284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

DATA PACKAGE

METALS

PROJECT NAME : CTO WE13

TETRA TECH NUS, INC.

661 Andersen Drive

Suite 200

Pittsburgh, PA - 15220-2745

Phone No: 412-921-7090

ORDER ID : P4549

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

Table Of Contents for P4549

1) METALS DATA 2

2) Signature Page 4

3) Case Narrative 5

4) Qualifier Page 7

5) Conformance/Non Conformance 8

6) QA Checklist 9

7) Chronicle 10

8) Hit Summary 11

9) Sample Data 13

- 9.1) TT-067-IDWGW-20241024 14
- 9.2) TT-068-IDWGW-20241024 15
- 9.3) TT-069-IDWGW-20241024 16

10) METALS CALIBRATION DATA 17

- 10.1) Initial and Continuing Calibration Verification 18
- 10.2) CRDL Standard For AA & ICP 30
- 10.3) Initial and Continuing Calibration Blank Summary 31
- 10.4) Preparation Blank Summary 41
- 10.5) Interference Check Sample 43

11) METALS QC DATA 45

- 11.1) Matrix Spike Summary 46
- 11.2) Post Digest Spike Summary 50
- 11.3) Duplicate Sample Summary 51
- 11.4) Laboratory Control Sample Summary 55
- 11.5) ICP Serial Dilutions 57

12) METALS PREPARATION & INSTRUMENT DATA 59

- 12.1) ICP Interelement Correction Factors 60

13) PREPARATION & ANALYTICAL SUMMARY 65

- 13.1) Sample Preparation Summary 66
- 13.2) Analysis Run Log 68

14) METALS RAW DATA 71

- 14.1) METALS RAW DATA - ANALYTICAL 72
- 14.2) LB133175 72
- 14.3) LB133167 362
- 14.4) METALS RAW DATA - PREP 364
  - 14.4.1) PB164404 364

14.4.2) PB164472 367
15) Analytical Runlogs 370
16) Standard Prep Logs 379
17) Shipping Document 535
17.1) Chain Of Custody 536
17.2) Lab Certificate 537
17.3) Internal COC 538

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Cover Page

Order ID : P4549

Project ID : CTO WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
P4549-01	TT-TB-20241024
P4549-02	TT-067-IDWGW-20241024
P4549-03	TT-068-IDWGW-20241024
P4549-04	TT-069-IDWGW-20241024

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 2:24 pm, Nov 07, 2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE13
Project Manager : Ernie Wu
Chemtech Project # P4549
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
4 Water samples were received on 10/24/2024.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH and VOCMS Group4. This data package contains results for Metals ICP-TAL,Mercury.

C. Analytical Techniques:
The analysis of Metals ICP-TAL was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of Mercury was based on method 7470A.

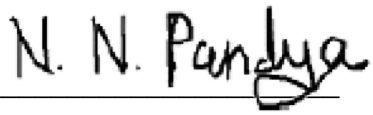
D. QA/ QC Samples:

The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (TT-069-IDWGW-20241024MS) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Lead, Magnesium, Manganese, Selenium, Silver, Thallium and Vanadium due to Chemical interference during Digestion Process.
The Matrix Spike Duplicate (TT-069-IDWGW-20241024MSD) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Lead, Magnesium, Manganese, Selenium, Silver, Thallium and Vanadium due to Chemical interference during Digestion Process.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature 

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 2:24 pm, Nov 07, 2024

284 Sheffield Street, Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: P4549 MATRIX: Water

METHOD: 6010D,7470A

		NA	NO	YES
1.	Calibration Summary met criteria.			✓
2.	ICP Interference Check Sample Results Summary Submitted.			✓
3.	Serial Dilution Summary (if applicable) Submitted.			✓
4.	Laboratory Control Sample Summary (if applicable) Submitted.			✓
5.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Matrix Spike (TT-069-IDWGW-20241024MS) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Lead, Magnesium, Manganese, Selenium, Silver, Thallium and Vanadium due to Chemical interference during Digestion Process. The Matrix Spike Duplicate (TT-069-IDWGW-20241024MSD) analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Cadmium, Lead, Magnesium, Manganese, Selenium, Silver, Thallium and Vanadium due to Chemical interference during Digestion Process.			
7.	Sample Duplicate Analysis Met QC Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			
9.	Analysis Holding Time Met			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

S. M. Jodhani

QA REVIEW

REVIEWED
By Sohil Jodhani, QA/QC Director at 2:09 pm, Nov 07, 2024

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P4549

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: SOHIL JODHANI **Date:** 11/06/2024

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LAB CHRONICLE

OrderID:	P4549	**OrderDate:**	10/24/2024 4:00:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	CTO WE13
Contact:	Ernie Wu	**Location:**	K11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4549-02	**TT-067-IDWGW-2024 1024**	**Water**			**10/24/24**			**10/24/24**
			Mercury	7470A		10/25/24	10/28/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	
P4549-03	**TT-068-IDWGW-2024 1024**	**Water**			**10/24/24**			**10/24/24**
			Mercury	7470A		10/25/24	10/28/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	
P4549-04	**TT-069-IDWGW-2024 1024**	**Water**			**10/24/24**			**10/24/24**
			Mercury	7470A		10/25/24	10/28/24	
			Metals ICP-TAL	6010D		10/25/24	10/28/24	

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Hit Summary Sheet
SW-846

SDG No.: P4549 **Order ID:** P4549

Client: Tetra Tech NUS, Inc. **Project ID:** CTO WE13

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : TT-067-IDWGW-20241024									
P4549-02	TT-067-IDWGW-20241024	Water	Aluminum	19000		28.3	40.0	50.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Arsenic	4.33	J	3.48	8.00	10.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Barium	85.5		6.28	12.5	50.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Beryllium	1.02	J	0.13	0.75	3.00	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Cadmium	0.62	J	0.094	0.75	3.00	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Calcium	8450		33.0	250	1000	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Chromium	37.7		0.66	2.50	5.00	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Cobalt	14.2	J	0.50	3.75	15.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Copper	33.0		7.07	8.00	10.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Iron	8550		18.5	40.0	50.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Lead	18.9		3.51	4.80	6.00	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Magnesium	3790		39.4	250	1000	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Manganese	283		1.46	2.50	10.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Nickel	21.4		0.85	5.00	20.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Potassium	2700		685	800	1000	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Sodium	36900		237	500	1000	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Vanadium	27.1		3.06	10.0	20.0	ug/L
P4549-02	TT-067-IDWGW-20241024	Water	Zinc	40.8		1.75	5.00	20.0	ug/L
Client ID : TT-068-IDWGW-20241024									
P4549-03	TT-068-IDWGW-20241024	Water	Aluminum	37900		28.3	40.0	50.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Arsenic	7.93	J	3.48	8.00	10.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Barium	151		6.28	12.5	50.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Beryllium	2.47	J	0.13	0.75	3.00	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Cadmium	1.55	J	0.094	0.75	3.00	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Calcium	17600		33.0	250	1000	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Chromium	31.5		0.66	2.50	5.00	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Cobalt	12.6	J	0.50	3.75	15.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Copper	21.0		7.07	8.00	10.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Iron	18500		18.5	40.0	50.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Lead	36.8		3.51	4.80	6.00	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Magnesium	7970		39.4	250	1000	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Manganese	430		1.46	2.50	10.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Nickel	21.3		0.85	5.00	20.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Potassium	2490		685	800	1000	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Sodium	55700		237	500	1000	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Vanadium	33.7		3.06	10.0	20.0	ug/L
P4549-03	TT-068-IDWGW-20241024	Water	Zinc	74.0		1.75	5.00	20.0	ug/L

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Hit Summary Sheet
SW-846

SDG No.: P4549 **Order ID:** P4549

Client: Tetra Tech NUS, Inc. **Project ID:** CTO WE13

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : TT-069-IDWGW-20241024									
P4549-04	TT-069-IDWGW-20241024	Water	Aluminum	13000		28.3	40.0	50.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Barium	96.5		6.28	12.5	50.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Beryllium	1.11	J	0.13	0.75	3.00	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Cadmium	0.50	J	0.094	0.75	3.00	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Calcium	9080		33.0	250	1000	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Chromium	15.1		0.66	2.50	5.00	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Cobalt	5.18	J	0.50	3.75	15.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Copper	11.2		7.07	8.00	10.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Iron	7460		18.5	40.0	50.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Lead	16.3		3.51	4.80	6.00	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Magnesium	3380		39.4	250	1000	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Manganese	192		1.46	2.50	10.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Nickel	9.45	J	0.85	5.00	20.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Potassium	1480		685	800	1000	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Sodium	43600		237	500	1000	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Vanadium	13.5	J	3.06	10.0	20.0	ug/L
P4549-04	TT-069-IDWGW-20241024	Water	Zinc	35.7		1.75	5.00	20.0	ug/L

SAMPLE DATA

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	10/24/24
Project:	CTO WE13	Date Received:	10/24/24
Client Sample ID:	TT-067-IDWGW-20241024	SDG No.:	P4549
Lab Sample ID:	P4549-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	19000		1	28.3	40.0	50.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-36-0	Antimony	6.25	UN	1	2.06	6.25	25.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-38-2	Arsenic	4.33	JN	1	3.48	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-39-3	Barium	85.5		1	6.28	12.5	50.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-41-7	Beryllium	1.02	JN	1	0.13	0.75	3.00	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-43-9	Cadmium	0.62	JN	1	0.094	0.75	3.00	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-70-2	Calcium	8450		1	33.0	250	1000	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-47-3	Chromium	37.7		1	0.66	2.50	5.00	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-48-4	Cobalt	14.2	J	1	0.50	3.75	15.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-50-8	Copper	33.0		1	7.07	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7439-89-6	Iron	8550		1	18.5	40.0	50.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7439-92-1	Lead	18.9	N	1	3.51	4.80	6.00	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7439-95-4	Magnesium	3790	N	1	39.4	250	1000	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7439-96-5	Manganese	283	N	1	1.46	2.50	10.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7439-97-6	Mercury	0.16	U	1	0.081	0.16	0.20	ug/L	10/25/24 08:10	10/28/24 11:37	SW7470A	
7440-02-0	Nickel	21.4		1	0.85	5.00	20.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-09-7	Potassium	2700		1	685	800	1000	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7782-49-2	Selenium	8.00	UN	1	5.88	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-22-4	Silver	2.50	UN	1	0.58	2.50	5.00	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-23-5	Sodium	36900		1	237	500	1000	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-28-0	Thallium	10.0	UN	1	2.32	10.0	20.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-62-2	Vanadium	27.1	N	1	3.06	10.0	20.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010
7440-66-6	Zinc	40.8		1	1.75	5.00	20.0	ug/L	10/25/24 11:00	10/28/24 13:44	SW6010	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

Alliance TECHNICAL GROUP
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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	10/24/24
Project:	CTO WE13	Date Received:	10/24/24
Client Sample ID:	TT-068-IDWGW-20241024	SDG No.:	P4549
Lab Sample ID:	P4549-03	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	37900		1	28.3	40.0	50.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-36-0	Antimony	6.25	UN	1	2.06	6.25	25.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-38-2	Arsenic	7.93	JN	1	3.48	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-39-3	Barium	151		1	6.28	12.5	50.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-41-7	Beryllium	2.47	JN	1	0.13	0.75	3.00	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-43-9	Cadmium	1.55	JN	1	0.094	0.75	3.00	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-70-2	Calcium	17600		1	33.0	250	1000	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-47-3	Chromium	31.5		1	0.66	2.50	5.00	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-48-4	Cobalt	12.6	J	1	0.50	3.75	15.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-50-8	Copper	21.0		1	7.07	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7439-89-6	Iron	18500		1	18.5	40.0	50.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7439-92-1	Lead	36.8	N	1	3.51	4.80	6.00	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7439-95-4	Magnesium	7970	N	1	39.4	250	1000	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7439-96-5	Manganese	430	N	1	1.46	2.50	10.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7439-97-6	Mercury	0.16	U	1	0.081	0.16	0.20	ug/L	10/25/24 08:10	10/28/24 11:46	SW7470A	
7440-02-0	Nickel	21.3		1	0.85	5.00	20.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-09-7	Potassium	2490		1	685	800	1000	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7782-49-2	Selenium	8.00	UN	1	5.88	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-22-4	Silver	2.50	UN	1	0.58	2.50	5.00	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-23-5	Sodium	55700		1	237	500	1000	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-28-0	Thallium	10.0	UN	1	2.32	10.0	20.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-62-2	Vanadium	33.7	N	1	3.06	10.0	20.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010
7440-66-6	Zinc	74.0		1	1.75	5.00	20.0	ug/L	10/25/24 11:00	10/28/24 13:48	SW6010	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	10/24/24
Project:	CTO WE13	Date Received:	10/24/24
Client Sample ID:	TT-069-IDWGW-20241024	SDG No.:	P4549
Lab Sample ID:	P4549-04	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	13000		1	28.3	40.0	50.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-36-0	Antimony	6.25	UN	1	2.06	6.25	25.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-38-2	Arsenic	8.00	UN	1	3.48	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-39-3	Barium	96.5		1	6.28	12.5	50.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-41-7	Beryllium	1.11	JN	1	0.13	0.75	3.00	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-43-9	Cadmium	0.50	JN	1	0.094	0.75	3.00	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-70-2	Calcium	9080		1	33.0	250	1000	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-47-3	Chromium	15.1		1	0.66	2.50	5.00	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-48-4	Cobalt	5.18	J	1	0.50	3.75	15.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-50-8	Copper	11.2		1	7.07	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7439-89-6	Iron	7460		1	18.5	40.0	50.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7439-92-1	Lead	16.3	N	1	3.51	4.80	6.00	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7439-95-4	Magnesium	3380	N	1	39.4	250	1000	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7439-96-5	Manganese	192	N	1	1.46	2.50	10.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7439-97-6	Mercury	0.16	U	1	0.081	0.16	0.20	ug/L	10/25/24 08:10	10/28/24 11:56	SW7470A	
7440-02-0	Nickel	9.45	J	1	0.85	5.00	20.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-09-7	Potassium	1480		1	685	800	1000	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7782-49-2	Selenium	8.00	UN	1	5.88	8.00	10.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-22-4	Silver	2.50	UN	1	0.58	2.50	5.00	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-23-5	Sodium	43600		1	237	500	1000	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-28-0	Thallium	10.0	UN	1	2.32	10.0	20.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-62-2	Vanadium	13.5	JN	1	3.06	10.0	20.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010
7440-66-6	Zinc	35.7		1	1.75	5.00	20.0	ug/L	10/25/24 11:00	10/28/24 13:52	SW6010	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
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LOD = Limit of Detection
D = Dilution
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J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

METAL CALIBRATION DATA

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV55	Mercury	3.70	4.0	92	90 - 110	CV	10/28/2024	11:09	LB133167

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV79	Mercury	5.23	5.0	105	90 - 110	CV	10/28/2024	11:16	LB133167
CCV80	Mercury	4.95	5.0	99	90 - 110	CV	10/28/2024	11:48	LB133167
CCV81	Mercury	4.98	5.0	100	90 - 110	CV	10/28/2024	12:09	LB133167

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2490	2500	100	90 - 110	P	10/28/2024	12:57	LB133175
	Antimony	1020	1000	102	90 - 110	P	10/28/2024	12:57	LB133175
	Arsenic	975	1000	98	90 - 110	P	10/28/2024	12:57	LB133175
	Barium	483	520	93	90 - 110	P	10/28/2024	12:57	LB133175
	Beryllium	490	510	96	90 - 110	P	10/28/2024	12:57	LB133175
	Cadmium	494	510	97	90 - 110	P	10/28/2024	12:57	LB133175
	Calcium	9820	10000	98	90 - 110	P	10/28/2024	12:57	LB133175
	Chromium	532	520	102	90 - 110	P	10/28/2024	12:57	LB133175
	Cobalt	528	520	102	90 - 110	P	10/28/2024	12:57	LB133175
	Copper	497	510	97	90 - 110	P	10/28/2024	12:57	LB133175
	Iron	10100	10000	101	90 - 110	P	10/28/2024	12:57	LB133175
	Lead	983	1000	98	90 - 110	P	10/28/2024	12:57	LB133175
	Magnesium	5750	6000	96	90 - 110	P	10/28/2024	12:57	LB133175
	Manganese	491	520	94	90 - 110	P	10/28/2024	12:57	LB133175
	Nickel	531	530	100	90 - 110	P	10/28/2024	12:57	LB133175
	Potassium	10500	9900	106	90 - 110	P	10/28/2024	12:57	LB133175
	Selenium	1010	1000	101	90 - 110	P	10/28/2024	12:57	LB133175
	Silver	273	250	109	90 - 110	P	10/28/2024	12:57	LB133175
	Sodium	9920	10000	99	90 - 110	P	10/28/2024	12:57	LB133175
	Thallium	970	1000	97	90 - 110	P	10/28/2024	12:57	LB133175
	Vanadium	485	500	97	90 - 110	P	10/28/2024	12:57	LB133175
	Zinc	1100	1000	110	90 - 110	P	10/28/2024	12:57	LB133175

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	107	100	107	80 - 120	P	10/28/2024	13:04	LB133175
	Antimony	50.7	50.0	101	80 - 120	P	10/28/2024	13:04	LB133175
	Arsenic	18.8	20.0	94	80 - 120	P	10/28/2024	13:04	LB133175
	Barium	94.7	100	95	80 - 120	P	10/28/2024	13:04	LB133175
	Beryllium	5.67	6.0	94	80 - 120	P	10/28/2024	13:04	LB133175
	Cadmium	5.66	6.0	94	80 - 120	P	10/28/2024	13:04	LB133175
	Calcium	1960	2000	98	80 - 120	P	10/28/2024	13:04	LB133175
	Chromium	9.20	10.0	92	80 - 120	P	10/28/2024	13:04	LB133175
	Cobalt	29.9	30.0	100	80 - 120	P	10/28/2024	13:04	LB133175
	Copper	21.5	20.0	108	80 - 120	P	10/28/2024	13:04	LB133175
	Iron	107	100	107	80 - 120	P	10/28/2024	13:04	LB133175
	Lead	11.0	12.0	92	80 - 120	P	10/28/2024	13:04	LB133175
	Magnesium	1920	2000	96	80 - 120	P	10/28/2024	13:04	LB133175
	Manganese	19.2	20.0	96	80 - 120	P	10/28/2024	13:04	LB133175
	Nickel	39.8	40.0	100	80 - 120	P	10/28/2024	13:04	LB133175
	Potassium	2020	2000	101	80 - 120	P	10/28/2024	13:04	LB133175
	Selenium	18.6	20.0	93	80 - 120	P	10/28/2024	13:04	LB133175
	Silver	11.3	10.0	113	80 - 120	P	10/28/2024	13:04	LB133175
	Sodium	1850	2000	92	80 - 120	P	10/28/2024	13:04	LB133175
	Thallium	36.2	40.0	90	80 - 120	P	10/28/2024	13:04	LB133175
	Vanadium	38.7	40.0	97	80 - 120	P	10/28/2024	13:04	LB133175
	Zinc	38.8	40.0	97	80 - 120	P	10/28/2024	13:04	LB133175

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9650	10000	96	90 - 110	P	10/28/2024	13:35	LB133175
	Antimony	4940	5000	99	90 - 110	P	10/28/2024	13:35	LB133175
	Arsenic	4870	5000	97	90 - 110	P	10/28/2024	13:35	LB133175
	Barium	9340	10000	93	90 - 110	P	10/28/2024	13:35	LB133175
	Beryllium	240	250	96	90 - 110	P	10/28/2024	13:35	LB133175
	Cadmium	2430	2500	97	90 - 110	P	10/28/2024	13:35	LB133175
	Calcium	23700	25000	95	90 - 110	P	10/28/2024	13:35	LB133175
	Chromium	969	1000	97	90 - 110	P	10/28/2024	13:35	LB133175
	Cobalt	2420	2500	97	90 - 110	P	10/28/2024	13:35	LB133175
	Copper	1240	1250	99	90 - 110	P	10/28/2024	13:35	LB133175
	Iron	4970	5000	100	90 - 110	P	10/28/2024	13:35	LB133175
	Lead	4840	5000	97	90 - 110	P	10/28/2024	13:35	LB133175
	Magnesium	23800	25000	95	90 - 110	P	10/28/2024	13:35	LB133175
	Manganese	2310	2500	92	90 - 110	P	10/28/2024	13:35	LB133175
	Nickel	2430	2500	97	90 - 110	P	10/28/2024	13:35	LB133175
	Potassium	25200	25000	101	90 - 110	P	10/28/2024	13:35	LB133175
	Selenium	4920	5000	98	90 - 110	P	10/28/2024	13:35	LB133175
	Silver	1260	1250	101	90 - 110	P	10/28/2024	13:35	LB133175
	Sodium	24700	25000	99	90 - 110	P	10/28/2024	13:35	LB133175
	Thallium	4620	5000	92	90 - 110	P	10/28/2024	13:35	LB133175
	Vanadium	2390	2500	96	90 - 110	P	10/28/2024	13:35	LB133175
	Zinc	2550	2500	102	90 - 110	P	10/28/2024	13:35	LB133175
CCV02	Aluminum	9710	10000	97	90 - 110	P	10/28/2024	14:25	LB133175
	Antimony	4980	5000	100	90 - 110	P	10/28/2024	14:25	LB133175
	Arsenic	4910	5000	98	90 - 110	P	10/28/2024	14:25	LB133175
	Barium	9410	10000	94	90 - 110	P	10/28/2024	14:25	LB133175
	Beryllium	240	250	96	90 - 110	P	10/28/2024	14:25	LB133175
	Cadmium	2440	2500	98	90 - 110	P	10/28/2024	14:25	LB133175
	Calcium	23800	25000	95	90 - 110	P	10/28/2024	14:25	LB133175
	Chromium	959	1000	96	90 - 110	P	10/28/2024	14:25	LB133175
	Cobalt	2430	2500	97	90 - 110	P	10/28/2024	14:25	LB133175
	Copper	1250	1250	100	90 - 110	P	10/28/2024	14:25	LB133175
	Iron	4830	5000	97	90 - 110	P	10/28/2024	14:25	LB133175
	Lead	4860	5000	97	90 - 110	P	10/28/2024	14:25	LB133175

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	23700	25000	95	90 - 110	P	10/28/2024	14:25	LB133175
	Manganese	2320	2500	93	90 - 110	P	10/28/2024	14:25	LB133175
	Nickel	2440	2500	98	90 - 110	P	10/28/2024	14:25	LB133175
	Potassium	24600	25000	98	90 - 110	P	10/28/2024	14:25	LB133175
	Selenium	4970	5000	100	90 - 110	P	10/28/2024	14:25	LB133175
	Silver	1240	1250	99	90 - 110	P	10/28/2024	14:25	LB133175
	Sodium	24100	25000	96	90 - 110	P	10/28/2024	14:25	LB133175
	Thallium	4740	5000	95	90 - 110	P	10/28/2024	14:25	LB133175
	Vanadium	2400	2500	96	90 - 110	P	10/28/2024	14:25	LB133175
	Zinc	2510	2500	100	90 - 110	P	10/28/2024	14:25	LB133175
CCV03	Aluminum	9970	10000	100	90 - 110	P	10/28/2024	15:15	LB133175
	Antimony	5180	5000	104	90 - 110	P	10/28/2024	15:15	LB133175
	Arsenic	5060	5000	101	90 - 110	P	10/28/2024	15:15	LB133175
	Barium	9730	10000	97	90 - 110	P	10/28/2024	15:15	LB133175
	Beryllium	242	250	97	90 - 110	P	10/28/2024	15:15	LB133175
	Cadmium	2470	2500	99	90 - 110	P	10/28/2024	15:15	LB133175
	Calcium	24000	25000	96	90 - 110	P	10/28/2024	15:15	LB133175
	Chromium	980	1000	98	90 - 110	P	10/28/2024	15:15	LB133175
	Cobalt	2480	2500	99	90 - 110	P	10/28/2024	15:15	LB133175
	Copper	1290	1250	104	90 - 110	P	10/28/2024	15:15	LB133175
	Iron	5000	5000	100	90 - 110	P	10/28/2024	15:15	LB133175
	Lead	4940	5000	99	90 - 110	P	10/28/2024	15:15	LB133175
	Magnesium	23800	25000	95	90 - 110	P	10/28/2024	15:15	LB133175
	Manganese	2350	2500	94	90 - 110	P	10/28/2024	15:15	LB133175
	Nickel	2490	2500	100	90 - 110	P	10/28/2024	15:15	LB133175
	Potassium	26000	25000	104	90 - 110	P	10/28/2024	15:15	LB133175
	Selenium	5150	5000	103	90 - 110	P	10/28/2024	15:15	LB133175
	Silver	1270	1250	102	90 - 110	P	10/28/2024	15:15	LB133175
	Sodium	25500	25000	102	90 - 110	P	10/28/2024	15:15	LB133175
	Thallium	4680	5000	94	90 - 110	P	10/28/2024	15:15	LB133175
	Vanadium	2450	2500	98	90 - 110	P	10/28/2024	15:15	LB133175
	Zinc	2600	2500	104	90 - 110	P	10/28/2024	15:15	LB133175
CCV04	Aluminum	9820	10000	98	90 - 110	P	10/28/2024	16:06	LB133175
	Antimony	5100	5000	102	90 - 110	P	10/28/2024	16:06	LB133175

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Arsenic	5020	5000	100	90 - 110	P	10/28/2024	16:06	LB133175
	Barium	9800	10000	98	90 - 110	P	10/28/2024	16:06	LB133175
	Beryllium	239	250	96	90 - 110	P	10/28/2024	16:06	LB133175
	Cadmium	2440	2500	98	90 - 110	P	10/28/2024	16:06	LB133175
	Calcium	23800	25000	95	90 - 110	P	10/28/2024	16:06	LB133175
	Chromium	974	1000	97	90 - 110	P	10/28/2024	16:06	LB133175
	Cobalt	2450	2500	98	90 - 110	P	10/28/2024	16:06	LB133175
	Copper	1270	1250	102	90 - 110	P	10/28/2024	16:06	LB133175
	Iron	4960	5000	99	90 - 110	P	10/28/2024	16:06	LB133175
	Lead	4870	5000	97	90 - 110	P	10/28/2024	16:06	LB133175
	Magnesium	23500	25000	94	90 - 110	P	10/28/2024	16:06	LB133175
	Manganese	2330	2500	93	90 - 110	P	10/28/2024	16:06	LB133175
	Nickel	2460	2500	98	90 - 110	P	10/28/2024	16:06	LB133175
	Potassium	25900	25000	104	90 - 110	P	10/28/2024	16:06	LB133175
	Selenium	5100	5000	102	90 - 110	P	10/28/2024	16:06	LB133175
	Silver	1260	1250	101	90 - 110	P	10/28/2024	16:06	LB133175
	Sodium	25500	25000	102	90 - 110	P	10/28/2024	16:06	LB133175
	Thallium	4910	5000	98	90 - 110	P	10/28/2024	16:06	LB133175
	Vanadium	2410	2500	97	90 - 110	P	10/28/2024	16:06	LB133175
	Zinc	2560	2500	102	90 - 110	P	10/28/2024	16:06	LB133175
CCV05	Aluminum	10000	10000	100	90 - 110	P	10/28/2024	16:57	LB133175
	Antimony	5310	5000	106	90 - 110	P	10/28/2024	16:57	LB133175
	Arsenic	5210	5000	104	90 - 110	P	10/28/2024	16:57	LB133175
	Barium	9800	10000	98	90 - 110	P	10/28/2024	16:57	LB133175
	Beryllium	241	250	96	90 - 110	P	10/28/2024	16:57	LB133175
	Cadmium	2490	2500	100	90 - 110	P	10/28/2024	16:57	LB133175
	Calcium	23900	25000	96	90 - 110	P	10/28/2024	16:57	LB133175
	Chromium	965	1000	96	90 - 110	P	10/28/2024	16:57	LB133175
	Cobalt	2490	2500	100	90 - 110	P	10/28/2024	16:57	LB133175
	Copper	1310	1250	105	90 - 110	P	10/28/2024	16:57	LB133175
	Iron	4900	5000	98	90 - 110	P	10/28/2024	16:57	LB133175
	Lead	4990	5000	100	90 - 110	P	10/28/2024	16:57	LB133175
	Magnesium	23700	25000	95	90 - 110	P	10/28/2024	16:57	LB133175
	Manganese	2320	2500	93	90 - 110	P	10/28/2024	16:57	LB133175

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Nickel	2500	2500	100	90 - 110	P	10/28/2024	16:57	LB133175
	Potassium	26200	25000	105	90 - 110	P	10/28/2024	16:57	LB133175
	Selenium	5400	5000	108	90 - 110	P	10/28/2024	16:57	LB133175
	Silver	1280	1250	102	90 - 110	P	10/28/2024	16:57	LB133175
	Sodium	25700	25000	103	90 - 110	P	10/28/2024	16:57	LB133175
	Thallium	5470	5000	109	90 - 110	P	10/28/2024	16:57	LB133175
	Vanadium	2420	2500	97	90 - 110	P	10/28/2024	16:57	LB133175
	Zinc	2610	2500	104	90 - 110	P	10/28/2024	16:57	LB133175
CCV06	Aluminum	9870	10000	99	90 - 110	P	10/28/2024	17:50	LB133175
	Antimony	5170	5000	103	90 - 110	P	10/28/2024	17:50	LB133175
	Arsenic	5080	5000	102	90 - 110	P	10/28/2024	17:50	LB133175
	Barium	9780	10000	98	90 - 110	P	10/28/2024	17:50	LB133175
	Beryllium	245	250	98	90 - 110	P	10/28/2024	17:50	LB133175
	Cadmium	2490	2500	100	90 - 110	P	10/28/2024	17:50	LB133175
	Calcium	24000	25000	96	90 - 110	P	10/28/2024	17:50	LB133175
	Chromium	973	1000	97	90 - 110	P	10/28/2024	17:50	LB133175
	Cobalt	2480	2500	99	90 - 110	P	10/28/2024	17:50	LB133175
	Copper	1290	1250	103	90 - 110	P	10/28/2024	17:50	LB133175
	Iron	4880	5000	98	90 - 110	P	10/28/2024	17:50	LB133175
	Lead	4970	5000	99	90 - 110	P	10/28/2024	17:50	LB133175
	Magnesium	23800	25000	95	90 - 110	P	10/28/2024	17:50	LB133175
	Manganese	2320	2500	93	90 - 110	P	10/28/2024	17:50	LB133175
	Nickel	2490	2500	100	90 - 110	P	10/28/2024	17:50	LB133175
	Potassium	25600	25000	103	90 - 110	P	10/28/2024	17:50	LB133175
	Selenium	5210	5000	104	90 - 110	P	10/28/2024	17:50	LB133175
	Silver	1270	1250	102	90 - 110	P	10/28/2024	17:50	LB133175
	Sodium	24900	25000	99	90 - 110	P	10/28/2024	17:50	LB133175
	Thallium	5370	5000	107	90 - 110	P	10/28/2024	17:50	LB133175
	Vanadium	2410	2500	96	90 - 110	P	10/28/2024	17:50	LB133175
	Zinc	2580	2500	103	90 - 110	P	10/28/2024	17:50	LB133175
CCV07	Aluminum	9960	10000	100	90 - 110	P	10/28/2024	18:43	LB133175
	Antimony	5210	5000	104	90 - 110	P	10/28/2024	18:43	LB133175
	Arsenic	5110	5000	102	90 - 110	P	10/28/2024	18:43	LB133175
	Barium	9750	10000	98	90 - 110	P	10/28/2024	18:43	LB133175

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV07	Beryllium	243	250	97	90 - 110	P	10/28/2024	18:43	LB133175
	Cadmium	2480	2500	99	90 - 110	P	10/28/2024	18:43	LB133175
	Calcium	24000	25000	96	90 - 110	P	10/28/2024	18:43	LB133175
	Chromium	966	1000	97	90 - 110	P	10/28/2024	18:43	LB133175
	Cobalt	2490	2500	100	90 - 110	P	10/28/2024	18:43	LB133175
	Copper	1290	1250	103	90 - 110	P	10/28/2024	18:43	LB133175
	Iron	4820	5000	96	90 - 110	P	10/28/2024	18:43	LB133175
	Lead	4970	5000	99	90 - 110	P	10/28/2024	18:43	LB133175
	Magnesium	23800	25000	95	90 - 110	P	10/28/2024	18:43	LB133175
	Manganese	2320	2500	93	90 - 110	P	10/28/2024	18:43	LB133175
	Nickel	2490	2500	100	90 - 110	P	10/28/2024	18:43	LB133175
	Potassium	25600	25000	102	90 - 110	P	10/28/2024	18:43	LB133175
	Selenium	5270	5000	106	90 - 110	P	10/28/2024	18:43	LB133175
	Silver	1260	1250	101	90 - 110	P	10/28/2024	18:43	LB133175
	Sodium	24200	25000	97	90 - 110	P	10/28/2024	18:43	LB133175
	Thallium	5500	5000	110	90 - 110	P	10/28/2024	18:43	LB133175
	Vanadium	2420	2500	97	90 - 110	P	10/28/2024	18:43	LB133175
	Zinc	2570	2500	103	90 - 110	P	10/28/2024	18:43	LB133175
CCV08	Aluminum	10300	10000	103	90 - 110	P	10/28/2024	19:33	LB133175
	Antimony	5400	5000	108	90 - 110	P	10/28/2024	19:33	LB133175
	Arsenic	5290	5000	106	90 - 110	P	10/28/2024	19:33	LB133175
	Barium	10000	10000	100	90 - 110	P	10/28/2024	19:33	LB133175
	Beryllium	251	250	100	90 - 110	P	10/28/2024	19:33	LB133175
	Cadmium	2570	2500	103	90 - 110	P	10/28/2024	19:33	LB133175
	Calcium	24700	25000	99	90 - 110	P	10/28/2024	19:33	LB133175
	Chromium	989	1000	99	90 - 110	P	10/28/2024	19:33	LB133175
	Cobalt	2570	2500	103	90 - 110	P	10/28/2024	19:33	LB133175
	Copper	1340	1250	107	90 - 110	P	10/28/2024	19:33	LB133175
	Iron	5020	5000	100	90 - 110	P	10/28/2024	19:33	LB133175
	Lead	5130	5000	103	90 - 110	P	10/28/2024	19:33	LB133175
	Magnesium	24500	25000	98	90 - 110	P	10/28/2024	19:33	LB133175
	Manganese	2360	2500	94	90 - 110	P	10/28/2024	19:33	LB133175
	Nickel	2580	2500	103	90 - 110	P	10/28/2024	19:33	LB133175
	Potassium	26700	25000	107	90 - 110	P	10/28/2024	19:33	LB133175

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV08	Selenium	5470	5000	110	90 - 110	P	10/28/2024	19:33	LB133175
	Silver	1310	1250	105	90 - 110	P	10/28/2024	19:33	LB133175
	Sodium	25700	25000	103	90 - 110	P	10/28/2024	19:33	LB133175
	Thallium	5470	5000	109	90 - 110	P	10/28/2024	19:33	LB133175
	Vanadium	2500	2500	100	90 - 110	P	10/28/2024	19:33	LB133175
	Zinc	2680	2500	107	90 - 110	P	10/28/2024	19:33	LB133175
CCV09	Aluminum	10100	10000	101	90 - 110	P	10/28/2024	20:22	LB133175
	Antimony	5270	5000	105	90 - 110	P	10/28/2024	20:22	LB133175
	Arsenic	5200	5000	104	90 - 110	P	10/28/2024	20:22	LB133175
	Barium	9830	10000	98	90 - 110	P	10/28/2024	20:22	LB133175
	Beryllium	249	250	100	90 - 110	P	10/28/2024	20:22	LB133175
	Cadmium	2530	2500	101	90 - 110	P	10/28/2024	20:22	LB133175
	Calcium	24400	25000	97	90 - 110	P	10/28/2024	20:22	LB133175
	Chromium	975	1000	98	90 - 110	P	10/28/2024	20:22	LB133175
	Cobalt	2520	2500	101	90 - 110	P	10/28/2024	20:22	LB133175
	Copper	1310	1250	105	90 - 110	P	10/28/2024	20:22	LB133175
	Iron	4930	5000	99	90 - 110	P	10/28/2024	20:22	LB133175
	Lead	5040	5000	101	90 - 110	P	10/28/2024	20:22	LB133175
	Magnesium	24100	25000	96	90 - 110	P	10/28/2024	20:22	LB133175
	Manganese	2330	2500	93	90 - 110	P	10/28/2024	20:22	LB133175
	Nickel	2530	2500	101	90 - 110	P	10/28/2024	20:22	LB133175
	Potassium	26200	25000	105	90 - 110	P	10/28/2024	20:22	LB133175
	Selenium	5360	5000	107	90 - 110	P	10/28/2024	20:22	LB133175
	Silver	1290	1250	103	90 - 110	P	10/28/2024	20:22	LB133175
	Sodium	25500	25000	102	90 - 110	P	10/28/2024	20:22	LB133175
	Thallium	5490	5000	110	90 - 110	P	10/28/2024	20:22	LB133175
	Vanadium	2440	2500	98	90 - 110	P	10/28/2024	20:22	LB133175
	Zinc	2620	2500	105	90 - 110	P	10/28/2024	20:22	LB133175
CCV10	Aluminum	10000	10000	100	90 - 110	P	10/28/2024	21:21	LB133175
	Antimony	5270	5000	106	90 - 110	P	10/28/2024	21:21	LB133175
	Arsenic	5180	5000	104	90 - 110	P	10/28/2024	21:21	LB133175
	Barium	9840	10000	98	90 - 110	P	10/28/2024	21:21	LB133175
	Beryllium	242	250	97	90 - 110	P	10/28/2024	21:21	LB133175
	Cadmium	2500	2500	100	90 - 110	P	10/28/2024	21:21	LB133175

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV10	Calcium	23900	25000	96	90 - 110	P	10/28/2024	21:21	LB133175
	Chromium	967	1000	97	90 - 110	P	10/28/2024	21:21	LB133175
	Cobalt	2500	2500	100	90 - 110	P	10/28/2024	21:21	LB133175
	Copper	1300	1250	104	90 - 110	P	10/28/2024	21:21	LB133175
	Iron	4860	5000	97	90 - 110	P	10/28/2024	21:21	LB133175
	Lead	4980	5000	100	90 - 110	P	10/28/2024	21:21	LB133175
	Magnesium	23600	25000	94	90 - 110	P	10/28/2024	21:21	LB133175
	Manganese	2310	2500	92	90 - 110	P	10/28/2024	21:21	LB133175
	Nickel	2500	2500	100	90 - 110	P	10/28/2024	21:21	LB133175
	Potassium	26300	25000	105	90 - 110	P	10/28/2024	21:21	LB133175
	Selenium	5330	5000	107	90 - 110	P	10/28/2024	21:21	LB133175
	Silver	1270	1250	102	90 - 110	P	10/28/2024	21:21	LB133175
	Sodium	25700	25000	103	90 - 110	P	10/28/2024	21:21	LB133175
	Thallium	5330	5000	106	90 - 110	P	10/28/2024	21:21	LB133175
	Vanadium	2420	2500	97	90 - 110	P	10/28/2024	21:21	LB133175
	Zinc	2600	2500	104	90 - 110	P	10/28/2024	21:21	LB133175
CCV11	Aluminum	10100	10000	101	90 - 110	P	10/28/2024	21:38	LB133175
	Antimony	5340	5000	107	90 - 110	P	10/28/2024	21:38	LB133175
	Arsenic	5220	5000	104	90 - 110	P	10/28/2024	21:38	LB133175
	Barium	10100	10000	101	90 - 110	P	10/28/2024	21:38	LB133175
	Beryllium	244	250	98	90 - 110	P	10/28/2024	21:38	LB133175
	Cadmium	2480	2500	99	90 - 110	P	10/28/2024	21:38	LB133175
	Calcium	23800	25000	95	90 - 110	P	10/28/2024	21:38	LB133175
	Chromium	970	1000	97	90 - 110	P	10/28/2024	21:38	LB133175
	Cobalt	2490	2500	100	90 - 110	P	10/28/2024	21:38	LB133175
	Copper	1320	1250	106	90 - 110	P	10/28/2024	21:38	LB133175
	Iron	4970	5000	100	90 - 110	P	10/28/2024	21:38	LB133175
	Lead	4970	5000	99	90 - 110	P	10/28/2024	21:38	LB133175
	Magnesium	23600	25000	94	90 - 110	P	10/28/2024	21:38	LB133175
	Manganese	2330	2500	93	90 - 110	P	10/28/2024	21:38	LB133175
	Nickel	2500	2500	100	90 - 110	P	10/28/2024	21:38	LB133175
	Potassium	27300	25000	109	90 - 110	P	10/28/2024	21:38	LB133175
	Selenium	5380	5000	108	90 - 110	P	10/28/2024	21:38	LB133175
	Silver	1290	1250	103	90 - 110	P	10/28/2024	21:38	LB133175

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV11	Sodium	25900	25000	104	90 - 110	P	10/28/2024	21:38	LB133175
	Thallium	5170	5000	103	90 - 110	P	10/28/2024	21:38	LB133175
	Vanadium	2440	2500	98	90 - 110	P	10/28/2024	21:38	LB133175
	Zinc	2540	2500	102	90 - 110	P	10/28/2024	21:38	LB133175

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.18	0.2	88	40 - 160	CV	10/28/2024	11:23	LB133167
CRI01	Aluminum	102	100	102	40 - 160	P	10/28/2024	13:12	LB133175
	Antimony	50.0	50.0	100	40 - 160	P	10/28/2024	13:12	LB133175
	Arsenic	19.1	20.0	96	40 - 160	P	10/28/2024	13:12	LB133175
	Barium	93.7	100	94	40 - 160	P	10/28/2024	13:12	LB133175
	Beryllium	5.64	6.0	94	40 - 160	P	10/28/2024	13:12	LB133175
	Cadmium	5.55	6.0	92	40 - 160	P	10/28/2024	13:12	LB133175
	Calcium	1930	2000	96	40 - 160	P	10/28/2024	13:12	LB133175
	Chromium	9.13	10.0	91	40 - 160	P	10/28/2024	13:12	LB133175
	Cobalt	29.3	30.0	98	40 - 160	P	10/28/2024	13:12	LB133175
	Copper	21.1	20.0	105	40 - 160	P	10/28/2024	13:12	LB133175
	Iron	98.8	100	99	40 - 160	P	10/28/2024	13:12	LB133175
	Lead	11.5	12.0	96	40 - 160	P	10/28/2024	13:12	LB133175
	Magnesium	1900	2000	95	40 - 160	P	10/28/2024	13:12	LB133175
	Manganese	19.1	20.0	95	40 - 160	P	10/28/2024	13:12	LB133175
	Nickel	39.2	40.0	98	40 - 160	P	10/28/2024	13:12	LB133175
	Potassium	1940	2000	97	40 - 160	P	10/28/2024	13:12	LB133175
	Selenium	17.6	20.0	88	40 - 160	P	10/28/2024	13:12	LB133175
	Silver	11.0	10.0	110	40 - 160	P	10/28/2024	13:12	LB133175
	Sodium	1780	2000	89	40 - 160	P	10/28/2024	13:12	LB133175
	Thallium	34.9	40.0	87	40 - 160	P	10/28/2024	13:12	LB133175
	Vanadium	36.9	40.0	92	40 - 160	P	10/28/2024	13:12	LB133175
	Zinc	37.3	40.0	93	40 - 160	P	10/28/2024	13:12	LB133175

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB55	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	10/28/2024	11:14	LB133167

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB79	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	10/28/2024	11:21	LB133167
CCB80	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	10/28/2024	11:53	LB133167
CCB81	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	10/28/2024	12:14	LB133167

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	13:08	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	13:08	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	13:08	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	13:08	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	13:08	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	13:08	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	13:08	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	13:08	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	13:08	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	13:08	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	13:08	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	13:08	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	13:08	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	13:08	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	13:08	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	13:08	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	13:08	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	13:08	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	13:08	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	13:08	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	13:08	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	13:08	LB133175

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	13:39	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	13:39	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	13:39	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	13:39	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	13:39	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	13:39	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	13:39	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	13:39	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	13:39	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	13:39	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	13:39	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	13:39	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	13:39	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	13:39	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	13:39	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	13:39	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	13:39	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	13:39	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	13:39	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	13:39	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	13:39	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	13:39	LB133175
CCB02	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	14:30	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	14:30	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	14:30	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	14:30	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	14:30	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	14:30	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	14:30	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	14:30	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	14:30	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	14:30	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	14:30	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	14:30	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	14:30	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	14:30	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	14:30	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	14:30	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	14:30	LB133175

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	14:30	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	14:30	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	14:30	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	14:30	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	14:30	LB133175
CCB03	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	15:20	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	15:20	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	15:20	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	15:20	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	15:20	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	15:20	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	15:20	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	15:20	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	15:20	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	15:20	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	15:20	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	15:20	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	15:20	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	15:20	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	15:20	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	15:20	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	15:20	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	15:20	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	15:20	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	15:20	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	15:20	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	15:20	LB133175
CCB04	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	16:10	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	16:10	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	16:10	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	16:10	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	16:10	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	16:10	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	16:10	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	16:10	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	16:10	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	16:10	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	16:10	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	16:10	LB133175

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	16:10	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	16:10	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	16:10	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	16:10	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	16:10	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	16:10	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	16:10	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	16:10	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	16:10	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	16:10	LB133175
CCB05	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	17:01	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	17:01	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	17:01	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	17:01	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	17:01	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	17:01	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	17:01	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	17:01	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	17:01	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	17:01	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	17:01	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	17:01	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	17:01	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	17:01	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	17:01	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	17:01	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	17:01	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	17:01	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	17:01	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	17:01	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	17:01	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	17:01	LB133175
CCB06	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	17:54	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	17:54	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	17:54	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	17:54	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	17:54	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	17:54	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	17:54	LB133175

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	17:54	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	17:54	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	17:54	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	17:54	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	17:54	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	17:54	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	17:54	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	17:54	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	17:54	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	17:54	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	17:54	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	17:54	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	17:54	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	17:54	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	17:54	LB133175
CCB07	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	18:47	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	18:47	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	18:47	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	18:47	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	18:47	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	18:47	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	18:47	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	18:47	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	18:47	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	18:47	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	18:47	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	18:47	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	18:47	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	18:47	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	18:47	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	18:47	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	18:47	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	18:47	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	18:47	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	18:47	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	18:47	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	18:47	LB133175
CCB08	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	19:37	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	19:37	LB133175

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB08	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	19:37	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	19:37	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	19:37	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	19:37	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	19:37	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	19:37	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	19:37	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	19:37	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	19:37	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	19:37	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	19:37	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	19:37	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	19:37	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	19:37	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	19:37	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	19:37	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	19:37	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	19:37	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	19:37	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	19:37	LB133175
CCB09	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	20:26	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	20:26	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	20:26	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	20:26	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	20:26	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	20:26	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	20:26	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	20:26	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	20:26	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	20:26	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	20:26	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	20:26	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	20:26	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	20:26	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	20:26	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	20:26	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	20:26	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	20:26	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	20:26	LB133175

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB09	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	20:26	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	20:26	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	20:26	LB133175
CCB10	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	21:25	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	21:25	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	21:25	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	21:25	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	21:25	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	21:25	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	21:25	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	21:25	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	21:25	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	21:25	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	21:25	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	21:25	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	21:25	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	21:25	LB133175
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	21:25	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	21:25	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	21:25	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	21:25	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	21:25	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	21:25	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	21:25	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	21:25	LB133175
CCB11	Aluminum	100	+/-100	U	80.0	100	P	10/28/2024	21:43	LB133175
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	10/28/2024	21:43	LB133175
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	21:43	LB133175
	Barium	100	+/-100	U	25.0	100	P	10/28/2024	21:43	LB133175
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	21:43	LB133175
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	10/28/2024	21:43	LB133175
	Calcium	2000	+/-2000	U	500	2000	P	10/28/2024	21:43	LB133175
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	21:43	LB133175
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	10/28/2024	21:43	LB133175
	Copper	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	21:43	LB133175
	Iron	100	+/-100	U	80.0	100	P	10/28/2024	21:43	LB133175
	Lead	12.0	+/-12.0	U	9.60	12.0	P	10/28/2024	21:43	LB133175
	Magnesium	2000	+/-2000	U	500	2000	P	10/28/2024	21:43	LB133175
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	10/28/2024	21:43	LB133175

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB11	Nickel	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	21:43	LB133175
	Potassium	2000	+/-2000	U	1600	2000	P	10/28/2024	21:43	LB133175
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	10/28/2024	21:43	LB133175
	Silver	10.0	+/-10.0	U	5.00	10.0	P	10/28/2024	21:43	LB133175
	Sodium	2000	+/-2000	U	1000	2000	P	10/28/2024	21:43	LB133175
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	21:43	LB133175
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	10/28/2024	21:43	LB133175
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	10/28/2024	21:43	LB133175

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- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB164472BL		**WATER**		**Batch Number:**		**PB164472**		**Prep Date:**	**10/25/2024**	
	Mercury	0.20	<0.20	U	0.16	0.20	CV	10/28/2024	11:32	LB133167

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB164404BL		**WATER**		**Batch Number:**		**PB164404**		**Prep Date:**	**10/25/2024**	
	Aluminum	50.0	<50.0	U	40.0	50.0	P	10/28/2024	14:17	LB133175
	Antimony	25.0	<25.0	U	6.25	25.0	P	10/28/2024	14:17	LB133175
	Arsenic	10.0	<10.0	U	8.00	10.0	P	10/28/2024	14:17	LB133175
	Barium	50.0	<50.0	U	12.5	50.0	P	10/28/2024	14:17	LB133175
	Beryllium	3.00	<3.00	U	0.75	3.00	P	10/28/2024	14:17	LB133175
	Cadmium	3.00	<3.00	U	0.75	3.00	P	10/28/2024	14:17	LB133175
	Calcium	1000	<1000	U	250	1000	P	10/28/2024	14:17	LB133175
	Chromium	5.00	<5.00	U	2.50	5.00	P	10/28/2024	14:17	LB133175
	Cobalt	15.0	<15.0	U	3.75	15.0	P	10/28/2024	14:17	LB133175
	Copper	10.0	<10.0	U	8.00	10.0	P	10/28/2024	14:17	LB133175
	Iron	50.0	<50.0	U	40.0	50.0	P	10/28/2024	14:17	LB133175
	Lead	6.00	<6.00	U	4.80	6.00	P	10/28/2024	14:17	LB133175
	Magnesium	1000	<1000	U	250	1000	P	10/28/2024	14:17	LB133175
	Manganese	10.0	<10.0	U	2.50	10.0	P	10/28/2024	14:17	LB133175
	Nickel	20.0	<20.0	U	5.00	20.0	P	10/28/2024	14:17	LB133175
	Potassium	1000	<1000	U	800	1000	P	10/28/2024	14:17	LB133175
	Selenium	10.0	<10.0	U	8.00	10.0	P	10/28/2024	14:17	LB133175
	Silver	5.00	<5.00	U	2.50	5.00	P	10/28/2024	14:17	LB133175
	Sodium	1000	<1000	U	500	1000	P	10/28/2024	14:17	LB133175
	Thallium	20.0	<20.0	U	10.0	20.0	P	10/28/2024	14:17	LB133175
	Vanadium	20.0	<20.0	U	10.0	20.0	P	10/28/2024	14:17	LB133175
	Zinc	20.0	<20.0	U	5.00	20.0	P	10/28/2024	14:17	LB133175

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	251000	255000	98	216000	294000	10/28/2024	13:16	LB133175
	Antimony	-1.00			-50	50	10/28/2024	13:16	LB133175
	Arsenic	2.59			-20	20	10/28/2024	13:16	LB133175
	Barium	2.22	6.0	37	-94	106	10/28/2024	13:16	LB133175
	Beryllium	1.16			-6	6	10/28/2024	13:16	LB133175
	Cadmium	6.97	1.0	697	-5	7	10/28/2024	13:16	LB133175
	Calcium	232000	245000	95	208000	282000	10/28/2024	13:16	LB133175
	Chromium	56.5	52.0	109	42	62	10/28/2024	13:16	LB133175
	Cobalt	2.29			-30	30	10/28/2024	13:16	LB133175
	Copper	-8.35	2.0	418	-18	22	10/28/2024	13:16	LB133175
	Iron	104000	101000	103	85600	116500	10/28/2024	13:16	LB133175
	Lead	8.36			-12	12	10/28/2024	13:16	LB133175
	Magnesium	255000	255000	100	216000	294000	10/28/2024	13:16	LB133175
	Manganese	5.76	7.0	82	-13	27	10/28/2024	13:16	LB133175
	Nickel	3.07	2.0	154	-38	42	10/28/2024	13:16	LB133175
	Potassium	-7.85			0	0	10/28/2024	13:16	LB133175
	Selenium	-9.09			-20	20	10/28/2024	13:16	LB133175
	Silver	3.99			-10	10	10/28/2024	13:16	LB133175
	Sodium	-37.5			0	0	10/28/2024	13:16	LB133175
	Thallium	7.63			-40	40	10/28/2024	13:16	LB133175
	Vanadium	6.67			-40	40	10/28/2024	13:16	LB133175
	Zinc	-2.07			-40	40	10/28/2024	13:16	LB133175
ICSAB01	Aluminum	245000	247000	99	209000	285000	10/28/2024	13:21	LB133175
	Antimony	620	618	100	525	711	10/28/2024	13:21	LB133175
	Arsenic	107	104	103	88.4	120	10/28/2024	13:21	LB133175
	Barium	472	537	88	437	637	10/28/2024	13:21	LB133175
	Beryllium	474	495	96	420	570	10/28/2024	13:21	LB133175
	Cadmium	967	972	100	826	1120	10/28/2024	13:21	LB133175
	Calcium	226000	235000	96	199000	271000	10/28/2024	13:21	LB133175
	Chromium	556	542	103	460	624	10/28/2024	13:21	LB133175
	Cobalt	513	476	108	404	548	10/28/2024	13:21	LB133175
	Copper	491	511	96	434	588	10/28/2024	13:21	LB133175
	Iron	103000	99300	104	84400	114500	10/28/2024	13:21	LB133175
	Lead	55.7	49.0	114	37	61	10/28/2024	13:21	LB133175
	Magnesium	247000	248000	100	210000	286000	10/28/2024	13:21	LB133175
	Manganese	459	507	90	430	584	10/28/2024	13:21	LB133175
	Nickel	1010	954	106	810	1100	10/28/2024	13:21	LB133175
	Potassium	45.1			0	0	10/28/2024	13:21	LB133175
	Selenium	39.8	46.0	86	26	66	10/28/2024	13:21	LB133175
	Silver	212	201	106	170	232	10/28/2024	13:21	LB133175
	Sodium	30.6			0	0	10/28/2024	13:21	LB133175
	Thallium	97.4	108	90	68	148	10/28/2024	13:21	LB133175

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	463	491	94	417	565	10/28/2024	13:21	LB133175
	Zinc	1060	952	111	809	1095	10/28/2024	13:21	LB133175

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4549

contract: TETR06 **lab code:** CHEM **case no.:** P4549 **sas no.:** P4549

matrix: Water **sample id:** P4549-02 **client id:** TT-067-IDWGW-20241024MS

Percent Solids for Sample: NA **Spiked ID:** P4549-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	4.10		0.20	U	4.0	102		CV

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- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4549

contract: TETR06 **lab code:** CHEM **case no.:** P4549 **sas no.:** P4549

matrix: Water **sample id:** P4549-02 **client id:** TT-067-IDWGW-20241024MSD

Percent Solids for Sample: NA **Spiked ID:** P4549-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	3.71		0.20	U	4.0	93		CV

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- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4549

contract: TETR06 **lab code:** CHEM **case no.:** P4549 **sas no.:** P4549

matrix: Water **sample id:** P4549-04 **client id:** TT-069-IDWGW-20241024MS

Percent Solids for Sample: NA **Spiked ID:** P4549-04MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	86 - 115	19900		13000		1000	692		P
Antimony	ug/L	88 - 113	117		25.0	U	400	29	N	P
Arsenic	ug/L	87 - 113	343		10.0	U	400	86	N	P
Barium	ug/L	88 - 113	185		96.5		100	88		P
Beryllium	ug/L	89 - 112	85.6		1.11	J	100	85	N	P
Cadmium	ug/L	88 - 113	86.9		0.50	J	100	86	N	P
Calcium	ug/L	87 - 113	9530		9080		500	89		P
Chromium	ug/L	90 - 113	199		15.1		200	92		P
Cobalt	ug/L	89 - 114	98.6		5.18	J	100	93		P
Copper	ug/L	86 - 114	146		11.2		150	90		P
Iron	ug/L	87 - 115	9820		7460		1500	158		P
Lead	ug/L	86 - 113	428		16.3		500	82	N	P
Magnesium	ug/L	85 - 113	4690		3380		1000	131	N	P
Manganese	ug/L	90 - 114	279		192		100	87	N	P
Nickel	ug/L	88 - 113	242		9.45	J	250	93		P
Potassium	ug/L	86 - 114	5960		1480		5000	90		P
Selenium	ug/L	83 - 114	824		10.0	U	1000	82	N	P
Silver	ug/L	84 - 115	30.3		5.00	U	37.5	81	N	P
Sodium	ug/L	87 - 115	44500		43600		1500	58		P
Thallium	ug/L	85 - 114	777		20.0	U	1000	78	N	P
Vanadium	ug/L	90 - 111	145		13.5	J	150	88	N	P
Zinc	ug/L	87 - 115	130		35.7		100	95		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4549

contract: TETR06 **lab code:** CHEM **case no.:** P4549 **sas no.:** P4549

matrix: Water **sample id:** P4549-04 **client id:** TT-069-IDWGW-20241024MSD

Percent Solids for Sample: NA **Spiked ID:** P4549-04MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	86 - 115	19800		13000		1000	685		P
Antimony	ug/L	88 - 113	116		25.0	U	400	29	N	P
Arsenic	ug/L	87 - 113	342		10.0	U	400	86	N	P
Barium	ug/L	88 - 113	184		96.5		100	88		P
Beryllium	ug/L	89 - 112	86.6		1.11	J	100	85	N	P
Cadmium	ug/L	88 - 113	86.6		0.50	J	100	86	N	P
Calcium	ug/L	87 - 113	9550		9080		500	93		P
Chromium	ug/L	90 - 113	204		15.1		200	94		P
Cobalt	ug/L	89 - 114	98.6		5.18	J	100	93		P
Copper	ug/L	86 - 114	145		11.2		150	90		P
Iron	ug/L	87 - 115	10000		7460		1500	170		P
Lead	ug/L	86 - 113	428		16.3		500	82	N	P
Magnesium	ug/L	85 - 113	4730		3380		1000	135	N	P
Manganese	ug/L	90 - 114	280		192		100	88	N	P
Nickel	ug/L	88 - 113	241		9.45	J	250	93		P
Potassium	ug/L	86 - 114	6060		1480		5000	92		P
Selenium	ug/L	83 - 114	821		10.0	U	1000	82	N	P
Silver	ug/L	84 - 115	30.8		5.00	U	37.5	82	N	P
Sodium	ug/L	87 - 115	45200		43600		1500	103		P
Thallium	ug/L	85 - 114	735		20.0	U	1000	74	N	P
Vanadium	ug/L	90 - 111	145		13.5	J	150	88	N	P
Zinc	ug/L	87 - 115	131		35.7		100	95		P

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Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Matrix: Water **Level:** LOW **Client ID:** TT-069-IDWGW-20241024A

Sample ID: P4549-04 **Spiked ID:** P4549-04A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	88 - 113	117		25.0	U	400	29		P
Arsenic	ug/L	87 - 113	342		10.0	U	400	86		P
Beryllium	ug/L	89 - 112	85.7		1.11	J	100	85		P
Cadmium	ug/L	88 - 113	86.8		0.50	J	100	86		P
Lead	ug/L	86 - 113	427		16.3		500	82		P
Magnesium	ug/L	85 - 113	4710		3380		1000	133		P
Manganese	ug/L	90 - 114	282		192		100	90		P
Selenium	ug/L	83 - 114	829		10.0	U	1000	83		P
Silver	ug/L	84 - 115	29.9		5.00	U	37.5	80		P
Thallium	ug/L	85 - 114	770		20.0	U	1000	77		P
Vanadium	ug/L	90 - 111	145		13.5	J	150	88		P

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Matrix: Water **Sample ID:** P4549-02 **Client ID:** TT-067-IDWGW-20241024DUP

Percent Solids for Sample: NA **Duplicate ID** P4549-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	0.20	U	0.20	U			CV

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Matrix: Water **Sample ID:** P4549-02MS **Client ID:** TT-067-IDWGW-20241024MSD

Percent Solids for Sample: NA **Duplicate ID** P4549-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	4.10		3.71		10		CV

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Matrix: Water **Sample ID:** P4549-04 **Client ID:** TT-069-IDWGW-20241024DUP

Percent Solids for Sample: NA **Duplicate ID** P4549-04DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	13000		13100		1		P
Antimony	ug/L	20	25.0	U	25.0	U			P
Arsenic	ug/L	20	10.0	U	10.0	U			P
Barium	ug/L	20	96.5		96.2		0		P
Beryllium	ug/L	20	1.11	J	1.11	J	0		P
Cadmium	ug/L	20	0.50	J	0.51	J	3		P
Calcium	ug/L	20	9080		9070		0		P
Chromium	ug/L	20	15.1		15.0		1		P
Cobalt	ug/L	20	5.18	J	5.21	J	1		P
Copper	ug/L	20	11.2		11.0		2		P
Iron	ug/L	20	7460		7700		3		P
Lead	ug/L	20	16.3		15.9		2		P
Magnesium	ug/L	20	3380		3400		1		P
Manganese	ug/L	20	192		191		1		P
Nickel	ug/L	20	9.45	J	9.28	J	2		P
Potassium	ug/L	20	1480		1510		2		P
Selenium	ug/L	20	10.0	U	10.0	U			P
Silver	ug/L	20	5.00	U	5.00	U			P
Sodium	ug/L	20	43600		45100		3		P
Thallium	ug/L	20	20.0	U	20.0	U			P
Vanadium	ug/L	20	13.5	J	13.1	J	3		P
Zinc	ug/L	20	35.7		32.4		10		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Matrix: Water **Sample ID:** P4549-04MS **Client ID:** TT-069-IDWGW-20241024MSD

Percent Solids for Sample: NA **Duplicate ID** P4549-04MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	19900		19800		1		P
Antimony	ug/L	20	117		116		1		P
Arsenic	ug/L	20	343		342		0		P
Barium	ug/L	20	185		184		1		P
Beryllium	ug/L	20	85.6		86.6		1		P
Cadmium	ug/L	20	86.9		86.6		0		P
Calcium	ug/L	20	9530		9550		0		P
Chromium	ug/L	20	199		204		2		P
Cobalt	ug/L	20	98.6		98.6		0		P
Copper	ug/L	20	146		145		1		P
Iron	ug/L	20	9820		10000		2		P
Lead	ug/L	20	428		428		0		P
Magnesium	ug/L	20	4690		4730		1		P
Manganese	ug/L	20	279		280		0		P
Nickel	ug/L	20	242		241		0		P
Potassium	ug/L	20	5960		6060		2		P
Selenium	ug/L	20	824		821		0		P
Silver	ug/L	20	30.3		30.8		2		P
Sodium	ug/L	20	44500		45200		2		P
Thallium	ug/L	20	777		735		6		P
Vanadium	ug/L	20	145		145		0		P
Zinc	ug/L	20	130		131		1		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB164404BS							
Aluminum	ug/L	1000	939		94	86 - 115	P
Antimony	ug/L	400	387		97	88 - 113	P
Arsenic	ug/L	400	360		90	87 - 113	P
Barium	ug/L	100	89.7		90	88 - 113	P
Beryllium	ug/L	100	93.6		94	89 - 112	P
Cadmium	ug/L	100	89.4		89	88 - 113	P
Calcium	ug/L	500	484	J	97	87 - 113	P
Chromium	ug/L	200	192		96	90 - 113	P
Cobalt	ug/L	100	95.8		96	89 - 114	P
Copper	ug/L	150	153		102	86 - 114	P
Iron	ug/L	1500	1450		97	87 - 115	P
Lead	ug/L	500	453		91	86 - 113	P
Magnesium	ug/L	1000	910	J	91	85 - 113	P
Manganese	ug/L	100	91.5		92	90 - 114	P
Nickel	ug/L	250	241		96	88 - 113	P
Potassium	ug/L	5000	4860		97	86 - 114	P
Selenium	ug/L	1000	917		92	83 - 114	P
Silver	ug/L	37.5	37.7		100	84 - 115	P
Sodium	ug/L	1500	1360		91	87 - 115	P
Thallium	ug/L	1000	884		88	85 - 114	P
Vanadium	ug/L	150	140		93	90 - 111	P
Zinc	ug/L	100	102		102	87 - 115	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB164472BS							
Mercury	ug/L	4.0	3.89		97	82 - 119	CV

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

TT-067-IDWGW-20241024L

Lab Name: Chemtech Consulting Group **Contract:** TETR06

Lab Code: CHEM **Lb No.:** lb133167 **Lab Sample ID :** P4549-02L **SDG No.:** P4549

Matrix (soil/water): Water **Level (low/med):** LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.20	U	1.00	U			CV

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

TT-069-IDWGW-20241024L

Lab Name: Chemtech Consulting Group **Contract:** TETR06

Lab Code: CHEM **Lb No.:** lb133175 **Lab Sample ID :** P4549-04L **SDG No.:** P4549

Matrix (soil/water): Water **Level (low/med):** LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	13000		13500		4		P
Antimony	25.0	U	125	U			P
Arsenic	10.0	U	50.0	U			P
Barium	96.5		91.8	J	5		P
Beryllium	1.11	J	1.09	J	2		P
Cadmium	0.50	J	15.0	U	100.0		P
Calcium	9080		9360		3		P
Chromium	15.1		13.5	J	11		P
Cobalt	5.18	J	5.11	J	1		P
Copper	11.2		50.0	U	100.0		P
Iron	7460		7570		1		P
Lead	16.3		30.0	U	100.0		P
Magnesium	3380		3490	J	3		P
Manganese	192		196		2		P
Nickel	9.45	J	9.77	J	3		P
Potassium	1480		5000	U	100.0		P
Selenium	10.0	U	50.0	U			P
Silver	5.00	U	25.0	U			P
Sodium	43600		43000		1		P
Thallium	20.0	U	100	U			P
Vanadium	13.5	J	100	U	100.0		P
Zinc	35.7		25.1	J	30		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	Ag
Aluminum	396.100	0.0000000	-0.0002060	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	-0.0075970	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0001050	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: As	Ba	Be	Cd	Co
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0039600
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0054900
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Cr	Cu	K	Mn	Mo
Aluminum	396.100	0.0000000	0.0000000	0.0000590	0.0000000	0.0396900
Antimony	206.833	0.0122000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	-0.0000710	-0.0003400
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007860
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Iron	240.488	0.0000000	0.0000000	0.0000730	0.0000000	-0.0015250
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0017400	-0.0100400
Vanadium	292.402	-0.0025100	0.0000000	0.0000000	0.0000000	-0.0072000
Zinc	213.800	0.0000000	0.0009010	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Na	Ni	Pb	Sb	Se
Aluminum	396.100	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Iron	240.488	0.0000000	-0.0017000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0067600	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4549 **SAS No.:** P4549

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Sn	Ti	Tl	V	Zn
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	-0.0035600	-0.0007970	0.0000000	-0.0018900	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Cobalt	228.616	0.0000000	0.0018800	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	-0.0039700	0.0000000	-0.0115600	0.0000000
Vanadium	292.402	0.0000000	0.0005320	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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Fax : 908 789 8922

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Method:**

Case No.: P4549 **SAS No.:** P4549

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB164404**						
P4549-02	TT-067-IDWGW-20241024	SAM	WATER	10/25/2024	50.0	25.0	
P4549-03	TT-068-IDWGW-20241024	SAM	WATER	10/25/2024	50.0	25.0	
P4549-04	TT-069-IDWGW-20241024	SAM	WATER	10/25/2024	50.0	25.0	
P4549-04DUP	TT-069-IDWGW-20241024DUP	DUP	WATER	10/25/2024	50.0	25.0	
P4549-04MS	TT-069-IDWGW-20241024MS	MS	WATER	10/25/2024	50.0	25.0	
P4549-04MSD	TT-069-IDWGW-20241024MSD	MSD	WATER	10/25/2024	50.0	25.0	
PB164404BL	PB164404BL	MB	WATER	10/25/2024	50.0	25.0	
PB164404BS	PB164404BS	LCS	WATER	10/25/2024	50.0	25.0	

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Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4549

Contract: TETR06 **Lab Code:** CHEM **Method:**

Case No.: P4549 **SAS No.:** P4549

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB164472**						
P4549-02	TT-067-IDWGW-20241024	SAM	WATER	10/25/2024	30.0	30.0	
P4549-02DUP	TT-067-IDWGW-20241024DUP	DUP	WATER	10/25/2024	30.0	30.0	
P4549-02MS	TT-067-IDWGW-20241024MS	MS	WATER	10/25/2024	30.0	30.0	
P4549-02MSD	TT-067-IDWGW-20241024MSD	MSD	WATER	10/25/2024	30.0	30.0	
P4549-03	TT-068-IDWGW-20241024	SAM	WATER	10/25/2024	30.0	30.0	
P4549-04	TT-069-IDWGW-20241024	SAM	WATER	10/25/2024	30.0	30.0	
PB164472BL	PB164472BL	MB	WATER	10/25/2024	30.0	30.0	
PB164472BS	PB164472BS	LCS	WATER	10/25/2024	30.0	30.0	

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metals
- 14 -
ANALYSIS RUN LOG

Client: Tetra Tech NUS, Inc. **Contract:** TETR06

Lab code: CHEM **Case no.:** P4549 **Sas no.:** P4549 **Sdg no.:** P4549

Instrument id number: **Method:** **Run number:** LB133167

Start date: 10/28/2024 **End date:** 10/28/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1044	HG
S0.2	S0.2	1	1051	HG
S2.5	S2.5	1	1053	HG
S5	S5	1	1056	HG
S7.5	S7.5	1	1101	HG
S10	S10	1	1105	HG
ICV55	ICV55	1	1109	HG
ICB55	ICB55	1	1114	HG
CCV79	CCV79	1	1116	HG
CCB79	CCB79	1	1121	HG
CRA	CRA	1	1123	HG
PB164472BL	PB164472BL	1	1132	HG
PB164472BS	PB164472BS	1	1135	HG
P4549-02	TT-067-IDWGW-20241024	1	1137	HG
P4549-02DUP	TT-067-IDWGW-20241024DUP	1	1139	HG
P4549-02MS	TT-067-IDWGW-20241024MS	1	1142	HG
P4549-02MSD	TT-067-IDWGW-20241024MSD	1	1144	HG
P4549-03	TT-068-IDWGW-20241024	1	1146	HG
CCV80	CCV80	1	1148	HG
CCB80	CCB80	1	1153	HG
P4549-04	TT-069-IDWGW-20241024	1	1156	HG
P4549-02L	TT-067-IDWGW-20241024L	5	1205	HG
CCV81	CCV81	1	1209	HG
CCB81	CCB81	1	1214	HG

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metals
- 14 -
ANALYSIS RUN LOG

Client: Tetra Tech NUS, Inc. **Contract:** TETR06

Lab code: CHEM **Case no.:** P4549 **Sas no.:** P4549 **Sdg no.:** P4549

Instrument id number: **Method:** **Run number:** LB133175

Start date: 10/28/2024 **End date:** 10/28/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1158	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1203	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1207	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1211	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1216	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1220	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1257	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1304	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1308	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1312	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1316	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1321	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1335	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1339	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-02	TT-067-IDWGW-20241024	1	1344	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-03	TT-068-IDWGW-20241024	1	1348	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-04	TT-069-IDWGW-20241024	1	1352	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-04DUP	TT-069-IDWGW-20241024DUP	1	1357	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-04L	TT-069-IDWGW-20241024L	5	1401	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-04MS	TT-069-IDWGW-20241024MS	1	1405	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-04MSD	TT-069-IDWGW-20241024MSD	1	1409	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4549-04A	TT-069-IDWGW-20241024A	1	1413	Ag,As,Be,Cd,Mg,Mn,Pb,Sb,Se,Tl,V
PB164404BL	PB164404BL	1	1417	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB164404BS	PB164404BS	1	1421	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1425	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1430	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1515	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1520	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1606	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1610	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV05	CCV05	1	1657	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB05	CCB05	1	1701	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV06	CCV06	1	1750	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB06	CCB06	1	1754	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV07	CCV07	1	1843	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB07	CCB07	1	1847	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV08	CCV08	1	1933	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB08	CCB08	1	1937	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV09	CCV09	1	2022	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB09	CCB09	1	2026	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV10	CCV10	1	2121	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

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metals
- 14 -
ANALYSIS RUN LOG

Client: Tetra Tech NUS, Inc. **Contract:** TETR06

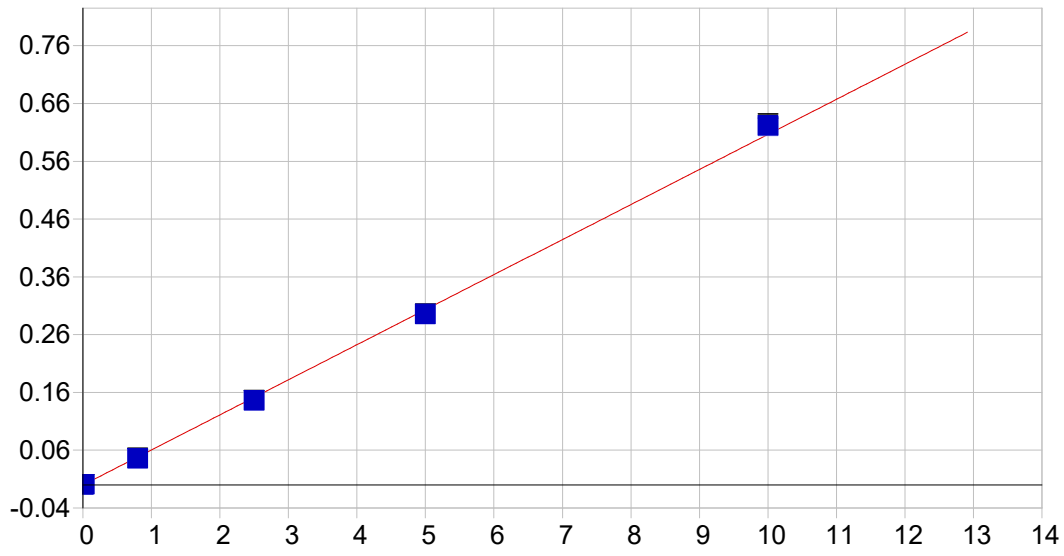
Lab code: CHEM **Case no.:** P4549 **Sas no.:** P4549 **Sdg no.:** P4549

Instrument id number: **Method:** **Run number:** LB133175

Start date: 10/28/2024 **End date:** 10/28/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
CCB10	CCB10	1	2125	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV11	CCV11	1	2138	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB11	CCB11	1	2143	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

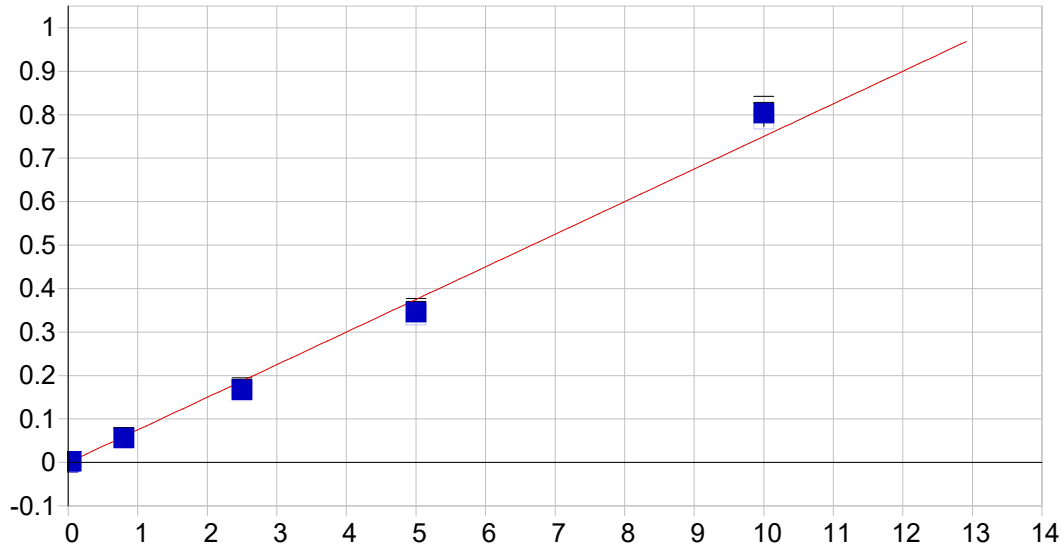


As 189.042 {479}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000180	Re-Slope:	1.000000
A1 (Gain):	0.060668	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999615	Status:	OK.
Std Error of Est:	0.000039		
Predicted MDL:	0.002044		
Predicted MQL:	0.006812		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00018	.000	1
S1	.02000	.01865	-.001	-6.77	.00095	.000	1
S3	2.5000	2.4108	-.089	-3.57	.14591	.000	1
S4	5.0000	4.8794	-.121	-2.41	.29551	.001	1
S5	10.000	10.248	.248	2.48	.62092	.004	1
S2	.80000	.76271	-.037	-4.66	.04604	.000	1

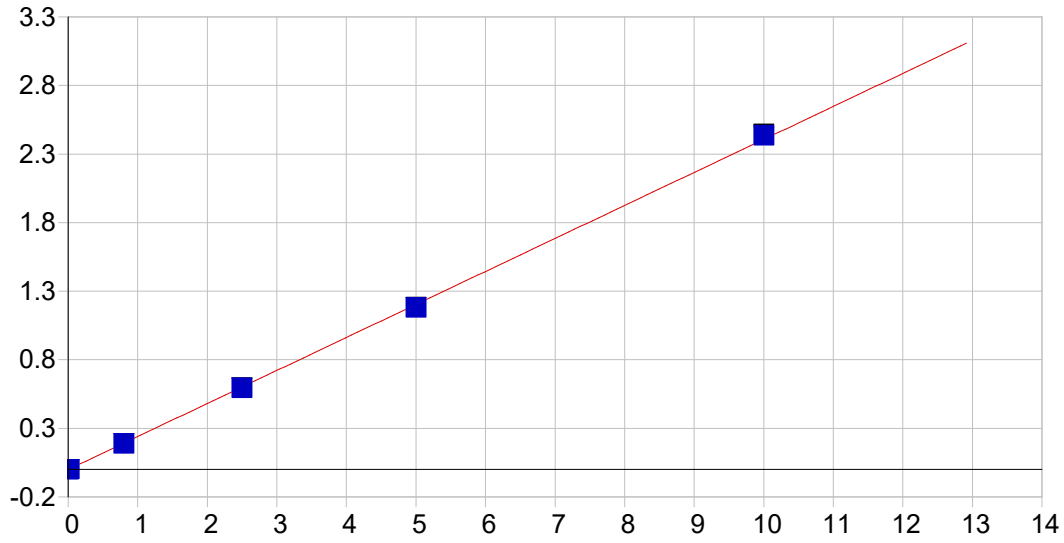


Tl 190.856 {477}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000127	Re-Slope:	1.000000
A1 (Gain):	0.075019	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996809	Status:	OK.
Std Error of Est:	0.000195		
Predicted MDL:	0.001408		
Predicted MQL:	0.004694		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00013	.000	1
S1	.04000	.03359	-.006	-16.0	.00220	.000	1
S3	2.5000	2.2338	-.266	-10.6	.16399	.004	1
S4	5.0000	4.6085	-.391	-7.83	.33869	.009	1
S5	10.000	10.711	.711	7.11	.78956	.016	1
S2	.80000	.75319	-.047	-5.85	.05527	.001	1

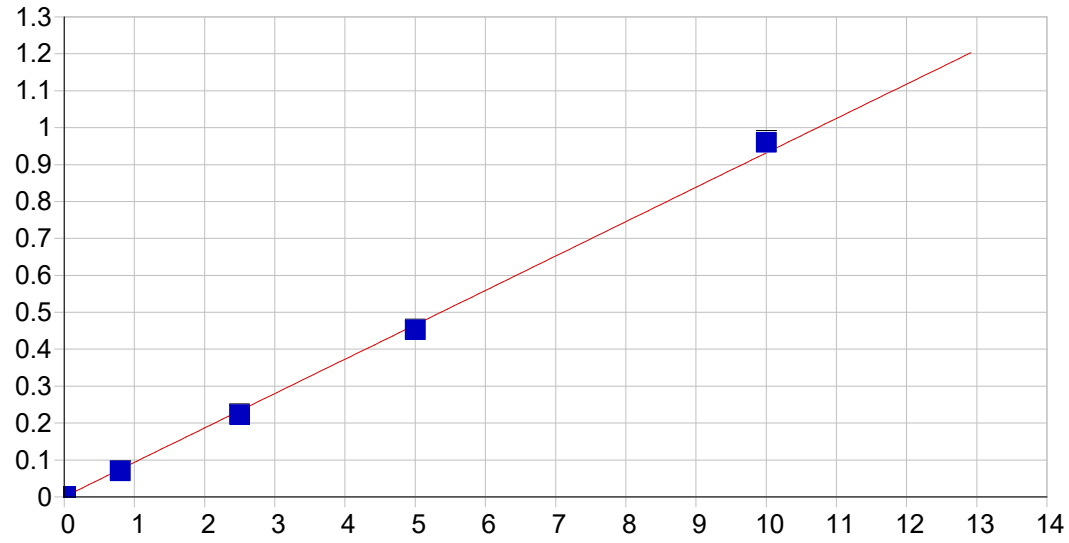


Pb 220.353 {453}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000180	Re-Slope:	1.000000
A1 (Gain):	0.240681	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999896	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.000938		
Predicted MQL:	0.003126		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00018	.000	1
S1	.01200	.01082	-.001	-9.87	.00237	.000	1
S3	2.5000	2.4721	-.028	-1.11	.59415	.001	1
S4	5.0000	4.9110	-.089	-1.78	1.1805	.001	1
S5	10.000	10.128	.128	1.28	2.4349	.009	1
S2	.80000	.78975	-.010	-1.28	.18969	.000	1

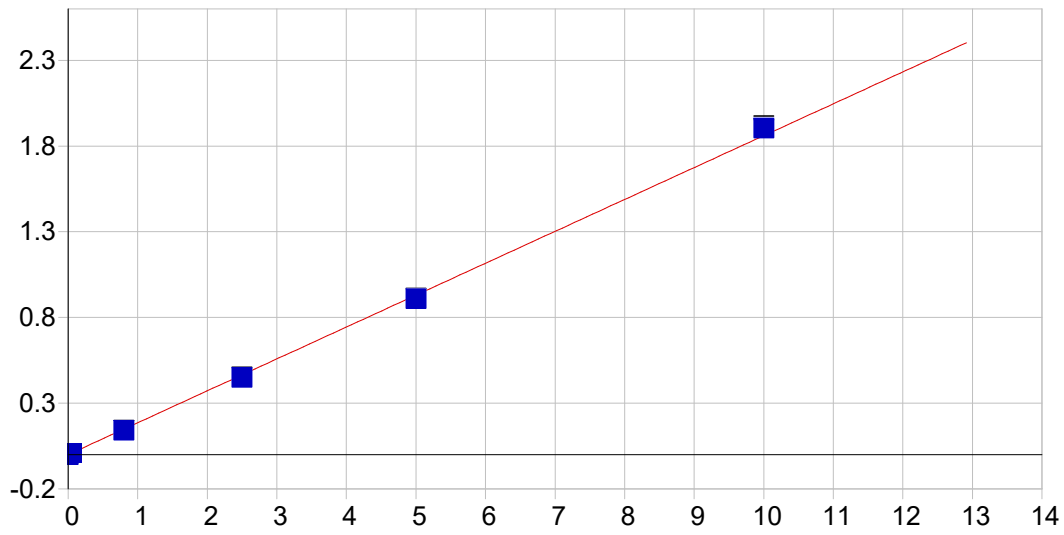


Se 196.090 {472}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000475	Re-Slope:	1.000000
A1 (Gain):	0.093119	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999416	Status:	OK.
Std Error of Est:	0.000075		
Predicted MDL:	0.001785		
Predicted MQL:	0.005949		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00048	.000	1
S1	.02000	.01683	-.003	-15.9	.00204	.000	1
S3	2.5000	2.3900	-.110	-4.40	.22298	.001	1
S4	5.0000	4.8563	-.144	-2.87	.45257	.002	1
S5	10.000	10.303	.303	3.03	.95969	.006	1
S2	.80000	.75332	-.047	-5.84	.07060	.000	1

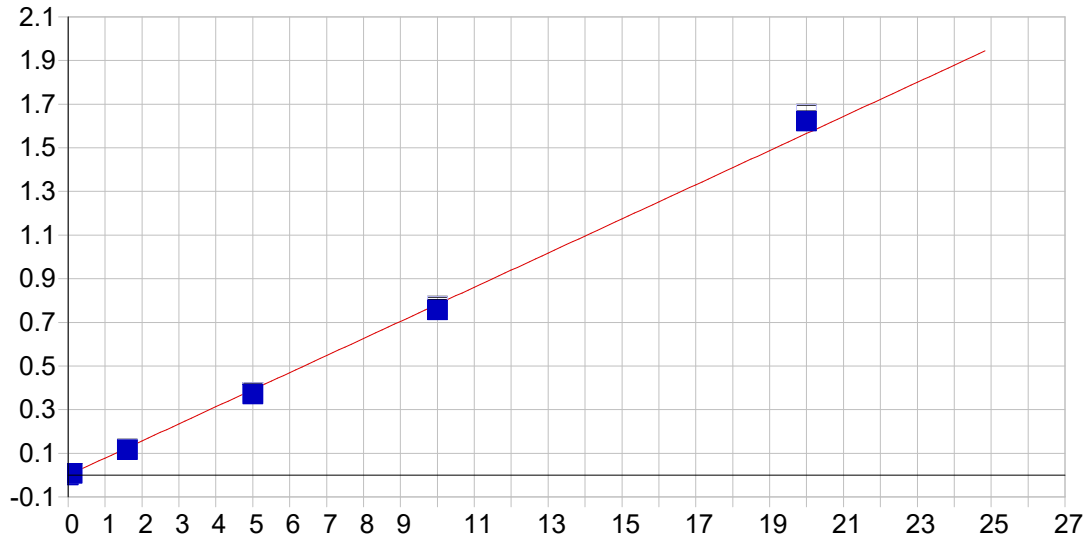


Sb 206.833 {463}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000133	Re-Slope:	1.000000
A1 (Gain):	0.186031	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999659	Status:	OK.
Std Error of Est:	0.000181		
Predicted MDL:	0.001093		
Predicted MQL:	0.003644		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00013	.000	1
S1	.05000	.04651	-.003	-6.98	.00880	.000	1
S3	2.5000	2.4182	-.082	-3.27	.45126	.001	1
S4	5.0000	4.8895	-.110	-2.21	.91226	.000	1
S5	10.000	10.234	.234	2.34	1.9089	.010	1
S2	.80000	.76223	-.038	-4.72	.14233	.000	1

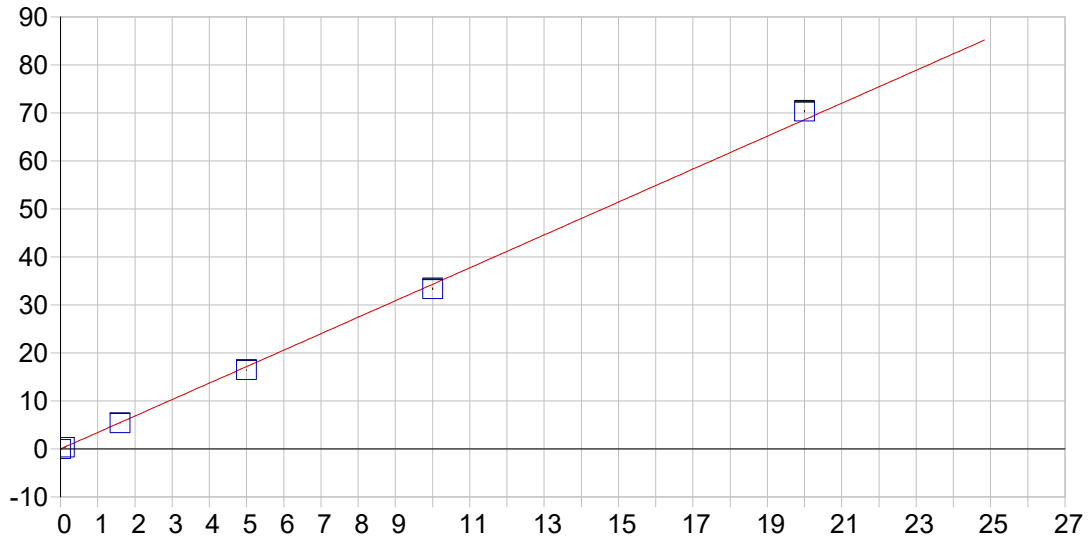


Al 396.152 { 85}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000090	Re-Slope:	1.000000
A1 (Gain):	0.078281	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999218	Status:	OK.
Std Error of Est:	0.000234		
Predicted MDL:	0.005132		
Predicted MQL:	0.017106		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00009	.000	1
S1	.10000	.09972	-.000	-.276	.00832	.000	1
S3	5.0000	4.7316	-.268	-5.37	.37790	.001	1
S4	10.000	9.6710	-.329	-3.29	.77215	.002	1
S5	20.000	20.716	.716	3.58	1.6520	.002	1
S2	1.6000	1.4812	-.119	-7.42	.11829	.000	1

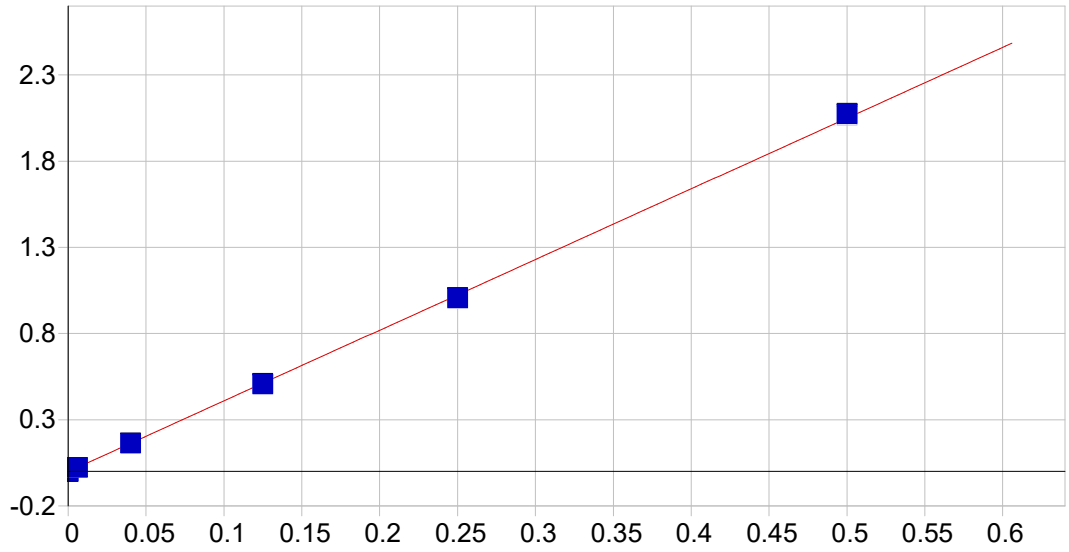


Ba 493.409 { 68}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.004741	Re-Slope:	1.000000
A1 (Gain):	3.429821	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999595	Status:	OK.
Std Error of Est:	0.007237		
Predicted MDL:	0.000397		
Predicted MQL:	0.001322		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00472	.001	1
S1	.10000	.10007	.000	.073	.33849	.001	1
S3	5.0000	4.7950	-.205	-4.10	16.441	.032	1
S4	10.000	9.7265	-.274	-2.74	33.355	.173	1
S5	20.000	20.512	.512	2.56	70.348	.166	1
S2	1.6000	1.5662	-.034	-2.11	5.3671	.021	1

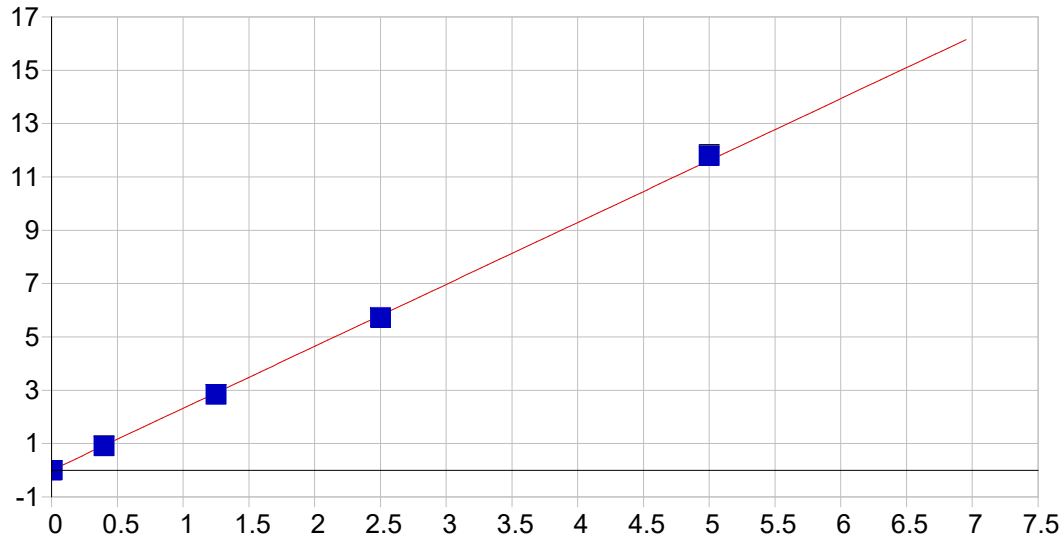


Be 234.861 {144}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000680	Re-Slope:	1.000000
A1 (Gain):	4.100616	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999891	Status:	OK.
Std Error of Est:	0.000173		
Predicted MDL:	0.000050		
Predicted MQL:	0.000167		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00068	.000	1
S1	.00600	.00559	-.000	-6.85	.02206	.000	1
S3	.12500	.12367	-.001	-1.07	.50414	.004	1
S4	.25000	.24553	-.004	-1.79	1.0016	.003	1
S5	.50000	.50618	.006	1.24	2.0658	.004	1
S2	.04000	.04003	.000	.076	.16274	.001	1

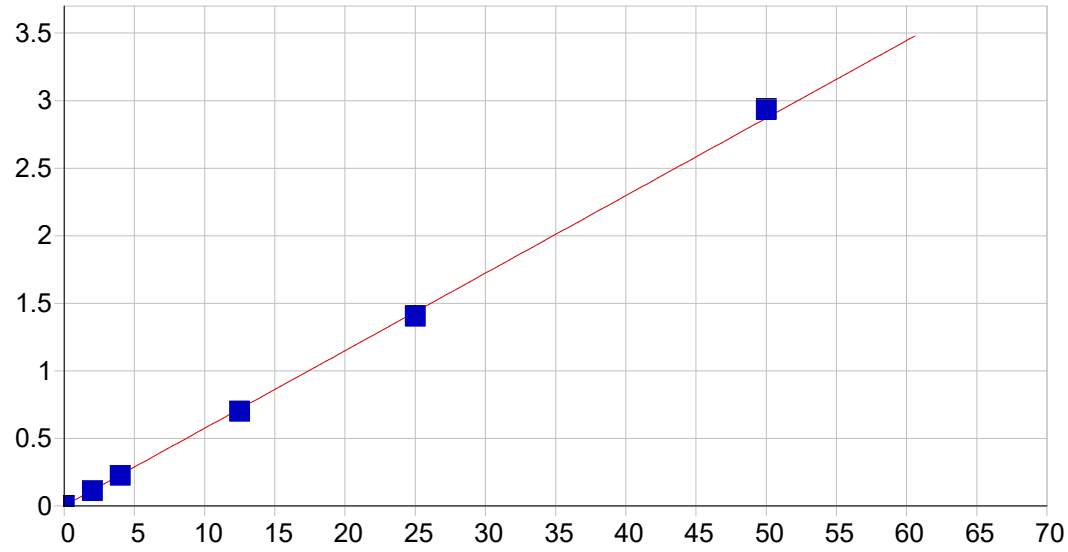


Cd 226.502 {449}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000104	Re-Slope:	1.000000
A1 (Gain):	2.322652	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999859	Status:	OK.
Std Error of Est:	0.000354		
Predicted MDL:	0.000074		
Predicted MQL:	0.000247		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00010	.000	1
S1	.00600	.00541	-.001	-9.86	.01251	.000	1
S3	1.2500	1.2224	-.028	-2.20	2.8412	.004	1
S4	2.5000	2.4643	-.036	-1.43	5.7275	.006	1
S5	5.0000	5.0748	.075	1.50	11.795	.038	1
S2	.40000	.38914	-.011	-2.72	.90437	.002	1

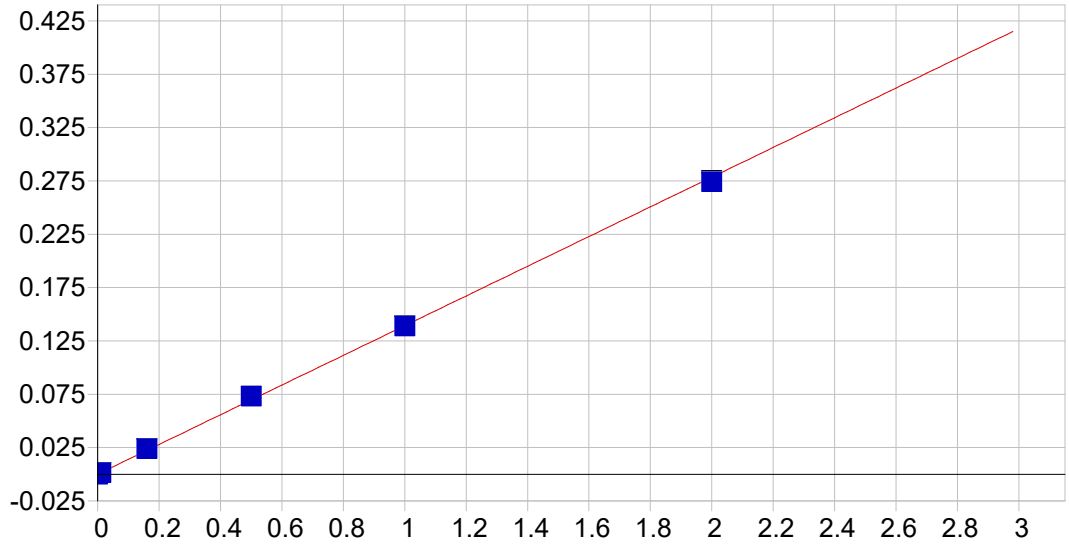


Ca 373.690 { 90}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000986	Re-Slope:	1.000000
A1 (Gain):	0.057390	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999726	Status:	OK.
Std Error of Est:	0.000710		
Predicted MDL:	0.006795		
Predicted MQL:	0.022652		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00018	.000	.000	.00100	.000	1
S2	4.0000	3.9009	-.099	-2.48	.22486	.001	1
S3	12.500	12.165	-.335	-2.68	.69916	.003	1
S4	25.000	24.424	-.576	-2.30	1.4027	.003	1
S5	50.000	51.086	1.09	2.17	2.9328	.008	1
S1	2.0000	1.9242	-.076	-3.79	.11141	.001	1

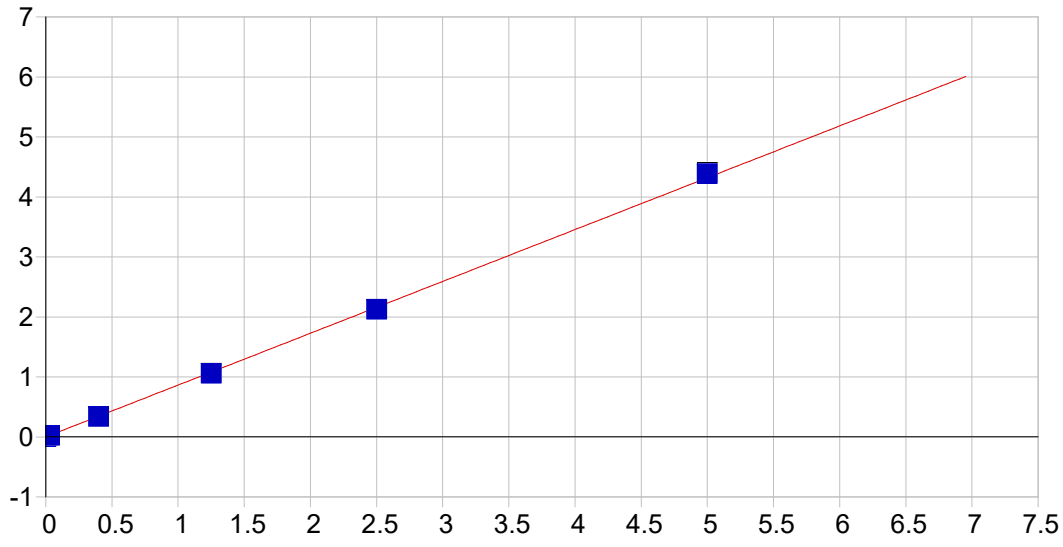


Cr 267.716 {126}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000032	Re-Slope:	1.000000
A1 (Gain):	0.139251	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999670	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.000444		
Predicted MQL:	0.001479		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.01000	.00978	-.000	-2.18	.00139	.000	1
S3	.50000	.52372	.024	4.74	.07298	.000	1
S4	1.0000	.99748	-.003	-.252	.13897	.000	1
S5	2.0000	1.9679	-.032	-1.61	.27415	.001	1
S2	.16000	.17113	.011	6.95	.02387	.000	1

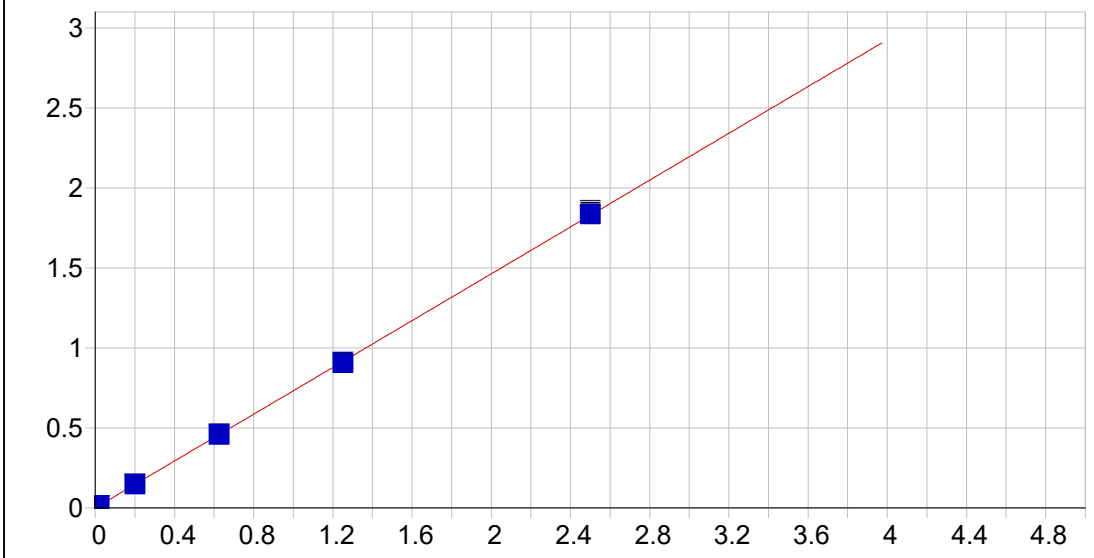


Co 228.616 {448}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000067	Re-Slope:	1.000000
A1 (Gain):	0.863862	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999850	Status:	OK.
Std Error of Est:	0.000304		
Predicted MDL:	0.000179		
Predicted MQL:	0.000596		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00006	.000	1
S1	.03000	.02866	-.001	-4.46	.02458	.000	1
S3	1.2500	1.2241	-.026	-2.08	1.0592	.002	1
S4	2.5000	2.4575	-.043	-1.70	2.1265	.001	1
S5	5.0000	5.0787	.079	1.57	4.3945	.015	1
S2	.40000	.39114	-.009	-2.21	.33841	.000	1

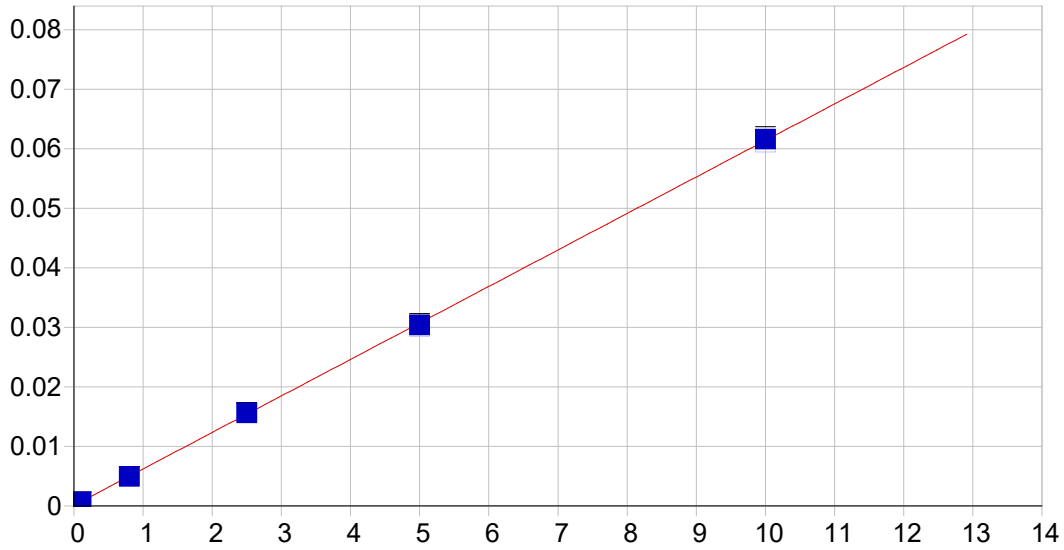


Cu 224.700 {450}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000453	Re-Slope:	1.000000
A1 (Gain):	0.731453	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.000363		
Predicted MQL:	0.001209		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00045	.000	1
S1	.02000	.02013	.000	.652	.01536	.000	1
S3	.62500	.62540	.000	.065	.46226	.001	1
S4	1.2500	1.2387	-.011	-.906	.91520	.001	1
S5	2.5000	2.5093	.009	.373	1.8533	.007	1
S2	.20000	.20147	.001	.733	.14921	.000	1

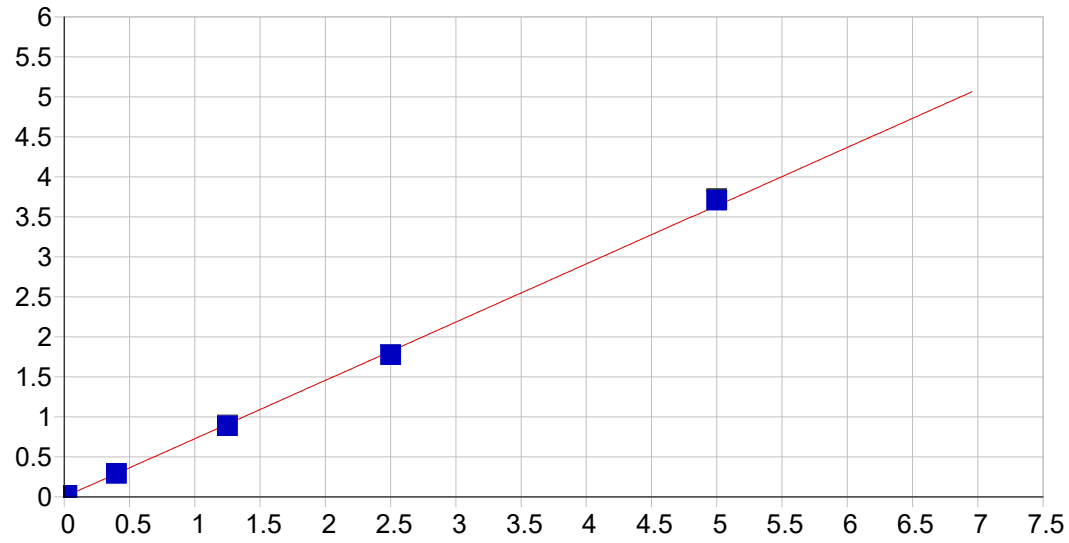


Fe 240.488 {140}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000086	Re-Slope:	1.000000
A1 (Gain):	0.006133	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999953	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.003813		
Predicted MQL:	0.012710		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00009	.000	1
S1	.10000	.09692	-.003	-3.08	.00067	.000	1
S3	2.5000	2.5400	.040	1.60	.01553	.000	1
S4	5.0000	4.9363	-.064	-1.27	.03010	.000	1
S5	10.000	10.033	.033	.330	.06109	.000	1
S2	.80000	.79372	-.006	-.785	.00491	.000	1

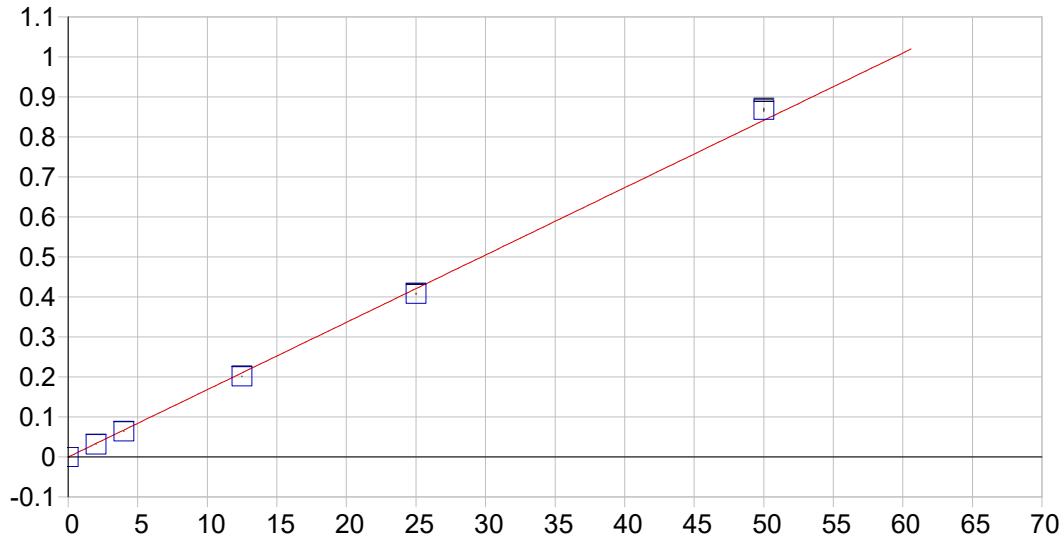


Mn 257.610 {131}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000076	Re-Slope:	1.000000
A1 (Gain):	0.728139	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999775	Status:	OK.
Std Error of Est:	0.000256		
Predicted MDL:	0.000235		
Predicted MQL:	0.000782		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00008	.000	1
S1	.02000	.01979	-.000	-1.07	.01449	.000	1
S3	1.2500	1.2198	-.030	-2.41	.88845	.006	1
S4	2.5000	2.4363	-.064	-2.55	1.7744	.000	1
S5	5.0000	5.0940	.094	1.88	3.7100	.013	1
S2	.40000	.40010	.000	.025	.29146	.001	1

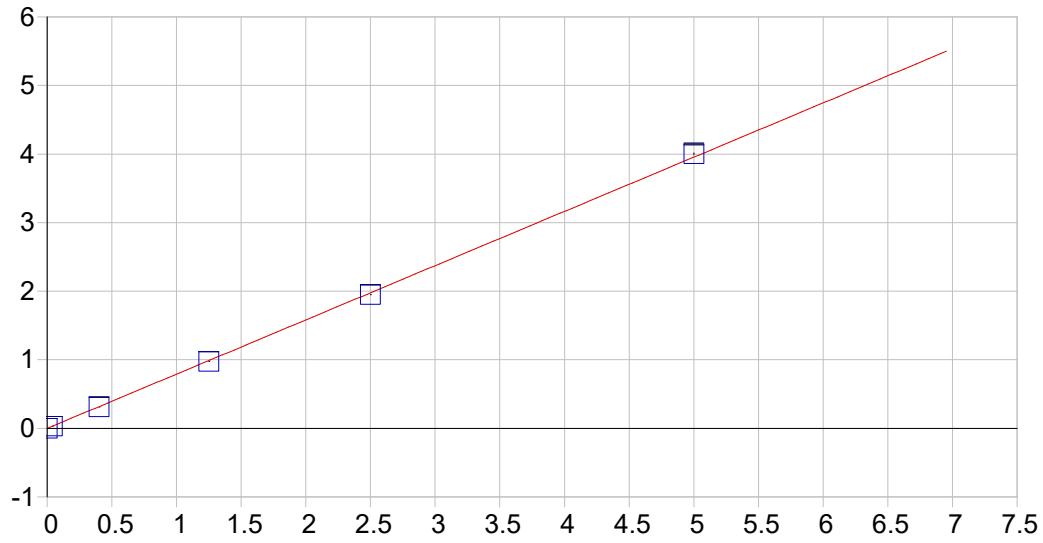


Mg 279.079 {121}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000147	Re-Slope:	1.000000
A1 (Gain):	0.016830	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999410	Status:	OK.
Std Error of Est:	0.000306		
Predicted MDL:	0.010562		
Predicted MQL:	0.035206		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00030	.000	.000	-.00014	.000	1
S2	4.0000	3.7978	-.202	-5.06	.06377	.000	1
S3	12.500	11.985	-.515	-4.12	.20156	.001	1
S4	25.000	24.258	-.742	-2.97	.40811	.002	1
S5	50.000	51.578	1.58	3.16	.86792	.004	1
S1	2.0000	1.8809	-.119	-5.95	.03151	.000	1

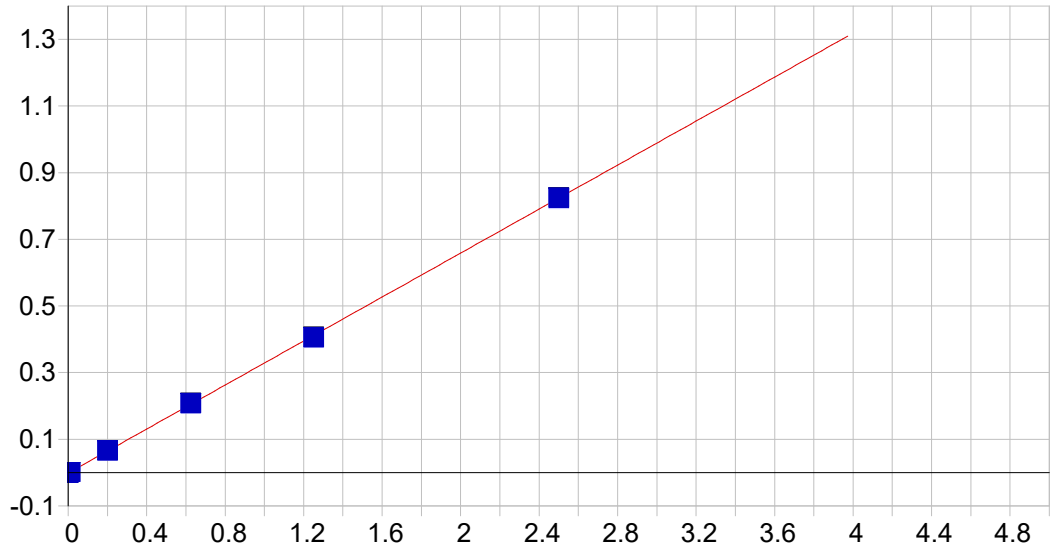


Ni 231.604 {446}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000337	Re-Slope:	1.000000
A1 (Gain):	0.790932	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999908	Status:	OK.
Std Error of Est:	0.000251		
Predicted MDL:	0.000237		
Predicted MQL:	0.000789		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00033	.000	1
S1	.04000	.03781	-.002	-5.48	.02957	.000	1
S3	1.2500	1.2315	-.019	-1.48	.97366	.002	1
S4	2.5000	2.4655	-.034	-1.38	1.9497	.002	1
S5	5.0000	5.0607	.061	1.21	4.0023	.014	1
S2	.40000	.39452	-.005	-1.37	.31170	.000	1

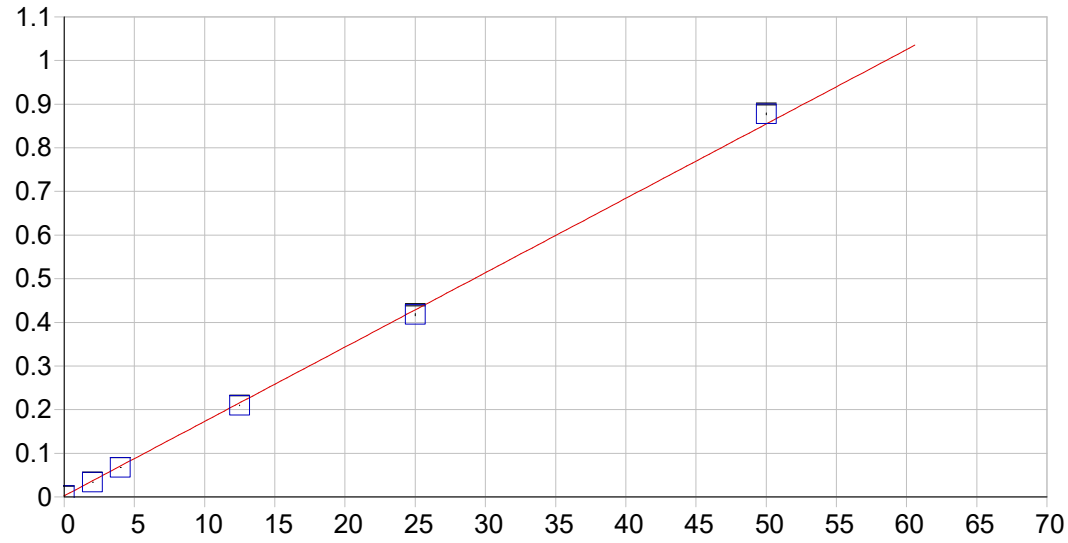


Ag 328.068 {103}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001253	Re-Slope:	1.000000
A1 (Gain):	0.330009	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	0.000298		
Predicted MQL:	0.000994		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00125	.000	1
S1	.01000	.01004	.000	.377	.00204	.000	1
S3	.62500	.63410	.009	1.46	.20719	.000	1
S4	1.2500	1.2347	-.015	-1.22	.40458	.000	1
S5	2.5000	2.5026	.003	.104	.82135	.001	1
S2	.20000	.20354	.004	1.77	.06566	.000	1

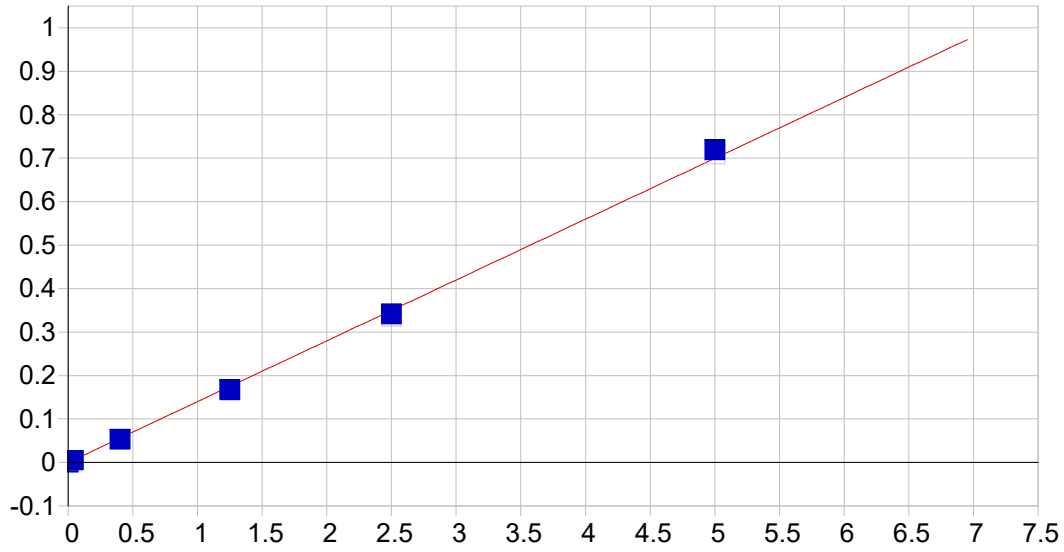


Na 589.592 { 57}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002627	Re-Slope:	1.000000
A1 (Gain):	0.017040	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999526	Status:	OK.
Std Error of Est:	0.000278		
Predicted MDL:	0.008489		
Predicted MQL:	0.028298		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00033	.000	.000	.00263	.000	1
S2	4.0000	3.8063	-.194	-4.84	.06749	.000	1
S3	12.500	12.150	-.350	-2.80	.20966	.001	1
S4	25.000	24.367	-.633	-2.53	.41783	.003	1
S5	50.000	51.358	1.36	2.72	.87775	.002	1
S1	2.0000	1.8184	-.182	-9.08	.03361	.000	1

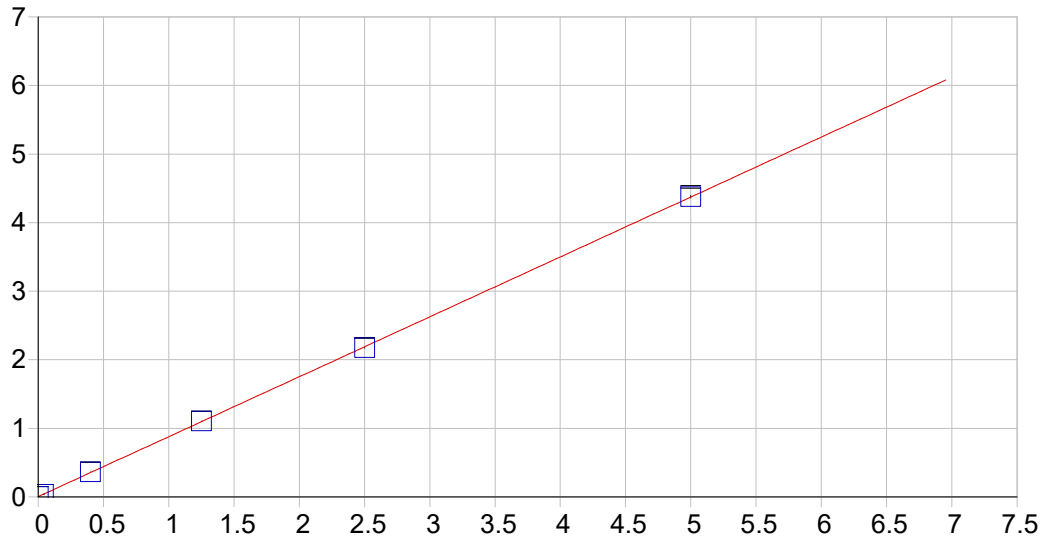


V 292.402 {115}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000009	Re-Slope:	1.000000
A1 (Gain):	0.139923	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999502	Status:	OK.
Std Error of Est:	0.000102		
Predicted MDL:	0.001304		
Predicted MQL:	0.004348		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00001	.000	1
S1	.04000	.03793	-.002	-5.16	.00511	.000	1
S3	1.2500	1.1977	-.052	-4.18	.16505	.001	1
S4	2.5000	2.4368	-.063	-2.53	.33587	.001	1
S5	5.0000	5.1389	.139	2.78	.70886	.001	1
S2	.40000	.37861	-.021	-5.35	.05217	.000	1

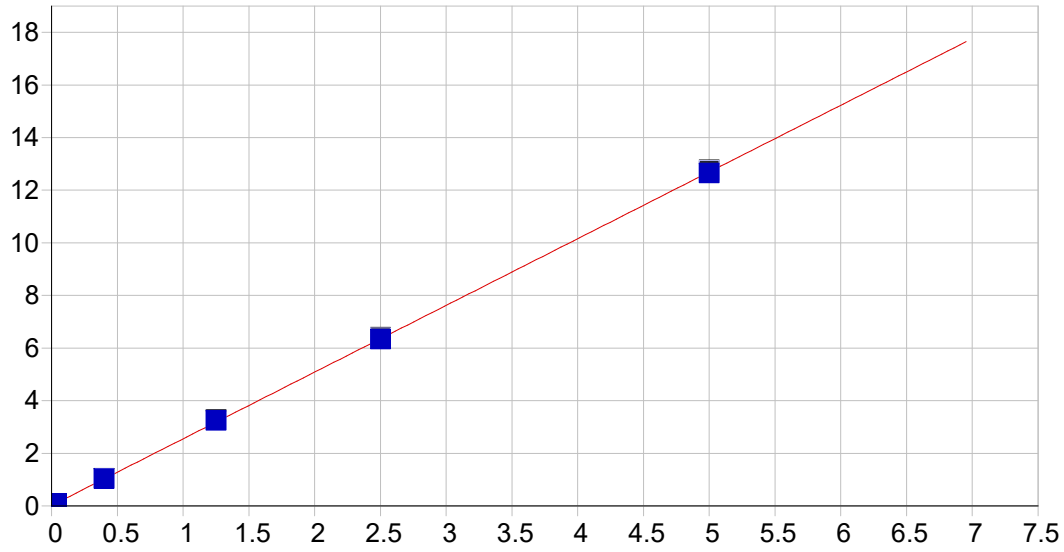


Zn 206.200 {464}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004466	Re-Slope:	1.000000
A1 (Gain):	0.873849	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000167		
Predicted MDL:	0.000189		
Predicted MQL:	0.000628		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00447	.000	1
S1	.04000	.03725	-.003	-6.88	.03702	.000	1
S3	1.2500	1.2595	.010	.763	1.1051	.003	1
S4	2.5000	2.4815	-.018	-.740	2.1729	.004	1
S5	5.0000	5.0026	.003	.052	4.3760	.019	1
S2	.40000	.40910	.009	2.27	.36195	.001	1

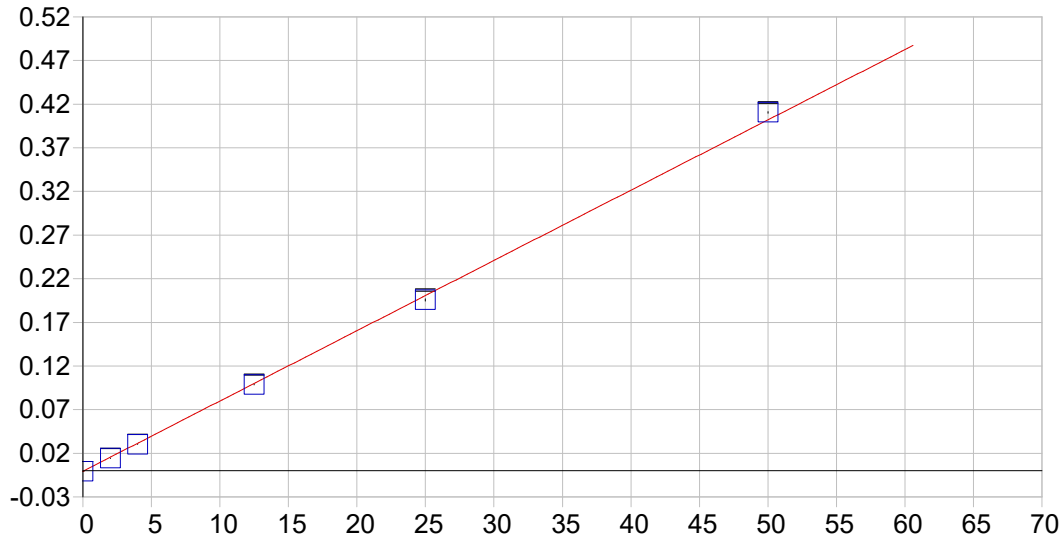


Zn 213.856 {158}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.014312	Re-Slope:	1.000000
A1 (Gain):	2.535845	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.000553		
Predicted MDL:	0.000266		
Predicted MQL:	0.000886		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01432	.001	1
S1	.04000	.03665	-.003	-8.38	.10796	.000	1
S3	1.2500	1.2732	.023	1.86	3.2651	.014	1
S4	2.5000	2.4933	-.007	-.270	6.3809	.024	1
S5	5.0000	4.9844	-.016	-.312	12.742	.028	1
S2	.40000	.40244	.002	.611	1.0419	.001	1

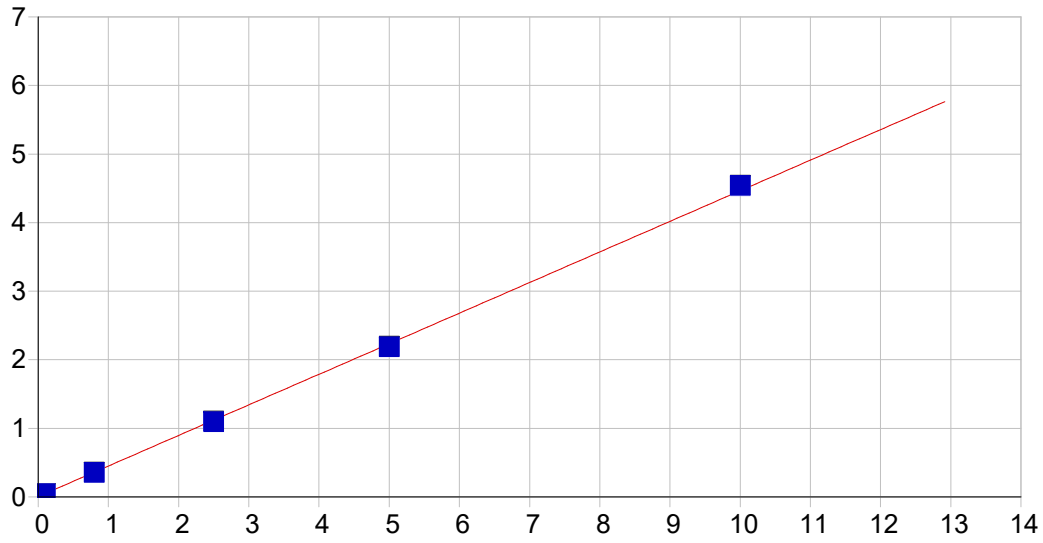


K 766.490 { 44}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000624	Re-Slope:	1.000000
A1 (Gain):	0.008053	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999695	Status:	OK.
Std Error of Est:	0.000105		
Predicted MDL:	0.021148		
Predicted MQL:	0.070494		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00026	.000	.000	-.00062	.000	1
S2	4.0000	3.8412	-.159	-3.97	.03031	.000	1
S3	12.500	12.357	-.143	-1.14	.09888	.001	1
S4	25.000	24.386	-.614	-2.46	.19574	.001	1
S5	50.000	51.066	1.07	2.13	.41059	.001	1
S1	2.0000	1.8500	-.150	-7.50	.01427	.000	1

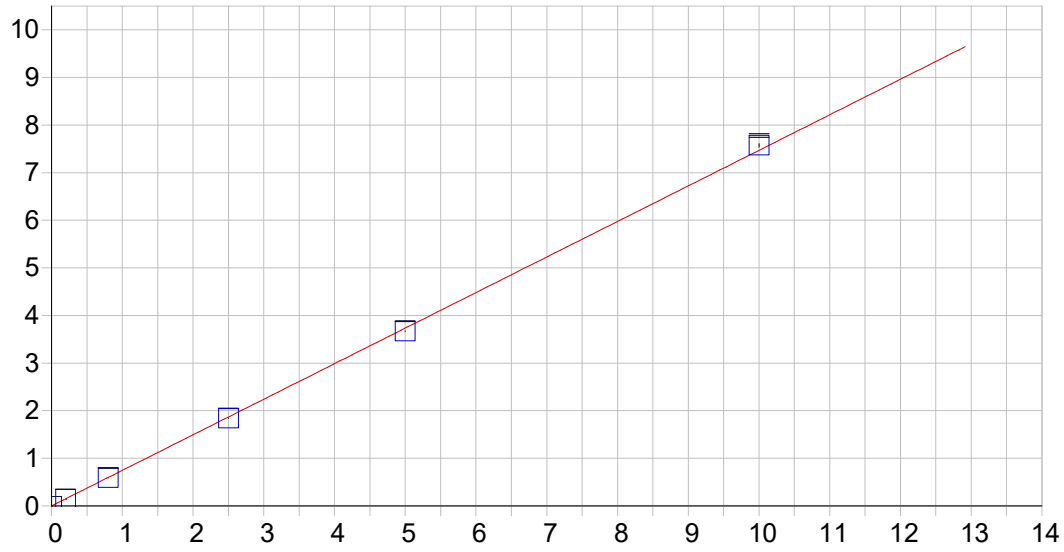


B 249.678 {135}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004001	Re-Slope:	1.000000
A1 (Gain):	0.446035	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999833	Status:	OK.
Std Error of Est:	0.000427		
Predicted MDL:	0.000561		
Predicted MQL:	0.001870		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00400	.000	1
S1	.10000	.09765	-.002	-2.35	.04736	.000	1
S3	2.5000	2.4465	-.053	-2.14	1.0931	.010	1
S4	5.0000	4.8990	-.101	-2.02	2.1847	.010	1
S5	10.000	10.166	.166	1.66	4.5299	.006	1
S2	.80000	.79039	-.010	-1.20	.35585	.001	1

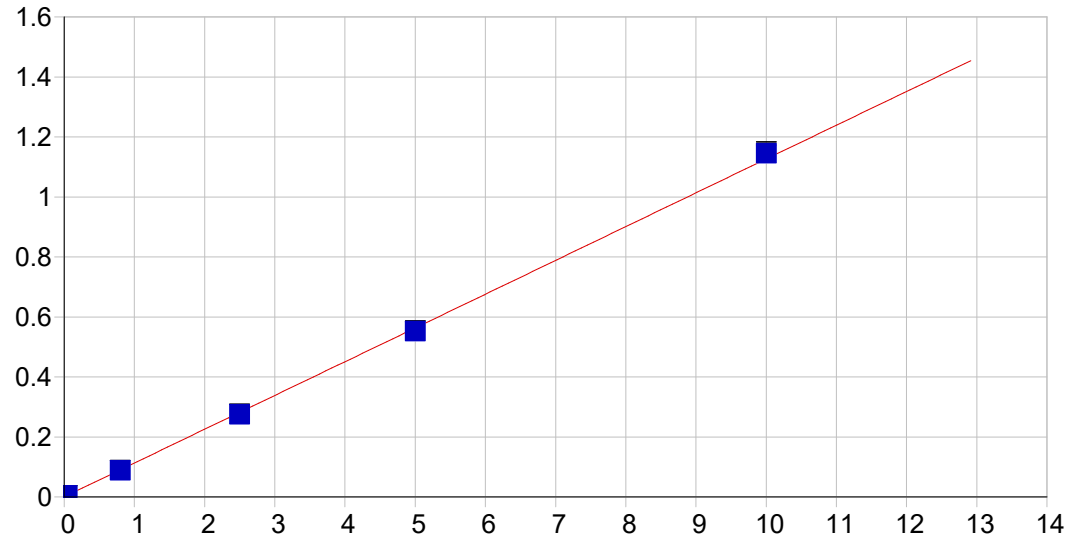


Mo 202.030 {467}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000102	Re-Slope:	1.000000
A1 (Gain):	0.746927	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.000850		
Predicted MDL:	0.000232		
Predicted MQL:	0.000772		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00011	.000	1
S1	.20000	.19289	-.007	-3.56	.14418	.000	1
S3	2.5000	2.4621	-.038	-1.52	1.8391	.004	1
S4	5.0000	4.9173	-.083	-1.65	3.6730	.007	1
S5	10.000	10.140	.140	1.40	7.5736	.037	1
S2	.80000	.78811	-.012	-1.49	.58876	.001	1

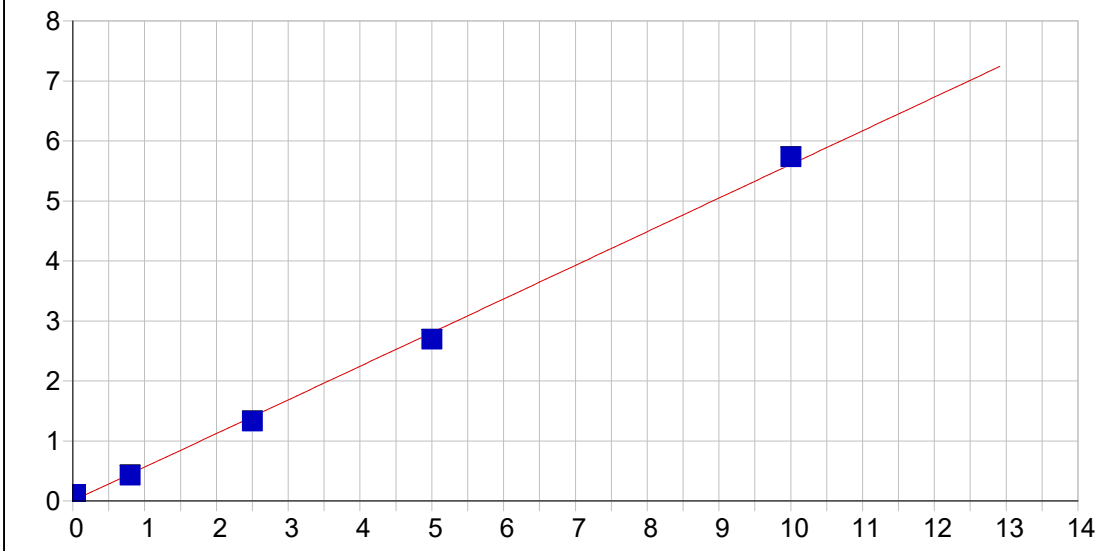


Sn 189.989 {478}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000273	Re-Slope:	1.000000
A1 (Gain):	0.112589	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999821	Status:	OK.
Std Error of Est:	0.000071		
Predicted MDL:	0.000701		
Predicted MQL:	0.002336		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00027	.000	1
S1	.04000	.03692	-.003	-7.71	.00442	.000	1
S3	2.5000	2.4451	-.055	-2.20	.27527	.001	1
S4	5.0000	4.9021	-.098	-1.96	.55162	.002	1
S5	10.000	10.171	.171	1.71	1.1443	.006	1
S2	.80000	.78495	-.015	-1.88	.08856	.000	1

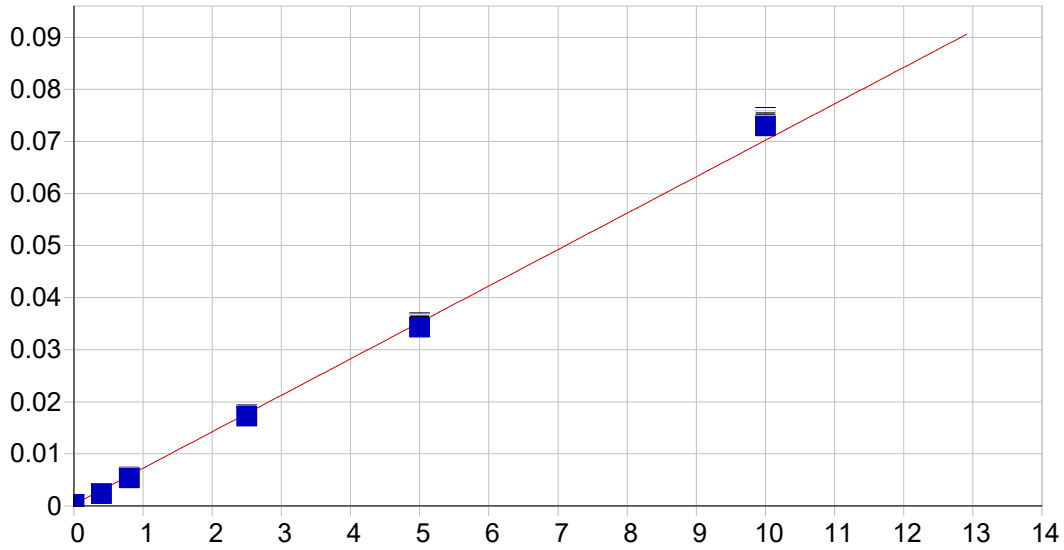


Ti 336.121 {100}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001554	Re-Slope:	1.000000
A1 (Gain):	0.560640	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.985284	Status:	OK.
Std Error of Est:	0.003223		
Predicted MDL:	0.000481		
Predicted MQL:	0.001604		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.00148	.000	1
S1	.04000	.18554	.146	364.	.10556	.000	1
S3	2.5000	2.3705	-.129	-5.18	1.3301	.005	1
S4	5.0000	4.7998	-.200	-4.00	2.6915	.003	1
S5	10.000	10.222	.222	2.22	5.7306	.008	1
S2	.80000	.76176	-.038	-4.78	.42847	.001	1

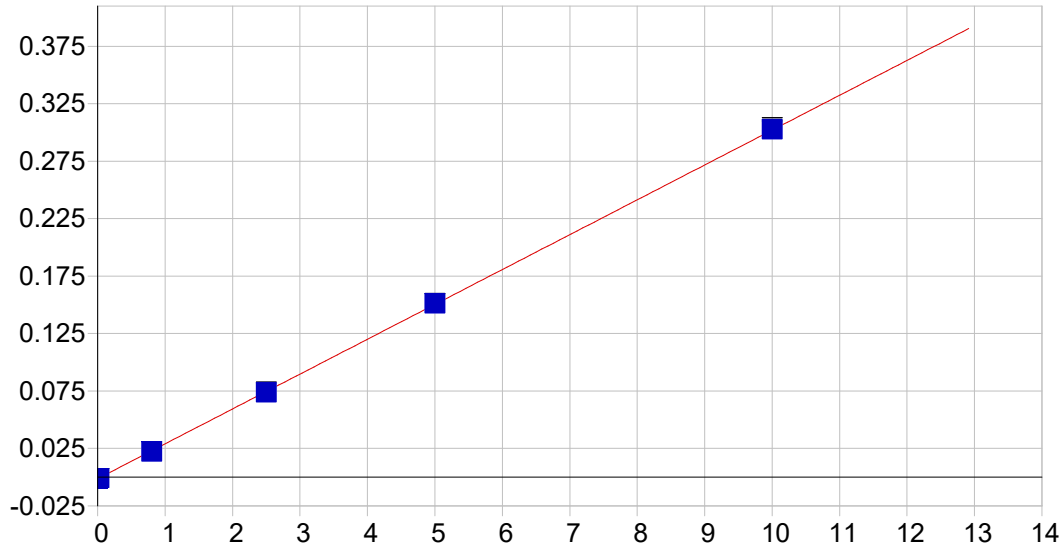


Si 288.158 {117}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000249	Re-Slope:	1.000000
A1 (Gain):	0.006997	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998583	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.005603		
Predicted MQL:	0.018676		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00015	.000	.000	.00025	.000	1
S1	.40000	.29541	-.105	-26.1	.00232	.000	1
S3	2.5000	2.4201	-.080	-3.20	.01744	.000	1
S4	5.0000	4.8646	-.135	-2.71	.03481	.000	1
S5	10.000	10.388	.388	3.88	.07398	.001	1
S2	.80000	.73077	-.069	-8.65	.00545	.000	1

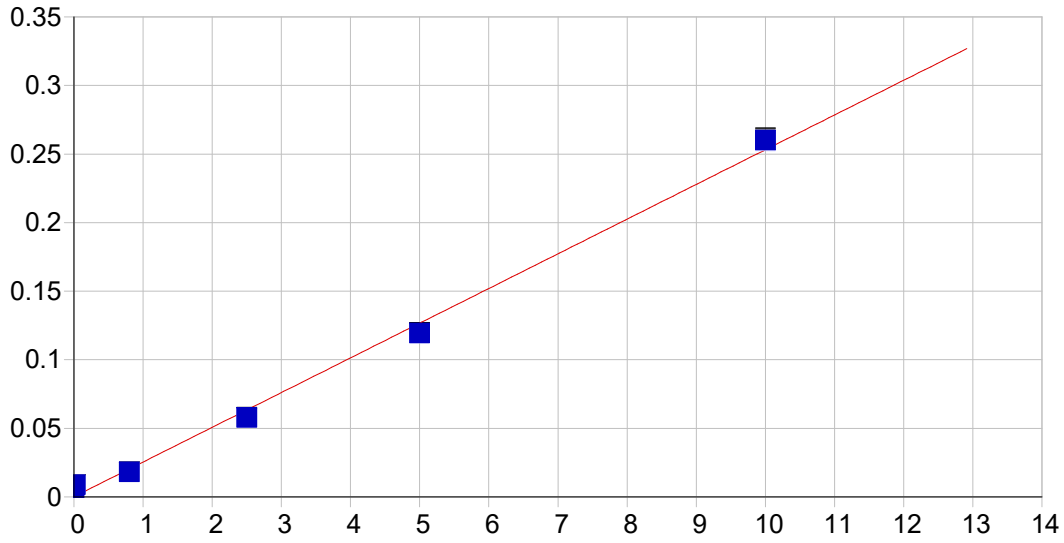


P 177.495 {490}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001307	Re-Slope:	1.000000
A1 (Gain):	0.030337	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999934	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.002453		
Predicted MQL:	0.008175		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00131	.000	1
S1	.02000	.01487	-.005	-25.7	-.00086	.000	1
S3	2.5000	2.4762	-.024	-.952	.07380	.000	1
S4	5.0000	5.0268	.027	.535	.15117	.000	1
S5	10.000	10.025	.025	.251	.30278	.001	1
S2	.80000	.77712	-.023	-2.86	.02227	.000	1

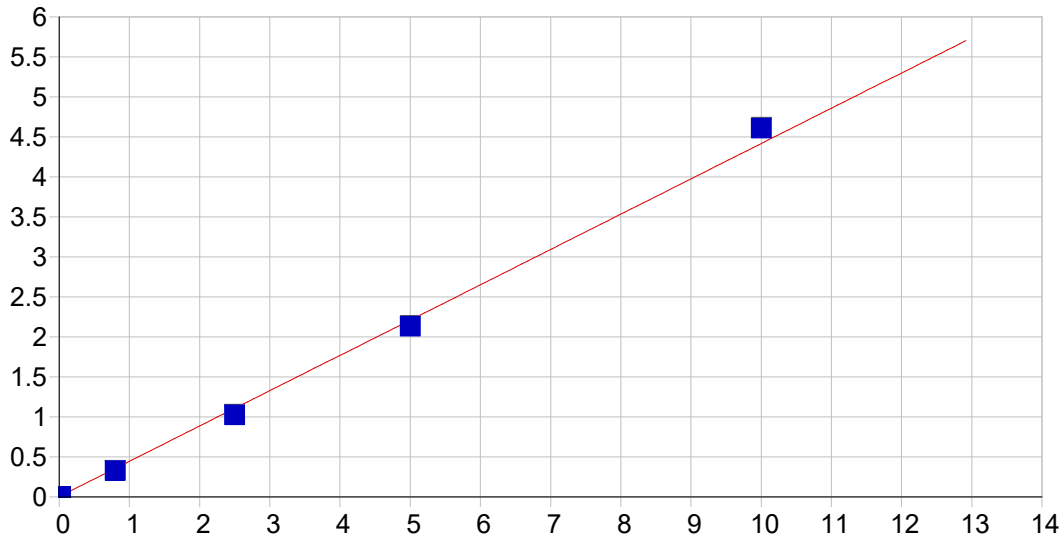


S 182.034 {485}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000151	Re-Slope:	1.000000
A1 (Gain):	0.025301	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.879686	Status:	OK.
Std Error of Est:	0.000320		
Predicted MDL:	0.002897		
Predicted MQL:	0.009657		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00032	-.000	.000	.00014	.000	1
S1	.02000	.34459	.325	1620.	.00885	.000	1
S3	2.5000	2.2770	-.223	-8.92	.05760	.000	1
S4	5.0000	4.7175	-.282	-5.65	.11918	.000	1
S5	10.000	10.278	.278	2.78	.25954	.002	1
S2	.80000	.71586	-.084	-10.5	.01821	.000	1

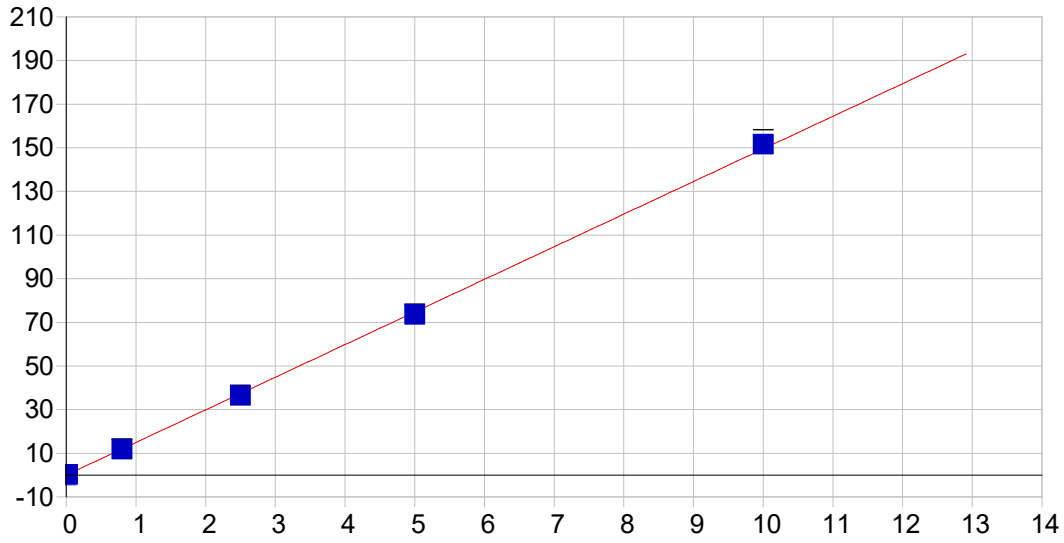


Li 670.784 { 50}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003779	Re-Slope:	1.000000
A1 (Gain):	0.441280	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998794	Status:	OK.
Std Error of Est:	0.000509		
Predicted MDL:	0.001735		
Predicted MQL:	0.005784		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00378	.000	1
S5	10.000	10.431	.431	4.31	4.6105	.008	1
S4	5.0000	4.8246	-.175	-3.51	2.1348	.007	1
S3	2.5000	2.3138	-.186	-7.45	1.0258	.007	1
S1	.02000	.01784	-.002	-10.8	.01181	.000	1
S2	.80000	.73328	-.067	-8.34	.32768	.002	1

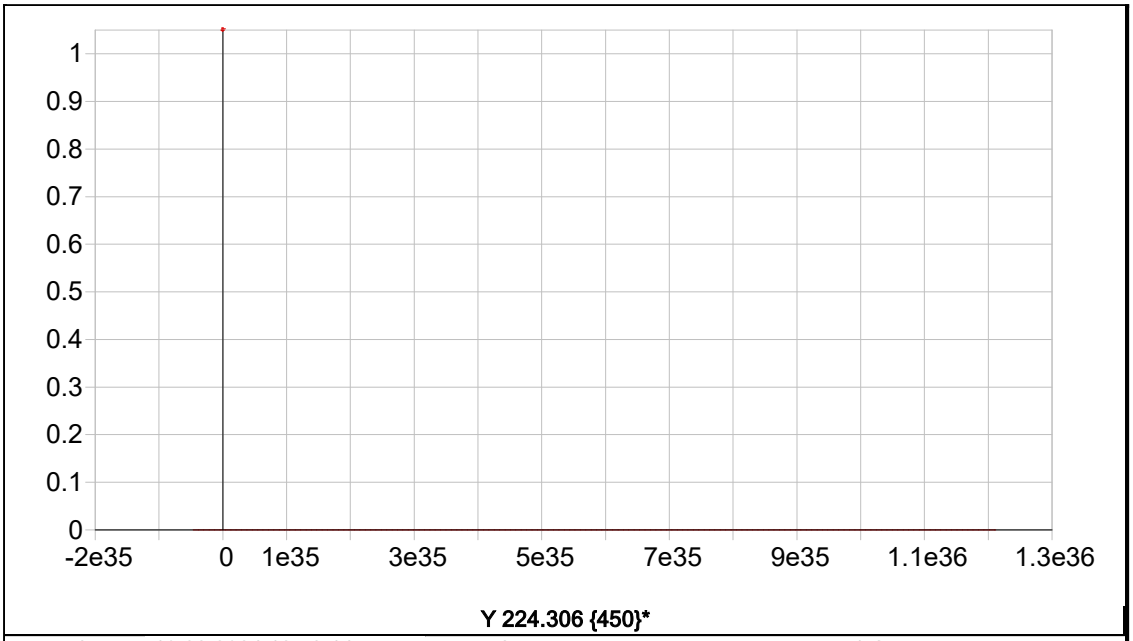


Sr 407.771 { 83}

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000351	Re-Slope:	1.000000
A1 (Gain):	14.948816	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999875	Status:	OK.
Std Error of Est:	0.005543		
Predicted MDL:	0.000030		
Predicted MQL:	0.000101		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00033	.000	1
S1	.02000	.01933	-.001	-3.35	.29009	.002	1
S3	2.5000	2.4404	-.060	-2.38	36.519	.146	1
S4	5.0000	4.9246	-.075	-1.51	73.692	.167	1
S5	10.000	10.141	.141	1.41	151.74	2.03	1
S2	.80000	.79496	-.005	-.630	11.895	.046	1

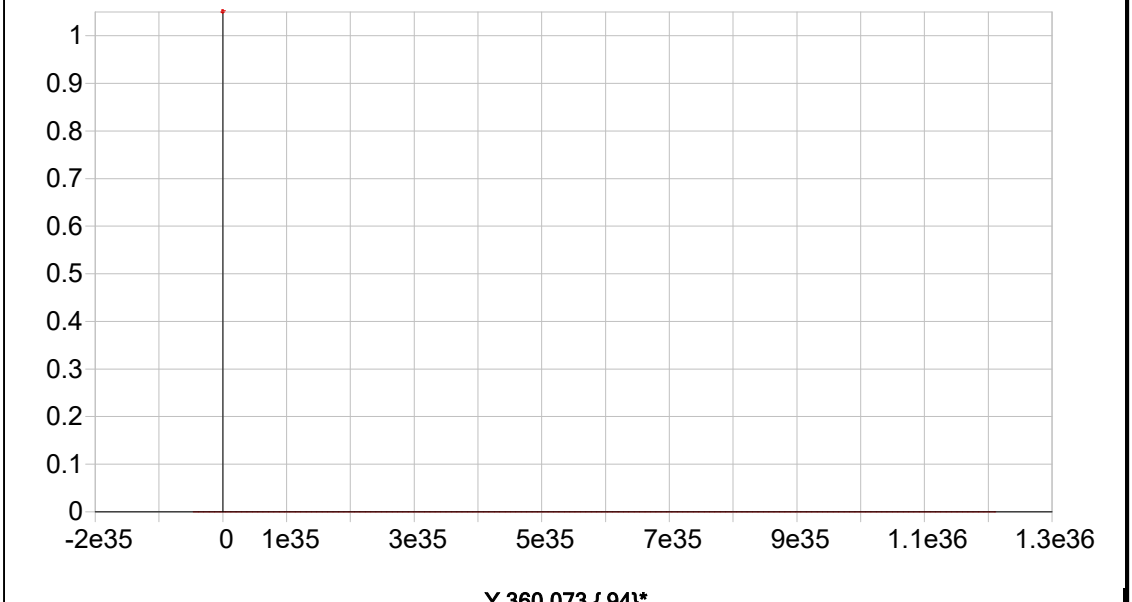


Y 224.306 {450}*

Date of Fit:	10/28/2024 12:53:14	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



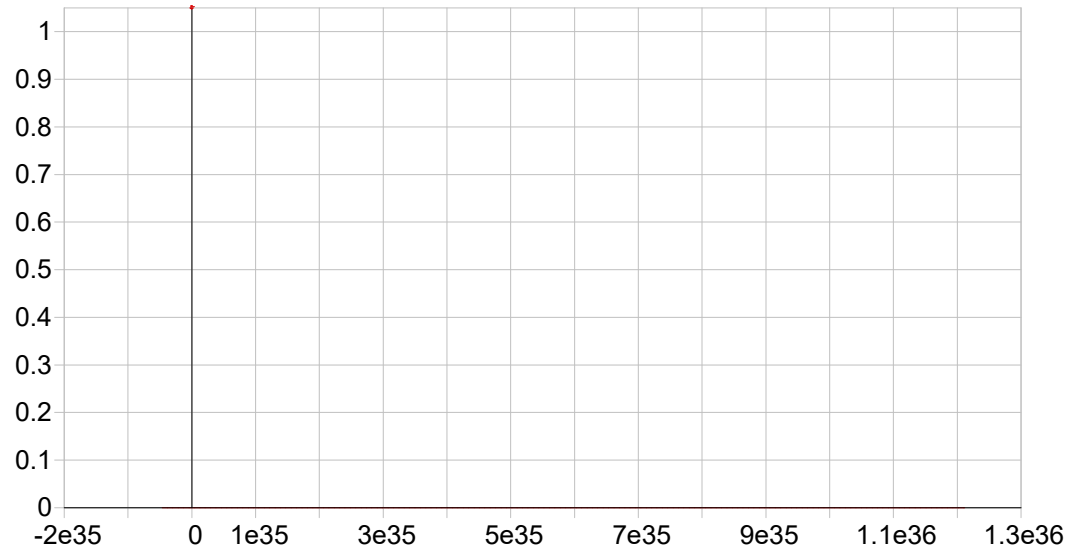
Y 360.073 { 94}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

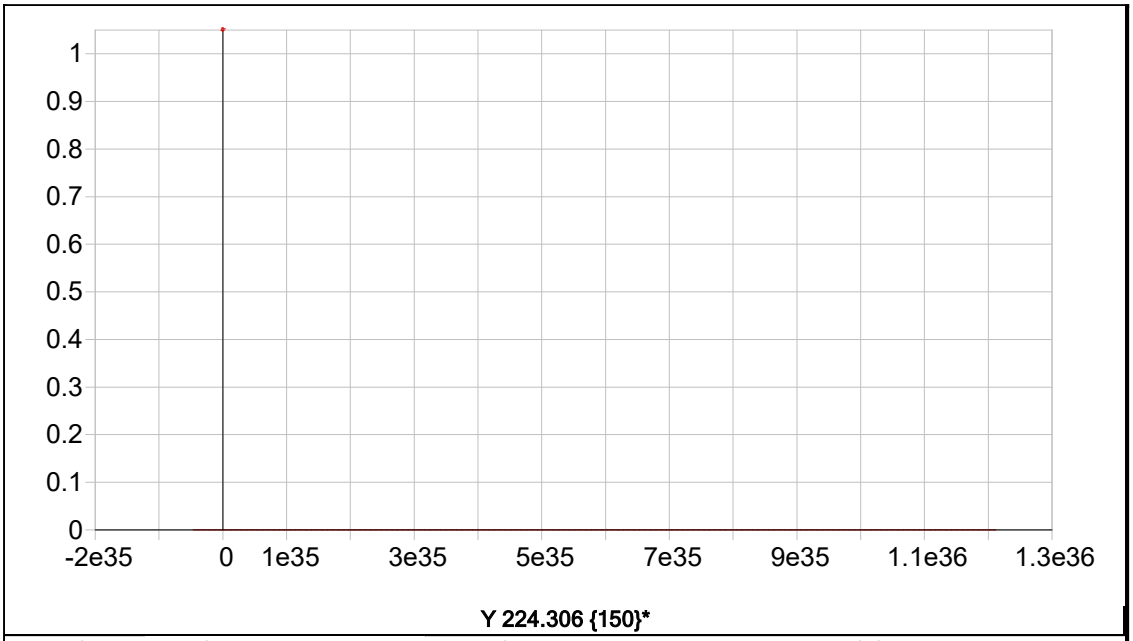
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

Date of Fit:	<not fit>		Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):		0.000000		Re-Slope:	1.000000	
A1 (Gain):		0.000000		Y-int:	0.000000	
A2 (Curvature):		0.000000				
n (Exponent):		1.000000				
Correlation:		0.000000		Status:	Warning	Zero Gain
Std Error of Est:		0.000000				
Predicted MDL:		n/a				
Predicted MQL:		n/a				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis

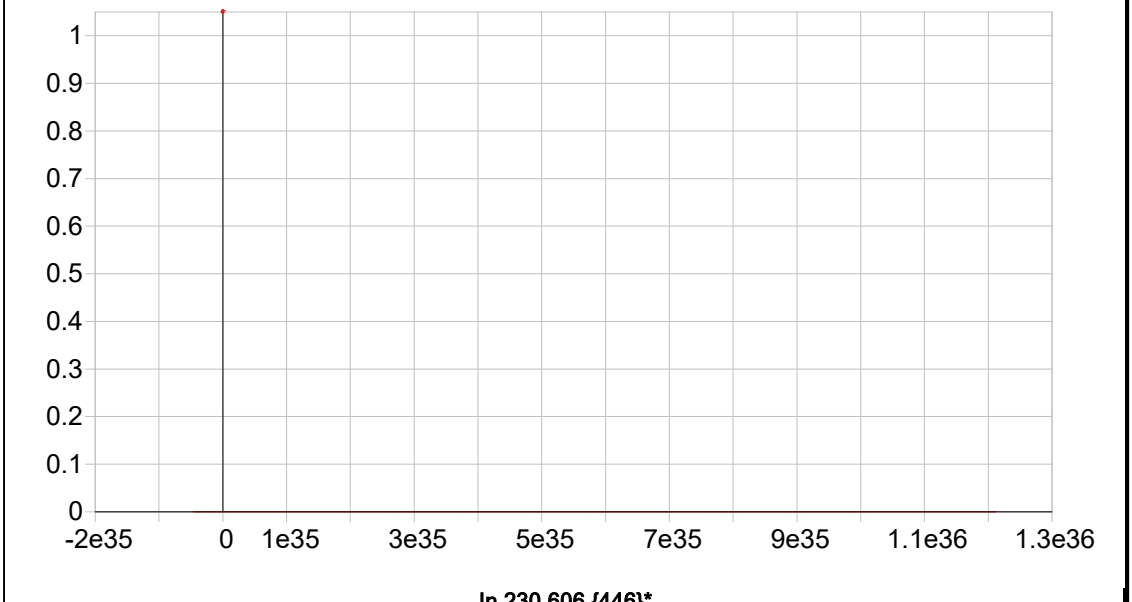


Y 224.306 {150}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



ln 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					
Std. Name	**Stated Conc.**	**Found Conc.**	**Difference**	**% Diff.**	**(S)IR**	**Std Dev**	**Emphasis**

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S0 Acquired: 10/28/2024 11:58:55 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00018	-.00013	-.00018	.00048	.00013	-.00009	-.00472	-.00068
Stddev	.00017	.00006	.00012	.00015	.00022	.00004	.00050	.00010
%RSD	94.740	50.347	64.164	31.004	166.89	41.728	10.623	15.185
#1	-.00028	-.00017	-.00019	.00064	-.00000	-.00012	-.00476	-.00078
#2	-.00027	-.00015	-.00029	.00038	.00039	-.00005	-.00520	-.00057
#3	.00002	-.00005	-.00006	.00040	.00001	-.00009	-.00420	-.00068

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00010	.00100	.00003	-.00006	.00045	.00009	.00008	-.00014
Stddev	.00015	.00026	.00007	.00014	.00009	.00001	.00005	.00014
%RSD	146.29	26.144	213.60	212.62	19.581	17.117	69.936	98.439
#1	-.00027	.00096	.00004	-.00021	.00050	.00010	.00014	-.00024
#2	-.00005	.00127	-.00004	-.00003	.00051	.00007	.00005	-.00020
#3	.00001	.00076	.00009	.00005	.00035	.00009	.00004	.00002

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00033	-.00125	.00263	.00001	.01432	-.00062	.00400	.00011
Stddev	.00006	.00005	.00009	.00010	.00081	.00012	.00028	.00008
%RSD	16.881	4.1745	3.2438	1003.4	5.6276	19.948	6.9212	71.361
#1	-.00039	-.00129	.00270	-.00010	.01466	-.00073	.00400	.00017
#2	-.00034	-.00128	.00267	.00004	.01340	-.00049	.00373	.00015
#3	-.00027	-.00119	.00254	.00009	.01490	-.00065	.00428	.00002

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00027	.00148	.00025	-.00131	.00014	.00378	-.00033
Stddev	.00003	.00014	.00002	.00006	.00009	.00031	.00034
%RSD	12.065	9.4798	8.6562	4.2319	66.540	8.0729	103.14
#1	.00026	.00131	.00023	-.00127	.00019	.00372	-.00009
#2	.00025	.00155	.00027	-.00128	.00021	.00411	-.00072
#3	.00031	.00156	.00026	-.00137	.00003	.00351	-.00018

Sample Name: S0 Acquired: 10/28/2024 11:58:55 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3307.4	67756.	13986.	2419.2	5364.6
Stddev	11.8	114.	44.	6.7	16.5
%RSD	.35793	.16802	.31644	.27799	.30808
#1	3295.0	67658.	13941.	2413.4	5351.4
#2	3308.5	67881.	13987.	2417.6	5359.2
#3	3318.6	67730.	14029.	2426.6	5383.1

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S1 Acquired: 10/28/2024 12:03:21 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00095	.00220	.00237	.00204	.00880	.00832	.33849	.02206
Stddev	.00004	.00012	.00011	.00013	.00003	.00029	.00109	.00025
%RSD	4.0575	5.5262	4.6531	6.1312	.30256	3.4489	.32167	1.1540
#1	.00093	.00216	.00233	.00207	.00878	.00814	.33817	.02204
#2	.00099	.00234	.00227	.00191	.00881	.00817	.33760	.02181
#3	.00092	.00210	.00249	.00215	.00883	.00865	.33971	.02232

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01251	.11141	.00139	.02458	.01536	.00067	.01449	.03151
Stddev	.00018	.00064	.00006	.00023	.00021	.00001	.00007	.00028
%RSD	1.4453	.57077	4.4247	.93596	1.3941	.93029	.50611	.89844
#1	.01253	.11069	.00146	.02437	.01556	.00067	.01448	.03143
#2	.01232	.11168	.00138	.02456	.01540	.00068	.01442	.03128
#3	.01268	.11187	.00134	.02482	.01513	.00068	.01457	.03182

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02957	.00204	.03361	.00511	.10796	.01427	.04736	.14418
Stddev	.00015	.00004	.00007	.00008	.00043	.00016	.00018	.00025
%RSD	.51398	1.8586	.20355	1.4689	.40001	1.1034	.38480	.17498
#1	.02971	.00207	.03354	.00516	.10747	.01427	.04725	.14434
#2	.02941	.00205	.03361	.00502	.10830	.01443	.04727	.14389
#3	.02957	.00199	.03368	.00514	.10809	.01412	.04757	.14430

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00442	.10556	.00232	-.00086	.00885	.01181	.29009
Stddev	.00004	.00020	.00001	.00009	.00004	.00005	.00161
%RSD	.80334	.18546	.57412	10.123	.45707	.42929	.55555
#1	.00442	.10542	.00233	-.00089	.00887	.01178	.28986
#2	.00439	.10548	.00233	-.00092	.00880	.01178	.28861
#3	.00446	.10578	.00231	-.00076	.00887	.01187	.29180

Sample Name: S1 Acquired: 10/28/2024 12:03:21 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3322.6	70131.	14069.	2504.3	5278.4
Stddev	1.4	93.	82.	7.4	2.2
%RSD	.04260	.13249	.58558	.29560	.04092
#1	3324.2	70128.	14110.	2509.1	5280.6
#2	3321.6	70040.	14123.	2495.8	5278.4
#3	3322.1	70225.	13974.	2508.1	5276.3

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S2 Acquired: 10/28/2024 12:07:46 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04604	.05527	.18969	.07060	.14233	.11829	5.3671	.16274
Stddev	.00007	.00117	.00027	.00018	.00020	.00043	.0207	.00128
%RSD	.16047	2.1139	.14091	.26127	.13727	.35951	.38564	.78820
#1	.04600	.05659	.18956	.07076	.14242	.11873	5.3877	.16400
#2	.04599	.05485	.18950	.07065	.14248	.11788	5.3463	.16144
#3	.04612	.05437	.18999	.07040	.14211	.11826	5.3674	.16277

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.90437	.22486	.02387	.33841	.14921	.00491	.29146	.06377
Stddev	.00182	.00062	.00009	.00035	.00038	.00002	.00102	.00042
%RSD	.20164	.27627	.37897	.10221	.25680	.30639	.35167	.65266
#1	.90538	.22438	.02384	.33874	.14931	.00490	.29155	.06331
#2	.90227	.22463	.02379	.33844	.14954	.00490	.29040	.06389
#3	.90546	.22556	.02397	.33805	.14879	.00493	.29245	.06411

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.31170	.06566	.06749	.05217	1.0419	.03031	.35585	.58876
Stddev	.00047	.00014	.00015	.00010	.0008	.00022	.00136	.00061
%RSD	.15035	.21043	.22722	.19576	.07721	.73824	.38324	.10400
#1	.31204	.06561	.06733	.05216	1.0425	.03031	.35663	.58921
#2	.31116	.06581	.06750	.05228	1.0422	.03053	.35427	.58901
#3	.31189	.06555	.06763	.05207	1.0410	.03008	.35664	.58807

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.08856	.42847	.00545	.02227	.01821	.32768	11.895
Stddev	.00023	.00104	.00008	.00012	.00004	.00234	.046
%RSD	.25845	.24242	1.3957	.53185	.21497	.71489	.38255
#1	.08882	.42783	.00537	.02239	.01824	.32827	11.940
#2	.08843	.42790	.00552	.02215	.01822	.32510	11.849
#3	.08843	.42967	.00545	.02226	.01817	.32967	11.897

Sample Name: S2 Acquired: 10/28/2024 12:07:46 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3189.4	66810.	13697.	2386.8	4982.5
Stddev	11.0	45.	68.	5.3	7.2
%RSD	.34568	.06700	.49684	.22198	.14363
#1	3194.1	66861.	13649.	2383.0	4981.9
#2	3176.7	66776.	13775.	2384.6	4975.6
#3	3197.2	66794.	13666.	2392.8	4989.9

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S3 Acquired: 10/28/2024 12:11:56 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.14591	.16399	.59415	.22298	.45126	.37790	16.441	.50414
Stddev	.00031	.00411	.00099	.00112	.00139	.00069	.032	.00388
%RSD	.21555	2.5089	.16691	.50180	.30858	.18307	.19336	.76944
#1	.14569	.16780	.59429	.22207	.44979	.37712	16.405	.50432
#2	.14627	.15963	.59310	.22264	.45142	.37810	16.460	.50018
#3	.14577	.16455	.59507	.22422	.45256	.37846	16.460	.50793

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.8412	.69916	.07298	1.0592	.46226	.01553	.88845	.20156
Stddev	.0039	.00302	.00007	.0018	.00107	.00002	.00576	.00079
%RSD	.13876	.43190	.09379	.17106	.23074	.09833	.64813	.38981
#1	2.8414	.70003	.07306	1.0595	.46107	.01552	.88627	.20080
#2	2.8372	.69580	.07294	1.0572	.46260	.01555	.88410	.20152
#3	2.8451	.70165	.07295	1.0608	.46312	.01552	.89498	.20237

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.97366	.20719	.20966	.16505	3.2651	.09888	1.0931	1.8391
Stddev	.00165	.00023	.00080	.00065	.0140	.00051	.0097	.0038
%RSD	.16901	.10882	.38138	.39519	.42986	.51805	.88485	.20503
#1	.97422	.20745	.21033	.16496	3.2582	.09886	1.0960	1.8364
#2	.97181	.20706	.20987	.16445	3.2812	.09940	1.0823	1.8375
#3	.97495	.20705	.20877	.16574	3.2557	.09838	1.1009	1.8434

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.27527	1.3301	.01744	.07380	.05760	1.0258	36.519
Stddev	.00068	.0053	.00005	.00036	.00035	.0073	.146
%RSD	.24819	.39947	.29014	.48431	.61364	.70799	.39919
#1	.27585	1.3324	.01743	.07422	.05785	1.0305	36.531
#2	.27452	1.3240	.01750	.07361	.05719	1.0174	36.367
#3	.27545	1.3338	.01740	.07359	.05775	1.0294	36.657

Sample Name: S3 Acquired: 10/28/2024 12:11:56 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3082.4	64278.	13598.	2241.5	4750.1
Stddev	7.6	187.	75.	8.8	2.6
%RSD	.24665	.29037	.55193	.39175	.05489
#1	3091.1	64250.	13576.	2246.0	4752.7
#2	3077.7	64107.	13681.	2231.4	4749.9
#3	3078.3	64477.	13536.	2247.1	4747.5

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S4 Acquired: 10/28/2024 12:16:15 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.29551	.33869	1.1805	.45257	.91226	.77215	33.355	1.0016
Stddev	.00072	.00900	.0011	.00160	.00038	.00226	.173	.0027
%RSD	.24510	2.6576	.09364	.35334	.04148	.29316	.51762	.27325
#1	.29624	.34904	1.1816	.45434	.91240	.77110	33.159	1.0035
#2	.29479	.33267	1.1805	.45122	.91183	.77060	33.484	1.0027
#3	.29552	.33437	1.1794	.45216	.91255	.77475	33.423	.99844

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.7275	1.4027	.13897	2.1265	.91520	.03010	1.7744	.40811
Stddev	.0063	.0033	.00029	.0010	.00062	.00031	.0004	.00175
%RSD	.11005	.23561	.20731	.04568	.06808	1.0320	.02114	.42927
#1	5.7342	1.4000	.13878	2.1276	.91542	.02996	1.7745	.40622
#2	5.7266	1.4017	.13930	2.1260	.91450	.02988	1.7740	.40845
#3	5.7217	1.4064	.13883	2.1259	.91568	.03045	1.7746	.40968

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.9497	.40458	.41783	.33587	6.3809	.19574	2.1847	3.6730
Stddev	.0017	.00040	.00254	.00103	.0244	.00139	.0104	.0069
%RSD	.08457	.10003	.60818	.30671	.38287	.70839	.47401	.18683
#1	1.9516	.40480	.41748	.33472	6.4088	.19577	2.1902	3.6798
#2	1.9490	.40412	.41549	.33617	6.3631	.19434	2.1912	3.6660
#3	1.9486	.40483	.42053	.33671	6.3709	.19712	2.1728	3.6732

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.55162	2.6915	.03481	.15117	.11918	2.1348	73.692
Stddev	.00175	.0033	.00033	.00021	.00044	.0070	.167
%RSD	.31703	.12273	.94764	.13640	.36612	.32811	.22676
#1	.55350	2.6915	.03459	.15099	.11968	2.1394	73.499
#2	.55133	2.6882	.03466	.15112	.11889	2.1267	73.781
#3	.55004	2.6948	.03519	.15139	.11897	2.1382	73.795

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S4 Acquired: 10/28/2024 12:16:15 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2951.2	64254.	13191.	2155.1	4478.7
Stddev	3.3	207.	23.	10.8	5.6
%RSD	.11079	.32258	.17710	.50224	.12404
#1	2948.7	64272.	13187.	2148.0	4472.3
#2	2954.9	64452.	13169.	2167.6	4481.5
#3	2950.0	64039.	13216.	2149.7	4482.3

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S5 Acquired: 10/28/2024 12:20:31 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.62092	.78956	2.4349	.95969	1.9089	1.6520	70.348	2.0658
Stddev	.00365	.01604	.0089	.00581	.0099	.0017	.166	.0038
%RSD	.58847	2.0314	.36392	.60529	.51779	.10172	.23662	.18222
#1	.61723	.77212	2.4294	.95442	1.9002	1.6539	70.172	2.0618
#2	.62098	.79290	2.4301	.95873	1.9070	1.6509	70.369	2.0662
#3	.62454	.80367	2.4451	.96592	1.9197	1.6511	70.503	2.0693

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	11.795	2.9328	.27415	4.3945	1.8533	.06109	3.7100	.86792
Stddev	.038	.0076	.00113	.0147	.0073	.00044	.0128	.00418
%RSD	.32558	.25773	.41178	.33488	.39434	.71493	.34531	.48188
#1	11.770	2.9248	.27366	4.3833	1.8484	.06065	3.6994	.86326
#2	11.775	2.9399	.27334	4.3891	1.8499	.06152	3.7242	.87134
#3	11.839	2.9337	.27544	4.4112	1.8617	.06110	3.7063	.86915

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.0023	.82135	.87775	.70886	12.742	.41059	4.5299	7.5736
Stddev	.0139	.00062	.00205	.00140	.028	.00093	.0059	.0375
%RSD	.34776	.07565	.23322	.19790	.21825	.22584	.13106	.49507
#1	3.9939	.82064	.87750	.70747	12.713	.40985	4.5232	7.5416
#2	3.9946	.82160	.87992	.70882	12.744	.41163	4.5320	7.5644
#3	4.0184	.82180	.87585	.71028	12.769	.41030	4.5345	7.6148

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.1443	5.7306	.07398	.30278	.25954	4.6105	151.74
Stddev	.0055	.0084	.00065	.00147	.00150	.0084	2.03
%RSD	.48173	.14734	.87768	.48592	.57838	.18213	1.3373
#1	1.1395	5.7257	.07324	.30158	.25821	4.6085	149.40
#2	1.1430	5.7404	.07423	.30234	.25924	4.6197	152.96
#3	1.1503	5.7258	.07447	.30442	.26117	4.6033	152.86

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: S5 Acquired: 10/28/2024 12:20:31 Type: Cal
Method: NON EPA-6010-200.7(v2451) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2775.7	61692.	12375.	2000.6	4124.7
Stddev	6.6	106.	16.	6.1	10.1
%RSD	.23770	.17126	.12933	.30369	.24521
#1	2780.5	61814.	12393.	2004.3	4129.9
#2	2778.3	61632.	12370.	1993.6	4131.2
#3	2768.1	61630.	12363.	2004.0	4113.1

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICV01 Acquired: 10/28/2024 12:57:41 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9750749	.9703004	.9833370	1.008754	1.021495	2.487071
Stddev	.0032620	.0210584	.0016399	.003734	.001444	.003494
%RSD	.3345340	2.170292	.1667651	.3701455	.1413655	.1404873
#1	.9776477	.9900997	.9844319	1.012664	1.022131	2.483047
#2	.9714061	.9481760	.9814517	1.005225	1.022511	2.489338
#3	.9761709	.9726257	.9841276	1.008374	1.019842	2.488827

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4834939	.4900776	.4937003	9.823692	.5322040	.5277479
Stddev	.0002178	.0018039	.0008914	.039945	.0011500	.0007588
%RSD	.0450447	.3680771	.1805584	.4066161	.2160886	.1437835
#1	.4836749	.4881233	.4939441	9.801076	.5311054	.5282191
#2	.4835547	.4904308	.4927124	9.800187	.5333994	.5268726
#3	.4832522	.4916787	.4944445	9.869814	.5321073	.5281521

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4969019	10.12710	.4913688	5.753602	.5311433	.2725654
Stddev	.0007640	.03907	.0015808	.037524	.0008296	.0003374
%RSD	.1537484	.3858008	.3217063	.6521839	.1561924	.1237808
#1	.4971159	10.12503	.4902917	5.749947	.5314471	.2723360
#2	.4960538	10.08911	.4906312	5.718040	.5302047	.2729528
#3	.4975361	10.16717	.4931835	5.792821	.5317783	.2724075

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.924821	.4846457	1.095686	10.52820	F 2.213339	2.576007
Stddev	.016445	.0021124	.002377	.00934	.007496	.003814
%RSD	.1656940	.4358695	.2169125	.0887557	.3386947	.1480581
#1	9.928821	.4853336	1.092951	10.53676	2.207808	2.578823
#2	9.938897	.4822751	1.097248	10.52960	2.210339	2.571666
#3	9.906745	.4863285	1.096860	10.51823	2.221871	2.577530

Sample Name: ICV01 Acquired: 10/28/2024 12:57:41 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.403838	2.271161	2.509332	F .0001668	F -.005031	F -.000305
Stddev	.013073	.000622	.005852	.0011315	.002613	.001191
%RSD	.5438348	.0273990	.2332179	678.3970	51.93316	390.0767
#1	2.414778	2.270477	2.513702	-.000264	-.005612	-.000600
#2	2.389360	2.271310	2.511612	-.000686	-.002177	.001005
#3	2.407376	2.271694	2.502683	.001450	-.007304	-.001321

Elem	Sr4077
Units	ppm
Avg	F -.008952
Stddev	.000063
%RSD	.6993798
#1	-.008924
#2	-.008907
#3	-.009023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2917.637	62184.27	14011.37	2047.536	4648.962
Stddev	8.519	178.17	25.55	5.348	11.614
%RSD	.2919777	.2865232	.1823676	.2611931	.2498136
#1	2913.444	62096.65	13995.51	2046.977	4645.096
#2	2912.028	62066.87	13997.76	2042.489	4639.774
#3	2927.440	62389.28	14040.85	2053.141	4662.015

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: LLICV01 Acquired: 10/28/2024 13:04:00 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188491	.0362193	.0110021	.0185536	.0507003	.1070000
Stddev	.0003772	.0012067	.0000550	.0002851	.0009981	.0035937
%RSD	2.000988	3.331786	.4996111	1.536581	1.968706	3.358572
#1	.0189681	.0372036	.0109602	.0184121	.0517524	.1067295
#2	.0184267	.0348730	.0109819	.0188818	.0505817	.1107213
#3	.0191524	.0365814	.0110644	.0183670	.0497668	.1035493

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0947313	.0056692	.0056571	1.962717	.0092008	.0299074
Stddev	.0003811	.0000076	.0000856	.005196	.0001363	.0001903
%RSD	.4023176	.1334711	1.513631	.2647515	1.481569	.6361680
#1	.0950432	.0056779	.0057540	1.967370	.0091430	.0301271
#2	.0948442	.0056660	.0055917	1.963670	.0093565	.0297997
#3	.0943065	.0056638	.0056255	1.957109	.0091029	.0297954

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215441	.1068550	.0191819	1.922795	.0398138	.0113222
Stddev	.0002145	.0010510	.0003168	.016025	.0002173	.0002423
%RSD	.9958042	.9836045	1.651356	.8334273	.5458878	2.140397
#1	.0216519	.1056440	.0188833	1.918732	.0396131	.0110929
#2	.0212970	.1075297	.0191482	1.909192	.0397837	.0115757
#3	.0216834	.1073912	.0195141	1.940460	.0400446	.0112980

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.845987	.0387065	.0387818	2.015065	.0952610	.2131447
Stddev	.005641	.0007260	.0002468	.021266	.0003377	.0014280
%RSD	.3055669	1.875598	.6362454	1.055345	.3545113	.6699665
#1	1.844301	.0385361	.0387147	2.034652	.0949255	.2147036
#2	1.852279	.0395025	.0385756	1.992446	.0956009	.2128308
#3	1.841382	.0380809	.0390552	2.018098	.0952566	.2118999

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: LLICV01 Acquired: 10/28/2024 13:04:00 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0391225	F .1879881	.3306520	F .0150839	F .3657283	F .0146574
Stddev	.0003211	.0002441	.0014127	.0001859	.0032579	.0008872
%RSD	.8206799	.1298234	.4272602	1.232388	.8907854	6.052918
#1	.0391724	.1882000	.3320865	.0152587	.3676022	.0139909
#2	.0387794	.1877212	.3292620	.0148886	.3676163	.0156644
#3	.0394157	.1880431	.3306075	.0151045	.3619665	.0143168

Elem	Sr4077
Units	ppm
Avg	.0193550
Stddev	.0000854
%RSD	.4414238
#1	.0192663
#2	.0194367
#3	.0193619

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2983.068	63836.34	13857.81	2106.772	4858.755
Stddev	17.144	270.11	37.81	19.811	23.041
%RSD	.5747162	.4231256	.2728777	.9403464	.4742222
#1	2965.754	63556.15	13821.99	2085.612	4833.506
#2	2983.413	64095.09	13854.11	2124.880	4864.114
#3	3000.037	63857.77	13897.35	2109.824	4878.645

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICB01 Acquired: 10/28/2024 13:08:19 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005958	-.000205	-.000895	.0001075	.0000831	.0041552	-.001696
Stddev	.0005853	.001472	.000405	.0022972	.0004894	.0052081	.000444
%RSD	98.24712	716.7052	45.26567	2137.024	589.0294	125.3401	26.18893
#1	.0012396	.000337	-.000549	.0024263	.0006155	.0059199	-.002170
#2	.0004518	-.001871	-.000795	-.002167	-.000019	-.001706	-.001290
#3	.0000958	.000918	-.001341	.000063	-.000347	.008252	-.001628

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000027	-.000005	.0041106	-.000333	.0000041	-.001402	-.014953
Stddev	.000020	.000066	.0010856	.000465	.0001183	.000154	.002970
%RSD	75.16991	1456.949	26.40948	139.4647	2893.372	11.00800	19.86237
#1	-.000013	-.000006	.0041254	-.000831	.0001272	-.001304	-.014889
#2	-.000018	-.000069	.0051887	-.000257	-.000109	-.001579	-.012016
#3	-.000050	.000062	.0030177	.000089	-.000006	-.001322	-.017955

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000070	-.000896	.0000160	.0004681	-.086243	-.000784	-.004923
Stddev	.000162	.009114	.0000635	.0001473	.005606	.000918	.000102
%RSD	230.5303	1017.310	397.4537	31.46544	6.499664	117.0524	2.071432
#1	-.000178	-.007263	.0000516	.0003380	-.085910	-.000555	-.004878
#2	.000116	-.004968	-.000057	.0006280	-.092008	-.000002	-.005040
#3	-.000149	.009544	.000054	.0004384	-.080812	-.001794	-.004852

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.023669	-.003628	-.000049	.0019437	.0006727	-.013570	-.004819
Stddev	.005712	.000247	.000059	.0007522	.0001126	.005279	.000969
%RSD	24.13117	6.819428	120.9296	38.70260	16.73803	38.89820	20.10106
#1	-.022707	-.003913	-.000104	.0025461	.0007243	-.011294	-.003705
#2	-.018499	-.003505	-.000055	.0021844	.0005436	-.019605	-.005291
#3	-.029800	-.003466	.000013	.0011005	.0007503	-.009812	-.005462

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICB01 Acquired: 10/28/2024 13:08:19 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000638	-.002239	-.000036
Stddev	.002213	.000638	.000028
%RSD	346.9457	28.48905	76.32815
#1	.000373	-.001540	-.000004
#2	.000889	-.002790	-.000051
#3	-.003175	-.002386	-.000052

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3014.670	64432.48	13871.19	2135.647	4965.109
Stddev	12.667	80.23	43.56	9.334	11.486
%RSD	.4201840	.1245216	.3140104	.4370409	.2313248
#1	3002.430	64393.23	13891.23	2132.221	4955.538
#2	3013.855	64379.44	13901.13	2128.511	4961.945
#3	3027.725	64524.79	13821.22	2146.210	4977.845

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CRI01 Acquired: 10/28/2024 13:12:40 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0191425	.0348798	.0114607	.0175772	.0500226	.1024550
Stddev	.0007887	.0004035	.0003637	.0007000	.0008151	.0013190
%RSD	4.120391	1.156787	3.173697	3.982236	1.629436	1.287370
#1	.0199918	.0350621	.0111065	.0177782	.0491693	.1032067
#2	.0184330	.0351600	.0118332	.0181548	.0507932	.1009320
#3	.0190028	.0344173	.0114425	.0167988	.0501054	.1032262

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0936936	.0056416	.0055494	1.929316	.0091340	.0293373
Stddev	.0005639	.0000328	.0000314	.012594	.0000292	.0000685
%RSD	.6018620	.5812001	.5652794	.6527826	.3197731	.2334561
#1	.0933334	.0056740	.0055357	1.940709	.0091238	.0293732
#2	.0943435	.0056085	.0055272	1.915793	.0091113	.0292583
#3	.0934039	.0056423	.0055852	1.931446	.0091670	.0293805

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210839	.0988210	.0190599	1.900590	.0391868	.0109539
Stddev	.0004102	.0023129	.0001109	.007705	.0002236	.0001568
%RSD	1.945486	2.340494	.5816967	.4053994	.5706932	1.431157
#1	.0209618	.0991949	.0190335	1.901968	.0394098	.0108484
#2	.0207486	.1009242	.0189646	1.907513	.0389625	.0111340
#3	.0215412	.0963440	.0191816	1.892289	.0391880	.0108793

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.776343	.0369260	.0373209	1.943575	.0937941	.2110790
Stddev	.013466	.0008799	.0003227	.008034	.0008318	.0001756
%RSD	.7580866	2.382859	.8646365	.4133502	.8868884	.0831863
#1	1.763889	.0360756	.0370007	1.945444	.0936299	.2111033
#2	1.790633	.0378327	.0376461	1.950509	.0930566	.2108925
#3	1.774507	.0368697	.0373160	1.934771	.0946958	.2112411

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CRI01 Acquired: 10/28/2024 13:12:40 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0374367	F .1864100	.3157014	.0143573	F .3520373	.0144223
Stddev	.0009105	.0007635	.0025051	.0013743	.0042824	.0025312
%RSD	2.432036	.4096007	.7935035	9.572194	1.216459	17.55068
#1	.0364974	.1862268	.3185897	.0153383	.3568949	.0146646
#2	.0374975	.1872485	.3141199	.0127865	.3488077	.0168237
#3	.0383153	.1857548	.3143947	.0149469	.3504092	.0117787

Elem	Sr4077
Units	ppm
Avg	.0191217
Stddev	.0001117
%RSD	.5841778
#1	.0190053
#2	.0192280
#3	.0191318

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3044.473	65865.57	13980.41	2178.667	4995.692
Stddev	3.130	243.58	42.78	24.931	2.494
%RSD	.1028110	.3698122	.3059747	1.144333	.0499324
#1	3048.065	65702.15	13931.02	2166.163	4993.337
#2	3043.022	65749.03	14005.52	2162.463	4998.305
#3	3042.331	66145.52	14004.70	2207.376	4995.432

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICSA01 Acquired: 10/28/2024 13:16:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025868	.0076321	.0083598	-.009093	-.000999	250.5570
Stddev	.0024489	.0024906	.0023644	.000220	.001081	1.3106
%RSD	94.66724	32.63346	28.28343	2.419171	108.2082	.5230674
#1	.0052560	.0100974	.0065901	-.009338	-.001031	250.1698
#2	.0020606	.0076820	.0110451	-.009029	-.002063	252.0175
#3	.0004438	.0051169	.0074442	-.008913	.000098	249.4836

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022182	.0011565	.0069748	232.3425	.0565471	.0022914
Stddev	.0004238	.0000728	.0000619	1.1073	.0007828	.0003218
%RSD	19.10690	6.294548	.8873737	.4765871	1.384406	14.04597
#1	.0023476	.0010745	.0069389	232.8428	.0564575	.0019249
#2	.0025623	.0012134	.0070462	233.1113	.0573708	.0024210
#3	.0017448	.0011815	.0069392	231.0733	.0558128	.0025282

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008348	104.2888	.0057636	255.0281	.0030675	.0039906
Stddev	.000548	.5487	.0001034	1.6874	.0003479	.0005150
%RSD	6.560439	.5261664	1.793425	.6616689	11.34183	12.90678
#1	-.008955	104.9136	.0058432	255.3095	.0033829	.0045053
#2	-.007890	103.8853	.0058007	256.5572	.0026943	.0034752
#3	-.008199	104.0674	.0056468	253.2177	.0031252	.0039912

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.037452	.0066736	-.002068	-.007851	.0194755	.0002006
Stddev	.007877	.0009882	.000307	.020779	.0014175	.0007365
%RSD	21.03269	14.80725	14.82806	264.6502	7.278363	367.1441
#1	-.043836	.0072711	-.001789	-.016378	.0210870	-.000108
#2	-.039871	.0072168	-.002018	-.023010	.0189178	-.000332
#3	-.028649	.0055330	-.002396	.015834	.0184217	.001041

Sample Name: ICSA01 Acquired: 10/28/2024 13:16:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001100	-.001061	-.001221	.0002898	-.016162	F .0468579
Stddev	.000402	.000255	.008138	.0032386	.003231	.0006486
%RSD	36.56889	24.08257	666.2786	1117.389	19.98818	1.384214
#1	-.001041	-.001030	.008050	-.001344	-.017473	.0461265
#2	-.000730	-.001330	-.004536	.004020	-.012482	.0473631
#3	-.001528	-.000822	-.007178	-.001807	-.018532	.0470842

Elem	Sr4077
Units	ppm
Avg	-.007098
Stddev	.000322
%RSD	4.541406
#1	-.007455
#2	-.007008
#3	-.006830

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2607.062	55476.90	13299.67	1839.745	3835.977
Stddev	12.025	183.92	62.48	10.925	10.199
%RSD	.4612566	.3315267	.4697998	.5938204	.2658759
#1	2617.253	55268.15	13275.74	1828.805	3845.119
#2	2610.135	55615.13	13252.70	1850.655	3837.836
#3	2593.798	55547.40	13370.59	1839.777	3824.977

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICSAB01 Acquired: 10/28/2024 13:21:20 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1069883	.0973984	.0557259	.0398073	.6196282	244.6481
Stddev	.0045545	.0012145	.0005964	.0016091	.0028652	.9218
%RSD	4.257017	1.246901	1.070219	4.042246	.4624035	.3768026
#1	.1070010	.0960642	.0560703	.0396533	.6206383	245.4042
#2	.1115365	.0984395	.0550373	.0382808	.6163948	243.6212
#3	.1024275	.0976915	.0560702	.0414879	.6218516	244.9188

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4718094	.4736401	.9665004	226.0753	.5563609	.5130492
Stddev	.0005125	.0009816	.0013242	.6224	.0019545	.0005607
%RSD	.1086152	.2072352	.1370094	.2753236	.3512978	.1092934
#1	.4716642	.4725528	.9657449	226.0844	.5554746	.5134947
#2	.4713852	.4744608	.9680295	226.6931	.5586015	.5132335
#3	.4723788	.4739067	.9657270	225.4484	.5550065	.5124196

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4910139	103.1072	.4589601	247.1500	1.013714	.2116928
Stddev	.0011708	.2677	.0017486	1.0414	.001314	.0004337
%RSD	.2384520	.2596748	.3809852	.4213516	.1296431	.2048473
#1	.4919536	103.3308	.4604746	247.0894	1.013814	.2114466
#2	.4897023	103.1802	.4593592	248.2204	1.014975	.2114383
#3	.4913857	102.8105	.4570465	246.1403	1.012352	.2121935

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0306161	.4629954	1.063681	.0450548	.9216452	1.077579
Stddev	.0022118	.0005416	.004474	.0099175	.0010846	.001708
%RSD	7.224379	.1169730	.4205734	22.01213	.1176806	.1585074
#1	.0330870	.4635511	1.068846	.0469843	.9205785	1.076937
#2	.0288211	.4624692	1.061034	.0538658	.9216103	1.076284
#3	.0299401	.4629659	1.061163	.0343143	.9227468	1.079515

Sample Name: ICSAB01 Acquired: 10/28/2024 13:21:20 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.028386	.9412580	1.106227	F .0059058	F -.011417	F .0469990
Stddev	.001713	.0008418	.006922	.0026492	.005126	.0020072
%RSD	.1665708	.0894305	.6257418	44.85869	44.89695	4.270615
#1	1.028441	.9421671	1.112015	.0066348	-.014574	.0446967
#2	1.030070	.9405055	1.108106	.0029683	-.005503	.0483808
#3	1.026645	.9411015	1.098559	.0081142	-.014175	.0479195

Elem	Sr4077
Units	ppm
Avg	F -.007277
Stddev	.000388
%RSD	5.334494
#1	-.007496
#2	-.007507
#3	-.006829

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2567.396	55003.16	13371.91	1801.605	3801.757
Stddev	8.587	212.96	35.02	18.267	7.275
%RSD	.3344657	.3871723	.2619060	1.013909	.1913673
#1	2558.214	54779.65	13331.54	1781.643	3793.384
#2	2575.228	55203.70	13394.07	1817.485	3806.534
#3	2568.745	55026.13	13390.13	1805.688	3805.354

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICSADLX20 Acquired: 10/28/2024 13:27:17 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002236	-.001298	.0009430	-.001467	.0003031	12.20368	-.001561
Stddev	.000829	.001970	.0012703	.000490	.0011314	.01797	.000276
%RSD	37.08476	151.7048	134.7069	33.39531	373.2403	.1472724	17.70462
#1	-.001474	-.002711	.0015832	-.001072	.0007059	12.18353	-.001654
#2	-.003119	.000952	.0017660	-.002016	-.000975	12.21807	-.001780
#3	-.002115	-.002136	-.000520	-.001314	.001178	12.20942	-.001251

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002080	.0002558	11.93587	.0019136	.0001018	-.001142	4.934362
Stddev	.0000168	.0000664	.04554	.0002156	.0001319	.000211	.056113
%RSD	8.069395	25.93909	.3815727	11.26824	129.5816	18.48377	1.137186
#1	.0001894	.0002438	11.88736	.0018447	.0001199	-.000906	4.878876
#2	.0002219	.0003274	11.97771	.0017408	.0002238	-.001208	4.991081
#3	.0002128	.0001963	11.94254	.0021553	-.000038	-.001313	4.933128

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002451	12.30964	.0003354	.0004998	-.083236	-.000047	-.004351
Stddev	.0001411	.08666	.0001630	.0002782	.008812	.001327	.000119
%RSD	57.55332	.7039778	48.60140	55.65333	10.58689	2794.284	2.740033
#1	.0003415	12.21672	.0005215	.0005368	-.090009	.000415	-.004231
#2	.0000832	12.38826	.0002668	.0007575	-.086427	-.001544	-.004469
#3	.0003106	12.32394	.0002179	.0002050	-.073273	.000986	-.004352

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.022781	-.004916	.0000035	.0005428	.0001737	-.014884	-.004025
Stddev	.026828	.000585	.0002182	.0005289	.0002328	.005440	.003411
%RSD	117.7616	11.90866	6165.200	97.43675	133.9917	36.54813	84.73747
#1	-.045778	-.005383	.0002406	.0011292	.0000161	-.010668	-.002463
#2	.006692	-.005107	-.000189	.0003973	.0004411	-.021024	-.007937
#3	-.029258	-.004259	-.000041	.0001019	.0000640	-.012960	-.001676

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICSADLX20 Acquired: 10/28/2024 13:27:17 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0029341	.0009247	-.000084
Stddev	.0005594	.0007484	.000061
%RSD	19.06637	80.93083	71.94647
#1	.0035744	.0009707	-.000037
#2	.0026873	.0016490	-.000153
#3	.0025405	.0001544	-.000064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3021.673	65468.36	13924.48	2147.925	4834.990
Stddev	16.022	166.10	50.39	25.311	14.293
%RSD	.5302423	.2537118	.3618926	1.178386	.2956120
#1	3003.690	65445.76	13945.96	2150.769	4819.728
#2	3026.900	65314.71	13866.90	2121.312	4837.180
#3	3034.429	65644.60	13960.57	2171.694	4848.061

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICSABDLX20 Acquired: 10/28/2024 13:31:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061483	.0040922	.0028089	.0017293	.0299494	12.12471	.0225888
Stddev	.0007123	.0005006	.0002562	.0012897	.0010275	.03070	.0005830
%RSD	11.58472	12.23349	9.120282	74.57903	3.430713	.2532415	2.580707
#1	.0054960	.0046162	.0028362	.0003854	.0298366	12.10861	.0220005
#2	.0060406	.0036188	.0025402	.0018455	.0310287	12.16012	.0225997
#3	.0069083	.0040417	.0030504	.0029570	.0289831	12.10540	.0231662

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254095	.0480003	11.89189	.0286661	.0252387	.0250782	5.118562
Stddev	.0000644	.0001668	.04495	.0004625	.0001732	.0002075	.022244
%RSD	.2533606	.3474834	.3779791	1.613411	.6862490	.8273815	.4345694
#1	.0253551	.0478351	11.84895	.0290913	.0254382	.0250279	5.093500
#2	.0254806	.0479972	11.93861	.0287332	.0251508	.0253062	5.126227
#3	.0253930	.0481686	11.88810	.0281737	.0251271	.0249005	5.135960

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0243939	12.28834	.0509108	.0106588	-.091874	.0242249	.0510185
Stddev	.0001801	.03482	.0002432	.0001381	.006541	.0008065	.0004072
%RSD	.7382122	.2833377	.4777344	1.295354	7.119643	3.329379	.7980461
#1	.0242602	12.26105	.0507973	.0108150	-.089997	.0249748	.0513842
#2	.0245987	12.32755	.0507451	.0105529	-.099148	.0233717	.0510916
#3	.0243228	12.27642	.0511900	.0106085	-.086477	.0243283	.0505798

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.022013	.0436023	.0545590	.0511449	.0483334	.0251294	-.005134
Stddev	.012704	.0006207	.0003948	.0009920	.0006490	.0069247	.001261
%RSD	57.71370	1.423668	.7236823	1.939598	1.342760	27.55598	24.55486
#1	-.033458	.0431275	.0541443	.0501716	.0490816	.0331253	-.005233
#2	-.008343	.0443047	.0549305	.0521546	.0479225	.0211414	-.006342
#3	-.024237	.0433746	.0546022	.0511085	.0479961	.0211214	-.003827

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: ICSABDLX20 Acquired: 10/28/2024 13:31:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011221	-.000368	-.000239
Stddev	.0024070	.000614	.000029
%RSD	214.5093	167.1325	12.18533
#1	.0037701	-.000967	-.000269
#2	.0005296	-.000396	-.000211
#3	-.000933	.000261	-.000237

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3057.510	63606.38	14025.64	2134.225	4880.411
Stddev	9.137	240.77	45.88	12.004	8.786
%RSD	.2988404	.3785334	.3271247	.5624573	.1800326
#1	3052.446	63453.45	14031.53	2123.331	4877.424
#2	3052.026	63481.78	13977.11	2132.249	4873.507
#3	3068.058	63883.92	14068.30	2147.094	4890.301

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV01 Acquired: 10/28/2024 13:35:47 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.865777	4.618783	4.843612	4.924733	4.943745	9.646973	9.342215
Stddev	.005983	.024277	.004466	.019511	.016009	.018909	.047891
%RSD	.1229532	.5256176	.0922001	.3961915	.3238165	.1960137	.5126311
#1	4.863712	4.594895	4.842230	4.905186	4.940619	9.625783	9.397428
#2	4.861101	4.618023	4.848606	4.924805	4.929530	9.662129	9.311925
#3	4.872519	4.643431	4.840001	4.944208	4.961086	9.653007	9.317292

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2399601	2.425987	23.73258	.9693092	2.423621	1.240893	4.973762
Stddev	.0009341	.003592	.12749	.0009575	.000889	.002521	.048471
%RSD	.3892779	.1480654	.5371973	.0987833	.0366767	.2031207	.9745279
#1	.2402754	2.425780	23.59175	.9688556	2.424328	1.239568	4.924042
#2	.2406957	2.429679	23.84012	.9686627	2.423912	1.239311	4.976366
#3	.2389091	2.422504	23.76588	.9704092	2.422623	1.243799	5.020879

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.313152	23.79459	2.430986	1.259528	24.68199	2.389826	2.553542
Stddev	.007647	.19220	.002512	.000191	.08578	.008617	.006684
%RSD	.3305993	.8077280	.1033484	.0151794	.3475269	.3605554	.2617531
#1	2.305186	23.58522	2.431776	1.259550	24.65001	2.379959	2.545979
#2	2.320434	23.96301	2.433008	1.259708	24.61681	2.393646	2.558657
#3	2.313837	23.83554	2.428173	1.259327	24.77917	2.395872	2.555988

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.23026	4.725784	5.010648	4.816388	4.662418	5.032993	5.086968
Stddev	.10093	.019877	.013634	.009367	.007214	.047808	.018349
%RSD	.4000164	.4206132	.2720979	.1944855	.1547238	.9499001	.3607066
#1	25.17186	4.731743	5.003761	4.815745	4.654088	4.979832	5.095389
#2	25.17212	4.741999	5.001832	4.826061	4.666574	5.046689	5.099595
#3	25.34680	4.703608	5.026352	4.807359	4.666592	5.072460	5.065920

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV01 Acquired: 10/28/2024 13:35:47 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.679069	4.526976	4.758972
Stddev	.003448	.016225	.039271
%RSD	.0736929	.3583965	.8252092
#1	4.676893	4.542846	4.720629
#2	4.677269	4.510419	4.799110
#3	4.683044	4.527662	4.757176

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2883.079	60960.91	13295.23	2007.446	4434.940
Stddev	11.558	102.63	54.51	4.475	11.661
%RSD	.4008944	.1683580	.4099943	.2229445	.2629290
#1	2879.521	61051.46	13283.02	2011.451	4424.693
#2	2895.997	60849.43	13247.86	2002.615	4447.628
#3	2873.718	60981.84	13354.80	2008.270	4432.498

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB01 Acquired: 10/28/2024 13:39:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004580	-.000237	.0002936	-.000561	.0005244	.0071311	-.002803
Stddev	.0020159	.001534	.0005954	.002093	.0006615	.0022856	.000522
%RSD	440.1369	647.4009	202.7902	373.1003	126.1495	32.05067	18.61385
#1	-.001869	.001473	.0009729	-.000591	.0011127	.0074707	-.002660
#2	.001651	-.000692	-.000137	.001547	-.000192	.0046947	-.003382
#3	.001592	-.001492	.000045	-.002639	.000652	.0092279	-.002368

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000224	.0000185	.0020664	-.000577	.0001778	-.001221	-.013076
Stddev	.0000564	.0000291	.0008181	.000139	.0000761	.000225	.002573
%RSD	251.8768	157.5936	39.59061	24.04360	42.82323	18.43596	19.67937
#1	.0000711	.0000520	.0030101	-.000546	.0001442	-.001191	-.013899
#2	.0000354	-.000001	.0016295	-.000728	.0001242	-.001013	-.015137
#3	-.000039	.000004	.0015595	-.000456	.0002650	-.001460	-.010192

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000182	.0017706	.0001194	.0005028	-.093565	-.000181	-.004750
Stddev	.000067	.0084415	.0000689	.0003220	.008306	.000529	.000067
%RSD	36.89531	476.7684	57.69720	64.03785	8.877714	291.8285	1.407788
#1	-.000120	-.004305	.0000415	.0002227	-.085491	-.000091	-.004728
#2	-.000253	.011410	.0001722	.0008546	-.102086	.000297	-.004698
#3	-.000173	-.001793	.0001446	.0004311	-.093119	-.000750	-.004825

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002860	-.001088	.0001326	.0014604	.0004379	-.014558	-.004189
Stddev	.018399	.000536	.0000664	.0005281	.0000905	.007313	.000351
%RSD	643.3375	49.26651	50.08935	36.15957	20.65832	50.23070	8.389620
#1	.017287	-.000795	.0000702	.0008507	.0004528	-.022328	-.004065
#2	-.007092	-.000763	.0001253	.0017725	.0003410	-.007810	-.004586
#3	-.018775	-.001707	.0002024	.0017581	.0005201	-.013538	-.003917

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB01 Acquired: 10/28/2024 13:39:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0007343	-.001236	.0000266
Stddev	.0025767	.000647	.0000195
%RSD	350.8956	52.39706	73.50368
#1	.0025022	-.000655	.0000482
#2	-.002222	-.001118	.0000210
#3	.001923	-.001934	.0000104

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3039.065	66397.21	14216.85	2152.417	5118.053
Stddev	2.763	119.41	76.42	13.535	3.732
%RSD	.0909003	.1798442	.5375444	.6288272	.0729250
#1	3041.927	66450.93	14136.09	2153.022	5121.897
#2	3038.852	66480.33	14226.44	2165.639	5117.818
#3	3036.414	66260.37	14288.03	2138.590	5114.444

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-02 Acquired: 10/28/2024 13:44:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086621	-.007288	.0377965	.0008292	-.000603	38.09482
Stddev	.0010924	.001063	.0007789	.0021453	.000876	.23218
%RSD	12.61129	14.58077	2.060810	258.7133	145.2880	.6094811
#1	.0078002	-.007510	.0384969	.0030184	.000404	37.88388
#2	.0082955	-.008221	.0379349	.0007386	-.001193	38.34359
#3	.0098907	-.006131	.0369577	-.001269	-.001020	38.05697

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1710981	.0020441	.0012419	16.90516	.0754841	.0283184
Stddev	.0017983	.0000537	.0000167	.05228	.0005516	.0000277
%RSD	1.051011	2.626446	1.346020	.3092546	.7307956	.0976801
#1	.1696900	.0019853	.0012548	16.88164	.0750266	.0283051
#2	.1731238	.0020906	.0012230	16.96507	.0753291	.0283502
#3	.1704805	.0020565	.0012478	16.86878	.0760967	.0282999

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0660757	17.09562	.5664969	7.579431	.0428405	.0007878
Stddev	.0002109	.01494	.0024057	.032313	.0002304	.0001878
%RSD	.3191778	.0874003	.4246687	.4263242	.5378763	23.83930
#1	.0659555	17.09787	.5648696	7.578935	.0431066	.0007209
#2	.0659524	17.07968	.5692603	7.611989	.0427054	.0009999
#3	.0663192	17.10931	.5653609	7.547369	.0427096	.0006426

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.80527	.0541932	.0816521	5.404695	.0478738	.0212057
Stddev	.34813	.0010412	.0006010	.007141	.0004165	.0002847
%RSD	.4716836	1.921289	.7360485	.1321178	.8699913	1.342418
#1	73.40337	.0538148	.0822759	5.399884	.0478126	.0208770
#2	73.99937	.0553708	.0810769	5.401302	.0483175	.0213657
#3	74.01308	.0533942	.0816034	5.412900	.0474912	.0213743

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-02 Acquired: 10/28/2024 13:44:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004135	.1686512	F 57.12958	1.276684	F 26.81188	.0159396
Stddev	.0007726	.0017868	.13360	.004122	.06902	.0011764
%RSD	186.8458	1.059472	.2338568	.3228755	.2574188	7.380397
#1	.0012275	.1672056	57.26292	1.272350	26.88400	.0172922
#2	.0003228	.1706489	56.99572	1.280556	26.74645	.0151546
#3	-.000310	.1680992	57.13011	1.277145	26.80520	.0153720

Elem	Sr4077
Units	ppm
Avg	.2555307
Stddev	.0026173
%RSD	1.024258
#1	.2528527
#2	.2580827
#3	.2556567

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3004.388	65345.51	15197.23	2109.700	4486.853
Stddev	4.458	156.16	82.89	9.328	8.105
%RSD	.1483739	.2389742	.5454276	.4421579	.1806305
#1	3002.004	65166.82	15225.51	2098.996	4485.594
#2	3009.531	65455.82	15103.90	2114.010	4495.513
#3	3001.630	65413.89	15262.28	2116.094	4479.451

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-03 Acquired: 10/28/2024 13:48:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158632	-.007359	.0735545	-.000888	-.000620	75.81799
Stddev	.0020782	.001036	.0005225	.001007	.001382	.11896
%RSD	13.10090	14.08246	.7103928	113.4133	222.9360	.1569028
#1	.0180654	-.008433	.0738651	-.000636	.000332	75.70180
#2	.0155880	-.007279	.0729513	-.000031	.000013	75.93954
#3	.0139364	-.006365	.0738472	-.001997	-.002205	75.81264

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3020475	.0049372	.0030958	35.14340	.0629703	.0251031
Stddev	.0002385	.0000717	.0000975	.03192	.0004506	.0000524
%RSD	.0789669	1.451871	3.148416	.0908253	.7155757	.2088264
#1	.3017747	.0048650	.0031593	35.11884	.0626951	.0250449
#2	.3021514	.0049381	.0029836	35.13188	.0627255	.0251465
#3	.3022165	.0050084	.0031446	35.17948	.0634903	.0251181

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0419467	36.96366	.8602197	15.94338	.0425479	.0011138
Stddev	.0002801	.07776	.0009846	.01460	.0001517	.0002909
%RSD	.6678341	.2103815	.1144562	.0915464	.3564726	26.11347
#1	.0416268	36.88694	.8594101	15.96024	.0426861	.0010233
#2	.0420647	36.96163	.8599333	15.93490	.0423856	.0008790
#3	.0421485	37.04243	.8613157	15.93501	.0425718	.0014392

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	111.3649	.0674530	.1480104	4.985232	.0946396	.0206077
Stddev	.4869	.0010763	.0004647	.012449	.0008441	.0001460
%RSD	.4372312	1.595579	.3139574	.2497203	.8919308	.7084311
#1	111.8348	.0678431	.1481441	4.990963	.0937097	.0204502
#2	111.3974	.0662361	.1474936	4.970949	.0948518	.0206344
#3	110.8625	.0682798	.1483937	4.993784	.0953574	.0207384

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-03 Acquired: 10/28/2024 13:48:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002228	.1422223	F 100.2385	.5975794	F 31.15849	.0339042
Stddev	.000282	.0005072	.2801	.0013642	.06625	.0016506
%RSD	12.67369	.3566199	.2794274	.2282807	.2126355	4.868419
#1	-.002359	.1420241	100.0257	.5970000	31.20952	.0357569
#2	-.002420	.1418442	100.1341	.5991376	31.08361	.0333653
#3	-.001903	.1427987	100.5558	.5966006	31.18232	.0325904

Elem	Sr4077
Units	ppm
Avg	.4096409
Stddev	.0007631
%RSD	.1862755
#1	.4088422
#2	.4103624
#3	.4097182

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3099.708	67400.88	15432.79	2200.603	4421.504
Stddev	10.040	156.80	28.27	10.029	8.300
%RSD	.3238917	.2326352	.1831503	.4557565	.1877249
#1	3109.872	67252.77	15400.17	2189.316	4431.077
#2	3089.798	67565.12	15450.21	2204.000	4416.319
#3	3099.454	67384.74	15447.98	2208.493	4417.116

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04 Acquired: 10/28/2024 13:52:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029980	-.006455	.0325037	.0000592	.0004620	25.96642
Stddev	.0021491	.001272	.0006443	.0004218	.0012128	.02543
%RSD	71.68420	19.70238	1.982253	712.0321	262.5299	.0979277
#1	.0034687	-.007569	.0329282	-.000384	-.000564	25.94642
#2	.0048728	-.005069	.0328205	.000455	.000150	25.99504
#3	.0006526	-.006725	.0317623	.000107	.001800	25.95781

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1929109	.0022271	.0009902	18.16655	.0301751	.0103581
Stddev	.0007556	.0000457	.0000487	.08566	.0004628	.0001350
%RSD	.3916724	2.053085	4.916015	.4715039	1.533771	1.302819
#1	.1926058	.0022201	.0009451	18.11913	.0306862	.0104111
#2	.1937713	.0022760	.0009836	18.26543	.0300548	.0104585
#3	.1923555	.0021853	.0010418	18.11509	.0297843	.0102047

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223214	14.92096	.3840394	6.752035	.0188937	.0004852
Stddev	.0002638	.06510	.0014742	.046950	.0000945	.0001824
%RSD	1.181850	.4362806	.3838759	.6953531	.5002849	37.58740
#1	.0222065	14.91638	.3830217	6.748904	.0187893	.0003677
#2	.0221345	14.98823	.3857300	6.800473	.0189185	.0003926
#3	.0226232	14.85828	.3833664	6.706728	.0189734	.0006953

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	87.28566	.0270025	.0713952	2.956497	.0462294	.0105150
Stddev	.14435	.0010514	.0002216	.025736	.0005765	.0001549
%RSD	.1653812	3.893833	.3103579	.8705058	1.246923	1.473144
#1	87.45223	.0275927	.0712345	2.975094	.0460436	.0104585
#2	87.20773	.0276261	.0713031	2.967272	.0468758	.0103963
#3	87.19702	.0257885	.0716480	2.927124	.0457688	.0106903

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04 Acquired: 10/28/2024 13:52:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002624	.1011825	F 47.54328	.2397529	F 25.00341	.0144635
Stddev	.000414	.0004229	.11022	.0023593	.06141	.0008326
%RSD	15.76799	.4179729	.2318344	.9840583	.2456248	5.756584
#1	-.002985	.1007679	47.52465	.2377837	24.94699	.0144596
#2	-.002172	.1011662	47.66163	.2423679	25.06882	.0136328
#3	-.002714	.1016133	47.44355	.2391071	24.99441	.0152980

Elem	Sr4077
Units	ppm
Avg	.1994956
Stddev	.0000619
%RSD	.0310231
#1	.1995668
#2	.1994549
#3	.1994651

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3018.871	65641.95	15002.44	2170.446	4587.985
Stddev	7.604	116.18	39.83	12.887	5.708
%RSD	.2518860	.1769833	.2654723	.5937340	.1244118
#1	3010.318	65563.89	15012.61	2175.740	4590.157
#2	3021.428	65586.50	14958.52	2179.842	4581.510
#3	3024.867	65775.46	15036.20	2155.755	4592.288

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04DUP Acquired: 10/28/2024 13:57:05 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041056	-.006346	.0318722	-.000833	.0010290	26.21319
Stddev	.0025076	.000838	.0010786	.000823	.0017002	.05995
%RSD	61.07676	13.20163	3.384084	98.84238	165.2241	.2287068
#1	.0066183	-.007110	.0306268	-.001019	.0018700	26.15112
#2	.0016032	-.006476	.0324879	-.001547	-.000928	26.21767
#3	.0040954	-.005450	.0325020	.000067	.002145	26.27078

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1924687	.0022274	.0010221	18.13333	.0299176	.0104101
Stddev	.0009685	.0000509	.0000341	.15391	.0003263	.0002484
%RSD	.5031963	2.284143	3.338955	.8487524	1.090738	2.386642
#1	.1913910	.0022365	.0010020	17.97111	.0302604	.0105907
#2	.1927488	.0021725	.0010616	18.15156	.0298815	.0101268
#3	.1932663	.0022731	.0010028	18.27730	.0296108	.0105128

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220563	15.40917	.3828000	6.791599	.0185559	.0009923
Stddev	.0004216	.06659	.0034601	.058677	.0004884	.0002895
%RSD	1.911641	.4321636	.9038952	.8639572	2.632001	29.17771
#1	.0215698	15.33259	.3797213	6.727065	.0182193	.0011323
#2	.0223149	15.45353	.3821342	6.805990	.0183323	.0011851
#3	.0222842	15.44138	.3865447	6.841741	.0191160	.0006593

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	90.14600	.0262207	.0647631	3.020021	.0461344	.0109733
Stddev	.33030	.0008446	.0002604	.013554	.0006641	.0001129
%RSD	.3664058	3.221331	.4020938	.4488100	1.439567	1.028499
#1	89.93220	.0252506	.0644722	3.013229	.0468557	.0108925
#2	90.52643	.0267930	.0649745	3.035628	.0455483	.0109251
#3	89.97938	.0266184	.0648427	3.011206	.0459991	.0111022

Sample Name: P4549-04DUP Acquired: 10/28/2024 13:57:05 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002737	.0997933	F 49.23674	.2367741	F 24.96333	.0131265
Stddev	.000723	.0009148	.19638	.0010046	.05736	.0004346
%RSD	26.43249	.9167395	.3988562	.4242876	.2297686	3.310490
#1	-.003533	.0987414	49.01248	.2362182	24.97177	.0130313
#2	-.002121	.1002344	49.37799	.2379338	24.90223	.0136007
#3	-.002557	.1004040	49.31975	.2361703	25.01601	.0127474

Elem	Sr4077
Units	ppm
Avg	.1998083
Stddev	.0003987
%RSD	.1995212
#1	.1993482
#2	.2000257
#3	.2000511

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2981.060	63473.07	14960.52	2082.222	4546.138
Stddev	11.267	54.82	26.06	2.574	12.459
%RSD	.3779648	.0863635	.1741898	.1236172	.2740514
#1	2974.387	63432.52	14970.24	2079.304	4545.080
#2	2994.069	63451.25	14980.32	2083.190	4559.092
#3	2974.723	63535.44	14931.00	2084.171	4534.242

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04LX5 Acquired: 10/28/2024 14:01:19 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000964	-.001787	.0063937	-.000669	.0009493	5.395436	.0367396
Stddev	.002370	.001934	.0006894	.000816	.0010440	.005019	.0005215
%RSD	245.9187	108.2357	10.78322	122.0224	109.9770	.0930201	1.419537
#1	-.003671	.000226	.0061750	.000203	.0011190	5.390250	.0363600
#2	.000047	-.001956	.0071659	-.000794	.0018981	5.395791	.0373342
#3	.000733	-.003631	.0058401	-.001416	-.000169	5.400269	.0365244

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004360	.0001591	3.742269	.0053988	.0020426	.0041084	3.028349
Stddev	.0000183	.0000595	.021544	.0003164	.0002129	.0001031	.020135
%RSD	4.206026	37.40702	.5757039	5.860896	10.42426	2.509637	.6648756
#1	.0004566	.0002260	3.719828	.0054870	.0018804	.0040428	3.020081
#2	.0004215	.0001119	3.744193	.0050476	.0019635	.0040551	3.013665
#3	.0004299	.0001394	3.762788	.0056617	.0022837	.0042272	3.051302

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0785009	1.396823	.0039073	.0006505	17.19694	.0060855	.0100372
Stddev	.0006226	.021511	.0002267	.0001994	.11991	.0012138	.0003087
%RSD	.7931562	1.540023	5.800652	30.64928	.6972920	19.94529	3.076008
#1	.0781229	1.374312	.0037145	.0005217	17.26813	.0069092	.0096951
#2	.0781603	1.398987	.0038505	.0008801	17.05849	.0046916	.0102952
#3	.0792195	1.417171	.0041570	.0005496	17.26418	.0066556	.0101212

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6032136	.0046203	.0021310	.0006044	.0202955	9.741536	.0422107
Stddev	.0119316	.0006873	.0000415	.0005542	.0003410	.020744	.0008361
%RSD	1.978008	14.87679	1.949516	91.69245	1.680325	.2129445	1.980783
#1	.5953540	.0040112	.0020849	.0005161	.0199148	9.722729	.0419934
#2	.5973438	.0044842	.0021424	.0000997	.0205730	9.738091	.0431340
#3	.6169431	.0053655	.0021656	.0011975	.0203987	9.763786	.0415047

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04LX5 Acquired: 10/28/2024 14:01:19 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.181685	.0018374	.0408552
Stddev	.034081	.0001257	.0001800
%RSD	.6577272	6.842495	.4405385
#1	5.142459	.0017929	.0409308
#2	5.204038	.0019794	.0406498
#3	5.198560	.0017400	.0409851

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3033.375	65983.79	15002.17	2154.118	4849.080
Stddev	11.532	68.30	27.91	11.712	21.168
%RSD	.3801815	.1035074	.1860483	.5437201	.4365425
#1	3039.348	66040.97	15034.37	2167.455	4859.795
#2	3020.081	65908.16	14984.81	2145.507	4824.696
#3	3040.695	66002.24	14987.34	2149.392	4862.748

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04MS Acquired: 10/28/2024 14:05:34 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6854432	1.554772	.8567574	1.648336	.2340826	39.79996
Stddev	.0017862	.041298	.0036431	.003049	.0002437	.12833
%RSD	.2605888	2.656202	.4252251	.1849659	.1041238	.3224257
#1	.6836661	1.575073	.8546707	1.651526	.2338190	39.80403
#2	.6854252	1.507253	.8546374	1.648031	.2341289	39.66965
#3	.6872383	1.581990	.8609641	1.645451	.2342999	39.92620

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3691559	.1712702	.1738440	19.05919	.3989490	.1972551
Stddev	.0018546	.0005971	.0003952	.07279	.0017153	.0002569
%RSD	.5023844	.3486378	.2273615	.3818935	.4299492	.1302601
#1	.3698804	.1711663	.1735409	19.10972	.3982332	.1969703
#2	.3670484	.1719125	.1737001	18.97576	.4009062	.1973253
#3	.3705388	.1707319	.1742910	19.09209	.3977075	.1974696

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2912057	19.64660	.5587338	9.380321	.4836705	.0605378
Stddev	.0004899	.16463	.0030565	.050735	.0008096	.0003328
%RSD	.1682140	.8379598	.5470381	.5408651	.1673812	.5496685
#1	.2908698	19.68814	.5597287	9.421537	.4828706	.0604535
#2	.2917678	19.46518	.5553038	9.323658	.4836516	.0602553
#3	.2909796	19.78649	.5611689	9.395768	.4844894	.0609046

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	89.01608	.2904328	.2604500	11.92695	.2690278	.3873311
Stddev	.75020	.0013833	.0011765	.08382	.0007844	.0005297
%RSD	.8427642	.4763007	.4517329	.7027808	.2915827	.1367429
#1	89.06363	.2900689	.2611042	11.93301	.2691890	.3877129
#2	88.24324	.2892678	.2590917	11.84027	.2681752	.3875539
#3	89.74137	.2919618	.2611539	12.00758	.2697191	.3867264

Sample Name: P4549-04MS Acquired: 10/28/2024 14:05:34 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0647627	.2333065	F 60.36260	5.849950	F 24.53086	.1750503
Stddev	.0008881	.0010898	.52893	.007398	.11175	.0005819
%RSD	1.371334	.4670889	.8762492	.1264695	.4555289	.3323986
#1	.0656721	.2327945	60.42672	5.841860	24.52478	.1754742
#2	.0638975	.2325669	59.80454	5.851618	24.42228	.1743870
#3	.0647186	.2345579	60.85655	5.856373	24.64552	.1752899

Elem	Sr4077
Units	ppm
Avg	.3821332
Stddev	.0016631
%RSD	.4352145
#1	.3819432
#2	.3805732
#3	.3838831

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2996.036	65465.31	14648.28	2125.441	4537.876
Stddev	12.419	430.37	54.67	25.380	9.964
%RSD	.4145168	.6574065	.3731943	1.194112	.2195644
#1	2995.541	65212.37	14587.98	2112.070	4540.623
#2	2983.871	65962.24	14694.59	2154.711	4526.827
#3	3008.694	65221.34	14662.28	2109.541	4546.178

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04MSD Acquired: 10/28/2024 14:09:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6836658	1.469040	.8556912	1.642935	.2320912	39.66703
Stddev	.0007081	.037394	.0052152	.004230	.0014179	.01735
%RSD	.1035750	2.545449	.6094725	.2574671	.6109191	.0437268
#1	.6835166	1.428804	.8496826	1.638107	.2336130	39.67128
#2	.6844366	1.475589	.8590428	1.644712	.2318532	39.64795
#3	.6830442	1.502726	.8583484	1.645987	.2308074	39.68185

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3680698	.1731765	.1732424	19.09429	.4073734	.1972155
Stddev	.0010415	.0013109	.0008569	.04048	.0028290	.0005289
%RSD	.2829740	.7569818	.4946360	.2120175	.6944567	.2681688
#1	.3692607	.1741501	.1722553	19.04958	.4093320	.1966048
#2	.3676200	.1716860	.1736768	19.12846	.4041299	.1975157
#3	.3673288	.1736936	.1737952	19.10483	.4086581	.1975259

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2908889	20.03120	.5606320	9.453712	.4821480	.0615956
Stddev	.0009481	.09292	.0009666	.055258	.0019777	.0001573
%RSD	.3259282	.4638542	.1724089	.5845116	.4101956	.2554363
#1	.2919787	19.95868	.5599084	9.393824	.4799836	.0617685
#2	.2904345	20.13594	.5617297	9.502723	.4825994	.0615572
#3	.2902535	19.99899	.5602578	9.464589	.4838611	.0614610

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	90.36454	.2901677	.2615862	12.11918	.2718713	.3881289
Stddev	.31460	.0014532	.0014764	.06825	.0021959	.0008746
%RSD	.3481442	.5008328	.5644007	.5631171	.8077035	.2253353
#1	90.11822	.2884982	.2632868	12.04830	.2725943	.3891165
#2	90.71893	.2911497	.2608399	12.18444	.2694050	.3874523
#3	90.25648	.2908550	.2606319	12.12479	.2736145	.3878180

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04MSD Acquired: 10/28/2024 14:09:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0658548	.2324884	F 61.77578	5.905419	F 24.26016	.1745792
Stddev	.0001859	.0001126	.32505	.062442	.19247	.0024668
%RSD	.2822432	.0484493	.5261745	1.057372	.7933527	1.412989
#1	.0656556	.2323844	61.44238	5.836985	24.04335	.1772042
#2	.0660236	.2324729	62.09177	5.919973	24.32625	.1723090
#3	.0658851	.2326080	61.79319	5.959298	24.41087	.1742246

Elem	Sr4077
Units	ppm
Avg	.3796209
Stddev	.0010297
%RSD	.2712505
#1	.3807652
#2	.3787690
#3	.3793285

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3005.897	64251.33	14621.66	2134.341	4551.990
Stddev	33.992	227.42	22.07	19.943	31.968
%RSD	1.130831	.3539542	.1509278	.9343932	.7022952
#1	2966.859	64407.49	14597.98	2134.516	4515.086
#2	3021.890	63990.41	14625.35	2114.311	4569.699
#3	3028.943	64356.09	14641.65	2154.196	4571.185

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04A Acquired: 10/28/2024 14:13:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6848094	1.539257	.8532263	1.658239	.2335801	39.90638
Stddev	.0011379	.021395	.0025692	.007966	.0017702	.15523
%RSD	.1661600	1.389960	.3011189	.4804111	.7578744	.3889834
#1	.6856831	1.515281	.8503488	1.649107	.2321688	39.73110
#2	.6835227	1.556404	.8540397	1.663767	.2330052	39.96155
#3	.6852224	1.546085	.8552903	1.661842	.2355664	40.02648

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3688436	.1713977	.1735351	19.27353	.4014778	.1975608
Stddev	.0013692	.0016097	.0003139	.09946	.0009424	.0003540
%RSD	.3712037	.9391628	.1808628	.5160407	.2347403	.1791766
#1	.3679146	.1699828	.1732983	19.17021	.4020218	.1971816
#2	.3704159	.1710614	.1738911	19.28174	.4003895	.1978825
#3	.3682003	.1731490	.1734158	19.36862	.4020219	.1976184

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2934336	19.71932	.5631245	9.421613	.4844282	.0597562
Stddev	.0005573	.04000	.0028911	.075662	.0008480	.0003185
%RSD	.1899164	.2028527	.5134124	.8030692	.1750537	.5329808
#1	.2929038	19.76151	.5601694	9.377254	.4838491	.0599270
#2	.2933823	19.68195	.5632571	9.378608	.4854016	.0593887
#3	.2940148	19.71450	.5659471	9.508976	.4840339	.0599528

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	89.17068	.2897623	.2672701	11.91293	.2690757	.3846294
Stddev	.49649	.0018098	.0006136	.03049	.0021954	.0006821
%RSD	.5567864	.6245773	.2295983	.2559234	.8159246	.1773291
#1	89.55731	.2876731	.2669410	11.94209	.2666323	.3839338
#2	89.34396	.2908480	.2679782	11.91544	.2697123	.3846574
#3	88.61078	.2907659	.2668913	11.88127	.2708825	.3852971

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4549-04A Acquired: 10/28/2024 14:13:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0659246	.2341973	F 60.77747	5.927746	F 24.54808	.1751426
Stddev	.0004372	.0006153	.06828	.009944	.09881	.0020554
%RSD	.6631876	.2627444	.1123379	.1677601	.4025344	1.173531
#1	.0657070	.2348069	60.85190	5.916284	24.43484	.1752004
#2	.0664279	.2342084	60.71774	5.932891	24.61683	.1771684
#3	.0656389	.2335764	60.76278	5.934065	24.59257	.1730589

Elem	Sr4077
Units	ppm
Avg	.3808168
Stddev	.0010847
%RSD	.2848409
#1	.3799803
#2	.3820424
#3	.3804277

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2992.935	65231.24	14587.42	2120.284	4538.351
Stddev	7.742	142.89	74.22	8.355	6.951
%RSD	.2586905	.2190530	.5087784	.3940450	.1531550
#1	2990.389	65066.82	14662.40	2111.423	4534.939
#2	3001.630	65325.33	14585.89	2121.411	4546.348
#3	2986.786	65301.57	14513.99	2128.018	4533.766

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164404BL Acquired: 10/28/2024 14:17:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000790	-.000483	-.000451	-.000826	.0001102	.0069130	-.002292
Stddev	.002827	.001273	.000456	.002244	.0005823	.0050842	.000219
%RSD	357.8553	263.8670	100.9632	271.7392	528.2124	73.54457	9.552322
#1	.002020	.000274	-.000914	-.000631	.0003268	.0051140	-.002233
#2	-.003634	.000231	-.000435	.001314	.0005532	.0029730	-.002535
#3	-.000756	-.001953	-.000004	-.003162	-.000549	.0126521	-.002109

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000455	.0000204	-.000045	-.000372	-.000003	-.001028	-.014391
Stddev	.0000275	.0000168	.006600	.000035	.000072	.000113	.001924
%RSD	60.41060	82.68833	14741.44	9.447334	2247.114	10.99172	13.37021
#1	.0000631	.0000233	-.006339	-.000409	.000021	-.000924	-.013128
#2	.0000597	.0000022	-.000618	-.000339	.000054	-.001148	-.013439
#3	.0000138	.0000355	.006823	-.000368	-.000085	-.001013	-.016605

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000184	-.003382	.0001784	.0007520	.0233611	.0003457	-.004592
Stddev	.000192	.003150	.0001219	.0000424	.0046703	.0006754	.000139
%RSD	104.1930	93.13826	68.31356	5.641187	19.99169	195.3465	3.025790
#1	-.000093	-.001154	.0002219	.0008000	.0274522	-.000281	-.004433
#2	-.000055	-.006986	.0002727	.0007368	.0243583	.000257	-.004656
#3	-.000404	-.002006	.0000408	.0007194	.0182728	.001061	-.004687

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0177400	-.006029	-.000109	.0013352	.0003009	-.004574	-.002479
Stddev	.0305736	.000465	.000211	.0004883	.0004265	.005449	.000704
%RSD	172.3432	7.707875	193.0717	36.57505	141.7405	119.1399	28.39427
#1	.0365360	-.005615	.000057	.0008289	.0005523	-.009865	-.001761
#2	-.017538	-.006532	-.000346	.0018034	.0005419	-.004877	-.002508
#3	.034222	-.005942	-.000038	.0013733	-.000192	.001021	-.003168

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164404BL Acquired: 10/28/2024 14:17:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0086695	-.002436	-.000029
Stddev	.0004525	.000525	.000006
%RSD	5.219765	21.53273	18.90839
#1	.0087562	-.002570	-.000031
#2	.0090724	-.002881	-.000034
#3	.0081799	-.001858	-.000023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3024.091	65863.28	14187.11	2147.640	5043.306
Stddev	3.754	191.41	57.22	17.420	1.935
%RSD	.1241401	.2906101	.4033516	.8111013	.0383631
#1	3027.958	65850.37	14121.70	2143.129	5041.512
#2	3023.856	65678.66	14227.93	2132.919	5045.356
#3	3020.461	66060.82	14211.70	2166.871	5043.050

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164404BS Acquired: 10/28/2024 14:21:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7195310	1.767150	.9069821	1.834096	.7743739	1.877266
Stddev	.0018069	.058489	.0020279	.006391	.0035239	.004317
%RSD	.2511164	3.309807	.2235886	.3484604	.4550588	.2299590
#1	.7199760	1.722466	.9078379	1.827392	.7704036	1.872829
#2	.7175433	1.745634	.9046666	1.834777	.7771306	1.881452
#3	.7210739	1.833350	.9084418	1.840120	.7755874	1.877518

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1793473	.1871591	.1787497	.9681460	.3846137	.1916879
Stddev	.0005773	.0002079	.0005263	.0061239	.0017818	.0005781
%RSD	.3219002	.1110583	.2944303	.6325370	.4632810	.3016004
#1	.1795617	.1869599	.1793310	.9673097	.3825750	.1922197
#2	.1786934	.1871427	.1783057	.9624832	.3858737	.1910725
#3	.1797867	.1873747	.1786122	.9746450	.3853922	.1917714

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3057024	2.906983	.1830589	1.820857	.4826740	.0754561
Stddev	.0004905	.009623	.0010639	.017767	.0009529	.0003455
%RSD	.1604411	.3310283	.5811974	.9757472	.1974173	.4578971
#1	.3058547	2.904427	.1828744	1.812146	.4836495	.0758138
#2	.3051538	2.898896	.1820992	1.809127	.4817455	.0754302
#3	.3060985	2.917626	.1842030	1.841299	.4826270	.0751243

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.713885	.2798676	.2031261	9.720409	.2662336	.4099355
Stddev	.014766	.0016580	.0012577	.036705	.0014946	.0006429
%RSD	.5440842	.5924301	.6191856	.3776067	.5613728	.1568253
#1	2.730777	.2786385	.2045697	9.744219	.2649240	.4096164
#2	2.703435	.2792110	.2022669	9.678139	.2659152	.4095146
#3	2.707443	.2817534	.2025417	9.738870	.2678618	.4106755

Sample Name: PB164404BS Acquired: 10/28/2024 14:21:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6617072	.1827444	F .6842408	5.736933	F -.006346	.1671312
Stddev	.0034649	.0005033	.0062385	.021159	.002697	.0013095
%RSD	.5236306	.2754136	.9117395	.3688258	42.50161	.7834995
#1	.6624158	.1822226	.6771395	5.753992	-.003268	.1680960
#2	.6579428	.1827838	.6888389	5.713256	-.008295	.1656406
#3	.6647631	.1832269	.6867441	5.743552	-.007476	.1676571

Elem	Sr4077
Units	ppm
Avg	.1865286
Stddev	.0003667
%RSD	.1965834
#1	.1868720
#2	.1861424
#3	.1865715

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3028.481	64982.25	14043.48	2114.913	4920.063
Stddev	4.403	213.72	13.57	17.052	3.968
%RSD	.1453946	.3288875	.0966300	.8062803	.0806453
#1	3030.432	64735.62	14044.30	2096.879	4915.940
#2	3023.439	65113.14	14056.62	2130.776	4923.855
#3	3031.571	65097.97	14029.51	2117.083	4920.395

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV02 Acquired: 10/28/2024 14:25:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.911807	4.738554	4.864929	4.974656	4.979471	9.712827	9.412954
Stddev	.014465	.076586	.010841	.018402	.003803	.015346	.093689
%RSD	.2945023	1.616235	.2228401	.3699193	.0763799	.1579928	.9953216
#1	4.912452	4.661786	4.874704	4.976434	4.976055	9.726208	9.516798
#2	4.925940	4.814957	4.853269	4.992105	4.983569	9.716195	9.387296
#3	4.897031	4.738919	4.866815	4.955430	4.978789	9.696077	9.334766

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2402093	2.436367	23.76209	.9593863	2.432376	1.249920	4.834936
Stddev	.0014177	.006131	.13013	.0050828	.003621	.001511	.017400
%RSD	.5901870	.2516399	.5476340	.5297962	.1488648	.1208508	.3598752
#1	.2405077	2.443228	23.89720	.9598002	2.436401	1.251632	4.854414
#2	.2414541	2.431426	23.75150	.9642495	2.429382	1.248777	4.820931
#3	.2386662	2.434448	23.63759	.9541092	2.431346	1.249349	4.829461

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.322547	23.73030	2.441141	1.238915	24.10225	2.395473	2.510391
Stddev	.007222	.20412	.003621	.000404	.08312	.005131	.005288
%RSD	.3109472	.8601697	.1483174	.0325879	.3448636	.2141865	.2106453
#1	2.329807	23.94594	2.444549	1.238847	24.08763	2.397425	2.509268
#2	2.322470	23.70486	2.437340	1.239349	24.02741	2.399342	2.516150
#3	2.315363	23.54008	2.441535	1.238550	24.19171	2.389653	2.505754

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.59583	4.760178	5.053430	4.852177	4.694023	5.088641	5.212882
Stddev	.13704	.026401	.002406	.007297	.012158	.018600	.008871
%RSD	.5571682	.5546228	.0476202	.1503944	.2590022	.3655168	.1701839
#1	24.59040	4.773964	5.052515	4.859129	4.703117	5.084691	5.206739
#2	24.46159	4.776833	5.056159	4.852826	4.698737	5.072332	5.208855
#3	24.73551	4.729738	5.051615	4.844577	4.680214	5.108898	5.223053

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV02 Acquired: 10/28/2024 14:25:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.735650	4.605289	4.814131
Stddev	.029159	.011680	.062915
%RSD	.6157373	.2536273	1.306885
#1	4.739044	4.618641	4.876766
#2	4.762963	4.596967	4.814687
#3	4.704942	4.600258	4.750940

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2904.720	63388.41	13394.68	2065.059	4465.068
Stddev	.894	229.67	100.08	12.499	3.240
%RSD	.0307664	.3623196	.7471308	.6052778	.0725622
#1	2905.746	63124.88	13298.17	2052.362	4468.072
#2	2904.109	63545.85	13387.90	2077.351	4465.498
#3	2904.306	63494.51	13497.98	2065.462	4461.635

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB02 Acquired: 10/28/2024 14:30:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000840	-.000363	-.000353	.0001529	.0009849	.0040651	-.002179
Stddev	.001235	.000982	.000349	.0007546	.0003673	.0049899	.000085
%RSD	146.9930	270.6681	98.82982	493.6725	37.29202	122.7493	3.920586
#1	-.000126	-.001183	-.000733	-.000607	.0006157	.0090278	-.002134
#2	-.000128	-.000632	-.000281	.000902	.0009889	.0041190	-.002125
#3	-.002266	.000726	-.000046	.000163	.0013502	-.000952	-.002277

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000002	-.000008	.0045375	-.000621	-.000023	-.001058	-.014181
Stddev	.000046	.000051	.0022050	.000186	.000152	.000196	.001638
%RSD	2944.149	655.7261	48.59606	30.01330	662.3659	18.55198	11.54992
#1	-.000021	-.000044	.0049519	-.000406	-.000163	-.000845	-.012992
#2	-.000034	-.000030	.0021546	-.000731	.000139	-.001232	-.013501
#3	.000051	.000051	.0065058	-.000725	-.000045	-.001097	-.016049

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000123	-.000295	.0000711	.0005909	-.074984	-.000273	-.004626
Stddev	.000124	.011765	.0001360	.0001575	.004524	.000977	.000296
%RSD	100.7062	3991.968	191.2093	26.64816	6.033537	358.1184	6.404074
#1	-.000024	.011063	.0001967	.0007683	-.079998	.000737	-.004290
#2	-.000084	-.012428	-.000073	.0005370	-.071206	-.001213	-.004736
#3	-.000262	.000481	.000090	.0004675	-.073749	-.000342	-.004850

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.022055	-.000813	-.000035	.0017266	.0003240	-.013465	-.002967
Stddev	.006199	.000240	.000044	.0005963	.0006394	.002708	.000281
%RSD	28.10695	29.50620	127.1993	34.53734	197.3639	20.11470	9.454445
#1	-.015726	-.000609	-.000018	.0010620	.0010611	-.014298	-.003174
#2	-.028115	-.000753	-.000001	.0022148	-.000007	-.010438	-.002648
#3	-.022323	-.001077	-.000085	.0019029	-.000082	-.015660	-.003080

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB02 Acquired: 10/28/2024 14:30:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0012108	-.002879	.0000310
Stddev	.0022436	.001748	.0000139
%RSD	185.3010	60.70961	44.93222
#1	.0016984	-.004710	.0000442
#2	-.001237	-.002698	.0000322
#3	.003170	-.001228	.0000165

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3109.929	65116.16	14244.48	2165.684	5187.876
Stddev	19.020	200.56	45.84	9.935	24.988
%RSD	.6115809	.3080023	.3218372	.4587309	.4816704
#1	3088.473	64884.65	14195.85	2157.530	5160.354
#2	3116.598	65226.93	14286.91	2162.772	5194.134
#3	3124.717	65236.91	14250.67	2176.749	5209.141

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-01 Acquired: 10/28/2024 14:34:24 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041775	.0002317	.1016469	-.004787	.0052487	4.638194
Stddev	.0002699	.0011804	.0011635	.000816	.0016745	.002358
%RSD	6.459726	509.4168	1.144611	17.05084	31.90241	.0508492
#1	.0043153	-.000969	.1028214	-.005490	.0071790	4.640907
#2	.0038666	.000272	.1004947	-.003892	.0041871	4.637039
#3	.0043507	.001391	.1016246	-.004979	.0043799	4.636635

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1364158	.0005166	.0020517	110.8086	.0192170	.0072414
Stddev	.0002802	.0000273	.0000761	.4340	.0004542	.0001657
%RSD	.2054066	5.277973	3.708744	.3916549	2.363754	2.288066
#1	.1367140	.0005013	.0021111	111.2080	.0197414	.0072163
#2	.1361579	.0005005	.0020780	110.8711	.0189645	.0070897
#3	.1363756	.0005481	.0019659	110.3468	.0189450	.0074182

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0869400	26.05016	.5486352	11.80595	.0185122	.0018574
Stddev	.0002154	.07114	.0041390	.05780	.0001409	.0000647
%RSD	.2477708	.2730752	.7544223	.4895954	.7611348	3.481868
#1	.0871755	26.13209	.5532681	11.82479	.0185548	.0019302
#2	.0867530	26.01427	.5473356	11.85199	.0186270	.0018351
#3	.0868914	26.00412	.5453020	11.74109	.0183550	.0018068

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.32555	.0133960	.5887223	15.72805	.0776232	.0041166
Stddev	.17013	.0008328	.0016331	.04548	.0001091	.0001054
%RSD	.3838186	6.216649	.2773952	.2891427	.1405602	2.561083
#1	44.48411	.0136434	.5870275	15.77372	.0775559	.0039951
#2	44.14583	.0140769	.5888538	15.68277	.0777490	.0041709
#3	44.34670	.0124675	.5902858	15.72767	.0775646	.0041839

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-01 Acquired: 10/28/2024 14:34:24 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000321	.1750201	F 15.17981	4.919643	3.790274	.0357527
Stddev	.0000341	.0002805	.04450	.022629	.024360	.0008802
%RSD	106.1300	.1602857	.2931761	.4599710	.6427052	2.461935
#1	-.000001	.1748232	15.12926	4.925266	3.776208	.0350178
#2	.000031	.1748958	15.21310	4.938930	3.818403	.0355122
#3	.000067	.1753413	15.19706	4.894732	3.776212	.0367282

Elem	Sr4077
Units	ppm
Avg	.3586933
Stddev	.0010328
%RSD	.2879449
#1	.3598649
#2	.3579145
#3	.3583006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2838.111	63630.92	14729.35	2069.602	4420.603
Stddev	14.944	245.85	11.81	8.883	17.527
%RSD	.5265628	.3863681	.0802128	.4292218	.3964887
#1	2849.267	63813.33	14735.04	2068.948	4432.289
#2	2843.934	63728.08	14737.24	2078.795	4429.069
#3	2821.131	63351.33	14715.76	2061.065	4400.449

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02 Acquired: 10/28/2024 14:38:35 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038426	-.000273	.1027710	-.004742	.0052270	4.825256
Stddev	.0015621	.001401	.0004466	.000555	.0010868	.007194
%RSD	40.65117	513.8524	.4345569	11.70946	20.79296	.1490889
#1	.0033186	-.001729	.1023099	-.004146	.0040466	4.817207
#2	.0055994	-.000154	.1032016	-.004835	.0054481	4.827502
#3	.0026100	.001065	.1028015	-.005245	.0061862	4.831060

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1399074	.0005266	.0020151	111.9119	.0198957	.0072736
Stddev	.0003822	.0000470	.0000722	.1742	.0001375	.0000897
%RSD	.2731501	8.929659	3.583874	.1557028	.6909796	1.233819
#1	.1402892	.0005084	.0020984	112.0987	.0199984	.0073453
#2	.1395249	.0005800	.0019762	111.8831	.0197395	.0073026
#3	.1399081	.0004913	.0019706	111.7538	.0199492	.0071730

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0907655	26.85004	.5544446	11.90576	.0197836	.0018862
Stddev	.0008631	.12258	.0010398	.04096	.0001585	.0000817
%RSD	.9509531	.4565445	.1875454	.3440054	.8012093	4.333110
#1	.0903645	26.98318	.5555275	11.95302	.0197690	.0019383
#2	.0901759	26.82509	.5543524	11.88361	.0196329	.0017920
#3	.0917562	26.74185	.5534539	11.88064	.0199489	.0019283

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.15402	.0144141	.6160784	16.43740	.0767904	.0042030
Stddev	.16698	.0007952	.0012285	.03460	.0002857	.0002203
%RSD	.3617894	5.516605	.1994065	.2104889	.3721070	5.241384
#1	46.34470	.0136862	.6173113	16.47649	.0770953	.0040948
#2	46.08343	.0152627	.6148544	16.42501	.0767471	.0044564
#3	46.03392	.0142935	.6160696	16.41070	.0765288	.0040577

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02 Acquired: 10/28/2024 14:38:35 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006279	.1842961	F 16.02115	5.011203	4.466456	.0373392
Stddev	.0002844	.0001439	.02474	.021930	.006629	.0010642
%RSD	45.29199	.0780699	.1544099	.4376194	.1484251	2.850059
#1	.0008665	.1843669	16.04744	5.025679	4.458851	.0361110
#2	.0007041	.1841305	16.01767	5.021958	4.471011	.0379886
#3	.0003132	.1843909	15.99834	4.985972	4.469508	.0379179

Elem	Sr4077
Units	ppm
Avg	.3667757
Stddev	.0006231
%RSD	.1698959
#1	.3670221
#2	.3660670
#3	.3672379

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2709.249	61468.24	14533.08	1965.553	4251.111
Stddev	19.142	53.22	10.25	6.023	21.113
%RSD	.7065362	.0865747	.0705534	.3064199	.4966369
#1	2728.580	61415.25	14535.74	1958.981	4274.845
#2	2708.865	61467.81	14541.75	1970.809	4244.068
#3	2690.302	61521.68	14521.76	1966.868	4234.420

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02DUP Acquired: 10/28/2024 14:42:45 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029821	.0002840	.1035269	-.004211	.0053760	4.806301
Stddev	.0013662	.0005926	.0019801	.001642	.0004371	.002871
%RSD	45.81379	208.6678	1.912635	38.98870	8.130930	.0597247
#1	.0043651	-.000344	.1033956	-.006079	.0049297	4.807977
#2	.0029479	.000833	.1055693	-.002999	.0058033	4.807939
#3	.0016334	.000362	.1016157	-.003555	.0053950	4.802986

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1395868	.0005023	.0019374	112.3184	.0199666	.0072466
Stddev	.0002811	.0000527	.0000829	.5257	.0005653	.0000641
%RSD	.2014088	10.49205	4.280467	.4680366	2.831189	.8849932
#1	.1399080	.0005614	.0018465	112.8488	.0205484	.0073142
#2	.1393854	.0004602	.0019568	112.3088	.0199321	.0072389
#3	.1394670	.0004854	.0020090	111.7975	.0194194	.0071866

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0890063	27.54215	.5544674	11.95070	.0193580	.0021078
Stddev	.0002290	.08028	.0027712	.03906	.0003359	.0003490
%RSD	.2572740	.2914766	.4997905	.3268231	1.735382	16.55851
#1	.0888571	27.63474	.5574887	11.97419	.0196667	.0018931
#2	.0892699	27.49212	.5538696	11.97230	.0190002	.0025105
#3	.0888918	27.49957	.5520439	11.90561	.0194073	.0019198

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.52342	.0140731	.6174196	16.98906	.0767765	.0043352
Stddev	.11258	.0003316	.0039843	.04323	.0007182	.0001904
%RSD	.2368840	2.355902	.6453167	.2544623	.9353883	4.392875
#1	47.39477	.0144386	.6134346	16.94928	.0773226	.0041551
#2	47.60387	.0139889	.6214033	16.98284	.0770439	.0043159
#3	47.57162	.0137918	.6174209	17.03507	.0759630	.0045346

Sample Name: P4554-02DUP Acquired: 10/28/2024 14:42:45 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005192	.1753522	F 16.30888	4.954044	4.404391	.0379348
Stddev	.0002409	.0005503	.03361	.006550	.022406	.0011629
%RSD	46.39014	.3138148	.2061031	.1322103	.5087085	3.065420
#1	.0003557	.1757599	16.27382	4.947052	4.429631	.0379264
#2	.0004062	.1747263	16.31198	4.955044	4.396693	.0391018
#3	.0007958	.1755705	16.34084	4.960036	4.386850	.0367762

Elem	Sr4077
Units	ppm
Avg	.3696029
Stddev	.0006567
%RSD	.1776707
#1	.3697477
#2	.3701750
#3	.3688859

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2725.423	59515.23	14441.99	1905.165	4277.238
Stddev	6.894	103.69	29.50	7.987	4.777
%RSD	.2529677	.1742209	.2042333	.4192344	.1116895
#1	2724.584	59606.97	14415.52	1912.836	4277.681
#2	2732.699	59535.97	14436.67	1905.762	4281.779
#3	2718.987	59402.73	14473.79	1896.896	4272.255

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02LX5 Acquired: 10/28/2024 14:46:55 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000075	-.000477	.0208316	.0000738	.0013281	.9547308	.0261792
Stddev	.001872	.001153	.0003668	.0002705	.0004592	.0077402	.0001310
%RSD	2484.994	241.7477	1.760823	366.3709	34.57742	.8107205	.5004048
#1	.002080	.000331	.0205060	.0001010	.0018411	.9617279	.0263136
#2	-.001009	-.001798	.0207597	.0003297	.0011876	.9464165	.0260519
#3	-.001297	.000036	.0212290	-.000209	.0009555	.9560479	.0261722

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001192	.0003352	22.98214	.0033527	.0013376	.0172801	5.198533
Stddev	.0000374	.0000307	.02344	.0002778	.0002561	.0003894	.032424
%RSD	31.35153	9.153510	.1019740	8.286988	19.14365	2.253281	.6237231
#1	.0001265	.0003202	22.97936	.0035574	.0011403	.0175804	5.162334
#2	.0000787	.0003705	23.00683	.0034644	.0016270	.0174198	5.224914
#3	.0001523	.0003149	22.96021	.0030364	.0012456	.0168402	5.208351

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1152486	2.448486	.0039618	.0008297	8.183707	.0029878	.1146666
Stddev	.0003329	.012618	.0001448	.0002108	.082048	.0003502	.0006365
%RSD	.2888961	.5153325	3.653962	25.40047	1.002577	11.72037	.5551251
#1	.1156308	2.442253	.0037968	.0005893	8.096199	.0026950	.1144061
#2	.1150936	2.463007	.0040213	.0009177	8.258904	.0033757	.1153920
#3	.1150215	2.440196	.0040674	.0009823	8.196017	.0028927	.1142016

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.040785	.0113156	.0010737	.0003446	.0361020	2.936639	.9459540
Stddev	.011488	.0001963	.0000393	.0007056	.0001703	.015503	.0014306
%RSD	.3778046	1.734819	3.659275	204.7460	.4717857	.5279128	.1512308
#1	3.030133	.0115403	.0011012	.0000576	.0362812	2.929820	.9444628
#2	3.052958	.0112297	.0010913	.0011485	.0359423	2.954383	.9460841
#3	3.039265	.0111770	.0010287	-.000172	.0360824	2.925715	.9473151

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02LX5 Acquired: 10/28/2024 14:46:55 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8276750	.0064840	.0741306
Stddev	.0065937	.0021193	.0001811
%RSD	.7966473	32.68468	.2442859
#1	.8285710	.0041513	.0741277
#2	.8206792	.0082907	.0739510
#3	.8337748	.0070099	.0743132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2965.819	65105.02	14248.86	2110.792	4810.704
Stddev	14.114	351.00	74.30	15.521	15.081
%RSD	.4758916	.5391328	.5214645	.7353023	.3134926
#1	2951.863	65224.69	14163.54	2114.617	4794.398
#2	2965.508	64709.83	14283.68	2093.716	4813.564
#3	2980.086	65380.54	14299.36	2124.043	4824.151

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02MS Acquired: 10/28/2024 14:51:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7845538	1.774061	1.019923	1.222883	.8144109	7.092011
Stddev	.0048481	.025073	.003623	.007828	.0056613	.027102
%RSD	.6179493	1.413336	.3552677	.6401084	.6951427	.3821547
#1	.7828896	1.781839	1.018343	1.218062	.8090159	7.122510
#2	.7807569	1.746020	1.017358	1.218672	.8139115	7.082836
#3	.7900148	1.794323	1.024068	1.231915	.8203054	7.070686

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3298908	.1930946	.1868312	114.9186	.4092673	.2071359
Stddev	.0016560	.0011190	.0007999	.6221	.0016729	.0004434
%RSD	.5019770	.5795300	.4281365	.5413820	.4087489	.2140759
#1	.3315931	.1943858	.1860491	115.5891	.4111636	.2067622
#2	.3297939	.1924050	.1867968	114.8069	.4080006	.2070196
#3	.3282854	.1924931	.1876478	114.3599	.4086376	.2076259

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3988011	29.11593	.7504536	13.98433	.5170828	.0801907
Stddev	.0016220	.21060	.0031044	.06752	.0017800	.0007146
%RSD	.4067243	.7233119	.4136748	.4828297	.3442303	.8910698
#1	.3972315	29.35799	.7534652	14.05489	.5153093	.0809996
#2	.3987010	29.01508	.7506317	13.97777	.5170699	.0796453
#3	.4004709	28.97472	.7472640	13.92033	.5188692	.0799273

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.65772	.2986428	.8173119	26.37763	.3432279	.4198047
Stddev	.33830	.0010276	.0080697	.21556	.0028268	.0020247
%RSD	.7098541	.3441007	.9873453	.8172084	.8235797	.4823015
#1	48.02021	.2996646	.8265901	26.61840	.3462662	.4187737
#2	47.60254	.2976094	.8134179	26.31194	.3406757	.4185030
#3	47.35040	.2986544	.8119276	26.20256	.3427417	.4221375

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02MS Acquired: 10/28/2024 14:51:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6246761	.3801060	F 17.13707	F 11.34251	5.159043	.2171888
Stddev	.0013653	.0055113	.11648	.02603	.024107	.0024991
%RSD	.2185670	1.449952	.6796995	.2295009	.4672690	1.150654
#1	.6238040	.3856564	17.27090	11.31247	5.142643	.2200298
#2	.6239747	.3800272	17.08178	11.35848	5.147765	.2153303
#3	.6262495	.3746345	17.05853	11.35658	5.186721	.2162063

Elem	Sr4077
Units	ppm
Avg	.5645467
Stddev	.0024195
%RSD	.4285674
#1	.5671602
#2	.5640950
#3	.5623849

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2812.979	63161.83	14230.50	2036.031	4360.545
Stddev	13.412	202.95	10.70	6.619	17.649
%RSD	.4768026	.3213247	.0752186	.3250808	.4047507
#1	2822.536	62942.16	14219.56	2029.584	4373.983
#2	2818.755	63342.36	14240.95	2042.809	4367.095
#3	2797.646	63200.98	14230.99	2035.701	4340.557

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02MSD Acquired: 10/28/2024 14:55:10 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8015828	1.758986	1.031708	1.261222	.8342617	7.040879
Stddev	.0009995	.030828	.004589	.003758	.0005323	.011521
%RSD	.1246849	1.752604	.4448246	.2979308	.0638018	.1636289
#1	.8026826	1.768566	1.031508	1.258796	.8347784	7.027943
#2	.8007300	1.783887	1.036395	1.265550	.8342915	7.044661
#3	.8013359	1.724506	1.027223	1.259319	.8337151	7.050034

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3305365	.1899610	.1881893	114.4557	.4053774	.2086592
Stddev	.0006653	.0001247	.0006141	.3702	.0011535	.0007372
%RSD	.2012833	.0656665	.3263390	.3234109	.2845483	.3533037
#1	.3297692	.1901050	.1884895	114.8583	.4065070	.2088041
#2	.3309530	.1898912	.1885956	114.1301	.4054237	.2093132
#3	.3308872	.1898868	.1874828	114.3787	.4042015	.2078603

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4058093	29.41209	.7414656	13.92904	.5211909	.0816217
Stddev	.0009294	.11952	.0034364	.04323	.0013916	.0003371
%RSD	.2290238	.4063663	.4634621	.3103318	.2670060	.4130703
#1	.4047967	29.54606	.7450281	13.96515	.5219983	.0818467
#2	.4066235	29.31639	.7381709	13.88115	.5219904	.0817843
#3	.4060076	29.37381	.7411979	13.94084	.5195840	.0812340

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	48.63365	.2994097	.8087163	27.02917	.3399561	.4332067
Stddev	.08404	.0015055	.0018809	.06844	.0008159	.0017710
%RSD	.1727941	.5028233	.2325755	.2531996	.2400011	.4088148
#1	48.67085	.3011458	.8108882	27.02059	.3405469	.4325417
#2	48.69267	.2986196	.8076314	27.10150	.3390252	.4352140
#3	48.53744	.2984638	.8076294	26.96543	.3402963	.4318645

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02MSD Acquired: 10/28/2024 14:55:10 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6245211	.3658977	F 17.17068	F 11.35280	5.144440	.2174046
Stddev	.0025072	.0036955	.01913	.04976	.019568	.0005948
%RSD	.4014589	1.009970	.1114334	.4382938	.3803656	.2735849
#1	.6265218	.3701449	17.19090	11.34982	5.147705	.2167283
#2	.6253330	.3641309	17.16828	11.40398	5.162170	.2178462
#3	.6217086	.3634173	17.15286	11.30459	5.123446	.2176394

Elem	Sr4077
Units	ppm
Avg	.5664301
Stddev	.0010259
%RSD	.1811215
#1	.5652605
#2	.5668524
#3	.5671776

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2731.590	61960.63	14222.84	1980.864	4266.977
Stddev	11.514	48.91	15.25	6.259	6.608
%RSD	.4215132	.0789334	.1072474	.3159619	.1548569
#1	2743.502	62005.92	14226.93	1982.228	4273.809
#2	2720.520	61908.77	14235.62	1986.329	4260.619
#3	2730.748	61967.21	14205.95	1974.036	4266.503

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02A Acquired: 10/28/2024 14:59:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8016772	1.783682	1.017093	1.259923	.8313571	6.869318
Stddev	.0031671	.003200	.001405	.007661	.0024999	.156833
%RSD	.3950550	.1793798	.1381714	.6080608	.3007047	2.283089
#1	.7990889	1.787212	1.017587	1.251282	.8309350	6.943077
#2	.8007341	1.782860	1.015507	1.262602	.8290952	6.689204
#3	.8052088	1.780973	1.018184	1.265886	.8340413	6.975673

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3208757	.1843689	.1857696	111.0783	.4010890	.2053756
Stddev	.0073001	.0032671	.0005772	2.3553	.0014050	.0003417
%RSD	2.275065	1.772031	.3106939	2.120441	.3503083	.1663766
#1	.3257698	.1858616	.1856958	112.6686	.4023529	.2052516
#2	.3124850	.1806222	.1852329	108.3724	.4013378	.2051133
#3	.3243724	.1866231	.1863801	112.1937	.3995761	.2057620

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4011092	29.56092	.7187926	13.48971	.5141537	.0813424
Stddev	.0014367	.20753	.0158123	.26069	.0008629	.0000924
%RSD	.3581825	.7020361	2.199838	1.932475	.1678346	.1136352
#1	.4000638	29.74543	.7300712	13.69422	.5141444	.0813359
#2	.4005163	29.33625	.7007186	13.19617	.5132955	.0812534
#3	.4027474	29.60108	.7255881	13.57873	.5150213	.0814379

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.35918	.2921206	.8147472	27.49189	.3308774	.4309446
Stddev	.30596	.0067634	.0011601	.17550	.0047008	.0009583
%RSD	.6198654	2.315271	.1423918	.6383602	1.420693	.2223796
#1	49.61287	.2973790	.8148997	27.62481	.3336395	.4307103
#2	49.01940	.2844909	.8135184	27.29296	.3254497	.4301252
#3	49.44528	.2944920	.8158235	27.55791	.3335430	.4319984

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4554-02A Acquired: 10/28/2024 14:59:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6139618	.3477920	F 17.26353	F 11.04688	5.071802	.2130742
Stddev	.0016650	.0083472	.08003	.01421	.006764	.0038007
%RSD	.2711936	2.400045	.4636045	.1286302	.1333641	1.783757
#1	.6121642	.3527509	17.32806	11.06121	5.065717	.2135002
#2	.6154512	.3381549	17.17397	11.03279	5.070603	.2090784
#3	.6142700	.3524703	17.28857	11.04665	5.079085	.2166439

Elem	Sr4077
Units	ppm
Avg	.5532008
Stddev	.0140477
%RSD	2.539348
#1	.5614231
#2	.5369804
#3	.5611989

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2720.924	60688.22	14544.56	1932.359	4270.368
Stddev	11.552	75.73	264.58	1.845	14.881
%RSD	.4245756	.1247827	1.819078	.0954842	.3484814
#1	2732.541	60603.68	14373.50	1930.386	4286.607
#2	2720.793	60749.83	14849.30	1934.041	4267.115
#3	2709.438	60711.17	14410.86	1932.651	4257.382

Sample Name: PB164410BL Acquired: 10/28/2024 15:03:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001081	-.000989	.0001574	.0002396	.0000289	.0031910	-.003775
Stddev	.001750	.000467	.0000130	.0016408	.0009289	.0009635	.000554
%RSD	161.8657	47.26747	8.272319	684.8667	3212.678	30.19437	14.67722
#1	-.002380	-.001305	.0001441	-.000408	.0004945	.0037823	-.003763
#2	.000909	-.000452	.0001701	-.000979	.0006329	.0037114	-.004335
#3	-.001774	-.001210	.0001580	.002105	-.001041	.0020792	-.003227

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000469	-.000050	.0013640	-.000447	-.000013	-.001396	-.013443
Stddev	.0000185	.000035	.0036893	.000328	.000084	.000545	.001299
%RSD	39.52437	70.17329	270.4725	73.28747	666.3994	39.05168	9.664682
#1	.0000384	-.000089	.0054263	-.000689	.000071	-.001095	-.014731
#2	.0000681	-.000042	-.001778	-.000074	-.000011	-.002026	-.013467
#3	.0000342	-.000020	.000444	-.000580	-.000097	-.001068	-.012133

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000048	.0028288	.0000253	.0004627	-.057784	-.000255	-.004613
Stddev	.000222	.0079839	.0002533	.0001678	.007074	.001123	.000118
%RSD	458.4526	282.2397	1000.721	36.27750	12.24202	440.5592	2.568179
#1	-.000302	.0003823	-.000231	.0004812	-.065637	.000069	-.004635
#2	.000053	.0117497	.000276	.0006205	-.051912	.000671	-.004485
#3	.000104	-.003646	.000031	.0002863	-.055802	-.001505	-.004718

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0173664	-.005757	-.000176	.0016900	.0004984	-.010894	-.002253
Stddev	.0056318	.000392	.000141	.0005047	.0000371	.005757	.002154
%RSD	32.42916	6.806194	79.93988	29.86678	7.448523	52.84846	95.61754
#1	.0204135	-.005394	-.000308	.0014446	.0005304	-.014853	-.000940
#2	.0108676	-.005704	-.000192	.0022705	.0004577	-.013540	-.001080
#3	.0208180	-.006173	-.000028	.0013548	.0005071	-.004289	-.004740

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164410BL Acquired: 10/28/2024 15:03:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0031004	-.001615	-.000036
Stddev	.0041988	.001101	.000017
%RSD	135.4253	68.21784	46.55440
#1	.0070730	-.002534	-.000040
#2	-.001293	-.001916	-.000018
#3	.003521	-.000394	-.000050

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3026.632	66310.11	14230.44	2137.661	5106.237
Stddev	5.307	267.73	38.86	16.067	8.795
%RSD	.1753288	.4037578	.2730981	.7516232	.1722462
#1	3020.626	66011.72	14187.24	2121.883	5096.138
#2	3028.585	66389.27	14241.53	2137.098	5110.361
#3	3030.686	66529.33	14262.55	2154.003	5112.213

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164410BS Acquired: 10/28/2024 15:07:27 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7053228	F 1.695315	.8894451	1.789246	.7558076	1.847158
Stddev	.0011430	.038758	.0030268	.006051	.0014636	.009429
%RSD	.1620520	2.286173	.3402987	.3381654	.1936403	.5104507
#1	.7059495	1.728326	.8929356	1.796072	.7572634	1.857834
#2	.7040035	1.704980	.8878535	1.787126	.7558229	1.839973
#3	.7060152	1.652640	.8875461	1.784542	.7543364	1.843666

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1801492	.1859705	.1752789	.9592725	.3879693	.1887955
Stddev	.0005355	.0006407	.0000784	.0052880	.0011856	.0003510
%RSD	.2972591	.3445199	.0447568	.5512492	.3056008	.1859033
#1	.1807625	.1856406	.1753651	.9560711	.3866319	.1884254
#2	.1799104	.1855619	.1752117	.9563704	.3888914	.1888377
#3	.1797746	.1867089	.1752600	.9653761	.3883846	.1891235

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3026990	2.927571	.1832477	1.797949	.4752147	.0749048
Stddev	.0008250	.012909	.0006718	.003792	.0004126	.0001676
%RSD	.2725336	.4409564	.3666340	.2108934	.0868277	.2237513
#1	.3032742	2.940536	.1835684	1.797145	.4755911	.0747126
#2	.3017538	2.914718	.1824756	1.802078	.4752794	.0749820
#3	.3030690	2.927459	.1836991	1.794623	.4747735	.0750200

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.761155	.2762036	.2029887	9.798248	.2645438	.3990319
Stddev	.017712	.0003911	.0008291	.031769	.0011181	.0011493
%RSD	.6414715	.1415985	.4084338	.3242274	.4226556	.2880202
#1	2.773207	.2757526	.2039198	9.830771	.2632839	.3999046
#2	2.769440	.2764489	.2023304	9.767292	.2654180	.3994614
#3	2.740819	.2764095	.2027159	9.796682	.2649295	.3977297

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164410BS Acquired: 10/28/2024 15:07:27 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6457751	.1790109	F .6666863	5.758008	F -.006164	.1702689
Stddev	.0023436	.0004907	.0066266	.011652	.000590	.0004584
%RSD	.3629146	.2741381	.9939579	.2023594	9.576754	.2692398
#1	.6477850	.1793821	.6731918	5.744622	-.005607	.1698380
#2	.6463396	.1791962	.6599449	5.763523	-.006102	.1702180
#3	.6432009	.1784545	.6669223	5.765878	-.006783	.1707507

Elem	Sr4077
Units	ppm
Avg	.1866950
Stddev	.0005105
%RSD	.2734534
#1	.1872660
#2	.1865367
#3	.1862825

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3045.460	64360.02	14022.90	2137.632	4946.074
Stddev	6.763	243.50	25.85	12.612	8.111
%RSD	.2220753	.3783477	.1843260	.5900026	.1639789
#1	3038.980	64084.36	13994.27	2123.445	4938.039
#2	3044.926	64449.83	14044.51	2141.878	4945.926
#3	3052.474	64545.86	14029.93	2147.574	4954.258

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-01 Acquired: 10/28/2024 15:11:27 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001737	.0009099	.0011888	-.001444	-.000926	.1251108	.1282571
Stddev	.0010936	.0015266	.0015515	.001705	.000187	.0058683	.0003349
%RSD	629.6682	167.7793	130.5086	118.1281	20.17999	4.690524	.2610976
#1	.0009425	-.000339	-.000511	-.002198	-.000711	.1275998	.1281323
#2	.0006569	.000457	.001549	-.002642	-.001018	.1184081	.1286364
#3	-.001078	.002612	.002528	.000509	-.001050	.1293244	.1280024

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000546	.0003522	42.83698	.0016766	.0014875	-.000012	6.265978
Stddev	.0000471	.0000282	.41793	.0004729	.0002134	.000382	.044554
%RSD	86.29962	8.013507	.9756349	28.20563	14.34268	3266.761	.7110520
#1	.0000744	.0003350	43.17419	.0011831	.0012957	.000423	6.232425
#2	.0000008	.0003368	42.96734	.0017208	.0017173	-.000292	6.316529
#3	.0000887	.0003848	42.36940	.0021258	.0014496	-.000167	6.248979

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.693903	8.176501	.0028746	.0007835	208.2445	.0020648	.0095383
Stddev	.013551	.090110	.0001063	.0000689	2.8256	.0005286	.0002044
%RSD	.7999947	1.102060	3.698357	8.793272	1.356859	25.60190	2.143391
#1	1.703733	8.255992	.0029125	.0007039	205.1569	.0014740	.0094056
#2	1.699532	8.194898	.0027545	.0008253	210.7015	.0022272	.0094355
#3	1.678445	8.078612	.0029567	.0008211	208.8750	.0024931	.0097737

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.315602	.1076557	-.000075	-.003420	.0020798	5.850356	.3736235
Stddev	.103839	.0013486	.000091	.000673	.0005349	.056780	.0032706
%RSD	1.248726	1.252704	121.9508	19.68445	25.71596	.9705451	.8753631
#1	8.212549	.1082850	-.000132	-.002798	.0024247	5.801172	.3738951
#2	8.420210	.1085746	-.000123	-.003327	.0014637	5.912494	.3767497
#3	8.314046	.1061075	.000030	-.004135	.0023512	5.837403	.3702255

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-01 Acquired: 10/28/2024 15:11:27 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.169768	.0076637	.2933992
Stddev	.015765	.0014749	.0013308
%RSD	.3780745	19.24486	.4535703
#1	4.152711	.0080306	.2930510
#2	4.172790	.0060400	.2948694
#3	4.183803	.0089205	.2922771

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2795.390	61873.67	14411.01	2045.307	4285.846
Stddev	33.421	522.57	94.60	27.376	37.801
%RSD	1.195570	.8445786	.6564508	1.338462	.8819975
#1	2830.767	62387.74	14339.54	2070.773	4324.851
#2	2791.055	61342.99	14375.20	2016.355	4283.310
#3	2764.348	61890.26	14518.29	2048.793	4249.377

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV03 Acquired: 10/28/2024 15:15:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.062488	4.679713	4.942768	5.153365	5.183922	9.973660	9.729484
Stddev	.002637	.037292	.005445	.003077	.014901	.019924	.091148
%RSD	.0520808	.7968798	.1101703	.0597071	.2874480	.1997708	.9368241
#1	5.061158	4.708865	4.943009	5.153103	5.166796	9.996622	9.725881
#2	5.065525	4.692583	4.937206	5.150428	5.193918	9.960931	9.822381
#3	5.060781	4.637691	4.948089	5.156565	5.191054	9.963428	9.640191

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2415574	2.470381	24.03607	.9796005	2.481167	1.293155	5.001033
Stddev	.0029271	.005765	.08672	.0022733	.004567	.001501	.039416
%RSD	1.211775	.2333534	.3607888	.2320636	.1840631	.1160384	.7881493
#1	.2449053	2.472364	24.12578	.9796519	2.482320	1.292647	4.966656
#2	.2402857	2.463886	23.95269	.9773019	2.476135	1.291974	4.992389
#3	.2394812	2.474891	24.02973	.9818476	2.485047	1.294843	5.044053

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.353686	23.84078	2.489294	1.274866	25.46956	2.446509	2.595657
Stddev	.003837	.16843	.006716	.001430	.31273	.006729	.004666
%RSD	.1630349	.7064828	.2697942	.1122003	1.227847	.2750256	.1797428
#1	2.354991	24.02922	2.491739	1.276308	25.11391	2.453470	2.598857
#2	2.349366	23.70489	2.481698	1.273447	25.59322	2.440040	2.590304
#3	2.356700	23.78822	2.494444	1.274842	25.70155	2.446016	2.597811

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.95437	4.805906	5.212965	4.917964	4.793592	5.174903	5.317994
Stddev	.30437	.040493	.005808	.012062	.003951	.058665	.010523
%RSD	1.172720	.8425684	.1114115	.2452697	.0824294	1.133650	.1978677
#1	25.62545	4.848676	5.207286	4.931282	4.789066	5.118082	5.330103
#2	26.01156	4.800884	5.212714	4.907774	4.795352	5.171372	5.312815
#3	26.22608	4.768158	5.218894	4.914835	4.796357	5.235253	5.311066

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV03 Acquired: 10/28/2024 15:15:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.819499	4.793973	4.929712
Stddev	.011290	.037063	.041008
%RSD	.2342506	.7731207	.8318454
#1	4.832429	4.751258	4.976005
#2	4.814471	4.817623	4.897943
#3	4.811596	4.813037	4.915187

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2737.065	60168.48	12990.38	1944.868	4249.148
Stddev	3.586	214.64	93.53	6.696	1.652
%RSD	.1309984	.3567260	.7200187	.3442866	.0388702
#1	2739.600	60410.23	12907.37	1952.028	4247.449
#2	2732.962	60000.32	12972.06	1938.760	4249.247
#3	2738.632	60094.88	13091.72	1943.816	4250.748

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB03 Acquired: 10/28/2024 15:20:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000322	-.001047	.0006655	-.000471	-.001266	-.001255	-.003887
Stddev	.002173	.001520	.0009843	.000664	.000951	.002122	.000234
%RSD	675.1505	145.1441	147.9008	140.9503	75.14898	169.1279	6.015006
#1	.001923	-.001288	.0014232	-.000800	-.000976	.000034	-.004042
#2	-.002416	.000579	-.000447	-.000906	-.000494	-.003705	-.003618
#3	-.000472	-.002432	.001020	.000293	-.002329	-.000094	-.004002

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000267	.0000623	.0025698	-.000410	.0001228	-.001232	-.016834
Stddev	.0000461	.0000967	.0071769	.000109	.0001393	.000333	.001336
%RSD	172.6770	155.3061	279.2798	26.65933	113.4842	26.99525	7.936160
#1	.0000156	.0000291	-.005698	-.000296	.0001543	-.001616	-.017576
#2	-.000013	.0001712	.006215	-.000421	.0002436	-.001032	-.017635
#3	.000077	-.000014	.007193	-.000514	-.000030	-.001049	-.015292

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000304	.0041654	.0002397	.0008741	-.060564	-.000182	-.004654
Stddev	.000363	.0012231	.0001843	.0003091	.007053	.001241	.000181
%RSD	119.4199	29.36351	76.87720	35.36291	11.64564	682.2248	3.880026
#1	.000113	.0032059	.0000916	.0010546	-.068708	-.001477	-.004862
#2	-.000471	.0055426	.0001815	.0010505	-.056467	-.000064	-.004533
#3	-.000554	.0037476	.0004461	.0005172	-.056517	.000996	-.004567

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069615	-.001913	.0002182	.0022735	.0001432	-.010741	-.002346
Stddev	.0097728	.000334	.0002113	.0002431	.0001927	.002288	.000184
%RSD	140.3836	17.47166	96.83768	10.69188	134.5694	21.30037	7.864298
#1	-.004152	-.001637	-.000014	.0020144	.0002214	-.013382	-.002304
#2	.014215	-.001816	.000268	.0023096	.0002845	-.009393	-.002186
#3	.010821	-.002284	.000400	.0024965	-.000076	-.009447	-.002548

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB03 Acquired: 10/28/2024 15:20:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000056	-.003188	.0000029
Stddev	.001460	.001871	.0000149
%RSD	2626.954	58.69733	507.1146
#1	.001008	-.005339	.0000199
#2	.000544	-.002291	-.000008
#3	-.001719	-.001934	-.000003

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2918.361	63490.33	13962.51	2051.387	4901.529
Stddev	22.393	79.98	70.84	6.619	21.420
%RSD	.7672980	.1259796	.5073915	.3226740	.4370115
#1	2896.583	63527.36	13884.37	2047.262	4878.441
#2	2917.178	63545.08	14022.56	2059.021	4905.391
#3	2941.321	63398.54	13980.59	2047.876	4920.756

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-01DUP Acquired: 10/28/2024 15:24:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018658	.0003349	.0006107	-.003206	-.001553	.1472643	.1401474
Stddev	.0043039	.0009474	.0005565	.000748	.000472	.0080449	.0084798
%RSD	230.6745	282.8437	91.12085	23.32193	30.38927	5.462924	6.050611
#1	.0049385	.0002827	-.000023	-.004064	-.001135	.1538100	.1492817
#2	.0037120	-.000585	.000838	-.002861	-.001459	.1382830	.1325256
#3	-.003053	.001307	.001018	-.002694	-.002064	.1497000	.1386350

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000554	.0003151	46.38444	.0017917	.0013829	-.000599	6.591596
Stddev	.0000560	.0001111	3.03903	.0003751	.0000651	.000260	.037142
%RSD	101.1500	35.25172	6.551836	20.93594	4.711255	43.50453	.5634777
#1	.0001145	.0004149	49.73603	.0020588	.0013134	-.000727	6.600291
#2	.0000486	.0001954	43.80816	.0013628	.0014425	-.000769	6.623620
#3	.0000030	.0003348	45.60915	.0019534	.0013929	-.000299	6.550878

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.836701	8.845108	.0030054	.0008144	219.5212	.0029846	.0107059
Stddev	.117075	.611026	.0003494	.0001831	4.7453	.0008418	.0003049
%RSD	6.374192	6.908072	11.62585	22.48449	2.161661	28.20358	2.847911
#1	1.966594	9.512474	.0033862	.0006718	215.4723	.0027318	.0104354
#2	1.739316	8.313132	.0029303	.0010209	224.7430	.0039238	.0110363
#3	1.804192	8.709717	.0026996	.0007505	218.3482	.0022982	.0106460

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.808663	.1189323	.0001985	-.004282	.0029342	6.202847	.3732922
Stddev	.062864	.0059939	.0001783	.000665	.0002040	.039845	.0022842
%RSD	.7136653	5.039720	89.81213	15.54081	6.950578	.6423716	.6119071
#1	8.761801	.1256763	.0002783	-.004809	.0027363	6.201376	.3729910
#2	8.880103	.1142132	.0003229	-.003534	.0031437	6.243408	.3757121
#3	8.784084	.1169073	-.000006	-.004503	.0029227	6.163758	.3711736

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-01DUP Acquired: 10/28/2024 15:24:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.195880	.0094126	.3219664
Stddev	.035596	.0028941	.0193206
%RSD	.8483532	30.74709	6.000817
#1	4.158493	.0123930	.3428088
#2	4.199784	.0066134	.3046545
#3	4.229363	.0092312	.3184358

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2771.741	59359.83	13441.44	1949.572	4257.070
Stddev	22.435	783.22	695.36	25.271	27.865
%RSD	.8094149	1.319438	5.173286	1.296219	.6545677
#1	2797.202	60217.07	12709.96	1978.638	4287.512
#2	2763.147	58681.64	14093.94	1932.805	4250.872
#3	2754.874	59180.79	13520.43	1937.273	4232.825

Sample Name: P3440-01LX5 Acquired: 10/28/2024 15:28:47 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000259	-.000896	.0000990	-.000263	.0005856	.0348312	.0247453
Stddev	.001729	.001145	.0004314	.002422	.0008416	.0005426	.0005449
%RSD	668.6725	127.8193	435.7983	921.7663	143.7084	1.557663	2.202245
#1	-.000662	-.001813	.0002127	-.000821	.0003223	.0344863	.0244088
#2	.001637	-.001261	-.000378	-.002357	-.000093	.0345507	.0253741
#3	-.001751	.000387	.000462	.002390	.001527	.0354566	.0244532

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000012	.0000310	9.057180	-.000348	.0004315	-.000844	1.262696
Stddev	.0000345	.0000867	.063965	.000178	.0001355	.000570	.003399
%RSD	2841.842	279.5669	.7062312	50.98254	31.39874	67.49680	.2692088
#1	.0000410	.0000515	9.081288	-.000238	.0003464	-.000433	1.260631
#2	-.000018	-.000064	9.105588	-.000254	.0005877	-.001494	1.266619
#3	-.000019	.000106	8.984665	-.000553	.0003603	-.000605	1.260838

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3624209	1.708410	.0007683	.0008103	42.02767	-.000696	-.002107
Stddev	.0027446	.012558	.0002755	.0001753	.24885	.000647	.000502
%RSD	.7572824	.7350406	35.86362	21.62733	.5921146	92.90322	23.82022
#1	.3637556	1.706611	.0009620	.0009894	42.27433	-.000003	-.002474
#2	.3642428	1.721770	.0004529	.0008025	42.03200	-.000802	-.001535
#3	.3592643	1.696849	.0008901	.0006391	41.77668	-.001283	-.002311

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.658494	.0202160	-.000018	.0003146	.0032671	1.148277	.0691159
Stddev	.018130	.0003496	.000158	.0004996	.0036976	.006064	.0024475
%RSD	1.093155	1.729241	873.2274	158.7828	113.1752	.5280668	3.541147
#1	1.665947	.0205993	-.000184	.0008424	.0011944	1.149450	.0701333
#2	1.671710	.0201341	.000130	-.000151	.0010709	1.153668	.0663238
#3	1.637826	.0199147	-.000000	.000253	.0075361	1.141712	.0708906

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-01LX5 Acquired: 10/28/2024 15:28:47 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7912704	-.000395	.0624833
Stddev	.0011306	.000774	.0005453
%RSD	.1428897	196.1431	.8727539
#1	.7917277	-.001264	.0629283
#2	.7921007	.000220	.0626466
#3	.7899827	-.000140	.0618749

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2850.700	62113.53	13856.02	2058.490	4537.622
Stddev	8.375	228.30	100.84	18.065	8.048
%RSD	.2937921	.3675575	.7277833	.8776049	.1773581
#1	2845.134	61906.23	13784.03	2046.027	4532.261
#2	2846.634	62076.15	13812.76	2050.234	4533.729
#3	2860.332	62358.22	13971.28	2079.208	4546.876

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-02MS Acquired: 10/28/2024 15:33:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7747241	1.669641	.9072365	1.976658	.8122339	2.095593	.3093364
Stddev	.0025512	.009916	.0007779	.008015	.0022468	.019662	.0021377
%RSD	.3293035	.5939190	.0857464	.4054669	.2766136	.9382403	.6910509
#1	.7725270	1.665616	.9077824	1.967717	.8118600	2.096871	.3086594
#2	.7741232	1.662370	.9075814	1.979062	.8101975	2.114584	.3117306
#3	.7775221	1.680937	.9063458	1.983196	.8146441	2.075323	.3076192

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1878816	.1826179	44.20484	.3783088	.1948374	.3006981	9.602778
Stddev	.0009162	.0005261	.30101	.0007655	.0002618	.0005580	.098603
%RSD	.4876754	.2881138	.6809451	.2023470	.1343840	.1855695	1.026815
#1	.1879828	.1828083	44.41112	.3781203	.1950331	.3002084	9.713715
#2	.1887430	.1830224	44.34398	.3776553	.1945399	.3005803	9.525121
#3	.1869189	.1820231	43.85944	.3791510	.1949390	.3013056	9.569498

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.863683	10.04002	.4888672	.0776064	211.7852	.2777934	.2291267
Stddev	.012773	.05824	.0007831	.0002882	2.6737	.0022296	.0009467
%RSD	.6853401	.5800664	.1601869	.3713691	1.262438	.8026054	.4131814
#1	1.872147	10.09312	.4895916	.0775476	214.7932	.2767892	.2293930
#2	1.869911	10.04920	.4889737	.0773521	209.6793	.2803485	.2299117
#3	1.848991	9.97774	.4880363	.0779194	210.8830	.2762425	.2280754

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.49524	.3763527	.4088830	.6766798	.1844089	6.639924	6.960714
Stddev	.10401	.0024178	.0011333	.0008771	.0010468	.046316	.002831
%RSD	.5623415	.6424408	.2771654	.1296149	.5676756	.6975416	.0406748
#1	18.57822	.3762098	.4079848	.6758397	.1848437	6.691354	6.962850
#2	18.37856	.3788389	.4085080	.6775897	.1851683	6.601504	6.957502
#3	18.52893	.3740095	.4101563	.6766100	.1832148	6.626916	6.961790

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-02MS Acquired: 10/28/2024 15:33:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.815603	.1792346	.4827625
Stddev	.012790	.0020088	.0028089
%RSD	.3352094	1.120740	.5818317
#1	3.801859	.1769326	.4813026
#2	3.817791	.1806320	.4860007
#3	3.827158	.1801392	.4809842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2789.614	61464.81	14019.19	2025.803	4261.814
Stddev	18.776	281.18	77.62	4.999	17.080
%RSD	.6730703	.4574680	.5537052	.2467796	.4007776
#1	2800.756	61228.32	14035.85	2024.093	4269.413
#2	2800.150	61775.71	13934.59	2021.883	4273.775
#3	2767.936	61390.39	14087.13	2031.432	4242.252

Sample Name: P3440-03MSD Acquired: 10/28/2024 15:37:12 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8044071	1.803250	.9323092	2.080076	.8478706	2.026474	.3106552
Stddev	.0024303	.015024	.0033470	.009389	.0022343	.011574	.0010715
%RSD	.3021266	.8331402	.3590023	.4513799	.2635237	.5711621	.3449227
#1	.8053349	1.789350	.9345096	2.072939	.8464129	2.039617	.3114732
#2	.8016496	1.801211	.9284574	2.076578	.8467559	2.017798	.3110502
#3	.8062369	1.819189	.9339606	2.090712	.8504430	2.022008	.3094423

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1900786	.1880817	42.38450	.3839730	.2000520	.3107719	8.956364
Stddev	.0014082	.0004862	.11881	.0009542	.0007289	.0011994	.072989
%RSD	.7408302	.2584989	.2803237	.2485165	.3643641	.3859264	.8149364
#1	.1890504	.1884093	42.49298	.3829624	.2008104	.3094063	9.034637
#2	.1895017	.1875230	42.25752	.3848586	.1993567	.3112550	8.944291
#3	.1916836	.1883127	42.40301	.3840979	.1999889	.3116543	8.890165

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.791873	9.658908	.5013619	.0798711	206.3387	.2868368	.2350161
Stddev	.008318	.033114	.0012996	.0003527	2.3497	.0006158	.0003380
%RSD	.4642001	.3428362	.2592083	.4415560	1.138744	.2147007	.1438249
#1	1.801250	9.672942	.5019316	.0795420	205.3379	.2873949	.2353647
#2	1.785384	9.621088	.4998748	.0798278	204.6551	.2861761	.2349938
#3	1.788986	9.682694	.5022794	.0802434	209.0230	.2869396	.2346898

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.88709	.3739950	.4270610	.6971490	.1884220	6.407129	6.993842
Stddev	.15354	.0020636	.0019293	.0019818	.0005758	.053875	.008798
%RSD	.8129479	.5517684	.4517726	.2842698	.3056041	.8408533	.1257959
#1	19.01352	.3730104	.4249778	.6993530	.1879183	6.460213	6.992825
#2	18.93151	.3726081	.4274188	.6965803	.1890498	6.408678	6.985596
#3	18.71623	.3763664	.4287864	.6955138	.1882981	6.352497	7.003104

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-03MSD Acquired: 10/28/2024 15:37:12 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.575779	.1836885	.4821639
Stddev	.010134	.0025170	.0012906
%RSD	.2834121	1.370270	.2676655
#1	3.576332	.1833683	.4833126
#2	3.565380	.1863503	.4824118
#3	3.585625	.1813469	.4807674

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2748.393	60913.74	14083.14	1964.883	4232.119
Stddev	17.459	66.57	75.07	9.283	14.138
%RSD	.6352607	.1092874	.5330825	.4724320	.3340721
#1	2768.181	60872.50	14137.75	1954.724	4248.208
#2	2735.158	60878.17	14114.14	1967.003	4221.678
#3	2741.840	60990.54	13997.53	1972.923	4226.470

Sample Name: P3440-01A Acquired: 10/28/2024 15:41:17 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8216529	1.837627	.9409909	2.101165	.8572771	2.084764	.3146563
Stddev	.0010806	.011156	.0021490	.005671	.0035952	.005158	.0004547
%RSD	.1315098	.6070733	.2283804	.2699060	.4193728	.2474151	.1445066
#1	.8204052	1.839782	.9411018	2.096099	.8569722	2.090138	.3147421
#2	.8222735	1.825551	.9430823	2.107292	.8610150	2.084302	.3150621
#3	.8222800	1.847548	.9387886	2.100105	.8538440	2.079853	.3141649

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1889148	.1903763	43.37536	.3870790	.2026381	.3160642	9.422831
Stddev	.0011796	.0003878	.39953	.0004880	.0003727	.0011723	.027958
%RSD	.6244236	.2037043	.9210971	.1260817	.1839484	.3708915	.2967071
#1	.1898706	.1908119	43.63974	.3873219	.2023779	.3152098	9.437462
#2	.1892773	.1900685	43.57060	.3865171	.2030651	.3174006	9.440437
#3	.1875964	.1902485	42.91576	.3873979	.2024713	.3155822	9.390593

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.846135	9.874138	.5091654	.0809714	216.5261	.2893344	.2406261
Stddev	.014508	.113303	.0008589	.0004017	1.7713	.0040454	.0002560
%RSD	.7858403	1.147471	.1686915	.4961214	.8180310	1.398178	.1064057
#1	1.853783	9.977542	.5096559	.0807500	218.4292	.2918809	.2404222
#2	1.855219	9.891850	.5096667	.0814351	214.9258	.2914524	.2405425
#3	1.829404	9.753022	.5081736	.0807290	216.2234	.2846697	.2409135

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.71045	.3763604	.4338923	.7066652	.1897751	6.793097	7.101267
Stddev	.05284	.0021814	.0012464	.0012461	.0009045	.021708	.028087
%RSD	.2680976	.5796055	.2872665	.1763385	.4766367	.3195617	.3955244
#1	19.66954	.3788764	.4335522	.7079609	.1903601	6.770432	7.113635
#2	19.69169	.3752074	.4352735	.7065594	.1902318	6.813702	7.121049
#3	19.77011	.3749975	.4328513	.7054754	.1887332	6.795156	7.069119

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-01A Acquired: 10/28/2024 15:41:17 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.112826	.1851798	.4921925
Stddev	.011258	.0005369	.0013167
%RSD	.2737256	.2899445	.2675109
#1	4.114991	.1856286	.4922318
#2	4.100644	.1845850	.4934890
#3	4.122845	.1853259	.4908566

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2687.102	59476.64	14054.04	1914.387	4140.965
Stddev	14.091	124.21	52.50	5.271	11.599
%RSD	.5244041	.2088458	.3735839	.2753141	.2800924
#1	2695.014	59618.21	14039.25	1920.131	4143.993
#2	2670.833	59425.77	14010.52	1913.257	4128.153
#3	2695.459	59385.93	14112.35	1909.773	4150.750

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-04 Acquired: 10/28/2024 15:45:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021443	.0020460	.0007625	-.001358	.0007353	.0798042
Stddev	.0041168	.0010278	.0001679	.001178	.0009134	.0061172
%RSD	191.9880	50.23583	22.02680	86.79626	124.2110	7.665229
#1	-.000422	.0023930	.0008490	-.000904	.0016495	.0828683
#2	.006893	.0008896	.0008694	-.002695	.0007338	.0727605
#3	-.000038	.0028554	.0005689	-.000474	-.000177	.0837838

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1616507	.0000788	.0004312	67.43764	.0065118	.0105827
Stddev	.0002597	.0000168	.0000712	.37240	.0001211	.0002070
%RSD	.1606814	21.29908	16.50810	.5522080	1.859754	1.956099
#1	.1619479	.0000810	.0004591	67.86307	.0066474	.0106027
#2	.1614669	.0000611	.0003503	67.27911	.0064734	.0103664
#3	.1615374	.0000944	.0004842	67.17074	.0064145	.0107790

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002675	9.766242	1.917404	15.57534	.0078479	.0010498
Stddev	.000453	.039838	.006402	.12496	.0003868	.0001115
%RSD	16.93998	.4079149	.3338784	.8023167	4.928520	10.61640
#1	-.003062	9.801725	1.923585	15.71192	.0074038	.0011154
#2	-.002787	9.723147	1.910802	15.54738	.0080287	.0009211
#3	-.002176	9.773853	1.917826	15.46673	.0081112	.0011128

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	484.7071	.0000406	.0489635	15.48116	.1152999	-.000097
Stddev	2.1679	.0003013	.0006522	.06125	.0001611	.000203
%RSD	.4472672	742.9441	1.332081	.3956522	.1397049	208.9973
#1	482.7917	.0002022	.0493041	15.45065	.1151976	.000056
#2	484.2688	.0002265	.0493749	15.44115	.1152165	-.000020
#3	487.0606	-.000307	.0482115	15.55167	.1154856	-.000327

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P3440-04 Acquired: 10/28/2024 15:45:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004422	.0006198	5.018704	.5810812	F 18.90240	.0115604
Stddev	.001015	.0006599	.035136	.0147255	.31378	.0008555
%RSD	22.95898	106.4812	.7001022	2.534160	1.659986	7.399811
#1	-.005552	-.000004	5.051288	.5739105	18.61507	.0118049
#2	-.004127	.000553	4.981477	.5713145	18.85491	.0106093
#3	-.003587	.001310	5.023346	.5980186	19.23721	.0122670

Elem	Sr4077
Units	ppm
Avg	.4913477
Stddev	.0012808
%RSD	.2606701
#1	.4900376
#2	.4914086
#3	.4925970

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2599.464	56358.77	14133.89	1864.039	3907.779
Stddev	44.523	203.86	18.05	15.302	63.585
%RSD	1.712762	.3617186	.1277183	.8209004	1.627144
#1	2626.641	56365.95	14143.30	1850.948	3945.541
#2	2623.669	56558.94	14145.31	1880.862	3943.428
#3	2548.083	56151.41	14113.08	1860.309	3834.367

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164476BL Acquired: 10/28/2024 15:49:46 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000806	-.001684	.0007936	-.000764	.0013205	.0007840	-.003685
Stddev	.002255	.001269	.0007981	.000280	.0007593	.0018835	.000151
%RSD	279.6184	75.33812	100.5578	36.65335	57.50169	240.2308	4.090004
#1	-.001236	-.003123	.0013771	-.000482	.0021337	.0029525	-.003592
#2	.001632	-.000723	.0011197	-.000766	.0006299	-.000156	-.003859
#3	-.002815	-.001208	-.000116	-.001042	.0011980	-.000444	-.003605

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000081	-.000042	-.001247	-.000238	.0000318	-.001170	-.017702
Stddev	.0000233	.000032	.005308	.000133	.0001026	.000326	.001730
%RSD	288.1328	77.65981	425.8467	55.88927	322.2862	27.89917	9.773919
#1	-.000006	-.000008	.004760	-.000380	-.000077	-.001309	-.015969
#2	-.000005	-.000045	-.005310	-.000116	.000046	-.000797	-.019430
#3	.000035	-.000073	-.003190	-.000219	.000127	-.001403	-.017708

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000184	-.001301	.0000073	.0007500	.1941419	-.000263	-.004836
Stddev	.000134	.003350	.0001736	.0001122	.0179371	.000199	.000371
%RSD	72.98881	257.5759	2365.163	14.95913	9.239157	75.56778	7.674983
#1	-.000145	-.001596	.0000851	.0006303	.2142777	-.000080	-.005264
#2	-.000073	.002188	.0001285	.0007669	.1882752	-.000234	-.004638
#3	-.000333	-.004493	-.000192	.0008528	.1798728	-.000474	-.004606

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0695878	-.005577	-.000264	.0021848	.0003800	-.016344	-.002404
Stddev	.0157404	.000440	.000146	.0004787	.0002093	.002163	.002280
%RSD	22.61952	7.887295	55.35895	21.91140	55.08050	13.23572	94.85291
#1	.0671836	-.005700	-.000217	.0027325	.0002649	-.018720	-.004879
#2	.0551877	-.005089	-.000427	.0019759	.0006216	-.014490	-.001942
#3	.0863919	-.005943	-.000147	.0018462	.0002535	-.015821	-.000390

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164476BL Acquired: 10/28/2024 15:49:46 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0013485	-.002626	-.000021
Stddev	.0020981	.002478	.000011
%RSD	155.5833	94.34547	51.49906
#1	.0036804	-.004806	-.000031
#2	-.000386	.000069	-.000010
#3	.000752	-.003141	-.000021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2971.766	65793.06	14021.11	2137.265	4984.492
Stddev	7.349	113.23	36.71	5.015	6.695
%RSD	.2472943	.1721016	.2618354	.2346592	.1343202
#1	2963.414	65662.50	14030.91	2131.488	4976.781
#2	2977.243	65864.48	14051.93	2139.801	4988.829
#3	2974.640	65852.19	13980.49	2140.506	4987.866

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164476BS Acquired: 10/28/2024 15:54:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7577115	1.785059	.9343145	1.930336	.8194164	1.954163
Stddev	.0018209	.030071	.0015185	.008570	.0042937	.007293
%RSD	.2403153	1.684608	.1625197	.4439527	.5239987	.3731939
#1	.7589146	1.786419	.9360103	1.932623	.8173535	1.947460
#2	.7556166	1.754331	.9338524	1.920854	.8165434	1.953100
#3	.7586033	1.814427	.9330808	1.937530	.8243523	1.961929

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1866828	.1907793	.1839442	.9932218	.3980015	.1983235
Stddev	.0008745	.0009482	.0001251	.0046811	.0012641	.0001914
%RSD	.4684230	.4969852	.0680061	.4713049	.3176137	.0965150
#1	.1876859	.1912426	.1838430	.9936805	.3973928	.1981039
#2	.1860811	.1914068	.1840841	.9976566	.3994548	.1984554
#3	.1862814	.1896886	.1839055	.9883282	.3971568	.1984110

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3219366	3.013495	.1887172	1.868979	.4990735	.0779462
Stddev	.0006286	.024715	.0007350	.005309	.0005343	.0001001
%RSD	.1952539	.8201287	.3894812	.2840586	.1070676	.1284915
#1	.3225160	3.030104	.1893959	1.870048	.4989522	.0779974
#2	.3212683	2.985093	.1888192	1.873672	.4996580	.0778308
#3	.3220255	3.025288	.1879365	1.863217	.4986102	.0780104

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.909497	.2892671	.2134131	10.24293	.2737705	.4311169
Stddev	.027854	.0012767	.0007200	.03695	.0010463	.0011575
%RSD	.9573417	.4413492	.3373661	.3607701	.3821867	.2684982
#1	2.928529	.2881753	.2126522	10.22965	.2746410	.4311885
#2	2.877527	.2906708	.2135033	10.21445	.2740608	.4299252
#3	2.922435	.2889550	.2140837	10.28468	.2726096	.4322369

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164476BS Acquired: 10/28/2024 15:54:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6821264	.1894831	.8779465	5.954369	F -.006561	.1747040
Stddev	.0014246	.0007513	.0021641	.015290	.000652	.0022554
%RSD	.2088508	.3964834	.2464993	.2567890	9.937850	1.290976
#1	.6831250	.1901869	.8797201	5.963821	-.006110	.1759400
#2	.6804950	.1895704	.8785843	5.962557	-.007309	.1721008
#3	.6827592	.1886920	.8755352	5.936728	-.006265	.1760712

Elem	Sr4077
Units	ppm
Avg	.1953089
Stddev	.0006078
%RSD	.3111724
#1	.1959959
#2	.1948416
#3	.1950891

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2912.742	64107.96	13939.21	2069.480	4776.942
Stddev	11.519	254.71	39.28	13.600	10.825
%RSD	.3954535	.3973125	.2818206	.6571861	.2266113
#1	2913.826	63914.40	13893.86	2066.023	4782.950
#2	2923.680	64396.52	13961.35	2084.475	4783.430
#3	2900.719	64012.98	13962.43	2057.941	4764.445

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-01 Acquired: 10/28/2024 15:58:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009578	.0472260	.1535281	-.123838	.0047998	183.2577
Stddev	.002626	.0009956	.0008908	.002110	.0008287	1.2037
%RSD	27.41999	2.108226	.5801953	1.704202	17.26625	.6568523
#1	-.008828	.0483539	.1537004	-.125913	.0051743	183.8008
#2	-.007408	.0468545	.1543201	-.121693	.0038499	184.0942
#3	-.012498	.0464695	.1525638	-.123909	.0053751	181.8781

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5087149	.0107057	.0874381	50.97392	1.060743	1.116908
Stddev	.0052728	.0001135	.0011202	.30876	.011552	.005844
%RSD	1.036501	1.060457	1.281190	.6057256	1.089088	.5232299
#1	.5054430	.0107860	.0873478	50.82750	1.073011	1.119822
#2	.5147976	.0107554	.0886008	51.32865	1.059146	1.120723
#3	.5059040	.0105758	.0863658	50.76560	1.050073	1.110180

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5380075	728.3866	1.880659	277.0545	.8481077	.0231647
Stddev	.0016652	3.8907	.016781	1.9001	.0050964	.0003741
%RSD	.3095040	.5341593	.8923134	.6858181	.6009150	1.614876
#1	.5398439	728.0103	1.877113	277.5757	.8487977	.0227835
#2	.5375825	732.4518	1.898929	278.6397	.8528239	.0235312
#3	.5365960	724.6976	1.865933	274.9482	.8427014	.0231794

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.317763	.4278923	.6992000	107.6596	.0833087	.0023332
Stddev	.008868	.0042311	.0030026	.4504	.0059544	.0001403
%RSD	.6729692	.9888332	.4294360	.4183438	7.147443	6.014154
#1	1.311663	.4256117	.6980632	107.4351	.0764354	.0023865
#2	1.327936	.4327744	.7026050	108.1781	.0868998	.0021740
#3	1.313690	.4252906	.6969317	107.3655	.0865908	.0024391

Sample Name: P4574-01 Acquired: 10/28/2024 15:58:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0249728	F 11.23388	5.191419	5.740241	F 287.5548	.9326577
Stddev	.0013526	.09105	.019210	.042515	3.0880	.0100860
%RSD	5.416154	.8105017	.3700316	.7406447	1.073897	1.081421
#1	.0251587	11.18329	5.208585	5.734964	286.7847	.9230513
#2	.0262228	11.33899	5.195001	5.785148	290.9550	.9431631
#3	.0235369	11.17936	5.170670	5.700611	284.9246	.9317589

Elem	Sr4077
Units	ppm
Avg	-.667385
Stddev	.003479
%RSD	.5212919
#1	-.667510
#2	-.670801
#3	-.663846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2942.491	67363.55	16420.74	2106.310	3740.044
Stddev	20.494	191.20	97.06	18.689	32.520
%RSD	.6964846	.2838308	.5910889	.8872821	.8695029
#1	2937.682	67317.89	16449.38	2127.571	3729.547
#2	2924.828	67199.32	16312.58	2092.479	3714.069
#3	2964.961	67573.45	16500.25	2098.879	3776.516

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-04 Acquired: 10/28/2024 16:02:27 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091285	-.009087	.3613584	-.026759	.0043019	39.32038
Stddev	.0012034	.001992	.0006156	.001955	.0010657	.02068
%RSD	13.18240	21.91819	.1703471	7.304541	24.77275	.0525828
#1	.0103539	-.007780	.3609347	-.028178	.0041946	39.33739
#2	.0079485	-.008101	.3610760	-.024529	.0032939	39.32638
#3	.0090832	-.011379	.3620645	-.027569	.0054172	39.29736

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2529498	.0036763	.0391008	74.42028	.0409123	.0968908
Stddev	.0007887	.0000730	.0001553	.10264	.0001596	.0000619
%RSD	.3117916	1.986769	.3970509	.1379152	.3900749	.0638795
#1	.2537645	.0035924	.0392717	74.41842	.0409472	.0969538
#2	.2528949	.0037260	.0389685	74.52383	.0410515	.0968887
#3	.2521901	.0037104	.0390621	74.31858	.0407381	.0968300

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8550111	146.3548	1.304660	23.98727	.0705788	.0067078
Stddev	.0008244	.2916	.003690	.04391	.0001898	.0002074
%RSD	.0964203	.1992733	.2828559	.1830694	.2689627	3.091412
#1	.8559630	146.6048	1.307084	23.94248	.0707485	.0067996
#2	.8545361	146.4252	1.306484	24.03025	.0706142	.0068535
#3	.8545341	146.0344	1.300413	23.98907	.0703738	.0064704

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9832689	.1008307	1.052472	15.24048	.0325664	.0039421
Stddev	.0027017	.0003596	.001715	.06120	.0001731	.0000541
%RSD	.2747696	.3566424	.1629200	.4015704	.5314528	1.373136
#1	.9831442	.1005286	1.052623	15.30075	.0327440	.0038842
#2	.9806317	.1007350	1.050688	15.24230	.0323982	.0039914
#3	.9860308	.1012285	1.054107	15.17839	.0325570	.0039506

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-04 Acquired: 10/28/2024 16:02:27 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0728444	3.782981	7.068298	F 20.91125	5.465960	.0688833
Stddev	.0003460	.009864	.007585	.02855	.017932	.0003168
%RSD	.4750520	.2607566	.1073072	.1365391	.3280709	.4599391
#1	.0729528	3.792290	7.059686	20.94372	5.478674	.0690095
#2	.0731233	3.784011	7.073982	20.89996	5.445449	.0685228
#3	.0724572	3.772642	7.071226	20.89007	5.473757	.0691176

Elem	Sr4077
Units	ppm
Avg	-.056226
Stddev	.000098
%RSD	.1736589
#1	-.056167
#2	-.056173
#3	-.056339

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5424.032	123128.1	28524.89	3904.281	4018.105
Stddev	27.316	169.1	75.03	7.382	14.345
%RSD	.5036112	.1373040	.2630261	.1890843	.3570081
#1	5396.671	123010.1	28503.95	3896.740	4001.640
#2	5424.123	123052.4	28462.55	3904.608	4024.771
#3	5451.303	123321.8	28608.16	3911.494	4027.903

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV04 Acquired: 10/28/2024 16:06:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.015714	4.906435	4.865150	5.103876	5.104089	9.815482	9.796338
Stddev	.011399	.091371	.004762	.013609	.006832	.015197	.065831
%RSD	.2272688	1.862261	.0978824	.2666480	.1338540	.1548285	.6720000
#1	5.004369	4.917747	4.870044	5.089591	5.096207	9.808815	9.811627
#2	5.015609	4.809935	4.860532	5.105346	5.107744	9.832873	9.724208
#3	5.027166	4.991623	4.864874	5.116691	5.108316	9.804758	9.853180

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2387173	2.439769	23.79630	.9742398	2.446988	1.274325	4.964778
Stddev	.0012686	.003583	.09304	.0038460	.000957	.001019	.033311
%RSD	.5314067	.1468625	.3909929	.3947715	.0390914	.0799353	.6709531
#1	.2372874	2.441662	23.79856	.9732005	2.447909	1.273672	4.972345
#2	.2397076	2.435636	23.70215	.9784987	2.445999	1.275499	4.928335
#3	.2391569	2.442008	23.88820	.9710203	2.447056	1.273806	4.993656

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.331671	23.47711	2.455974	1.259023	25.48342	2.414243	2.562423
Stddev	.016812	.09538	.001168	.000251	.06609	.002524	.004300
%RSD	.7210283	.4062663	.0475580	.0199451	.2593494	.1045474	.1678115
#1	2.331441	23.46663	2.456773	1.258837	25.54939	2.414573	2.557509
#2	2.314975	23.38740	2.454634	1.258923	25.41721	2.416585	2.564267
#3	2.348597	23.57730	2.456515	1.259309	25.48366	2.411570	2.565494

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.88558	4.740651	5.159498	4.884286	4.753225	5.083539	5.275178
Stddev	.06035	.014275	.006299	.010131	.011815	.030603	.003656
%RSD	.2331257	.3011208	.1220855	.2074225	.2485619	.6019972	.0693113
#1	25.92772	4.726266	5.152239	4.889909	4.748825	5.056904	5.272113
#2	25.81645	4.754813	5.162737	4.872590	4.744243	5.076747	5.274195
#3	25.91258	4.740875	5.163519	4.890359	4.766609	5.116968	5.279225

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV04 Acquired: 10/28/2024 16:06:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.802324	4.807168	4.908091
Stddev	.021631	.012004	.047839
%RSD	.4504296	.2497048	.9746942
#1	4.792377	4.808935	4.897446
#2	4.787455	4.794378	4.866472
#3	4.827139	4.818190	4.960356

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2804.336	61111.33	13240.04	2000.409	4343.801
Stddev	5.191	272.61	48.32	14.480	2.065
%RSD	.1850959	.4460908	.3649358	.7238413	.0475306
#1	2808.603	60855.24	13208.52	1992.369	4345.580
#2	2798.557	61397.90	13295.67	2017.125	4341.537
#3	2805.848	61080.85	13215.93	1991.733	4344.285

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB04 Acquired: 10/28/2024 16:10:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000668	-.002381	-.000398	.0008733	.0004006	.0046794	-.002470
Stddev	.001508	.000129	.000618	.0020259	.0014972	.0033965	.000661
%RSD	225.7912	5.400835	155.2853	231.9812	373.7659	72.58305	26.77341
#1	-.002203	-.002307	-.001093	-.000420	.0020306	.0026346	-.003225
#2	-.000610	-.002306	.000092	.003208	.0000844	.0086001	-.001991
#3	.000811	-.002529	-.000193	-.000168	-.000913	.0028036	-.002195

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000412	.0001275	-.001378	-.000354	.0001810	-.001304	-.013151
Stddev	.0000275	.0000268	.005603	.000312	.0002648	.000157	.002404
%RSD	66.84077	21.05654	406.6794	88.15392	146.2986	12.05917	18.28111
#1	.0000448	.0000967	.002909	-.000112	-.000012	-.001358	-.014091
#2	.0000668	.0001406	.000675	-.000243	.000483	-.001127	-.010419
#3	.0000121	.0001454	-.007717	-.000706	.000072	-.001428	-.014943

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000086	-.000820	.0001393	.0004512	-.059908	-.000552	-.004525
Stddev	.000221	.008798	.0001143	.0001063	.001491	.000179	.000234
%RSD	255.2516	1073.310	82.09361	23.55390	2.489511	32.34519	5.168991
#1	.000064	-.007914	.0000486	.0004691	-.059606	-.000383	-.004788
#2	.000016	-.003570	.0002677	.0005473	-.061528	-.000535	-.004342
#3	-.000340	.009025	.0001015	.0003371	-.058591	-.000739	-.004444

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158152	-.001834	.0003122	.0020350	.0006123	-.009368	-.002391
Stddev	.0161989	.000413	.0001212	.0001549	.0002849	.002733	.002265
%RSD	102.4261	22.51747	38.81368	7.611411	46.52315	29.17175	94.71863
#1	.0288249	-.001358	.0002982	.0018670	.0009389	-.009083	-.000072
#2	-.002329	-.002045	.0004397	.0020660	.0004830	-.006788	-.002505
#3	.020949	-.002098	.0001986	.0021721	.0004151	-.012231	-.004598

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB04 Acquired: 10/28/2024 16:10:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0015567	-.000511	.0000770
Stddev	.0017540	.000608	.0000170
%RSD	112.6726	119.0056	22.09387
#1	.0015685	.000172	.0000919
#2	-.000203	-.000711	.0000585
#3	.003305	-.000993	.0000807

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2990.578	63225.79	13971.82	2101.821	5013.236
Stddev	6.921	96.87	28.76	5.147	7.518
%RSD	.2314227	.1532095	.2058751	.2448623	.1499548
#1	2983.155	63315.46	13946.77	2104.422	5005.500
#2	2991.727	63123.05	13965.46	2095.892	5013.693
#3	2996.853	63238.85	14003.24	2105.147	5020.515

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-07 Acquired: 10/28/2024 16:15:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0322035	-.022055	.2226745	-.040218	.0012294	166.1636
Stddev	.0036312	.005087	.0007553	.002528	.0017521	.7819
%RSD	11.27597	23.06536	.3391828	6.285662	142.5198	.4705689
#1	.0285024	-.017396	.2218360	-.037490	.0028037	166.1725
#2	.0357606	-.021288	.2228862	-.042481	-.000658	165.3772
#3	.0323475	-.027483	.2233014	-.040683	.001543	166.9410

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8569639	.0066455	.0205548	1729.042	.5309436	.0636440
Stddev	.0052458	.0000611	.0002846	2.893	.0070419	.0008162
%RSD	.6121360	.9188023	1.384683	.1673165	1.326303	1.282490
#1	.8609529	.0066184	.0203127	1732.379	.5237911	.0627441
#2	.8510217	.0067154	.0204833	1727.496	.5311701	.0638513
#3	.8589170	.0066027	.0208684	1727.250	.5378695	.0643366

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.240905	148.2032	3.131825	70.43633	.3002346	.0062575
Stddev	.039476	1.4411	.023010	.18318	.0033341	.0005282
%RSD	.7532268	.9724090	.7347208	.2600678	1.110487	8.441822
#1	5.208802	146.9176	3.153004	70.52579	.2975477	.0066130
#2	5.228931	147.9311	3.107341	70.22561	.2991903	.0065090
#3	5.284981	149.7611	3.135131	70.55759	.3039658	.0056505

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.38612	.2389227	2.071984	29.32455	.3214644	.0267126
Stddev	.21288	.0010704	.030453	.37043	.0015489	.0002531
%RSD	.9509543	.4480207	1.469764	1.263213	.4818386	.9476568
#1	22.21100	.2389222	2.039124	28.94683	.3203953	.0266264
#2	22.32428	.2378525	2.077571	29.33960	.3207573	.0265138
#3	22.62307	.2399933	2.099256	29.68724	.3232407	.0269976

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-07 Acquired: 10/28/2024 16:15:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1316820	7.423591	F 84.36601	8.742735	F 80.25989	.6947577
Stddev	.0006032	.035579	1.07940	.041151	.73843	.0119787
%RSD	.4580544	.4792710	1.279423	.4706833	.9200430	1.724157
#1	.1314013	7.444291	83.27541	8.700716	79.66394	.6847665
#2	.1323743	7.382508	84.38877	8.744529	80.02976	.6914695
#3	.1312703	7.443974	85.43384	8.782958	81.08598	.7080371

Elem	Sr4077
Units	ppm
Avg	9.399969
Stddev	.086924
%RSD	.9247253
#1	9.302516
#2	9.427890
#3	9.469502

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2443.056	54941.49	14078.81	1775.511	3142.020
Stddev	19.148	620.95	50.98	26.260	22.645
%RSD	.7837853	1.130206	.3621014	1.478994	.7207155
#1	2458.430	55600.75	14035.50	1805.124	3161.616
#2	2449.130	54855.99	14134.99	1766.349	3147.215
#3	2421.607	54367.71	14065.93	1755.059	3117.229

Sample Name: P4574-09 Acquired: 10/28/2024 16:19:24 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1009603	-.051396	.9759869	-.051840	.0040801	183.4476
Stddev	.0033128	.004800	.0008447	.003249	.0022425	.5663
%RSD	3.281263	9.338846	.0865459	6.267807	54.96166	.3086797
#1	.1047530	-.045879	.9768908	-.055191	.0029645	183.4298
#2	.0994955	-.053692	.9758524	-.051626	.0066616	182.8904
#3	.0986324	-.054616	.9752176	-.048703	.0026142	184.0226

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.592541	.0073997	.0358233	1789.490	F 2.306435	.1254819
Stddev	.007646	.0001335	.0004219	13.942	.009079	.0008268
%RSD	.4801301	1.804349	1.177712	.7790976	.3936421	.6589391
#1	1.600277	.0075276	.0354404	1802.998	2.313043	.1245479
#2	1.584988	.0074103	.0362756	1775.152	2.310179	.1261205
#3	1.592360	.0072612	.0357539	1790.320	2.296082	.1257771

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.768194	228.7069	6.443718	117.5922	.7985349	.0063321
Stddev	.024569	.6685	.050487	.8298	.0029529	.0002091
%RSD	.5152738	.2923051	.7835143	.7056181	.3697933	3.302716
#1	4.740994	228.1500	6.501260	118.5407	.7951382	.0063252
#2	4.788777	229.4483	6.406844	117.2357	.7999752	.0061265
#3	4.774812	228.5224	6.423050	117.0003	.8004914	.0065445

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.530145	.9396769	4.554497	52.33535	.1772641	.2552301
Stddev	.047931	.0049695	.005769	.25896	.0008748	.0006590
%RSD	.7339920	.5288575	.1266586	.4948016	.4935238	.2581953
#1	6.475113	.9454014	4.550112	52.06885	.1762849	.2546669
#2	6.562757	.9364699	4.561032	52.58604	.1779688	.2559549
#3	6.552564	.9371595	4.552347	52.35116	.1775386	.2550685

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-09 Acquired: 10/28/2024 16:19:24 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0603785	F 12.25587	F 74.60460	F 10.67111	F 72.94782	.8338361
Stddev	.0020784	.08282	2.40988	.05174	.40037	.0031997
%RSD	3.442316	.6757699	3.230207	.4848959	.5488423	.3837260
#1	.0595023	12.34710	75.71188	10.61136	72.50274	.8302670
#2	.0627515	12.18542	71.84009	10.70070	73.27863	.8347933
#3	.0588817	12.23509	76.26185	10.70127	73.06208	.8364478

Elem	Sr4077
Units	ppm
Avg	1.061192
Stddev	.002209
%RSD	.2081265
#1	1.059398
#2	1.063659
#3	1.060519

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2557.806	57908.71	15187.84	1821.766	3038.113
Stddev	18.990	183.38	123.59	13.180	19.333
%RSD	.7424154	.3166690	.8137310	.7234565	.6363350
#1	2577.668	58047.98	15045.25	1836.813	3058.779
#2	2539.829	57700.94	15264.18	1816.217	3020.469
#3	2555.920	57977.21	15254.09	1812.268	3035.090

Sample Name: P4574-11 Acquired: 10/28/2024 16:23:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0981082	-.037329	.9297776	-.052552	.0092745	175.4158
Stddev	.0025243	.005421	.0011547	.005035	.0032827	1.3632
%RSD	2.572960	14.52200	.1241904	9.580288	35.39497	.7771452
#1	.0960891	-.031077	.9296932	-.049447	.0101071	174.6099
#2	.0972971	-.040185	.9286673	-.049848	.0120606	174.6477
#3	.1009383	-.040724	.9309721	-.058361	.0056556	176.9898

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.466983	.0073065	.0317597	1780.065	F 2.023712	.1128453
Stddev	.004947	.0000838	.0002549	3.944	.006770	.0001829
%RSD	.3372159	1.147214	.8025038	.2215402	.3345406	.1620347
#1	1.471370	.0072109	.0317059	1777.801	2.017735	.1130444
#2	1.461621	.0073672	.0320372	1777.775	2.022335	.1128066
#3	1.467958	.0073415	.0315360	1784.619	2.031064	.1126849

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.944726	242.6712	6.293303	108.0309	.6878177	.0097983
Stddev	.010295	1.7285	.028421	.1447	.0012270	.0002036
%RSD	.1731786	.7122771	.4516052	.1339291	.1783882	2.078418
#1	5.944845	242.5138	6.295706	108.1095	.6888052	.0099557
#2	5.954960	241.0268	6.263757	107.8639	.6882038	.0095683
#3	5.934371	244.4730	6.320446	108.1192	.6864442	.0098710

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.648856	.9180637	5.281701	36.73836	.1860503	.2423190
Stddev	.032301	.0042513	.004343	.19513	.0021288	.0014425
%RSD	.5718126	.4630743	.0822222	.5311209	1.144224	.5953032
#1	5.642276	.9227814	5.277333	36.76507	.1857541	.2406607
#2	5.620352	.9145296	5.286018	36.53126	.1840850	.2432840
#3	5.683940	.9168802	5.281752	36.91876	.1883117	.2430123

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-11 Acquired: 10/28/2024 16:23:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0566534	F 11.21261	F 100.3609	6.971268	F 69.81518	.7780523
Stddev	.0014930	.03581	.3988	.054502	.65053	.0027753
%RSD	2.635379	.3193696	.3973274	.7818095	.9317846	.3566968
#1	.0583053	11.24408	100.7236	7.009118	69.06481	.7776613
#2	.0554001	11.17365	99.9339	6.995885	70.22022	.7810024
#3	.0562549	11.22011	100.4252	6.908800	70.16052	.7754933

Elem	Sr4077
Units	ppm
Avg	1.096675
Stddev	.009830
%RSD	.8963876
#1	1.106875
#2	1.087261
#3	1.095889

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2471.454	54451.51	14289.84	1750.180	3091.531
Stddev	3.361	208.62	25.47	6.797	4.663
%RSD	.1360093	.3831317	.1782256	.3883822	.1508187
#1	2471.488	54438.60	14265.30	1743.934	3087.628
#2	2468.076	54666.29	14316.14	1757.420	3090.271
#3	2474.798	54249.65	14288.06	1749.186	3096.694

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4575-01 Acquired: 10/28/2024 16:28:21 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0606480	.0058223	.3378483	-.067996	.0094864	167.9137
Stddev	.0008892	.0009472	.0021165	.002552	.0009833	.4916
%RSD	1.466216	16.26809	.6264678	3.753392	10.36530	.2927877
#1	.0615861	.0068717	.3386546	-.067998	.0104296	168.2346
#2	.0605405	.0055643	.3394432	-.070547	.0084674	168.1588
#3	.0598174	.0050308	.3354472	-.065443	.0095621	167.3477

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6849047	.0144955	.0370831	39.01494	.3134836	.2521371
Stddev	.0030385	.0001211	.0004541	.08569	.0004903	.0004910
%RSD	.4436436	.8351974	1.224658	.2196232	.1563928	.1947372
#1	.6829304	.0143808	.0372082	38.91993	.3129421	.2526637
#2	.6884037	.0146221	.0374616	39.08637	.3138974	.2516919
#3	.6833799	.0144837	.0365795	39.03851	.3136111	.2520557

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3642701	424.1812	5.272292	68.13902	.3689501	.0133717
Stddev	.0011656	2.7241	.016645	.08615	.0006164	.0006221
%RSD	.3199894	.6422092	.3157081	.1264261	.1670597	4.652613
#1	.3635917	424.9618	5.256381	68.03996	.3688344	.0136860
#2	.3656160	421.1519	5.289585	68.19638	.3683998	.0126551
#3	.3636025	426.4298	5.270909	68.18072	.3696161	.0137740

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.048154	.5179253	1.009282	18.68482	.4355884	.0073257
Stddev	.020345	.0014571	.002916	.02230	.0044549	.0002396
%RSD	.4030196	.2813303	.2889414	.1193695	1.022738	3.270974
#1	5.037460	.5173663	1.006684	18.66842	.4385787	.0070841
#2	5.071616	.5168304	1.012437	18.67582	.4304683	.0073297
#3	5.035387	.5195790	1.008726	18.71022	.4377181	.0075633

Sample Name: P4575-01 Acquired: 10/28/2024 16:28:21 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0368958	5.834466	F 17.96917	6.657169	1.888703	.3398760
Stddev	.0020932	.014557	.03096	.004593	.006799	.0013528
%RSD	5.673329	.2494969	.1723173	.0689996	.3599607	.3980218
#1	.0347959	5.827684	17.98075	6.652254	1.881257	.3405328
#2	.0389823	5.851176	17.93408	6.661354	1.894580	.3407749
#3	.0369090	5.824537	17.99267	6.657897	1.890274	.3383202

Elem	Sr4077
Units	ppm
Avg	-.267853
Stddev	.003275
%RSD	1.222501
#1	-.268950
#2	-.264171
#3	-.270439

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3001.282	64562.82	15637.71	2093.101	4035.654
Stddev	5.466	125.22	29.65	11.036	6.251
%RSD	.1821153	.1939503	.1896238	.5272663	.1549011
#1	2994.974	64428.74	15611.38	2085.329	4028.486
#2	3004.251	64676.73	15631.92	2105.733	4039.974
#3	3004.621	64582.99	15669.83	2088.240	4038.502

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01 Acquired: 10/28/2024 16:32:42 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0722100	.0008083	.3501547	-.047053	.0004934	171.6679
Stddev	.0003000	.0004155	.0017984	.000677	.0010930	.3484
%RSD	.4154320	51.40227	.5135886	1.439776	221.5286	.2029557
#1	.0720109	.0011653	.3503943	-.046273	.0012576	172.0668
#2	.0720642	.0009074	.3482486	-.047492	.0009812	171.5136
#3	.0725550	.0003522	.3518213	-.047393	-.000759	171.4233

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4807452	.0096433	.0291792	23.08723	.2737458	.1434283
Stddev	.0012315	.0000677	.0002081	.03618	.0003784	.0003037
%RSD	.2561628	.7022868	.7133158	.1567079	.1382135	.2117148
#1	.4821594	.0096467	.0289621	23.08199	.2740695	.1437760
#2	.4799094	.0095739	.0293770	23.12574	.2733299	.1432940
#3	.4801667	.0097092	.0291986	23.05396	.2738382	.1432150

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2023537	302.9186	2.859956	14.46078	.1518776	.0090765
Stddev	.0010617	1.0276	.010767	.08448	.0004575	.0004693
%RSD	.5246549	.3392232	.3764690	.5842066	.3012206	5.170768
#1	.2017054	303.2748	2.868470	14.38423	.1515808	.0093732
#2	.2017767	303.7206	2.863546	14.55142	.1516475	.0093208
#3	.2035789	301.7603	2.847853	14.44670	.1524045	.0085354

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.693742	.4717118	.4297862	7.461471	.0882166	.0039321
Stddev	.028099	.0020157	.0013682	.070725	.0010322	.0001561
%RSD	.7607261	.4273122	.3183389	.9478686	1.170061	3.969634
#1	3.693721	.4707436	.4311532	7.435786	.0870258	.0037703
#2	3.665653	.4703628	.4297886	7.407178	.0888565	.0039444
#3	3.721852	.4740289	.4284169	7.541450	.0887673	.0040817

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01 Acquired: 10/28/2024 16:32:42 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0168830	2.749747	F 20.06566	5.744869	2.718101	.0709563
Stddev	.0013282	.002058	.06692	.005831	.005653	.0011441
%RSD	7.867072	.0748287	.3334932	.1014925	.2079872	1.612409
#1	.0155974	2.751595	19.98897	5.739616	2.712005	.0722672
#2	.0168016	2.750117	20.09579	5.751143	2.723171	.0701593
#3	.0182500	2.747529	20.11221	5.743847	2.719128	.0704423

Elem	Sr4077
Units	ppm
Avg	-.181659
Stddev	.001115
%RSD	.6140062
#1	-.181879
#2	-.182648
#3	-.180450

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3264.620	72577.22	16956.05	2350.480	4208.146
Stddev	10.500	40.21	60.42	11.006	8.445
%RSD	.3216284	.0554072	.3563461	.4682343	.2006835
#1	3274.461	72610.67	16911.94	2356.000	4214.440
#2	3265.834	72588.38	16931.28	2337.807	4211.449
#3	3253.566	72532.60	17024.91	2357.634	4198.548

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01DUP Acquired: 10/28/2024 16:36:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0704985	.0022440	.3532915	-.046654	.0003493	173.5237
Stddev	.0035056	.0018609	.0007534	.005518	.0011140	.7076
%RSD	4.972561	82.93035	.2132478	11.82739	318.8822	.4077621
#1	.0724096	.0006213	.3526167	-.040580	.0016299	173.7559
#2	.0664526	.0042753	.3541044	-.051359	-.000396	174.0860
#3	.0726332	.0018354	.3531533	-.048022	-.000186	172.7292

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4840478	.0096105	.0291388	23.20905	.2732826	.1445694
Stddev	.0012046	.0001190	.0002683	.15232	.0011726	.0001312
%RSD	.2488564	1.238134	.9209048	.6562746	.4290910	.0907819
#1	.4847276	.0097442	.0288323	23.34094	.2745940	.1446415
#2	.4847588	.0095711	.0293318	23.24388	.2729187	.1446488
#3	.4826569	.0095163	.0292522	23.04234	.2723351	.1444179

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2004734	309.3031	2.852682	14.37531	.1532987	.0099570
Stddev	.0012356	.4992	.013211	.03662	.0002046	.0001697
%RSD	.6163215	.1613862	.4631250	.2547473	.1334464	1.704663
#1	.2018650	309.7795	2.865887	14.38251	.1534524	.0100925
#2	.1995052	309.3458	2.852695	14.40780	.1530665	.0100119
#3	.2000501	308.7839	2.839464	14.33562	.1533771	.0097666

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.802360	.4711691	.4358350	7.677895	.0958071	.0044042
Stddev	.015220	.0012563	.0031225	.028253	.0008037	.0001162
%RSD	.4002834	.2666364	.7164464	.3679800	.8388691	2.637766
#1	3.816344	.4726196	.4391018	7.670808	.0957085	.0043901
#2	3.786149	.4704590	.4355230	7.653860	.0950573	.0042958
#3	3.804588	.4704286	.4328802	7.709017	.0966556	.0045268

Sample Name: P4577-01DUP Acquired: 10/28/2024 16:36:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170328	2.764715	F 20.64783	5.747668	2.736711	.0718937
Stddev	.0018258	.008674	.05076	.005088	.006311	.0010596
%RSD	10.71915	.3137493	.2458428	.0885163	.2305913	1.473877
#1	.0190694	2.773006	20.59458	5.744077	2.731332	.0729826
#2	.0155428	2.765436	20.65322	5.753490	2.743658	.0718324
#3	.0164860	2.755702	20.69567	5.745438	2.735145	.0708660

Elem	Sr4077
Units	ppm
Avg	-.187111
Stddev	.000255
%RSD	.1361648
#1	-.187383
#2	-.187072
#3	-.186878

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3187.078	70657.53	16908.66	2278.513	4120.339
Stddev	11.712	67.29	47.15	5.367	12.847
%RSD	.3674709	.0952358	.2788555	.2355702	.3117953
#1	3198.135	70729.23	16873.83	2284.671	4133.876
#2	3188.292	70647.60	16889.83	2276.036	4118.826
#3	3174.807	70595.75	16962.31	2274.831	4108.316

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01LX5 Acquired: 10/28/2024 16:41:09 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0132738	-.000276	.0748502	-.012271	-.000155	40.44125	.1093386
Stddev	.0013717	.002707	.0002675	.001402	.000069	.06067	.0004989
%RSD	10.33394	981.1122	.3573695	11.42835	44.42219	.1500123	.4562786
#1	.0117066	.000398	.0751539	-.013257	-.000096	40.39524	.1098919
#2	.0138588	-.003256	.0746496	-.012890	-.000137	40.41851	.1089231
#3	.0142560	.002030	.0747472	-.010665	-.000231	40.51000	.1092007

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024045	.0041574	5.544520	.0654375	.0292062	.0492164	73.68710
Stddev	.0001115	.0000556	.013179	.0004156	.0001636	.0005908	.29795
%RSD	4.636624	1.336440	.2376989	.6350686	.5601151	1.200320	.4043465
#1	.0024616	.0042121	5.529327	.0649897	.0293934	.0498351	73.41288
#2	.0022760	.0041010	5.552867	.0658107	.0291348	.0486582	73.64428
#3	.0024758	.0041591	5.551367	.0655123	.0290905	.0491559	74.00415

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6823160	3.419560	.0316005	.0027491	.8002663	.1114555	.1004364
Stddev	.0028818	.026854	.0002616	.0000836	.0054800	.0003425	.0005721
%RSD	.4223515	.7853135	.8279561	3.040390	.6847678	.3072564	.5695638
#1	.6794502	3.410860	.0316815	.0027470	.7940159	.1111699	.1010309
#2	.6822842	3.398134	.0318120	.0026667	.8025370	.1113614	.0998898
#3	.6852135	3.449685	.0313079	.0028338	.8042459	.1118351	.1003887

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.758506	.0158325	.0004734	.0034625	.6541545	4.766802	1.130146
Stddev	.006784	.0006941	.0000697	.0005437	.0017146	.024407	.002114
%RSD	.3858040	4.383772	14.72151	15.70178	.2621148	.5120261	.1870211
#1	1.761847	.0150857	.0004014	.0028744	.6535388	4.739350	1.131381
#2	1.762972	.0164578	.0005406	.0035663	.6528327	4.786052	1.131351
#3	1.750699	.0159541	.0004783	.0039468	.6560920	4.775004	1.127705

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01LX5 Acquired: 10/28/2024 16:41:09 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5408445	.0141742	-.044962
Stddev	.0050778	.0006520	.000333
%RSD	.9388632	4.600150	.7395643
#1	.5457072	.0145528	-.044603
#2	.5412503	.0134213	-.045022
#3	.5355760	.0145486	-.045260

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2991.246	62874.84	14744.32	2038.915	4607.431
Stddev	5.463	67.60	23.34	7.011	7.671
%RSD	.1826486	.1075143	.1583279	.3438507	.1664910
#1	2984.937	62935.76	14750.87	2037.093	4598.592
#2	2994.350	62802.12	14763.68	2032.995	4611.359
#3	2994.450	62886.64	14718.39	2046.657	4612.343

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01MS Acquired: 10/28/2024 16:45:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7074770	1.945884	1.224976	1.552723	.6790839	173.9354
Stddev	.0028526	.021745	.005327	.001903	.0040238	1.4362
%RSD	.4032042	1.117465	.4348939	.1225664	.5925292	.8256951
#1	.7083763	1.920911	1.224817	1.554441	.6795486	172.3299
#2	.7042832	1.960627	1.219731	1.553050	.6748480	174.3783
#3	.7097716	1.956113	1.230382	1.550677	.6828552	175.0979

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6464033	.1630401	.2097127	24.02630	.5939990	.3369424
Stddev	.0009481	.0005332	.0003258	.07175	.0008535	.0003353
%RSD	.1466791	.3270548	.1553483	.2986117	.1436847	.0995094
#1	.6460261	.1624551	.2096058	23.94440	.5930236	.3373064
#2	.6457019	.1634990	.2094538	24.05646	.5946086	.3366462
#3	.6474820	.1631662	.2100785	24.07805	.5943649	.3368746

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4359191	306.5941	3.019684	15.96289	.6366255	.0776121
Stddev	.0016714	.7018	.005870	.08496	.0001564	.0001602
%RSD	.3834149	.2289145	.1944054	.5322141	.0245630	.2064372
#1	.4340169	306.8326	3.013297	15.88109	.6365496	.0774372
#2	.4371528	305.8041	3.020912	16.05069	.6368053	.0777518
#3	.4365875	307.1456	3.024844	15.95689	.6365215	.0776473

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.371545	.7044802	.6085594	16.73241	.3003584	.3627321
Stddev	.030428	.0007156	.0027828	.07592	.0026311	.0008550
%RSD	.4775648	.1015765	.4572721	.4537464	.8759746	.2357077
#1	6.395957	.7042948	.6116682	16.80109	.3032811	.3618299
#2	6.337455	.7052702	.6063011	16.65088	.2996154	.3628363
#3	6.381223	.7038755	.6077090	16.74525	.2981787	.3635303

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01MS Acquired: 10/28/2024 16:45:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6879237	2.935865	F 21.48149	F 11.47000	2.628511	.2202045
Stddev	.0013990	.001463	.07026	.01447	.009039	.0018717
%RSD	.2033591	.0498256	.3270573	.1261272	.3438865	.8499903
#1	.6869006	2.936711	21.54734	11.46726	2.629232	.2186607
#2	.6895179	2.936708	21.40753	11.48564	2.637168	.2196664
#3	.6873528	2.934176	21.48959	11.45709	2.619133	.2222863

Elem	Sr4077
Units	ppm
Avg	-.020417
Stddev	.000404
%RSD	1.978520
#1	-.020616
#2	-.019952
#3	-.020683

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3277.104	70961.55	16560.71	2298.097	4226.015
Stddev	2.732	158.28	48.84	7.555	6.830
%RSD	.0833779	.2230527	.2948951	.3287636	.1616282
#1	3276.706	70876.67	16617.05	2289.664	4223.432
#2	3280.013	71144.17	16530.52	2304.248	4233.760
#3	3274.592	70863.82	16534.55	2300.379	4220.853

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01MSD Acquired: 10/28/2024 16:49:28 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7117218	1.910934	1.243250	1.556109	.6848054	175.6581
Stddev	.0019917	.035441	.000924	.005024	.0022458	.2589
%RSD	.2798432	1.854647	.0743263	.3228273	.3279518	.1473966
#1	.7098193	1.870153	1.244153	1.552116	.6829251	175.4141
#2	.7115540	1.928360	1.242307	1.554463	.6872922	175.9297
#3	.7137921	1.934288	1.243290	1.561750	.6841990	175.6305

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6475235	.1673129	.2147192	24.13619	.5936163	.3412847
Stddev	.0013593	.0009706	.0003984	.02616	.0026597	.0004356
%RSD	.2099268	.5801291	.1855413	.1083979	.4480511	.1276466
#1	.6459542	.1684335	.2147452	24.16372	.5965272	.3417808
#2	.6483329	.1667367	.2143085	24.11164	.5913130	.3411086
#3	.6482836	.1667685	.2151040	24.13322	.5930086	.3409647

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4535830	293.7411	3.024486	16.03743	.6456573	.0748913
Stddev	.0014173	1.7315	.005315	.06349	.0007684	.0003995
%RSD	.3124706	.5894708	.1757266	.3958600	.1190140	.5334901
#1	.4549297	291.8823	3.024567	16.05843	.6455272	.0745990
#2	.4537151	294.0326	3.019131	15.96610	.6449623	.0753465
#3	.4521043	295.3083	3.029760	16.08775	.6464825	.0747283

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.140992	.7084076	.5989889	16.31549	.2826104	.3662756
Stddev	.035779	.0011417	.0012600	.11055	.0034707	.0006860
%RSD	.5826275	.1611682	.2103583	.6775495	1.228103	.1872851
#1	6.099723	.7097239	.5983312	16.18841	.2792074	.3655422
#2	6.159965	.7078131	.6004417	16.38943	.2824786	.3663831
#3	6.163289	.7076858	.5981937	16.36864	.2861451	.3669014

Sample Name: P4577-01MSD Acquired: 10/28/2024 16:49:28 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7001917	2.976031	F 21.79345	F 11.72754	2.628366	.2242074
Stddev	.0015781	.007663	.16975	.00427	.015048	.0013657
%RSD	.2253779	.2575016	.7788868	.0363721	.5725138	.6091083
#1	.7005813	2.969141	21.62182	11.72286	2.610991	.2226559
#2	.6984553	2.984285	21.79728	11.72852	2.636920	.2247388
#3	.7015384	2.974668	21.96125	11.73122	2.637187	.2252275

Elem	Sr4077
Units	ppm
Avg	-.005424
Stddev	.001357
%RSD	25.01991
#1	-.003959
#2	-.005676
#3	-.006638

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3276.884	73327.31	16357.42	2355.139	4210.896
Stddev	.687	175.47	62.02	10.825	4.165
%RSD	.0209801	.2392943	.3791834	.4596275	.0989100
#1	3276.201	73528.34	16286.64	2367.578	4209.402
#2	3276.875	73204.90	16383.35	2347.858	4215.602
#3	3277.576	73248.70	16402.28	2349.980	4207.685

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01A Acquired: 10/28/2024 16:53:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7151705	1.906799	1.234954	1.565429	.6840917	176.8469
Stddev	.0012945	.023834	.004484	.006605	.0014704	.6132
%RSD	.1810119	1.249943	.3630883	.4219445	.2149355	.3467179
#1	.7140001	1.884377	1.230774	1.560107	.6825486	176.5570
#2	.7149504	1.904190	1.234398	1.563360	.6854765	177.5512
#3	.7165610	1.931830	1.239691	1.572822	.6842500	176.4324

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6555992	.1626587	.2136033	24.23969	.5903887	.3409602
Stddev	.0025055	.0004484	.0005952	.03621	.0014236	.0004872
%RSD	.3821689	.2756656	.2786702	.1493687	.2411286	.1428973
#1	.6535829	.1629853	.2133113	24.25939	.5890420	.3404065
#2	.6584041	.1628434	.2132105	24.19791	.5902458	.3413234
#3	.6548104	.1621475	.2142882	24.26178	.5918784	.3411508

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4507628	300.3808	3.022367	15.94945	.6441828	.0756293
Stddev	.0019456	.3135	.005419	.03351	.0007951	.0005058
%RSD	.4316360	.1043515	.1793045	.2101067	.1234230	.6687895
#1	.4491611	300.3273	3.019188	15.95767	.6432729	.0750479
#2	.4529280	300.0976	3.028624	15.91260	.6445316	.0759687
#3	.4501992	300.7176	3.019289	15.97809	.6447439	.0758712

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.386217	.7105546	.6158695	16.63501	.2864639	.3642757
Stddev	.018839	.0007836	.0031161	.01342	.0003806	.0009867
%RSD	.2949927	.1102836	.5059683	.0806798	.1328497	.2708682
#1	6.364780	.7114496	.6166483	16.64757	.2868844	.3632800
#2	6.393738	.7099918	.6124378	16.62087	.2863643	.3642940
#3	6.400135	.7102225	.6185223	16.63659	.2861430	.3652532

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4577-01A Acquired: 10/28/2024 16:53:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6915296	2.996529	F 21.86171	F 11.58125	2.669448	.2249552
Stddev	.0015309	.014241	.02705	.00726	.018082	.0012586
%RSD	.2213748	.4752573	.1237224	.0626993	.6773694	.5595074
#1	.6916623	2.983326	21.88091	11.57889	2.648928	.2238953
#2	.6899367	3.011620	21.83078	11.57545	2.676371	.2263463
#3	.6929898	2.994641	21.87344	11.58939	2.683047	.2246240

Elem	Sr4077
Units	ppm
Avg	-.009891
Stddev	.000870
%RSD	8.798830
#1	-.010485
#2	-.008892
#3	-.010297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3219.264	71983.93	16489.26	2298.533	4149.634
Stddev	4.227	49.25	23.86	5.729	7.822
%RSD	.1313138	.0684151	.1447037	.2492531	.1885009
#1	3220.275	71947.27	16489.06	2299.596	4151.744
#2	3222.895	72039.91	16465.51	2303.657	4156.185
#3	3214.623	71964.61	16513.23	2292.347	4140.974

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV05 Acquired: 10/28/2024 16:57:38 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.207036	5.467993	4.986098	5.397662	5.312928	10.01957	9.804964
Stddev	.004546	.046674	.010236	.008171	.005019	.01280	.042909
%RSD	.0873028	.8535769	.2052939	.1513844	.0944612	.1277813	.4376236
#1	5.204338	5.416314	4.976058	5.389366	5.310885	10.02848	9.816402
#2	5.204486	5.480588	4.985716	5.397917	5.309253	10.00490	9.757495
#3	5.212284	5.507076	4.996519	5.405702	5.318646	10.02533	9.840995

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2412824	2.491122	23.89823	.9649848	2.494542	1.310964	4.899050
Stddev	.0010474	.007124	.09426	.0022388	.005880	.001248	.026028
%RSD	.4341031	.2859707	.3944084	.2320052	.2357311	.0951674	.5312833
#1	.2417133	2.483640	23.82346	.9640228	2.488060	1.312330	4.872356
#2	.2420455	2.491903	24.00411	.9675439	2.496029	1.309885	4.900437
#3	.2400882	2.497824	23.86712	.9633878	2.499535	1.310677	4.924356

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.316987	23.68000	2.500363	1.276816	25.67253	2.422779	2.606542
Stddev	.009173	.08595	.005359	.000489	.02787	.003680	.006870
%RSD	.3958806	.3629595	.2143373	.0383275	.1085500	.1518834	.2635581
#1	2.309605	23.58111	2.495370	1.277137	25.64035	2.419281	2.598699
#2	2.327256	23.73671	2.499694	1.277058	25.68832	2.426617	2.611489
#3	2.314101	23.72219	2.506025	1.276253	25.68891	2.422440	2.609439

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.20070	4.808812	5.381329	4.993427	4.798459	5.334723	5.188510
Stddev	.06068	.017288	.006786	.017986	.012795	.032876	.025334
%RSD	.2315866	.3595121	.1261062	.3602003	.2666522	.6162596	.4882638
#1	26.15391	4.815269	5.377681	4.973148	4.791172	5.299670	5.163185
#2	26.17893	4.821943	5.377146	4.999683	4.813233	5.339628	5.188495
#3	26.26926	4.789225	5.389158	5.007451	4.790972	5.364871	5.213852

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV05 Acquired: 10/28/2024 16:57:38 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.942922	4.808281	4.964650
Stddev	.012567	.025007	.032899
%RSD	.2542419	.5200832	.6626734
#1	4.928655	4.804331	4.938900
#2	4.947762	4.835027	5.001713
#3	4.952350	4.785483	4.953336

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2724.390	60934.40	13154.79	1922.639	4255.042
Stddev	11.256	36.10	38.57	4.262	8.803
%RSD	.4131541	.0592440	.2932321	.2216610	.2068871
#1	2711.741	60925.24	13139.90	1926.525	4246.833
#2	2733.302	60974.20	13125.88	1923.310	4264.338
#3	2728.126	60903.77	13198.58	1918.081	4253.956

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB05 Acquired: 10/28/2024 17:01:49 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005311	-.001226	.0004288	.0008660	.0011380	.0069992	-.003560
Stddev	.0005584	.000575	.0003424	.0004565	.0011082	.0013293	.000385
%RSD	105.1547	46.92613	79.85022	52.71688	97.38707	18.99228	10.81933
#1	.0002074	-.000694	.0002623	.0013910	.0000739	.0085153	-.003773
#2	.0011759	-.001148	.0002015	.0005624	.0010544	.0064485	-.003791
#3	.0002099	-.001836	.0008226	.0006446	.0022856	.0060337	-.003115

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000546	.0000195	-.001976	-.000418	.0001623	-.001053	-.014647
Stddev	.0000343	.0000269	.006614	.000124	.0001320	.000427	.000811
%RSD	62.86862	137.8198	334.6480	29.75629	81.31226	40.57345	5.539817
#1	.0000448	-.000006	.003226	-.000512	.0000557	-.001256	-.015287
#2	.0000928	.000048	-.009420	-.000465	.0001212	-.001342	-.013734
#3	.0000263	.000017	.000264	-.000277	.0003099	-.000562	-.014919

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000123	.0030558	.0001841	.0006076	-.078681	.0001192	-.004604
Stddev	.000082	.0057925	.0002167	.0000838	.005115	.0011394	.000194
%RSD	66.57019	189.5593	117.6879	13.79298	6.500464	955.6719	4.208266
#1	-.000109	.0087144	.0004045	.0007036	-.083974	-.000812	-.004676
#2	-.000211	-.002862	.0001765	.0005694	-.078305	-.000220	-.004751
#3	-.000049	.003315	-.000029	.0005496	-.073765	.001390	-.004385

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009325	-.002444	.0000558	.0019271	.0008338	-.003750	-.001356
Stddev	.011271	.000315	.0000894	.0005527	.0002415	.003556	.000809
%RSD	120.8632	12.87855	160.0015	28.68012	28.96285	94.81898	59.61718
#1	.000282	-.002777	.0000943	.0021909	.0009769	.000246	-.000537
#2	-.021733	-.002402	-.000046	.0012919	.0009694	-.006564	-.001378
#3	-.006526	-.002152	.000120	.0022985	.0005550	-.004933	-.002154

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB05 Acquired: 10/28/2024 17:01:49 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0021366	-.001261	.0000058
Stddev	.0026084	.000487	.0000094
%RSD	122.0805	38.61482	160.9534
#1	.0030562	-.001299	.0000148
#2	.0041607	-.000756	.0000066
#3	-.000807	-.001727	-.000004

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2904.206	62918.37	13936.12	2029.894	4880.786
Stddev	6.762	40.03	52.36	5.917	10.595
%RSD	.2328346	.0636253	.3756877	.2914745	.2170789
#1	2896.471	62881.01	13877.05	2035.288	4868.998
#2	2908.995	62913.48	13954.52	2023.566	4883.843
#3	2907.152	62960.62	13976.79	2030.827	4889.516

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164439BL Acquired: 10/28/2024 17:06:10 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000101	-.001891	-.000946	-.001647	-.000238	.0044567	-.003071
Stddev	.001716	.000924	.000224	.000620	.000226	.0028531	.000586
%RSD	1698.339	48.89227	23.66100	37.62455	95.00608	64.01899	19.08434
#1	.001589	-.002707	-.000964	-.001642	-.000495	.0011983	-.003329
#2	-.001843	-.000887	-.000714	-.001030	-.000067	.0065072	-.002400
#3	-.000050	-.002079	-.001161	-.002270	-.000153	.0056646	-.003484

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000291	.0000437	.0001911	-.000080	.0001682	-.001175	-.013491
Stddev	.0000092	.0000173	.0033560	.000171	.0001016	.000447	.002077
%RSD	31.57310	39.68743	1756.572	214.9434	60.39867	38.04959	15.39636
#1	.0000368	.0000368	-.002139	-.000001	.0002841	-.001675	-.014226
#2	.0000316	.0000308	-.001325	-.000276	.0000948	-.000814	-.011146
#3	.0000189	.0000634	.004038	.000038	.0001256	-.001036	-.015100

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000286	.0003933	.0002181	.0007045	-.087979	-.000372	-.004731
Stddev	.000054	.0061189	.0001698	.0001232	.010658	.000497	.000347
%RSD	18.82706	1555.812	77.85670	17.48281	12.11397	133.6990	7.343664
#1	-.000230	.0073796	.0000600	.0007644	-.098218	-.000674	-.004490
#2	-.000289	-.002186	.0003975	.0007863	-.088771	-.000643	-.004573
#3	-.000338	-.004013	.0001968	.0005629	-.076947	.000202	-.005129

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005425	-.004297	-.000070	.0013998	.0007851	-.009997	-.002838
Stddev	.000772	.000309	.000188	.0007522	.0004707	.001064	.001166
%RSD	14.23140	7.201325	270.5695	53.73601	59.94977	10.64765	41.08844
#1	-.005756	-.004641	-.000223	.0022640	.0008290	-.008914	-.004159
#2	-.005976	-.004042	.000141	.0010430	.0002940	-.010034	-.001951
#3	-.004543	-.004208	-.000126	.0008924	.0012323	-.011042	-.002404

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164439BL Acquired: 10/28/2024 17:06:10 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010232	-.001902	-.000019
Stddev	.0015746	.000687	.000021
%RSD	153.8876	36.12407	112.8263
#1	.0006346	-.002647	-.000013
#2	-.000321	-.001293	-.000042
#3	.002756	-.001766	-.000001

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2940.305	63774.49	13871.69	2072.517	4939.755
Stddev	5.387	158.61	48.23	12.158	6.018
%RSD	.1832029	.2486996	.3476589	.5866304	.1218227
#1	2944.388	63647.59	13824.40	2069.474	4938.148
#2	2934.200	63952.30	13869.86	2085.907	4934.703
#3	2942.328	63723.57	13920.80	2062.168	4946.413

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164439BS Acquired: 10/28/2024 17:10:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7579181	2.085517	.9452317	1.961221	.8316314	1.947298
Stddev	.0016101	.021194	.0020314	.005391	.0046681	.011289
%RSD	.2124339	1.016224	.2149079	.2748988	.5613209	.5797310
#1	.7596141	2.081758	.9470520	1.966264	.8370007	1.949146
#2	.7564105	2.066455	.9430404	1.955538	.8293586	1.935199
#3	.7577297	2.108339	.9456027	1.961861	.8285349	1.957549

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1886248	.1956036	.1855910	.9966623	.4054352	.2000238
Stddev	.0004062	.0011448	.0002276	.0029731	.0005536	.0003384
%RSD	.2153321	.5852479	.1226499	.2983033	.1365490	.1691567
#1	.1883239	.1953315	.1857852	.9932646	.4052175	.2003325
#2	.1884636	.1946193	.1853405	.9979357	.4060646	.1996621
#3	.1890868	.1968598	.1856473	.9987866	.4050235	.2000766

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3212625	3.027057	.1883817	1.872126	.5015891	.0776833
Stddev	.0004354	.008980	.0009861	.006255	.0010646	.0003532
%RSD	.1355381	.2966585	.5234808	.3340973	.2122509	.4547191
#1	.3217322	3.037371	.1886213	1.871670	.5028183	.0774824
#2	.3211830	3.022825	.1872979	1.866112	.5009861	.0774763
#3	.3208723	3.020975	.1892260	1.878597	.5009628	.0780912

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.899035	.2860021	.2141870	10.36778	.2804322	.4430732
Stddev	.007571	.0005096	.0005128	.03269	.0017343	.0011436
%RSD	.2611547	.1781635	.2394296	.3153136	.6184409	.2581042
#1	2.897044	.2854485	.2135956	10.38341	.2806567	.4443853
#2	2.907402	.2861065	.2145089	10.38973	.2785966	.4425462
#3	2.892658	.2864514	.2144566	10.33021	.2820433	.4422882

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164439BS Acquired: 10/28/2024 17:10:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7061093	.1917115	F .7180163	5.917650	F -.009954	.1767074
Stddev	.0028631	.0006042	.0059216	.015076	.000423	.0015843
%RSD	.4054714	.3151336	.8247134	.2547556	4.250123	.8965850
#1	.7094150	.1911793	.7111907	5.932920	-.010418	.1759200
#2	.7044946	.1915870	.7210777	5.902776	-.009852	.1756711
#3	.7044183	.1923682	.7217805	5.917255	-.009591	.1785312

Elem	Sr4077
Units	ppm
Avg	.1955565
Stddev	.0004957
%RSD	.2535059
#1	.1958440
#2	.1949840
#3	.1958414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2957.407	62716.86	13788.45	2064.184	4823.152
Stddev	11.652	90.60	72.32	7.843	12.996
%RSD	.3940106	.1444606	.5245316	.3799381	.2694434
#1	2944.292	62621.21	13772.46	2055.767	4808.744
#2	2966.567	62727.99	13867.43	2071.286	4833.990
#3	2961.363	62801.38	13725.45	2065.499	4826.721

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4452-03 Acquired: 10/28/2024 17:14:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008567	-.012225	.0031696	.0007966	.0004409	.0016587	.4614617
Stddev	.003090	.001364	.0006053	.0012066	.0006161	.0030873	.0038718
%RSD	36.07422	11.15762	19.09813	151.4741	139.7347	186.1262	.8390181
#1	-.009505	-.011270	.0024988	-.000512	-.000247	-.001664	.4650402
#2	-.011080	-.013787	.0033347	.001036	.000943	.002201	.4619932
#3	-.005116	-.011617	.0036752	.001866	.000627	.004439	.4573516

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000162	-.000168	358.0229	.1892332	-.000076	.0018835	.0486003
Stddev	.000043	.000015	3.8311	.0013716	.000250	.0002302	.0019510
%RSD	26.27964	8.941950	1.070081	.7248159	329.1316	12.22260	4.014366
#1	-.000187	-.000161	359.1886	.1902549	.000108	.0020584	.0508488
#2	-.000186	-.000185	361.1358	.1876743	.000024	.0016227	.0473556
#3	-.000113	-.000157	353.7443	.1897703	-.000361	.0019695	.0475965

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050894	.0100746	.0021481	-.000159	499.4697	-.000086	.0355646
Stddev	.0001342	.0055967	.0003157	.000114	.6419	.000770	.0003488
%RSD	2.636180	55.55302	14.69895	71.85700	.1285232	899.4161	.9807546
#1	.0050559	.0121764	.0025080	-.000254	499.3095	.000127	.0357655
#2	.0049751	.0037312	.0020182	-.000032	498.9230	.000556	.0357664
#3	.0052371	.0143161	.0019180	-.000191	500.1766	-.000940	.0351618

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.45926	.0062924	.0503108	-.004790	-.007508	.1720055	-.004605
Stddev	.07961	.0001878	.0002350	.001445	.000301	.0034610	.002751
%RSD	.4312815	2.984677	.4670280	30.16526	4.014050	2.012174	59.73681
#1	18.52884	.0065034	.0505644	-.003336	-.007256	.1760019	-.002438
#2	18.37244	.0062301	.0501006	-.004808	-.007426	.1699909	-.003677
#3	18.47650	.0061435	.0502672	-.006225	-.007842	.1700236	-.007700

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4452-03 Acquired: 10/28/2024 17:14:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.150703	.0965933	.6007145
Stddev	.010527	.0013084	.0042383
%RSD	.9148230	1.354569	.7055450
#1	1.161631	.0953144	.6049932
#2	1.140630	.0965362	.6006324
#3	1.149847	.0979293	.5965178

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2385.172	53121.24	13169.23	1675.628	3636.566
Stddev	5.065	144.71	106.92	4.068	5.739
%RSD	.2123396	.2724061	.8118781	.2427739	.1578045
#1	2384.002	52965.36	13077.43	1675.159	3632.878
#2	2380.794	53251.30	13143.63	1679.909	3633.642
#3	2390.719	53147.07	13286.62	1671.814	3643.177

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4545-02 Acquired: 10/28/2024 17:19:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009079	-.010818	.0171562	.0048518	.0018180	.2100285	.1701256
Stddev	.001947	.000411	.0005956	.0020014	.0003618	.0035915	.0015560
%RSD	21.44476	3.794624	3.471736	41.25181	19.90319	1.709989	.9145954
#1	-.007253	-.011196	.0166744	.0071567	.0018615	.2137013	.1711958
#2	-.008856	-.010877	.0169720	.0038454	.0021561	.2065243	.1708403
#3	-.011128	-.010381	.0178221	.0035532	.0014363	.2098598	.1683407

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000001	.0008421	44.07656	.0073185	.0031178	.0120784	.2046799
Stddev	.000037	.0001028	.33196	.0002689	.0001777	.0004580	.0030920
%RSD	3841.916	12.20851	.7531415	3.674511	5.698353	3.791526	1.510645
#1	-.000040	.0008874	44.22486	.0073818	.0033222	.0115829	.2036329
#2	.000004	.0009144	44.30853	.0070235	.0030307	.0121663	.2081595
#3	.000033	.0007244	43.69631	.0075501	.0030005	.0124861	.2022474

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5459103	2.266563	.0083565	.0006325	321.0444	.0001837	.0887089
Stddev	.0048753	.024434	.0001922	.0001582	1.0840	.0006263	.0005657
%RSD	.8930579	1.078026	2.300276	25.00851	.3376349	340.9176	.6377122
#1	.5493959	2.272067	.0083261	.0004709	320.8449	-.000240	.0880761
#2	.5479960	2.287775	.0081812	.0006396	322.2143	.000903	.0888849
#3	.5403392	2.239846	.0085621	.0007871	320.0741	-.000112	.0891656

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.825717	.0052727	.0005898	-.002512	.0053054	1.575727	.0075258
Stddev	.025910	.0004744	.0001688	.000114	.0006425	.007503	.0003060
%RSD	1.419188	8.996488	28.61352	4.550702	12.10941	.4761453	4.066523
#1	1.817111	.0049765	.0007203	-.002633	.0056007	1.569306	.0073495
#2	1.805205	.0058198	.0006498	-.002499	.0057471	1.583974	.0078792
#3	1.854835	.0050218	.0003992	-.002405	.0045684	1.573900	.0073488

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4545-02 Acquired: 10/28/2024 17:19:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.245170	.0106994	.2068983
Stddev	.005609	.0009354	.0015895
%RSD	.4504281	8.742054	.7682340
#1	1.247788	.0117276	.2080167
#2	1.248990	.0098991	.2075994
#3	1.238731	.0104715	.2050789

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2586.906	57130.24	13935.49	1799.957	4026.958
Stddev	15.323	165.82	111.69	13.909	13.121
%RSD	.5923334	.2902502	.8014810	.7727280	.3258240
#1	2571.542	57303.74	13848.33	1813.630	4012.468
#2	2586.988	56973.34	13896.75	1785.824	4030.368
#3	2602.188	57113.65	14061.39	1800.419	4038.037

Sample Name: P4547-04 Acquired: 10/28/2024 17:23:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006374	-.010840	-.001122	.0035937	.0013372	.1745641	.2057839
Stddev	.000818	.001302	.001071	.0010638	.0003423	.0021911	.0003243
%RSD	12.82614	12.01526	95.49363	29.60160	25.59950	1.255193	.1575776
#1	-.005758	-.012246	.000073	.0043318	.0010589	.1723459	.2057350
#2	-.006063	-.009676	-.001443	.0023743	.0017195	.1746194	.2054869
#3	-.007301	-.010597	-.001995	.0040749	.0012334	.1767271	.2061299

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000053	.0004745	7.337054	.0086327	.0045868	.0466464	1.216129
Stddev	.000048	.0000077	.021677	.0003173	.0002045	.0005007	.007136
%RSD	91.33286	1.614028	.2954474	3.675450	4.458899	1.073315	.5867892
#1	-.000000	.0004808	7.324360	.0087213	.0045153	.0463854	1.224252
#2	-.000096	.0004767	7.324717	.0082805	.0048175	.0463302	1.213266
#3	-.000063	.0004659	7.362083	.0088963	.0044277	.0472236	1.210869

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.346038	1.640359	.0107546	.0005732	341.4910	-.000223	.0523651
Stddev	.012720	.010458	.0001262	.0001355	2.0027	.001021	.0005383
%RSD	.2926745	.6375495	1.173702	23.63889	.5864560	457.2335	1.027934
#1	4.345026	1.630678	.0106569	.0004701	342.9461	-.000889	.0521100
#2	4.333855	1.638947	.0107099	.0007267	342.3200	-.000733	.0529835
#3	4.359234	1.651451	.0108972	.0005229	339.2069	.000952	.0520018

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.055216	.0061713	.0000916	-.000747	.0048728	.5545526	.0068675
Stddev	.008191	.0004896	.0001490	.000398	.0005993	.0062150	.0020908
%RSD	.7762349	7.933488	162.7308	53.24124	12.29829	1.120719	30.44466
#1	1.048603	.0056509	-.000080	-.000770	.0048672	.5615882	.0061172
#2	1.064378	.0066227	.000183	-.001134	.0054749	.5522603	.0052554
#3	1.052666	.0062404	.000172	-.000339	.0042764	.5498094	.0092299

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-04 Acquired: 10/28/2024 17:23:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2035586	.0004053	.0414754
Stddev	.0039763	.0010737	.0000194
%RSD	1.953403	264.9156	.0467576
#1	.2039661	.0007559	.0414684
#2	.1993942	.0012598	.0414974
#3	.2073154	-.000800	.0414605

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2632.212	57451.25	13788.23	1853.244	4083.367
Stddev	11.971	288.00	21.54	12.512	13.022
%RSD	.4547786	.5012910	.1562159	.6751393	.3189150
#1	2624.179	57128.74	13804.02	1842.096	4071.095
#2	2645.970	57542.25	13796.97	1850.860	4097.029
#3	2626.487	57682.75	13763.69	1866.776	4081.978

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-08 Acquired: 10/28/2024 17:28:00 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009179	-.011589	-.001941	.0034998	.0012690	.1267307	.3420510
Stddev	.000933	.000446	.000725	.0012460	.0001847	.0048351	.0017384
%RSD	10.16847	3.846560	37.34144	35.60086	14.55583	3.815221	.5082143
#1	-.009996	-.011967	-.002292	.0035560	.0011285	.1249659	.3440060
#2	-.009381	-.011701	-.002424	.0047166	.0012002	.1322002	.3414677
#3	-.008162	-.011097	-.001108	.0022266	.0014782	.1230260	.3406794

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000058	.0004161	40.81106	.0097167	.0066957	.2694127	.1692396
Stddev	.000041	.0000486	.10952	.0006300	.0001428	.0014310	.0010512
%RSD	70.94075	11.68642	.2683682	6.483872	2.133187	.5311631	.6211061
#1	-.000030	.0003609	40.68950	.0091526	.0068605	.2709172	.1693164
#2	-.000105	.0004523	40.84162	.0103966	.0066099	.2680687	.1702502
#3	-.000039	.0004352	40.90205	.0096009	.0066165	.2692521	.1681521

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.794059	1.578630	.0093717	.0008337	373.8026	-.000621	.0402926
Stddev	.007676	.012093	.0000667	.0001976	.5997	.000332	.0002166
%RSD	.1601220	.7660564	.7119458	23.70450	.1604287	53.40663	.5375617
#1	4.802097	1.565037	.0092950	.0009253	373.2434	-.000455	.0400460
#2	4.786804	1.582656	.0094036	.0009688	373.7285	-.000405	.0404518
#3	4.793276	1.588197	.0094166	.0006069	374.4359	-.001003	.0403801

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7257502	.0038477	.0003172	-.002762	.0034966	.5107571	.0037583
Stddev	.0181328	.0003278	.0003602	.001276	.0003426	.0036715	.0035487
%RSD	2.498491	8.519563	113.5413	46.18135	9.798245	.7188249	94.42266
#1	.7196675	.0038324	.0007071	-.003724	.0031258	.5147983	.0032747
#2	.7114407	.0035278	.0002476	-.003247	.0038013	.5098460	.0004763
#3	.7461423	.0041829	-.000003	-.001315	.0035628	.5076270	.0075241

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-08 Acquired: 10/28/2024 17:28:00 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2538166	.0085364	.0661005
Stddev	.0033582	.0010558	.0002888
%RSD	1.323074	12.36864	.4369598
#1	.2564801	.0081170	.0664333
#2	.2549256	.0097375	.0659153
#3	.2500442	.0077547	.0659529

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2633.217	57404.53	13775.98	1851.528	4035.168
Stddev	14.421	188.77	23.33	11.540	13.436
%RSD	.5476469	.3288467	.1693659	.6232816	.3329778
#1	2616.620	57317.82	13774.99	1839.163	4019.973
#2	2642.680	57274.69	13753.16	1853.408	4045.481
#3	2640.352	57621.08	13799.80	1862.013	4040.050

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-04 Acquired: 10/28/2024 17:32:26 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008740	-.012986	-.001070	.0036862	.0005028	-.010719	.4163123
Stddev	.001194	.002518	.000198	.0005236	.0011823	.009971	.0019597
%RSD	13.65816	19.38770	18.52935	14.20480	235.1429	93.02205	.4707332
#1	-.007404	-.015020	-.001291	.0031868	.0016604	-.015267	.4142187
#2	-.009113	-.013766	-.001008	.0042311	.0005509	.000715	.4181028
#3	-.009702	-.010170	-.000909	.0036407	-.000703	-.017605	.4166155

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000288	.0002055	123.1222	.0011348	.0072147	.0200060	.0945102
Stddev	.000054	.0000822	.9242	.0000313	.0002756	.0003821	.0023925
%RSD	18.84886	39.97543	.7506718	2.761840	3.819903	1.909731	2.531426
#1	-.000225	.0002008	122.0549	.0011259	.0073577	.0201894	.0943970
#2	-.000313	.0002899	123.6551	.0011088	.0068969	.0195668	.0969573
#3	-.000324	.0001258	123.6565	.0011696	.0073893	.0202617	.0921764

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.828846	2.624161	.0025286	.0003599	327.7011	-.000085	.0220622
Stddev	.015013	.014847	.0000573	.0001257	2.7588	.000404	.0002762
%RSD	.5307270	.5657816	2.264106	34.91905	.8418671	473.2391	1.252003
#1	2.811608	2.607025	.0025203	.0004438	329.5073	-.000119	.0220329
#2	2.839059	2.633170	.0024759	.0004206	329.0704	-.000471	.0223518
#3	2.835871	2.632288	.0025895	.0002154	324.5255	.000334	.0218017

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6874812	-.000493	.0008876	-.003622	-.001251	.4529605	-.003014
Stddev	.0154560	.000288	.0001172	.000488	.000074	.0025213	.002428
%RSD	2.248206	58.34166	13.20573	13.46229	5.908419	.5566253	80.54242
#1	.6704866	-.000761	.0010176	-.004057	-.001287	.4513033	-.000812
#2	.6912587	-.000189	.0008551	-.003095	-.001166	.4517161	-.002612
#3	.7006983	-.000529	.0007900	-.003714	-.001300	.4558621	-.005618

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-04 Acquired: 10/28/2024 17:32:26 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3125523	.0269046	.1582310
Stddev	.0061230	.0003427	.0006367
%RSD	1.959033	1.273813	.4023703
#1	.3118018	.0269222	.1575172
#2	.3068392	.0272382	.1587403
#3	.3190160	.0265535	.1584354

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2556.847	57182.16	13741.71	1814.700	3920.944
Stddev	13.677	278.24	45.13	15.178	15.275
%RSD	.5349140	.4865872	.3283956	.8363681	.3895673
#1	2557.165	57006.92	13778.16	1802.084	3919.893
#2	2570.363	57036.58	13691.24	1810.474	3936.717
#3	2543.014	57502.99	13755.75	1831.543	3906.222

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-08 Acquired: 10/28/2024 17:36:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006655	-.008544	.0011179	.0026316	.0012208	.1923872	.2800380
Stddev	.001162	.001681	.0009794	.0013944	.0012055	.0015728	.0008870
%RSD	17.46333	19.68034	87.61189	52.98618	98.74408	.8175159	.3167364
#1	-.005927	-.010296	.0020886	.0013586	.0002113	.1916827	.2809227
#2	-.007995	-.008391	.0011352	.0024145	.0008956	.1912899	.2791487
#3	-.006042	-.006944	.0001299	.0041219	.0025555	.1941891	.2800426

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004119	.0002629	3.757846	.0045676	.0089633	.0032187	9.131583
Stddev	.0000166	.0000138	.011999	.0002434	.0001933	.0000553	.055821
%RSD	4.040170	5.247088	.3193055	5.328374	2.156205	1.718468	.6112987
#1	.0004285	.0002762	3.744148	.0042923	.0091769	.0031618	9.079855
#2	.0004118	.0002637	3.762896	.0046561	.0089124	.0032220	9.124142
#3	.0003953	.0002487	3.766495	.0047543	.0088006	.0032723	9.190751

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4690981	.5355049	.0120817	.0009671	359.6596	.0007676	.0435735
Stddev	.0001188	.0043739	.0002280	.0001078	2.0910	.0007102	.0003295
%RSD	.0253292	.8167857	1.887260	11.15049	.5813792	92.52768	.7560770
#1	.4689688	.5355065	.0121293	.0010846	362.0623	.0012945	.0431938
#2	.4691230	.5311302	.0122822	.0009438	358.2526	.0010483	.0437434
#3	.4692025	.5398781	.0118337	.0008728	358.6638	-.000040	.0437833

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5874589	.0023487	.0005249	-.001150	.0049790	.3652242	.0086324
Stddev	.0071024	.0004414	.0001390	.001046	.0006760	.0052002	.0025142
%RSD	1.209012	18.79473	26.49063	90.94040	13.57735	1.423849	29.12517
#1	.5808215	.0025552	.0004546	-.000953	.0050732	.3643827	.0113981
#2	.5949494	.0018419	.0004350	-.000217	.0042609	.3707939	.0064850
#3	.5866059	.0026490	.0006850	-.002281	.0056030	.3604961	.0080142

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-08 Acquired: 10/28/2024 17:36:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2705891	-.000335	.0245912
Stddev	.0021370	.000315	.0000568
%RSD	.7897732	93.83956	.2309764
#1	.2730523	-.000068	.0246550
#2	.2694850	-.000257	.0245462
#3	.2692299	-.000682	.0245723

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2610.106	57791.98	13901.46	1838.578	4086.605
Stddev	5.251	129.92	14.94	4.284	6.893
%RSD	.2011778	.2248036	.1074886	.2329855	.1686736
#1	2614.904	57933.17	13887.54	1843.063	4094.184
#2	2610.918	57765.27	13899.58	1834.529	4084.921
#3	2604.496	57677.49	13917.25	1838.141	4080.710

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-04 Acquired: 10/28/2024 17:41:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004998	-.011605	.0380382	.0044928	.0006185	.1363255	.1224330
Stddev	.003690	.000465	.0004452	.0004815	.0008303	.0051824	.0000413
%RSD	73.83351	4.002844	1.170509	10.71708	134.2393	3.801458	.0337179
#1	-.001534	-.011843	.0377820	.0050438	.0009961	.1385149	.1224223
#2	-.008879	-.011070	.0385523	.0041526	-.000333	.1304077	.1224785
#3	-.004581	-.011903	.0377802	.0042821	.001193	.1400538	.1223980

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000803	.0014567	18.23948	.0101891	.0174874	.0277208	.2084907
Stddev	.0000525	.0001073	.02559	.0001402	.0001760	.0001667	.0012817
%RSD	65.43498	7.367977	.1403199	1.375842	1.006200	.6015482	.6147511
#1	.0000948	.0014068	18.26517	.0103489	.0176534	.0276085	.2096165
#2	.0001241	.0013835	18.21398	.0101321	.0173029	.0276414	.2087599
#3	.0000220	.0015799	18.23929	.0100865	.0175059	.0279124	.2070959

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.169825	1.116237	.0212069	.0006409	352.5566	-.000186	.2209533
Stddev	.005106	.006303	.0001330	.0002246	1.2932	.000566	.0002425
%RSD	.4364965	.5646597	.6269897	35.04286	.3668136	304.1908	.1097541
#1	1.173143	1.110907	.0212943	.0004191	351.1416	.000089	.2209898
#2	1.163945	1.123194	.0212725	.0006354	352.8506	.000190	.2211755
#3	1.172386	1.114610	.0210539	.0008682	353.6774	-.000838	.2206946

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.370648	.0010552	.0004556	-.001417	.0028516	1.680934	.0679348
Stddev	.011469	.0003277	.0000595	.000488	.0001421	.010951	.0004937
%RSD	.4837934	31.05505	13.06735	34.41719	4.981873	.6514752	.7267614
#1	2.357738	.0006877	.0004798	-.001310	.0027415	1.668742	.0680040
#2	2.374549	.0011609	.0003878	-.001949	.0030119	1.689934	.0674101
#3	2.379659	.0013170	.0004992	-.000992	.0028012	1.684126	.0683902

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-04 Acquired: 10/28/2024 17:41:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3084499	.0073318	.0902030
Stddev	.0012988	.0006336	.0003119
%RSD	.4210846	8.641401	.3457289
#1	.3074722	.0066026	.0905152
#2	.3079539	.0076449	.0898915
#3	.3099237	.0077478	.0902023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2606.751	56285.18	13825.96	1802.801	4071.925
Stddev	5.463	118.96	50.96	7.729	2.171
%RSD	.2095743	.2113478	.3685879	.4287390	.0533191
#1	2606.091	56170.64	13767.85	1795.520	4070.054
#2	2601.648	56408.12	13863.04	1801.972	4071.414
#3	2612.514	56276.79	13846.98	1810.912	4074.305

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-08 Acquired: 10/28/2024 17:45:44 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008483	-.011836	.0326602	.0053985	.0007735	.1362128	.1528097
Stddev	.001484	.001885	.0002903	.0014070	.0004477	.0043615	.0003383
%RSD	17.49146	15.92323	.8887833	26.06271	57.87886	3.201957	.2213760
#1	-.009440	-.010481	.0324686	.0066752	.0010038	.1315213	.1528927
#2	-.009236	-.011040	.0325178	.0038900	.0002575	.1401444	.1524376
#3	-.006774	-.013988	.0329942	.0056303	.0010592	.1369726	.1530987

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000378	.0019869	32.79982	.0032867	.0113937	.0093630	.8723391
Stddev	.0000389	.0000761	.14215	.0005257	.0001881	.0004061	.0040025
%RSD	102.8945	3.829773	.4333949	15.99328	1.650841	4.337410	.4588239
#1	.0000010	.0020743	32.70810	.0028628	.0112559	.0091288	.8677595
#2	.0000786	.0019509	32.96357	.0038749	.0113173	.0091282	.8740893
#3	.0000339	.0019355	32.72779	.0031224	.0116080	.0098319	.8751683

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.154887	1.113405	.0168111	.0003871	387.0108	.0003955	.1697714
Stddev	.002146	.013240	.0002255	.0002495	1.7731	.0007424	.0003797
%RSD	.1858014	1.189158	1.341592	64.43700	.4581569	187.7055	.2236594
#1	1.152442	1.101179	.0168630	.0001923	385.2180	.0003341	.1701023
#2	1.156454	1.127468	.0165642	.0003008	388.7636	-.000314	.1693569
#3	1.155767	1.111570	.0170062	.0006683	387.0508	.001167	.1698551

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.318728	.0049396	.0004772	-.001229	.0008531	1.977311	.0056692
Stddev	.013640	.0003286	.0002311	.000988	.0001225	.012908	.0021033
%RSD	1.034321	6.652649	48.41901	80.40227	14.35949	.6527848	37.10152
#1	1.324547	.0049157	.0004458	-.001599	.0007862	1.971437	.0074270
#2	1.303143	.0046237	.0002635	-.001980	.0009944	1.992111	.0033389
#3	1.328492	.0052796	.0007224	-.000109	.0007786	1.968385	.0062416

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-08 Acquired: 10/28/2024 17:45:44 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6235563	.0077890	.1815162
Stddev	.0047901	.0010881	.0005634
%RSD	.7681928	13.97025	.3104144
#1	.6216565	.0084464	.1808779
#2	.6200075	.0065330	.1817262
#3	.6290049	.0083876	.1819445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2621.688	57184.23	13734.93	1842.976	4057.301
Stddev	7.496	196.20	10.54	5.723	9.499
%RSD	.2859213	.3431000	.0767734	.3105202	.2341112
#1	2619.435	57146.37	13726.36	1846.604	4053.307
#2	2630.052	57009.72	13731.72	1836.379	4068.145
#3	2615.577	57396.60	13746.71	1845.945	4050.452

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV06 Acquired: 10/28/2024 17:50:10 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.079792	5.369578	4.966399	5.213951	5.167432	9.867954	9.782847
Stddev	.008481	.064731	.003398	.003052	.009574	.032581	.087095
%RSD	.1669598	1.205518	.0684177	.0585374	.1852786	.3301662	.8902869
#1	5.074447	5.443965	4.968407	5.213217	5.156936	9.892861	9.881588
#2	5.075359	5.326056	4.962476	5.211333	5.175686	9.879920	9.716946
#3	5.089571	5.338713	4.968314	5.217303	5.169675	9.831083	9.750008

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2445298	2.486409	23.97614	.9726703	2.484309	1.290460	4.879045
Stddev	.0008496	.003684	.08933	.0054591	.002808	.003217	.006625
%RSD	.3474439	.1481522	.3725750	.5612494	.1130389	.2492650	.1357818
#1	.2452350	2.486128	24.07789	.9701629	2.483984	1.288314	4.885941
#2	.2447680	2.482873	23.93989	.9789327	2.481677	1.288907	4.872730
#3	.2435866	2.490225	23.91063	.9689154	2.487265	1.294158	4.878464

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.321111	23.83914	2.488773	1.269170	24.85459	2.413135	2.577802
Stddev	.012533	.07607	.002492	.001664	.09994	.008451	.002834
%RSD	.5399393	.3190973	.1001322	.1311347	.4020884	.3502081	.1099280
#1	2.334596	23.92682	2.487427	1.268074	24.92873	2.422410	2.578172
#2	2.318918	23.79075	2.487244	1.271085	24.89411	2.411123	2.574802
#3	2.309820	23.79985	2.491649	1.268351	24.74094	2.405871	2.580433

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.64259	4.840235	5.274570	4.981446	4.766458	5.125705	5.285092
Stddev	.05292	.011384	.007890	.006938	.022133	.042463	.017783
%RSD	.2063773	.2351865	.1495825	.1392851	.4643568	.8284386	.3364708
#1	25.62327	4.849261	5.271428	4.983474	4.788709	5.080255	5.305072
#2	25.70245	4.843996	5.268735	4.973720	4.766221	5.132497	5.271000
#3	25.60204	4.827446	5.283546	4.987145	4.744444	5.164362	5.279204

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV06 Acquired: 10/28/2024 17:50:10 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.916158	4.744212	4.906139
Stddev	.021183	.029984	.010610
%RSD	.4308751	.6320225	.2162680
#1	4.940070	4.772785	4.916659
#2	4.899745	4.746860	4.895440
#3	4.908659	4.712992	4.906317

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2806.968	61713.81	13155.74	1991.571	4340.911
Stddev	8.125	12.50	65.06	11.087	11.149
%RSD	.2894479	.0202560	.4945414	.5567167	.2568448
#1	2816.057	61699.39	13081.40	1985.691	4352.817
#2	2804.439	61721.45	13183.54	2004.360	4339.199
#3	2800.410	61720.60	13202.28	1984.663	4330.717

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB06 Acquired: 10/28/2024 17:54:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004006	-.002253	-.000224	-.000534	.0003046	.0046127	-.003511
Stddev	.0008283	.000473	.000555	.001683	.0012811	.0027270	.000098
%RSD	206.7579	21.00146	247.2829	315.3904	420.5259	59.11944	2.791698
#1	.0013570	-.002317	-.000053	-.002430	.0017436	.0061198	-.003414
#2	-.000072	-.002691	-.000845	.000049	-.000118	.0014648	-.003610
#3	-.000083	-.001751	.000224	.000781	-.000712	.0062536	-.003508

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000376	.0000547	.0030816	-.000498	.0000658	-.001344	-.015660
Stddev	.0000605	.0000637	.0034883	.000407	.0001606	.000275	.003010
%RSD	160.6900	116.4534	113.1978	81.80098	244.0343	20.46820	19.22297
#1	.0001045	-.000016	.0045426	-.000028	-.000115	-.001061	-.014915
#2	-.000013	.000108	.0056019	-.000745	.000120	-.001610	-.018972
#3	.000022	.000073	-.000900	-.000721	.000192	-.001360	-.013091

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000138	.0009428	.0001518	.0006012	.1399425	.0001235	-.004699
Stddev	.000028	.0086001	.0003291	.0001058	.0055143	.0010958	.000221
%RSD	20.41846	912.2069	216.8220	17.58985	3.940374	887.2303	4.706234
#1	-.000170	.0009596	.0004042	.0005115	.1345392	-.000267	-.004912
#2	-.000120	-.007666	-.000220	.0007178	.1397270	-.000724	-.004470
#3	-.000123	.009534	.000272	.0005744	.1455614	.001361	-.004715

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0438646	-.003414	.0002113	.0019649	.0006877	-.008251	-.001762
Stddev	.0144799	.000271	.0001243	.0010320	.0002987	.004824	.001687
%RSD	33.01047	7.934966	58.84998	52.51982	43.43836	58.46474	95.77873
#1	.0549271	-.003313	.0003155	.0017098	.0005379	-.003866	-.003474
#2	.0491909	-.003721	.0002446	.0010844	.0004935	-.007468	-.001710
#3	.0274760	-.003209	.0000737	.0031005	.0010317	-.013418	-.000101

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB06 Acquired: 10/28/2024 17:54:23 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001636	.0014694	.0000227
Stddev	.001730	.0003688	.0000209
%RSD	105.7398	25.10027	92.23420
#1	.000269	.0018084	.0000141
#2	-.002068	.0010767	.0000075
#3	-.003110	.0015232	.0000466

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2934.799	63283.29	14062.29	2049.199	4953.941
Stddev	3.532	31.72	57.15	4.734	2.754
%RSD	.1203569	.0501308	.4064299	.2310375	.0556019
#1	2933.804	63279.38	14008.33	2046.962	4952.072
#2	2931.870	63253.70	14056.36	2054.637	4952.647
#3	2938.722	63316.78	14122.18	2045.997	4957.104

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-12 Acquired: 10/28/2024 17:58:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006400	-.010105	.0057370	.0043688	.0003170	.1298818	.1101494
Stddev	.001371	.000656	.0004267	.0021141	.0004336	.0024853	.0007009
%RSD	21.42352	6.496674	7.437694	48.39136	136.7713	1.913537	.6363436
#1	-.007979	-.009827	.0057842	.0022178	-.000143	.1322938	.1103851
#2	-.005709	-.010854	.0052887	.0044446	.000377	.1273291	.1107020
#3	-.005512	-.009633	.0061382	.0064440	.000718	.1300223	.1093610

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005336	.0002423	6.054103	.0108740	.0197687	.0083688	.9251509
Stddev	.0000370	.0000341	.040467	.0002469	.0000442	.0002211	.0073578
%RSD	6.943061	14.08032	.6684219	2.270948	.2233802	2.641515	.7953070
#1	.0005338	.0002293	6.007383	.0106038	.0197470	.0085444	.9179452
#2	.0004965	.0002810	6.076710	.0110879	.0197396	.0081206	.9326519
#3	.0005706	.0002166	6.078214	.0109303	.0198195	.0084416	.9248557

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.593359	.4783057	.0114598	.0005932	345.4545	.0000698	.0713474
Stddev	.010667	.0044260	.0001857	.0002600	1.6898	.0010444	.0002408
%RSD	.6694857	.9253491	1.620648	43.83695	.4891645	1496.984	.3375355
#1	1.585028	.4731967	.0116200	.0008632	344.0309	.0007298	.0715368
#2	1.605382	.4807452	.0112562	.0003444	345.0108	-.001134	.0714290
#3	1.589667	.4809751	.0115033	.0005719	347.3220	.000614	.0710764

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9141684	.0012272	.0003922	-.001020	.0022241	.5284046	-.000532
Stddev	.0116785	.0003203	.0001124	.000296	.0005843	.0084417	.001188
%RSD	1.277498	26.09785	28.66941	29.04335	26.27071	1.597591	223.3492
#1	.9006855	.0011947	.0003073	-.000751	.0016971	.5187004	.000676
#2	.9211221	.0009244	.0003496	-.001338	.0021228	.5324601	-.000574
#3	.9206976	.0015625	.0005197	-.000972	.0028525	.5340532	-.001699

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-12 Acquired: 10/28/2024 17:58:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1774611	-.000354	.0497213
Stddev	.0012094	.000714	.0001817
%RSD	.6815090	201.6916	.3653589
#1	.1772450	.000354	.0496826
#2	.1763744	-.000343	.0499192
#3	.1787640	-.001073	.0495621

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2604.804	55890.35	13905.41	1791.943	4088.818
Stddev	5.342	106.92	55.76	2.217	5.518
%RSD	.2050852	.1913084	.4010304	.1236989	.1349649
#1	2606.355	55996.29	13913.78	1791.353	4089.941
#2	2609.198	55782.47	13845.94	1794.395	4093.689
#3	2598.858	55892.31	13956.53	1790.081	4082.824

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-03 Acquired: 10/28/2024 18:03:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009969	-.010216	-.000615	.0036078	.0006898	.3044889	.0537283
Stddev	.001327	.000555	.000993	.0015522	.0014773	.0021966	.0004294
%RSD	13.31383	5.431023	161.3962	43.02380	214.1591	.7214125	.7991300
#1	-.010456	-.009771	-.001630	.0052366	.0011017	.3045270	.0535346
#2	-.010984	-.010837	-.000572	.0021455	.0019175	.3022734	.0534299
#3	-.008467	-.010039	.000355	.0034415	-.000950	.3066662	.0542204

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000124	-.000089	3.069794	.0035084	-.000034	.0056901	.3719103
Stddev	.000011	.000047	.011929	.0002569	.000139	.0001343	.0044633
%RSD	9.092720	52.62732	.3885961	7.322621	405.0351	2.359591	1.200109
#1	-.000114	-.000137	3.061252	.0033298	.000105	.0058431	.3674213
#2	-.000122	-.000088	3.064706	.0033926	-.000173	.0055921	.3763475
#3	-.000136	-.000043	3.083423	.0038028	-.000035	.0056349	.3719620

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0272554	.1338775	.0018774	.0003209	419.7932	.0007472	.0567120
Stddev	.0000750	.0071051	.0002107	.0002752	.5568	.0006626	.0002655
%RSD	.2752074	5.307139	11.22027	85.75412	.1326468	88.68205	.4681027
#1	.0271757	.1371709	.0019056	.0005761	420.4360	.0010961	.0564636
#2	.0272661	.1257233	.0020725	.0000294	419.4600	.0011625	.0566805
#3	.0273246	.1387382	.0016540	.0003571	419.4835	-.000017	.0569918

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.097068	-.000091	.0004834	-.000380	.0029905	.7807070	.0861764
Stddev	.011763	.000441	.0001627	.001008	.0000274	.0043668	.0005392
%RSD	1.072217	484.0506	33.65068	265.5564	.9153731	.5593397	.6257400
#1	1.101093	-.000327	.0004756	-.000895	.0029790	.7857419	.0858239
#2	1.106290	-.000363	.0006499	.000782	.0030218	.7784261	.0859082
#3	1.083821	.000417	.0003248	-.001026	.0029708	.7779529	.0867972

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-03 Acquired: 10/28/2024 18:03:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1805331	-.001011	.0061637
Stddev	.0019931	.000954	.0000285
%RSD	1.104000	94.35874	.4623963
#1	.1825072	-.001654	.0061309
#2	.1785215	-.001465	.0061823
#3	.1805705	.000085	.0061779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2626.058	55493.75	13755.06	1806.472	4083.269
Stddev	11.527	45.52	44.21	3.290	11.124
%RSD	.4389324	.0820248	.3214044	.1821153	.2724302
#1	2617.073	55490.13	13767.48	1802.673	4073.237
#2	2622.048	55450.15	13791.72	1808.373	4081.338
#3	2639.055	55540.98	13705.96	1808.370	4095.232

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-06 Acquired: 10/28/2024 18:07:39 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010227	-.011703	.0071020	.0048862	.0002926	.2535200	.0626508
Stddev	.001052	.000576	.0005048	.0009461	.0008968	.0051737	.0000857
%RSD	10.28740	4.919989	7.108380	19.36249	306.4661	2.040752	.1367549
#1	-.009940	-.012170	.0065942	.0047619	.0013116	.2481637	.0626685
#2	-.011394	-.011060	.0071081	.0040084	-.000057	.2584894	.0625576
#3	-.009349	-.011878	.0076038	.0058883	-.000376	.2539069	.0627261

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000095	.0000325	4.862165	.0018424	.0005953	.0638485	.5038700
Stddev	.000008	.0001019	.010899	.0003418	.0001264	.0001854	.0032803
%RSD	8.931931	313.8990	.2241606	18.55011	21.23487	.2904189	.6510176
#1	-.000089	.0001461	4.850269	.0021796	.0005622	.0640515	.5004346
#2	-.000104	.0000020	4.864554	.0014962	.0007350	.0636879	.5069694
#3	-.000090	-.000051	4.871671	.0018515	.0004888	.0638062	.5042059

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0409046	.3786112	.0040891	.0003267	418.9276	-.000367	.1597949
Stddev	.0001032	.0080751	.0000581	.0000129	3.6531	.001568	.0009453
%RSD	.2522424	2.132816	1.420402	3.945149	.8720014	426.9085	.5915529
#1	.0410228	.3748448	.0041363	.0003316	414.7441	-.002131	.1587803
#2	.0408325	.3731075	.0041068	.0003364	420.5519	.000869	.1606508
#3	.0408585	.3878814	.0040242	.0003121	421.4868	.000160	.1599536

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.269658	-.000274	.0002773	-.001188	.0032074	.6475083	.0104116
Stddev	.033411	.000509	.0001525	.000190	.0002269	.0051197	.0013790
%RSD	2.631457	185.4403	54.99388	15.99446	7.072794	.7906754	13.24535
#1	1.258771	-.000693	.0004203	-.001032	.0034316	.6422296	.0113745
#2	1.307154	-.000422	.0002949	-.001131	.0029780	.6524526	.0110285
#3	1.243048	.000292	.0001168	-.001399	.0032127	.6478426	.0088318

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-06 Acquired: 10/28/2024 18:07:39 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1879022	.0013328	.0098353
Stddev	.0035608	.0016450	.0000193
%RSD	1.895000	123.4278	.1963930
#1	.1907397	-.000487	.0098575
#2	.1890604	.001770	.0098223
#3	.1839066	.002715	.0098262

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2630.955	57279.09	13626.68	1863.094	4078.603
Stddev	3.889	210.55	28.37	9.097	8.519
%RSD	.1478244	.3675940	.2081805	.4882516	.2088656
#1	2626.930	57446.51	13598.81	1863.147	4068.772
#2	2634.693	57042.70	13625.72	1853.971	4083.233
#3	2631.241	57348.06	13655.52	1872.163	4083.805

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-08 Acquired: 10/28/2024 18:12:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011404	-.011865	-.000783	.0032999	.0007704	.2777401	.1369112
Stddev	.002183	.001009	.001061	.0009161	.0004557	.0012797	.0008467
%RSD	19.13851	8.500921	135.5451	27.76101	59.15455	.4607685	.6184225
#1	-.012924	-.010737	.000271	.0029007	.0012634	.2789501	.1377850
#2	-.008903	-.012682	-.000769	.0043479	.0003645	.2778695	.1368541
#3	-.012385	-.012175	-.001850	.0026512	.0006834	.2764005	.1360946

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000153	-.000185	145.8838	.0218028	-.000474	.0009628	.0615092
Stddev	.000033	.000074	.0817	.0004459	.000141	.0003741	.0000822
%RSD	21.25548	40.10745	.0560051	2.045182	29.86383	38.85590	.1337030
#1	-.000184	-.000260	145.9291	.0213469	-.000470	.0005749	.0615441
#2	-.000119	-.000111	145.7894	.0218237	-.000334	.0013213	.0615682
#3	-.000155	-.000185	145.9328	.0222380	-.000617	.0009922	.0614152

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015329	.0316442	.0043757	.0004387	412.5973	.0003415	.0154449
Stddev	.0001186	.0030949	.0000911	.0002994	1.8145	.0025086	.0002427
%RSD	7.735255	9.780423	2.081385	68.24772	.4397688	734.6654	1.571635
#1	.0016534	.0294386	.0044762	.0002306	414.5887	.0027410	.0151870
#2	.0014164	.0303119	.0042987	.0003036	411.0377	.0005471	.0154786
#3	.0015288	.0351822	.0043521	.0007818	412.1653	-.002264	.0156690

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.825788	.0147727	.0026661	-.003977	-.002803	1.116450	-.001500
Stddev	.033751	.0003025	.0001786	.000995	.000504	.003497	.002217
%RSD	.5793357	2.047407	6.699884	25.01925	17.97980	.3132621	147.7553
#1	5.786850	.0151167	.0028500	-.004020	-.003382	1.112412	-.001909
#2	5.843856	.0145485	.0026551	-.004951	-.002562	1.118516	.000892
#3	5.846659	.0146530	.0024932	-.002962	-.002464	1.118423	-.003485

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-08 Acquired: 10/28/2024 18:12:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.125352	.0353819	1.515066
Stddev	.009254	.0017655	.006745
%RSD	.2243206	4.989832	.4451774
#1	4.135791	.0334200	1.521752
#2	4.118156	.0358831	1.508264
#3	4.122109	.0368427	1.515181

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2506.523	55911.13	13490.16	1776.098	3867.616
Stddev	.821	40.92	35.16	5.373	2.653
%RSD	.0327662	.0731839	.2606116	.3024899	.0685939
#1	2505.931	55957.60	13449.63	1778.803	3864.562
#2	2506.176	55895.28	13508.50	1779.580	3868.936
#3	2507.461	55880.51	13512.37	1769.910	3869.350

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-10 Acquired: 10/28/2024 18:16:40 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008067	-.011110	-.000533	.0041286	.0005153	.2380120	.2161761
Stddev	.002276	.001377	.001126	.0021539	.0016062	.0003123	.0008214
%RSD	28.21135	12.39779	211.3777	52.17123	311.6982	.1312180	.3799477
#1	-.007802	-.012359	.000747	.0056007	-.000488	.2377316	.2153591
#2	-.010464	-.009633	-.001371	.0051285	-.000334	.2383486	.2161675
#3	-.005935	-.011338	-.000974	.0016564	.002368	.2379557	.2170017

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000190	-.000157	176.4753	.2421210	-.000675	.0011583	.0395638
Stddev	.000047	.000058	.4051	.0012382	.000061	.0001877	.0016224
%RSD	24.56779	37.27897	.2295468	.5114072	9.085568	16.20203	4.100765
#1	-.000158	-.000177	176.0577	.2419453	-.000746	.0011438	.0377340
#2	-.000243	-.000091	176.5015	.2409800	-.000648	.0013529	.0401305
#3	-.000168	-.000202	176.8666	.2434377	-.000633	.0009784	.0408268

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014289	.0143490	.0028015	.0001886	438.6709	.0000667	.0208183
Stddev	.0000617	.0069302	.0001477	.0001147	6.1387	.0007734	.0002472
%RSD	4.319199	48.29792	5.272662	60.79843	1.399380	1160.327	1.187346
#1	.0014135	.0092468	.0029164	.0003147	436.7330	-.000792	.0209284
#2	.0013764	.0115611	.0028531	.0000905	433.7351	.000282	.0205352
#3	.0014969	.0222390	.0026349	.0001607	445.5447	.000710	.0209914

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.071847	.0013067	.0452494	-.004589	-.003728	.4422206	.0049666
Stddev	.034720	.0001991	.0003163	.000587	.000178	.0027831	.0017415
%RSD	.6845586	15.23311	.6989806	12.79589	4.776260	.6293586	35.06514
#1	5.057328	.0011268	.0456116	-.004718	-.003647	.4435456	.0068228
#2	5.046743	.0015206	.0451094	-.005102	-.003604	.4440938	.0047084
#3	5.111469	.0012728	.0450274	-.003948	-.003932	.4390226	.0033686

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-10 Acquired: 10/28/2024 18:16:40 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.043619	.0466527	.2734655
Stddev	.002578	.0012511	.0009346
%RSD	.1261286	2.681676	.3417539
#1	2.045808	.0468744	.2725295
#2	2.040778	.0477781	.2734681
#3	2.044271	.0453056	.2743987

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2456.606	54443.58	13502.59	1713.350	3810.288
Stddev	.769	238.86	19.21	10.623	4.020
%RSD	.0312957	.4387372	.1422703	.6199864	.1055112
#1	2457.347	54535.35	13524.15	1720.260	3809.995
#2	2455.812	54622.95	13496.35	1718.673	3806.422
#3	2456.658	54172.44	13487.28	1701.119	3814.446

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-12 Acquired: 10/28/2024 18:21:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008539	-.012818	-.000486	.0035151	.0003051	.2505544	.1541632
Stddev	.001149	.000815	.000927	.0004629	.0007423	.0035605	.0000378
%RSD	13.45912	6.361911	190.5084	13.16940	243.3445	1.421029	.0245041
#1	-.008114	-.012015	-.001556	.0030184	-.000142	.2465733	.1542066
#2	-.009840	-.013645	.000086	.0035923	.001162	.2516563	.1541384
#3	-.007663	-.012795	.000010	.0039345	-.000105	.2534337	.1541445

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000131	-.000128	167.0361	.2285686	-.000468	.0011730	.0185232
Stddev	.000026	.000066	.5225	.0016600	.000083	.0003311	.0026183
%RSD	20.11365	51.94319	.3127773	.7262582	17.63241	28.22487	14.13540
#1	-.000116	-.000114	166.7598	.2266529	-.000507	.0014725	.0180332
#2	-.000116	-.000069	167.6387	.2295845	-.000525	.0008175	.0213519
#3	-.000162	-.000200	166.7098	.2294683	-.000374	.0012289	.0161845

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016476	.0129237	.0027025	.0002464	435.9321	-.000008	.0145096
Stddev	.0001691	.0059987	.0001864	.0001416	7.3205	.000068	.0004365
%RSD	10.26662	46.41598	6.897586	57.45957	1.679275	837.3415	3.008643
#1	.0018155	.0081792	.0027972	.0002385	431.3832	-.000069	.0142786
#2	.0014772	.0196664	.0028224	.0003917	444.3766	-.000021	.0150131
#3	.0016501	.0109255	.0024877	.0001089	432.0364	.000066	.0142371

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.512313	.0014158	.0279713	-.003891	-.003389	.6339292	-.001076
Stddev	.018246	.0005058	.0003003	.000881	.000184	.0083985	.000404
%RSD	.3310094	35.72514	1.073519	22.63677	5.429568	1.324838	37.58550
#1	5.495151	.0015862	.0277852	-.003320	-.003216	.6270535	-.001284
#2	5.531478	.0018144	.0278111	-.004906	-.003369	.6432898	-.000610
#3	5.510310	.0008468	.0283177	-.003449	-.003582	.6314443	-.001333

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-12 Acquired: 10/28/2024 18:21:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.166576	.0433309	.2445421
Stddev	.008071	.0008735	.0007195
%RSD	.2548957	2.016007	.2942417
#1	3.157859	.0429542	.2453178
#2	3.168076	.0427089	.2444119
#3	3.173792	.0443296	.2438965

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2479.672	55204.91	13448.37	1738.646	3820.266
Stddev	1.365	360.89	46.61	18.400	7.885
%RSD	.0550298	.6537226	.3465984	1.058322	.2063879
#1	2478.102	55591.44	13416.73	1757.385	3812.667
#2	2480.340	54876.79	13426.47	1720.604	3819.722
#3	2480.574	55146.50	13501.89	1737.949	3828.408

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-06 Acquired: 10/28/2024 18:25:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006680	-.011514	.0015272	.0020295	.0005479	.1490639	.1115036
Stddev	.001474	.001158	.0010910	.0010359	.0005710	.0025978	.0003633
%RSD	22.05972	10.05526	71.43765	51.04230	104.2168	1.742752	.3258444
#1	-.005118	-.010755	.0020092	.0008334	.0009028	.1461632	.1118252
#2	-.006878	-.010940	.0002782	.0026245	-.000111	.1498522	.1115761
#3	-.008045	-.012847	.0022941	.0026308	.000852	.1511762	.1111095

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001497	.0003350	23.07128	.0034397	.0029356	.0002508	11.21434
Stddev	.0000228	.0000142	.07909	.0003996	.0000679	.0002960	.02660
%RSD	15.25791	4.237090	.3428230	11.61772	2.314501	118.0472	.2372167
#1	.0001344	.0003344	22.97996	.0037357	.0029195	-.000087	11.22867
#2	.0001760	.0003211	23.11587	.0035982	.0030101	.000372	11.23070
#3	.0001388	.0003495	23.11801	.0029851	.0028771	.000467	11.18364

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5338473	6.437029	.0075513	.0009955	348.3102	.0012115	.0414491
Stddev	.0003956	.020038	.0002064	.0001166	1.4653	.0005214	.0004600
%RSD	.0740952	.3112932	2.733427	11.70954	.4206996	43.03567	1.109759
#1	.5334207	6.415511	.0077893	.0008956	349.2852	.0006361	.0418986
#2	.5339194	6.440422	.0074437	.0011236	349.0204	.0016526	.0409793
#3	.5342019	6.455153	.0074209	.0009675	346.6251	.0013459	.0414695

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.942451	.0204912	.0002592	-.002206	.0057539	.6756077	.0774126
Stddev	.034734	.0008129	.0005103	.000856	.0000236	.0068350	.0024926
%RSD	1.180436	3.966822	196.8449	38.78449	.4109118	1.011683	3.219942
#1	2.981840	.0209180	-.000243	-.003166	.0057344	.6757920	.0763825
#2	2.929304	.0195538	.000244	-.001926	.0057471	.6823487	.0802551
#3	2.916211	.0210017	.000777	-.001525	.0057802	.6686824	.0756001

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-06 Acquired: 10/28/2024 18:25:33 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4550221	.0052303	.0635105
Stddev	.0042350	.0003169	.0002239
%RSD	.9307262	6.059273	.3525970
#1	.4502137	.0049274	.0637690
#2	.4566551	.0052040	.0633814
#3	.4581975	.0055595	.0633810

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2643.816	58184.51	13750.43	1858.802	4090.787
Stddev	13.335	111.88	27.45	11.237	17.007
%RSD	.5043988	.1922790	.1996007	.6045276	.4157455
#1	2633.897	58069.32	13780.40	1846.210	4076.830
#2	2638.576	58191.45	13744.39	1867.809	4085.802
#3	2658.976	58292.75	13726.51	1862.388	4109.730

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08 Acquired: 10/28/2024 18:29:59 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007133	-.008906	.0007122	.0031834	.0006208	.1022364	.0983674
Stddev	.001515	.001675	.0008389	.0023077	.0002282	.0021387	.0010526
%RSD	21.23697	18.80220	117.8031	72.49082	36.75548	2.091958	1.070045
#1	-.005844	-.010013	.0014072	.0018075	.0004452	.1043736	.0978001
#2	-.008802	-.009726	-.000220	.0018952	.0008788	.1000961	.0977201
#3	-.006754	-.006980	.000949	.0058476	.0005385	.1022393	.0995819

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000287	.0002166	40.68292	.0084790	.0031134	-.000111	7.747165
Stddev	.0000324	.0000485	.12660	.0006227	.0002017	.000183	.021531
%RSD	113.0446	22.41173	.3111971	7.344564	6.478898	164.7985	.2779233
#1	.0000576	.0002702	40.54896	.0080619	.0029082	-.000158	7.734532
#2	-.000006	.0002037	40.69918	.0081802	.0031204	.000091	7.772026
#3	.000035	.0001758	40.80060	.0091948	.0033115	-.000266	7.734936

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.084863	8.666474	.0151629	.0006117	401.3158	.0014888	.0309270
Stddev	.005550	.025768	.0001350	.0001460	4.1074	.0010362	.0004170
%RSD	.5115911	.2973307	.8906099	23.86680	1.023490	69.59927	1.348375
#1	1.079571	8.639090	.0153142	.0006407	404.0589	.0003612	.0304544
#2	1.084379	8.670085	.0151196	.0007409	403.2950	.0017060	.0312431
#3	1.090640	8.690246	.0150548	.0004533	396.5935	.0023992	.0310835

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.511403	.0176477	.0008094	-.002971	.0038142	.4802282	.0065496
Stddev	.021688	.0002730	.0001479	.000518	.0000624	.0036620	.0013144
%RSD	.8635923	1.547150	18.27932	17.43941	1.636407	.7625516	20.06842
#1	2.536254	.0173411	.0009066	-.002781	.0037423	.4843697	.0075410
#2	2.496295	.0178645	.0006391	-.002575	.0038456	.4774183	.0050587
#3	2.501660	.0177376	.0008825	-.003557	.0038548	.4788968	.0070492

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08 Acquired: 10/28/2024 18:29:59 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6856837	.0087720	.0633031
Stddev	.0023894	.0012541	.0006326
%RSD	.3484737	14.29639	.9993038
#1	.6831672	.0084087	.0633001
#2	.6879216	.0077396	.0626721
#3	.6859624	.0101676	.0639373

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2630.603	56822.79	13653.40	1844.466	4029.644
Stddev	2.489	246.45	10.39	10.391	5.148
%RSD	.0946336	.4337111	.0760617	.5633658	.1277427
#1	2633.477	56711.30	13664.23	1849.885	4023.797
#2	2629.124	56651.78	13652.45	1832.486	4031.646
#3	2629.207	57105.28	13643.53	1851.027	4033.490

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08DUP Acquired: 10/28/2024 18:34:26 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009225	-.009612	-.000090	.0039667	.0020093	.1017606	.0944435
Stddev	.000213	.000731	.001066	.0025414	.0005609	.0017294	.0020801
%RSD	2.313343	7.609332	1178.459	64.06843	27.91460	1.699495	2.202513
#1	-.009427	-.008770	.000746	.0062572	.0015361	.1026030	.0953152
#2	-.009245	-.010092	-.001291	.0012327	.0026288	.1029075	.0959460
#3	-.009002	-.009974	.000273	.0044102	.0018628	.0997714	.0920694

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000797	.0002782	39.07440	.0083465	.0031680	.0002526	7.522789
Stddev	.0000452	.0000348	.72761	.0007750	.0002263	.0000802	.017892
%RSD	56.68503	12.51519	1.862108	9.284980	7.142118	31.72963	.2378438
#1	.0001043	.0002457	39.31190	.0088675	.0033324	.0001798	7.514232
#2	.0001072	.0002738	39.65357	.0074560	.0029100	.0003385	7.510782
#3	.0000275	.0003149	38.25771	.0087162	.0032617	.0002396	7.543353

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.039601	8.335222	.0152907	.0009545	392.2814	-.000121	.0305935
Stddev	.021772	.143184	.0004306	.0000764	3.3704	.000611	.0006695
%RSD	2.094291	1.717818	2.816035	8.007608	.8591875	503.6059	2.188356
#1	1.051143	8.371238	.0151795	.0009435	388.7111	-.000703	.0298448
#2	1.053172	8.456959	.0149266	.0010358	392.7249	-.000175	.0308012
#3	1.014488	8.177468	.0157660	.0008841	395.4081	.000515	.0311346

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.486012	.0160975	.0006503	-.002568	.0037180	.4671820	.0092389
Stddev	.022489	.0001738	.0002537	.000693	.0000203	.0052989	.0022537
%RSD	.9046268	1.079939	39.01888	26.99826	.5456968	1.134230	24.39405
#1	2.480485	.0162178	.0007518	-.003195	.0037015	.4654990	.0069726
#2	2.466802	.0161765	.0003615	-.001824	.0037120	.4731180	.0114798
#3	2.510749	.0158981	.0008375	-.002686	.0037407	.4629289	.0092643

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08DUP Acquired: 10/28/2024 18:34:26 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6900226	.0080483	.0614610
Stddev	.0148509	.0015848	.0014095
%RSD	2.152239	19.69170	2.293276
#1	.6792040	.0086873	.0624434
#2	.6839095	.0062437	.0620935
#3	.7069544	.0092138	.0598461

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2587.599	57913.60	14137.01	1836.941	3978.351
Stddev	36.544	397.65	227.09	19.083	61.968
%RSD	1.412271	.6866334	1.606374	1.038824	1.557636
#1	2603.936	58097.80	14010.64	1835.503	4011.366
#2	2613.125	58185.77	14001.22	1856.703	4016.821
#3	2545.737	57457.25	14399.18	1818.619	3906.865

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08LX5 Acquired: 10/28/2024 18:38:51 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002241	-.004266	-.000274	-.000980	.0003225	.0242422	.0167211
Stddev	.002032	.000119	.000831	.000507	.0001137	.0031347	.0000732
%RSD	90.65610	2.780022	303.4719	51.70653	35.24729	12.93088	.4378976
#1	-.002175	-.004393	.000330	-.001184	.0001945	.0238058	.0166700
#2	-.004306	-.004158	.000071	-.001352	.0003612	.0275723	.0168050
#3	-.000243	-.004248	-.001222	-.000403	.0004118	.0213486	.0166884

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000557	-.000013	8.659594	.0009928	.0007632	-.001142	1.605255
Stddev	.0000378	.000066	.038297	.0003300	.0000758	.000200	.006027
%RSD	67.95630	511.8144	.4422465	33.24276	9.927037	17.51142	.3754511
#1	.0000196	.000031	8.631026	.0006137	.0006757	-.001311	1.598324
#2	.0000523	-.000089	8.703110	.0011486	.0008057	-.000921	1.608183
#3	.0000951	.000020	8.644645	.0012161	.0008081	-.001193	1.609259

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2291028	1.848556	.0033522	.0005256	81.89952	-.000366	.0030085
Stddev	.0006128	.006058	.0001968	.0001616	.64784	.000336	.0001057
%RSD	.2674829	.3276920	5.869590	30.74603	.7910162	91.70182	3.514191
#1	.2284702	1.845337	.0032698	.0007086	82.62840	.000012	.0030345
#2	.2291446	1.844788	.0032100	.0004654	81.68086	-.000480	.0028922
#3	.2296937	1.855544	.0035768	.0004027	81.38931	-.000631	.0030988

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6207373	-.001634	-.000052	.0001931	.0013140	.0884641	.0005519
Stddev	.0122193	.000075	.000151	.0002693	.0004640	.0045772	.0016132
%RSD	1.968519	4.616828	290.3455	139.4827	35.30895	5.174135	292.3159
#1	.6307585	-.001640	-.000202	.0004521	.0013448	.0831833	.0016213
#2	.6243287	-.001706	-.000055	-.000086	.0017618	.0912943	.0013380
#3	.6071248	-.001555	.000101	.000213	.0008354	.0909148	-.001304

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08LX5 Acquired: 10/28/2024 18:38:51 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1455004	.0025076	.0134935
Stddev	.0016226	.0013503	.0000711
%RSD	1.115166	53.84729	.5267364
#1	.1471948	.0018819	.0135516
#2	.1439608	.0015837	.0135145
#3	.1453455	.0040573	.0134143

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2734.169	57836.04	13769.79	1864.415	4347.783
Stddev	8.190	55.42	17.19	6.236	8.047
%RSD	.2995504	.0958273	.1248424	.3344897	.1850793
#1	2728.851	57793.30	13765.72	1862.218	4344.740
#2	2730.056	57898.66	13755.00	1871.452	4341.701
#3	2743.601	57816.16	13788.65	1859.574	4356.907

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV07 Acquired: 10/28/2024 18:43:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.110048	5.498158	4.967732	5.272882	5.207106	9.962837	9.750608
Stddev	.012484	.130206	.002439	.024180	.007071	.019881	.066580
%RSD	.2442931	2.368182	.0490904	.4585806	.1357878	.1995517	.6828287
#1	5.104728	5.348170	4.970274	5.248266	5.204469	9.985730	9.793203
#2	5.101106	5.564121	4.967512	5.273779	5.201732	9.949906	9.673884
#3	5.124311	5.582181	4.965411	5.296601	5.215116	9.952875	9.784738

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2428394	2.484778	23.99946	.9655129	2.487946	1.290863	4.816129
Stddev	.0005681	.002906	.01454	.0022700	.001882	.000524	.005933
%RSD	.2339280	.1169700	.0605726	.2351044	.0756639	.0405558	.1231957
#1	.2434237	2.485398	24.01621	.9652112	2.487632	1.290468	4.822831
#2	.2428056	2.487324	23.99023	.9634089	2.489966	1.290663	4.811545
#3	.2422891	2.481611	23.99192	.9679186	2.486240	1.291457	4.814012

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.320652	23.81763	2.490337	1.263754	24.19746	2.422666	2.573593
Stddev	.006818	.05111	.001094	.001202	.10883	.001776	.012255
%RSD	.2937768	.2145718	.0439191	.0951224	.4497466	.0733094	.4761744
#1	2.328451	23.77173	2.490453	1.263062	24.32237	2.424666	2.559466
#2	2.315825	23.80846	2.491368	1.265142	24.14697	2.422056	2.579951
#3	2.317680	23.87270	2.489190	1.263057	24.12306	2.421275	2.581362

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.56394	4.831421	5.311723	4.984293	4.779163	5.095038	5.256582
Stddev	.05387	.013298	.015675	.007683	.008152	.038117	.030741
%RSD	.2107368	.2752315	.2951038	.1541539	.1705780	.7481174	.5848185
#1	25.62453	4.842182	5.296526	4.976623	4.788577	5.059976	5.226650
#2	25.52143	4.835525	5.310805	4.991990	4.774454	5.089528	5.255022
#3	25.54587	4.816554	5.327836	4.984266	4.774459	5.135610	5.288073

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV07 Acquired: 10/28/2024 18:43:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.906313	4.755987	4.940873
Stddev	.027241	.038058	.021879
%RSD	.5552213	.8002085	.4428076
#1	4.874989	4.799500	4.941209
#2	4.924453	4.739555	4.962582
#3	4.919498	4.728905	4.918829

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2777.825	61780.39	13068.31	1965.503	4303.147
Stddev	5.530	93.96	30.50	8.201	9.938
%RSD	.1990614	.1520828	.2333622	.4172700	.2309398
#1	2783.706	61700.66	13033.32	1974.756	4314.066
#2	2777.038	61883.97	13082.38	1959.130	4294.633
#3	2772.731	61756.54	13089.23	1962.622	4300.742

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB07 Acquired: 10/28/2024 18:47:22 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001443	-.002000	-.000391	-.000415	.0003517	.0067968	-.002876
Stddev	.001960	.000919	.001203	.002330	.0004356	.0026913	.000449
%RSD	135.7717	45.94767	307.9870	562.0180	123.8847	39.59659	15.60458
#1	-.001437	-.001791	-.001582	-.002657	.0005836	.0052160	-.002903
#2	.000513	-.001204	.000824	-.000582	.0006222	.0052701	-.003310
#3	-.003406	-.003006	-.000414	.001995	-.000151	.0099043	-.002414

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000514	.0000689	.0015805	-.000164	.0000840	-.000961	-.014468
Stddev	.0000613	.0000660	.0050222	.000536	.0000882	.000131	.001896
%RSD	119.2963	95.73204	317.7693	327.1709	104.9627	13.65239	13.10779
#1	.0001222	-.000006	.0039544	-.000776	.0000828	-.001028	-.015244
#2	.0000136	.000097	.0049756	.000058	.0001729	-.000810	-.015853
#3	.0000184	.000116	-.004189	.000226	-.000004	-.001046	-.012306

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000308	.0006493	.0000736	.0005115	.1392138	-.000275	-.004671
Stddev	.000120	.0108535	.0001660	.0001995	.0079537	.000212	.000211
%RSD	39.06966	1671.624	225.5236	38.99842	5.713316	77.22158	4.511112
#1	-.000327	.0127105	-.000108	.0006512	.1300454	-.000066	-.004857
#2	-.000419	-.008330	.000218	.0002831	.1442644	-.000490	-.004715
#3	-.000180	-.002433	.000111	.0006002	.1433315	-.000268	-.004442

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0284926	-.003408	.0001223	.0023761	.0004177	-.009793	-.002032
Stddev	.0121468	.000190	.0001224	.0004748	.0001873	.000904	.003185
%RSD	42.63158	5.563083	100.0661	19.98310	44.83077	9.233540	156.7075
#1	.0383169	-.003226	.0001633	.0027177	.0005366	-.009165	-.005596
#2	.0322499	-.003393	-.000015	.0025768	.0005147	-.009386	.000535
#3	.0149111	-.003605	.000219	.0018339	.0002019	-.010830	-.001036

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB07 Acquired: 10/28/2024 18:47:22 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001869	.0001487	.0000222
Stddev	.0015360	.0015558	.0000240
%RSD	821.8669	1046.112	108.1309
#1	-.001018	.0018463	.0000105
#2	.001917	-.001209	.0000498
#3	-.000338	-.000191	.0000063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2925.893	63685.96	13852.69	2073.188	4869.231
Stddev	6.864	64.81	15.84	5.576	12.448
%RSD	.2345860	.1017697	.1143557	.2689434	.2556477
#1	2918.171	63680.00	13834.76	2076.554	4855.765
#2	2931.300	63624.33	13858.48	2066.752	4871.610
#3	2928.206	63753.54	13864.81	2076.257	4880.317

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08MS Acquired: 10/28/2024 18:51:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7343739	1.706882	.8287305	1.875261	.7893795	1.901645	.2660118
Stddev	.0045199	.041645	.0009772	.003045	.0019698	.008381	.0014350
%RSD	.6154786	2.439811	.1179142	.1623654	.2495394	.4407373	.5394420
#1	.7361013	1.754686	.8296098	1.871785	.7896882	1.894505	.2643562
#2	.7292450	1.687486	.8289030	1.876538	.7872736	1.899558	.2667811
#3	.7377754	1.678472	.8276785	1.877458	.7911767	1.910873	.2668981

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1684493	.1748036	39.86906	.3828081	.1894809	.2786932	10.27771
Stddev	.0010514	.0002083	.23234	.0026210	.0003085	.0003365	.13478
%RSD	.6241655	.1191518	.5827682	.6846679	.1628188	.1207361	1.311376
#1	.1674019	.1749447	39.60286	.3841819	.1893947	.2784378	10.33175
#2	.1684413	.1745644	39.97327	.3844567	.1892246	.2785672	10.37708
#3	.1695047	.1749018	40.03106	.3797859	.1898233	.2790745	10.12430

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.204984	9.961787	.4765742	.0745060	382.3740	.2645455	.2341540
Stddev	.006579	.063333	.0009942	.0009172	5.5094	.0011517	.0022966
%RSD	.5460140	.6357622	.2086080	1.231110	1.440838	.4353521	.9807935
#1	1.197451	9.890759	.4762193	.0745362	388.4048	.2634236	.2346611
#2	1.209607	9.982223	.4758061	.0754078	381.1123	.2657248	.2361546
#3	1.207894	10.01238	.4776971	.0735741	377.6049	.2644880	.2316462

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.71226	.2415627	.4258138	.6420153	.1786315	1.207657	6.045888
Stddev	.14248	.0014859	.0006619	.0013439	.0014479	.017742	.027152
%RSD	1.120783	.6151325	.1554429	.2093258	.8105599	1.469158	.4490986
#1	12.73758	.2399187	.4257401	.6404635	.1770662	1.197257	6.072244
#2	12.84038	.2419593	.4251919	.6427873	.1789053	1.228143	6.047416
#3	12.55882	.2428101	.4265095	.6427951	.1799229	1.197570	6.018005

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08MS Acquired: 10/28/2024 18:51:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6508739	.1692791	.2374341
Stddev	.0043645	.0009918	.0014406
%RSD	.6705557	.5858967	.6067166
#1	.6537726	.1681883	.2357769
#2	.6529947	.1701267	.2381385
#3	.6458543	.1695221	.2383868

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2575.672	57178.03	13554.09	1811.330	3955.371
Stddev	4.763	536.66	76.33	13.967	6.646
%RSD	.1849106	.9385782	.5631415	.7711031	.1680255
#1	2576.569	56986.87	13639.67	1810.031	3958.023
#2	2579.922	56763.13	13529.53	1798.058	3960.281
#3	2570.524	57784.10	13493.06	1825.902	3947.808

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08MSD Acquired: 10/28/2024 18:55:51 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7427332	1.731736	.8277816	1.901488	.7999420	1.911994	.2656915
Stddev	.0115008	.043703	.0116508	.028174	.0125236	.034927	.0041681
%RSD	1.548437	2.523649	1.407477	1.481678	1.565563	1.826720	1.568778
#1	.7301727	1.700269	.8162600	1.869783	.7871235	1.929429	.2680449
#2	.7527473	1.781635	.8395575	1.923655	.8121483	1.934770	.2681506
#3	.7452797	1.713303	.8275271	1.911025	.8005541	1.871782	.2608790

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1680241	.1748321	39.71791	.3846405	.1896113	.2799318	10.60679
Stddev	.0015659	.0022903	.51608	.0007344	.0026695	.0042445	.05743
%RSD	.9319380	1.309991	1.299376	.1909402	1.407888	1.516269	.5414279
#1	.1689831	.1723659	39.90691	.3838279	.1866638	.2756887	10.54119
#2	.1688722	.1768920	40.11284	.3848368	.1918663	.2841777	10.64794
#3	.1662172	.1752385	39.13396	.3852569	.1903039	.2799290	10.63126

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.197650	9.895943	.4767459	.0762809	397.9367	.2649706	.2398856
Stddev	.012844	.123956	.0059910	.0007325	2.6468	.0038104	.0015123
%RSD	1.072456	1.252592	1.256639	.9602696	.6651364	1.438042	.6304392
#1	1.205843	9.984556	.4702226	.0754516	395.0031	.2672897	.2382513
#2	1.204260	9.948981	.4820018	.0765516	398.6611	.2670492	.2401699
#3	1.182847	9.754293	.4780132	.0768396	400.1459	.2605730	.2412357

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.31710	.2410659	.4296731	.6428930	.1782044	1.252598	6.015794
Stddev	.02780	.0021622	.0067633	.0094060	.0031104	.014703	.090754
%RSD	.2087724	.8969342	1.574047	1.463070	1.745415	1.173770	1.508593
#1	13.29485	.2421228	.4224550	.6334555	.1794364	1.239599	5.921026
#2	13.34827	.2424962	.4358640	.6522671	.1805101	1.268555	6.101914
#3	13.30819	.2385785	.4307001	.6429565	.1746667	1.249641	6.024442

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08MSD Acquired: 10/28/2024 18:55:51 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6589322	.1692725	.2373333
Stddev	.0082298	.0022507	.0034400
%RSD	1.248965	1.329615	1.449421
#1	.6529386	.1686795	.2390474
#2	.6683155	.1717604	.2395795
#3	.6555424	.1673778	.2333731

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2550.664	55056.58	13592.37	1763.498	3936.063
Stddev	34.581	224.72	135.72	10.084	47.727
%RSD	1.355769	.4081616	.9985212	.5718078	1.212569
#1	2586.648	55279.28	13508.40	1773.447	3987.144
#2	2517.681	55060.55	13519.77	1763.763	3892.606
#3	2547.663	54829.90	13748.95	1753.285	3928.440

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08A Acquired: 10/28/2024 18:59:59 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7361055	1.739778	.8279121	1.881499	.7917412	1.908799	.2639209
Stddev	.0011012	.040717	.0022810	.009559	.0036414	.024434	.0025853
%RSD	.1496036	2.340353	.2755160	.5080620	.4599275	1.280079	.9795905
#1	.7363526	1.786564	.8281631	1.882058	.7904539	1.881928	.2611303
#2	.7370622	1.720415	.8300573	1.890766	.7958515	1.914787	.2662346
#3	.7349017	1.712357	.8255160	1.871673	.7889183	1.929683	.2643978

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1676433	.1750382	39.64073	.3802917	.1895486	.2791689	10.35913
Stddev	.0014175	.0003986	.51085	.0005078	.0002428	.0013382	.07111
%RSD	.8455479	.2277116	1.288688	.1335297	.1280941	.4793410	.6864499
#1	.1661069	.1746431	39.05112	.3800876	.1894378	.2780945	10.27716
#2	.1689004	.1754401	39.95102	.3808698	.1893810	.2806679	10.40415
#3	.1679225	.1750312	39.92004	.3799178	.1898271	.2787444	10.39610

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.193640	9.889498	.4762923	.0750474	388.6833	.2639712	.2362076
Stddev	.013883	.157008	.0011048	.0001299	4.6150	.0041838	.0008901
%RSD	1.163050	1.587626	.2319473	.1730722	1.187336	1.584927	.3768471
#1	1.177727	9.708237	.4756959	.0748987	388.6095	.2591963	.2361070
#2	1.203272	9.983301	.4775671	.0751047	393.3347	.2669942	.2371437
#3	1.199920	9.976955	.4756139	.0751388	384.1056	.2657230	.2353720

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.97044	.2398608	.4272124	.6452713	.1783224	1.213680	6.071619
Stddev	.05078	.0029896	.0014519	.0012422	.0015582	.003300	.014667
%RSD	.3914832	1.246395	.3398516	.1925034	.8738008	.2719060	.2415583
#1	12.91569	.2365492	.4268533	.6439183	.1769878	1.210183	6.055785
#2	13.01599	.2423609	.4288101	.6463602	.1800347	1.216739	6.084739
#3	12.97963	.2406723	.4259736	.6455354	.1779446	1.214119	6.074332

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-08A Acquired: 10/28/2024 18:59:59 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6531677	.1689195	.2365028
Stddev	.0014982	.0018459	.0021432
%RSD	.2293726	1.092794	.9061863
#1	.6548868	.1667888	.2340331
#2	.6524764	.1699336	.2378737
#3	.6521400	.1700360	.2376016

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2577.695	56283.67	13591.55	1781.907	3955.918
Stddev	15.847	52.23	103.40	4.225	15.735
%RSD	.6147612	.0927918	.7607727	.2370816	.3977696
#1	2579.683	56313.73	13707.88	1785.036	3959.978
#2	2560.948	56223.37	13510.09	1777.102	3938.551
#3	2592.454	56313.92	13556.68	1783.584	3969.226

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164393TB Acquired: 10/28/2024 19:04:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007557	-.009923	-.001421	.0046653	.0009209	.0142139
Stddev	.002461	.000735	.000247	.0012169	.0006441	.0055291
%RSD	32.57085	7.408349	17.36615	26.08316	69.94528	38.89939
#1	-.008524	-.009081	-.001585	.0037823	.0016534	.0114812
#2	-.009388	-.010252	-.001137	.0060533	.0004430	.0205772
#3	-.004759	-.010437	-.001541	.0041602	.0006663	.0105832

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004223	-.000190	-.000237	.0032611	.0090566	-.000098
Stddev	.000222	.000027	.000043	.0056038	.0002899	.000230
%RSD	5.248125	14.12309	18.28890	171.8400	3.201147	235.8803
#1	-.004472	-.000159	-.000213	.0060232	.0087579	.000151
#2	-.004047	-.000204	-.000211	.0069476	.0093369	-.000304
#3	-.004149	-.000206	-.000287	-.003188	.0090752	-.000139

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000614	.0294002	.0018254	.0055522	.0059413	.0004915
Stddev	.000131	.0006216	.0001108	.0070007	.0002576	.0001129
%RSD	21.30655	2.114404	6.070030	126.0872	4.335493	22.96630
#1	-.000463	.0290518	.0019531	.0046890	.0062337	.0006121
#2	-.000696	.0290309	.0017542	-.000977	.0058421	.0003884
#3	-.000683	.0301179	.0017690	.012944	.0057480	.0004741

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 356.1522	-.000933	-.002993	.0902563	-.006020	.0003906
Stddev	2.3269	.000618	.000345	.0243365	.000460	.0003994
%RSD	.6533501	66.26495	11.52209	26.96379	7.633551	102.2561
#1	358.8277	-.000239	-.002595	.0862911	-.006090	.0003487
#2	354.6004	-.001425	-.003204	.0681458	-.005530	.0000138
#3	355.0285	-.001135	-.003181	.1163319	-.006441	.0008094

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164393TB Acquired: 10/28/2024 19:04:07 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000439	.0005487	-.002012	-.004016	.0078647	-.000432
Stddev	.000513	.0004297	.003205	.000848	.0014905	.000796
%RSD	116.7209	78.31218	159.2833	21.12148	18.95173	184.3075
#1	-.000969	.0008333	-.004383	-.003038	.0069119	-.000034
#2	-.000405	.0000544	-.003287	-.004547	.0095824	-.001349
#3	.000055	.0007585	.001634	-.004463	.0070999	.000087

Elem	Sr4077
Units	ppm
Avg	-.000059
Stddev	.000021
%RSD	36.09390
#1	-.000062
#2	-.000079
#3	-.000037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2608.626	57271.76	13592.04	1851.654	4081.928
Stddev	7.057	117.58	94.17	12.801	11.089
%RSD	.2705391	.2053032	.6928406	.6913021	.2716606
#1	2613.717	57161.31	13699.24	1845.711	4089.395
#2	2611.590	57395.36	13554.17	1866.345	4087.203
#3	2600.570	57258.62	13522.69	1842.904	4069.187

Sample Name: PB164453BL Acquired: 10/28/2024 19:08:35 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008761	-.002362	-.000836	-.001224	.0008910	.0083619	-.002850
Stddev	.0006743	.000471	.000459	.001530	.0005684	.0026696	.000161
%RSD	76.95922	19.94949	54.88041	124.9873	63.79823	31.92594	5.660988
#1	.0002608	-.002781	-.000656	-.002941	.0013592	.0054928	-.002882
#2	.0007707	-.001852	-.000494	-.000725	.0010552	.0107726	-.002675
#3	.0015969	-.002454	-.001358	-.000006	.0002585	.0088204	-.002993

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000143	.0000231	.0006789	-.000460	.0000791	-.001341	-.014377
Stddev	.0000103	.0000886	.0073628	.000082	.0001384	.000074	.001464
%RSD	72.20980	383.7254	1084.512	17.79783	174.9581	5.497951	10.18163
#1	.0000093	-.000056	-.005794	-.000548	.0001799	-.001261	-.012849
#2	.0000262	.000119	.008689	-.000443	.0001361	-.001407	-.015767
#3	.0000074	.000007	-.000858	-.000387	-.000079	-.001356	-.014516

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000295	.0050477	.0003011	.0005404	.5106683	.0003698	-.003859
Stddev	.000086	.0020265	.0002994	.0001581	.0334153	.0011675	.000210
%RSD	29.03412	40.14628	99.40943	29.25814	6.543444	315.7406	5.443391
#1	-.000358	.0053435	-.000023	.0005074	.5476722	-.000933	-.004101
#2	-.000197	.0028896	.000358	.0007124	.5016330	.000719	-.003755
#3	-.000329	.0069101	.000568	.0004014	.4826997	.001323	-.003721

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0868057	-.006212	-.000240	.0019224	.0004399	-.015247	-.002811
Stddev	.0038687	.000123	.000084	.0005770	.0000847	.003005	.002717
%RSD	4.456721	1.979009	35.11560	30.01513	19.26204	19.70822	96.64762
#1	.0833924	-.006315	-.000171	.0018145	.0003966	-.012803	-.002554
#2	.0860166	-.006246	-.000334	.0014070	.0005375	-.018602	-.000232
#3	.0910081	-.006076	-.000216	.0025458	.0003855	-.014336	-.005647

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164453BL Acquired: 10/28/2024 19:08:35 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001238	.0012662	-.000024
Stddev	.002394	.0022050	.000006
%RSD	193.3164	174.1454	23.67163
#1	.001440	.0038036	-.000028
#2	-.003171	.0001793	-.000018
#3	-.001984	-.000184	-.000027

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2913.260	63977.99	13632.81	2080.469	4875.302
Stddev	6.504	290.15	63.63	5.622	2.967
%RSD	.2232420	.4535092	.4667724	.2702301	.0608550
#1	2919.620	64299.77	13609.63	2084.685	4878.363
#2	2913.538	63897.89	13584.01	2082.635	4872.439
#3	2906.621	63736.31	13704.78	2074.086	4875.105

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164453BS Acquired: 10/28/2024 19:12:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7734186	2.092714	.9598839	2.010377	.8325029	2.024173
Stddev	.0037078	.043888	.0008735	.002939	.0014503	.007173
%RSD	.4794061	2.097190	.0909982	.1461730	.1742047	.3543568
#1	.7776526	2.129018	.9602685	2.011069	.8341596	2.024089
#2	.7718515	2.105183	.9588841	2.012907	.8314630	2.017042
#3	.7707516	2.043940	.9604991	2.007154	.8318861	2.031387

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1889725	.1974011	.1885898	1.018775	.4009399	.2030027
Stddev	.0014133	.0009450	.0003558	.007721	.0017413	.0002599
%RSD	.7478812	.4787242	.1886397	.7578299	.4343053	.1280215
#1	.1896417	.1969559	.1885681	1.021947	.3990418	.2030293
#2	.1873489	.1967610	.1889559	1.009973	.4013147	.2032482
#3	.1899269	.1984865	.1882454	1.024404	.4024634	.2027305

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3277025	3.016981	.1894567	1.906645	.5097817	.0798488
Stddev	.0006623	.018174	.0013878	.031731	.0000894	.0005841
%RSD	.2021096	.6023820	.7325009	1.664247	.0175276	.7315410
#1	.3284589	3.006063	.1885398	1.882656	.5096978	.0797850
#2	.3274224	3.006920	.1887769	1.894656	.5097717	.0804622
#3	.3272263	3.037960	.1910533	1.942625	.5098757	.0792992

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.004790	.2924749	.2171877	10.42000	.2810027	.4433278
Stddev	.023068	.0036862	.0003024	.02247	.0014043	.0002988
%RSD	.7677167	1.260329	.1392156	.2156036	.4997307	.0673943
#1	3.023698	.2949395	.2172376	10.44139	.2807456	.4434667
#2	2.979087	.2882373	.2174619	10.39659	.2797447	.4429848
#3	3.011584	.2942479	.2168634	10.42201	.2825177	.4435317

Sample Name: PB164453BS Acquired: 10/28/2024 19:12:57 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6968079	.1903005	F .7066463	5.961507	F -.012277	.1765214
Stddev	.0024213	.0008086	.0072495	.021966	.001455	.0019485
%RSD	.3474857	.4249205	1.025900	.3684677	11.85524	1.103827
#1	.6975480	.1905672	.7148674	5.984144	-.011035	.1774623
#2	.6987727	.1893922	.7011702	5.960097	-.013878	.1742810
#3	.6941029	.1909420	.7039012	5.940279	-.011917	.1778209

Elem	Sr4077
Units	ppm
Avg	.1978285
Stddev	.0013812
%RSD	.6981692
#1	.1988963
#2	.1962687
#3	.1983206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2869.037	62252.67	13513.42	1994.031	4705.045
Stddev	3.150	46.38	47.77	9.270	4.055
%RSD	.1097884	.0744951	.3534668	.4648987	.0861867
#1	2869.626	62216.29	13518.30	1986.660	4701.141
#2	2871.850	62304.89	13558.55	1990.994	4709.236
#3	2865.634	62236.82	13463.40	2004.439	4704.758

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-01 Acquired: 10/28/2024 19:16:56 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0416603	-.002337	.1542648	-.040307	.0007562	120.9810
Stddev	.0030372	.001107	.0008894	.002311	.0019271	.1639
%RSD	7.290271	47.35842	.5765308	5.732395	254.8485	.1355079
#1	.0393813	-.003271	.1533179	-.042954	-.001192	120.9055
#2	.0451082	-.002624	.1550825	-.039278	.002661	121.1690
#3	.0404913	-.001115	.1543942	-.038690	.000799	120.8684

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7776296	.0108641	.0293437	20.90571	.2461571	.1514036
Stddev	.0029336	.0001565	.0002061	.02909	.0015407	.0003787
%RSD	.3772471	1.440433	.7025105	.1391621	.6259054	.2501020
#1	.7808702	.0110307	.0295195	20.87773	.2468795	.1509744
#2	.7751548	.0108413	.0291168	20.90359	.2472039	.1515458
#3	.7768639	.0107202	.0293947	20.93580	.2443880	.1516906

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9961016	267.7907	7.364165	52.27422	.2936437	.0110664
Stddev	.0016248	.9453	.003759	.45178	.0006069	.0003642
%RSD	.1631143	.3530001	.0510458	.8642438	.2066705	3.291413
#1	.9978591	266.8220	7.359862	51.75590	.2940558	.0107983
#2	.9957912	267.8395	7.365826	52.58445	.2939286	.0109199
#3	.9946543	268.7107	7.366808	52.48232	.2929468	.0114811

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.954013	.3219244	.5750066	23.05140	.1082138	.0007578
Stddev	.027445	.0002879	.0023820	.03336	.0019090	.0001944
%RSD	.2757174	.0894300	.4142626	.1447111	1.764118	25.64906
#1	9.975821	.3217712	.5776615	23.08501	.1060617	.0009815
#2	9.923196	.3217454	.5730565	23.01830	.1097032	.0006616
#3	9.963023	.3222565	.5743019	23.05088	.1088765	.0006303

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-01 Acquired: 10/28/2024 19:16:56 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121698	5.040985	F 11.96056	7.992548	.2892705	.1793339
Stddev	.0018937	.006676	.01651	.035061	.0028134	.0008119
%RSD	15.56065	.1324437	.1380516	.4386677	.9725718	.4527449
#1	.0113141	5.048420	11.94202	8.033030	.2909294	.1802005
#2	.0108550	5.039033	11.96597	7.971938	.2908600	.1792104
#3	.0143403	5.035502	11.97368	7.972675	.2860222	.1785908

Elem	Sr4077
Units	ppm
Avg	-.140308
Stddev	.001543
%RSD	1.099643
#1	-.138650
#2	-.140574
#3	-.141701

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3325.785	72646.66	17452.87	2314.722	4042.867
Stddev	10.834	106.62	27.15	9.896	9.696
%RSD	.3257455	.1467597	.1555398	.4275326	.2398253
#1	3313.552	72769.71	17451.55	2322.967	4032.342
#2	3334.166	72581.77	17426.41	2317.451	4051.435
#3	3329.638	72588.50	17480.65	2303.747	4044.825

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05 Acquired: 10/28/2024 19:21:02 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0448688	-.006437	.1809869	-.049236	.0032416	116.4849
Stddev	.0022608	.005957	.0017870	.001017	.0016139	.0850
%RSD	5.038720	92.54297	.9873802	2.065969	49.78663	.0729295
#1	.0422641	-.012975	.1818619	-.050389	.0036110	116.5293
#2	.0460204	-.001318	.1821677	-.048854	.0014751	116.5385
#3	.0463220	-.005017	.1789309	-.048465	.0046388	116.3870

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.092870	.0135318	.0366296	116.8736	.2815876	.1901825
Stddev	.005475	.0000882	.0002948	.4951	.0009642	.0003969
%RSD	.5009570	.6519639	.8048838	.4236459	.3424299	.2086799
#1	1.091376	.0136140	.0368970	116.3638	.2804848	.1898100
#2	1.098936	.0135427	.0366782	116.9046	.2820060	.1901376
#3	1.088296	.0134386	.0363134	117.3526	.2822720	.1905999

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.177155	301.5898	7.198261	69.97507	.3844074	.0111772
Stddev	.003044	1.4142	.036107	.39801	.0007411	.0002159
%RSD	.2585472	.4689034	.5016046	.5687863	.1927769	1.931787
#1	1.180280	299.9649	7.156576	69.64976	.3844725	.0109328
#2	1.174200	302.5421	7.219834	69.85658	.3836360	.0113419
#3	1.176984	302.2625	7.218371	70.41886	.3851138	.0112569

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.04567	.3398049	.7293125	31.60071	.1302421	.0010726
Stddev	.08258	.0028199	.0012251	.12694	.0013882	.0001408
%RSD	.7476042	.8298584	.1679863	.4016908	1.065876	13.12932
#1	11.04652	.3376129	.7284225	31.58348	.1289327	.0011278
#2	11.12782	.3388157	.7288051	31.73539	.1300960	.0011775
#3	10.96267	.3429861	.7307098	31.48327	.1316976	.0009126

Sample Name: P4547-05 Acquired: 10/28/2024 19:21:02 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144547	4.996792	8.201886	F 11.32209	.2638051	.2680493
Stddev	.0026355	.010433	.012470	.02187	.0048320	.0011401
%RSD	18.23275	.2087917	.1520385	.1931877	1.831662	.4253371
#1	.0137695	4.989325	8.189130	11.29796	.2691764	.2691857
#2	.0122294	5.008712	8.202480	11.32771	.2598116	.2680568
#3	.0173651	4.992337	8.214049	11.34061	.2624275	.2669055

Elem	Sr4077
Units	ppm
Avg	-.089352
Stddev	.001203
%RSD	1.345847
#1	-.088105
#2	-.089445
#3	-.090505

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3235.333	72101.29	17200.96	2266.566	3851.707
Stddev	10.645	138.57	27.93	.727	9.081
%RSD	.3290306	.1921853	.1623719	.0320652	.2357693
#1	3226.643	72092.29	17228.55	2266.579	3845.838
#2	3232.150	71967.44	17172.71	2267.286	3847.117
#3	3247.207	72244.13	17201.62	2265.833	3862.167

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4531-01 Acquired: 10/28/2024 19:25:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0353525	-.017720	.3331935	-.037643	.0135959	146.7630
Stddev	.0007903	.001654	.0015281	.000340	.0009265	1.0787
%RSD	2.235450	9.331715	.4586139	.9024477	6.814875	.7350163
#1	.0355099	-.015846	.3315676	-.037355	.0129423	145.7363
#2	.0344954	-.018337	.3346000	-.038018	.0131892	147.8871
#3	.0360522	-.018976	.3334128	-.037556	.0146562	146.6656

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7484213	.0083563	.0278784	46.52103	.1988317	.1432990
Stddev	.0010316	.0000772	.0002128	.14482	.0005582	.0006361
%RSD	.1378326	.9238507	.7632326	.3112894	.2807490	.4438814
#1	.7474664	.0083841	.0278121	46.35487	.1988389	.1429072
#2	.7482821	.0084157	.0277067	46.62036	.1982699	.1440329
#3	.7495154	.0082690	.0281164	46.58786	.1993862	.1429569

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3419484	249.7880	3.495597	47.81981	.2233563	.0101283
Stddev	.0004577	.5714	.006907	.22375	.0006074	.0002288
%RSD	.1338546	.2287561	.1976059	.4679090	.2719271	2.258846
#1	.3415949	249.1619	3.488806	47.56156	.2227212	.0102593
#2	.3424654	250.2813	3.502615	47.95559	.2239314	.0102614
#3	.3417848	249.9208	3.495369	47.94229	.2234164	.0098641

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.29667	.5024275	.5696972	17.59841	.1377235	.0036959
Stddev	.02435	.0020357	.0017800	.02892	.0019975	.0004411
%RSD	.2364674	.4051767	.3124506	.1643564	1.450343	11.93524
#1	10.27781	.5035322	.5688125	17.58369	.1385450	.0035832
#2	10.28803	.5036719	.5717462	17.57981	.1354462	.0041825
#3	10.32415	.5000782	.5685328	17.63174	.1391792	.0033221

Sample Name: P4531-01 Acquired: 10/28/2024 19:25:06 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211142	6.515576	F 11.25640	9.155929	4.115882	.1321654
Stddev	.0003122	.012121	.04372	.025388	.019047	.0014170
%RSD	1.478374	.1860248	.3884447	.2772878	.4627600	1.072151
#1	.0209279	6.501855	11.21453	9.139014	4.096660	.1306500
#2	.0214745	6.520042	11.25291	9.143651	4.134749	.1334575
#3	.0209401	6.524829	11.30177	9.185123	4.116237	.1323887

Elem	Sr4077
Units	ppm
Avg	-.088804
Stddev	.000585
%RSD	.6584226
#1	-.088294
#2	-.089442
#3	-.088677

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3214.178	72161.02	16654.95	2314.615	3975.252
Stddev	2.347	89.28	38.67	17.496	2.364
%RSD	.0730048	.1237208	.2321592	.7558804	.0594778
#1	3211.572	72099.68	16649.02	2310.063	3973.329
#2	3216.122	72119.94	16619.59	2299.846	3974.535
#3	3214.839	72263.45	16696.24	2333.937	3977.892

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4545-01 Acquired: 10/28/2024 19:29:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0884488	.0020019	1.327513	-.043401	.0112083	159.8973
Stddev	.0029330	.0015743	.004459	.001398	.0007841	.7081
%RSD	3.316082	78.63809	.3359055	3.222032	6.995381	.4428703
#1	.0915454	.0034105	1.322433	-.041787	.0119507	159.0825
#2	.0880884	.0003025	1.330783	-.044195	.0103883	160.3639
#3	.0857127	.0022926	1.329321	-.044222	.0112859	160.2455

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.677333	.0104661	.0427705	75.04209	.2794759	.1690839
Stddev	.006022	.0001018	.0000733	.14025	.0013320	.0002306
%RSD	.2249106	.9729305	.1713311	.1868896	.4766108	.1364063
#1	2.684222	.0103618	.0427041	74.88351	.2809883	.1688369
#2	2.673069	.0105653	.0428491	75.09293	.2784775	.1692936
#3	2.674710	.0104712	.0427583	75.14982	.2789619	.1691213

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4982749	293.8456	10.88393	34.31631	.3224132	.0122870
Stddev	.0014752	.5468	.01766	.11674	.0004443	.0002268
%RSD	.2960560	.1860713	.1622452	.3402024	.1378015	1.845635
#1	.4996468	293.2143	10.89724	34.18669	.3221478	.0121704
#2	.4967146	294.1692	10.89065	34.41319	.3229261	.0121422
#3	.4984633	294.1532	10.86390	34.34905	.3221657	.0125484

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.846968	.4156631	1.535794	11.10090	.0942605	.0134438
Stddev	.017052	.0022618	.008801	.04447	.0011816	.0005582
%RSD	.2916401	.5441527	.5730647	.4005909	1.253565	4.151837
#1	5.840795	.4131812	1.544169	11.05093	.0934361	.0140140
#2	5.833861	.4176084	1.526621	11.11565	.0956142	.0128985
#3	5.866246	.4161998	1.536590	11.13612	.0937311	.0134190

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4545-01 Acquired: 10/28/2024 19:29:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1711022	4.239644	F 13.91310	8.066525	4.016232	.1275475
Stddev	.0007361	.001689	.07173	.009938	.004943	.0012008
%RSD	.4301813	.0398352	.5155649	.1231995	.1230864	.9414861
#1	.1707132	4.241393	13.83069	8.055054	4.013104	.1288892
#2	.1719512	4.238023	13.94711	8.071986	4.021931	.1271797
#3	.1706423	4.239517	13.96150	8.072534	4.013661	.1265736

Elem	Sr4077
Units	ppm
Avg	.0913736
Stddev	.0014213
%RSD	1.555456
#1	.0929652
#2	.0902312
#3	.0909244

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3123.750	68168.55	16050.80	2206.041	4028.221
Stddev	8.871	53.85	38.57	3.960	5.570
%RSD	.2839808	.0789968	.2403150	.1795208	.1382810
#1	3116.352	68201.45	16022.59	2202.062	4025.992
#2	3133.584	68106.41	16035.05	2209.982	4034.561
#3	3121.313	68197.80	16094.75	2206.079	4024.111

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV08 Acquired: 10/28/2024 19:33:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.292254	5.469317	5.130018	5.473794	5.399992	10.31105
Stddev	.009940	.077839	.002829	.021226	.016169	.01517
%RSD	.1878162	1.423202	.0551470	.3877668	.2994230	.1470921
#1	5.280778	5.380217	5.131459	5.449487	5.381410	10.29355
#2	5.297864	5.524108	5.126758	5.483225	5.407711	10.32045
#3	5.298121	5.503626	5.131837	5.488669	5.410854	10.31915

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.02608	.2511180	2.569441	24.67534	.9889391	2.569242
Stddev	.11369	.0012330	.001746	.06097	.0016834	.001804
%RSD	1.133935	.4910177	.0679603	.2470692	.1702215	.0702301
#1	10.04715	.2508011	2.571386	24.64983	.9894758	2.571321
#2	10.12776	.2524786	2.568931	24.74491	.9902887	2.568089
#3	9.90333	.2500744	2.568007	24.63127	.9870528	2.568316

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.336584	5.016562	2.358445	24.53918	2.575804	1.313001
Stddev	.003064	.010267	.007688	.11909	.002085	.000998
%RSD	.2292193	.2046635	.3259888	.4852956	.0809636	.0759924
#1	1.333298	5.006778	2.356956	24.55182	2.577433	1.314151
#2	1.339362	5.015656	2.366769	24.65144	2.576525	1.312370
#3	1.337093	5.027252	2.351610	24.41427	2.573454	1.312482

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.68109	2.497173	2.683527	26.65868	4.958751	F 5.503324
Stddev	.11852	.003871	.002609	.09082	.023728	.014837
%RSD	.4615095	.1550042	.0972042	.3406638	.4785127	.2696033
#1	25.63390	2.494424	2.683799	26.61433	4.958799	5.486556
#2	25.59343	2.501599	2.680793	26.59857	4.982456	5.508660
#3	25.81594	2.495494	2.685989	26.76315	4.934999	5.514754

Sample Name: CCV08 Acquired: 10/28/2024 19:33:31 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.124314	4.902978	5.434532	5.376262	5.054231	4.830365
Stddev	.006244	.008508	.028210	.001578	.017786	.015999
%RSD	.1218557	.1735274	.5190935	.0293469	.3519117	.3312086
#1	5.123422	4.898766	5.410105	5.375444	5.040161	4.813423
#2	5.130956	4.912770	5.428084	5.378080	5.074223	4.832457
#3	5.118563	4.897397	5.465409	5.375260	5.048310	4.845215

Elem	Sr4077
Units	ppm
Avg	5.068753
Stddev	.044340
%RSD	.8747645
#1	5.023922
#2	5.069752
#3	5.112585

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2747.187	60821.56	13067.56	1925.478	4269.626
Stddev	6.428	73.55	50.45	7.484	4.051
%RSD	.2339897	.1209336	.3860809	.3886687	.0948697
#1	2754.423	60766.37	13070.15	1923.415	4273.861
#2	2744.998	60905.06	13015.86	1933.777	4269.228
#3	2742.138	60793.24	13116.67	1919.242	4265.789

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB08 Acquired: 10/28/2024 19:37:42 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001013	-.002129	-.000538	-.001139	-.000795	.0049642	-.003750
Stddev	.000394	.000748	.001039	.000506	.000288	.0009754	.000301
%RSD	38.88528	35.15478	193.0504	44.40591	36.23518	19.64891	8.035421
#1	-.000869	-.002852	.000493	-.001720	-.000809	.0058707	-.003948
#2	-.000712	-.002178	-.001584	-.000800	-.001076	.0050897	-.003403
#3	-.001460	-.001357	-.000522	-.000896	-.000501	.0039321	-.003899

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000464	.0001156	.0019697	-.000571	.0001951	-.001367	-.011806
Stddev	.0000227	.0000580	.0016570	.000401	.0000684	.000090	.002928
%RSD	48.84202	50.22478	84.12178	70.17986	35.07045	6.597235	24.79929
#1	.0000563	.0001096	.0008058	-.000842	.0002665	-.001436	-.009565
#2	.0000205	.0000607	.0038668	-.000761	.0001888	-.001399	-.010734
#3	.0000624	.0001764	.0012366	-.000111	.0001301	-.001265	-.015119

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000025	.0045685	.0002058	.0007635	-.028304	-.000237	-.004754
Stddev	.000112	.0017488	.0000646	.0001027	.010222	.001094	.000148
%RSD	442.4958	38.27906	31.38210	13.45050	36.11694	461.9181	3.113966
#1	.000045	.0035964	.0001700	.0007508	-.037462	.001025	-.004900
#2	-.000154	.0035217	.0001670	.0008719	-.017275	-.000822	-.004759
#3	.000034	.0065873	.0002803	.0006677	-.030175	-.000914	-.004604

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006981	-.003389	.0002689	.0016851	.0007238	-.007387	-.000693
Stddev	.018505	.000374	.0000766	.0003137	.0001481	.002143	.002338
%RSD	265.0781	11.03460	28.47836	18.61872	20.46489	29.00957	337.5126
#1	.009778	-.003519	.0001904	.0016318	.0006601	-.005831	-.001462
#2	-.026840	-.002967	.0003434	.0014014	.0006183	-.006499	.001933
#3	-.003880	-.003680	.0002729	.0020221	.0008932	-.009831	-.002549

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB08 Acquired: 10/28/2024 19:37:42 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0006185	-.000797	.0000988
Stddev	.0013322	.001265	.0000295
%RSD	215.3892	158.6534	29.79872
#1	.0019002	-.002257	.0000747
#2	-.000759	-.000050	.0000901
#3	.000714	-.000084	.0001317

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2864.544	63423.66	13994.10	2003.532	4841.850
Stddev	2.307	224.19	65.29	5.188	3.565
%RSD	.0805410	.3534748	.4665851	.2589409	.0736220
#1	2864.681	63551.32	14028.56	2006.736	4843.203
#2	2862.172	63164.80	13918.79	1997.547	4844.540
#3	2866.780	63554.86	14034.94	2006.314	4837.807

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05DUP Acquired: 10/28/2024 19:42:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0409516	-.001365	.1646331	-.045763	.0029185	106.2774
Stddev	.0028029	.001567	.0024874	.001562	.0018973	.1291
%RSD	6.844417	114.7964	1.510875	3.413959	65.00998	.1214534
#1	.0440070	.000149	.1668007	-.046060	.0021622	106.1506
#2	.0384995	-.002981	.1651813	-.047156	.0050773	106.4086
#3	.0403481	-.001264	.1619173	-.044074	.0015160	106.2730

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.008656	.0125804	.0318743	166.6849	.2665144	.1707753
Stddev	.004621	.0001676	.0000982	.0611	.0005789	.0003364
%RSD	.4581643	1.332537	.3080958	.0366769	.2172269	.1969773
#1	1.005030	.0124108	.0318264	166.7513	.2669351	.1710546
#2	1.007078	.0125844	.0318093	166.6726	.2658541	.1708695
#3	1.013859	.0127460	.0319873	166.6309	.2667538	.1704019

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9605814	282.9513	7.227132	65.60993	.3574976	.0104595
Stddev	.0018696	.1890	.016244	.06128	.0005101	.0001657
%RSD	.1946310	.0668094	.2247679	.0934040	.1426830	1.584211
#1	.9625779	282.7965	7.234394	65.61911	.3574361	.0104246
#2	.9602943	282.8955	7.208524	65.66610	.3570211	.0103141
#3	.9588719	283.1620	7.238479	65.54457	.3580357	.0106399

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.40411	.3165914	.6886798	32.41294	.1375788	.0010030
Stddev	.07454	.0010674	.0012182	.13542	.0009508	.0001974
%RSD	.7164169	.3371506	.1768922	.4177836	.6911183	19.67763
#1	10.33558	.3178235	.6883533	32.25666	.1365098	.0008377
#2	10.39328	.3159451	.6876581	32.48669	.1378965	.0012215
#3	10.48347	.3160057	.6900280	32.49547	.1383301	.0009497

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05DUP Acquired: 10/28/2024 19:42:03 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169165	5.145399	F 13.01296	F 10.21604	.4168129	.2673879
Stddev	.0013701	.006276	.01633	.04546	.0094390	.0028434
%RSD	8.099090	.1219786	.1255183	.4449734	2.264557	1.063399
#1	.0172277	5.142197	12.99481	10.19848	.4144392	.2651646
#2	.0181042	5.141369	13.02648	10.18198	.4087873	.2664073
#3	.0154175	5.152630	13.01758	10.26766	.4272121	.2705918

Elem	Sr4077
Units	ppm
Avg	.0073884
Stddev	.0008534
%RSD	11.55071
#1	.0069263
#2	.0068656
#3	.0083732

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3104.588	68750.43	16410.55	2176.618	3802.858
Stddev	14.129	216.97	65.87	6.460	12.804
%RSD	.4550989	.3155850	.4014111	.2967780	.3367023
#1	3088.912	68590.27	16335.93	2171.290	3788.418
#2	3108.514	68663.67	16435.13	2174.760	3807.325
#3	3116.339	68997.35	16460.61	2183.803	3812.830

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05LX5 Acquired: 10/28/2024 19:46:08 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079949	-.001357	.0387308	-.012358	.0004482	28.80002	.2713676
Stddev	.0029824	.001690	.0006445	.001216	.0021217	.04912	.0004460
%RSD	37.30398	124.5989	1.663997	9.836750	473.3761	.1705408	.1643527
#1	.0085910	.000070	.0392917	-.013749	-.001766	28.74652	.2715430
#2	.0106343	-.000917	.0388739	-.011828	.002464	28.81050	.2708605
#3	.0047595	-.003224	.0380268	-.011497	.000647	28.84306	.2716992

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037464	.0048352	30.20881	.0745513	.0397785	.3136401	77.17036
Stddev	.0000356	.0000793	.06971	.0002840	.0002255	.0004230	.39215
%RSD	.9503749	1.640192	.2307505	.3809392	.5669484	.1348581	.5081550
#1	.0037473	.0047452	30.15966	.0747078	.0397407	.3131606	76.73737
#2	.0037104	.0048951	30.17818	.0742235	.0395742	.3137991	77.27211
#3	.0037816	.0048651	30.28859	.0747227	.0400205	.3139605	77.50161

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.894136	17.92154	.0821047	.0030384	2.531054	.0879856	.1789082
Stddev	.006024	.06447	.0003442	.0000463	.007956	.0005910	.0001686
%RSD	.3180462	.3597354	.4191957	1.523003	.3143500	.6716613	.0942330
#1	1.888862	17.85475	.0821826	.0029928	2.521889	.0885941	.1787309
#2	1.892844	17.92646	.0817283	.0030372	2.535090	.0874138	.1790664
#3	1.900701	17.98341	.0824033	.0030853	2.536184	.0879491	.1789275

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.479773	.0303752	.0001675	.0021129	1.320046	2.171438	2.353577
Stddev	.016157	.0010522	.0005666	.0009318	.002330	.008136	.006758
%RSD	.2160073	3.464102	338.2105	44.10147	.1765179	.3747049	.2871436
#1	7.478142	.0295388	.0007670	.0031811	1.319242	2.162528	2.353860
#2	7.464494	.0300303	.0000946	.0014672	1.318225	2.178474	2.346682
#3	7.496684	.0315566	-.000359	.0016904	1.322672	2.173310	2.360189

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05LX5 Acquired: 10/28/2024 19:46:08 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0458302	.0655201	-.023413
Stddev	.0073050	.0009562	.000402
%RSD	15.93932	1.459398	1.715682
#1	.0467797	.0653702	-.022954
#2	.0526140	.0665424	-.023583
#3	.0380969	.0646477	-.023701

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2945.199	63952.59	14374.57	2096.204	4355.197
Stddev	2.932	68.00	23.70	6.240	5.495
%RSD	.0995481	.1063330	.1648571	.2976850	.1261696
#1	2941.831	63973.83	14349.86	2089.106	4348.996
#2	2946.585	63876.50	14397.10	2100.825	4359.459
#3	2947.181	64007.44	14376.74	2098.683	4357.137

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05MS Acquired: 10/28/2024 19:50:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6493851	1.843616	1.057362	1.457223	.6511738	118.6733
Stddev	.0020322	.039831	.001244	.004616	.0022551	.2064
%RSD	.3129395	2.160459	.1176072	.3167505	.3463093	.1738961
#1	.6512856	1.889608	1.056320	1.462213	.6536259	118.4741
#2	.6496268	1.820574	1.057027	1.453107	.6507063	118.8862
#3	.6472428	1.820665	1.058738	1.456350	.6491891	118.6596

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.255215	.1560588	.2181777	120.8474	.5810888	.3840871
Stddev	.004048	.0005201	.0001909	.3778	.0005458	.0006131
%RSD	.3225128	.3332779	.0874972	.3126360	.0939203	.1596160
#1	1.252567	.1559830	.2183685	120.4193	.5805454	.3846894
#2	1.259875	.1555808	.2179868	121.1340	.5810842	.3834638
#3	1.253202	.1566127	.2181779	120.9889	.5816369	.3841080

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.358735	305.6745	7.423968	71.87495	.8632559	.0744556
Stddev	.002673	1.2046	.021283	.23984	.0003346	.0004513
%RSD	.1967233	.3940741	.2866858	.3336916	.0387615	.6061902
#1	1.358757	304.2838	7.400734	71.59826	.8630590	.0739599
#2	1.361397	306.3928	7.442522	72.00301	.8630663	.0748428
#3	1.356051	306.3468	7.428647	72.02358	.8636422	.0745641

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.80306	.5603065	.8894094	40.90726	.3380111	.3424557
Stddev	.06257	.0025052	.0019678	.11658	.0007539	.0010467
%RSD	.4533171	.4471077	.2212513	.2849969	.2230543	.3056602
#1	13.73691	.5608342	.8899240	40.79860	.3371408	.3434872
#2	13.86130	.5625057	.8872353	41.03041	.3384287	.3424857
#3	13.81097	.5575794	.8910687	40.89277	.3384640	.3413943

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05MS Acquired: 10/28/2024 19:50:18 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6863324	5.303502	F 10.01852	F 17.07962	.2522262	.4165882
Stddev	.0011591	.015024	.04167	.04506	.0077163	.0005449
%RSD	.1688841	.2832872	.4159328	.2638017	3.059284	.1308027
#1	.6869629	5.287488	9.97107	17.12671	.2541813	.4163266
#2	.6849947	5.317287	10.04919	17.07522	.2587768	.4162234
#3	.6870396	5.305732	10.03529	17.03692	.2437203	.4172146

Elem	Sr4077
Units	ppm
Avg	.0677222
Stddev	.0014177
%RSD	2.093423
#1	.0687975
#2	.0682535
#3	.0661156

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3249.647	70220.77	16665.13	2240.368	3874.191
Stddev	7.663	72.71	31.84	4.913	5.295
%RSD	.2357964	.1035497	.1910472	.2192727	.1366741
#1	3247.391	70164.90	16634.56	2234.910	3872.108
#2	3243.365	70194.43	16662.73	2241.760	3870.255
#3	3258.184	70302.98	16698.10	2244.435	3880.211

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05MSD Acquired: 10/28/2024 19:54:16 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6483821	1.784289	1.047373	1.454095	.6496278	118.3654
Stddev	.0041107	.015748	.003017	.003888	.0017902	.2411
%RSD	.6339904	.8826065	.2880977	.2673534	.2755744	.2037246
#1	.6503459	1.797049	1.050856	1.453278	.6485465	118.2245
#2	.6436579	1.766689	1.045556	1.450682	.6486426	118.2279
#3	.6511426	1.789129	1.045706	1.458327	.6516942	118.6439

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.241887	.1524382	.2179123	120.3844	.5641378	.3809638
Stddev	.002690	.0004248	.0002559	.3989	.0014789	.0003303
%RSD	.2165892	.2786802	.1174242	.3313777	.2621513	.0866898
#1	1.239768	.1521335	.2179555	119.9251	.5642551	.3809838
#2	1.240980	.1529235	.2176376	120.5833	.5655546	.3812836
#3	1.244913	.1522577	.2181439	120.6447	.5626038	.3806240

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.361815	294.1643	7.310326	71.24825	.8576554	.0720271
Stddev	.001980	.7327	.026431	.32235	.0004239	.0003655
%RSD	.1454189	.2490936	.3615518	.4524321	.0494303	.5074602
#1	1.361582	293.3213	7.280541	70.87657	.8572985	.0716862
#2	1.359961	294.5236	7.319453	71.41684	.8575438	.0719820
#3	1.363901	294.6481	7.330983	71.45134	.8581240	.0724130

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.31098	.5524522	.8705462	39.70792	.3124610	.3391620
Stddev	.02095	.0017446	.0013707	.06753	.0015129	.0014423
%RSD	.1573823	.3157943	.1574526	.1700695	.4841782	.4252496
#1	13.31431	.5515663	.8705499	39.69922	.3117442	.3378884
#2	13.28857	.5513282	.8691737	39.64515	.3114397	.3388695
#3	13.33007	.5544620	.8719151	39.77937	.3141990	.3407281

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05MSD Acquired: 10/28/2024 19:54:16 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6776838	5.338840	F 10.43908	F 16.78754	.2522544	.4114092
Stddev	.0027265	.009702	.02257	.02469	.0014221	.0025175
%RSD	.4023221	.1817317	.2161842	.1470776	.5637455	.6119138
#1	.6796826	5.329705	10.41364	16.79770	.2506506	.4091184
#2	.6745779	5.337791	10.44691	16.75939	.2527509	.4110048
#3	.6787908	5.349025	10.45668	16.80554	.2533616	.4141044

Elem	Sr4077
Units	ppm
Avg	.0766643
Stddev	.0009042
%RSD	1.179459
#1	.0767279
#2	.0757300
#3	.0775350

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3231.967	72624.11	16846.48	2257.451	3870.725
Stddev	8.708	172.89	18.56	6.243	5.989
%RSD	.2694277	.2380573	.1101819	.2765464	.1547204
#1	3241.309	72425.75	16826.55	2253.872	3877.445
#2	3230.516	72742.78	16849.60	2264.659	3868.778
#3	3224.076	72703.80	16863.28	2253.820	3865.952

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4547-05A Acquired: 10/28/2024 19:58:12 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6404452	1.763974	1.028356	1.428175	.6360099	121.7206
Stddev	.0041841	.019214	.000916	.007951	.0006634	.0838
%RSD	.6533123	1.089217	.0890548	.5567570	.1042982	.0688352
#1	.6382812	1.754717	1.028197	1.420305	.6352818	121.6540
#2	.6377862	1.751142	1.029340	1.428014	.6365799	121.8147
#3	.6452681	1.786064	1.027529	1.436205	.6361680	121.6930

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.254456	.1495724	.2142357	116.9376	.5674510	.3801065
Stddev	.004593	.0001540	.0000600	.4759	.0014913	.0012579
%RSD	.3660981	.1029468	.0279974	.4069949	.2628005	.3309221
#1	1.256937	.1495603	.2142501	116.3910	.5690677	.3791532
#2	1.257274	.1497321	.2141698	117.2607	.5661293	.3796340
#3	1.249156	.1494248	.2142872	117.1610	.5671560	.3815321

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.368670	303.4942	7.321873	72.47555	.8537854	.0717337
Stddev	.000480	1.4477	.019657	.42096	.0006769	.0005588
%RSD	.0350995	.4770204	.2684738	.5808357	.0792864	.7789368
#1	1.369164	301.8392	7.306674	72.00220	.8540355	.0711335
#2	1.368205	304.5259	7.344072	72.61646	.8530190	.0718287
#3	1.368641	304.1175	7.314873	72.80798	.8543017	.0722389

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.81825	.5534164	.8858652	40.91552	.3210679	.3318109
Stddev	.06546	.0007893	.0035466	.08205	.0005783	.0009317
%RSD	.4737088	.1426228	.4003586	.2005232	.1801228	.2807937
#1	13.82733	.5525053	.8847434	40.91891	.3205284	.3312649
#2	13.87868	.5538512	.8830151	40.99581	.3216784	.3312812
#3	13.74872	.5538927	.8898371	40.83183	.3209968	.3328867

Sample Name: P4547-05A Acquired: 10/28/2024 19:58:12 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6618585	5.706305	F 13.30429	F 16.76818	.2506975	.4103917
Stddev	.0040176	.011858	.04081	.03695	.0070274	.0025890
%RSD	.6070151	.2078043	.3067066	.2203510	2.803136	.6308501
#1	.6619793	5.698568	13.26368	16.75938	.2527547	.4127794
#2	.6577819	5.719957	13.30391	16.73644	.2428712	.4107555
#3	.6658143	5.700390	13.34528	16.80874	.2564668	.4076400

Elem	Sr4077
Units	ppm
Avg	.0595628
Stddev	.0024485
%RSD	4.110727
#1	.0621774
#2	.0591869
#3	.0573239

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3214.261	71665.40	16980.81	2263.810	3848.637
Stddev	3.782	97.52	41.60	4.397	7.260
%RSD	.1176740	.1360745	.2449966	.1942402	.1886315
#1	3211.637	71592.62	16947.33	2266.642	3844.474
#2	3218.596	71627.39	16967.71	2266.044	3857.020
#3	3212.549	71776.20	17027.38	2258.744	3844.418

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-01 Acquired: 10/28/2024 20:02:09 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0492986	-.004406	.2035126	-.053867	.0018521	116.6743
Stddev	.0027918	.003763	.0007140	.003195	.0013220	.0756
%RSD	5.662954	85.40083	.3508580	5.930439	71.37443	.0648366
#1	.0518340	-.008097	.2040825	-.055168	.0009808	116.5946
#2	.0497550	-.004546	.2027116	-.050227	.0033732	116.7452
#3	.0463067	-.000575	.2037436	-.056206	.0012024	116.6831

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.356576	.0136232	.0395593	210.1979	.2971281	.1947530
Stddev	.001852	.0000646	.0003675	1.0559	.0010001	.0006663
%RSD	.1365217	.4740482	.9289735	.5023426	.3365944	.3421307
#1	1.356345	.0136523	.0398640	209.3114	.2959739	.1939896
#2	1.354849	.0136681	.0396628	209.9162	.2976731	.1950520
#3	1.358532	.0135492	.0391512	211.3661	.2977374	.1952175

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9764179	315.5439	8.231998	73.56249	.3953928	.0112711
Stddev	.0015653	1.3685	.018864	.40776	.0009710	.0001884
%RSD	.1603081	.4337109	.2291542	.5542991	.2455776	1.671297
#1	.9776131	314.0657	8.210227	73.11626	.3942838	.0111304
#2	.9746461	315.7991	8.243479	73.91570	.3960902	.0114851
#3	.9769945	316.7669	8.242288	73.65552	.3958045	.0111978

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.814622	.3606617	.7773440	35.54425	.1457409	.0015103
Stddev	.019044	.0014905	.0017380	.10295	.0032738	.0001859
%RSD	.3955534	.4132767	.2235873	.2896359	2.246306	12.30806
#1	4.814563	.3589553	.7793411	35.43648	.1420497	.0014183
#2	4.795606	.3617089	.7761737	35.55470	.1468802	.0013884
#3	4.833695	.3613211	.7765171	35.64158	.1482928	.0017243

Sample Name: P4561-01 Acquired: 10/28/2024 20:02:09 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127375	5.576469	8.443479	F 10.88903	.5027791	.3123315
Stddev	.0013127	.002936	.032155	.04754	.0063410	.0013902
%RSD	10.30571	.0526439	.3808213	.4365488	1.261194	.4451146
#1	.0142144	5.573113	8.415324	10.84074	.4988905	.3127109
#2	.0122941	5.577733	8.436595	10.89057	.5100963	.3134926
#3	.0117039	5.578560	8.478518	10.93577	.4993506	.3107909

Elem	Sr4077
Units	ppm
Avg	.0146449
Stddev	.0015175
%RSD	10.36205
#1	.0162687
#2	.0144032
#3	.0132627

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3194.313	70754.61	16899.33	2247.791	3792.786
Stddev	13.987	29.63	27.30	6.808	6.697
%RSD	.4378779	.0418733	.1615371	.3028765	.1765644
#1	3178.173	70759.13	16877.80	2240.340	3785.054
#2	3201.861	70781.72	16890.17	2253.687	3796.734
#3	3202.904	70722.99	16930.04	2249.346	3796.571

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-05 Acquired: 10/28/2024 20:06:22 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0449593	.0017118	.1395514	-.034017	.0017587	94.16628	1.010325
Stddev	.0021214	.0027891	.0021868	.002308	.0006508	.11795	.002209
%RSD	4.718545	162.9298	1.567016	6.785571	37.00313	.1252619	.2186596
#1	.0433488	.0041258	.1373366	-.031353	.0022888	94.03533	1.012697
#2	.0473630	.0023511	.1396084	-.035409	.0019550	94.19931	1.008326
#3	.0441660	-.001341	.1417091	-.035289	.0010324	94.26420	1.009952

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093036	.0213884	14.66137	.2012676	.1378535	.2992703	228.7550
Stddev	.0000762	.0002987	.02234	.0009018	.0002282	.0009482	.7237
%RSD	.8193933	1.396366	.1523918	.4480488	.1655491	.3168239	.3163598
#1	.0093139	.0217306	14.63690	.2008901	.1380362	.2988347	228.0622
#2	.0093741	.0211803	14.68068	.2022968	.1379267	.3003579	228.6969
#3	.0092227	.0212543	14.66653	.2006159	.1375977	.2986182	229.5060

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.593107	32.59482	.2477182	.0087740	2.554431	.2640503	.5724539
Stddev	.008383	.17723	.0009219	.0000408	.007758	.0026851	.0019568
%RSD	.3232863	.5437270	.3721664	.4653185	.3037042	1.016890	.3418201
#1	2.583978	32.39418	.2486203	.0087979	2.562461	.2613893	.5733244
#2	2.594884	32.66025	.2477568	.0087268	2.553853	.2640029	.5702129
#3	2.600459	32.73003	.2467776	.0087971	2.546977	.2667588	.5738243

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.39581	.0630218	.0003124	.0104033	3.038250	5.972719	7.069544
Stddev	.01913	.0006451	.0001333	.0006620	.002152	.006452	.018856
%RSD	.1543023	1.023679	42.67994	6.363314	.0708257	.1080206	.2667242
#1	12.41719	.0630422	.0003726	.0103240	3.037051	5.965825	7.091292
#2	12.38993	.0623667	.0001596	.0097845	3.036965	5.978611	7.059583
#3	12.38032	.0636565	.0004051	.0111014	3.040734	5.973723	7.057758

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4561-05 Acquired: 10/28/2024 20:06:22 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.084655	.1519593	-.142464
Stddev	.001407	.0010508	.000748
%RSD	.0674962	.6915219	.5250572
#1	2.085691	.1522313	-.141702
#2	2.083053	.1507992	-.142494
#3	2.085222	.1528474	-.143197

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3316.287	72480.87	16482.56	2343.851	4287.815
Stddev	4.023	116.71	10.80	16.876	7.267
%RSD	.1213032	.1610240	.0655125	.7200150	.1694744
#1	3312.223	72346.49	16484.86	2328.793	4279.456
#2	3320.268	72539.19	16492.03	2362.092	4291.363
#3	3316.369	72556.92	16470.80	2340.667	4292.625

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4566-01 Acquired: 10/28/2024 20:10:28 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0346898	-.009353	.2717204	-.045010	.0034237	133.4197	.5703670
Stddev	.0018706	.002108	.0026902	.003024	.0007738	.0936	.0018637
%RSD	5.392277	22.53403	.9900650	6.717636	22.60004	.0701813	.3267514
#1	.0339395	-.009191	.2698501	-.041814	.0043099	133.3472	.5688112
#2	.0368190	-.007331	.2705076	-.045391	.0030790	133.3864	.5698573
#3	.0333108	-.011537	.2748035	-.047826	.0028822	133.5254	.5724325

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107620	.0309922	80.17713	.2132232	.1477154	.2666019	281.8952
Stddev	.0000490	.0000821	.32665	.0004732	.0003109	.0013491	2.2507
%RSD	.4556470	.2650485	.4074135	.2219410	.2104428	.5060499	.7984080
#1	.0107325	.0310857	79.81226	.2129942	.1474107	.2681566	279.6290
#2	.0108186	.0309593	80.27676	.2137674	.1480321	.2659112	281.9265
#3	.0107349	.0309316	80.44236	.2129080	.1477034	.2657381	284.1300

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.831810	47.27704	.1751264	.0105359	12.23569	.4647560	.5680502
Stddev	.023583	.23180	.0006651	.0004525	.06613	.0021982	.0021340
%RSD	.6154645	.4902932	.3798004	4.294837	.5404827	.4729729	.3756649
#1	3.805453	47.01200	.1744220	.0100827	12.18867	.4624047	.5660461
#2	3.839059	47.37723	.1752133	.0105372	12.20709	.4651036	.5702938
#3	3.850917	47.44189	.1757437	.0109877	12.31130	.4667597	.5678108

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.31103	.1407190	.0071274	.0163986	6.227672	7.586123	5.753221
Stddev	.04592	.0044899	.0004024	.0012988	.017183	.042728	.008107
%RSD	.4453467	3.190701	5.645276	7.920001	.2759122	.5632336	.1409096
#1	10.32132	.1371370	.0070749	.0149035	6.208324	7.550910	5.744160
#2	10.26084	.1392640	.0075534	.0170455	6.233536	7.573803	5.759789
#3	10.35093	.1457560	.0067538	.0172469	6.241154	7.633658	5.755713

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4566-01 Acquired: 10/28/2024 20:10:28 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.523251	.1098624	-.104468
Stddev	.009532	.0005002	.001932
%RSD	.3777832	.4552575	1.849146
#1	2.512293	.1094292	-.102503
#2	2.527827	.1097482	-.104534
#3	2.529632	.1104097	-.106365

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3160.199	70926.61	16522.36	2261.368	3965.266
Stddev	3.277	46.73	34.56	5.081	5.603
%RSD	.1036834	.0658833	.2091571	.2246663	.1412963
#1	3157.440	70894.72	16508.42	2264.960	3971.369
#2	3159.337	70980.25	16496.95	2263.590	3960.356
#3	3163.821	70904.87	16561.71	2255.556	3964.074

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-01 Acquired: 10/28/2024 20:14:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0743508	-.019249	2.613443	-.038955	.0019025	105.3532	.6738590
Stddev	.0008600	.003102	.001831	.000513	.0006010	.3033	.0010854
%RSD	1.156702	16.11669	.0700755	1.318004	31.58870	.2878766	.1610734
#1	.0752584	-.021976	2.611774	-.039061	.0012579	105.1479	.6727397
#2	.0742460	-.015874	2.613154	-.039407	.0020022	105.2101	.6739304
#3	.0735480	-.019898	2.615402	-.038397	.0024473	105.7015	.6749070

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110500	.0327822	45.72138	.4312814	.1329491	.9369563	227.9720
Stddev	.0000949	.0001797	.09258	.0004169	.0002715	.0006328	.8672
%RSD	.8588394	.5482133	.2024799	.0966647	.2042465	.0675361	.3804184
#1	.0111590	.0329696	45.61771	.4309839	.1332559	.9376144	227.0141
#2	.0110056	.0326114	45.75060	.4317579	.1328520	.9369024	228.7037
#3	.0109854	.0327655	45.79581	.4311024	.1327395	.9363522	228.1983

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.771468	58.77150	.2838676	.0099396	8.029071	.4100896	2.185487
Stddev	.012044	.30746	.0006017	.0000688	.018532	.0031911	.008203
%RSD	.2524225	.5231466	.2119467	.6919288	.2308105	.7781568	.3753249
#1	4.759151	58.41895	.2837809	.0099375	8.008864	.4068756	2.176260
#2	4.783220	58.91158	.2833140	.0098718	8.045273	.4101359	2.191954
#3	4.772033	58.98398	.2845079	.0100093	8.033076	.4132574	2.188246

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.88627	.0695095	.0043946	.0343274	8.968707	7.003538	9.518396
Stddev	.05320	.0016991	.0001592	.0004212	.012779	.018052	.033944
%RSD	.1978744	2.444431	3.623270	1.226929	.1424833	.2577544	.3566121
#1	26.82781	.0675816	.0043777	.0338419	8.954509	6.983011	9.556460
#2	26.89916	.0701583	.0042445	.0345952	8.972326	7.010663	9.507458
#3	26.93185	.0707886	.0045616	.0345451	8.979287	7.016940	9.491270

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-01 Acquired: 10/28/2024 20:14:32 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4651277	.1895774	-.007658
Stddev	.0028868	.0002946	.000721
%RSD	.6206483	.1553953	9.415620
#1	.4681993	.1898890	-.006992
#2	.4647133	.1893034	-.008423
#3	.4624704	.1895397	-.007559

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3402.260	76351.04	17604.05	2407.054	4048.274
Stddev	7.325	48.40	34.09	10.290	8.275
%RSD	.2153037	.0633947	.1936634	.4274893	.2044077
#1	3397.067	76295.24	17565.18	2412.063	4042.420
#2	3399.074	76376.05	17628.89	2395.219	4044.660
#3	3410.639	76381.81	17618.07	2413.880	4057.741

Sample Name: P4567-05 Acquired: 10/28/2024 20:18:36 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0477893	-.007902	.4828480	-.025222	.0010987	65.78807	.3775506
Stddev	.0032526	.001038	.0021790	.001179	.0004883	.11793	.0002201
%RSD	6.806069	13.13341	.4512825	4.676362	44.44452	.1792583	.0583000
#1	.0473339	-.006978	.4810292	-.023891	.0013271	65.71543	.3777749
#2	.0447883	-.007703	.4822516	-.026137	.0014309	65.72463	.3775420
#3	.0512455	-.009025	.4852631	-.025638	.0005380	65.92414	.3773349

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102032	.0210423	17.60273	.2464013	.0920670	.1970948	170.3647
Stddev	.0000165	.0001353	.06182	.0003365	.0001043	.0003511	.4003
%RSD	.1618167	.6429528	.3511886	.1365825	.1132435	.1781523	.2349766
#1	.0101920	.0208940	17.53493	.2467763	.0919488	.1967193	169.9035
#2	.0101955	.0210738	17.61727	.2461255	.0921459	.1974149	170.6221
#3	.0102222	.0211590	17.65598	.2463020	.0921063	.1971503	170.5685

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.200529	30.01984	.1841879	.0076760	7.671952	.2615340	.9266563
Stddev	.011891	.08210	.0005648	.0002277	.023617	.0021382	.0029317
%RSD	.3715423	.2734794	.3066381	2.966025	.3078419	.8175671	.3163705
#1	3.188470	29.96669	.1841366	.0074364	7.671536	.2591267	.9298012
#2	3.200873	29.97843	.1836506	.0078896	7.695775	.2632129	.9239990
#3	3.212245	30.11440	.1847766	.0077019	7.648546	.2622623	.9261687

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.87200	.0472591	.0026189	.0178342	5.276388	7.017634	6.245342
Stddev	.02027	.0008015	.0003241	.0014031	.005991	.013879	.038827
%RSD	.1706990	1.695900	12.37434	7.867341	.1135361	.1977745	.6216881
#1	11.86570	.0463514	.0028650	.0175711	5.276486	7.003273	6.215996
#2	11.89467	.0475567	.0022517	.0165813	5.270348	7.030975	6.230661
#3	11.85564	.0478692	.0027399	.0193502	5.282328	7.018654	6.289368

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-05 Acquired: 10/28/2024 20:18:36 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3603361	.0805461	-.087542
Stddev	.0027421	.0008957	.000437
%RSD	.7609949	1.112042	.4991528
#1	.3573568	.0798437	-.087042
#2	.3627543	.0815548	-.087853
#3	.3608970	.0802399	-.087730

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3346.998	74110.46	17295.15	2342.735	4212.574
Stddev	15.923	106.10	17.89	14.409	9.220
%RSD	.4757406	.1431590	.1034611	.6150389	.2188649
#1	3336.169	74000.50	17281.18	2326.156	4205.695
#2	3339.545	74118.67	17315.32	2352.233	4208.976
#3	3365.281	74212.21	17288.94	2349.815	4223.050

Sample Name: CCV09 Acquired: 10/28/2024 20:22:42 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV09 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.195831	5.487139	5.037643	5.358564	5.271364	10.11432	9.832277
Stddev	.004562	.127140	.013187	.028273	.006553	.08852	.159132
%RSD	.0877978	2.317052	.2617670	.5276184	.1243107	.8752329	1.618463
#1	5.190990	5.502503	5.023773	5.364721	5.276220	10.17174	9.883586
#2	5.200050	5.605898	5.050020	5.383250	5.273960	10.15885	9.959424
#3	5.196452	5.353015	5.039136	5.327720	5.263910	10.01238	9.653820

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2488746	2.525560	24.35059	.9746176	2.519574	1.309443	4.933589
Stddev	.0031253	.003670	.27446	.0050719	.004584	.001443	.024936
%RSD	1.255789	.1453097	1.127111	.5203958	.1819259	.1101975	.5054268
#1	.2495520	2.521559	24.38456	.9788850	2.514321	1.309736	4.941600
#2	.2516056	2.528770	24.60649	.9759574	2.522759	1.307877	4.953535
#3	.2454660	2.526350	24.06074	.9690103	2.521643	1.310718	4.905633

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.334767	24.09722	2.527895	1.287073	25.45363	2.441910	2.621371
Stddev	.029652	.29186	.002431	.001270	.07892	.026157	.009714
%RSD	1.270014	1.211181	.0961619	.0986805	.3100415	1.071173	.3705730
#1	2.341160	24.13548	2.525109	1.285724	25.54473	2.455326	2.611537
#2	2.360701	24.36807	2.529583	1.287248	25.40635	2.458636	2.621614
#3	2.302440	23.78812	2.528994	1.288246	25.40981	2.411766	2.630961

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.23300	4.905938	5.377326	5.063403	4.813341	5.339040	5.321538
Stddev	.04532	.055856	.011459	.012502	.047729	.032223	.032978
%RSD	.1727785	1.138537	.2130969	.2469119	.9915885	.6035436	.6197093
#1	26.28475	4.931759	5.375787	5.060695	4.835782	5.302463	5.291136
#2	26.21389	4.944212	5.389476	5.077038	4.845714	5.351417	5.356597
#3	26.20036	4.841843	5.366714	5.052477	4.758528	5.363239	5.316881

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV09 Acquired: 10/28/2024 20:22:42 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV09 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.005777	4.812032	5.018973
Stddev	.013998	.052914	.036534
%RSD	.2796385	1.099629	.7279225
#1	5.003850	4.845746	5.047174
#2	5.020638	4.839305	5.032045
#3	4.992842	4.751045	4.977701

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2770.481	60640.79	12950.37	1944.609	4287.148
Stddev	2.133	43.94	125.18	10.975	6.258
%RSD	.0770021	.0724605	.9666416	.5643872	.1459731
#1	2771.496	60591.54	12895.97	1954.964	4294.208
#2	2771.918	60654.85	12861.58	1945.758	4284.956
#3	2768.030	60675.98	13093.54	1933.104	4282.282

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB09 Acquired: 10/28/2024 20:26:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB09 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000926	-.001134	-.000747	.0003736	-.000482	.0051282	-.002224
Stddev	.000234	.000911	.000882	.0013663	.001210	.0068830	.000453
%RSD	25.22006	80.36878	118.0759	365.7418	251.2618	134.2197	20.36137
#1	-.000780	-.001453	-.001328	.0019275	.000390	.0006027	-.002647
#2	-.000802	-.001842	-.001180	-.000168	-.001863	.0017326	-.002279
#3	-.001195	-.000106	.000268	-.000639	.000028	.0130492	-.001746

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000097	.0000307	.0022979	-.000191	.0001370	-.001028	-.012932
Stddev	.0000309	.0000308	.0055207	.000229	.0001623	.000253	.002105
%RSD	319.0937	100.0590	240.2523	119.6096	118.4655	24.61361	16.27443
#1	-.000002	-.000003	.0006702	-.000399	-.000040	-.001103	-.013980
#2	.000045	.000039	-.002226	.000054	.000279	-.000746	-.010509
#3	-.000013	.000057	.008449	-.000228	.000172	-.001234	-.014306

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000112	.0011660	.0000373	.0004362	-.074966	-.000466	-.004663
Stddev	.000034	.0026934	.0000821	.0003819	.009029	.000481	.000324
%RSD	30.46312	230.9973	220.1736	87.55828	12.04460	103.3553	6.955063
#1	-.000099	-.000085	.0001297	.0004140	-.072367	-.000207	-.005028
#2	-.000087	-.000674	.0000097	.0008287	-.085009	-.001021	-.004407
#3	-.000151	.004257	-.000027	.0000658	-.067520	-.000169	-.004555

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163074	-.002835	.0001935	.0016560	.0005572	-.005938	-.001192
Stddev	.0164631	.000347	.0001627	.0002729	.0002862	.006045	.000156
%RSD	100.9545	12.23735	84.07259	16.48008	51.35832	101.8072	13.05583
#1	.0332420	-.002709	.0002337	.0015643	.0007947	-.001869	-.001173
#2	.0153200	-.002569	.0003324	.0014409	.0006373	-.012885	-.001047
#3	.0003603	-.003228	.0000145	.0019630	.0002395	-.003061	-.001356

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB09 Acquired: 10/28/2024 20:26:52 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB09 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001749	-.000469	.0000218
Stddev	.0024242	.000308	.0000232
%RSD	1386.286	65.72288	106.1403
#1	.0029469	-.000242	.0000437
#2	-.001548	-.000345	-.000002
#3	-.000874	-.000819	.000024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2957.163	62342.53	13760.26	2068.304	4984.016
Stddev	8.655	78.94	17.16	10.555	7.326
%RSD	.2926682	.1266177	.1246777	.5103194	.1469914
#1	2960.914	62251.42	13773.26	2056.226	4984.738
#2	2963.309	62385.65	13766.72	2072.925	4990.954
#3	2947.266	62390.52	13740.82	2075.760	4976.356

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4567-09 Acquired: 10/28/2024 20:31:12 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0710951	-.016441	.7451992	-.036547	.0017499	118.1817	.6150667
Stddev	.0014173	.001379	.0016289	.001141	.0007158	.2664	.0007777
%RSD	1.993502	8.387194	.2185786	3.121674	40.90376	.2254523	.1264469
#1	.0695382	-.015341	.7447972	-.037803	.0018784	117.9152	.6145800
#2	.0714367	-.017988	.7438090	-.035575	.0023928	118.1818	.6146564
#3	.0723104	-.015995	.7469914	-.036264	.0009786	118.4481	.6159636

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0128814	.0299816	20.44675	.2881974	.1369326	.2185812	243.1023
Stddev	.0001106	.0001822	.08249	.0014996	.0004534	.0016244	.0965
%RSD	.8585400	.6076186	.4034157	.5203537	.3310969	.7431753	.0397031
#1	.0128090	.0297974	20.37215	.2864657	.1364329	.2184027	243.1061
#2	.0128264	.0299857	20.43278	.2890599	.1370473	.2170534	243.0039
#3	.0130087	.0301617	20.53533	.2890665	.1373176	.2202876	243.1968

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.751010	45.72249	.2065623	.0100678	7.243543	.4461675	1.427659
Stddev	.022924	.26792	.0006556	.0003672	.032395	.0015139	.003968
%RSD	.4825126	.5859689	.3173789	3.646875	.4472228	.3393084	.2779619
#1	4.731727	45.47261	.2060969	.0096703	7.271523	.4444332	1.424313
#2	4.744945	45.68947	.2062779	.0101389	7.251053	.4468447	1.432043
#3	4.776356	46.00539	.2073120	.0103943	7.208053	.4472245	1.426620

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.72671	.0698362	.0078284	.0399919	8.614873	6.315016	7.832778
Stddev	.03728	.0023611	.0003184	.0005386	.023898	.011428	.017787
%RSD	.2929133	3.380959	4.066617	1.346650	.2774070	.1809691	.2270818
#1	12.75521	.0724150	.0076113	.0394421	8.590993	6.314485	7.812687
#2	12.74040	.0693134	.0076800	.0400153	8.614835	6.326700	7.846516
#3	12.68453	.0677804	.0081938	.0405184	8.638789	6.303862	7.839130

Sample Name: P4567-09 Acquired: 10/28/2024 20:31:12 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.066821	.1297290	-.109608
Stddev	.006105	.0012813	.000212
%RSD	.5722950	.9877030	.1936096
#1	1.064805	.1293947	-.109843
#2	1.073679	.1311443	-.109550
#3	1.061978	.1286479	-.109431

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3524.758	76771.02	17989.46	2464.603	4142.349
Stddev	11.008	228.27	45.81	16.220	5.903
%RSD	.3122973	.2973379	.2546591	.6580986	.1425007
#1	3513.319	76557.30	18034.78	2448.742	4135.533
#2	3535.277	76744.27	17990.43	2463.907	4145.861
#3	3525.679	77011.48	17943.17	2481.159	4145.651

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-03 Acquired: 10/28/2024 20:35:16 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5169486	.0055059	3.051613	-.027136	.0108272	100.9733
Stddev	.0007017	.0012454	.004454	.001701	.0019957	.1990
%RSD	.1357313	22.62018	.1459647	6.270192	18.43276	.1971255
#1	.5163970	.0067435	3.047473	-.026936	.0119418	101.0466
#2	.5177384	.0042528	3.051042	-.028929	.0120166	100.7481
#3	.5167105	.0055215	3.056326	-.025543	.0085231	101.1254

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.199233	.0079854	.0367221	30.18106	1.577080	.1100049
Stddev	.003765	.0000657	.0001727	.09203	.002432	.0003640
%RSD	.3139728	.8230190	.4704018	.3049288	.1542038	.3308773
#1	1.202616	.0079332	.0365315	30.08013	1.574282	.1097427
#2	1.199906	.0080592	.0368684	30.20270	1.578272	.1098515
#3	1.195177	.0079638	.0367664	30.26034	1.578686	.1104204

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.567797	239.0499	2.413960	45.60116	.5163026	.0307717
Stddev	.005855	.9781	.001452	.16555	.0008036	.0002653
%RSD	.1641058	.4091510	.0601513	.3630411	.1556512	.8622642
#1	3.561490	238.2882	2.415195	45.48377	.5153774	.0306377
#2	3.573060	240.1529	2.414325	45.52920	.5168265	.0306001
#3	3.568841	238.7085	2.412360	45.79051	.5167040	.0310773

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.09379	.2710584	4.437054	17.82818	.1347562	.0081916
Stddev	.24597	.0002855	.008224	.11242	.0030245	.0005298
%RSD	.6291797	.1053260	.1853435	.6305805	2.244396	6.467642
#1	39.05867	.2713871	4.440034	17.78985	.1345706	.0086479
#2	39.35543	.2709159	4.443373	17.95476	.1378693	.0083163
#3	38.86726	.2708721	4.427756	17.73994	.1318289	.0076105

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-03 Acquired: 10/28/2024 20:35:16 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.497355	2.779956	F 12.52033	F 16.99368	F 83.58905	.1625658
Stddev	.011380	.002530	.04451	.07334	.52107	.0015815
%RSD	.4556904	.0910212	.3555408	.4315887	.6233681	.9728675
#1	2.484363	2.782655	12.47524	16.91091	83.00027	.1624623
#2	2.505562	2.779576	12.56425	17.01958	83.99075	.1641966
#3	2.502138	2.777638	12.52149	17.05057	83.77614	.1610386

Elem	Sr4077
Units	ppm
Avg	-.003803
Stddev	.001242
%RSD	32.66877
#1	-.002517
#2	-.004996
#3	-.003895

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3087.965	69049.48	16148.22	2169.906	4121.054
Stddev	3.728	236.12	49.48	14.384	6.756
%RSD	.1207177	.3419520	.3064400	.6628995	.1639291
#1	3090.910	68982.97	16091.29	2163.357	4128.770
#2	3083.774	68853.75	16172.44	2159.961	4116.203
#3	3089.211	69311.71	16180.93	2186.399	4118.189

Sample Name: P4578-04 Acquired: 10/28/2024 20:39:20 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8847635	.0152711	5.648079	-.022526	.0131286	101.8945
Stddev	.0066980	.0029013	.009438	.001174	.0015737	.2699
%RSD	.7570443	18.99886	.1670948	5.209802	11.98708	.2649242
#1	.8915761	.0186212	5.643340	-.023366	.0143313	101.5837
#2	.8845283	.0135790	5.658947	-.023026	.0113475	102.0292
#3	.8781862	.0136131	5.641950	-.021185	.0137070	102.0706

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.145045	.0079434	.0494436	38.40838	F 2.276156	.1101401
Stddev	.000722	.0000914	.0002247	.17311	.004728	.0001474
%RSD	.0336541	1.151059	.4544642	.4507133	.2077368	.1338700
#1	2.145685	.0078917	.0496814	38.23041	2.270885	.1103024
#2	2.144263	.0078895	.0494145	38.57618	2.277560	.1101035
#3	2.145189	.0080489	.0492349	38.41856	2.280024	.1100144

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.330950	235.9523	2.179692	45.78666	.6763611	.0535105
Stddev	.019590	.5996	.006756	.27897	.0009641	.0003216
%RSD	.3674825	.2541334	.3099641	.6092797	.1425481	.6010457
#1	5.350601	235.5640	2.173733	45.49939	.6758492	.0532028
#2	5.330829	236.6429	2.187032	46.05651	.6774732	.0538444
#3	5.311421	235.6500	2.178309	45.80407	.6757609	.0534844

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.26573	.2644918	7.108096	17.76162	.1297873	.0127577
Stddev	.17590	.0024197	.026216	.03692	.0013782	.0000746
%RSD	.3973823	.9148411	.3688141	.2078367	1.061855	.5847009
#1	44.46841	.2628809	7.096984	17.79939	.1312031	.0128241
#2	44.15295	.2672743	7.089267	17.72562	.1297084	.0127719
#3	44.17581	.2633202	7.138038	17.75984	.1284502	.0126770

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-04 Acquired: 10/28/2024 20:39:20 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.613844	2.761502	F 13.48794	F 20.09592	F 93.56364	.1655481
Stddev	.018330	.005564	.01341	.11275	.60370	.0007283
%RSD	.3972856	.2014920	.0994219	.5610818	.6452287	.4399076
#1	4.624954	2.756960	13.47988	20.15642	94.13837	.1655177
#2	4.623890	2.767709	13.50342	20.16550	93.61792	.1648355
#3	4.592687	2.759837	13.48051	19.96582	92.93463	.1662911

Elem	Sr4077
Units	ppm
Avg	.1200643
Stddev	.0005565
%RSD	.4635196
#1	.1203455
#2	.1194233
#3	.1204242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3018.108	68083.64	15947.79	2111.515	4079.045
Stddev	17.132	154.68	37.33	10.233	14.122
%RSD	.5676328	.2271981	.2341053	.4846395	.3462116
#1	2998.712	67939.52	15969.28	2099.761	4063.431
#2	3024.439	68064.34	15904.67	2118.439	4082.781
#3	3031.173	68247.08	15969.41	2116.345	4090.924

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-05 Acquired: 10/28/2024 20:43:21 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0218734	.0039092	.1161422	-.032017	.0030381	63.23619	.3241126
Stddev	.0020817	.0024761	.0018099	.001399	.0014261	1.90273	.0104386
%RSD	9.517259	63.34041	1.558360	4.370427	46.93950	3.008924	3.220673
#1	.0216264	.0013393	.1159711	-.033191	.0044489	61.04209	.3120606
#2	.0240676	.0062794	.1180316	-.030468	.0030681	64.43246	.3302977
#3	.0199261	.0041089	.1144240	-.032391	.0015972	64.23401	.3299797

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062243	.0167137	85.38655	.1793193	.0855563	.1958241	198.6943
Stddev	.0001464	.0005057	2.70561	.0004205	.0005433	.0032712	1.6439
%RSD	2.352425	3.025657	3.168663	.2344879	.6349822	1.670480	.8273489
#1	.0060563	.0172015	82.26548	.1794800	.0859786	.1992877	196.7964
#2	.0063250	.0167477	87.06763	.1788422	.0857469	.1953972	199.6131
#3	.0062916	.0161918	86.82654	.1796358	.0849434	.1927872	199.6733

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.949209	44.50064	.1852070	.0079980	14.82117	.1774715	.5215000
Stddev	.099133	1.38594	.0010866	.0002523	.09298	.0069572	.0038813
%RSD	3.361346	3.114424	.5866787	3.154007	.6273684	3.920180	.7442574
#1	2.834826	42.90124	.1855568	.0077128	14.71408	.1694451	.5235233
#2	3.010253	45.34805	.1860756	.0080895	14.86811	.1817769	.5170251
#3	3.002547	45.25262	.1839886	.0081918	14.88134	.1811925	.5239516

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.03182	.0878621	.0057888	.0374965	1.969205	9.658497	5.384927
Stddev	.09602	.0012373	.0002572	.0008421	.061678	.052169	.005032
%RSD	.6843230	1.408271	4.442713	2.245671	3.132132	.5401382	.0934381
#1	13.92217	.0892864	.0055273	.0374104	1.898054	9.598645	5.381284
#2	14.07244	.0872479	.0057978	.0383783	2.007476	9.694330	5.390668
#3	14.10086	.0870521	.0060414	.0367009	2.002087	9.682518	5.382828

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-05 Acquired: 10/28/2024 20:43:21 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	8.882602	.1265943	-.038901
Stddev	.024328	.0059750	.003541
%RSD	.2738888	4.719798	9.101975
#1	8.866947	.1197007	-.042980
#2	8.910630	.1297974	-.036622
#3	8.870229	.1302848	-.037100

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3009.732	66726.51	15318.04	2108.660	4166.447
Stddev	20.611	363.99	320.70	17.739	29.735
%RSD	.6848045	.5454906	2.093631	.8412329	.7136661
#1	2990.412	66306.26	15686.17	2090.267	4139.617
#2	3007.356	66942.16	15099.17	2125.662	4161.308
#3	3031.428	66931.10	15168.77	2110.050	4198.416

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-07 Acquired: 10/28/2024 20:47:26 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0376173	.0026960	.1909074	-.032370	.0018030	75.98260
Stddev	.0024488	.0031995	.0013934	.001796	.0008851	3.73369
%RSD	6.509776	118.6748	.7298793	5.548225	49.09186	4.913871
#1	.0395202	-.000239	.1908173	-.034346	.0007812	71.67249
#2	.0384771	.002220	.1923436	-.031927	.0022918	78.22510
#3	.0348545	.006107	.1895612	-.030837	.0023358	78.05021

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4542772	.0070335	.0197930	82.34886	.2525600	.0985915
Stddev	.0193995	.0001932	.0003246	3.82713	.0004329	.0004562
%RSD	4.270400	2.747332	1.639750	4.647463	.1713921	.4627237
#1	.4318784	.0068114	.0201540	77.93756	.2521648	.0991021
#2	.4652342	.0071629	.0196995	84.32590	.2530226	.0984483
#3	.4657190	.0071262	.0195254	84.78313	.2524927	.0982241

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2489478	211.1081	2.454344	44.04704	.2029681	.0081836
Stddev	.0029659	3.0429	.108820	2.15452	.0002637	.0005262
%RSD	1.191392	1.441391	4.433765	4.891405	.1299413	6.429947
#1	.2523689	207.6870	2.329272	41.56017	.2027266	.0075953
#2	.2473752	212.1252	2.506413	45.23088	.2032495	.0086094
#3	.2470994	213.5122	2.527346	45.35007	.2029281	.0083460

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.71977	.2190208	.5544573	16.30185	.0979211	.0077803
Stddev	.16128	.0100001	.0006036	.12888	.0023921	.0002476
%RSD	.9645957	4.565833	.1088691	.7906127	2.442852	3.183095
#1	16.53358	.2076478	.5550451	16.15303	.1002879	.0077888
#2	16.81618	.2229772	.5538390	16.37670	.0979710	.0075284
#3	16.80954	.2264374	.5544880	16.37582	.0955045	.0080235

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4578-07 Acquired: 10/28/2024 20:47:26 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0847496	2.382280	F 11.17888	6.808222	F 21.10305	.1326921
Stddev	.0009010	.112475	.26865	.009805	.05085	.0053462
%RSD	1.063182	4.721325	2.403211	.1440145	.2409710	4.029022
#1	.0857876	2.252437	10.86937	6.811040	21.10454	.1265243
#2	.0841691	2.444675	11.35171	6.797317	21.15314	.1360002
#3	.0842920	2.449727	11.31557	6.816310	21.05146	.1355519

Elem	Sr4077
Units	ppm
Avg	-.032097
Stddev	.004823
%RSD	15.02625
#1	-.037622
#2	-.028727
#3	-.029943

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3138.787	68758.22	16177.57	2213.150	4141.165
Stddev	4.093	56.59	526.27	1.475	5.743
%RSD	.1304018	.0823051	3.253091	.0666437	.1386731
#1	3136.201	68823.53	16785.08	2212.635	4135.888
#2	3143.506	68723.62	15886.82	2212.001	4147.281
#3	3136.653	68727.52	15860.83	2214.813	4140.326

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-09DLX5 Acquired: 10/28/2024 20:59:53 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195594	-.009708	.2080150	-.011804	.0016349	42.23264
Stddev	.0030448	.001150	.0020053	.000594	.0011079	1.11103
%RSD	15.56676	11.84849	.9640283	5.032657	67.76611	2.630743
#1	.0161335	-.008571	.2090375	-.012479	.0027042	43.51147
#2	.0219562	-.010871	.2093029	-.011363	.0017086	41.68172
#3	.0205886	-.009680	.2057045	-.011569	.0004920	41.50472

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3721938	.0018618	.0049314	463.3426	.5673808	.0250731
Stddev	.0106222	.0000371	.0000473	11.4607	.0024754	.0001452
%RSD	2.853930	1.991351	.9591286	2.473489	.4362896	.5792684
#1	.3844240	.0019045	.0048971	476.5682	.5684812	.0252317
#2	.3668825	.0018432	.0049116	457.1311	.5645459	.0250410
#3	.3652749	.0018378	.0049853	456.3286	.5691152	.0249466

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.191473	52.39582	1.599973	28.39210	.1681884	.0022823
Stddev	.002395	.44354	.043691	.68694	.0002509	.0001127
%RSD	.2009754	.8465197	2.730713	2.419486	.1491634	4.938726
#1	1.193458	52.90166	1.649894	29.17529	.1684781	.0023931
#2	1.192147	52.21230	1.581320	28.10934	.1680485	.0022862
#3	1.188813	52.07348	1.568705	27.89167	.1680388	.0021678

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.270063	.2298351	1.075600	10.86774	.0335314	.0612111
Stddev	.013836	.0065269	.007276	.06548	.0000365	.0003957
%RSD	1.089388	2.839816	.6765014	.6025530	.1088908	.6464772
#1	1.283463	.2373627	1.083961	10.94305	.0335359	.0616645
#2	1.255829	.2257519	1.070701	10.83595	.0335655	.0609348
#3	1.270898	.2263908	1.072137	10.82422	.0334929	.0610341

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-09DLX5 Acquired: 10/28/2024 20:59:53 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0115585	2.983061	F 16.32270	2.033041	F 13.67233	.1480098
Stddev	.0016583	.080529	.16866	.006480	.09174	.0038467
%RSD	14.34721	2.699541	1.033259	.3187157	.6709615	2.598974
#1	.0131121	3.075672	16.51452	2.031403	13.76830	.1522718
#2	.0117510	2.943994	16.25590	2.040183	13.66317	.1469621
#3	.0098123	2.929518	16.19768	2.027538	13.58551	.1447953

Elem	Sr4077
Units	ppm
Avg	.2604497
Stddev	.0078749
%RSD	3.023564
#1	.2695354
#2	.2562253
#3	.2555885

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2683.088	58327.97	13779.14	1865.722	3859.617
Stddev	11.621	255.40	318.88	12.554	15.892
%RSD	.4331389	.4378671	2.314232	.6728968	.4117431
#1	2675.479	58041.89	13414.70	1852.481	3848.653
#2	2677.319	58408.97	13915.79	1867.233	3852.356
#3	2696.465	58533.04	14006.92	1877.453	3877.842

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-11DLX5 Acquired: 10/28/2024 21:04:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0178361	-.008539	.1939595	-.012520	.0027786	37.26865
Stddev	.0010812	.002521	.0018876	.000582	.0008298	.46051
%RSD	6.062020	29.52226	.9731800	4.650313	29.86272	1.235659
#1	.0166890	-.010654	.1948658	-.012249	.0018351	37.79910
#2	.0188364	-.009213	.1952230	-.012122	.0031059	36.97127
#3	.0179829	-.005749	.1917897	-.013188	.0033948	37.03557

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3170011	.0017296	.0044172	424.0957	.4717877	.0222959
Stddev	.0035721	.0000347	.0001190	2.6370	.0071617	.0000821
%RSD	1.126838	2.007423	2.693926	.6218005	1.517988	.3682634
#1	.3210612	.0016944	.0045396	426.2405	.4642364	.0223255
#2	.3156006	.0017306	.0043019	421.1514	.4784828	.0223591
#3	.3143414	.0017638	.0044101	424.8952	.4726439	.0222031

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.393003	52.56849	1.455334	24.20258	.1414775	.0031577
Stddev	.008911	.59019	.011305	.19451	.0010644	.0001676
%RSD	.6396905	1.122702	.7767768	.8036576	.7523346	5.306043
#1	1.402328	52.18321	1.468379	24.42117	.1427033	.0032956
#2	1.384574	53.24795	1.449239	24.04861	.1409421	.0029712
#3	1.392107	52.27432	1.448385	24.13795	.1407871	.0032063

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.026768	.2087333	1.189838	7.185076	.0329805	.0546223
Stddev	.012314	.0014237	.011302	.068340	.0014469	.0002202
%RSD	1.199327	.6820713	.9499018	.9511364	4.387192	.4030332
#1	1.016761	.2103360	1.177914	7.155973	.0314537	.0547652
#2	1.040520	.2082489	1.200394	7.263150	.0343314	.0547330
#3	1.023024	.2076149	1.191206	7.136106	.0331565	.0543688

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: P4574-11DLX5 Acquired: 10/28/2024 21:04:11 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104858	2.537776	F 20.63958	1.287750	F 12.93230	.1289995
Stddev	.0008434	.030364	.17168	.008335	.10507	.0035911
%RSD	8.043592	1.196489	.8317912	.6472860	.8124748	2.783790
#1	.0111088	2.572810	20.51489	1.295543	13.05351	.1328573
#2	.0095260	2.521478	20.83539	1.278961	12.86721	.1257539
#3	.0108226	2.519041	20.56846	1.288746	12.87617	.1283873

Elem	Sr4077
Units	ppm
Avg	.2492526
Stddev	.0042925
%RSD	1.722155
#1	.2542056
#2	.2469392
#3	.2466131

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2694.120	56850.43	13647.51	1868.798	3916.935
Stddev	19.609	662.48	96.85	12.585	23.136
%RSD	.7278625	1.165310	.7096834	.6734363	.5906656
#1	2673.192	57419.52	13537.05	1879.292	3890.950
#2	2712.070	56123.18	13717.87	1854.845	3935.299
#3	2697.100	57008.59	13687.63	1872.258	3924.557

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: PB164415BL Acquired: 10/28/2024 21:08:29 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001505	-.001892	-.000055	-.000272	-.000617	.0063309	-.002996
Stddev	.001733	.000373	.000146	.001218	.000492	.0022318	.000109
%RSD	115.1031	19.69877	264.7271	448.4678	79.72639	35.25245	3.646213
#1	-.002893	-.002322	-.000209	.000986	-.000547	.0061142	-.003026
#2	-.002061	-.001697	-.000040	-.000356	-.001139	.0042153	-.003088
#3	.000437	-.001658	.000083	-.001446	-.000164	.0086631	-.002875

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000399	-.000023	.0070921	-.000622	.0000892	-.001166	-.010768
Stddev	.0000224	.000028	.0070014	.000373	.0000673	.000102	.002346
%RSD	55.99034	123.4343	98.72056	59.99294	75.48656	8.749852	21.78871
#1	.0000358	-.000004	.0085283	-.000641	.0000172	-.001271	-.008517
#2	.0000200	-.000010	.0132640	-.000986	.0000999	-.001067	-.010587
#3	.0000641	-.000055	-.000516	-.000240	.0001505	-.001160	-.013199

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000224	.0033222	.0001263	.0004282	-.098357	-.000644	-.004739
Stddev	.000069	.0073825	.0001473	.0001285	.006223	.001697	.000210
%RSD	30.71283	222.2203	116.6177	30.00214	6.326535	263.5521	4.435214
#1	-.000295	-.002021	.0001919	.0004393	-.104580	-.000251	-.004528
#2	-.000220	.000241	-.000042	.0002946	-.098357	.000822	-.004742
#3	-.000158	.011746	.000229	.0005508	-.092134	-.002503	-.004948

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001483	-.006730	-.000117	-.001439	.0007305	-.001978	-.003115
Stddev	.011261	.000145	.000203	.000323	.0004310	.004125	.001994
%RSD	759.1217	2.154683	173.2917	22.43088	59.00408	208.5444	64.01812
#1	-.014134	-.006896	-.000347	-.001802	.0007493	-.003185	-.003898
#2	.002236	-.006666	-.000044	-.001187	.0002904	.002616	-.004599
#3	.007447	-.006627	.000039	-.001326	.0011519	-.005366	-.000848

Sample Name: PB164415BL Acquired: 10/28/2024 21:08:29 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011627	-.001836	-.000014
Stddev	.0006009	.000033	.000013
%RSD	51.68206	1.781347	89.81472
#1	.0009277	-.001873	-.000025
#2	.0007148	-.001810	-.000018
#3	.0018456	-.001826	-.000000

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2942.424	64205.37	13778.19	2085.065	4965.242
Stddev	5.156	132.90	46.15	16.076	12.267
%RSD	.1752336	.2069900	.3349413	.7710310	.2470653
#1	2937.001	64211.66	13745.24	2088.385	4952.658
#2	2947.264	64069.43	13830.93	2067.587	4977.166
#3	2943.008	64335.00	13758.39	2099.222	4965.901

Sample Name: PB164415BS Acquired: 10/28/2024 21:12:49 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7654839	2.010655	.9422752	1.983799	.8190137	1.970156
Stddev	.0011037	.010758	.0006701	.000176	.0022057	.014978
%RSD	.1441827	.5350721	.0711180	.0088907	.2693104	.7602519
#1	.7654288	2.012543	.9415599	1.983611	.8214293	1.967934
#2	.7666141	2.020344	.9428885	1.983823	.8171069	1.956413
#3	.7644088	1.999077	.9423771	1.983961	.8185048	1.986121

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1900490	.1962182	.1857477	1.000872	.3982695	.1996142
Stddev	.0010895	.0008226	.0001898	.008265	.0021503	.0004134
%RSD	.5732971	.4192540	.1021860	.8258174	.5399218	.2070992
#1	.1905185	.1964677	.1857251	1.008247	.3960911	.1996191
#2	.1888034	.1952997	.1859478	.991938	.3983267	.2000252
#3	.1908250	.1968873	.1855702	1.002430	.4003907	.1991984

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3230659	2.960086	.1867397	1.861682	.5019837	.0786442
Stddev	.0004705	.009985	.0008550	.024675	.0005433	.0002167
%RSD	.1456484	.3373361	.4578517	1.325396	.1082393	.2755897
#1	.3233418	2.948876	.1862560	1.876177	.5021843	.0785003
#2	.3225226	2.963352	.1862363	1.833192	.5013685	.0788934
#3	.3233332	2.968029	.1877269	1.875678	.5023981	.0785387

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.870003	.2856591	.2138848	10.34570	.2790266	.4344742
Stddev	.008415	.0017824	.0001284	.01270	.0017229	.0005507
%RSD	.2932170	.6239648	.0600215	.1227883	.6174708	.1267522
#1	2.863591	.2868741	.2137997	10.36035	.2806352	.4342900
#2	2.879532	.2836130	.2138223	10.33776	.2772085	.4340393
#3	2.866885	.2864904	.2140325	10.33898	.2792361	.4350934

Sample Name: PB164415BS Acquired: 10/28/2024 21:12:49 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6821464	.1874332	F .6963158	5.847240	F -.009055	.1804694
Stddev	.0021330	.0011565	.0069146	.017112	.004400	.0010082
%RSD	.3126925	.6170107	.9930298	.2926584	48.59427	.5586441
#1	.6825748	.1885244	.6912915	5.865582	-.008025	.1809447
#2	.6840328	.1862209	.6934541	5.831703	-.005261	.1793114
#3	.6798317	.1875543	.7042019	5.844435	-.013879	.1811520

Elem	Sr4077
Units	ppm
Avg	.1974786
Stddev	.0008043
%RSD	.4073016
#1	.1980943
#2	.1965686
#3	.1977729

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2896.173	63228.36	13627.68	2049.871	4748.848
Stddev	1.623	91.94	78.17	4.377	4.079
%RSD	.0560356	.1454133	.5736133	.2135275	.0858978
#1	2894.751	63333.11	13574.17	2044.942	4749.189
#2	2897.941	63190.94	13717.39	2053.305	4744.610
#3	2895.826	63161.02	13591.49	2051.365	4752.747

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV10 Acquired: 10/28/2024 21:21:37 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV10 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.176071	5.327288	4.981549	5.328918	5.274814	9.999214	9.836073
Stddev	.011911	.089943	.011019	.019608	.007457	.051692	.073080
%RSD	.2301260	1.688340	.2211899	.3679584	.1413722	.5169608	.7429834
#1	5.162414	5.224456	4.984726	5.306297	5.266203	9.939921	9.826993
#2	5.184308	5.366102	4.969290	5.339400	5.279185	10.03480	9.913269
#3	5.181493	5.391307	4.990629	5.341058	5.279054	10.02292	9.767957

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2422611	2.496491	23.86395	.9666611	2.498848	1.302085	4.864932
Stddev	.0007150	.006564	.18013	.0027681	.005300	.000934	.012809
%RSD	.2951577	.2629242	.7548093	.2863570	.2120847	.0717341	.2633001
#1	.2416620	2.497640	23.65729	.9663268	2.500620	1.301196	4.852511
#2	.2430527	2.489429	23.98769	.9640753	2.492890	1.303058	4.864189
#3	.2420686	2.502405	23.94685	.9695812	2.503035	1.302001	4.878097

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.305000	23.61554	2.504897	1.268643	25.67050	2.417679	2.598467
Stddev	.016721	.22475	.004576	.003744	.01546	.016241	.008968
%RSD	.7254294	.9516958	.1826973	.2951077	.0602377	.6717437	.3451194
#1	2.287083	23.35671	2.505420	1.270935	25.68728	2.398931	2.592345
#2	2.320189	23.72859	2.500081	1.264323	25.65683	2.427413	2.594295
#3	2.307729	23.76132	2.509189	1.270671	25.66739	2.426694	2.608760

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.33954	4.812074	5.362867	4.999235	4.777671	5.325009	5.196859
Stddev	.05557	.013584	.012990	.012989	.030883	.080926	.024870
%RSD	.2109574	.2822968	.2422152	.2598148	.6463972	1.519726	.4785674
#1	26.36894	4.798318	5.349267	4.990572	4.751189	5.245047	5.178795
#2	26.27545	4.825480	5.364189	4.992964	4.811595	5.323116	5.186557
#3	26.37424	4.812424	5.375145	5.014170	4.770230	5.406865	5.225225

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV10 Acquired: 10/28/2024 21:21:37 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV10 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.910519	4.858831	4.967428
Stddev	.032669	.037223	.016957
%RSD	.6652916	.7660966	.3413632
#1	4.877098	4.855181	4.948914
#2	4.912079	4.897745	4.982204
#3	4.942380	4.823568	4.971166

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2760.346	61246.19	13118.94	1953.154	4290.662
Stddev	5.388	212.60	54.64	3.719	4.420
%RSD	.1952069	.3471238	.4165339	.1904237	.1030182
#1	2761.191	61224.48	13175.51	1953.873	4286.348
#2	2754.585	61468.81	13066.45	1956.462	4290.456
#3	2765.262	61045.28	13114.85	1949.128	4295.181

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB10 Acquired: 10/28/2024 21:25:48 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB10 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007120	-.000992	.0004308	-.000416	.0007289	.0070118	-.003527
Stddev	.0029430	.002118	.0002653	.001497	.0005528	.0018541	.000447
%RSD	413.3528	213.5363	61.58718	360.1296	75.83620	26.44315	12.66878
#1	-.001570	-.003425	.0001398	-.001618	.0002339	.0048794	-.003681
#2	.004034	.000439	.0004932	.001261	.0013254	.0079122	-.003877
#3	-.000328	.000011	.0006593	-.000891	.0006274	.0082438	-.003024

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000448	.0000618	-.000711	-.000425	.0000604	-.001246	-.014850
Stddev	.0000090	.0000280	.002572	.000200	.0000621	.000207	.001710
%RSD	20.00832	45.28610	361.9385	47.04594	102.8216	16.58440	11.51270
#1	.0000413	.0000934	-.003017	-.000214	.0001295	-.001306	-.012912
#2	.0000381	.0000522	.002063	-.000612	.0000422	-.001016	-.015494
#3	.0000550	.0000399	-.001178	-.000448	.0000094	-.001416	-.016144

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000106	.0029552	.0001963	.0007397	-.096129	-.000072	-.004773
Stddev	.000149	.0069566	.0002842	.0001796	.002969	.000608	.000223
%RSD	140.7340	235.4037	144.7726	24.28398	3.088955	842.5792	4.673567
#1	-.000271	.0052263	.0005220	.0007767	-.095413	.000390	-.004549
#2	.000017	.0084924	.0000688	.0008980	-.099391	.000155	-.004776
#3	-.000064	-.004853	-.000002	.0005445	-.093584	-.000761	-.004995

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089117	-.000849	.0002740	.0016410	.0006360	-.009859	-.000556
Stddev	.0241394	.000319	.0001193	.0004369	.0003015	.003595	.001987
%RSD	270.8721	37.59899	43.55069	26.62165	47.40099	36.47015	357.2982
#1	-.005179	-.000564	.0003689	.0015973	.0006236	-.010179	-.001374
#2	.036785	-.001194	.0003129	.0020981	.0009435	-.006113	.001709
#3	-.004871	-.000788	.0001400	.0012276	.0003409	-.013283	-.002004

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB10 Acquired: 10/28/2024 21:25:48 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB10 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002768	-.001422	.0000459
Stddev	.002953	.000992	.0000171
%RSD	106.6817	69.74043	37.19523
#1	-.002829	-.000293	.0000649
#2	.000215	-.001824	.0000409
#3	-.005691	-.002150	.0000319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2981.116	65535.57	13816.68	2115.367	5034.564
Stddev	8.174	8.12	17.56	3.276	12.216
%RSD	.2742040	.0123888	.1271275	.1548461	.2426525
#1	2971.696	65544.75	13801.61	2118.559	5020.480
#2	2986.343	65529.32	13812.46	2112.014	5040.916
#3	2985.309	65532.64	13835.97	2115.530	5042.295

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: LR1 Acquired: 10/28/2024 21:29:46 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093370	.0292932	.0474201	-.199053	.0018948	2141.863	.0144257
Stddev	.0081780	.0053929	.0005772	.001594	.0037145	5.948	.0004057
%RSD	87.58663	18.41008	1.217292	.8009605	196.0390	.2776985	2.812224
#1	.0022173	.0233097	.0471236	-.200165	-.000518	2146.705	.0144223
#2	.0182692	.0337790	.0470514	-.197226	.006172	2143.661	.0148330
#3	.0075247	.0307908	.0480854	-.199767	.000030	2135.224	.0140217

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088515	.1480712	1809.129	.0053276	.0436920	.1295618	1006.551
Stddev	.0001464	.0007240	13.839	.0008624	.0003014	.0071305	11.271
%RSD	1.653563	.4889323	.7649346	16.18675	.6899418	5.503570	1.119813
#1	.0086830	.1482145	1824.672	.0044913	.0435824	.1232146	1016.797
#2	.0089253	.1472864	1804.573	.0052777	.0434607	.1281935	1008.377
#3	.0089464	.1487129	1798.143	.0062138	.0440329	.1372774	994.477

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.066641	1659.451	.0251001	.0099569	2142.024	.0412773	.2504221
Stddev	.001057	19.609	.0004951	.0023883	20.362	.0021043	.0010462
%RSD	1.585391	1.181662	1.972520	23.98585	.9506052	5.097907	.4177546
#1	-.067745	1681.805	.0248651	.0113256	2134.592	.0426059	.2516184
#2	-.065640	1651.394	.0247662	.0113460	2126.422	.0423748	.2499695
#3	-.066537	1645.154	.0256689	.0071992	2165.059	.0388512	.2496785

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1350.774	.0505600	-.004737	.0167773	-.039864	.1556174	.0928049
Stddev	32.860	.0133654	.000902	.0040035	.000253	.0153308	.0054728
%RSD	2.432716	26.43478	19.04074	23.86271	.6345148	9.851571	5.897145
#1	1386.767	.0611873	-.005340	.0157814	-.039854	.1730823	.0865565
#2	1343.179	.0549381	-.003700	.0211847	-.040122	.1493881	.0951105
#3	1322.376	.0355546	-.005172	.0133657	-.039617	.1443818	.0967477

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: LR1 Acquired: 10/28/2024 21:29:46 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.186019	.5530118	-.994125
Stddev	.006162	.0033323	.011281
%RSD	3.312809	.6025808	1.134751
#1	-.184608	.5517520	-1.00436
#2	-.192765	.5567904	-.99599
#3	-.180685	.5504930	-.98203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1702.532	39457.98	10646.04	1217.520	2339.800
Stddev	1.632	43.49	24.93	4.157	3.277
%RSD	.0958656	.1102064	.2341394	.3414158	.1400639
#1	1700.723	39432.47	10633.95	1215.041	2336.185
#2	1702.976	39508.19	10674.71	1215.199	2340.638
#3	1703.895	39433.29	10629.47	1222.319	2342.577

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: LR2 Acquired: 10/28/2024 21:34:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142423	-.035808	228.4847	.0039144	-.004139	.1071243	^F *****
Stddev	.0006641	.001695	.7405	.0019315	.000626	.0097649	-----
%RSD	4.663120	4.734345	.3241048	49.34436	15.12488	9.115462	-----
#1	.0141322	-.037582	228.6617	.0052862	-.003717	.1014762	^ -----
#2	.0149546	-.034204	227.6717	.0017055	-.004858	.1014969	^ -----
#3	.0136401	-.035638	229.1206	.0047515	-.003841	.1183998	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002087	-.007009	.2398287	.0137363	-.038391	237.2837	.0138815
Stddev	.000036	.000016	.0090328	.0002738	.000710	2.6032	.0038057
%RSD	1.730919	.2337028	3.766338	1.993475	1.848602	1.097069	27.41531
#1	-.002128	-.007019	.2309702	.0139401	-.037918	240.0441	.0138778
#2	-.002065	-.006990	.2394896	.0134251	-.039207	234.8731	.0100777
#3	-.002066	-.007019	.2490262	.0138438	-.038048	236.9340	.0176890

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.09712	-.008461	46.76274	.0036225	.5656002	-.015567	37.32735
Stddev	.24853	.009035	.10253	.0003131	.0609362	.000240	.27973
%RSD	.5391363	106.7842	.2192520	8.642995	10.77373	1.539925	.7494080
#1	46.13762	-.015209	46.75520	.0036830	.6297786	-.015412	37.08772
#2	46.32291	-.011978	46.66419	.0039009	.5584925	-.015843	37.63474
#3	45.83083	.001804	46.86883	.0032836	.5085295	-.015446	37.25958

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9266823	-.004402	-.006318	-.006037	-.042684	-.014858	1.212141
Stddev	.0855129	.000849	.000217	.000531	.000660	.004206	.009131
%RSD	9.227855	19.28368	3.438978	8.796519	1.546704	28.30392	.7533172
#1	1.022004	-.003756	-.006078	-.005836	-.043442	-.018440	1.221673
#2	.901331	-.005364	-.006378	-.006639	-.042373	-.015907	1.203471
#3	.856711	-.004086	-.006500	-.005635	-.042236	-.010228	1.211278

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: LR2 Acquired: 10/28/2024 21:34:43 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.059672	-.001478	.0020284
Stddev	.005233	.000268	.0000226
%RSD	8.768829	18.15065	1.116362
#1	-.063255	-.001273	.0020072
#2	-.062095	-.001782	.0020523
#3	-.053668	-.001379	.0020256

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2514.944	61141.56	13900.52	1856.869	4475.192
Stddev	6.060	111.73	12.21	22.081	6.530
%RSD	.2409550	.1827421	.0878426	1.189148	.1459199
#1	2509.440	61107.86	13895.11	1854.531	4472.577
#2	2521.438	61050.56	13891.94	1836.050	4482.624
#3	2513.954	61266.26	13914.50	1880.026	4470.374

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV11 Acquired: 10/28/2024 21:38:50 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV11 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.221699	5.169944	4.966999	5.378562	5.339311	10.06635	10.06879
Stddev	.002224	.039639	.007759	.003799	.008523	.02504	.12795
%RSD	.0425947	.7667131	.1562208	.0706279	.1596294	.2487602	1.270767
#1	5.224267	5.133201	4.975933	5.381940	5.349152	10.07738	10.16629
#2	5.220455	5.164679	4.961944	5.374450	5.334478	10.03768	10.11619
#3	5.220376	5.211952	4.963120	5.379296	5.334303	10.08397	9.92391

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2443472	2.484963	23.83784	.9695926	2.490168	1.323020	4.974102
Stddev	.0015256	.001544	.06803	.0028722	.002512	.002711	.023392
%RSD	.6243612	.0621534	.2853667	.2962258	.1008663	.2048822	.4702681
#1	.2460655	2.486736	23.85183	.9664621	2.493068	1.323380	4.947092
#2	.2431518	2.483904	23.76390	.9702095	2.488660	1.325532	4.987617
#3	.2438244	2.484250	23.89778	.9721062	2.488777	1.320147	4.987597

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.329483	23.62257	2.499170	1.288292	25.93015	2.440026	2.541016
Stddev	.011109	.09793	.001827	.001582	.06770	.001497	.002913
%RSD	.4769013	.4145629	.0730883	.1227877	.2610938	.0613539	.1146576
#1	2.331908	23.53928	2.501238	1.290037	25.96657	2.438341	2.542737
#2	2.317361	23.59798	2.498494	1.287889	25.97184	2.441204	2.542658
#3	2.339179	23.73045	2.497777	1.286951	25.85203	2.440533	2.537652

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	27.28044	4.864657	5.384411	4.967538	4.813746	5.333354	5.148177
Stddev	.06994	.021955	.003309	.005602	.008846	.067475	.013330
%RSD	.2563620	.4513183	.0614538	.1127631	.1837723	1.265144	.2589198
#1	27.20126	4.884834	5.382117	4.964100	4.822684	5.256530	5.148362
#2	27.33379	4.841276	5.388204	4.964512	4.804994	5.360529	5.161413
#3	27.30628	4.867861	5.382912	4.974002	4.813561	5.383004	5.134756

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCV11 Acquired: 10/28/2024 21:38:50 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV11 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.885847	4.973001	5.051238
Stddev	.007492	.030381	.039026
%RSD	.1533362	.6109123	.7725979
#1	4.890500	5.007760	5.089520
#2	4.877205	4.959725	5.011508
#3	4.889836	4.951518	5.052685

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2714.045	59832.05	12959.14	1900.825	4250.869
Stddev	4.178	147.95	44.88	7.632	3.754
%RSD	.1539441	.2472730	.3463525	.4015146	.0883037
#1	2714.727	59942.78	12908.30	1898.360	4251.728
#2	2709.568	59664.03	12993.28	1894.730	4246.760
#3	2717.840	59889.35	12975.86	1909.385	4254.119

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB11 Acquired: 10/28/2024 21:43:02 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB11 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000307	-.001330	.0005047	-.000674	-.001274	.0090916	-.004909
Stddev	.000874	.000547	.0002786	.000627	.000606	.0024859	.000298
%RSD	284.3168	41.14557	55.19223	92.98605	47.54784	27.34300	6.079594
#1	-.000226	-.000939	.0008117	-.000101	-.000896	.0103919	-.005183
#2	-.001219	-.001095	.0002681	-.001343	-.001972	.0106578	-.004591
#3	.000523	-.001955	.0004343	-.000578	-.000953	.0062252	-.004954

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000154	.0000633	.0059493	-.000271	.0000816	-.000004	-.011834
Stddev	.0000112	.0000125	.0042430	.000179	.0000812	.000392	.002863
%RSD	72.77521	19.73043	71.31962	65.89038	99.51904	9797.900	24.19714
#1	.0000179	.0000666	.0076500	-.000335	.0000631	-.000457	-.014402
#2	.0000031	.0000739	.0090780	-.000409	.0001704	.000234	-.012354
#3	.0000251	.0000495	.0011198	-.000069	.0000112	.000211	-.008746

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000094	.0100867	.0000436	.0008677	.0972723	-.000575	-.003646
Stddev	.000112	.0126589	.0001895	.0000543	.0086057	.000154	.000562
%RSD	119.4804	125.5008	434.6645	6.258890	8.847016	26.77478	15.41344
#1	-.000199	.0137463	-.000101	.0008158	.1053483	-.000480	-.003015
#2	-.000107	.0205126	-.000027	.0008631	.0982486	-.000753	-.004091
#3	.000024	-.003999	.000258	.0009241	.0882201	-.000492	-.003834

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2919134	-.002310	.0000521	.0017143	.0005961	-.007446	-.000700
Stddev	.0285167	.000366	.0000447	.0003885	.0005017	.003194	.000933
%RSD	9.768874	15.86426	85.87167	22.66473	84.16218	42.90108	133.3849
#1	.3225413	-.001898	.0000084	.0020853	.0002503	-.009958	-.001710
#2	.2870708	-.002432	.0000978	.0013104	.0011715	-.008530	-.000520
#3	.2661281	-.002599	.0000500	.0017472	.0003664	-.003851	.000130

Reviewed By:kareem
On:11/6/2024 10:58:05 PM
Inst Id :P4
LB :LB133175

Sample Name: CCB11 Acquired: 10/28/2024 21:43:02 Type: Unk
Method: NON EPA-6010-200.7(v2451) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB11 Custom ID2: Custom ID3:
Comment:

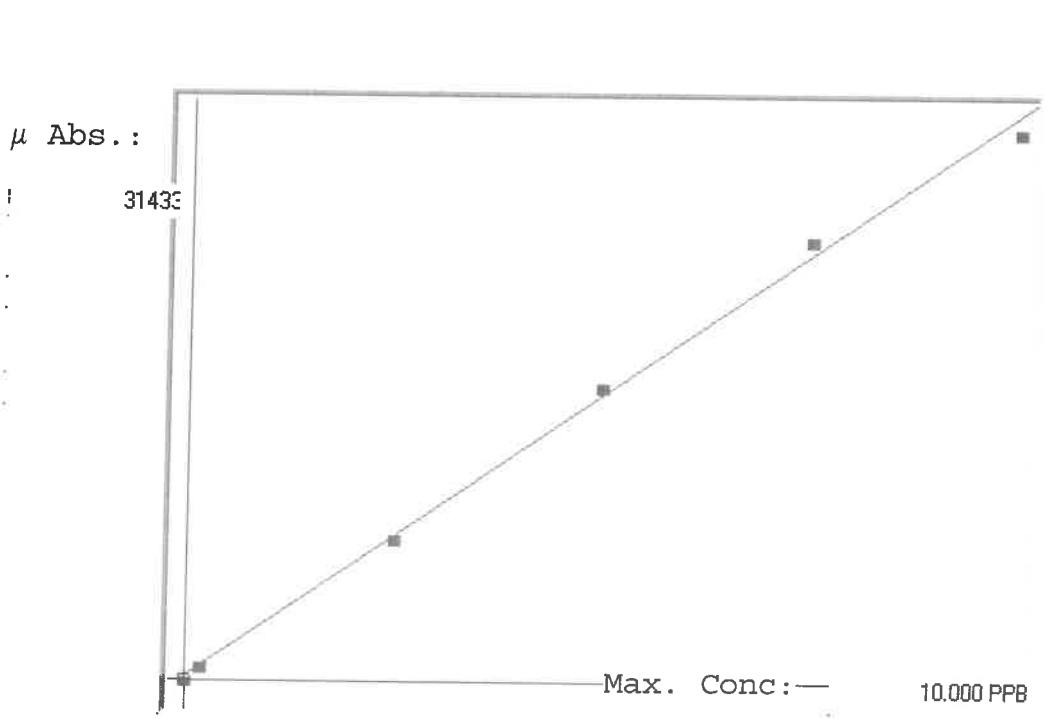
Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001800	-.001677	.0000066
Stddev	.001841	.000694	.0000121
%RSD	102.2985	41.35873	182.0033
#1	-.000133	-.001765	-.000001
#2	-.001490	-.000944	-.000000
#3	-.003776	-.002322	.000021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2844.376	62435.17	13765.83	1996.507	4783.081
Stddev	11.244	89.49	13.53	9.916	13.432
%RSD	.3952901	.1433249	.0982890	.4966478	.2808322
#1	2857.212	62342.07	13766.68	1992.549	4798.336
#2	2839.645	62520.54	13751.90	2007.790	4777.878
#3	2836.271	62442.91	13778.91	1989.181	4773.027

Reviewed By:mohan
On:10/29/2024
12:32:27 AM
Inst Id :CV1
LB :LB133167

LB133167

7470A /INSTRUMENT ID: CV1



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	C/, D
0.0	0.000	-0.080	-0.080	-18	0.000	-18	0				-9
0.2	0.200	0.183	-0.017	825	0.0 %	825					-2
2.5	2.500	2.458	-0.042	8133	0.0 %	8133					3
5.0	5.000	5.160	0.160	16813	0.0 %	16813					4
7.5	7.500	7.767	0.267	25186	0.0 %	25186					-3
10.0	10.000	9.712	-0.288	31433	0.0 %	31433					

Reviewed By:mohan
On:10/29/2024
12:32:27 AM
Inst Id :CV1
LB :LB133167

LB133167 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 28 Oct 2024 10:41:11

Sample ID	Extended ID	µ Abs	Conc	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	50	-18	-	0.00000	7470A	PPB	28 Oct 2024 10:44:16	S	Std
0.2 - 1	50-2	825	-	0.20000	7470A	PPB	28 Oct 2024 10:51:28	S	Std
2.5 - 1	52.5	8133	-	2.50000	7470A	PPB	28 Oct 2024 10:53:45	S	Std
5.0 - 1	55	16813	-	5.00000	7470A	PPB	28 Oct 2024 10:56:02	S	Std
7.5 - 1	57.5	25186	-	7.50000	7470A	PPB	28 Oct 2024 11:01:03	S	Std
10.0 - 1	510	31433	-	10.00000	7470A	PPB	28 Oct 2024 11:05:55	S	Std
ICV55 - 1	ICV55	12127	3.7014		-7470A	PPB	28 Oct 2024 11:09:29	U	SMPL
ICB55 - 1	ICB55	-64	-0.0939		-7470A	PPB	28 Oct 2024 11:14:18	U	SMPL
CCV79 - 1	CCV79	17032	5.2284		-7470A	PPB	28 Oct 2024 11:16:32	U	SMPL
CCB79 - 1	CCB79	86	-0.0472		-7470A	PPB	28 Oct 2024 11:21:22	U	SMPL
CRA - 1	CRA	804	0.1763		-7470A	PPB	28 Oct 2024 11:23:37	U	SMPL
HighStd - 1	HighStd	30915	9.5505		-7470A	PPB	28 Oct 2024 11:25:51	U	SMPL
ChkStd - 1	ChkStd	22638	6.9737		-7470A	PPB	28 Oct 2024 11:28:07	U	SMPL
PB164472BL - 1	PBW	16	-0.0690		-7470A	PPB	28 Oct 2024 11:32:59	U	SMPL
PB164472BS - 1	LCSW	12719	3.8857		-7470A	PPB	28 Oct 2024 11:35:15	U	SMPL
P4549-02 - 1	TT-067-IDWGW-20241024	-169	-0.1266		-7470A	PPB	28 Oct 2024 11:37:31	U	SMPL
P4549-02DUP - 1	TT-067-IDWGW-20241024DUP	124	-0.0354		-7470A	PPB	28 Oct 2024 11:39:48	U	SMPL
P4549-02MS - 1	TT-067-IDWGW-20241024MS	13399	4.0974		-7470A	PPB	28 Oct 2024 11:42:06	U	SMPL
P4549-02MSD - 1	TT-067-IDWGW-20241024MSD	12159	3.7113		-7470A	PPB	28 Oct 2024 11:44:24	U	SMPL
P4549-03 - 1	TT-068-IDWGW-20241024	394	0.0486		-7470A	PPB	28 Oct 2024 11:46:41	U	SMPL
CCV80 - 1	CCV80	16123	4.9454		-7470A	PPB	28 Oct 2024 11:48:58	U	SMPL
CCB80 - 1	CCB80	117	-0.0376		-7470A	PPB	28 Oct 2024 11:53:49	U	SMPL
P4549-04 - 1	TT-069-IDWGW-20241024	76	-0.0504		-7470A	PPB	28 Oct 2024 11:56:03	U	SMPL
P4564-01 - 1	100324	17	-0.0687		-7470A	PPB	28 Oct 2024 11:58:18	U	SMPL
P4578-01 - 1	WB-305-SW	-186	-0.1319		-7470A	PPB	28 Oct 2024 12:00:33	U	SMPL
P4578-02 - 1	WB-305-SW-1	24	-0.0665		-7470A	PPB	28 Oct 2024 12:02:49	U	SMPL
P4549-02LX5 - 1		-24	-0.0815		-7470A	PPB	28 Oct 2024 12:05:05	U	SMPL
P4549-02A - 1		12725	3.8875		-7470A	PPB	28 Oct 2024 12:07:21	U	SMPL
CCV81 - 1	CCV81	16246	4.9837		-7470A	PPB	28 Oct 2024 12:09:37	U	SMPL
CCB81 - 1	CCB81	79	-0.0494		-7470A	PPB	28 Oct 2024 12:14:26	U	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB164404

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 10/25/2024 **Time :** 11:00 **Temp :** 95 °C

End Digest Date: 10/25/2024 **Time :** 14:15 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: jgp

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6000
LFS-2	0.25	M6009
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
CONC: HNO3	3.00	M6097
1:1 HCL	5.00	MP82127
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

Hot Block # 1 Cell # 50 Temp: 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/25/24 14:20	jgp / Met dig.	Metals Cab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB164404

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
P4549-02	TT-067-IDWGW-20241024	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	1
P4549-03	TT-068-IDWGW-20241024	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	2
P4549-04	TT-069-IDWGW-20241024	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	3
P4549-04MS	TT-069-IDWGW-20241024MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	5
P4549-04MSD	TT-069-IDWGW-20241024MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	6
P4549-04DUP	TT-069-IDWGW-20241024DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	4
PB164404BL	PBW404	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	7
PB164404BS	LCS404	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	8

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB164404 **WorkList ID :** 184774 **Department :** Digestion **Date :** 10-25-2024 10:16:35

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4549-02	TT-067-IDWGW-20241024	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	K11	10/24/2024	6010D
P4549-03	TT-068-IDWGW-20241024	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	K11	10/24/2024	6010D
P4549-04	TT-069-IDWGW-20241024	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	K11	10/24/2024	6010D

Date/Time 10/25/24 10:20
Raw Sample Received by: ~~jgp(met dig~~ CP
Raw Sample Relinquished by: CP

Date/Time 10/25/24 19:40
Raw Sample Received by: CP
Raw Sample Relinquished by: ~~jgp(Met dig~~

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB164472

SOP ID : M7470A-Mercury-19

SDG No : NA

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M4909

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 10/25/2024 **Time :** 08:10 **Temp :** 94 °C

End Digest Date: 10/25/2024 **Time :** 10:10 **Temp :** 94 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: 12

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP82934
CCV	30mL	MP82936
CRA	30mL	MP82938
Blank Spike	0.48mL	M P82926
Matrix Spike	0.48mL	MP82926

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.5mL	MP82651
KMnO4 (5%)	4.5mL	MP82652
K2S2O8 (5%)	2.5mL	MP82653
Hydroxylamine HCL (12%)	2.0mL	MP82654
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP82927
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP82929
2.5 ppb	S2.5	30mL	MP82930
5.0 ppb	S5.0	30mL	MP82931
7.5 ppb	S7.5	30mL	MP82932
10.0 ppb	S10.0	30mL	MP82933
ICV	ICV	30mL	MP82934
ICB	ICB	30mL	MP82935
CCV	CCV	30mL	MP82936
CCB	CCB	30mL	MP82937
CRI	CRI	30mL	MP82938
CHK STD	CHK STD	30mL	MP82939

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/25/24 @ 10:30	MB - Dig. Lab	MB - Metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB164472

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
P4549-02	TT-067-IDWGW-20241024	30	30	<2	N/A	3-1
P4549-02DUP	TT-067-IDWGW-20241024DUP	30	30	<2	N/A	2
P4549-02MS	TT-067-IDWGW-20241024MS	30	30	<2	MP82926	3
P4549-02MSD	TT-067-IDWGW-20241024MSD	30	30	<2	MP82926	4
P4549-03	TT-068-IDWGW-20241024	30	30	<2	N/A	5
P4549-04	TT-069-IDWGW-20241024	30	30	<2	N/A	6
P4564-01	100324	30	30	<2	N/A	7
P4578-01	WB-305-SW	30	30	<2	N/A	8
P4578-02	WB-305-SW-1	30	30	<2	N/A	9
PB164472BL	PBW472	30	30	<2	N/A	10
PB164472BS	LCS472	30	30	<2	MP82926	11

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 102524_7470 **WorkList ID :** 184787 **Department :** Digestion **Date :** 10-25-2024 07:45:56

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4549-02	TT-067-IDWGW-20241024	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	K11	10/24/2024	7470A
P4549-03	TT-068-IDWGW-20241024	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	K11	10/24/2024	7470A
P4549-04	TT-069-IDWGW-20241024	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	K11	10/24/2024	7470A
P4578-01	WB-305-SW	Water	Mercury	1:1 HNO3 to pH < 2	PORT06	K63	10/25/2024	7470A
P4578-02	WB-305-SW-1	Water	Mercury	1:1 HNO3 to pH < 2	PORT06	K63	10/25/2024	7470A
P4564-01	100324	Water	Mercury	1:1 HNO3 to pH < 2	PSEG03	K63	10/25/2024	7470A

Date/Time 10/24/24 P 7:50

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 10/25/24 P 8:45

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133167

Review By	jaswal	Review On	10/29/2024 12:31:07 AM
Supervise By	mohan	Supervise On	10/29/2024 12:32:27 AM

STD. NAME	STD REF.#
ICAL Standard	MP82910,MP82912,MP82913,MP82914,MP82915,MP82916
ICV Standard	MP82917
CCV Standard	MP82919
ICSA Standard	
CRI Standard	MP82921
LCS Standard	
Chk Standard	MP82918,MP82920,MP82922,MP82941

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/28/24 10:44		Mohan	OK
2	S0.2	S0.2	CAL2	10/28/24 10:51		Mohan	OK
3	S2.5	S2.5	CAL3	10/28/24 10:53		Mohan	OK
4	S5	S5	CAL4	10/28/24 10:56		Mohan	OK
5	S7.5	S7.5	CAL5	10/28/24 11:01		Mohan	OK
6	S10	S10	CAL6	10/28/24 11:05		Mohan	OK
7	ICV55	ICV55	ICV	10/28/24 11:09		Mohan	OK
8	ICB55	ICB55	ICB	10/28/24 11:14		Mohan	OK
9	CCV79	CCV79	CCV	10/28/24 11:16		Mohan	OK
10	CCB79	CCB79	CCB	10/28/24 11:21		Mohan	OK
11	CRA	CRA	CRDL	10/28/24 11:23		Mohan	OK
12	HighStd	HighStd	HIGH STD	10/28/24 11:25		Mohan	OK
13	ChkStd	ChkStd	SAM	10/28/24 11:28		Mohan	OK
14	PB164472BL	PB164472BL	MB	10/28/24 11:32		Mohan	OK
15	PB164472BS	PB164472BS	LCS	10/28/24 11:35		Mohan	OK
16	P4549-02	TT-067-IDWGW-2024	SAM	10/28/24 11:37		Mohan	OK
17	P4549-02DUP	TT-067-IDWGW-2024	DUP	10/28/24 11:39		Mohan	OK
18	P4549-02MS	TT-067-IDWGW-2024	MS	10/28/24 11:42		Mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133167

Review By	jaswal	Review On	10/29/2024 12:31:07 AM
Supervise By	mohan	Supervise On	10/29/2024 12:32:27 AM

STD. NAME	STD REF.#
ICAL Standard	MP82910,MP82912,MP82913,MP82914,MP82915,MP82916
ICV Standard	MP82917
CCV Standard	MP82919
ICSA Standard	
CRI Standard	MP82921
LCS Standard	
Chk Standard	MP82918,MP82920,MP82922,MP82941

19	P4549-02MSD	TT-067-IDWGW-2024	MSD	10/28/24 11:44		Mohan	OK
20	P4549-03	TT-068-IDWGW-2024	SAM	10/28/24 11:46		Mohan	OK
21	CCV80	CCV80	CCV	10/28/24 11:48		Mohan	OK
22	CCB80	CCB80	CCB	10/28/24 11:53		Mohan	OK
23	P4549-04	TT-069-IDWGW-2024	SAM	10/28/24 11:56		Mohan	OK
24	P4564-01	100324	SAM	10/28/24 11:58		Mohan	OK
25	P4578-01	WB-305-SW	SAM	10/28/24 12:00		Mohan	OK
26	P4578-02	WB-305-SW-1	SAM	10/28/24 12:02		Mohan	OK
27	P4549-02L	TT-067-IDWGW-2024	SD	10/28/24 12:05		Mohan	OK
28	P4549-02A	TT-067-IDWGW-2024	PS	10/28/24 12:07		Mohan	OK
29	CCV81	CCV81	CCV	10/28/24 12:09		Mohan	OK
30	CCB81	CCB81	CCB	10/28/24 12:14		Mohan	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/28/24 11:58		Kareem	OK
2	S1	S1	CAL2	10/28/24 12:03		Kareem	OK
3	S2	S2	CAL3	10/28/24 12:07		Kareem	OK
4	S3	S3	CAL4	10/28/24 12:11		Kareem	OK
5	S4	S4	CAL5	10/28/24 12:16		Kareem	OK
6	S5	S5	CAL6	10/28/24 12:20		Kareem	OK
7	ICV01	ICV01	ICV	10/28/24 12:57	Fail for Ba,Mn,K,Ag,Zn (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	10/28/24 13:04		Kareem	OK
9	ICB01	ICB01	ICB	10/28/24 13:08		Kareem	OK
10	CRI01	CRI01	CRDL	10/28/24 13:12		Kareem	OK
11	ICSA01	ICSA01	ICSA	10/28/24 13:16		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	10/28/24 13:21		Kareem	OK
13	ICSADL	ICSADL	ICSA	10/28/24 13:27		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	10/28/24 13:31		Kareem	OK
15	CCV01	CCV01	CCV	10/28/24 13:35		Kareem	OK
16	CCB01	CCB01	CCB	10/28/24 13:39		Kareem	OK
17	P4549-02	TT-067-IDWGW-2024	SAM	10/28/24 13:44		Kareem	OK
18	P4549-03	TT-068-IDWGW-2024	SAM	10/28/24 13:48		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

19	P4549-04	TT-069-IDWGW-2024	SAM	10/28/24 13:52		Kareem	OK
20	P4549-04DUP	TT-069-IDWGW-2024	DUP	10/28/24 13:57		Kareem	OK
21	P4549-04L	TT-069-IDWGW-2024	SD	10/28/24 14:01		Kareem	OK
22	P4549-04MS	TT-069-IDWGW-2024	MS	10/28/24 14:05		Kareem	OK
23	P4549-04MSD	TT-069-IDWGW-2024	MSD	10/28/24 14:09		Kareem	OK
24	P4549-04A	TT-069-IDWGW-2024	PS	10/28/24 14:13		Kareem	OK
25	PB164404BL	PB164404BL	MB	10/28/24 14:17		Kareem	OK
26	PB164404BS	PB164404BS	LCS	10/28/24 14:21		Kareem	OK
27	CCV02	CCV02	CCV	10/28/24 14:25		Kareem	OK
28	CCB02	CCB02	CCB	10/28/24 14:30		Kareem	OK
29	P4554-01	001-WILLETS-PT-BL	SAM	10/28/24 14:34		Kareem	OK
30	P4554-02	002-35TH-AVE(SEP)	SAM	10/28/24 14:38		Kareem	OK
31	P4554-02DUP	002-35TH-AVE(SEP)[	DUP	10/28/24 14:42		Kareem	OK
32	P4554-02L	002-35TH-AVE(SEP)L	SD	10/28/24 14:46		Kareem	OK
33	P4554-02MS	002-35TH-AVE(SEP)M	MS	10/28/24 14:51		Kareem	OK
34	P4554-02MSD	002-35TH-AVE(SEP)M	MSD	10/28/24 14:55		Kareem	OK
35	P4554-02A	002-35TH-AVE(SEP)A	PS	10/28/24 14:59		Kareem	OK
36	PB164410BL	PB164410BL	MB	10/28/24 15:03		Kareem	OK
37	PB164410BS	PB164410BS	LCS	10/28/24 15:07		Kareem	OK
38	P3440-01	923-K1-WS-080124	SAM	10/28/24 15:11		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

39	CCV03	CCV03	CCV	10/28/24 15:15		Kareem	OK
40	CCB03	CCB03	CCB	10/28/24 15:20		Kareem	OK
41	P3440-01DUP	923-K1-WS-080124D	DUP	10/28/24 15:24		Kareem	OK
42	P3440-01L	923-K1-WS-080124L	SD	10/28/24 15:28		Kareem	OK
43	P3440-02	923-K1-WS-080124M	MS	10/28/24 15:33		Kareem	OK
44	P3440-03	923-K1-WS-080124M	MSD	10/28/24 15:37		Kareem	OK
45	P3440-01A	923-K1-WS-080124A	PS	10/28/24 15:41		Kareem	OK
46	P3440-04	922-K1-WS-080124	SAM	10/28/24 15:45		Kareem	OK
47	PB164476BL	PB164476BL	MB	10/28/24 15:49		Kareem	OK
48	PB164476BS	PB164476BS	LCS	10/28/24 15:54		Kareem	OK
49	P4574-01	GRAVEL-1	SAM	10/28/24 15:58		Kareem	OK
50	P4574-04	GRAVEL-2	SAM	10/28/24 16:02		Kareem	OK
51	CCV04	CCV04	CCV	10/28/24 16:06		Kareem	OK
52	CCB04	CCB04	CCB	10/28/24 16:10		Kareem	OK
53	P4574-07	CONCRETE-1	SAM	10/28/24 16:15		Kareem	OK
54	P4574-09	CONCRETE-2	SAM	10/28/24 16:19	Cr high	Kareem	Dilution
55	P4574-11	CONCRETE-3	SAM	10/28/24 16:23	Cr high	Kareem	Dilution
56	P4575-01	PL-02-102424	SAM	10/28/24 16:28		Kareem	OK
57	P4577-01	TR-05-102524	SAM	10/28/24 16:32		Kareem	OK
58	P4577-01DUP	TR-05-102524DUP	DUP	10/28/24 16:36		Kareem	OK

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Fax : 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

59	P4577-01L	TR-05-102524L	SD	10/28/24 16:41		Kareem	OK
60	P4577-01MS	TR-05-102524MS	MS	10/28/24 16:45		Kareem	OK
61	P4577-01MSD	TR-05-102524MSD	MSD	10/28/24 16:49		Kareem	OK
62	P4577-01A	TR-05-102524A	PS	10/28/24 16:53		Kareem	OK
63	CCV05	CCV05	CCV	10/28/24 16:57		Kareem	OK
64	CCB05	CCB05	CCB	10/28/24 17:01		Kareem	OK
65	PB164439BL	PB164439BL	MB	10/28/24 17:06		Kareem	OK
66	PB164439BS	PB164439BS	LCS	10/28/24 17:10		Kareem	OK
67	P4452-03	ETGI-285	SAM	10/28/24 17:14		Kareem	OK
68	P4545-02	VNJ-215	SAM	10/28/24 17:19		Kareem	OK
69	P4547-04	BP-F-21	SAM	10/28/24 17:23		Kareem	OK
70	P4547-08	BP-F-20	SAM	10/28/24 17:28		Kareem	OK
71	P4561-04	BP-F-19	SAM	10/28/24 17:32		Kareem	OK
72	P4561-08	BP-F-18	SAM	10/28/24 17:36		Kareem	OK
73	P4567-04	WC-1	SAM	10/28/24 17:41		Kareem	OK
74	P4567-08	WC-2	SAM	10/28/24 17:45		Kareem	OK
75	CCV06	CCV06	CCV	10/28/24 17:50		Kareem	OK
76	CCB06	CCB06	CCB	10/28/24 17:54		Kareem	OK
77	P4567-12	WC-3	SAM	10/28/24 17:58		Kareem	OK
78	P4574-03	GRAVEL-1	SAM	10/28/24 18:03		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

79	P4574-06	GRAVEL-2	SAM	10/28/24 18:07		Kareem	OK
80	P4574-08	CONCRETE-1	SAM	10/28/24 18:12		Kareem	OK
81	P4574-10	CONCRETE-2	SAM	10/28/24 18:16		Kareem	OK
82	P4574-12	CONCRETE-3	SAM	10/28/24 18:21		Kareem	OK
83	P4578-06	WB-305-BOT	SAM	10/28/24 18:25		Kareem	OK
84	P4578-08	WB-305-BOT-1	SAM	10/28/24 18:29		Kareem	OK
85	P4578-08DUP	WB-305-BOT-1DUP	DUP	10/28/24 18:34		Kareem	OK
86	P4578-08L	WB-305-BOT-1L	SD	10/28/24 18:38		Kareem	OK
87	CCV07	CCV07	CCV	10/28/24 18:43		Kareem	OK
88	CCB07	CCB07	CCB	10/28/24 18:47		Kareem	OK
89	P4578-08MS	WB-305-BOT-1MS	MS	10/28/24 18:51		Kareem	OK
90	P4578-08MSD	WB-305-BOT-1MSD	MSD	10/28/24 18:55		Kareem	OK
91	P4578-08A	WB-305-BOT-1A	PS	10/28/24 18:59		Kareem	OK
92	PB164393TB	PB164393TB	MB	10/28/24 19:04		Kareem	OK
93	PB164453BL	PB164453BL	MB	10/28/24 19:08		Kareem	OK
94	PB164453BS	PB164453BS	LCS	10/28/24 19:12		Kareem	OK
95	P4547-01	BP-F-21	SAM	10/28/24 19:16		Kareem	OK
96	P4547-05	BP-F-20	SAM	10/28/24 19:21		Kareem	OK
97	P4531-01	OR-03-102424	SAM	10/28/24 19:25		Kareem	OK
98	P4545-01	VNJ-215	SAM	10/28/24 19:29		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

99	CCV08	CCV08	CCV	10/28/24 19:33		Kareem	OK
100	CCB08	CCB08	CCB	10/28/24 19:37		Kareem	OK
101	P4547-05DUP	BP-F-20DUP	DUP	10/28/24 19:42		Kareem	OK
102	P4547-05L	BP-F-20L	SD	10/28/24 19:46		Kareem	OK
103	P4547-05MS	BP-F-20MS	MS	10/28/24 19:50		Kareem	OK
104	P4547-05MSD	BP-F-20MSD	MSD	10/28/24 19:54		Kareem	OK
105	P4547-05A	BP-F-20A	PS	10/28/24 19:58		Kareem	OK
106	P4561-01	BP-F-19	SAM	10/28/24 20:02		Kareem	OK
107	P4561-05	BP-F-18	SAM	10/28/24 20:06		Kareem	OK
108	P4566-01	HD-01-102524	SAM	10/28/24 20:10		Kareem	OK
109	P4567-01	WC-1	SAM	10/28/24 20:14		Kareem	OK
110	P4567-05	WC-2	SAM	10/28/24 20:18		Kareem	OK
111	CCV09	CCV09	CCV	10/28/24 20:22		Kareem	OK
112	CCB09	CCB09	CCB	10/28/24 20:26		Kareem	OK
113	P4567-09	WC-3	SAM	10/28/24 20:31		Kareem	OK
114	P4578-03	WB-305-TOP	SAM	10/28/24 20:35		Kareem	OK
115	P4578-04	WB-305-TOP-1	SAM	10/28/24 20:39	Cr high	Kareem	Dilution
116	P4578-05	WB-305-BOT	SAM	10/28/24 20:43		Kareem	OK
117	P4578-07	WB-305-BOT-1	SAM	10/28/24 20:47		Kareem	OK
118	P4574-09DL	CONCRETE-2DL	SAM	10/28/24 20:59	5x for Cr	Kareem	Confirms

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133175

Review By	jaswal	Review On	10/30/2024 1:21:12 AM
Supervise By	mohan	Supervise On	10/30/2024 1:21:31 AM

STD. NAME	STD REF.#
ICAL Standard	MP82441,MP82476,MP82477,MP82478,MP82479,MP82712
ICV Standard	MP82485
CCV Standard	MP82488
ICSA Standard	MP82486,MP82487
CRI Standard	MP82712
LCS Standard	
Chk Standard	MP82491,MP82492

119	P4574-11DL	CONCRETE-3DL	SAM	10/28/24 21:04	5x for Cr	Kareem	Confirms
120	PB164415BL	PB164415BL	MB	10/28/24 21:08		Kareem	OK
121	PB164415BS	PB164415BS	LCS	10/28/24 21:12		Kareem	OK
122	CCV10	CCV10	CCV	10/28/24 21:21		Kareem	OK
123	CCB10	CCB10	CCB	10/28/24 21:25		Kareem	OK
124	LR1	LR1	HIGH STD	10/28/24 21:29		Kareem	OK
125	LR2	LR2	HIGH STD	10/28/24 21:34		Kareem	OK
126	CCV11	CCV11	CCV	10/28/24 21:38		Kareem	OK
127	CCB11	CCB11	CCB	10/28/24 21:43		Kareem	OK

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Prep Standard - Chemical Standard Summary

Order ID : P4549

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB164404,PB164472,

Sequence ID/Qc Batch ID: LB133167,LB133175,

Standard ID :
MP82127,MP82441,MP82476,MP82477,MP82478,MP82479,MP82485,MP82486,MP82487,MP82488,MP82491,MP82492,MP82711,MP82712,MP82909,MP82910,MP82912,MP82913,MP82914,MP82915,MP82916,MP82917,MP82918,MP82919,MP82920,MP82921,MP82922,MP82941,

Chemical ID :
M4960,M5062,M5130,M5192,M5218,M5223,M5288,M5295,M5296,M5390,M5394,M5429,M5467,M5498,M5515,M5658,M5697,M5698,M5747,M5748,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5814,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M5882,M5953,M5962,M5963,M5970,M5978,M5982,M5984,M6000,M6009,M6021,M6023,M6028,M6030,M6033,M6034,M6037,M6040,M6094,M6097,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP82127	09/03/2024	02/08/2025	Janvi Patel	None	None	Sarabjit Jaswal 09/03/2024

FROM 1250.00000ml of M6040 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP82441	09/23/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 125.00000ml of M6040 + 2350.00000ml of W3112 + 25.00000ml of M6037 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP82476	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 5.00000ml of M5296 + 5.00000ml of M5394 + 5.00000ml of M5802 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M5982 + 460.00000ml of MP82441 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP82477	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 50.00000ml of MP82441 + 50.00000ml of MP82476 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP82478	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 25.00000ml of MP82476 + 75.00000ml of MP82441 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP82479	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 16.00000ml of MP82476 + 184.00000ml of MP82441 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP82485	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.02500ml of M5982 + 0.25000ml of M5218 + 10.00000ml of M5295 + 89.77500ml of MP82441 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP82486	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 25.00000ml of M5130 + 225.00000ml of MP82441 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP82487	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5296 + 0.10000ml of M5970 + 0.10000ml of M5982 + 10.00000ml of M5130 + 10.00000ml of M5223 + 79.50000ml of MP82441 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP82488	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 50.00000ml of MP82441 + 50.00000ml of MP82476 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP82491	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 1.00000ml of M5984 + 10.00000ml of M4960 + 1969.00000ml of W3112 + 20.00000ml of M5963 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP82492	09/24/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 09/24/2024

FROM 200.00000ml of M6034 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP82711	10/07/2024	10/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 10/07/2024

FROM 0.00300ml of M6028 + 0.03000ml of M5798 + 0.05000ml of M5515 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6033 + 0.06000ml of M5747 + 0.10000ml of M5697 + 0.10000ml of M5698 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M5982 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M5819 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.25000ml of M5467 + 0.25000ml of M5802 + 0.50000ml of M5390 + 0.50000ml of M5814 + 1.00000ml of M5192 + 1.00000ml of M5288 + 1.00000ml of M5498 + 1.00000ml of M5769 + 1.00000ml of M5806 + 1.00000ml of M5978 + 2.00000ml of M5816 + 2.00000ml of M5818 + 77.68000ml of MP82441 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP82712	10/07/2024	10/30/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 10/07/2024

FROM 2.00000ml of MP82711 + 98.00000ml of MP82441 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP82909	10/24/2024	10/25/2024	Mohan Bera	None	None	Sarabjit Jaswal 10/26/2024

FROM 1.00000ml of M6097 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP82910	10/24/2024	10/25/2024	Mohan Bera	None	None	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP82912	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 247.30000ml of W3112 + 0.20000ml of MP82909 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP82913	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 245.00000ml of W3112 + 2.50000ml of MP82909 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP82914	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 242.50000ml of W3112 + 5.00000ml of MP82909 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP82915	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 240.00000ml of W3112 + 7.50000ml of MP82909 = Final Quantity: 250.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP82916	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 237.50000ml of W3112 + 10.00000ml of MP82909 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP82917	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M5953 + 2.50000ml of M6097 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP82918	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP82919	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6097 + 10.00000ml of MP82909 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP82920	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 495.00000ml of W3112 + 5.00000ml of M6097 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP82921	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 247.30000ml of W3112 + 0.20000ml of MP82909 = Final Quantity: 250.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP82922	10/24/2024	10/25/2024	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 10/26/2024

FROM 2.50000ml of M6097 + 240.50000ml of W3112 + 7.00000ml of MP82909 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP82941	10/28/2024	10/29/2024	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 10/29/2024

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6094 = Final Quantity: 500.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	100721	10/07/2024	10/09/2021 / jaswal	10/08/2021 / jaswal	M4960

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	11/19/2024	05/20/2024 / bin	04/20/2021 / bin	M5130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	11/19/2024	05/20/2024 / bin	04/20/2021 / bin	M5223

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	02/20/2020 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	11/28/2022 / bin	09/19/2022 / bin	M5394

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	01/01/2025	07/01/2024 / mohan	03/30/2023 / mohan	M5953

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	01/04/2025	07/09/2024 / Al-Terek	07/03/2024 / Al-Terek	M5963

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	08/30/2026	08/13/2024 / Jaswal	05/14/2024 / Jaswal	M6000

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	08/13/2024 / Jaswal	05/14/2024 / Jaswal	M6009

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	01/25/2019 / Jaswal	M6028

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	02/01/2025	08/06/2024 / Janvi	08/01/2024 / Janvi	M6034

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	02/02/2025	08/24/2024 / Janvi	08/01/2024 / Janvi	M6037

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/08/2025	08/09/2024 / Janvi	08/01/2024 / Janvi	M6040

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		04/24/2025	10/24/2024 / Janvi	10/21/2024 / Janvi	M6094

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	10/24/2024 / Janvi	09/21/2024 / Janvi	M6097

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

R: 8/5/24

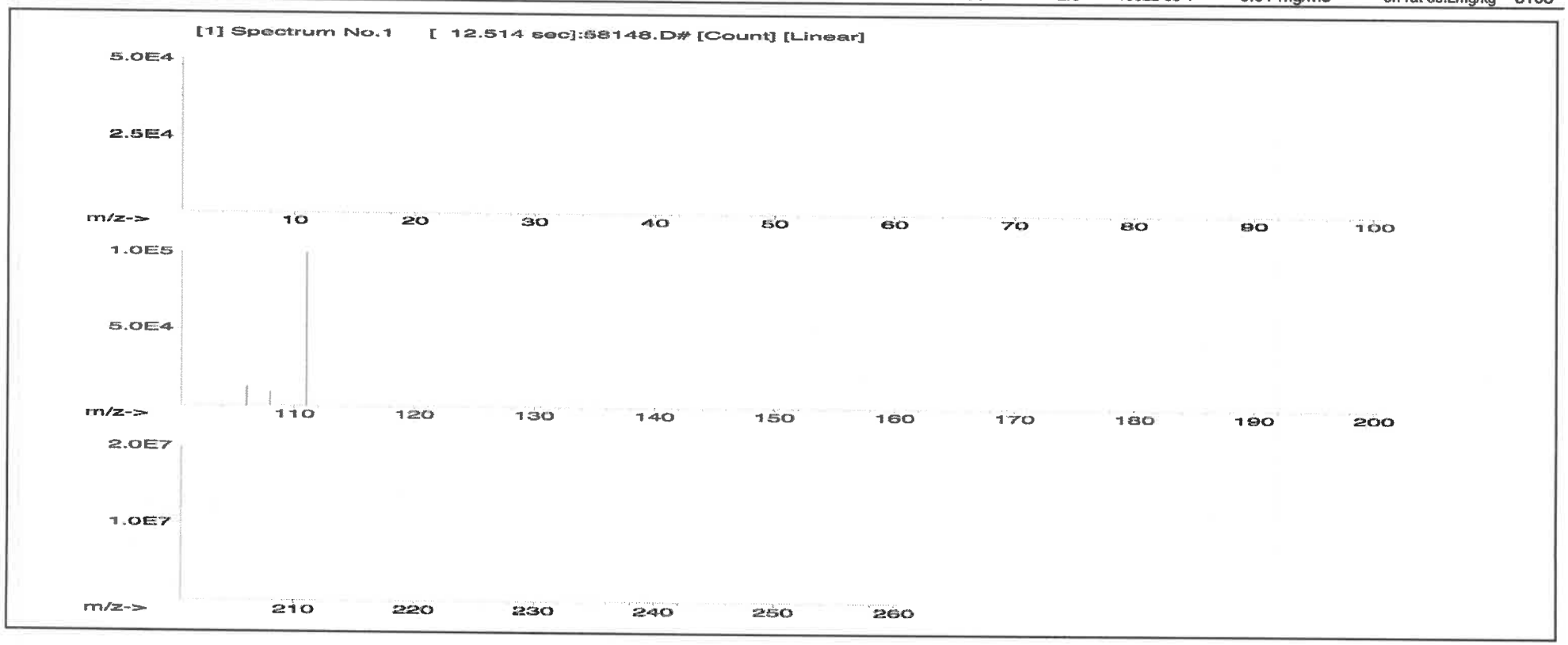
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**			**Lot #**	
Lot Number:	**070124**		**Solvent:**	24002546	Nitric Acid
Description:	**Cadmium (Cd)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	S2-MEB711673
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

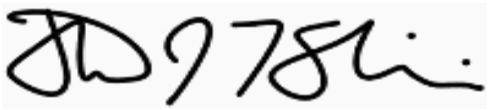
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

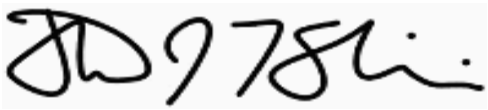
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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RD:05/14/2024

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES

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Certificate of Analysis

RD:05/14/2024

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M4960 R: 10/08/21 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58149
Lot Number: 100721
Description: Indium (In)

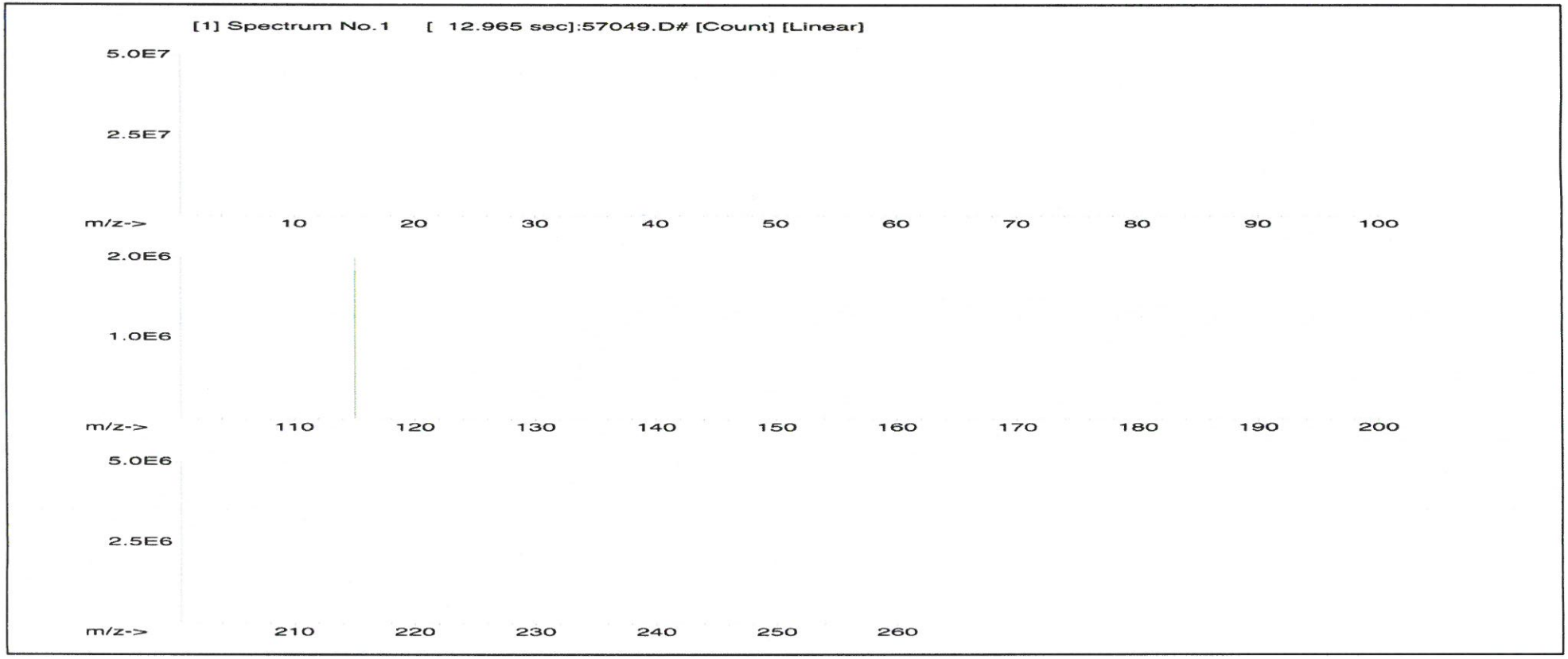
Expiration Date: 100724
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 500.06 0.058 Flask Uncertainty

	Lot #	
Solvent:	20370011	Nitric Acid
5%	25.0 (mL)	Nitric Acid

Giovanni Esposito

Formulated By:	Giovanni Esposito	100721
Reviewed By:	Pedro L. Rentas	100721

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Indium Oxide (In)	IN086	W1096A	10000	99.999	0.10	82.6	6.05408	6.05441	**10000.6**	**20.1**	1312-43-2	NA	NA	3124a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	T	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\,(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5192 R: 06/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

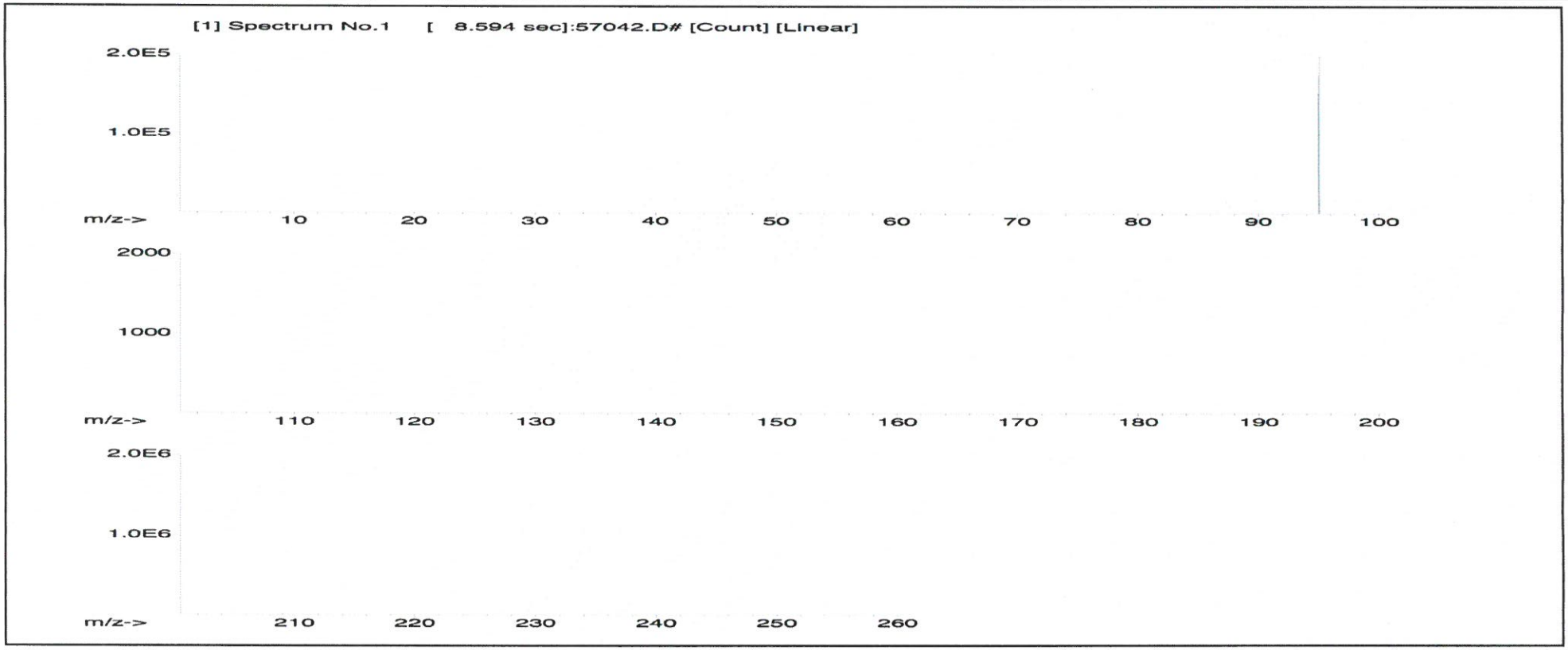
Part Number:	**57042**
Lot Number:	**051722**
Description:	**Molybdenum (Mo)**
Expiration Date:	051725
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	**1000**
NIST Test Number:	6UTB
Volume shown below was diluted to (mL):	3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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Certified Reference Material CRM

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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

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

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

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Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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CERTIFIED WEIGHT REPORT:

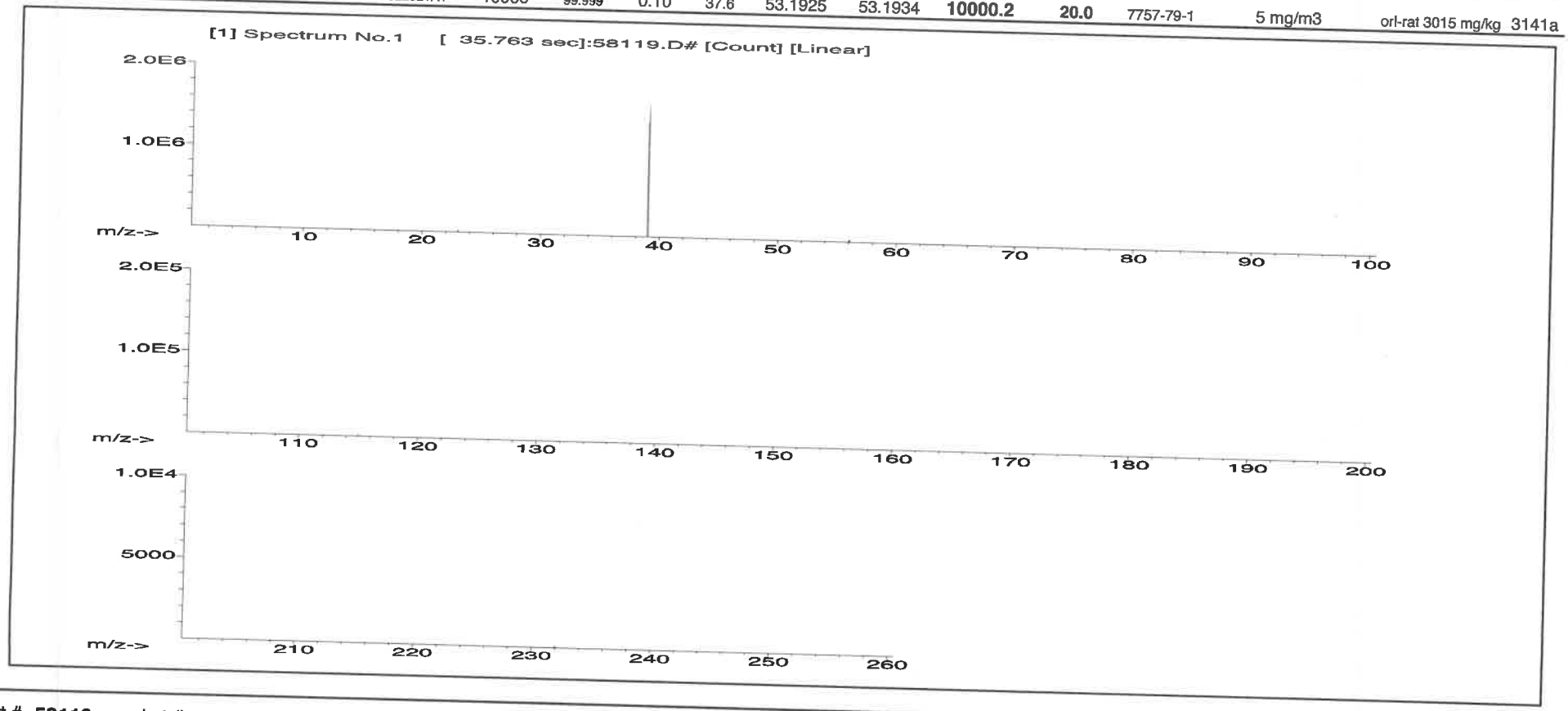
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 071122
Reviewed By: Pedro L. Rentas 071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	CN^-	99

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R:09/08/22 (BA)

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M5387 . M5389 . M5390 . M5391 . M5392

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https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57056
Lot Number: 072122
Description: Barium (Ba)

Expiration Date: 072125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 ± 0.058 Flask Uncertainty

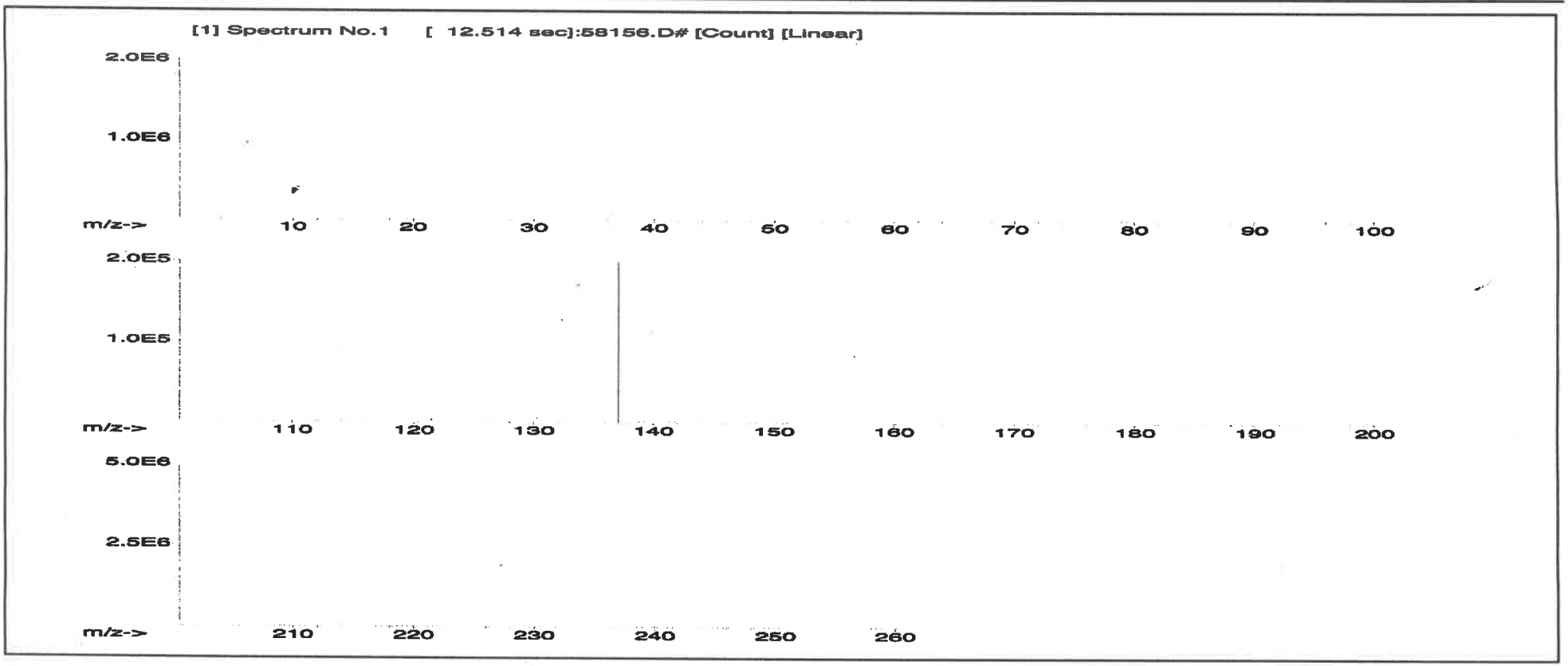
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	072122
Reviewed By:	Pedro L. Rentas	072122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	**1000.0**	2.0	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



44549-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

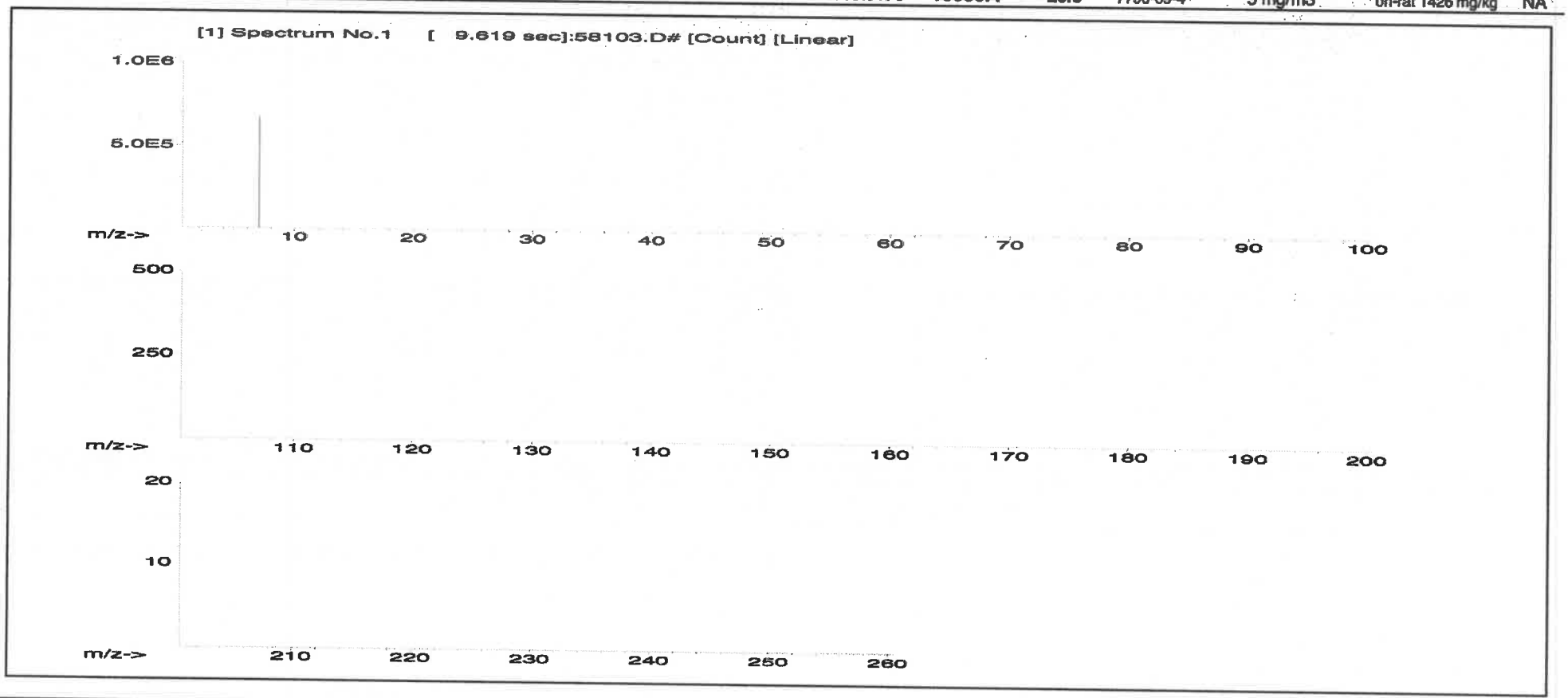
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #			
Solvent:	20510011	Nitric Acid		
2%	20.0 (mL)	Nitric Acid		

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



1539-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

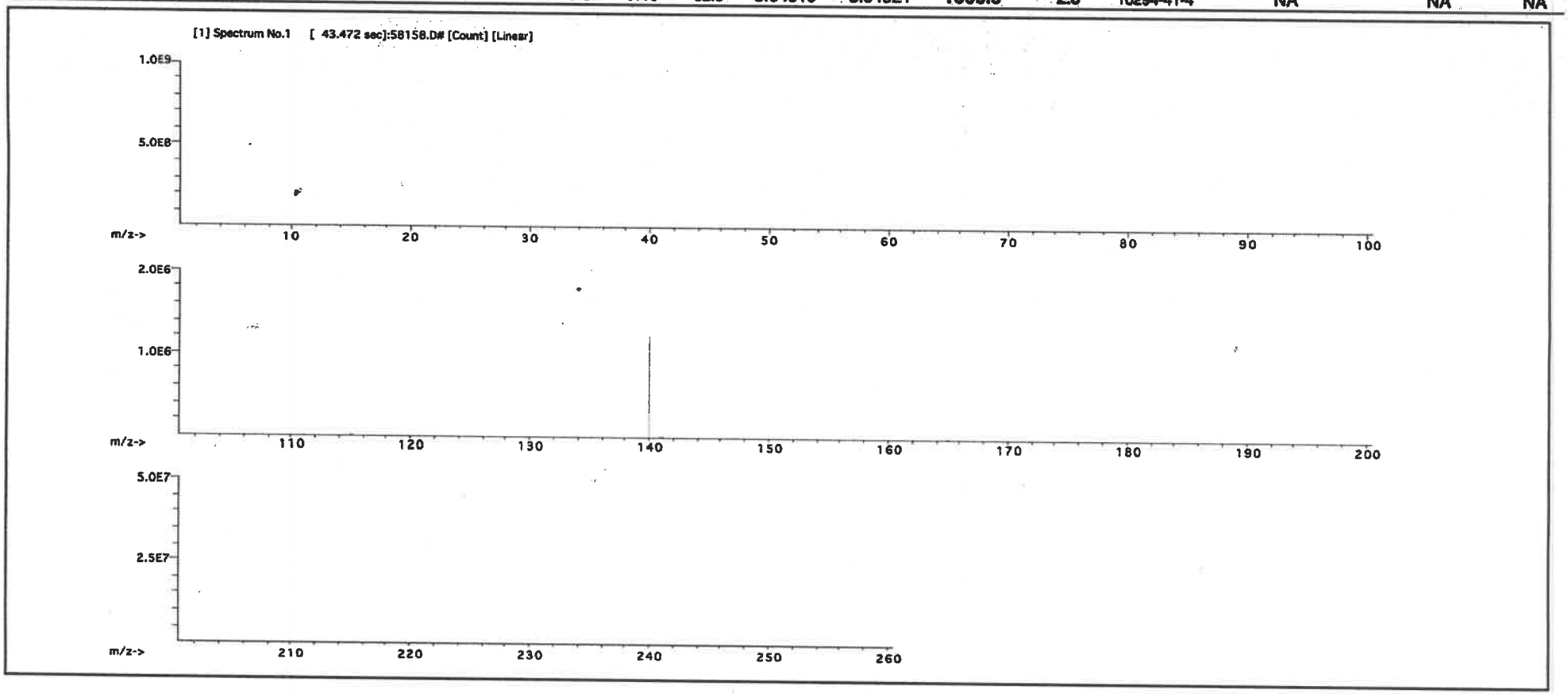
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CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**	
Lot Number:	020623	**Solvent:**	21110221	Nitric Acid
Description:	Cerium (Ce)			
		2%	20.0 (mL)	Nitric Acid
Expiration Date:	020626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



ICP-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

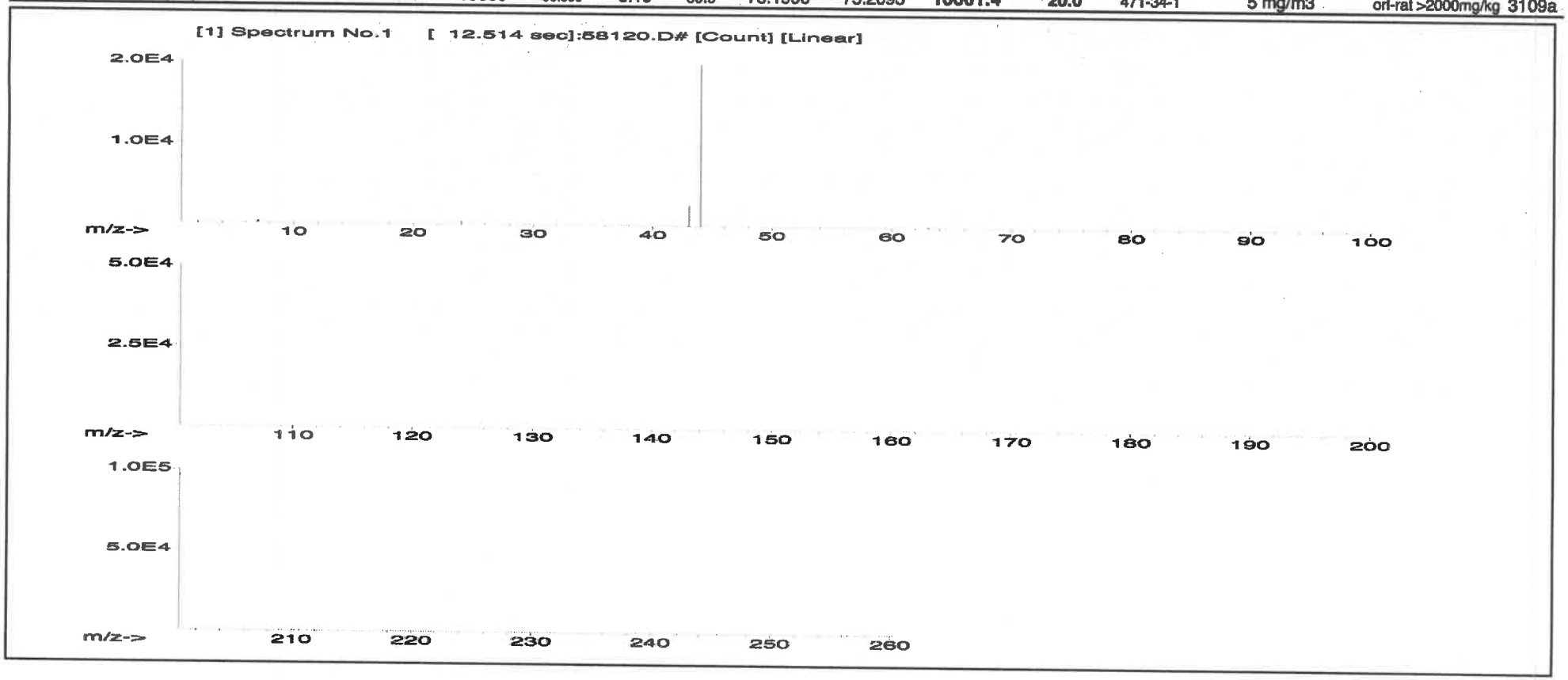
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 031523

Pedro Rentas
Reviewed By: Pedro L. Rentas 031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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MS514 - MS515 R: 03/17/22

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

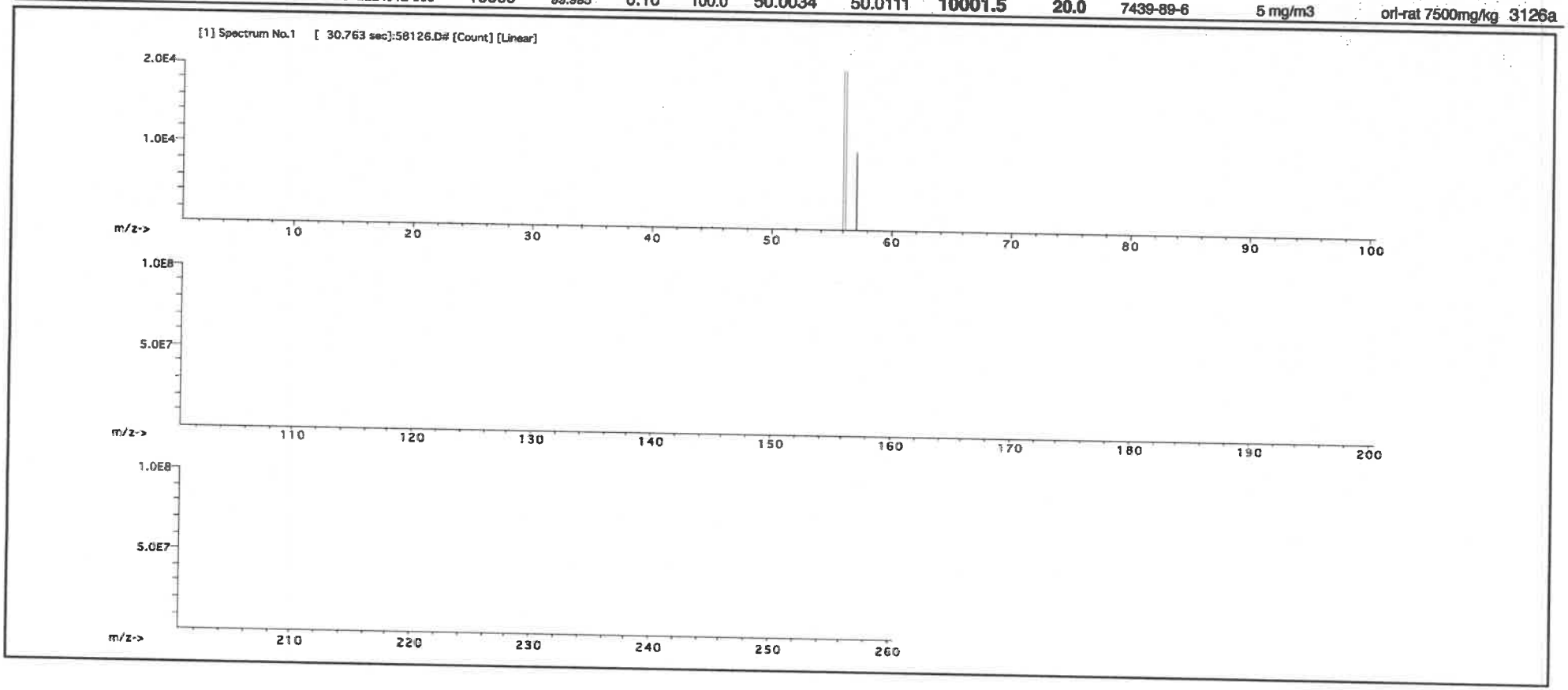
Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

	Lot #			
Solvent:	20510011	Nitric Acid		
7.0%	350.0 (mL)	Nitric Acid		
	5E-05	Balance Uncertainty		
	0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2224912-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



AR1539METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5658 R ! 8/25/23

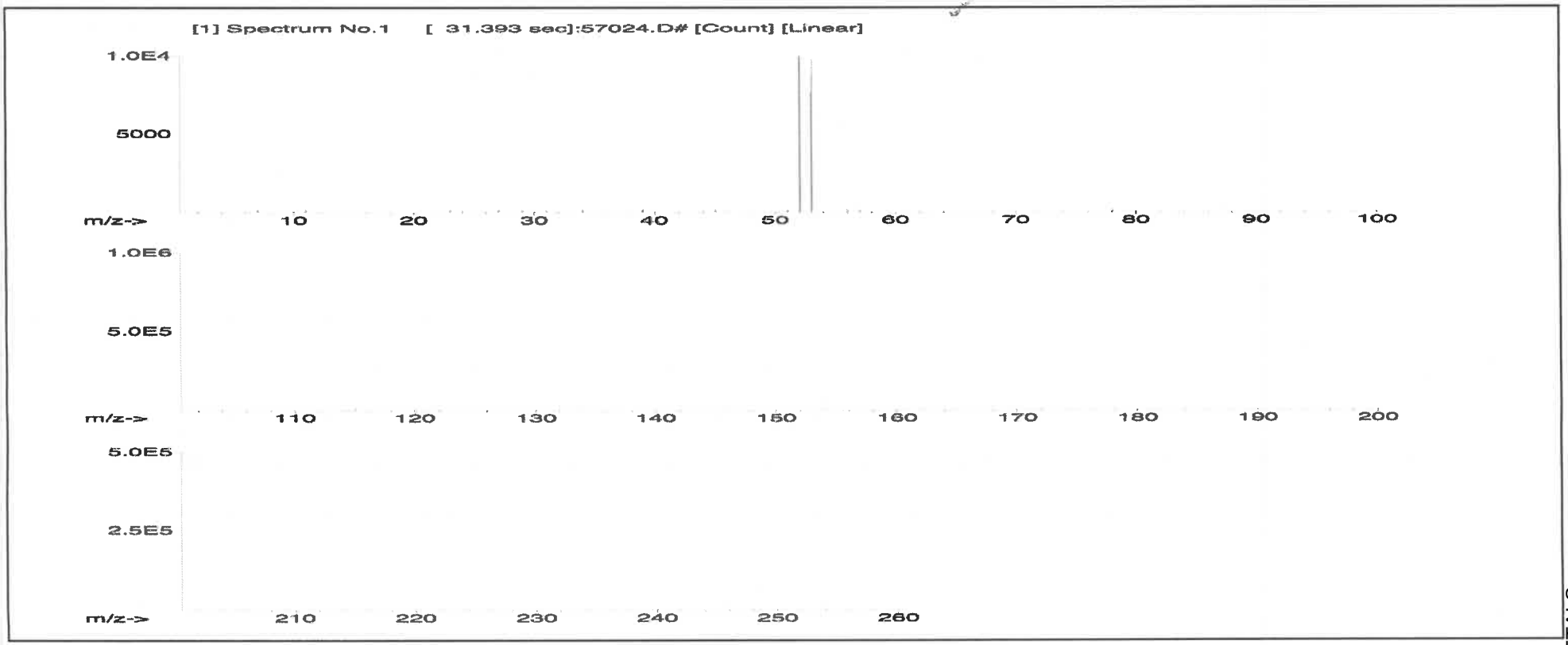
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5697 R: 10/27/23

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CERTIFIED WEIGHT REPORT:

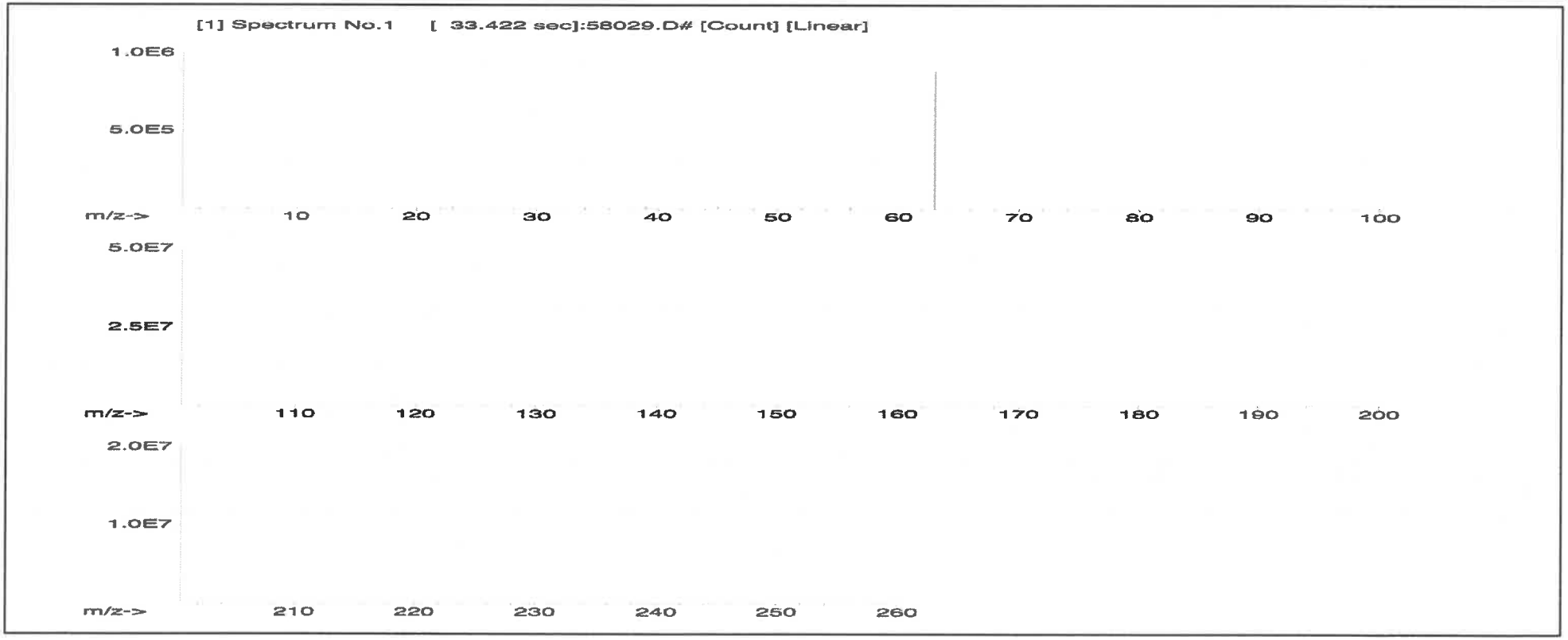
		Lot #	Solvent:
Part Number:	**58029**	24002546	Nitric Acid
Lot Number:	**102523**		
Description:	**Copper (Cu)**		

2.0%	40.0 (mL)	Nitric Acid	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Expiration Date:	102526		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05	Balance Uncertainty
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5648 R: 10/27/23

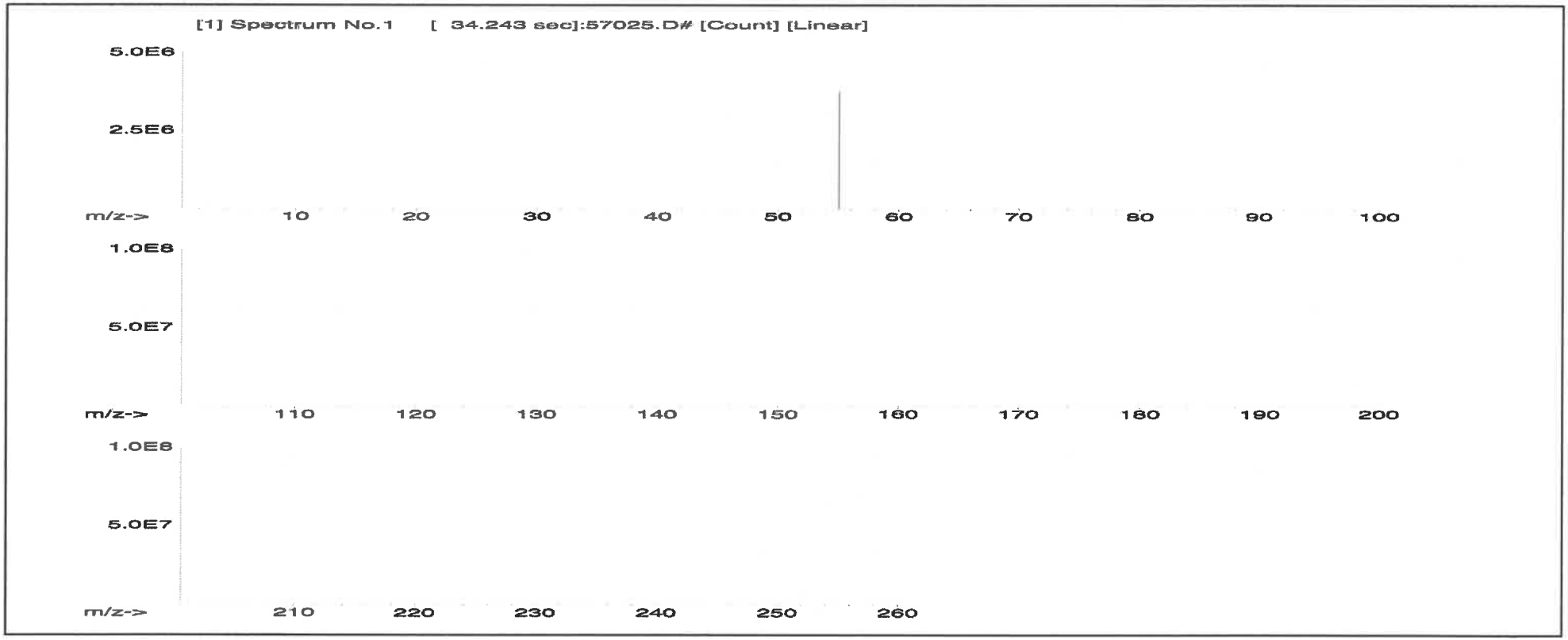
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58025**	24002546	Nitric Acid		
Lot Number:	**102623**				
Description:	**Manganese (Mn)**	2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	102626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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R: 12/20/23 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

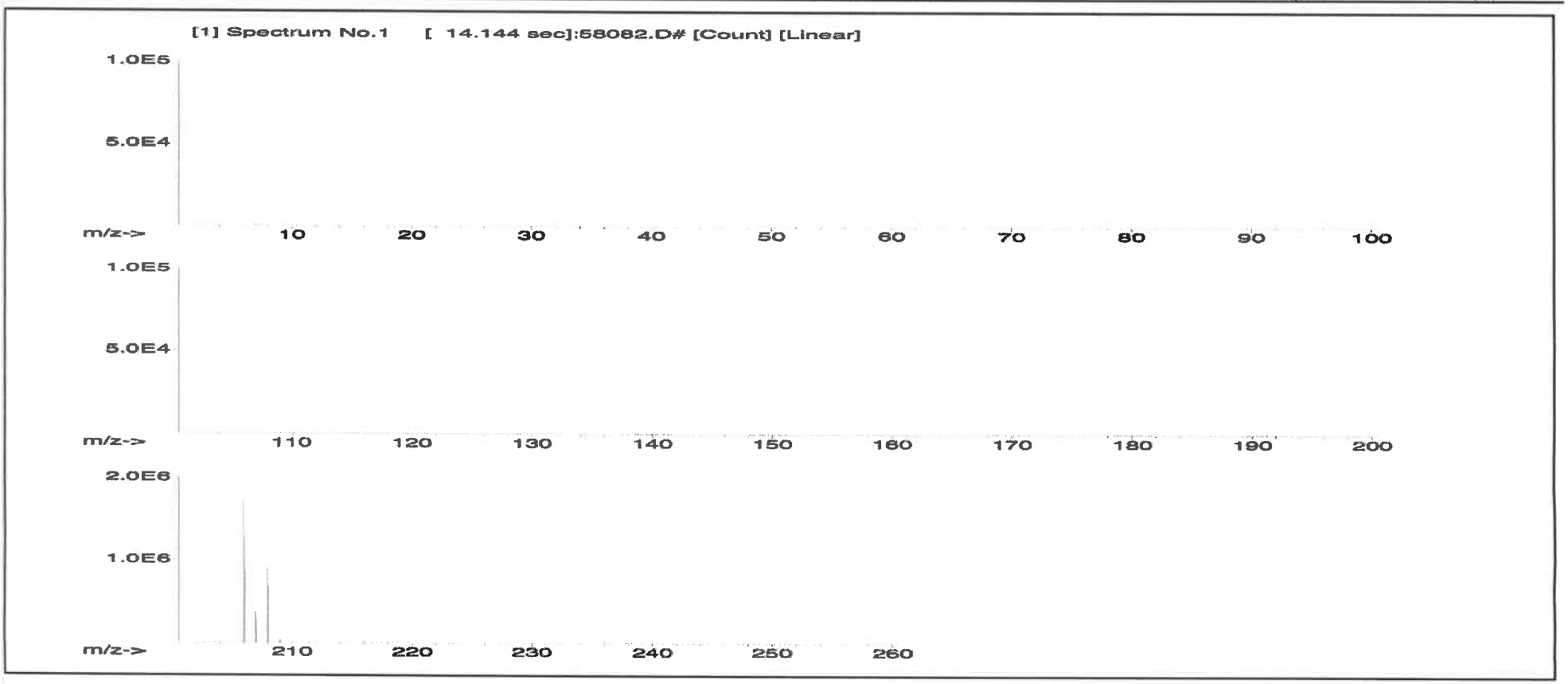
Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 12/20/23 M5748

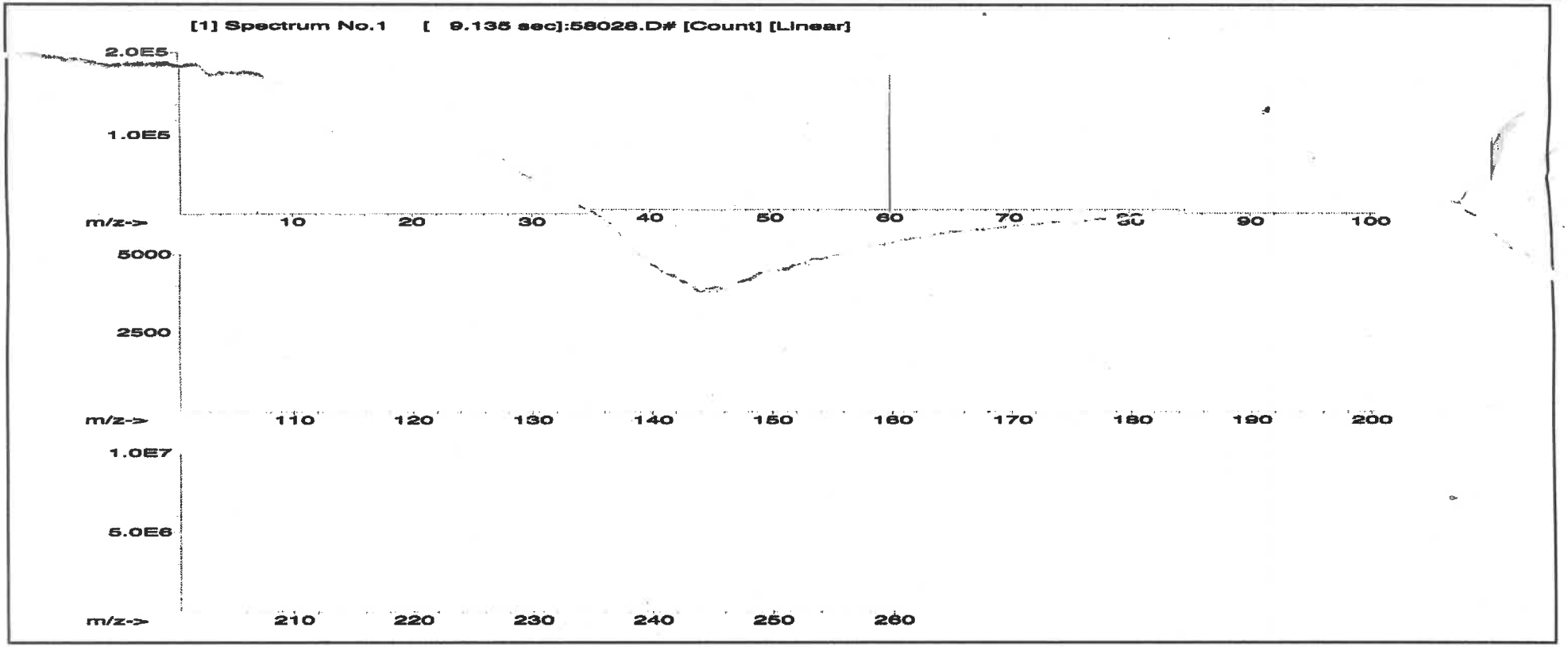
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5768 M5769 BP R:1/3/24

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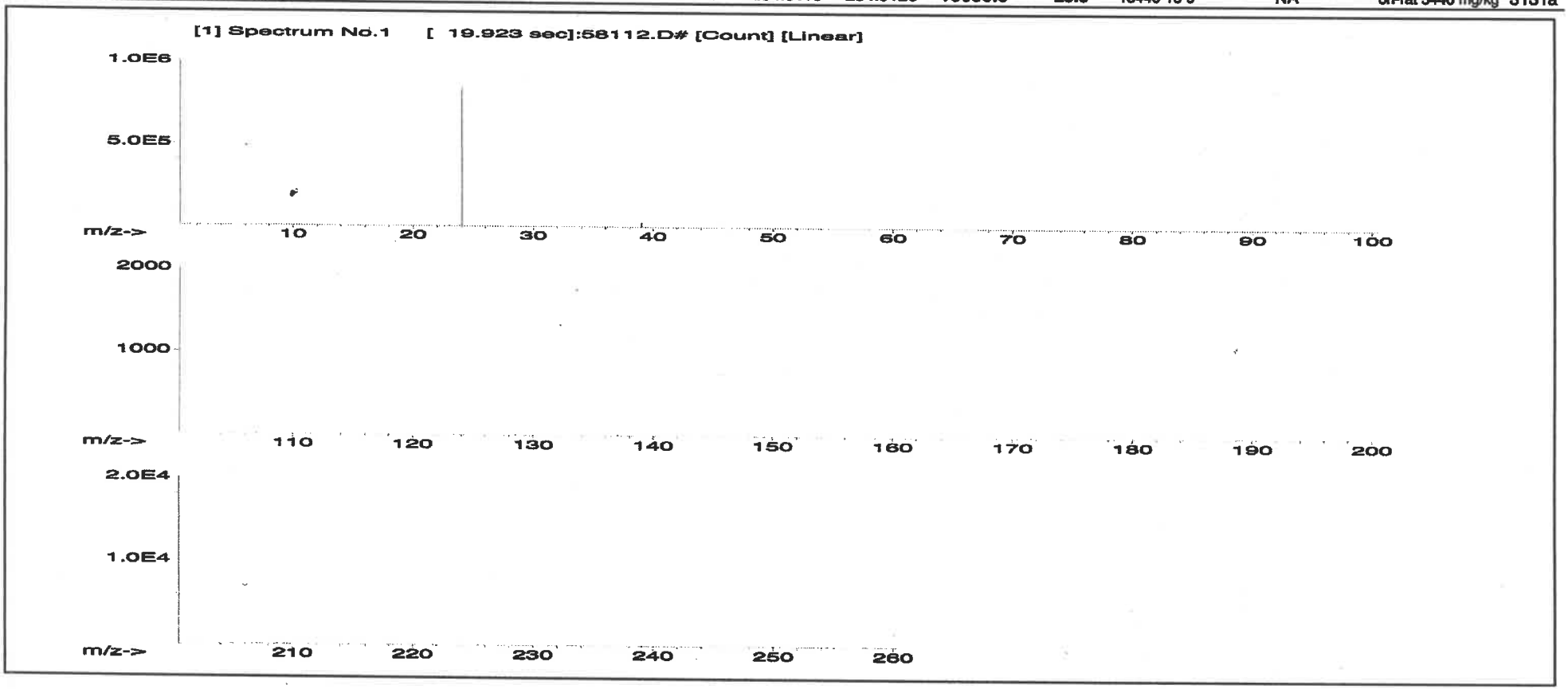
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CERTIFIED WEIGHT REPORT:

Part Number:	**58112**		**Lot #**	
Lot Number:	**091823**	**Solvent:**	24002546	Nitric Acid
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	091826			
Recommended Storage:	Ambient (20 °C)	M5768, M5769	BP	R: 1/3/24
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05 Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058 Flask Uncertainty		

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5798

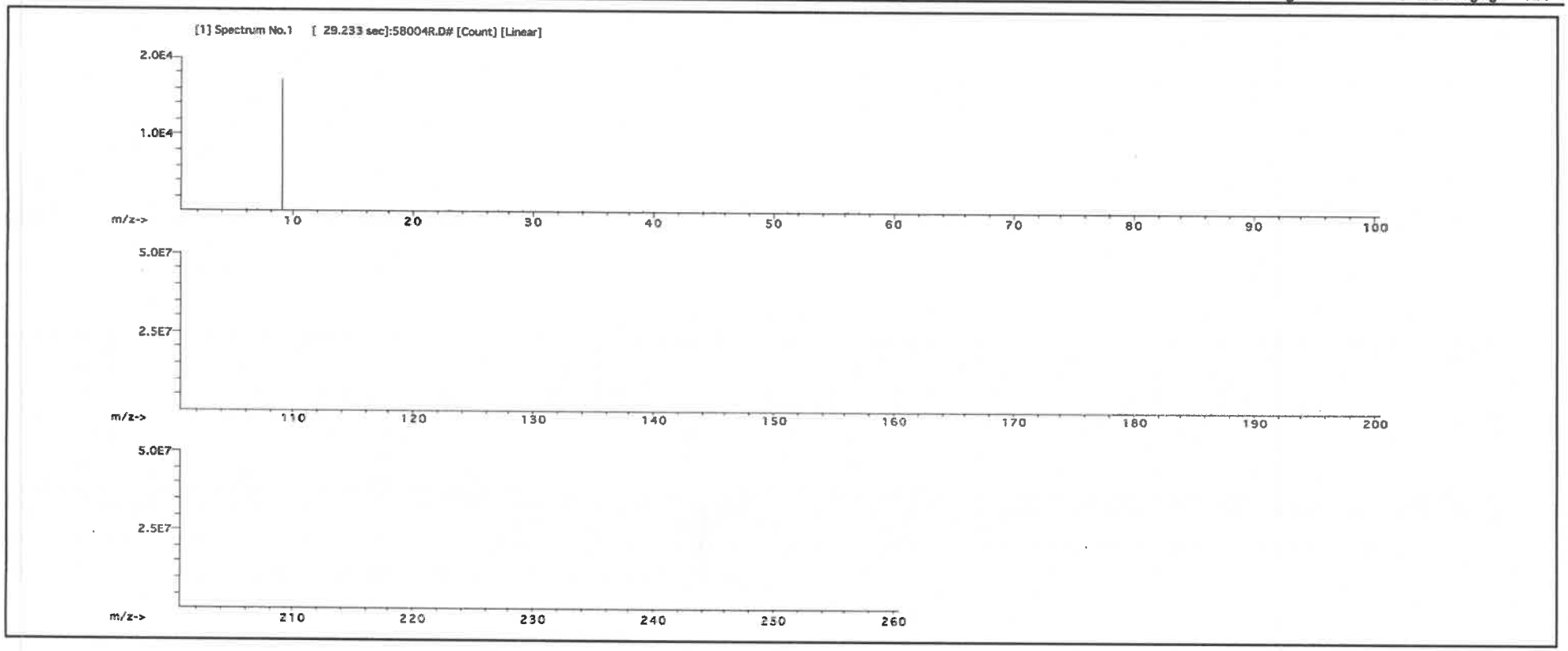
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



74649-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R? 02/09/24 IM5799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

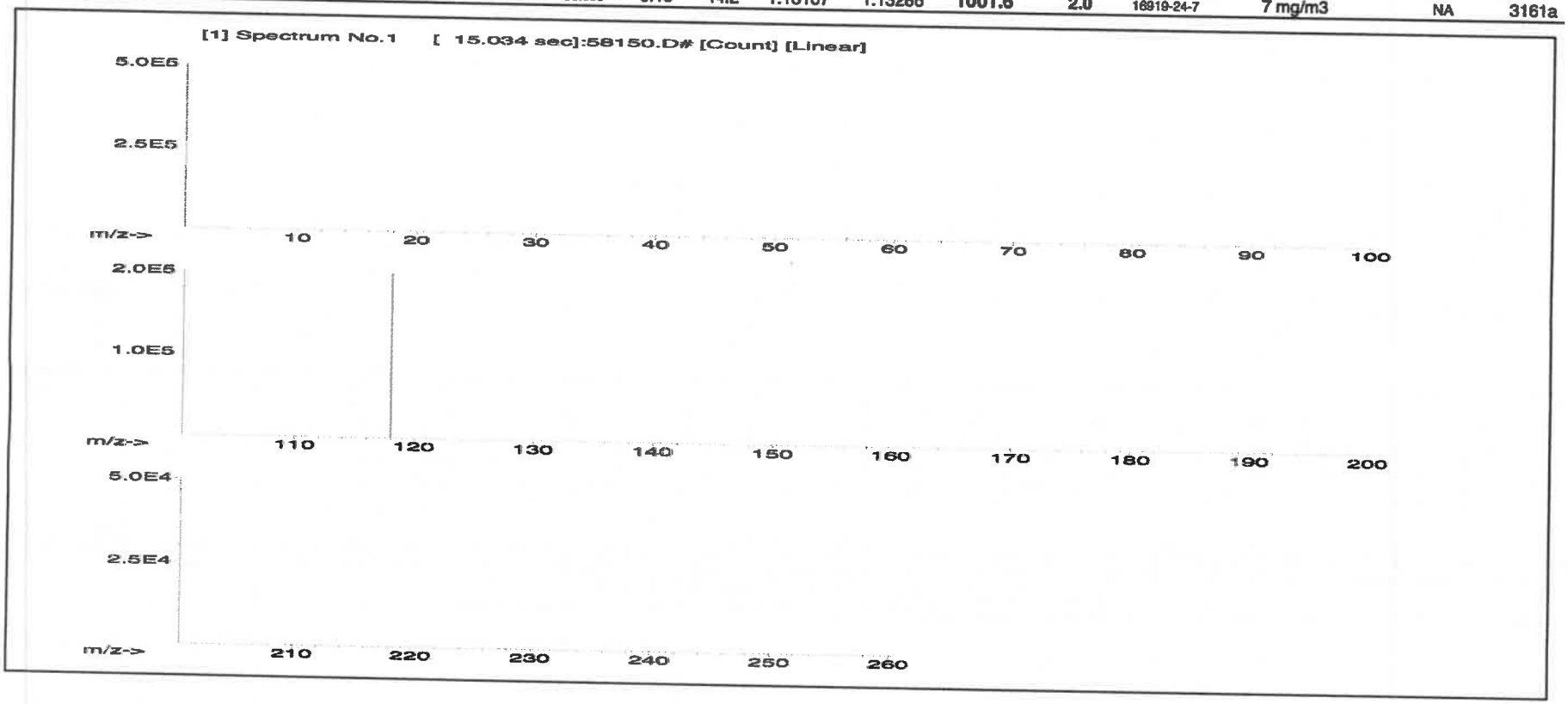
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 IM5800 BH

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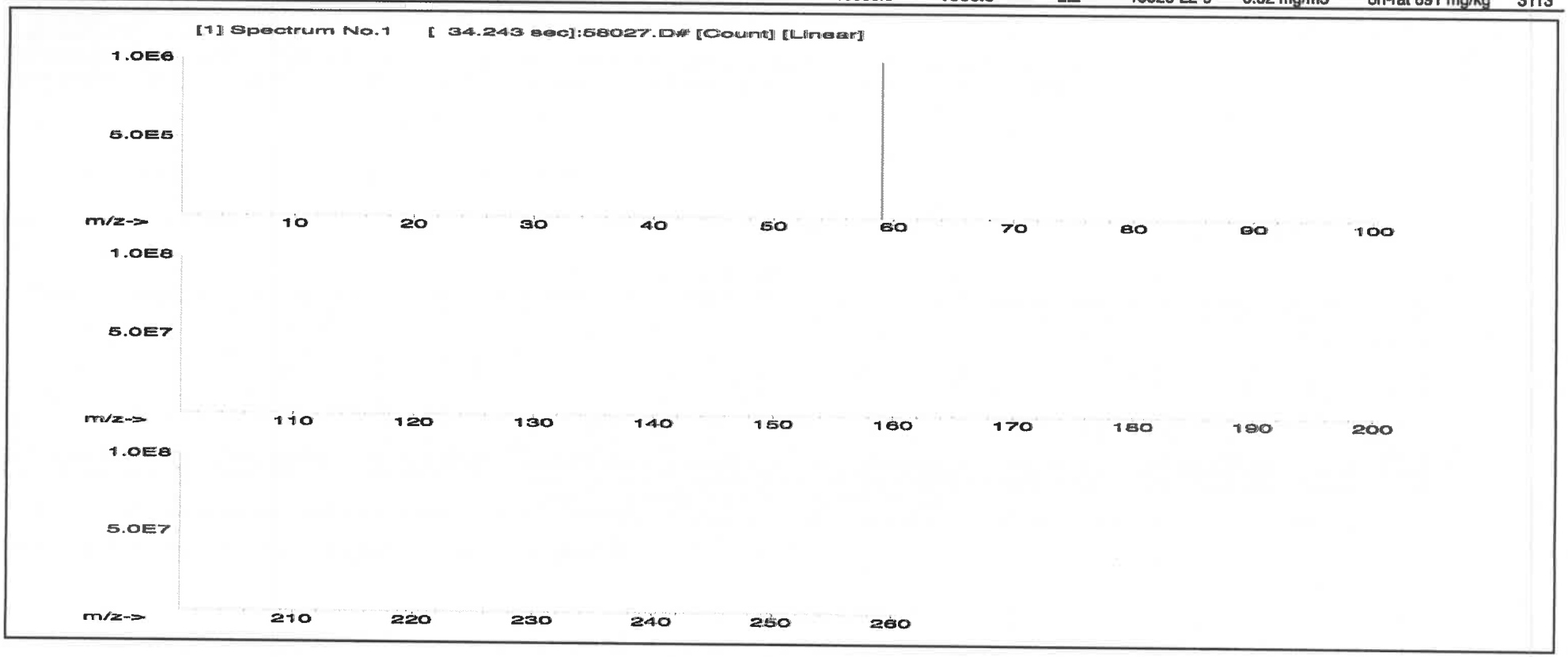
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	2.2	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5801 BH

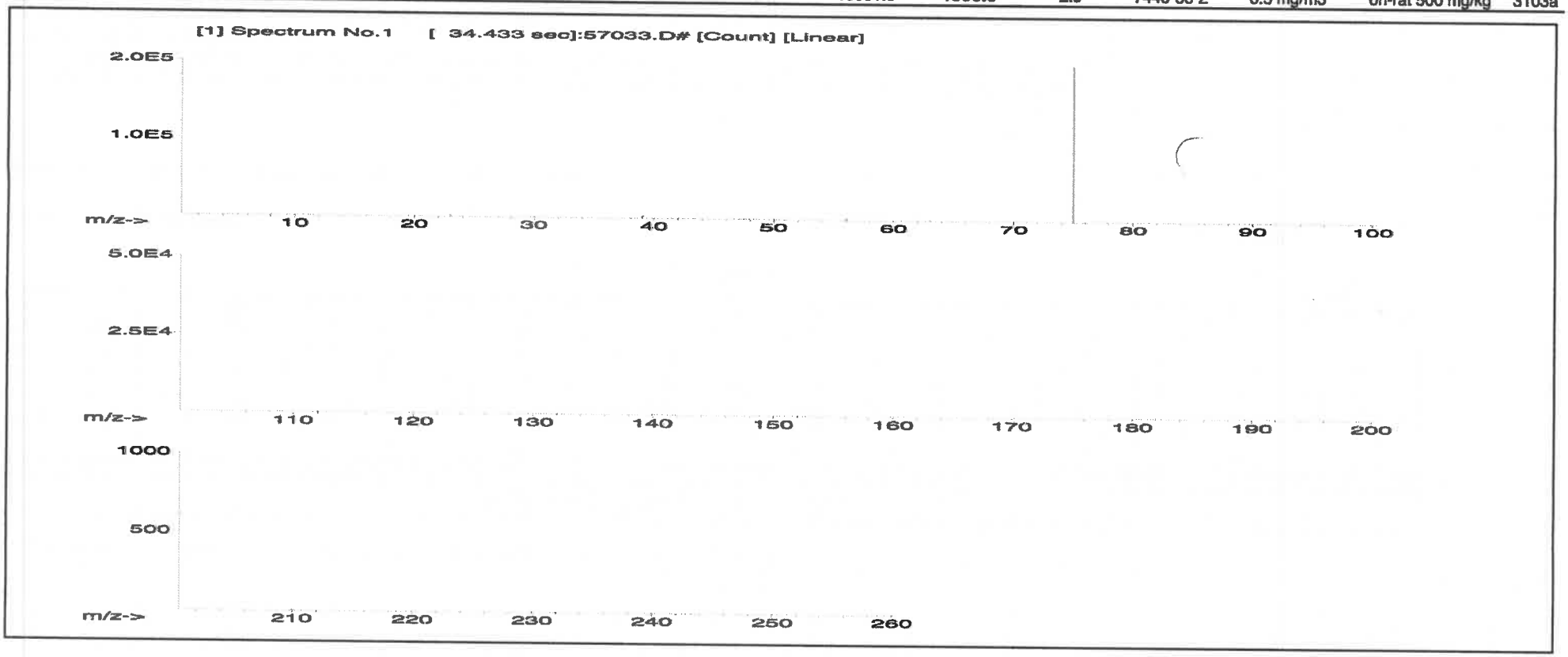
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
Description:	**Arsenic (As)**				
		2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	2.0	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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A: 02/09/24 M.5814

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CERTIFIED WEIGHT REPORT:

Part Number: 57005
Lot Number: 071123
Description: Boron (B)

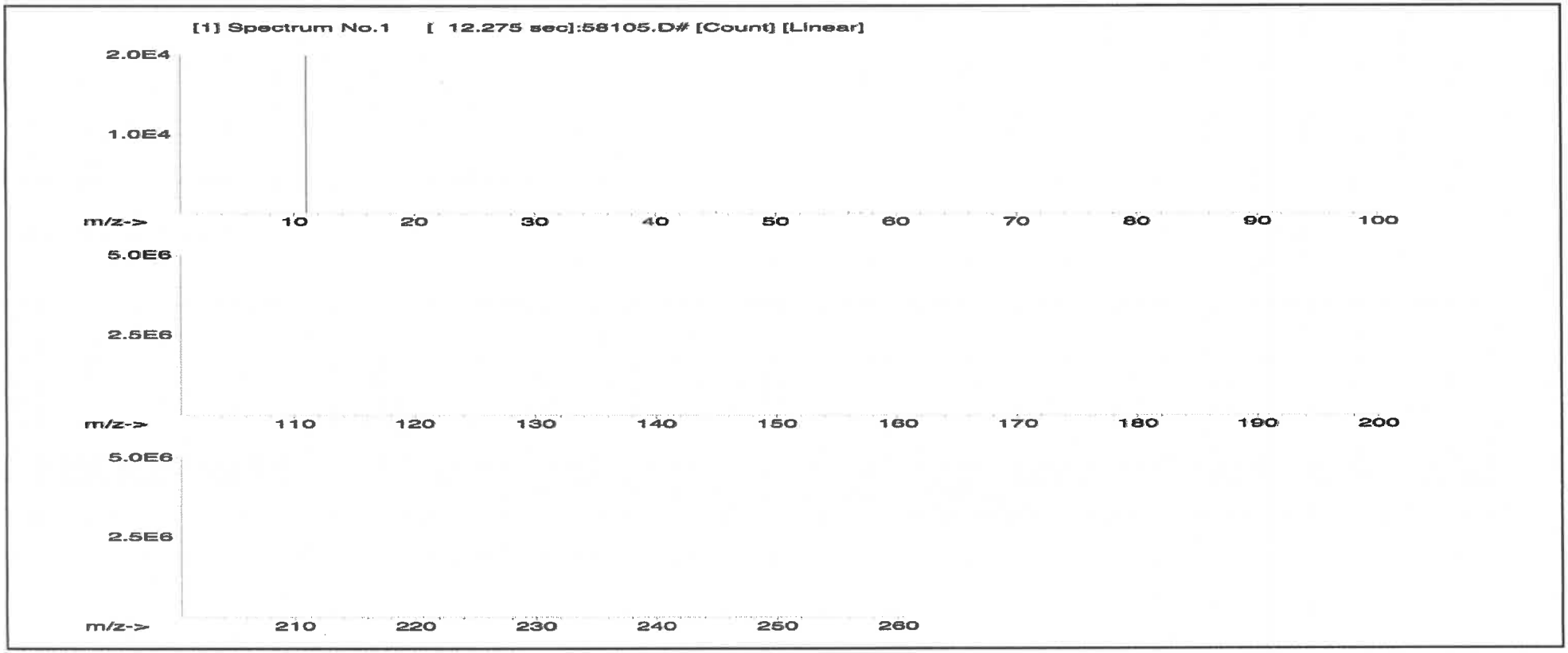
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

	Lot #			
Solvent:	MKBQ8597V	Ammonium hydroxide		
	2.0%	40.0 (mL)	Ammonium hydroxide	
		5E-05	Balance Uncertainty	

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R1 02/09/24. M58165

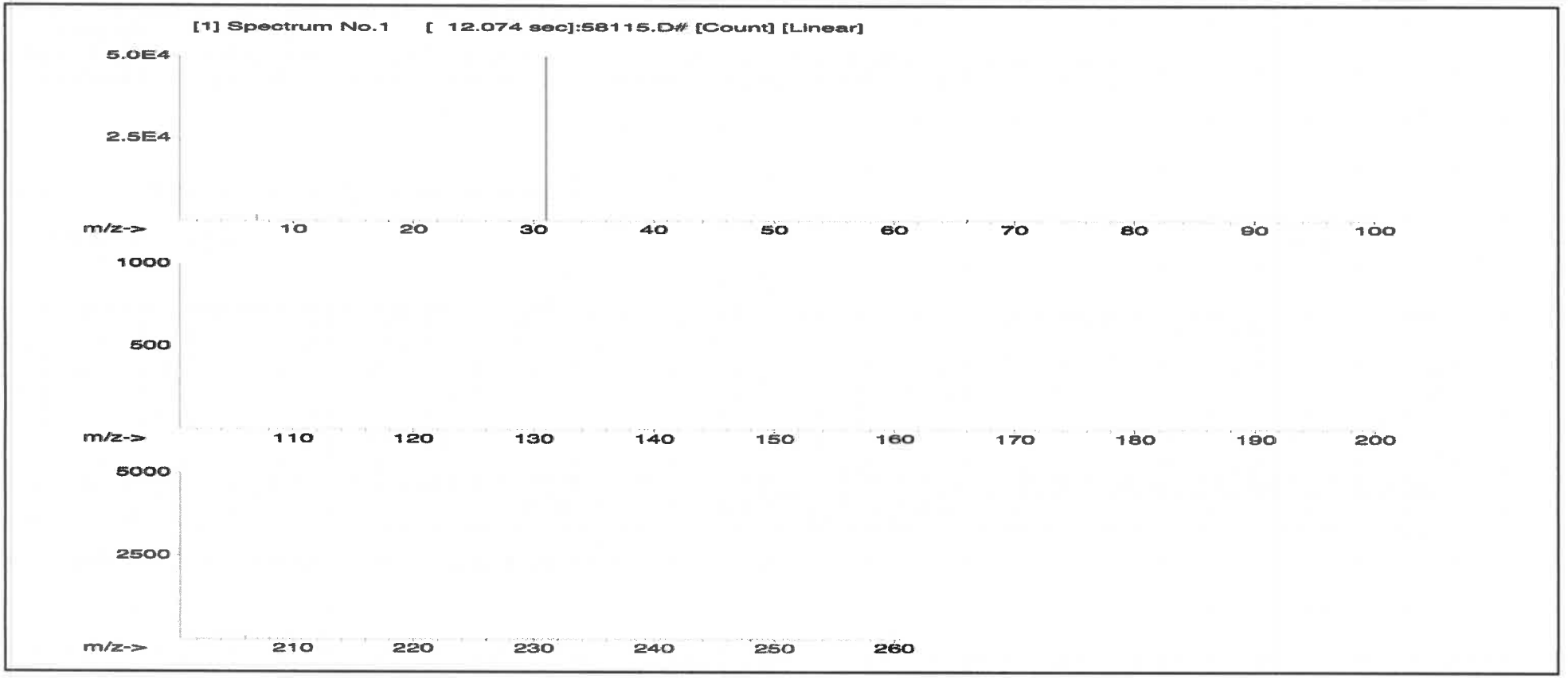
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CERTIFIED WEIGHT REPORT:

Part Number:	**57115**		**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**				
Description:	**Phosphorous (P)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5816

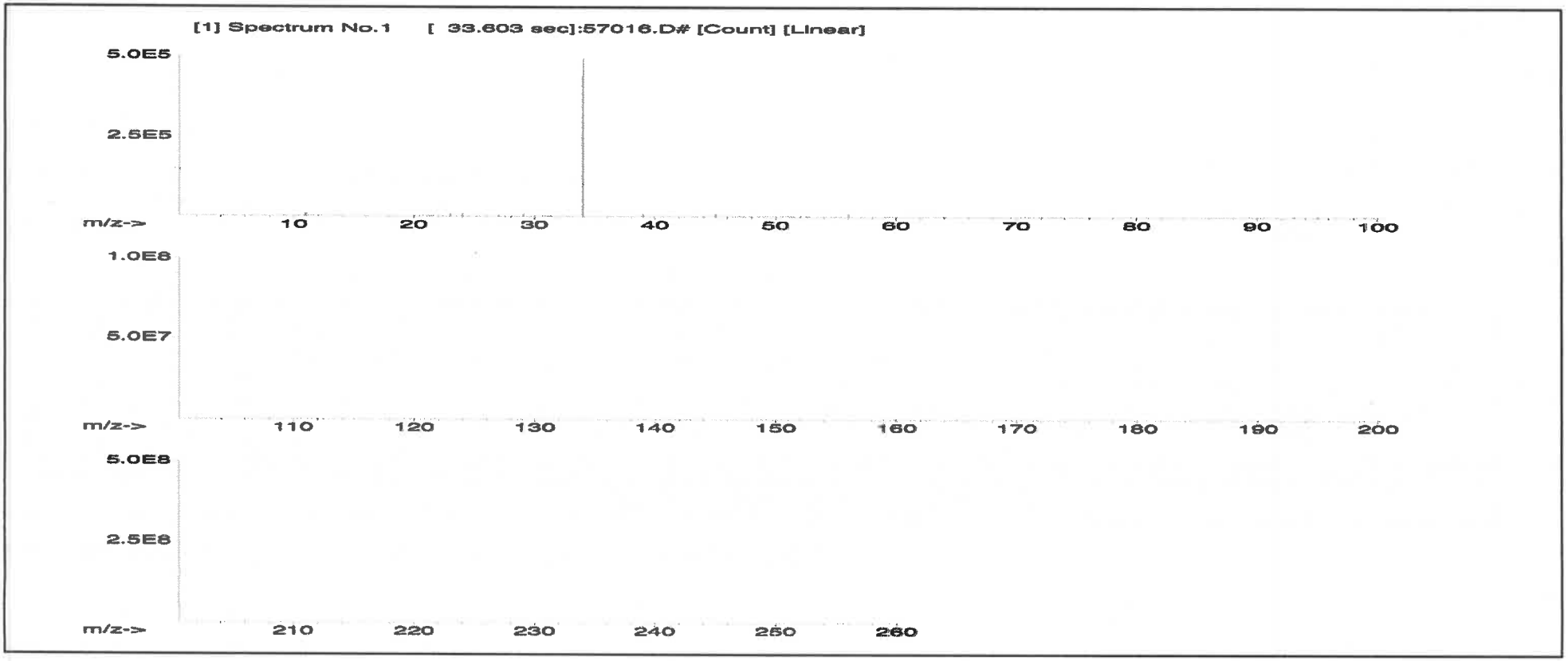
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CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 02/09/24 M5817

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CERTIFIED WEIGHT REPORT:

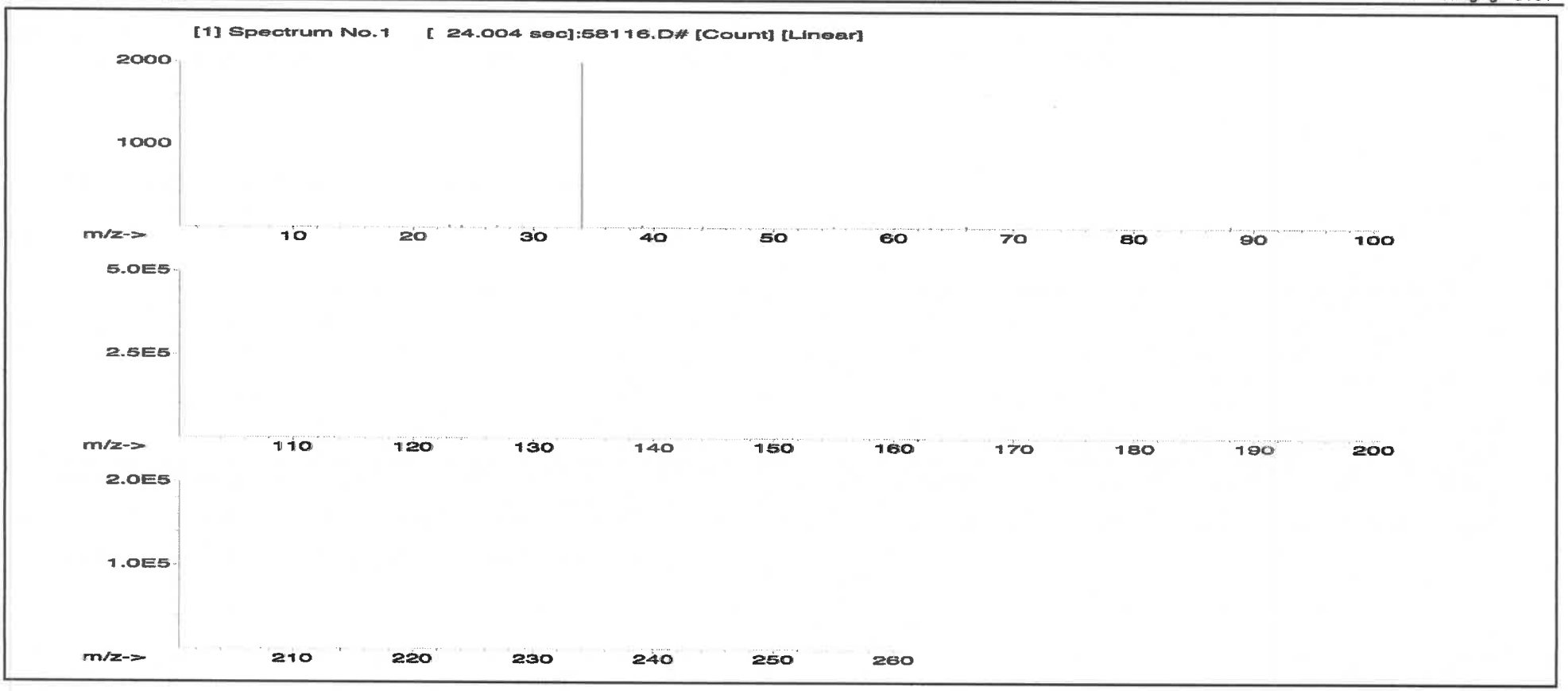
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	ori-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M.5818
Lot #

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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

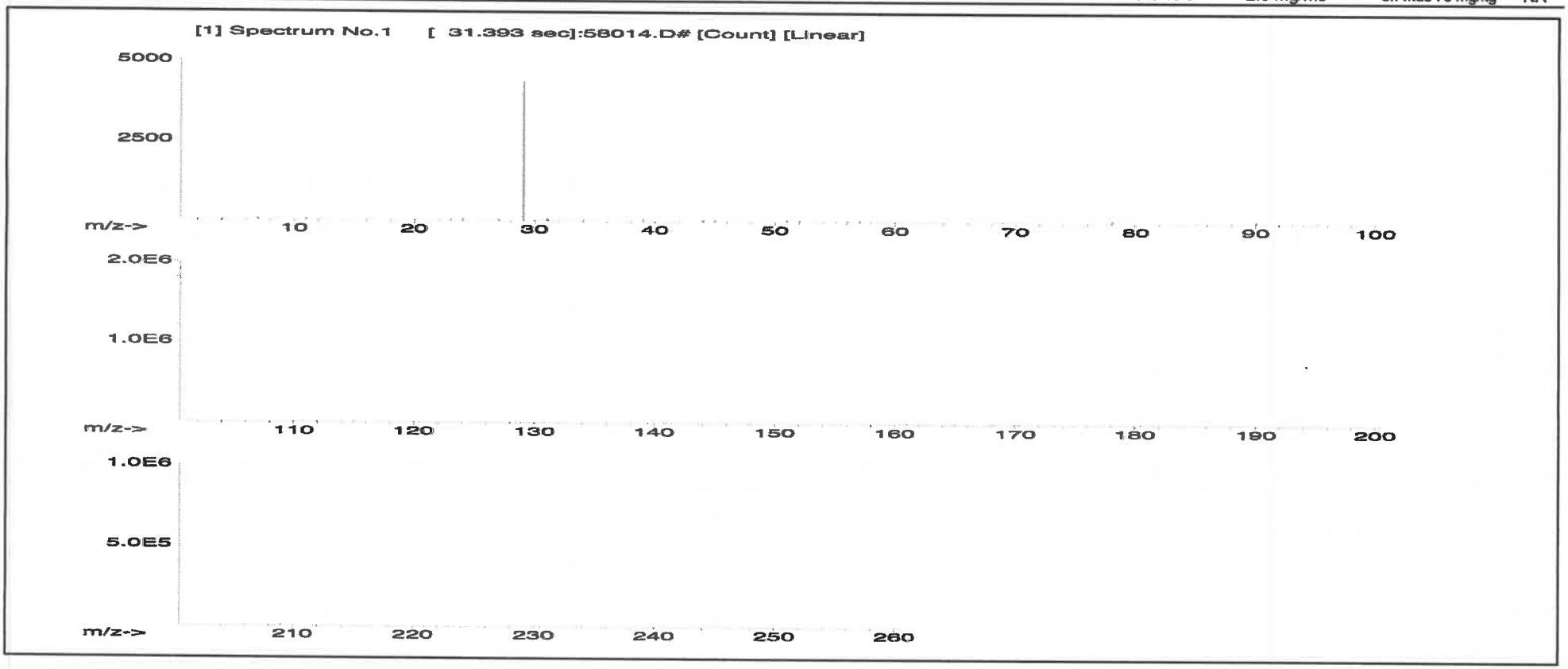
Solvent: 24002546 Nitric Acid ± 5E-05 Balance Uncertainty

2% 40.0 (mL) Nitric Acid

Aleah O'Brady
Formulated By: Aleah O'Brady 122023

Pedro Rentas
Reviewed By: Pedro L. Rentas 122023

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorosilicate (Si)	IN009	SID082022A1	1000	99.999	0.10	14.4	13.8854	13.8855	**1000.0**	**2.0**	16919-19-0	2.5 mg/m3	orl-mus 70 mg/kg	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

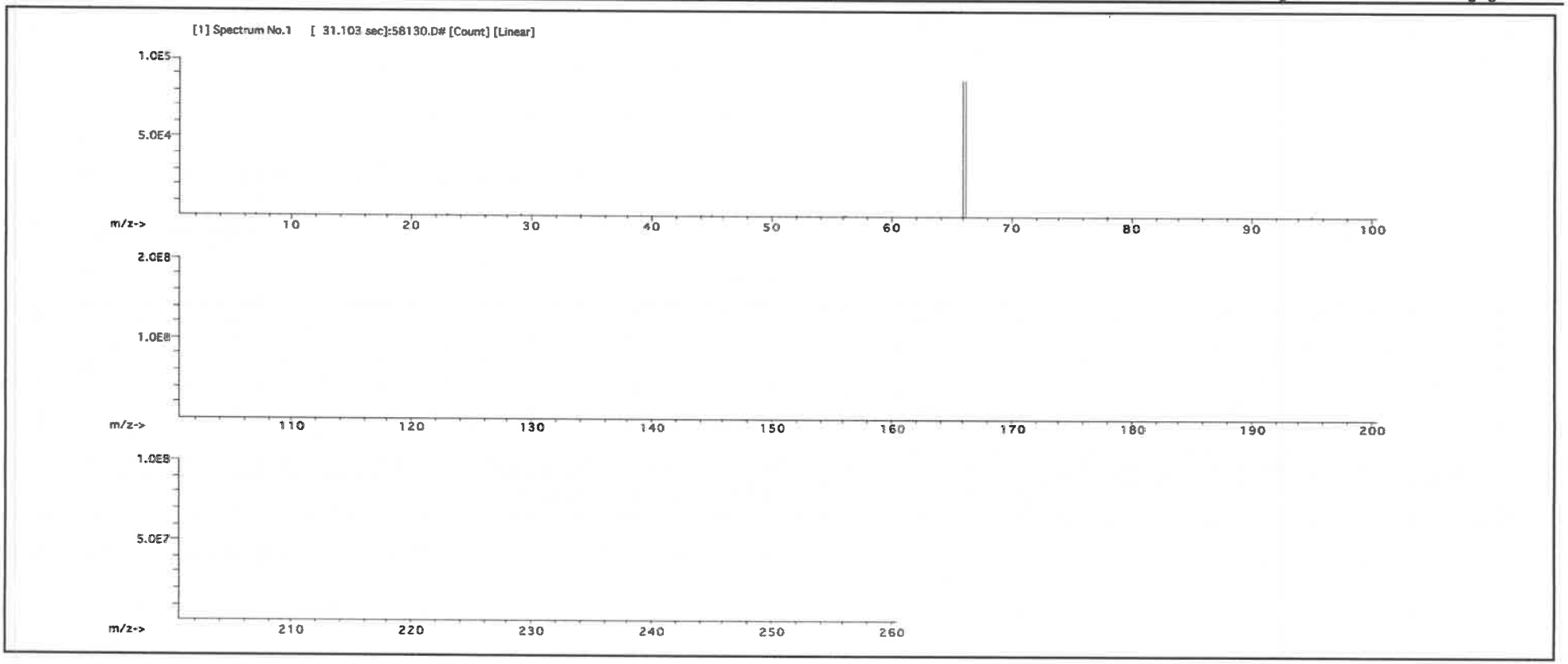
Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5820

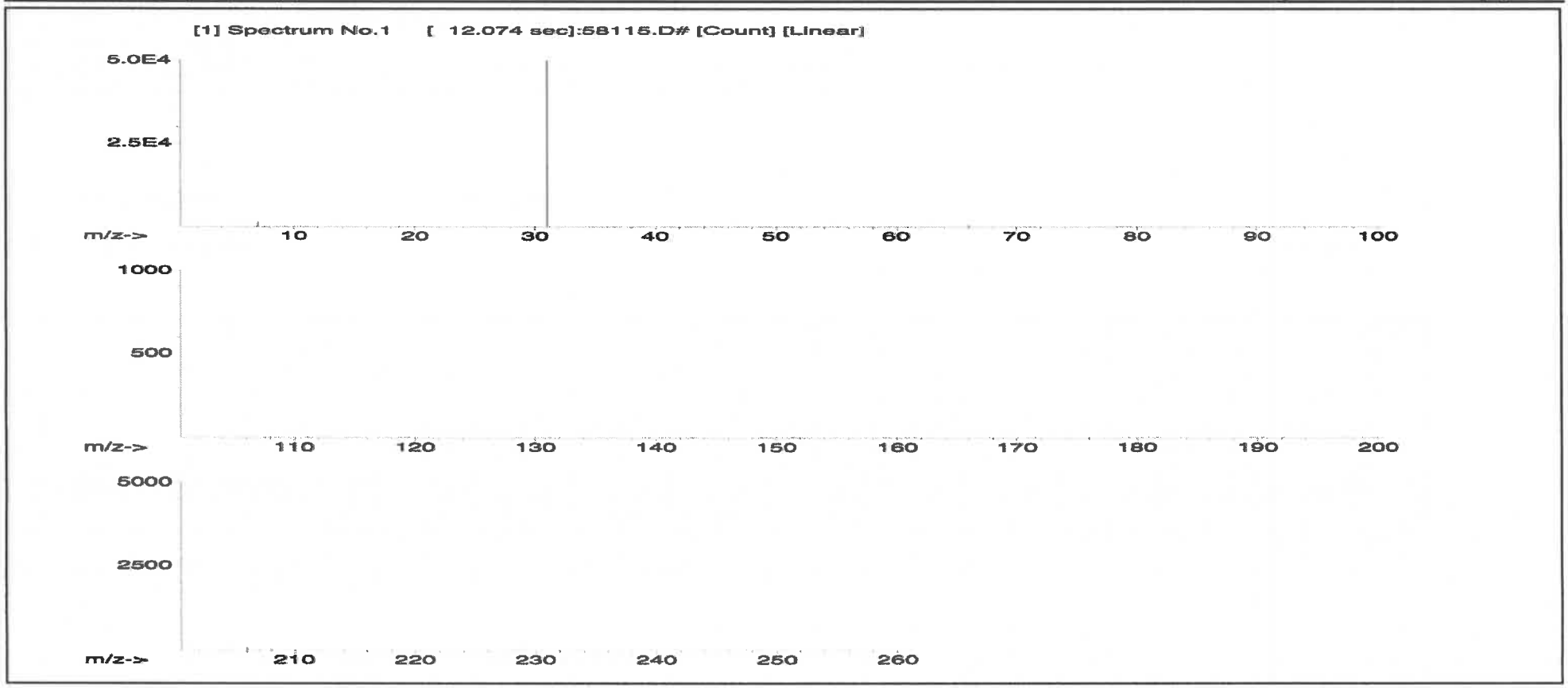
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry 091123
Reviewed By:	Pedro L. Rentas 091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

MSS28 - 37
MSS53
3/30/23

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	CN^-	99

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M5962 R! 06/14/24.

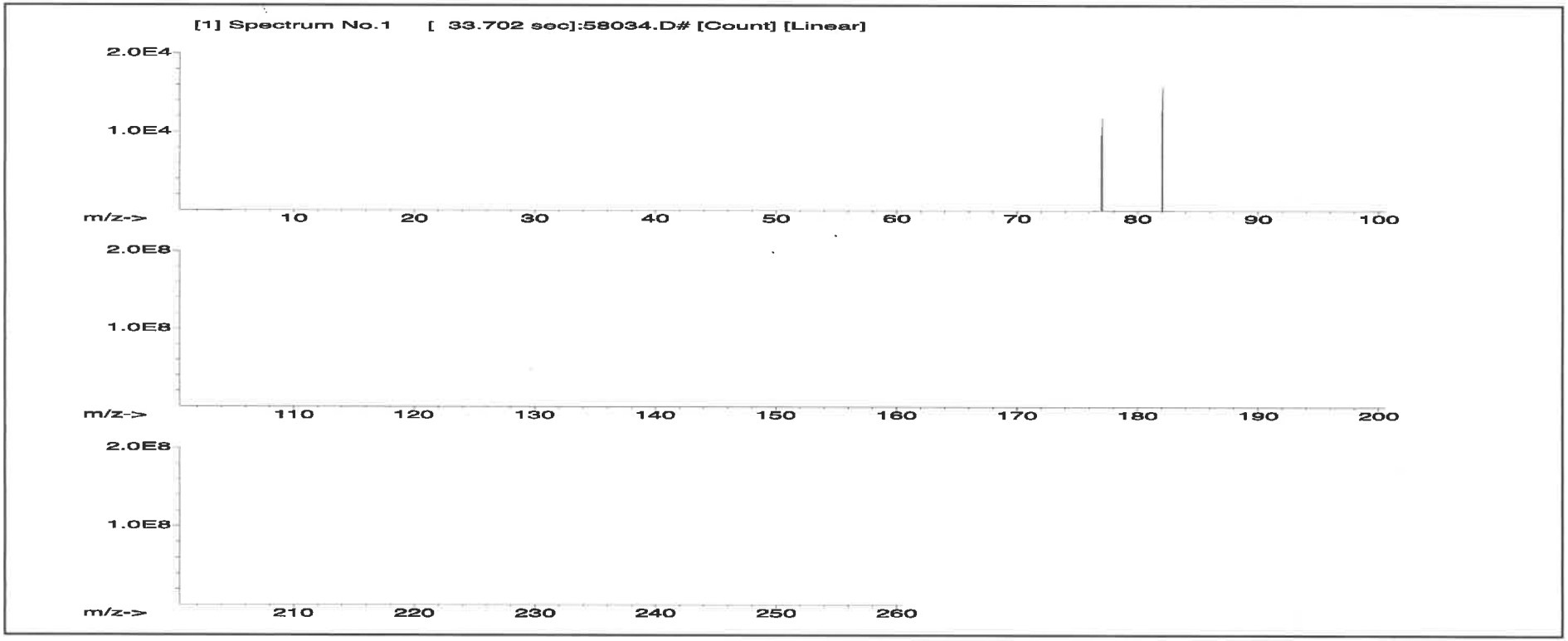
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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

MS963 MS964 MS965
MS966 MS967 MS968

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

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M5970, M5971 R: 7/01/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

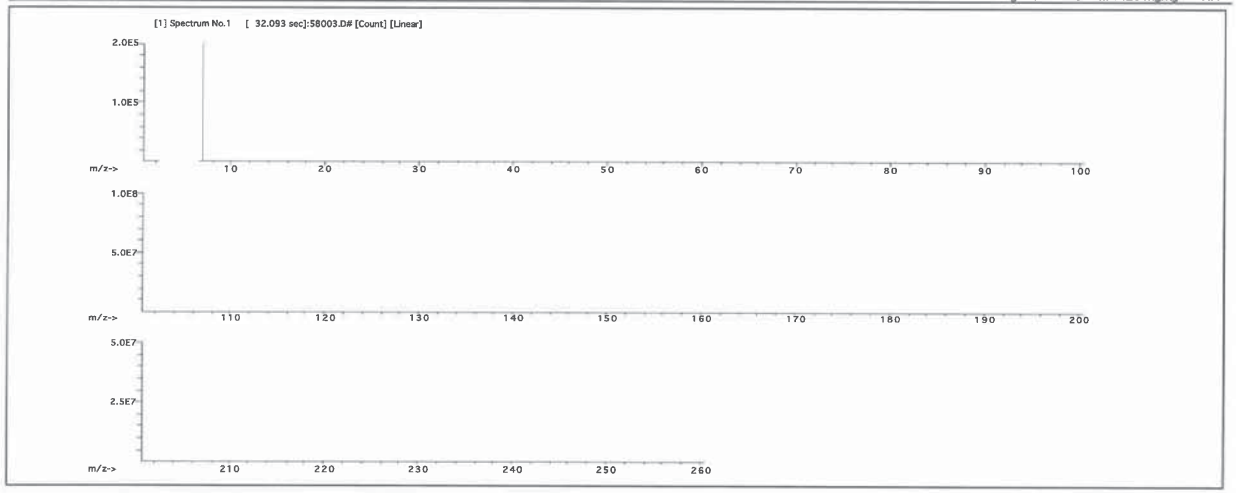
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.016 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5978, M5979

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\ (u_{char\ i})^2)^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (\bar{x}_a)\ (u_{char\ a})$

$\bar{x}_a$ = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

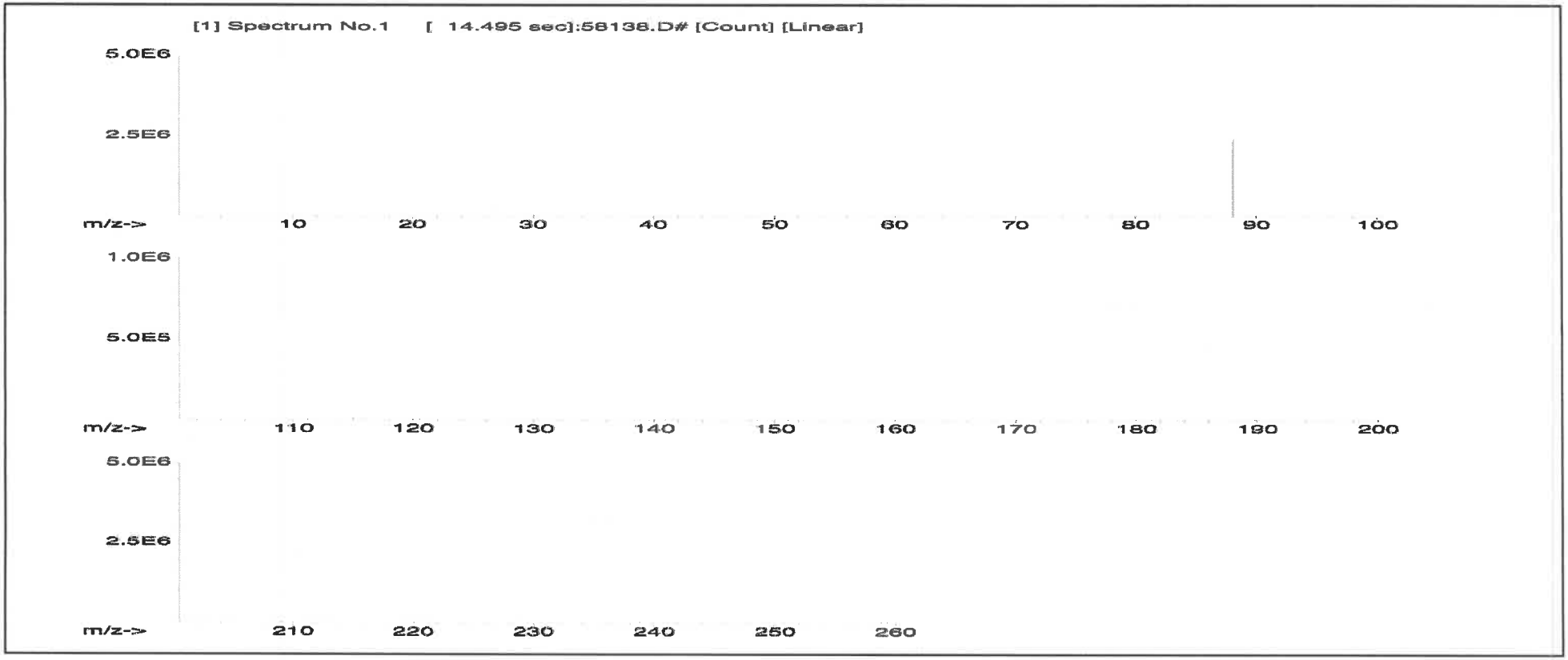
45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:	**57038**			**Lot #**	
Lot Number:	**031524**		**Solvent:**	24002546	Nitric Acid
Description:	**Strontium (Sr)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	031527				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M6033

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

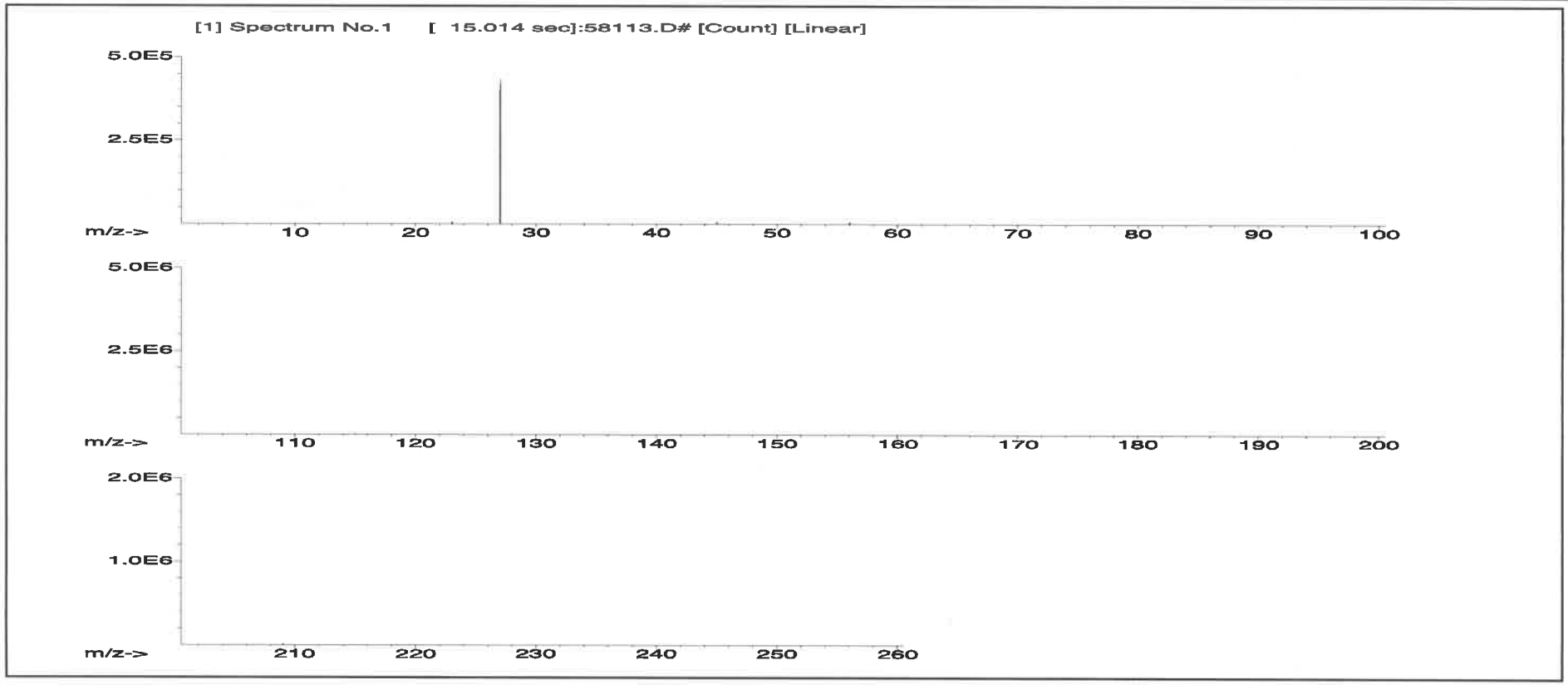
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
Description:	**Aluminum (Al)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Lot #

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Nitric Acid 69%
CMOS

Recv date: 1.1.—08/01/2023

M6034, M6037
M6035, M6038,
M6036,

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

Recv date: 1.1.—08/01/2023

M6034, M6037
M6035, M6038,
M6036,

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Received — 08/01/2024
paper
M6039
M6040

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.192
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6094
M6095.

metdig
10/21/24.

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

M6096
M6097
M6098
M6099
M6100

Mtd 9/21/24

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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R: 01/03/24 M5806, M5807

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 ± 0.06 Flask Uncertainty

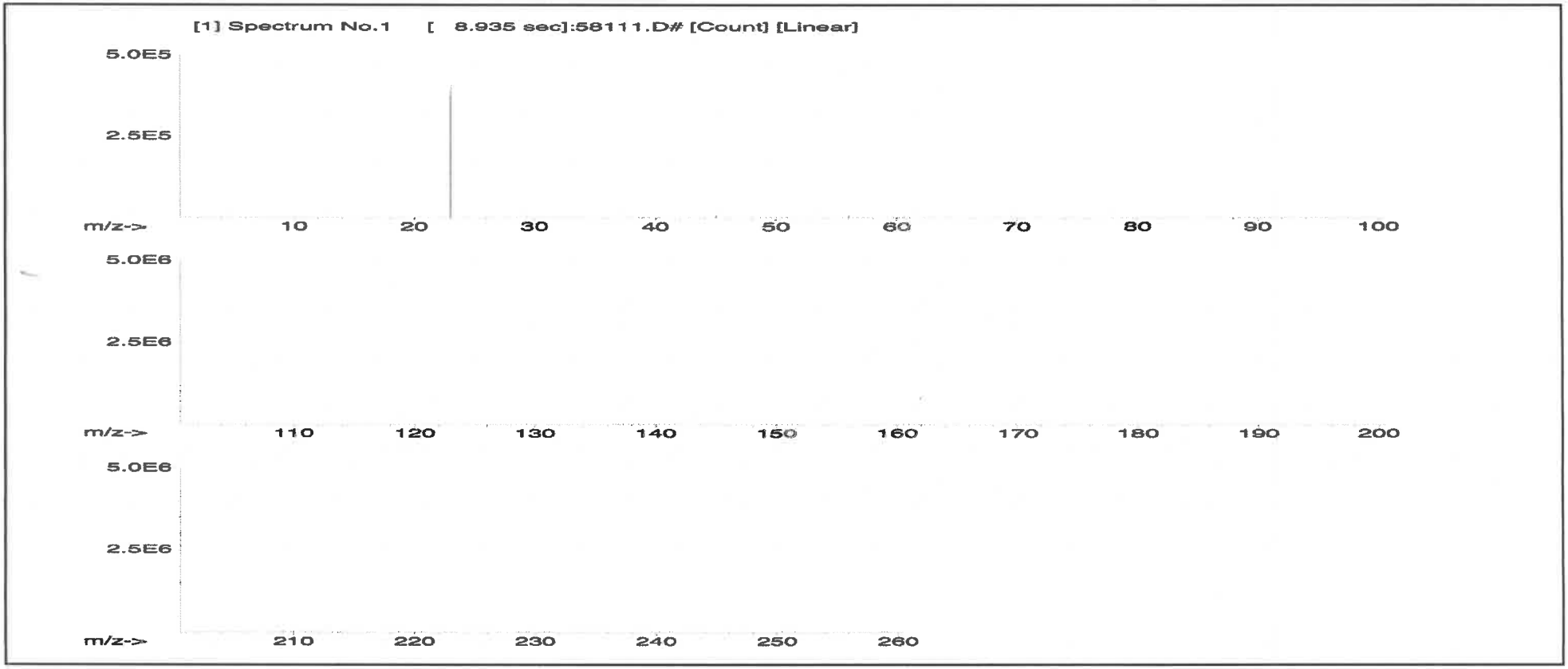
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 01/03/24 M5802, M5803

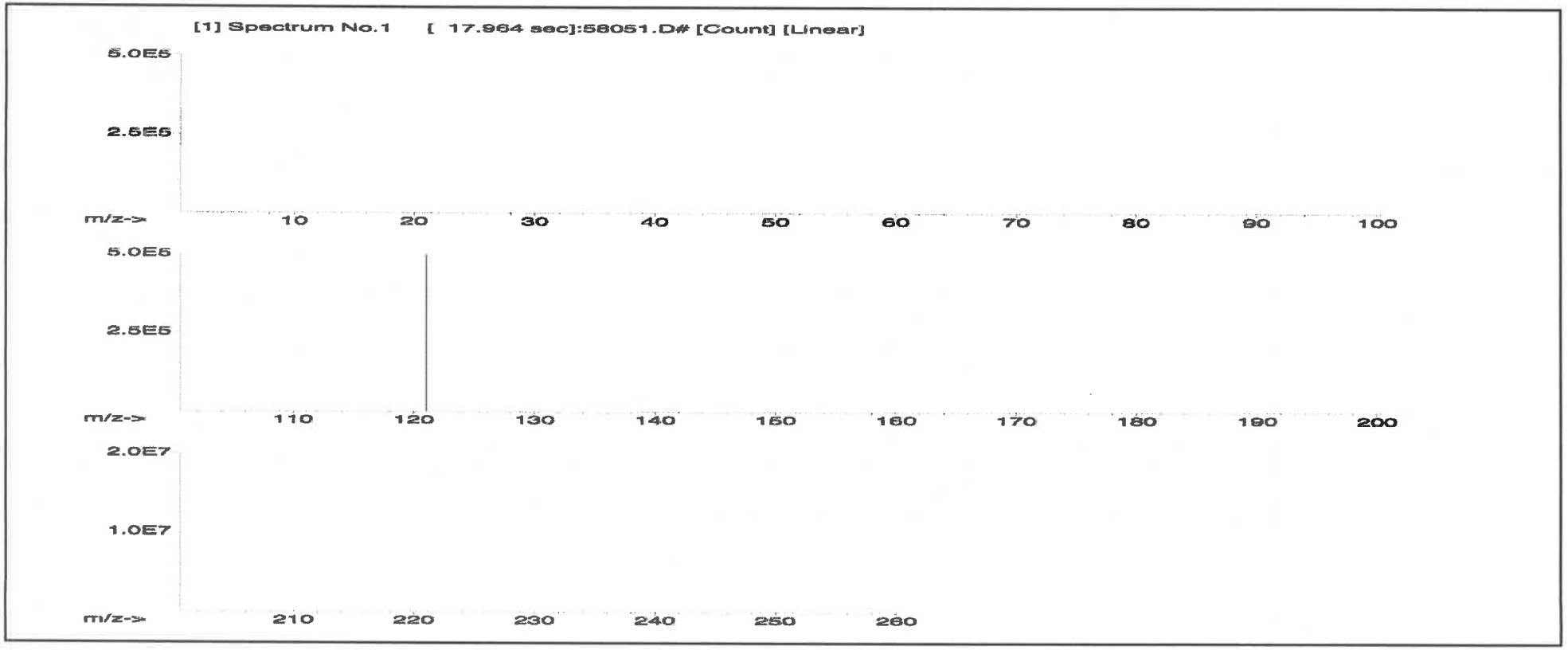
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**120523**				
Description:	**Antimony (Sb)**	2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	120526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

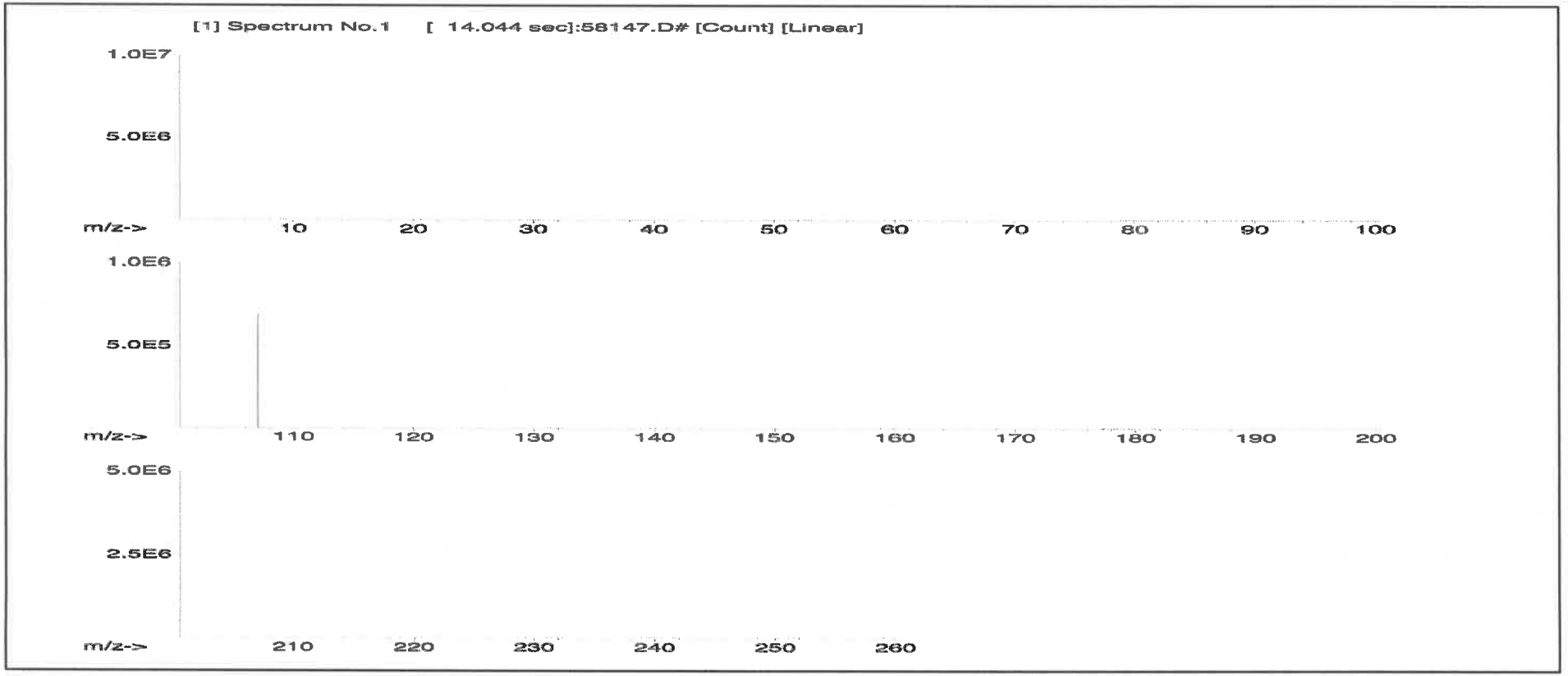
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R ! 8/5/24

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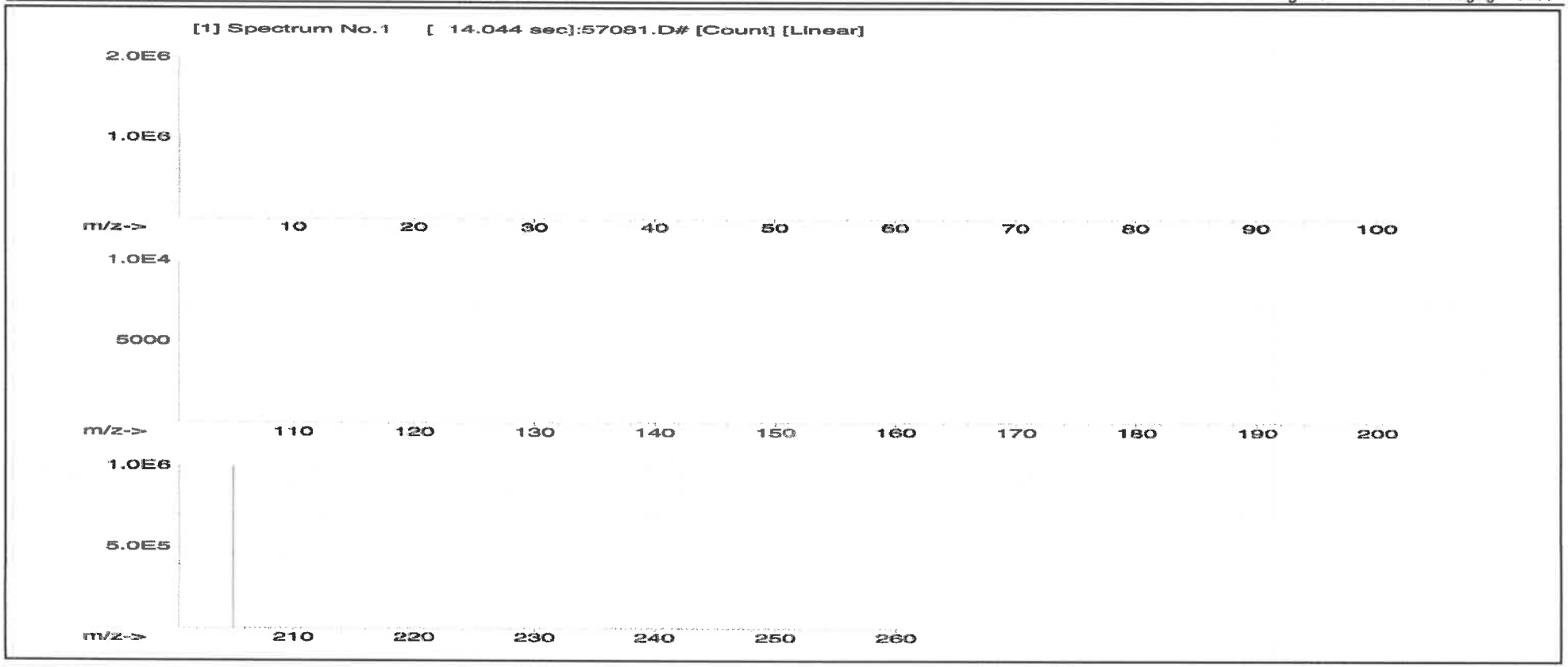
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**			**Lot #**	
Lot Number:	**062724**		**Solvent:**	24002546	Nitric Acid
Description:	**Thallium (Tl)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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Bc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

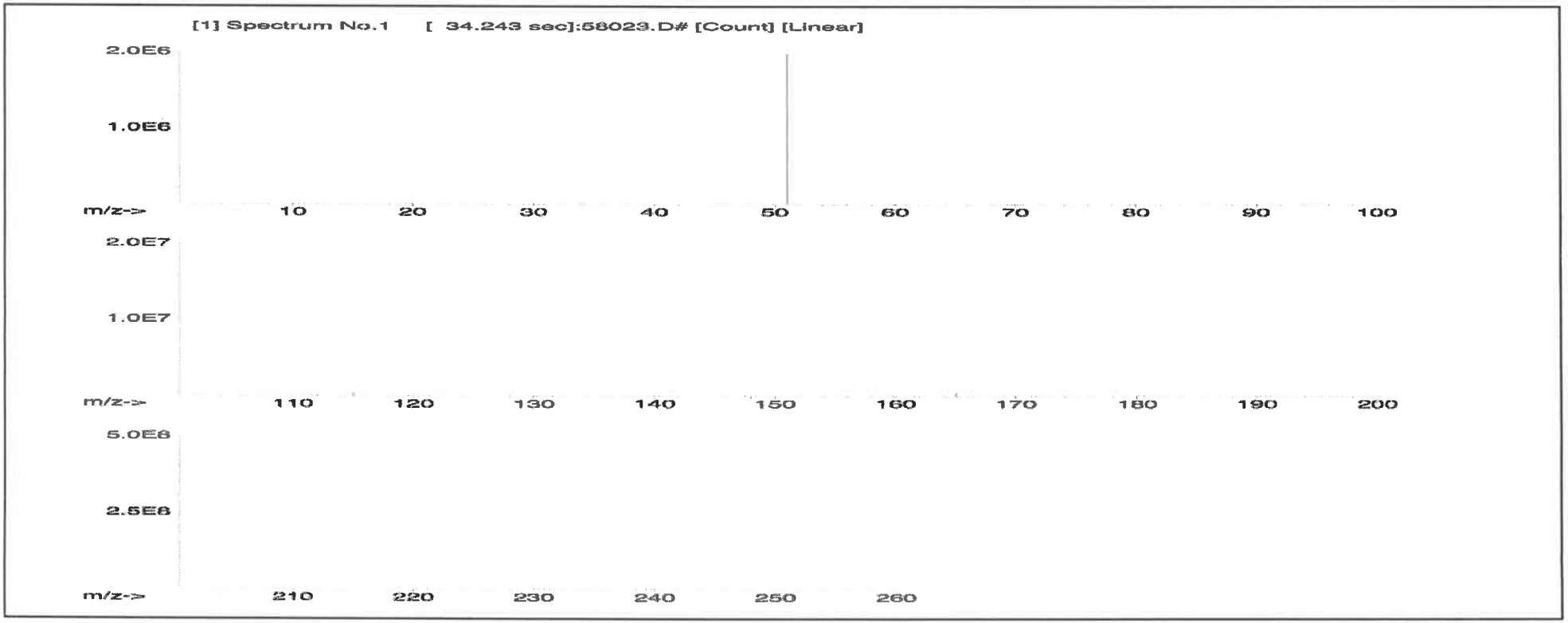
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Chemtech Project Number: P4549

COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: Tetra Tech	PROJECT NAME: NWIRP Bethpage	BILL TO: SEE CONTRACT PO#
ADDRESS: 4433 Corporation Ln, Suite 300	PROJECT #: 112G08005-WE13 LOCATION: GW IDW	ADDRESS:
CITY: Virginia Beach STATE: VA ZIP: 23462	PROJECT MANAGER: Ernie Wu	CITY: STATE: ZIP:
ATTENTION: Ernie Wu	E-MAIL: ernie,wu@tetratech.com	ATTENTION: PHONE:
PHONE: 757-466-4901 FAX: 757-461-4148	PHONE: 757-466-4901 FAX: 757-461-4148	

DATA TURNAROUND INFORMATION

FAX:_____48hr_____ DAYS*
HARD COPY:_____48hr_____DAYS*
EDD_____48hr_____DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ❑ RESULTS ONLY
- ❑ RESULTS + QC
- ❑ New Jersey REDUCED
- ❑ New Jersey CLP
- ❑ EDD Format_____
- ❑ USEPA CLP
- ❑ New York State ASP "B"
- ❑ New York State ASP "A"
- ❑ Other_____

ANALYSIS

1	2	3	4	5	6	7	8	9
VOC's (EPA 624)	pH	Total Metals	PCB's (EPA 8082)					

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES A		B						COMMENTS
								1	2	3	4	5	6	7	8	9	
1.	TT-TB-20241024	QA		X	10/24/24	10:00	2	2									Trip Blank
2.	TT-067-IDWGW-20241024	AQ		X	10/24/24	14:00	5	2	1	1	1						
3.	TT-068-IDWGW-20241024	AQ		X	10/24/24	14:05	5	2	1	1	1						
4.	TT-069-IDWGW-20241024	AQ		X	10/24/24	14:10	5	2	1	1	1						
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	10/24/24 15:00	1. 15:30 10.24.24
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.	10-24-2024 1905	

Conditions of bottles or coolers at receipt: q Compliant q Non Compliant q Cooler Temp 3.0°C
MeOH extraction requires an additional 4oz. Jar for percent solid q Ice in Cooler?: yes
Comments:
48hr TAT - CTO-WE13 Drilling GW IDW Sampling - Frac Tank #3291 (TT-050)

Page 1 of 1

SHIPPED VIA: CLIENT: ❑ Hand Delivered ❑ Overnight
CHEMTECH: ❑ Picked Up ❑ Overnight

Shipment Complete ❑ YES ❑ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

Order ID : P4549 TETR06
Client Name : Tetra Tech NUS, Inc.
Client Contact : Ernie Wu
Invoice Name : Tetra Tech NUS, Inc.
Invoice Contact : Ernie Wu

Order Date : 10/24/2024 4:00:00 PM
Project Name : CTO WE13
Receive DateTime : 10/24/2024 ~~12:00:00~~ 19:05 AM
Purchase Order :

Project Mgr :
Report Type : Level 4
EDD Type : ADAPT
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P4549-01	TT-TB-20241024	Water	10/24/2024	10:00					
					VOCMS Group4		624.1		2 Bus. Days
P4549-02	TT-067-IDWGW-20241024	Water	10/24/2024	14:00					
					VOCMS Group4		624.1		2 Bus. Days
P4549-03	TT-068-IDWGW-20241024	Water	10/24/2024	14:05					
					VOCMS Group4		624.1		2 Bus. Days
P4549-04	TT-069-IDWGW-20241024	Water	10/24/2024	14:10					
					VOCMS Group4		624.1		2 Bus. Days

Relinguished By :
Date / Time : 10/25/24 0900

Received By :
Date / Time : 10/25/24 0900 Rgh 5

Storage Area : VOA Refridgerator Room