentration will change with standardization concentration.

(b) Diluent reagent reference number: SEE ATTACHED Expiration Date: SEE ATTACHED

(c) Standards must be made fresh (daily) before distillation. After distillation, they may be held under refrigeration for a maximum of 28 days before analysis.

\*If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Reason codes for data corrections: 1-reviewer error correction; 2-transcription error; 3-computer error; 4-analyst error

**Misc. Raw Data**

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**Raw Data**

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# Prep Log

Vial Track #:	Lims ID:	Initial Tare Wt (g)	Total Wt (g)	Weight of Sample (g)	Date Prepared	Lot #:	Prep By	Vial Desc:	Comments
	JC95555-1.3	36.7400	41.6100	4.8700				NAB	
9/11/2019-1229	JC95555-1.4	33.8400	39.1400	5.3000	9/24/2019 9:14:41 PM	N/A	JP	DI water	
9/11/2019-1230	JC95555-1.5	34.2400	40.0300	5.7900	9/24/2019 9:16:44 PM	N/A	JP	DI water	
	JC95555-2.3	36.8200	41.0800	4.2600				NAB	
9/11/2019-1213	JC95555-2.4	33.8300	38.3600	4.5300	9/24/2019 9:16:55 PM	N/A	JP	DI water	
9/11/2019-1214	JC95555-2.5	33.9200	38.4900	4.5700	9/24/2019 9:17:05 PM	N/A	JP	DI water	
	JC95555-3.3	37.0100	41.0300	4.0200				NAB	
9/11/2019-1234	JC95555-3.4	34.1500	37.8800	3.7300	9/24/2019 9:17:15 PM	N/A	JP	DI water	
9/11/2019-1233	JC95555-3.5	33.8400	37.8500	4.0100	9/24/2019 9:17:26 PM	N/A	JP	DI water	
	JC95555-4.3	36.7500	40.5000	3.7500				NAB	
9/11/2019-1249	JC95555-4.4	33.9400	36.7600	2.8200	9/24/2019 9:17:36 PM	N/A	JP	DI water	
9/11/2019-1250	JC95555-4.5	33.8000	36.6500	2.8500	9/24/2019 9:17:44 PM	N/A	JP	DI water	