



September 15, 2017

Dawn Denham
Weston Solutions, Inc.
5599 San Felipe, Suite 700
Houston, Texas 77056
TEL: (713) 985-6610
FAX (713) 985-6703
RE: Toups - Harvey Sampling

Order No.: 1709084

Dear Dawn Denham:

DHL Analytical, Inc. received 1 sample(s) on 9/13/2017 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read 'John DuPont'.

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-17-19



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State Superfund Site	Soil COCs	Soil Analytical Methods	Water COCs	Water Analytical Methods
Industrial Road	lead	SW6020A	None	N/A
	PCBs (as Aroclors)	SW8082A		
International Creosoting	Arsenic	SW6020A	Arsenic	SW6020A
	Chromium		Chromium	
	benzo(a)pyrene	SW8270D	benzo(a)pyrene	SW8270D
	benzo(a)anthracene		benzo(a)anthracene	
	benzo(b)fluoranthene		benzo(b)fluoranthene	
	carbazole		carbazole	
vinyl chloride	SW8260C	vinyl chloride	SW8260C	
Jensen Drive Scrap	lead	SW6020A	lead	SW6020A
	arsenic		arsenic	
	PCBs (as Aroclors)	SW8082A	PCBs (as Aroclors)	SW8082A
Maintech International	Benzo(a)pyrene	SW8270D	None	N/A
	chrysene			
Spector Salvage Yard	None	N/A	Carbon tetrachloride	SW8260C
			chloroform	
			Methylene chloride	
Toups	None	N/A	pentachlorophenol	SW8270D
			lead	SW6020A

DATE
SIGNATURE
CUSTODY SEAL

ORIGIN ID: EIXA (727) 560-0426
 MICHAEL KANAREK
 5599 SAN FELIPE ST STE 700
 HOUSTON, TX 77056
 UNITED STATES US

SHIP DATE: 12SEP17
 ACTWGT: 42.00 LB
 CAD: 006994250/SSFE1802
 DIMS: 23x13x13 IN
 BILL THIRD PARTY

Part # 166297-435 HIT EXP 03/18
 3901/61/11/11645

TO JENNIFER BARKER
 DHL ANALYTICAL
 2300 DOUBLE CREEK DR

ROUND ROCK TX 78664

(512) 888-8222
 YNU:
 PO:

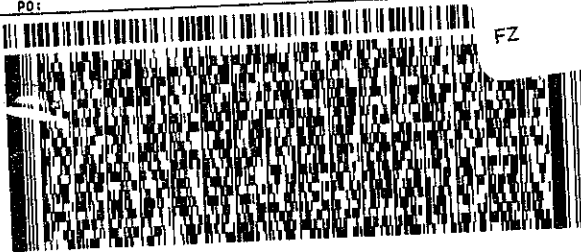
REF:

DEPT:

RT 512

1 10:30

D 968 09.7



3 of 3

MPS# 7877 0526 9684
 0263

Mstr# 7877 0526 9562

0201

WED 12 SEP 10:30A
 PRIORITY OVERNIGHT

A8 BSMA

70444
 TX-US AUS



800-255-3950 • 304-255-3900
 Safely Environmental Containers
 OEC

Sample Receipt Checklist

Client Name Weston Solutions, Inc.

Date Received: 9/13/2017

Work Order Number 1709084

Received by EL

Checklist completed by: [Signature] 9/13/2017
Signature Date

Reviewed by [Initials] 9/13/2017
Initials Date

Carrier name FedEx 1day

- Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on shipping container/cooler? Yes [checked] No [] Not Present []
Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [checked] No []
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? Yes [checked] No []
Container/Temp Blank temperature in compliance? Yes [checked] No [] 2.0 °C
Water - VOA vials have zero headspace? Yes [] No [] No VOA vials submitted [checked]
Water - pH<2 acceptable upon receipt? Yes [checked] No [] NA [] LOT # 8086
Adjusted? no Checked by CL
Water - ph>9 (S) or ph>12 (CN) acceptable upon receipt? Yes [] No [] NA [checked] LOT #
Adjusted? Checked by

Any No response must be detailed in the comments section below.

Client contacted Date contacted: Person contacted

Contacted by: Regarding:

Comments:

Corrective Action

Laboratory Name: DHL Analytical, Inc.							
Laboratory Review Checklist: Reportable Data							
Project Name: Toups - Harvey Sampling			LRC Date: 9/15/17				
Reviewer Name: Carlos Castro			Laboratory Work Order: 1709084				
Prep Batch Number(s): See Prep Dates Report			Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-Custody (C-O-C)					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt? 2) Were all departures from standard conditions described in an exception report?	X				R1-01
R2	OI	Sample and Quality Control (QC) Identification					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers? 2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test Reports					
		1) Were all samples prepared and analyzed within holding times? 2) Other than those results < MQL, were all other raw values bracketed by calibration standards? 3) Were calculations checked by a peer or supervisor? 4) Were all analyte identifications checked by a peer or supervisor? 5) Were sample detection limits reported for all analytes not detected? 6) Were all results for soil and sediment samples reported on a dry weight basis? 7) Were % moisture (or solids) reported for all soil and sediment samples? 8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035? 9) If required for the project, TICs reported?	X				
R4	O	Surrogate Recovery Data					
		1) Were surrogates added prior to extraction? 2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test Reports/Summary Forms for Blank Samples					
		1) Were appropriate type(s) of blanks analyzed? 2) Were blanks analyzed at the appropriate frequency? 3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures? 4) Were blank concentrations < MDL? 5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, greater than 10 times the concentration in the blank sample?	X				
R6	OI	Laboratory Control Samples (LCS):					
		1) Were all COCs included in the LCS? 2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps? 3) Were LCSs analyzed at the required frequency? 4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits? 5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs? 6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		1) Were the project/method specified analytes included in the MS and MSD? 2) Were MS/MSD analyzed at the appropriate frequency? 3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits? 4) Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical Duplicate Data					
		1) Were appropriate analytical duplicates analyzed for each matrix? 2) Were analytical duplicates analyzed at the appropriate frequency? 3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method Quantitation Limits (MQLs):					
		1) Are the MQLs for each method analyte included in the laboratory data package? 2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard? 3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other Problems/Anomalies					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER? 2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results? 3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				R10-01

Laboratory Name: DHL Analytical, Inc.							
Laboratory Review Checklist (continued): Supporting Data							
Project Name: Toups - Harvey Sampling				LRC Date: 9/15/17			
Reviewer Name: Carlos Castro				Laboratory Work Order: 1709084			
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial Calibration (ICAL)					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw Data (NELAC Section 5.5.10)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	X				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) The amount of analyte measured in the duplicate,
 - b) The calculated RPD, and
 - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on March 27, 2017. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager



Signature

09/15/17

Date

Name: Scott Schroeder
Official Title: Technical Director

CLIENT: Weston Solutions, Inc.
Project: Toups - Harvey Sampling
Lab Order: 1709084

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020A - Metals Analysis

Exception Report R1-01

The sample was received on and log-in performed on 9/13/17. A total of 1 sample was received. The sample arrived in good condition and was properly packaged.

Exception Report R10-01

Per project specification, MS/MSDs are from work order or project samples only.

CLIENT: Weston Solutions, Inc.
Project: Toups - Harvey Sampling
Lab Order: 1709084

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1709084-01	Toups W-1		09/12/17 01:30 PM	9/13/2017

Lab Order: 1709084
Client: Weston Solutions, Inc.
Project: Toups - Harvey Sampling

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1709084-01A	Toups W-1	09/12/17 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/14/17 08:20 AM	82354
1709084-01B	Toups W-1	09/12/17 01:30 PM	Aqueous	SW3510C	Aq Prep Sep Funnel: BNA	09/13/17 10:45 AM	82338

Lab Order: 1709084
Client: Weston Solutions, Inc.
Project: Toups - Harvey Sampling

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1709084-01A	Toups W-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	82354	1	09/15/17 01:00 PM	ICP-MS4_170915A
1709084-01B	Toups W-1	Aqueous	SW8270D	Semivolatiles by GC/MS - Water	82338	1	09/13/17 05:18 PM	GCMS9_170913C

DHL Analytical, Inc.

Date: 15-Sep-17

CLIENT: Weston Solutions, Inc.
Project: Toups - Harvey Sampling
Project No: 02444.034.001.0001
Lab Order: 1709084

Client Sample ID: Toups W-1
Lab ID: 1709084-01
Collection Date: 09/12/17 01:30 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A			Analyst: RO		
Lead	<0.000300	0.000300	0.00100		mg/L	1	09/15/17 01:00 PM
IS: Bismuth	95.3	0	70-200		%REC	1	09/15/17 01:00 PM
SEMIVOLATILES BY GC/MS - WATER		SW8270D			Analyst: LG		
Pentachlorophenol	<0.000406	0.000406	0.000812		mg/L	1	09/13/17 05:18 PM
IS: 1,4-Dichlorobenzene-d4	121	0	50-200		%REC	1	09/13/17 05:18 PM
IS: Acenaphthene-d10	108	0	50-200		%REC	1	09/13/17 05:18 PM
IS: Chrysene-d12	102	0	50-200		%REC	1	09/13/17 05:18 PM
IS: Naphthalene-d8	116	0	50-200		%REC	1	09/13/17 05:18 PM
IS: Perylene-d12	106	0	50-200		%REC	1	09/13/17 05:18 PM
IS: Phenanthrene-d10	93.4	0	50-200		%REC	1	09/13/17 05:18 PM
Surr: 2,4,6-Tribromophenol	75.5	0	42-124		%REC	1	09/13/17 05:18 PM
Surr: 2-Fluorophenol	62.3	0	20-120		%REC	1	09/13/17 05:18 PM
Surr: Phenol-d5	36.3	0	20-120		%REC	1	09/13/17 05:18 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: Weston Solutions, Inc.
Work Order: 1709084
Project: Touns - Harvey Sampling

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170807E

Sample ID	DCS1-81788	Batch ID:	81788	TestNo:	SW6020A	Units:	mg/L
SampType:	DCS	Run ID:	ICP-MS4_170807E	Analysis Date:	8/7/2017 11:00:00 AM	Prep Date:	8/4/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000499	0.00100	0.000500	0	99.8	80	120	0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Weston Solutions, Inc.
Work Order: 1709084
Project: Toups - Harvey Sampling

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170915A

The QC data in batch 82354 applies to the following samples: 1709084-01A

Sample ID MB-82354	Batch ID: 82354	TestNo: SW6020A	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 12:46:00 PM	Prep Date: 9/14/2017							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	<0.000300	0.00100								
IS: Bismuth	0.200		0.200		103	70	200			

Sample ID LCS-82354	Batch ID: 82354	TestNo: SW6020A	Units: mg/L							
SampType: LCS	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 12:48:00 PM	Prep Date: 9/14/2017							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.191	0.00100	0.200	0	95.7	80	120			
IS: Bismuth	0.200		0.200		98.5	70	200			

Sample ID LCSD-82354	Batch ID: 82354	TestNo: SW6020A	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 12:50:00 PM	Prep Date: 9/14/2017							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.189	0.00100	0.200	0	94.5	80	120	1.17	15	
IS: Bismuth	0.200		0.200		98.2	70	200	0	0	

Qualifiers: B Analyte detected in the associated Method Blank J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit RL Reporting Limit J Analyte detected between SDL and RL	DF Dilution Factor MDL Method Detection Limit R RPD outside accepted control limits S Spike Recovery outside control limits N Parameter not NELAC certified
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CLIENT: Weston Solutions, Inc.
Work Order: 1709084
Project: Toups - Harvey Sampling

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_170915A

Sample ID ICV-170915	Batch ID: R94175	TestNo: SW6020A	Units: mg/L							
SampType: ICV	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 10:40:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.0990	0.00100	0.100	0	99.0	90	110			
IS: Bismuth	0.200		0.200		99.9	70	200			

Sample ID LCVL-170915	Batch ID: R94175	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 10:50:00 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000924	0.00100	0.00100	0	92.4	70	130			
IS: Bismuth	0.200		0.200		99.0	70	200			

Sample ID CCV3-170915	Batch ID: R94175	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 12:36:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.190	0.00100	0.200	0	95.0	90	110			
IS: Bismuth	0.200		0.200		98.2	70	200			

Sample ID LCVL3-170915	Batch ID: R94175	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 12:42:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000897	0.00100	0.00100	0	89.7	70	130			
IS: Bismuth	0.200		0.200		100	70	200			

Sample ID CCV4-170915	Batch ID: R94175	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 1:24:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.188	0.00100	0.200	0	94.1	90	110			
IS: Bismuth	0.200		0.200		97.6	70	200			

Sample ID LCVL4-170915	Batch ID: R94175	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS4_170915A	Analysis Date: 9/15/2017 1:46:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000876	0.00100	0.00100	0	87.6	70	130			
IS: Bismuth	0.200		0.200		99.3	70	200			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Weston Solutions, Inc.
Work Order: 1709084
Project: Toups - Harvey Sampling

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS9_170822B

Sample ID: DCS2/LQV1-82088	Batch ID: 82088	TestNo: SW8270D	Units: mg/L
SampType: DCS2	Run ID: GCMS9_170822B	Analysis Date: 8/22/2017 5:32:00 PM	Prep Date: 8/22/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	0.000800	0.000800	0.00160	0	50.0	10	400	0	0	
IS: 1,4-Dichlorobenzene-d4	0.0800		0.0800		80.3	50	200	0	0	
IS: Acenaphthene-d10	0.0800		0.0800		68.7	50	200	0	0	
IS: Chrysene-d12	0.0800		0.0800		77.8	50	200	0	0	
IS: Naphthalene-d8	0.0800		0.0800		70.6	50	200	0	0	
IS: Perylene-d12	0.0800		0.0800		76.0	50	200	0	0	
IS: Phenanthrene-d10	0.0800		0.0800		65.8	50	200	0	0	
Surr: 2,4,6-Tribromophenol	54.6		80.00		68.2	42	124	0	0	
Surr: 2-Fluorophenol	45.4		80.00		56.8	20	120	0	0	
Surr: Phenol-d5	25.6		80.00		32.0	20	120	0	0	

<p>Qualifiers:</p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAC certified</p>
---	--

CLIENT: Weston Solutions, Inc.

Work Order: 1709084

Project: Toups - Harvey Sampling

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS9_170913C

The QC data in batch 82338 applies to the following samples: 1709084-01B

Sample ID	LCS-82338	Batch ID:	82338	TestNo:	SW8270D	Units:	mg/L
SampType:	LCS	Run ID:	GCMS9_170913C	Analysis Date:	9/13/2017 12:52:00 PM	Prep Date:	9/13/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	0.0224	0.000800	0.0400	0	56.0	38	120			
IS: 1,4-Dichlorobenzene-d4	0.0800		0.0800		127	50	200			
IS: Acenaphthene-d10	0.0800		0.0800		97.4	50	200			
IS: Chrysene-d12	0.0800		0.0800		70.7	50	200			
IS: Naphthalene-d8	0.0800		0.0800		119	50	200			
IS: Perylene-d12	0.0800		0.0800		72.0	50	200			
IS: Phenanthrene-d10	0.0800		0.0800		73.9	50	200			
Surr: 2,4,6-Tribromophenol	48.4		80.00		60.5	42	124			
Surr: 2-Fluorophenol	50.6		80.00		63.3	20	120			
Surr: Phenol-d5	33.6		80.00		42.0	20	120			

Sample ID	MB-82338	Batch ID:	82338	TestNo:	SW8270D	Units:	mg/L
SampType:	MBLK	Run ID:	GCMS9_170913C	Analysis Date:	9/13/2017 2:29:00 PM	Prep Date:	9/13/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	<0.000400	0.000800								
IS: 1,4-Dichlorobenzene-d4	0.0800		0.0800		107	50	200			
IS: Acenaphthene-d10	0.0800		0.0800		103	50	200			
IS: Chrysene-d12	0.0800		0.0800		81.3	50	200			
IS: Naphthalene-d8	0.0800		0.0800		116	50	200			
IS: Perylene-d12	0.0800		0.0800		85.0	50	200			
IS: Phenanthrene-d10	0.0800		0.0800		77.5	50	200			
Surr: 2,4,6-Tribromophenol	51.2		80.00		64.0	42	124			
Surr: 2-Fluorophenol	47.0		80.00		58.8	20	120			
Surr: Phenol-d5	27.0		80.00		33.8	20	120			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Weston Solutions, Inc.
Work Order: 1709084
Project: Toups - Harvey Sampling

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS9_170913C

Sample ID ICV-170913	Batch ID: R94145	TestNo: SW8270D	Units: mg/L
SampType: ICV	Run ID: GCMS9_170913C	Analysis Date: 9/13/2017 12:25:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	2.24	0.000800	2.50	0	89.6	80	120			
IS: 1,4-Dichlorobenzene-d4	4.00		4.00		112	50	200			
IS: Acenaphthene-d10	4.00		4.00		84.3	50	200			
IS: Chrysene-d12	4.00		4.00		93.3	50	200			
IS: Naphthalene-d8	4.00		4.00		103	50	200			
IS: Perylene-d12	4.00		4.00		92.5	50	200			
IS: Phenanthrene-d10	4.00		4.00		88.6	50	200			
Surr: 2,4,6-Tribromophenol	2160		2500		86.4	80	120			
Surr: 2-Fluorophenol	2410		2500		96.4	80	120			
Surr: Phenol-d5	2280		2500		91.2	80	120			

Qualifiers:	B Analyte detected in the associated Method Blank	DF Dilution Factor	
	J Analyte detected between MDL and RL	MDL Method Detection Limit	
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits	
	RL Reporting Limit	S Spike Recovery outside control limits	
	J Analyte detected between SDL and RL	N Parameter not NELAC certified	

CLIENT: Weston Solutions, Inc.
Work Order: 1709084
Project: Toups - Harvey Sampling

SQL SUMMARY REPORT

TestNo: SW6020A	MDL	SQL
Analyte	mg/L	mg/L
Lead	0.000300	0.00100

TestNo: SW8270D	MDL	SQL
Analyte	mg/L	mg/L
Pentachlorophenol	0.000400	0.000800

Qualifiers: SQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

GCMS9

For

DHL Work Order

1709084

GCMS9_170913C

For

DHL Work Order

1709084

Lab Data Review Check List
EPA Method 8270 / 625 - Semi-Volatile Organic Compounds

PROJECT AND BATCH NUMBERS ARE LISTED ON THE RUN LOG		Run ID: GCMS9_170913C				
		SOP: ORGANICS-SemiVol-01				
Review Item	Yes	No	N/A	2nd Level Review		
Data Folder Contents						
1. Is the Prep Batch Report included? Check and record the following: <i>Prep Start/End Dates, Sample Amounts, Bottle #s</i>	X				X	
2. Are the reagents and spikes listed on the Prep Batch Report current with a valid expiration date? <i>All standard/QC sample preparations shall be documented in LIMS</i>	X					
3. Is the Run Log and instrument sequence included? <i>Check the Test Code, Sample Type, Batch ID, and Analysis Date/Time</i>	X					
4. Is the System Verification - Tune Report included? <i>Date/Tme of Tune starts 12-hour analysis window</i>	X					
5. Is the Evaluate Continuing Calibration Report included?	X					
Daily Demonstration of Performance						
QC items that do not meet method/SOP/project requirements will be described on the run log. All variances that impact data quality will be described in the Variance/Comment Section on page 2.						
Review Item	Frequency	Limits	Pass	Fail (List Batch/Sample) **See Run Log**	2nd Level Review	
DFTPP Tune	Before ICAL Every 12 hours	See Tune Eval Report	Yes		X	
Breakdown Check/Tailing Factor	Prior to samples Every 12 hours	≤ 20% for DDT / Benzidine and PCP tailing factor < 2	Yes			
Initial Calibration Curve (ICAL) (minimum: 5 Standards)	Prior to samples and when ICV fails	Avg. RF - %RSD ≤15%(DoD), ≤20%(SF) Curve (COD) - R ² ≥ 0.990	Yes			
SSCV - (Second Source)	After calibration (ICAL)	70-130% (8270D/SF-QAPP) 80-120% (DoD)	Yes			
Review Item	Frequency	Limits	Pass	Fail	N/A	Review
ICV - (Daily Initial Cal Verification) 8270D - Corrective action required if >20% of target analytes have >20% drift	Every 12 hours	ISTDs Area% (50-200%) Surrogates %R (See LIMS) %R (80-120%) 8270D %R (80-120%) DoD %R (70-130%) SF-QAPP		X		X
Method Blank (MB) System Blank (SYS Blank)	Every Batch (MB) Daily (SYS BL)	< MQL (SF) / <½ RL (DoD) or <1/10 the sample/reg limit	X			
Lab Control Sample (LCS)	Every Batch	See LIMS	X			
Lab Control Sample Dup (LCSD)	Insufficient sample Sample Matrix	See LIMS			X	
LCSD - RPD	Every LCS/LCSD	≤ 20 (Aq) / ≤ 30 (Soil&DoD)			X	
Field Samples	Up to 20 per prep batch	ISTDs Area% (50-200%) Surrogates %R (See LIMS) RRT ± 0.06 RRT Standard Q value > 70 - check for #	X			
Matrix Spike (MS)	Every Batch/20 samples	See LIMS	X			
Matrix Spike Duplicate (MSD) (MSD is N/A for Method 625)	Every Prep Batch except Method 625		X			
MSD - RPD (MSD is N/A for Method 625)	Every MS/MSD except Method 625	≤ 20 (Aq) / ≤ 30 (Soil&DoD)	X			

Lab Data Review Check List

EPA Method 8270 / 625 - Semi-Volatile Organic Compounds

Review Item	Criteria	Yes	No	N/A	2nd Level Review
Sample Analysis 1. Are all sample hold times met?	7 days (Aq) - extraction	X			X
	14 days (Soil) - extraction			X	
	40 days analysis	X			
2. Are all manual integrations signed (Before & After) and printouts included ? Put in LIMS Comment Section <i>Include MI form for DoD work</i>	Before & After - signed Comment Section in LIMS MI Form - DoD only			X	X
3. Are all samples with concentrations > the highest standard used for calibration diluted and reanalyzed?				X	
Review Item #3 is N/A ONLY if all sample results are within Calibration range or NO if dilution is in different folder					
4. Is mass spectra reviewed/verified if Q value is <70 and/or # flag for results >MDL?	Q value <70 - All hits	X			X
5. Are ALL reported analytes > MDL (+ J flags) highlighted by the analyst?		X		Confirm with analyst if LIMS result does not match LabCore	
VARIANCE REPORT					
QC items that do not meet method/SOP/project requirements will be described on the run log. All variances that impact data quality will be described in this section.					
NON-CONFORMANCES / VARIANCE 1. Are all non-conformances included and noted?	All deviations from the method and SOP that affect data quality			X	X
2. Are all corrective actions included?				X	
3. Does the variance require approval by the Technical Director/General Manager/QA Manager?				X	

TECHNICAL DIRECTOR / QA MANAGER APPROVAL
SIGNATURE AND DATE STAMP:

Description and Corrective Actions of QC items that do not meet method/SOP/project requirements:

****INCLUDE VARIANCE ITEM / REASON / CORRECTIVE ACTION / IMPACT ON DATA****

VARIANCE ITEM	REASON	CORRECTIVE ACTION
<input type="checkbox"/> Hold Time exceeded (7D/14D-Ext/40D-Analysis)	<input type="checkbox"/> Sample Received out of HT	<input type="checkbox"/> Reanalyze QC to confirm
<input type="checkbox"/> ICV out of control (± 20%-DoD / 30%-SF-QAPP)	<input type="checkbox"/> Carryover from previous run	<input type="checkbox"/> Recalibrate
<input type="checkbox"/> MB/SYS BL out of control (> MDL / >½ RL)	<input type="checkbox"/> Cross contamination	<input type="checkbox"/> Reprep/Reanalyze sample
<input type="checkbox"/> LCS <input type="checkbox"/> LCSD out of control (See LIMS)	<input type="checkbox"/> Lab Artifact	<input type="checkbox"/> Reprep/Reanalyze Batch
<input type="checkbox"/> RPD out of control for LCS/LCSD (>20/30)	<input type="checkbox"/> Prep Spike error (describe)	<input type="checkbox"/> Reanalyze Batch/Sample/QC
<input type="checkbox"/> MS <input type="checkbox"/> MSD out of control (See LIMS)	<input type="checkbox"/> High Levels of target analytes	<input type="checkbox"/> Verify H2O/reagents are clean
<input type="checkbox"/> RPD out of control for MS/MSD (>20/30)	<input type="checkbox"/> High Levels of non-targets	<input type="checkbox"/> Reanalyze sample to confirm
<input type="checkbox"/> Internal Standard(s) out of control	<input type="checkbox"/> Insufficient sample for QC	<input type="checkbox"/> Sample results ND w/ dilution
<input type="checkbox"/> Multiple Surrogates out of control	<input type="checkbox"/> Prep Error	<input type="checkbox"/> Client notified and approved
<input type="checkbox"/> No MS/MSD prepared - LCS/LCSD used instead	<input type="checkbox"/> Analytical Error	<input type="checkbox"/> Flag data / Case narrative
<input type="checkbox"/> Missing QC (other than MS/MSD)	<input type="checkbox"/> Client Request	<input type="checkbox"/> Instrument Maintenance
<input type="checkbox"/> QC sample(s) was mis-spiked	<input type="checkbox"/> Other (describe below)	<input type="checkbox"/> Accept data
<input type="checkbox"/> Other (describe below)		
	<input type="checkbox"/> Cannot reanalyze (HT out/Lack of Sample)	

General Comments and Impact on Data:

Analyst: *Jawuan Garcia*

Date of Completion: 9/14/2017

Second-Level Review: *Janice Whitt*

Date Stamp: 9/14/2017



Run ID: GCMS9_170913C**Run No.:** 94145**Analytical Run Date:** 9/13/2017**InstrumentID:** GCMS9**Analyst:** Lauren Garcia**Column:** ZB-SV (30m x 0.25mm ID x 0.25µm df)**Calibration ID:** 778**Column ID:** 0.25mm**Column Length:** 30m**Cal Comments:** SV170606.M, No MI.

SampID	DF	TestCode	SampType	Batch ID	Analysis Date/Time	Q	Comments
DFTPP-170913	1	8270_W_LL	TUNE	R94145	9/13/2017 12:01:00 PM		
ICV-170913	1	8270_W_LL	ICV	R94145	9/13/2017 12:25:00 PM		High recovery for 2,4-Dinitrophenol and 4-Nitroaniline, LCS ok.
LCS-82338	1	8270_W_LL	LCS	82338	9/13/2017 12:52:00 PM		
1709073-01BMS	1	8270_W_LL	MS	82338	9/13/2017 1:17:00 PM		
1709073-01BMSD	1	8270_W_LL	MSD	82338	9/13/2017 1:41:00 PM		
MB-82338	1	8270_W_LL	MBLK	82338	9/13/2017 2:29:00 PM		
1709073-01B	1	8270_W_LL	SAMP	82338	9/13/2017 3:41:00 PM		DNR-QC reference only.
1709084-01B	1	8270_W_LL	SAMP	82338	9/13/2017 5:18:00 PM		
1709091-01B	1	8270_W_LL	SAMP	82338	9/13/2017 7:28:00 PM		

Std ID	Std Name	Type	Exp. Date
DFTPP170524	2.5 PPM 525 TUNE STD.	TUNE	05/24/2018
SVICV170803	2.5 PPM ICV Standard	ICV	10/31/2017
SVIS170104-4	4000 PPM INTERNAL STANDARD	ALL	11/27/2017

Sequence Name: C:\msdchem\1\sequence\170913.s

Comment:

Operator:

Data Path: C:\MSDCHEM\1\DATA\170913\

Instrument Control Pre-Seq Cmd:

Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:

Data Analysis Post-Seq Cmd:

Method Sections To Run

Full Method
 Reprocessing Only

Sequence Barcode Options

On Mismatch, Inject Anyway
 On Mismatch, Don't Inject
 Barcode Disabled

Line	Sample Name/Misc Info
1) Sample	2 DFTPP-170913
Datafile	17091304
Method	DFTPPLVIBF
2) Sample	3 17091305 SV170606 ICV-170913
3) Sample	4 17091306 SV170606 LCS-82338/LCS-82349
4) Sample	5 17091307 SV170606 1709073-01BMS
5) Sample	6 17091308 SV170606 1709073-01BMSD
6) Sample	7 17091309 SV170606 SB-170913
7) Sample	8 17091310 SV170606 MB-82338/MB-82349
8) Sample	9 17091311 SV170606 1709066-01C
9) Sample	10 17091312 SV170606 1709072-01B
10) Sample	11 17091313 SV170606 1709073-01B
11) Sample	12 17091314 SV170606 1709074-01B
12) Sample	13 17091315 SV170606 1709075-01B
13) Sample	14 17091316 SV170606 1709075-02B
14) Sample	15 17091317 SV170606 1709084-01B
15) Sample	16 17091318 SV170606 ICV-170913-NP
16) Sample	17 17091319 SV170606 LCS-82349-NP LCS-NP-82349
17) Sample	18 17091320 SV170606 1709081-01B
18) Sample	19 17091321 SV170606 1709090-02A
19) Sample	20 17091322 SV170606 1709091-01B

DHL Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **9/13/2017 9:00:00 AM**

Digestion:

Prep End Date: **9/13/2017 12:03:00 PM**

Prep Batch **82338** Prep Code: **3510_B**

Technician: **Alice Dacic**

Prep Factor Units:
mL/mL

Equipment List
Balance # 25
Turbo-Vap # 1,3
Balance #29

Sample ID	Matrix	pH	SampAmt	Fin Vol	Factor	Bottle #	Vessel	Cleanup
1709066-01C	Aqueous	6, <2, >11	522.8	10	0.019	1 of 2		
1709072-01B	Leachate	4, <2, >11	54.4	10	0.184	1 of 1		
tcp extraction was done 9/9/2017.								
1709073-01B	Leachate	5, <2, >11	55.6	10	0.180	1 of 1		
emulsions tcp extraction was done 9/9/2017.								
1709073-01BMS	Leachate	5, <2, >11	51.8	10	0.193	1 of 1		
emulsions								
1709073-01BMSD	Leachate	5, <2, >11	51.3	10	0.195	1 of 1		
emulsions								
1709074-01B	Leachate	7, <2, >11	52.3	10	0.191	1 of 1		
emulsions tcp extraction was done 9/9/2017.								
1709075-01B	Leachate	5, <2, >11	57.1	10	0.175	1 of 1		
tcp extraction was done 9/9/2017.								
1709075-02B	Leachate	5, <2, >11	58.3	10	0.172	1 of 1		
tcp extraction was done 9/9/2017.								
1709084-01B	Aqueous	6, <2, >11	492.5	10	0.020	1 of 2		
emulsions								
LCS-82338	Aqueous	6, <2, >11	500	10	0.020	of 1		
MB-82338	Aqueous	6, <2, >11	500	10	0.020	of 1		

Do not use this page, see below. jw 9/14/2017

Number	Reagent Name	Amt	Units	Exp. Date	Spk ID	Spike Name	SampType	Amt (mL or g)	Exp. Date
7180	pH paper 11-13	1	paper	05/14/2023	SVPREP170828	40 PPM Surrogate Standard	ALL	1	11/26/2017
8086	pH paper 0-3	1	paper	12/15/2025	SVPREP170831-1	20 PPM Spike #1 Base/Neutrals	LCS/LCSD	1	11/29/2017
11181	Sulfuric Acid (Certified ACS PLUS)	2	ml	02/27/2027	SVPREP170831-2	20 PPM Spike #2 Benzidines	LCS/LCSD	1	11/29/2017
11404	Purified Sodium Sulfate	20	g	05/18/2027	SVPREP170831-3	20 PPM Spike #3 Amines	LCS/LCSD	1	11/29/2017
11448	Methylene Chloride	140	ml	06/01/2027	SVPREP170831-4	20 PPM Spike #4 Acids	LCS/LCSD	1	11/29/2017
11557	Whatman 41 Filter	1	filter	07/06/2027	SVPREP170831-5	20 PPM Spike #5	LCS/LCSD	1	11/29/2017
11644	pH paper 0-14	1	paper	10/30/2019					
11689	5M Sodium Hydroxide Solution	20	ml	02/17/2018					

DHL Analytical, Inc.

PREP BATCH REPORT

Page: 1 of 1

Prep Start Date: 9/13/2017 9:00:00 AM

Digestion:

Prep End Date: 9/13/17 ~~12:08 PM~~ 4:15 PM

Prep Batch 82338 Prep Code: 3510_B

Technician: Alice Dacic

Prep Factor Units:
mL/mL

Equipment List

Balance # 25
Turbo-Vap # 1,3
Balance #29

Sample ID	Matrix	pH	SampAmt	Fin Vol	Factor	Bottle #	Vessel	Cleanup
1709066-01C	Aqueous	6, <2, >11	500	10	0.020	1 of 2	800.3 - 277.5 = 522.8	
1709072-01B	Leachate	4,	500	10	0.020	1 of 1	54.4	
	0.986							
	tclp extraction was done 9/9/2017.							
1709073-01B	Leachate	5,	500	10	0.020	1 of 1	55.6	emulsions
	0.778							
	tclp extraction was done 9/9/2017.							
1709073-01BMS	Leachate	5,	500	10	0.020	1 of 1	51.8	
	0.778							
1709073-01BMSD	Leachate	5,	500	10	0.020	1 of 1	51.3	
	0.778							
1709074-01B	Leachate	7,	500	10	0.020	1 of 1	52.3	emulsions
	0.820							
	tclp extraction was done 9/9/2017.							
1709075-01B	Leachate	5,	500	10	0.020	1 of 1	57.1	
	0.778							
	tclp extraction was done 9/9/2017.							
1709075-02B	Leachate	5,	500	10	0.020	1 of 1	58.3	
	0.778							
	tclp extraction was done 9/9/2017.							
LCS-82338	Aqueous	6, ↓	500	10	0.020	of		
MB-82338	Aqueous	6, ↓	500	10	0.020	of		

1709084-01B 6, <2, >11

added @ 10:45 AM 1 of 2 767.1 - 274.6 = 492.5 emulsions

AD 9/13/17
~~1709072-01B~~ 4, |

added @ 2:10 PM ~~to 1~~ ~~52.3~~

1709091-01B 5, <2, >11

1 of 2 AD 9/13/17 517.5 emulsions after base add'n

Number	Reagent Name	Amt	Units	Exp. D:	Spk.ID	Spike Name	SampType	Amt (mL or g)	Exp. Date
7180	pH paper 11-13	1	paper	05/14/2023	SVPREP170828	40 PPM Surrogate Standard	ALL	1	11/26/2017
8086	pH paper 0-3	1	paper	12/15/2025	SVPREP170831-1	20 PPM Spike #1 Base/Neutrals	LCS/LCSD	LCS/MS/MSD	11/29/2017
11181	Sulfuric Acid (Certified ACS PLUS)	2	ml	02/27/2027	SVPREP170831-2	20 PPM Spike #2 Benzidines	LCS/LCSD	1	11/29/2017
11404	Purified Sodium Sulfate	20	g	05/18/2027	SVPREP170831-3	20 PPM Spike #3 Amines	LCS/LCSD	1	11/29/2017
11448	Methylene Chloride	140	ml	06/01/2027	SVPREP170831-4	20 PPM Spike #4 Acids	LCS/LCSD	1	11/29/2017
11557	Whatman 41 Filter	1	filter	07/06/2027	SVPREP170831-5	20 PPM Spike #5	LCS/LCSD	1	11/29/2017
11644	pH paper 0-14	1	paper	10/30/2019					
11689	5M Sodium Hydroxide Solution	20	ml	02/17/2018					

REVIEWED BY

By Janice Whitt at 9:29:56 AM, 9/14/2017

MP 9/13/17

AD 9/13/17

JJ 9/13/17

DHL Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **9/13/2017 9:00:00 AM**

Digestion:

Prep End Date: **9/13/2017 4:15:00 PM**

Prep Batch **82338** Prep Code: **3510_B**

Technician: **Alice Dacic**

Prep Factor Units:
mL/mL

Equipment List
Balance # 25
Turbo-Vap # 1,3
Balance #29

Sample ID	Matrix	pH	SampAmt	Fin Vol	Factor	Bottle #	Vessel	Cleanup
1709066-01C	Aqueous	6, <2, >11	522.8	10	0.019	1 of 2		
1709072-01B	Leachate	4, <2, >11	54.4	10	0.184	1 of 1		
tcp extraction was done 9/9/2017.								
1709073-01B	Leachate	5, <2, >11	55.6	10	0.180	1 of 1		
emulsions tcp extraction was done 9/9/2017.								
1709073-01BMS	Leachate	5, <2, >11	51.8	10	0.193	1 of		
emulsions								
1709073-01BMSD	Leachate	5, <2, >11	51.3	10	0.195	1 of		
emulsions								
1709074-01B	Leachate	7, <2, >11	52.3	10	0.191	1 of 1		
emulsions tcp extraction was done 9/9/2017.								
1709075-01B	Leachate	5, <2, >11	57.1	10	0.175	1 of 1		
tcp extraction was done 9/9/2017.								
1709075-02B	Leachate	5, <2, >11	58.3	10	0.172	1 of 1		
tcp extraction was done 9/9/2017.								
1709084-01B	Aqueous	6, <2, >11	492.5	10	0.020	1 of 2		
emulsions								
1709091-01B	Aqueous	5, <2, >11	517.5	10	0.019	1 of 2		
emulsions after base addition								
LCS-82338	Aqueous	6, <2, >11	500	10	0.020	of		
MB-82338	Aqueous	6, <2, >11	500	10	0.020	of		

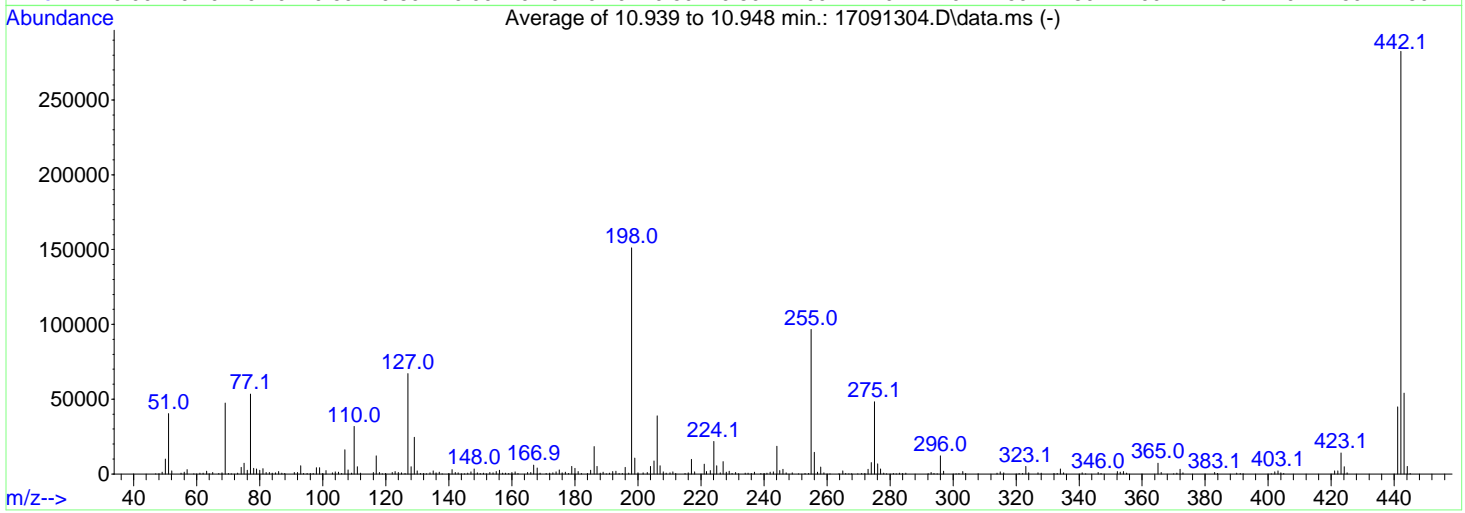
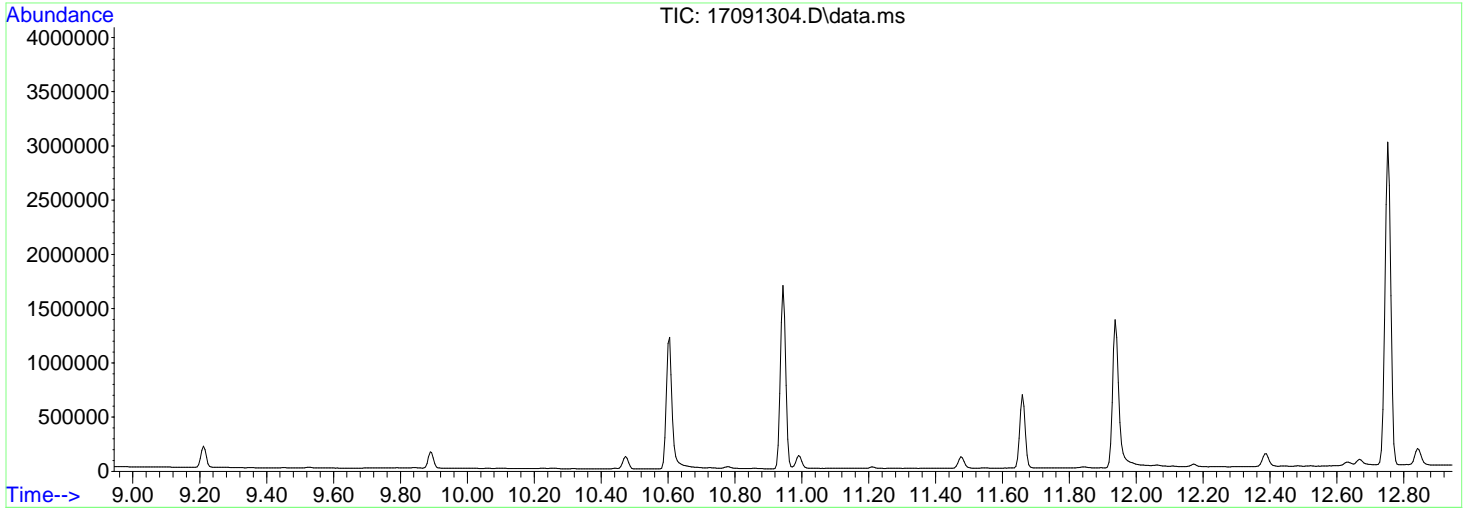
Number	Reagent Name	Amt	Units	Exp. Date	Spk ID	Spike Name	SampType	Amt (mL or g)	Exp. Date
7180	pH paper 11-13	1	paper	05/14/2023	SVPREP170828	40 PPM Surrogate Standard	ALL	1	11/26/2017
8086	pH paper 0-3	1	paper	12/15/2025	SVPREP170831-1	20 PPM Spike #1 Base/Neutrals	LCS/MS/MSD	1	11/29/2017
11181	Sulfuric Acid (Certified ACS PLUS)	2	ml	02/27/2027	SVPREP170831-2	20 PPM Spike #2 Benzidines	LCS/MS/MSD	1	11/29/2017
11404	Purified Sodium Sulfate	20	g	05/18/2027	SVPREP170831-3	20 PPM Spike #3 Amines	LCS/MS/MSD	1	11/29/2017
11448	Methylene Chloride	140	ml	06/01/2027	SVPREP170831-4	20 PPM Spike #4 Acids	LCS/MS/MSD	1	11/29/2017
11557	Whatman 41 Filter	1	filter	07/06/2027	SVPREP170831-5	20 PPM Spike #5	LCS/MS/MSD	1	11/29/2017
11644	pH paper 0-14	1	paper	10/30/2019					
11689	5M Sodium Hydroxide Solution	20	ml	02/17/2018					

REVIEWED BY
By Janice W... 9:30:03 AM, 9/14/2017
30

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091304.D
 Acq On : 13 Sep 2017 12:01 pm
 Operator :
 Sample : DFTPP-170913
 Misc : TUNE
 ALS Vial : 2 Sample Multiplier: 1

Integration File: TIC2.P

Method : C:\msdchem\1\METHODS\DFTPLVIBF.M
 Title :
 Last Update : Thu Oct 20 15:23:02 2016



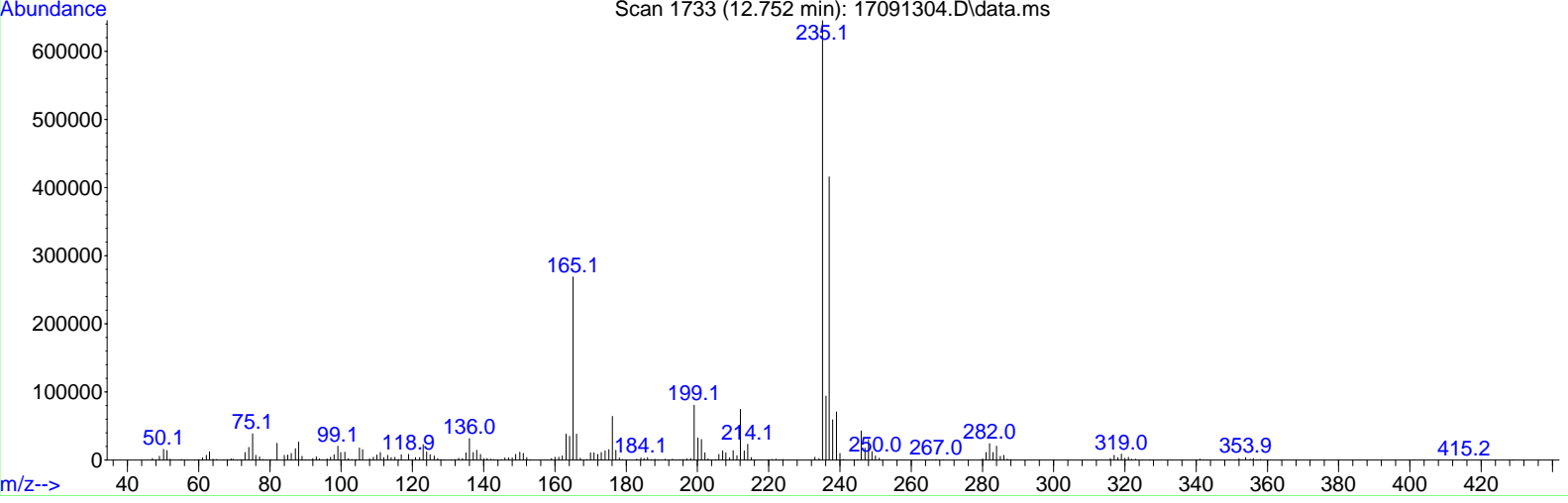
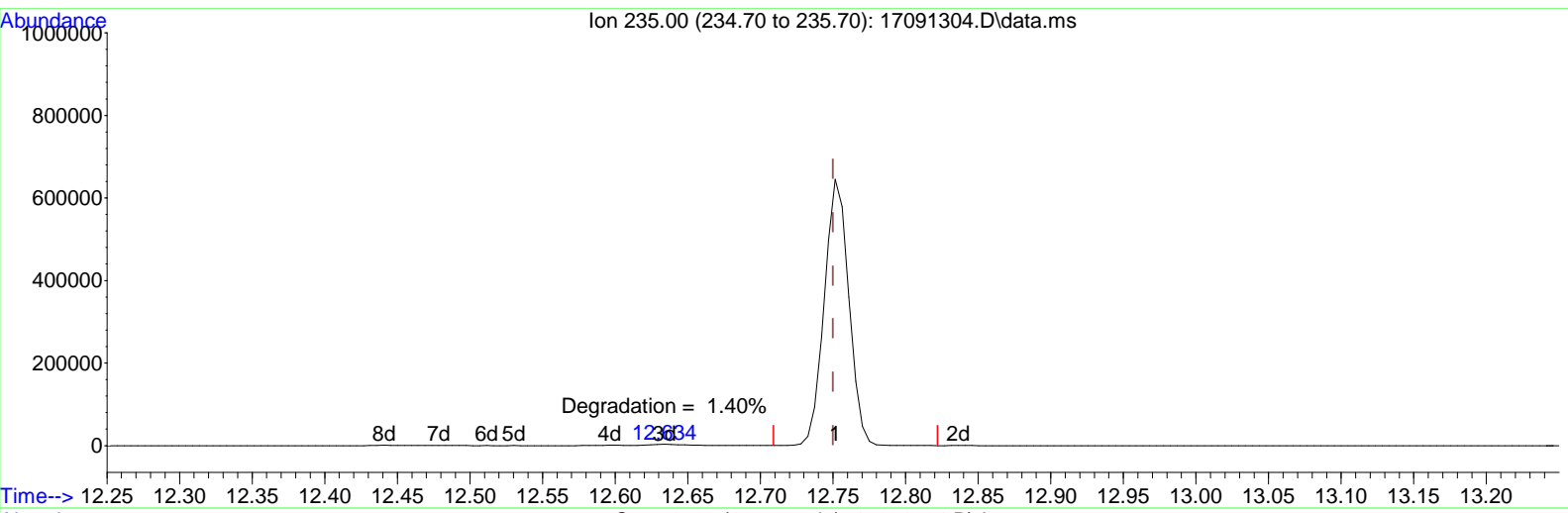
AutoFind: Scans 1348, 1349, 1350; Background Corrected with Scan 1341

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	26.7	40311	PASS
68	69	0.00	2	1.5	707	PASS
70	69	0.00	2	0.8	366	PASS
127	198	10	80	44.3	67032	PASS
197	198	0.00	2	0.4	539	PASS
198	198	100	100	100.0	151189	PASS
199	198	5	9	7.0	10541	PASS
275	198	10	60	31.9	48179	PASS
365	198	1	200	4.7	7179	PASS
441	442	0.01	24	15.9	44875	PASS
442	198	50	400	186.9	282603	PASS
443	442	15	24	19.2	54123	PASS

REVIEWED BY
 By Janice Whitt at 9:19:22 AM, 9/14/2017

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091304.D
 Acq On : 13 Sep 2017 12:01 pm
 Operator :
 Sample : DFTPP-170913
 Misc : TUNE
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 12:19:28 2017
 QMeth File : DFTPPLVIBF.M
 InstName : GCMS9
 Quant Title :
 QLast Update : Thu Oct 20 15:23:02 2016
 Response via : Initial Calibration



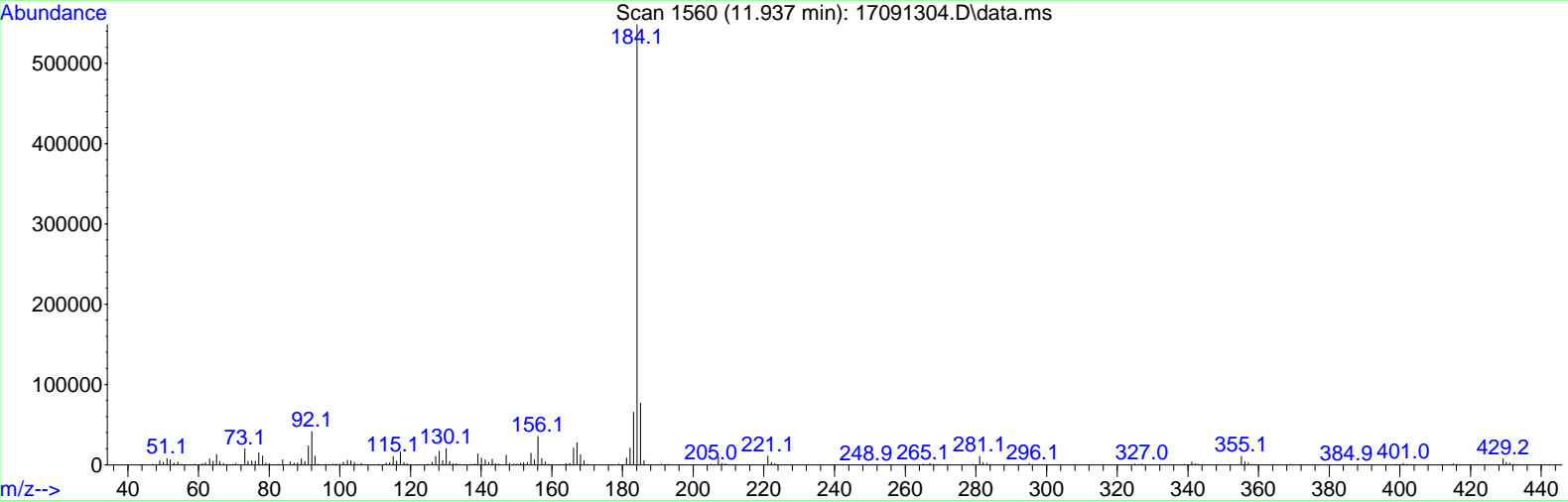
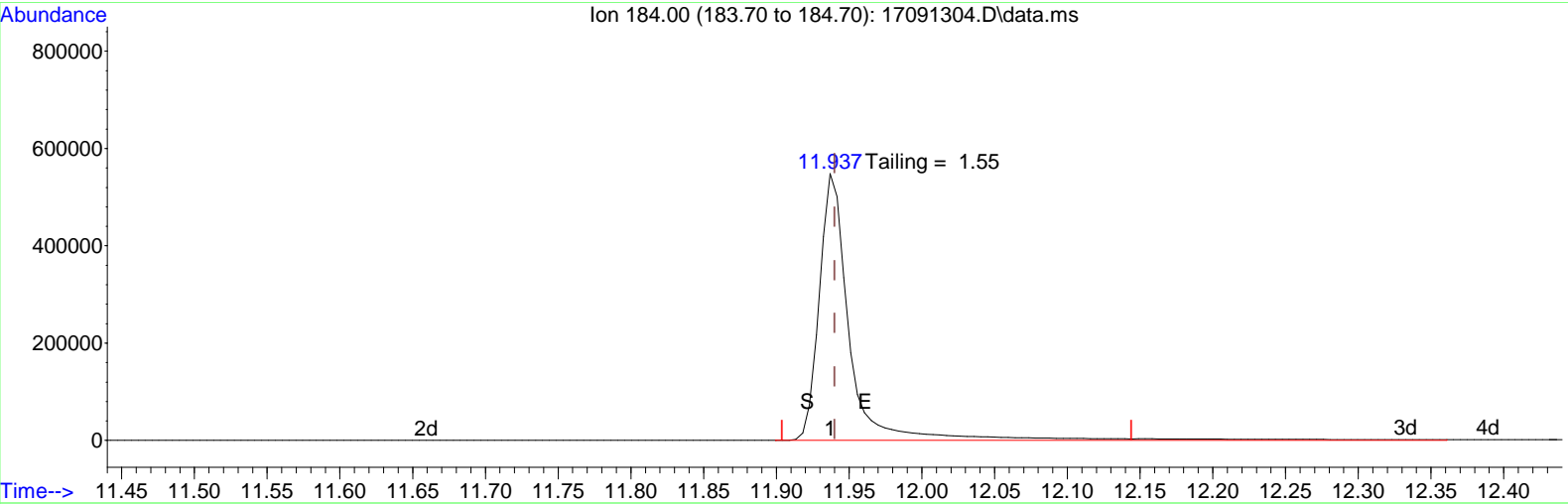
TIC: 17091304.D\data.ms

(1)	DDT		
12.752min (+ 0.002)		0.000	
response	758151		Qvalue 100
Ion	Exp%	Act%	
235.00	100.00	100.00	
0.00	11.50	0.00	
0.00	11.50	0.00	
0.00	11.50	0.00	

REVIEWED BY
 By Janice Whitt at 9:19:35 AM, 9/14/2017

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091304.D
 Acq On : 13 Sep 2017 12:01 pm
 Operator :
 Sample : DFTPP-170913
 Misc : TUNE
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 12:19:28 2017
 QMeth File : DFTPPLVIBF.M
 InstName : GCMS9
 Quant Title :
 QLast Update : Thu Oct 20 15:23:02 2016
 Response via : Initial Calibration



TIC: 17091304.D\data.ms

(4) Benzidine

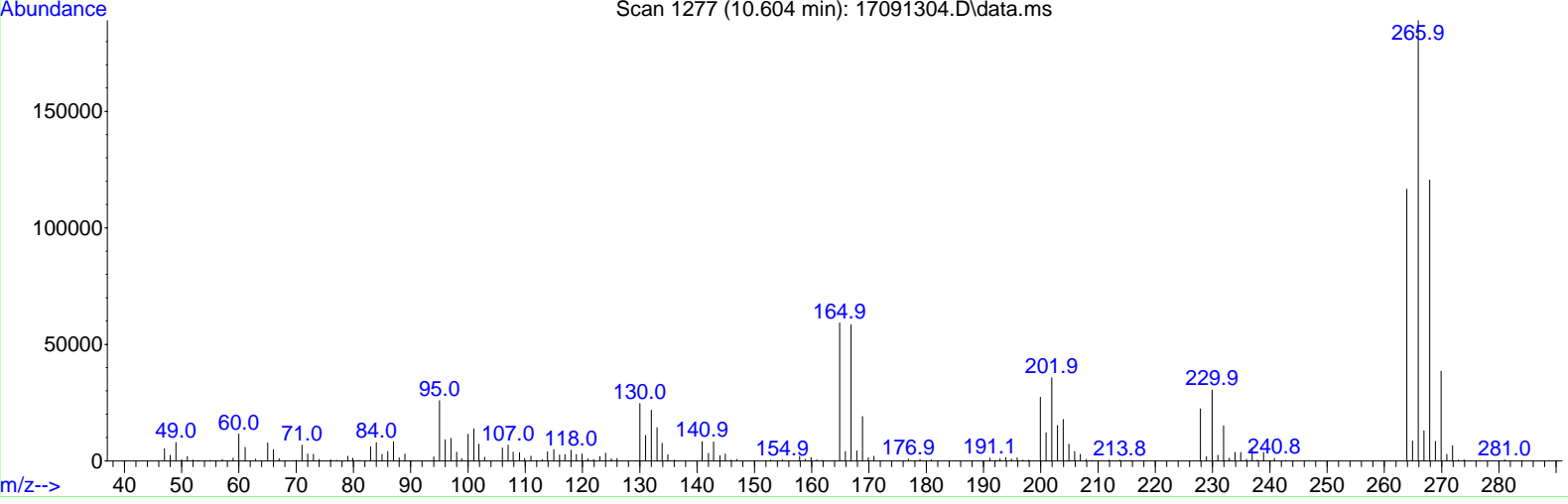
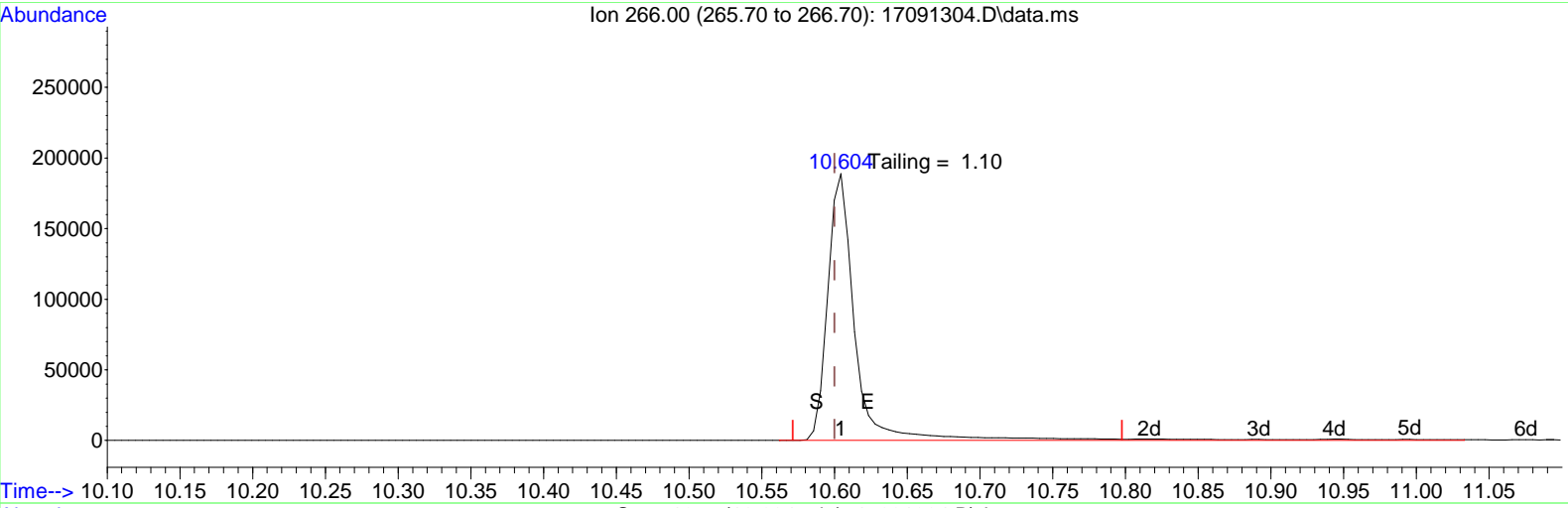
11.937min (-0.003) 0.000

response 797675 Qvalue 100

Ion	Exp%	Act%
184.00	100.00	100.00
0.00	11.50	0.00
0.00	11.50	0.00
0.00	11.50	0.00

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091304.D
 Acq On : 13 Sep 2017 12:01 pm
 Operator :
 Sample : DFTPP-170913
 Misc : TUNE
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 13 12:19:28 2017
 QMeth File : DFTPPLVIBF.M
 InstName : GCMS9
 Quant Title :
 QLast Update : Thu Oct 20 15:23:02 2016
 Response via : Initial Calibration



TIC: 17091304.D\data.ms

(5) Pentachlorophenol

10.604min (+ 0.004) 0.000

response 247742 Qvalue 100

Ion	Exp%	Act%
266.00	100.00	100.00
0.00	10.20	0.00
0.00	10.20	0.00
0.00	10.20	0.00

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091305.D
 Acq On : 13 Sep 2017 12:25 pm
 Operator :
 Sample : ICV-170913
 Misc : ICV
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:34:26 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.024	152	865088	4.00	mg/kg	112
22) Naphthalene-d8	8.062	136	3543712	4.00	mg/kg	103
42) Acenaphthene-d10	9.528	164	1604484	4.00	mg/kg	84
65) Phenanthrene-d10	10.780	188	3642153	4.00	mg/kg	89
80) Chrysene-d12	13.314	240	5017675	4.00	mg/kg	93
89) Perylene-d12	14.986	264	4808296	4.00	mg/kg	93
System Monitoring Compounds						
7) 2-Fluorophenol	5.876	112	487969	2.41	mg/kg	0.00
Spiked Amount	4.000	Range	20 - 120	Recovery	=	60.25%
9) Phenol-d5	6.705	99	776488	2.28	mg/kg	0.00
Spiked Amount	4.000	Range	20 - 120	Recovery	=	57.00%
23) Nitrobenzene-d5	7.466	82	665717	2.49	mg/kg	0.00
Spiked Amount	4.000	Range	41 - 120	Recovery	=	62.25%
47) 2-Fluorobiphenyl	8.943	172	1562242	2.51	mg/kg	0.00
Spiked Amount	4.000	Range	48 - 120	Recovery	=	62.75%
69) 2,4,6-Tribromophenol	10.187	330	376243	2.16	mg/kg	0.00
Spiked Amount	4.000	Range	42 - 124	Recovery	=	54.00%
83) 4-Terphenyl-d14	12.170	244	2346335	2.32	mg/kg	-0.01
Spiked Amount	4.000	Range	51 - 135	Recovery	=	58.00%
Target Compounds						
2) N-nitrosodimethylamine	4.733	74	273427	2.297	mg/kg	95
3) Pyridine	4.782	79	534925	2.255	mg/kg	96
4) N-nitrosodiethylamine	6.064	102	291220	2.618	mg/kg	97
5) Benzaldehyde	6.679	77	480344	2.571	mg/kg	99
6) Aniline	6.761	93	840709	2.318	mg/kg	98
8) bis(2-Chloroethyl)ether	6.799	95	183997	2.577	mg/kg	97
10) Phenol	6.716	94	719218	2.439	mg/kg	98
11) 2-Chlorophenol	6.859	128	632699	2.393	mg/kg	99
12) 1,3-Dichlorobenzene	6.979	146	661106	2.527	mg/kg	99
13) 1,4-Dichlorobenzene	7.039	146	705677	2.397	mg/kg	100
14) 1,2-Dichlorobenzene	7.162	146	695651	2.441	mg/kg	99
15) Benzyl alcohol	7.121	108	401037	2.681	mg/kg	98
16) bis(2-chloroisopropyl)...	7.218	45	753254	2.299	mg/kg	99
17) 2-Methylphenol	7.196	108	557577	2.244	mg/kg	100
18) Hexachloroethane	7.436	117	236842	2.383	mg/kg	98
19) N-Nitrosodi-n-propylamine	7.327	70	422164	2.191	mg/kg	99
20) 4-Methylphenol	7.312	108	578754	2.243	mg/kg	99
21) Acetophenone	7.338	105	968798	2.707	mg/kg	97
24) Nitrobenzene	7.481	77	599625	2.651	mg/kg	99
25) Isophorone	7.668	82	1048932	2.379	mg/kg	99
26) 2-Nitrophenol	7.740	139	351745	2.748	mg/kg	97
27) 2,4-Dimethylphenol	7.747	107	567448	2.418	mg/kg	99
28) bis(2-Chloroethoxy)met...	7.826	93	741996	2.569	mg/kg	99
29) Benzoic acid	7.811	105	239656	1.754	mg/kg	98
30) 2,4-Dichlorophenol	7.931	162	600941	2.376	mg/kg	100
31) 1,2,4-Trichlorobenzene	8.006	180	711422	2.614	mg/kg	99
32) Naphthalene	8.081	128	2114191	2.654	mg/kg	100
33) 4-Chloroaniline	8.107	127	718634	2.415	mg/kg	100
34) 2,6-Dichlorophenol	8.114	162	591060	2.569	mg/kg	100
35) Hexachlorobutadiene	8.167	225	447429	2.559	mg/kg	99
36) N-nitrosodi-n-butylamine	8.366	116	91941	1.958	mg/kg	100
37) Caprolactam	8.407	113	148594	2.432	mg/kg	95
38) 4-Chloro-3-methylphenol	8.489	107	441661	2.280	mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.785	216	751561	2.130	mg/kg	100

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091305.D
 Acq On : 13 Sep 2017 12:25 pm
 Operator :
 Sample : ICV-170913
 Misc : ICV
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:34:26 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Aug 29 10:36:46 2017

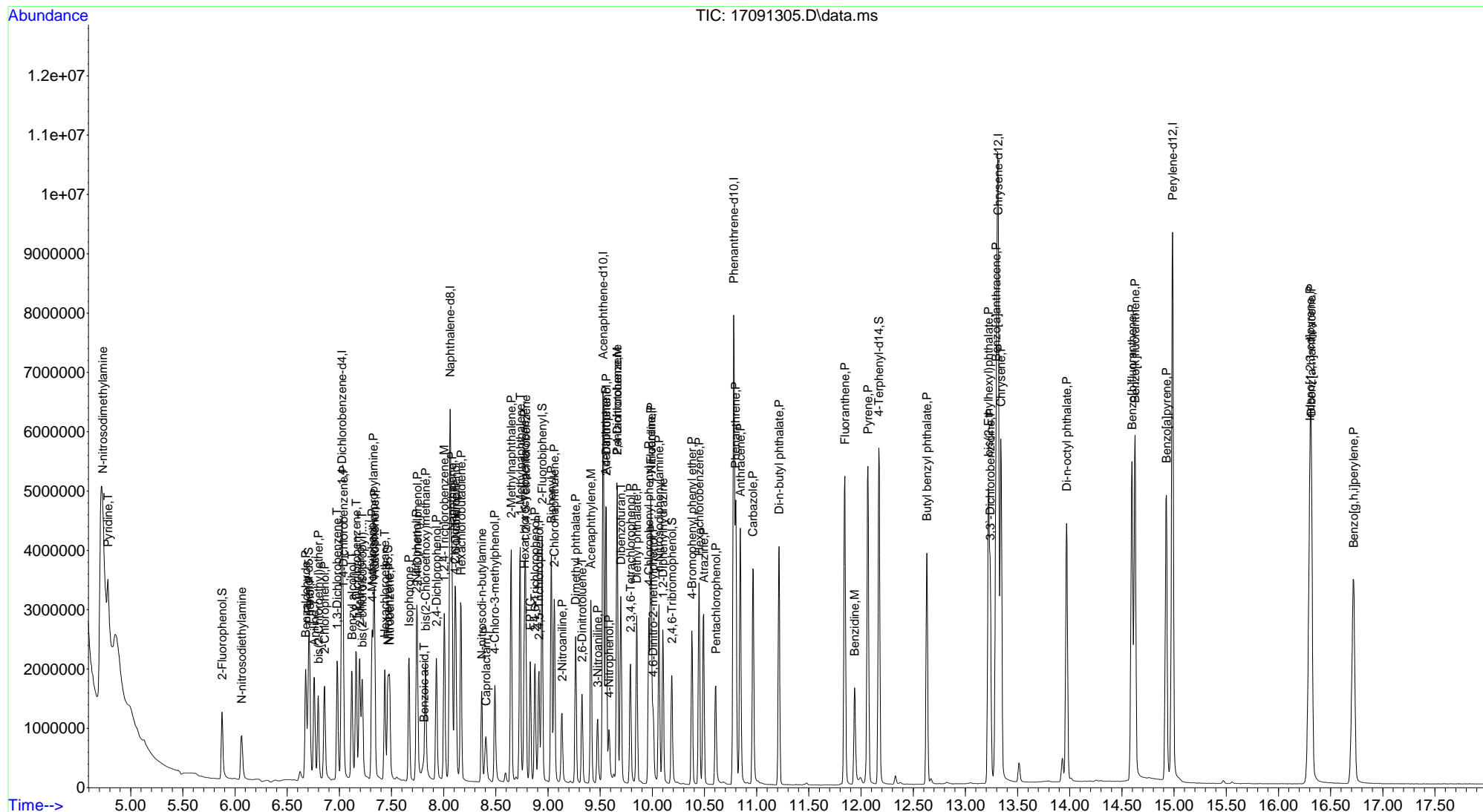
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.647	142	1320847	2.306	mg/kg	100
41) 1-Methylnaphthalene	8.733	142	1287951	2.221	mg/kg	100
43) Hexachlorocyclopentadiene	8.774	237	432807	2.656	mg/kg	99
44) EPTC	8.830	128	404671	2.428	mg/kg	100
45) 2,4,6-Trichlorophenol	8.875	196	386786	2.816	mg/kg	100
46) 2,4,5-Trichlorophenol	8.913	196	405135	2.493	mg/kg	99
48) Biphenyl	9.033	154	1488887	2.887	mg/kg	100
49) 2-Chloronaphthalene	9.059	162	1169757	2.732	mg/kg	99
50) 2-Nitroaniline	9.134	138	328620	2.690	mg/kg	100
51) Acenaphthylene	9.411	152	1645866	2.742	mg/kg	100
52) Dimethyl phthalate	9.265	163	1314478	2.652	mg/kg	99
53) 2,6-Dinitrotoluene	9.325	165	264286	2.589	mg/kg	98
54) Acenaphthene	9.554	153	1265934	2.473	mg/kg	98
55) 3-Nitroaniline	9.475	138	264041	2.774	mg/kg	99
56) 2,4-Dinitrophenol	9.558	184	135037	3.106	mg/kg#	55
57) Dibenzofuran	9.696	168	1609106	2.492	mg/kg	99
58) 2,4-Dinitrotoluene	9.663	165	395054	2.752	mg/kg	83
59) 4-Nitrophenol	9.584	109	124338	2.800	mg/kg	96
60) 2,3,4,6-Tetrachlorophenol	9.790	232	354226	2.526	mg/kg	99
61) Fluorene	9.985	166	1303943	2.626	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.966	204	645748	2.592	mg/kg	99
63) Diethyl phthalate	9.850	149	1349238	2.747	mg/kg	100
64) 4-Nitroaniline	9.989	138	287120	3.088	mg/kg	96
66) 4,6-Dinitro-2-methylph...	10.007	198	223627	2.532	mg/kg	92
67) 1,2-Diphenylhydrazine	10.101	182	295473	2.348	mg/kg	99
68) n-Nitrosodiphenylamine	10.064	169	909327	2.571	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.379	248	465993	2.441	mg/kg	100
71) Atrazine	10.491	200	459324	2.852	mg/kg	100
72) Hexachlorobenzene	10.450	284	643895	2.410	mg/kg	97
73) Pentachlorophenol	10.607	266	302765	2.240	mg/kg	100
74) Phenanthrene	10.798	178	2042529	2.470	mg/kg	100
75) Anthracene	10.843	178	2081290	2.484	mg/kg	100
76) Pentachlorobenzene	9.663	250	752586	2.411	mg/kg	99
77) Carbazole	10.963	167	1967004	2.653	mg/kg	100
78) Di-n-butyl phthalate	11.215	149	2621081	2.537	mg/kg	99
79) Fluoranthene	11.844	202	2760868	2.644	mg/kg	100
81) Benzidine	11.938	184	893867	2.202	mg/kg	99
82) Pyrene	12.065	202	2851224	2.505	mg/kg	100
84) Butyl benzyl phthalate	12.632	149	1211534	2.588	mg/kg	99
85) 3,3'-Dichlorobenzidine	13.239	252	1107370	2.343	mg/kg	100
86) Benzo[a]anthracene	13.295	228	3023939	2.555	mg/kg	100
87) Chrysene	13.340	228	2744154	2.432	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.220	149	1882507	2.510	mg/kg	99
90) Di-n-octyl phthalate	13.970	149	3167330	2.652	mg/kg	100
91) Benzo[b]fluoranthene	14.596	252	3151682	2.702	mg/kg	100
92) Benzo[k]fluoranthene	14.626	252	2980601	2.460	mg/kg	100
93) Benzo[a]pyrene	14.926	252	2637459	2.796	mg/kg	100
94) Indeno[1,2,3-cd]pyrene	16.301	276	3868199	2.816	mg/kg	96
95) Dibenz[a,h]anthracene	16.316	278	3178929	2.807	mg/kg	100
96) Benzo[g,h,i]perylene	16.721	276	3044583	2.770	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091305.D
 Acq On : 13 Sep 2017 12:25 pm
 Operator :
 Sample : ICV-170913
 Misc : ICV
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 14 08:34:26 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091306.D
 Acq On : 13 Sep 2017 12:52 pm
 Operator :
 Sample : LCS-82338
 Misc : LCS
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 08:34:31 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	%Rec

Internal Standards					
1) 1,4-Dichlorobenzene-d4	7.031	152	985176	4.00 mg/kg	127
22) Naphthalene-d8	8.062	136	4094388	4.00 mg/kg	119
42) Acenaphthene-d10	9.527	164	1854271	4.00 mg/kg	97
65) Phenanthrene-d10	10.780	188	3037693	4.00 mg/kg	74
80) Chrysene-d12	13.314	240	3803002	4.00 mg/kg	71
89) Perylene-d12	14.986	264	3741579	4.00 mg/kg	72

System Monitoring Compounds					Dev(Min)
7) 2-Fluorophenol	5.918	112	588326	2.53 mg/kg	0.04
Spiked Amount	4.000	Range 20 - 120	Recovery	=	63.25%
9) Phenol-d5	6.712	99	649745	1.68 mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	42.00%
23) Nitrobenzene-d5	7.470	82	806395	2.60 mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	65.00%
47) 2-Fluorobiphenyl	8.943	172	1914019	2.66 mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	66.50%
69) 2,4,6-Tribromophenol	10.187	330	352034	2.42 mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	60.50%
83) 4-Terphenyl-d14	12.174	244	1974363	2.58 mg/kg	-0.01
Spiked Amount	4.000	Range 51 - 135	Recovery	=	64.50%

Target Compounds					Qvalue
2) N-nitrosodimethylamine	4.872	74	118738	0.835 mg/kg#	51
3) Pyridine	4.935	79	190657	0.706 mg/kg	91
4) N-nitrosodiethylamine	6.112	102	167728	1.339 mg/kg	95
5) Benzaldehyde	6.690	77	311525	1.464 mg/kg	99
6) Aniline	6.769	93	361342	0.898 mg/kg	98
8) bis(2-Chloroethyl)ether	6.806	95	108067	1.342 mg/kg	96
10) Phenol	6.724	94	319571	1.038 mg/kg	98
11) 2-Chlorophenol	6.866	128	399036	1.348 mg/kg	100
12) 1,3-Dichlorobenzene	6.990	146	369896	1.242 mg/kg	100
13) 1,4-Dichlorobenzene	7.046	146	405437	1.209 mg/kg	99
14) 1,2-Dichlorobenzene	7.166	146	396393	1.221 mg/kg	99
15) Benzyl alcohol	7.125	108	227561	1.381 mg/kg	97
16) bis(2-chloroisopropyl)...	7.222	45	427717	1.146 mg/kg	85
17) 2-Methylphenol	7.200	108	326675	1.198 mg/kg	99
18) Hexachloroethane	7.439	117	140798	1.244 mg/kg	99
19) N-Nitrosodi-n-propylamine	7.327	70	256256	1.168 mg/kg	98
20) 4-Methylphenol	7.316	108	324057	1.126 mg/kg	100
21) Acetophenone	7.338	105	590204	1.448 mg/kg	98
24) Nitrobenzene	7.484	77	375047	1.509 mg/kg	100
25) Isophorone	7.668	82	742373	1.457 mg/kg	100
26) 2-Nitrophenol	7.739	139	208851	1.554 mg/kg	94
27) 2,4-Dimethylphenol	7.747	107	379789	1.401 mg/kg	98
28) bis(2-Chloroethoxy)met...	7.826	93	500214	1.499 mg/kg	99
29) Benzoic acid	7.792	105	52120	0.457 mg/kg	83
30) 2,4-Dichlorophenol	7.931	162	366414	1.281 mg/kg	99
31) 1,2,4-Trichlorobenzene	8.006	180	425416	1.353 mg/kg	100
32) Naphthalene	8.081	128	1319604	1.434 mg/kg	100
33) 4-Chloroaniline	8.107	127	431058	1.254 mg/kg	100
34) 2,6-Dichlorophenol	8.118	162	362492	1.364 mg/kg	98
35) Hexachlorobutadiene	8.167	225	250328	1.239 mg/kg	99
36) N-nitrosodi-n-butylamine	8.365	116	64322	1.186 mg/kg	99
37) Caprolactam	8.392	113	33033	0.493 mg/kg	95
38) 4-Chloro-3-methylphenol	8.485	107	272740	1.219 mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.785	216	474852	1.165 mg/kg	99

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091306.D
 Acq On : 13 Sep 2017 12:52 pm
 Operator :
 Sample : LCS-82338
 Misc : LCS
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 08:34:31 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Aug 29 10:36:46 2017

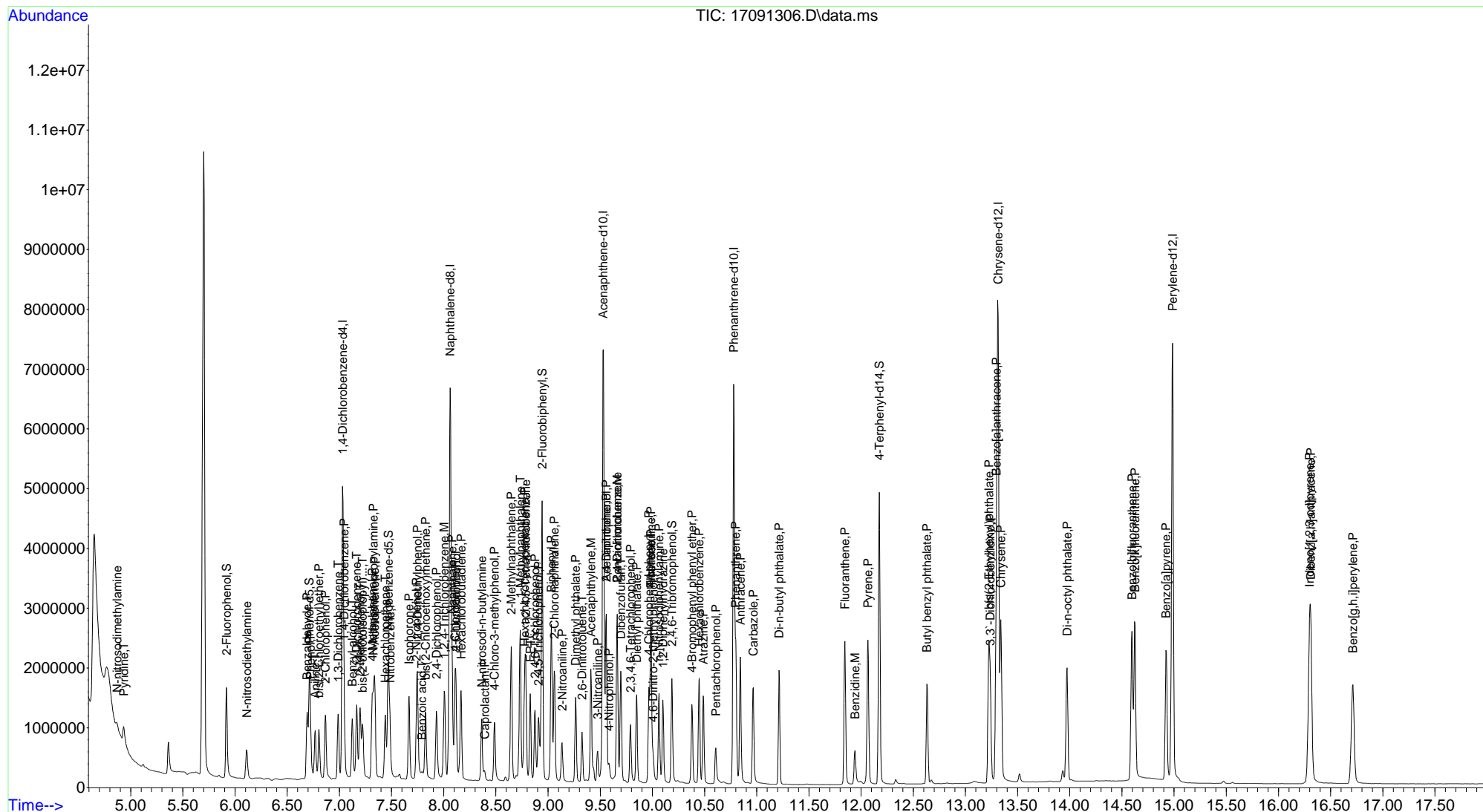
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.647	142	842150	1.273	mg/kg	100
41) 1-Methylnaphthalene	8.733	142	920674	1.374	mg/kg	100
43) Hexachlorocyclopentadiene	8.774	237	243714	1.416	mg/kg	100
44) EPTC	8.830	128	300269	1.559	mg/kg	100
45) 2,4,6-Trichlorophenol	8.875	196	241021	1.632	mg/kg	99
46) 2,4,5-Trichlorophenol	8.909	196	241257	1.319	mg/kg	99
48) Biphenyl	9.033	154	1081595	1.814	mg/kg	99
49) 2-Chloronaphthalene	9.059	162	773806	1.564	mg/kg	100
50) 2-Nitroaniline	9.134	138	188338	1.511	mg/kg	100
51) Acenaphthylene	9.411	152	1071988	1.545	mg/kg	99
52) Dimethyl phthalate	9.265	163	770692	1.345	mg/kg	99
53) 2,6-Dinitrotoluene	9.325	165	151247	1.365	mg/kg	96
54) Acenaphthene	9.557	153	828810	1.401	mg/kg	99
55) 3-Nitroaniline	9.475	138	132927	1.425	mg/kg	99
56) 2,4-Dinitrophenol	9.557	184	49783	1.373	mg/kg#	4
57) Dibenzofuran	9.696	168	987044	1.322	mg/kg	100
58) 2,4-Dinitrotoluene	9.662	165	195295	1.366	mg/kg	83
59) 4-Nitrophenol	9.584	109	40933	1.003	mg/kg	98
60) 2,3,4,6-Tetrachlorophenol	9.790	232	178733	1.196	mg/kg	99
61) Fluorene	9.985	166	768477	1.339	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.966	204	374500	1.301	mg/kg	99
63) Diethyl phthalate	9.850	149	696194	1.227	mg/kg	100
64) 4-Nitroaniline	9.985	138	125837	1.273	mg/kg	94
66) 4,6-Dinitro-2-methylph...	10.007	198	86829	1.315	mg/kg	82
67) 1,2-Diphenylhydrazine	10.101	182	163092	1.551	mg/kg	98
68) n-Nitrosodiphenylamine	10.064	169	458963	1.556	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.378	248	240610	1.511	mg/kg	99
71) Atrazine	10.487	200	224007	1.668	mg/kg	99
72) Hexachlorobenzene	10.450	284	331474	1.488	mg/kg	99
73) Pentachlorophenol	10.607	266	113100	1.120	mg/kg	99
74) Phenanthrene	10.798	178	1006206	1.459	mg/kg	100
75) Anthracene	10.843	178	1023343	1.465	mg/kg	99
76) Pentachlorobenzene	9.662	250	464865	1.786	mg/kg	100
77) Carbazole	10.967	167	895299	1.448	mg/kg	100
78) Di-n-butyl phthalate	11.214	149	1189612	1.403	mg/kg	100
79) Fluoranthene	11.844	202	1232718	1.416	mg/kg	99
81) Benzidine	11.942	184	348116	1.176	mg/kg	100
82) Pyrene	12.065	202	1283784	1.488	mg/kg	99
84) Butyl benzyl phthalate	12.631	149	524930	1.550	mg/kg	96
85) 3,3'-Dichlorobenzidine	13.239	252	509223	1.454	mg/kg	100
86) Benzo[a]anthracene	13.299	228	1360282	1.517	mg/kg	100
87) Chrysene	13.340	228	1267395	1.482	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.224	149	821120	1.484	mg/kg	99
90) Di-n-octyl phthalate	13.973	149	1398914	1.531	mg/kg	99
91) Benzo[b]fluoranthene	14.596	252	1450181	1.598	mg/kg	99
92) Benzo[k]fluoranthene	14.626	252	1389112	1.474	mg/kg	99
93) Benzo[a]pyrene	14.922	252	1185750	1.616	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.298	276	1772046	1.658	mg/kg	96
95) Dibenz[a,h]anthracene	16.309	278	1480020	1.679	mg/kg	100
96) Benzo[g,h,i]perylene	16.714	276	1423432	1.664	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091306.D
 Acq On : 13 Sep 2017 12:52 pm
 Operator :
 Sample : LCS-82338
 Misc : LCS
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 14 08:34:31 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091307.D
 Acq On : 13 Sep 2017 1:17 pm
 Operator :
 Sample : 1709073-01BMS
 Misc : MS
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 08:34:35 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	%Rec

Internal Standards					
1) 1,4-Dichlorobenzene-d4	7.031	152	974948	4.00 mg/kg	126
22) Naphthalene-d8	8.062	136	4103189	4.00 mg/kg	119
42) Acenaphthene-d10	9.528	164	1892656	4.00 mg/kg	99
65) Phenanthrene-d10	10.780	188	3262975	4.00 mg/kg	79
80) Chrysene-d12	13.310	240	4045842	4.00 mg/kg	75
89) Perylene-d12	14.982	264	3680688	4.00 mg/kg	71

System Monitoring Compounds					Dev(Min)
7) 2-Fluorophenol	5.921	112	735958	3.12 mg/kg	0.04
Spiked Amount	4.000	Range 20 - 120	Recovery	=	78.00%
9) Phenol-d5	6.716	99	971729	2.53 mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	63.25%
23) Nitrobenzene-d5	7.470	82	865080	2.77 mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	69.25%
47) 2-Fluorobiphenyl	8.943	172	2197397	2.99 mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	74.75%
69) 2,4,6-Tribromophenol	10.187	330	471494	2.99 mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	74.75%
83) 4-Terphenyl-d14	12.170	244	2339136	2.87 mg/kg	-0.01
Spiked Amount	4.000	Range 51 - 135	Recovery	=	71.75%

Target Compounds					Qvalue
2) N-nitrosodimethylamine	4.894	74	199779	1.477 mg/kg#	73
3) Pyridine	4.954	79	331329	1.239 mg/kg	90
4) N-nitrosodiethylamine	6.116	102	175150	1.411 mg/kg	95
5) Benzaldehyde	6.694	77	292908	1.391 mg/kg	98
6) Aniline	6.776	93	92956	0.255 mg/kg	89
8) bis(2-Chloroethyl)ether	6.806	95	115103	1.442 mg/kg	96
10) Phenol	6.724	94	464036	1.477 mg/kg	99
11) 2-Chlorophenol	6.866	128	427115	1.454 mg/kg	100
12) 1,3-Dichlorobenzene	6.990	146	436233	1.480 mg/kg	100
13) 1,4-Dichlorobenzene	7.046	146	471267	1.421 mg/kg	100
14) 1,2-Dichlorobenzene	7.166	146	456363	1.421 mg/kg	99
15) Benzyl alcohol	7.125	108	247069	1.508 mg/kg	98
16) bis(2-chloroisopropyl)...	7.222	45	473223	1.281 mg/kg	99
17) 2-Methylphenol	7.200	108	367568	1.354 mg/kg	100
18) Hexachloroethane	7.440	117	169127	1.510 mg/kg	100
19) N-Nitrosodi-n-propylamine	7.327	70	297399	1.370 mg/kg	98
20) 4-Methylphenol	7.316	108	394213	1.376 mg/kg	99
21) Acetophenone	7.338	105	709979	1.760 mg/kg	98
24) Nitrobenzene	7.485	77	413098	1.647 mg/kg	100
25) Isophorone	7.668	82	754026	1.477 mg/kg	99
26) 2-Nitrophenol	7.740	139	235277	1.721 mg/kg	98
27) 2,4-Dimethylphenol	7.747	107	386577	1.423 mg/kg	98
28) bis(2-Chloroethoxy)met...	7.826	93	505542	1.512 mg/kg	99
29) Benzoic acid	7.815	105	254865	1.635 mg/kg	97
30) 2,4-Dichlorophenol	7.931	162	381582	1.330 mg/kg	100
31) 1,2,4-Trichlorobenzene	8.006	180	462600	1.468 mg/kg	100
32) Naphthalene	8.081	128	1412068	1.531 mg/kg	100
33) 4-Chloroaniline	8.111	127	175361	0.509 mg/kg	99
34) 2,6-Dichlorophenol	8.114	162	410795	1.542 mg/kg	99
35) Hexachlorobutadiene	8.167	225	304790	1.506 mg/kg	99
36) N-nitrosodi-n-butylamine	8.362	116	72157	1.327 mg/kg	99
37) Caprolactam	8.403	113	165376	2.338 mg/kg	97
38) 4-Chloro-3-methylphenol	8.493	107	319567	1.425 mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.785	216	539999	1.322 mg/kg	100

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091307.D
 Acq On : 13 Sep 2017 1:17 pm
 Operator :
 Sample : 1709073-01BMS
 Misc : MS
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 08:34:35 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Aug 29 10:36:46 2017

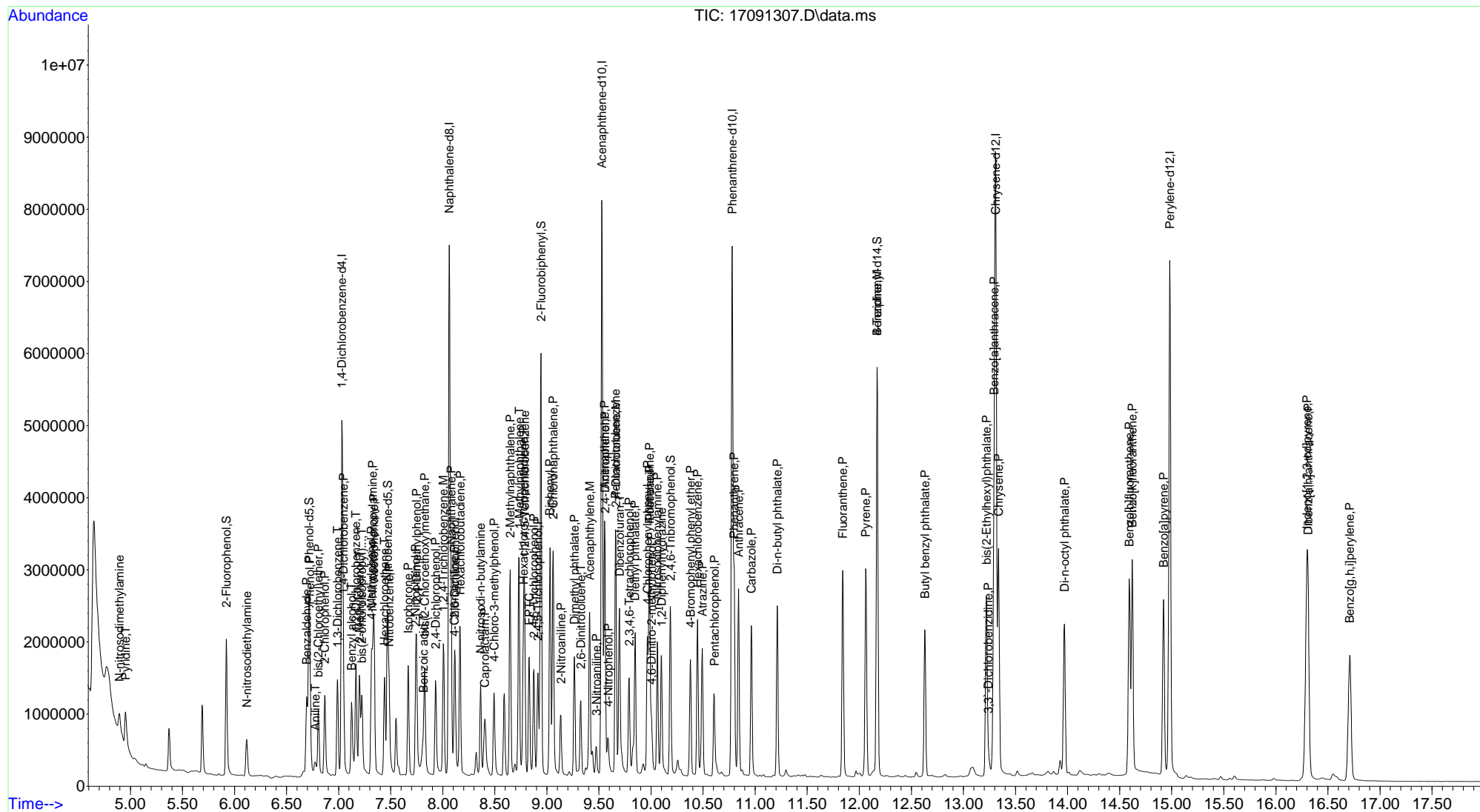
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.647	142	941362	1.420	mg/kg	100
41) 1-Methylnaphthalene	8.733	142	1006111	1.498	mg/kg	99
43) Hexachlorocyclopentadiene	8.774	237	295575	1.651	mg/kg	99
44) EPTC	8.830	128	338539	1.722	mg/kg	99
45) 2,4,6-Trichlorophenol	8.875	196	280083	1.834	mg/kg	100
46) 2,4,5-Trichlorophenol	8.913	196	297207	1.581	mg/kg	99
48) Biphenyl	9.029	154	1210787	1.990	mg/kg	99
49) 2-Chloronaphthalene	9.059	162	872964	1.728	mg/kg	99
50) 2-Nitroaniline	9.134	138	231538	1.768	mg/kg	99
51) Acenaphthylene	9.411	152	1222865	1.727	mg/kg	100
52) Dimethyl phthalate	9.265	163	907146	1.551	mg/kg	99
53) 2,6-Dinitrotoluene	9.325	165	181137	1.582	mg/kg	99
54) Acenaphthene	9.554	153	935939	1.550	mg/kg	98
55) 3-Nitroaniline	9.475	138	101287	1.113	mg/kg	97
56) 2,4-Dinitrophenol	9.558	184	86410	2.017	mg/kg#	46
57) Dibenzofuran	9.696	168	1223713	1.606	mg/kg	100
58) 2,4-Dinitrotoluene	9.663	165	237986	1.588	mg/kg	81
59) 4-Nitrophenol	9.588	109	70442	1.552	mg/kg	96
60) 2,3,4,6-Tetrachlorophenol	9.790	232	243499	1.558	mg/kg	100
61) Fluorene	9.985	166	899737	1.536	mg/kg	100
62) 4-Chlorophenyl phenyl ...	9.966	204	444976	1.514	mg/kg	99
63) Diethyl phthalate	9.846	149	852537	1.472	mg/kg	100
64) 4-Nitroaniline	9.985	138	123702	1.230	mg/kg	92
66) 4,6-Dinitro-2-methylph...	10.004	198	138155	1.845	mg/kg	80
67) 1,2-Diphenylhydrazine	10.101	182	208507	1.846	mg/kg	96
68) n-Nitrosodiphenylamine	10.060	169	561843	1.773	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.379	248	295544	1.728	mg/kg	99
71) Atrazine	10.491	200	268415	1.860	mg/kg	99
72) Hexachlorobenzene	10.446	284	399738	1.670	mg/kg	99
73) Pentachlorophenol	10.607	266	205898	1.775	mg/kg	100
74) Phenanthrene	10.798	178	1204313	1.625	mg/kg	100
75) Anthracene	10.840	178	1232116	1.642	mg/kg	99
76) Pentachlorobenzene	9.659	250	538501	1.926	mg/kg	100
77) Carbazole	10.963	167	1082946	1.631	mg/kg	100
78) Di-n-butyl phthalate	11.211	149	1481760	1.621	mg/kg	100
79) Fluoranthene	11.841	202	1479899	1.582	mg/kg	99
81) Benzidine	12.170	184	25948	0.102	mg/kg#	1
82) Pyrene	12.062	202	1517220	1.653	mg/kg	98
84) Butyl benzyl phthalate	12.632	149	653090	1.791	mg/kg	99
85) 3,3'-Dichlorobenzidine	13.239	252	181476	0.507	mg/kg	99
86) Benzo[a]anthracene	13.295	228	1578518	1.654	mg/kg	100
87) Chrysene	13.336	228	1471530	1.617	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.220	149	988671	1.670	mg/kg	100
90) Di-n-octyl phthalate	13.970	149	1551975	1.720	mg/kg	100
91) Benzo[b]fluoranthene	14.592	252	1529513	1.713	mg/kg	99
92) Benzo[k]fluoranthene	14.622	252	1495645	1.613	mg/kg	99
93) Benzo[a]pyrene	14.922	252	1289697	1.786	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.298	276	1902487	1.809	mg/kg	97
95) Dibenz[a,h]anthracene	16.309	278	1570722	1.812	mg/kg	100
96) Benzo[g,h,i]perylene	16.710	276	1513789	1.799	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091307.D
 Acq On : 13 Sep 2017 1:17 pm
 Operator :
 Sample : 1709073-01BMS
 Misc : MS
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 14 08:34:35 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091308.D
 Acq On : 13 Sep 2017 1:41 pm
 Operator :
 Sample : 1709073-01BMSD
 Misc : MSD
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 08:34:39 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.031	152	912083	4.00	mg/kg	118
22) Naphthalene-d8	8.062	136	3441370	4.00	mg/kg	100
42) Acenaphthene-d10	9.527	164	1621965	4.00	mg/kg	85
65) Phenanthrene-d10	10.779	188	3027324	4.00	mg/kg	74
80) Chrysene-d12	13.306	240	4025452	4.00	mg/kg	75
89) Perylene-d12	14.982	264	3983338	4.00	mg/kg	77

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.917	112	741410	3.33	mg/kg	0.04
Spiked Amount	4.000	Range	20 - 120	Recovery	=	83.25%
9) Phenol-d5	6.712	99	940833	2.62	mg/kg	0.00
Spiked Amount	4.000	Range	20 - 120	Recovery	=	65.50%
23) Nitrobenzene-d5	7.466	82	822578	3.11	mg/kg	0.00
Spiked Amount	4.000	Range	41 - 120	Recovery	=	77.75%
47) 2-Fluorobiphenyl	8.943	172	1980314	3.14	mg/kg	0.00
Spiked Amount	4.000	Range	48 - 120	Recovery	=	78.50%
69) 2,4,6-Tribromophenol	10.187	330	431406	2.95	mg/kg	0.00
Spiked Amount	4.000	Range	42 - 124	Recovery	=	73.75%
83) 4-Terphenyl-d14	12.170	244	2412189	2.98	mg/kg	-0.02
Spiked Amount	4.000	Range	51 - 135	Recovery	=	74.50%

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.887	74	186905	1.477	mg/kg#	74
3) Pyridine	4.947	79	323652	1.294	mg/kg	91
4) N-nitrosodiethylamine	6.112	102	171178	1.473	mg/kg	94
5) Benzaldehyde	6.690	77	286758	1.456	mg/kg	99
6) Aniline	6.772	93	102717	0.296	mg/kg	88
8) bis(2-Chloroethyl)ether	6.806	95	114908	1.538	mg/kg	98
10) Phenol	6.723	94	459382	1.555	mg/kg	98
11) 2-Chlorophenol	6.866	128	428690	1.557	mg/kg	99
12) 1,3-Dichlorobenzene	6.986	146	424795	1.540	mg/kg	100
13) 1,4-Dichlorobenzene	7.042	146	459485	1.480	mg/kg	99
14) 1,2-Dichlorobenzene	7.166	146	442685	1.473	mg/kg	100
15) Benzyl alcohol	7.125	108	252694	1.641	mg/kg	98
16) bis(2-chloroisopropyl)...	7.222	45	460548	1.333	mg/kg	95
17) 2-Methylphenol	7.200	108	361249	1.418	mg/kg	99
18) Hexachloroethane	7.439	117	153089	1.461	mg/kg	97
19) N-Nitrosodi-n-propylamine	7.327	70	273175	1.345	mg/kg	97
20) 4-Methylphenol	7.316	108	357693	1.335	mg/kg	100
21) Acetophenone	7.338	105	645540	1.711	mg/kg	98
24) Nitrobenzene	7.484	77	378461	1.788	mg/kg	98
25) Isophorone	7.668	82	737656	1.722	mg/kg	99
26) 2-Nitrophenol	7.739	139	225963	1.936	mg/kg	98
27) 2,4-Dimethylphenol	7.747	107	373873	1.641	mg/kg	99
28) bis(2-Chloroethoxy)met...	7.826	93	481206	1.716	mg/kg	99
29) Benzoic acid	7.811	105	238104	1.788	mg/kg	97
30) 2,4-Dichlorophenol	7.931	162	368385	1.523	mg/kg	99
31) 1,2,4-Trichlorobenzene	8.005	180	440839	1.668	mg/kg	100
32) Naphthalene	8.080	128	1245341	1.610	mg/kg	100
33) 4-Chloroaniline	8.107	127	161409	0.559	mg/kg	100
34) 2,6-Dichlorophenol	8.114	162	364201	1.630	mg/kg	99
35) Hexachlorobutadiene	8.163	225	271598	1.600	mg/kg	99
36) N-nitrosodi-n-butylamine	8.362	116	65705	1.440	mg/kg	100
37) Caprolactam	8.407	113	148623	2.503	mg/kg	93
38) 4-Chloro-3-methylphenol	8.493	107	275238	1.463	mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.785	216	482807	1.409	mg/kg	100

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091308.D
 Acq On : 13 Sep 2017 1:41 pm
 Operator :
 Sample : 1709073-01BMSD
 Misc : MSD
 ALS Vial : 6 Sample Multiplier: 1

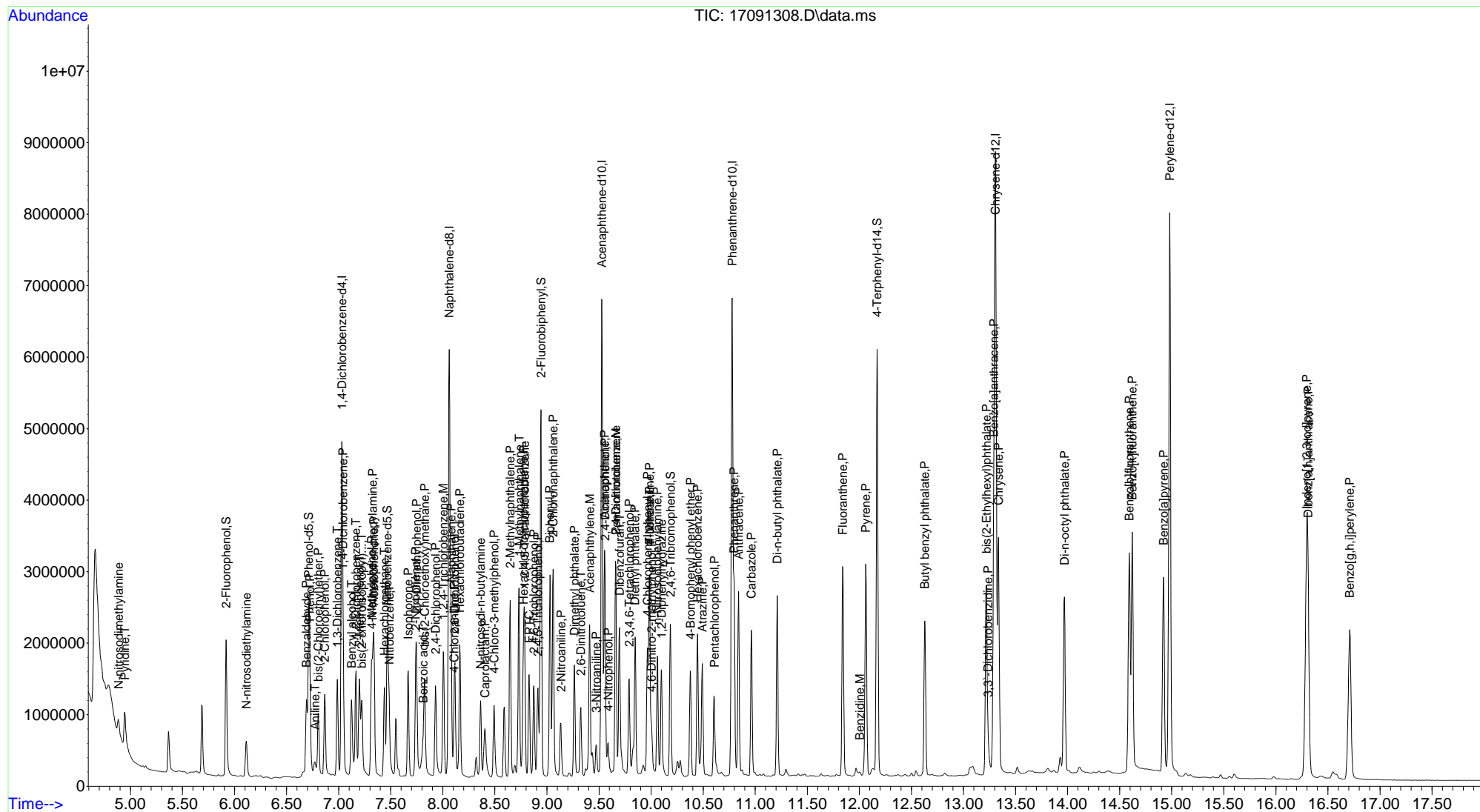
Quant Time: Sep 14 08:34:39 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.646	142	842166	1.514	mg/kg	100
41) 1-Methylnaphthalene	8.733	142	914787	1.624	mg/kg	99
43) Hexachlorocyclopentadiene	8.774	237	257447	1.675	mg/kg	100
44) EPTC	8.830	128	303257	1.800	mg/kg	98
45) 2,4,6-Trichlorophenol	8.875	196	250945	1.909	mg/kg	100
46) 2,4,5-Trichlorophenol	8.913	196	263240	1.632	mg/kg	99
48) Biphenyl	9.029	154	1085097	2.081	mg/kg	100
49) 2-Chloronaphthalene	9.059	162	784630	1.813	mg/kg	100
50) 2-Nitroaniline	9.134	138	212916	1.875	mg/kg	98
51) Acenaphthylene	9.411	152	1149559	1.894	mg/kg	99
52) Dimethyl phthalate	9.265	163	854091	1.704	mg/kg	99
53) 2,6-Dinitrotoluene	9.325	165	172309	1.741	mg/kg	99
54) Acenaphthene	9.554	153	844898	1.632	mg/kg	98
55) 3-Nitroaniline	9.471	138	98295	1.237	mg/kg	97
56) 2,4-Dinitrophenol	9.557	184	81213	2.155	mg/kg#	54
57) Dibenzofuran	9.696	168	1108025	1.697	mg/kg	100
58) 2,4-Dinitrotoluene	9.662	165	217677	1.678	mg/kg	80
59) 4-Nitrophenol	9.587	109	63352	1.615	mg/kg	96
60) 2,3,4,6-Tetrachlorophenol	9.790	232	237635	1.753	mg/kg	100
61) Fluorene	9.985	166	825943	1.645	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.966	204	412516	1.638	mg/kg	99
63) Diethyl phthalate	9.846	149	833957	1.680	mg/kg	100
64) 4-Nitroaniline	9.985	138	110270	1.275	mg/kg	91
66) 4,6-Dinitro-2-methylph...	10.004	198	129262	1.859	mg/kg	80
67) 1,2-Diphenylhydrazine	10.101	182	196546	1.876	mg/kg	92
68) n-Nitrosodiphenylamine	10.060	169	522984	1.779	mg/kg	99
70) 4-Bromophenyl phenyl e...	10.378	248	276786	1.745	mg/kg	99
71) Atrazine	10.491	200	249741	1.866	mg/kg	99
72) Hexachlorobenzene	10.446	284	379256	1.708	mg/kg	99
73) Pentachlorophenol	10.607	266	201767	1.860	mg/kg	100
74) Phenanthrene	10.798	178	1167898	1.699	mg/kg	100
75) Anthracene	10.839	178	1220276	1.752	mg/kg	100
76) Pentachlorobenzene	9.662	250	488894	1.884	mg/kg	100
77) Carbazole	10.963	167	1059760	1.720	mg/kg	100
78) Di-n-butyl phthalate	11.211	149	1536811	1.807	mg/kg	100
79) Fluoranthene	11.840	202	1535357	1.769	mg/kg	100
81) Benzidine	12.005	184	872	0.021	mg/kg	72
82) Pyrene	12.062	202	1569027	1.719	mg/kg	99
84) Butyl benzyl phthalate	12.628	149	689292	1.892	mg/kg	96
85) 3,3'-Dichlorobenzidine	13.235	252	206219	0.576	mg/kg	99
86) Benzo[a]anthracene	13.291	228	1675570	1.765	mg/kg	100
87) Chrysene	13.336	228	1517922	1.677	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.220	149	1053330	1.783	mg/kg	100
90) Di-n-octyl phthalate	13.970	149	1775782	1.816	mg/kg	100
91) Benzo[b]fluoranthene	14.592	252	1757626	1.819	mg/kg	100
92) Benzo[k]fluoranthene	14.622	252	1705144	1.699	mg/kg	99
93) Benzo[a]pyrene	14.922	252	1474524	1.887	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.294	276	2208105	1.940	mg/kg	95
95) Dibenz[a,h]anthracene	16.309	278	1819892	1.939	mg/kg	100
96) Benzo[g,h,i]perylene	16.710	276	1767097	1.941	mg/kg	99

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

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091308.D
 Acq On : 13 Sep 2017 1:41 pm
 Operator :
 Sample : 1709073-01BMSD
 Misc : MSD
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 14 08:34:39 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091310.D
 Acq On : 13 Sep 2017 2:29 pm
 Operator :
 Sample : MB-82338
 Misc : MBLK
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 14 08:34:43 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.027	152	829111	4.00	mg/kg	107
22) Naphthalene-d8	8.058	136	3997003	4.00	mg/kg	116
42) Acenaphthene-d10	9.527	164	1966911	4.00	mg/kg	103
65) Phenanthrene-d10	10.776	188	3185287	4.00	mg/kg	78
80) Chrysene-d12	13.306	240	4369108	4.00	mg/kg	81
89) Perylene-d12	14.982	264	4418675	4.00	mg/kg	85

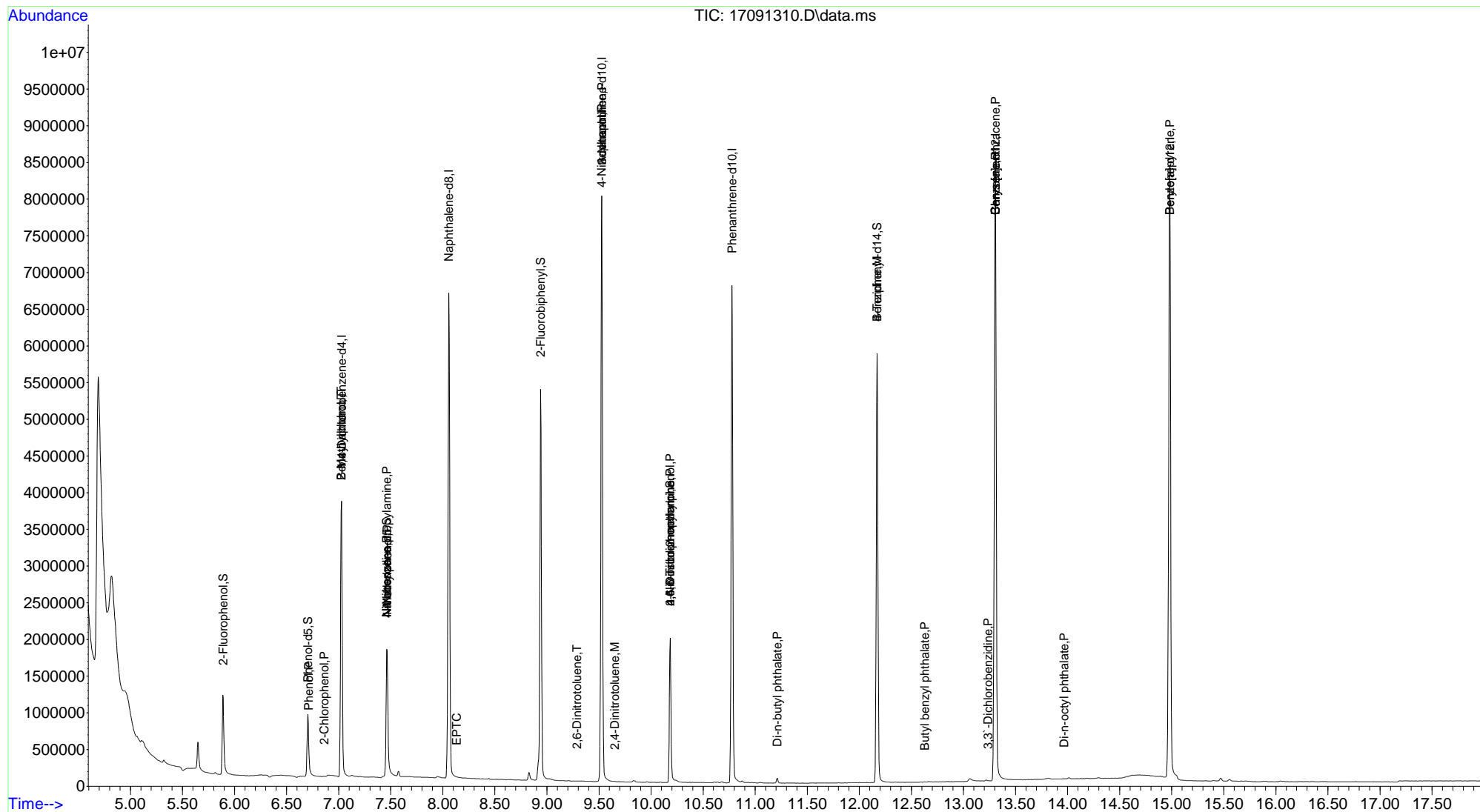
System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.891	112	456555	2.35	mg/kg	0.01
Spiked Amount	4.000	Range 20 - 120	Recovery	=	58.75%	
9) Phenol-d5	6.705	99	439194	1.35	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	33.75%	
23) Nitrobenzene-d5	7.462	82	779701	2.58	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	64.50%	
47) 2-Fluorobiphenyl	8.939	172	2123156	2.78	mg/kg	-0.01
Spiked Amount	4.000	Range 48 - 120	Recovery	=	69.50%	
69) 2,4,6-Tribromophenol	10.184	330	392428	2.56	mg/kg	-0.01
Spiked Amount	4.000	Range 42 - 124	Recovery	=	64.00%	
83) 4-Terphenyl-d14	12.170	244	2412922	2.75	mg/kg	-0.01
Spiked Amount	4.000	Range 51 - 135	Recovery	=	68.75%	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.688	74	9460	Below Cal	#	1
10) Phenol	6.712	94	922	0.031	mg/kg#	1
11) 2-Chlorophenol	6.862	128	405	0.025	mg/kg#	45
15) Benzyl alcohol	7.023	108	2498	0.081	mg/kg#	1
17) 2-Methylphenol	7.023	108	2498	0.039	mg/kg#	4
19) N-Nitrosodi-n-propylamine	7.462	70	95346	0.516	mg/kg	78
20) 4-Methylphenol	7.466	108	770	0.029	mg/kg#	1
24) Nitrobenzene	7.462	77	2540	0.029	mg/kg#	31
44) EPTC	8.133	128	440	0.002	mg/kg	85
53) 2,6-Dinitrotoluene	9.288	165	464	0.031	mg/kg#	38
55) 3-Nitroaniline	9.527	138	245	0.026	mg/kg#	1
58) 2,4-Dinitrotoluene	9.651	165	419	0.025	mg/kg#	37
59) 4-Nitrophenol	9.524	109	2151	0.121	mg/kg#	1
66) 4,6-Dinitro-2-methylph...	10.184	198	479	0.098	mg/kg#	1
68) n-Nitrosodiphenylamine	10.184	169	7287	0.024	mg/kg#	35
78) Di-n-butyl phthalate	11.211	149	43967	0.064	mg/kg	99
81) Benzidine	12.170	184	25994	0.096	mg/kg#	1
84) Butyl benzyl phthalate	12.628	149	1723	0.028	mg/kg	87
85) 3,3'-Dichlorobenzidine	13.235	252	833	0.018	mg/kg	87
86) Benzo[a]anthracene	13.306	228	11478	0.011	mg/kg#	70
87) Chrysene	13.306	228	11478	0.012	mg/kg#	67
90) Di-n-octyl phthalate	13.966	149	1028	0.030	mg/kg	73
93) Benzo[a]pyrene	14.982	252	13463	0.016	mg/kg	88

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

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091310.D
 Acq On : 13 Sep 2017 2:29 pm
 Operator :
 Sample : MB-82338
 Misc : MBLK
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 14 08:34:43 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091317.D
 Acq On : 13 Sep 2017 5:18 pm
 Operator :
 Sample : 1709084-01B
 Misc : SAMP
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Sep 14 08:36:32 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	7.027	152	937071	4.00	mg/kg	121
22) Naphthalene-d8	8.058	136	3999027	4.00	mg/kg	116
42) Acenaphthene-d10	9.524	164	2047957	4.00	mg/kg	108
65) Phenanthrene-d10	10.776	188	3836419	4.00	mg/kg	93
80) Chrysene-d12	13.306	240	5458070	4.00	mg/kg	102
89) Perylene-d12	14.982	264	5498332	4.00	mg/kg	106

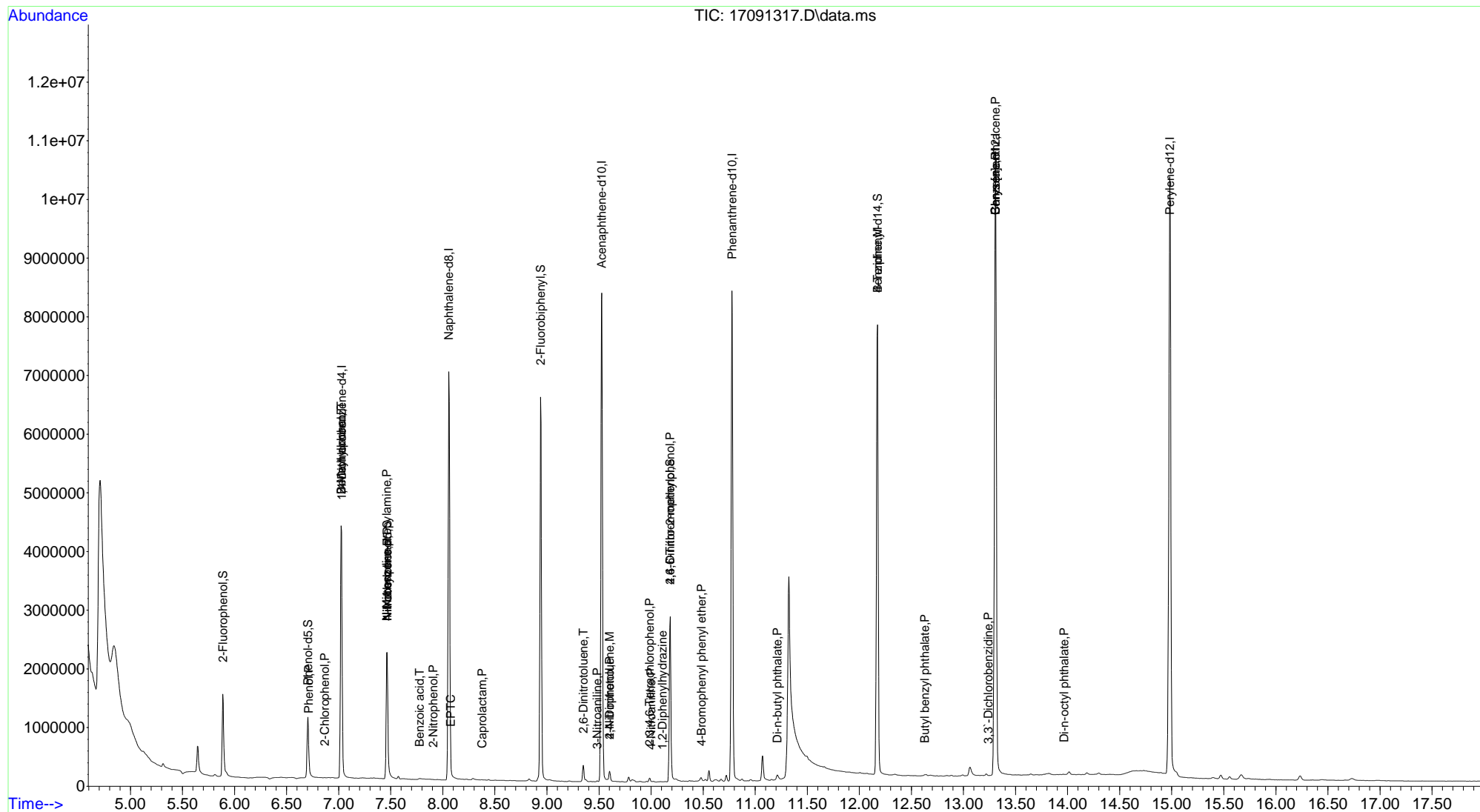
System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.888	112	547964	2.49	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	62.25%	
9) Phenol-d5	6.705	99	530667	1.45	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	36.25%	
23) Nitrobenzene-d5	7.466	82	900733	2.94	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	73.50%	
47) 2-Fluorobiphenyl	8.939	172	2519710	3.17	mg/kg	-0.01
Spiked Amount	4.000	Range 48 - 120	Recovery	=	79.25%	
69) 2,4,6-Tribromophenol	10.184	330	559054	3.02	mg/kg	-0.01
Spiked Amount	4.000	Range 42 - 124	Recovery	=	75.50%	
83) 4-Terphenyl-d14	12.174	244	3231113	2.94	mg/kg	-0.01
Spiked Amount	4.000	Range 51 - 135	Recovery	=	73.50%	

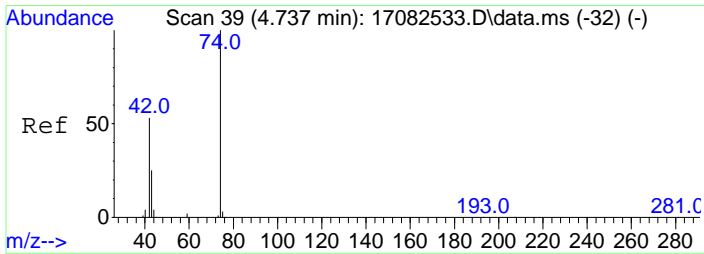
Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.714	74	10048	Below Cal	#	1
10) Phenol	6.712	94	808	0.030	mg/kg#	1
11) 2-Chlorophenol	6.866	128	553	0.025	mg/kg#	70
15) Benzyl alcohol	7.024	108	2666	0.080	mg/kg#	1
17) 2-Methylphenol	7.024	108	2666	0.038	mg/kg#	4
19) N-Nitrosodi-n-propylamine	7.462	70	108842	0.522	mg/kg	78
20) 4-Methylphenol	7.466	108	907	0.029	mg/kg#	1
24) Nitrobenzene	7.466	77	2841	0.030	mg/kg#	30
26) 2-Nitrophenol	7.908	139	278	0.022	mg/kg#	39
29) Benzoic acid	7.777	105	1325	0.121	mg/kg	74
37) Caprolactam	8.377	113	99	0.032	mg/kg#	34
44) EPTC	8.077	128	908	0.004	mg/kg	94
53) 2,6-Dinitrotoluene	9.348	165	1190	0.037	mg/kg#	1
55) 3-Nitroaniline	9.483	138	157	0.025	mg/kg#	5
58) 2,4-Dinitrotoluene	9.603	165	1436	0.032	mg/kg	72
59) 4-Nitrophenol	9.603	109	4362	0.169	mg/kg#	38
60) 2,3,4,6-Tetrachlorophenol	9.985	232	6561	0.063	mg/kg#	27
64) 4-Nitroaniline	10.000	138	141	0.036	mg/kg#	36
66) 4,6-Dinitro-2-methylph...	10.184	198	728	0.099	mg/kg#	1
67) 1,2-Diphenylhydrazine	10.109	182	217	0.024	mg/kg#	1
70) 4-Bromophenyl phenyl e...	10.483	248	2551	0.013	mg/kg#	16
78) Di-n-butyl phthalate	11.211	149	34546	0.047	mg/kg	99
81) Benzidine	12.174	184	36343	0.105	mg/kg#	1
84) Butyl benzyl phthalate	12.628	149	4512	0.033	mg/kg	85
85) 3,3`-Dichlorobenzidine	13.239	252	263	0.016	mg/kg#	25
86) Benzo[a]anthracene	13.306	228	16331	0.013	mg/kg	75
87) Chrysene	13.306	228	16331	0.013	mg/kg#	71
90) Di-n-octyl phthalate	13.966	149	707	0.030	mg/kg	99

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

Data Path : C:\msdchem\1\DATA\170913\
 Data File : 17091317.D
 Acq On : 13 Sep 2017 5:18 pm
 Operator :
 Sample : 1709084-01B
 Misc : SAMP
 ALS Vial : 15 Sample Multiplier: 1

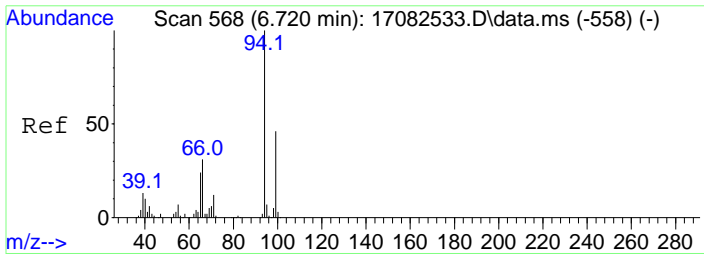
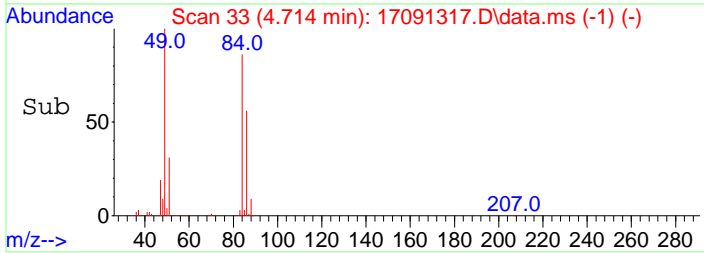
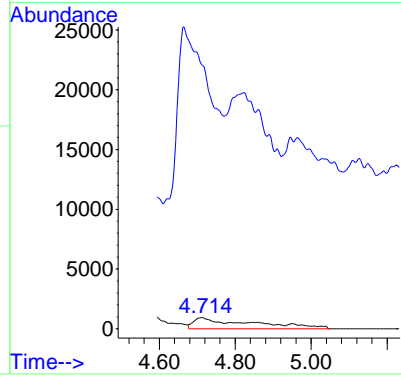
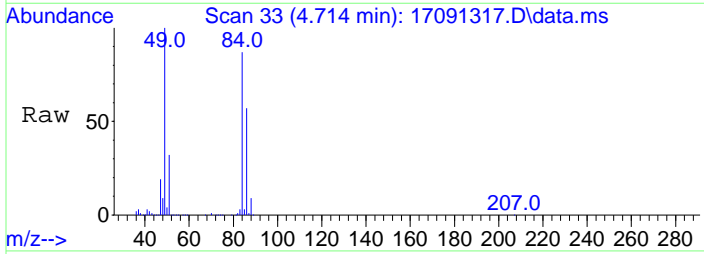
Quant Time: Sep 14 08:36:32 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Aug 29 10:36:46 2017
 Response via : Initial Calibration





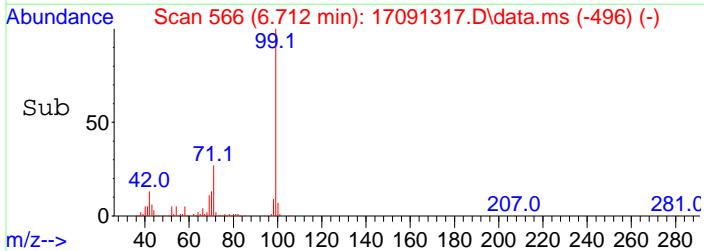
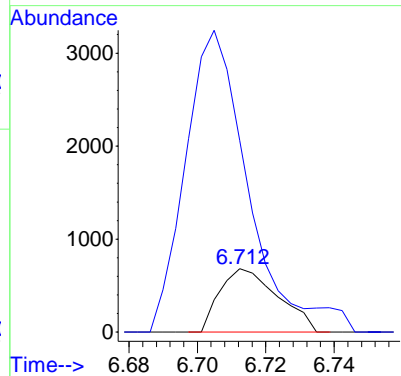
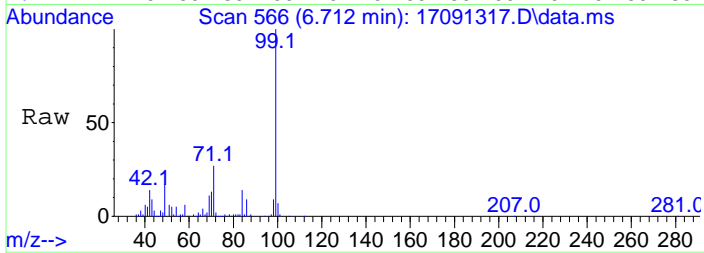
#2
 N-nitrosodimethylamine
 Concen: Below Cal
 RT: 4.714 min Scan# 33
 Delta R.T. -0.022 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

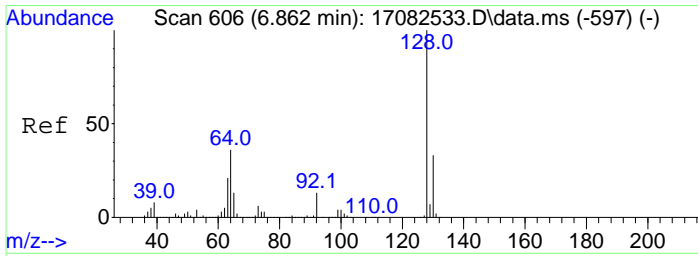
Tgt Ion	Resp	Lower	Upper
74	100		
43	860.1	17.6	32.8#



#10
 Phenol
 Concen: 0.030 mg/kg
 RT: 6.712 min Scan# 566
 Delta R.T. -0.007 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

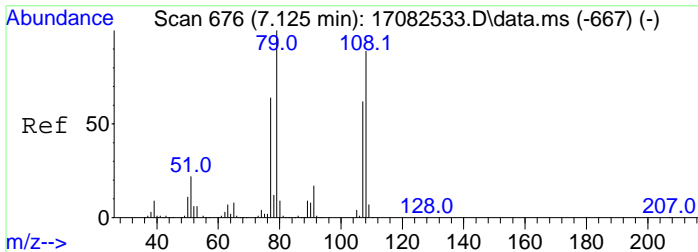
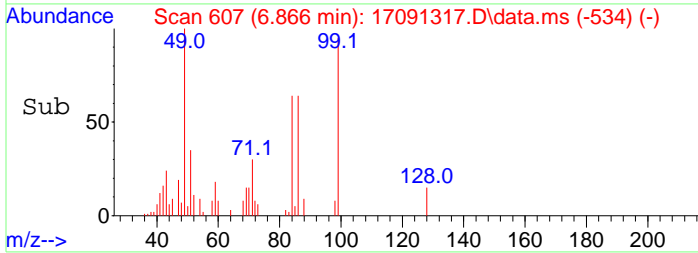
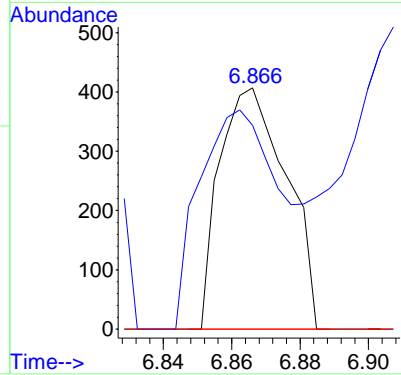
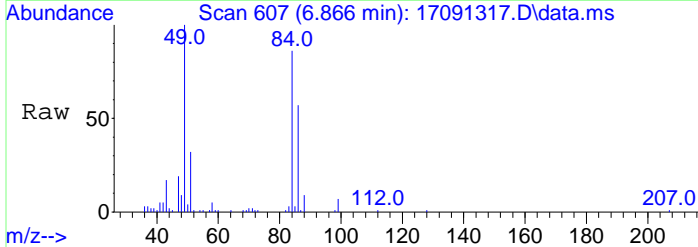
Tgt Ion	Resp	Lower	Upper
94	100		
65	263.4	0.0	55.7#





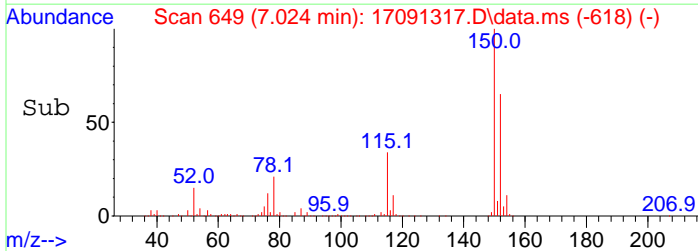
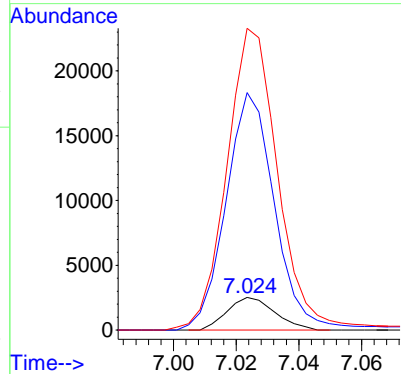
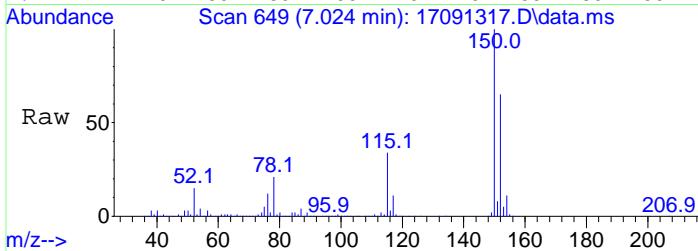
#11
 2-Chlorophenol
 Concen: 0.025 mg/kg
 RT: 6.866 min Scan# 607
 Delta R.T. 0.004 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

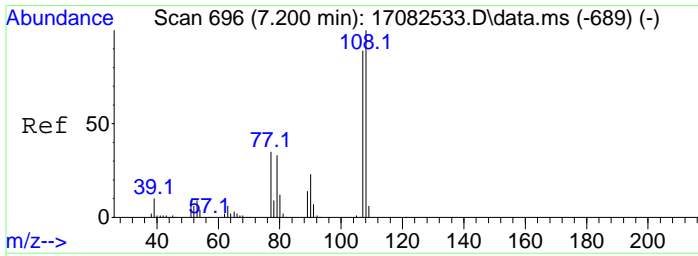
Tgt Ion	Resp	Lower	Upper
128	100		
64	33.7	17.2	57.2
130	0.0	12.7	52.7#



#15
 Benzyl alcohol
 Concen: 0.080 mg/kg
 RT: 7.024 min Scan# 649
 Delta R.T. -0.101 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

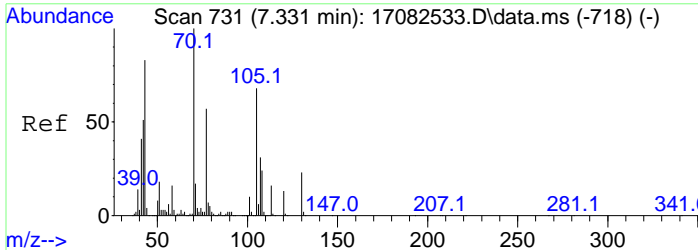
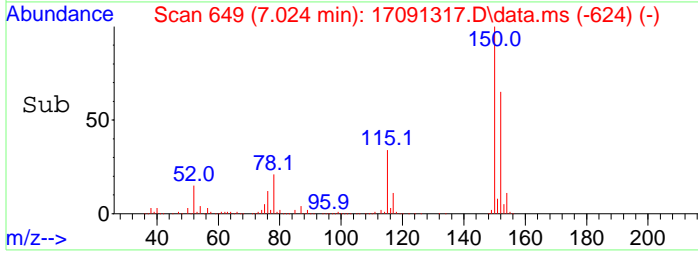
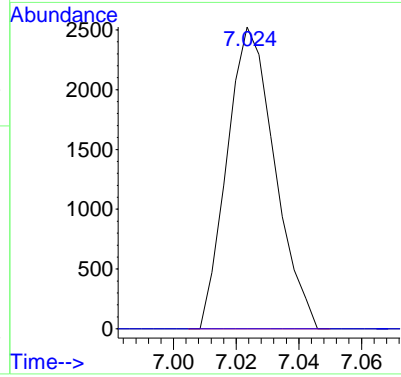
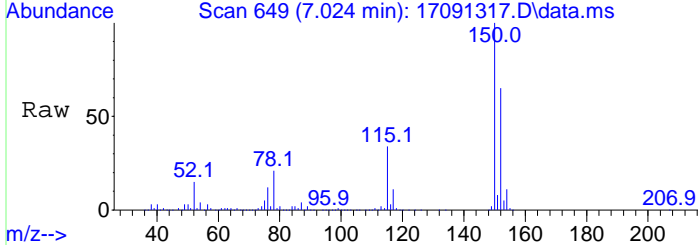
Tgt Ion	Resp	Lower	Upper
108	100		
79	709.5	94.2	134.2#
77	903.4	54.6	94.6#





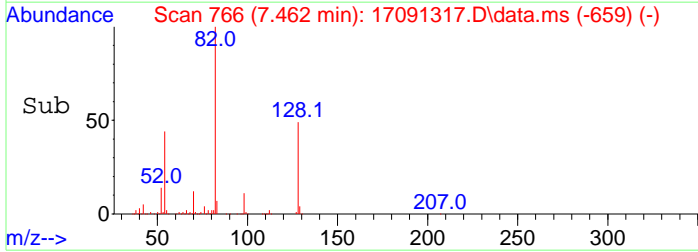
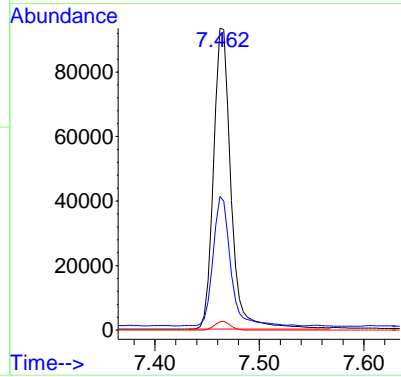
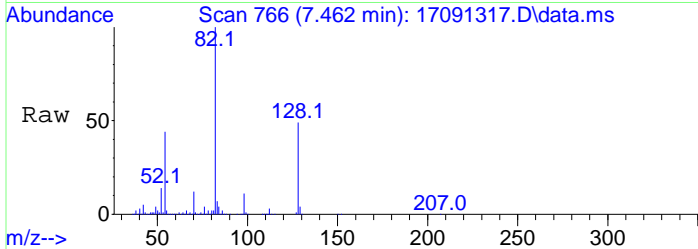
#17
 2-Methylphenol
 Concen: 0.038 mg/kg
 RT: 7.024 min Scan# 649
 Delta R.T. -0.176 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

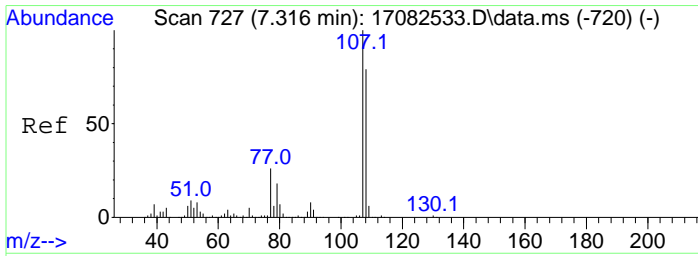
Tgt Ion	Resp	Lower	Upper
108	100		
107	0.0	70.4	110.4#



#19
 N-Nitrosodi-n-propylamine
 Concen: 0.522 mg/kg
 RT: 7.462 min Scan# 766
 Delta R.T. 0.131 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

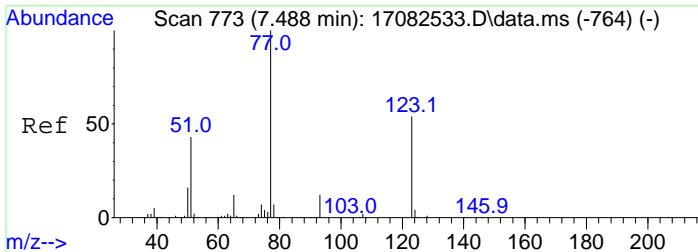
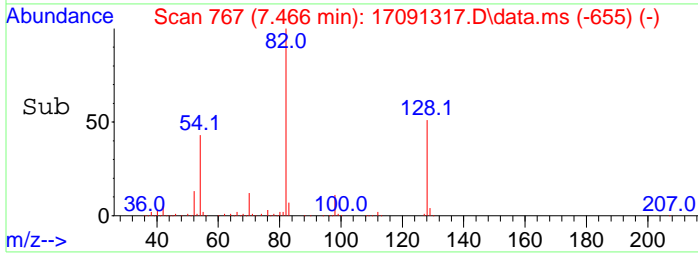
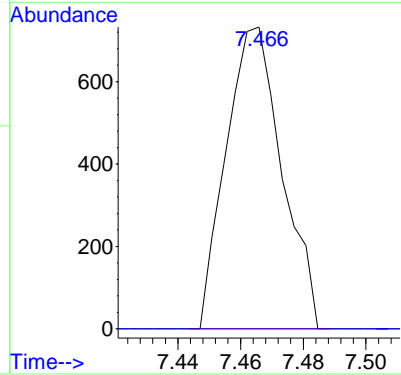
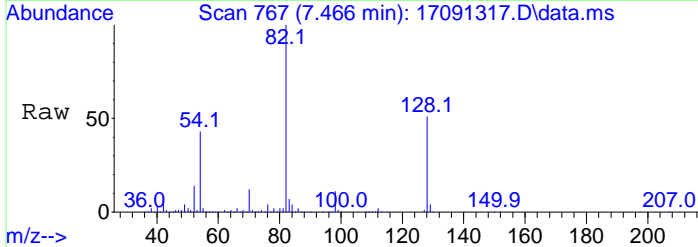
Tgt Ion	Resp	Lower	Upper
70	100		
42	43.0	33.3	73.3
130	2.8	2.4	42.4





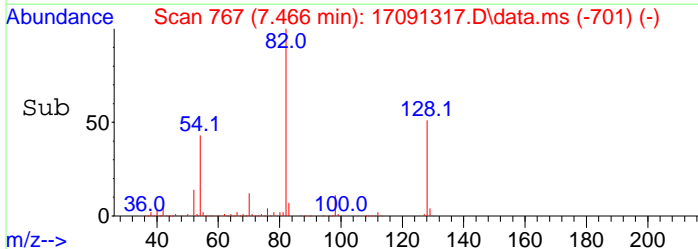
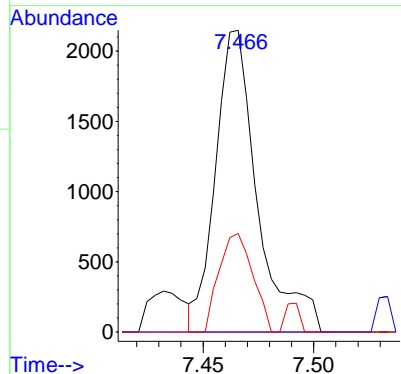
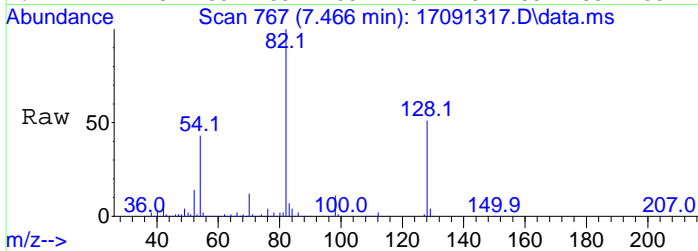
#20
 4-Methylphenol
 Concen: 0.029 mg/kg
 RT: 7.466 min Scan# 767
 Delta R.T. 0.150 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

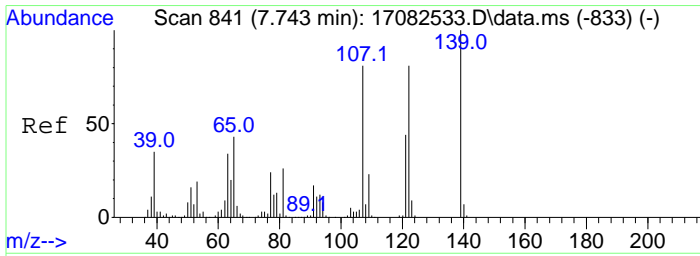
Tgt Ion	Resp	Lower	Upper
108	907		
107	0.0	106.4	146.4#



#24
 Nitrobenzene
 Concen: 0.030 mg/kg
 RT: 7.466 min Scan# 767
 Delta R.T. -0.022 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

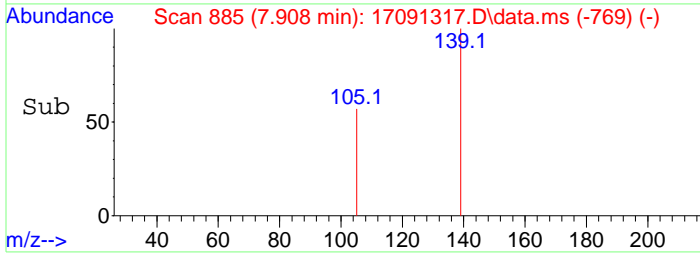
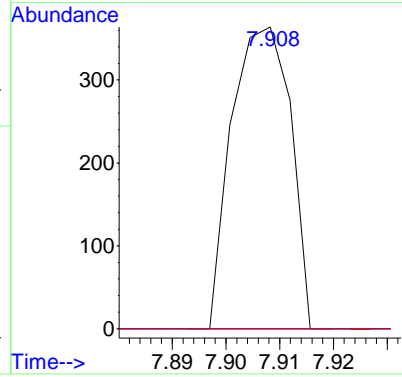
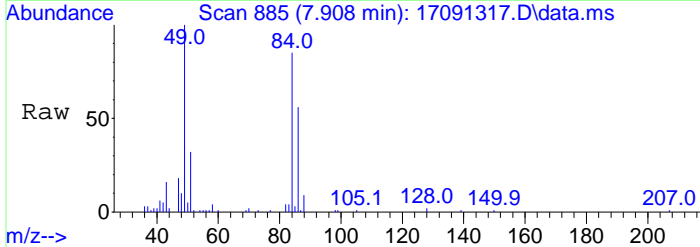
Tgt Ion	Resp	Lower	Upper
77	2841		
123	0.0	32.1	72.1#
65	32.7	0.0	32.5#





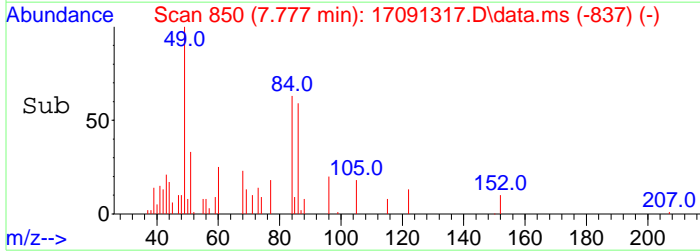
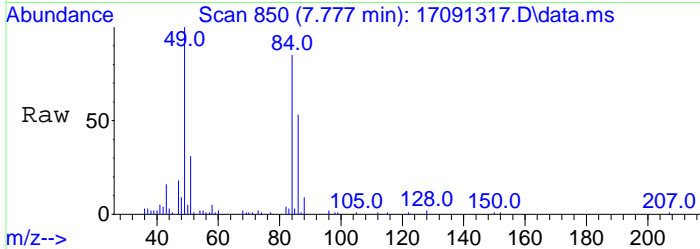
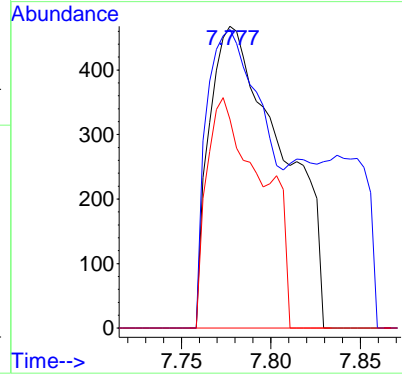
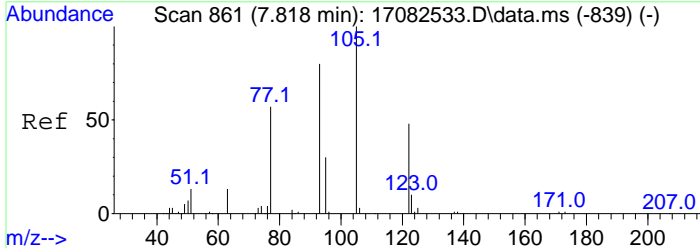
#26
 2-Nitrophenol
 Concen: 0.022 mg/kg
 RT: 7.908 min Scan# 885
 Delta R.T. 0.165 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

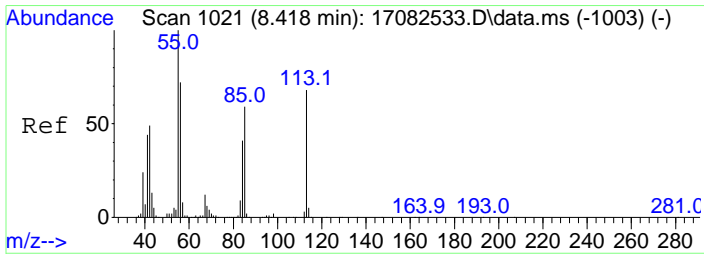
Tgt Ion	Resp	Lower	Upper
139	100		
65	0.0	13.0	73.0#
109	0.0	0.0	53.9



#29
 Benzoic acid
 Concen: 0.121 mg/kg
 RT: 7.777 min Scan# 850
 Delta R.T. -0.041 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

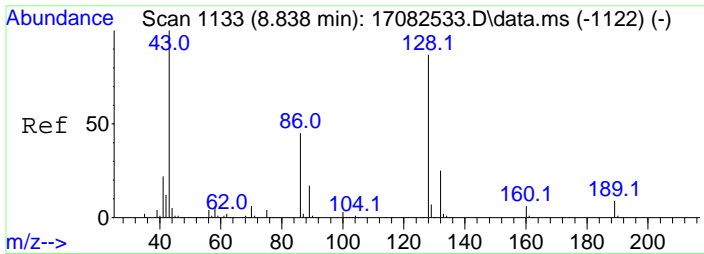
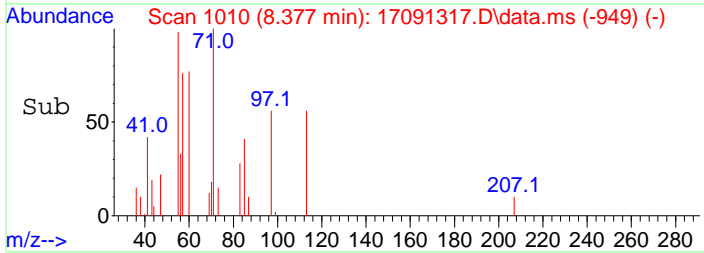
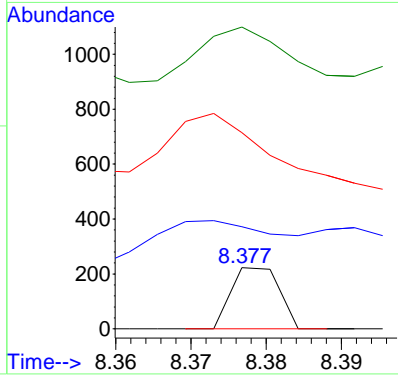
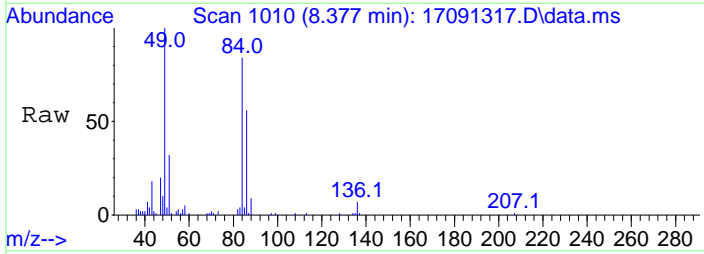
Tgt Ion	Resp	Lower	Upper
105	100		
77	98.9	41.9	101.9
122	69.2	57.8	117.8





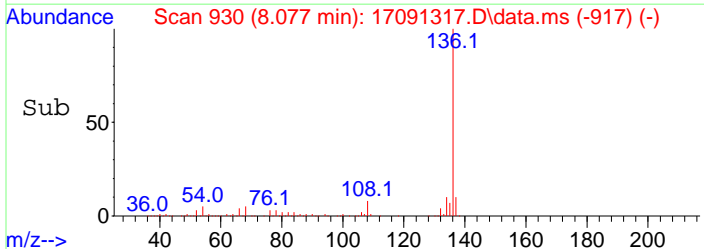
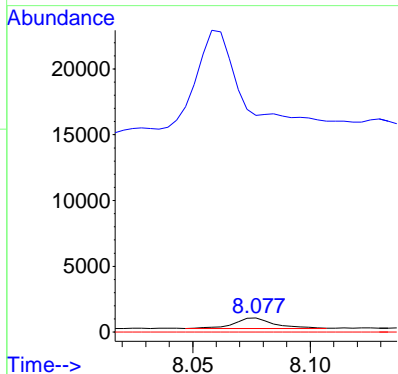
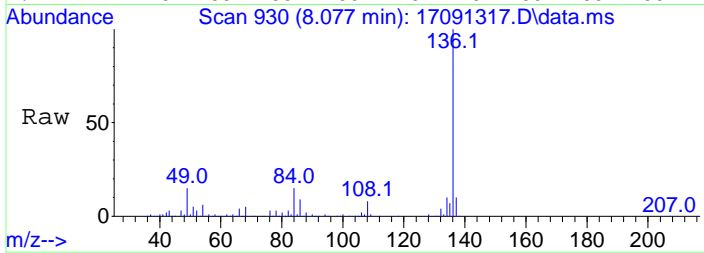
#37
 Caprolactam
 Concen: 0.032 mg/kg
 RT: 8.377 min Scan# 1010
 Delta R.T. -0.041 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

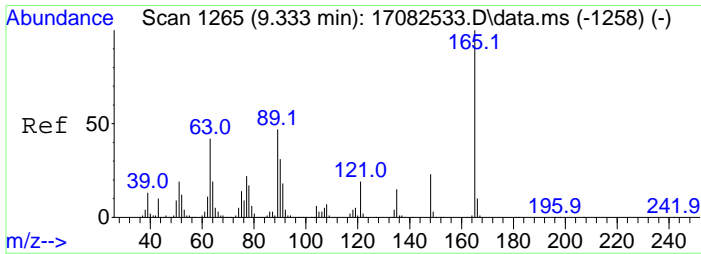
Tgt Ion	Resp	Lower	Upper
113	100		
56	4.5	87.2	147.2#
55	69.5	132.8	192.8#
85	79.4	60.6	120.6



#44
 EPTC
 Concen: 0.004 mg/kg
 RT: 8.077 min Scan# 930
 Delta R.T. -0.761 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

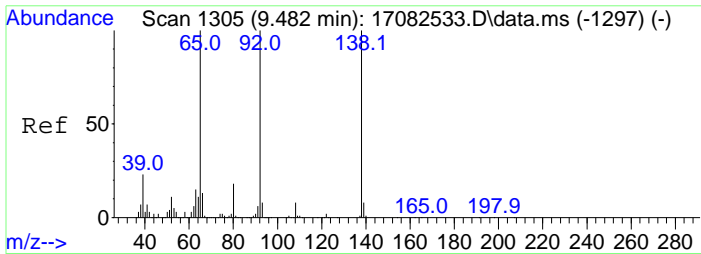
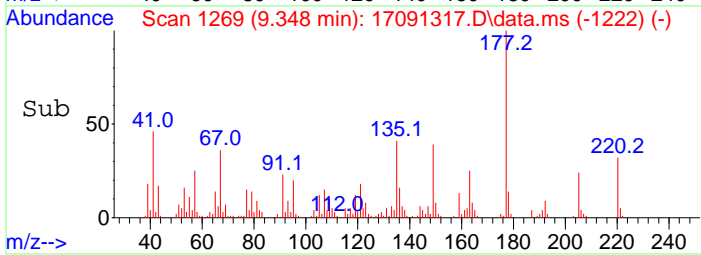
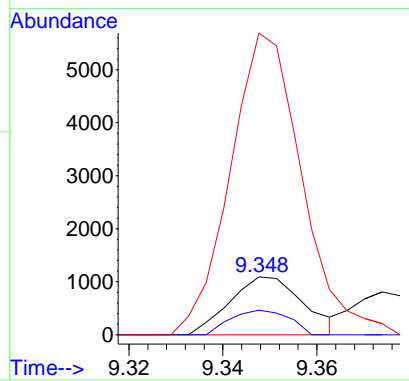
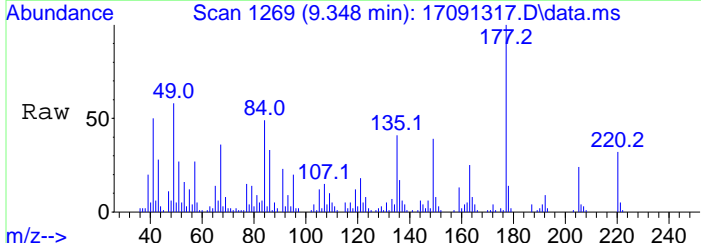
Tgt Ion	Resp	Lower	Upper
128	100		
86	56.2	34.7	74.7
189	0.0	0.0	30.6





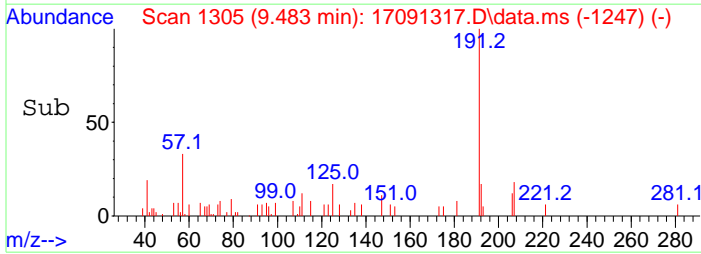
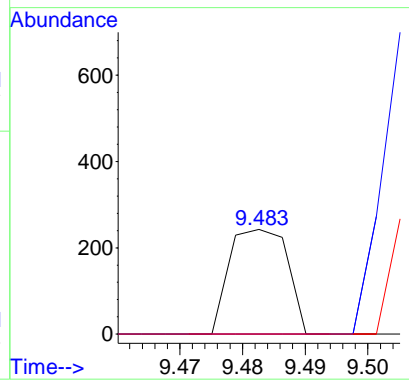
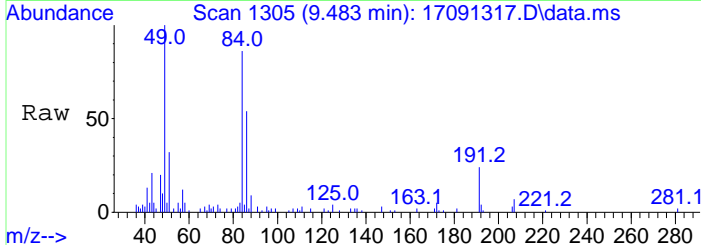
#53
 2,6-Dinitrotoluene
 Concen: 0.037 mg/kg
 RT: 9.348 min Scan# 1269
 Delta R.T. 0.015 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

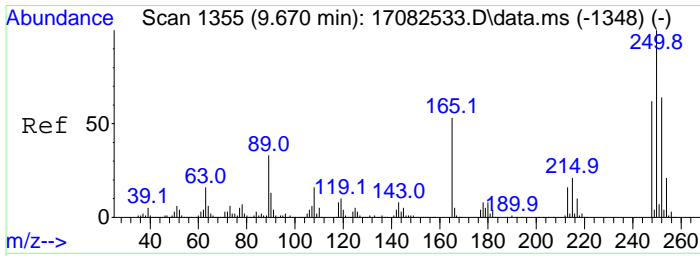
Tgt Ion	Resp	Lower	Upper
165	100		
89	42.8	26.7	66.7
121	489.1	0.0	39.3#



#55
 3-Nitroaniline
 Concen: 0.025 mg/kg
 RT: 9.483 min Scan# 1305
 Delta R.T. 0.000 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

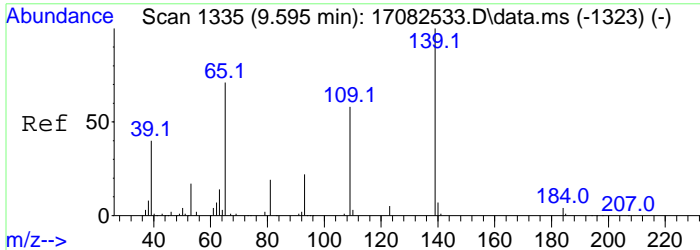
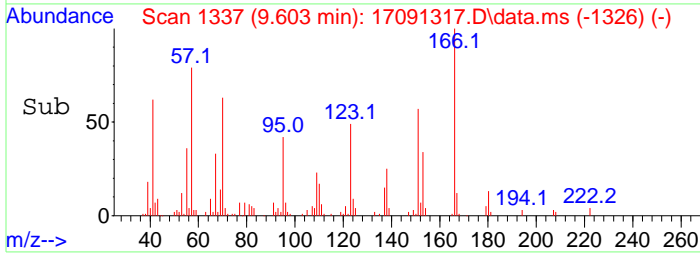
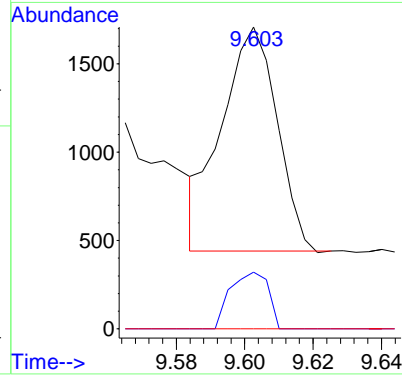
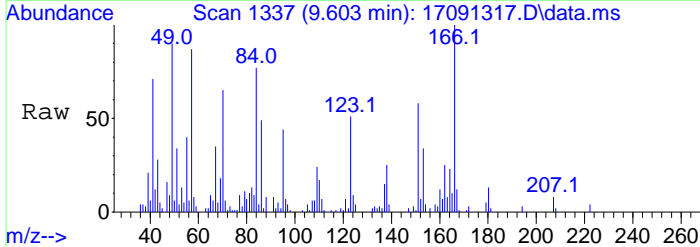
Tgt Ion	Resp	Lower	Upper
138	100		
108	0.0	0.0	38.1
92	0.0	70.7	130.7#





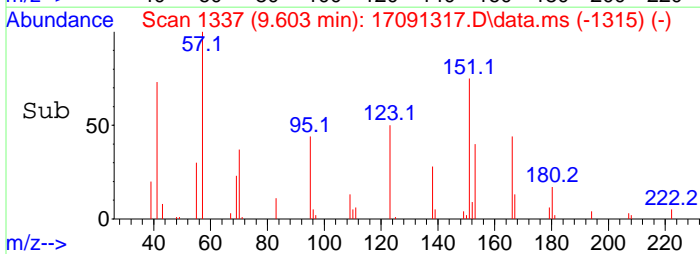
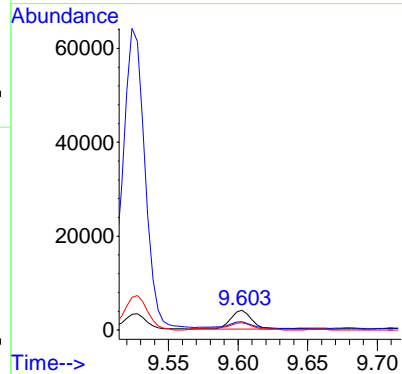
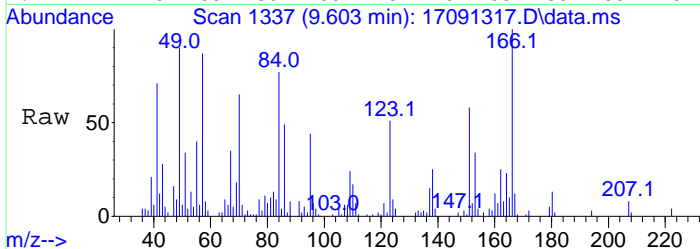
#58
 2,4-Dinitrotoluene
 Concen: 0.032 mg/kg
 RT: 9.603 min Scan# 1337
 Delta R.T. -0.067 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

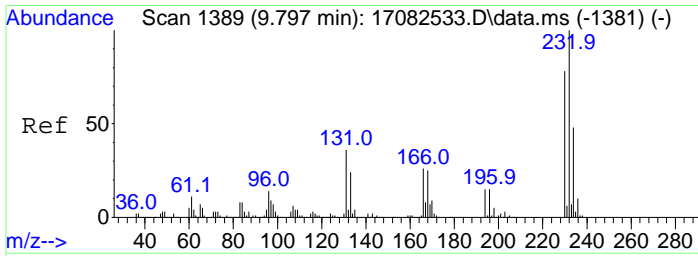
Tgt Ion	Resp	Lower	Upper
165	1436		
165	100		
63	25.3	24.6	64.6
182	0.0	0.0	25.8



#59
 4-Nitrophenol
 Concen: 0.169 mg/kg
 RT: 9.603 min Scan# 1337
 Delta R.T. 0.008 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

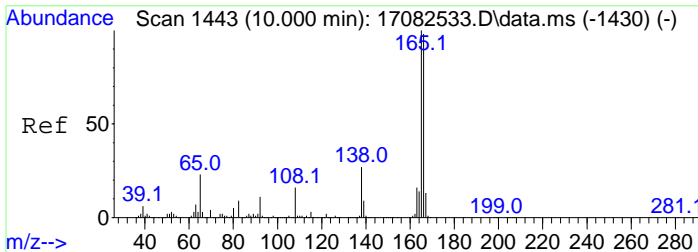
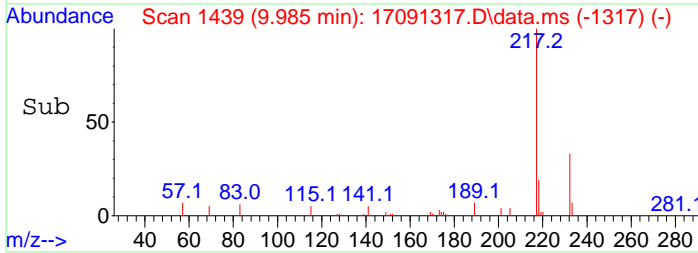
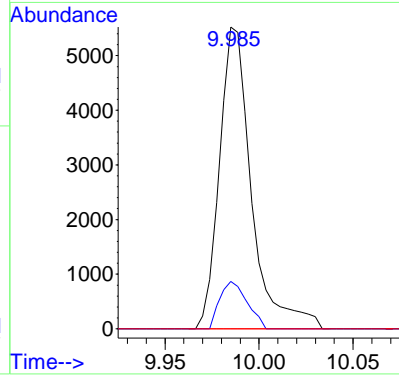
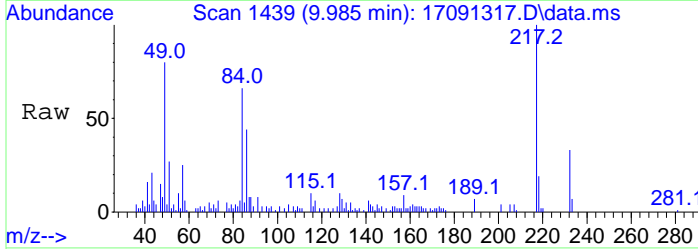
Tgt Ion	Resp	Lower	Upper
109	4362		
109	100		
81	34.4	13.8	73.8
65	39.4	99.4	159.4#





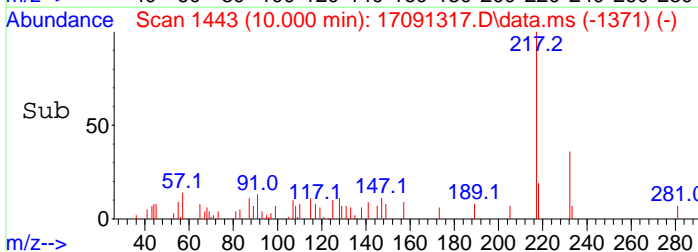
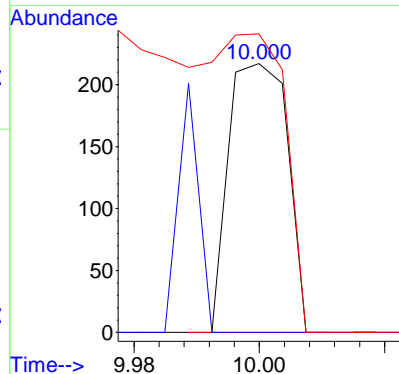
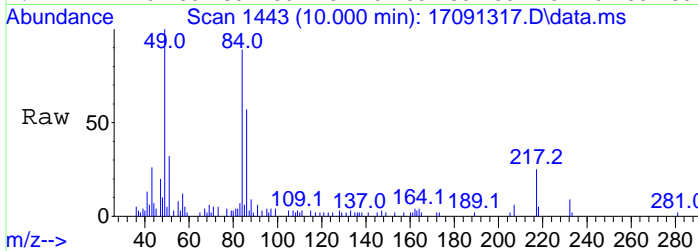
#60
 2,3,4,6-Tetrachlorophenol
 Concen: 0.063 mg/kg
 RT: 9.985 min Scan# 1439
 Delta R.T. 0.188 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

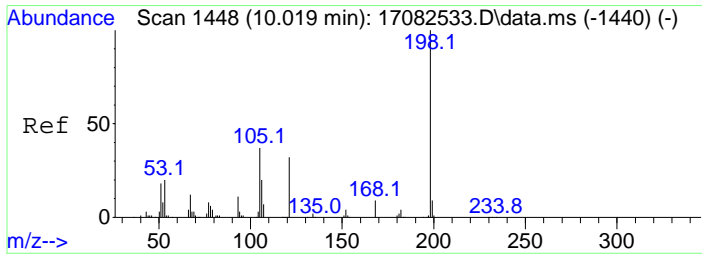
Tgt Ion	Resp	Lower	Upper
232	100		
131	13.4	16.9	56.9#
230	0.0	57.8	97.8#



#64
 4-Nitroaniline
 Concen: 0.036 mg/kg
 RT: 10.000 min Scan# 1443
 Delta R.T. 0.000 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

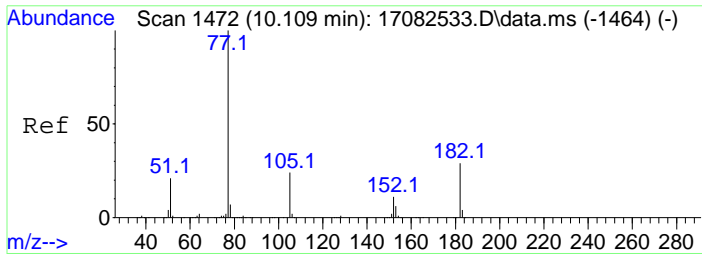
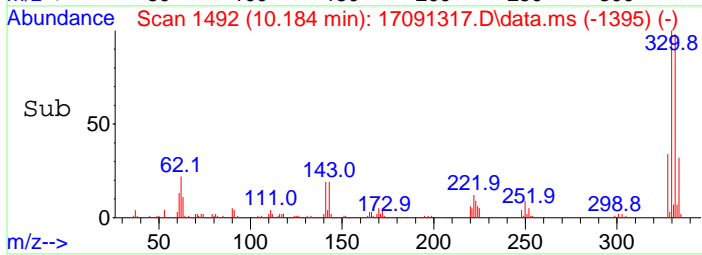
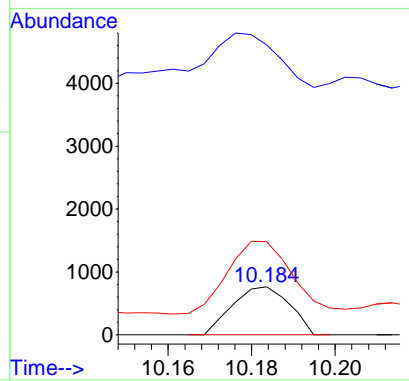
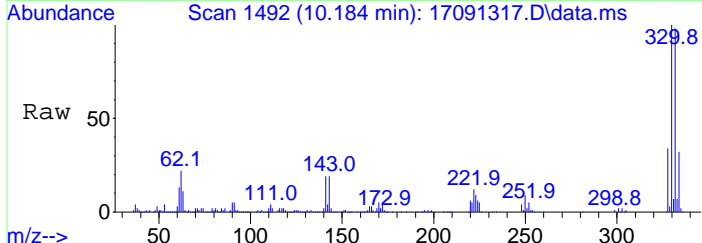
Tgt Ion	Resp	Lower	Upper
138	100		
92	0.0	24.1	64.1#
108	111.1	43.7	83.7#





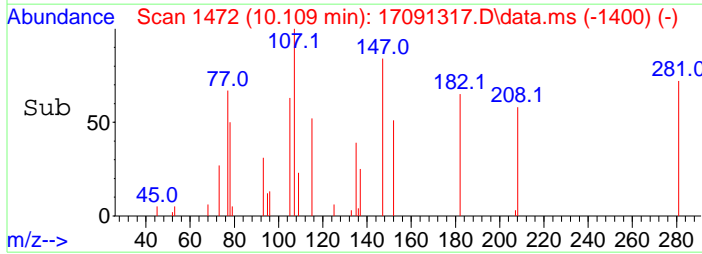
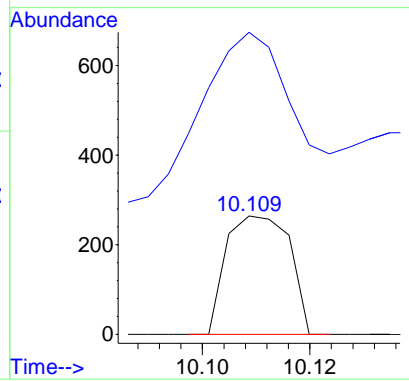
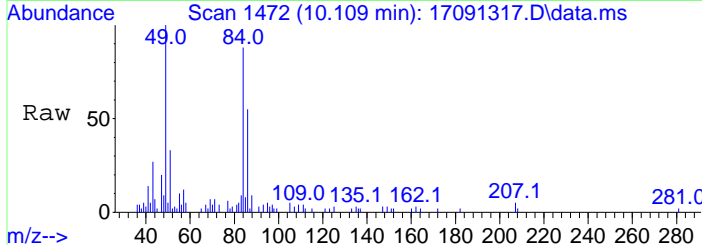
#66
 4,6-Dinitro-2-methylphenol
 Concen: 0.099 mg/kg
 RT: 10.184 min Scan# 1492
 Delta R.T. 0.165 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

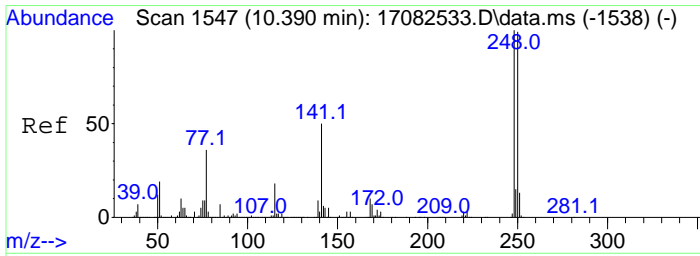
Tgt Ion	Resp	Lower	Upper
198	100		
51	80.7	1.5	61.5#
105	149.4	7.9	67.9#



#67
 1,2-Diphenylhydrazine
 Concen: 0.024 mg/kg
 RT: 10.109 min Scan# 1472
 Delta R.T. 0.000 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

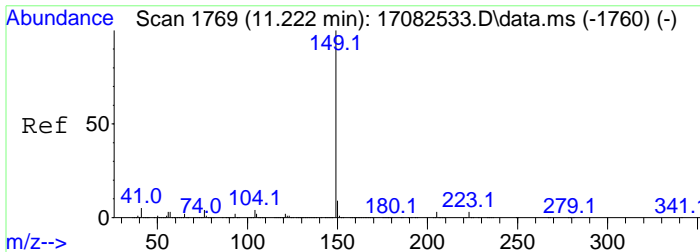
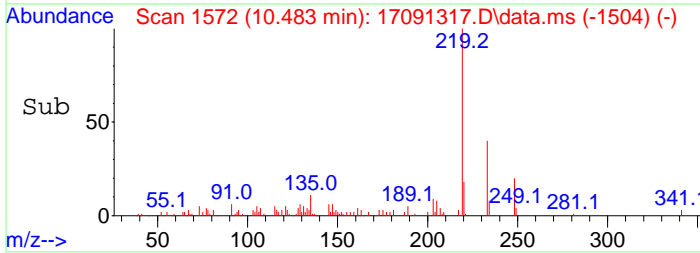
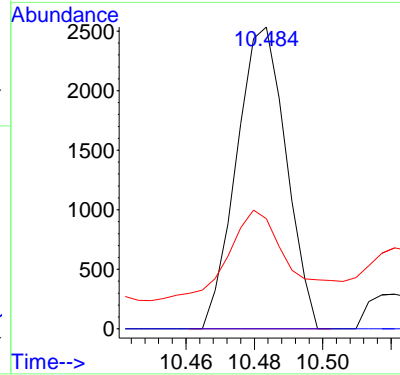
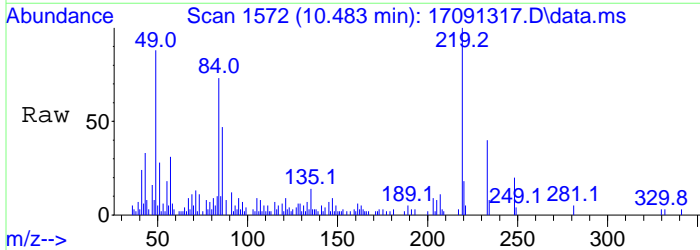
Tgt Ion	Resp	Lower	Upper
182	100		
105	208.3	64.3	104.3#





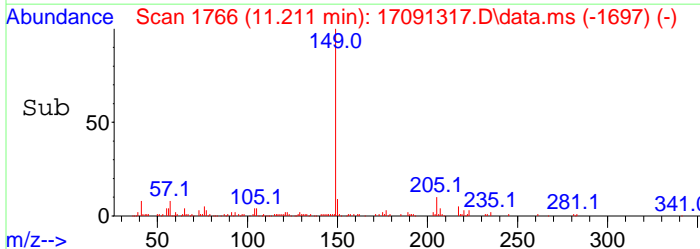
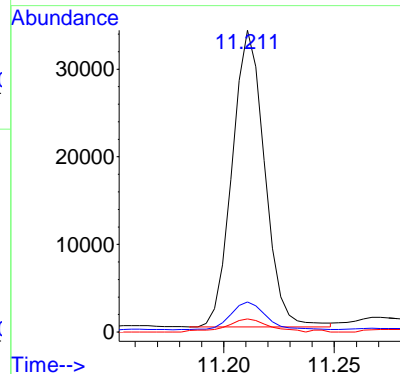
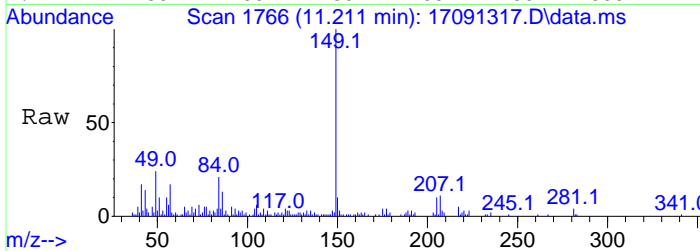
#70
 4-Bromophenyl phenyl ether
 Concen: 0.013 mg/kg
 RT: 10.483 min Scan# 1572
 Delta R.T. 0.094 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

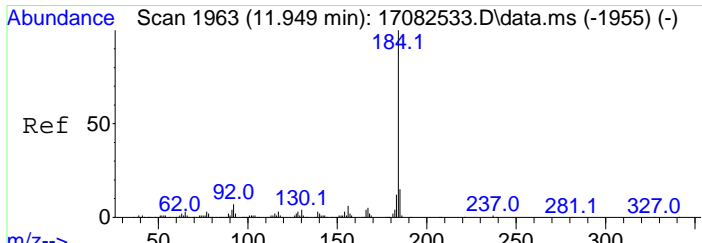
Tgt Ion	Resp	Lower	Upper
248	100		
250	0.0	69.0	129.0#
115	24.7	0.0	50.4



#78
 Di-n-butyl phthalate
 Concen: 0.047 mg/kg
 RT: 11.211 min Scan# 1766
 Delta R.T. -0.011 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

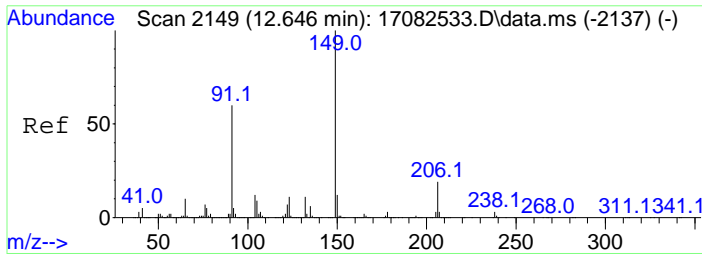
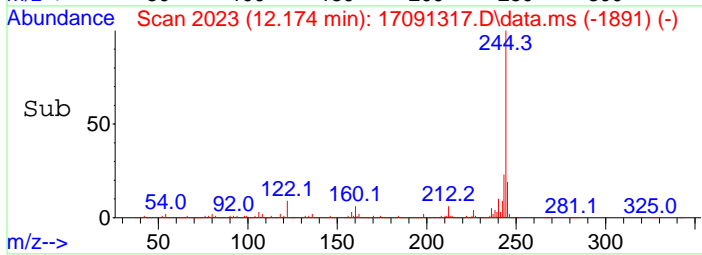
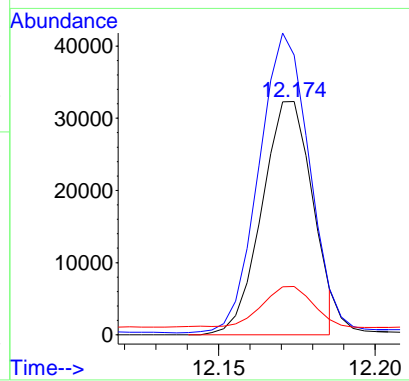
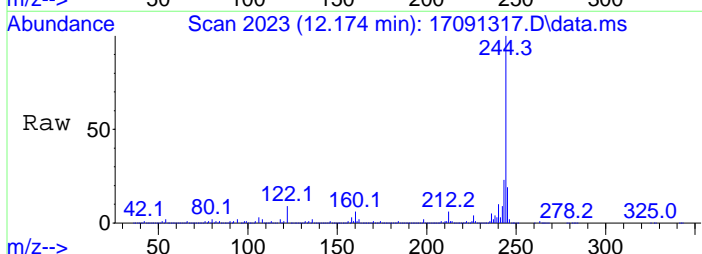
Tgt Ion	Resp	Lower	Upper
149	100		
150	9.2	0.0	29.3
104	4.5	0.0	24.1





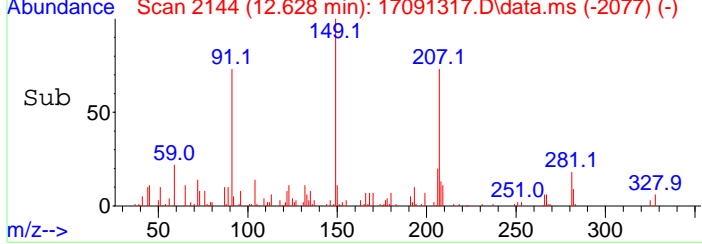
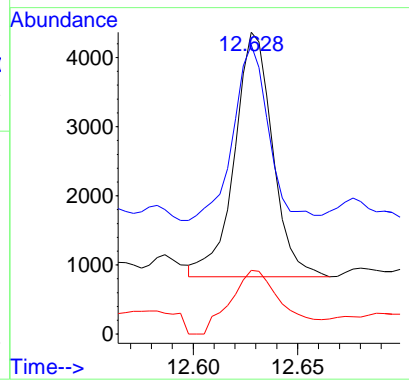
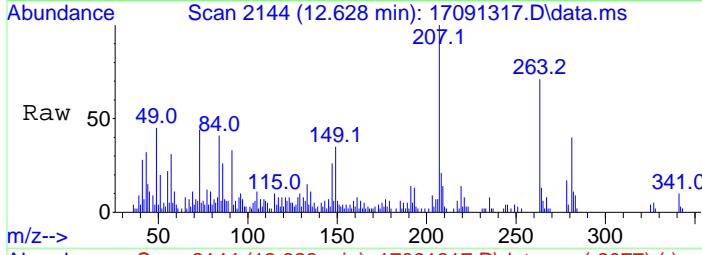
#81
Benzidine
Concen: 0.105 mg/kg
RT: 12.174 min Scan# 2023
Delta R.T. 0.225 min
Lab File: 17091317.D
Acq: 13 Sep 2017 5:18 pm

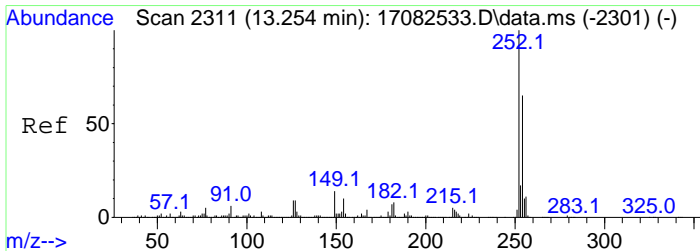
Tgt Ion	Resp	Lower	Upper
184	100		
92	118.9	0.0	27.0#
185	17.0	0.0	34.2



#84
Butyl benzyl phthalate
Concen: 0.033 mg/kg
RT: 12.628 min Scan# 2144
Delta R.T. -0.019 min
Lab File: 17091317.D
Acq: 13 Sep 2017 5:18 pm

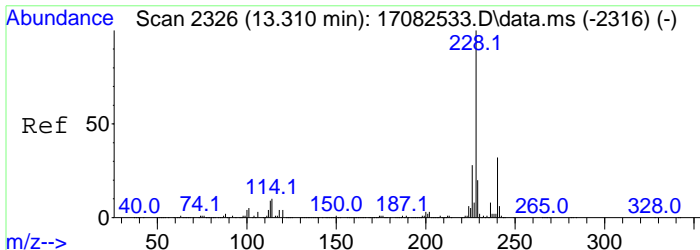
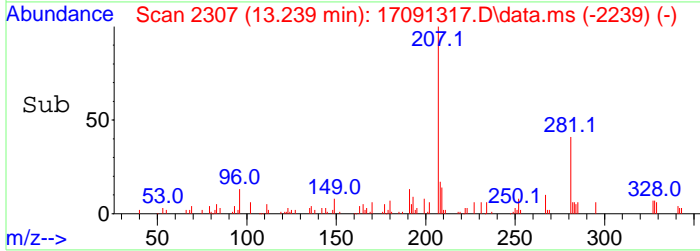
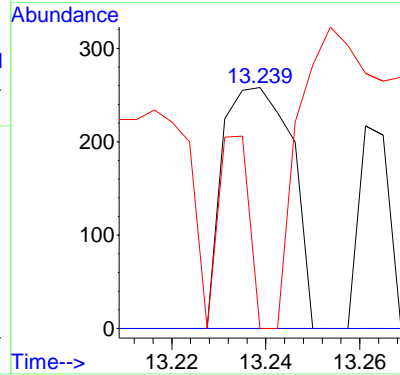
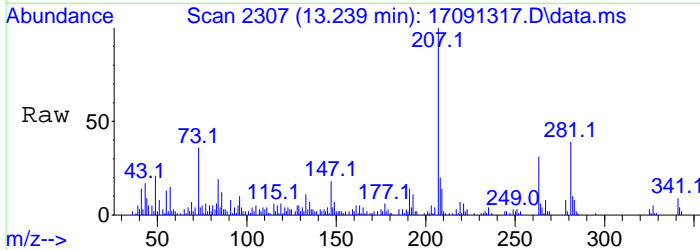
Tgt Ion	Resp	Lower	Upper
149	100		
91	71.7	40.6	80.6
206	26.1	0.0	39.1





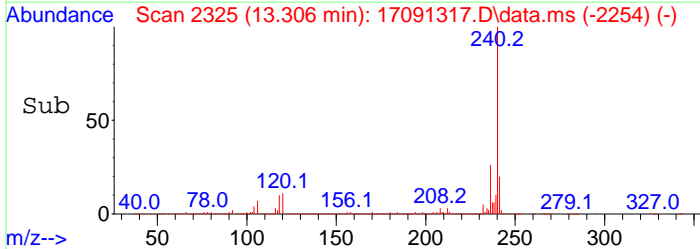
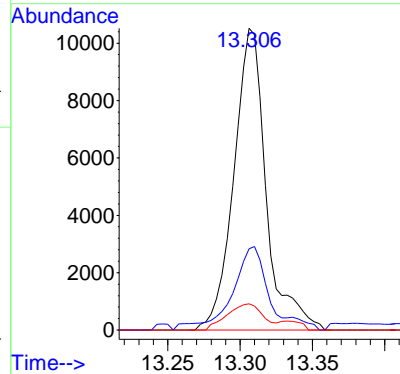
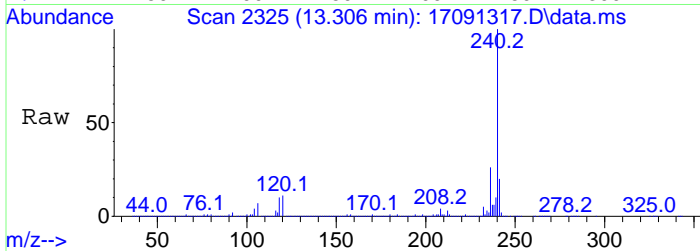
#85
 3,3'-Dichlorobenzidine
 Concen: 0.016 mg/kg
 RT: 13.239 min Scan# 2307
 Delta R.T. -0.015 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

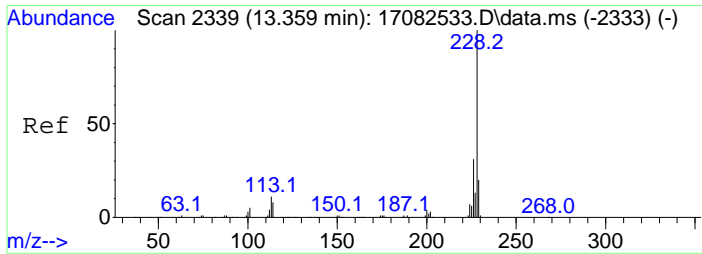
Tgt Ion	Resp	Lower	Upper
252	100		
254	0.0	44.8	84.8#
126	0.0	0.0	29.2



#86
 Benzo[a]anthracene
 Concen: 0.013 mg/kg
 RT: 13.306 min Scan# 2325
 Delta R.T. -0.004 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

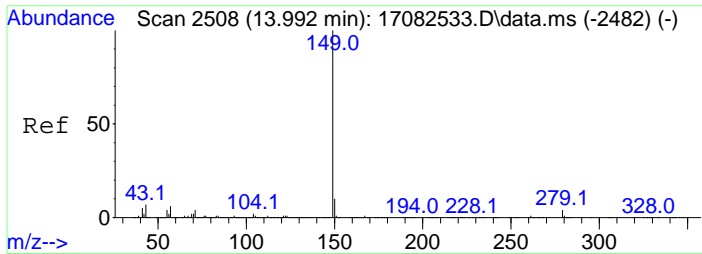
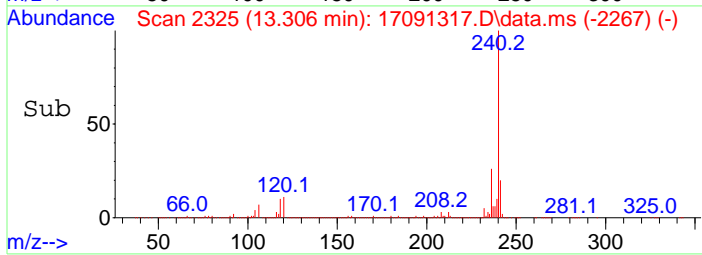
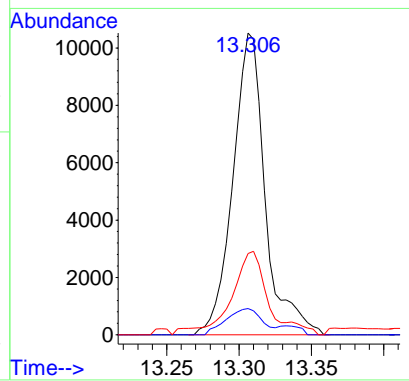
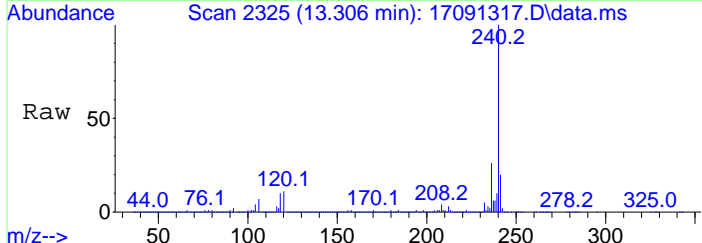
Tgt Ion	Resp	Lower	Upper
228	100		
229	24.9	0.1	40.1
226	8.7	7.7	47.7





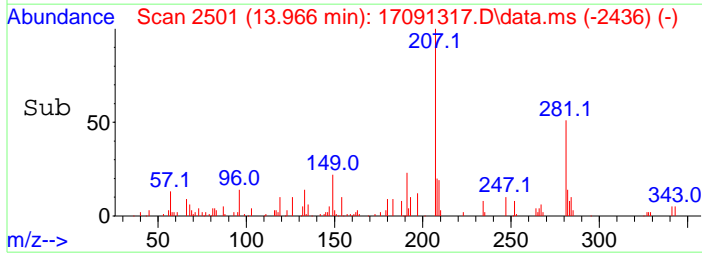
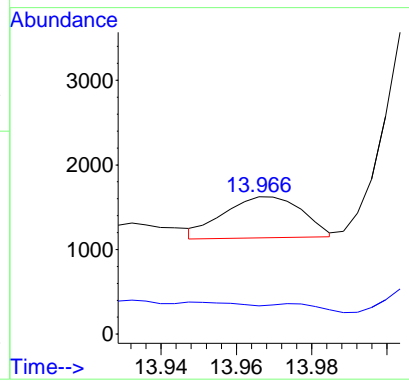
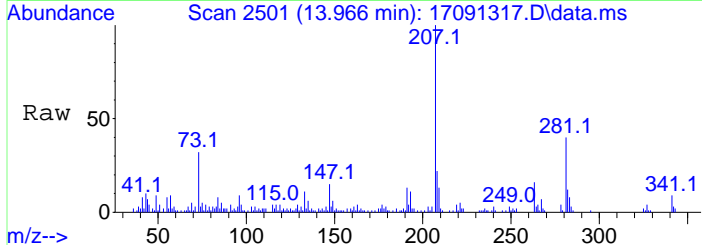
#87
 Chrysene
 Concen: 0.013 mg/kg
 RT: 13.306 min Scan# 2325
 Delta R.T. -0.052 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

Tgt Ion	Resp	Lower	Upper
228	100		
226	8.7	10.8	50.8#
229	24.9	0.0	40.0



#90
 Di-n-octyl phthalate
 Concen: 0.030 mg/kg
 RT: 13.966 min Scan# 2501
 Delta R.T. -0.026 min
 Lab File: 17091317.D
 Acq: 13 Sep 2017 5:18 pm

Tgt Ion	Resp	Lower	Upper
149	100		
150	10.4	0.0	29.8



**GCMS9
Calibration Curve
For
DHL Work Order
1709084**

Method 8270 / 625 SVOC Calibration Curve Sheet

Instrument ID: GCMS # 9

Calibration File Name: GCMS#9 SV170606.CAL

Target Concentration	Standard Preparation Stocks and Surrogate (µL/mL)	Final Volume mL
0.04 ppm	0.008 mL of 5.0 ppm	1
0.10 ppm	0.02 mL of 5.0 ppm	1
0.20 ppm	0.04 mL of 5.0 ppm	1
0.50 ppm	0.10 mL of 5.0 ppm	1
1.0 ppm	0.20 mL of 5.0 ppm	1
2.0 ppm	0.40 mL of 5.0 ppm	1
3.0 ppm	0.60 mL of 5.0 ppm	1
4.0 ppm	0.80 mL of 5.0 ppm	1
5.0 ppm	1.0 mL of SVCAL170605	1
SSCV 2.5 ppm	0.5 mL of SVSSCV170605	1
SSCV 2.5 ppm	SVSSCV170605-1	1

Standards Used for the Calibration Curve

STANDARD NAME	DHL Standard ID
5.0 PPM SEMIVOL CAL STANDARD	SVCAL170605
5.0 PPM SEMIVOL SSCV STANDARD (FULL)	SVSSCV170605
2.5 PPM SEMIVOL SSCV STANDARD (EPTC)	SVSSCV170605-1
4000PPM SVOL SURROGATE	SVSUR170104-15
4000PPB INTERNAL STANDARD	SVIS170104-2

Review Item	Acceptance Criteria	Yes	No	N/A	2nd Level Review
1. Are all standards within expiration dates?	Primary Stocks = 1 year Intermediate Standards = 6 months	X			X
2. Are all manual integrations listed on MI tracking form? (DoD Projects only)	Manual Integration Tracking Form			X	
3. Does the tune and DFTPP (breakdown / tailing factor) meet criteria?	≤ 20% for DDT / Benzidine and PCP tailing factor < 2 See Tune Eval Report	X			
3. Does the ICAL curve meet criteria? Use average CF only if %RSD < 15%	%RSD < 15% COD ≥ 0.990	X			
4. Has the low point been reprocessed under the new ICAL curve and meets criteria?	70-130% recovery	X			
5. Has the SSCV been analyzed and meets criteria?	80-120% recovery – DoD 70-130% recovery – non-DoD	X			

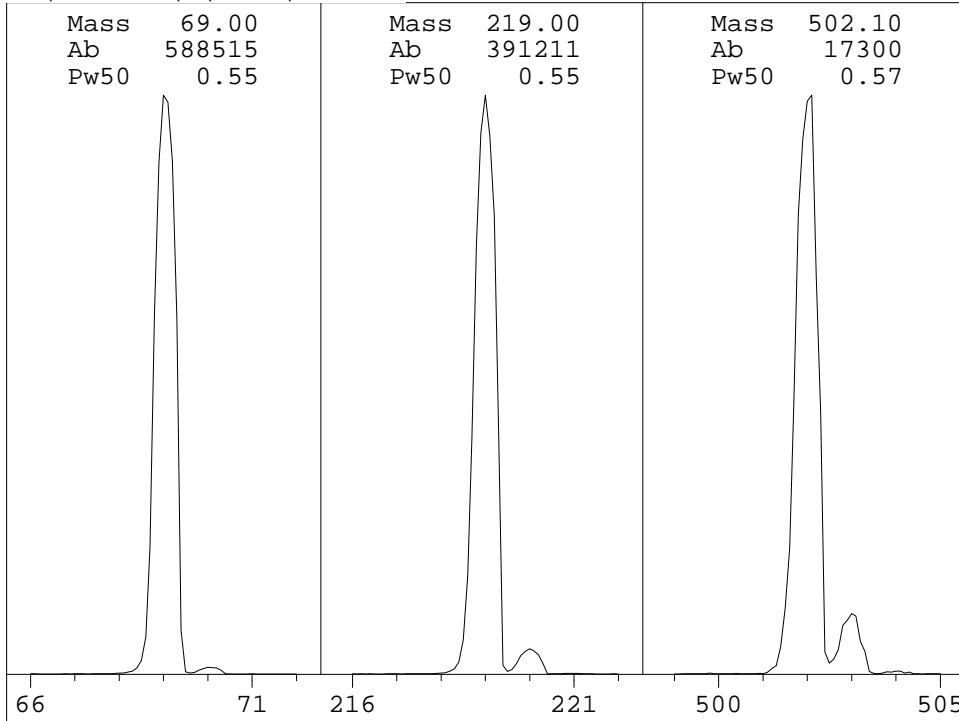
Analyst: *Karyn Lane*

Date: 6/6/2017

Second-Level Review: *Don Winston*

Date: **06/07/2017**

Calibration prepared and spiked by Don Winston. Analyzed by Karyn Lane.

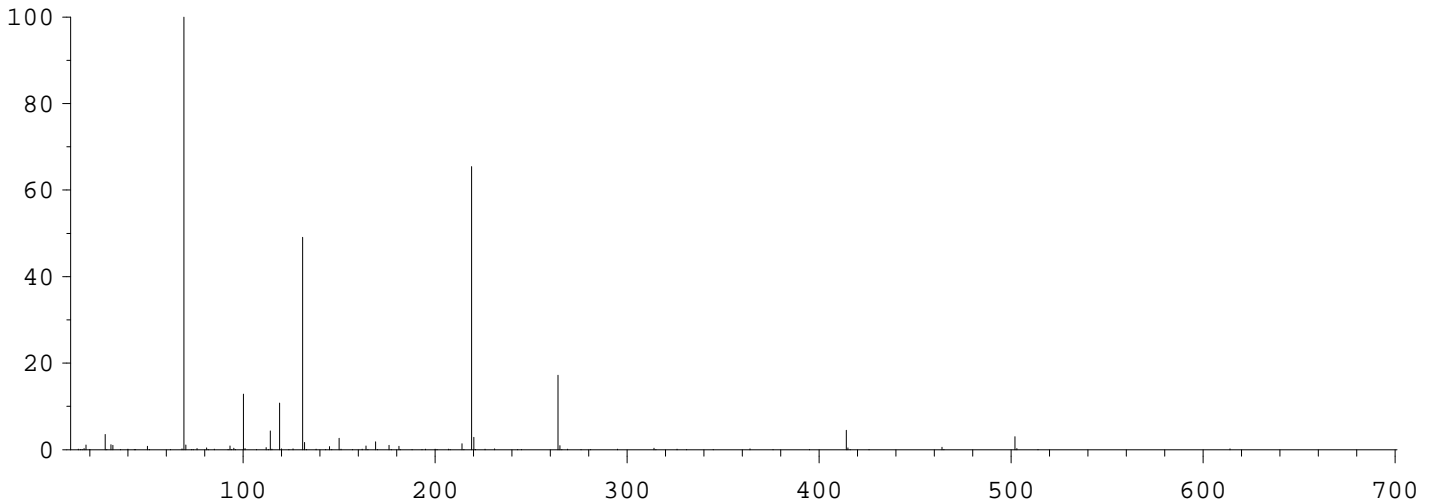


Ion Pol Pos MassGain -993
 MassOffs -41
 Emission 34.6 AmuGain 1477
 EIEnrgy 69.9 AmuOffs 125.81
 Filament 1 Wid219 -0.021
 DC Pol Pos
 Repeller 21.75
 IonFcus 90.2 HEDenab On
 EntLens 19.0 EMVolts 1282
 EntOffs 19.07

 PFTBA Open Samples 8
 Averages 3
 Stepsize 0.10

Temperatures and Pressures:
 MS Source 330 Turbo Speed 100
 MS Quad 150 HiVac 1.00e10

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
 102 peaks Base: 69.10 Abundance: 562176



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.10	562176	100.00	70.10	6241	1.11
219.00	368000	65.46	220.10	15895	4.32
502.10	16992	3.02	503.10	1663	9.79

Air/Water Check: H2O~1.06% N2~3.51% O2~0.99% CO2~0.05% N2/H2O~331.51%

Column(1) Flow: 1.3 Column(2): -1.79769e+308 ml/min. Interface Temp: 310

Ramp Criteria:

Ion Focus Maximum 90 volts using ion 502; EM Gain 90556
 Repeller Maximum 35 volts using ion 219; Gain Factor 0.91

MassGain Values(Samples): -983(3) -979(2) -972(1) -946(0) -867(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	125.8	125.8	125.8	125.8	125.8	125.8	125.8
Entrance Lens Offset:	19.1	19.1	19.1	19.1	19.1	19.1	19.1

Method Path : C:\msdchem\1\METHODS\
 Method File : SV170606.M
 Title : CLP BNA Calibration - Large Volume Injection
 Last Update : Tue Jun 06 15:04:48 2017
 Response Via : Initial Calibration

Calibration Files

.04 =17060603.D 0.1 =17060604.D 0.5 =17060606.D 1.0 =17060607.D 2.0 =17060608.D 3.0 =17060609.D 4.0 =17060610.D
 5.0 =17060611.D 0.2 =17060605.D

Compound	.04	0.1	0.5	1.0	2.0	3.0	4.0	5.0	0.2	Avg	%RSD	Fit	RSD/CF	Constant	Linear	Quad
1) I 1,4-Dichlorobenzen...	-----ISTD-----															
2) N-nitrosodimet...	1.982	1.075	0.564	0.551	0.547	0.583	0.568	0.551	0.758	0.798	59.78	*Q	0.998	0.0141	0.5006	0.0438
3) T Pyridine	0.887	1.067	1.153	1.139	1.127	1.219	1.152	1.073	1.056	1.097	8.60	A	0.086	0.0000	1.0970	0.0000
4) N-nitrosodieth...	0.276	0.326	0.475	0.477	0.514	0.523	0.552	0.494	0.393	0.448	21.18	*Q	0.997	-0.0037	0.5191	0.001
5) P Benzaldehyde	0.728	0.848	0.902	0.880	0.932	0.913	0.906	0.834	0.831	0.864	7.24	A	0.072	0.0000	0.8639	0.0000
6) T Aniline	0.987	1.085	1.468	1.597	1.656	1.731	1.819	1.625	1.200	1.463	20.50	*Q	0.997	-0.0117	1.6773	0.034
7) S 2-Fluorophenol	0.371	0.583	0.741	0.826	0.925	0.998	1.044	1.005	0.651	0.794	28.64	*Q	0.998	-0.0066	0.8570	0.152
8) P bis(2-Chloroet...	0.216	0.241	0.303	0.313	0.334	0.333	0.350	0.320	0.252	0.296#	16.02	*Q	0.998	-0.0019	0.3320	0.001
9) S Phenol-d5	1.020	1.124	1.421	1.537	1.577	1.579	1.688	1.503	1.151	1.400	17.11	*Q	0.997	-0.0098	1.5984	-0.01
10) P Phenol	0.729	0.804	1.114	1.238	1.346	1.348	1.626	1.466	0.844	1.168	27.08	*Q	0.995	-0.0083	1.2115	0.271
11) P 2-Chlorophenol	0.774	0.872	1.096	1.175	1.196	1.268	1.303	1.211	0.904	1.089	17.55	*Q	0.998	-0.0070	1.2084	0.043
12) T 1,3-Dichlorobe...	1.181	1.180	1.204	1.170	1.265	1.239	1.272	1.200	1.174	1.209	3.27	A	0.033	0.0000	1.2095	0.0000
13) P 1,4-Dichlorobe...	1.490	1.366	1.332	1.305	1.383	1.329	1.362	1.326	1.358	1.361	3.96	A	0.040	0.0000	1.3611	0.0000
14) T 1,2-Dichlorobe...	1.345	1.382	1.292	1.274	1.351	1.317	1.367	1.263	1.271	1.318	3.41	A	0.034	0.0000	1.3180	0.0000
15) T Benzyl alcohol		0.384	0.559	0.575	0.722	0.698	0.744	0.683	0.421	0.599	23.03	*Q	0.996	-0.0109	0.6929	0.022
16) T bis(2-chlorois...	1.683	1.634	1.621	1.435	1.518	1.461	1.460	1.335	1.491	1.515	7.33	A	0.073	0.0000	1.5152	0.0000
17) T 2-Methylphenol	0.628	0.756	0.978	0.946	1.209	1.183	1.304	1.165	0.799	0.996	23.49	*Q	0.995	-0.0077	1.0983	0.114
18) T Hexachloroethane	0.483	0.469	0.448	0.445	0.474	0.460	0.470	0.440	0.446	0.459	3.32	A	0.033	0.0000	0.4595	0.0000
19) P N-Nitrosodi-n-...	0.968	0.905	0.929	0.849	1.005	0.899	0.895	0.805	0.762	0.891	8.58	A	0.086	0.0000	0.8908	0.0000
20) P 4-Methylphenol	0.666	0.874	1.016	1.006	1.284	1.195	1.320	1.156	0.926	1.049	20.13	*Q	0.994	-0.0078	1.1851	0.038
21) P Acetophenone	1.319	1.380	1.750	1.691	1.952	1.847	1.848	1.666	1.441	1.655	13.63	A	0.136	0.0000	1.6549	0.0000
22) I Naphthalene-d8	-----ISTD-----															
23) S Nitrobenzene-d5	0.194	0.207	0.278	0.283	0.287	0.312	0.330	0.315	0.247	0.272	17.46	*Q	0.999	-0.0013	0.2824	0.034
24) P Nitrobenzene	0.150	0.178	0.229	0.242	0.238	0.263	0.274	0.276	0.199	0.228	19.23	*Q	0.999	-0.0010	0.2307	0.039
25) P Isophorone	0.451	0.448	0.523	0.504	0.543	0.512	0.539	0.490	0.470	0.498	7.15	A	0.072	0.0000	0.4978	0.0000
26) P 2-Nitrophenol	0.068	0.078	0.119	0.129	0.141	0.161	0.161	0.155	0.103	0.124	28.16	*Q	0.994	-0.0006	0.1165	0.041
27) P 2,4-Dimethylph...	0.227	0.226	0.274	0.263	0.279	0.290	0.293	0.278	0.254	0.265	9.35	A	0.094	0.0000	0.2648	0.0000
28) P bis(2-Chloroet...	0.293	0.304	0.336	0.322	0.337	0.354	0.358	0.333	0.296	0.326	7.30	A	0.073	0.0000	0.3260	0.0000

Method	Path																
Method	File	C:\msdchem\1\METHODS\SV170606.M															
Title	: CLP BNA Calibration - Large Volume Injection																
29) T	Benzoic acid	0.042	0.081	0.117	0.163	0.182	0.208	0.188	0.042	0.128	52.33	*Q	0.991	-0.0040	0.1403	0.052	
30) P	2,4-Dichloroph...	0.155	0.177	0.258	0.270	0.287	0.291	0.304	0.286	0.202	0.248	22.26	*Q	0.999	-0.0020	0.2817	0.012
31) M	1,2,4-Trichlor...	0.303	0.307	0.304	0.297	0.289	0.321	0.324	0.315	0.303	0.307	3.69	A	0.037	0.0000	0.3072	0.0000
32) P	Naphthalene	0.940	0.902	0.889	0.902	0.908	0.896	0.898	0.864	0.891	0.899	2.23	A	0.022	0.0000	0.8990	0.0000
33) P	4-Chloroaniline	0.275	0.274	0.344	0.333	0.387	0.362	0.390	0.367	0.292	0.336	13.63	A	0.136	0.0000	0.3359	0.0000
34) P	2,6-Dichloroph...	0.220	0.220	0.262	0.261	0.288	0.275	0.291	0.282	0.238	0.260	10.64	A	0.106	0.0000	0.2597	0.0000
35) P	Hexachlorobuta...	0.201	0.201	0.193	0.197	0.191	0.200	0.201	0.200	0.192	0.197	2.15	A	0.022	0.0000	0.1973	0.0000
36) P	N-nitrosodi-n-...	0.030	0.038	0.050	0.053	0.054	0.051	0.054	0.051	0.041	0.047#	18.12	*Q	0.999	-0.0003	0.0548	-0.00
37) P	Caprolactam	0.034	0.043	0.063	0.068	0.070	0.067	0.073	0.068	0.048	0.059	23.73	*Q	0.998	-0.0005	0.0698	0.000
38) P	4-Chloro-3-met...	0.185	0.190	0.219	0.223	0.240	0.229	0.252	0.231	0.198	0.219	10.48	A	0.105	0.0000	0.2187	0.0000
39) P	1,2,4,5-Tetrac...	0.414	0.403	0.403	0.401	0.388	0.387	0.411	0.386	0.391	0.398	2.60	A	0.026	0.0000	0.3983	0.0000
40) P	2-Methylnaphth...	0.665	0.631	0.659	0.645	0.641	0.654	0.669	0.637	0.618	0.646	2.57	A	0.026	0.0000	0.6465	0.0000
41) T	1-Methylnaphth...	0.727	0.670	0.673	0.634	0.620	0.638	0.644	0.613	0.672	0.655	5.36	A	0.054	0.0000	0.6547	0.0000
42) I	Acenaphthene-d10	-----ISTD-----															
43) P	Hexachlorocycl...	0.123	0.192	0.329	0.349	0.392	0.423	0.446	0.461	0.244	0.329	36.08	*Q	0.999	-0.0030	0.3447	0.099
44) P	EPTC	0.383	0.395	0.438	0.417	0.428	0.414	0.434	0.422	0.409	0.415	4.29	A	0.043	0.0000	0.4155	0.0000
45) P	2,4,6-Trichlor...	0.198	0.208	0.304	0.319	0.348	0.361	0.366	0.364	0.249	0.302	22.30	*Q	0.995	-0.0011	0.2900	0.076
46) P	2,4,5-Trichlor...	0.277	0.338	0.393	0.381	0.413	0.393	0.431	0.420	0.351	0.377	12.84	*Q	0.999	-0.0012	0.3887	0.029
47) S	2-Fluorobiphenyl	1.522	1.510	1.619	1.527	1.558	1.568	1.571	1.576	1.529	1.553	2.23	A	0.022	0.0000	1.5533	0.0000
48) P	Biphenyl	1.219	1.219	1.315	1.279	1.289	1.294	1.322	1.379	1.258	1.286	3.95	A	0.040	0.0000	1.2859	0.0000
49) P	2-Chloronaphth...	1.045	1.004	1.080	1.025	1.041	1.094	1.156	1.142	1.018	1.067	5.09	A	0.051	0.0000	1.0674	0.0000
50) P	2-Nitroaniline	0.122	0.141	0.239	0.278	0.308	0.320	0.345	0.353	0.185	0.255	34.40	*Q	0.993	-0.0013	0.2282	0.116
51) M	Acenaphthylene	1.318	1.354	1.530	1.556	1.588	1.540	1.582	1.587	1.414	1.497	7.06	A	0.071	0.0000	1.4965	0.0000
52) P	Dimethyl phtha...	1.075	1.151	1.224	1.281	1.284	1.297	1.320	1.345	1.145	1.236	7.49	A	0.075	0.0000	1.2358	0.0000
53) T	2,6-Dinitrotol...	0.130	0.146	0.212	0.237	0.251	0.260	0.273	0.280	0.175	0.218	25.67	*Q	1.000	-0.0015	0.2284	0.043
54) P	Acenaphthene	1.326	1.286	1.271	1.222	1.269	1.279	1.305	1.259	1.271	1.276	2.27	A	0.023	0.0000	1.2764	0.0000
55) P	3-Nitroaniline	0.083	0.107	0.167	0.213	0.236	0.269	0.257	0.278	0.127	0.193	38.31	*Q	0.990	-0.0010	0.1673	0.102
56) P	2,4-Dinitrophenol			0.038	0.061	0.092	0.112	0.123	0.134	0.015	0.082	54.84	*Q	0.999	-0.0035	0.0688	0.056
57) T	Dibenzofuran	1.417	1.549	1.597	1.597	1.742	1.662	1.687	1.694	1.546	1.610	6.15	A	0.062	0.0000	1.6101	0.0000
58) M	2,4-Dinitrotol...	0.145	0.164	0.282	0.320	0.375	0.380	0.389	0.416	0.205	0.297	34.72	*Q	0.990	-0.0015	0.2662	0.136
59) P	4-Nitrophenol		0.037	0.073	0.085	0.101	0.117	0.124	0.133	0.050	0.090	39.12	*Q	0.999	-0.0015	0.0834	0.042
60) P	2,3,4,6-Tetrac...	0.165	0.203	0.310	0.342	0.355	0.370	0.378	0.379	0.259	0.307	26.04	*Q	0.995	-0.0016	0.3058	0.073
61) P	Fluorene	1.175	1.202	1.239	1.240	1.231	1.261	1.292	1.299	1.205	1.238	3.33	A	0.033	0.0000	1.2381	0.0000
62) P	4-Chlorophenyl...	0.580	0.590	0.613	0.615	0.631	0.643	0.663	0.663	0.595	0.621	4.92	A	0.049	0.0000	0.6211	0.0000
63) P	Diethyl phthalate	1.093	1.146	1.206	1.224	1.252	1.301	1.298	1.342	1.157	1.224	6.72	A	0.067	0.0000	1.2243	0.0000
64) P	4-Nitroaniline	0.088	0.113	0.179	0.224	0.235	0.225	0.234	0.253	0.138	0.188	32.33	*Q	0.998	-0.0018	0.2081	0.033

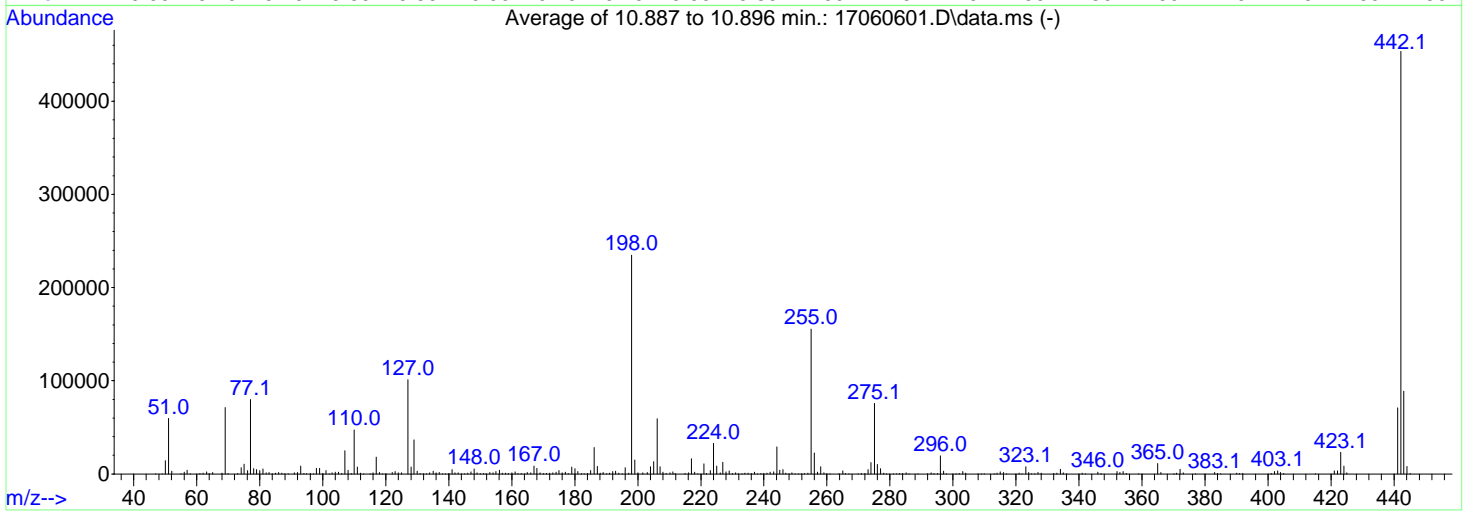
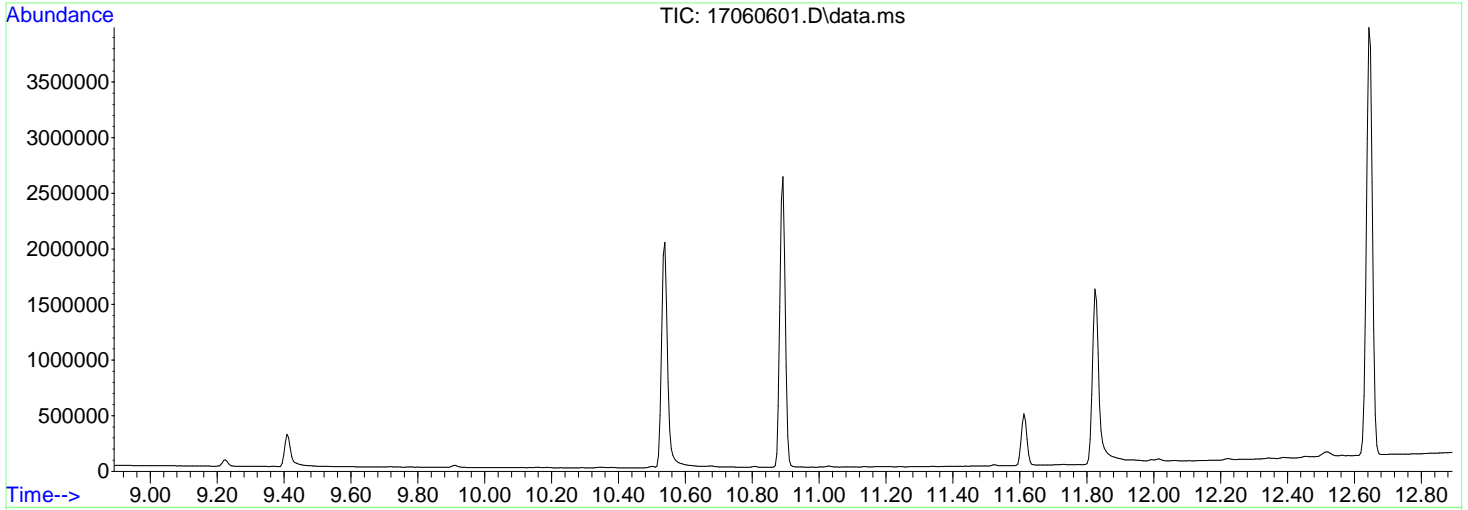
Method Path : C:\msdchem\1\METHODS\ Method File : SV170606.M Title : CLP BNA Calibration - Large Volume Injection																	
65) I	Phenanthrene-d10	-----ISTD-----															
66) P	4,6-Dinitro-2-...	0.026	0.065	0.078	0.100	0.101	0.105	0.113	0.036	0.078	42.33	*Q	0.999	-0.0019	0.0850	0.023	
67) P	1,2-Diphenylhy...	0.085	0.101	0.130	0.133	0.145	0.135	0.141	0.133	0.116	0.124	16.03	*Q	0.999	-0.0008	0.1425	-0.00
68) P	n-Nitrosodiphe...	0.340	0.359	0.392	0.394	0.426	0.404	0.397	0.413	0.372	0.388	6.99	A	0.070	0.0000	0.3885	0.0000
69) S	2,4,6-Tribromo...	0.110	0.134	0.171	0.177	0.210	0.189	0.194	0.196	0.145	0.169	19.52	*Q	0.998	-0.0012	0.1906	0.005
70) P	4-Bromophenyl ...	0.187	0.201	0.207	0.206	0.228	0.213	0.230	0.217	0.197	0.210	6.66	A	0.067	0.0000	0.2096	0.0000
71) P	Atrazine	0.152	0.155	0.177	0.186	0.196	0.183	0.192	0.187	0.163	0.177	9.11	A	0.091	0.0000	0.1769	0.0000
72) P	Hexachlorobenzene	0.284	0.289	0.290	0.296	0.312	0.288	0.307	0.292	0.282	0.293	3.41	A	0.034	0.0000	0.2934	0.0000
73) P	Pentachlorophenol	0.059	0.078	0.123	0.142	0.167	0.161	0.171	0.173	0.092	0.129	33.76	*Q	0.991	-0.0007	0.1214	0.050
74) P	Phenanthrene	0.933	0.904	0.891	0.860	1.000	0.882	0.915	0.910	0.878	0.908	4.51	A	0.045	0.0000	0.9083	0.0000
75) P	Anthracene	0.877	0.932	0.893	0.875	0.958	0.932	0.941	0.922	0.950	0.920	3.37	A	0.034	0.0000	0.9201	0.0000
76) P	Pentachloroben...	0.361	0.335	0.338	0.324	0.387	0.331	0.345	0.333	0.331	0.343	5.75	A	0.057	0.0000	0.3428	0.0000
77) P	Carbazole	0.713	0.728	0.789	0.831	0.935	0.829	0.860	0.868	0.775	0.814	8.68	A	0.087	0.0000	0.8141	0.0000
78) P	Di-n-butyl pht...	0.901	0.883	1.042	1.049	1.187	1.151	1.151	1.157	0.936	1.051	11.35	*Q	0.999	-0.0041	1.1120	0.045
79) P	Fluoranthene	1.103	1.046	1.117	1.088	1.195	1.165	1.292	1.230	1.084	1.147	6.96	A	0.070	0.0000	1.1466	0.0000
80) I	Chrysene-d12	-----ISTD-----															
81) M	Benzidine	0.240	0.233	0.288	0.300	0.336	0.319	0.364	0.341	0.236	0.295	16.77	*Q	0.997	-0.0014	0.3046	0.038
82) P	Pyrene	0.862	0.867	0.904	0.858	0.899	0.944	1.037	0.937	0.856	0.907	6.49	A	0.065	0.0000	0.9072	0.0000
83) S	4-Terphenyl-d14	0.788	0.784	0.814	0.745	0.795	0.809	0.890	0.839	0.777	0.805	5.14	A	0.051	0.0000	0.8046	0.0000
84) P	Butyl benzyl p...	0.223	0.240	0.325	0.324	0.355	0.394	0.419	0.390	0.264	0.326	21.75	*Q	0.997	-0.0019	0.3392	0.057
85) P	3,3`-Dichlorob...	0.300	0.281	0.336	0.330	0.388	0.382	0.420	0.379	0.305	0.347	13.68	*Q	0.997	-0.0014	0.3612	0.030
86) P	Benzo[a]antha...	1.087	0.969	0.928	0.851	0.942	0.933	0.929	0.924	0.927	0.943	6.61	A	0.066	0.0000	0.9434	0.0000
87) P	Chrysene	0.990	0.896	0.888	0.848	0.902	0.894	0.910	0.879	0.889	0.900	4.23	A	0.042	0.0000	0.8996	0.0000
88) P	bis(2-Ethylhex...	0.378	0.389	0.517	0.524	0.612	0.606	0.666	0.597	0.427	0.524	20.10	*Q	0.996	-0.0036	0.5744	0.046
89) I	Perylene-d12	-----ISTD-----															
90) P	Di-n-octyl pht...	0.588	0.608	0.857	0.892	1.017	1.058	1.014	0.989	0.686	0.857	21.56	*Q	0.998	-0.0072	0.9840	0.030
91) P	Benzo[b]fluora...	0.932	0.897	0.962	0.998	0.947	1.060	0.995	1.012	0.931	0.970	5.18	A	0.052	0.0000	0.9704	0.0000
92) P	Benzo[k]fluora...	1.020	1.003	1.046	1.001	0.986	1.061	0.979	0.974	1.001	1.008	2.92	A	0.029	0.0000	1.0078	0.0000
93) P	Benzo[a]pyrene	0.722	0.728	0.797	0.760	0.764	0.884	0.811	0.854	0.740	0.785	7.24	A	0.072	0.0000	0.7846	0.0000
94) P	Indeno[1,2,3-c...	1.041	1.066	1.138	1.124	1.163	1.257	1.220	1.209	1.068	1.143	6.64	A	0.066	0.0000	1.1428	0.0000
95) P	Dibenz[a,h]ant...	0.871	0.866	0.950	0.917	0.962	1.031	0.994	0.991	0.897	0.942	6.15	A	0.061	0.0000	0.9423	0.0000
96) P	Benzo[g,h,i]pe...	0.877	0.870	0.912	0.897	0.903	0.993	0.952	0.933	0.890	0.914	4.30	A	0.043	0.0000	0.9143	0.0000

(#) = Out of Range

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060601.D
 Acq On : 6 Jun 2017 10:24 am
 Operator :
 Sample : DFTPP-170606
 Misc : TUNE
 ALS Vial : 1 Sample Multiplier: 1

Integration File: TIC2.P

Method : C:\msdchem\1\METHODS\DFTPPLVIBF.M
 Title :
 Last Update : Thu Oct 20 15:23:02 2016



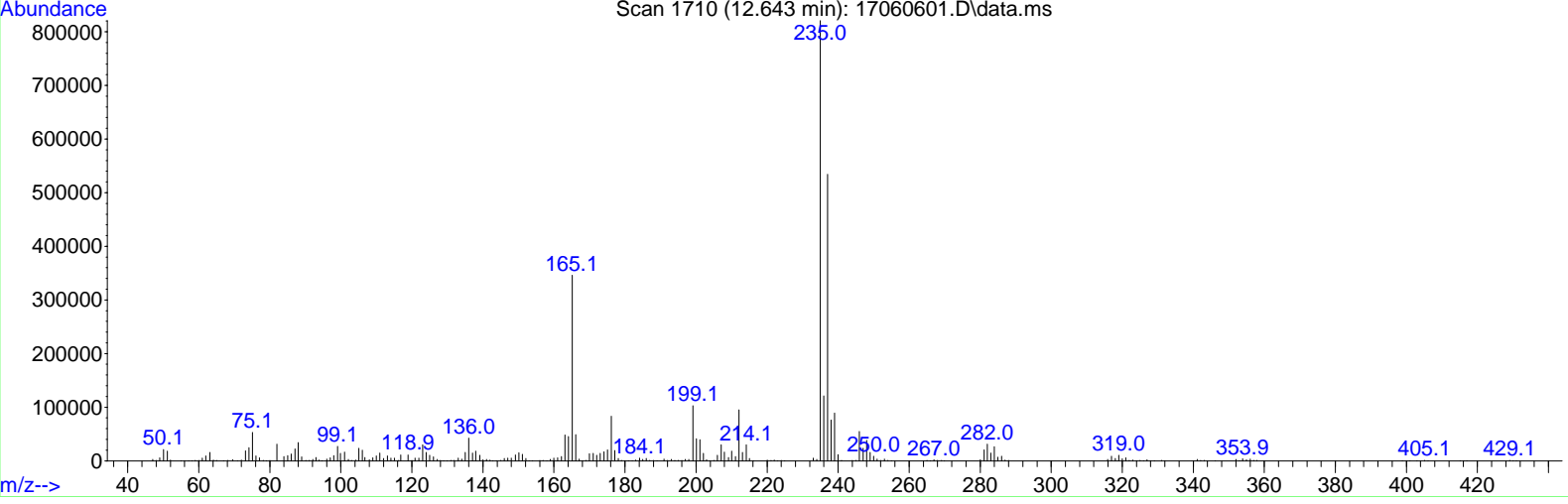
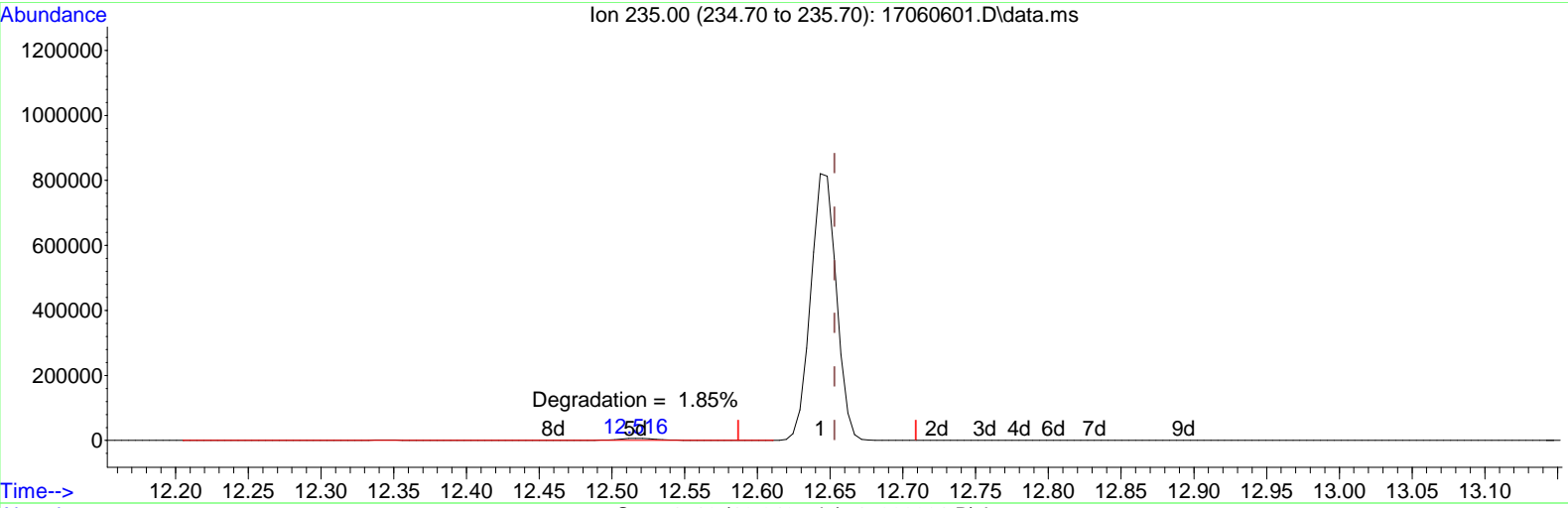
AutoFind: Scans 1337, 1338, 1339; Background Corrected with Scan 1330

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	25.4	59616	PASS
68	69	0.00	2	1.5	1039	PASS
70	69	0.00	2	0.6	429	PASS
127	198	10	80	43.1	101104	PASS
197	198	0.00	2	0.4	961	PASS
198	198	100	100	100.0	234603	PASS
199	198	5	9	6.4	15077	PASS
275	198	10	60	32.2	75616	PASS
365	198	1	200	4.8	11330	PASS
441	442	0.01	24	15.6	70941	PASS
442	198	50	400	193.3	453568	PASS
443	442	15	24	19.5	88624	PASS

REVIEWED/APPROVED
 By Sherri Herschmann at 10:32:23 AM, 6/7/2017

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060601.D
 Acq On : 6 Jun 2017 10:24 am
 Operator :
 Sample : DFTPP-170606
 Misc : TUNE
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 10:42:47 2017
 QMeth File : DFTPPLVIBF.M
 InstName : GCMS9
 Quant Title :
 QLast Update : Thu Oct 20 15:23:02 2016
 Response via : Initial Calibration



TIC: 17060601.D\data.ms

(1) DDT

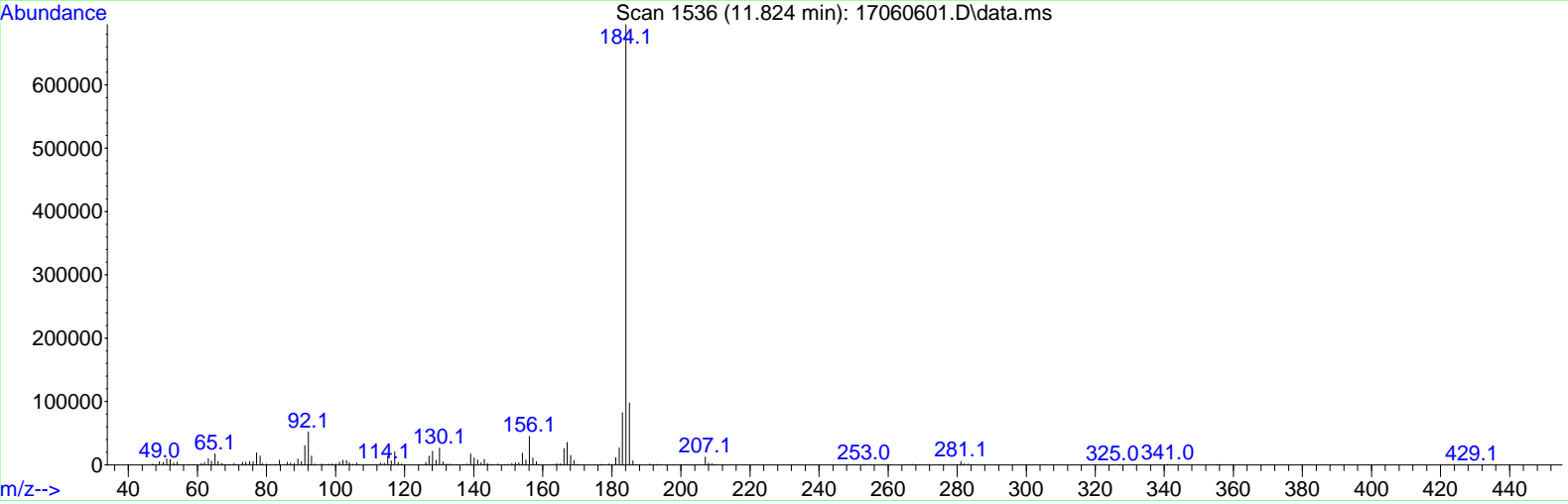
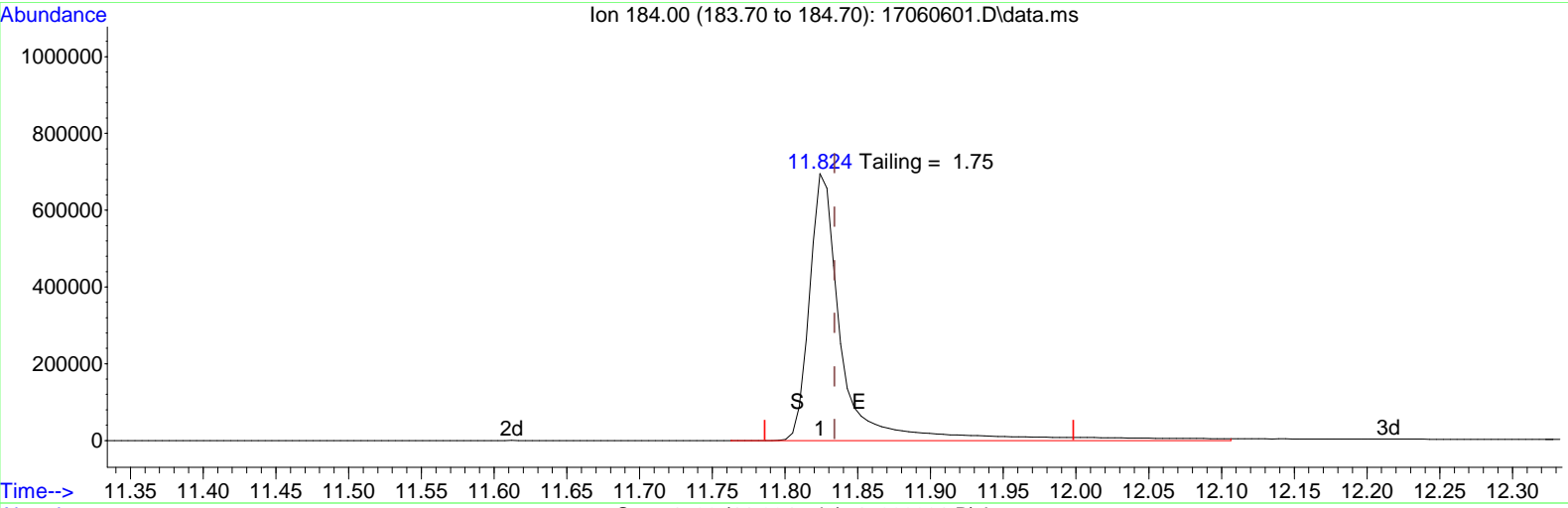
12.643min (-0.010) 0.000

response 1005146

Ion	Exp%	Act%
235.00	100.00	100.00
0.00	11.50	0.00
0.00	11.50	0.00
0.00	11.50	0.00

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060601.D
 Acq On : 6 Jun 2017 10:24 am
 Operator :
 Sample : DFTPP-170606
 Misc : TUNE
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 10:42:47 2017
 QMeth File : DFTPPLVIBF.M
 InstName : GCMS9
 Quant Title :
 QLast Update : Thu Oct 20 15:23:02 2016
 Response via : Initial Calibration



TIC: 17060601.D\data.ms

(4) Benzidine

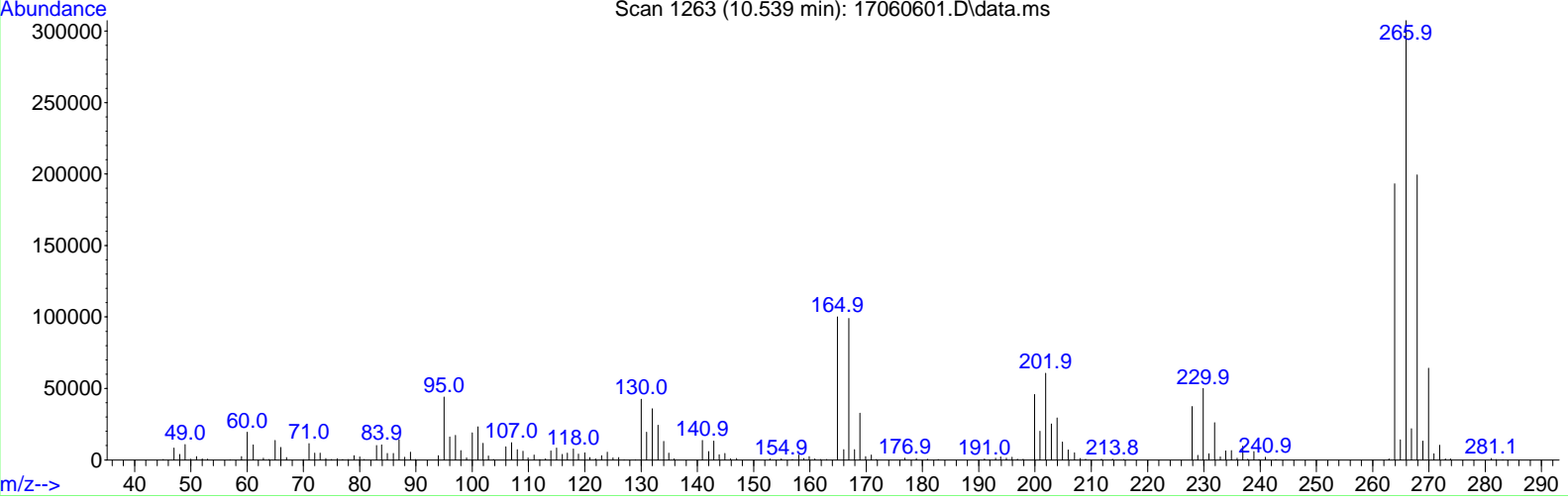
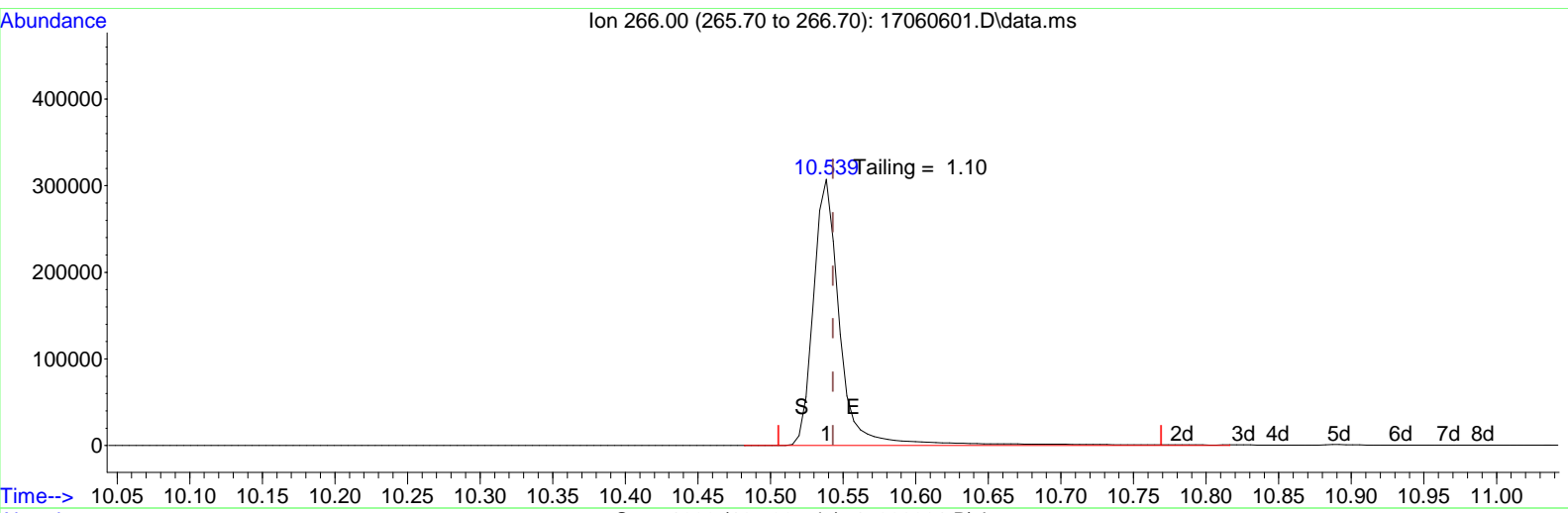
11.824min (-0.010) 0.000

response 1063472

Ion	Exp%	Act%
184.00	100.00	100.00
0.00	11.50	0.00
0.00	11.50	0.00
0.00	11.50	0.00

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060601.D
 Acq On : 6 Jun 2017 10:24 am
 Operator :
 Sample : DFTPP-170606
 Misc : TUNE
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 06 10:42:47 2017
 QMeth File : DFTPPLVIBF.M
 InstName : GCMS9
 Quant Title :
 QLast Update : Thu Oct 20 15:23:02 2016
 Response via : Initial Calibration



TIC: 17060601.D\data.ms

(5) Pentachlorophenol

10.539min (-0.004) 0.000

response 394956

Ion	Exp%	Act%
266.00	100.00	100.00
0.00	10.20	0.00
0.00	10.20	0.00
0.00	10.20	0.00

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060603.D
 Acq On : 6 Jun 2017 11:13 am
 Operator :
 Sample : CAL1 0.04 ppm
 Misc : CAL1
 ALS Vial : 3 Sample Multiplier: 1

Reprocessed low point.

Quant Time: Jun 06 16:05:14 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.941	152	762062	4.00	mg/kg	98
22) Naphthalene-d8	7.976	136	3716578	4.00	mg/kg	108
42) Acenaphthene-d10	9.438	164	2376010	4.00	mg/kg	125
65) Phenanthrene-d10	10.675	188	4873307	4.00	mg/kg	119
80) Chrysene-d12	13.179	240	6420780	4.00	mg/kg	119
89) Perylene-d12	14.862	264	6024473	4.00	mg/kg	116

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.862	112	2828	0.05	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	1.25%#	
9) Phenol-d5	6.660	99	7771	0.05	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	1.25%#	
23) Nitrobenzene-d5	7.398	82	7209	0.05	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	1.25%#	
47) 2-Fluorobiphenyl	8.857	172	36155	0.04	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	1.00%#	
69) 2,4,6-Tribromophenol	10.098	330	5373	0.05	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	1.25%#	
83) 4-Terphenyl-d14	12.054	244	50618	0.04	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	1.00%#	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.778	74	15104	0.046	mg/kg#	1
3) Pyridine	4.932	79	6756	0.032	mg/kg#	16
4) N-nitrosodiethylamine	6.053	102	2104	0.049	mg/kg	83
5) Benzaldehyde	6.608	77	5547	0.034	mg/kg	98
6) Aniline	6.709	93	7519	0.051	mg/kg	95
8) bis(2-Chloroethyl)ether	6.746	95	1647	0.049	mg/kg#	83
10) Phenol	6.671	94	5553	0.051	mg/kg	99
11) 2-Chlorophenol	6.799	128	5898	0.049	mg/kg	94
12) 1,3-Dichlorobenzene	6.915	146	9000	0.039	mg/kg	96
13) 1,4-Dichlorobenzene	6.956	146	11351	0.044	mg/kg#	83
14) 1,2-Dichlorobenzene	7.102	146	10252	0.041	mg/kg	97
15) Benzyl alcohol	7.061	108	2788	0.084	mg/kg	96
16) bis(2-chloroisopropyl)...	7.162	45	12824	0.044	mg/kg	80
17) 2-Methylphenol	7.140	108	4783	0.051	mg/kg	98
18) Hexachloroethane	7.353	117	3682	0.042	mg/kg	95
19) N-Nitrosodi-n-propylamine	7.271	70	7378	0.043	mg/kg	91
20) 4-Methylphenol	7.252	108	5075	0.049	mg/kg	94
21) Acetophenone	7.271	105	10051	0.032	mg/kg	94
24) Nitrobenzene	7.413	77	5591	0.044	mg/kg	94
25) Isophorone	7.593	82	16768	0.036	mg/kg	100
26) 2-Nitrophenol	7.672	139	2532	0.042	mg/kg	91
27) 2,4-Dimethylphenol	7.680	107	8450	0.034	mg/kg	96
28) bis(2-Chloroethoxy)met...	7.758	93	10902	0.036	mg/kg	100
29) Benzoic acid	7.740	105	706	0.117	mg/kg#	38
30) 2,4-Dichlorophenol	7.856	162	5775	0.050	mg/kg	97
31) 1,2,4-Trichlorobenzene	7.931	180	11268	0.039	mg/kg	95
32) Naphthalene	7.991	128	34939	0.042	mg/kg	99
33) 4-Chloroaniline	8.036	127	10213	0.033	mg/kg	98
34) 2,6-Dichlorophenol	8.043	162	8173	0.034	mg/kg	97
35) Hexachlorobutadiene	8.111	225	7486	0.041	mg/kg	95
36) N-nitrosodi-n-butylamine	8.298	116	1125	0.047	mg/kg	94
37) Caprolactam	8.287	113	1247	0.050	mg/kg	90
38) 4-Chloro-3-methylphenol	8.414	107	6875	0.034	mg/kg	98
39) 1,2,4,5-Tetrachloroben...	8.714	216	15387	0.042	mg/kg	96

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060603.D
 Acq On : 6 Jun 2017 11:13 am
 Operator :
 Sample : CAL1 0.04 ppm
 Misc : CAL1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 16:05:14 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Jun 06 15:04:48 2017

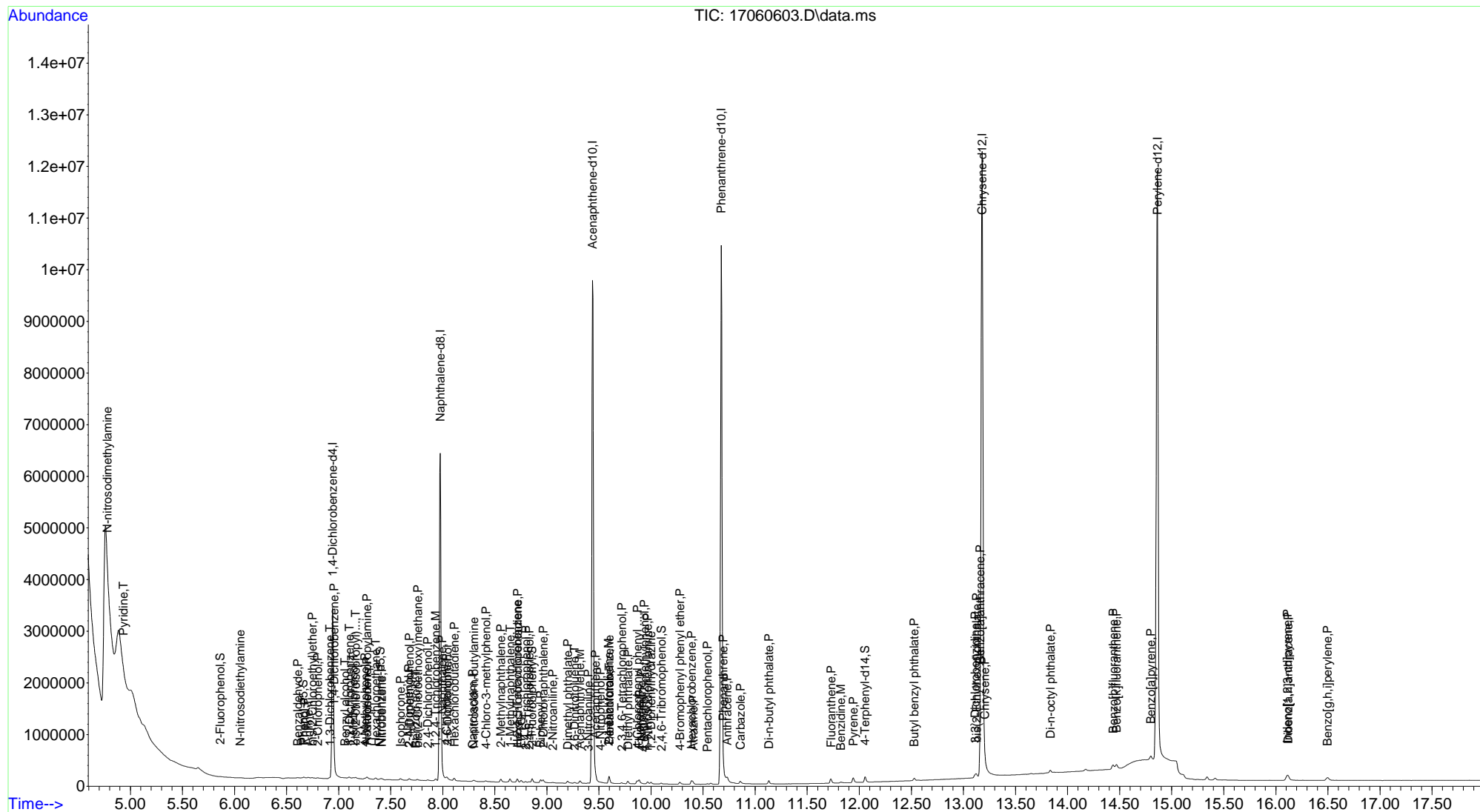
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	24708	0.041	mg/kg	99
41) 1-Methylnaphthalene	8.647	142	27018	0.044	mg/kg	98
43) Hexachlorocyclopentadiene	8.718	237	2927	0.049	mg/kg	98
44) EPTC	8.752	128	9105	0.037	mg/kg	93
45) 2,4,6-Trichlorophenol	8.797	196	4714	0.043	mg/kg	97
46) 2,4,5-Trichlorophenol	8.830	196	6589	0.041	mg/kg	98
48) Biphenyl	8.939	154	28968	0.038	mg/kg	98
49) 2-Chloronaphthalene	8.965	162	24840	0.039	mg/kg	97
50) 2-Nitroaniline	9.055	138	2901	0.043	mg/kg	88
51) Acenaphthylene	9.318	152	31314	0.035	mg/kg	98
52) Dimethyl phthalate	9.202	163	25535	0.035	mg/kg	99
53) 2,6-Dinitrotoluene	9.265	165	3077	0.049	mg/kg	78
54) Acenaphthene	9.464	153	31498	0.042	mg/kg	97
55) 3-Nitroaniline	9.396	138	1982	0.043	mg/kg	87
56) 2,4-Dinitrophenol	0.000		0	N.D.		
57) Dibenzofuran	9.599	168	33676	0.035	mg/kg	98
58) 2,4-Dinitrotoluene	9.591	165	3454	0.044	mg/kg#	65
59) 4-Nitrophenol	9.513	109	323	0.076	mg/kg#	66
60) 2,3,4,6-Tetrachlorophenol	9.719	232	3915	0.042	mg/kg	97
61) Fluorene	9.888	166	27913	0.038	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.869	204	13772	0.037	mg/kg	99
63) Diethyl phthalate	9.779	149	25969	0.036	mg/kg	99
64) 4-Nitroaniline	9.906	138	2088	0.051	mg/kg	87
66) 4,6-Dinitro-2-methylph...	9.936	198	713	0.097	mg/kg#	50
67) 1,2-Diphenylhydrazine	10.000	182	4142	0.047	mg/kg	96
68) n-Nitrosodiphenylamine	9.966	169	16561	0.035	mg/kg	99
70) 4-Bromophenyl phenyl e...	10.277	248	9134	0.036	mg/kg	99
71) Atrazine	10.405	200	7423	0.034	mg/kg	98
72) Hexachlorobenzene	10.390	284	13864	0.039	mg/kg	97
73) Pentachlorophenol	10.540	266	2857	0.043	mg/kg	96
74) Phenanthrene	10.694	178	45470	0.041	mg/kg	99
75) Anthracene	10.731	178	42748	0.038	mg/kg	99
76) Pentachlorobenzene	9.599	250	17610	0.042	mg/kg	99
77) Carbazole	10.858	167	34730	0.035	mg/kg	97
78) Di-n-butyl phthalate	11.132	149	43900	0.047	mg/kg	99
79) Fluoranthene	11.728	202	53771	0.038	mg/kg	99
81) Benzidine	11.822	184	15411	0.049	mg/kg	96
82) Pyrene	11.942	202	55361	0.038	mg/kg	97
84) Butyl benzyl phthalate	12.527	149	14323	0.049	mg/kg	94
85) 3,3'-Dichlorobenzidine	13.111	252	19242	0.049	mg/kg	96
86) Benzo[a]anthracene	13.160	228	69817	0.046	mg/kg	99
87) Chrysene	13.205	228	63536	0.044	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.126	149	24290	0.051	mg/kg	99
90) Di-n-octyl phthalate	13.835	149	35429	0.053	mg/kg	100
91) Benzo[b]fluoranthene	14.438	252	56149	0.038	mg/kg	99
92) Benzo[k]fluoranthene	14.468	252	61451	0.040	mg/kg	88
93) Benzo[a]pyrene	14.798	252	43507	0.037	mg/kg	98
94) Indeno[1,2,3-cd]pyrene	16.110	276	62696	0.036	mg/kg	98
95) Dibenz[a,h]anthracene	16.118	278	52503	0.037	mg/kg	99
96) Benzo[g,h,i]perylene	16.496	276	52849	0.038	mg/kg	97

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060603.D
 Acq On : 6 Jun 2017 11:13 am
 Operator :
 Sample : CAL1 0.04 ppm
 Misc : CAL1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 06 16:05:14 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060604.D
 Acq On : 6 Jun 2017 11:37 am
 Operator :
 Sample : CAL2 0.1 ppm
 Misc : CAL2
 ALS Vial : 4 Sample Multiplier: 1

Reprocessed low point for highlighted analytes.

Quant Time: Jun 06 16:05:19 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	758102	4.00	mg/kg	98
22) Naphthalene-d8	7.975	136	3615327	4.00	mg/kg	105
42) Acenaphthene-d10	9.437	164	2265200	4.00	mg/kg	119
65) Phenanthrene-d10	10.675	188	4684954	4.00	mg/kg	114
80) Chrysene-d12	13.179	240	6122065	4.00	mg/kg	114
89) Perylene-d12	14.862	264	5827788	4.00	mg/kg	112

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.865	112	11046	0.10	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	2.50%#	
9) Phenol-d5	6.663	99	21300	0.09	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	2.25%#	
23) Nitrobenzene-d5	7.398	82	18681	0.09	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	2.25%#	
47) 2-Fluorobiphenyl	8.860	172	85497	0.10	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	2.50%#	
69) 2,4,6-Tribromophenol	10.097	330	15659	0.10	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	2.50%#	
83) 4-Terphenyl-d14	12.054	244	119931	0.10	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	2.50%#	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.785	74	20370	0.102	mg/kg#	79
3) Pyridine	4.879	79	20222	0.097	mg/kg#	16
4) N-nitrosodiethylamine	6.052	102	6178	0.091	mg/kg	87
5) Benzaldehyde	6.607	77	16077	0.098	mg/kg	93
6) Aniline	6.708	93	20561	0.092	mg/kg	92
8) bis(2-Chloroethyl)ether	6.746	95	4566	0.095	mg/kg#	88
10) Phenol	6.671	94	15239	0.093	mg/kg	99
11) 2-Chlorophenol	6.802	128	16524	0.095	mg/kg	96
12) 1,3-Dichlorobenzene	6.915	146	22365	0.098	mg/kg	97
13) 1,4-Dichlorobenzene	6.956	146	25896	0.100	mg/kg#	88
14) 1,2-Dichlorobenzene	7.102	146	26187	0.105	mg/kg	99
15) Benzyl alcohol	7.061	108	7287	0.119	mg/kg	95 119%
16) bis(2-chloroisopropyl)...	7.162	45	30962	0.108	mg/kg	95
17) 2-Methylphenol	7.140	108	14324	0.097	mg/kg	97
18) Hexachloroethane	7.353	117	8893	0.102	mg/kg	96
19) N-Nitrosodi-n-propylamine	7.271	70	17161	0.102	mg/kg	97
20) 4-Methylphenol	7.252	108	16573	0.100	mg/kg	94
21) Acetophenone	7.271	105	26157	0.083	mg/kg	96
24) Nitrobenzene	7.413	77	16053	0.094	mg/kg	92
25) Isophorone	7.593	82	40513	0.090	mg/kg	99
26) 2-Nitrophenol	7.672	139	7045	0.085	mg/kg	83
27) 2,4-Dimethylphenol	7.679	107	20400	0.085	mg/kg	95
28) bis(2-Chloroethoxy)met...	7.754	93	27463	0.093	mg/kg	97
29) Benzoic acid	7.717	105	3770	0.141	mg/kg#	25
30) 2,4-Dichlorophenol	7.856	162	15993	0.091	mg/kg	98
31) 1,2,4-Trichlorobenzene	7.931	180	27766	0.100	mg/kg	99
32) Naphthalene	7.990	128	81560	0.100	mg/kg	99
33) 4-Chloroaniline	8.035	127	24733	0.081	mg/kg	99
34) 2,6-Dichlorophenol	8.043	162	19892	0.085	mg/kg	97
35) Hexachlorobutadiene	8.110	225	18174	0.102	mg/kg	98
36) N-nitrosodi-n-butylamine	8.298	116	3468	0.095	mg/kg	93
37) Caprolactam	8.290	113	3929	0.093	mg/kg	89
38) 4-Chloro-3-methylphenol	8.410	107	17213	0.087	mg/kg	95
39) 1,2,4,5-Tetrachloroben...	8.714	216	36402	0.101	mg/kg	100

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060604.D
 Acq On : 6 Jun 2017 11:37 am
 Operator :
 Sample : CAL2 0.1 ppm
 Misc : CAL2
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 16:05:19 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Jun 06 15:04:48 2017

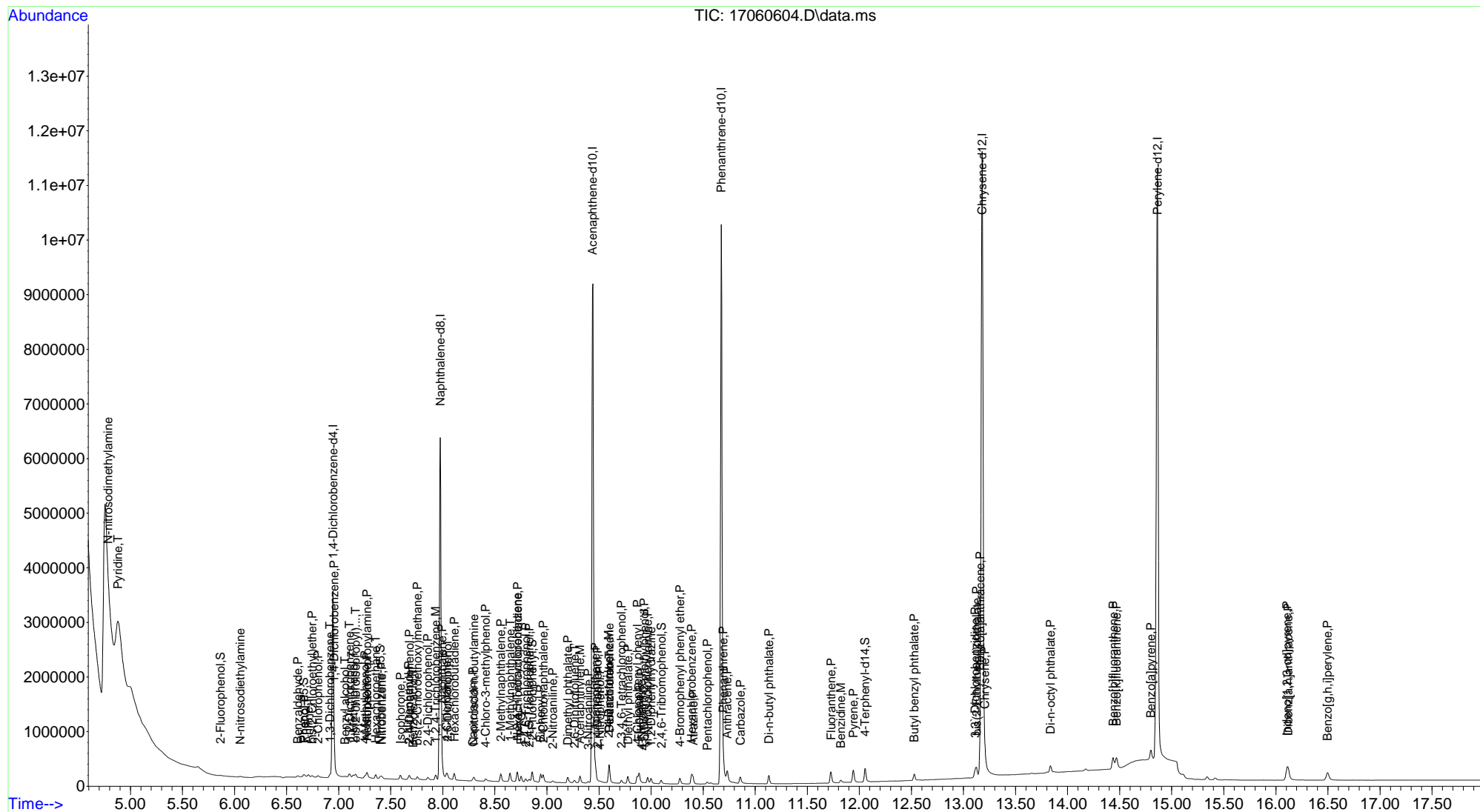
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	57015	0.098	mg/kg	99
41) 1-Methylnaphthalene	8.646	142	60600	0.102	mg/kg	100
43) Hexachlorocyclopentadiene	8.718	237	10889	0.090	mg/kg	100
44) EPTC	8.751	128	22348	0.095	mg/kg	99
45) 2,4,6-Trichlorophenol	8.796	196	11759	0.086	mg/kg	99
46) 2,4,5-Trichlorophenol	8.830	196	19122	0.099	mg/kg	98
48) Biphenyl	8.939	154	69020	0.095	mg/kg	99
49) 2-Chloronaphthalene	8.965	162	56865	0.094	mg/kg	97
50) 2-Nitroaniline	9.055	138	7969	0.083	mg/kg	86
51) Acenaphthylene	9.317	152	76688	0.090	mg/kg	100
52) Dimethyl phthalate	9.201	163	65179	0.093	mg/kg	99
53) 2,6-Dinitrotoluene	9.265	165	8241	0.090	mg/kg	82
54) Acenaphthene	9.464	153	72844	0.101	mg/kg	98
55) 3-Nitroaniline	9.396	138	6083	0.087	mg/kg	94
56) 2,4-Dinitrophenol	9.486	184	344	0.201	mg/kg#	30
57) Dibenzofuran	9.599	168	87702	0.096	mg/kg	99
58) 2,4-Dinitrotoluene	9.591	165	9296	0.083	mg/kg#	70
59) 4-Nitrophenol	9.509	109	2102	0.113	mg/kg	90 113%
60) 2,3,4,6-Tetrachlorophenol	9.715	232	11500	0.087	mg/kg	98
61) Fluorene	9.884	166	68045	0.097	mg/kg	100
62) 4-Chlorophenyl phenyl ...	9.869	204	33398	0.095	mg/kg	100
63) Diethyl phthalate	9.779	149	64874	0.094	mg/kg	99
64) 4-Nitroaniline	9.906	138	6387	0.088	mg/kg	94
66) 4,6-Dinitro-2-methylph...	9.932	198	3010	0.120	mg/kg	87 120%
67) 1,2-Diphenylhydrazine	10.000	182	11798	0.094	mg/kg	100
68) n-Nitrosodiphenylamine	9.966	169	42003	0.092	mg/kg	99
70) 4-Bromophenyl phenyl e...	10.277	248	23535	0.096	mg/kg	100
71) Atrazine	10.405	200	18170	0.088	mg/kg	99
72) Hexachlorobenzene	10.390	284	33811	0.098	mg/kg	99
73) Pentachlorophenol	10.540	266	9137	0.087	mg/kg	97
74) Phenanthrene	10.693	178	105926	0.100	mg/kg	99
75) Anthracene	10.731	178	109121	0.101	mg/kg	99
76) Pentachlorobenzene	9.599	250	39224	0.098	mg/kg	99
77) Carbazole	10.858	167	85317	0.089	mg/kg	98
78) Di-n-butyl phthalate	11.132	149	103432	0.094	mg/kg	99
79) Fluoranthene	11.728	202	122497	0.091	mg/kg	99
81) Benzidine	11.822	184	35655	0.094	mg/kg	98
82) Pyrene	11.942	202	132771	0.096	mg/kg	99
84) Butyl benzyl phthalate	12.526	149	36691	0.093	mg/kg	93
85) 3,3'-Dichlorobenzidine	13.111	252	42982	0.093	mg/kg	100
86) Benzo[a]anthracene	13.160	228	148378	0.103	mg/kg	98
87) Chrysene	13.205	228	137190	0.100	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.126	149	59543	0.093	mg/kg	98
90) Di-n-octyl phthalate	13.835	149	88596	0.091	mg/kg	100 91%
91) Benzo[b]fluoranthene	14.438	252	130649	0.092	mg/kg	99
92) Benzo[k]fluoranthene	14.468	252	146116	0.100	mg/kg	94
93) Benzo[a]pyrene	14.798	252	106029	0.093	mg/kg	100
94) Indeno[1,2,3-cd]pyrene	16.106	276	155360	0.093	mg/kg	95
95) Dibenz[a,h]anthracene	16.118	278	126219	0.092	mg/kg	99
96) Benzo[g,h,i]perylene	16.496	276	126697	0.095	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060604.D
 Acq On : 6 Jun 2017 11:37 am
 Operator :
 Sample : CAL2 0.1 ppm
 Misc : CAL2
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 06 16:05:19 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060605.D
 Acq On : 6 Jun 2017 12:02 pm
 Operator :
 Sample : CAL3 0.2 ppm
 Misc : CAL3
 ALS Vial : 5 Sample Multiplier: 1

Reprocessed low point for highlighted analytes.

Quant Time: Jun 06 16:05:24 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	841242	4.00	mg/kg	109
22) Naphthalene-d8	7.976	136	3845604	4.00	mg/kg	111
42) Acenaphthene-d10	9.438	164	2265790	4.00	mg/kg	119
65) Phenanthrene-d10	10.675	188	4666465	4.00	mg/kg	114
80) Chrysene-d12	13.179	240	6257299	4.00	mg/kg	116
89) Perylene-d12	14.862	264	5949238	4.00	mg/kg	114

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.862	112	27373	0.18	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	4.50%#	
9) Phenol-d5	6.660	99	48419	0.17	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	4.25%#	
23) Nitrobenzene-d5	7.398	82	47490	0.19	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	4.75%#	
47) 2-Fluorobiphenyl	8.857	172	173199	0.20	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	5.00%#	
69) 2,4,6-Tribromophenol	10.097	330	33761	0.18	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	4.50%#	
83) 4-Terphenyl-d14	12.054	244	243082	0.19	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	4.75%#	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.771	74	31865	0.189	mg/kg#	36
3) Pyridine	4.838	79	44404	0.192	mg/kg#	1
4) N-nitrosodiethylamine	6.049	102	16517	0.179	mg/kg	97
5) Benzaldehyde	6.604	77	34956	0.192	mg/kg	96
6) Aniline	6.709	93	50459	0.171	mg/kg	95
8) bis(2-Chloroethyl)ether	6.742	95	10609	0.175	mg/kg	93
10) Phenol	6.671	94	35518	0.165	mg/kg	100
11) 2-Chlorophenol	6.799	128	38040	0.173	mg/kg	97
12) 1,3-Dichlorobenzene	6.915	146	49377	0.194	mg/kg	99
13) 1,4-Dichlorobenzene	6.956	146	57131	0.200	mg/kg	96
14) 1,2-Dichlorobenzene	7.102	146	53480	0.193	mg/kg	99
15) Benzyl alcohol	7.057	108	17724	0.185	mg/kg	96
16) bis(2-chloroisopropyl)...	7.162	45	62704	0.197	mg/kg	98
17) 2-Methylphenol	7.140	108	33623	0.173	mg/kg	97
18) Hexachloroethane	7.353	117	18742	0.194	mg/kg	94
19) N-Nitrosodi-n-propylamine	7.271	70	32034	0.171	mg/kg	99
20) 4-Methylphenol	7.252	108	38952	0.182	mg/kg	97
21) Acetophenone	7.271	105	60623	0.174	mg/kg	98
24) Nitrobenzene	7.413	77	38359	0.189	mg/kg	97
25) Isophorone	7.590	82	90299	0.189	mg/kg	99
26) 2-Nitrophenol	7.668	139	19792	0.193	mg/kg	94
27) 2,4-Dimethylphenol	7.680	107	48765	0.192	mg/kg	99
28) bis(2-Chloroethoxy)met...	7.755	93	56983	0.182	mg/kg	99
29) Benzoic acid	7.717	105	8019	0.170	mg/kg#	34 85%
30) 2,4-Dichlorophenol	7.856	162	38745	0.171	mg/kg	97
31) 1,2,4-Trichlorobenzene	7.931	180	58318	0.197	mg/kg	99
32) Naphthalene	7.991	128	171409	0.198	mg/kg	100
33) 4-Chloroaniline	8.036	127	56122	0.174	mg/kg	100
34) 2,6-Dichlorophenol	8.043	162	45813	0.184	mg/kg	98
35) Hexachlorobutadiene	8.111	225	36986	0.195	mg/kg	98
36) N-nitrosodi-n-butylamine	8.298	116	7843	0.174	mg/kg	99
37) Caprolactam	8.291	113	9160	0.167	mg/kg	83
38) 4-Chloro-3-methylphenol	8.411	107	38105	0.181	mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.714	216	75276	0.197	mg/kg	99

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060605.D
 Acq On : 6 Jun 2017 12:02 pm
 Operator :
 Sample : CAL3 0.2 ppm
 Misc : CAL3
 ALS Vial : 5 Sample Multiplier: 1

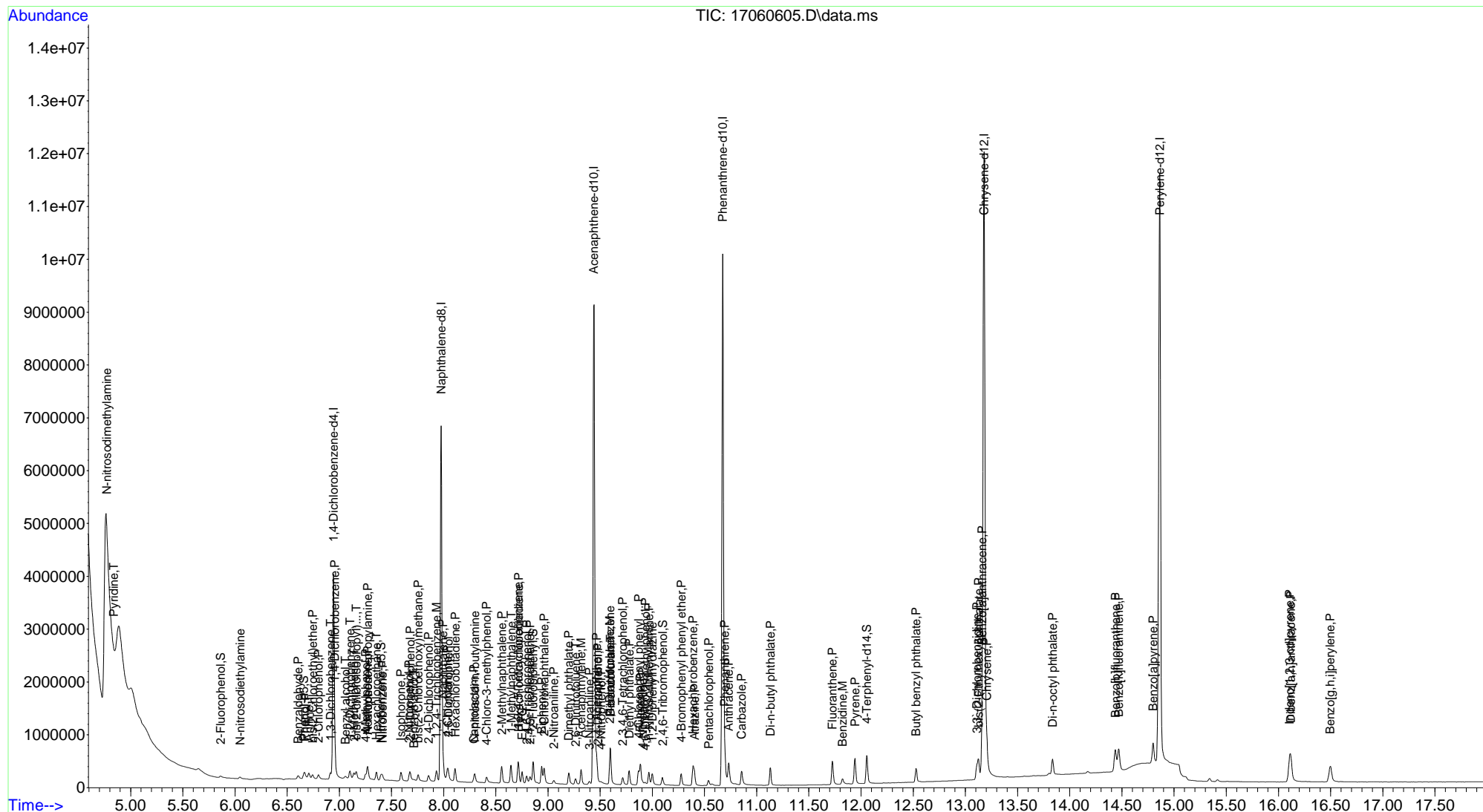
Quant Time: Jun 06 16:05:24 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	118916	0.191	mg/kg	98
41) 1-Methylnaphthalene	8.647	142	129162	0.205	mg/kg	99
43) Hexachlorocyclopentadiene	8.718	237	27615	0.174	mg/kg	100
44) EPTC	8.752	128	46308	0.197	mg/kg	99
45) 2,4,6-Trichlorophenol	8.797	196	28208	0.185	mg/kg	99
46) 2,4,5-Trichlorophenol	8.827	196	39714	0.192	mg/kg	99
48) Biphenyl	8.939	154	142485	0.196	mg/kg	99
49) 2-Chloronaphthalene	8.962	162	115381	0.191	mg/kg	99
50) 2-Nitroaniline	9.055	138	20917	0.180	mg/kg	91
51) Acenaphthylene	9.318	152	160220	0.189	mg/kg	100
52) Dimethyl phthalate	9.198	163	129746	0.185	mg/kg	99
53) 2,6-Dinitrotoluene	9.265	165	19777	0.178	mg/kg	92
54) Acenaphthene	9.464	153	144038	0.199	mg/kg	98
55) 3-Nitroaniline	9.396	138	14384	0.171	mg/kg	96
56) 2,4-Dinitrophenol	9.479	184	1743	0.234	mg/kg	87 117%
57) Dibenzofuran	9.599	168	175115	0.192	mg/kg	99
58) 2,4-Dinitrotoluene	9.591	165	23231	0.172	mg/kg	75
59) 4-Nitrophenol	9.509	109	5615	0.185	mg/kg	92
60) 2,3,4,6-Tetrachlorophenol	9.715	232	29332	0.188	mg/kg	98
61) Fluorene	9.884	166	136569	0.195	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.869	204	67414	0.192	mg/kg	99
63) Diethyl phthalate	9.779	149	131112	0.189	mg/kg	99
64) 4-Nitroaniline	9.906	138	15590	0.166	mg/kg	99
66) 4,6-Dinitro-2-methylph...	9.933	198	8409	0.174	mg/kg	97
67) 1,2-Diphenylhydrazine	10.000	182	27063	0.186	mg/kg	97
68) n-Nitrosodiphenylamine	9.966	169	86851	0.192	mg/kg	99
70) 4-Bromophenyl phenyl e...	10.277	248	46063	0.188	mg/kg	100
71) Atrazine	10.405	200	38135	0.185	mg/kg	99
72) Hexachlorobenzene	10.390	284	65912	0.193	mg/kg	99
73) Pentachlorophenol	10.540	266	21427	0.172	mg/kg	98
74) Phenanthrene	10.694	178	204902	0.193	mg/kg	100
75) Anthracene	10.731	178	221702	0.207	mg/kg	99
76) Pentachlorobenzene	9.595	250	77227	0.193	mg/kg	99
77) Carbazole	10.855	167	180806	0.190	mg/kg	98
78) Di-n-butyl phthalate	11.132	149	218418	0.183	mg/kg	100
79) Fluoranthene	11.724	202	252957	0.189	mg/kg	99
81) Benzidine	11.822	184	73731	0.172	mg/kg	98
82) Pyrene	11.942	202	267811	0.189	mg/kg	99
84) Butyl benzyl phthalate	12.527	149	82492	0.177	mg/kg	93
85) 3,3'-Dichlorobenzidine	13.108	252	95445	0.184	mg/kg	99
86) Benzo[a]anthracene	13.160	228	290120	0.197	mg/kg	99
87) Chrysene	13.205	228	278038	0.198	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.126	149	133715	0.173	mg/kg	99
90) Di-n-octyl phthalate	13.835	149	204032	0.168	mg/kg	99
91) Benzo[b]fluoranthene	14.438	252	276870	0.192	mg/kg	100
92) Benzo[k]fluoranthene	14.468	252	297734	0.199	mg/kg	97
93) Benzo[a]pyrene	14.798	252	220207	0.189	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.107	276	317549	0.187	mg/kg	96
95) Dibenz[a,h]anthracene	16.118	278	266848	0.190	mg/kg	100
96) Benzo[g,h,i]perylene	16.496	276	264812	0.195	mg/kg	99

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060605.D
 Acq On : 6 Jun 2017 12:02 pm
 Operator :
 Sample : CAL3 0.2 ppm
 Misc : CAL3
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 06 16:05:24 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060606.D
 Acq On : 6 Jun 2017 12:27 pm
 Operator :
 Sample : CAL4 0.5 ppm
 Misc : CAL
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 16:05:29 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	781430	4.00	mg/kg	101
22) Naphthalene-d8	7.976	136	3797518	4.00	mg/kg	110
42) Acenaphthene-d10	9.438	164	2151926	4.00	mg/kg	113
65) Phenanthrene-d10	10.675	188	4413081	4.00	mg/kg	107
80) Chrysene-d12	13.179	240	5699994	4.00	mg/kg	106
89) Perylene-d12	14.862	264	5436707	4.00	mg/kg	105

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.858	112	72406	0.45	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	11.25%#	
9) Phenol-d5	6.660	99	138804	0.47	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	11.75%#	
23) Nitrobenzene-d5	7.398	82	132173	0.50	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	12.50%#	
47) 2-Fluorobiphenyl	8.856	172	435535	0.52	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	13.00%#	
69) 2,4,6-Tribromophenol	10.097	330	94369	0.47	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	11.75%#	
83) 4-Terphenyl-d14	12.054	244	580097	0.51	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	12.75%#	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.755	74	55133	0.447	mg/kg#	78
3) Pyridine	4.800	79	112662	0.526	mg/kg	67
4) N-nitrosodiethylamine	6.041	102	46434	0.486	mg/kg	99
5) Benzaldehyde	6.600	77	88127	0.522	mg/kg	97
6) Aniline	6.705	93	143412	0.464	mg/kg	95
8) bis(2-Chloroethyl)ether	6.742	95	29582	0.478	mg/kg	98
10) Phenol	6.667	94	108780	0.474	mg/kg	100
11) 2-Chlorophenol	6.798	128	107051	0.475	mg/kg	100
12) 1,3-Dichlorobenzene	6.911	146	117576	0.498	mg/kg	99
13) 1,4-Dichlorobenzene	6.956	146	130101	0.489	mg/kg	99
14) 1,2-Dichlorobenzene	7.098	146	126184	0.490	mg/kg	99
15) Benzyl alcohol	7.053	108	54643	0.465	mg/kg	96
16) bis(2-chloroisopropyl)...	7.158	45	158322	0.535	mg/kg	99
17) 2-Methylphenol	7.140	108	95569	0.468	mg/kg	99
18) Hexachloroethane	7.353	117	43795	0.488	mg/kg	97
19) N-Nitrosodi-n-propylamine	7.267	70	90763	0.522	mg/kg	97
20) 4-Methylphenol	7.248	108	99268	0.453	mg/kg	99
21) Acetophenone	7.267	105	170928	0.529	mg/kg	99
24) Nitrobenzene	7.410	77	108772	0.504	mg/kg	97
25) Isophorone	7.589	82	248302	0.525	mg/kg	99
26) 2-Nitrophenol	7.668	139	56498	0.507	mg/kg	94
27) 2,4-Dimethylphenol	7.676	107	130240	0.518	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.754	93	159653	0.516	mg/kg	99
29) Benzoic acid	7.721	105	38443	0.388	mg/kg#	76
30) 2,4-Dichlorophenol	7.856	162	122696	0.485	mg/kg	99
31) 1,2,4-Trichlorobenzene	7.931	180	144371	0.495	mg/kg	99
32) Naphthalene	7.991	128	422071	0.494	mg/kg	100
33) 4-Chloroaniline	8.036	127	163415	0.512	mg/kg	100
34) 2,6-Dichlorophenol	8.043	162	124480	0.505	mg/kg	98
35) Hexachlorobutadiene	8.111	225	91525	0.489	mg/kg	100
36) N-nitrosodi-n-butylamine	8.298	116	23932	0.487	mg/kg	99
37) Caprolactam	8.294	113	30071	0.484	mg/kg#	70
38) 4-Chloro-3-methylphenol	8.410	107	104187	0.502	mg/kg	100
39) 1,2,4,5-Tetrachloroben...	8.714	216	191150	0.506	mg/kg	99

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060606.D
 Acq On : 6 Jun 2017 12:27 pm
 Operator :
 Sample : CAL4 0.5 ppm
 Misc : CAL
 ALS Vial : 6 Sample Multiplier: 1

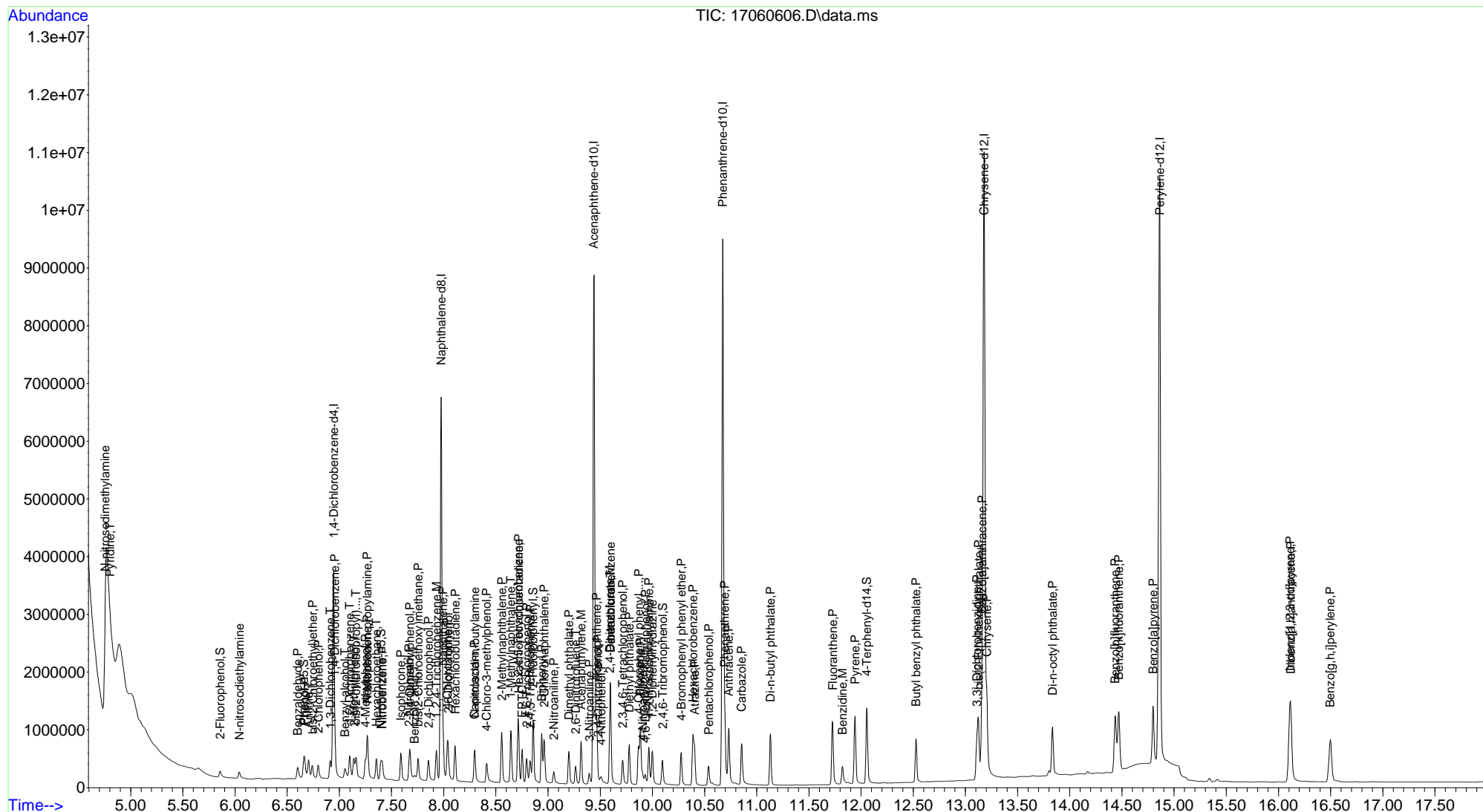
Quant Time: Jun 06 16:05:29 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	312652	0.509	mg/kg	99
41) 1-Methylnaphthalene	8.643	142	319647	0.514	mg/kg	100
43) Hexachlorocyclopentadiene	8.718	237	88472	0.495	mg/kg	99
44) EPTC	8.752	128	117727	0.527	mg/kg	99
45) 2,4,6-Trichlorophenol	8.797	196	81805	0.522	mg/kg	99
46) 2,4,5-Trichlorophenol	8.830	196	105786	0.514	mg/kg	100
48) Biphenyl	8.939	154	353600	0.511	mg/kg	99
49) 2-Chloronaphthalene	8.961	162	290383	0.506	mg/kg	99
50) 2-Nitroaniline	9.055	138	64314	0.513	mg/kg	97
51) Acenaphthylene	9.318	152	411584	0.511	mg/kg	100
52) Dimethyl phthalate	9.201	163	329220	0.495	mg/kg	99
53) 2,6-Dinitrotoluene	9.265	165	56938	0.479	mg/kg	95
54) Acenaphthene	9.464	153	341759	0.498	mg/kg	99
55) 3-Nitroaniline	9.396	138	44996	0.487	mg/kg	100
56) 2,4-Dinitrophenol	9.479	184	10346	0.440	mg/kg#	56
57) Dibenzofuran	9.599	168	429511	0.496	mg/kg	99
58) 2,4-Dinitrotoluene	9.591	165	75987	0.518	mg/kg	90
59) 4-Nitrophenol	9.509	109	19528	0.477	mg/kg	93
60) 2,3,4,6-Tetrachlorophenol	9.715	232	83293	0.511	mg/kg	99
61) Fluorene	9.884	166	333251	0.500	mg/kg	100
62) 4-Chlorophenyl phenyl ...	9.869	204	164784	0.493	mg/kg	99
63) Diethyl phthalate	9.779	149	324414	0.493	mg/kg	100
64) 4-Nitroaniline	9.906	138	48261	0.457	mg/kg	98
66) 4,6-Dinitro-2-methylph...	9.932	198	36126	0.462	mg/kg	98
67) 1,2-Diphenylhydrazine	10.000	182	71616	0.480	mg/kg	97
68) n-Nitrosodiphenylamine	9.966	169	216047	0.504	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.277	248	114367	0.494	mg/kg	98
71) Atrazine	10.405	200	97641	0.500	mg/kg	100
72) Hexachlorobenzene	10.390	284	160067	0.495	mg/kg	99
73) Pentachlorophenol	10.540	266	67629	0.502	mg/kg	99
74) Phenanthrene	10.693	178	491646	0.491	mg/kg	99
75) Anthracene	10.731	178	492841	0.486	mg/kg	99
76) Pentachlorobenzene	9.599	250	186202	0.492	mg/kg	99
77) Carbazole	10.855	167	435051	0.484	mg/kg	98
78) Di-n-butyl phthalate	11.132	149	574590	0.481	mg/kg	99
79) Fluoranthene	11.728	202	615994	0.487	mg/kg	99
81) Benzidine	11.822	184	204890	0.482	mg/kg	100
82) Pyrene	11.942	202	644391	0.498	mg/kg	100
84) Butyl benzyl phthalate	12.526	149	231503	0.492	mg/kg	95
85) 3,3'-Dichlorobenzidine	13.107	252	239290	0.476	mg/kg	99
86) Benzo[a]anthracene	13.160	228	661042	0.492	mg/kg	99
87) Chrysene	13.205	228	632412	0.493	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.126	149	368412	0.471	mg/kg	99
90) Di-n-octyl phthalate	13.835	149	582242	0.463	mg/kg	99
91) Benzo[b]fluoranthene	14.434	252	653790	0.496	mg/kg	99
92) Benzo[k]fluoranthene	14.468	252	710550	0.519	mg/kg	98
93) Benzo[a]pyrene	14.798	252	541724	0.508	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.110	276	773570	0.498	mg/kg	97
95) Dibenz[a,h]anthracene	16.118	278	645532	0.504	mg/kg	100
96) Benzo[g,h,i]perylene	16.496	276	620036	0.499	mg/kg	99

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060606.D
 Acq On : 6 Jun 2017 12:27 pm
 Operator :
 Sample : CAL4 0.5 ppm
 Misc : CAL
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 06 16:05:29 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060607.D
 Acq On : 6 Jun 2017 12:51 pm
 Operator :
 Sample : CAL5 1.0 ppm
 Misc : CAL
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 16:05:34 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	731280	4.00	mg/kg	94
22) Naphthalene-d8	7.976	136	3305540	4.00	mg/kg	96
42) Acenaphthene-d10	9.441	164	1983306	4.00	mg/kg	104
65) Phenanthrene-d10	10.675	188	4174522	4.00	mg/kg	102
80) Chrysene-d12	13.183	240	5714171	4.00	mg/kg	106
89) Perylene-d12	14.862	264	5436188	4.00	mg/kg	105

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.862	112	151013	0.95	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	23.75%	
9) Phenol-d5	6.660	99	281024	0.99	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	24.75%	
23) Nitrobenzene-d5	7.398	82	233688	0.99	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	24.75%#	
47) 2-Fluorobiphenyl	8.857	172	757324	0.98	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	24.50%#	
69) 2,4,6-Tribromophenol	10.097	330	184520	0.95	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	23.75%#	
83) 4-Terphenyl-d14	12.054	244	1064610	0.93	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	23.25%#	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.759	74	100671	0.967	mg/kg	88
3) Pyridine	4.797	79	208235	1.038	mg/kg	81
4) N-nitrosodiethylamine	6.041	102	87176	0.946	mg/kg	97
5) Benzaldehyde	6.604	77	160820	1.018	mg/kg	99
6) Aniline	6.709	93	291914	0.975	mg/kg	97
8) bis(2-Chloroethyl)ether	6.742	95	57223	0.964	mg/kg	96
10) Phenol	6.671	94	226314	0.994	mg/kg	99
11) 2-Chlorophenol	6.799	128	214887	0.987	mg/kg	99
12) 1,3-Dichlorobenzene	6.915	146	213892	0.967	mg/kg	99
13) 1,4-Dichlorobenzene	6.960	146	238571	0.959	mg/kg	99
14) 1,2-Dichlorobenzene	7.102	146	232940	0.967	mg/kg	99
15) Benzyl alcohol	7.054	108	105120	0.887	mg/kg	98
16) bis(2-chloroisopropyl)...	7.162	45	262312	0.947	mg/kg	99
17) 2-Methylphenol	7.140	108	172959	0.870	mg/kg	99
18) Hexachloroethane	7.353	117	81446	0.970	mg/kg	99
19) N-Nitrosodi-n-propylamine	7.271	70	155145	0.953	mg/kg	100
20) 4-Methylphenol	7.248	108	183872	0.869	mg/kg	100
21) Acetophenone	7.271	105	309164	1.022	mg/kg	99
24) Nitrobenzene	7.413	77	200225	1.023	mg/kg	100
25) Isophorone	7.590	82	416310	1.012	mg/kg	99
26) 2-Nitrophenol	7.668	139	106350	1.029	mg/kg	96
27) 2,4-Dimethylphenol	7.676	107	217599	0.994	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.755	93	266148	0.988	mg/kg	99
29) Benzoic acid	7.732	105	96914	0.877	mg/kg	90
30) 2,4-Dichlorophenol	7.856	162	223256	0.977	mg/kg	99
31) 1,2,4-Trichlorobenzene	7.931	180	245526	0.967	mg/kg	99
32) Naphthalene	7.991	128	745703	1.004	mg/kg	100
33) 4-Chloroaniline	8.036	127	275458	0.992	mg/kg	100
34) 2,6-Dichlorophenol	8.043	162	215541	1.005	mg/kg	99
35) Hexachlorobutadiene	8.111	225	162795	0.998	mg/kg	100
36) N-nitrosodi-n-butylamine	8.298	116	44191	1.011	mg/kg	99
37) Caprolactam	8.302	113	56535	1.010	mg/kg#	73
38) 4-Chloro-3-methylphenol	8.414	107	184385	1.020	mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.714	216	331244	1.006	mg/kg	100

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060607.D
 Acq On : 6 Jun 2017 12:51 pm
 Operator :
 Sample : CAL5 1.0 ppm
 Misc : CAL
 ALS Vial : 7 Sample Multiplier: 1

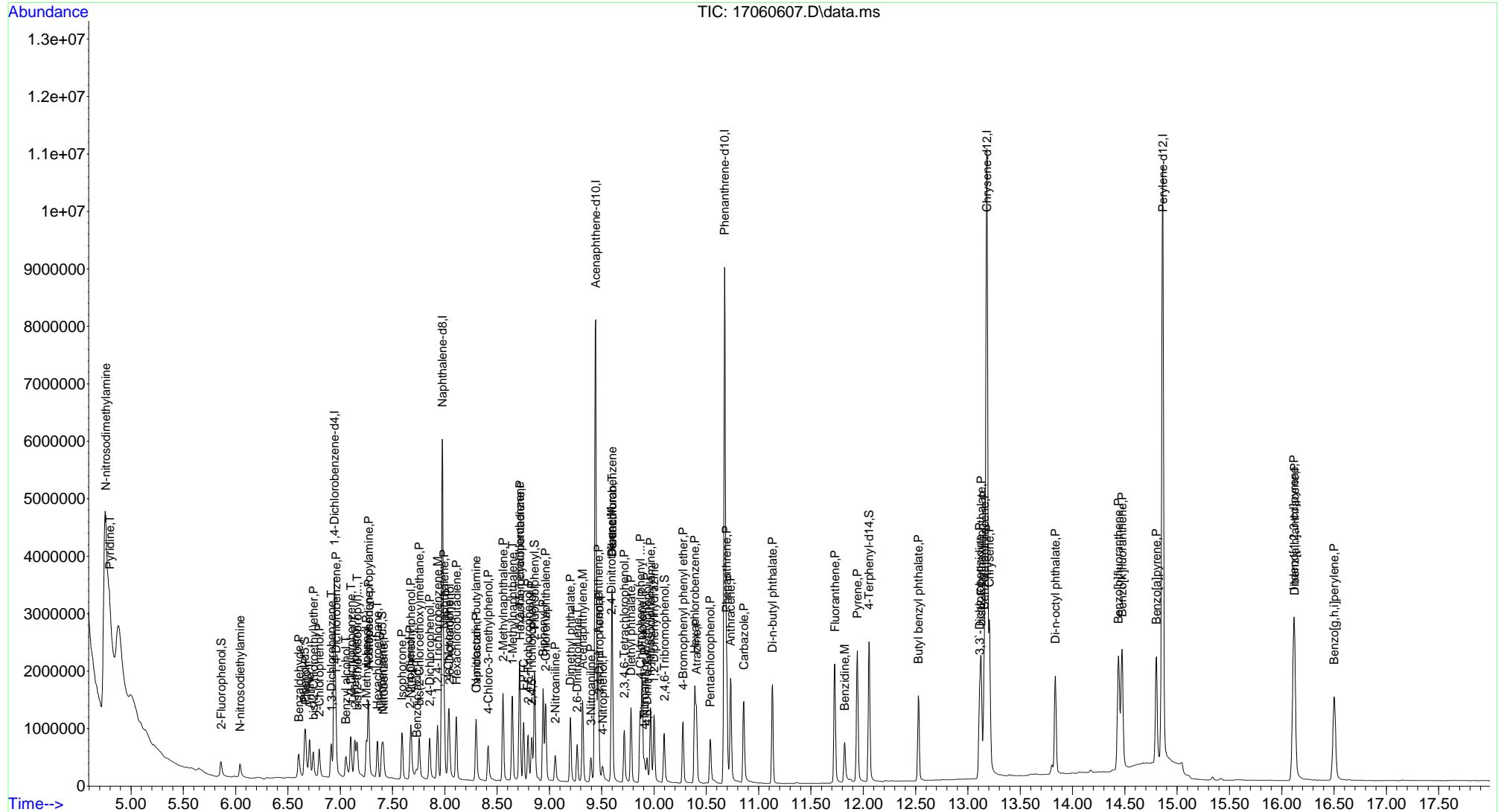
Quant Time: Jun 06 16:05:34 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	532969	0.998	mg/kg	100
41) 1-Methylnaphthalene	8.647	142	524224	0.969	mg/kg	100
43) Hexachlorocyclopentadiene	8.718	237	172810	0.977	mg/kg	100
44) EPTC	8.755	128	206937	1.005	mg/kg	99
45) 2,4,6-Trichlorophenol	8.797	196	158278	1.044	mg/kg	100
46) 2,4,5-Trichlorophenol	8.830	196	188725	0.974	mg/kg	99
48) Biphenyl	8.939	154	634222	0.995	mg/kg	99
49) 2-Chloronaphthalene	8.962	162	508426	0.961	mg/kg	100
50) 2-Nitroaniline	9.055	138	137735	1.088	mg/kg	99
51) Acenaphthylene	9.318	152	771324	1.039	mg/kg	99
52) Dimethyl phthalate	9.202	163	635197	1.037	mg/kg	99
53) 2,6-Dinitrotoluene	9.265	165	117568	1.015	mg/kg	96
54) Acenaphthene	9.468	153	606073	0.958	mg/kg	100
55) 3-Nitroaniline	9.396	138	105561	1.108	mg/kg	100
56) 2,4-Dinitrophenol	9.475	184	30235	0.915	mg/kg	86
57) Dibenzofuran	9.599	168	791975	0.992	mg/kg	100
58) 2,4-Dinitrotoluene	9.591	165	158848	1.077	mg/kg	98
59) 4-Nitrophenol	9.509	109	42080	0.970	mg/kg	98
60) 2,3,4,6-Tetrachlorophenol	9.715	232	169584	1.071	mg/kg	99
61) Fluorene	9.888	166	614952	1.002	mg/kg	100
62) 4-Chlorophenyl phenyl ...	9.869	204	304764	0.990	mg/kg	100
63) Diethyl phthalate	9.779	149	607069	1.000	mg/kg	100
64) 4-Nitroaniline	9.910	138	111114	1.066	mg/kg	98
66) 4,6-Dinitro-2-methylph...	9.933	198	81348	0.946	mg/kg	98
67) 1,2-Diphenylhydrazine	10.000	182	138436	0.962	mg/kg	99
68) n-Nitrosodiphenylamine	9.966	169	411585	1.015	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.277	248	214762	0.982	mg/kg	99
71) Atrazine	10.405	200	193734	1.050	mg/kg	98
72) Hexachlorobenzene	10.390	284	308799	1.009	mg/kg	99
73) Pentachlorophenol	10.536	266	148239	1.074	mg/kg	99
74) Phenanthrene	10.694	178	897136	0.946	mg/kg	100
75) Anthracene	10.731	178	912859	0.951	mg/kg	99
76) Pentachlorobenzene	9.599	250	337657	0.944	mg/kg	100
77) Carbazole	10.858	167	867212	1.021	mg/kg	99
78) Di-n-butyl phthalate	11.132	149	1095102	0.949	mg/kg	100
79) Fluoranthene	11.728	202	1135263	0.949	mg/kg	98
81) Benzidine	11.822	184	428160	0.972	mg/kg	100
82) Pyrene	11.942	202	1225773	0.946	mg/kg	99
84) Butyl benzyl phthalate	12.527	149	462986	0.941	mg/kg	97
85) 3,3'-Dichlorobenzidine	13.111	252	470804	0.911	mg/kg	100
86) Benzo[a]anthracene	13.156	228	1215747	0.902	mg/kg	99
87) Chrysene	13.205	228	1211621	0.943	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.126	149	748314	0.920	mg/kg	100
90) Di-n-octyl phthalate	13.835	149	1212855	0.929	mg/kg	100
91) Benzo[b]fluoranthene	14.438	252	1356432	1.029	mg/kg	100
92) Benzo[k]fluoranthene	14.472	252	1359930	0.993	mg/kg	99
93) Benzo[a]pyrene	14.802	252	1033170	0.969	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.114	276	1527366	0.983	mg/kg	98
95) Dibenz[a,h]anthracene	16.122	278	1246477	0.973	mg/kg	99
96) Benzo[g,h,i]perylene	16.500	276	1219669	0.982	mg/kg	99

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060607.D
 Acq On : 6 Jun 2017 12:51 pm
 Operator :
 Sample : CAL5 1.0 ppm
 Misc : CAL
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 06 16:05:34 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060608.D
 Acq On : 6 Jun 2017 1:16 pm
 Operator :
 Sample : CAL6 2.0 ppm
 Misc : CAL
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 16:05:39 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.941	152	731555	4.00	mg/kg	94
22) Naphthalene-d8	7.976	136	3663201	4.00	mg/kg	106
42) Acenaphthene-d10	9.441	164	2086909	4.00	mg/kg	110
65) Phenanthrene-d10	10.675	188	4020559	4.00	mg/kg	98
80) Chrysene-d12	13.182	240	5709485	4.00	mg/kg	106
89) Perylene-d12	14.862	264	5865207	4.00	mg/kg	113

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.850	112	338227	2.01	mg/kg	0.00
Spiked Amount	4.000	Range	20 - 120	Recovery	=	50.25%
9) Phenol-d5	6.660	99	576886	2.01	mg/kg	0.00
Spiked Amount	4.000	Range	20 - 120	Recovery	=	50.25%
23) Nitrobenzene-d5	7.398	82	524768	1.93	mg/kg	0.00
Spiked Amount	4.000	Range	41 - 120	Recovery	=	48.25%
47) 2-Fluorobiphenyl	8.860	172	1625733	2.01	mg/kg	0.00
Spiked Amount	4.000	Range	48 - 120	Recovery	=	50.25%
69) 2,4,6-Tribromophenol	10.097	330	421357	2.19	mg/kg	0.00
Spiked Amount	4.000	Range	42 - 124	Recovery	=	54.75%
83) 4-Terphenyl-d14	12.058	244	2270271	1.98	mg/kg	0.00
Spiked Amount	4.000	Range	51 - 135	Recovery	=	49.50%#

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.733	74	200112	1.987	mg/kg	94
3) Pyridine	4.767	79	412073	2.054	mg/kg	95
4) N-nitrosodiethylamine	6.034	102	187877	2.004	mg/kg	99
5) Benzaldehyde	6.596	77	340970	2.158	mg/kg	99
6) Aniline	6.705	93	605770	1.982	mg/kg	97
8) bis(2-Chloroethyl)ether	6.738	95	122109	2.028	mg/kg	98
10) Phenol	6.667	94	492451	2.021	mg/kg	99
11) 2-Chlorophenol	6.795	128	437559	1.968	mg/kg	99
12) 1,3-Dichlorobenzene	6.911	146	462761	2.092	mg/kg	99
13) 1,4-Dichlorobenzene	6.956	146	505739	2.032	mg/kg	99
14) 1,2-Dichlorobenzene	7.098	146	494161	2.050	mg/kg	100
15) Benzyl alcohol	7.053	108	264249	2.112	mg/kg	99
16) bis(2-chloroisopropyl)...	7.158	45	555165	2.003	mg/kg	100
17) 2-Methylphenol	7.140	108	442159	2.113	mg/kg	100
18) Hexachloroethane	7.353	117	173393	2.063	mg/kg	100
19) N-Nitrosodi-n-propylamine	7.271	70	367779	2.257	mg/kg	99
20) 4-Methylphenol	7.252	108	469575	2.155	mg/kg	100
21) Acetophenone	7.267	105	713963	2.359	mg/kg	99
24) Nitrobenzene	7.409	77	436828	1.926	mg/kg	98
25) Isophorone	7.589	82	994343	2.181	mg/kg	99
26) 2-Nitrophenol	7.668	139	258875	2.063	mg/kg	98
27) 2,4-Dimethylphenol	7.679	107	511487	2.109	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.754	93	617534	2.068	mg/kg	100
29) Benzoic acid	7.754	105	299212	2.050	mg/kg	100
30) 2,4-Dichlorophenol	7.856	162	524817	2.019	mg/kg	99
31) 1,2,4-Trichlorobenzene	7.931	180	529222	1.881	mg/kg	100
32) Naphthalene	7.994	128	1663519	2.020	mg/kg	100
33) 4-Chloroaniline	8.035	127	708932	2.304	mg/kg	100
34) 2,6-Dichlorophenol	8.043	162	527742	2.219	mg/kg	99
35) Hexachlorobutadiene	8.110	225	349515	1.934	mg/kg	100
36) N-nitrosodi-n-butylamine	8.302	116	99431	2.050	mg/kg	100
37) Caprolactam	8.313	113	128693	2.042	mg/kg	97
38) 4-Chloro-3-methylphenol	8.418	107	439137	2.193	mg/kg	100
39) 1,2,4,5-Tetrachloroben...	8.714	216	711506	1.951	mg/kg	99

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060608.D
 Acq On : 6 Jun 2017 1:16 pm
 Operator :
 Sample : CAL6 2.0 ppm
 Misc : CAL
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 16:05:39 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Jun 06 15:04:48 2017

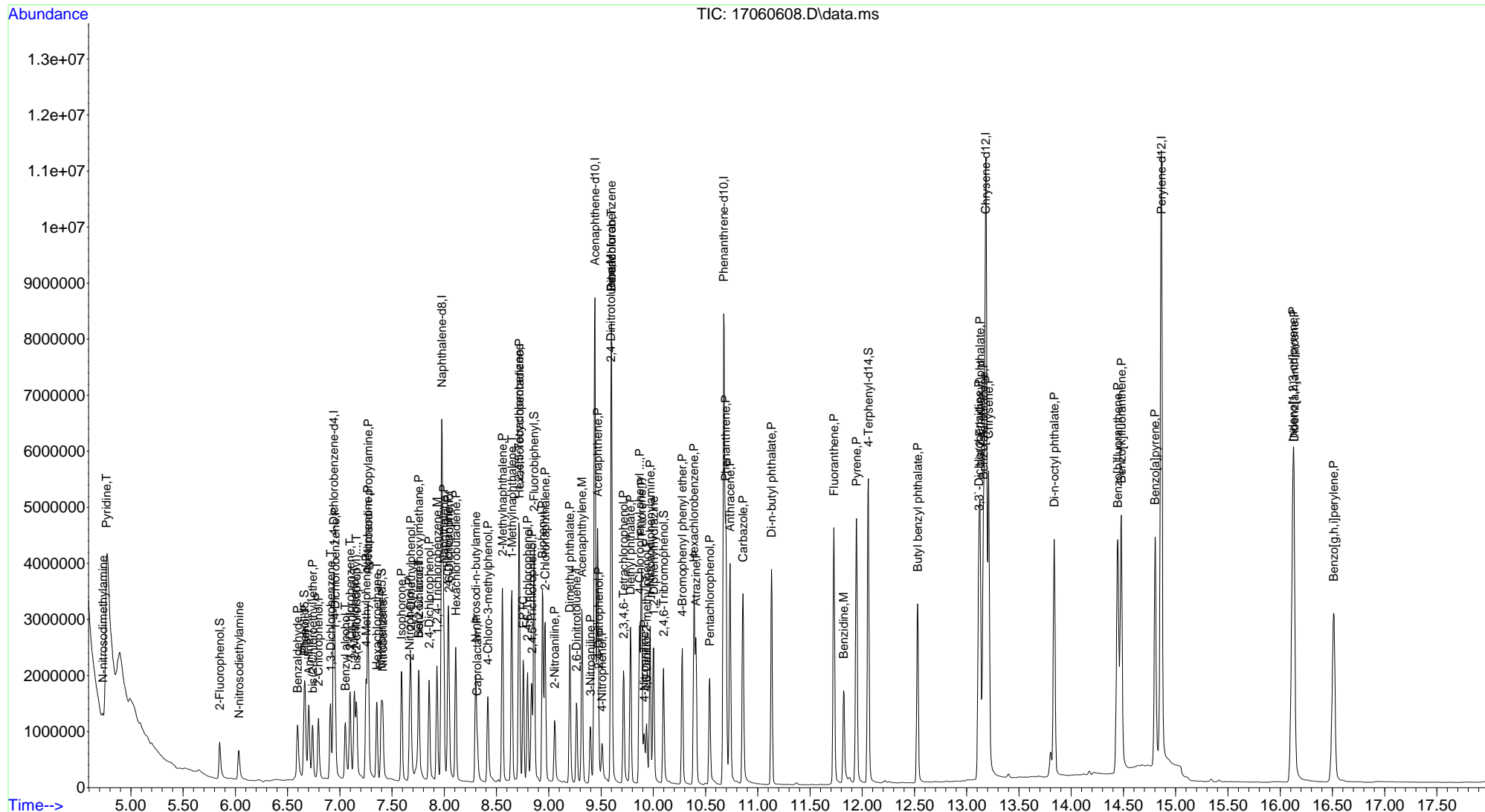
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	1173928	1.983	mg/kg	100
41) 1-Methylnaphthalene	8.647	142	1136410	1.895	mg/kg	100
43) Hexachlorocyclopentadiene	8.718	237	409141	2.017	mg/kg	100
44) EPTC	8.755	128	446361	2.059	mg/kg	99
45) 2,4,6-Trichlorophenol	8.796	196	363270	2.119	mg/kg	99
46) 2,4,5-Trichlorophenol	8.838	196	431084	2.058	mg/kg	100
48) Biphenyl	8.939	154	1344984	2.005	mg/kg	100
49) 2-Chloronaphthalene	8.965	162	1086651	1.951	mg/kg	99
50) 2-Nitroaniline	9.055	138	321213	2.138	mg/kg	97
51) Acenaphthylene	9.318	152	1656542	2.122	mg/kg	99
52) Dimethyl phthalate	9.201	163	1340082	2.078	mg/kg	99
53) 2,6-Dinitrotoluene	9.265	165	262240	2.029	mg/kg	98
54) Acenaphthene	9.467	153	1323839	1.988	mg/kg	100
55) 3-Nitroaniline	9.400	138	246433	2.142	mg/kg	98
56) 2,4-Dinitrophenol	9.479	184	95586	2.021	mg/kg	98
57) Dibenzofuran	9.599	168	1818032	2.164	mg/kg	99
58) 2,4-Dinitrotoluene	9.595	165	390811	2.211	mg/kg	99
59) 4-Nitrophenol	9.509	109	105011	1.987	mg/kg	99
60) 2,3,4,6-Tetrachlorophenol	9.715	232	369922	2.080	mg/kg	100
61) Fluorene	9.887	166	1284239	1.988	mg/kg	100
62) 4-Chlorophenyl phenyl ...	9.869	204	657962	2.030	mg/kg	99
63) Diethyl phthalate	9.782	149	1306134	2.045	mg/kg	100
64) 4-Nitroaniline	9.914	138	244759	2.109	mg/kg	100
66) 4,6-Dinitro-2-methylph...	9.936	198	200439	2.122	mg/kg	98
67) 1,2-Diphenylhydrazine	10.004	182	291701	2.098	mg/kg	99
68) n-Nitrosodiphenylamine	9.970	169	857069	2.195	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.277	248	458326	2.175	mg/kg	99
71) Atrazine	10.408	200	394197	2.217	mg/kg	99
72) Hexachlorobenzene	10.390	284	627327	2.127	mg/kg	99
73) Pentachlorophenol	10.540	266	335908	2.250	mg/kg	100
74) Phenanthrene	10.693	178	2011096	2.203	mg/kg	100
75) Anthracene	10.735	178	1926284	2.083	mg/kg	100
76) Pentachlorobenzene	9.599	250	777456	2.256	mg/kg	100
77) Carbazole	10.858	167	1880102	2.298	mg/kg	100
78) Di-n-butyl phthalate	11.132	149	2385983	2.104	mg/kg	100
79) Fluoranthene	11.728	202	2402434	2.084	mg/kg	100
81) Benzidine	11.822	184	959898	2.087	mg/kg	99
82) Pyrene	11.945	202	2566859	1.982	mg/kg	100
84) Butyl benzyl phthalate	12.530	149	1012517	1.954	mg/kg	100
85) 3,3'-Dichlorobenzidine	13.115	252	1107338	2.072	mg/kg	100
86) Benzo[a]anthracene	13.160	228	2688442	1.996	mg/kg	99
87) Chrysene	13.209	228	2576303	2.006	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.126	149	1746102	2.068	mg/kg	99
90) Di-n-octyl phthalate	13.838	149	2982051	2.063	mg/kg	100
91) Benzo[b]fluoranthene	14.446	252	2777959	1.952	mg/kg	100
92) Benzo[k]fluoranthene	14.479	252	2891622	1.957	mg/kg	99
93) Benzo[a]pyrene	14.802	252	2239232	1.946	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.121	276	3409850	2.035	mg/kg	98
95) Dibenz[a,h]anthracene	16.133	278	2822520	2.043	mg/kg	100
96) Benzo[g,h,i]perylene	16.511	276	2648599	1.976	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060608.D
 Acq On : 6 Jun 2017 1:16 pm
 Operator :
 Sample : CAL6 2.0 ppm
 Misc : CAL
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 06 16:05:39 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060609.D
 Acq On : 6 Jun 2017 1:40 pm
 Operator :
 Sample : CAL7 3.0 ppm
 Misc : CAL
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 16:05:44 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	774826	4.00	mg/kg	100
22) Naphthalene-d8	7.976	136	3452787	4.00	mg/kg	100
42) Acenaphthene-d10	9.441	164	1903048	4.00	mg/kg	100
65) Phenanthrene-d10	10.675	188	4108775	4.00	mg/kg	100
80) Chrysene-d12	13.183	240	5376265	4.00	mg/kg	100
89) Perylene-d12	14.866	264	5196897	4.00	mg/kg	100

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.858	112	579679	3.10	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	77.50%	
9) Phenol-d5	6.664	99	917677	3.01	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	75.25%	
23) Nitrobenzene-d5	7.398	82	807034	3.05	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	76.25%	
47) 2-Fluorobiphenyl	8.860	172	2237373	3.03	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	75.75%	
69) 2,4,6-Tribromophenol	10.101	330	582505	2.94	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	73.50%	
83) 4-Terphenyl-d14	12.058	244	3262969	3.02	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	75.50%	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.752	74	338691	3.161	mg/kg	100
3) Pyridine	4.782	79	708374	3.334	mg/kg	100
4) N-nitrosodiethylamine	6.038	102	304041	3.046	mg/kg	100
5) Benzaldehyde	6.600	77	530420	3.170	mg/kg	100
6) Aniline	6.709	93	1005942	3.075	mg/kg	100
8) bis(2-Chloroethyl)ether	6.742	95	193445	3.019	mg/kg	100
10) Phenol	6.675	94	783146	2.895	mg/kg	100
11) 2-Chlorophenol	6.799	128	736711	3.085	mg/kg	100
12) 1,3-Dichlorobenzene	6.915	146	720003	3.073	mg/kg	100
13) 1,4-Dichlorobenzene	6.960	146	772417	2.930	mg/kg	100
14) 1,2-Dichlorobenzene	7.098	146	765283	2.998	mg/kg	100
15) Benzyl alcohol	7.057	108	405792	3.013	mg/kg	100
16) bis(2-chloroisopropyl)...	7.162	45	848883	2.892	mg/kg	100
17) 2-Methylphenol	7.143	108	687719	3.023	mg/kg	100
18) Hexachloroethane	7.353	117	267151	3.002	mg/kg	100
19) N-Nitrosodi-n-propylamine	7.275	70	522227	3.026	mg/kg	100
20) 4-Methylphenol	7.252	108	694440	2.979	mg/kg	100
21) Acetophenone	7.271	105	1073566	3.349	mg/kg	100
24) Nitrobenzene	7.413	77	681996	3.045	mg/kg	100
25) Isophorone	7.593	82	1326125	3.086	mg/kg	100
26) 2-Nitrophenol	7.668	139	417090	3.229	mg/kg	100
27) 2,4-Dimethylphenol	7.680	107	749693	3.279	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.758	93	917507	3.261	mg/kg	100
29) Benzoic acid	7.762	105	470887	3.103	mg/kg	100
30) 2,4-Dichlorophenol	7.859	162	753776	3.029	mg/kg	100
31) 1,2,4-Trichlorobenzene	7.931	180	831231	3.135	mg/kg	100
32) Naphthalene	7.994	128	2319053	2.988	mg/kg	100
33) 4-Chloroaniline	8.036	127	936191	3.229	mg/kg	100
34) 2,6-Dichlorophenol	8.043	162	711339	3.174	mg/kg	100
35) Hexachlorobutadiene	8.111	225	517307	3.037	mg/kg	100
36) N-nitrosodi-n-butylamine	8.302	116	132614	2.916	mg/kg	100
37) Caprolactam	8.321	113	174332	2.921	mg/kg	100
38) 4-Chloro-3-methylphenol	8.418	107	592341	3.138	mg/kg	100
39) 1,2,4,5-Tetrachloroben...	8.714	216	1002809	2.917	mg/kg	100

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060609.D
 Acq On : 6 Jun 2017 1:40 pm
 Operator :
 Sample : CAL7 3.0 ppm
 Misc : CAL
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 16:05:44 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Jun 06 15:04:48 2017

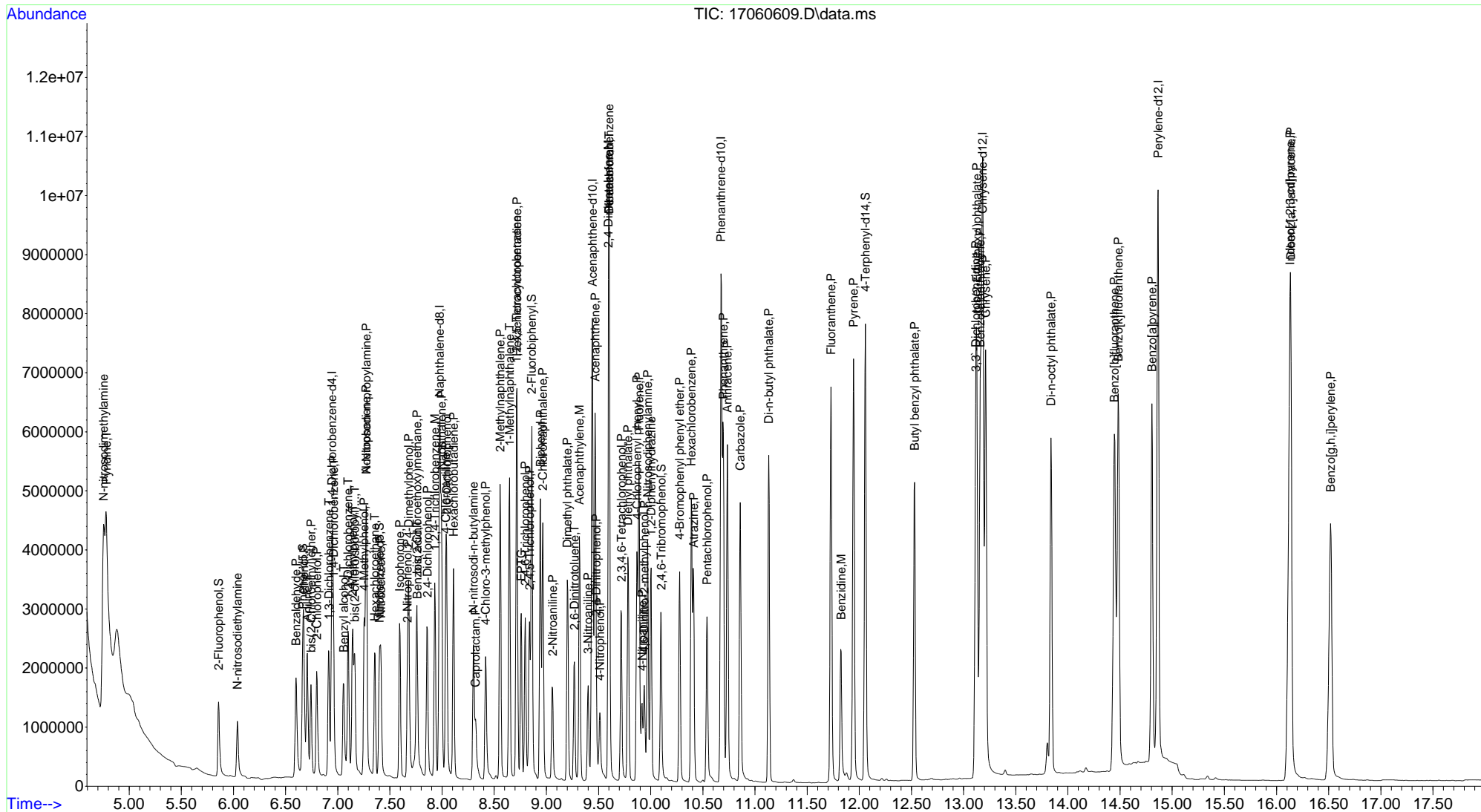
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	1693361	3.035	mg/kg	100
41) 1-Methylnaphthalene	8.647	142	1652461	2.924	mg/kg	100
43) Hexachlorocyclopentadiene	8.718	237	603897	3.047	mg/kg	100
44) EPTC	8.759	128	591396	2.992	mg/kg	100
45) 2,4,6-Trichlorophenol	8.797	196	514571	3.107	mg/kg	100
46) 2,4,5-Trichlorophenol	8.838	196	561104	2.888	mg/kg	100
48) Biphenyl	8.943	154	1846436	3.018	mg/kg	100
49) 2-Chloronaphthalene	8.965	162	1561988	3.076	mg/kg	100
50) 2-Nitroaniline	9.059	138	457041	3.048	mg/kg	100
51) Acenaphthylene	9.318	152	2198188	3.087	mg/kg	100
52) Dimethyl phthalate	9.201	163	1851091	3.148	mg/kg	100
53) 2,6-Dinitrotoluene	9.269	165	370700	3.004	mg/kg	100
54) Acenaphthene	9.468	153	1824926	3.005	mg/kg	100
55) 3-Nitroaniline	9.400	138	384011	3.237	mg/kg	100
56) 2,4-Dinitrophenol	9.479	184	159192	3.093	mg/kg	100
57) Dibenzofuran	9.603	168	2372409	3.097	mg/kg	100
58) 2,4-Dinitrotoluene	9.595	165	543063	3.089	mg/kg	100
59) 4-Nitrophenol	9.513	109	167698	3.092	mg/kg	100
60) 2,3,4,6-Tetrachlorophenol	9.719	232	527601	3.079	mg/kg	100
61) Fluorene	9.887	166	1799421	3.055	mg/kg	100
62) 4-Chlorophenyl phenyl ...	9.869	204	917205	3.104	mg/kg	100
63) Diethyl phthalate	9.783	149	1857065	3.188	mg/kg	100
64) 4-Nitroaniline	9.917	138	321162	2.930	mg/kg	100
66) 4,6-Dinitro-2-methylph...	9.940	198	311264	3.018	mg/kg	100
67) 1,2-Diphenylhydrazine	10.004	182	417094	2.948	mg/kg	100
68) n-Nitrosodiphenylamine	9.970	169	1243597	3.116	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.277	248	655816	3.046	mg/kg	100
71) Atrazine	10.412	200	563017	3.099	mg/kg	100
72) Hexachlorobenzene	10.390	284	886617	2.942	mg/kg	100
73) Pentachlorophenol	10.540	266	497642	3.048	mg/kg	100
74) Phenanthrene	10.697	178	2719205	2.915	mg/kg	100
75) Anthracene	10.735	178	2873426	3.040	mg/kg	100
76) Pentachlorobenzene	9.603	250	1020870	2.899	mg/kg	100
77) Carbazole	10.858	167	2553318	3.053	mg/kg	100
78) Di-n-butyl phthalate	11.132	149	3545592	3.025	mg/kg	100
79) Fluoranthene	11.728	202	3591137	3.049	mg/kg	100
81) Benzidine	11.826	184	1287478	2.895	mg/kg	100
82) Pyrene	11.945	202	3808195	3.123	mg/kg	100
84) Butyl benzyl phthalate	12.530	149	1588929	3.103	mg/kg	100
85) 3,3'-Dichlorobenzidine	13.115	252	1539417	2.996	mg/kg	100
86) Benzo[a]anthracene	13.160	228	3763059	2.968	mg/kg	100
87) Chrysene	13.213	228	3605142	2.982	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.126	149	2442055	3.006	mg/kg	100
90) Di-n-octyl phthalate	13.839	149	4124034	3.176	mg/kg	100
91) Benzo[b]fluoranthene	14.446	252	4131839	3.277	mg/kg	100
92) Benzo[k]fluoranthene	14.483	252	4133857	3.157	mg/kg	100
93) Benzo[a]pyrene	14.806	252	3447128	3.382	mg/kg	100
94) Indeno[1,2,3-cd]pyrene	16.129	276	4898047	3.299	mg/kg	100
95) Dibenz[a,h]anthracene	16.136	278	4018787	3.283	mg/kg	100
96) Benzo[g,h,i]perylene	16.519	276	3869696	3.258	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060609.D
 Acq On : 6 Jun 2017 1:40 pm
 Operator :
 Sample : CAL7 3.0 ppm
 Misc : CAL
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 06 16:05:44 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060610.D
 Acq On : 6 Jun 2017 2:05 pm
 Operator :
 Sample : CAL8 4.0 ppm
 Misc : CAL
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 06 16:05:49 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	760659	4.00	mg/kg	98
22) Naphthalene-d8	7.979	136	3426785	4.00	mg/kg	99
42) Acenaphthene-d10	9.441	164	1954781	4.00	mg/kg	103
65) Phenanthrene-d10	10.678	188	4090891	4.00	mg/kg	100
80) Chrysene-d12	13.186	240	5048135	4.00	mg/kg	94
89) Perylene-d12	14.866	264	5549257	4.00	mg/kg	107

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.854	112	794278	4.14	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	103.50%	
9) Phenol-d5	6.667	99	1284155	4.29	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	107.25%	
23) Nitrobenzene-d5	7.398	82	1129233	4.16	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	104.00%	
47) 2-Fluorobiphenyl	8.860	172	3070518	4.05	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	101.25%	
69) 2,4,6-Tribromophenol	10.101	330	792833	3.98	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	99.50%	
83) 4-Terphenyl-d14	12.062	244	4493214	4.42	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	110.50%	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.741	74	432222	4.066	mg/kg	97
3) Pyridine	4.771	79	876592	4.202	mg/kg	98
4) N-nitrosodiethylamine	6.038	102	419738	4.268	mg/kg	97
5) Benzaldehyde	6.600	77	689431	4.197	mg/kg	99
6) Aniline	6.705	93	1383743	4.272	mg/kg	99
8) bis(2-Chloroethyl)ether	6.742	95	266238	4.217	mg/kg	98
10) Phenol	6.675	94	1236789	4.341	mg/kg	100
11) 2-Chlorophenol	6.799	128	991344	4.181	mg/kg	100
12) 1,3-Dichlorobenzene	6.911	146	967589	4.207	mg/kg	100
13) 1,4-Dichlorobenzene	6.956	146	1035952	4.002	mg/kg	100
14) 1,2-Dichlorobenzene	7.098	146	1039620	4.148	mg/kg	100
15) Benzyl alcohol	7.057	108	566073	4.214	mg/kg	99
16) bis(2-chloroisopropyl)...	7.162	45	1110274	3.853	mg/kg	100
17) 2-Methylphenol	7.143	108	991536	4.295	mg/kg	99
18) Hexachloroethane	7.353	117	357225	4.088	mg/kg	99
19) N-Nitrosodi-n-propylamine	7.278	70	680958	4.020	mg/kg	99
20) 4-Methylphenol	7.256	108	1004373	4.330	mg/kg	100
21) Acetophenone	7.271	105	1405473	4.466	mg/kg	99
24) Nitrobenzene	7.413	77	939764	4.065	mg/kg	100
25) Isophorone	7.597	82	1848464	4.335	mg/kg	98
26) 2-Nitrophenol	7.668	139	551500	4.062	mg/kg	99
27) 2,4-Dimethylphenol	7.680	107	1002576	4.419	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.758	93	1225303	4.387	mg/kg	99
29) Benzoic acid	7.773	105	711265	4.302	mg/kg	99
30) 2,4-Dichlorophenol	7.859	162	1042205	4.161	mg/kg	100
31) 1,2,4-Trichlorobenzene	7.931	180	1111291	4.223	mg/kg	99
32) Naphthalene	7.994	128	3078897	3.997	mg/kg	100
33) 4-Chloroaniline	8.036	127	1335328	4.640	mg/kg	100
34) 2,6-Dichlorophenol	8.047	162	995630	4.476	mg/kg	99
35) Hexachlorobutadiene	8.111	225	688968	4.075	mg/kg	99
36) N-nitrosodi-n-butylamine	8.302	116	185399	4.153	mg/kg	99
37) Caprolactam	8.332	113	250117	4.206	mg/kg	98
38) 4-Chloro-3-methylphenol	8.422	107	864610	4.616	mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.714	216	1407606	4.126	mg/kg	99

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060610.D
 Acq On : 6 Jun 2017 2:05 pm
 Operator :
 Sample : CAL8 4.0 ppm
 Misc : CAL
 ALS Vial : 10 Sample Multiplier: 1

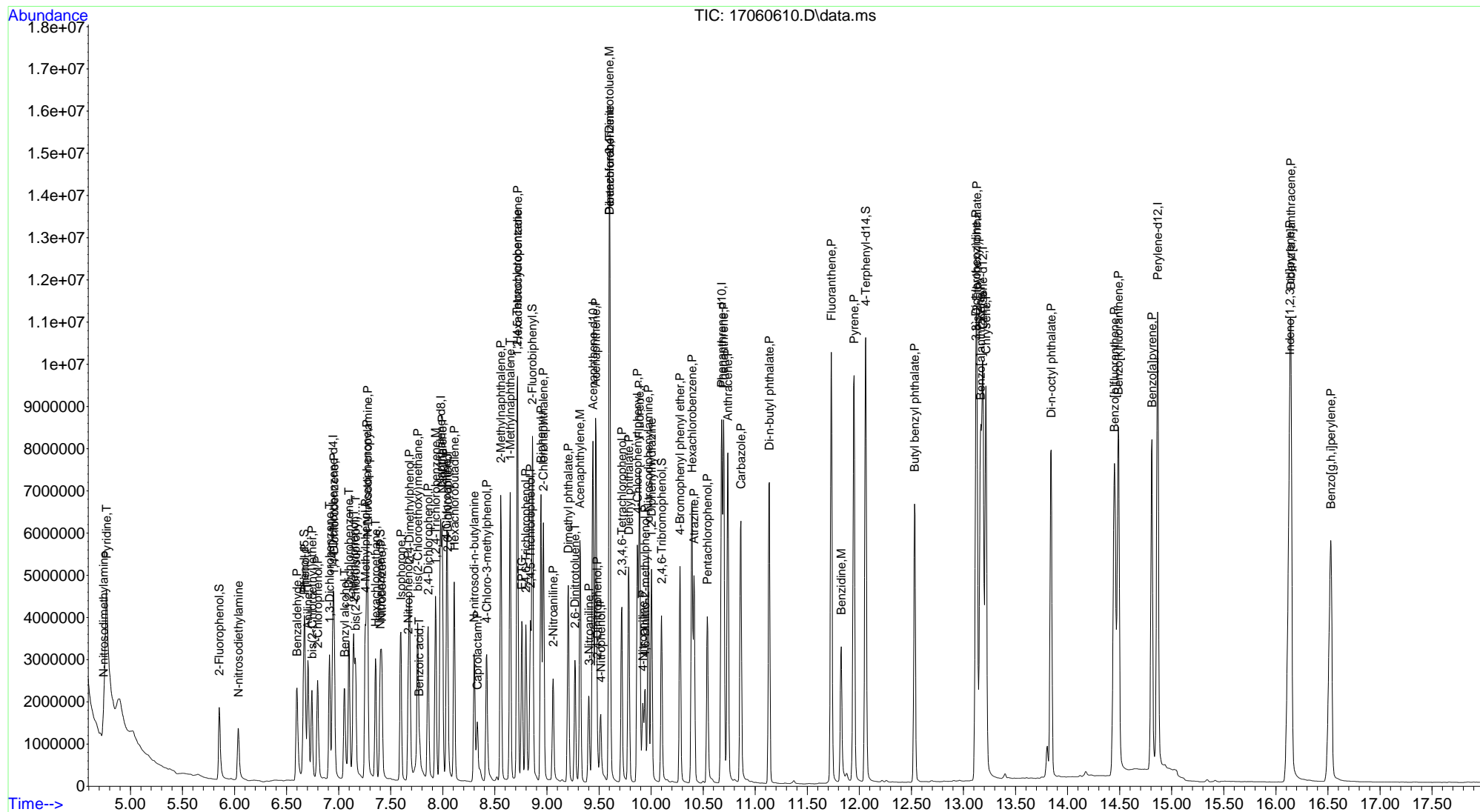
Quant Time: Jun 06 16:05:49 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	2292797	4.140	mg/kg	100
41) 1-Methylnaphthalene	8.647	142	2206620	3.934	mg/kg	99
43) Hexachlorocyclopentadiene	8.718	237	871564	4.035	mg/kg	99
44) EPTC	8.759	128	847563	4.174	mg/kg	99
45) 2,4,6-Trichlorophenol	8.797	196	715148	4.003	mg/kg	99
46) 2,4,5-Trichlorophenol	8.842	196	842501	4.124	mg/kg	100
48) Biphenyl	8.943	154	2584028	4.112	mg/kg	100
49) 2-Chloronaphthalene	8.965	162	2260083	4.333	mg/kg	100
50) 2-Nitroaniline	9.059	138	675317	4.019	mg/kg	100
51) Acenaphthylene	9.318	152	3091990	4.228	mg/kg	100
52) Dimethyl phthalate	9.205	163	2579455	4.271	mg/kg	100
53) 2,6-Dinitrotoluene	9.269	165	532883	4.023	mg/kg	98
54) Acenaphthene	9.468	153	2551137	4.090	mg/kg	100
55) 3-Nitroaniline	9.404	138	503169	3.872	mg/kg	96
56) 2,4-Dinitrophenol	9.483	184	241356	4.031	mg/kg	94
57) Dibenzofuran	9.603	168	3297333	4.191	mg/kg	99
58) 2,4-Dinitrotoluene	9.599	165	759487	3.907	mg/kg	99
59) 4-Nitrophenol	9.516	109	242652	4.005	mg/kg	97
60) 2,3,4,6-Tetrachlorophenol	9.719	232	739129	4.004	mg/kg	100
61) Fluorene	9.887	166	2524962	4.173	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.869	204	1295183	4.267	mg/kg	100
63) Diethyl phthalate	9.786	149	2536489	4.239	mg/kg	99
64) 4-Nitroaniline	9.921	138	456546	3.905	mg/kg	98
66) 4,6-Dinitro-2-methylph...	9.944	198	431522	3.957	mg/kg	99
67) 1,2-Diphenylhydrazine	10.004	182	576603	4.128	mg/kg	100
68) n-Nitrosodiphenylamine	9.974	169	1622393	4.084	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.277	248	941713	4.392	mg/kg	100
71) Atrazine	10.412	200	786283	4.347	mg/kg	100
72) Hexachlorobenzene	10.394	284	1255209	4.183	mg/kg	98
73) Pentachlorophenol	10.540	266	697777	3.988	mg/kg	100
74) Phenanthrene	10.697	178	3743830	4.030	mg/kg	99
75) Anthracene	10.738	178	3848495	4.090	mg/kg	100
76) Pentachlorobenzene	9.603	250	1413033	4.031	mg/kg	100
77) Carbazole	10.862	167	3518192	4.225	mg/kg	100
78) Di-n-butyl phthalate	11.136	149	4708819	3.991	mg/kg	100
79) Fluoranthene	11.732	202	5283456	4.505	mg/kg	100
81) Benzidine	11.826	184	1835478	4.223	mg/kg	100
82) Pyrene	11.949	202	5232413	4.570	mg/kg	100
84) Butyl benzyl phthalate	12.530	149	2117560	4.220	mg/kg	98
85) 3,3'-Dichlorobenzidine	13.119	252	2117754	4.274	mg/kg	100
86) Benzo[a]anthracene	13.164	228	4688690	3.938	mg/kg	100
87) Chrysene	13.216	228	4596207	4.049	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.130	149	3363842	4.293	mg/kg	99
90) Di-n-octyl phthalate	13.842	149	5625581	4.024	mg/kg	100
91) Benzo[b]fluoranthene	14.450	252	5518768	4.099	mg/kg	99
92) Benzo[k]fluoranthene	14.487	252	5433433	3.886	mg/kg	100
93) Benzo[a]pyrene	14.809	252	4502826	4.137	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.133	276	6772768	4.272	mg/kg	99
95) Dibenz[a,h]anthracene	16.144	278	5515535	4.219	mg/kg	100
96) Benzo[g,h,i]perylene	16.526	276	5285641	4.167	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060610.D
 Acq On : 6 Jun 2017 2:05 pm
 Operator :
 Sample : CAL8 4.0 ppm
 Misc : CAL
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 06 16:05:49 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060611.D
 Acq On : 6 Jun 2017 2:30 pm
 Operator :
 Sample : CAL9 5.0 ppm
 Misc : CAL
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 06 16:05:54 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	817729	4.00	mg/kg	106
22) Naphthalene-d8	7.979	136	3385554	4.00	mg/kg	98
42) Acenaphthene-d10	9.441	164	1800828	4.00	mg/kg	95
65) Phenanthrene-d10	10.678	188	3965629	4.00	mg/kg	97
80) Chrysene-d12	13.186	240	5298714	4.00	mg/kg	99
89) Perylene-d12	14.865	264	5492803	4.00	mg/kg	106

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.854	112	1027279	4.85	mg/kg	0.00
Spiked Amount	4.000	Range 20	- 120	Recovery	=	121.25%#
9) Phenol-d5	6.667	99	1536541	4.77	mg/kg	0.00
Spiked Amount	4.000	Range 20	- 120	Recovery	=	119.25%
23) Nitrobenzene-d5	7.402	82	1334405	4.88	mg/kg	0.00
Spiked Amount	4.000	Range 41	- 120	Recovery	=	122.00%#
47) 2-Fluorobiphenyl	8.864	172	3548441	5.07	mg/kg	0.00
Spiked Amount	4.000	Range 48	- 120	Recovery	=	126.75%#
69) 2,4,6-Tribromophenol	10.101	330	972511	4.99	mg/kg	0.00
Spiked Amount	4.000	Range 42	- 124	Recovery	=	124.75%#
83) 4-Terphenyl-d14	12.062	244	5555606	5.21	mg/kg	0.00
Spiked Amount	4.000	Range 51	- 135	Recovery	=	130.25%

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.744	74	563432	4.874	mg/kg	97
3) Pyridine	4.774	79	1096888	4.891	mg/kg	100
4) N-nitrosodiethylamine	6.037	102	504729	4.769	mg/kg	97
5) Benzaldehyde	6.600	77	852943	4.830	mg/kg	99
6) Aniline	6.708	93	1661159	4.756	mg/kg	99
8) bis(2-Chloroethyl)ether	6.742	95	327217	4.814	mg/kg	98
10) Phenol	6.678	94	1498771	4.793	mg/kg	99
11) 2-Chlorophenol	6.798	128	1237751	4.825	mg/kg	100
12) 1,3-Dichlorobenzene	6.911	146	1227103	4.963	mg/kg	100
13) 1,4-Dichlorobenzene	6.960	146	1354930	4.869	mg/kg	100
14) 1,2-Dichlorobenzene	7.098	146	1290543	4.790	mg/kg	100
15) Benzyl alcohol	7.057	108	698382	4.805	mg/kg	100
16) bis(2-chloroisopropyl)...	7.162	45	1365055	4.407	mg/kg	98
17) 2-Methylphenol	7.143	108	1190496	4.744	mg/kg	100
18) Hexachloroethane	7.353	117	449692	4.788	mg/kg	100
19) N-Nitrosodi-n-propylamine	7.278	70	822997	4.519	mg/kg	100
20) 4-Methylphenol	7.256	108	1181730	4.722	mg/kg	99
21) Acetophenone	7.274	105	1703103	5.034	mg/kg	99
24) Nitrobenzene	7.417	77	1167523	4.948	mg/kg	99
25) Isophorone	7.597	82	2072004	4.918	mg/kg	100
26) 2-Nitrophenol	7.672	139	656292	4.694	mg/kg	99
27) 2,4-Dimethylphenol	7.683	107	1175896	5.246	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.762	93	1409143	5.107	mg/kg	100
29) Benzoic acid	7.781	105	796748	4.732	mg/kg	100
30) 2,4-Dichlorophenol	7.863	162	1211703	4.856	mg/kg	100
31) 1,2,4-Trichlorobenzene	7.931	180	1334940	5.135	mg/kg	99
32) Naphthalene	7.994	128	3655204	4.804	mg/kg	100
33) 4-Chloroaniline	8.039	127	1553509	5.464	mg/kg	100
34) 2,6-Dichlorophenol	8.047	162	1194285	5.434	mg/kg	99
35) Hexachlorobutadiene	8.110	225	845684	5.063	mg/kg	100
36) N-nitrosodi-n-butylamine	8.305	116	214863	4.907	mg/kg	98
37) Caprolactam	8.339	113	286234	4.866	mg/kg	97
38) 4-Chloro-3-methylphenol	8.422	107	977372	5.281	mg/kg	99
39) 1,2,4,5-Tetrachloroben...	8.718	216	1634167	4.848	mg/kg	99

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060611.D
 Acq On : 6 Jun 2017 2:30 pm
 Operator :
 Sample : CAL9 5.0 ppm
 Misc : CAL
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 06 16:05:54 2017

QMeth File : SV170606.M

InstName : GCMS9

Quant Title : CLP BNA Calibration - Large Volume Injection

QLast Update : Tue Jun 06 15:04:48 2017

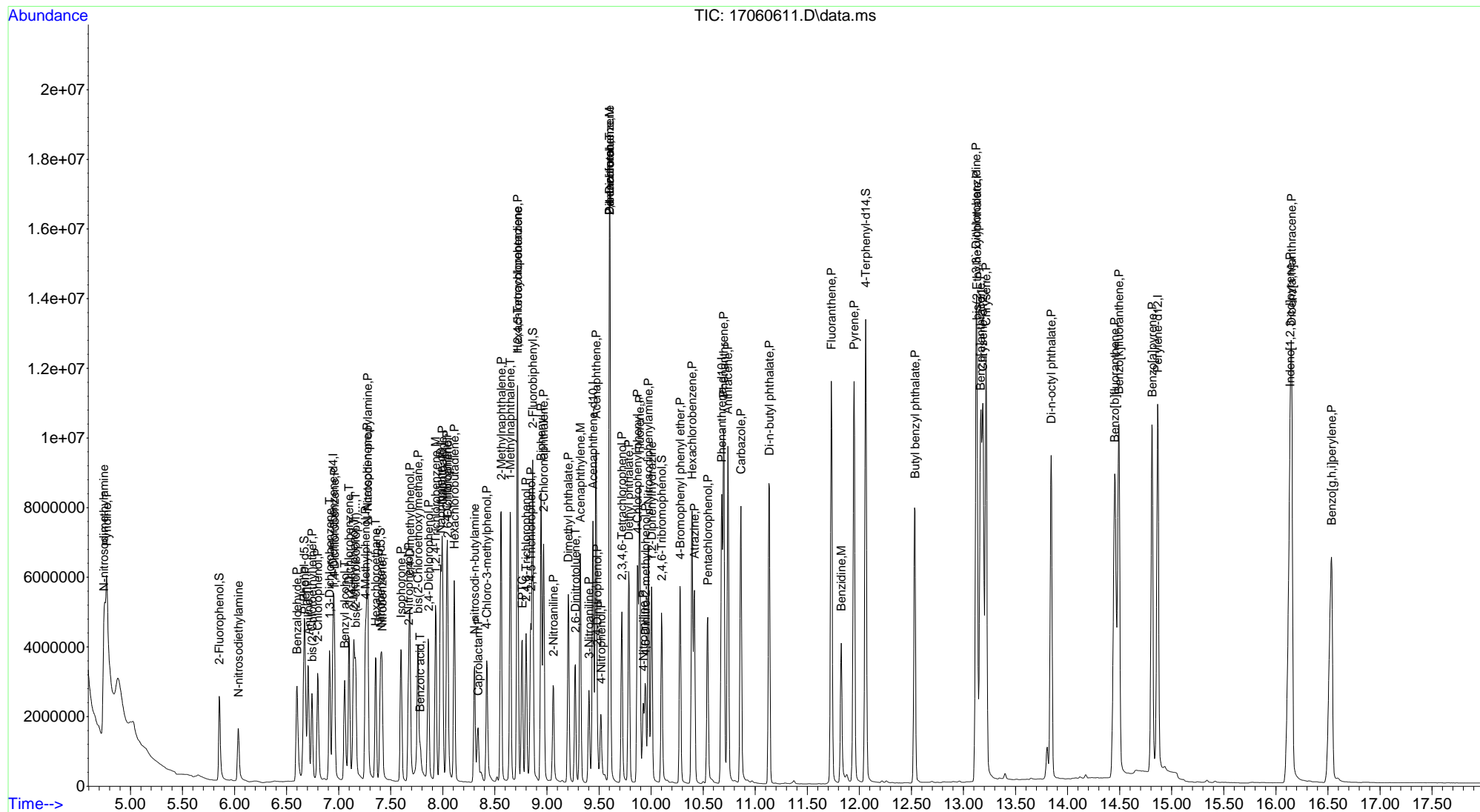
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.560	142	2694156	4.924	mg/kg	100
41) 1-Methylnaphthalene	8.646	142	2592945	4.679	mg/kg	99
43) Hexachlorocyclopentadiene	8.718	237	1037025	4.950	mg/kg	100
44) EPTC	8.763	128	950023	5.079	mg/kg	100
45) 2,4,6-Trichlorophenol	8.800	196	820279	4.786	mg/kg	100
46) 2,4,5-Trichlorophenol	8.845	196	945744	4.950	mg/kg	98
48) Biphenyl	8.943	154	3104430	5.362	mg/kg	99
49) 2-Chloronaphthalene	8.969	162	2569742	5.348	mg/kg	99
50) 2-Nitroaniline	9.063	138	795357	4.812	mg/kg	99
51) Acenaphthylene	9.321	152	3573256	5.303	mg/kg	100
52) Dimethyl phthalate	9.205	163	3028274	5.443	mg/kg	100
53) 2,6-Dinitrotoluene	9.273	165	630437	4.971	mg/kg	99
54) Acenaphthene	9.471	153	2834397	4.932	mg/kg	99
55) 3-Nitroaniline	9.404	138	626770	4.801	mg/kg	99
56) 2,4-Dinitrophenol	9.482	184	302739	4.942	mg/kg	98
57) Dibenzofuran	9.602	168	3812419	5.259	mg/kg	99
58) 2,4-Dinitrotoluene	9.602	165	935655	4.836	mg/kg	96
59) 4-Nitrophenol	9.520	109	300035	4.962	mg/kg	95
60) 2,3,4,6-Tetrachlorophenol	9.719	232	853246	4.823	mg/kg	99
61) Fluorene	9.891	166	2924254	5.246	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.869	204	1491398	5.333	mg/kg	98
63) Diethyl phthalate	9.786	149	3021673	5.482	mg/kg	99
64) 4-Nitroaniline	9.925	138	568865	5.066	mg/kg	98
66) 4,6-Dinitro-2-methylph...	9.947	198	560698	4.995	mg/kg	99
67) 1,2-Diphenylhydrazine	10.007	182	659111	4.898	mg/kg	100
68) n-Nitrosodiphenylamine	9.973	169	2047651	5.317	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.281	248	1074680	5.171	mg/kg	99
71) Atrazine	10.416	200	928119	5.293	mg/kg	99
72) Hexachlorobenzene	10.393	284	1448069	4.979	mg/kg	99
73) Pentachlorophenol	10.543	266	855465	4.767	mg/kg	100
74) Phenanthrene	10.697	178	4510199	5.009	mg/kg	99
75) Anthracene	10.738	178	4570787	5.011	mg/kg	99
76) Pentachlorobenzene	9.602	250	1652475	4.862	mg/kg	100
77) Carbazole	10.862	167	4301745	5.330	mg/kg	99
78) Di-n-butyl phthalate	11.136	149	5736618	4.965	mg/kg	100
79) Fluoranthene	11.732	202	6096394	5.363	mg/kg	100
81) Benzidine	11.825	184	2259177	4.862	mg/kg	99
82) Pyrene	11.949	202	6205359	5.163	mg/kg	100
84) Butyl benzyl phthalate	12.534	149	2583990	4.803	mg/kg	99
85) 3,3'-Dichlorobenzidine	13.122	252	2512251	4.781	mg/kg	99
86) Benzo[a]anthracene	13.164	228	6119779	4.897	mg/kg	99
87) Chrysene	13.216	228	5819562	4.884	mg/kg	99
88) bis(2-Ethylhexyl)phtha...	13.130	149	3952243	4.761	mg/kg	99
90) Di-n-octyl phthalate	13.842	149	6793903	4.872	mg/kg	99
91) Benzo[b]fluoranthene	14.453	252	6948214	5.214	mg/kg	99
92) Benzo[k]fluoranthene	14.494	252	6689051	4.834	mg/kg	99
93) Benzo[a]pyrene	14.813	252	5866360	5.445	mg/kg	99
94) Indeno[1,2,3-cd]pyrene	16.136	276	8300450	5.289	mg/kg	98
95) Dibenz[a,h]anthracene	16.151	278	6805486	5.259	mg/kg	99
96) Benzo[g,h,i]perylene	16.534	276	6407410	5.103	mg/kg	100

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060611.D
 Acq On : 6 Jun 2017 2:30 pm
 Operator :
 Sample : CAL9 5.0 ppm
 Misc : CAL
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 06 16:05:54 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060613.D
 Acq On : 6 Jun 2017 3:19 pm
 Operator :
 Sample : SSCV 2.5 ppm EPTC
 Misc : ICV
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 06 16:05:59 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.941	152	621637	4.00	mg/kg	80
22) Naphthalene-d8	7.976	136	3227459	4.00	mg/kg	93
42) Acenaphthene-d10	9.437	164	2201132	4.00	mg/kg	116
65) Phenanthrene-d10	10.675	188	4417070	4.00	mg/kg	108
80) Chrysene-d12	13.179	240	5839857	4.00	mg/kg	109
89) Perylene-d12	14.862	264	5493617	4.00	mg/kg	106
System Monitoring Compounds						
7) 2-Fluorophenol	0.000	112	0	0.00	mg/kg	Dev(Min)
Spiked Amount	4.000	Range	20 - 120	Recovery	=	0.00%#
9) Phenol-d5	0.000	99	0	0.00	mg/kg	
Spiked Amount	4.000	Range	20 - 120	Recovery	=	0.00%#
23) Nitrobenzene-d5	7.394	82	74	0.02	mg/kg	0.00
Spiked Amount	4.000	Range	41 - 120	Recovery	=	0.50%#
47) 2-Fluorobiphenyl	8.864	172	114	0.00	mg/kg	0.00
Spiked Amount	4.000	Range	48 - 120	Recovery	=	0.00%#
69) 2,4,6-Tribromophenol	10.097	330	270	0.03	mg/kg	0.00
Spiked Amount	4.000	Range	42 - 124	Recovery	=	0.75%#
83) 4-Terphenyl-d14	12.054	244	8425	0.01	mg/kg	0.00
Spiked Amount	4.000	Range	51 - 135	Recovery	=	0.25%#
Target Compounds						
2) N-nitrosodimethylamine	4.778	74	9640	0.011	mg/kg#	1
3) Pyridine	4.620	79	2759	0.016	mg/kg#	16
4) N-nitrosodiethylamine	0.000		0	N.D.		
5) Benzaldehyde	0.000		0	N.D.		
6) Aniline	0.000		0	N.D.		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.		
10) Phenol	0.000		0	N.D.		
11) 2-Chlorophenol	0.000		0	N.D.		
12) 1,3-Dichlorobenzene	0.000		0	N.D.		
13) 1,4-Dichlorobenzene	0.000		0	N.D.		
14) 1,2-Dichlorobenzene	0.000		0	N.D.		
15) Benzyl alcohol	6.941	108	1671	0.079	mg/kg#	1
16) bis(2-chloroisopropyl)...	0.000		0	N.D.		
17) 2-Methylphenol	6.941	108	1671	0.038	mg/kg#	4
18) Hexachloroethane	7.136	117	98	0.001	mg/kg#	2
19) N-Nitrosodi-n-propylamine	7.282	70	258	0.002	mg/kg#	33
20) 4-Methylphenol	0.000		0	N.D.		
21) Acetophenone	0.000		0	N.D.		
24) Nitrobenzene	0.000		0	N.D.		
25) Isophorone	7.578	82	22	0.000	mg/kg	59
26) 2-Nitrophenol	0.000		0	N.D.		
27) 2,4-Dimethylphenol	0.000		0	N.D.		
28) bis(2-Chloroethoxy)met...	7.976	93	732	0.003	mg/kg#	1
29) Benzoic acid	0.000		0	N.D.		
30) 2,4-Dichlorophenol	0.000		0	N.D.		
31) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
32) Naphthalene	7.990	128	157	0.000	mg/kg	69
33) 4-Chloroaniline	0.000		0	N.D.		
34) 2,6-Dichlorophenol	0.000		0	N.D.		
35) Hexachlorobutadiene	0.000		0	N.D.		
36) N-nitrosodi-n-butylamine	0.000		0	N.D.		
37) Caprolactam	0.000		0	N.D.		
38) 4-Chloro-3-methylphenol	0.000		0	N.D.		
39) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.		

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060613.D
 Acq On : 6 Jun 2017 3:19 pm
 Operator :
 Sample : SSCV 2.5 ppm EPTC
 Misc : ICV
 ALS Vial : 13 Sample Multiplier: 1

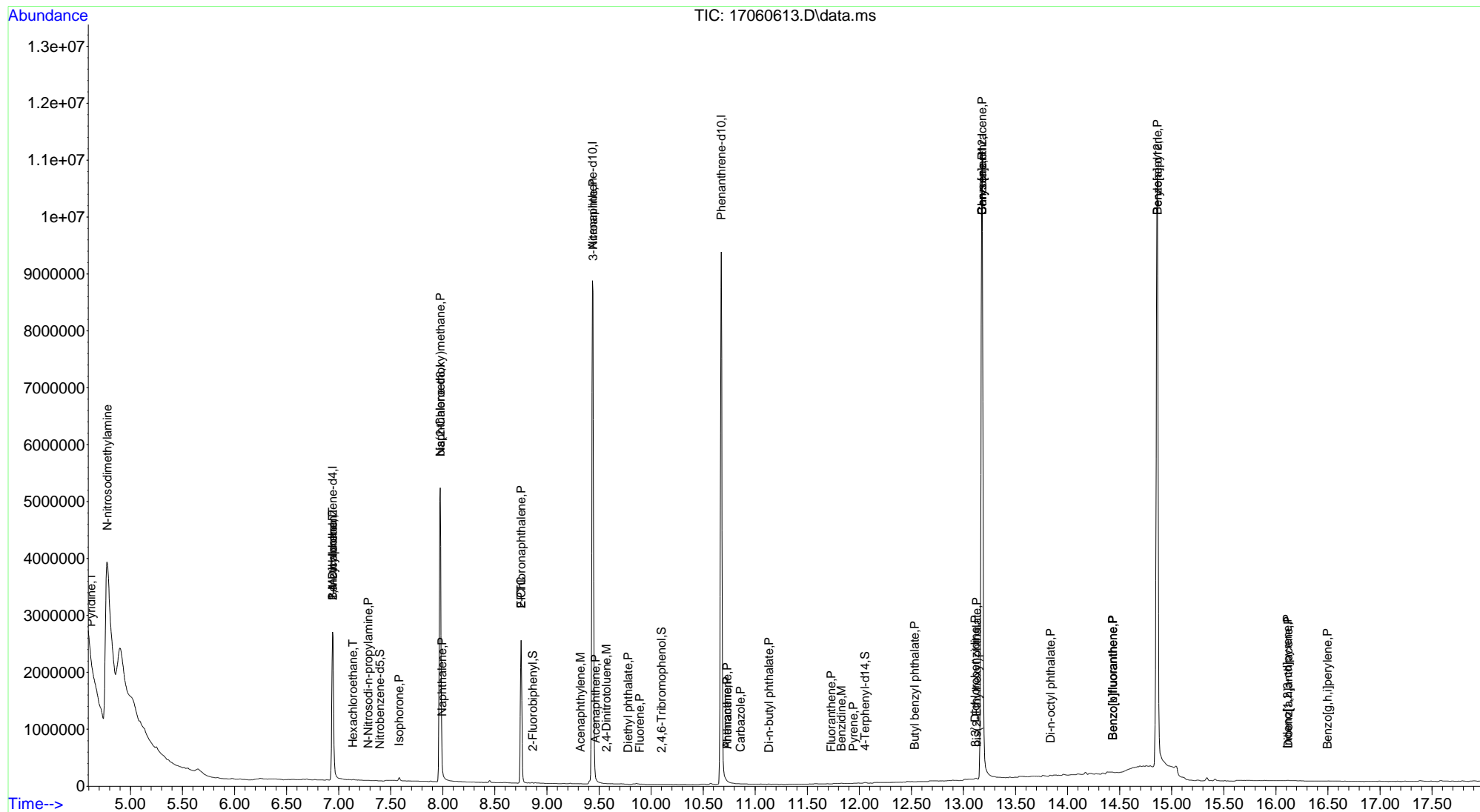
Quant Time: Jun 06 16:05:59 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	0.000		0	N.D.		
41) 1-Methylnaphthalene	0.000		0	N.D.		
43) Hexachlorocyclopentadiene	0.000		0	N.D.		
44) EPTC	8.751	128	518890	2.270	mg/kg	99 90.8%
45) 2,4,6-Trichlorophenol	0.000		0	N.D.		
46) 2,4,5-Trichlorophenol	0.000		0	N.D.		
48) Biphenyl	0.000		0	N.D.		
49) 2-Chloronaphthalene	8.751	162	1912	0.003	mg/kg#	40
50) 2-Nitroaniline	0.000		0	N.D.		
51) Acenaphthylene	9.321	152	148	0.000	mg/kg#	60
52) Dimethyl phthalate	0.000		0	N.D.		
53) 2,6-Dinitrotoluene	0.000		0	N.D.		
54) Acenaphthene	9.464	153	147	0.000	mg/kg#	22
55) 3-Nitroaniline	9.441	138	273	0.026	mg/kg#	1
56) 2,4-Dinitrophenol	0.000		0	N.D.		
57) Dibenzofuran	0.000		0	N.D.		
58) 2,4-Dinitrotoluene	9.569	165	104	0.023	mg/kg#	37
59) 4-Nitrophenol	0.000		0	N.D.		
60) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
61) Fluorene	9.891	166	156	0.000	mg/kg#	63
62) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
63) Diethyl phthalate	9.779	149	704	0.001	mg/kg#	59
64) 4-Nitroaniline	0.000		0	N.D.		
66) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
67) 1,2-Diphenylhydrazine	0.000		0	N.D.		
68) n-Nitrosodiphenylamine	0.000		0	N.D.		
70) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
71) Atrazine	0.000		0	N.D.		
72) Hexachlorobenzene	0.000		0	N.D.		
73) Pentachlorophenol	0.000		0	N.D.		
74) Phenanthrene	10.731	178	782	0.001	mg/kg	60
75) Anthracene	10.731	178	782	0.001	mg/kg	60
76) Pentachlorobenzene	0.000		0	N.D.		
77) Carbazole	10.858	167	622	0.001	mg/kg#	69
78) Di-n-butyl phthalate	11.132	149	4341	0.018	mg/kg	96
79) Fluoranthene	11.728	202	762	0.001	mg/kg	72
81) Benzidine	11.825	184	6875	0.033	mg/kg	97
82) Pyrene	11.942	202	752	0.001	mg/kg	71
84) Butyl benzyl phthalate	12.530	149	597	0.024	mg/kg#	44
85) 3,3'-Dichlorobenzidine	13.111	252	5537	0.026	mg/kg	98
86) Benzo[a]anthracene	13.179	228	15940	0.012	mg/kg	70
87) Chrysene	13.179	228	15940	0.012	mg/kg#	67
88) bis(2-Ethylhexyl)phtha...	13.126	149	5801	0.032	mg/kg	98
90) Di-n-octyl phthalate	13.835	149	850	0.030	mg/kg	58
91) Benzo[b]fluoranthene	14.434	252	1105	0.001	mg/kg	65
92) Benzo[k]fluoranthene	14.434	252	1105	0.001	mg/kg	66
93) Benzo[a]pyrene	14.862	252	17175	0.016	mg/kg	75
94) Indeno[1,2,3-cd]pyrene	16.110	276	3515	0.002	mg/kg	98
95) Dibenz[a,h]anthracene	16.118	278	2423	0.002	mg/kg	88
96) Benzo[g,h,i]perylene	16.496	276	3468	0.003	mg/kg	97

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060613.D
 Acq On : 6 Jun 2017 3:19 pm
 Operator :
 Sample : SSCV 2.5 ppm EPTC
 Misc : ICV
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 06 16:05:59 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060614.D
 Acq On : 6 Jun 2017 3:44 pm
 Operator :
 Sample : SSCV 2.5 ppm
 Misc : ICV
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 06 16:06:03 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	732162	4.00	mg/kg	94
22) Naphthalene-d8	7.976	136	3380174	4.00	mg/kg	98
42) Acenaphthene-d10	9.441	164	1912392	4.00	mg/kg	100
65) Phenanthrene-d10	10.675	188	4018657	4.00	mg/kg	98
80) Chrysene-d12	13.183	240	5545598	4.00	mg/kg	103
89) Perylene-d12	14.862	264	5516977	4.00	mg/kg	106

System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	5.854	112	388607	2.28	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	57.00%	
9) Phenol-d5	6.660	99	635015	2.20	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	55.00%	
23) Nitrobenzene-d5	7.398	82	565944	2.24	mg/kg	0.00
Spiked Amount	4.000	Range 41 - 120	Recovery	=	56.00%	
47) 2-Fluorobiphenyl	8.860	172	1702518	2.29	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	57.25%	
69) 2,4,6-Tribromophenol	10.097	330	430556	2.24	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	56.00%	
83) 4-Terphenyl-d14	12.054	244	2421931	2.17	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	54.25%	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.737	74	272901	2.705	mg/kg	97
3) Pyridine	4.771	79	489306	2.437	mg/kg	98
4) N-nitrosodiethylamine	6.034	102	231401	2.460	mg/kg	100
5) Benzaldehyde	6.596	77	374436	2.368	mg/kg	99
6) Aniline	6.705	93	729332	2.374	mg/kg	97
8) bis(2-Chloroethyl)ether	6.739	95	140823	2.333	mg/kg	99
10) Phenol	6.671	94	566524	2.289	mg/kg	100
11) 2-Chlorophenol	6.795	128	544095	2.430	mg/kg	99
12) 1,3-Dichlorobenzene	6.911	146	582668	2.632	mg/kg	100
13) 1,4-Dichlorobenzene	6.956	146	582984	2.340	mg/kg	100
14) 1,2-Dichlorobenzene	7.098	146	579041	2.400	mg/kg	99
15) Benzyl alcohol	7.054	108	277803	2.214	mg/kg	99
16) bis(2-chloroisopropyl)...	7.158	45	565874	2.040	mg/kg	98
17) 2-Methylphenol	7.140	108	538345	2.538	mg/kg	100
18) Hexachloroethane	7.353	117	201101	2.391	mg/kg	98
19) N-Nitrosodi-n-propylamine	7.271	70	418840	2.569	mg/kg	99
20) 4-Methylphenol	7.252	108	562054	2.564	mg/kg	99
21) Acetophenone	7.271	105	808102	2.668	mg/kg	99
24) Nitrobenzene	7.413	77	551376	2.564	mg/kg	99
25) Isophorone	7.593	82	1084246	2.578	mg/kg	99
26) 2-Nitrophenol	7.668	139	310178	2.574	mg/kg	98
27) 2,4-Dimethylphenol	7.680	107	557838	2.493	mg/kg	100
28) bis(2-Chloroethoxy)met...	7.755	93	769686	2.794	mg/kg	99
29) Benzoic acid	7.751	105	355761	2.521	mg/kg	98
30) 2,4-Dichlorophenol	7.856	162	582355	2.412	mg/kg	99
31) 1,2,4-Trichlorobenzene	7.931	180	641410	2.471	mg/kg	100
32) Naphthalene	7.994	128	1879640	2.474	mg/kg	100
33) 4-Chloroaniline	8.036	127	781111	2.752	mg/kg	100
34) 2,6-Dichlorophenol	8.043	162	595702	2.715	mg/kg	99
35) Hexachlorobutadiene	8.111	225	417568	2.504	mg/kg	99
36) N-nitrosodi-n-butylamine	8.302	116	106670	2.387	mg/kg	99
37) Caprolactam	8.324	113	163582	2.801	mg/kg	98
38) 4-Chloro-3-methylphenol	8.418	107	498845	2.700	mg/kg	100
39) 1,2,4,5-Tetrachloroben...	8.714	216	733902	2.181	mg/kg	100

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060614.D
 Acq On : 6 Jun 2017 3:44 pm
 Operator :
 Sample : SSCV 2.5 ppm
 Misc : ICV
 ALS Vial : 14 Sample Multiplier: 1

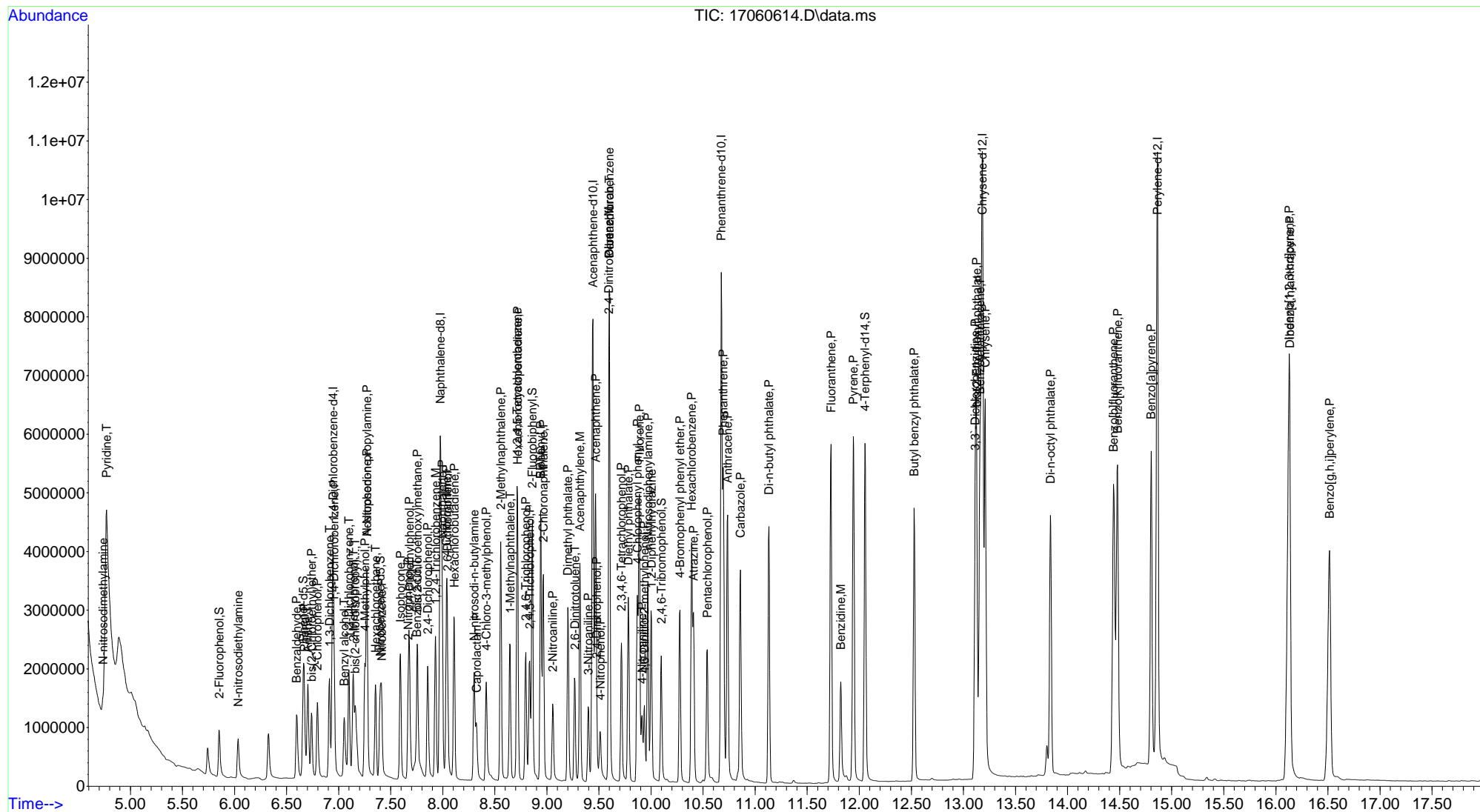
Quant Time: Jun 06 16:06:03 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec
40) 2-Methylnaphthalene	8.557	142	1396316	2.556	mg/kg	100
41) 1-Methylnaphthalene	8.647	142	765997	1.385	mg/kg	100 See RR
43) Hexachlorocyclopentadiene	8.718	237	471633	2.460	mg/kg	99
44) EPTC	8.939	128	82404	0.415	mg/kg#	53 NC
45) 2,4,6-Trichlorophenol	8.797	196	418236	2.589	mg/kg	99
46) 2,4,5-Trichlorophenol	8.834	196	483646	2.496	mg/kg	98
48) Biphenyl	8.939	154	1776953	2.890	mg/kg	100
49) 2-Chloronaphthalene	8.965	162	1306813	2.561	mg/kg	99
50) 2-Nitroaniline	9.055	138	364117	2.538	mg/kg	98
51) Acenaphthylene	9.318	152	1981446	2.769	mg/kg	100
52) Dimethyl phthalate	9.201	163	1598368	2.705	mg/kg	100
53) 2,6-Dinitrotoluene	9.269	165	319919	2.625	mg/kg	100
54) Acenaphthene	9.468	153	1440993	2.361	mg/kg	100
55) 3-Nitroaniline	9.396	138	305313	2.711	mg/kg	98
56) 2,4-Dinitrophenol	9.479	184	142704	2.857	mg/kg	97
57) Dibenzofuran	9.599	168	1900033	2.468	mg/kg	99
58) 2,4-Dinitrotoluene	9.595	165	445099	2.632	mg/kg	99
59) 4-Nitrophenol	9.513	109	128197	2.499	mg/kg	97
60) 2,3,4,6-Tetrachlorophenol	9.715	232	423840	2.534	mg/kg	100
61) Fluorene	9.887	166	1629181	2.752	mg/kg	99
62) 4-Chlorophenyl phenyl ...	9.869	204	759067	2.556	mg/kg	100
63) Diethyl phthalate	9.783	149	1525481	2.606	mg/kg	100
64) 4-Nitroaniline	9.914	138	300566	2.749	mg/kg	100
66) 4,6-Dinitro-2-methylph...	9.936	198	244573	2.513	mg/kg	99
67) 1,2-Diphenylhydrazine	10.004	182	340247	2.452	mg/kg	99
68) n-Nitrosodiphenylamine	9.970	169	1075234	2.755	mg/kg	100
70) 4-Bromophenyl phenyl e...	10.277	248	560779	2.663	mg/kg	99
71) Atrazine	10.409	200	440585	2.480	mg/kg	100
72) Hexachlorobenzene	10.390	284	752453	2.553	mg/kg	99
73) Pentachlorophenol	10.540	266	410141	2.654	mg/kg	100
74) Phenanthrene	10.693	178	2284180	2.503	mg/kg	100
75) Anthracene	10.735	178	2244280	2.428	mg/kg	100
76) Pentachlorobenzene	9.599	250	741537	2.153	mg/kg	100
77) Carbazole	10.858	167	2047647	2.503	mg/kg	100
78) Di-n-butyl phthalate	11.132	149	2821982	2.478	mg/kg	100
79) Fluoranthene	11.728	202	3035034	2.635	mg/kg	99
81) Benzidine	11.822	184	1026254	2.282	mg/kg	100
82) Pyrene	11.942	202	3166048	2.517	mg/kg	99
84) Butyl benzyl phthalate	12.527	149	1460699	2.799	mg/kg	98
85) 3,3'-Dichlorobenzidine	13.111	252	1362815	2.594	mg/kg	100
86) Benzo[a]anthracene	13.160	228	3180151	2.431	mg/kg	100
87) Chrysene	13.209	228	3111077	2.495	mg/kg	100
88) bis(2-Ethylhexyl)phtha...	13.126	149	2086110	2.517	mg/kg	100
90) Di-n-octyl phthalate	13.835	149	3187769	2.335	mg/kg	100
91) Benzo[b]fluoranthene	14.442	252	3454593	2.581	mg/kg	100
92) Benzo[k]fluoranthene	14.480	252	3410063	2.453	mg/kg	100
93) Benzo[a]pyrene	14.802	252	2928033	2.706	mg/kg	100
94) Indeno[1,2,3-cd]pyrene	16.125	276	3983800	2.527	mg/kg	99
95) Dibenz[a,h]anthracene	16.133	278	3396173	2.613	mg/kg	100
96) Benzo[g,h,i]perylene	16.515	276	3427204	2.718	mg/kg	99

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060614.D
 Acq On : 6 Jun 2017 3:44 pm
 Operator :
 Sample : SSCV 2.5 ppm
 Misc : ICV
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 06 16:06:03 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060615.D
 Acq On : 6 Jun 2017 4:08 pm
 Operator :
 Sample : SSCV RERUN
 Misc : ICV
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 06 16:33:17 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	%Rec

Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.945	152	691931	4.00	mg/kg	89
22) Naphthalene-d8	7.976	136	3072952	4.00	mg/kg	89
42) Acenaphthene-d10	9.438	164	2116751	4.00	mg/kg	111
65) Phenanthrene-d10	10.675	188	4126951	4.00	mg/kg	100
80) Chrysene-d12	13.179	240	5303886	4.00	mg/kg	99
89) Perylene-d12	14.858	264	5786160	4.00	mg/kg	111

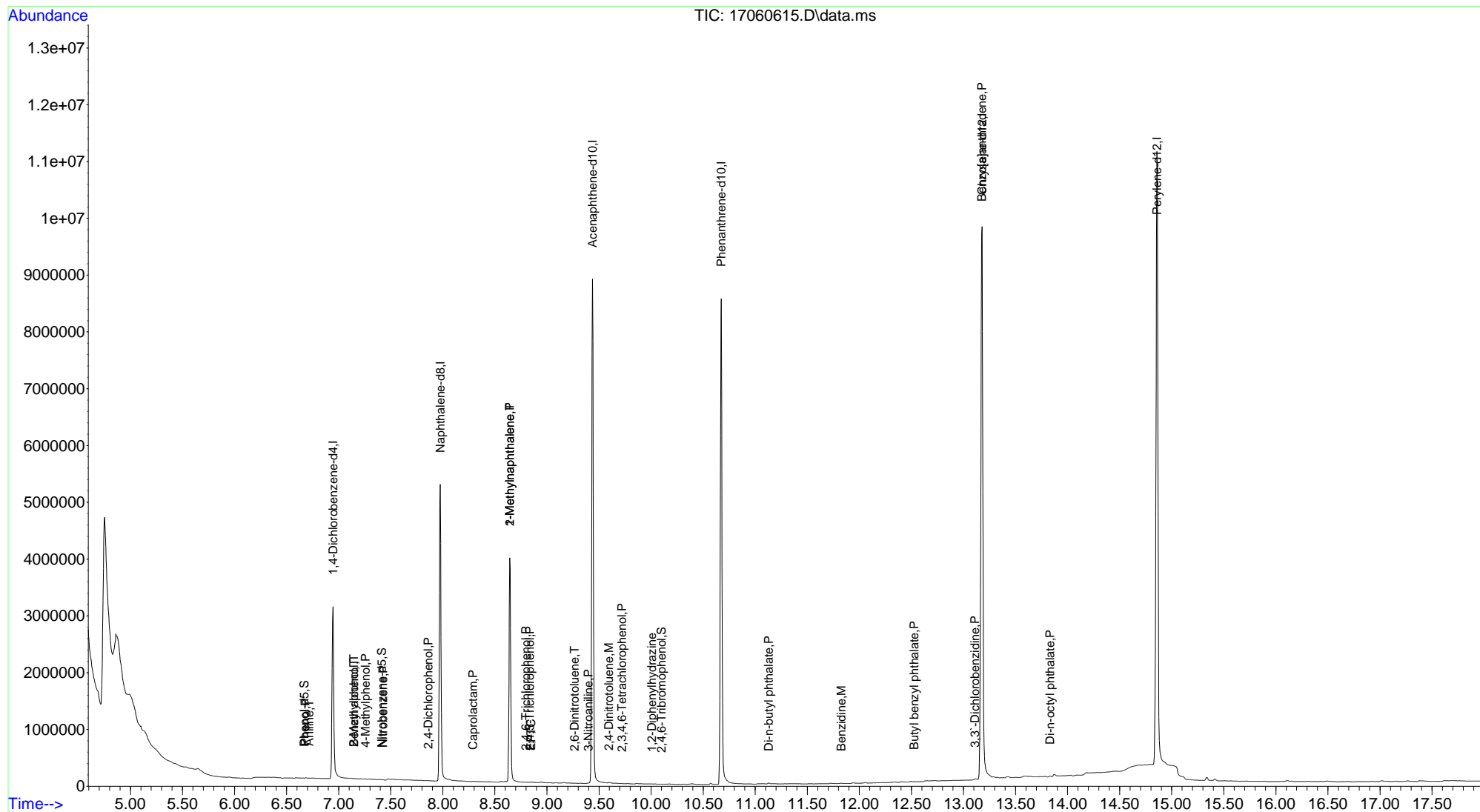
System Monitoring Compounds						Dev(Min)
7) 2-Fluorophenol	0.000	112	0	0.00	mg/kg	
Spiked Amount	4.000	Range 20 - 120	Recovery	=	0.00%#	
9) Phenol-d5	6.667	99	481	0.03	mg/kg	0.00
Spiked Amount	4.000	Range 20 - 120	Recovery	=	0.75%#	
23) Nitrobenzene-d5	7.413	82	464	0.02	mg/kg	0.02
Spiked Amount	4.000	Range 41 - 120	Recovery	=	0.50%#	
47) 2-Fluorobiphenyl	8.860	172	2426	0.00	mg/kg	0.00
Spiked Amount	4.000	Range 48 - 120	Recovery	=	0.00%#	
69) 2,4,6-Tribromophenol	10.097	330	612	0.03	mg/kg	0.00
Spiked Amount	4.000	Range 42 - 124	Recovery	=	0.75%#	
83) 4-Terphenyl-d14	12.054	244	6890	0.01	mg/kg	0.00
Spiked Amount	4.000	Range 51 - 135	Recovery	=	0.25%#	

Target Compounds						Qvalue
2) N-nitrosodimethylamine	4.752	74	9540	Below Cal	#	1
6) Aniline	6.716	93	524	0.030	mg/kg#	45
10) Phenol	6.679	94	471	0.029	mg/kg	49
15) Benzyl alcohol	7.147	108	525	0.068	mg/kg#	1
17) 2-Methylphenol	7.147	108	525	0.031	mg/kg	80
20) 4-Methylphenol	7.256	108	378	0.028	mg/kg#	76
24) Nitrobenzene	7.425	77	371	0.020	mg/kg#	34
30) 2,4-Dichlorophenol	7.859	162	327	0.030	mg/kg#	26
37) Caprolactam	8.290	113	365	0.037	mg/kg	87
40) 2-Methylnaphthalene	8.643	142	1336455	2.691	mg/kg	97
41) 1-Methylnaphthalene	8.643	142	1336455	2.657	mg/kg	100
44) EPTC	8.845	128	95	0.000	mg/kg	76
45) 2,4,6-Trichlorophenol	8.797	196	415	0.018	mg/kg#	80
46) 2,4,5-Trichlorophenol	8.834	196	520	0.015	mg/kg#	68
53) 2,6-Dinitrotoluene	9.265	165	94	0.027	mg/kg#	38
55) 3-Nitroaniline	9.396	138	107	0.025	mg/kg	91
58) 2,4-Dinitrotoluene	9.595	165	188	0.023	mg/kg#	37
60) 2,3,4,6-Tetrachlorophenol	9.719	232	364	0.023	mg/kg#	79
67) 1,2-Diphenylhydrazine	10.007	182	93	0.024	mg/kg#	63
78) Di-n-butyl phthalate	11.128	149	11286	0.025	mg/kg	97
81) Benzidine	11.825	184	6414	0.034	mg/kg	89
84) Butyl benzyl phthalate	12.526	149	1823	0.027	mg/kg	81
85) 3,3'-Dichlorobenzidine	13.108	252	6775	0.030	mg/kg	97
86) Benzo[a]anthracene	13.175	228	18819	0.015	mg/kg	75
90) Di-n-octyl phthalate	13.831	149	3756	0.032	mg/kg	89

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

Data Path : C:\msdchem\1\DATA\170606\
 Data File : 17060615.D
 Acq On : 6 Jun 2017 4:08 pm
 Operator :
 Sample : SSCV RERUN
 Misc : ICV
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 06 16:33:17 2017
 QMeth File : SV170606.M
 InstName : GCMS9
 Quant Title : CLP BNA Calibration - Large Volume Injection
 QLast Update : Tue Jun 06 15:04:48 2017
 Response via : Initial Calibration



ICP-MS4

For

DHL Work Order

1709084

ICP-MS4_170915A

For

DHL Work Order

1709084

Lab Data Review Check List
EPA Method 6020A / 200.8 - Trace Metals by ICP-MS

PROJECT AND BATCH NUMBERS ARE LISTED ON THE RUN LOG		Run ID:	ICP-MS4_170915A			
		SOP:	MET-ICP-MS-02			
Review Item	Yes	No	N/A	2nd Level Review		
Data Folder Contents						
1. Is the Prep Batch Report included? <i>Check the Prep Start/End Dates, Sample Amounts, Bottle #s</i>	X					
2. Are the reagents and spikes listed on the Prep Batch Report current with a valid expiration date? <i>All standard/QC sample preparations shall be documented in LIMS</i>	X				X	
3. Is the Run Log and instrument sequence included? <i>Check the Test Code, Sample Type, Batch ID, and Analysis Date/Time</i>	X					
Daily Demonstration of Performance						
QC items that do not meet method/SOP/project requirements will be described on the run log. All variances that impact data quality will be described in the Variance/Comment Section on page 2.						
Review Item	Frequency	Limits	Pass	Fail (List Batch/Sample) **See Run Log**	2nd Level Review	
Tune	Before ICAL	RSD ≤ 5% / Peak Width@10% <0.9amu	X			
Initial Calibration Curve (ICAL) (Blank + Multi-Level CAL STDS)	Prior to samples and when ICV fails	R ² ≥ 0.99 (DoD) R ≥ 0.998 (6020A)	X		X	
Note: LCVLs and ICSA/ICSAB are N/A for Method 200.8 or project-specific exceptions.						
Review Item	Frequency	Limits	Pass	Fail	N/A	Review
P/A Factor - Performed at least Monthly or After maintenance	After Instrument Maintenance or monthly	Increasing trend	X			
ICSA (N/A for Method 200.8+U)	After calibration & every 12 hours	< RL (except Mn & Zn)	X			
ICSAB (N/A for Method 200.8+U)	After calibration & every 12 hours	80-120% (correct for ICSA result)	X			
ICV (Second Source Verification)	After ICAL	90-110%	X			
ICB	After calibration	< MDL	X			
CCV	Every 10 samples	90-110%	X			
CCB	Every 10 samples	< MDL (ALL + DoD)	X			
Internal Standards	Every sample and QC sample	> 70% (6020A) 60-125% (200.8) 30-120% (DoD)	X			
LCVL (6020A test code)	After ICAL, every 10 samples and end of run	70-130%		X		X
LCVL (DoD)	DAILY	80-120%			X	
LCVL (All metals test codes except 200.8/6020A)	After ICAL and end of run	70-130%			X	
Method Blank (MB)	Every Batch	< MDL / <½ RL (DoD) or <1/10 the sample/reg limit	X			
Filter/TCLP/SPLP Blank	Filter-Dissolved only TCLP / SPLP	< MDL / <½ RL (DoD) or <1/10 the sample/reg limit			X	
Lab Control Sample (LCS)	Every Batch	80-120%	X			
Lab Control Sample Dup (LCSD)	Every Batch	80-120%	X			
LCSD - RPD	Every LCS/LCSD	15 (H2O) / 20 (Soil)	X			
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	Every Batch	70-130 / 80-120 (6020A)		X		
MSD - RPD	Every MS/MSD	15 (H2O) / 20 (Soil)	X			
Dilution Test (SD) - RPD	Every Batch	10		X		
Post Digestion Spike (PDS)	Every Batch	75-125 / 80-120 (6020A)	X			

Lab Data Review Check List
EPA Method 6020 / 6020A / 200.8 - Trace Metals by ICP-MS

Review Item	Criteria	Yes	No	N/A	2nd Level Review
Sample Analysis 1. Are all sample hold times met?	6 months	X			X
2. Are all samples with concentrations > the highest standard used for calibration diluted and reanalyzed?	All results > high point of ICAL must be diluted	X			
3. Are ALL reported analytes and reported results > MDL highlighted by the analyst?		X		Confirm with analyst if LIMS result does not match Labcore	

VARIANCE REPORT

QC items that do not meet method/SOP/project requirements will be described on the run log. All variances that impact data quality will be described in this section.

NON-CONFORMANCES / VARIANCE	Criteria	Yes	No	N/A	2nd Level
1. Are all non-conformances and corrective actions included and noted?	All deviations from the method and SOP that affect data quality	X			X
2. Does the variance require approval by the Technical Director/General Manager/QA Manager?		X			

TECHNICAL DIRECTOR / QA MANAGER APPROVAL
SIGNATURE AND DATE STAMP:

Description and Corrective Actions of QC items that do not meet method/SOP/project requirements:

****INCLUDE VARIANCE ITEM / REASON / CORRECTIVE ACTION / IMPACT ON DATA****

VARIANCE ITEM	REASON	CORRECTIVE ACTION
<input type="checkbox"/> CCV out of control (± 10%)	<input type="checkbox"/> Carryover from previous run	<input type="checkbox"/> Reanalyze QC to confirm
<input type="checkbox"/> CCB out of control (> MDL / >½ RL)	<input type="checkbox"/> Cross contamination	<input type="checkbox"/> Recalibrate
<input type="checkbox"/> MB out of control (> RL / >½ RL)	<input type="checkbox"/> Lab Artifact	<input type="checkbox"/> Reprep/Reanalyze sample
<input type="checkbox"/> LCS <input type="checkbox"/> LCSD out of control (± 20%)	<input type="checkbox"/> Prep Spike error (describe)	<input type="checkbox"/> Reprep/Reanalyze Batch
<input type="checkbox"/> MS <input type="checkbox"/> MSD out of control (± 20%)	<input type="checkbox"/> Matrix Effect	<input type="checkbox"/> Reanalyze Batch/Sample/QC
<input type="checkbox"/> RPD out of control for LCS/LCSD/MS/MSD (15/25)	<input type="checkbox"/> High Levels of Target Metals	<input type="checkbox"/> Verify reagents are clean
<input type="checkbox"/> Post Digestion Spike out of control (See Method)	<input type="checkbox"/> Insufficient sample for QC	<input type="checkbox"/> Reanalyze sample to confirm
<input type="checkbox"/> Serial Dilution out of control (see Method)	<input type="checkbox"/> Digestion/Prep Error	<input type="checkbox"/> Sample results ND w/ dilution
<input type="checkbox"/> Internal Standard(s) out of control (see Method)	<input type="checkbox"/> Analytical Error	<input type="checkbox"/> Client notified and approved
<input type="checkbox"/> No MS/MSD prepared - LCS/LCSD used instead	<input type="checkbox"/> Client Request	<input type="checkbox"/> Flag data / Case narrative
<input type="checkbox"/> Missing QC (other than MS/MSD)		<input type="checkbox"/> Accept data
<input type="checkbox"/> QC sample(s) was mis-spiked		<input type="checkbox"/> Cal Std high and sample ND
<input type="checkbox"/> ICSA/ICSAB missing or out of control (± 20%)		
<input type="checkbox"/> LCVL out of control (± 30%)	<input type="checkbox"/> Other (describe below)	<input type="checkbox"/> Other (describe below)
<input type="checkbox"/> Sample(s) analyzed outside of HT		
<input type="checkbox"/> Other (describe below)		

General Comments and Impact on Data:

Analyst: *[Signature]* Date of Completion: 09/15/2017

Second-Level Review: *Janice Whitt* Date Stamp: 9/15/2017



Method 200.8/6020A Calibration Curve – ICP-MS


CAL LEVEL	RUN LOG ID	LIMS CAL STD ID	Prep Date	
MET CAL 1	BLANK STD 1	---	09/15/2017	
MET CAL 2	L2-170915	MET-L2CAL- 170802	09/15/2017	MADE FRESH DAILY
MET CAL 3	L-170915	MET-LCAL- 170802	09/15/2017	
MET CAL 4	10X-170915	MET-LCAL10X- 170802	09/15/2017	
MET CAL 5	5X-170915	MET-LCAL5X- 170802	09/15/2017	
MET CAL 6	2X-170915	MET-MCAL- 170802	09/15/2017	
MET CAL 7	H-170915	MET-HCAL-170802	08/02/2017	
MET CAL 8	H2-170915	MET-H2CAL-170802	08/02/2017	

Metal	MET CAL 2	MET CAL 3	MET CAL 4	MET CAL 5	MET CAL 6	MET CAL 7	MET CAL 8
	MET-L2CAL (10X OF LCAL)	MET-LCAL (50X OF HCAL)	MET-LCAL10X (10X OF HCAL)	MET-LCAL5X (5X OF HCAL)	MET-MCAL (2X OF HCAL)	MET-HCAL (SEE BELOW)	MET-H2CAL (SEE BELOW)
Aluminum	20	200	1000	2000	5000	10,000	---
Antimony	1	10	50	100	250	500	---
Arsenic	1	10	50	100	250	500	2000
Barium	1	10	50	100	250	500	2000
Beryllium	1	10	50	100	250	500	2000
Boron	1	10	50	100	250	500	2000
Cadmium	1	10	50	100	250	500	2000
Calcium	20	200	1000	2000	5000	10,000	2000
Chromium	1	10	50	100	250	500	2000
Cobalt	1	10	50	100	250	500	2000
Copper	1	10	50	100	250	500	2000
Iron	20	200	1000	2000	5000	10,000	---
Lead	1	10	50	100	250	500	2000
Lithium	1	10	50	100	250	500	2000
Magnesium	20	200	1000	2000	5000	10,000	2000
Manganese	1	10	50	100	250	500	2000
Molybdenum	1	10	50	100	250	500	2000
Nickel	1	10	50	100	250	500	2000
Potassium	20	200	1000	2000	5000	10,000	25,000
Selenium	1	10	50	100	250	500	2000
Silver	1	10	50	100	250	500	---
Sodium	20	200	1000	2000	5000	10,000	25,000
Strontium	1	10	50	100	250	500	2000
Thallium	1	10	50	100	250	500	2000
Tin	1	10	50	100	250	500	2000
Titanium	1	10	50	100	250	500	2000
Uranium	1	10	50	100	250	500	2000
Vanadium	1	10	50	100	250	500	2000
Zinc	1	10	50	100	250	500	2000

MET CAL 7: MET-HCAL-170802

MET CAL 8: MET-H2CAL-170802

STOCK	Amount Used	Final Volume (mL)	Final Conc (µg/L)	STOCK	Amount Used	Final Volume (mL)	Final Conc (µg/L)
AL PRIMARY STD 1000 PPM	500 µL	50	10,000	1000 PPM STRONTIUM STD	100 µL	50	2000
FE PRIMARY STD 1000 PPM	500 µL	50	10,000	1000 PPM TIN STD	100 µL	50	2000
2500 PPM NATURALS SPIKE	200 µL	50	10,000	1000 PPM TITANIUM STD	100 µL	50	2000
50 PPM CUSTOM+Sr,Sn,Ti	500 µL	50	2000	1000 PPM URANIUM STD	100 µL	50	2000
Sb + Ag 50 PPM	500 µL	50	2000	1000 PPM BORON STD	100 µL	50	2000
				1000 PPM LITHIUM STD	100 µL	50	2000
				1000 PPM MOLYBDENUM	100 µL	50	2000
				500 PPM CUSTOM MIX STD	200 µL	50	2000
				2500 PPM NATURALS SPIKE	500 µL	50	25,000

Analyst/Date:  09/15/2017

REVIEWED BY
By Janice Whitt at 3:59:29 PM, 9/15/2017

Second-Level Review/Date:

Run ID: ICP-MS4_170915A

Run No.: 94175

Analytical Run Date: 9/15/2017

InstrumentID: ICP-MS4

Analyst: Ryan Oliver

SampID	DF	TestCode	SampType	Batch ID	Analysis Date/Time	Q	Comments
BLANK STD 1	1	6020A_W	CAL	R94175	9/15/2017 10:13:00 AM		
L2-170915	1	6020A_W	CAL	R94175	9/15/2017 10:15:00 AM		
L-170915	1	6020A_W	CAL	R94175	9/15/2017 10:17:00 AM		
10X-170915	1	6020A_W	CAL	R94175	9/15/2017 10:19:00 AM		
5X-170915	1	6020A_W	CAL	R94175	9/15/2017 10:21:00 AM		
2X-170915	1	6020A_W	CAL	R94175	9/15/2017 10:23:00 AM		
H-170915	1	6020A_W	CAL	R94175	9/15/2017 10:24:00 AM		
H2-170915	1	6020A_W	CAL	R94175	9/15/2017 10:26:00 AM		
ICSA-170915	1	6020A_W	ICSA	R94175	9/15/2017 10:32:00 AM		
ICSAB-170915	1	6020A_W	ICSB	R94175	9/15/2017 10:34:00 AM		
ICV-170915	1	6020A_W	ICV	R94175	9/15/2017 10:40:00 AM		
LCVL-170915	1	6020A_W	LCVL	R94175	9/15/2017 10:50:00 AM		
ICB-170915	1	6020A_W	ICB	R94175	9/15/2017 10:54:00 AM		
MB-82353	5	6020A_S	MBLK	82353	9/15/2017 10:56:00 AM		
LCS-82353	5	6020A_S	LCS	82353	9/15/2017 10:58:00 AM		
LCSD-82353	5	6020A_S	LCSD	82353	9/15/2017 11:00:00 AM		
1709034-02C	5	6020A_S	SAMP	82353	9/15/2017 11:04:00 AM		
1709034-02C SD	25	6020A_S	SD	82353	9/15/2017 11:05:00 AM		R-flag Se, Zn; PDS passes
1709083-02A	5	6020A_S	SAMP	82353	9/15/2017 11:07:00 AM		
1709085-02A	5	6020A_S	SAMP	82353	9/15/2017 11:09:00 AM		
1709098-01A	5	6020A_S	SAMP	82353	9/15/2017 11:11:00 AM		
1709108-04B	5	6020A_S	SAMP	82353	9/15/2017 11:13:00 AM		
1709034-04C	5	6020A_S	SAMP	82353	9/15/2017 11:15:00 AM		
1709034-06C	5	6020A_S	SAMP	82353	9/15/2017 11:17:00 AM		
1709034-08C	5	6020A_S	SAMP	82353	9/15/2017 11:19:00 AM		
1709034-10C	5	6020A_S	SAMP	82353	9/15/2017 11:20:00 AM		
1709092-01A	5	6020A_S	SAMP	82353	9/15/2017 11:22:00 AM		
1709034-02C PDS	5	6020A_S	PDS	82353	9/15/2017 11:24:00 AM		
1709034-02C MS	5	6020A_S	MS	82353	9/15/2017 11:26:00 AM		
1709034-02C MSD	5	6020A_S	MSD	82353	9/15/2017 11:28:00 AM		

Std ID	Std Name	Type	Exp. Date
MET-CCV-170802	ICPMS CCV 200/5000 PPB	CCV	02/03/2018
MET-H2CAL-170802	ICPMS High Cal2 2000ppb std 8	CAL	02/03/2018
MET-HCAL-170802	ICPMS High Cal 500ppb/10ppm std	CAL	02/03/2018
MET-ICV-170802	ICPMS ICV 100 ppb	ICV	02/03/2018
MET-IS-170530	INTERNAL STANDARD 1 PPM	CAL	11/28/2017
MET-L2CAL-170802	ICPMS Low Cal2 1/20ppb std 2	CAL	02/03/2018
MET-LCAL-170802	ICPMS Low Cal 10/200ppb std 3	CAL	02/03/2018
MET-LCAL10X-1708	ICPMS Low Cal 50/1000ppb std 4	CAL	02/03/2018
MET-LCAL5X-17080	ICPMS Low Cal 100/2000ppb std 5	CAL	02/03/2018
MET-MCAL-170802	ICPMS Mid Cal 250/5000ppb std 6	CAL	02/03/2018
MET-PA-170417	ICPMS PA FACTOR SOLUTION	CAL	10/17/2017
MET-PDS-170814-1	10 PPM Ag+Sb PDS	CAL	02/14/2018
MET-PDS-170814-2	10 PPM CUSTOM PDS SOLUTION	PDS	02/14/2018
MET-PDS-170814-3	250 PPM Naturals+Al+Fe PDS	PDS	02/14/2018
MET-TUNECHK-170	100ppb TUNE CHECK SOLUTION	TUNE	09/18/2017

Run ID: ICP-MS4_170915A Run No.: 94175

CCV1-170915	1	6020A_W	CCV	R94175	9/15/2017 11:30:00 AM	
LCVL1-170915	1	6020A_W	LCVL	R94175	9/15/2017 11:35:00 AM	
CCB1-170915	1	6020A_W	CCB	R94175	9/15/2017 11:40:00 AM	
1709092-02A	5	6020A_S	SAMP	82353	9/15/2017 11:42:00 AM	
1709092-03A	5	6020A_S	SAMP	82353	9/15/2017 11:44:00 AM	
1709092-04A	5	6020A_S	SAMP	82353	9/15/2017 11:45:00 AM	
1709092-05A	5	6020A_S	SAMP	82353	9/15/2017 11:47:00 AM	
1709092-06A	5	6020A_S	SAMP	82353	9/15/2017 11:49:00 AM	
CCV2-170915	1	6020A_W	CCV	R94175	9/15/2017 11:51:00 AM	
LCVL2-170915	1	6020A_W	LCVL	R94175	9/15/2017 11:57:00 AM	
CCB2-170915	1	6020A_W	CCB	R94175	9/15/2017 12:03:00 PM	
CCV3-170915	1	6020A_W	CCV	R94175	9/15/2017 12:36:00 PM	
LCVL3-170915	1	6020A_W	LCVL	R94175	9/15/2017 12:42:00 PM	
CCB3-170915	1	6020A_W	CCB	R94175	9/15/2017 12:44:00 PM	
MB-82354	1	6020A_W	MBLK	82354	9/15/2017 12:46:00 PM	
LCS-82354	1	6020A_W	LCS	82354	9/15/2017 12:48:00 PM	
LCSD-82354	1	6020A_W	LCSD	82354	9/15/2017 12:50:00 PM	
1709087-01A	1	6020A_W	SAMP	82354	9/15/2017 12:54:00 PM	
1709087-01A SD	5	6020A_W	SD	82354	9/15/2017 12:56:00 PM	
1709083-01A	1	6020A_W	SAMP	82354	9/15/2017 12:58:00 PM	
1709084-01A	1	6020A_W	SAMP	82354	9/15/2017 1:00:00 PM	
1709085-01A	1	6020A_W	SAMP	82354	9/15/2017 1:02:00 PM	
1709099-01B	1	6020A_W	SAMP	82354	9/15/2017 1:04:00 PM	
1709100-01B	1	6020A_W	SAMP	82354	9/15/2017 1:05:00 PM	Int Std. Bi-low, does not effect reported compound. jw 9/15/2017
1709108-02B	1	6020A_W	SAMP	82354	9/15/2017 1:07:00 PM	
1709089-01B	1	6020A_W	SAMP	82354	9/15/2017 1:09:00 PM	DNR; Reran @ dilution
1709089-02B	1	6020A_W	SAMP	82354	9/15/2017 1:11:00 PM	DNR; Reran @ dilution
1709089-03B	1	6020A_W	SAMP	82354	9/15/2017 1:13:00 PM	DNR; Reran @ dilution
1709087-01A PDS	1	6020A_W	PDS	82354	9/15/2017 1:15:00 PM	
1709087-01A MS	1	6020A_W	MS	82354	9/15/2017 1:17:00 PM	S-flag Na- Low
1709087-01A MSD	1	6020A_W	MSD	82354	9/15/2017 1:19:00 PM	S-flag Na- Low
CCV4-170915	1	6020A_W	CCV	R94175	9/15/2017 1:24:00 PM	
LCVL4-170915	1	6020A_W	LCVL	R94175	9/15/2017 1:46:00 PM	S-flag Na; Associated samples are clsoer to CCV level; CCV/CCB pass
CCB4-170915	1	6020A_W	CCB	R94175	9/15/2017 1:48:00 PM	
1709087-01A	10	6020A_W	SAMP	82354	9/15/2017 1:50:00 PM	

Std ID	Std Name	Type	Exp. Date
MET-CCV-170802	ICPMS CCV 200/5000 PPB	CCV	02/03/2018
MET-H2CAL-170802	ICPMS High Cal2 2000ppb std 8	CAL	02/03/2018
MET-HCAL-170802	ICPMS High Cal 500ppb/10ppm std	CAL	02/03/2018
MET-ICV-170802	ICPMS ICV 100 ppb	ICV	02/03/2018
MET-IS-170530	INTERNAL STANDARD 1 PPM	CAL	11/28/2017
MET-L2CAL-170802	ICPMS Low Cal2 1/20ppb std 2	CAL	02/03/2018
MET-LCAL-170802	ICPMS Low Cal 10/200ppb std 3	CAL	02/03/2018
MET-LCAL10X-1708	ICPMS Low Cal 50/1000ppb std 4	CAL	02/03/2018
MET-LCAL5X-17080	ICPMS Low Cal 100/2000ppb std 5	CAL	02/03/2018
MET-MCAL-170802	ICPMS Mid Cal 250/5000ppb std 6	CAL	02/03/2018
MET-PA-170417	ICPMS PA FACTOR SOLUTION	CAL	10/17/2017
MET-PDS-170814-1	10 PPM Ag+Sb PDS	CAL	02/14/2018
MET-PDS-170814-2	10 PPM CUSTOM PDS SOLUTION	PDS	02/14/2018
MET-PDS-170814-3	250 PPM Naturals+Al+Fe PDS	PDS	02/14/2018
MET-TUNECHK-170	100ppb TUNE CHECK SOLUTION	TUNE	09/18/2017

Run ID:

ICP-MS4_170915A

Run No.: 94175

1709087-01A SD	50	6020A_W	SD	82354	9/15/2017 1:52:00 PM	
1709087-01A PDS	10	6020A_W	PDS	82354	9/15/2017 1:54:00 PM	
1709089-01B	50	6020A_W	SAMP	82354	9/15/2017 1:56:00 PM	
1709089-02B	50	6020A_W	SAMP	82354	9/15/2017 1:58:00 PM	
1709089-03B	50	6020A_W	SAMP	82354	9/15/2017 2:00:00 PM	
1709087-02A	10	6020A_W	SAMP	82354	9/15/2017 2:02:00 PM	
1709087-03A	10	6020A_W	SAMP	82354	9/15/2017 2:04:00 PM	
1709087-02A	1	6020A_W	SAMP	82354	9/15/2017 2:06:00 PM	
1709087-03A	1	6020A_W	SAMP	82354	9/15/2017 2:08:00 PM	
CCV5-170915	1	6020A_W	CCV	R94175	9/15/2017 2:13:00 PM	
LCVL5-170915	1	6020A_W	LCVL	R94175	9/15/2017 2:18:00 PM	
CCB5-170915	1	6020A_W	CCB	R94175	9/15/2017 2:28:00 PM	

Std ID	Std Name	Type	Exp. Date
MET-CCV-170802	ICPMS CCV 200/5000 PPB	CCV	02/03/2018
MET-H2CAL-170802	ICPMS High Cal2 2000ppb std 8	CAL	02/03/2018
MET-HCAL-170802	ICPMS High Cal 500ppb/10ppm std	CAL	02/03/2018
MET-ICV-170802	ICPMS ICV 100 ppb	ICV	02/03/2018
MET-IS-170530	INTERNAL STANDARD 1 PPM	CAL	11/28/2017
MET-L2CAL-170802	ICPMS Low Cal2 1/20ppb std 2	CAL	02/03/2018
MET-LCAL-170802	ICPMS Low Cal 10/200ppb std 3	CAL	02/03/2018
MET-LCAL10X-1708	ICPMS Low Cal 50/1000ppb std 4	CAL	02/03/2018
MET-LCAL5X-17080	ICPMS Low Cal 100/2000ppb std 5	CAL	02/03/2018
MET-MCAL-170802	ICPMS Mid Cal 250/5000ppb std 6	CAL	02/03/2018
MET-PA-170417	ICPMS PA FACTOR SOLUTION	CAL	10/17/2017
MET-PDS-170814-1	10 PPM Ag+Sb PDS	CAL	02/14/2018
MET-PDS-170814-2	10 PPM CUSTOM PDS SOLUTION	PDS	02/14/2018
MET-PDS-170814-3	250 PPM Naturals+Al+Fe PDS	PDS	02/14/2018
MET-TUNECHK-170	100ppb TUNE CHECK SOLUTION	TUNE	09/18/2017

Sample List

Batch Folder C:\Agilent\ICPMH\1\DATA\170915.b

Acquisition Order

- # Sequence Flow**
 1 Calibration Standards
 2 Unknown Samples
 3 Blank Samples

Calibration Standards:

#	Skip	Sample Type	Sample Name	Comment	Vial#	Level	Total Dil.
1		CCB		CAL 6020A_W	1101		
2		CCB		CAL 6020A_W	1101		
3		CCB		CAL 6020A_W	1102		
4		CCB		CAL 6020A_W	1102		
5		CCB		CAL 6020A_W	1102		
6		CCB		CAL 6020A_W	1103		
7		CCB		CAL 6020A_W	1103		
8		CCB		CAL 6020A_W	1103		
9		CalBlk	BLANK STD 1	CAL 6020A_W	2101	1	
10		CalStd	L2-170915	CAL 6020A_W	2102	2	
11		CalStd	L-170915	CAL 6020A_W	2103	3	
12		CalStd	10X-170915	CAL 6020A_W	2104	4	
13		CalStd	5X-170915	CAL 6020A_W	2105	5	
14		CalStd	2X-170915	CAL 6020A_W	2106	6	
15		CalStd	H-170915	CAL 6020A_W	2107	7	
16		CalStd	H2-170915	CAL 6020A_W	2108	8	
17		ICB	BLANK	CCB 6020A_W	1101		
18		ICB	BLANK	CCB 6020A_W	1102		
19		ICSA	ICSA-170915	ICSA6020A_W	2109		
20		ICSB	ICSAB-170915	ICSB6020A_W	2110		
21		ICB	BLANK	CCB 6020A_W	1101		
22		ICB	BLANK	CCB 6020A_W	1102		
23		ICV	ICV-170915	ICV 6020A_W	2111		
24		ICB	ICB-170915	ICB 6020A_W	1101		
25		LLICV	LCVL-170915	LCVL6020A_W	2112		
26		ICB	ICB-170915	ICB 6020A_W	1102		
27		ICB	ICB-170915	ICB 6020A_W	1103		
28		PB	MB-82353	MBLK6020A_S	2201		5
29		LCS_S	LCS-82353	LCS 6020A_S	2202		5
30		LCS_S	LCSD-82353	LCSD6020A_S	2203		5
31		CCB	RINSE	CCB 6020A_W	1101		
32		AllRef	1709034-02C	SAMP6020A_S	2204		5
33		SD	1709034-02C SD	SD 6020A_S	2205		25
34		Sample	1709083-02A	SAMP6020A_S	2206		5
35		Sample	1709085-02A	SAMP6020A_S	2207		5
36		Sample	1709098-01A	SAMP6020A_S	2208		5
37		Sample	1709108-04B	SAMP6020A_S	2209		5
38		Sample	1709034-04C	SAMP6020A_S	2210		5
39		Sample	1709034-06C	SAMP6020A_S	2211		5
40		Sample	1709034-08C	SAMP6020A_S	2212		5
41		Sample	1709034-10C	SAMP6020A_S	2301		5
42		Sample	1709092-01A	SAMP6020A_S	2302		5
43		PDS	1709034-02C PDS	PDS 6020A_S	2303		5
44		MS_S	1709034-02C MS	MS 6020A_S	2304		5
45		MS_S	1709034-02C MSD	MSD 6020A_S	2305		5
46		CCV	CCV1-170915	CCV 6020A_W	1207		
47		CCB	CCB1-170915	CCB 6020A_W	1102		
48		LLCCV	LCVL1-170915	LCVL6020A_W	2112		

Sample List

49	CCB	CCB1-170915	CCB 6020A_W	1103	
50	Sample	1709092-02A	SAMP6020A_S	2306	5
51	Sample	1709092-03A	SAMP6020A_S	2307	5
52	Sample	1709092-04A	SAMP6020A_S	2308	5
53	Sample	1709092-05A	SAMP6020A_S	2309	5
54	Sample	1709092-06A	SAMP6020A_S	2310	5
55	CCV	CCV2-170915	CCV 6020A_W	1207	
56	CCB	CCB2-170915	CCB 6020A_W	1102	
57	LLCCV	LCVL2-170915	LCVL6020A_W	2112	
58	CCB	CCB2-170915	CCB 6020A_W	1103	
59	PB_W	MB-82355	MBLKTCLP_MET	3101	1
60	PB_W	MB-82348-TCLP	MBLKTCLP_MET	3102	1
61	LCS_W	LCS-82355	LCS TCLP_MET	3103	1
62	LCS_W	LCSD-82355	LCSDTCLP_MET	3104	1
63	CCB	RINSE	CCB 6020A_W	1101	
64	AllRef	1709077-02A	SAMPTCLP_MET	3105	1
65	SD	1709077-02A SD	SD TCLP_MET	3106	5
66	SAMP_W	1709093-01A	SAMPTCLP_MET	3107	1
67	SAMP_W	1709094-01A	SAMPTCLP_MET	3108	1
68	SAMP_W	1709077-01A	SAMPTCLP_MET	3109	1
69	SAMP_W	1709048-01A	SAMPTCLP_MET	3110	1
70	PDS	1709077-02A PDS	PDS TCLP_MET	3111	1
71	MS_W	1709077-02A MS	MS TCLP_MET	3112	1
72	MS_W	1709077-02A MSD	MSD TCLP_MET	3201	1
73	CCB	RINSE	CCB 6020A_W	1102	
74	CCB	RINSE	CCB 6020A_W	1103	
75	CCV	CCV3-170915	CCV 6020A_W	1207	
76	CCB	CCB3-170915	CCB 6020A_W	1102	
77	LLCCV	LCVL3-170915	LCVL6020A_W	2512	
78	CCB	CCB3-170915	CCB 6020A_W	1103	
79	PB_W	MB-82354	MBLK6020A_W	4101	1
80	LCS_W	LCS-82354	LCS 6020A_W	4102	1
81	LCS_W	LCSD-82354	LCSD6020A_W	4103	1
82	CCB	RINSE	CCB 6020A_W	1101	
83	AllRef	1709087-01A	SAMP6020A_W	4104	1
84	SD	1709087-01A SD	SD 6020A_W	4105	5
85	SAMP_W	1709083-01A	SAMP6020A_W	4106	1
86	SAMP_W	1709084-01A	SAMP6020A_W	4107	1
87	SAMP_W	1709085-01A	SAMP6020A_W	4108	1
88	SAMP_W	1709099-01B	SAMP6020A_W	4109	1
89	SAMP_W	1709100-01B	SAMP6020A_W	4110	1
90	SAMP_W	1709108-02B	SAMP6020A_W	4111	1
91	SAMP_W	1709089-01B	SAMP6020A_W	4112	1
92	SAMP_W	1709089-02B	SAMP6020A_W	4201	1
93	SAMP_W	1709089-03B	SAMP6020A_W	4202	1
94	PDS	1709087-01A PDS	PDS 6020A_W	4203	1
95	MS_W	1709087-01A MS	MS 6020A_W	4204	1
96	MS_W	1709087-01A MSD	MSD 6020A_W	4205	1
97	CCB	RINSE	CCB 6020A_W	1102	
98	CCB	RINSE	CCB 6020A_W	1103	
99	CCV	CCV4-170915	CCV 6020A_W	1207	
100	CCB	CCB4-170915	CCB 6020A_W	1102	
101	CCB	CCB4-170915	CCB 6020A_W	1102	
102	CCB	CCB4-170915	CCB 6020A_W	1103	
103	CCB	CCB4-170915	CCB 6020A_W	1103	
104	LLCCV	LCVL4-170915	LCVL6020A_W	2512	
105	CCB	CCB4-170915	CCB 6020A_W	1103	
106	AllRef	1709087-01A	SAMP6020A_W	4301	1
107	SD	1709087-01A SD	SD 6020A_W	4302	50

Sample List

108	PDS	1709087-01A PDS	PDS 6020A_W	4303	10
109	SAMP_W	1709089-01B	SAMP6020A_W	4304	50
110	SAMP_W	1709089-02B	SAMP6020A_W	4305	50
111	SAMP_W	1709089-03B	SAMP6020A_W	4306	50
112	SAMP_W	1709087-02A	SAMP6020A_W	4307	10
113	SAMP_W	1709087-03A	SAMP6020A_W	4308	10
114	SAMP_W	1709087-02A	SAMP6020A_W	4206	1
115	SAMP_W	1709087-03A	SAMP6020A_W	4207	1
116	CCB	RINSE	CCB 6020A_W	1102	
117	CCB	RINSE	CCB 6020A_W	1103	
118	CCV	CCV5-170915	CCV 6020A_W	1207	
119	CCB	CCB5-170915	CCB 6020A_W	1102	
120	LLCCV	LCVL5-170915	LCVL6020A_W	2511	
121	CCB	CCB5-170915	CCB 6020A_W	1102	
122	CCB	CCB5-170915	CCB 6020A_W	1102	
123	CCB	CCB5-170915	CCB 6020A_W	1102	
124	CCB	CCB5-170915	CCB 6020A_W	1103	
125	CCB	CCB5-170915	CCB 6020A_W	1103	

Unknown Samples:

#	Skip	Sample Type	Sample Name	Comment	Vial#	Level	Total Dil.
---	------	-------------	-------------	---------	-------	-------	------------

Blank Samples:

#	Skip	Sample Type	Sample Name	Comment	Vial#	Level	Total Dil.
---	------	-------------	-------------	---------	-------	-------	------------

Periodic Block

#	Block Name	Period	Unit	Reset By
---	------------	--------	------	----------

Sublist

DHL Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: 9/14/2017 8:20:55 AM

Digestion:

Prep End Date:

Prep Batch 82354 Prep Code: 3005A

Technician: Sydney Powers

Prep Factor Units:
mL/mL

Equipment List

Hot Block #3
Thermometer #60
Pipette #P-40-Spikes
Pipette #P-41 Samples

Sample ID	Matrix	pH	SampAmt	Fin Vol	Factor	Bottle #	Vessel	Cleanup
1709083-01A	Aqueous		50	50	1.000	1 of 1		
1709084-01A	Aqueous		50	50	1.000	1 of 1		
1709085-01A	Aqueous		50	50	1.000	1 of 1		
1709087-01A	MS/MSD		50	50	1.000	1 of 1		
1709087-02A	Aqueous		50	50	1.000	1 of 1		
1709087-03A	Aqueous		50	50	1.000	1 of 1		
1709089-01B	Aqueous		50	50	1.000	1 of 1		
1709089-02B	Aqueous		50	50	1.000	1 of 1		
1709089-03B	Aqueous		50	50	1.000	1 of 1		
1709099-01B	Aqueous		50	50	1.000	1 of 1		
1709100-01B	Aqueous		50	50	1.000	1 of 1		
LCS-82354	Aqueous		50	50	1.000	of		
LCSD-82354	Aqueous		50	50	1.000	of		
MB-82354	Aqueous		50	50	1.000	of		

1709108-02B 50 50 Sample added to batch 11:30-16:30

Number	Reagent Name	Amt	Units	Exp. Date	Spk ID	Spike Name	SampType	Amt (mL or g)	Exp. Date
11490	Hydrochloric Acid (trace metal grade)	1	ml	12/15/2019	MET-161107-1	AL PRIMARY STD 1000 PPM	LCS/MS/MSD	0.25	04/27/2018
11594	Digestion Vessels	1	ml	01/10/2018	MET-161107-4	FE PRIMARY STD 1000 PPM	LCS/MS/MSD	0.25	04/27/2018
11661	Nitric Acid (Trace Metal Grade)	1	ml	04/05/2019	MET-SPIKE-170803-3	2500 PPM Naturals Spike	LCS/MS/MSD	0.1	02/04/2018
					MET-SPIKE-170815-1	Sb+Ag 50 PPM	LCS/MS/MSD	0.2	02/16/2018
					MET-SPIKE-170815-2	50 PPM Custom+Sr,Sn,Ti,U,B,Li,Mo	LCS/MS/MSD	0.2	02/16/2018

8:45-13:45

REVIEWED BY
By Janice Whitt at 4:01:42 PM, 9/15/2017

Janice Whitt
9/14/17

DHL Analytical, Inc.

PREP BATCH REPORT

Prep Start Date: **9/14/2017 8:20:55 AM**
 Digestion: **Start: 9/14/2017 8:45:00 AM / Stop: 9/14/2017 4:30:00 PM**
 Prep End Date: **9/14/2017 4:40:01 PM**

Prep Factor Units:
mL/mL

Prep Batch **82354** Prep Code: **3005A** Technician: **Sydney Powers**

Equipment List	
Hot Block #3	
Thermometer #60	
Pipette #P-40-Spikes	
Pipette #P-41 Samples	

Sample ID	Matrix	pH	SampAmt	Fin Vol	Factor	Bottle #	Vessel	Cleanup
1709083-01A	Aqueous		50	50	1.000	1 of 1		
1709084-01A	Aqueous		50	50	1.000	1 of 1		
1709085-01A	Aqueous		50	50	1.000	1 of 1		
1709087-01A	Aqueous		50	50	1.000	1 of 1		
1709087-01A MS	Aqueous		50	50	1.000	of		
1709087-01A MSD	Aqueous		50	50	1.000	of		
1709087-01A PDS	Aqueous		50	50	1.000	of		
1709087-01A SD	Aqueous		50	50	1.000	of		
1709087-02A	Aqueous		50	50	1.000	1 of 1		
1709087-03A	Aqueous		50	50	1.000	1 of 1		
1709089-01B	Aqueous		50	50	1.000	1 of 1		
1709089-02B	Aqueous		50	50	1.000	1 of 1		
1709089-03B	Aqueous		50	50	1.000	1 of 1		
1709099-01B	Aqueous		50	50	1.000	1 of 1		
1709100-01B	Aqueous		50	50	1.000	1 of 1		
1709108-02B	Aqueous		50	50	1.000	1 of 1		
LCS-82354	Aqueous		50	50	1.000	of		
LCSD-82354	Aqueous		50	50	1.000	of		
MB-82354	Aqueous		50	50	1.000	of		

Number	Reagent Name	Amt	Units	Exp. Date
11490	Hydrochloric Acid (trace metal grade)	1	ml	12/15/2019
11594	Digestion Vessels	1	ml	01/10/2018
11661	Nitric Acid (Trace Metal Grade)	1	ml	04/05/2019

Spk ID	Spike Name	SampType	Amt (mL or g)	Exp. Date
MET-161107-1	AL PRIMARY STD 1000 PPM	LCS/MS/MSD	0.25	04/27/2018
MET-161107-4	FE PRIMARY STD 1000 PPM	LCS/MS/MSD	0.25	04/27/2018
MET-SPIKE-170803-3	2500 PPM Naturals Spike	LCS/MS/MSD	0.1	02/04/2018
MET-SPIKE-170815-1	Sb+Ag 50 PPM	LCS/MS/MSD	0.2	02/16/2018
MET-SPIKE-170815-2	50 PPM Custom+Sr,Sn,Ti,U,B,Li,Mo	LCS/MS/MSD	0.2	02/16/2018

REVIEWED BY
 By Janice Whitt at 4:01:45 PM, 9/15/2017

Calibration Summary Report

Date Acquired 9/15/2017 10:13

Data Batch 170915.b

Level	Calibration File Name
1	009CALB.d
2	010CALB.d
3	011CALB.d
4	012CALB.d
5	013CALB.d
6	014CALB.d
7	015CALB.d
8	016CALB.d

Calibration Table

Ele	Corr Coef	Curve Equation
As	1.0000	$y = 0.0010 * x + 7.3156E-005$
Be	1.0000	$y = 5.6311E-005 * x + 3.2017E-006$
B	1.0000	$y = 2.7014E-005 * x + 1.4393E-004$
Na	1.0000	$y = 8.8950E-004 * x + 0.0117$
Mg	1.0000	$y = 4.5827E-004 * x + 6.8230E-004$
Al	1.0000	$y = 1.6600E-004 * x + 0.0030$
K	1.0000	$y = 3.7298E-004 * x + 0.0219$
Ca	0.9999	$y = 2.2621E-005 * x + 2.1985E-004$
Ti	1.0000	$y = 1.5173E-004 * x + 5.3271E-006$
V	1.0000	$y = 0.0053 * x + 0.0015$
Cr	1.0000	$y = 0.0065 * x + 7.2060E-004$
Mn	1.0000	$y = 0.0036 * x + 2.4518E-004$
Fe	1.0000	$y = 0.0051 * x + 0.0122$
Co	1.0000	$y = 0.0157 * x + 3.1758E-004$
Ni	1.0000	$y = 0.0043 * x + 0.0092$
Cu	1.0000	$y = 0.0114 * x + 0.0011$
Zn	1.0000	$y = 0.0016 * x + 3.8393E-004$
Se	1.0000	$y = 7.8292E-005 * x + 2.3638E-005$
Sr	0.9999	$y = 6.4939E-004 * x + 4.4438E-005$
Mo	0.9999	$y = 6.6341E-004 * x + 1.1809E-005$
Ag	1.0000	$y = 0.0021 * x + 6.0912E-006$
Cd	1.0000	$y = 2.9286E-004 * x + 1.1432E-006$
Sn	1.0000	$y = 6.1354E-004 * x + 4.9535E-005$
Sb	1.0000	$y = 7.5183E-004 * x + 1.7406E-005$
Tl	1.0000	$y = 0.0018 * x + 1.4377E-005$
Ba	1.0000	$y = 2.7386E-004 * x + 7.7499E-006$
Pb	1.0000	$y = 0.0024 * x + 6.4623E-005$



Calibration Summary Report

Level 7 Cal

Ele	Conc	Calc	%Rec
As	500	494.78	99
Be	500	505.93	101
B	500	503.17	101
Na	10000	10036.69	100
Mg	10000	10012.74	100
Al	10000	9968.45	100
K	10000	9907.37	99
Ca	10000	9782.04	98
Ti	500	491.45	98
V	500	489.06	98
Cr	500	495.28	99
Mn	500	493.63	99
Fe	10000	9982.26	100
Co	500	506.19	101
Ni	500	499.77	100
Cu	500	502.58	101
Zn	500	507.70	102
Se	500	497.43	99
Sr	500	477.89	96
Mo	500	481.75	96
Ag	500	499.29	100
Cd	500	502.13	100
Sn	500	485.73	97
Sb	500	500.64	100
Tl	500	501.65	100
Ba	500	496.16	99
Pb	500	498.72	100

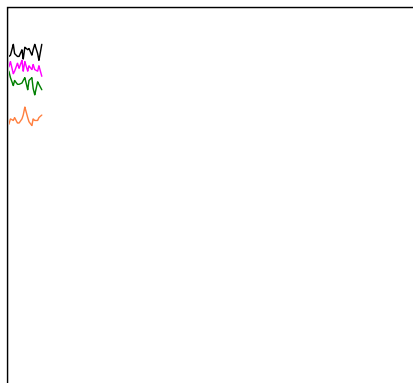
Level 8 Cal

Ele	Conc	Calc	%Rec
As	2000	2001.25	100
Be	2000	1997.97	100
B	2000	1999.11	100
Na	25000	24974.86	100
Mg	25000	24984.29	100
K	25000	25036.65	100
Ca	25000	25115.64	100
Ti	2000	2002.20	100
V	2000	2003.48	100
Cr	2000	2001.33	100
Mn	2000	2001.89	100
Co	2000	1997.69	100
Ni	2000	1999.24	100
Cu	2000	1998.16	100
Zn	2000	1996.61	100
Se	2000	1999.72	100
Sr	2000	2007.46	100
Mo	2000	2006.30	100
Cd	2000	1999.36	100
Sn	2000	2004.80	100
Tl	2000	1999.89	100
Ba	2000	2001.66	100
Pb	2000	2000.81	100

REVIEWED BY
By Janice Whitt at 4:01:53 PM, 9/15/2017

Current Signal

[Helium]



Mass	Range	Count	Avg. Count	RSD [%]
63	500	231	274.2	6.74
59	20000	15716	16054.3	1.85
89	20000	14380	14131.9	1.71
140	50000	40946	42132.3	1.44
205	50000	45304	44230.7	1.57
156/140	1	0.432 %	0.410 %	7.21
51	100	82	76.4	12.65
56	5000	2214	2292.1	2.90
75	20	3	1.8	103.19
78	20	3	2.9	66.36
Integration Time [sec]		0.10		

Plasma Parameters

RF Power	1550	W	Nebulizer Pump	0.10	rps
RF Matching	1.90	V	S/C Temp	2	°C
Smpl Depth	8.0	mm	Gas Switch	Dilution Gas	
Carrier Gas	0.70	L/min	Makeup/Dilution Gas	0.40	L/min
Option Gas	0.0	%			

Lenses Parameters

Extract 1	0.0	V	Cell Entrance	-40	V
Extract 2	-180.0	V	Cell Exit	-58	V
Omega Bias	-80	V	Deflect	0.8	V
Omega Lens	8.1	V	Plate Bias	-60	V

Cell Parameters

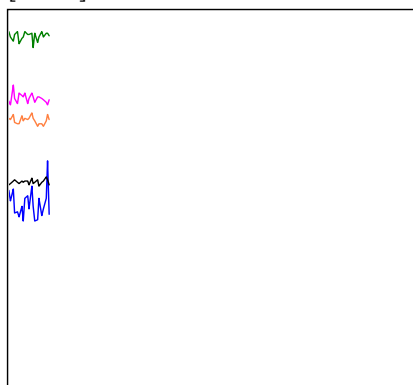
Use Gas	Yes		OctP RF	200	V
He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP Bias	-19.0	V			

Meters

IF/BK Press	2.16E+2	Pa	Carrier Gas(BP)	3.06E+2	kPa	Forward Power	1549	W
Analyzer Press	1.57E-4	Pa	Reflected Power	6	W			

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
63	500	229	243.4	7.83
59	20000	18686	18634.2	1.22
89	50000	35582	35446.6	1.42
140	50000	38148	38334.8	1.69
205	50000	26942	27267.5	1.19
156/140	2	1.694 %	1.684 %	7.11
51	20000	15615	15787.7	1.74
56	200000	187317	184571.7	1.09
75	2000	1344	1310.3	2.91
78	1000	766	747.7	5.12

Integration Time [sec] 0.10

Plasma Parameters

RF Power	1550	W	Nebulizer Pump	0.10	rps
RF Matching	1.90	V	S/C Temp	2	°C
Smpl Depth	8.0	mm	Gas Switch	Dilution Gas	
Carrier Gas	0.70	L/min	Makeup/Dilution Gas	0.40	L/min
Option Gas	0.0	%			

Lenses Parameters

Extract 1	0.0	V	Cell Entrance	-40	V
Extract 2	-180.0	V	Cell Exit	-58	V
Omega Bias	-80	V	Deflect	1.4	V
Omega Lens	8.1	V	Plate Bias	-60	V

Cell Parameters

Use Gas	No		OctP RF	200	V
He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP Bias	-19.0	V			

Meters

IF/BK Press	2.14E+2	Pa	Carrier Gas(BP)	3.07E+2	kPa	Forward Power	1550	W
Analyzer Press	9.16E-5	Pa	Reflected Power	6	W			

US EPA Tune Check Sample Report

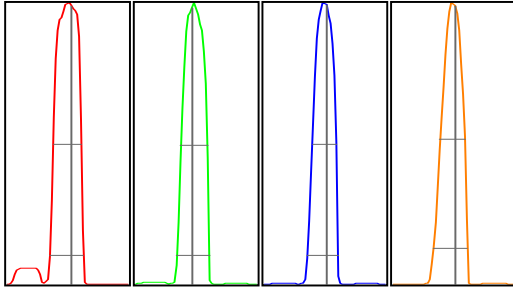
Batch Folder C:\Agilent\ICPMH\1\DATA\DHL Li+U TEMPLATE.b
 Report Comment
 Instrument Name ICPMS4 JP12361998

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	61408	1.08	5.00	
59	99129	1.45	5.00	
115	171779	0.69	5.00	
205	152674	1.73	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	60430	61091	61712	61654	62154
59	97394	98287	99038	99784	101144
115	170564	170724	171651	173266	172688
205	157175	152529	151506	151840	150320

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	92502	7.10	6.9 - 7.1		0.823	0.850	
59	164712	58.95	58.9 - 59.1		0.779	0.850	
115	310214	115.05	114.9 - 115.1		0.739	0.850	
205	268334	205.05	204.9 - 205.1		0.826	0.850	

X% = 10 Int Time [sec] = 0.1 Acq Time [sec] = 135.05 Y Axis = Linear

Tune Parameters

Plasma Parameters

ParameterName	Value Unit	ParameterName	Value Unit
RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.90 V	S/C Temp	2 °C
Smpl Depth	8.0 mm	Gas Switch	Dilution Gas
Carrier Gas	0.70 L/min	Makeup/Dilution Gas	0.40 L/min
Option Gas	0.0 %		

Lenses Parameters

ParameterName	Value Unit	ParameterName	Value Unit
Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-180.0 V	Cell Exit	-58 V
Omega Bias	-80 V	Deflect	1.4 V
Omega Lens	8.1 V	Plate Bias	-60 V

Cell Parameters

ParameterName	Value Unit	ParameterName	Value Unit
Use Gas	No	OctP RF	200 V
He Flow	0.0 mL/min	Energy Discrimination	3.0 V
OctP Bias	-19.0 V		

REVIEWED BY
By Janice Whitt at 4:01:59 PM, 9/15/2017

P/A Factor Tuning Report

```
===== Current Sample =====
Sample Name:   CCB5-170915
Data File:    125_CCB.d
Acquired:     9/15/2017 2:28:33 PM
```

```
===== Detector Parameters and P/A Factors =====
Discriminator: 4.5 mV
AnalogHV:     1749 V
PulseHV:      1599 V
```

Acquired: 9/15/2017 9:45:42 AM

Mass[u]	Element	P/A Factor
9	Be	0.113003
23	Na	0.122552
24	Mg	0.126948
27	Al	0.129958
39	K	0.129614
45	Sc	0.131300
47	Ti	0.131591
51	V	0.133373
52	Cr	0.136613
55	Mn	0.137790
56	Fe	0.127408
59	Co	0.140729
60	Ni	0.143352
63	Cu	0.143655
66	Zn	0.144294
72	Ge	0.143603
75	As	0.142607
88	Sr	0.143128
95	Mo	0.142943
111	Cd	0.148672
115	In	0.147425
118	Sn	0.147647
121	Sb	0.147920
137	Ba	0.147565
205	Tl	0.153376
206	[Pb]	0.154559
207	[Pb]	0.154913
208	Pb	0.153893
209	Bi	0.155715
238	U	0.153388
7	Li	Signal too low
11	B	Signal too low
44	Ca	Signal too low
78	Se	Signal too low
107	Ag	Signal too low

Created: 9/15/2017 2:30:06 PM

REVIEWED BY

By Janice Whitt at 4:02:04 PM, 9/15/2017

Calibration Blank Report

Date Acquired 9/15/2017 10:13
Data Batch 170915.b
Data File Name 009CALB.d

Sample Name BLANK STD 1
Comment CAL 6020A_W
Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	4	66.14
11	B	45	180	16.04
23	Na	45	14654	2.14
24	Mg	45	853	0.78
27	Al	45	3716	4.31
39	K	45	27409	0.93
44	Ca	45	275	4.31
47	Ti	45	7	50.03
51	V	45	1868	5.16
52	Cr	45	901	7.35
55	Mn	45	307	9.96
56	Fe	45	15248	8.19
59	Co	72	277	6.26
60	Ni	72	7984	4.29
63	Cu	72	1000	3.33
66	Zn	72	334	14.52
75	As	72	64	36.17
78	Se	72	21	16.49
88	Sr	115	389	8.59
95	Mo	115	103	3.23
107	Ag	115	53	21.65
111	Cd	115	10	57.75
118	Sn	115	433	8.03
121	Sb	115	152	11.02
137	Ba	115	68	15.02
205	Tl	209	351	10.24
208	Pb	209	1578	3.58

QC ISTD Table

Mass	Name	CPS	%RSD
45	Sc	1250708	0.29
72	Ge	871265	0.22
115	In	8749493	0.75
209	Bi	24417425	0.76

Calibration Standard Report

Date Acquired 9/15/2017 10:15
 Data Batch 170915.b
 Data File Name 010CAL.S.d

Sample Name L2-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	73	22.37
11	B	45	186	8.49
23	Na	45	35864	0.58
24	Mg	45	11593	2.99
27	Al	45	7190	1.98
39	K	45	36290	0.08
44	Ca	45	884	5.49
47	Ti	45	199	17.92
51	V	45	7978	2.62
52	Cr	45	8607	2.81
55	Mn	45	4218	1.12
56	Fe	45	144403	0.98
59	Co	72	13213	1.39
60	Ni	72	8887	4.46
63	Cu	72	10558	1.66
66	Zn	72	1781	2.68
75	As	72	901	3.99
78	Se	72	83	19.75
88	Sr	115	5270	0.16
95	Mo	115	5268	1.56
107	Ag	115	16455	0.22
111	Cd	115	2502	3.32
118	Sn	115	5282	2.08
121	Sb	115	6297	3.32
137	Ba	115	2338	3.19
205	Tl	209	39434	0.26
208	Pb	209	54048	0.82

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1248235	0.18	1250708	99.80	70	120	
72	Ge	864404	0.44	871265	99.21	70	120	
115	In	8713584	0.55	8749493	99.59	70	120	
209	Bi	24339058	0.32	24417425	99.68	70	120	

Calibration Standard Report

Date Acquired 9/15/2017 10:17
 Data Batch 170915.b
 Data File Name 011CAL.S.d

Sample Name L-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	650	4.44
11	B	45	476	20.03
23	Na	45	226118	0.49
24	Mg	45	109996	0.32
27	Al	45	42337	0.72
39	K	45	114328	0.59
44	Ca	45	5395	1.98
47	Ti	45	1833	7.41
51	V	45	62521	0.91
52	Cr	45	77210	0.94
55	Mn	45	41887	0.14
56	Fe	45	1328508	0.09
59	Co	72	131584	0.07
60	Ni	72	40690	0.75
63	Cu	72	98119	0.31
66	Zn	72	14224	1.79
75	As	72	8516	0.55
78	Se	72	655	3.38
88	Sr	115	50639	0.86
95	Mo	115	50614	2.00
107	Ag	115	169828	0.71
111	Cd	115	24136	1.95
118	Sn	115	48390	0.81
121	Sb	115	60762	0.73
137	Ba	115	22381	1.23
205	Tl	209	393373	0.23
208	Pb	209	524931	0.61

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1237485	0.27	1250708	98.94	70	120	
72	Ge	860474	0.57	871265	98.76	70	120	
115	In	8627296	0.47	8749493	98.60	70	120	
209	Bi	24187184	0.80	24417425	99.06	70	120	

Calibration Standard Report

Date Acquired 9/15/2017 10:19
 Data Batch 170915.b
 Data File Name 012CALS.d

Sample Name 10X-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	3491	2.55
11	B	45	1841	5.77
23	Na	45	1118337	0.84
24	Mg	45	572829	0.41
27	Al	45	208673	0.50
39	K	45	485581	0.34
44	Ca	45	27584	2.72
47	Ti	45	9304	1.21
51	V	45	317374	0.39
52	Cr	45	400305	0.47
55	Mn	45	219702	0.47
56	Fe	45	6409706	0.69
59	Co	72	685961	0.62
60	Ni	72	191708	0.39
63	Cu	72	508461	0.22
66	Zn	72	72207	0.81
75	As	72	44447	0.26
78	Se	72	3421	1.86
88	Sr	115	263580	0.62
95	Mo	115	265182	0.51
107	Ag	115	880356	0.68
111	Cd	115	126267	0.34
118	Sn	115	252981	0.88
121	Sb	115	319158	0.46
137	Ba	115	114658	0.10
205	Tl	209	2084678	0.56
208	Pb	209	2756131	0.19

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1223741	0.68	1250708	97.84	70	120	
72	Ge	849091	0.50	871265	97.46	70	120	
115	In	8506204	1.22	8749493	97.22	70	120	
209	Bi	23946791	1.12	24417425	98.07	70	120	

Calibration Standard Report

Date Acquired 9/15/2017 10:21
 Data Batch 170915.b
 Data File Name 013CALS.d

Sample Name 5X-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	6918	0.75
11	B	45	3554	5.29
23	Na	45	2191793	0.11
24	Mg	45	1121032	0.33
27	Al	45	407182	0.21
39	K	45	923703	0.47
44	Ca	45	53060	2.78
47	Ti	45	18012	0.09
51	V	45	627690	0.69
52	Cr	45	786770	0.25
55	Mn	45	429678	0.61
56	Fe	45	12507167	0.95
59	Co	72	1344490	0.28
60	Ni	72	371789	0.72
63	Cu	72	992761	0.33
66	Zn	72	142038	0.48
75	As	72	87259	0.29
78	Se	72	6684	1.88
88	Sr	115	515705	0.31
95	Mo	115	526333	0.29
107	Ag	115	1737639	0.30
111	Cd	115	247000	0.39
118	Sn	115	499348	0.10
121	Sb	115	625371	0.50
137	Ba	115	225420	1.07
205	Tl	209	4085072	0.57
208	Pb	209	5448691	0.42

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1197123	0.47	1250708	95.72	70	120	
72	Ge	832821	0.38	871265	95.59	70	120	
115	In	8416150	0.74	8749493	96.19	70	120	
209	Bi	23429880	0.44	24417425	95.96	70	120	

Calibration Standard Report

Date Acquired 9/15/2017 10:23
 Data Batch 170915.b
 Data File Name 014CALS.d

Sample Name 2X-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	16952	0.53
11	B	45	8163	2.11
23	Na	45	5333260	0.55
24	Mg	45	2741822	0.30
27	Al	45	999732	0.25
39	K	45	2241310	0.48
44	Ca	45	131491	1.71
47	Ti	45	45057	1.70
51	V	45	1533676	0.62
52	Cr	45	1919519	0.74
55	Mn	45	1052050	0.69
56	Fe	45	30407258	0.48
59	Co	72	3266991	0.49
60	Ni	72	896477	0.62
63	Cu	72	2394772	0.60
66	Zn	72	344438	0.35
75	As	72	213423	0.42
78	Se	72	16444	0.47
88	Sr	115	1270621	0.46
95	Mo	115	1307427	0.61
107	Ag	115	4248217	0.45
111	Cd	115	605069	0.59
118	Sn	115	1223347	0.65
121	Sb	115	1544737	0.69
137	Ba	115	554290	0.23
205	Tl	209	10371279	1.18
208	Pb	209	13491778	0.68

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1188502	0.13	1250708	95.03	70	120	
72	Ge	818511	0.11	871265	93.95	70	120	
115	In	8243314	0.85	8749493	94.21	70	120	
209	Bi	23189830	0.80	24417425	94.97	70	120	

Calibration Standard Report

Date Acquired 9/15/2017 10:24
 Data Batch 170915.b
 Data File Name 015CALS.d

Sample Name H-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	33854	0.57
11	B	45	16321	1.10
23	Na	45	10621261	0.42
24	Mg	45	5452558	0.84
27	Al	45	1969665	0.29
39	K	45	4416485	0.41
44	Ca	45	263175	0.99
47	Ti	45	88605	1.21
51	V	45	3063489	0.33
52	Cr	45	3825343	0.11
55	Mn	45	2097540	0.09
56	Fe	45	60526866	0.55
59	Co	72	6536201	0.49
60	Ni	72	1759077	0.27
63	Cu	72	4709490	0.43
66	Zn	72	678440	0.21
75	As	72	424687	0.36
78	Se	72	32103	0.55
88	Sr	115	2535161	0.28
95	Mo	115	2610558	0.21
107	Ag	115	8369936	0.89
111	Cd	115	1201105	0.38
118	Sn	115	2434534	0.20
121	Sb	115	3074519	0.68
137	Ba	115	1109885	0.42
205	Tl	209	20580440	0.20
208	Pb	209	26849457	0.59

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1188147	0.32	1250708	95.00	70	120	
72	Ge	823834	0.54	871265	94.56	70	120	
115	In	8167907	0.35	8749493	93.35	70	120	
209	Bi	22846020	0.64	24417425	93.56	70	120	

Calibration Standard Report

Date Acquired 9/15/2017 10:26
 Data Batch 170915.b
 Data File Name 016CALS.d

Sample Name H2-170915
 Comment CAL 6020A_W
 Dilution 1

Mass	Name	IS	CPS	%RSD
9	Be	45	131794	0.31
11	B	45	63428	1.40
23	Na	45	26036036	0.85
24	Mg	45	13412482	0.40
27	Al	45	5202	9.51
39	K	45	10964266	0.58
44	Ca	45	665769	0.96
47	Ti	45	355863	0.48
51	V	45	12367398	0.44
52	Cr	45	15237028	0.24
55	Mn	45	8385521	0.25
56	Fe	45	75523	21.20
59	Co	72	25423776	1.07
60	Ni	72	6913209	1.04
63	Cu	72	18451454	1.46
66	Zn	72	2628807	0.23
75	As	72	1692852	0.22
78	Se	72	127141	0.27
88	Sr	115	10444814	0.77
95	Mo	115	10663561	1.04
107	Ag	115	5937	26.92
111	Cd	115	4690982	0.30
118	Sn	115	9855174	0.62
121	Sb	115	4676	9.49
137	Ba	115	4391835	0.15
205	Tl	209	80414012	0.82
208	Pb	209	105568657	0.46

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	Flag
45	Sc	1171386	0.23	1250708	93.66	70	120	
72	Ge	811979	0.52	871265	93.20	70	120	
115	In	8012001	0.93	8749493	91.57	70	120	
209	Bi	22391125	0.08	24417425	91.70	70	120	

Interference Check Solution A (ICS-A) Report

Date Acquired 9/15/2017 10:32
 Data Batch 170915.b
 Data File Name 019ICSA.d

Sample Name ICSA-170915
 Comment ICSA6020A_W
 Dilution 1

Mass	Name	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	0.103	11	51.6	1.2	0.8	
11	B	5.452	344	20.4	30	30	
51	V	0.057	2123	3.0	10	10	
52	Cr	0.346	3510	4.9	8	5	
55	Mn	1.709	7517	1.4	8	10	
59	Co	0.463	6027	3.8	8	10	
60	Ni	0.725	9737	3.7	8	10	
63	Cu	0.549	5872	3.0	8	10	
66	Zn	2.505	3534	9.7	10	5	
75	As	0.212	233	11.0	4	5	
78	Se	0.465	48	20.6	2	5	
88	Sr	3.489	18109	0.6	10	10	
107	Ag	0.212	3460	8.8	0.8	2	
111	Cd	0.676	1561	4.2	1.2	1	
118	Sn	0.330	1975	4.9	10	10	
121	Sb	0.632	3861	3.6	4	2.5	
137	Ba	0.344	799	14.4	8	10	
205	Tl	0.244	9330	5.8	4	1.5	
208	Pb	0.353	18486	4.1	1.2	1	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1182895	0.34	1250708	94.58	70	120	
72	Ge	794987	0.20	871265	91.25	70	120	
115	In	7837889	0.38	8749493	89.58	70	120	
209	Bi	20597515	1.03	24417425	84.36	70	120	

Interference Check Solution AB (ICS-AB) Report

Date Acquired 9/15/2017 10:34
 Data Batch 170915.b
 Data File Name 020ICSB.d

Sample Name ICSAB-170915
 Comment ICSB6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
51	V	45	39.487	249612	1.00	40	98.7	80	120	
52	Cr	45	20.651	160726	0.75	20	103.3	80	120	
55	Mn	45	19.338	82660	0.83	20	96.7	80	120	
59	Co	72	40.625	510612	0.29	40	101.6	80	120	
60	Ni	72	37.701	135898	1.20	40	94.3	80	120	
63	Cu	72	20.631	188971	0.56	20	103.2	80	120	
66	Zn	72	20.487	26931	1.00	20	102.4	80	120	
75	As	72	20.902	17511	0.64	20	104.5	80	120	
78	Se	72	20.296	1293	2.56	20	101.5	80	120	
107	Ag	115	19.068	309683	0.22	20	95.3	80	120	
111	Cd	115	10.256	23771	1.13	10	102.6	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1191154	0.21	1250708	95.24	70	120	
72	Ge	801518	0.31	871265	91.99	70	120	
115	In	7912095	0.63	8749493	90.43	70	120	
209	Bi	20724579	1.21	24417425	84.88	70	120	

Initial Calibration Verification (ICV) Report

Date Acquired 9/15/2017 10:40
 Data Batch 170915.b
 Data File Name 023_ICV.d

Sample Name ICV-170915
 Comment ICV 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	99.461	7045	0.97	100	99.5	90	110	
11	B	45	103.911	3709	5.90	100	103.9	90	110	
23	Na	45	2603.276	2925915	0.78	2500	104.1	90	110	
24	Mg	45	2587.464	1491541	0.73	2500	103.5	90	110	
27	Al	45	2457.935	516678	0.81	2500	98.3	90	110	
39	K	45	2563.114	1229390	0.42	2500	102.5	90	110	
44	Ca	45	2432.736	69460	0.99	2500	97.3	90	110	
47	Ti	45	100.611	19199	2.29	100	100.6	90	110	
51	V	45	100.390	666873	0.54	100	100.4	90	110	
52	Cr	45	103.457	846219	0.48	100	103.5	90	110	
55	Mn	45	99.882	449323	0.19	100	99.9	90	110	
56	Fe	45	2490.020	15987243	0.88	2500	99.6	90	110	
59	Co	72	104.153	1419082	0.30	100	104.2	90	110	
60	Ni	72	103.440	390428	0.86	100	103.4	90	110	
63	Cu	72	105.316	1041941	0.70	100	105.3	90	110	
66	Zn	72	105.420	148887	0.52	100	105.4	90	110	
75	As	72	101.811	92246	0.38	100	101.8	90	110	
78	Se	72	101.441	6923	2.00	100	101.4	90	110	
88	Sr	115	96.946	554931	0.27	100	96.9	90	110	
95	Mo	115	94.866	554463	0.59	100	94.9	90	110	
107	Ag	115	103.832	1877139	0.24	100	103.8	90	110	
111	Cd	115	101.056	260695	0.74	100	101.1	90	110	
118	Sn	115	99.307	537117	0.41	100	99.3	90	110	
121	Sb	115	102.973	682084	0.32	100	103.0	90	110	
137	Ba	115	99.526	240157	1.33	100	99.5	90	110	
205	Tl	209	96.720	4236581	0.20	100	96.7	90	110	
208	Pb	209	98.951	5688546	0.31	100	99.0	90	110	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1257207	0.74	1250708	100.52	70	120	
72	Ge	869141	0.23	871265	99.76	70	120	
115	In	8808371	0.34	8749493	100.67	70	120	
209	Bi	24390963	0.70	24417425	99.89	70	120	

Low Level Calibration Verification (LLCV) Report

Date Acquired 9/15/2017 10:50
 Data Batch 170915.b
 Data File Name 025LICV.d

Sample Name LCVL-170915
 Comment LCVL6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	1.005	74	3.58	1	100.5	70	130	
11	B	45	18.202	787	5.87	20	91.0	70	130	
23	Na	45	93.470	117418	0.49	100	93.5	70	130	
24	Mg	45	91.384	52683	0.80	100	91.4	70	130	
27	Al	45	88.139	21790	2.15	100	88.1	70	130	
39	K	45	90.476	68900	1.53	100	90.5	70	130	
44	Ca	45	90.660	2811	1.56	100	90.7	70	130	
47	Ti	45	4.776	903	10.97	5	95.5	70	130	
51	V	45	0.916	7826	1.08	1	91.6	70	130	
52	Cr	45	4.744	39054	0.85	5	94.9	70	130	
55	Mn	45	4.789	21500	0.10	5	95.8	70	130	
56	Fe	45	102.763	664099	1.10	100	102.8	70	130	
59	Co	72	4.796	65517	0.55	5	95.9	70	130	
60	Ni	72	3.801	21987	1.91	5	76.0	70	130	
63	Cu	72	4.931	49662	1.43	5	98.6	70	130	
66	Zn	72	5.094	7502	2.84	5	101.9	70	130	
75	As	72	4.720	4331	2.06	5	94.4	70	130	
78	Se	72	4.887	353	4.73	5	97.7	70	130	
88	Sr	115	4.544	25947	2.13	5	90.9	70	130	
95	Mo	115	4.398	25376	0.76	5	88.0	70	130	
107	Ag	115	1.945	34639	2.15	2	97.3	70	130	
111	Cd	115	0.977	2488	5.15	1	97.7	70	130	
118	Sn	115	4.643	25106	2.22	5	92.9	70	130	
121	Sb	115	1.857	12247	2.41	2	92.9	70	130	
137	Ba	115	4.697	11210	1.13	5	93.9	70	130	
205	Tl	209	0.933	40844	1.16	1	93.3	70	130	
208	Pb	209	0.924	54162	0.20	1	92.4	70	130	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1237840	0.62	1250708	98.97	70	120	
72	Ge	867935	0.61	871265	99.62	70	120	
115	In	8662802	0.28	8749493	99.01	70	120	
209	Bi	24171187	0.59	24417425	98.99	70	120	

Initial Calibration Blank (ICB) Report

Date Acquired 9/15/2017 10:54
 Data Batch 170915.b
 Data File Name 027_ICB.d

Sample Name ICB-170915
 Comment ICB 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	45	0.010	5	24.7	0.4	0.3	
11	B	45	1.206	218	3.2	10	10	
23	Na	45	1.741	16368	2.3	50	100	
24	Mg	45	-0.440	593	6.7	50	100	
27	Al	45	-4.780	2687	4.8	50	10	
39	K	45	-0.846	26653	1.6	50	100	
44	Ca	45	-1.225	237	11.9	50	100	
47	Ti	45	-0.005	6	124.9	4	3	
51	V	45	0.011	1911	2.2	4	3	
52	Cr	45	-0.043	542	6.1	2	2	
55	Mn	45	-0.023	200	12.0	2	3	
56	Fe	45	-0.666	10854	1.5	50	50	
59	Co	72	-0.008	160	8.3	2	3	
60	Ni	72	-0.719	5265	2.6	2	3	
63	Cu	72	-0.021	786	3.7	2	2	
66	Zn	72	0.258	691	4.3	4	2	
75	As	72	0.003	66	7.9	2	2	
78	Se	72	0.095	27	13.8	1	2	
88	Sr	115	0.001	392	14.5	4	3	
95	Mo	115	0.057	433	21.4	2	2	
107	Ag	115	0.003	108	48.1	0.4	1	
111	Cd	115	-0.002	6	34.7	0.4	0.3	
118	Sn	115	0.026	567	2.4	4	3	
121	Sb	115	-0.004	124	10.1	2	0.8	
137	Ba	115	0.009	89	24.1	2	3	
205	Tl	209	0.024	1399	7.2	2	0.5	
208	Pb	209	0.001	1602	5.4	0.4	0.3	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1233903	0.24	1250708	98.66	70	120	
72	Ge	862382	0.16	871265	98.98	70	120	
115	In	8674896	1.04	8749493	99.15	70	120	
209	Bi	24275692	0.93	24417425	99.42	70	120	

Method Blank Report

Date Acquired 9/15/17 10:56 AM
 Data Batch 170915.b
 Data File Name 028_PB.d

Sample Name MB-82353
 Comment MBLK6020A_S
 Dilution 5

Mass	Name	IS	Conc (ppb)	CPS	%RSD	High Limit	Flag
9	Be	45	-0.005	4	41.66		
11	B	45	-0.246	172	22.60		
23	Na	45	10.219	26094	2.31		
24	Mg	45	2.571	2334	3.98		
27	Al	45	-0.975	3524	6.16		
39	K	45	7.231	30867	2.35		
44	Ca	45	13.984	673	11.81		
47	Ti	45	0.035	13	25.01		
51	V	45	-0.012	1793	10.89		
52	Cr	45	0.048	1297	7.13		
55	Mn	45	0.029	439	10.99		
56	Fe	45	2.362	30405	1.66		
59	Co	72	-0.002	247	16.61		
60	Ni	72	-0.563	5878	1.67		
63	Cu	72	0.052	1513	11.66		
66	Zn	72	1.130	1925	3.52		
75	As	72	0.011	73	16.09		
78	Se	72	0.078	26	15.34		
88	Sr	115	0.031	573	10.29		
95	Mo	115	0.067	499	10.03		
107	Ag	115	0.002	82	10.20		
111	Cd	115	0.001	12	56.76		
118	Sn	115	4.709	26015	2.07		J
121	Sb	115	-0.002	139	43.62		
137	Ba	115	0.018	113	17.65		
205	Tl	209	0.030	1669	3.30		
208	Pb	209	0.017	2592	2.03		

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1254099	0.27	1250708	100.27	70	120	
72	Ge	868311	0.21	871265	99.66	70	120	
115	In	8853886	0.92	8749493	101.19	70	120	
209	Bi	24774282	0.19	24417425	101.46	70	120	

Laboratory Control Sample (LCS) Report

Date Acquired 9/15/2017 10:58
 Data Batch 170915.b
 Data File Name 029_LS.d

Sample Name LCS-82353
 Comment LCS 6020A_S
 Dilution 5

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	195.107	13795	0.82	200	97.6	80	120	
11	B	45	195.593	6814	3.35	200	97.8	80	120	
23	Na	45	4964.759	5557821	0.95	1000	496.5	80	120	Fail
24	Mg	45	4964.667	2856563	0.33	1000	496.5	80	120	Fail
27	Al	45	990.689	210162	0.53	1000	99.1	80	120	
39	K	45	5031.709	2383187	0.38	1000	503.2	80	120	Fail
44	Ca	45	4898.457	139364	0.79	1000	489.8	80	120	Fail
47	Ti	45	200.911	38268	1.22	200	100.5	80	120	
51	V	45	197.516	1308220	0.53	200	98.8	80	120	
52	Cr	45	201.396	1643782	0.62	200	100.7	80	120	
55	Mn	45	199.336	894972	0.57	200	99.7	80	120	
56	Fe	45	1012.338	6498315	0.31	1000	101.2	80	120	
59	Co	72	203.568	2758619	0.28	200	101.8	80	120	
60	Ni	72	204.485	759988	0.22	200	102.2	80	120	
63	Cu	72	205.995	2026267	0.15	200	103.0	80	120	
66	Zn	72	200.265	281052	0.66	200	100.1	80	120	
75	As	72	198.474	178816	0.28	200	99.2	80	120	
78	Se	72	195.728	13269	1.33	200	97.9	80	120	
88	Sr	115	196.344	1110387	0.58	200	98.2	80	120	
95	Mo	115	192.239	1110363	0.53	200	96.1	80	120	
107	Ag	115	205.885	3678665	0.28	200	102.9	80	120	
111	Cd	115	197.947	504669	0.62	200	99.0	80	120	
118	Sn	115	203.122	1085366	0.28	200	101.6	80	120	
121	Sb	115	203.201	1330133	0.02	200	101.6	80	120	
137	Ba	115	199.193	474966	0.47	200	99.6	80	120	
205	Tl	209	203.284	8786571	1.35	200	101.6	80	120	
208	Pb	209	199.995	11343287	0.49	200	100.0	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1255256	0.87	1250708	100.36	70	120	
72	Ge	864563	0.75	871265	99.23	70	120	
115	In	8705713	0.43	8749493	99.50	70	120	
209	Bi	24069973	1.29	24417425	98.58	70	120	

Laboratory Control Sample (LCS) Report

Date Acquired 9/15/2017 11:00
 Data Batch 170915.b
 Data File Name 030_LS.d

Sample Name LCSD-82353
 Comment LCSD6020A_S
 Dilution 5

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	194.752	13717	1.33	200	97.4	80	120	
11	B	45	205.179	7110	2.03	200	102.6	80	120	
23	Na	45	4979.729	5552998	0.66	1000	498.0	80	120	Fail
24	Mg	45	4968.420	2847681	0.07	1000	496.8	80	120	Fail
27	Al	45	982.942	207735	1.01	1000	98.3	80	120	
39	K	45	4986.069	2352612	0.08	1000	498.6	80	120	Fail
44	Ca	45	4876.066	138189	1.11	1000	487.6	80	120	Fail
47	Ti	45	198.582	37683	2.14	200	99.3	80	120	
51	V	45	195.493	1289781	0.23	200	97.7	80	120	
52	Cr	45	198.522	1614062	0.71	200	99.3	80	120	
55	Mn	45	197.453	883092	0.59	200	98.7	80	120	
56	Fe	45	1010.144	6459150	0.49	1000	101.0	80	120	
59	Co	72	204.364	2757055	0.28	200	102.2	80	120	
60	Ni	72	203.655	753557	0.19	200	101.8	80	120	
63	Cu	72	205.867	2015965	0.45	200	102.9	80	120	
66	Zn	72	200.429	280019	0.25	200	100.2	80	120	
75	As	72	198.070	177651	0.35	200	99.0	80	120	
78	Se	72	193.780	13078	0.48	200	96.9	80	120	
88	Sr	115	194.132	1097531	0.25	200	97.1	80	120	
95	Mo	115	189.549	1094454	0.15	200	94.8	80	120	
107	Ag	115	204.359	3650058	0.52	200	102.2	80	120	
111	Cd	115	196.210	500074	0.19	200	98.1	80	120	
118	Sn	115	200.304	1069958	0.21	200	100.2	80	120	
121	Sb	115	201.523	1318690	0.40	200	100.8	80	120	
137	Ba	115	196.328	467964	0.77	200	98.2	80	120	
205	Tl	209	201.957	8733914	0.73	200	101.0	80	120	
208	Pb	209	198.419	11261501	0.14	200	99.2	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1250354	0.61	1250708	99.97	70	120	
72	Ge	860685	0.51	871265	98.79	70	120	
115	In	8703210	0.92	8749493	99.47	70	120	
209	Bi	24083685	0.83	24417425	98.63	70	120	

Dilution Sample (Dil) Report

Date Acquired 9/15/2017 11:05
 Data Batch 170915.b
 Data File Name 033_SD.d

Sample Name 1709034-02C SD
 Comment SD 6020A_S
 Dilution 25

Mass	Name	IS	Conc	CPS	%RSD	Ref Value	%Rec	Low	High	Flag
9	Be	45	0.277	23	8.70	1.1	126.7	110	90	
11	B	45	19.207	811	8.71	68.5	140.2	110	90	
23	Na	45	256.372	293429	1.22	1183.5	108.3	110	90	Good
24	Mg	45	2950.645	1655687	0.55	13629.0	108.2	110	90	Good
27	Al	45	5850.394	1192195	0.26	27779.0	105.3	110	90	Good
39	K	45	1614.391	763734	0.83	7911.1	102.0	110	90	Good
44	Ca	45	251064.983	6950742	0.61	1212835.5	103.5	110	90	Good
47	Ti	45	68.357	12699	2.45	324.9	105.2	110	90	Good
51	V	45	16.516	108328	0.40	78.4	105.3	110	90	Good
52	Cr	45	6.944	56110	1.40	32.4	107.0	110	90	Good
55	Mn	45	385.299	1686436	0.08	1842.5	104.6	110	90	Good
56	Fe	45	4315.787	26963050	0.59	19552.3	110.4	110	90	
59	Co	72	3.034	39152	1.42	14.6	104.1	110	90	Good
60	Ni	72	6.579	30383	0.61	33.5	98.2	110	90	Good
63	Cu	72	2.853	27472	0.51	13.0	109.5	110	90	Good
66	Zn	72	21.386	28671	1.18	93.1	114.8	110	90	
75	As	72	1.827	1616	2.63	8.9	102.7	110	90	Good
78	Se	72	0.795	70	3.22	3.3	122.2	110	90	
88	Sr	115	425.096	2313683	0.84	2239.2	94.9	110	90	Good
95	Mo	115	0.237	1417	8.09	0.9	132.4	110	90	
107	Ag	115	0.022	427	13.69	0.0	234.1	110	90	
111	Cd	115	0.113	288	5.71	0.5	114.4	110	90	
118	Sn	115	1.521	8238	4.04	7.2	104.9	110	90	Good
121	Sb	115	0.078	638	4.86	0.4	108.4	110	90	Good
137	Ba	115	14.386	33075	1.04	70.0	102.8	110	90	Good
205	Tl	209	0.096	4186	3.72	0.4	132.1	110	90	
208	Pb	209	1.724	92415	0.58	8.4	102.1	110	90	Good

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1223827	0.30	1250708	97.85	70	120	
72	Ge	817835	0.22	871265	93.87	70	120	
115	In	8380211	1.21	8749493	95.78	70	120	
209	Bi	22399159	0.34	24417425	91.73	70	120	

Post Digestion Spike Sample (PDS) Report

Date Acquired 9/15/2017 11:24
 Data Batch 170915.b
 Data File Name 043_PDS.d

Sample Name 1709034-02C PDS
 Comment PDS 6020A_S
 Dilution 5

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	163.963	11422	1.87	1.1	200	81.4	75	125	
11	B	45	226.560	7746	4.45	68.5	200	79.0	75	125	
23	Na	45	6059.837	6680203	0.86	1183.5	5000	97.5	75	125	
24	Mg	45	17990.714	10196213	1.17	13629.0	5000	87.2	75	125	
27	Al	45	32808.248	6738601	1.28	27779.0	5000	100.6	75	125	
39	K	45	13144.823	6089870	0.62	7911.1	5000	104.7	75	125	
44	Ca	45	#####	34650367	0.19	1212835.5	5000	517.2	75	125	Fail
47	Ti	45	528.489	99167	0.65	324.9	200	101.8	75	125	
51	V	45	269.808	1759870	0.33	78.4	200	95.7	75	125	
52	Cr	45	220.564	1773592	1.18	32.4	200	94.1	75	125	
55	Mn	45	2049.338	9062302	0.11	1842.5	200	103.4	75	125	
56	Fe	45	24207.850	152751683	0.90	19552.3	5000	93.1	75	125	
59	Co	72	206.972	2539148	0.47	14.6	200	96.2	75	125	
60	Ni	72	218.215	733724	0.11	33.5	200	92.4	75	125	
63	Cu	72	190.099	1692882	0.21	13.0	200	88.5	75	125	
66	Zn	72	268.159	340581	0.68	93.1	200	87.5	75	125	
75	As	72	212.233	173096	0.18	8.9	200	101.7	75	125	
78	Se	72	192.969	11843	3.45	3.3	200	94.9	75	125	
88	Sr	115	2514.933	12749326	0.30	2239.2	200	137.9	75	125	Fail
95	Mo	115	188.146	974461	0.28	0.9	200	93.6	75	125	
107	Ag	115	173.559	2780708	0.57	0.0	200	86.8	75	125	
111	Cd	115	179.106	409467	0.41	0.5	200	89.3	75	125	
118	Sn	115	200.111	958814	0.11	7.2	200	96.4	75	125	
121	Sb	115	190.892	1120488	0.34	0.4	200	95.3	75	125	
137	Ba	115	264.735	566023	0.40	70.0	200	97.4	75	125	
205	Tl	209	203.089	6761329	0.89	0.4	200	101.4	75	125	
208	Pb	209	204.749	8945946	0.13	8.4	200	98.2	75	125	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1236622	0.31	1250708	98.87	70	120	
72	Ge	782651	0.30	871265	89.83	70	120	
115	In	7806276	0.08	8749493	89.22	70	120	
209	Bi	18540726	0.93	24417425	75.93	70	120	

Matrix Spike Sample (MS) Report

Date Acquired 9/15/2017 11:26
 Data Batch 170915.b
 Data File Name 044_MSS.d

Sample Name 1709034-02C MS
 Comment MS 6020A_S
 Dilution 5

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	166.249	11538	0.39	1.1	200	82.6	80	120	
11	B	45	237.189	8072	1.61	68.5	200	84.3	80	120	
23	Na	45	6135.882	6738996	0.82	1183.5	1000	495.2	80	120	Fail
24	Mg	45	18657.700	10535266	0.39	13629.0	1000	502.9	80	120	Fail
27	Al	45	31997.574	6548084	0.54	27779.0	1000	421.9	80	120	Fail
39	K	45	13959.478	6441868	0.32	7911.1	1000	604.8	80	120	Fail
44	Ca	45	#####	34131899	0.46	1212835.5	1000	1184.6	80	120	Fail
47	Ti	45	547.177	102293	1.15	324.9	200	111.1	80	120	
51	V	45	275.550	1790622	0.58	78.4	200	98.6	80	120	
52	Cr	45	220.388	1765581	0.53	32.4	200	94.0	80	120	
55	Mn	45	2043.888	9004945	0.44	1842.5	200	100.7	80	120	
56	Fe	45	22219.039	139685199	0.55	19552.3	1000	266.7	80	120	Fail
59	Co	72	208.275	2543270	0.41	14.6	200	96.8	80	120	
60	Ni	72	223.690	748460	0.34	33.5	200	95.1	80	120	
63	Cu	72	194.037	1719858	0.36	13.0	200	90.5	80	120	
66	Zn	72	274.978	347600	0.71	93.1	200	90.9	80	120	
75	As	72	214.910	174460	0.50	8.9	200	103.0	80	120	
78	Se	72	200.285	12234	1.26	3.3	200	98.5	80	120	
88	Sr	115	2450.323	12384473	0.12	2239.2	200	105.5	80	120	
95	Mo	115	190.072	981468	0.06	0.9	200	94.6	80	120	
107	Ag	115	177.700	2838494	0.47	0.0	200	88.8	80	120	
111	Cd	115	179.740	409669	0.75	0.5	200	89.6	80	120	
118	Sn	115	200.654	958524	0.15	7.2	200	96.7	80	120	
121	Sb	115	180.239	1054784	0.19	0.4	200	89.9	80	120	
137	Ba	115	269.743	574980	0.64	70.0	200	99.9	80	120	
205	Tl	209	210.471	6930874	0.53	0.4	200	105.1	80	120	
208	Pb	209	209.810	9067331	0.28	8.4	200	100.7	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1232081	0.53	1250708	98.51	70	120	
72	Ge	779033	0.73	871265	89.41	70	120	
115	In	7782930	0.53	8749493	88.95	70	120	
209	Bi	18338151	0.68	24417425	75.10	70	120	

Matrix Spike Sample (MS) Report

Date Acquired 9/15/2017 11:28
 Data Batch 170915.b
 Data File Name 045_MSS.d

Sample Name 1709034-02C MSD
 Comment MSD 6020A_S
 Dilution 5

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	164.842	11486	1.11	1.1	200	81.9	80	120	
11	B	45	236.262	8073	1.98	68.5	200	83.9	80	120	
23	Na	45	6134.995	6764831	1.17	1183.5	1000	495.2	80	120	Fail
24	Mg	45	18364.296	10411205	1.50	13629.0	1000	473.5	80	120	Fail
27	Al	45	28946.756	5947798	1.29	27779.0	1000	116.8	80	120	
39	K	45	13537.669	6272875	0.39	7911.1	1000	562.7	80	120	Fail
44	Ca	45	#####	34740910	0.42	1212835.5	1000	2873.9	80	120	Fail
47	Ti	45	533.659	100165	0.54	324.9	200	104.4	80	120	
51	V	45	270.891	1767425	0.42	78.4	200	96.2	80	120	
52	Cr	45	219.453	1765119	0.47	32.4	200	93.5	80	120	
55	Mn	45	2057.132	9099331	0.78	1842.5	200	107.3	80	120	
56	Fe	45	21109.801	133240581	0.32	19552.3	1000	155.7	80	120	Fail
59	Co	72	210.632	2563493	0.44	14.6	200	98.0	80	120	
60	Ni	72	224.027	747090	0.26	33.5	200	95.3	80	120	
63	Cu	72	195.748	1729289	0.46	13.0	200	91.4	80	120	
66	Zn	72	274.345	345661	0.55	93.1	200	90.6	80	120	
75	As	72	217.814	176234	0.69	8.9	200	104.5	80	120	
78	Se	72	200.579	12211	0.10	3.3	200	98.7	80	120	
88	Sr	115	2503.531	12753276	0.72	2239.2	200	132.2	80	120	Fail
95	Mo	115	190.987	993959	0.19	0.9	200	95.0	80	120	
107	Ag	115	178.651	2876116	0.63	0.0	200	89.3	80	120	
111	Cd	115	180.434	414496	0.40	0.5	200	90.0	80	120	
118	Sn	115	201.034	967895	0.25	7.2	200	96.9	80	120	
121	Sb	115	182.268	1075055	0.30	0.4	200	91.0	80	120	
137	Ba	115	267.576	574866	0.33	70.0	200	98.8	80	120	
205	Tl	209	213.494	7052622	0.45	0.4	200	106.6	80	120	
208	Pb	209	211.281	9159553	0.12	8.4	200	101.4	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1236977	0.36	1250708	98.90	70	120	
72	Ge	776439	0.43	871265	89.12	70	120	
115	In	7844200	0.44	8749493	89.65	70	120	
209	Bi	18396212	0.75	24417425	75.34	70	120	

Continuing Calibration Verification (CCV) Report

Date Acquired 9/15/2017 11:30
 Data Batch 170915.b
 Data File Name 046_CCV.d

Sample Name CCV1-170915
 Comment CCV 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	187.600	13092	1.01	200	93.8	90	110	
11	B	45	193.275	6647	1.86	200	96.6	90	110	
23	Na	45	4733.776	5231483	0.63	5000	94.7	90	110	
24	Mg	45	4707.853	2673896	0.33	5000	94.2	90	110	
27	Al	45	4969.232	1025722	0.35	5000	99.4	90	110	
39	K	45	4757.132	2225495	0.67	5000	95.1	90	110	
44	Ca	45	5266.015	147862	6.14	5000	105.3	90	110	
47	Ti	45	196.146	36879	0.86	200	98.1	90	110	
51	V	45	191.878	1254482	0.11	200	95.9	90	110	
52	Cr	45	195.076	1571710	0.24	200	97.5	90	110	
55	Mn	45	194.547	862215	0.56	200	97.3	90	110	
56	Fe	45	5008.406	31674118	0.97	5000	100.2	90	110	
59	Co	72	197.094	2643417	0.63	200	98.5	90	110	
60	Ni	72	198.056	728763	0.72	200	99.0	90	110	
63	Cu	72	200.484	1951768	0.20	200	100.2	90	110	
66	Zn	72	198.621	275867	0.63	200	99.3	90	110	
75	As	72	196.104	174858	0.53	200	98.1	90	110	
78	Se	72	196.336	13172	0.72	200	98.2	90	110	
88	Sr	115	190.649	1074051	0.27	200	95.3	90	110	
95	Mo	115	184.428	1061155	0.20	200	92.2	90	110	
107	Ag	115	199.599	3552639	0.39	200	99.8	90	110	
111	Cd	115	192.305	488406	0.40	200	96.2	90	110	
118	Sn	115	190.372	1013344	0.25	200	95.2	90	110	
121	Sb	115	198.083	1291666	0.67	200	99.0	90	110	
137	Ba	115	192.386	456986	0.69	200	96.2	90	110	
205	Tl	209	195.238	8381200	0.55	200	97.6	90	110	
208	Pb	209	191.741	10802279	0.09	200	95.9	90	110	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1238981	0.35	1250708	99.06	70	120	
72	Ge	855619	0.14	871265	98.20	70	120	
115	In	8672229	0.32	8749493	99.12	70	120	
209	Bi	23906243	0.84	24417425	97.91	70	120	

Low Level Calibration Verification (LLCV) Report

Date Acquired 9/15/2017 11:35
 Data Batch 170915.b
 Data File Name 048LCCV.d

Sample Name LCVL1-170915
 Comment LCVL6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	1.045	77	19.19	1	104.5	70	130	
11	B	45	21.687	910	3.26	20	108.4	70	130	
23	Na	45	96.188	121308	1.20	100	96.2	70	130	
24	Mg	45	91.142	52937	0.76	100	91.1	70	130	
27	Al	45	90.116	22361	0.37	100	90.1	70	130	
39	K	45	91.833	70043	0.41	100	91.8	70	130	
44	Ca	45	108.220	3327	5.39	100	108.2	70	130	
47	Ti	45	4.545	867	3.08	5	90.9	70	130	
51	V	45	0.928	7961	1.46	1	92.8	70	130	
52	Cr	45	4.739	39305	1.15	5	94.8	70	130	
55	Mn	45	4.750	21489	0.64	5	95.0	70	130	
56	Fe	45	102.820	669400	0.14	100	102.8	70	130	
59	Co	72	4.853	66316	0.39	5	97.1	70	130	
60	Ni	72	4.040	22879	1.68	5	80.8	70	130	
63	Cu	72	4.967	50045	0.92	5	99.3	70	130	
66	Zn	72	4.735	6999	2.22	5	94.7	70	130	
75	As	72	4.779	4386	1.49	5	95.6	70	130	
78	Se	72	4.931	356	6.47	5	98.6	70	130	
88	Sr	115	4.561	26363	1.48	5	91.2	70	130	
95	Mo	115	4.459	26044	0.48	5	89.2	70	130	
107	Ag	115	1.904	34312	0.59	2	95.2	70	130	
111	Cd	115	0.963	2482	2.41	1	96.3	70	130	
118	Sn	115	4.676	25589	0.68	5	93.5	70	130	
121	Sb	115	1.913	12764	1.14	2	95.7	70	130	
137	Ba	115	4.628	11182	1.93	5	92.6	70	130	
205	Tl	209	0.934	41134	1.65	1	93.4	70	130	
208	Pb	209	0.911	53775	0.76	1	91.1	70	130	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1247050	0.29	1250708	99.71	70	120	
72	Ge	868268	0.87	871265	99.66	70	120	
115	In	8768469	0.33	8749493	100.22	70	120	
209	Bi	24309971	0.85	24417425	99.56	70	120	

Continuing Calibration Blank (CCB) Report

Date Acquired 9/15/2017 11:40
 Data Batch 170915.b
 Data File Name 049_CCB.d

Sample Name CCB1-170915
 Comment CCB 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	45	0.023	6	36.7	0.4	0.3	
11	B	45	1.189	221	13.9	10	10	
23	Na	45	4.755	20018	2.2	50	100	
24	Mg	45	-0.765	417	2.9	50	100	
27	Al	45	-3.144	3075	4.7	50	10	
39	K	45	0.314	27658	1.1	50	100	
44	Ca	45	4.599	407	4.8	50	100	
47	Ti	45	0.006	8	24.7	4	3	
51	V	45	0.023	2025	5.3	4	3	
52	Cr	45	-0.056	449	3.5	2	2	
55	Mn	45	-0.013	248	10.3	2	3	
56	Fe	45	-0.828	10003	2.7	50	50	
59	Co	72	-0.008	167	7.2	2	3	
60	Ni	72	-0.815	4917	2.3	2	3	
63	Cu	72	-0.020	797	5.5	2	2	
66	Zn	72	0.063	420	18.7	4	2	
75	As	72	0.009	71	4.8	2	2	
78	Se	72	0.128	29	25.8	1	2	
88	Sr	115	0.007	430	10.1	4	3	
95	Mo	115	0.026	256	6.4	2	2	
107	Ag	115	0.009	216	24.2	0.4	1	
111	Cd	115	-0.003	3	173.2	0.4	0.3	
118	Sn	115	0.022	557	5.8	4	3	
121	Sb	115	0.039	408	8.7	2	0.8	
137	Ba	115	0.005	81	17.1	2	3	
205	Tl	209	0.035	1885	6.1	2	0.5	
208	Pb	209	-0.002	1478	2.5	0.4	0.3	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1255377	0.46	1250708	100.37	70	120	
72	Ge	863247	0.08	871265	99.08	70	120	
115	In	8796854	1.21	8749493	100.54	70	120	
209	Bi	24298126	0.31	24417425	99.51	70	120	

Continuing Calibration Verification (CCV) Report

Date Acquired 9/15/2017 11:51
 Data Batch 170915.b
 Data File Name 055_CCV.d

Sample Name CCV2-170915
 Comment CCV 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	181.438	12584	0.48	200	90.7	90	110	
11	B	45	187.902	6428	1.72	200	94.0	90	110	
23	Na	45	4636.826	5092901	0.18	5000	92.7	90	110	
24	Mg	45	4636.922	2617364	0.18	5000	92.7	90	110	
27	Al	45	4923.584	1010005	0.99	5000	98.5	90	110	
39	K	45	4740.362	2204007	0.42	5000	94.8	90	110	
44	Ca	45	5101.077	142319	5.05	5000	102.0	90	110	
47	Ti	45	196.959	36804	0.67	200	98.5	90	110	
51	V	45	190.271	1236344	0.92	200	95.1	90	110	
52	Cr	45	192.395	1540557	0.37	200	96.2	90	110	
55	Mn	45	191.958	845497	0.23	200	96.0	90	110	
56	Fe	45	5010.145	31490074	0.13	5000	100.2	90	110	
59	Co	72	196.011	2623858	0.21	200	98.0	90	110	
60	Ni	72	195.944	719700	0.89	200	98.0	90	110	
63	Cu	72	198.174	1925626	0.91	200	99.1	90	110	
66	Zn	72	197.094	273225	0.48	200	98.5	90	110	
75	As	72	194.546	173137	0.42	200	97.3	90	110	
78	Se	72	195.165	13069	1.06	200	97.6	90	110	
88	Sr	115	189.830	1062559	0.06	200	94.9	90	110	
95	Mo	115	183.414	1048554	0.26	200	91.7	90	110	
107	Ag	115	197.285	3488890	0.20	200	98.6	90	110	
111	Cd	115	190.862	481633	0.74	200	95.4	90	110	
118	Sn	115	189.581	1002685	0.57	200	94.8	90	110	
121	Sb	115	196.232	1271388	0.47	200	98.1	90	110	
137	Ba	115	191.999	453121	0.30	200	96.0	90	110	
205	Tl	209	195.722	8202532	0.52	200	97.9	90	110	
208	Pb	209	191.594	10537657	0.21	200	95.8	90	110	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1231366	0.74	1250708	98.45	70	120	
72	Ge	853985	0.18	871265	98.02	70	120	
115	In	8616986	1.00	8749493	98.49	70	120	
209	Bi	23340146	1.32	24417425	95.59	70	120	

Low Level Calibration Verification (LLCV) Report

Date Acquired 9/15/2017 11:57
 Data Batch 170915.b
 Data File Name 057LCCV.d

Sample Name LCVL2-170915
 Comment LCVL6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	0.828	62	9.12	1	82.8	70	130	
11	B	45	18.219	796	13.00	20	91.1	70	130	
23	Na	45	94.857	120206	1.19	100	94.9	70	130	
24	Mg	45	89.276	52034	0.89	100	89.3	70	130	
27	Al	45	91.219	22660	1.10	100	91.2	70	130	
39	K	45	93.080	70845	1.15	100	93.1	70	130	
44	Ca	45	95.599	2980	6.07	100	95.6	70	130	
47	Ti	45	5.116	978	5.46	5	102.3	70	130	
51	V	45	0.957	8174	0.97	1	95.7	70	130	
52	Cr	45	4.653	38731	1.31	5	93.1	70	130	
55	Mn	45	4.712	21386	1.23	5	94.2	70	130	
56	Fe	45	102.598	670086	0.59	100	102.6	70	130	
59	Co	72	4.871	66355	1.33	5	97.4	70	130	
60	Ni	72	3.994	22640	2.49	5	79.9	70	130	
63	Cu	72	4.936	49582	1.22	5	98.7	70	130	
66	Zn	72	4.699	6927	2.28	5	94.0	70	130	
75	As	72	4.804	4395	1.22	5	96.1	70	130	
78	Se	72	4.795	345	1.80	5	95.9	70	130	
88	Sr	115	4.564	26508	1.19	5	91.3	70	130	
95	Mo	115	4.360	25594	0.62	5	87.2	70	130	
107	Ag	115	1.908	34566	2.59	2	95.4	70	130	
111	Cd	115	0.943	2445	2.52	1	94.3	70	130	
118	Sn	115	4.578	25185	1.07	5	91.6	70	130	
121	Sb	115	1.841	12353	0.34	2	92.1	70	130	
137	Ba	115	4.667	11332	0.55	5	93.3	70	130	
205	Tl	209	0.928	40239	0.79	1	92.8	70	130	
208	Pb	209	0.904	52536	1.24	1	90.4	70	130	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1250971	0.26	1250708	100.02	70	120	
72	Ge	865646	0.45	871265	99.36	70	120	
115	In	8812559	0.79	8749493	100.72	70	120	
209	Bi	23933410	1.39	24417425	98.02	70	120	

Continuing Calibration Blank (CCB) Report

Date Acquired 9/15/2017 12:03
 Data Batch 170915.b
 Data File Name 058_CCB.d

Sample Name CCB2-170915
 Comment CCB 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	45	-0.023	2	137.8	0.4	0.3	
11	B	45	1.076	216	9.9	10	10	
23	Na	45	4.021	19061	1.7	50	100	
24	Mg	45	-0.847	367	9.2	50	100	
27	Al	45	-3.081	3066	4.7	50	10	
39	K	45	1.143	27846	1.3	50	100	
44	Ca	45	4.190	392	20.3	50	100	
47	Ti	45	-0.017	3	100.1	4	3	
51	V	45	0.032	2070	3.4	4	3	
52	Cr	45	-0.063	388	3.9	2	2	
55	Mn	45	-0.022	206	8.3	2	3	
56	Fe	45	-0.769	10307	2.1	50	50	
59	Co	72	-0.011	132	8.1	2	3	
60	Ni	72	-0.843	4837	0.8	2	3	
63	Cu	72	-0.035	649	8.4	2	2	
66	Zn	72	0.033	380	3.8	4	2	
75	As	72	-0.004	60	2.8	2	2	
78	Se	72	0.092	27	30.7	1	2	
88	Sr	115	0.004	414	14.7	4	3	
95	Mo	115	0.010	160	13.0	2	2	
107	Ag	115	0.006	154	15.2	0.4	1	
111	Cd	115	-0.002	4	43.4	0.4	0.3	
118	Sn	115	-0.007	397	23.4	4	3	
121	Sb	115	0.004	181	4.2	2	0.8	
137	Ba	115	-0.005	57	27.0	2	3	
205	Tl	209	0.022	1298	12.5	2	0.5	
208	Pb	209	-0.012	894	2.7	0.4	0.3	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1246401	0.52	1250708	99.66	70	120	
72	Ge	867599	0.34	871265	99.58	70	120	
115	In	8751818	0.07	8749493	100.03	70	120	
209	Bi	24080146	0.62	24417425	98.62	70	120	

Continuing Calibration Verification (CCV) Report

Date Acquired 9/15/2017 12:36
 Data Batch 170915.b
 Data File Name 075_CCV.d

Sample Name CCV3-170915
 Comment CCV 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	184.206	12950	1.04	200	92.1	90	110	
11	B	45	191.785	6646	2.67	200	95.9	90	110	
23	Na	45	4773.292	5313747	0.60	5000	95.5	90	110	
24	Mg	45	4663.307	2668058	0.35	5000	93.3	90	110	
27	Al	45	4949.428	1029164	0.90	5000	99.0	90	110	
39	K	45	4788.420	2256407	0.75	5000	95.8	90	110	
44	Ca	45	4605.168	130289	0.40	5000	92.1	90	110	
47	Ti	45	195.588	37045	0.26	200	97.8	90	110	
51	V	45	191.205	1259267	0.32	200	95.6	90	110	
52	Cr	45	193.089	1567128	0.15	200	96.5	90	110	
55	Mn	45	194.174	866886	0.11	200	97.1	90	110	
56	Fe	45	5061.680	32246631	0.63	5000	101.2	90	110	
59	Co	72	198.509	2672300	0.41	200	99.3	90	110	
60	Ni	72	197.971	731176	0.37	200	99.0	90	110	
63	Cu	72	198.652	1941212	0.48	200	99.3	90	110	
66	Zn	72	198.802	277154	0.53	200	99.4	90	110	
75	As	72	195.695	175140	0.50	200	97.8	90	110	
78	Se	72	198.552	13371	1.18	200	99.3	90	110	
88	Sr	115	188.365	1075737	0.21	200	94.2	90	110	
95	Mo	115	181.255	1057171	0.69	200	90.6	90	110	
107	Ag	115	196.085	3537905	0.42	200	98.0	90	110	
111	Cd	115	190.052	489310	0.51	200	95.0	90	110	
118	Sn	115	187.776	1013255	0.41	200	93.9	90	110	
121	Sb	115	194.667	1286798	0.21	200	97.3	90	110	
137	Ba	115	190.479	458655	0.48	200	95.2	90	110	
205	Tl	209	193.953	8353146	0.38	200	97.0	90	110	
208	Pb	209	189.995	10739586	0.68	200	95.0	90	110	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1248080	0.24	1250708	99.79	70	120	
72	Ge	858855	0.83	871265	98.58	70	120	
115	In	8791246	0.57	8749493	100.48	70	120	
209	Bi	23986312	1.41	24417425	98.23	70	120	

Low Level Calibration Verification (LLCV) Report

Date Acquired 9/15/2017 12:42
 Data Batch 170915.b
 Data File Name 077LCCV.d

Sample Name LCVL3-170915
 Comment LCVL6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	0.970	73	7.51	1	97.0	70	130	
11	B	45	17.750	791	6.55	20	88.8	70	130	
23	Na	45	119.013	149203	0.70	100	119.0	70	130	
24	Mg	45	89.942	53170	1.08	100	89.9	70	130	
27	Al	45	90.070	22743	1.67	100	90.1	70	130	
39	K	45	93.306	71971	0.61	100	93.3	70	130	
44	Ca	45	91.113	2894	7.13	100	91.1	70	130	
47	Ti	45	4.841	939	1.82	5	96.8	70	130	
51	V	45	0.981	8452	3.00	1	98.1	70	130	
52	Cr	45	4.654	39293	2.03	5	93.1	70	130	
55	Mn	45	4.678	21539	1.46	5	93.6	70	130	
56	Fe	45	101.709	673968	1.16	100	101.7	70	130	
59	Co	72	4.840	66938	0.46	5	96.8	70	130	
60	Ni	72	4.074	23282	0.84	5	81.5	70	130	
63	Cu	72	4.954	50510	0.98	5	99.1	70	130	
66	Zn	72	4.982	7433	3.59	5	99.6	70	130	
75	As	72	4.777	4437	0.58	5	95.5	70	130	
78	Se	72	5.318	387	3.71	5	106.4	70	130	
88	Sr	115	4.563	27050	0.54	5	91.3	70	130	
95	Mo	115	4.341	26009	1.78	5	86.8	70	130	
107	Ag	115	1.874	34654	0.19	2	93.7	70	130	
111	Cd	115	0.910	2407	1.57	1	91.0	70	130	
118	Sn	115	4.597	25818	1.35	5	91.9	70	130	
121	Sb	115	1.857	12713	2.65	2	92.9	70	130	
137	Ba	115	4.555	11290	0.63	5	91.1	70	130	
205	Tl	209	0.926	41041	1.13	1	92.6	70	130	
208	Pb	209	0.897	53313	0.96	1	89.7	70	130	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1268963	0.23	1250708	101.46	70	120	
72	Ge	878724	0.95	871265	100.86	70	120	
115	In	8995132	0.82	8749493	102.81	70	120	
209	Bi	24478912	1.11	24417425	100.25	70	120	

Continuing Calibration Blank (CCB) Report

Date Acquired 9/15/2017 12:44
 Data Batch 170915.b
 Data File Name 078_CCB.d

Sample Name CCB3-170915
 Comment CCB 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	45	0.003	4	35.3	0.4	0.3	
11	B	45	1.250	228	10.8	10	10	
23	Na	45	25.789	44412	0.3	50	100	
24	Mg	45	-0.912	339	7.9	50	100	
27	Al	45	-3.629	3036	3.4	50	10	
39	K	45	0.566	28354	1.9	50	100	
44	Ca	45	-0.808	258	7.6	50	100	
47	Ti	45	-0.035	0	#DIV/0!	4	3	
51	V	45	0.022	2061	4.3	4	3	
52	Cr	45	-0.056	459	14.8	2	2	
55	Mn	45	-0.020	222	7.7	2	3	
56	Fe	45	-1.022	8941	1.5	50	50	
59	Co	72	-0.003	234	12.9	2	3	
60	Ni	72	-0.886	4777	3.4	2	3	
63	Cu	72	-0.023	782	4.1	2	2	
66	Zn	72	0.060	427	12.3	4	2	
75	As	72	0.014	78	16.4	2	2	
78	Se	72	0.085	27	2.1	1	2	
88	Sr	115	-0.003	387	13.3	4	3	
95	Mo	115	0.021	234	21.3	2	2	
107	Ag	115	0.011	251	23.8	0.4	1	
111	Cd	115	-0.001	9	78.1	0.4	0.3	
118	Sn	115	0.001	453	6.0	4	3	
121	Sb	115	0.025	324	10.0	2	0.8	
137	Ba	115	0.000	71	13.5	2	3	
205	Tl	209	0.030	1667	3.1	2	0.5	
208	Pb	209	-0.013	866	5.3	0.4	0.3	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1281510	0.27	1250708	102.46	70	120	
72	Ge	885633	0.56	871265	101.65	70	120	
115	In	9038963	0.15	8749493	103.31	70	120	
209	Bi	24649887	0.19	24417425	100.95	70	120	

Method Blank Report

Date Acquired 9/15/17 12:46 PM
 Data Batch 170915.b
 Data File Name 079_LRB.d

Sample Name MB-82354
 Comment MBLK6020A_W
 Dilution 1

Mass	Name	IS	Conc (ppb)	CPS	%RSD	High Limit	Flag
9	Be	45	0.003	4	93.26		
11	B	45	3.904	320	16.17		
23	Na	45	29.317	48517	0.13		
24	Mg	45	1.410	1706	6.09		
27	Al	45	6.411	5180	4.90		
39	K	45	2.024	29102	0.76		
44	Ca	45	22.828	945	3.78		
47	Ti	45	0.033	13	25.01		
51	V	45	0.048	2241	7.67		
52	Cr	45	-0.041	579	10.87		
55	Mn	45	-0.004	294	7.19		
56	Fe	45	-0.199	14350	1.17		
59	Co	72	-0.005	216	3.89		
60	Ni	72	-0.841	4943	5.22		
63	Cu	72	-0.003	989	7.15		
66	Zn	72	1.284	2181	5.04		
75	As	72	0.010	74	9.56		
78	Se	72	0.019	22	35.64		
88	Sr	115	0.124	1142	2.36		
95	Mo	115	0.024	256	7.18		
107	Ag	115	0.012	278	12.02		
111	Cd	115	-0.002	6	91.64		
118	Sn	115	0.013	523	15.46		
121	Sb	115	0.028	352	4.86		
137	Ba	115	0.024	131	7.34		
205	Tl	209	0.024	1445	2.24		
208	Pb	209	-0.009	1110	12.30		

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1283712	0.37	1250708	102.64	70	120	
72	Ge	884718	0.44	871265	101.54	70	120	
115	In	9128722	0.74	8749493	104.33	70	120	
209	Bi	25067441	1.07	24417425	102.66	70	120	

Laboratory Control Sample (LCS) Report

Date Acquired 9/15/2017 12:48
 Data Batch 170915.b
 Data File Name 080_LFB.d

Sample Name LCS-82354
 Comment LCS 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	190.452	13336	1.46	200	95.2	80	120	
11	B	45	195.319	6738	3.14	200	97.7	80	120	
23	Na	45	4658.033	5165137	1.47	5000	93.2	80	120	
24	Mg	45	4596.806	2619537	0.71	5000	91.9	80	120	
27	Al	45	4983.419	1032071	0.70	5000	99.7	80	120	
39	K	45	4655.975	2186003	0.90	5000	93.1	80	120	
44	Ca	45	4564.881	128638	0.60	5000	91.3	80	120	
47	Ti	45	197.297	37220	1.19	200	98.6	80	120	
51	V	45	192.996	1265980	0.26	200	96.5	80	120	
52	Cr	45	195.103	1577150	0.43	200	97.6	80	120	
55	Mn	45	194.787	866142	0.82	200	97.4	80	120	
56	Fe	45	5055.539	32078908	0.40	5000	101.1	80	120	
59	Co	72	201.845	2688611	0.27	200	100.9	80	120	
60	Ni	72	200.694	733309	0.40	200	100.3	80	120	
63	Cu	72	203.399	1966594	0.15	200	101.7	80	120	
66	Zn	72	201.978	278606	0.45	200	101.0	80	120	
75	As	72	199.249	176445	0.56	200	99.6	80	120	
78	Se	72	198.817	13248	1.08	200	99.4	80	120	
88	Sr	115	191.472	1083657	0.68	200	95.7	80	120	
95	Mo	115	184.231	1064909	0.63	200	92.1	80	120	
107	Ag	115	198.467	3548722	0.53	200	99.2	80	120	
111	Cd	115	193.834	494549	0.61	200	96.9	80	120	
118	Sn	115	190.286	1017552	0.12	200	95.1	80	120	
121	Sb	115	196.596	1287866	0.11	200	98.3	80	120	
137	Ba	115	193.061	460694	0.10	200	96.5	80	120	
205	Tl	209	195.903	8460312	0.26	200	98.0	80	120	
208	Pb	209	191.307	10842401	0.52	200	95.7	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1243105	0.35	1250708	99.39	70	120	
72	Ge	849771	0.25	871265	97.53	70	120	
115	In	8712117	0.23	8749493	99.57	70	120	
209	Bi	24048774	0.72	24417425	98.49	70	120	

Laboratory Control Sample (LCS) Report

Date Acquired 9/15/2017 12:50
 Data Batch 170915.b
 Data File Name 081_LFB.d

Sample Name LCSD-82354
 Comment LCSD6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	187.231	13196	0.94	200	93.6	80	120	
11	B	45	196.409	6819	1.47	200	98.2	80	120	
23	Na	45	4840.461	5401999	0.59	5000	96.8	80	120	
24	Mg	45	4765.561	2733496	0.11	5000	95.3	80	120	
27	Al	45	4929.519	1027673	0.90	5000	98.6	80	120	
39	K	45	4844.718	2288499	0.68	5000	96.9	80	120	
44	Ca	45	4679.556	132734	1.38	5000	93.6	80	120	
47	Ti	45	191.778	36418	0.89	200	95.9	80	120	
51	V	45	188.837	1246871	0.56	200	94.4	80	120	
52	Cr	45	191.389	1557300	0.14	200	95.7	80	120	
55	Mn	45	191.375	856565	0.38	200	95.7	80	120	
56	Fe	45	4979.224	31803532	0.59	5000	99.6	80	120	
59	Co	72	198.819	2652355	0.12	200	99.4	80	120	
60	Ni	72	198.969	728168	0.78	200	99.5	80	120	
63	Cu	72	200.901	1945398	0.77	200	100.5	80	120	
66	Zn	72	200.937	277595	0.48	200	100.5	80	120	
75	As	72	196.164	173985	0.58	200	98.1	80	120	
78	Se	72	199.058	13284	0.44	200	99.5	80	120	
88	Sr	115	186.890	1068449	0.98	200	93.4	80	120	
95	Mo	115	180.508	1053974	0.07	200	90.3	80	120	
107	Ag	115	195.805	3536654	0.31	200	97.9	80	120	
111	Cd	115	190.323	490523	0.65	200	95.2	80	120	
118	Sn	115	186.602	1007981	0.25	200	93.3	80	120	
121	Sb	115	192.918	1276593	0.47	200	96.5	80	120	
137	Ba	115	188.184	453616	0.28	200	94.1	80	120	
205	Tl	209	196.210	8450736	0.55	200	98.1	80	120	
208	Pb	209	189.085	10687596	0.32	200	94.5	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1251318	0.79	1250708	100.05	70	120	
72	Ge	851096	0.66	871265	97.69	70	120	
115	In	8800537	0.29	8749493	100.58	70	120	
209	Bi	23983768	0.56	24417425	98.22	70	120	

Dilution Sample (Dil) Report

Date Acquired 9/15/2017 12:56
 Data Batch 170915.b
 Data File Name 084_SD.d

Sample Name 1709087-01A SD
 Comment SD 6020A_W
 Dilution 5

Mass	Name	IS	Conc	CPS	%RSD	Ref Value	%Rec	Low	High	Flag
9	Be	45	0.003	4	81.04	0.0	180.6	110	90	
11	B	45	397.465	13922	0.62	1864.4	106.6	110	90	Good
23	Na	45	14288.360	16277084	0.45	69006.5	103.5	110	90	Good
24	Mg	45	7582.302	4446825	0.35	36709.5	103.3	110	90	Good
27	Al	45	33.774	10976	3.30	168.0	100.5	110	90	Good
39	K	45	1790.636	882584	0.28	8709.6	102.8	110	90	Good
44	Ca	45	21680.417	627793	0.52	105556.6	102.7	110	90	Good
47	Ti	45	0.222	50	53.34	1.3	86.2	110	90	
51	V	45	0.338	4191	1.40	1.3	131.7	110	90	
52	Cr	45	-0.012	821	10.47	0.1	-54.2	110	90	
55	Mn	45	2.405	11317	1.05	11.7	102.8	110	90	Good
56	Fe	45	10.454	83849	1.21	53.7	97.4	110	90	Good
59	Co	72	0.023	599	6.96	0.2	74.8	110	90	
60	Ni	72	-0.085	7780	2.75	3.0	-14.1	110	90	
63	Cu	72	0.116	2178	3.10	0.6	93.0	110	90	Good
66	Zn	72	0.916	1652	6.05	3.7	123.1	110	90	
75	As	72	0.196	245	5.98	1.0	94.9	110	90	Good
78	Se	72	0.095	27	34.06	0.8	59.6	110	90	
88	Sr	115	282.352	1650917	0.39	1455.7	97.0	110	90	Good
95	Mo	115	0.573	3528	0.38	2.8	102.8	110	90	Good
107	Ag	115	0.020	424	8.83	0.0	245.4	110	90	
111	Cd	115	0.010	37	47.23	0.0	184.5	110	90	
118	Sn	115	0.012	514	8.10	0.1	47.8	110	90	
121	Sb	115	0.067	608	4.79	0.3	131.3	110	90	
137	Ba	115	9.675	23922	0.67	47.8	101.1	110	90	Good
205	Tl	209	0.042	2162	6.80	0.1	241.9	110	90	
208	Pb	209	0.205	13110	0.68	1.0	98.4	110	90	Good

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1279526	0.46	1250708	102.30	70	120	
72	Ge	883830	0.40	871265	101.44	70	120	
115	In	9001719	0.41	8749493	102.88	70	120	
209	Bi	23918638	0.57	24417425	97.96	70	120	

Sample Report

Date Acquired 9/15/17 1:00 PM
 Data Batch 170915.b
 Data File Name 086_WS.d

Sample Name 1709084-01A
 Comment SAMP6020A_W
 Dilution 1

Mass	Name	IS	Conc (ppb)	CPS	%RSD	High Limit	Flag
9	Be	45	0.002	4	90.14	2000	
11	B	45	85.354	2967	7.20	2000	>RL
23	Na	45	17668.452	19044811	1.41	25000	>RL
24	Mg	45	6583.303	3654186	0.35	25000	>RL
27	Al	45	101.560	24014	1.24	10000	>RL
39	K	45	1035.061	494051	1.07	25000	>RL
44	Ca	45	94434.175	2587079	0.39	10000	OUTCAL
47	Ti	45	2.155	402	15.04	2000	
51	V	45	9.514	62519	1.76	2000	J
52	Cr	45	1.276	10914	4.05	2000	
55	Mn	45	47.952	207935	0.26	2000	>RL
56	Fe	45	207.775	1298486	0.50	10000	>RL
59	Co	72	0.422	5772	3.03	2000	
60	Ni	72	4.392	23202	1.40	2000	J
63	Cu	72	5.131	49570	1.34	2000	J
66	Zn	72	8.096	11256	1.27	2000	>RL
75	As	72	1.408	1283	2.60	2000	
78	Se	72	0.375	44	9.68	2000	
88	Sr	115	269.006	1502124	0.94	2000	>RL
95	Mo	115	2.351	13509	1.70	2000	J
107	Ag	115	0.040	761	13.38	500	
111	Cd	115	0.102	267	15.16	2000	
118	Sn	115	0.243	1708	7.16	2000	
121	Sb	115	0.394	2696	2.35	500	
137	Ba	115	82.092	193338	0.92	2000	>RL
205	Tl	209	0.029	1533	6.42	2000	
208	Pb	209	0.185	11619	0.67	2000	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1210975	0.59	1250708	96.82	70	120	
72	Ge	833164	0.37	871265	95.63	70	120	
115	In	8596833	0.33	8749493	98.26	70	120	
209	Bi	23261790	0.37	24417425	95.27	70	120	

Post Digestion Spike Sample (PDS) Report

Date Acquired 9/15/2017 13:15
 Data Batch 170915.b
 Data File Name 094_PDS.d

Sample Name 1709087-01A PDS
 Comment PDS 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	177.283	12002	1.00	0.0	200	88.6	75	125	
11	B	45	1987.245	64698	0.41	1864.4	200	61.4	75	125	Fail
23	Na	45	69313.152	74120388	0.86	69006.5	5000	6.1	75	125	Fail
24	Mg	45	39000.831	21482935	1.07	36709.5	5000	45.8	75	125	Fail
27	Al	45	4833.891	968096	0.82	168.0	5000	93.3	75	125	
39	K	45	13347.249	6009959	0.45	8709.6	5000	92.8	75	125	
44	Ca	45	#####	2830753	0.21	105556.6	5000	-29.0	75	125	Fail
47	Ti	45	195.634	35684	0.15	1.3	200	97.2	75	125	
51	V	45	195.449	1239605	0.56	1.3	200	97.1	75	125	
52	Cr	45	194.768	1522348	0.65	0.1	200	97.3	75	125	
55	Mn	45	201.813	867669	0.59	11.7	200	95.1	75	125	
56	Fe	45	4810.934	29518449	1.09	53.7	5000	95.1	75	125	
59	Co	72	197.578	2496244	0.54	0.2	200	98.7	75	125	
60	Ni	72	195.810	678797	0.45	3.0	200	96.4	75	125	
63	Cu	72	191.315	1754543	0.58	0.6	200	95.3	75	125	
66	Zn	72	194.459	254422	0.33	3.7	200	95.4	75	125	
75	As	72	203.213	170684	0.24	1.0	200	101.1	75	125	
78	Se	72	205.103	12962	2.38	0.8	200	102.2	75	125	
88	Sr	115	1598.153	8699415	1.34	1455.7	200	71.2	75	125	Fail
95	Mo	115	186.920	1039517	0.54	2.8	200	92.1	75	125	
107	Ag	115	185.856	3197319	0.29	0.0	200	92.9	75	125	
111	Cd	115	186.882	458750	0.21	0.0	200	93.4	75	125	
118	Sn	115	192.924	992574	0.46	0.1	200	96.4	75	125	
121	Sb	115	185.794	1171005	0.89	0.3	200	92.8	75	125	
137	Ba	115	238.000	546399	0.75	47.8	200	95.1	75	125	
205	Tl	209	197.908	7898996	0.44	0.1	200	98.9	75	125	
208	Pb	209	191.394	10025283	0.57	1.0	200	95.2	75	125	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1201989	0.79	1250708	96.10	70	120	
72	Ge	806009	0.64	871265	92.51	70	120	
115	In	8382044	0.41	8749493	95.80	70	120	
209	Bi	22226565	0.97	24417425	91.03	70	120	

Matrix Spike Sample (MS) Report

Date Acquired 9/15/2017 13:17
 Data Batch 170915.b
 Data File Name 095_MSW.d

Sample Name 1709087-01A MS
 Comment MS 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	177.009	11891	1.67	0.0	200	88.5	80	120	
11	B	45	2035.512	65748	0.46	1864.4	200	85.6	80	120	
23	Na	45	72003.630	76399079	0.61	69006.5	5000	59.9	80	120	Fail
24	Mg	45	40902.892	22355338	1.19	36709.5	5000	83.9	80	120	
27	Al	45	4874.998	968676	0.68	168.0	5000	94.1	80	120	
39	K	45	13871.231	6196657	1.99	8709.6	5000	103.2	80	120	
44	Ca	45	#####	2963028	0.41	105556.6	5000	85.3	80	120	
47	Ti	45	199.479	36106	1.64	1.3	200	99.1	80	120	
51	V	45	193.525	1217922	0.79	1.3	200	96.1	80	120	
52	Cr	45	190.144	1474738	0.92	0.1	200	95.0	80	120	
55	Mn	45	202.479	863814	0.77	11.7	200	95.4	80	120	
56	Fe	45	4977.826	30303548	0.27	53.7	5000	98.5	80	120	
59	Co	72	196.836	2471885	0.21	0.2	200	98.3	80	120	
60	Ni	72	197.840	681628	0.24	3.0	200	97.4	80	120	
63	Cu	72	192.856	1758016	0.32	0.6	200	96.1	80	120	
66	Zn	72	192.934	250917	0.70	3.7	200	94.6	80	120	
75	As	72	203.791	170142	0.44	1.0	200	101.4	80	120	
78	Se	72	205.627	12917	0.68	0.8	200	102.4	80	120	
88	Sr	115	1666.840	9022461	1.04	1455.7	200	105.6	80	120	
95	Mo	115	188.485	1042336	0.33	2.8	200	92.8	80	120	
107	Ag	115	186.523	3190830	0.32	0.0	200	93.2	80	120	
111	Cd	115	186.566	455409	0.94	0.0	200	93.3	80	120	
118	Sn	115	190.320	973684	0.53	0.1	200	95.1	80	120	
121	Sb	115	198.973	1247017	0.41	0.3	200	99.4	80	120	
137	Ba	115	239.259	546208	0.33	47.8	200	95.7	80	120	
205	Tl	209	200.924	7991407	1.25	0.1	200	100.4	80	120	
208	Pb	209	193.476	10098521	0.14	1.0	200	96.2	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1192665	0.85	1250708	95.36	70	120	
72	Ge	801150	0.02	871265	91.95	70	120	
115	In	8335006	0.12	8749493	95.26	70	120	
209	Bi	22148302	0.89	24417425	90.71	70	120	

Matrix Spike Sample (MS) Report

Date Acquired 9/15/2017 13:19
 Data Batch 170915.b
 Data File Name 096_MSW.d

Sample Name 1709087-01A MSD
 Comment MSD 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	178.188	11749	0.43	0.0	200	89.1	80	120	
11	B	45	2032.110	64424	0.51	1864.4	200	83.9	80	120	
23	Na	45	72627.548	75631073	1.20	69006.5	5000	72.4	80	120	Fail
24	Mg	45	41133.859	22066160	1.18	36709.5	5000	88.5	80	120	
27	Al	45	4948.637	965065	1.03	168.0	5000	95.6	80	120	
39	K	45	13797.233	6049446	1.35	8709.6	5000	101.8	80	120	
44	Ca	45	#####	2902522	0.91	105556.6	5000	81.0	80	120	
47	Ti	45	201.062	35716	1.35	1.3	200	99.9	80	120	
51	V	45	195.828	1209543	0.75	1.3	200	97.3	80	120	
52	Cr	45	191.343	1456467	0.52	0.1	200	95.6	80	120	
55	Mn	45	204.613	856693	0.45	11.7	200	96.5	80	120	
56	Fe	45	5038.206	30103004	1.31	53.7	5000	99.7	80	120	
59	Co	72	197.855	2454915	0.68	0.2	200	98.9	80	120	
60	Ni	72	197.957	673857	0.05	3.0	200	97.5	80	120	
63	Cu	72	192.912	1737458	0.13	0.6	200	96.1	80	120	
66	Zn	72	194.697	250175	1.03	3.7	200	95.5	80	120	
75	As	72	204.967	169074	0.19	1.0	200	102.0	80	120	
78	Se	72	203.504	12630	1.29	0.8	200	101.4	80	120	
88	Sr	115	1673.634	8845706	0.76	1455.7	200	109.0	80	120	
95	Mo	115	192.069	1037123	0.81	2.8	200	94.6	80	120	
107	Ag	115	191.004	3190496	0.56	0.0	200	95.5	80	120	
111	Cd	115	189.881	452576	1.41	0.0	200	94.9	80	120	
118	Sn	115	193.270	965470	0.21	0.1	200	96.6	80	120	
121	Sb	115	199.926	1223461	0.37	0.3	200	99.8	80	120	
137	Ba	115	242.541	540650	0.64	47.8	200	97.3	80	120	
205	Tl	209	202.527	7946969	0.60	0.1	200	101.2	80	120	
208	Pb	209	194.433	10012463	0.21	1.0	200	96.7	80	120	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1170531	0.69	1250708	93.59	70	120	
72	Ge	791565	0.48	871265	90.85	70	120	
115	In	8138614	0.18	8749493	93.02	70	120	
209	Bi	21850720	0.41	24417425	89.49	70	120	

Continuing Calibration Verification (CCV) Report

Date Acquired 9/15/2017 13:24
 Data Batch 170915.b
 Data File Name 099_CCV.d

Sample Name CCV4-170915
 Comment CCV 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	183.346	12204	0.67	200	91.7	90	110	
11	B	45	208.019	6810	2.83	200	104.0	90	110	
23	Na	45	4764.114	5021300	0.22	5000	95.3	90	110	
24	Mg	45	4617.933	2501487	0.19	5000	92.4	90	110	
27	Al	45	4932.059	970977	0.59	5000	98.6	90	110	
39	K	45	4761.149	2124287	0.78	5000	95.2	90	110	
44	Ca	45	4611.525	123525	0.80	5000	92.2	90	110	
47	Ti	45	195.031	34974	0.21	200	97.5	90	110	
51	V	45	189.288	1180319	0.47	200	94.6	90	110	
52	Cr	45	192.261	1477377	0.32	200	96.1	90	110	
55	Mn	45	193.587	818274	0.66	200	96.8	90	110	
56	Fe	45	5063.581	30542191	1.05	5000	101.3	90	110	
59	Co	72	196.675	2522209	0.40	200	98.3	90	110	
60	Ni	72	197.062	693367	0.28	200	98.5	90	110	
63	Cu	72	197.644	1839825	0.43	200	98.8	90	110	
66	Zn	72	197.602	262430	0.82	200	98.8	90	110	
75	As	72	194.749	166044	0.96	200	97.4	90	110	
78	Se	72	198.853	12756	1.57	200	99.4	90	110	
88	Sr	115	186.834	1037079	0.25	200	93.4	90	110	
95	Mo	115	179.402	1017045	0.81	200	89.7	90	110	Fail
107	Ag	115	195.193	3423088	0.49	200	97.6	90	110	
111	Cd	115	190.845	477570	0.42	200	95.4	90	110	
118	Sn	115	187.494	983352	0.26	200	93.7	90	110	
121	Sb	115	194.054	1246778	0.17	200	97.0	90	110	
137	Ba	115	189.550	443621	0.22	200	94.8	90	110	
205	Tl	209	194.381	8316027	1.37	200	97.2	90	110	
208	Pb	209	188.186	10566685	0.26	200	94.1	90	110	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1181655	0.07	1250708	94.48	70	120	
72	Ge	818136	0.39	871265	93.90	70	120	
115	In	8544640	0.27	8749493	97.66	70	120	
209	Bi	23826392	0.91	24417425	97.58	70	120	

Low Level Calibration Verification (LLCV) Report

Date Acquired 9/15/2017 13:46
 Data Batch 170915.b
 Data File Name 104LCCV.d

Sample Name LCVL4-170915
 Comment LCVL6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	0.847	59	1.69	1	84.7	70	130	
11	B	45	27.132	1017	6.94	20	135.7	70	130	Fail
23	Na	45	138.439	156375	0.46	100	138.4	70	130	Fail
24	Mg	45	90.443	48851	0.72	100	90.4	70	130	
27	Al	45	90.597	20884	1.78	100	90.6	70	130	
39	K	45	88.932	63873	1.40	100	88.9	70	130	
44	Ca	45	88.800	2584	4.37	100	88.8	70	130	
47	Ti	45	4.923	872	7.31	5	98.5	70	130	
51	V	45	0.942	7485	2.82	1	94.2	70	130	
52	Cr	45	4.731	36491	1.52	5	94.6	70	130	
55	Mn	45	4.772	20070	1.62	5	95.4	70	130	
56	Fe	45	102.077	618040	0.49	100	102.1	70	130	
59	Co	72	4.769	60890	1.37	5	95.4	70	130	
60	Ni	72	3.910	20926	0.91	5	78.2	70	130	
63	Cu	72	4.824	45431	1.95	5	96.5	70	130	
66	Zn	72	4.876	6725	3.39	5	97.5	70	130	
75	As	72	4.668	4004	1.07	5	93.4	70	130	
78	Se	72	4.803	324	0.76	5	96.1	70	130	
88	Sr	115	4.404	24651	1.75	5	88.1	70	130	
95	Mo	115	4.339	24535	0.81	5	86.8	70	130	
107	Ag	115	1.864	32523	1.36	2	93.2	70	130	
111	Cd	115	0.924	2306	6.10	1	92.4	70	130	
118	Sn	115	4.537	24049	2.34	5	90.7	70	130	
121	Sb	115	1.827	11808	2.98	2	91.4	70	130	
137	Ba	115	4.559	10663	1.58	5	91.2	70	130	
205	Tl	209	0.889	39082	0.83	1	88.9	70	130	
208	Pb	209	0.876	51657	0.47	1	87.6	70	130	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1159557	0.21	1250708	92.71	70	120	
72	Ge	811154	0.28	871265	93.10	70	120	
115	In	8488328	0.80	8749493	97.02	70	120	
209	Bi	24256758	0.74	24417425	99.34	70	120	

Continuing Calibration Blank (CCB) Report

Date Acquired 9/15/2017 13:48
 Data Batch 170915.b
 Data File Name 105_CCB.d

Sample Name CCB4-170915
 Comment CCB 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	45	-0.036	1	86.6	0.4	0.3	
11	B	45	7.018	386	2.8	10	10	
23	Na	45	47.633	62526	0.5	50	100	
24	Mg	45	-0.625	458	13.0	50	100	
27	Al	45	-3.335	2795	3.3	50	10	
39	K	45	-0.872	24959	1.2	50	100	
44	Ca	45	0.786	275	9.7	50	100	
47	Ti	45	-0.035	0	#DIV/0!	4	3	
51	V	45	0.067	2132	4.9	4	3	
52	Cr	45	-0.055	420	8.4	2	2	
55	Mn	45	-0.022	193	7.5	2	3	
56	Fe	45	-0.963	8418	3.9	50	50	
59	Co	72	-0.009	140	31.0	2	3	
60	Ni	72	-0.904	4309	3.7	2	3	
63	Cu	72	-0.029	662	6.7	2	2	
66	Zn	72	0.031	352	8.3	4	2	
75	As	72	-0.010	51	13.2	2	2	
78	Se	72	0.063	23	38.3	1	2	
88	Sr	115	0.005	408	5.3	4	3	
95	Mo	115	0.008	146	26.3	2	2	
107	Ag	115	0.007	179	8.6	0.4	1	
111	Cd	115	-0.003	3	100.1	0.4	0.3	
118	Sn	115	-0.025	292	6.3	4	3	
121	Sb	115	0.005	178	5.7	2	0.8	
137	Ba	115	0.001	68	17.3	2	3	
205	Tl	209	0.009	752	5.9	2	0.5	
208	Pb	209	-0.019	500	15.1	0.4	0.3	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1156037	0.18	1250708	92.43	70	120	
72	Ge	810543	0.70	871265	93.03	70	120	
115	In	8499538	0.29	8749493	97.14	70	120	
209	Bi	24261741	0.59	24417425	99.36	70	120	

Dilution Sample (Dil) Report

Date Acquired 9/15/2017 13:52
 Data Batch 170915.b
 Data File Name 107_SD.d

Sample Name 1709087-01A SD
 Comment SD 6020A_W
 Dilution 50

Mass	Name	IS	Conc	CPS	%RSD	Ref Value	%Rec	Low	High	Flag
9	Be	45	-0.027	2	100.00	0.0	368.5	110	90	
11	B	45	47.042	1655	11.20	197.0	119.4	110	90	
23	Na	45	1455.989	1528121	1.03	7165.2	101.6	110	90	Good
24	Mg	45	765.327	410901	0.63	3796.8	100.8	110	90	Good
27	Al	45	0.724	3615	4.39	15.9	22.8	110	90	
39	K	45	183.760	105767	0.34	897.1	102.4	110	90	Good
44	Ca	45	2183.887	58023	1.80	10781.6	101.3	110	90	Good
47	Ti	45	0.040	13	90.16	0.1	188.1	110	90	
51	V	45	0.096	2336	4.80	0.2	261.9	110	90	
52	Cr	45	-0.054	431	3.81	0.0	598.5	110	90	
55	Mn	45	0.240	1292	9.99	1.2	98.1	110	90	Good
56	Fe	45	0.082	14747	2.06	4.9	8.3	110	90	
59	Co	72	-0.010	138	8.50	0.0	-694.1	110	90	
60	Ni	72	-0.800	4735	1.22	-0.5	836.0	110	90	
63	Cu	72	-0.005	893	6.11	0.0	-55.3	110	90	
66	Zn	72	0.295	709	5.49	0.6	259.7	110	90	
75	As	72	0.015	73	3.88	0.1	78.4	110	90	
78	Se	72	-0.069	15	35.94	0.1	-467.7	110	90	
88	Sr	115	27.865	155755	0.96	137.9	101.0	110	90	Good
95	Mo	115	0.058	431	2.36	0.3	106.1	110	90	Good
107	Ag	115	0.006	166	16.15	0.0	508.2	110	90	
111	Cd	115	-0.002	6	69.34	0.0	-792.2	110	90	
118	Sn	115	-0.024	298	10.58	0.0	608.0	110	90	
121	Sb	115	0.010	216	10.30	0.0	211.7	110	90	
137	Ba	115	0.953	2308	2.24	4.9	98.3	110	90	Good
205	Tl	209	0.007	657	4.34	0.0	525.6	110	90	
208	Pb	209	0.005	1885	1.77	0.1	30.2	110	90	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1169334	0.52	1250708	93.49	70	120	
72	Ge	822245	0.28	871265	94.37	70	120	
115	In	8586508	1.00	8749493	98.14	70	120	
209	Bi	24351121	0.39	24417425	99.73	70	120	

Post Digestion Spike Sample (PDS) Report

Date Acquired 9/15/2017 13:54
 Data Batch 170915.b
 Data File Name 108_PDS.d

Sample Name 1709087-01A PDS
 Comment PDS 6020A_W
 Dilution 10

Mass	Name	IS	Conc	CPS	%RSD	Ref Conc	Spk Amt	%Rec	Low	High	Flag
9	Be	45	190.769	12174	0.86	0.0	200	95.4	75	125	
11	B	45	398.173	12349	3.56	197.0	200	100.6	75	125	
23	Na	45	12089.547	12196816	1.24	7165.2	5000	98.5	75	125	
24	Mg	45	8542.240	4435882	0.32	3796.8	5000	94.9	75	125	
27	Al	45	4915.006	927753	0.34	15.9	5000	98.0	75	125	
39	K	45	5851.540	2497505	0.27	897.1	5000	99.1	75	125	
44	Ca	45	15840.230	406207	0.18	10781.6	5000	101.2	75	125	
47	Ti	45	203.538	34995	0.70	0.1	200	101.7	75	125	
51	V	45	202.362	1209716	0.25	0.2	200	101.1	75	125	
52	Cr	45	205.341	1512789	0.64	0.0	200	102.7	75	125	
55	Mn	45	201.550	816815	0.77	1.2	200	100.2	75	125	
56	Fe	45	5046.572	29185344	1.39	4.9	5000	100.8	75	125	
59	Co	72	203.907	2502776	1.18	0.0	200	102.0	75	125	
60	Ni	72	201.851	679586	0.65	-0.5	200	101.2	75	125	
63	Cu	72	201.607	1796220	0.50	0.0	200	100.8	75	125	
66	Zn	72	206.682	262696	0.95	0.6	200	103.1	75	125	
75	As	72	205.232	167475	0.56	0.1	200	102.6	75	125	
78	Se	72	208.065	12774	1.15	0.1	200	104.0	75	125	
88	Sr	115	333.737	1788227	0.83	137.9	200	97.9	75	125	
95	Mo	115	185.776	1016800	0.48	0.3	200	92.8	75	125	
107	Ag	115	199.637	3379973	0.20	0.0	200	99.8	75	125	
111	Cd	115	197.074	476120	0.80	0.0	200	98.5	75	125	
118	Sn	115	199.966	1012473	0.19	0.0	200	100.0	75	125	
121	Sb	115	187.192	1161127	0.71	0.0	200	93.6	75	125	
137	Ba	115	202.967	458601	0.41	4.9	200	99.1	75	125	
205	Tl	209	199.250	8363421	0.58	0.0	200	99.6	75	125	
208	Pb	209	194.477	10712650	0.50	0.1	200	97.2	75	125	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1132957	0.16	1250708	90.59	70	120	
72	Ge	783051	0.32	871265	89.88	70	120	
115	In	8249466	0.72	8749493	94.29	70	120	
209	Bi	23374227	1.07	24417425	95.73	70	120	

Continuing Calibration Verification (CCV) Report

Date Acquired 9/15/2017 14:13
 Data Batch 170915.b
 Data File Name 118_CCV.d

Sample Name CCV5-170915
 Comment CCV 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	184.956	11901	0.59	200	92.5	90	110	
11	B	45	199.211	6312	2.40	200	99.6	90	110	
23	Na	45	4710.855	4800377	1.77	5000	94.2	90	110	
24	Mg	45	4648.570	2434426	1.74	5000	93.0	90	110	
27	Al	45	4897.825	932243	2.20	5000	98.0	90	110	
39	K	45	4683.122	2020473	1.91	5000	93.7	90	110	
44	Ca	45	4512.325	116861	2.26	5000	90.2	90	110	
47	Ti	45	195.829	33945	1.78	200	97.9	90	110	
51	V	45	191.772	1155909	1.21	200	95.9	90	110	
52	Cr	45	194.039	1441333	0.95	200	97.0	90	110	
55	Mn	45	194.600	795158	0.82	200	97.3	90	110	
56	Fe	45	5101.926	29749150	0.50	5000	102.0	90	110	
59	Co	72	195.509	2448677	0.45	200	97.8	90	110	
60	Ni	72	195.709	672609	0.33	200	97.9	90	110	
63	Cu	72	198.174	1801831	0.75	200	99.1	90	110	
66	Zn	72	199.028	258179	1.27	200	99.5	90	110	
75	As	72	192.162	160021	0.78	200	96.1	90	110	
78	Se	72	197.523	12375	0.39	200	98.8	90	110	
88	Sr	115	182.083	1001904	0.59	200	91.0	90	110	
95	Mo	115	176.514	991983	0.32	200	88.3	90	110	Fail
107	Ag	115	194.305	3378068	0.45	200	97.2	90	110	
111	Cd	115	189.118	469175	1.05	200	94.6	90	110	
118	Sn	115	186.637	970406	0.78	200	93.3	90	110	
121	Sb	115	191.305	1218475	0.38	200	95.7	90	110	
137	Ba	115	188.379	437071	0.54	200	94.2	90	110	
205	Tl	209	192.855	8404695	0.69	200	96.4	90	110	
208	Pb	209	186.654	10675665	0.58	200	93.3	90	110	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1142345	0.65	1250708	91.34	70	120	
72	Ge	799139	1.35	871265	91.72	70	120	
115	In	8471318	1.21	8749493	96.82	70	120	
209	Bi	24269017	0.68	24417425	99.39	70	120	

Low Level Calibration Verification (LLCV) Report

Date Acquired 9/15/2017 14:18
 Data Batch 170915.b
 Data File Name 120LCCV.d

Sample Name LCVL5-170915
 Comment LCVL6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	Exp	%Rec	Low	High	Flag
9	Be	45	0.852	59	19.16	1	85.2	70	130	
11	B	45	24.858	934	6.38	20	124.3	70	130	
23	Na	45	123.877	139691	0.79	100	123.9	70	130	
24	Mg	45	91.793	48986	0.92	100	91.8	70	130	
27	Al	45	90.883	20693	1.11	100	90.9	70	130	
39	K	45	88.704	63025	0.77	100	88.7	70	130	
44	Ca	45	90.772	2605	6.30	100	90.8	70	130	
47	Ti	45	4.495	788	13.38	5	89.9	70	130	
51	V	45	0.994	7715	2.70	1	99.4	70	130	
52	Cr	45	4.640	35384	2.33	5	92.8	70	130	
55	Mn	45	4.797	19936	0.16	5	95.9	70	130	
56	Fe	45	103.146	617011	0.24	100	103.1	70	130	
59	Co	72	4.866	62159	0.75	5	97.3	70	130	
60	Ni	72	4.057	21443	0.79	5	81.1	70	130	
63	Cu	72	4.879	45964	0.27	5	97.6	70	130	
66	Zn	72	4.872	6723	3.30	5	97.4	70	130	
75	As	72	4.796	4114	1.37	5	95.9	70	130	
78	Se	72	4.764	322	8.88	5	95.3	70	130	
88	Sr	115	4.472	25279	0.49	5	89.4	70	130	
95	Mo	115	4.338	24773	0.47	5	86.8	70	130	
107	Ag	115	1.879	33127	1.81	2	94.0	70	130	
111	Cd	115	0.944	2379	2.19	1	94.4	70	130	
118	Sn	115	4.593	24584	2.12	5	91.9	70	130	
121	Sb	115	1.863	12156	2.64	2	93.1	70	130	
137	Ba	115	4.589	10841	2.42	5	91.8	70	130	
205	Tl	209	0.912	40742	1.34	1	91.2	70	130	
208	Pb	209	0.888	53229	0.87	1	88.8	70	130	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1145903	0.24	1250708	91.62	70	120	
72	Ge	811588	0.40	871265	93.15	70	120	
115	In	8573990	0.87	8749493	97.99	70	120	
209	Bi	24668915	0.72	24417425	101.03	70	120	

Continuing Calibration Blank (CCB) Report

Date Acquired 9/15/2017 14:28
 Data Batch 170915.b
 Data File Name 125_CCB.d

Sample Name CCB5-170915
 Comment CCB 6020A_W
 Dilution 1

Mass	Name	IS	Conc	CPS	%RSD	MDL S	MDL Aq	QC Flag
9	Be	45	-0.047	1	173.2	0.4	0.3	
11	B	45	7.314	390	3.4	10	10	
23	Na	45	29.301	43148	1.2	50	100	
24	Mg	45	-0.620	454	9.6	50	100	
27	Al	45	-3.288	2770	3.1	50	10	
39	K	45	-1.192	24520	1.6	50	100	
44	Ca	45	-0.730	232	25.6	50	100	
47	Ti	45	-0.022	2	86.6	4	3	
51	V	45	0.071	2135	1.6	4	3	
52	Cr	45	-0.058	389	12.5	2	2	
55	Mn	45	-0.015	219	16.0	2	3	
56	Fe	45	-1.045	7835	1.2	50	50	
59	Co	72	-0.011	116	10.9	2	3	
60	Ni	72	-0.868	4397	2.9	2	3	
63	Cu	72	-0.036	591	15.9	2	2	
66	Zn	72	0.045	367	4.2	4	2	
75	As	72	-0.012	49	9.2	2	2	
78	Se	72	-0.006	19	36.5	1	2	
88	Sr	115	-0.004	354	13.9	4	3	
95	Mo	115	0.004	124	10.8	2	2	
107	Ag	115	0.005	146	16.2	0.4	1	
111	Cd	115	-0.003	3	0.0	0.4	0.3	
118	Sn	115	-0.026	287	13.7	4	3	
121	Sb	115	0.013	229	3.7	2	0.8	
137	Ba	115	0.016	104	15.1	2	3	
205	Tl	209	0.008	698	8.2	2	0.5	
208	Pb	209	-0.019	516	12.2	0.4	0.3	

QC ISTD Table

Mass	Name	CPS	%RSD	Ref CPS	%Rec	Low	High	QC Flag
45	Sc	1142082	0.41	1250708	91.31	70	120	
72	Ge	803815	0.09	871265	92.26	70	120	
115	In	8531749	0.83	8749493	97.51	70	120	
209	Bi	24844603	0.71	24417425	101.75	70	120	