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 : P4868

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

Table Of Contents for P4868

1) METALS DATA 2

2) Signature Page 4

3) Case Narrative 5

4) Qualifier Page 6

5) Conformance/Non Conformance 7

6) QA Checklist 8

7) Chronicle 9

8) Hit Summary 10

9) Sample Data 11

- 9.1) RW5-SP100-20241114 12
- 9.2) RW5-SP303-20241114 13

10) METALS CALIBRATION DATA 14

- 10.1) Initial and Continuing Calibration Verification 15
- 10.2) CRDL Standard For AA & ICP 28
- 10.3) Initial and Continuing Calibration Blank Summary 30
- 10.4) Preparation Blank Summary 40
- 10.5) Interference Check Sample 42

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) LB133502 72
- 14.3) LB133540 262
- 14.4) LB133490 374
- 14.5) METALS RAW DATA - PREP 376
  - 14.5.1) PB165011 376

14.5.2) PB165066 379
15) Analytical Runlogs 382
16) Standard Prep Logs 393
17) Shipping Document 547
17.1) Chain Of Custody 548
17.2) Lab Certificate 549

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

Cover Page

Order ID : P4868

Project ID : CTO WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
P4868-01	RW5-SP100-20241114
P4868-02	RW5-SP201-20241114
P4868-03	RW5-SP303-20241114

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 : _____

Date: 11/27/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE13
Project Manager: Ernie Wu
Chemtech Project # P4868
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
3 Water samples were received on 11/14/2024.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Mercury, Metals ICP-TAL, METALS-TAL, SVOC-SIMGroup1 and SVOC-TCL BNA - 20. 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 analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met criteria for all samples.

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_____

Alliance TECHNICAL GROUP
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

QA Control # A3040961

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: P4868 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.		✓	
	The Serial Dilution met criteria for all samples.			
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.			
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).

_____ _____

QA REVIEW Date

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P4868

	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:** 11/27/2024

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

LAB CHRONICLE

OrderID:	P4868	**OrderDate:**	11/14/2024 3:41:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	CTO WE13
Contact:	Ernie Wu	**Location:**	L41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4868-01	**RW5-SP100-20241114**	**Water**			**11/14/24**			**11/14/24**
			Mercury	7470A		11/18/24	11/18/24	
			Metals ICP-TAL	6010D		11/15/24	11/18/24	
P4868-03	**RW5-SP303-20241114**	**Water**			**11/14/24**			**11/14/24**
			Mercury	7470A		11/18/24	11/18/24	
			Metals ICP-TAL	6010D		11/15/24	11/18/24	

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

Hit Summary Sheet
SW-846

SDG No.: P4868 **Order ID:** P4868

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW5-SP100-20241114									
P4868-01	RW5-SP100-20241114	Water	Calcium	3290		33.0	250	1000	ug/L
P4868-01	RW5-SP100-20241114	Water	Chromium	1.94	J	0.66	2.50	5.00	ug/L
P4868-01	RW5-SP100-20241114	Water	Cobalt	2.82	J	0.50	3.75	15.0	ug/L
P4868-01	RW5-SP100-20241114	Water	Iron	1210		18.5	40.0	50.0	ug/L
P4868-01	RW5-SP100-20241114	Water	Lead	6.72		3.51	4.80	6.00	ug/L
P4868-01	RW5-SP100-20241114	Water	Magnesium	1320		39.4	250	1000	ug/L
P4868-01	RW5-SP100-20241114	Water	Manganese	20.0		1.46	2.50	10.0	ug/L
P4868-01	RW5-SP100-20241114	Water	Nickel	4.70	J	0.85	5.00	20.0	ug/L
P4868-01	RW5-SP100-20241114	Water	Sodium	10800		237	500	1000	ug/L
P4868-01	RW5-SP100-20241114	Water	Zinc	14.8	J	1.75	5.00	20.0	ug/L
Client ID : RW5-SP303-20241114									
P4868-03	RW5-SP303-20241114	Water	Calcium	4720		33.0	250	1000	ug/L
P4868-03	RW5-SP303-20241114	Water	Chromium	4.33	J	0.66	2.50	5.00	ug/L
P4868-03	RW5-SP303-20241114	Water	Cobalt	1.62	J	0.50	3.75	15.0	ug/L
P4868-03	RW5-SP303-20241114	Water	Iron	46.5	J	18.5	40.0	50.0	ug/L
P4868-03	RW5-SP303-20241114	Water	Magnesium	1780		39.4	250	1000	ug/L
P4868-03	RW5-SP303-20241114	Water	Manganese	36.2		1.46	2.50	10.0	ug/L
P4868-03	RW5-SP303-20241114	Water	Nickel	2.38	J	0.85	5.00	20.0	ug/L
P4868-03	RW5-SP303-20241114	Water	Potassium	792	J	685	800	1000	ug/L
P4868-03	RW5-SP303-20241114	Water	Sodium	10700		237	500	1000	ug/L
P4868-03	RW5-SP303-20241114	Water	Zinc	9.05	J	1.75	5.00	20.0	ug/L

SAMPLE DATA

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:	11/14/24
Project:	CTO WE13	Date Received:	11/14/24
Client Sample ID:	RW5-SP100-20241114	SDG No.:	P4868
Lab Sample ID:	P4868-01	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	40.0	U	1	28.3	40.0	50.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-36-0	Antimony	6.25	U	1	2.06	6.25	25.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-38-2	Arsenic	8.00	U	1	3.48	8.00	10.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-39-3	Barium	12.5	U	1	6.28	12.5	50.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-41-7	Beryllium	0.75	U	1	0.13	0.75	3.00	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-43-9	Cadmium	0.75	U	1	0.094	0.75	3.00	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-70-2	Calcium	3290		1	33.0	250	1000	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-47-3	Chromium	1.94	J	1	0.66	2.50	5.00	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-48-4	Cobalt	2.82	J	1	0.50	3.75	15.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-50-8	Copper	8.00	U	1	7.07	8.00	10.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7439-89-6	Iron	1210		1	18.5	40.0	50.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7439-92-1	Lead	6.72		1	3.51	4.80	6.00	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7439-95-4	Magnesium	1320		1	39.4	250	1000	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7439-96-5	Manganese	20.0		1	1.46	2.50	10.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7439-97-6	Mercury	0.16	U	1	0.081	0.16	0.20	ug/L	11/18/24 13:05	11/18/24 15:06	SW7470A	
7440-02-0	Nickel	4.70	J	1	0.85	5.00	20.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-09-7	Potassium	800	U	1	685	800	1000	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7782-49-2	Selenium	8.00	U	1	5.88	8.00	10.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-22-4	Silver	2.50	U	1	0.58	2.50	5.00	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-23-5	Sodium	10800		1	237	500	1000	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-28-0	Thallium	10.0	U	1	2.32	10.0	20.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-62-2	Vanadium	10.0	U	1	3.06	10.0	20.0	ug/L	11/15/24 13:00	11/18/24 16:08	SW6010	SW3010
7440-66-6	Zinc	14.8	J	1	1.75	5.00	20.0	ug/L	11/15/24 13:00	11/18/24 16:08	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:	11/14/24
Project:	CTO WE13	Date Received:	11/14/24
Client Sample ID:	RW5-SP303-20241114	SDG No.:	P4868
Lab Sample ID:	P4868-03	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	40.0	U	1	28.3	40.0	50.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-36-0	Antimony	6.25	U	1	2.06	6.25	25.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-38-2	Arsenic	8.00	U	1	3.48	8.00	10.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-39-3	Barium	12.5	U	1	6.28	12.5	50.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-41-7	Beryllium	0.75	U	1	0.13	0.75	3.00	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-43-9	Cadmium	0.75	U	1	0.094	0.75	3.00	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-70-2	Calcium	4720		1	33.0	250	1000	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-47-3	Chromium	4.33	J	1	0.66	2.50	5.00	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-48-4	Cobalt	1.62	J	1	0.50	3.75	15.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-50-8	Copper	8.00	U	1	7.07	8.00	10.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7439-89-6	Iron	46.5	J	1	18.5	40.0	50.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7439-92-1	Lead	4.80	U	1	3.51	4.80	6.00	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7439-95-4	Magnesium	1780		1	39.4	250	1000	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7439-96-5	Manganese	36.2		1	1.46	2.50	10.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7439-97-6	Mercury	0.16	U	1	0.081	0.16	0.20	ug/L	11/18/24 13:05	11/18/24 15:08	SW7470A	
7440-02-0	Nickel	2.38	J	1	0.85	5.00	20.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-09-7	Potassium	792	J	1	685	800	1000	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7782-49-2	Selenium	8.00	U	1	5.88	8.00	10.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-22-4	Silver	2.50	U	1	0.58	2.50	5.00	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-23-5	Sodium	10700		1	237	500	1000	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-28-0	Thallium	10.0	U	1	2.32	10.0	20.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-62-2	Vanadium	10.0	U	1	3.06	10.0	20.0	ug/L	11/15/24 13:00	11/18/24 16:12	SW6010	SW3010
7440-66-6	Zinc	9.05	J	1	1.75	5.00	20.0	ug/L	11/15/24 13:00	11/18/24 16:12	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

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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
ICV89	Mercury	3.74	4.0	94	90 - 110	CV	11/18/2024	13:46	LB133490

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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
CCV01	Mercury	4.94	5.0	99	90 - 110	CV	11/18/2024	13:53	LB133490
CCV02	Mercury	4.96	5.0	99	90 - 110	CV	11/18/2024	14:26	LB133490
CCV03	Mercury	5.11	5.0	102	90 - 110	CV	11/18/2024	14:59	LB133490
CCV04	Mercury	5.01	5.0	100	90 - 110	CV	11/18/2024	15:22	LB133490

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	2680	2500	107	90 - 110	P	11/18/2024	12:57	LB133502
	Antimony	1040	1000	104	90 - 110	P	11/18/2024	12:57	LB133502
	Arsenic	1040	1000	104	90 - 110	P	11/18/2024	12:57	LB133502
	Barium	533	520	102	90 - 110	P	11/18/2024	12:57	LB133502
	Beryllium	521	510	102	90 - 110	P	11/18/2024	12:57	LB133502
	Cadmium	523	510	103	90 - 110	P	11/18/2024	12:57	LB133502
	Calcium	10400	10000	104	90 - 110	P	11/18/2024	12:57	LB133502
	Chromium	554	520	107	90 - 110	P	11/18/2024	12:57	LB133502
	Cobalt	530	520	102	90 - 110	P	11/18/2024	12:57	LB133502
	Copper	544	510	107	90 - 110	P	11/18/2024	12:57	LB133502
	Iron	10500	10000	105	90 - 110	P	11/18/2024	12:57	LB133502
	Lead	1030	1000	104	90 - 110	P	11/18/2024	12:57	LB133502
	Magnesium	6150	6000	102	90 - 110	P	11/18/2024	12:57	LB133502
	Manganese	534	520	103	90 - 110	P	11/18/2024	12:57	LB133502
	Nickel	531	530	100	90 - 110	P	11/18/2024	12:57	LB133502
	Potassium	10400	9900	105	90 - 110	P	11/18/2024	12:57	LB133502
	Selenium	1070	1000	107	90 - 110	P	11/18/2024	12:57	LB133502
	Silver	264	250	106	90 - 110	P	11/18/2024	12:57	LB133502
	Sodium	9990	10000	100	90 - 110	P	11/18/2024	12:57	LB133502
	Thallium	1040	1000	104	90 - 110	P	11/18/2024	12:57	LB133502
	Vanadium	522	500	104	90 - 110	P	11/18/2024	12:57	LB133502
	Zinc	1080	1000	108	90 - 110	P	11/18/2024	12:57	LB133502

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	104	100	104	80 - 120	P	11/18/2024	13:11	LB133502
	Antimony	49.6	50.0	99	80 - 120	P	11/18/2024	13:11	LB133502
	Arsenic	18.9	20.0	94	80 - 120	P	11/18/2024	13:11	LB133502
	Barium	101	100	101	80 - 120	P	11/18/2024	13:11	LB133502
	Beryllium	6.06	6.0	101	80 - 120	P	11/18/2024	13:11	LB133502
	Cadmium	6.99	6.0	116	80 - 120	P	11/18/2024	13:11	LB133502
	Calcium	2060	2000	103	80 - 120	P	11/18/2024	13:11	LB133502
	Chromium	10.5	10.0	105	80 - 120	P	11/18/2024	13:11	LB133502
	Cobalt	29.4	30.0	98	80 - 120	P	11/18/2024	13:11	LB133502
	Copper	22.1	20.0	110	80 - 120	P	11/18/2024	13:11	LB133502
	Iron	100	100	100	80 - 120	P	11/18/2024	13:11	LB133502
	Lead	12.1	12.0	101	80 - 120	P	11/18/2024	13:11	LB133502
	Magnesium	2050	2000	102	80 - 120	P	11/18/2024	13:11	LB133502
	Manganese	20.8	20.0	104	80 - 120	P	11/18/2024	13:11	LB133502
	Nickel	39.0	40.0	97	80 - 120	P	11/18/2024	13:11	LB133502
	Potassium	1900	2000	95	80 - 120	P	11/18/2024	13:11	LB133502
	Selenium	20.9	20.0	105	80 - 120	P	11/18/2024	13:11	LB133502
	Silver	10.8	10.0	108	80 - 120	P	11/18/2024	13:11	LB133502
	Sodium	1650	2000	82	80 - 120	P	11/18/2024	13:11	LB133502
	Thallium	39.6	40.0	99	80 - 120	P	11/18/2024	13:11	LB133502
	Vanadium	40.1	40.0	100	80 - 120	P	11/18/2024	13:11	LB133502
	Zinc	43.9	40.0	110	80 - 120	P	11/18/2024	13:11	LB133502

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	10100	10000	101	90 - 110	P	11/18/2024	13:52	LB133502
	Antimony	5090	5000	102	90 - 110	P	11/18/2024	13:52	LB133502
	Arsenic	4990	5000	100	90 - 110	P	11/18/2024	13:52	LB133502
	Barium	9590	10000	96	90 - 110	P	11/18/2024	13:52	LB133502
	Beryllium	243	250	97	90 - 110	P	11/18/2024	13:52	LB133502
	Cadmium	2460	2500	98	90 - 110	P	11/18/2024	13:52	LB133502
	Calcium	24300	25000	97	90 - 110	P	11/18/2024	13:52	LB133502
	Chromium	1020	1000	102	90 - 110	P	11/18/2024	13:52	LB133502
	Cobalt	2460	2500	98	90 - 110	P	11/18/2024	13:52	LB133502
	Copper	1270	1250	101	90 - 110	P	11/18/2024	13:52	LB133502
	Iron	4940	5000	99	90 - 110	P	11/18/2024	13:52	LB133502
	Lead	4930	5000	99	90 - 110	P	11/18/2024	13:52	LB133502
	Magnesium	24500	25000	98	90 - 110	P	11/18/2024	13:52	LB133502
	Manganese	2370	2500	95	90 - 110	P	11/18/2024	13:52	LB133502
	Nickel	2460	2500	98	90 - 110	P	11/18/2024	13:52	LB133502
	Potassium	24900	25000	99	90 - 110	P	11/18/2024	13:52	LB133502
	Selenium	5110	5000	102	90 - 110	P	11/18/2024	13:52	LB133502
	Silver	1250	1250	100	90 - 110	P	11/18/2024	13:52	LB133502
	Sodium	24500	25000	98	90 - 110	P	11/18/2024	13:52	LB133502
	Thallium	5140	5000	103	90 - 110	P	11/18/2024	13:52	LB133502
	Vanadium	2470	2500	99	90 - 110	P	11/18/2024	13:52	LB133502
	Zinc	2550	2500	102	90 - 110	P	11/18/2024	13:52	LB133502
CCV02	Aluminum	10200	10000	102	90 - 110	P	11/18/2024	14:31	LB133502
	Antimony	5150	5000	103	90 - 110	P	11/18/2024	14:31	LB133502
	Arsenic	5030	5000	101	90 - 110	P	11/18/2024	14:31	LB133502
	Barium	9540	10000	95	90 - 110	P	11/18/2024	14:31	LB133502
	Beryllium	243	250	97	90 - 110	P	11/18/2024	14:31	LB133502
	Cadmium	2490	2500	100	90 - 110	P	11/18/2024	14:31	LB133502
	Calcium	24500	25000	98	90 - 110	P	11/18/2024	14:31	LB133502
	Chromium	1030	1000	103	90 - 110	P	11/18/2024	14:31	LB133502
	Cobalt	2490	2500	100	90 - 110	P	11/18/2024	14:31	LB133502
	Copper	1280	1250	102	90 - 110	P	11/18/2024	14:31	LB133502
	Iron	4940	5000	99	90 - 110	P	11/18/2024	14:31	LB133502
	Lead	4980	5000	100	90 - 110	P	11/18/2024	14:31	LB133502

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	24700	25000	99	90 - 110	P	11/18/2024	14:31	LB133502
	Manganese	2370	2500	95	90 - 110	P	11/18/2024	14:31	LB133502
	Nickel	2490	2500	100	90 - 110	P	11/18/2024	14:31	LB133502
	Potassium	25400	25000	102	90 - 110	P	11/18/2024	14:31	LB133502
	Selenium	5160	5000	103	90 - 110	P	11/18/2024	14:31	LB133502
	Silver	1260	1250	100	90 - 110	P	11/18/2024	14:31	LB133502
	Sodium	24400	25000	98	90 - 110	P	11/18/2024	14:31	LB133502
	Thallium	5110	5000	102	90 - 110	P	11/18/2024	14:31	LB133502
	Vanadium	2500	2500	100	90 - 110	P	11/18/2024	14:31	LB133502
	Zinc	2550	2500	102	90 - 110	P	11/18/2024	14:31	LB133502
CCV03	Aluminum	10000	10000	100	90 - 110	P	11/18/2024	15:35	LB133502
	Antimony	5130	5000	102	90 - 110	P	11/18/2024	15:35	LB133502
	Arsenic	5000	5000	100	90 - 110	P	11/18/2024	15:35	LB133502
	Barium	9430	10000	94	90 - 110	P	11/18/2024	15:35	LB133502
	Beryllium	239	250	96	90 - 110	P	11/18/2024	15:35	LB133502
	Cadmium	2450	2500	98	90 - 110	P	11/18/2024	15:35	LB133502
	Calcium	23900	25000	96	90 - 110	P	11/18/2024	15:35	LB133502
	Chromium	1020	1000	102	90 - 110	P	11/18/2024	15:35	LB133502
	Cobalt	2450	2500	98	90 - 110	P	11/18/2024	15:35	LB133502
	Copper	1270	1250	101	90 - 110	P	11/18/2024	15:35	LB133502
	Iron	4850	5000	97	90 - 110	P	11/18/2024	15:35	LB133502
	Lead	4910	5000	98	90 - 110	P	11/18/2024	15:35	LB133502
	Magnesium	24100	25000	96	90 - 110	P	11/18/2024	15:35	LB133502
	Manganese	2320	2500	93	90 - 110	P	11/18/2024	15:35	LB133502
	Nickel	2450	2500	98	90 - 110	P	11/18/2024	15:35	LB133502
	Potassium	24900	25000	100	90 - 110	P	11/18/2024	15:35	LB133502
	Selenium	5130	5000	103	90 - 110	P	11/18/2024	15:35	LB133502
	Silver	1240	1250	100	90 - 110	P	11/18/2024	15:35	LB133502
	Sodium	24100	25000	96	90 - 110	P	11/18/2024	15:35	LB133502
	Thallium	5000	5000	100	90 - 110	P	11/18/2024	15:35	LB133502
	Vanadium	2450	2500	98	90 - 110	P	11/18/2024	15:35	LB133502
	Zinc	2550	2500	102	90 - 110	P	11/18/2024	15:35	LB133502
CCV04	Aluminum	10000	10000	100	90 - 110	P	11/18/2024	16:25	LB133502
	Antimony	5140	5000	103	90 - 110	P	11/18/2024	16:25	LB133502

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	16:25	LB133502
	Barium	9440	10000	94	90 - 110	P	11/18/2024	16:25	LB133502
	Beryllium	241	250	96	90 - 110	P	11/18/2024	16:25	LB133502
	Cadmium	2460	2500	98	90 - 110	P	11/18/2024	16:25	LB133502
	Calcium	24000	25000	96	90 - 110	P	11/18/2024	16:25	LB133502
	Chromium	1030	1000	103	90 - 110	P	11/18/2024	16:25	LB133502
	Cobalt	2450	2500	98	90 - 110	P	11/18/2024	16:25	LB133502
	Copper	1270	1250	102	90 - 110	P	11/18/2024	16:25	LB133502
	Iron	4880	5000	98	90 - 110	P	11/18/2024	16:25	LB133502
	Lead	4910	5000	98	90 - 110	P	11/18/2024	16:25	LB133502
	Magnesium	24400	25000	97	90 - 110	P	11/18/2024	16:25	LB133502
	Manganese	2310	2500	92	90 - 110	P	11/18/2024	16:25	LB133502
	Nickel	2450	2500	98	90 - 110	P	11/18/2024	16:25	LB133502
	Potassium	24900	25000	100	90 - 110	P	11/18/2024	16:25	LB133502
	Selenium	5210	5000	104	90 - 110	P	11/18/2024	16:25	LB133502
	Silver	1260	1250	101	90 - 110	P	11/18/2024	16:25	LB133502
	Sodium	24000	25000	96	90 - 110	P	11/18/2024	16:25	LB133502
	Thallium	5310	5000	106	90 - 110	P	11/18/2024	16:25	LB133502
	Vanadium	2460	2500	98	90 - 110	P	11/18/2024	16:25	LB133502
	Zinc	2570	2500	103	90 - 110	P	11/18/2024	16:25	LB133502
CCV05	Aluminum	10200	10000	102	90 - 110	P	11/18/2024	17:01	LB133502
	Antimony	5270	5000	105	90 - 110	P	11/18/2024	17:01	LB133502
	Arsenic	5120	5000	102	90 - 110	P	11/18/2024	17:01	LB133502
	Barium	9720	10000	97	90 - 110	P	11/18/2024	17:01	LB133502
	Beryllium	246	250	98	90 - 110	P	11/18/2024	17:01	LB133502
	Cadmium	2500	2500	100	90 - 110	P	11/18/2024	17:01	LB133502
	Calcium	24400	25000	98	90 - 110	P	11/18/2024	17:01	LB133502
	Chromium	1040	1000	104	90 - 110	P	11/18/2024	17:01	LB133502
	Cobalt	2500	2500	100	90 - 110	P	11/18/2024	17:01	LB133502
	Copper	1300	1250	104	90 - 110	P	11/18/2024	17:01	LB133502
	Iron	4970	5000	99	90 - 110	P	11/18/2024	17:01	LB133502
	Lead	5000	5000	100	90 - 110	P	11/18/2024	17:01	LB133502
	Magnesium	24700	25000	99	90 - 110	P	11/18/2024	17:01	LB133502
	Manganese	2370	2500	95	90 - 110	P	11/18/2024	17:01	LB133502

Alliance TECHNICAL GROUP
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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	17:01	LB133502
	Potassium	25600	25000	102	90 - 110	P	11/18/2024	17:01	LB133502
	Selenium	5040	5000	101	90 - 110	P	11/18/2024	17:01	LB133502
	Silver	1280	1250	102	90 - 110	P	11/18/2024	17:01	LB133502
	Sodium	25200	25000	101	90 - 110	P	11/18/2024	17:01	LB133502
	Thallium	5140	5000	103	90 - 110	P	11/18/2024	17:01	LB133502
	Vanadium	2510	2500	100	90 - 110	P	11/18/2024	17:01	LB133502
	Zinc	2550	2500	102	90 - 110	P	11/18/2024	17:01	LB133502
CCV06	Aluminum	10100	10000	101	90 - 110	P	11/18/2024	18:04	LB133502
	Antimony	5200	5000	104	90 - 110	P	11/18/2024	18:04	LB133502
	Arsenic	5080	5000	102	90 - 110	P	11/18/2024	18:04	LB133502
	Barium	9550	10000	96	90 - 110	P	11/18/2024	18:04	LB133502
	Beryllium	245	250	98	90 - 110	P	11/18/2024	18:04	LB133502
	Cadmium	2490	2500	100	90 - 110	P	11/18/2024	18:04	LB133502
	Calcium	24400	25000	97	90 - 110	P	11/18/2024	18:04	LB133502
	Chromium	1040	1000	104	90 - 110	P	11/18/2024	18:04	LB133502
	Cobalt	2490	2500	100	90 - 110	P	11/18/2024	18:04	LB133502
	Copper	1280	1250	102	90 - 110	P	11/18/2024	18:04	LB133502
	Iron	4960	5000	99	90 - 110	P	11/18/2024	18:04	LB133502
	Lead	4980	5000	100	90 - 110	P	11/18/2024	18:04	LB133502
	Magnesium	24600	25000	98	90 - 110	P	11/18/2024	18:04	LB133502
	Manganese	2360	2500	94	90 - 110	P	11/18/2024	18:04	LB133502
	Nickel	2490	2500	99	90 - 110	P	11/18/2024	18:04	LB133502
	Potassium	25300	25000	101	90 - 110	P	11/18/2024	18:04	LB133502
	Selenium	4980	5000	100	90 - 110	P	11/18/2024	18:04	LB133502
	Silver	1270	1250	102	90 - 110	P	11/18/2024	18:04	LB133502
	Sodium	24700	25000	99	90 - 110	P	11/18/2024	18:04	LB133502
	Thallium	5170	5000	104	90 - 110	P	11/18/2024	18:04	LB133502
	Vanadium	2490	2500	100	90 - 110	P	11/18/2024	18:04	LB133502
	Zinc	2570	2500	103	90 - 110	P	11/18/2024	18:04	LB133502
CCV07	Aluminum	10500	10000	105	90 - 110	P	11/18/2024	18:54	LB133502
	Antimony	5440	5000	109	90 - 110	P	11/18/2024	18:54	LB133502
	Arsenic	5290	5000	106	90 - 110	P	11/18/2024	18:54	LB133502
	Barium	9680	10000	97	90 - 110	P	11/18/2024	18:54	LB133502

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	251	250	100	90 - 110	P	11/18/2024	18:54	LB133502
	Cadmium	2570	2500	103	90 - 110	P	11/18/2024	18:54	LB133502
	Calcium	25000	25000	100	90 - 110	P	11/18/2024	18:54	LB133502
	Chromium	1070	1000	107	90 - 110	P	11/18/2024	18:54	LB133502
	Cobalt	2570	2500	103	90 - 110	P	11/18/2024	18:54	LB133502
	Copper	1330	1250	106	90 - 110	P	11/18/2024	18:54	LB133502
	Iron	5050	5000	101	90 - 110	P	11/18/2024	18:54	LB133502
	Lead	5140	5000	103	90 - 110	P	11/18/2024	18:54	LB133502
	Magnesium	25300	25000	101	90 - 110	P	11/18/2024	18:54	LB133502
	Manganese	2410	2500	96	90 - 110	P	11/18/2024	18:54	LB133502
	Nickel	2560	2500	103	90 - 110	P	11/18/2024	18:54	LB133502
	Potassium	25800	25000	103	90 - 110	P	11/18/2024	18:54	LB133502
	Selenium	5260	5000	105	90 - 110	P	11/18/2024	18:54	LB133502
	Silver	1300	1250	104	90 - 110	P	11/18/2024	18:54	LB133502
	Sodium	24400	25000	97	90 - 110	P	11/18/2024	18:54	LB133502
	Thallium	5370	5000	108	90 - 110	P	11/18/2024	18:54	LB133502
	Vanadium	2570	2500	103	90 - 110	P	11/18/2024	18:54	LB133502
	Zinc	2650	2500	106	90 - 110	P	11/18/2024	18:54	LB133502

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	2680	2500	107	90 - 110	P	11/20/2024	12:50	LB133540
	Antimony	1020	1000	102	90 - 110	P	11/20/2024	12:50	LB133540
	Arsenic	1040	1000	104	90 - 110	P	11/20/2024	12:50	LB133540
	Barium	535	520	103	90 - 110	P	11/20/2024	12:50	LB133540
	Beryllium	528	510	104	90 - 110	P	11/20/2024	12:50	LB133540
	Cadmium	529	510	104	90 - 110	P	11/20/2024	12:50	LB133540
	Calcium	10500	10000	105	90 - 110	P	11/20/2024	12:50	LB133540
	Chromium	548	520	106	90 - 110	P	11/20/2024	12:50	LB133540
	Cobalt	532	520	102	90 - 110	P	11/20/2024	12:50	LB133540
	Copper	546	510	107	90 - 110	P	11/20/2024	12:50	LB133540
	Iron	10400	10000	104	90 - 110	P	11/20/2024	12:50	LB133540
	Lead	1050	1000	105	90 - 110	P	11/20/2024	12:50	LB133540
	Magnesium	6200	6000	103	90 - 110	P	11/20/2024	12:50	LB133540
	Manganese	540	520	104	90 - 110	P	11/20/2024	12:50	LB133540
	Nickel	535	530	101	90 - 110	P	11/20/2024	12:50	LB133540
	Potassium	10300	9900	104	90 - 110	P	11/20/2024	12:50	LB133540
	Selenium	1070	1000	107	90 - 110	P	11/20/2024	12:50	LB133540
	Silver	267	250	107	90 - 110	P	11/20/2024	12:50	LB133540
	Sodium	9880	10000	99	90 - 110	P	11/20/2024	12:50	LB133540
	Thallium	1090	1000	109	90 - 110	P	11/20/2024	12:50	LB133540
	Vanadium	523	500	105	90 - 110	P	11/20/2024	12:50	LB133540
	Zinc	1090	1000	109	90 - 110	P	11/20/2024	12:50	LB133540

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	101	100	101	80 - 120	P	11/20/2024	12:59	LB133540
	Antimony	48.0	50.0	96	80 - 120	P	11/20/2024	12:59	LB133540
	Arsenic	17.6	20.0	88	80 - 120	P	11/20/2024	12:59	LB133540
	Barium	95.0	100	95	80 - 120	P	11/20/2024	12:59	LB133540
	Beryllium	5.41	6.0	90	80 - 120	P	11/20/2024	12:59	LB133540
	Cadmium	6.86	6.0	114	80 - 120	P	11/20/2024	12:59	LB133540
	Calcium	1940	2000	97	80 - 120	P	11/20/2024	12:59	LB133540
	Chromium	10.0	10.0	100	80 - 120	P	11/20/2024	12:59	LB133540
	Cobalt	28.3	30.0	94	80 - 120	P	11/20/2024	12:59	LB133540
	Copper	21.0	20.0	105	80 - 120	P	11/20/2024	12:59	LB133540
	Iron	91.6	100	92	80 - 120	P	11/20/2024	12:59	LB133540
	Lead	11.5	12.0	96	80 - 120	P	11/20/2024	12:59	LB133540
	Magnesium	1910	2000	96	80 - 120	P	11/20/2024	12:59	LB133540
	Manganese	19.3	20.0	96	80 - 120	P	11/20/2024	12:59	LB133540
	Nickel	37.3	40.0	93	80 - 120	P	11/20/2024	12:59	LB133540
	Potassium	1790	2000	90	80 - 120	P	11/20/2024	12:59	LB133540
	Selenium	16.0	20.0	80	80 - 120	P	11/20/2024	12:59	LB133540
	Silver	10.1	10.0	101	80 - 120	P	11/20/2024	12:59	LB133540
	Sodium	1620	2000	81	80 - 120	P	11/20/2024	12:59	LB133540
	Thallium	36.9	40.0	92	80 - 120	P	11/20/2024	12:59	LB133540
	Vanadium	38.5	40.0	96	80 - 120	P	11/20/2024	12:59	LB133540
	Zinc	41.3	40.0	103	80 - 120	P	11/20/2024	12:59	LB133540

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	10000	10000	100	90 - 110	P	11/20/2024	13:35	LB133540
	Antimony	5020	5000	100	90 - 110	P	11/20/2024	13:35	LB133540
	Arsenic	4940	5000	99	90 - 110	P	11/20/2024	13:35	LB133540
	Barium	9530	10000	95	90 - 110	P	11/20/2024	13:35	LB133540
	Beryllium	241	250	96	90 - 110	P	11/20/2024	13:35	LB133540
	Cadmium	2440	2500	98	90 - 110	P	11/20/2024	13:35	LB133540
	Calcium	24200	25000	97	90 - 110	P	11/20/2024	13:35	LB133540
	Chromium	1020	1000	102	90 - 110	P	11/20/2024	13:35	LB133540
	Cobalt	2460	2500	98	90 - 110	P	11/20/2024	13:35	LB133540
	Copper	1270	1250	101	90 - 110	P	11/20/2024	13:35	LB133540
	Iron	4930	5000	99	90 - 110	P	11/20/2024	13:35	LB133540
	Lead	4920	5000	98	90 - 110	P	11/20/2024	13:35	LB133540
	Magnesium	24300	25000	97	90 - 110	P	11/20/2024	13:35	LB133540
	Manganese	2360	2500	94	90 - 110	P	11/20/2024	13:35	LB133540
	Nickel	2460	2500	99	90 - 110	P	11/20/2024	13:35	LB133540
	Potassium	25400	25000	102	90 - 110	P	11/20/2024	13:35	LB133540
	Selenium	5030	5000	101	90 - 110	P	11/20/2024	13:35	LB133540
	Silver	1250	1250	100	90 - 110	P	11/20/2024	13:35	LB133540
	Sodium	24700	25000	99	90 - 110	P	11/20/2024	13:35	LB133540
	Thallium	4950	5000	99	90 - 110	P	11/20/2024	13:35	LB133540
	Vanadium	2460	2500	98	90 - 110	P	11/20/2024	13:35	LB133540
	Zinc	2570	2500	103	90 - 110	P	11/20/2024	13:35	LB133540
CCV02	Aluminum	9020	10000	90	90 - 110	P	11/20/2024	14:50	LB133540
	Antimony	5460	5000	109	90 - 110	P	11/20/2024	14:50	LB133540
	Arsenic	5460	5000	109	90 - 110	P	11/20/2024	14:50	LB133540
	Barium	9550	10000	96	90 - 110	P	11/20/2024	14:50	LB133540
	Beryllium	260	250	104	90 - 110	P	11/20/2024	14:50	LB133540
	Cadmium	2610	2500	104	90 - 110	P	11/20/2024	14:50	LB133540
	Calcium	27000	25000	108	90 - 110	P	11/20/2024	14:50	LB133540
	Chromium	905	1000	90	90 - 110	P	11/20/2024	14:50	LB133540
	Cobalt	2540	2500	102	90 - 110	P	11/20/2024	14:50	LB133540
	Copper	1300	1250	104	90 - 110	P	11/20/2024	14:50	LB133540
	Iron	5120	5000	102	90 - 110	P	11/20/2024	14:50	LB133540
	Lead	5120	5000	102	90 - 110	P	11/20/2024	14:50	LB133540

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.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	23800	25000	95	90 - 110	P	11/20/2024	14:50	LB133540
	Manganese	2700	2500	108	90 - 110	P	11/20/2024	14:50	LB133540
	Nickel	2460	2500	98	90 - 110	P	11/20/2024	14:50	LB133540
	Potassium	27300	25000	109	90 - 110	P	11/20/2024	14:50	LB133540
	Selenium	4620	5000	92	90 - 110	P	11/20/2024	14:50	LB133540
	Silver	1290	1250	103	90 - 110	P	11/20/2024	14:50	LB133540
	Sodium	26700	25000	107	90 - 110	P	11/20/2024	14:50	LB133540
	Thallium	4920	5000	98	90 - 110	P	11/20/2024	14:50	LB133540
	Vanadium	2560	2500	102	90 - 110	P	11/20/2024	14:50	LB133540
	Zinc	2280	2500	91	90 - 110	P	11/20/2024	14:50	LB133540
CCV03	Aluminum	9540	10000	95	90 - 110	P	11/20/2024	16:48	LB133540
	Antimony	4680	5000	94	90 - 110	P	11/20/2024	16:48	LB133540
	Arsenic	4610	5000	92	90 - 110	P	11/20/2024	16:48	LB133540
	Barium	9040	10000	90	90 - 110	P	11/20/2024	16:48	LB133540
	Beryllium	237	250	95	90 - 110	P	11/20/2024	16:48	LB133540
	Cadmium	2300	2500	92	90 - 110	P	11/20/2024	16:48	LB133540
	Calcium	23200	25000	93	90 - 110	P	11/20/2024	16:48	LB133540
	Chromium	971	1000	97	90 - 110	P	11/20/2024	16:48	LB133540
	Cobalt	2300	2500	92	90 - 110	P	11/20/2024	16:48	LB133540
	Copper	1180	1250	94	90 - 110	P	11/20/2024	16:48	LB133540
	Iron	4610	5000	92	90 - 110	P	11/20/2024	16:48	LB133540
	Lead	4640	5000	93	90 - 110	P	11/20/2024	16:48	LB133540
	Magnesium	23400	25000	94	90 - 110	P	11/20/2024	16:48	LB133540
	Manganese	2250	2500	90	90 - 110	P	11/20/2024	16:48	LB133540
	Nickel	2300	2500	92	90 - 110	P	11/20/2024	16:48	LB133540
	Potassium	23700	25000	95	90 - 110	P	11/20/2024	16:48	LB133540
	Selenium	4720	5000	94	90 - 110	P	11/20/2024	16:48	LB133540
	Silver	1200	1250	96	90 - 110	P	11/20/2024	16:48	LB133540
	Sodium	22800	25000	91	90 - 110	P	11/20/2024	16:48	LB133540
	Thallium	4610	5000	92	90 - 110	P	11/20/2024	16:48	LB133540
	Vanadium	2350	2500	94	90 - 110	P	11/20/2024	16:48	LB133540
	Zinc	2430	2500	97	90 - 110	P	11/20/2024	16:48	LB133540

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

Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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
CRI01	Aluminum	107	100	107	40 - 160	P	11/18/2024	13:20	LB133502
	Antimony	51.5	50.0	103	40 - 160	P	11/18/2024	13:20	LB133502
	Arsenic	19.8	20.0	99	40 - 160	P	11/18/2024	13:20	LB133502
	Barium	98.9	100	99	40 - 160	P	11/18/2024	13:20	LB133502
	Beryllium	5.98	6.0	100	40 - 160	P	11/18/2024	13:20	LB133502
	Cadmium	7.02	6.0	117	40 - 160	P	11/18/2024	13:20	LB133502
	Calcium	2040	2000	102	40 - 160	P	11/18/2024	13:20	LB133502
	Chromium	10.5	10.0	105	40 - 160	P	11/18/2024	13:20	LB133502
	Cobalt	29.7	30.0	99	40 - 160	P	11/18/2024	13:20	LB133502
	Copper	22.7	20.0	113	40 - 160	P	11/18/2024	13:20	LB133502
	Iron	99.2	100	99	40 - 160	P	11/18/2024	13:20	LB133502
	Lead	11.7	12.0	97	40 - 160	P	11/18/2024	13:20	LB133502
	Magnesium	2030	2000	102	40 - 160	P	11/18/2024	13:20	LB133502
	Manganese	20.0	20.0	100	40 - 160	P	11/18/2024	13:20	LB133502
	Nickel	39.4	40.0	98	40 - 160	P	11/18/2024	13:20	LB133502
	Potassium	1920	2000	96	40 - 160	P	11/18/2024	13:20	LB133502
	Selenium	21.8	20.0	109	40 - 160	P	11/18/2024	13:20	LB133502
	Silver	11.0	10.0	110	40 - 160	P	11/18/2024	13:20	LB133502
	Sodium	1640	2000	82	40 - 160	P	11/18/2024	13:20	LB133502
	Thallium	40.7	40.0	102	40 - 160	P	11/18/2024	13:20	LB133502
	Vanadium	41.7	40.0	104	40 - 160	P	11/18/2024	13:20	LB133502
	Zinc	44.6	40.0	111	40 - 160	P	11/18/2024	13:20	LB133502
CRA	Mercury	0.17	0.2	86	40 - 160	CV	11/18/2024	14:00	LB133490
CRI01	Aluminum	112	100	112	40 - 160	P	11/20/2024	13:13	LB133540
	Antimony	50.5	50.0	101	40 - 160	P	11/20/2024	13:13	LB133540
	Arsenic	21.2	20.0	106	40 - 160	P	11/20/2024	13:13	LB133540
	Barium	99.7	100	100	40 - 160	P	11/20/2024	13:13	LB133540
	Beryllium	5.83	6.0	97	40 - 160	P	11/20/2024	13:13	LB133540
	Cadmium	7.32	6.0	122	40 - 160	P	11/20/2024	13:13	LB133540
	Calcium	2060	2000	103	40 - 160	P	11/20/2024	13:13	LB133540
	Chromium	10.5	10.0	105	40 - 160	P	11/20/2024	13:13	LB133540
	Cobalt	29.8	30.0	99	40 - 160	P	11/20/2024	13:13	LB133540
	Copper	22.6	20.0	113	40 - 160	P	11/20/2024	13:13	LB133540
	Iron	98.8	100	99	40 - 160	P	11/20/2024	13:13	LB133540
	Lead	12.4	12.0	104	40 - 160	P	11/20/2024	13:13	LB133540

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

Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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
CRI01	Magnesium	2040	2000	102	40 - 160	P	11/20/2024	13:13	LB133540
	Manganese	20.5	20.0	103	40 - 160	P	11/20/2024	13:13	LB133540
	Nickel	39.4	40.0	98	40 - 160	P	11/20/2024	13:13	LB133540
	Potassium	1900	2000	95	40 - 160	P	11/20/2024	13:13	LB133540
	Selenium	15.8	20.0	79	40 - 160	P	11/20/2024	13:13	LB133540
	Silver	11.0	10.0	110	40 - 160	P	11/20/2024	13:13	LB133540
	Sodium	1700	2000	85	40 - 160	P	11/20/2024	13:13	LB133540
	Thallium	38.0	40.0	95	40 - 160	P	11/20/2024	13:13	LB133540
	Vanadium	41.1	40.0	103	40 - 160	P	11/20/2024	13:13	LB133540
	Zinc	44.1	40.0	110	40 - 160	P	11/20/2024	13:13	LB133540

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB89	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	11/18/2024	13:48	LB133490

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	11/18/2024	13:58	LB133490
CCB02	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	11/18/2024	14:28	LB133490
CCB03	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	11/18/2024	15:01	LB133490
CCB04	Mercury	0.089	+/-0.20	J	0.16	0.20	CV	11/18/2024	15:24	LB133490

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	13:15	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	13:15	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	13:15	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	13:15	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	13:15	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	13:15	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	13:15	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	13:15	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	13:15	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	13:15	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	13:15	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	13:15	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	13:15	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	13:15	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	13:15	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	13:15	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	13:15	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	13:15	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	13:15	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	13:15	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	13:15	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	13:15	LB133502

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	14:02	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	14:02	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	14:02	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	14:02	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	14:02	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	14:02	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	14:02	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	14:02	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	14:02	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	14:02	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	14:02	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	14:02	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	14:02	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	14:02	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	14:02	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	14:02	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	14:02	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	14:02	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	14:02	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	14:02	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	14:02	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	14:02	LB133502
CCB02	Aluminum	100	+/-100	U	80.0	100	P	11/18/2024	14:35	LB133502
	Antimony	4.42	+/-50.0	J	12.5	50.0	P	11/18/2024	14:35	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	14:35	LB133502
	Barium	18.0	+/-100	J	25.0	100	P	11/18/2024	14:35	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	14:35	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	14:35	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	14:35	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	14:35	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	14:35	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	14:35	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	14:35	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	14:35	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	14:35	LB133502
	Manganese	5.73	+/-20.0	J	5.00	20.0	P	11/18/2024	14:35	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	14:35	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	14:35	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	14:35	LB133502

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	14:35	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	14:35	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	14:35	LB133502
	Vanadium	6.17	+/-40.0	J	20.0	40.0	P	11/18/2024	14:35	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	14:35	LB133502
CCB03	Aluminum	100	+/-100	U	80.0	100	P	11/18/2024	15:39	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	15:39	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	15:39	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	15:39	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	15:39	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	15:39	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	15:39	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	15:39	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	15:39	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	15:39	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	15:39	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	15:39	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	15:39	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	15:39	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	15:39	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	15:39	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	15:39	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	15:39	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	15:39	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	15:39	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	15:39	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	15:39	LB133502
CCB04	Aluminum	100	+/-100	U	80.0	100	P	11/18/2024	16:29	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	16:29	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	16:29	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	16:29	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	16:29	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	16:29	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	16:29	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	16:29	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	16:29	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	16:29	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	16:29	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	16:29	LB133502

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	16:29	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	16:29	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	16:29	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	16:29	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	16:29	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	16:29	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	16:29	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	16:29	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	16:29	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	16:29	LB133502
CCB05	Aluminum	100	+/-100	U	80.0	100	P	11/18/2024	17:06	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	17:06	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	17:06	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	17:06	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	17:06	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	17:06	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	17:06	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	17:06	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	17:06	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	17:06	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	17:06	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	17:06	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	17:06	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	17:06	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	17:06	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	17:06	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	17:06	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	17:06	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	17:06	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	17:06	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	17:06	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	17:06	LB133502
CCB06	Aluminum	100	+/-100	U	80.0	100	P	11/18/2024	18:08	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	18:08	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	18:08	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	18:08	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	18:08	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	18:08	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	18:08	LB133502

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/18/2024	18:08	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	18:08	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	18:08	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	18:08	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	18:08	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	18:08	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	18:08	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	18:08	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	18:08	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	18:08	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	18:08	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	18:08	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	18:08	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	18:08	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	18:08	LB133502
CCB07	Aluminum	100	+/-100	U	80.0	100	P	11/18/2024	18:58	LB133502
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/18/2024	18:58	LB133502
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	18:58	LB133502
	Barium	100	+/-100	U	25.0	100	P	11/18/2024	18:58	LB133502
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	18:58	LB133502
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/18/2024	18:58	LB133502
	Calcium	2000	+/-2000	U	500	2000	P	11/18/2024	18:58	LB133502
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	18:58	LB133502
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/18/2024	18:58	LB133502
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	18:58	LB133502
	Iron	100	+/-100	U	80.0	100	P	11/18/2024	18:58	LB133502
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/18/2024	18:58	LB133502
	Magnesium	2000	+/-2000	U	500	2000	P	11/18/2024	18:58	LB133502
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/18/2024	18:58	LB133502
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	18:58	LB133502
	Potassium	2000	+/-2000	U	1600	2000	P	11/18/2024	18:58	LB133502
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/18/2024	18:58	LB133502
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/18/2024	18:58	LB133502
	Sodium	2000	+/-2000	U	1000	2000	P	11/18/2024	18:58	LB133502
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	18:58	LB133502
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/18/2024	18:58	LB133502
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/18/2024	18:58	LB133502

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/20/2024	13:09	LB133540
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/20/2024	13:09	LB133540
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	13:09	LB133540
	Barium	100	+/-100	U	25.0	100	P	11/20/2024	13:09	LB133540
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	13:09	LB133540
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	13:09	LB133540
	Calcium	2000	+/-2000	U	500	2000	P	11/20/2024	13:09	LB133540
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	13:09	LB133540
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/20/2024	13:09	LB133540
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	13:09	LB133540
	Iron	100	+/-100	U	80.0	100	P	11/20/2024	13:09	LB133540
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/20/2024	13:09	LB133540
	Magnesium	2000	+/-2000	U	500	2000	P	11/20/2024	13:09	LB133540
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/20/2024	13:09	LB133540
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	13:09	LB133540
	Potassium	2000	+/-2000	U	1600	2000	P	11/20/2024	13:09	LB133540
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	13:09	LB133540
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	13:09	LB133540
	Sodium	2000	+/-2000	U	1000	2000	P	11/20/2024	13:09	LB133540
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	13:09	LB133540
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	13:09	LB133540
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	13:09	LB133540

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/20/2024	13:46	LB133540
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/20/2024	13:46	LB133540
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	13:46	LB133540
	Barium	100	+/-100	U	25.0	100	P	11/20/2024	13:46	LB133540
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	13:46	LB133540
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	13:46	LB133540
	Calcium	2000	+/-2000	U	500	2000	P	11/20/2024	13:46	LB133540
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	13:46	LB133540
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/20/2024	13:46	LB133540
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	13:46	LB133540
	Iron	100	+/-100	U	80.0	100	P	11/20/2024	13:46	LB133540
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/20/2024	13:46	LB133540
	Magnesium	2000	+/-2000	U	500	2000	P	11/20/2024	13:46	LB133540
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/20/2024	13:46	LB133540
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	13:46	LB133540
	Potassium	2000	+/-2000	U	1600	2000	P	11/20/2024	13:46	LB133540
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	13:46	LB133540
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	13:46	LB133540
	Sodium	2000	+/-2000	U	1000	2000	P	11/20/2024	13:46	LB133540
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	13:46	LB133540
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	13:46	LB133540
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	13:46	LB133540
CCB02	Aluminum	100	+/-100	U	80.0	100	P	11/20/2024	15:00	LB133540
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/20/2024	15:00	LB133540
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	15:00	LB133540
	Barium	100	+/-100	U	25.0	100	P	11/20/2024	15:00	LB133540
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	15:00	LB133540
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	15:00	LB133540
	Calcium	2000	+/-2000	U	500	2000	P	11/20/2024	15:00	LB133540
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	15:00	LB133540
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/20/2024	15:00	LB133540
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	15:00	LB133540
	Iron	100	+/-100	U	80.0	100	P	11/20/2024	15:00	LB133540
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/20/2024	15:00	LB133540
	Magnesium	2000	+/-2000	U	500	2000	P	11/20/2024	15:00	LB133540
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/20/2024	15:00	LB133540
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	15:00	LB133540
	Potassium	2000	+/-2000	U	1600	2000	P	11/20/2024	15:00	LB133540
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	15:00	LB133540

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	11/20/2024	15:00	LB133540
	Sodium	2000	+/-2000	U	1000	2000	P	11/20/2024	15:00	LB133540
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	15:00	LB133540
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	15:00	LB133540
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	15:00	LB133540
CCB03	Aluminum	100	+/-100	U	80.0	100	P	11/20/2024	16:52	LB133540
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	11/20/2024	16:52	LB133540
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	16:52	LB133540
	Barium	100	+/-100	U	25.0	100	P	11/20/2024	16:52	LB133540
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	16:52	LB133540
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	11/20/2024	16:52	LB133540
	Calcium	2000	+/-2000	U	500	2000	P	11/20/2024	16:52	LB133540
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	16:52	LB133540
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	11/20/2024	16:52	LB133540
	Copper	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	16:52	LB133540
	Iron	100	+/-100	U	80.0	100	P	11/20/2024	16:52	LB133540
	Lead	12.0	+/-12.0	U	9.60	12.0	P	11/20/2024	16:52	LB133540
	Magnesium	2000	+/-2000	U	500	2000	P	11/20/2024	16:52	LB133540
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	11/20/2024	16:52	LB133540
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	16:52	LB133540
	Potassium	2000	+/-2000	U	1600	2000	P	11/20/2024	16:52	LB133540
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	11/20/2024	16:52	LB133540
	Silver	10.0	+/-10.0	U	5.00	10.0	P	11/20/2024	16:52	LB133540
	Sodium	2000	+/-2000	U	1000	2000	P	11/20/2024	16:52	LB133540
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	16:52	LB133540
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	11/20/2024	16:52	LB133540
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	11/20/2024	16:52	LB133540

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

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB165066BL		**WATER**		**Batch Number:**		**PB165066**		**Prep Date:**	**11/18/2024**	
	Mercury	0.20	<0.20	U	0.16	0.20	CV	11/18/2024	14:43	LB133490

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

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB165011BL		**WATER**		**Batch Number:**		**PB165011**		**Prep Date:**	**11/15/2024**	
	Aluminum	50.0	<50.0	U	40.0	50.0	P	11/20/2024	16:39	LB133540
	Antimony	25.0	<25.0	U	6.25	25.0	P	11/20/2024	16:39	LB133540
	Arsenic	10.0	<10.0	U	8.00	10.0	P	11/20/2024	16:39	LB133540
	Barium	50.0	<50.0	U	12.5	50.0	P	11/20/2024	16:39	LB133540
	Beryllium	3.00	<3.00	U	0.75	3.00	P	11/20/2024	16:39	LB133540
	Cadmium	3.00	<3.00	U	0.75	3.00	P	11/20/2024	16:39	LB133540
	Calcium	1000	<1000	U	250	1000	P	11/20/2024	16:39	LB133540
	Chromium	5.00	<5.00	U	2.50	5.00	P	11/20/2024	16:39	LB133540
	Cobalt	15.0	<15.0	U	3.75	15.0	P	11/20/2024	16:39	LB133540
	Copper	10.0	<10.0	U	8.00	10.0	P	11/20/2024	16:39	LB133540
	Iron	50.0	<50.0	U	40.0	50.0	P	11/20/2024	16:39	LB133540
	Lead	6.00	<6.00	U	4.80	6.00	P	11/20/2024	16:39	LB133540
	Magnesium	1000	<1000	U	250	1000	P	11/20/2024	16:39	LB133540
	Manganese	10.0	<10.0	U	2.50	10.0	P	11/20/2024	16:39	LB133540
	Nickel	20.0	<20.0	U	5.00	20.0	P	11/20/2024	16:39	LB133540
	Potassium	1000	<1000	U	800	1000	P	11/20/2024	16:39	LB133540
	Selenium	10.0	<10.0	U	8.00	10.0	P	11/20/2024	16:39	LB133540
	Silver	5.00	<5.00	U	2.50	5.00	P	11/20/2024	16:39	LB133540
	Sodium	1000	<1000	U	500	1000	P	11/20/2024	16:39	LB133540
	Thallium	20.0	<20.0	U	10.0	20.0	P	11/20/2024	16:39	LB133540
	Vanadium	20.0	<20.0	U	10.0	20.0	P	11/20/2024	16:39	LB133540
	Zinc	20.0	<20.0	U	5.00	20.0	P	11/20/2024	16:39	LB133540

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	255000	255000	100	216000	294000	11/18/2024	13:30	LB133502
	Antimony	-3.34			-50	50	11/18/2024	13:30	LB133502
	Arsenic	6.18			-20	20	11/18/2024	13:30	LB133502
	Barium	2.50	6.0	42	-94	106	11/18/2024	13:30	LB133502
	Beryllium	1.39			-6	6	11/18/2024	13:30	LB133502
	Cadmium	4.50	1.0	450	-5	7	11/18/2024	13:30	LB133502
	Calcium	234000	245000	96	208000	282000	11/18/2024	13:30	LB133502
	Chromium	56.3	52.0	108	42	62	11/18/2024	13:30	LB133502
	Cobalt	1.87			-30	30	11/18/2024	13:30	LB133502
	Copper	14.3	2.0	715	-18	22	11/18/2024	13:30	LB133502
	Iron	96400	101000	95	85600	116500	11/18/2024	13:30	LB133502
	Lead	8.39			-12	12	11/18/2024	13:30	LB133502
	Magnesium	257000	255000	101	216000	294000	11/18/2024	13:30	LB133502
	Manganese	3.33	7.0	48	-13	27	11/18/2024	13:30	LB133502
	Nickel	2.89	2.0	144	-38	42	11/18/2024	13:30	LB133502
	Potassium	43.3			0	0	11/18/2024	13:30	LB133502
	Selenium	-16.2			-20	20	11/18/2024	13:30	LB133502
	Silver	-0.11			-10	10	11/18/2024	13:30	LB133502
	Sodium	-43.4			0	0	11/18/2024	13:30	LB133502
	Thallium	-4.41			-40	40	11/18/2024	13:30	LB133502
	Vanadium	7.77			-40	40	11/18/2024	13:30	LB133502
	Zinc	5.14			-40	40	11/18/2024	13:30	LB133502
ICSAB01	Aluminum	263000	247000	106	209000	285000	11/18/2024	13:42	LB133502
	Antimony	633	618	102	525	711	11/18/2024	13:42	LB133502
	Arsenic	116	104	112	88.4	120	11/18/2024	13:42	LB133502
	Barium	493	537	92	437	637	11/18/2024	13:42	LB133502
	Beryllium	495	495	100	420	570	11/18/2024	13:42	LB133502
	Cadmium	1020	972	105	826	1120	11/18/2024	13:42	LB133502
	Calcium	238000	235000	101	199000	271000	11/18/2024	13:42	LB133502
	Chromium	579	542	107	460	624	11/18/2024	13:42	LB133502
	Cobalt	508	476	107	404	548	11/18/2024	13:42	LB133502
	Copper	506	511	99	434	588	11/18/2024	13:42	LB133502
	Iron	98700	99300	99	84400	114500	11/18/2024	13:42	LB133502
	Lead	57.7	49.0	118	37	61	11/18/2024	13:42	LB133502
	Magnesium	262000	248000	106	210000	286000	11/18/2024	13:42	LB133502
	Manganese	475	507	94	430	584	11/18/2024	13:42	LB133502
	Nickel	1000	954	105	810	1100	11/18/2024	13:42	LB133502
	Potassium	-18.9			0	0	11/18/2024	13:42	LB133502
	Selenium	32.7	46.0	71	26	66	11/18/2024	13:42	LB133502
	Silver	202	201	100	170	232	11/18/2024	13:42	LB133502
	Sodium	-170			0	0	11/18/2024	13:42	LB133502
	Thallium	91.6	108	85	68	148	11/18/2024	13:42	LB133502

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	499	491	102	417	565	11/18/2024	13:42	LB133502
	Zinc	894	952	94	809	1095	11/18/2024	13:42	LB133502
ICSA01	Aluminum	268000	255000	105	216000	294000	11/20/2024	13:17	LB133540
	Antimony	-4.03			-50	50	11/20/2024	13:17	LB133540
	Arsenic	5.49			-20	20	11/20/2024	13:17	LB133540
	Barium	1.32	6.0	22	-94	106	11/20/2024	13:17	LB133540
	Beryllium	1.44			-6	6	11/20/2024	13:17	LB133540
	Cadmium	6.68	1.0	668	-5	7	11/20/2024	13:17	LB133540
	Calcium	244000	245000	100	208000	282000	11/20/2024	13:17	LB133540
	Chromium	58.8	52.0	113	42	62	11/20/2024	13:17	LB133540
	Cobalt	2.35			-30	30	11/20/2024	13:17	LB133540
	Copper	15.6	2.0	780	-18	22	11/20/2024	13:17	LB133540
	Iron	101000	101000	100	85600	116500	11/20/2024	13:17	LB133540
	Lead	7.49			-12	12	11/20/2024	13:17	LB133540
	Magnesium	269000	255000	106	216000	294000	11/20/2024	13:17	LB133540
	Manganese	3.17	7.0	45	-13	27	11/20/2024	13:17	LB133540
	Nickel	2.95	2.0	148	-38	42	11/20/2024	13:17	LB133540
	Potassium	-5.15			0	0	11/20/2024	13:17	LB133540
	Selenium	-18.8			-20	20	11/20/2024	13:17	LB133540
	Silver	-1.10			-10	10	11/20/2024	13:17	LB133540
	Sodium	-74.9			0	0	11/20/2024	13:17	LB133540
	Thallium	-1.13			-40	40	11/20/2024	13:17	LB133540
	Vanadium	8.64			-40	40	11/20/2024	13:17	LB133540
	Zinc	5.94			-40	40	11/20/2024	13:17	LB133540
ICSAB01	Aluminum	268000	247000	108	209000	285000	11/20/2024	13:28	LB133540
	Antimony	644	618	104	525	711	11/20/2024	13:28	LB133540
	Arsenic	118	104	114	88.4	120	11/20/2024	13:28	LB133540
	Barium	517	537	96	437	637	11/20/2024	13:28	LB133540
	Beryllium	514	495	104	420	570	11/20/2024	13:28	LB133540
	Cadmium	1050	972	108	826	1120	11/20/2024	13:28	LB133540
	Calcium	244000	235000	104	199000	271000	11/20/2024	13:28	LB133540
	Chromium	583	542	108	460	624	11/20/2024	13:28	LB133540
	Cobalt	527	476	111	404	548	11/20/2024	13:28	LB133540
	Copper	520	511	102	434	588	11/20/2024	13:28	LB133540
	Iron	100000	99300	101	84400	114500	11/20/2024	13:28	LB133540
	Lead	57.8	49.0	118	37	61	11/20/2024	13:28	LB133540
	Magnesium	267000	248000	108	210000	286000	11/20/2024	13:28	LB133540
	Manganese	497	507	98	430	584	11/20/2024	13:28	LB133540
	Nickel	1040	954	109	810	1100	11/20/2024	13:28	LB133540
	Potassium	-40.7			0	0	11/20/2024	13:28	LB133540
	Selenium	30.2	46.0	66	26	66	11/20/2024	13:28	LB133540
	Silver	206	201	102	170	232	11/20/2024	13:28	LB133540

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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	Sodium	-45.3			0	0	11/20/2024	13:28	LB133540
	Thallium	90.2	108	84	68	148	11/20/2024	13:28	LB133540
	Vanadium	510	491	104	417	565	11/20/2024	13:28	LB133540
	Zinc	916	952	96	809	1095	11/20/2024	13:28	LB133540

METAL QC DATA

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

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4868

contract: TETR06 **lab code:** CHEM **case no.:** P4868 **sas no.:** P4868

matrix: Water **sample id:** P4867-04 **client id:** TT-072-IDWGW-20241113MS

Percent Solids for Sample: NA **Spiked ID:** P4867-04MS **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	4.34		0.20	U	4.0	108		CV

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

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4868

contract: TETR06 **lab code:** CHEM **case no.:** P4868 **sas no.:** P4868

matrix: Water **sample id:** P4867-04 **client id:** TT-072-IDWGW-20241113MSD

Percent Solids for Sample: NA **Spiked ID:** P4867-04MSD **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	3.99		0.20	U	4.0	100		CV

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

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4868

contract: TETR06 **lab code:** CHEM **case no.:** P4868 **sas no.:** P4868

matrix: Water **sample id:** P4868-03 **client id:** RW5-SP303-20241114MS

Percent Solids for Sample: NA **Spiked ID:** P4868-03MS **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	1070		50.0	U	1000	107		P
Antimony	ug/L	88 - 113	416		25.0	U	400	104		P
Arsenic	ug/L	87 - 113	403		10.0	U	400	101		P
Barium	ug/L	88 - 113	103		50.0	U	100	103		P
Beryllium	ug/L	89 - 112	99.6		3.00	U	100	100		P
Cadmium	ug/L	88 - 113	98.0		3.00	U	100	98		P
Calcium	ug/L	87 - 113	5170		4720		500	90		P
Chromium	ug/L	90 - 113	218		4.33	J	200	107		P
Cobalt	ug/L	89 - 114	101		1.62	J	100	100		P
Copper	ug/L	86 - 114	158		10.0	U	150	105		P
Iron	ug/L	87 - 115	1560		46.5	J	1500	101		P
Lead	ug/L	86 - 113	475		6.00	U	500	95		P
Magnesium	ug/L	85 - 113	2770		1780		1000	99		P
Manganese	ug/L	90 - 114	137		36.2		100	101		P
Nickel	ug/L	88 - 113	249		2.38	J	250	99		P
Potassium	ug/L	86 - 114	5780		792	J	5000	100		P
Selenium	ug/L	83 - 114	1010		10.0	U	1000	101		P
Silver	ug/L	84 - 115	31.9		5.00	U	37.5	85		P
Sodium	ug/L	87 - 115	11800		10700		1500	73		P
Thallium	ug/L	85 - 114	1030		20.0	U	1000	103		P
Vanadium	ug/L	90 - 111	159		20.0	U	150	106		P
Zinc	ug/L	87 - 115	115		9.05	J	100	106		P

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

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P4868

contract: TETR06 **lab code:** CHEM **case no.:** P4868 **sas no.:** P4868

matrix: Water **sample id:** P4868-03 **client id:** RW5-SP303-20241114MSD

Percent Solids for Sample: NA **Spiked ID:** P4868-03MSD **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	1070		50.0	U	1000	107		P
Antimony	ug/L	88 - 113	414		25.0	U	400	104		P
Arsenic	ug/L	87 - 113	402		10.0	U	400	100		P
Barium	ug/L	88 - 113	102		50.0	U	100	102		P
Beryllium	ug/L	89 - 112	98.7		3.00	U	100	99		P
Cadmium	ug/L	88 - 113	97.0		3.00	U	100	97		P
Calcium	ug/L	87 - 113	5110		4720		500	78		P
Chromium	ug/L	90 - 113	217		4.33	J	200	106		P
Cobalt	ug/L	89 - 114	101		1.62	J	100	99		P
Copper	ug/L	86 - 114	157		10.0	U	150	105		P
Iron	ug/L	87 - 115	1570		46.5	J	1500	101		P
Lead	ug/L	86 - 113	470		6.00	U	500	94		P
Magnesium	ug/L	85 - 113	2750		1780		1000	97		P
Manganese	ug/L	90 - 114	136		36.2		100	100		P
Nickel	ug/L	88 - 113	247		2.38	J	250	98		P
Potassium	ug/L	86 - 114	5810		792	J	5000	100		P
Selenium	ug/L	83 - 114	1010		10.0	U	1000	101		P
Silver	ug/L	84 - 115	32.0		5.00	U	37.5	85		P
Sodium	ug/L	87 - 115	12000		10700		1500	82		P
Thallium	ug/L	85 - 114	1050		20.0	U	1000	105		P
Vanadium	ug/L	90 - 111	157		20.0	U	150	105		P
Zinc	ug/L	87 - 115	116		9.05	J	100	107		P

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

Metals
- 5b -

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Matrix: **Level:** LOW **Client ID:**

Sample ID: **Spiked ID:**

Analyte	Units	Acceptance Limit %R	C	Sample Result	C	Spike Added	% Recovery	Qual	M

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Matrix: Water **Sample ID:** P4867-04 **Client ID:** TT-072-IDWGW-20241113DUP

Percent Solids for Sample: NA **Duplicate ID** P4867-04DUP **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"

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Matrix: Water **Sample ID:** P4867-04MS **Client ID:** TT-072-IDWGW-20241113MSD

Percent Solids for Sample: NA **Duplicate ID** P4867-04MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	4.34		3.99		8		CV

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

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Matrix: Water **Sample ID:** P4868-03 **Client ID:** RW5-SP303-20241114DUP

Percent Solids for Sample: NA **Duplicate ID** P4868-03DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	50.0	U	50.0	U			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	50.0	U	50.0	U			P
Beryllium	ug/L	20	3.00	U	3.00	U			P
Cadmium	ug/L	20	3.00	U	3.00	U			P
Calcium	ug/L	20	4720		4740		0		P
Chromium	ug/L	20	4.33	J	4.42	J	2		P
Cobalt	ug/L	20	1.62	J	1.70	J	5		P
Copper	ug/L	20	10.0	U	10.0	U			P
Iron	ug/L	20	46.5	J	44.5	J	4		P
Lead	ug/L	20	6.00	U	6.00	U			P
Magnesium	ug/L	20	1780		1790		1		P
Manganese	ug/L	20	36.2		36.6		1		P
Nickel	ug/L	20	2.38	J	2.38	J	0		P
Potassium	ug/L	20	792	J	807	J	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	10700		10900		2		P
Thallium	ug/L	20	20.0	U	20.0	U			P
Vanadium	ug/L	20	20.0	U	20.0	U			P
Zinc	ug/L	20	9.05	J	9.29	J	3		P

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

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Matrix: Water **Sample ID:** P4868-03MS **Client ID:** RW5-SP303-20241114MSD

Percent Solids for Sample: NA **Duplicate ID** P4868-03MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	1070		1070		0		P
Antimony	ug/L	20	416		414		0		P
Arsenic	ug/L	20	403		402		0		P
Barium	ug/L	20	103		102		1		P
Beryllium	ug/L	20	99.6		98.7		1		P
Cadmium	ug/L	20	98.0		97.0		1		P
Calcium	ug/L	20	5170		5110		1		P
Chromium	ug/L	20	218		217		0		P
Cobalt	ug/L	20	101		101		0		P
Copper	ug/L	20	158		157		1		P
Iron	ug/L	20	1560		1570		1		P
Lead	ug/L	20	475		470		1		P
Magnesium	ug/L	20	2770		2750		1		P
Manganese	ug/L	20	137		136		1		P
Nickel	ug/L	20	249		247		1		P
Potassium	ug/L	20	5780		5810		1		P
Selenium	ug/L	20	1010		1010		0		P
Silver	ug/L	20	31.9		32.0		0		P
Sodium	ug/L	20	11800		12000		2		P
Thallium	ug/L	20	1030		1050		2		P
Vanadium	ug/L	20	159		157		1		P
Zinc	ug/L	20	115		116		1		P

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

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

LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165011BS							
Aluminum	ug/L	1000	978		98	86 - 115	P
Antimony	ug/L	400	375		94	88 - 113	P
Arsenic	ug/L	400	372		93	87 - 113	P
Barium	ug/L	100	90.6		91	88 - 113	P
Beryllium	ug/L	100	98.3		98	89 - 112	P
Cadmium	ug/L	100	92.6		93	88 - 113	P
Calcium	ug/L	500	484	J	97	87 - 113	P
Chromium	ug/L	200	199		100	90 - 113	P
Cobalt	ug/L	100	93.7		94	89 - 114	P
Copper	ug/L	150	150		100	86 - 114	P
Iron	ug/L	1500	1400		93	87 - 115	P
Lead	ug/L	500	468		94	86 - 113	P
Magnesium	ug/L	1000	954	J	95	85 - 113	P
Manganese	ug/L	100	94.5		94	90 - 114	P
Nickel	ug/L	250	235		94	88 - 113	P
Potassium	ug/L	5000	4630		93	86 - 114	P
Selenium	ug/L	1000	962		96	83 - 114	P
Silver	ug/L	37.5	36.7		98	84 - 115	P
Sodium	ug/L	1500	1320		88	87 - 115	P
Thallium	ug/L	1000	965		96	85 - 114	P
Vanadium	ug/L	150	145		97	90 - 111	P
Zinc	ug/L	100	101		101	87 - 115	P

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

LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165066BS							
Mercury	ug/L	4.0	3.42		86	82 - 119	CV

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

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

TT-072-IDWGW-20241113L

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

Lab Code: CHEM **Lb No.:** lb133490 **Lab Sample ID :** P4867-04L **SDG No.:** P4868

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

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

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

RW5-SP303-20241114L

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

Lab Code: CHEM **Lb No.:** lb133502 **Lab Sample ID :** P4868-03L **SDG No.:** P4868

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	50.0	U	250	U			P
Antimony	25.0	U	125	U			P
Arsenic	10.0	U	50.0	U			P
Barium	50.0	U	250	U			P
Beryllium	3.00	U	15.0	U			P
Cadmium	3.00	U	15.0	U			P
Calcium	4720		4770	J	1		P
Chromium	4.33	J	4.27	J	2		P
Cobalt	1.62	J	75.0	U	100.0		P
Copper	10.0	U	50.0	U			P
Iron	46.5	J	250	U	100.0		P
Lead	6.00	U	30.0	U			P
Magnesium	1780		1810	J	2		P
Manganese	36.2		37.3	J	3		P
Nickel	2.38	J	100	U	100.0		P
Potassium	792	J	5000	U	100.0		P
Selenium	10.0	U	50.0	U			P
Silver	5.00	U	25.0	U			P
Sodium	10700		9520		11		P
Thallium	20.0	U	100	U			P
Vanadium	20.0	U	100	U			P
Zinc	9.05	J	10.1	J	11		P

METAL PREPARATION & INSTRUMENT DATA

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P4868 **SAS No.:** P4868

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

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

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

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

Case No.: P4868 **SAS No.:** P4868

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165011**						
P4868-01	RW5-SP100-20241114	SAM	WATER	11/15/2024	50.0	25.0	
P4868-03	RW5-SP303-20241114	SAM	WATER	11/15/2024	50.0	25.0	
P4868-03DUP	RW5-SP303-20241114DUP	DUP	WATER	11/15/2024	50.0	25.0	
P4868-03MS	RW5-SP303-20241114MS	MS	WATER	11/15/2024	50.0	25.0	
P4868-03MSD	RW5-SP303-20241114MSD	MSD	WATER	11/15/2024	50.0	25.0	
PB165011BL	PB165011BL	MB	WATER	11/15/2024	50.0	25.0	
PB165011BS	PB165011BS	LCS	WATER	11/15/2024	50.0	25.0	

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

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P4868

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

Case No.: P4868 **SAS No.:** P4868

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165066**						
P4867-04DUP	TT-072-IDWGW-20241113DUP	DUP	WATER	11/18/2024	30.0	30.0	
P4867-04MS	TT-072-IDWGW-20241113MS	MS	WATER	11/18/2024	30.0	30.0	
P4867-04MSD	TT-072-IDWGW-20241113MSD	MSD	WATER	11/18/2024	30.0	30.0	
P4868-01	RW5-SP100-20241114	SAM	WATER	11/18/2024	30.0	30.0	
P4868-03	RW5-SP303-20241114	SAM	WATER	11/18/2024	30.0	30.0	
PB165066BL	PB165066BL	MB	WATER	11/18/2024	30.0	30.0	
PB165066BS	PB165066BS	LCS	WATER	11/18/2024	30.0	30.0	

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

metals
- 14 -
ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** P4868 **Sas no.:** P4868 **Sdg no.:** P4868

Instrument id number: **Method:** **Run number:** LB133490

Start date: 11/18/2024 **End date:** 11/18/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1323	HG
S0.2	S0.2	1	1325	HG
S2.5	S2.5	1	1328	HG
S5	S5	1	1330	HG
S7.5	S7.5	1	1332	HG
S10	S10	1	1343	HG
ICV89	ICV89	1	1346	HG
ICB89	ICB89	1	1348	HG
CCV01	CCV01	1	1353	HG
CCB01	CCB01	1	1358	HG
CRA	CRA	1	1400	HG
CCV02	CCV02	1	1426	HG
CCB02	CCB02	1	1428	HG
PB165066BL	PB165066BL	1	1443	HG
PB165066BS	PB165066BS	1	1445	HG
P4867-04DUP	TT-072-IDWGW-20241113DUP	1	1454	HG
P4867-04MS	TT-072-IDWGW-20241113MS	1	1457	HG
CCV03	CCV03	1	1459	HG
CCB03	CCB03	1	1501	HG
P4867-04MSD	TT-072-IDWGW-20241113MSD	1	1503	HG
P4868-01	RW5-SP100-20241114	1	1506	HG
P4868-03	RW5-SP303-20241114	1	1508	HG
P4867-04L	TT-072-IDWGW-20241113L	5	1517	HG
CCV04	CCV04	1	1522	HG
CCB04	CCB04	1	1524	HG

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

metals
- 14 -
ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** P4868 **Sas no.:** P4868 **Sdg no.:** P4868

Instrument id number: **Method:** **Run number:** LB133502

Start date: 11/18/2024 **End date:** 11/18/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1231	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	1236	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	1240	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	1244	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	1249	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	1253	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	1311	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	1315	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	1320	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	1330	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	1342	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	1352	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	1402	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	1431	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	1435	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	1535	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	1539	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4868-01	RW5-SP100-20241114	1	1608	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4868-03	RW5-SP303-20241114	1	1612	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4868-03DUP	RW5-SP303-20241114DUP	1	1616	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4868-03MSD	RW5-SP303-20241114MSD	1	1621	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	1625	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	1629	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4868-03L	RW5-SP303-20241114L	5	1641	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4868-03MS	RW5-SP303-20241114MS	1	1646	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	1701	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	1706	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	1804	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	1808	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	1854	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	1858	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

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

metals
- 14 -
ANALYSIS RUN LOG

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

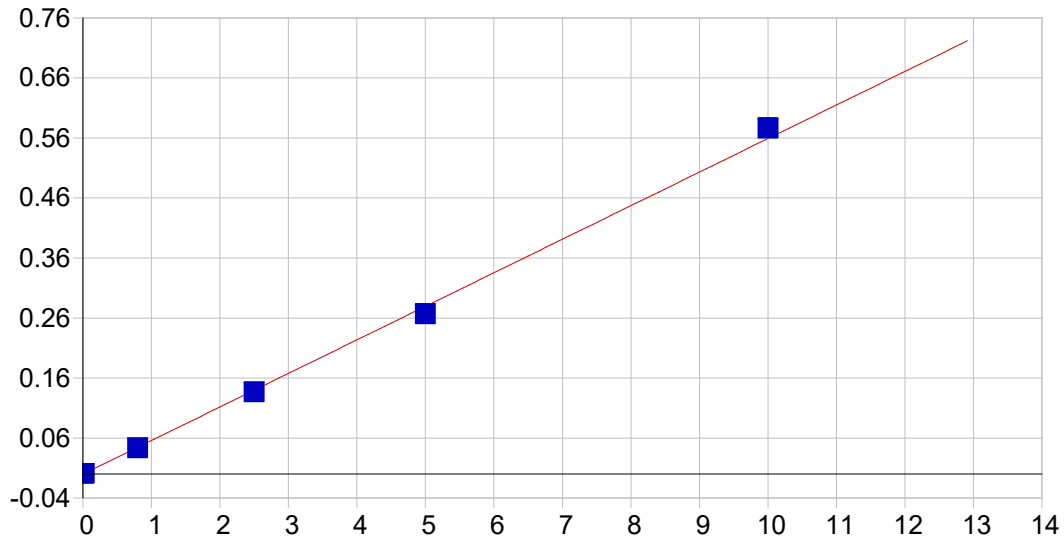
Lab code: CHEM **Case no.:** P4868 **Sas no.:** P4868 **Sdg no.:** P4868

Instrument id number: **Method:** **Run number:** LB133540

Start date: 11/20/2024 **End date:** 11/20/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1217	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	1222	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	1226	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	1230	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	1235	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	1239	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	1250	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	1259	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	1309	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	1313	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	1317	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	1328	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	1346	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	1450	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	1500	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165011BL	PB165011BL	1	1639	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165011BS	PB165011BS	1	1644	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	1648	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	1652	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

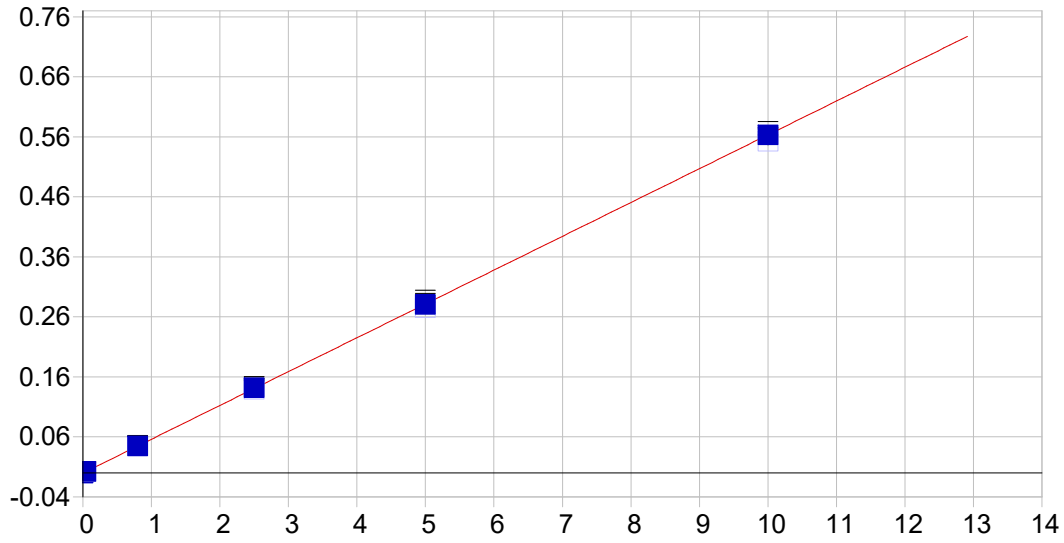


As 189.042 {479}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000155	Re-Slope:	1.000000
A1 (Gain):	0.055924	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999401	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.002474		
Predicted MQL:	0.008245		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00016	.000	1
S1	.02000	.02222	.002	11.1	.00108	.000	1
S3	2.5000	2.4446	-.055	-2.22	.13641	.000	1
S4	5.0000	4.7709	-.229	-4.58	.26635	.001	1
S5	10.000	10.305	.305	3.05	.57554	.001	1
S2	.80000	.77725	-.023	-2.84	.04326	.001	1

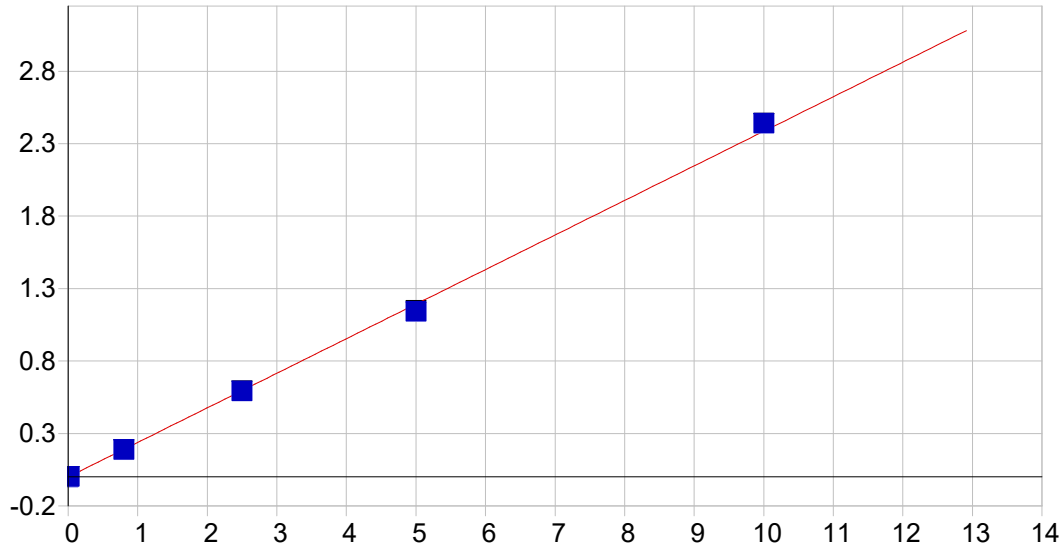


Tl 190.856 {477}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000278	Re-Slope:	1.000000
A1 (Gain):	0.056358	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.001999		
Predicted MQL:	0.006665		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00028	.000	1
S1	.04000	.03928	-.001	-1.79	.00179	.000	1
S3	2.5000	2.5200	.020	.800	.13915	.002	1
S4	5.0000	4.9815	-.019	-.370	.27528	.007	1
S5	10.000	9.9959	-.004	-.041	.55269	.006	1
S2	.80000	.80330	.003	.413	.04416	.001	1

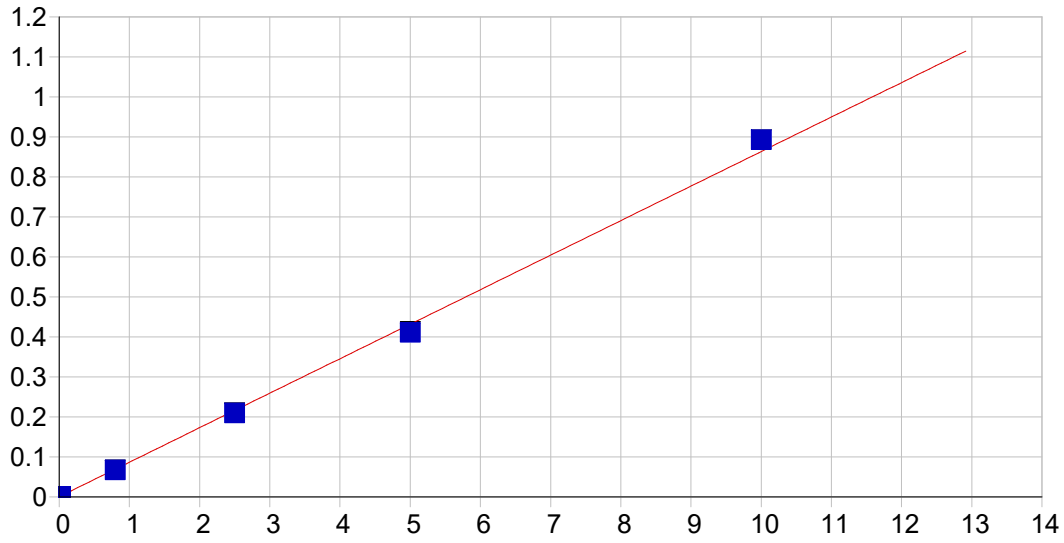


Pb 220.353 {453}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000277	Re-Slope:	1.000000
A1 (Gain):	0.238586	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999607	Status:	OK.
Std Error of Est:	0.000121		
Predicted MDL:	0.001043		
Predicted MQL:	0.003476		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00028	.000	1
S1	.01200	.01223	.000	1.96	.00259	.000	1
S3	2.5000	2.4883	-.012	-.467	.59274	.001	1
S4	5.0000	4.7909	-.209	-4.18	1.1414	.006	1
S5	10.000	10.232	.232	2.32	2.4384	.001	1
S2	.80000	.78818	-.012	-1.48	.18756	.001	1

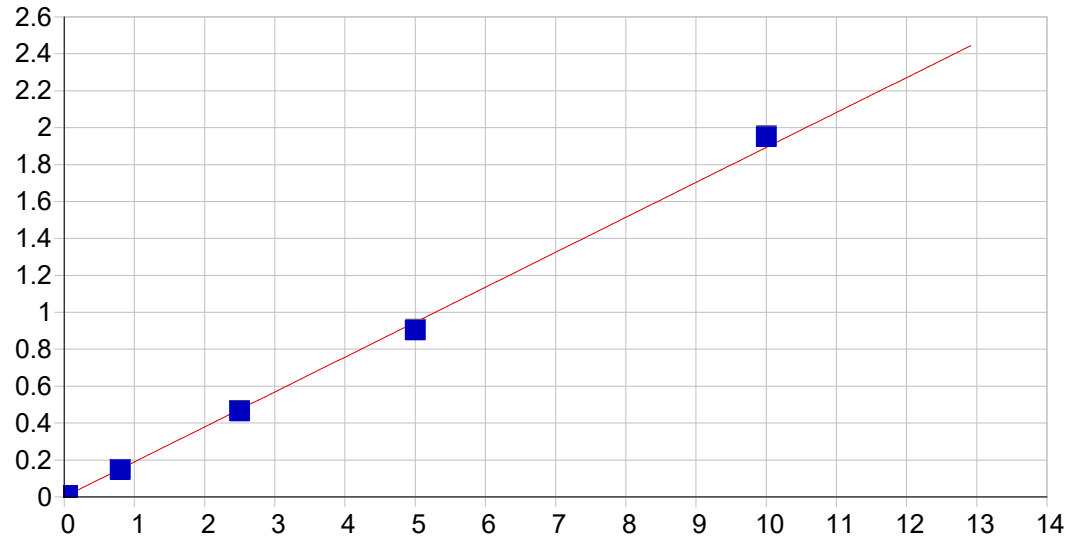


Se 196.090 {472}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000408	Re-Slope:	1.000000
A1 (Gain):	0.086285	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999269	Status:	OK.
Std Error of Est:	0.000077		
Predicted MDL:	0.002155		
Predicted MQL:	0.007182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00041	.000	1
S1	.02000	.02201	.002	10.0	.00231	.000	1
S3	2.5000	2.4250	-.075	-3.00	.20960	.001	1
S4	5.0000	4.7600	-.240	-4.80	.41102	.002	1
S5	10.000	10.342	.342	3.42	.89259	.001	1
S2	.80000	.77042	-.030	-3.70	.06687	.000	1

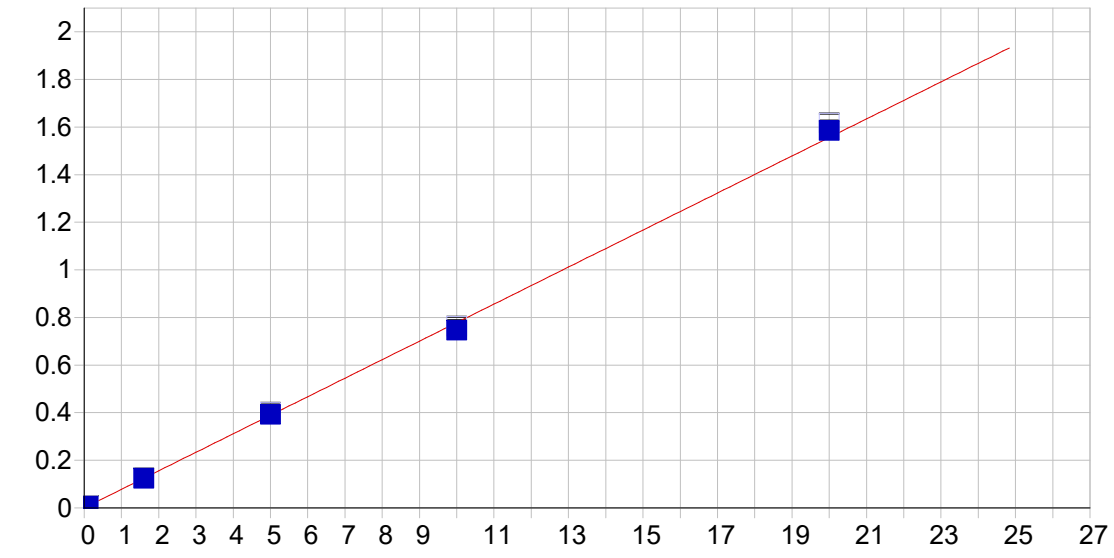


Sb 206.833 {463}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000411	Re-Slope:	1.000000
A1 (Gain):	0.189231	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999416	Status:	OK.
Std Error of Est:	0.000241		
Predicted MDL:	0.001201		
Predicted MQL:	0.004004		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00041	.000	1
S1	.05000	.05123	.001	2.46	.01013	.000	1
S3	2.5000	2.4501	-.050	-2.00	.46533	.001	1
S4	5.0000	4.7669	-.233	-4.66	.90504	.004	1
S5	10.000	10.303	.303	3.03	1.9551	.002	1
S2	.80000	.77917	-.021	-2.60	.14827	.001	1

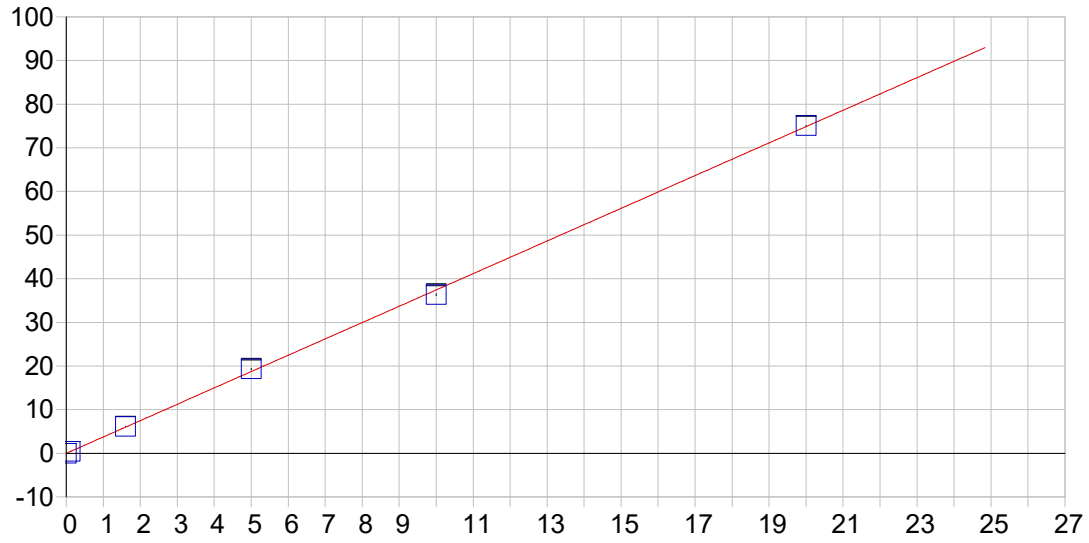


Al 396.152 { 85}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000317	Re-Slope:	1.000000
A1 (Gain):	0.077806	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999674	Status:	OK.
Std Error of Est:	0.000150		
Predicted MDL:	0.005892		
Predicted MQL:	0.019640		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00032	.000	1
S1	.10000	.10764	.008	7.64	.00930	.000	1
S3	5.0000	5.0474	.047	.949	.40058	.001	1
S4	10.000	9.5909	-.409	-4.09	.76164	.002	1
S5	20.000	20.372	.372	1.86	1.6155	.002	1
S2	1.6000	1.5819	-.018	-1.13	.12582	.001	1

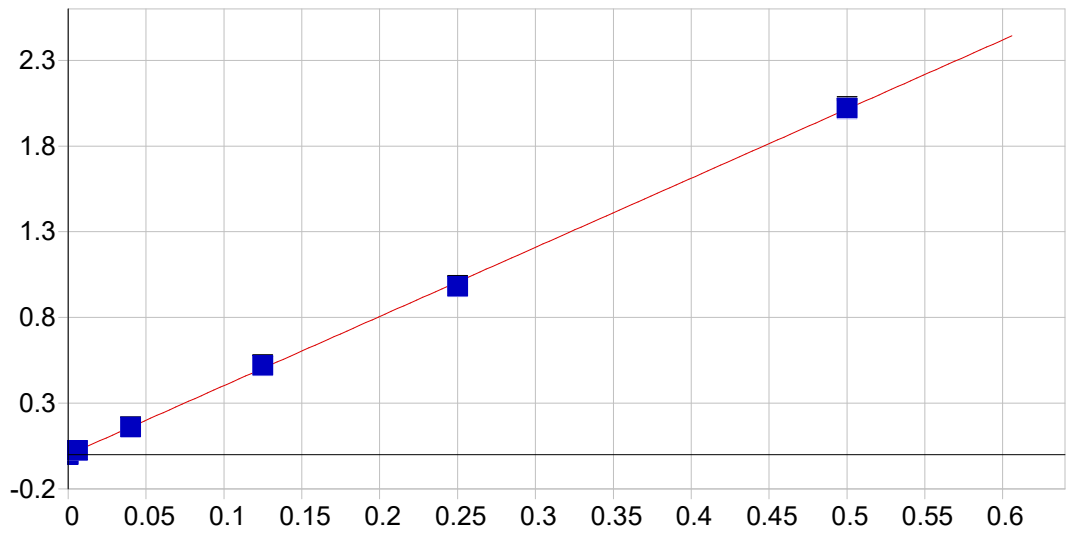


Ba 493.409 { 68}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000438	Re-Slope:	1.000000
A1 (Gain):	3.742875	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999773	Status:	OK.
Std Error of Est:	0.005917		
Predicted MDL:	0.000402		
Predicted MQL:	0.001340		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00037	.002	1
S1	.10000	.11416	.014	14.2	.42772	.003	1
S3	5.0000	5.1595	.160	3.19	19.312	.162	1
S4	10.000	9.7181	-.282	-2.82	36.374	.219	1
S5	20.000	20.060	.060	.300	75.083	.084	1
S2	1.6000	1.6482	.048	3.01	6.1694	.009	1

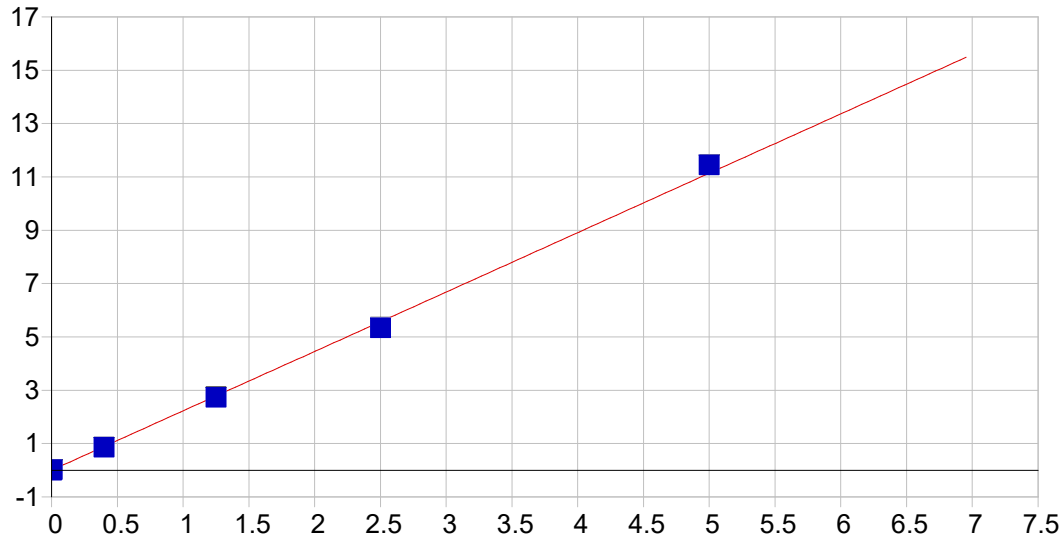


Be 234.861 {144}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000958	Re-Slope:	1.000000
A1 (Gain):	4.033050	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000216		
Predicted MDL:	0.000058		
Predicted MQL:	0.000194		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00096	.000	1
S1	.00600	.00637	.000	6.17	.02455	.000	1
S3	.12500	.12908	.004	3.27	.51739	.004	1
S4	.25000	.24375	-.006	-2.50	.97757	.005	1
S5	.50000	.50164	.002	.329	2.0132	.008	1
S2	.04000	.04016	.000	.394	.16028	.000	1

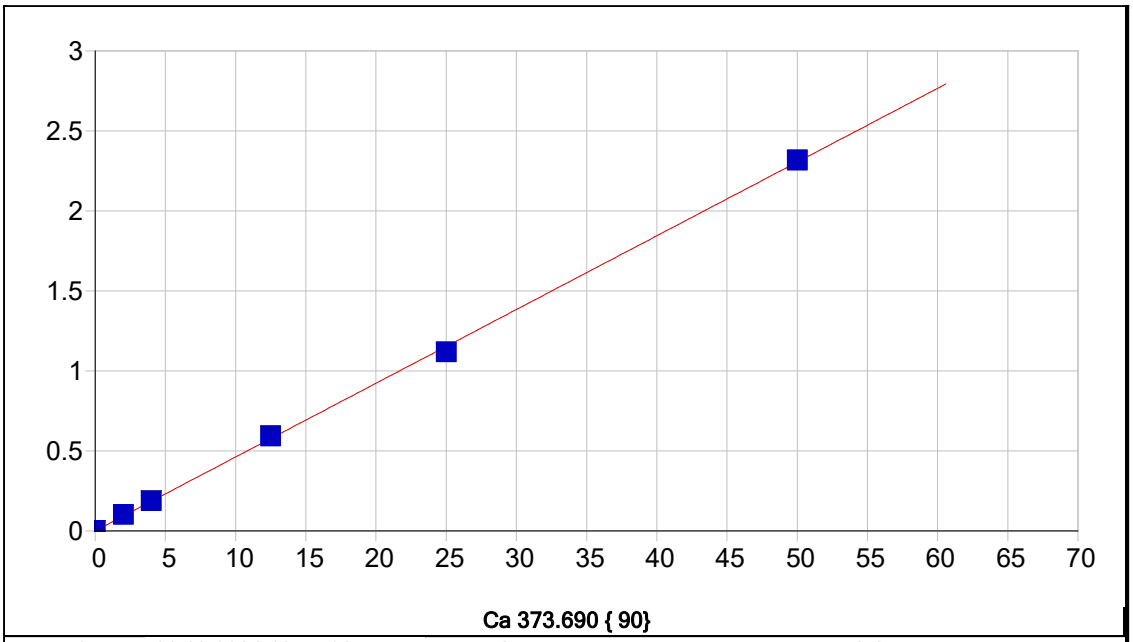


Cd 226.502 {449}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000017	Re-Slope:	1.000000
A1 (Gain):	2.227458	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999491	Status:	OK.
Std Error of Est:	0.000646		
Predicted MDL:	0.000086		
Predicted MQL:	0.000286		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.00600	.00725	.001	20.9	.01619	.000	1
S3	1.2500	1.2271	-.023	-1.83	2.7355	.005	1
S4	2.5000	2.3971	-.103	-4.12	5.3437	.021	1
S5	5.0000	5.1393	.139	2.79	11.456	.011	1
S2	.40000	.38519	-.015	-3.70	.85864	.007	1

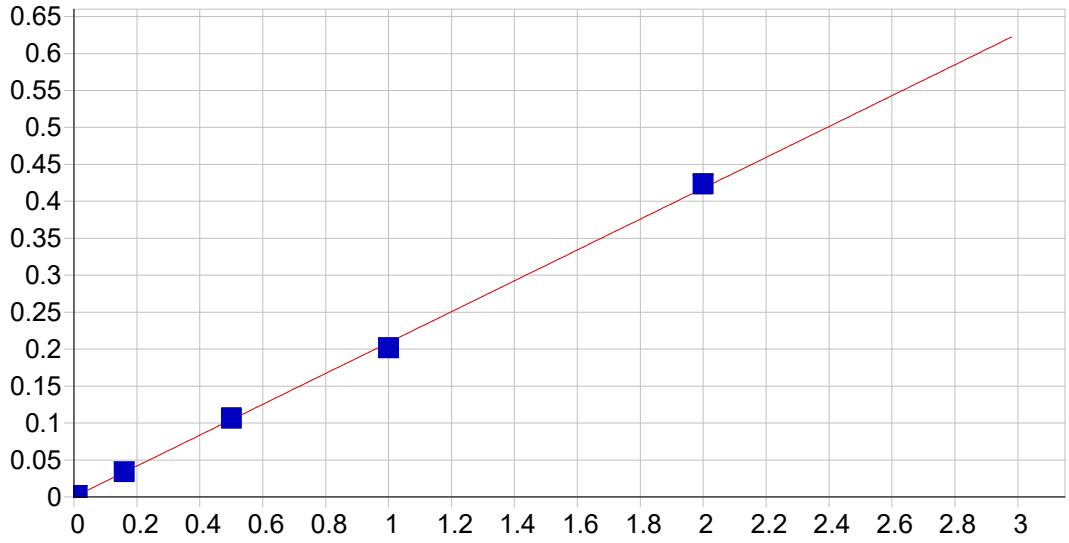


Ca 373.690 { 90}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001384	Re-Slope:	1.000000
A1 (Gain):	0.046077	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999723	Status:	OK.
Std Error of Est:	0.000574		
Predicted MDL:	0.009368		
Predicted MQL:	0.031226		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00021	-.000	.000	.00137	.000	1
S2	4.0000	4.0562	.056	1.40	.18828	.001	1
S3	12.500	12.800	.300	2.40	.59115	.002	1
S4	25.000	24.214	-.786	-3.14	1.1171	.001	1
S5	50.000	50.241	.241	.481	2.3163	.002	1
S1	2.0000	2.1897	.190	9.48	.10228	.000	1

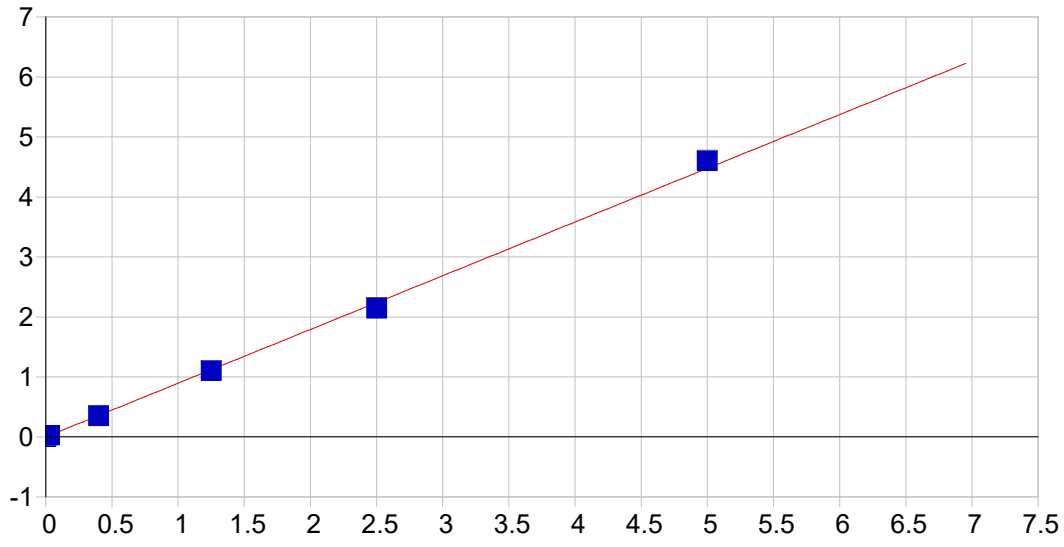


Cr 267.716 {126}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000029	Re-Slope:	1.000000
A1 (Gain):	0.208850	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	0.000355		
Predicted MQL:	0.001182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.01000	.01006	.000	.593	.00213	.000	1
S3	.50000	.50852	.009	1.70	.10626	.000	1
S4	1.0000	.96470	-.035	-3.53	.20157	.001	1
S5	2.0000	2.0248	.025	1.24	.42303	.001	1
S2	.16000	.16196	.002	1.23	.03386	.000	1

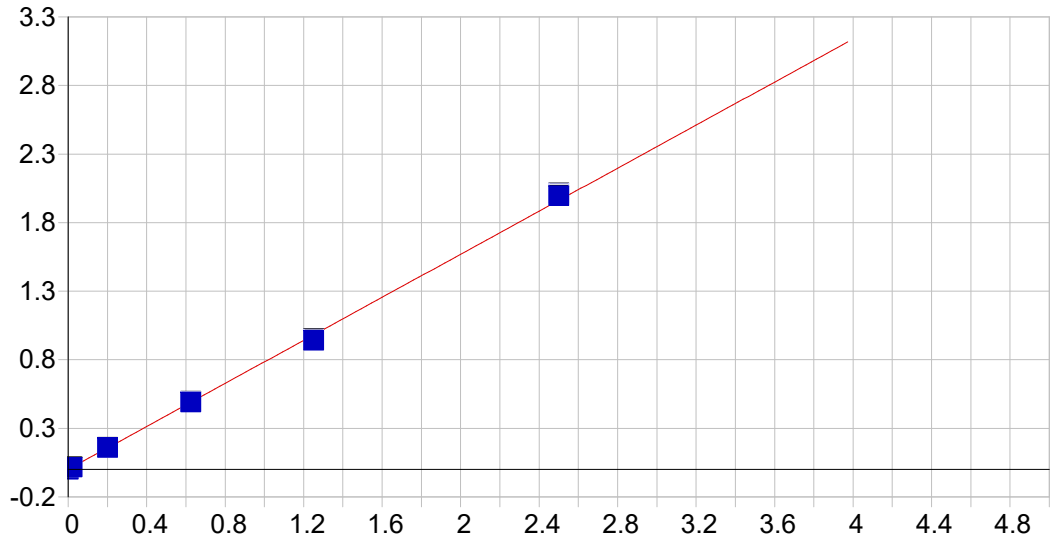


Co 228.616 {448}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000032	Re-Slope:	1.000000
A1 (Gain):	0.895272	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999513	Status:	OK.
Std Error of Est:	0.000569		
Predicted MDL:	0.000192		
Predicted MQL:	0.000640		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00003	.000	1
S1	.03000	.03091	.001	3.04	.02753	.000	1
S3	1.2500	1.2315	-.018	-1.48	1.1044	.002	1
S4	2.5000	2.3918	-.108	-4.33	2.1451	.009	1
S5	5.0000	5.1362	.136	2.72	4.6059	.004	1
S2	.40000	.38954	-.010	-2.61	.34932	.002	1

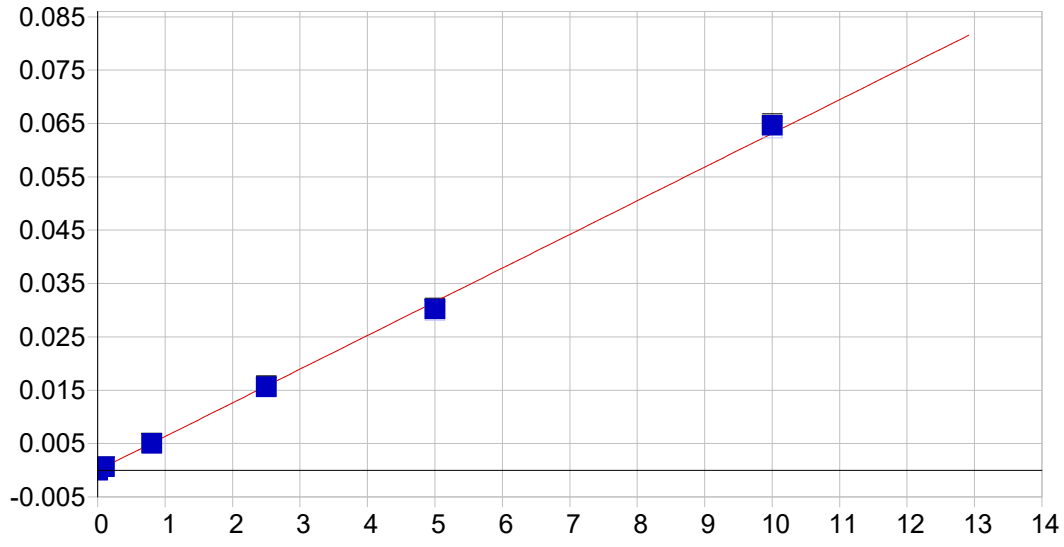


Cu 224.700 {450}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000071	Re-Slope:	1.000000
A1 (Gain):	0.784625	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999667	Status:	OK.
Std Error of Est:	0.000240		
Predicted MDL:	0.000383		
Predicted MQL:	0.001276		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00007	.000	1
S1	.02000	.02263	.003	13.1	.01802	.000	1
S3	.62500	.62637	.001	.219	.49621	.001	1
S4	1.2500	1.2002	-.050	-3.98	.95113	.004	1
S5	2.5000	2.5437	.044	1.75	2.0146	.002	1
S2	.20000	.20207	.002	1.03	.16011	.001	1

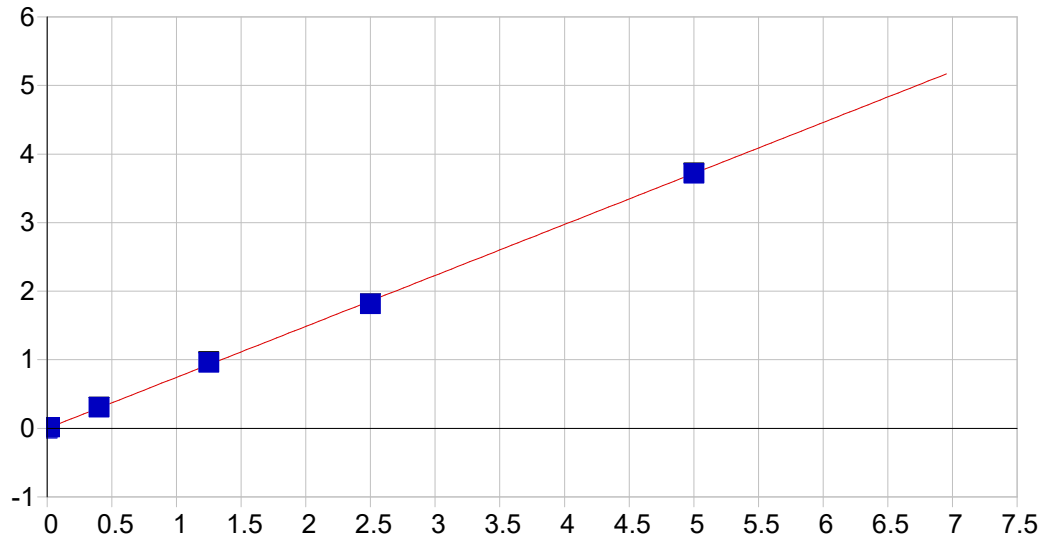


Fe 240.488 {140}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.006314	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999577	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.003971		
Predicted MQL:	0.013236		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00000	.000	1
S1	.10000	.10049	.000	.493	.00063	.000	1
S3	2.5000	2.4800	-.020	-.801	.01552	.000	1
S4	5.0000	4.7830	-.217	-4.34	.02993	.000	1
S5	10.000	10.239	.239	2.39	.06411	.000	1
S2	.80000	.79721	-.003	-.348	.00499	.000	1

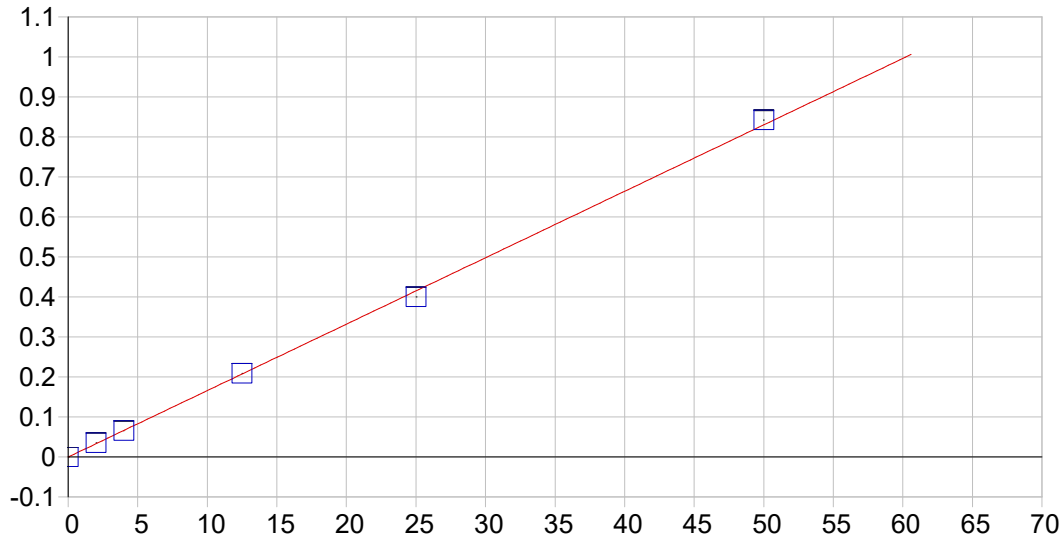


Mn 257.610 {131}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000020	Re-Slope:	1.000000
A1 (Gain):	0.743359	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999792	Status:	OK.
Std Error of Est:	0.000252		
Predicted MDL:	0.000268		
Predicted MQL:	0.000893		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.02000	.02293	.003	14.6	.01703	.000	1
S3	1.2500	1.2929	.043	3.43	.96125	.007	1
S4	2.5000	2.4403	-.060	-2.39	1.8144	.003	1
S5	5.0000	4.9998	-.000	-.005	3.7173	.007	1
S2	.40000	.41409	.014	3.52	.30786	.000	1

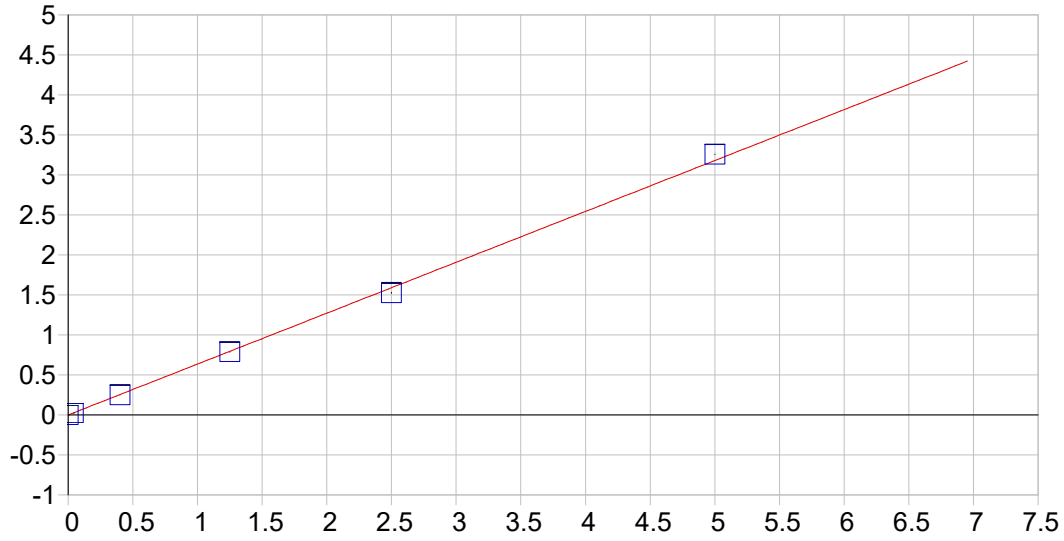


Mg 279.079 {121}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000272	Re-Slope:	1.000000
A1 (Gain):	0.016607	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999704	Status:	OK.
Std Error of Est:	0.000214		
Predicted MDL:	0.012155		
Predicted MQL:	0.040517		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00010	-.000	.000	-.00027	.000	1
S2	4.0000	3.9551	-.045	-1.12	.06541	.000	1
S3	12.500	12.585	.085	.681	.20873	.000	1
S4	25.000	24.092	-.908	-3.63	.39984	.000	1
S5	50.000	50.719	.719	1.44	.84204	.002	1
S1	2.0000	2.1484	.148	7.42	.03541	.000	1

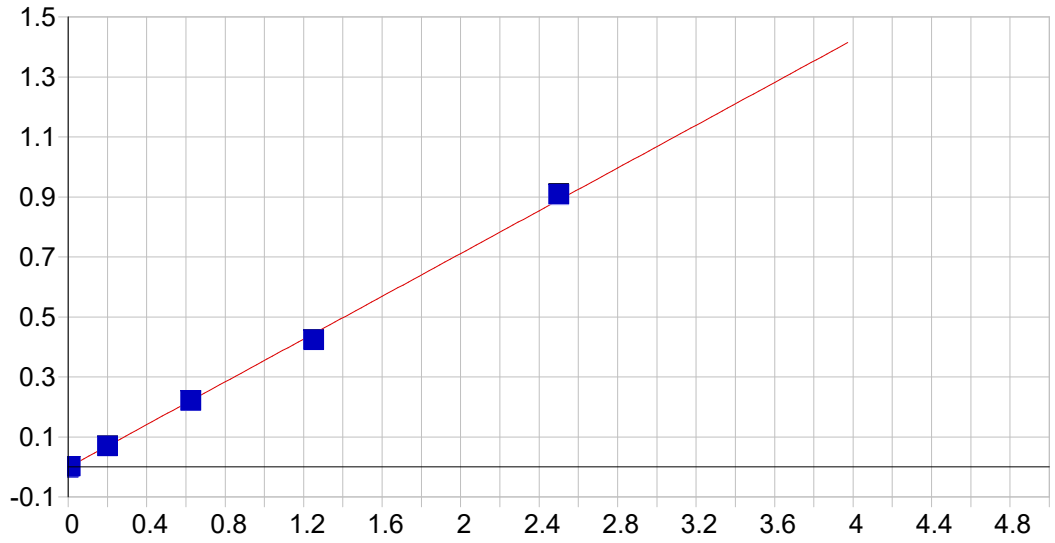


Ni 231.604 {446}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000328	Re-Slope:	1.000000
A1 (Gain):	0.636036	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999590	Status:	OK.
Std Error of Est:	0.000428		
Predicted MDL:	0.000304		
Predicted MQL:	0.001014		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00033	.000	1
S1	.04000	.04087	.001	2.16	.02566	.000	1
S3	1.2500	1.2370	-.013	-1.04	.78647	.002	1
S4	2.5000	2.3972	-.103	-4.11	1.5244	.006	1
S5	5.0000	5.1228	.123	2.46	3.2579	.003	1
S2	.40000	.39215	-.008	-1.96	.24909	.001	1

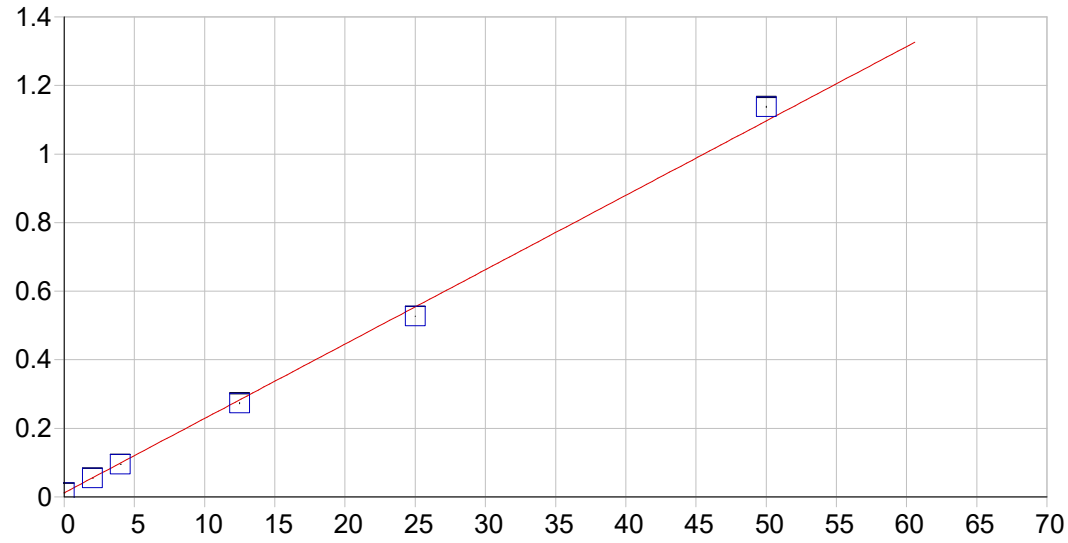


Ag 328.068 {103}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001654	Re-Slope:	1.000000
A1 (Gain):	0.356423	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999585	Status:	OK.
Std Error of Est:	0.000085		
Predicted MDL:	0.000299		
Predicted MQL:	0.000998		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00165	.000	1
S1	.01000	.01074	.001	7.42	.00215	.000	1
S3	.62500	.62425	-.001	-.120	.21996	.001	1
S4	1.2500	1.1943	-.056	-4.45	.42227	.001	1
S5	2.5000	2.5557	.056	2.23	.90572	.002	1
S2	.20000	.19997	-.000	-.017	.06934	.000	1

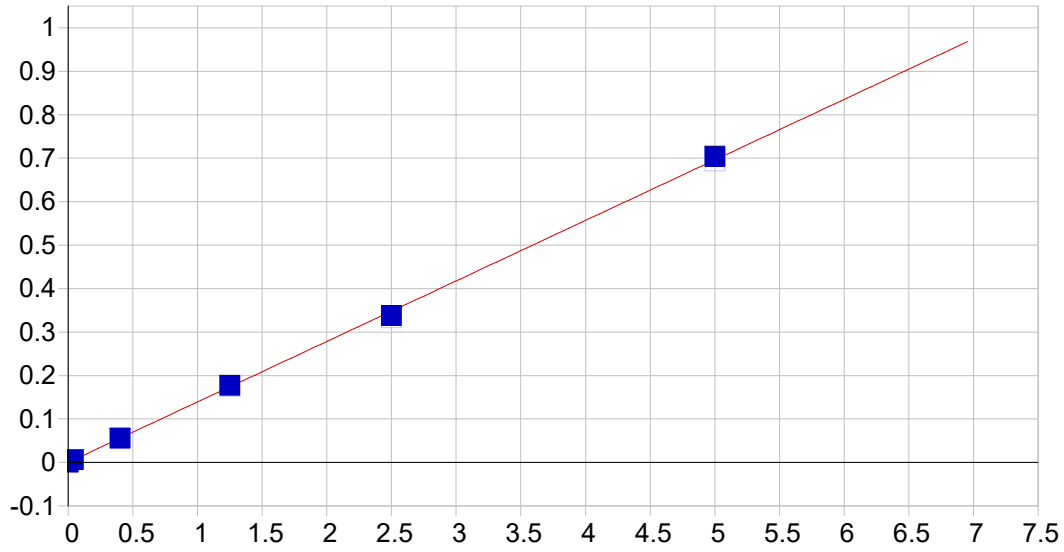


Na 589.592 { 57}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.012006	Re-Slope:	1.000000
A1 (Gain):	0.021689	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999145	Status:	OK.
Std Error of Est:	0.000475		
Predicted MDL:	0.007798		
Predicted MQL:	0.025994		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00020	.000	.000	.01201	.001	1
S2	4.0000	3.8271	-.173	-4.32	.09501	.000	1
S3	12.500	12.050	-.450	-3.60	.27336	.002	1
S4	25.000	23.740	-1.26	-5.04	.52690	.000	1
S5	50.000	51.904	1.90	3.81	1.1378	.002	1
S1	2.0000	1.9782	-.022	-1.09	.05491	.000	1

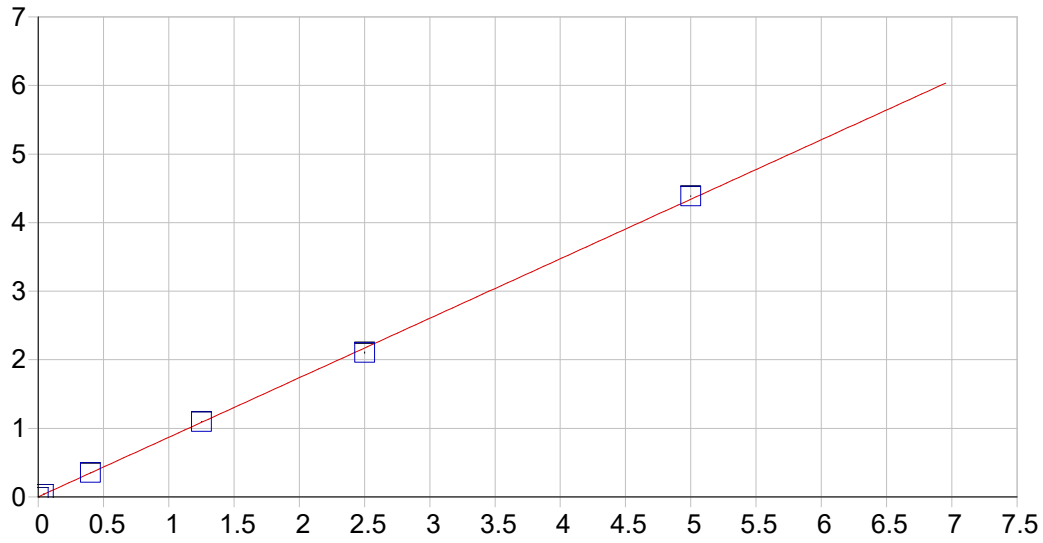


V 292.402 {115}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.139212	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999807	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.001494		
Predicted MQL:	0.004979		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.04000	.04363	.004	9.09	.00588	.000	1
S3	1.2500	1.2706	.021	1.65	.17436	.001	1
S4	2.5000	2.4250	-.075	-3.00	.33252	.001	1
S5	5.0000	5.0515	.052	1.03	.69309	.002	1
S2	.40000	.39938	-.001	-.155	.05480	.000	1

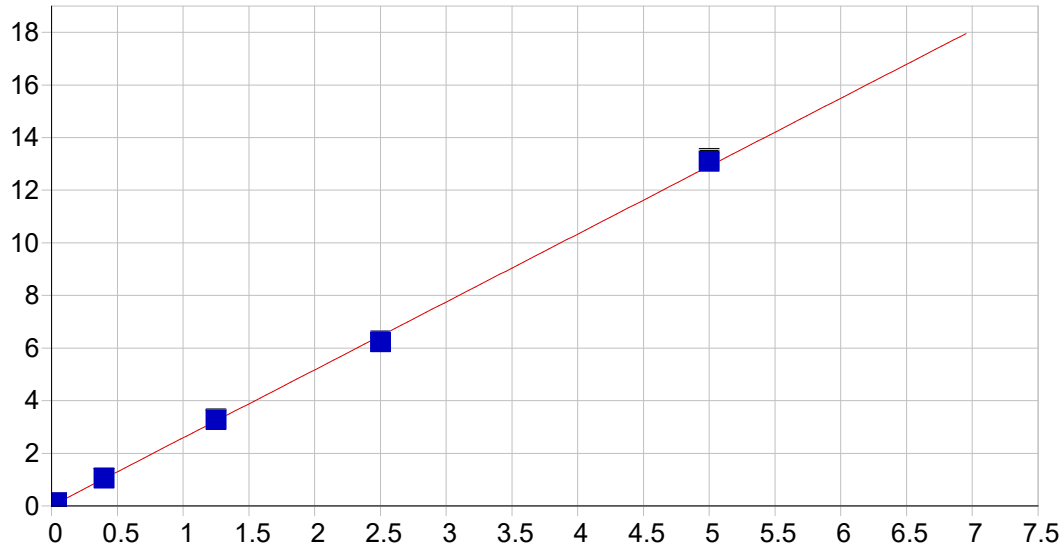


Zn 206.200 {464}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001630	Re-Slope:	1.000000
A1 (Gain):	0.867806	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999812	Status:	OK.
Std Error of Est:	0.000395		
Predicted MDL:	0.000212		
Predicted MQL:	0.000706		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00163	.000	1
S1	.04000	.04417	.004	10.4	.03996	.000	1
S3	1.2500	1.2636	.014	1.09	1.0982	.003	1
S4	2.5000	2.4248	-.075	-3.01	2.1059	.009	1
S5	5.0000	5.0519	.052	1.04	4.3857	.004	1
S2	.40000	.40550	.006	1.38	.35353	.002	1

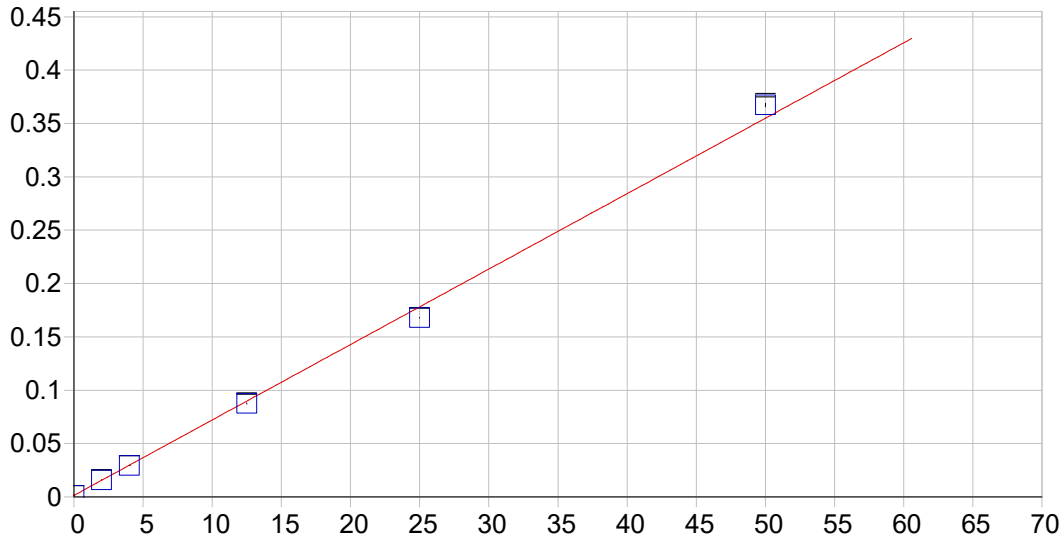


Zn 213.856 {158}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006388	Re-Slope:	1.000000
A1 (Gain):	2.581751	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999752	Status:	OK.
Std Error of Est:	0.001360		
Predicted MDL:	0.000280		
Predicted MQL:	0.000933		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00638	.000	1
S1	.04000	.04424	.004	10.6	.12132	.001	1
S3	1.2500	1.2641	.014	1.13	3.2923	.017	1
S4	2.5000	2.4117	-.088	-3.53	6.2778	.009	1
S5	5.0000	5.0656	.066	1.31	13.174	.032	1
S2	.40000	.40436	.004	1.09	1.0575	.001	1

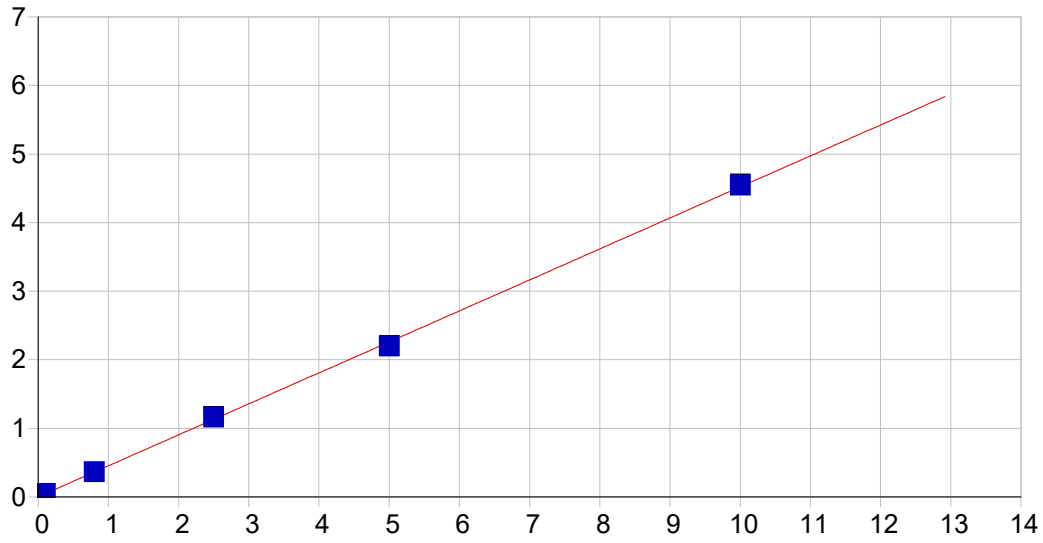


K 766.490 { 44}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001439	Re-Slope:	1.000000
A1 (Gain):	0.007069	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999167	Status:	OK.
Std Error of Est:	0.000153		
Predicted MDL:	0.024825		
Predicted MQL:	0.082749		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00006	.000	.000	.00144	.000	1
S2	4.0000	3.9445	-.056	-1.39	.02932	.000	1
S3	12.500	12.193	-.307	-2.45	.08764	.001	1
S4	25.000	23.548	-1.45	-5.81	.16791	.000	1
S5	50.000	51.754	1.75	3.51	.36730	.002	1
S1	2.0000	2.0604	.060	3.02	.01600	.000	1

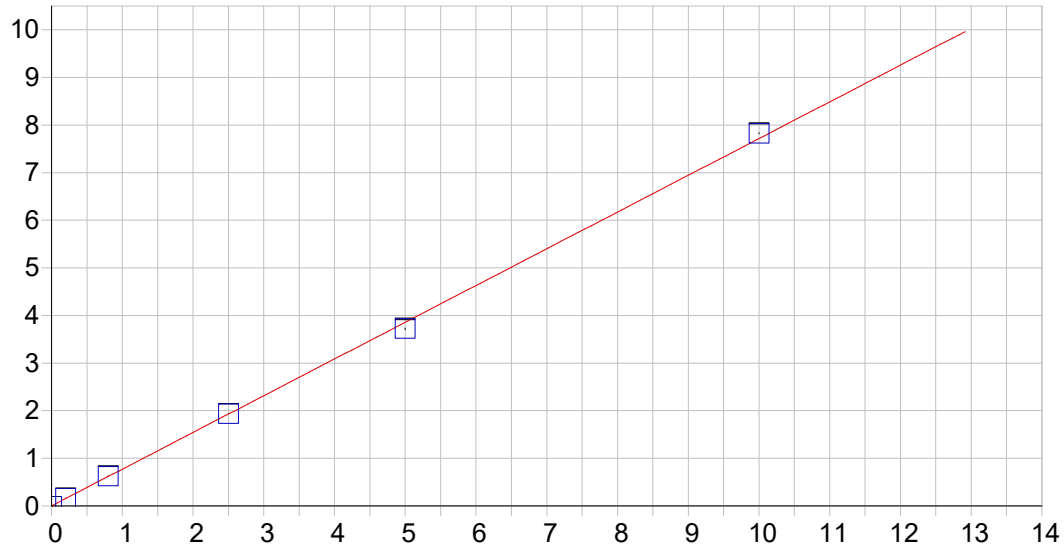


B 249.678 {135}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001210	Re-Slope:	1.000000
A1 (Gain):	0.451898	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999759	Status:	OK.
Std Error of Est:	0.000520		
Predicted MDL:	0.000638		
Predicted MQL:	0.002125		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00120	.000	1
S1	.10000	.11600	.016	16.0	.05344	.000	1
S3	2.5000	2.5680	.068	2.72	1.1595	.011	1
S4	5.0000	4.8568	-.143	-2.86	2.1916	.010	1
S5	10.000	10.058	.058	.581	4.5376	.018	1
S2	.80000	.80119	.001	.149	.36256	.001	1

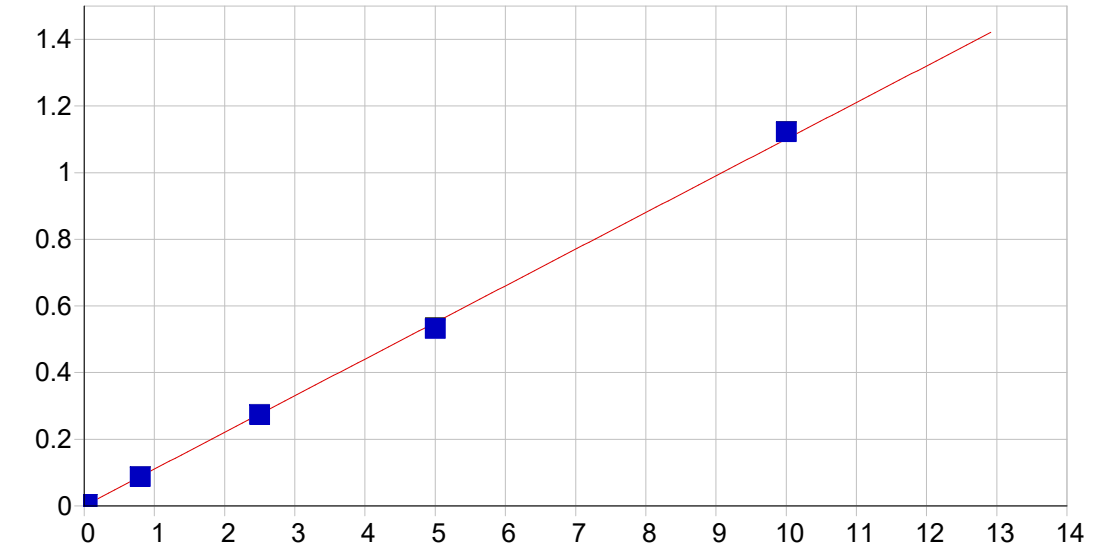


Mo 202.030 {467}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000215	Re-Slope:	1.000000
A1 (Gain):	0.771606	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999746	Status:	OK.
Std Error of Est:	0.001294		
Predicted MDL:	0.000248		
Predicted MQL:	0.000828		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00020	.000	1
S1	.20000	.21315	.013	6.57	.16468	.001	1
S3	2.5000	2.5100	.010	.399	1.9369	.004	1
S4	5.0000	4.8227	-.177	-3.55	3.7215	.016	1
S5	10.000	10.143	.143	1.43	7.8263	.010	1
S2	.80000	.81163	.012	1.45	.62647	.005	1

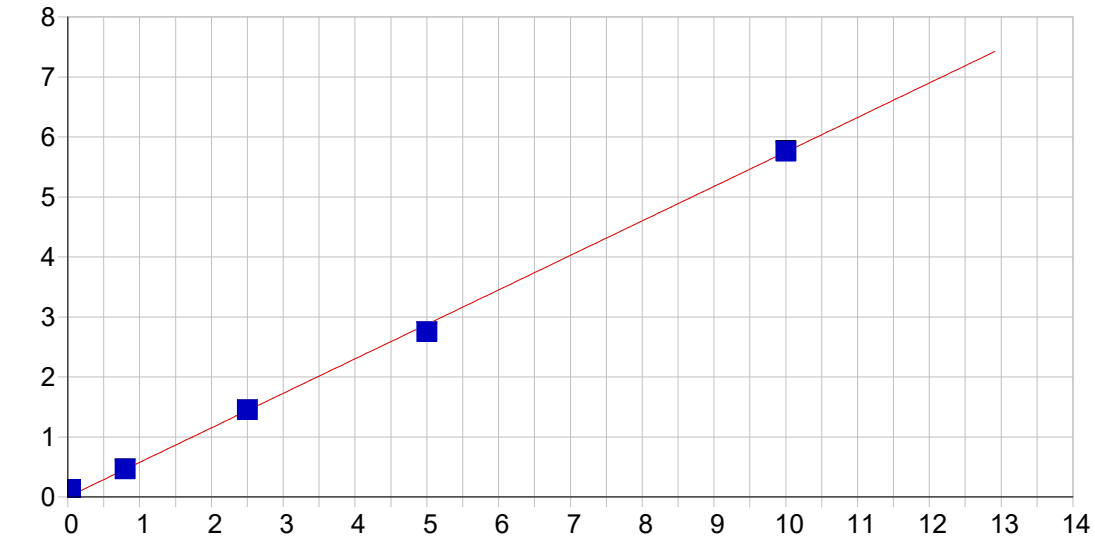


Sn 189.989 {478}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000588	Re-Slope:	1.000000
A1 (Gain):	0.109981	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999718	Status:	OK.
Std Error of Est:	0.000086		
Predicted MDL:	0.000788		
Predicted MQL:	0.002627		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00059	.000	1
S1	.04000	.03762	-.002	-5.96	.00472	.000	1
S3	2.5000	2.4857	-.014	-.571	.27369	.001	1
S4	5.0000	4.8277	-.172	-3.45	.53098	.003	1
S5	10.000	10.200	.200	2.00	1.1213	.000	1
S2	.80000	.78901	-.011	-1.37	.08727	.001	1

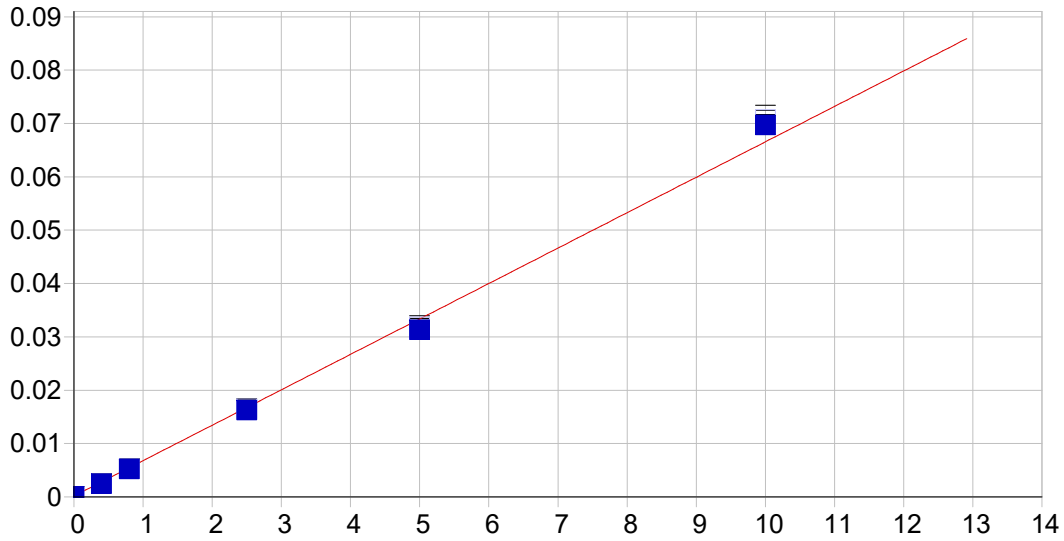


Ti 336.121 {100}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001761	Re-Slope:	1.000000
A1 (Gain):	0.574760	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.979668	Status:	OK.
Std Error of Est:	0.003901		
Predicted MDL:	0.000540		
Predicted MQL:	0.001798		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00017	-.000	.000	.00166	.000	1
S1	.04000	.21417	.174	435.	.12484	.000	1
S3	2.5000	2.5235	.023	.938	1.4516	.004	1
S4	5.0000	4.7863	-.214	-4.27	2.7517	.005	1
S5	10.000	10.015	.015	.151	5.7560	.014	1
S2	.80000	.80099	.001	.124	.46197	.000	1

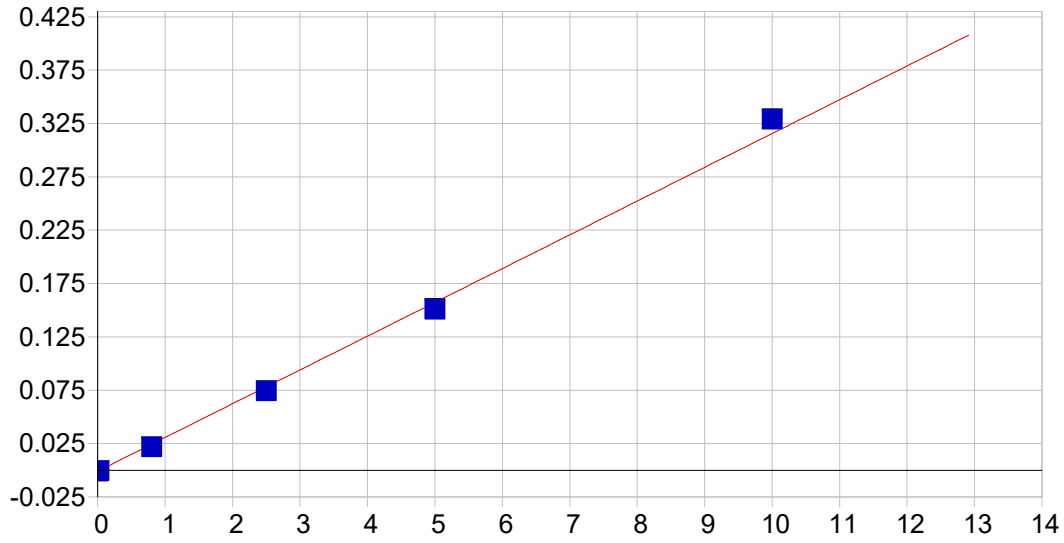


Si 288.158 {117}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000158	Re-Slope:	1.000000
A1 (Gain):	0.006640	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998643	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.006230		
Predicted MQL:	0.020765		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00009	.000	.000	.00016	.000	1
S1	.40000	.34821	-.052	-12.9	.00248	.000	1
S3	2.5000	2.4224	-.078	-3.10	.01649	.000	1
S4	5.0000	4.6956	-.304	-6.09	.03184	.000	1
S5	10.000	10.475	.475	4.75	.07071	.001	1
S2	.80000	.75854	-.041	-5.18	.00528	.000	1

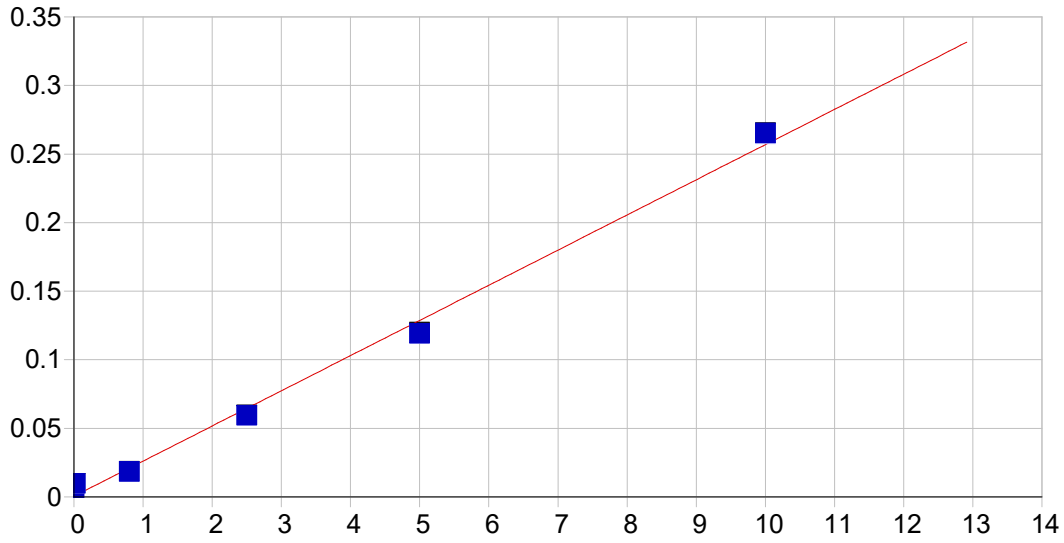


P 177.495 {490}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000969	Re-Slope:	1.000000
A1 (Gain):	0.031656	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998859	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.002522		
Predicted MQL:	0.008407		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00097	.000	1
S1	.02000	.01700	-.003	-15.0	-.00043	.000	1
S3	2.5000	2.3760	-.124	-4.96	.07423	.000	1
S4	5.0000	4.7893	-.211	-4.21	.15062	.001	1
S5	10.000	10.421	.421	4.21	.32887	.000	1
S2	.80000	.71669	-.083	-10.4	.02171	.000	1

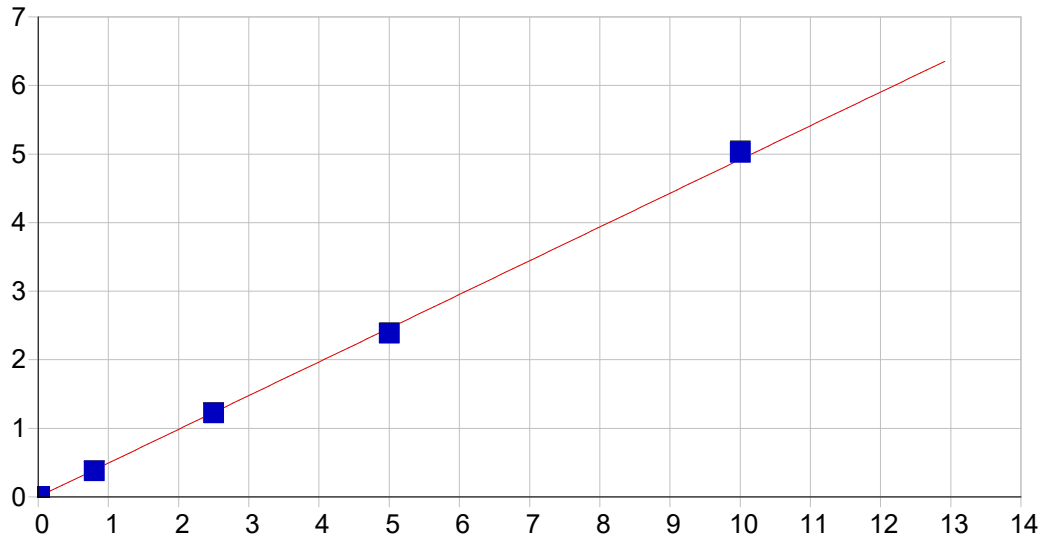


S 182.034 {485}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000456	Re-Slope:	1.000000
A1 (Gain):	0.025643	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.865196	Status:	OK.
Std Error of Est:	0.000347		
Predicted MDL:	0.003139		
Predicted MQL:	0.010464		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00034	-.000	.000	.00045	.000	1
S1	.02000	.36784	.348	1740.	.00987	.000	1
S3	2.5000	2.3005	-.200	-7.98	.05928	.000	1
S4	5.0000	4.6350	-.365	-7.30	.11898	.001	1
S5	10.000	10.328	.328	3.28	.26463	.000	1
S2	.80000	.70247	-.098	-12.2	.01842	.000	1

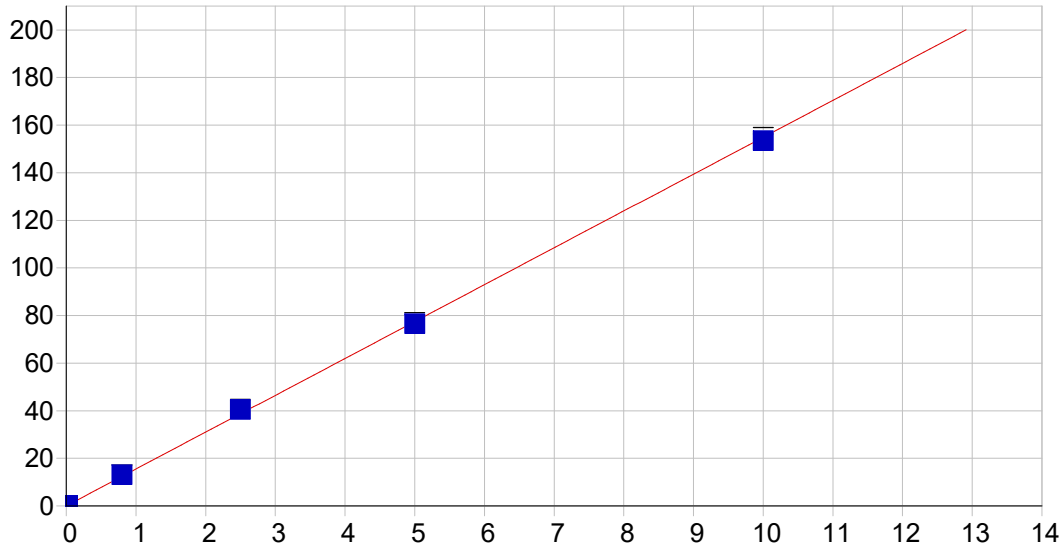


Li 670.784 { 50}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001311	Re-Slope:	1.000000
A1 (Gain):	0.491865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999706	Status:	OK.
Std Error of Est:	0.000280		
Predicted MDL:	0.001824		
Predicted MQL:	0.006082		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00131	.000	1
S5	10.000	10.209	.209	2.09	5.0271	.016	1
S4	5.0000	4.8459	-.154	-3.08	2.3870	.006	1
S3	2.5000	2.4784	-.022	-.865	1.2214	.012	1
S1	.02000	.02095	.001	4.77	.01180	.000	1
S2	.80000	.76599	-.034	-4.25	.37843	.002	1

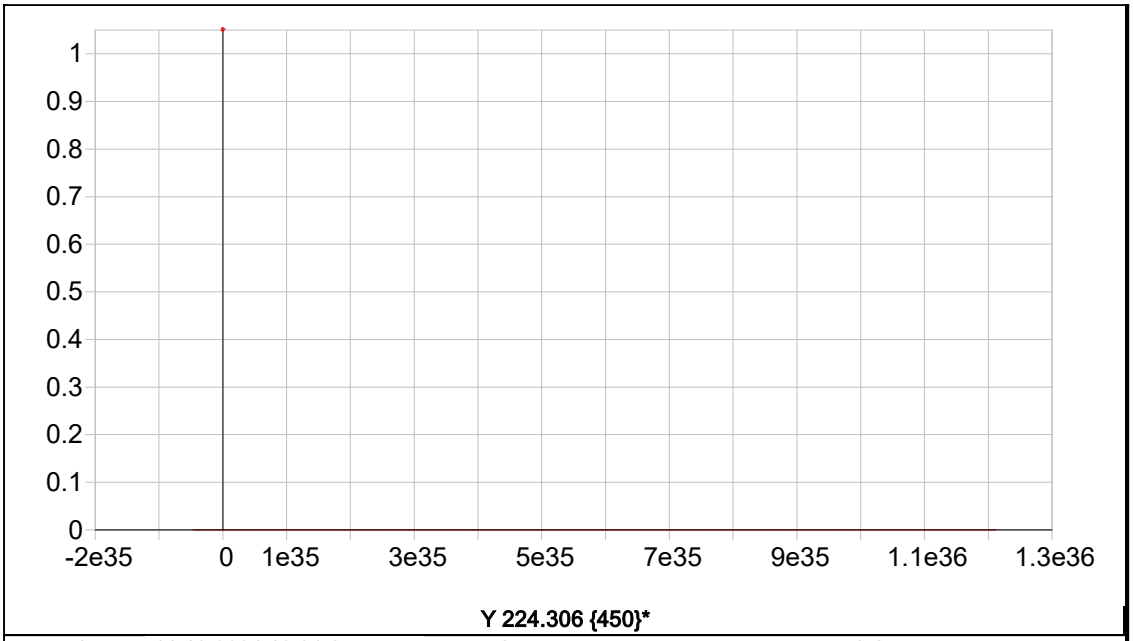


Sr 407.771 { 83}

Date of Fit:	11/18/2024 12:57:32	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001644	Re-Slope:	1.000000
A1 (Gain):	15.489293	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999747	Status:	OK.
Std Error of Est:	0.008170		
Predicted MDL:	0.000034		
Predicted MQL:	0.000113		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00158	.001	1
S1	.02000	.02231	.002	11.6	.34881	.003	1
S3	2.5000	2.6126	.113	4.50	40.508	.150	1
S4	5.0000	4.9363	-.064	-1.27	76.538	.438	1
S5	10.000	9.9063	-.094	-.937	153.60	1.33	1
S2	.80000	.84247	.042	5.31	13.063	.021	1

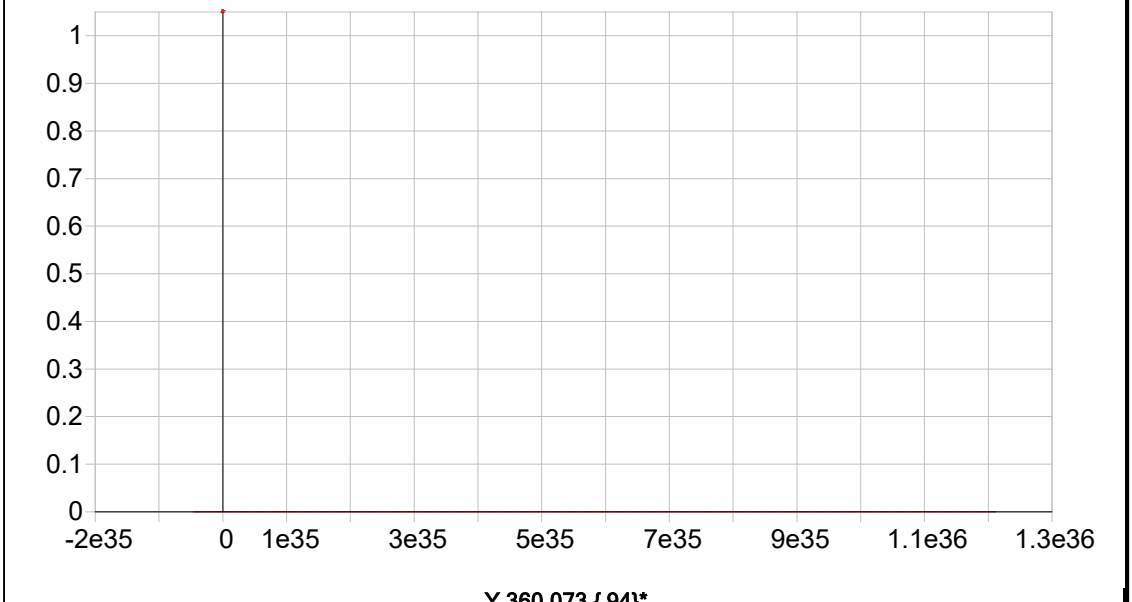


Y 224.306 {450}*

Date of Fit:	11/18/2024 12:31:27	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}*

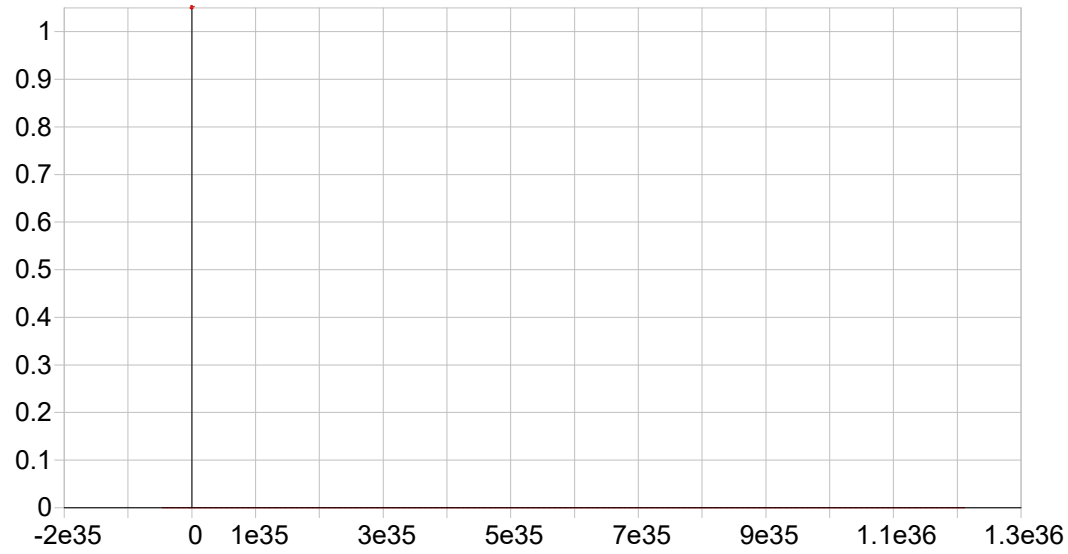
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

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

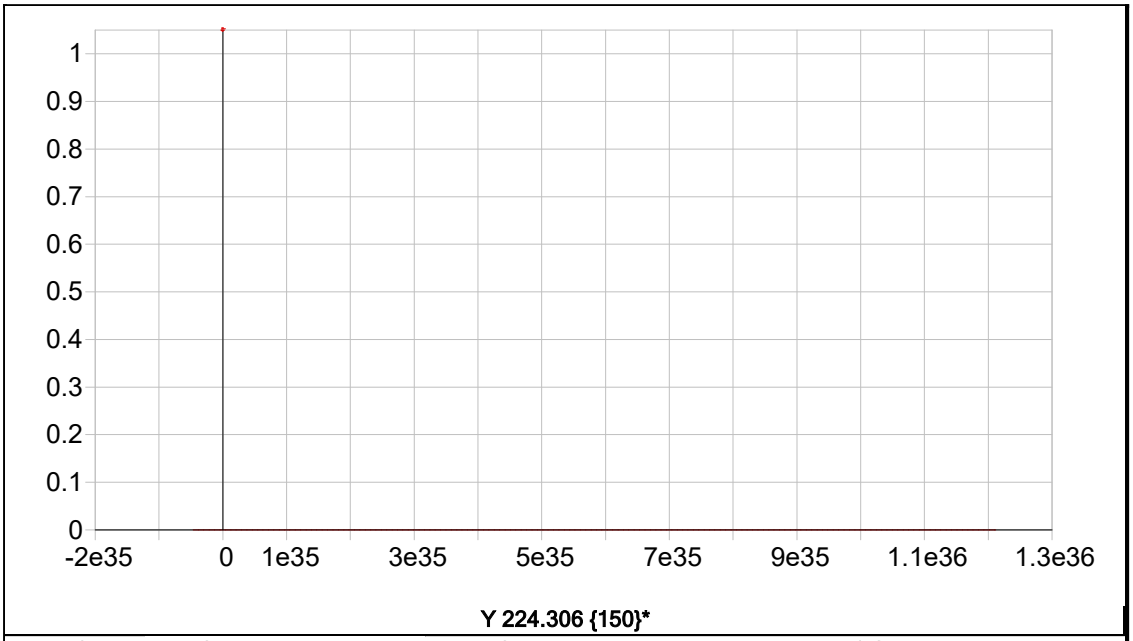


Y 371.030 { 91}*

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

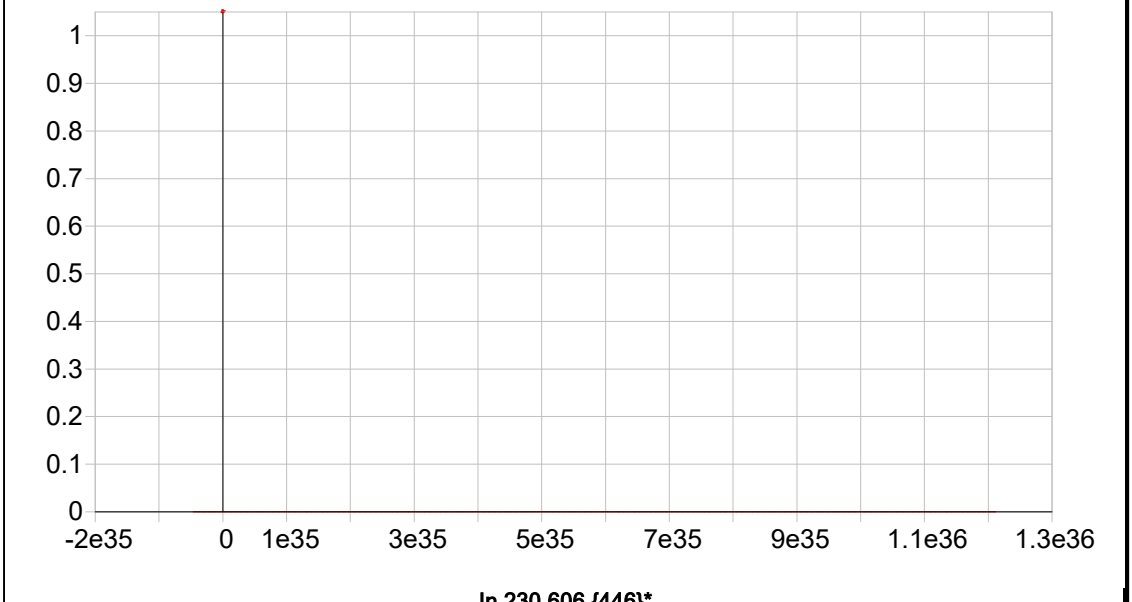


Y 224.306 {150}*

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



In 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:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S0 Acquired: 11/18/2024 12:31:58 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	-.00016	-.00028	-.00028	.00041	.00041	.00032	.00037	-.00096
Stddev	.00008	.00011	.00006	.00015	.00022	.00028	.00164	.00013
%RSD	53.710	40.336	20.908	37.915	52.592	87.772	442.59	13.599
#1	-.00019	-.00018	-.00022	.00048	.00018	.00031	.00097	-.00084
#2	-.00006	-.00040	-.00027	.00023	.00045	.00004	.00163	-.00110
#3	-.00022	-.00025	-.00034	.00051	.00061	.00060	-.00149	-.00094

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	-.00002	.00137	.00003	-.00003	.00007	.00000	-.00002	-.00027
Stddev	.00013	.00017	.00002	.00016	.00023	.00001	.00008	.00006
%RSD	681.18	12.428	61.566	513.84	330.36	1423.5	351.49	20.300
#1	.00009	.00135	.00005	.00015	.00026	-.00001	-.00004	-.00021
#2	.00001	.00122	.00003	-.00015	-.00018	.00000	-.00010	-.00032
#3	-.00016	.00156	.00001	-.00009	.00013	.00001	.00006	-.00028

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	-.00165	.01201	.00001	.00638	.00144	.00120	.00020
Stddev	.00016	.00003	.00054	.00011	.00045	.00023	.00023	.00015
%RSD	49.517	1.6519	4.4741	903.69	7.1151	16.165	19.401	73.492
#1	-.00016	-.00168	.01145	-.00004	.00588	.00119	.00146	.00008
#2	-.00049	-.00162	.01205	.00014	.00677	.00166	.00116	.00016
#3	-.00033	-.00166	.01253	-.00006	.00649	.00147	.00100	.00037

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	.00059	.00166	.00016	-.00097	.00045	.00131	.00158
Stddev	.00010	.00029	.00003	.00005	.00008	.00043	.00059
%RSD	17.078	17.647	21.809	4.6928	18.163	33.136	37.217
#1	.00056	.00167	.00016	-.00092	.00053	.00181	.00204
#2	.00070	.00137	.00020	-.00099	.00037	.00112	.00180
#3	.00051	.00195	.00013	-.00100	.00044	.00100	.00092

Sample Name: S0 Acquired: 11/18/2024 12:31:58 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	2869.9	61913.	11823.	2221.7	4743.2
Stddev	6.0	73.	66.	10.9	3.7
%RSD	.21020	.11813	.56052	.49267	.07800
#1	2870.9	61897.	11751.	2218.3	4740.2
#2	2875.4	61849.	11835.	2233.9	4747.3
#3	2863.5	61993.	11882.	2212.8	4742.2

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S1 Acquired: 11/18/2024 12:36:23 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	.00108	.00179	.00259	.00231	.01013	.00930	.42772	.02455
Stddev	.00005	.00004	.00014	.00023	.00017	.00015	.00276	.00023
%RSD	4.2091	2.3448	5.4515	9.9667	1.6744	1.6649	.64634	.92381
#1	.00103	.00175	.00247	.00209	.00993	.00912	.42829	.02434
#2	.00113	.00183	.00254	.00255	.01021	.00936	.43015	.02452
#3	.00109	.00179	.00274	.00229	.01024	.00941	.42471	.02479

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	.01619	.10228	.00213	.02753	.01802	.00063	.01703	.03541
Stddev	.00010	.00019	.00008	.00014	.00021	.00002	.00015	.00012
%RSD	.63039	.18213	3.6890	.49451	1.1842	3.8260	.88336	.33501
#1	.01630	.10249	.00204	.02751	.01827	.00060	.01692	.03548
#2	.01617	.10217	.00217	.02768	.01791	.00065	.01697	.03547
#3	.01610	.10217	.00218	.02741	.01789	.00064	.01720	.03527

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	.02566	.00215	.05491	.00588	.12132	.01600	.05344	.16468
Stddev	.00001	.00006	.00020	.00008	.00080	.00007	.00028	.00050
%RSD	.03512	2.8799	.36471	1.4183	.65598	.40871	.52020	.30661
#1	.02565	.00211	.05508	.00583	.12059	.01596	.05365	.16411
#2	.02567	.00212	.05497	.00598	.12120	.01597	.05312	.16485
#3	.02567	.00222	.05469	.00583	.12217	.01608	.05354	.16508

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	.00472	.12484	.00248	-.00043	.00987	.01180	.34881
Stddev	.00005	.00030	.00002	.00005	.00004	.00048	.00347
%RSD	1.1407	.23971	.75775	10.768	.45466	4.1049	.99580
#1	.00467	.12504	.00249	-.00048	.00991	.01133	.35215
#2	.00477	.12499	.00248	-.00043	.00986	.01175	.34906
#3	.00472	.12450	.00245	-.00039	.00982	.01230	.34521

Sample Name: S1 Acquired: 11/18/2024 12:36:23 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	2768.9	61518.	11804.	2115.4	4530.7
Stddev	4.1	149.	40.	10.1	4.1
%RSD	.14760	.24144	.33924	.47913	.09067
#1	2767.0	61622.	11758.	2125.0	4526.6
#2	2773.6	61584.	11822.	2116.4	4534.8
#3	2766.1	61348.	11831.	2104.8	4530.7

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S2 Acquired: 11/18/2024 12:40:45 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	.04326	.04416	.18756	.06687	.14827	.12582	6.1694	.16028
Stddev	.00053	.00063	.00129	.00046	.00066	.00058	.0089	.00033
%RSD	1.2205	1.4346	.68718	.68514	.44799	.46256	.14430	.20658
#1	.04377	.04359	.18844	.06714	.14873	.12617	6.1792	.16045
#2	.04331	.04485	.18816	.06712	.14856	.12514	6.1618	.15989
#3	.04272	.04405	.18608	.06634	.14750	.12613	6.1672	.16049

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	.85864	.18828	.03386	.34932	.16011	.00499	.30786	.06541
Stddev	.00658	.00092	.00004	.00236	.00082	.00004	.00031	.00033
%RSD	.76638	.48841	.12242	.67514	.51421	.74118	.09964	.50494
#1	.86384	.18724	.03389	.35110	.16084	.00498	.30820	.06512
#2	.86085	.18859	.03389	.35022	.16029	.00496	.30761	.06577
#3	.85124	.18900	.03382	.34664	.15922	.00503	.30776	.06535

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	.24909	.06934	.09501	.05480	1.0575	.02932	.36256	.62647
Stddev	.00149	.00007	.00021	.00011	.0010	.00006	.00118	.00474
%RSD	.59802	.09812	.21958	.19370	.08948	.22002	.32549	.75685
#1	.25029	.06926	.09477	.05468	1.0566	.02933	.36214	.63050
#2	.24956	.06937	.09513	.05484	1.0575	.02926	.36164	.62767
#3	.24743	.06938	.09514	.05488	1.0585	.02939	.36389	.62125

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	.08727	.46197	.00528	.02171	.01842	.37843	13.063
Stddev	.00053	.00036	.00005	.00012	.00008	.00188	.021
%RSD	.60286	.07748	.92777	.55379	.45787	.49651	.15843
#1	.08769	.46156	.00532	.02182	.01833	.37980	13.082
#2	.08745	.46212	.00528	.02175	.01850	.37629	13.041
#3	.08668	.46223	.00522	.02158	.01841	.37920	13.067

Sample Name: S2 Acquired: 11/18/2024 12:40:45 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	2772.1	60553.	12259.	2082.8	4454.7
Stddev	25.0	165.	43.	1.3	36.7
%RSD	.90142	.27187	.34748	.06242	.82475
#1	2747.6	60706.	12266.	2081.6	4420.8
#2	2771.2	60575.	12298.	2084.2	4449.6
#3	2797.5	60379.	12214.	2082.6	4493.8

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S3 Acquired: 11/18/2024 12:44:54 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	.13641	.13915	.59274	.20960	.46533	.40058	19.312	.51739
Stddev	.00032	.00200	.00113	.00064	.00076	.00074	.162	.00421
%RSD	.23471	1.4352	.19139	.30703	.16420	.18492	.83942	.81278
#1	.13675	.14143	.59380	.21034	.46614	.40143	19.493	.52210
#2	.13612	.13772	.59289	.20919	.46524	.40004	19.261	.51606
#3	.13634	.13830	.59155	.20927	.46462	.40029	19.181	.51400

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	2.7355	.59115	.10626	1.1044	.49621	.01552	.96125	.20873
Stddev	.0053	.00191	.00049	.0021	.00107	.00014	.00650	.00030
%RSD	.19431	.32381	.46557	.19275	.21599	.90683	.67659	.14598
#1	2.7394	.59321	.10676	1.1062	.49738	.01559	.96619	.20873
#2	2.7377	.58943	.10577	1.1050	.49597	.01536	.95388	.20843
#3	2.7295	.59082	.10627	1.1021	.49528	.01562	.96368	.20904

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	.78647	.21996	.27336	.17436	3.2923	.08764	1.1595	1.9369
Stddev	.00223	.00058	.00168	.00075	.0168	.00056	.0106	.0035
%RSD	.28319	.26479	.61599	.42789	.51138	.63614	.91153	.18093
#1	.78817	.22010	.27368	.17515	3.2947	.08740	1.1713	1.9393
#2	.78729	.21932	.27154	.17367	3.2744	.08724	1.1562	1.9386
#3	.78395	.22046	.27486	.17425	3.3079	.08828	1.1509	1.9329

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	.27369	1.4516	.01649	.07423	.05928	1.2214	40.508
Stddev	.00061	.0040	.00008	.00024	.00028	.0121	.150
%RSD	.22199	.27628	.48312	.31978	.47546	.98736	.37022
#1	.27423	1.4562	.01645	.07422	.05954	1.2326	40.680
#2	.27380	1.4486	.01644	.07448	.05898	1.2086	40.405
#3	.27303	1.4500	.01659	.07400	.05932	1.2232	40.438

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S3 Acquired: 11/18/2024 12:44:54 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	2720.0	59378.	11935.	2029.1	4253.6
Stddev	3.9	339.	73.	19.3	11.2
%RSD	.14188	.57089	.61207	.95316	.26416
#1	2715.6	59378.	11853.	2028.4	4240.7
#2	2721.9	59717.	11992.	2048.9	4261.4
#3	2722.6	59039.	11960.	2010.2	4258.7

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S4 Acquired: 11/18/2024 12:49:09 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	.26635	.27528	1.1414	.41102	.90504	.76164	36.374	.97757
Stddev	.00074	.00725	.0057	.00214	.00398	.00173	.219	.00517
%RSD	.27914	2.6339	.50251	.52172	.43972	.22764	.60121	.52936
#1	.26550	.27294	1.1348	.40883	.90083	.75982	36.157	.98325
#2	.26682	.28341	1.1443	.41312	.90553	.76327	36.594	.97631
#3	.26674	.26948	1.1452	.41111	.90874	.76183	36.371	.97313

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	5.3437	1.1171	.20157	2.1451	.95113	.02993	1.8144	.39984
Stddev	.0213	.0006	.00083	.0085	.00394	.00017	.0028	.00023
%RSD	.39923	.05798	.41274	.39631	.41461	.56243	.15624	.05870
#1	5.3191	1.1165	.20179	2.1353	.94750	.02974	1.8139	.39997
#2	5.3568	1.1169	.20226	2.1490	.95056	.03006	1.8174	.39998
#3	5.3552	1.1178	.20065	2.1508	.95533	.03000	1.8118	.39957

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	1.5244	.42227	.52690	.33252	6.2778	.16791	2.1916	3.7215
Stddev	.0060	.00119	.00041	.00081	.0094	.00038	.0102	.0159
%RSD	.39197	.28129	.07831	.24490	.14959	.22872	.46646	.42605
#1	1.5177	.42357	.52737	.33218	6.2801	.16755	2.2027	3.7032
#2	1.5262	.42199	.52677	.33345	6.2858	.16786	2.1896	3.7302
#3	1.5292	.42125	.52657	.33194	6.2674	.16831	2.1825	3.7310

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	.53098	2.7517	.03184	.15062	.11898	2.3870	76.538
Stddev	.00279	.0050	.00028	.00079	.00078	.0056	.438
%RSD	.52598	.18257	.87442	.52714	.65453	.23581	.57261
#1	.52782	2.7475	.03153	.14977	.11827	2.3935	76.432
#2	.53312	2.7573	.03192	.15134	.11981	2.3836	77.020
#3	.53200	2.7504	.03207	.15074	.11885	2.3840	76.163

Sample Name: S4 Acquired: 11/18/2024 12:49:09 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	2660.1	58723.	12013.	1986.9	4086.5
Stddev	8.2	150.	60.	6.7	10.4
%RSD	.30811	.25595	.49723	.33473	.25538
#1	2665.2	58638.	11958.	1985.0	4097.0
#2	2664.3	58635.	12004.	1981.4	4086.4
#3	2650.6	58897.	12076.	1994.3	4076.1

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S5 Acquired: 11/18/2024 12:53:21 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	.57554	.55269	2.4384	.89259	1.9551	1.6155	75.083	2.0132
Stddev	.00092	.00615	.0012	.00110	.0015	.0022	.084	.0076
%RSD	.15924	1.1119	.04696	.12352	.07933	.13389	.11167	.37803
#1	.57516	.55929	2.4371	.89347	1.9564	1.6176	74.990	2.0219
#2	.57487	.55165	2.4389	.89136	1.9534	1.6133	75.154	2.0089
#3	.57658	.54714	2.4392	.89295	1.9556	1.6157	75.103	2.0087

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	11.456	2.3163	.42303	4.6059	2.0146	.06411	3.7173	.84204
Stddev	.011	.0021	.00077	.0040	.0019	.00029	.0072	.00153
%RSD	.09557	.09127	.18317	.08582	.09445	.45168	.19431	.18115
#1	11.445	2.3184	.42249	4.6035	2.0143	.06380	3.7244	.84356
#2	11.456	2.3142	.42267	4.6037	2.0129	.06415	3.7100	.84051
#3	11.467	2.3164	.42391	4.6105	2.0167	.06438	3.7176	.84205

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	3.2579	.90572	1.1378	.69309	13.174	.36730	4.5376	7.8263
Stddev	.0032	.00221	.0015	.00161	.032	.00161	.0183	.0098
%RSD	.09914	.24422	.13398	.23190	.24028	.43933	.40328	.12497
#1	3.2548	.90328	1.1373	.69434	13.152	.36564	4.5587	7.8280
#2	3.2577	.90627	1.1394	.69128	13.210	.36740	4.5271	7.8157
#3	3.2613	.90760	1.1365	.69366	13.161	.36887	4.5270	7.8351

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	1.1213	5.7560	.07071	.32887	.26463	5.0271	153.60
Stddev	.0001	.0144	.00088	.00027	.00016	.0155	1.33
%RSD	.01132	.25023	1.2461	.08193	.06112	.30849	.86509
#1	1.1214	5.7718	.06982	.32859	.26458	5.0450	154.32
#2	1.1211	5.7436	.07074	.32913	.26450	5.0188	152.07
#3	1.1213	5.7526	.07158	.32889	.26481	5.0175	154.41

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: S5 Acquired: 11/18/2024 12:53:21 Type: Cal
Method: NON EPA-6010-200.7(v2474) 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	2500.7	56164.	11966.	1859.9	3772.4
Stddev	5.3	131.	46.	2.8	7.1
%RSD	.21209	.23336	.38581	.15168	.18944
#1	2499.7	56283.	11914.	1863.1	3771.8
#2	2506.4	56185.	12002.	1858.1	3779.8
#3	2495.9	56024.	11982.	1858.4	3765.5

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICV01 Acquired: 11/18/2024 12:57:33 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	1.035439	1.035285	1.034831	1.068325	1.038265	2.678877
Stddev	.002875	.014212	.001943	.004684	.001135	.005803
%RSD	.2776744	1.372734	.1877621	.4384176	.1092687	.2166269
#1	1.035170	1.039066	1.034223	1.067503	1.037055	2.681281
#2	1.038440	1.019566	1.037005	1.064106	1.038434	2.672258
#3	1.032709	1.047225	1.033265	1.073365	1.039305	2.683091

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5325550	.5213692	.5234347	10.42137	.5543451	.5297627
Stddev	.0019249	.0023320	.0004354	.05018	.0015822	.0007868
%RSD	.3614432	.4472853	.0831802	.4814802	.2854138	.1485208
#1	.5347513	.5222290	.5233651	10.40844	.5560956	.5299861
#2	.5317522	.5187293	.5230384	10.37893	.5539227	.5288883
#3	.5311614	.5231492	.5239008	10.47675	.5530170	.5304136

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5439742	10.48155	.5335541	6.148078	.5309943	.2643289
Stddev	.0006637	.02315	.0017622	.031859	.0003494	.0003551
%RSD	.1220002	.2208500	.3302667	.5182005	.0657925	.1343582
#1	.5445357	10.50438	.5355722	6.128904	.5310614	.2643877
#2	.5432418	10.45809	.5327706	6.130474	.5306162	.2646509
#3	.5441451	10.48218	.5323197	6.184854	.5313052	.2639479

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.991967	.5215863	1.077692	10.39088	2.366617	2.543875
Stddev	.063484	.0014581	.001178	.07299	.008291	.007733
%RSD	.6353550	.2795486	.1093072	.7024411	.3503411	.3039710
#1	10.04299	.5219530	1.077334	10.40477	2.369516	2.541182
#2	10.01204	.5199799	1.076735	10.45593	2.357266	2.537848
#3	9.92087	.5228261	1.079008	10.31195	2.373070	2.552594

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICV01 Acquired: 11/18/2024 12:57:33 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	2.376967	2.431905	F 2.027179	F .0047621	F -.016369	F -.000030
Stddev	.005002	.005697	.005123	.0011247	.001818	.001220
%RSD	.2104340	.2342514	.2526927	23.61766	11.10793	4073.189
#1	2.380629	2.438260	2.021568	.0058117	-.015952	.001026
#2	2.371268	2.427257	2.031607	.0048997	-.014795	.000250
#3	2.379003	2.430198	2.028361	.0035749	-.018359	-.001365

Elem	Sr4077
Units	ppm
Avg	F -.009098
Stddev	.000016
%RSD	.1774447
#1	-.009109
#2	-.009080
#3	-.009106

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2680.370	58788.02	12515.89	1943.515	4316.722
Stddev	3.222	126.71	44.55	5.516	5.998
%RSD	.1202135	.2155373	.3559768	.2838091	.1389560
#1	2677.491	58691.51	12480.11	1937.602	4311.370
#2	2679.768	58741.04	12565.79	1948.522	4315.589
#3	2683.851	58931.51	12501.77	1944.419	4323.206

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: LLICV01 Acquired: 11/18/2024 13:11:34 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0188573	.0395642	.0120805	.0209123	.0496402	.1035433
Stddev	.0014388	.0012490	.0013345	.0013214	.0004823	.0046784
%RSD	7.629850	3.156949	11.04689	6.318724	.9716279	4.518274
#1	.0189097	.0381769	.0134233	.0224142	.0493502	.1045961
#2	.0173931	.0399163	.0120637	.0199280	.0493734	.0984282
#3	.0202692	.0405994	.0107544	.0203948	.0501969	.1076055

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1011312	.0060554	.0069879	2.063881	.0104689	.0294120
Stddev	.0010408	.0000510	.0000030	.003513	.0002995	.0000518
%RSD	1.029113	.8424373	.0429832	.1702139	2.861171	.1762285
#1	.1022231	.0060861	.0069846	2.066185	.0101354	.0294719
#2	.1010201	.0060836	.0069887	2.065620	.0105561	.0293827
#3	.1001505	.0059965	.0069905	2.059838	.0107151	.0293815

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220600	.1002345	.0208014	2.050263	.0389770	.0107954
Stddev	.0003371	.0021419	.0002121	.027987	.0003273	.0002988
%RSD	1.528334	2.136848	1.019461	1.365064	.8397240	2.768050
#1	.0223698	.1018877	.0208808	2.045639	.0392388	.0110983
#2	.0217009	.0978148	.0205611	2.024876	.0386100	.0107870
#3	.0221093	.1010009	.0209624	2.080274	.0390822	.0105008

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.650666	.0401432	.0438950	1.899795	.1121889	.2126786
Stddev	.006796	.0017072	.0003083	.010563	.0011106	.0004313
%RSD	.4117061	4.252767	.7023755	.5559997	.9899221	.2027998
#1	1.658436	.0399954	.0439307	1.903529	.1130551	.2122152
#2	1.645833	.0419196	.0441838	1.907984	.1125747	.2127520
#3	1.647728	.0385148	.0435703	1.887872	.1109368	.2130684

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: LLICV01 Acquired: 11/18/2024 13:11:34 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0343690	F .2002139	.3655304	F .0148599	F .3485766	.0174277
Stddev	.0007679	.0008172	.0043419	.0014797	.0066764	.0002467
%RSD	2.234250	.4081717	1.187839	9.957548	1.915339	1.415530
#1	.0352179	.2001367	.3690689	.0163589	.3409094	.0175629
#2	.0341661	.1994381	.3668370	.0148204	.3531066	.0175773
#3	.0337229	.2010670	.3606852	.0134003	.3517139	.0171430

Elem	Sr4077
Units	ppm
Avg	.0205167
Stddev	.0001070
%RSD	.5216258
#1	.0206380
#2	.0204765
#3	.0204356

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2773.239	60613.04	12546.12	2016.528	4609.244
Stddev	2.119	187.51	35.12	4.675	4.073
%RSD	.0764023	.3093527	.2799279	.2318104	.0883578
#1	2774.120	60438.46	12532.74	2016.178	4611.742
#2	2774.775	60589.42	12519.65	2012.038	4611.445
#3	2770.822	60811.24	12585.96	2021.367	4604.544

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICB01 Acquired: 11/18/2024 13:15:58 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000387	-.001879	.0002969	.0007034	-.000853	-.003574
Stddev	.002035	.001061	.0006205	.0013362	.001106	.003873
%RSD	525.8013	56.46009	208.9728	189.9582	129.6734	108.3844
#1	-.001812	-.002349	.0010110	.0022286	-.002094	-.007183
#2	-.001292	-.000665	-.000111	.0001422	-.000495	-.004055
#3	.001943	-.002625	-.000010	-.000261	.000029	.000518

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002520	.0000351	-.000038	.0049376	.0000203	-.000115
Stddev	.000026	.0000330	.000049	.0030745	.0001229	.000074
%RSD	1.024163	93.84825	128.1794	62.26741	605.8183	64.68214
#1	-.002549	.0000707	-.000068	.0014245	-.000027	-.000199
#2	-.002514	.0000291	-.000064	.0062511	.000160	-.000085
#3	-.002498	.0000056	.000018	.0071373	-.000072	-.000060

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000495	-.002324	.0000943	.0054112	-.000034	.0003416
Stddev	.000411	.002364	.0001392	.0109940	.000048	.0001340
%RSD	82.88507	101.7407	147.6638	203.1708	139.3473	39.21449
#1	-.000077	.000120	.0000220	.0110972	-.000003	.0004815
#2	-.000512	-.002492	.0002548	.0123979	-.000090	.0003289
#3	-.000897	-.004600	.0000061	-.007261	-.000011	.0002145

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.223497	-.000829	-.000657	-.071320	.0041933	.0000960
Stddev	.009148	.000478	.000180	.012844	.0002892	.0000130
%RSD	4.092962	57.66622	27.30994	18.00915	6.897709	13.55669
#1	-.233699	-.000889	-.000477	-.066532	.0040380	.0001106
#2	-.220766	-.001275	-.000836	-.061557	.0045270	.0000858
#3	-.216026	-.000324	-.000659	-.085870	.0040148	.0000915

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICB01 Acquired: 11/18/2024 13:15:58 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091695	.0005707	.0079141	-.003818	F -.010289	-.001969
Stddev	.0004160	.0005081	.0046676	.001764	.001684	.000608
%RSD	4.536404	89.03775	58.97889	46.21460	16.37093	30.87861
#1	.0093694	.0003595	.0025253	-.001823	-.008901	-.002347
#2	.0094477	.0002022	.0106957	-.004455	-.009803	-.002292
#3	.0086913	.0011504	.0105212	-.005175	-.012163	-.001268

Elem	Sr4077
Units	ppm
Avg	-.000100
Stddev	.000025
%RSD	24.94972
#1	-.000123
#2	-.000073
#3	-.000103

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2723.539	60720.06	12430.82	1961.079	4593.494
Stddev	12.559	156.74	28.13	5.112	7.069
%RSD	.4611145	.2581310	.2262938	.2606943	.1538882
#1	2733.115	60560.49	12398.37	1959.924	4599.494
#2	2728.183	60873.80	12448.28	1966.670	4595.286
#3	2709.320	60725.89	12445.82	1956.643	4585.702

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CRI01 Acquired: 11/18/2024 13:20:25 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0197772	.0407359	.0116853	.0217511	.0515029	.1074053
Stddev	.0008831	.0007046	.0004024	.0007326	.0007905	.0007172
%RSD	4.465395	1.729705	3.443418	3.368126	1.534930	.6677519
#1	.0187679	.0399257	.0112655	.0209066	.0523931	.1081862
#2	.0204079	.0410761	.0117229	.0221300	.0508829	.1072535
#3	.0201559	.0412058	.0120676	.0222167	.0512328	.1067761

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0989229	.0059829	.0070216	2.043200	.0105383	.0297190
Stddev	.0003194	.0000386	.0000988	.003869	.0004580	.0000527
%RSD	.3228633	.6454459	1.407617	.1893606	4.346150	.1772645
#1	.0991882	.0059445	.0069503	2.045952	.0100582	.0297303
#2	.0990122	.0060218	.0071345	2.038776	.0109704	.0297651
#3	.0985684	.0059823	.0069801	2.044872	.0105865	.0296615

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0226526	.0991877	.0200006	2.032773	.0394023	.0110443
Stddev	.0002078	.0005952	.0002439	.011820	.0000823	.0000882
%RSD	.9174597	.6000980	1.219402	.5814577	.2088451	.7984647
#1	.0227009	.0996414	.0197728	2.046386	.0394948	.0109447
#2	.0228320	.0994079	.0202579	2.026807	.0393748	.0110756
#3	.0224249	.0985137	.0199710	2.025125	.0393373	.0111126

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.642963	.0416800	.0445756	1.918958	.1094931	.2175522
Stddev	.011127	.0014231	.0002915	.013937	.0013364	.0003567
%RSD	.6772347	3.414345	.6539639	.7262963	1.220549	.1639531
#1	1.633805	.0419140	.0444362	1.934381	.1095626	.2172023
#2	1.639737	.0401543	.0449107	1.907264	.1107934	.2179153
#3	1.655346	.0429715	.0443800	1.915230	.1081233	.2175390

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CRI01 Acquired: 11/18/2024 13:20:25 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0351917	F .2003989	.3632671	.0142607	F .3511819	.0157610
Stddev	.0007445	.0004395	.0033126	.0024575	.0044393	.0007224
%RSD	2.115521	.2193336	.9118801	17.23284	1.264110	4.583720
#1	.0343943	.2008575	.3612638	.0161542	.3557714	.0149499
#2	.0358686	.2003579	.3614468	.0114835	.3508645	.0163355
#3	.0353122	.1999813	.3670906	.0151444	.3469098	.0159976

Elem	Sr4077
Units	ppm
Avg	.0204699
Stddev	.0000626
%RSD	.3059640
#1	.0205175
#2	.0204932
#3	.0203989

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2686.493	60628.98	12657.79	1941.529	4509.789
Stddev	4.750	58.03	53.94	8.257	1.913
%RSD	.1768156	.0957095	.4261271	.4252627	.0424297
#1	2691.815	60564.38	12599.65	1935.797	4511.640
#2	2684.980	60676.69	12667.51	1950.992	4509.907
#3	2682.684	60645.87	12706.21	1937.797	4507.819

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICSA01 Acquired: 11/18/2024 13:30:37 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0061773	-.004410	.0083901	-.016245	-.003336	255.0487
Stddev	.0017015	.002979	.0010149	.002592	.000552	1.3637
%RSD	27.54373	67.53990	12.09693	15.95822	16.55694	.5346749
#1	.0068166	-.003946	.0091161	-.019234	-.003967	253.6732
#2	.0074665	-.001691	.0088239	-.014887	-.002940	255.0725
#3	.0042488	-.007594	.0072304	-.014613	-.003100	256.4003

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025042	.0013931	.0044961	234.4681	.0562689	.0018657
Stddev	.0008452	.0000421	.0000638	.9629	.0002070	.0001193
%RSD	33.75303	3.021079	1.418728	.4106881	.3679648	6.394140
#1	.0019813	.0013453	.0045693	233.8479	.0560993	.0017411
#2	.0034794	.0014093	.0044527	233.9790	.0564996	.0018771
#3	.0020520	.0014247	.0044662	235.5774	.0562078	.0019788

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142707	96.35917	.0033343	257.0309	.0028875	-.000114
Stddev	.0007933	.06053	.0002513	1.0894	.0002554	.000160
%RSD	5.559186	.0628130	7.537785	.4238401	8.843507	140.2884
#1	.0135363	96.29966	.0030513	256.0472	.0030945	.000002
#2	.0151122	96.35719	.0035313	256.8438	.0026021	-.000297
#3	.0141637	96.42067	.0034205	258.2017	.0029658	-.000048

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.043388	.0077709	.0051391	.0432670	.0497072	-.000014
Stddev	.026056	.0012216	.0001875	.0122655	.0007126	.000341
%RSD	60.05460	15.72060	3.647904	28.34827	1.433670	2404.336
#1	-.069765	.0075660	.0050883	.0375570	.0489446	.000152
#2	-.042733	.0090821	.0053467	.0573465	.0503563	-.000406
#3	-.017665	.0066647	.0049823	.0348976	.0498207	.000211

Sample Name: ICSA01 Acquired: 11/18/2024 13:30:37 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0045944	-.000971	.0189320	-.001779	F -.022165	F .0322552
Stddev	.0007813	.000210	.0016756	.001912	.004267	.0011692
%RSD	17.00557	21.59051	8.850573	107.5189	19.24912	3.624757
#1	.0039632	-.000790	.0170675	-.000127	-.017567	.0310360
#2	.0054682	-.001201	.0194168	-.001336	-.025997	.0323625
#3	.0043517	-.000921	.0203117	-.003874	-.022930	.0333670

Elem	Sr4077
Units	ppm
Avg	.0027425
Stddev	.0007156
%RSD	26.09261
#1	.0034967
#2	.0020732
#3	.0026575

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2387.245	52611.51	11931.33	1701.551	3553.937
Stddev	7.384	106.45	28.33	14.169	5.994
%RSD	.3093279	.2023378	.2374725	.8327282	.1686456
#1	2378.726	52635.35	11949.90	1714.976	3547.017
#2	2391.813	52495.16	11945.38	1686.739	3557.298
#3	2391.197	52704.03	11898.72	1702.938	3557.496

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICSAB01 Acquired: 11/18/2024 13:42:01 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.1156934	.0915886	.0576658	.0327491	.6326313	262.5997
Stddev	.0021662	.0008978	.0009423	.0062258	.0025778	.6811
%RSD	1.872372	.9801929	1.634078	19.01075	.4074739	.2593594
#1	.1134209	.0911060	.0565925	.0275855	.6354463	261.9946
#2	.1159246	.0926244	.0583574	.0396626	.6303860	263.3373
#3	.1177348	.0910354	.0580476	.0309991	.6320617	262.4671

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4929268	.4946506	1.016676	237.8483	.5788312	.5075868
Stddev	.0007529	.0015000	.001330	.9296	.0018736	.0005056
%RSD	.1527326	.3032513	.1308159	.3908366	.3236825	.0996002
#1	.4937857	.4961098	1.015695	237.5794	.5807653	.5071165
#2	.4923811	.4947291	1.016143	238.8827	.5770246	.5075224
#3	.4926136	.4931128	1.018190	237.0828	.5787038	.5081214

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5056586	98.73787	.4753477	261.5678	.9995472	.2021633
Stddev	.0013394	.12636	.0019319	1.2337	.0004985	.0004275
%RSD	.2648831	.1279753	.4064168	.4716567	.0498752	.2114835
#1	.5063219	98.60719	.4745063	260.9756	.9990071	.2026230
#2	.5041170	98.85942	.4775576	262.9859	.9996448	.2020893
#3	.5065369	98.74700	.4739792	260.7419	.9999897	.2017776

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.169763	.4986395	.8940908	-.018871	.9107747	.9934178
Stddev	.020673	.0021773	.0026664	.010941	.0007345	.0020612
%RSD	12.17762	.4366397	.2982224	57.97674	.0806424	.2074856
#1	-.192735	.4972195	.8958298	-.023471	.9114610	.9928102
#2	-.163901	.4975529	.8910210	-.026761	.9108629	.9917287
#3	-.152655	.5011462	.8954217	-.006381	.9100000	.9957145

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: ICSAB01 Acquired: 11/18/2024 13:42:01 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.9322306	.9144744	F .8450829	F .0076440	F -.024794	F .0369796
Stddev	.0048557	.0023651	.0117318	.0028247	.006194	.0008742
%RSD	.5208637	.2586340	1.388246	36.95330	24.98157	2.363961
#1	.9266524	.9165309	.8320510	.0100928	-.021043	.0371708
#2	.9355095	.9150024	.8548025	.0045537	-.031943	.0360256
#3	.9345300	.9118899	.8483951	.0082855	-.021396	.0377424

Elem	Sr4077
Units	ppm
Avg	F .0022561
Stddev	.0003451
%RSD	15.29763
#1	.0026256
#2	.0019421
#3	.0022006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2321.811	52049.53	12083.85	1635.546	3507.508
Stddev	10.902	27.13	45.26	4.276	12.224
%RSD	.4695650	.0521239	.3745764	.2614480	.3485128
#1	2309.253	52055.09	12080.61	1638.677	3493.540
#2	2327.322	52020.06	12040.29	1630.674	3512.726
#3	2328.857	52073.46	12130.65	1637.288	3516.256

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV01 Acquired: 11/18/2024 13:52:18 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.990921	5.142558	4.930192	5.110912	5.087014	10.10033	9.585070
Stddev	.001569	.080948	.004780	.015900	.009940	.02472	.080585
%RSD	.0314297	1.574082	.0969469	.3110965	.1954030	.2447349	.8407363
#1	4.989715	5.128103	4.924751	5.119795	5.091408	10.11034	9.518548
#2	4.992694	5.069812	4.933713	5.092555	5.075635	10.11847	9.674679
#3	4.990353	5.229760	4.932111	5.120385	5.094001	10.07217	9.561983

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2431287	2.463304	24.33005	1.023857	2.460707	1.267175	4.935036
Stddev	.0006486	.003349	.11138	.002595	.004444	.001970	.029362
%RSD	.2667784	.1359544	.4578058	.2534833	.1805960	.1554904	.5949716
#1	.2423856	2.460196	24.21892	1.021635	2.456178	1.265800	4.915480
#2	.2434191	2.462867	24.44169	1.026709	2.460882	1.266293	4.968799
#3	.2435813	2.466851	24.32954	1.023227	2.465061	1.269432	4.920828

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.366609	24.52793	2.461783	1.252647	24.48458	2.473977	2.552516
Stddev	.011477	.09242	.002421	.002636	.07491	.010919	.009739
%RSD	.4849381	.3767927	.0983402	.2104000	.3059341	.4413353	.3815262
#1	2.353960	24.43193	2.459271	1.251769	24.40399	2.462330	2.563600
#2	2.376357	24.61630	2.461978	1.255610	24.55208	2.483982	2.548618
#3	2.369509	24.53557	2.464101	1.250564	24.49768	2.475617	2.545330

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.85708	4.804503	5.169332	4.879056	4.814134	5.128071	5.179963
Stddev	.12663	.003537	.010077	.008231	.017779	.034360	.008364
%RSD	.5094331	.0736239	.1949450	.1687075	.3693037	.6700415	.1614602
#1	24.75256	4.800431	5.170589	4.869552	4.794293	5.088425	5.189293
#2	24.99789	4.806262	5.158685	4.883925	4.828619	5.146562	5.173139
#3	24.82078	4.806816	5.178721	4.883690	4.819491	5.149227	5.177455

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV01 Acquired: 11/18/2024 13:52:18 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.817078	4.574387	4.905845
Stddev	.017294	.035303	.003473
%RSD	.3590161	.7717597	.0707835
#1	4.824384	4.533628	4.905080
#2	4.797330	4.594142	4.909637
#3	4.829520	4.595390	4.902820

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2564.411	57243.49	12421.98	1833.584	4017.515
Stddev	6.133	126.40	13.80	14.158	6.008
%RSD	.2391708	.2208107	.1111145	.7721457	.1495425
#1	2559.349	57101.40	12418.08	1817.240	4015.983
#2	2571.232	57285.66	12437.31	1842.074	4024.141
#3	2562.652	57343.42	12410.55	1841.438	4012.422

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB01 Acquired: 11/18/2024 14:02:06 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002956	-.002854	.0002760	.0013459	.0040815	.0126550
Stddev	.000294	.001475	.0004768	.0013192	.0013159	.0068194
%RSD	9.937041	51.69138	172.7506	98.01583	32.23918	53.88674
#1	-.003286	-.004552	.0001482	.0018198	.0053355	.0204443
#2	-.002723	-.001891	.0008037	-.000145	.0041976	.0077605
#3	-.002859	-.002119	-.000124	.002363	.0027115	.0097603

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002752	-.000012	.0000151	.0118274	.0001127	-.000013
Stddev	.000304	.000017	.0000849	.0045076	.0001692	.000191
%RSD	11.03729	140.6783	560.3958	38.11163	150.1518	1439.587
#1	-.003096	-.000015	-.000025	.0066354	.0002909	.000023
#2	-.002639	-.000028	-.000042	.0147412	-.000046	.000157
#3	-.002521	.000006	.000113	.0141056	.000093	-.000220

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000092	.0043115	.0003149	.0143241	-.000148	.0005665
Stddev	.000091	.0007896	.0000795	.0124288	.000100	.0002384
%RSD	99.68919	18.31282	25.23552	86.76866	68.00117	42.07917
#1	-.000008	.0044500	.0002934	.0267187	-.000075	.0005160
#2	-.000189	.0050227	.0004028	.0018613	-.000262	.0003574
#3	-.000078	.0034619	.0002483	.0143923	-.000106	.0008261

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.301321	.0002847	-.000532	-.110057	.0081125	.0006288
Stddev	.005165	.0010325	.000127	.017870	.0003492	.0001680
%RSD	1.714242	362.6012	23.79660	16.23711	4.304482	26.72641
#1	-.306597	-.000907	-.000561	-.130102	.0085137	.0006244
#2	-.296274	.000888	-.000393	-.095793	.0078765	.0007990
#3	-.301090	.000873	-.000641	-.104277	.0079474	.0004630

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB01 Acquired: 11/18/2024 14:02:06 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085626	.0006914	.0107531	F -.012649	-.009510	-.001046
Stddev	.0008251	.0001835	.0047312	.013261	.003331	.001917
%RSD	9.635867	26.53939	43.99859	104.8343	35.03084	183.3574
#1	.0091785	.0008982	.0127737	-.004863	-.013332	.001139
#2	.0088842	.0005479	.0141385	-.005124	-.007219	-.001828
#3	.0076252	.0006282	.0053471	-.027961	-.007979	-.002448

Elem	Sr4077
Units	ppm
Avg	.0003334
Stddev	.0002956
%RSD	88.64256
#1	.0006570
#2	.0002657
#3	.0000776

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2688.369	59088.85	12658.67	1872.883	4596.604
Stddev	3.467	111.09	32.91	6.265	4.392
%RSD	.1289643	.1880081	.2599715	.3345130	.0955400
#1	2684.367	59101.69	12695.66	1869.853	4595.055
#2	2690.281	58971.89	12647.72	1868.709	4593.196
#3	2690.460	59192.96	12632.63	1880.087	4601.560

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4857-01 Acquired: 11/18/2024 14:06:27 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.7311394	-.018659	.1438558	-.023440	.0043009	89.77281
Stddev	.0043845	.001607	.0016040	.002912	.0018600	.26994
%RSD	.5996767	8.611780	1.115006	12.42149	43.24548	.3006886
#1	.7265101	-.017424	.1420127	-.025688	.0056936	89.72524
#2	.7352291	-.018079	.1449357	-.024482	.0021887	90.06337
#3	.7316791	-.020476	.1446189	-.020151	.0050205	89.52982

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6600789	.0064170	.0062454	28.42702	.0811243	.0295481
Stddev	.0035333	.0000700	.0001025	.05107	.0009134	.0003671
%RSD	.5352793	1.090862	1.640952	.1796488	1.125933	1.242383
#1	.6626139	.0064421	.0061359	28.46573	.0807532	.0294389
#2	.6615799	.0064710	.0062611	28.44619	.0804549	.0299574
#3	.6560430	.0063379	.0063391	28.36914	.0821649	.0292480

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1727147	119.0014	.4755371	12.74068	.0950439	.0023102
Stddev	.0021137	.6030	.0013979	.02952	.0003635	.0000785
%RSD	1.223815	.5067005	.2939677	.2317217	.3824399	3.396622
#1	.1720567	118.5432	.4765452	12.70676	.0948943	.0022493
#2	.1750792	118.7765	.4761248	12.75464	.0954583	.0022826
#3	.1710083	119.6845	.4739412	12.76063	.0947791	.0023988

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.13106	.2840155	1.382977	23.17432	.2271095	.0162920
Stddev	.12567	.0021566	.004097	.03182	.0007152	.0001802
%RSD	.2557928	.7593085	.2962296	.1373051	.3149048	1.106340
#1	49.02127	.2841507	1.380310	23.16975	.2277027	.0163840
#2	49.10376	.2861013	1.380926	23.14502	.2263153	.0164077
#3	49.26814	.2817946	1.387694	23.20817	.2273103	.0160843

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4857-01 Acquired: 11/18/2024 14:06:27 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0038317	2.914354	F 30.59557	3.468569	F 11.04390	.0301283
Stddev	.0010885	.008324	.17014	.019178	.10233	.0007736
%RSD	28.40793	.2856249	.5561053	.5529216	.9265330	2.567576
#1	.0038691	2.918363	30.45997	3.447648	10.95044	.0293755
#2	.0027250	2.919916	30.54026	3.485318	11.15324	.0300883
#3	.0049010	2.904784	30.78649	3.472742	11.02804	.0309210

Elem	Sr4077
Units	ppm
Avg	1.008761
Stddev	.015570
%RSD	1.543447
#1	1.004141
#2	1.026118
#3	.996025

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2732.543	60151.35	14020.19	1911.158	3884.647
Stddev	21.202	201.46	44.72	7.207	28.673
%RSD	.7758916	.3349183	.3189371	.3771130	.7381036
#1	2738.471	60291.20	14007.36	1916.107	3898.349
#2	2709.009	60242.42	13983.29	1902.889	3851.694
#3	2750.150	59920.44	14069.92	1914.477	3903.899

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4857-03 Acquired: 11/18/2024 14:10:41 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0453120	-.015554	.8743651	-.049762	.0011307	108.1323
Stddev	.0023025	.001507	.0021740	.001360	.0018153	.2140
%RSD	5.081356	9.689396	.2486337	2.733473	160.5400	.1978620
#1	.0432136	-.014415	.8767063	-.051246	.0009529	107.9009
#2	.0449473	-.017263	.8739789	-.049465	.0030284	108.1727
#3	.0477750	-.014984	.8724101	-.048575	-.000589	108.3231

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5997118	.0083114	.0185136	234.3894	.1747557	.1149278
Stddev	.0012893	.0001092	.0002402	2.1440	.0004319	.0004577
%RSD	.2149861	1.313736	1.297299	.9147100	.2471244	.3982254
#1	.6002068	.0082486	.0186549	232.3824	.1751170	.1154296
#2	.6006802	.0082483	.0186495	234.1376	.1748727	.1145332
#3	.5982483	.0084375	.0182362	236.6481	.1742774	.1148207

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3809056	188.8696	4.137052	96.15816	.1960691	.0001293
Stddev	.0002475	.6134	.037274	1.08809	.0004261	.0002935
%RSD	.0649708	.3247626	.9009794	1.131564	.2173493	227.1069
#1	.3806937	188.5113	4.100454	95.23279	.1960631	-.000209
#2	.3808455	188.5196	4.135735	95.88483	.1956459	.000311
#3	.3811776	189.5778	4.174967	97.35685	.1964982	.000286

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.575643	.2800766	1.138415	7.552579	.1126230	.0030632
Stddev	.179192	.0004837	.007835	.088649	.0009408	.0002891
%RSD	5.011459	.1726984	.6882799	1.173764	.8353826	9.439269
#1	3.767628	.2806182	1.147367	7.645713	.1115513	.0028120
#2	3.546477	.2799237	1.135078	7.542799	.1130052	.0029983
#3	3.412823	.2796878	1.132801	7.469226	.1133127	.0033792

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4857-03 Acquired: 11/18/2024 14:10:41 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0128985	3.145679	F 21.12889	7.253772	2.291184	.1410027
Stddev	.0001607	.008787	.06149	.039652	.017447	.0016365
%RSD	1.246067	.2793455	.2910345	.5466408	.7614663	1.160614
#1	.0130796	3.138664	21.19748	7.295932	2.309567	.1421447
#2	.0128431	3.142838	21.07871	7.248157	2.289129	.1417357
#3	.0127729	3.155535	21.11046	7.217227	2.274855	.1391279

Elem	Sr4077
Units	ppm
Avg	.1347254
Stddev	.0038539
%RSD	2.860569
#1	.1381970
#2	.1354007
#3	.1305784

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2832.943	64356.83	14452.27	2020.503	3602.452
Stddev	4.115	330.17	33.82	24.317	8.646
%RSD	.1452449	.5130235	.2339926	1.203513	.2399939
#1	2828.702	63975.61	14448.39	1993.065	3592.519
#2	2836.918	64551.18	14487.86	2029.060	3606.553
#3	2833.210	64543.70	14420.56	2039.385	3608.284

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01 Acquired: 11/18/2024 14:14:45 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0337091	-.014030	.3266144	-.054343	-.003005	138.6510
Stddev	.0014947	.001736	.0024154	.001107	.000284	.5335
%RSD	4.434003	12.37650	.7395337	2.036949	9.453823	.3847570
#1	.0324316	-.012051	.3259778	-.053339	-.002804	138.0350
#2	.0353528	-.015297	.3292844	-.054160	-.003330	138.9590
#3	.0333429	-.014742	.3245811	-.055530	-.002880	138.9589

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.502402	.0125256	.0179413	63.32602	.2212282	.1802846
Stddev	.011420	.0000730	.0001333	.08019	.0012134	.0006383
%RSD	.7601042	.5830006	.7428091	.1266333	.5484895	.3540663
#1	1.492078	.0125991	.0178912	63.23422	.2222282	.1807412
#2	1.514669	.0125247	.0180923	63.36144	.2198782	.1805573
#3	1.500460	.0124531	.0178403	63.38241	.2215780	.1795552

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3764750	219.5270	6.729557	61.11983	.2883756	.0001394
Stddev	.0027534	.9817	.026249	.25058	.0009621	.0001183
%RSD	.7313717	.4471875	.3900612	.4099859	.3336334	84.84443
#1	.3765158	219.4537	6.701316	60.96971	.2889149	.0000292
#2	.3792079	218.5840	6.753210	60.98068	.2889471	.0001247
#3	.3737015	220.5433	6.734145	61.40911	.2872648	.0002644

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.789602	.3152667	.6739605	12.92817	.2097792	.0015835
Stddev	.013111	.0005482	.0055527	.02737	.0007448	.0005474
%RSD	.2737420	.1738928	.8238844	.2116945	.3550376	34.57124
#1	4.795235	.3151747	.6796708	12.90560	.2093715	.0017520
#2	4.798955	.3158551	.6685802	12.92030	.2093272	.0020269
#3	4.774616	.3147702	.6736305	12.95861	.2106388	.0009716

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01 Acquired: 11/18/2024 14:14:45 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0044249	3.252455	F 27.28995	7.189366	3.280494	.2445732
Stddev	.0024341	.016179	.12152	.050786	.014556	.0020232
%RSD	55.00923	.4974475	.4453016	.7064042	.4437196	.8272280
#1	.0016202	3.234768	27.31501	7.244808	3.286519	.2439170
#2	.0059860	3.266507	27.15786	7.178195	3.263892	.2468430
#3	.0056686	3.256091	27.39700	7.145096	3.291070	.2429596

Elem	Sr4077
Units	ppm
Avg	.0602801
Stddev	.0025081
%RSD	4.160705
#1	.0592589
#2	.0631377
#3	.0584438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2924.837	66918.41	14737.39	2135.977	3798.470
Stddev	8.005	392.87	19.68	14.325	14.618
%RSD	.2736960	.5870911	.1335136	.6706682	.3848361
#1	2916.625	66553.35	14715.31	2123.699	3783.129
#2	2925.270	67334.17	14743.80	2151.716	3800.043
#3	2932.617	66867.69	14753.07	2132.517	3812.238

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4867-02 Acquired: 11/18/2024 14:18:49 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0117535	-.010611	.0440058	-.001349	-.000192	22.69943
Stddev	.0015979	.001207	.0014169	.001843	.001181	.28144
%RSD	13.59522	11.37858	3.219905	136.5924	615.0332	1.239840
#1	.0103095	-.011886	.0423907	-.002447	-.001044	23.01366
#2	.0134703	-.009485	.0450397	-.002380	.001156	22.61409
#3	.0114808	-.010462	.0445870	.000779	-.000688	22.47054

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2160595	.0030032	.0004860	23.51801	.0632968	.0243663
Stddev	.0026913	.0000191	.0001189	.08201	.0005296	.0000984
%RSD	1.245615	.6368670	24.46886	.3487208	.8367180	.4039251
#1	.2189785	.0030185	.0003507	23.60969	.0627252	.0243380
#2	.2155235	.0029818	.0005738	23.45162	.0633943	.0242851
#3	.2136766	.0030093	.0005335	23.49271	.0637709	.0244758

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0701521	15.26017	.5856745	8.154971	.0323108	.0001468
Stddev	.0006250	.21568	.0110740	.092613	.0003254	.0002575
%RSD	.8909789	1.413328	1.890812	1.135667	1.007134	175.3908
#1	.0694332	15.50891	.5980484	8.257953	.0322889	.0001547
#2	.0704566	15.14641	.5822800	8.128444	.0326466	.0004002
#3	.0705666	15.12520	.5766951	8.078515	.0319969	-.000115

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	58.95664	.0485646	.1562243	3.527567	.0549485	.0138899
Stddev	.52382	.0003872	.0010656	.007021	.0007780	.0002426
%RSD	.8884758	.7973046	.6820798	.1990325	1.415880	1.746917
#1	58.49791	.0489165	.1574328	3.520448	.0556600	.0137999
#2	58.84459	.0481498	.1554197	3.534486	.0550679	.0137051
#3	59.52741	.0486277	.1558205	3.527766	.0541178	.0141647

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4867-02 Acquired: 11/18/2024 14:18:49 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.004857	.1087903	F 39.90540	.4001354	F 13.98931	.0168157
Stddev	.000451	.0059782	.38398	.0049053	.09687	.0011075
%RSD	9.295524	5.495157	.9622262	1.225920	.6924698	6.586131
#1	-.005083	.1152190	39.66833	.3964217	13.87747	.0179896
#2	-.005151	.1077538	39.69944	.4056961	14.04695	.0157893
#3	-.004337	.1033981	40.34841	.3982884	14.04351	.0166681

Elem	Sr4077
Units	ppm
Avg	.3186037
Stddev	.0011756
%RSD	.3689912
#1	.3198631
#2	.3184127
#3	.3175353

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2716.225	60817.11	13692.41	1938.936	4171.188
Stddev	20.867	395.74	66.65	21.030	28.407
%RSD	.7682473	.6507120	.4867593	1.084618	.6810272
#1	2740.179	61049.80	13616.93	1942.918	4203.834
#2	2706.509	61041.38	13717.14	1957.691	4157.625
#3	2701.988	60360.18	13743.15	1916.200	4152.105

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4867-03 Acquired: 11/18/2024 14:23:01 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0135338	-.007532	.0618818	-.003543	-.001564	39.52294
Stddev	.0027388	.002050	.0004778	.002239	.001366	.08693
%RSD	20.23650	27.21632	.7721828	63.20448	87.36521	.2199571
#1	.0136059	-.007339	.0618930	-.002464	-.003138	39.49973
#2	.0107597	-.009671	.0623539	-.002048	-.000691	39.44997
#3	.0162358	-.005585	.0613984	-.006117	-.000862	39.61913

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2325120	.0037919	.0013292	21.43369	.1010392	.0399735
Stddev	.0002740	.0000546	.0000886	.15570	.0007797	.0002009
%RSD	.1178554	1.440062	6.663288	.7264398	.7716400	.5025549
#1	.2322975	.0037831	.0014306	21.42718	.1001445	.0399792
#2	.2324177	.0037422	.0012671	21.28134	.1014001	.0397698
#3	.2328207	.0038503	.0012898	21.59254	.1015730	.0401714

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0928915	26.08720	1.085781	10.20785	.0590322	-.000171
Stddev	.0002087	.14826	.007653	.09978	.0005977	.000147
%RSD	.2246554	.5683251	.7048131	.9775130	1.012495	86.24071
#1	.0931116	25.98174	1.084238	10.20189	.0597222	-.000293
#2	.0928662	26.02315	1.079017	10.11118	.0586754	-.000213
#3	.0926966	26.25672	1.094088	10.31048	.0586989	-.000007

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	58.34472	.0757656	.1998322	4.873854	.0561243	.0188528
Stddev	.26727	.0016663	.0006970	.024488	.0007477	.0001098
%RSD	.4580918	2.199297	.3488049	.5024373	1.332292	.5825966
#1	58.11632	.0759112	.1990515	4.850994	.0559318	.0189463
#2	58.63867	.0740312	.2003921	4.899697	.0569495	.0187318
#3	58.27918	.0773543	.2000529	4.870870	.0554917	.0188803

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4867-03 Acquired: 11/18/2024 14:23:01 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.004146	.0995719	F 52.04655	.4524024	F 18.97459	.0209921
Stddev	.001548	.0005865	.13139	.0036471	.02875	.0014211
%RSD	37.34281	.5890378	.2524426	.8061554	.1515095	6.769524
#1	-.002400	.1002246	51.92433	.4553185	19.00196	.0226029
#2	-.005351	.0990892	52.02980	.4535756	18.97716	.0199158
#3	-.004688	.0994019	52.18550	.4483131	18.94464	.0204575

Elem	Sr4077
Units	ppm
Avg	.3673585
Stddev	.0004280
%RSD	.1165059
#1	.3671295
#2	.3678523
#3	.3670938

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2734.576	61644.86	13886.06	1934.380	4089.765
Stddev	8.411	92.15	56.47	9.535	12.229
%RSD	.3075946	.1494773	.4066400	.4929139	.2990139
#1	2727.728	61710.99	13873.95	1944.021	4079.352
#2	2732.035	61683.98	13947.59	1934.163	4086.713
#3	2743.965	61539.61	13836.63	1924.955	4103.231

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4867-04 Acquired: 11/18/2024 14:27:13 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.000238	-.011550	.0179708	.0011716	.0008596	7.163507
Stddev	.001075	.002376	.0003625	.0018050	.0009747	.028642
%RSD	452.0410	20.56669	2.017036	154.0575	113.3937	.3998336
#1	.000022	-.012396	.0181110	-.000505	.0009800	7.135137
#2	.000683	-.013387	.0175591	.000937	-.000170	7.192414
#3	-.001418	-.008868	.0182422	.003082	.001768	7.162972

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1308374	.0010116	.0001359	18.83950	.0212534	.0076979
Stddev	.0002972	.0000460	.0000731	.15111	.0002436	.0001563
%RSD	.2271921	4.547867	53.83058	.8020912	1.145982	2.029769
#1	.1308582	.0009634	.0002081	18.66509	.0214919	.0077167
#2	.1305303	.0010550	.0001376	18.92226	.0210050	.0075331
#3	.1311237	.0010164	.0000619	18.93115	.0212634	.0078440

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236256	8.350644	.3601850	4.526841	.0146270	.0001206
Stddev	.0003254	.013293	.0016419	.040048	.0001283	.0002010
%RSD	1.377420	.1591860	.4558577	.8846810	.8770130	166.6611
#1	.0232543	8.358683	.3584437	4.480616	.0145829	-.000086
#2	.0237613	8.335300	.3617051	4.548822	.0145267	.000315
#3	.0238612	8.357948	.3604060	4.551085	.0147716	.000133

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	72.28476	.0211868	.1112546	396.3754	.0343587	.0088754
Stddev	.43731	.0012449	.0008089	1.8471	.0006580	.0002224
%RSD	.6049856	5.875806	.7270529	.4660038	1.914944	2.505387
#1	72.78638	.0210756	.1120442	395.2028	.0346902	.0087069
#2	71.98371	.0200011	.1112918	398.5046	.0336009	.0087918
#3	72.08419	.0224835	.1104277	395.4187	.0347849	.0091274

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4867-04 Acquired: 11/18/2024 14:27:13 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.002767	.0845798	F 27.99491	8.860851	F 17.20951	.0105022
Stddev	.000648	.0007488	.03142	.024490	.02975	.0013020
%RSD	23.41429	.8852941	.1122377	.2763883	.1728539	12.39758
#1	-.002988	.0853854	28.01280	8.877932	17.19762	.0114839
#2	-.002037	.0844489	27.95862	8.871828	17.24337	.0109975
#3	-.003275	.0839051	28.01330	8.832792	17.18755	.0090252

Elem	Sr4077
Units	ppm
Avg	.1865088
Stddev	.0003227
%RSD	.1730319
#1	.1864156
#2	.1868679
#3	.1862430

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2490.812	54450.14	12714.30	1748.870	3808.213
Stddev	6.922	164.56	55.10	10.504	10.475
%RSD	.2778935	.3022164	.4333456	.6006293	.2750591
#1	2487.557	54287.93	12777.89	1738.427	3801.372
#2	2486.117	54616.95	12684.43	1748.748	3802.994
#3	2498.761	54445.56	12680.60	1759.434	3820.272

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV02 Acquired: 11/18/2024 14:31:36 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	5.033545	5.113114	4.977237	5.159679	5.149041	10.16953	9.544116
Stddev	.023217	.130643	.014068	.027399	.011463	.09028	.095114
%RSD	.4612399	2.555057	.2826423	.5310258	.2226153	.8877050	.9965701
#1	5.006772	4.962375	4.961252	5.129565	5.136448	10.27337	9.652674
#2	5.045751	5.183393	4.987733	5.183138	5.158868	10.12550	9.504257
#3	5.048114	5.193574	4.982726	5.166334	5.151806	10.10971	9.475417

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2430358	2.488234	24.51176	1.026525	2.488276	1.279594	4.936221
Stddev	.0024186	.006557	.21966	.001815	.005487	.002587	.019464
%RSD	.9951451	.2635246	.8961360	.1768309	.2205116	.2021849	.3943017
#1	.2458015	2.480777	24.75030	1.027888	2.482136	1.276812	4.927332
#2	.2413177	2.493096	24.46713	1.024464	2.492699	1.281928	4.958541
#3	.2419881	2.490831	24.31784	1.027222	2.489994	1.280042	4.922788

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.371254	24.71414	2.490024	1.256237	24.43565	2.500601	2.546379
Stddev	.017049	.24731	.004806	.001848	.06475	.020425	.005359
%RSD	.7189806	1.000688	.1929913	.1471268	.2649637	.8167923	.2104447
#1	2.390891	24.96262	2.484713	1.257799	24.50854	2.522872	2.552478
#2	2.362633	24.71181	2.494072	1.254197	24.38480	2.496187	2.544235
#3	2.360237	24.46801	2.491288	1.256716	24.41361	2.482744	2.542424

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.37031	4.809235	5.248332	4.911270	4.851804	5.298874	5.188251
Stddev	.09468	.037993	.021124	.011447	.038843	.011279	.020815
%RSD	.3731861	.7900042	.4024895	.2330701	.8005989	.2128619	.4012026
#1	25.47942	4.853077	5.223990	4.898594	4.896414	5.308772	5.179076
#2	25.32170	4.785935	5.259142	4.920850	4.833533	5.286594	5.212078
#3	25.30982	4.788693	5.261863	4.914365	4.825465	5.301255	5.173600

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV02 Acquired: 11/18/2024 14:31:36 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.845597	4.586270	4.933014
Stddev	.033477	.044923	.054328
%RSD	.6908822	.9795037	1.101316
#1	4.811648	4.634478	4.995730
#2	4.878582	4.545582	4.902897
#3	4.846561	4.578750	4.900414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2577.861	58097.77	12549.52	1839.987	4042.820
Stddev	3.103	92.09	116.42	4.463	6.512
%RSD	.1203765	.1585109	.9276982	.2425463	.1610743
#1	2581.337	58036.53	12416.38	1836.443	4050.248
#2	2576.873	58053.10	12599.93	1838.519	4038.094
#3	2575.371	58203.68	12632.23	1844.999	4040.119

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB02 Acquired: 11/18/2024 14:35:48 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003721	-.001955	-.000204	.0017763	.0044208	.0258552
Stddev	.0017547	.000551	.000192	.0011656	.0008654	.0193600
%RSD	471.6217	28.16198	93.88029	65.62120	19.57572	74.87874
#1	.0022813	-.001409	-.000192	.0030459	.0049172	.0475438
#2	.0000049	-.001945	-.000019	.0015282	.0049236	.0197027
#3	-.001170	-.002510	-.000402	.0007546	.0034215	.0103190

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0180284	.0000649	-.000006	.0587296	.0002737	-.000073
Stddev	.0170950	.0000140	.000044	.0500197	.0004743	.000150
%RSD	94.82244	21.58797	773.2871	85.16953	173.3198	204.8967
#1	.0365968	.0000773	.000030	.1124936	.0007698	-.000046
#2	.0145451	.0000497	-.000054	.0501247	.0002266	-.000235
#3	.0029434	.0000677	.000007	.0135706	-.000175	.000061

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000029	.0131152	.0057283	.0623437	.0000014	.0005094
Stddev	.000253	.0077898	.0042408	.0441484	.0001799	.0002043
%RSD	885.3459	59.39500	74.03249	70.81457	13144.37	40.09702
#1	-.000198	.0205904	.0104122	.1107195	.0001823	.0005709
#2	-.000149	.0137104	.0046237	.0520816	-.000001	.0006759
#3	.000262	.0050449	.0021491	.0242301	-.000178	.0002815

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.207163	.0061730	-.000401	-.022674	.0081532	.0007768
Stddev	.023210	.0048273	.000293	.016958	.0006673	.0003577
%RSD	11.20367	78.20013	73.10170	74.79392	8.184906	46.05580
#1	-.180627	.0113580	-.000065	-.003128	.0089194	.0011833
#2	-.217174	.0053523	-.000602	-.033481	.0076992	.0006372
#3	-.223686	.0018086	-.000535	-.031411	.0078411	.0005098

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB02 Acquired: 11/18/2024 14:35:48 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096068	.0128523	.0301429	-.005424	F -.011518	.0064798
Stddev	.0006761	.0085865	.0206771	.001097	.002553	.0045457
%RSD	7.037384	66.80918	68.59686	20.22974	22.16598	70.15194
#1	.0095983	.0220942	.0535225	-.004198	-.011204	.0113380
#2	.0089350	.0113406	.0226468	-.006313	-.009137	.0057718
#3	.0102870	.0051220	.0142594	-.005762	-.014214	.0023297

Elem	Sr4077
Units	ppm
Avg	F .0114440
Stddev	.0090491
%RSD	79.07303
#1	.0213654
#2	.0093222
#3	.0036443

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2743.674	60171.26	12637.96	1940.957	4656.518
Stddev	7.245	77.90	17.42	11.178	15.698
%RSD	.2640730	.1294621	.1378152	.5758916	.3371254
#1	2736.233	60092.72	12618.62	1936.988	4638.940
#2	2750.706	60172.57	12652.42	1953.578	4669.141
#3	2744.083	60248.50	12642.84	1932.306	4661.473

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: PB165011BL Acquired: 11/18/2024 14:40:47 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.002516	-.003496	-.000107	-.000347	.0001348	.0060804	-.002839
Stddev	.001731	.000635	.000347	.000324	.0015398	.0038429	.000209
%RSD	68.80042	18.15614	324.1813	93.41080	1142.491	63.20110	7.364429
#1	-.003651	-.002933	.000124	-.000704	-.001580	.0100619	-.002793
#2	-.003373	-.003371	-.000505	-.000071	.001400	.0023931	-.003068
#3	-.000524	-.004184	.000060	-.000266	.000585	.0057861	-.002657

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000727	-.000098	-.001050	-.000186	-.000100	-.000108	.0087172
Stddev	.0000261	.000100	.004275	.000273	.000143	.000238	.0081874
%RSD	35.89498	102.0439	407.1598	146.6101	143.1842	220.0407	93.92155
#1	.0000440	-.000113	.001609	-.000393	.000062	-.000018	.0149731
#2	.0000951	-.000189	.001223	.000123	-.000155	-.000379	.0117278
#3	.0000789	.000009	-.005982	-.000288	-.000206	.000072	-.000549

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001731	.0094552	-.000021	.0004792	-.241095	.0000494	-.000900
Stddev	.0001504	.0060682	.000126	.0001529	.006367	.0011395	.000406
%RSD	86.91879	64.17858	593.6674	31.90240	2.641063	2307.782	45.12274
#1	.0003448	.0082259	.000078	.0003327	-.247475	.0010408	-.000650
#2	.0000646	.0040958	-.000163	.0004673	-.241071	-.001195	-.001369
#3	.0001098	.0160440	.000022	.0006377	-.234740	.000303	-.000681

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.058248	.0039316	.0001411	.0094604	.0005791	.0109864	-.005590
Stddev	.016178	.0005617	.0001424	.0002174	.0004414	.0046799	.001946
%RSD	27.77509	14.28598	100.9056	2.297462	76.21630	42.59692	34.80562
#1	-.073317	.0044291	.0002819	.0097009	.0010622	.0055898	-.006943
#2	-.041151	.0040431	-.000003	.0092780	.0001968	.0134424	-.003360
#3	-.060274	.0033225	.000144	.0094023	.0004784	.0139271	-.006467

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: PB165011BL Acquired: 11/18/2024 14:40:47 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.007999	-.002089	.0000169
Stddev	.001849	.001268	.0000651
%RSD	23.11599	60.70334	384.5596
#1	-.007113	-.002919	.0000886
#2	-.010124	-.002718	.0000008
#3	-.006759	-.000629	-.000039

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2708.764	59843.32	12658.16	1919.446	4625.581
Stddev	9.002	63.59	11.54	4.639	10.272
%RSD	.3323307	.1062563	.0911939	.2416957	.2220718
#1	2714.523	59881.63	12644.91	1924.481	4630.053
#2	2713.379	59769.92	12666.05	1915.345	4632.858
#3	2698.391	59878.42	12663.51	1918.512	4613.831

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: PB165011BS Acquired: 11/18/2024 14:45:05 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.7863369	2.017635	.9738364	2.025797	.7970421	2.036371
Stddev	.0026657	.032037	.0018722	.005326	.0011080	.005787
%RSD	.3390005	1.587831	.1922530	.2629277	.1390098	.2842010
#1	.7883309	2.053941	.9750433	2.030236	.7981743	2.032038
#2	.7873706	1.993339	.9716797	2.019891	.7959601	2.042944
#3	.7833092	2.005625	.9747863	2.027266	.7969919	2.034132

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1901740	.1970306	.1944810	1.015254	.4182127	.1966088
Stddev	.0003535	.0017287	.0004016	.010590	.0005145	.0005953
%RSD	.1858690	.8773524	.2064882	1.043078	.1230330	.3027949
#1	.1902336	.1967213	.1947091	1.007132	.4180565	.1970408
#2	.1904939	.1988930	.1940173	1.011399	.4187873	.1959297
#3	.1897946	.1954774	.1947165	1.027231	.4177944	.1968558

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3146978	2.935168	.1971602	1.977720	.4927955	.0758964
Stddev	.0003179	.012295	.0020928	.021224	.0012233	.0002276
%RSD	.1010310	.4188844	1.061471	1.073143	.2482340	.2998391
#1	.3150168	2.927477	.1955648	1.953219	.4935056	.0757026
#2	.3146955	2.928679	.1963860	1.990468	.4913829	.0761470
#3	.3143809	2.949348	.1995298	1.989471	.4934978	.0758396

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.558241	.3062856	.2114728	9.785164	.2916574	.4269662
Stddev	.009483	.0032423	.0005937	.026582	.0017033	.0016464
%RSD	.3706947	1.058582	.2807674	.2716607	.5839937	.3855983
#1	2.560869	.3027585	.2116298	9.794714	.2922639	.4287804
#2	2.547720	.3091364	.2108164	9.755126	.2929744	.4255671
#3	2.566132	.3069619	.2119723	9.805652	.2897339	.4265510

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: PB165011BS Acquired: 11/18/2024 14:45:05 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6738051	.1951561	.7633253	5.717112	F -.020256	.1740463
Stddev	.0035380	.0005411	.0062263	.057075	.003455	.0010176
%RSD	.5250707	.2772551	.8156743	.9983201	17.05583	.5846604
#1	.6761344	.1947920	.7566484	5.782997	-.018357	.1735168
#2	.6697339	.1957779	.7643550	5.685562	-.018167	.1734026
#3	.6755469	.1948985	.7689725	5.682776	-.024244	.1752194

Elem	Sr4077
Units	ppm
Avg	.2017261
Stddev	.0004727
%RSD	.2343153
#1	.2012521
#2	.2021974
#3	.2017288

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2648.451	59518.58	12534.13	1863.119	4387.692
Stddev	7.705	121.46	49.75	15.988	7.022
%RSD	.2909248	.2040653	.3968999	.8581082	.1600442
#1	2640.754	59469.15	12542.31	1865.482	4379.839
#2	2648.435	59656.96	12480.79	1877.794	4389.870
#3	2656.164	59429.64	12579.28	1846.082	4393.368

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: PB165003BL Acquired: 11/18/2024 14:49:05 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.000952	-.001502	-.000245	.0012575	.0007390	.0016882
Stddev	.002309	.001011	.000738	.0022025	.0005149	.0009582
%RSD	242.5392	67.29930	301.0237	175.1473	69.67841	56.75971
#1	.001600	-.000581	-.000504	.0037955	.0012908	.0007003
#2	-.001559	-.001343	.000588	.0001287	.0002712	.0017507
#3	-.002897	-.002584	-.000820	-.000152	.0006551	.0026136

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002960	.0000460	-.000100	-.001730	-.000020	-.000153
Stddev	.000322	.0000388	.000042	.008184	.000057	.000167
%RSD	10.88594	84.44659	42.45500	473.0568	281.9396	109.1477
#1	-.002652	.0000664	-.000079	-.001561	-.000084	-.000270
#2	-.003294	.0000012	-.000072	-.009997	-.000004	-.000227
#3	-.002933	.0000703	-.000149	.006368	.000027	.000038

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000247	.0001034	.0000442	.0097777	.0000957	.0006343
Stddev	.000414	.0037264	.0001613	.0124723	.0001219	.0003022
%RSD	167.6266	3605.452	364.5701	127.5586	127.3819	47.64739
#1	-.000724	.0025157	.0001320	-.002638	-.000007	.0007623
#2	.000007	.0019828	-.000142	.009665	.000230	.0002891
#3	-.000024	-.004188	.000143	.022306	.000063	.0008514

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.247670	.0002884	-.000931	-.064257	.0030896	.0000911
Stddev	.009830	.0021069	.000244	.011435	.0002043	.0001319
%RSD	3.969014	730.3992	26.23936	17.79646	6.612030	144.7894
#1	-.258949	.0010788	-.000967	-.058250	.0031521	.0002109
#2	-.243134	.0018858	-.001155	-.077444	.0028614	.0001127
#3	-.240927	-.002099	-.000671	-.057076	.0032554	-.000050

Sample Name: PB165003BL Acquired: 11/18/2024 14:49:05 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0097173	.0004209	.0089714	-.004522	F -.010884	-.001604
Stddev	.0002141	.0005058	.0049589	.001278	.001670	.001917
%RSD	2.203041	120.1692	55.27432	28.26268	15.34795	119.5055
#1	.0099438	-.000124	.0034070	-.005968	-.010497	-.002219
#2	.0095182	.000875	.0129234	-.004051	-.012714	.000545
#3	.0096901	.000512	.0105837	-.003546	-.009440	-.003139

Elem	Sr4077
Units	ppm
Avg	-.000036
Stddev	.000027
%RSD	75.39848
#1	-.000012
#2	-.000030
#3	-.000065

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2728.386	59267.42	12691.99	1909.644	4645.229
Stddev	1.565	43.19	24.66	1.649	4.017
%RSD	.0573777	.0728699	.1942752	.0863459	.0864716
#1	2727.232	59272.24	12712.75	1909.939	4640.629
#2	2727.757	59308.00	12664.73	1911.125	4647.019
#3	2730.168	59222.03	12698.48	1907.867	4648.040

Sample Name: PB165003BS Acquired: 11/18/2024 14:53:26 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.7754532	2.034122	.9669667	1.984444	.7906063	2.012614
Stddev	.0017998	.011229	.0002102	.001592	.0056188	.005853
%RSD	.2320984	.5520397	.0217336	.0802315	.7106992	.2907922
#1	.7745330	2.040770	.9667604	1.985734	.7932620	2.009595
#2	.7775271	2.040439	.9669590	1.984933	.7944051	2.008887
#3	.7742995	2.021157	.9671805	1.982664	.7841519	2.019359

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1906075	.1987021	.1929504	1.005916	.4130512	.1957024
Stddev	.0008086	.0005011	.0004784	.013724	.0009748	.0008249
%RSD	.4242241	.2521770	.2479260	1.364327	.2360081	.4215230
#1	.1913115	.1988602	.1931352	1.007010	.4141570	.1962411
#2	.1897244	.1981411	.1924071	.991677	.4123159	.1947527
#3	.1907868	.1991051	.1933087	1.019060	.4126809	.1961134

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3108182	2.903619	.1976565	1.979727	.4890101	.0751069
Stddev	.0004220	.014153	.0007548	.015811	.0016865	.0005280
%RSD	.1357865	.4874380	.3818699	.7986668	.3448764	.7029976
#1	.3109679	2.902086	.1984954	1.997972	.4895870	.0755881
#2	.3111449	2.890295	.1970323	1.971193	.4871109	.0751906
#3	.3103416	2.918477	.1974419	1.970016	.4903324	.0745421

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.490309	.3025703	.2086733	9.503954	.2930060	.4256933
Stddev	.013381	.0012499	.0007055	.048855	.0008672	.0004861
%RSD	.5373343	.4130851	.3381078	.5140452	.2959612	.1141859
#1	2.503267	.3029629	.2093144	9.512564	.2920456	.4258800
#2	2.476541	.3035768	.2087881	9.451366	.2932410	.4251416
#3	2.491117	.3011713	.2079174	9.547930	.2937315	.4260584

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: PB165003BS Acquired: 11/18/2024 14:53:26 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6828809	.1975650	.7477023	5.735631	F -.017423	.1759795
Stddev	.0018775	.0008571	.0012026	.020782	.000909	.0004299
%RSD	.2749426	.4338480	.1608348	.3623364	5.218082	.2443095
#1	.6818601	.1978628	.7490183	5.759525	-.016462	.1764546
#2	.6817349	.1965987	.7466606	5.721757	-.017536	.1756172
#3	.6850477	.1982336	.7474281	5.725611	-.018270	.1758666

Elem	Sr4077
Units	ppm
Avg	.2007066
Stddev	.0008249
%RSD	.4110065
#1	.2014011
#2	.1997947
#3	.2009239

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2706.574	60517.41	12489.34	1948.096	4459.992
Stddev	9.082	99.39	18.23	2.900	11.885
%RSD	.3355582	.1642404	.1459968	.1488471	.2664786
#1	2698.082	60404.41	12494.22	1947.513	4446.301
#2	2705.490	60591.30	12504.65	1951.243	4467.656
#3	2716.149	60556.51	12469.17	1945.532	4466.018

Sample Name: P4848-01 Acquired: 11/18/2024 15:10:36 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6103431	-.011017	3.919916	-.064849	-.074582	121.0737
Stddev	.0023325	.003035	.013701	.001596	.003443	.4918
%RSD	.3821592	27.54684	.3495297	2.461606	4.616691	.4061666
#1	.6130099	-.013316	3.904153	-.063021	-.076659	120.6015
#2	.6086835	-.012159	3.928963	-.065561	-.070607	121.0367
#3	.6093358	-.007577	3.926633	-.065967	-.076479	121.5829

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.506794	.0100983	.0352722	114.0588	F 11.09900	.1872292
Stddev	.007132	.0000210	.0002707	.5440	.05823	.0002923
%RSD	.4733119	.2081912	.7675360	.4769546	.5246013	.1561196
#1	1.499147	.0100768	.0350393	113.4495	11.14182	.1868948
#2	1.507971	.0100994	.0352080	114.2314	11.03270	.1873564
#3	1.513264	.0101188	.0355692	114.4957	11.12248	.1874363

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.079486	293.4729	3.906043	56.73695	.7700310	.0188045
Stddev	.005545	1.0256	.021355	.32328	.0021352	.0003005
%RSD	.2666323	.3494682	.5467082	.5697872	.2772931	1.598201
#1	2.073721	292.3811	3.881438	56.38250	.7677874	.0186006
#2	2.084781	293.6218	3.916944	56.81275	.7702675	.0186634
#3	2.079955	294.4160	3.919748	57.01559	.7720382	.0191497

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.440554	.7080216	3.962682	13.70418	.2162156	.0081243
Stddev	.031424	.0030038	.019371	.06501	.0020645	.0002452
%RSD	.9133321	.4242567	.4888356	.4743532	.9548506	3.018268
#1	3.410000	.7046894	3.984882	13.65005	.2141743	.0084051
#2	3.438882	.7105214	3.953946	13.68621	.2161699	.0079526
#3	3.472780	.7088542	3.949217	13.77628	.2183026	.0080152

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4848-01 Acquired: 11/18/2024 15:10:36 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.9184516	3.306842	F 23.35540	7.771174	F 101.1189	.1953278
Stddev	.0026966	.015480	.05525	.020570	.2472	.0020241
%RSD	.2936016	.4681308	.2365690	.2646906	.2444721	1.036269
#1	.9158764	3.290689	23.29926	7.747774	100.8563	.1929924
#2	.9182234	3.308287	23.35722	7.779351	101.3471	.1964155
#3	.9212550	3.321549	23.40972	7.786398	101.1533	.1965756

Elem	Sr4077
Units	ppm
Avg	.1130208
Stddev	.0012112
%RSD	1.071661
#1	.1116488
#2	.1134716
#3	.1139419

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2672.134	62648.33	14446.71	1914.040	3706.754
Stddev	4.546	156.35	15.62	9.767	8.543
%RSD	.1701427	.2495711	.1081443	.5103020	.2304625
#1	2673.201	62470.16	14430.13	1905.768	3715.716
#2	2667.148	62762.66	14448.85	1911.536	3698.704
#3	2676.051	62712.18	14461.15	1924.816	3705.842

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4849-01 Acquired: 11/18/2024 15:14:38 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0388772	-.011824	1.543252	-.038581	.0049522	79.94011
Stddev	.0003774	.001631	.007400	.002664	.0011448	.14509
%RSD	.9706736	13.79504	.4795358	6.904016	23.11646	.1815013
#1	.0384444	-.012735	1.538006	-.040412	.0038717	79.91348
#2	.0390502	-.009941	1.540032	-.039807	.0048329	80.09667
#3	.0391371	-.012797	1.551716	-.035526	.0061519	79.81018

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.071092	.0066345	.0108171	39.38487	.2287029	.0888009
Stddev	.002982	.0000424	.0003233	.06073	.0010942	.0001104
%RSD	.2784279	.6389735	2.989099	.1541941	.4784466	.1242840
#1	1.070236	.0065904	.0106779	39.37383	.2289263	.0886821
#2	1.074409	.0066750	.0105866	39.33043	.2296682	.0889002
#3	1.068632	.0066381	.0111867	39.45037	.2275142	.0888204

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6072473	153.0715	4.690723	25.23895	.1760485	.0015437
Stddev	.0030260	1.0741	.009471	.10052	.0004694	.0000202
%RSD	.4983209	.7016713	.2019164	.3982628	.2666352	1.308717
#1	.6060955	153.0598	4.684311	25.28854	.1757933	.0015229
#2	.6049662	154.1514	4.686257	25.12328	.1765903	.0015450
#3	.6106801	152.0034	4.701602	25.30505	.1757620	.0015633

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.872467	.2238929	1.189895	7.743183	.2045006	.0064559
Stddev	.050974	.0007838	.009909	.077282	.0004846	.0003568
%RSD	1.316310	.3500897	.8327273	.9980620	.2369609	5.526843
#1	3.870378	.2230032	1.193255	7.736536	.2046635	.0066711
#2	3.924453	.2241935	1.197687	7.823573	.2048828	.0060441
#3	3.822570	.2244819	1.178743	7.669439	.2039556	.0066527

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4849-01 Acquired: 11/18/2024 15:14:38 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0765581	2.380002	F 18.57970	6.308201	4.952959	.0589769
Stddev	.0005334	.003380	.15694	.029642	.024718	.0012879
%RSD	.6967898	.1419972	.8446695	.4698914	.4990586	2.183827
#1	.0759521	2.376225	18.59461	6.285293	4.933360	.0584009
#2	.0767655	2.382740	18.72865	6.297632	4.944789	.0604523
#3	.0769567	2.381041	18.41584	6.341679	4.980728	.0580774

Elem	Sr4077
Units	ppm
Avg	.0219158
Stddev	.0005167
%RSD	2.357442
#1	.0218747
#2	.0214209
#3	.0224518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2947.798	65518.31	14604.32	2093.511	3986.198
Stddev	4.374	653.03	30.30	21.573	4.515
%RSD	.1483797	.9967122	.2074601	1.030476	.1132638
#1	2948.119	65251.62	14569.52	2083.293	3989.123
#2	2952.002	65040.83	14624.80	2078.946	3988.473
#3	2943.272	66262.47	14618.65	2118.295	3980.998

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4850-01 Acquired: 11/18/2024 15:18:42 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0329506	-.025907	.3579559	-.045320	-.003005	123.0852
Stddev	.0022936	.002226	.0004214	.002714	.002253	1.0344
%RSD	6.960603	8.590487	.1177121	5.988865	74.98796	.8403920
#1	.0313693	-.023426	.3578870	-.048266	-.000915	123.1829
#2	.0355811	-.026568	.3575732	-.042922	-.002707	122.0054
#3	.0319013	-.027727	.3584074	-.044771	-.005392	124.0672

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7437645	.0088860	.0147957	85.54367	.2129337	.1042749
Stddev	.0073841	.0001648	.0001195	.68557	.0005390	.0003687
%RSD	.9927956	1.854261	.8075140	.8014315	.2531307	.3535950
#1	.7461155	.0088849	.0149107	85.34312	.2128804	.1046935
#2	.7354912	.0087217	.0148040	84.98074	.2134974	.1039986
#3	.7496868	.0090512	.0146722	86.30716	.2124233	.1041324

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3717663	198.4640	3.075443	62.05377	.1906203	.0013724
Stddev	.0018317	.8939	.026929	.43905	.0011957	.0001648
%RSD	.4926980	.4504149	.8756186	.7075297	.6272544	12.00569
#1	.3737703	197.5553	3.074712	61.86801	.1918116	.0013147
#2	.3713497	199.3424	3.048886	61.73813	.1906290	.0015582
#3	.3701787	198.4944	3.102730	62.55516	.1894203	.0012442

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.73536	.3644640	.5184538	18.08456	.2436463	.0045893
Stddev	.01349	.0049326	.0021482	.07054	.0011289	.0001970
%RSD	.1059582	1.353375	.4143384	.3900607	.4633156	4.293423
#1	12.74935	.3624668	.5164170	18.12617	.2426673	.0045366
#2	12.73431	.3608432	.5206983	18.12439	.2448811	.0048073
#3	12.72242	.3700820	.5182460	18.00311	.2433905	.0044240

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4850-01 Acquired: 11/18/2024 15:18:42 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.001900	5.661656	F 20.67065	9.065271	3.962436	.1410722
Stddev	.000318	.048302	.10248	.038774	.017216	.0026846
%RSD	16.75032	.8531454	.4957736	.4277160	.4344834	1.902993
#1	-.001784	5.670336	20.58974	9.108506	3.982305	.1410217
#2	-.001656	5.609602	20.78589	9.033582	3.951944	.1384132
#3	-.002260	5.705029	20.63633	9.053726	3.953060	.1437817

Elem	Sr4077
Units	ppm
Avg	.1374815
Stddev	.0039457
%RSD	2.869959
#1	.1397781
#2	.1329254
#3	.1397408

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2840.917	63459.32	14370.52	2018.259	3734.963
Stddev	13.586	169.14	144.67	4.194	19.793
%RSD	.4782169	.2665309	1.006719	.2078053	.5299455
#1	2827.744	63315.41	14297.10	2013.711	3715.851
#2	2840.127	63416.93	14537.18	2021.974	3733.664
#3	2854.881	63645.62	14277.28	2019.092	3755.373

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4851-01 Acquired: 11/18/2024 15:22:45 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0264202	-.044650	.2294509	-.060585	-.003131	120.6075
Stddev	.0013380	.003317	.0007216	.004416	.001745	.2806
%RSD	5.064102	7.428038	.3144911	7.289017	55.73295	.2326346
#1	.0256196	-.048280	.2298232	-.065450	-.004938	120.3021
#2	.0256762	-.041778	.2286192	-.056830	-.001455	120.6663
#3	.0279648	-.043892	.2299104	-.059476	-.002999	120.8540

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6352771	.0067749	.0225279	54.73072	.2039367	.1525922
Stddev	.0025726	.0001169	.0004104	.07582	.0006995	.0007169
%RSD	.4049559	1.726143	1.821580	.1385409	.3430201	.4698424
#1	.6323159	.0066648	.0229159	54.65837	.2032651	.1530810
#2	.6365541	.0068976	.0225693	54.80960	.2038838	.1517692
#3	.6369613	.0067622	.0220983	54.72420	.2046611	.1529264

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4521528	245.9426	4.584434	57.34227	.2365984	.0017689
Stddev	.0034628	1.5753	.010092	.08548	.0009901	.0005002
%RSD	.7658559	.6405253	.2201307	.1490711	.4184554	28.27668
#1	.4561414	245.0150	4.573355	57.26135	.2366104	.0012467
#2	.4504020	245.0513	4.586847	57.33377	.2356023	.0018163
#3	.4499149	247.7615	4.593101	57.43168	.2375823	.0022437

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.355572	.4744590	.5867754	23.19788	.1530114	.0078976
Stddev	.058124	.0013719	.0036592	.11564	.0014062	.0003305
%RSD	.9145378	.2891498	.6236179	.4984865	.9190393	4.185068
#1	6.319752	.4729845	.5853940	23.12832	.1519568	.0075272
#2	6.324329	.4746949	.5840079	23.13396	.1524695	.0081625
#3	6.422636	.4756977	.5909242	23.33137	.1546080	.0080031

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4851-01 Acquired: 11/18/2024 15:22:45 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.011125	9.242168	F 11.53654	F 15.16879	4.020430	.1398714
Stddev	.001388	.027762	.05950	.09545	.029528	.0014507
%RSD	12.48024	.3003852	.5157933	.6292786	.7344365	1.037146
#1	-.012304	9.210713	11.51945	15.19540	4.034036	.1382953
#2	-.011476	9.252542	11.48746	15.06286	3.986552	.1411508
#3	-.009594	9.263250	11.60273	15.24812	4.040701	.1401681

Elem	Sr4077
Units	ppm
Avg	-.103705
Stddev	.001251
%RSD	1.206724
#1	-.103222
#2	-.102768
#3	-.105126

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3020.123	68652.02	15379.09	2142.551	3775.544
Stddev	17.991	244.51	21.41	15.552	18.049
%RSD	.5957190	.3561628	.1392419	.7258637	.4780452
#1	2999.377	68592.74	15368.56	2147.883	3754.995
#2	3029.550	68920.72	15364.99	2154.737	3788.831
#3	3031.443	68442.60	15403.73	2125.035	3782.806

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4852-01 Acquired: 11/18/2024 15:26:48 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0730998	-.033542	.3946245	-.086030	-.006395	197.7798
Stddev	.0031715	.001677	.0028900	.000626	.002156	.2969
%RSD	4.338623	5.001060	.7323443	.7275163	33.72174	.1500964
#1	.0741073	-.035462	.3942353	-.085321	-.008780	198.1191
#2	.0756451	-.032808	.3919487	-.086504	-.004584	197.6523
#3	.0695469	-.032357	.3976893	-.086266	-.005820	197.5679

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7945973	.0140661	.0245369	43.36585	.3684978	.1616320
Stddev	.0024161	.0000979	.0001755	.12348	.0005848	.0004059
%RSD	.3040646	.6959797	.7153499	.2847416	.1587033	.2511321
#1	.7966966	.0141697	.0243342	43.48322	.3690974	.1611849
#2	.7951390	.0139751	.0246341	43.23705	.3679289	.1617335
#3	.7919564	.0140534	.0246423	43.37727	.3684671	.1619775

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2740855	338.7674	4.499275	43.88277	.2303498	.0017276
Stddev	.0017270	1.0092	.010578	.05097	.0005297	.0003605
%RSD	.6300988	.2979098	.2351013	.1161549	.2299687	20.86481
#1	.2725646	337.6032	4.511239	43.89820	.2298403	.0015892
#2	.2737290	339.3948	4.495427	43.92425	.2303114	.0014569
#3	.2759630	339.3041	4.491160	43.82587	.2308976	.0021368

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.819330	.5959039	.8788944	15.43363	.1748092	.0050862
Stddev	.019994	.0008662	.0061755	.03649	.0031722	.0004588
%RSD	1.099001	.1453568	.7026425	.2364372	1.814683	9.019881
#1	1.798313	.5956585	.8856848	15.39215	.1712980	.0046040
#2	1.838115	.5951869	.8773845	15.46079	.1756610	.0055173
#3	1.821562	.5968663	.8736139	15.44796	.1774685	.0051372

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4852-01 Acquired: 11/18/2024 15:26:48 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0035104	8.466025	F 26.43292	F 11.06514	.5108129	.1370010
Stddev	.0008633	.009745	.12044	.03251	.0066382	.0003128
%RSD	24.59266	.1151107	.4556401	.2938100	1.299528	.2283081
#1	.0025984	8.474405	26.29569	11.02787	.5095353	.1371849
#2	.0036179	8.468340	26.52107	11.07990	.5049064	.1371782
#3	.0043149	8.455331	26.48201	11.08765	.5179970	.1366398

Elem	Sr4077
Units	ppm
Avg	-.145757
Stddev	.001406
%RSD	.9644947
#1	-.144167
#2	-.146266
#3	-.146836

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2788.642	62777.50	14471.82	1973.235	3767.101
Stddev	5.354	119.54	98.08	8.243	7.859
%RSD	.1919836	.1904106	.6777388	.4177553	.2086258
#1	2793.349	62646.26	14361.97	1963.970	3773.051
#2	2789.761	62806.11	14502.87	1979.757	3770.059
#3	2782.818	62880.14	14550.62	1975.978	3758.191

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4852-02 Acquired: 11/18/2024 15:31:10 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0492513	-.039982	.6291498	-.042741	-.003440	132.2243
Stddev	.0024321	.001720	.0021358	.004043	.001034	.0920
%RSD	4.938134	4.302226	.3394664	9.459951	30.06096	.0695862
#1	.0472804	-.038280	.6268593	-.038134	-.002730	132.2164
#2	.0519693	-.039948	.6295035	-.044387	-.004627	132.1365
#3	.0485041	-.041719	.6310866	-.045702	-.002964	132.3200

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8716577	.0116227	.0316812	17.30184	.2096569	.1226342
Stddev	.0026891	.0000802	.0003623	.03937	.0006245	.0005511
%RSD	.3085011	.6900557	1.143719	.2275740	.2978576	.4493990
#1	.8723076	.0117143	.0319031	17.26548	.2092092	.1222507
#2	.8687033	.0115882	.0318774	17.29637	.2093911	.1223861
#3	.8739623	.0115654	.0312631	17.34366	.2103703	.1232658

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1849250	174.7608	6.482654	25.49931	.2081432	.0008028
Stddev	.0012575	1.5443	.022760	.08304	.0005862	.0002665
%RSD	.6800281	.8836820	.3510970	.3256426	.2816077	33.19878
#1	.1857974	173.8252	6.473186	25.40664	.2074715	.0007516
#2	.1854940	173.9139	6.466156	25.52433	.2084074	.0005656
#3	.1834835	176.5433	6.508620	25.56696	.2085508	.0010912

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3624809	.3001757	.5835426	9.201080	.0963284	.0062911
Stddev	.0131270	.0012077	.0014360	.064715	.0026282	.0002862
%RSD	3.621420	.4023218	.2460896	.7033411	2.728354	4.549337
#1	.3557460	.2990197	.5851499	9.165456	.0945603	.0064969
#2	.3540883	.3000782	.5823859	9.162005	.0950765	.0064121
#3	.3776083	.3014292	.5830920	9.275780	.0993485	.0059643

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4852-02 Acquired: 11/18/2024 15:31:10 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0175015	4.609174	F 15.42354	F 13.98729	.9625090	.0746056
Stddev	.0014997	.007926	.10518	.08133	.0085174	.0001888
%RSD	8.569023	.1719671	.6819528	.5814504	.8849123	.2529956
#1	.0190495	4.607216	15.35874	13.92318	.9571440	.0747853
#2	.0160553	4.602410	15.36699	13.95991	.9723300	.0744089
#3	.0173997	4.617896	15.54490	14.07877	.9580529	.0746226

Elem	Sr4077
Units	ppm
Avg	-.036215
Stddev	.001486
%RSD	4.104325
#1	-.035128
#2	-.035609
#3	-.037909

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4294.117	96697.54	22100.55	3034.960	3840.874
Stddev	12.342	221.87	44.56	13.841	5.370
%RSD	.2874208	.2294498	.2016437	.4560647	.1398158
#1	4281.728	96781.23	22069.88	3033.551	3834.800
#2	4294.212	96865.40	22080.10	3049.451	3844.992
#3	4306.412	96446.00	22151.67	3021.876	3842.830

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV03 Acquired: 11/18/2024 15:35:23 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.995558	5.000934	4.906233	5.132793	5.127356	10.02033	9.429373
Stddev	.014385	.033402	.003613	.005671	.011752	.00818	.052681
%RSD	.2879623	.6679150	.0736317	.1104926	.2291937	.0816248	.5586890
#1	5.010294	5.004335	4.902519	5.137898	5.134003	10.02974	9.486445
#2	4.994829	4.965961	4.909735	5.133792	5.134276	10.01496	9.382606
#3	4.981551	5.032505	4.906447	5.126688	5.113787	10.01628	9.419068

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2390310	2.452660	23.92588	1.017406	2.453888	1.267188	4.853000
Stddev	.0002986	.003308	.04230	.002057	.002449	.002156	.008947
%RSD	.1249178	.1348786	.1768103	.2021492	.0998133	.1701378	.1843556
#1	.2393756	2.449587	23.95697	1.015211	2.451779	1.267266	4.857131
#2	.2388482	2.452231	23.94297	1.019288	2.453311	1.269304	4.859134
#3	.2388693	2.456161	23.87771	1.017720	2.456574	1.264994	4.842734

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.320658	24.10397	2.453664	1.243748	24.10812	2.452110	2.547121
Stddev	.009568	.03843	.002841	.000985	.16897	.005392	.002442
%RSD	.4123168	.1594145	.1157929	.0791682	.7008886	.2198813	.0958919
#1	2.330040	24.06390	2.452056	1.242661	24.22124	2.455485	2.549857
#2	2.321020	24.14051	2.451993	1.244581	24.18924	2.454953	2.546345
#3	2.310913	24.10751	2.456945	1.244004	23.91389	2.445892	2.545161

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.87343	4.709506	5.219552	4.844740	4.772948	5.228950	4.992550
Stddev	.06701	.011881	.005841	.007149	.014356	.025110	.012492
%RSD	.2694126	.2522783	.1119064	.1475596	.3007889	.4802114	.2502133
#1	24.89988	4.723180	5.219529	4.842035	4.788597	5.208672	4.980178
#2	24.92317	4.703631	5.225405	4.839338	4.769863	5.221141	5.005159
#3	24.79723	4.701707	5.213723	4.852847	4.760385	5.257037	4.992314

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV03 Acquired: 11/18/2024 15:35:23 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.747832	4.513657	4.862543
Stddev	.014083	.047983	.013349
%RSD	.2966222	1.063061	.2745333
#1	4.749302	4.558741	4.872553
#2	4.733071	4.519006	4.847386
#3	4.761122	4.463223	4.867689

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2575.567	58123.83	12692.74	1828.191	4056.471
Stddev	7.576	73.58	56.86	11.050	4.885
%RSD	.2941400	.1265939	.4480075	.6043996	.1204143
#1	2570.830	58106.11	12632.17	1817.698	4051.215
#2	2571.567	58060.72	12701.06	1827.152	4057.325
#3	2584.305	58204.65	12744.99	1839.724	4060.872

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB03 Acquired: 11/18/2024 15:39:34 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.001091	-.001757	-.000120	.0006571	.0004532	-.002762	-.003806
Stddev	.000727	.001211	.000112	.0015907	.0004318	.003111	.000484
%RSD	66.58064	68.93467	93.52631	242.0679	95.28158	112.6252	12.70448
#1	-.000923	-.001253	.000006	.0021882	.0002343	-.004915	-.004364
#2	-.000464	-.003138	-.000208	.0007704	.0001747	.000804	-.003553
#3	-.001888	-.000879	-.000159	-.000987	.0009506	-.004175	-.003502

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000534	-.000096	-.008916	-.000306	.0000308	-.000514	.0017068
Stddev	.0000257	.000013	.003741	.000153	.0001607	.000118	.0029708
%RSD	48.22092	13.47316	41.96000	49.94635	521.5479	22.96006	174.0536
#1	.0000252	-.000082	-.009325	-.000463	.0002111	-.000548	.0009520
#2	.0000757	-.000096	-.012437	-.000157	-.000098	-.000611	.0049823
#3	.0000591	-.000108	-.004987	-.000298	-.000021	-.000383	-.000814

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001631	.0100712	-.000325	.0004107	-.280458	-.000186	-.001167
Stddev	.0001078	.0036496	.000283	.0000154	.011032	.000965	.000126
%RSD	66.08603	36.23839	87.09149	3.750069	3.933462	519.7036	10.75439
#1	.0000617	.0060782	-.000109	.0004018	-.291825	.000236	-.001255
#2	.0002763	.0132346	-.000221	.0004285	-.279754	-.001290	-.001224
#3	.0001514	.0109009	-.000645	.0004019	-.269795	.000497	-.001024

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.059988	.0055918	.0002298	.0092242	.0007261	.0102530	-.002570
Stddev	.029134	.0003805	.0003203	.0005636	.0001752	.0006588	.002021
%RSD	48.56544	6.804502	139.4068	6.109722	24.12413	6.425561	78.61846
#1	-.090816	.0060008	.0005994	.0097528	.0009131	.0108130	-.004121
#2	-.056238	.0052484	.0000567	.0092887	.0005658	.0095271	-.000285
#3	-.032912	.0055261	.0000332	.0086312	.0006994	.0104189	-.003304

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB03 Acquired: 11/18/2024 15:39:34 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.008750	-.002285	-.000034
Stddev	.001610	.001503	.000014
%RSD	18.39740	65.78786	40.47698
#1	-.007818	-.003896	-.000029
#2	-.007823	-.002039	-.000023
#3	-.010609	-.000920	-.000049

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2741.426	61468.43	12696.56	1948.239	4656.003
Stddev	8.748	57.64	63.85	8.297	6.978
%RSD	.3191011	.0937712	.5028938	.4258838	.1498799
#1	2731.349	61479.14	12624.65	1949.036	4648.200
#2	2745.861	61406.19	12718.43	1939.572	4658.164
#3	2747.068	61519.97	12746.60	1956.109	4661.645

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4852-03 Acquired: 11/18/2024 15:43:55 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0699478	-.042162	.5774506	-.055279	-.004784	183.7367
Stddev	.0026644	.001944	.0019514	.002950	.001358	.4531
%RSD	3.809096	4.610321	.3379285	5.336810	28.39299	.2466170
#1	.0724930	-.043451	.5754632	-.054276	-.003858	184.2230
#2	.0671784	-.039927	.5775248	-.052961	-.004151	183.3264
#3	.0701721	-.043110	.5793638	-.058600	-.006344	183.6606

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9843992	.0126180	.0275230	17.31683	.3390140	.1074848
Stddev	.0047332	.0001477	.0003780	.08080	.0009082	.0004724
%RSD	.4808163	1.170231	1.373517	.4666093	.2678894	.4394875
#1	.9790742	.0126671	.0279114	17.22390	.3395677	.1074340
#2	.9859962	.0127349	.0271562	17.37044	.3395085	.1070399
#3	.9881273	.0124521	.0275013	17.35616	.3379659	.1079805

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1869840	241.4375	4.172451	24.43786	.1905592	.0008417
Stddev	.0012562	1.7681	.024633	.07705	.0001245	.0004109
%RSD	.6718146	.7323365	.5903770	.3152763	.0653455	48.82468
#1	.1884162	239.4686	4.144011	24.35342	.1904635	.0003776
#2	.1864671	241.9543	4.186253	24.50434	.1907000	.0009880
#3	.1860687	242.8897	4.187089	24.45582	.1905139	.0011594

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.931607	.4730861	1.001689	11.13039	.1325496	.0135895
Stddev	.017219	.0025061	.003701	.08059	.0014048	.0001936
%RSD	.8914156	.5297261	.3695018	.7240941	1.059799	1.424378
#1	1.912942	.4703492	1.002660	11.05078	.1312446	.0137722
#2	1.935009	.4752684	.997599	11.12845	.1323679	.0133866
#3	1.946872	.4736408	1.004808	11.21194	.1340364	.0136097

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4852-03 Acquired: 11/18/2024 15:43:55 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0235607	5.703063	F 17.89684	F 13.94717	1.197648	.0964062
Stddev	.0020622	.020203	.05974	.02412	.005902	.0013469
%RSD	8.752726	.3542485	.3337938	.1729193	.4927605	1.397077
#1	.0226059	5.679756	17.83234	13.93160	1.193000	.0948556
#2	.0221490	5.713853	17.90791	13.93495	1.195657	.0970776
#3	.0259273	5.715581	17.95026	13.97495	1.204288	.0972854

Elem	Sr4077
Units	ppm
Avg	-.080144
Stddev	.001142
%RSD	1.424834
#1	-.078924
#2	-.080320
#3	-.081187

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3437.777	78096.67	17323.83	2456.179	3889.544
Stddev	5.919	58.98	56.81	12.818	9.370
%RSD	.1721708	.0755156	.3279463	.5218584	.2408989
#1	3431.307	78064.39	17282.84	2449.210	3879.079
#2	3439.105	78060.88	17299.98	2470.972	3897.154
#3	3442.919	78164.73	17388.69	2448.356	3892.398

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01DUP Acquired: 11/18/2024 15:48:08 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0345793	-.013704	.3270002	-.056068	-.002898	140.7244
Stddev	.0002394	.003498	.0018083	.003222	.001419	1.0194
%RSD	.6924301	25.52745	.5529923	5.747129	48.97472	.7243643
#1	.0343040	-.013557	.3261890	-.057520	-.003438	139.9068
#2	.0347390	-.017273	.3257396	-.058309	-.001288	140.3999
#3	.0346950	-.010281	.3290721	-.052375	-.003969	141.8665

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.479177	.0122895	.0191216	62.98086	.2263874	.1814473
Stddev	.009637	.0000713	.0002829	.55013	.0009586	.0006369
%RSD	.6515163	.5798703	1.479274	.8734893	.4234210	.3510181
#1	1.470594	.0122109	.0190253	62.43380	.2256175	.1809539
#2	1.477335	.0123499	.0188994	62.97477	.2274610	.1812216
#3	1.489602	.0123078	.0194400	63.53401	.2260837	.1821663

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3736710	223.3111	6.597965	61.19774	.2882169	.0011439
Stddev	.0013568	1.0267	.057210	.57005	.0008406	.0002361
%RSD	.3630889	.4597561	.8670890	.9314812	.2916502	20.63679
#1	.3730472	223.0841	6.542635	60.60501	.2875472	.0014132
#2	.3727384	224.4323	6.594374	61.24620	.2879432	.0010462
#3	.3752275	222.4169	6.656886	61.74200	.2891602	.0009724

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.777511	.3144613	.6935769	13.38294	.2077842	.0019561
Stddev	.033932	.0018778	.0055146	.05397	.0011889	.0001794
%RSD	.7102523	.5971525	.7950997	.4032606	.5721853	9.172706
#1	4.759105	.3123519	.6918786	13.36735	.2084405	.0017507
#2	4.816669	.3150811	.6997410	13.44299	.2085004	.0020353
#3	4.756757	.3159508	.6891112	13.33848	.2064118	.0020824

Sample Name: P4859-01DUP Acquired: 11/18/2024 15:48:08 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0047215	3.235662	F 28.67426	6.915947	3.267586	.2346442
Stddev	.0021998	.026956	.09511	.025862	.010252	.0010216
%RSD	46.59045	.8331000	.3316822	.3739452	.3137625	.4353929
#1	.0022559	3.209932	28.72965	6.893643	3.256209	.2346033
#2	.0064829	3.233358	28.72868	6.944296	3.270443	.2336436
#3	.0054259	3.263696	28.56444	6.909901	3.276108	.2356856

Elem	Sr4077
Units	ppm
Avg	.0539409
Stddev	.0027630
%RSD	5.122229
#1	.0524878
#2	.0522077
#3	.0571272

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2876.410	64765.31	14828.52	2021.434	3765.743
Stddev	7.975	309.63	94.75	9.599	7.037
%RSD	.2772503	.4780807	.6389784	.4748637	.1868601
#1	2867.311	64550.71	14908.07	2023.709	3758.373
#2	2882.190	64624.95	14853.80	2010.901	3772.390
#3	2879.727	65120.26	14723.69	2029.691	3766.465

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01LX5 Acquired: 11/18/2024 15:52:13 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0062282	-.006113	.0688692	-.012172	-.001903	31.61507	.3309965
Stddev	.0011003	.002054	.0005758	.001195	.000886	.07359	.0006498
%RSD	17.66705	33.60639	.8360629	9.821241	46.57798	.2327834	.1963180
#1	.0050031	-.007262	.0693591	-.013510	-.001686	31.53425	.3304284
#2	.0071324	-.003741	.0682349	-.011797	-.001145	31.63276	.3308561
#3	.0065491	-.007337	.0690135	-.011209	-.002878	31.67822	.3317051

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029876	.0021007	14.73694	.0532054	.0361405	.0909785	51.62887
Stddev	.0000373	.0000514	.11183	.0005750	.0000512	.0004653	.05029
%RSD	1.247782	2.446809	.7588653	1.080658	.1415405	.5113862	.0974051
#1	.0030305	.0020414	14.63410	.0538255	.0360987	.0908292	51.67830
#2	.0029627	.0021283	14.72073	.0526899	.0361975	.0906063	51.63055
#3	.0029698	.0021324	14.85599	.0531009	.0361252	.0915001	51.57776

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.551030	13.92879	.0582549	.0005866	.8251659	.0738431	.1593503
Stddev	.009638	.07799	.0003651	.0002000	.0095661	.0010463	.0002712
%RSD	.6213684	.5599243	.6266987	34.09315	1.159297	1.416969	.1701688
#1	1.542545	13.85615	.0578531	.0004478	.8313085	.0734924	.1590392
#2	1.549036	13.91901	.0585663	.0008159	.8300452	.0730172	.1594752
#3	1.561509	14.01120	.0583452	.0004962	.8141440	.0750198	.1595365

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.868584	.0489047	.0005152	.0074709	.7504964	6.386826	1.332875
Stddev	.024008	.0008531	.0000645	.0014351	.0032210	.044640	.007415
%RSD	.8369375	1.744453	12.51774	19.20940	.4291881	.6989451	.5563353
#1	2.888084	.0496957	.0004465	.0060045	.7483761	6.434844	1.324652
#2	2.875900	.0480008	.0005745	.0075357	.7489103	6.379050	1.334920
#3	2.841769	.0490176	.0005245	.0088726	.7542030	6.346585	1.339054

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01LX5 Acquired: 11/18/2024 15:52:13 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6245370	.0509420	.0118041
Stddev	.0029277	.0024926	.0001762
%RSD	.4687737	4.893043	1.492287
#1	.6272797	.0483229	.0116482
#2	.6214541	.0512182	.0117690
#3	.6248771	.0532851	.0119952

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2724.344	59831.77	13284.63	1904.564	4251.823
Stddev	12.246	204.51	47.14	17.938	12.063
%RSD	.4494924	.3418078	.3548125	.9418379	.2837200
#1	2721.727	59657.73	13333.72	1898.136	4247.500
#2	2713.618	59780.56	13280.42	1890.726	4242.517
#3	2737.686	60057.02	13239.74	1924.830	4265.453

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01MS Acquired: 11/18/2024 15:56:26 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.7050975	1.950258	1.237199	1.651749	.6760040	141.0416
Stddev	.0011634	.023758	.001912	.002616	.0010767	.7603
%RSD	.1650032	1.218207	.1545565	.1583514	.1592677	.5390343
#1	.7051868	1.938114	1.234994	1.649031	.6755331	140.3331
#2	.7038920	1.935026	1.238404	1.651968	.6752431	140.9470
#3	.7062137	1.977633	1.238199	1.654249	.6772359	141.8448

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.645126	.1708252	.2111982	63.76633	.5574545	.3736589
Stddev	.007756	.0013451	.0000470	.55178	.0003542	.0008188
%RSD	.4714726	.7873824	.0222590	.8653221	.0635321	.2191175
#1	1.638647	.1694233	.2111655	63.13751	.5575431	.3729566
#2	1.643010	.1721051	.2111771	63.99188	.5577559	.3734619
#3	1.653721	.1709472	.2112521	64.16962	.5570644	.3745582

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6123984	221.3991	6.792458	62.41258	.7637884	.0654447
Stddev	.0002392	.7117	.053401	.70570	.0006879	.0002928
%RSD	.0390508	.3214646	.7861843	1.130704	.0900577	.4474039
#1	.6122909	220.9468	6.733925	61.60301	.7637359	.0651120
#2	.6126725	221.0311	6.804931	62.73698	.7631282	.0656632
#3	.6122319	222.2195	6.838519	62.89775	.7645009	.0655589

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.220766	.5616628	.8483828	21.84886	.4263877	.3590400
Stddev	.027250	.0054390	.0017932	.05159	.0023948	.0003466
%RSD	.3773783	.9683682	.2113604	.2361418	.5616584	.0965319
#1	7.244527	.5554328	.8477086	21.89204	.4236272	.3592317
#2	7.191022	.5640901	.8504153	21.79173	.4276267	.3586399
#3	7.226749	.5654654	.8470244	21.86282	.4279091	.3592485

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01MS Acquired: 11/18/2024 15:56:26 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6644410	3.391901	F 28.51948	F 12.62991	3.219399	.3875108
Stddev	.0027462	.021386	.07378	.04432	.012050	.0017922
%RSD	.4133082	.6305039	.2586885	.3509407	.3742964	.4624886
#1	.6624971	3.369304	28.50771	12.60678	3.208709	.3871955
#2	.6632432	3.394572	28.45229	12.60195	3.217030	.3858973
#3	.6675826	3.411826	28.59843	12.68102	3.232457	.3894398

Elem	Sr4077
Units	ppm
Avg	.2268556
Stddev	.0012313
%RSD	.5427851
#1	.2256704
#2	.2267681
#3	.2281284

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2886.597	65179.15	14542.48	2045.157	3773.028
Stddev	10.356	106.66	85.63	5.652	10.441
%RSD	.3587722	.1636469	.5888030	.2763732	.2767270
#1	2876.931	65086.75	14639.27	2051.462	3763.659
#2	2885.334	65295.88	14511.57	2043.465	3771.142
#3	2897.528	65154.82	14476.61	2040.544	3784.284

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01MSD Acquired: 11/18/2024 16:00:22 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6883564	1.905086	1.206730	1.599548	.6611384	141.9998
Stddev	.0030318	.020202	.007890	.004522	.0010856	.3307
%RSD	.4404404	1.060407	.6538492	.2826940	.1641943	.2328606
#1	.6848689	1.888456	1.208806	1.595096	.6619281	142.3784
#2	.6903643	1.899233	1.198009	1.599410	.6615867	141.8534
#3	.6898360	1.927567	1.213374	1.604136	.6599005	141.7676

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.648554	.1675993	.2053778	63.64055	.5454410	.3664409
Stddev	.005832	.0005583	.0002623	.18684	.0014628	.0009422
%RSD	.3537942	.3331015	.1277287	.2935831	.2681819	.2571325
#1	1.655129	.1681555	.2055569	63.59416	.5455103	.3663023
#2	1.644004	.1676032	.2050767	63.48128	.5439448	.3655757
#3	1.646530	.1670390	.2054999	63.84622	.5468679	.3674448

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6016776	219.3749	6.788454	62.51168	.7473654	.0638858
Stddev	.0006202	1.7115	.018708	.19761	.0019591	.0001192
%RSD	.1030849	.7801737	.2755866	.3161096	.2621401	.1865455
#1	.6016161	218.5716	6.791352	62.38311	.7467708	.0637497
#2	.6023263	218.2129	6.768466	62.41272	.7457724	.0639356
#3	.6010904	221.3403	6.805545	62.73922	.7495530	.0639719

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.126356	.5565469	.8402968	21.50127	.4179549	.3516107
Stddev	.032895	.0005770	.0018735	.08895	.0023910	.0004449
%RSD	.4615951	.1036738	.2229555	.4136979	.5720704	.1265336
#1	7.130126	.5564073	.8423007	21.45186	.4160183	.3513053
#2	7.091738	.5571809	.8385891	21.44800	.4172190	.3514058
#3	7.157203	.5560525	.8400005	21.60396	.4206273	.3521212

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01MSD Acquired: 11/18/2024 16:00:22 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6503403	3.403302	F 28.15399	F 12.44970	3.183401	.3871371
Stddev	.0038455	.008508	.14815	.04229	.012354	.0008263
%RSD	.5913101	.2499809	.5262144	.3396705	.3880692	.2134248
#1	.6506572	3.411630	28.08440	12.42666	3.177896	.3879845
#2	.6463461	3.394626	28.05345	12.42393	3.174756	.3863338
#3	.6540175	3.403649	28.32412	12.49850	3.197550	.3870930

Elem	Sr4077
Units	ppm
Avg	.2263168
Stddev	.0027026
%RSD	1.194143
#1	.2290562
#2	.2262414
#3	.2236527

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2925.708	65768.42	14532.71	2076.262	3825.585
Stddev	5.787	284.60	61.52	16.117	3.505
%RSD	.1977975	.4327239	.4232891	.7762301	.0916268
#1	2925.920	65659.43	14462.83	2063.708	3823.317
#2	2919.819	66091.40	14578.65	2094.436	3823.817
#3	2931.387	65554.43	14556.67	2070.643	3829.622

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01A Acquired: 11/18/2024 16:04:19 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6959878	1.952064	1.229372	1.624308	.6705291	146.1066
Stddev	.0037880	.011288	.001248	.008926	.0023298	.4161
%RSD	.5442665	.5782672	.1014843	.5495335	.3474614	.2848095
#1	.6946959	1.951772	1.228642	1.631989	.6678996	145.9177
#2	.7002528	1.963495	1.230813	1.626420	.6723361	145.8185
#3	.6930147	1.940925	1.228663	1.614516	.6713517	146.5837

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.656030	.1690586	.2102984	64.16796	.5555618	.3734553
Stddev	.005950	.0004353	.0005020	.22303	.0037463	.0005668
%RSD	.3593169	.2575001	.2387273	.3475744	.6743329	.1517752
#1	1.650124	.1685579	.2101482	64.00548	.5513520	.3737708
#2	1.655941	.1692697	.2108584	64.07615	.5568047	.3737941
#3	1.662024	.1693480	.2098887	64.42224	.5585287	.3728009

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6138251	221.6543	6.830562	63.88248	.7660246	.0637203
Stddev	.0013690	1.4209	.021560	.26298	.0017581	.0003782
%RSD	.2230220	.6410582	.3156406	.4116642	.2295148	.5935723
#1	.6145483	220.3641	6.813116	63.74700	.7642426	.0633186
#2	.6146808	221.4216	6.823904	63.71486	.7677579	.0640696
#3	.6122462	223.1772	6.854665	64.18558	.7660734	.0637727

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.173548	.5654738	.8479155	21.73339	.4230372	.3575049
Stddev	.050193	.0025567	.0064522	.13066	.0033972	.0003177
%RSD	.6996907	.4521297	.7609495	.6012010	.8030409	.0888560
#1	7.115778	.5631225	.8418867	21.60847	.4192765	.3571447
#2	7.206465	.5651035	.8471389	21.72257	.4239514	.3577448
#3	7.198402	.5681955	.8547208	21.86912	.4258837	.3576253

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4859-01A Acquired: 11/18/2024 16:04:19 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6588467	3.509108	F 29.20902	F 12.73680	3.235840	.3923835
Stddev	.0013317	.011755	.14444	.03748	.007487	.0027414
%RSD	.2021317	.3349803	.4944890	.2942863	.2313925	.6986505
#1	.6578024	3.501821	29.11930	12.74720	3.239578	.3893464
#2	.6603464	3.502835	29.13213	12.76799	3.240724	.3946749
#3	.6583912	3.522669	29.37564	12.69522	3.227220	.3931292

Elem	Sr4077
Units	ppm
Avg	.2265039
Stddev	.0002074
%RSD	.0915436
#1	.2262873
#2	.2265240
#3	.2267005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2893.420	66061.11	14520.09	2061.966	3770.227
Stddev	3.314	257.85	16.18	13.911	5.709
%RSD	.1145290	.3903180	.1114358	.6746492	.1514349
#1	2896.331	66353.24	14531.90	2077.734	3775.827
#2	2889.814	65964.88	14501.64	2051.430	3764.414
#3	2894.115	65865.22	14526.71	2056.733	3770.439

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-01 Acquired: 11/18/2024 16:08:17 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.008465	-.011629	.0134432	.0034526	.0017150	.0400840	-.000704
Stddev	.002800	.001222	.0012723	.0005548	.0012286	.0012180	.000344
%RSD	33.07951	10.50831	9.464261	16.06773	71.64018	3.038583	48.83538
#1	-.005795	-.011758	.0124300	.0040849	.0012152	.0387010	-.000740
#2	-.011379	-.012782	.0148712	.0030477	.0008150	.0405538	-.001029
#3	-.008220	-.010348	.0130285	.0032251	.0031148	.0409970	-.000344

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000087	-.000186	6.574497	.0038730	.0056321	.0099325	2.412466
Stddev	.000009	.000068	.005674	.0001150	.0000478	.0001022	.014482
%RSD	10.69028	36.39432	.0862982	2.968860	.8482333	1.028473	.6002998
#1	-.000085	-.000143	6.580812	.0039829	.0056814	.0100504	2.397097
#2	-.000080	-.000265	6.569830	.0037536	.0055860	.0098733	2.414444
#3	-.000098	-.000152	6.572848	.0038826	.0056290	.0098737	2.425858

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0399710	2.640825	.0093980	.0007230	21.61953	.0003323	.0295779
Stddev	.0000914	.018420	.0000472	.0001337	.14756	.0005926	.0006401
%RSD	.2286538	.6974922	.5023039	18.49263	.6825149	178.3280	2.164059
#1	.0400439	2.646861	.0094426	.0005742	21.46126	.0004670	.0288952
#2	.0400006	2.620144	.0094027	.0008330	21.75331	-.000316	.0296741
#3	.0398685	2.655469	.0093486	.0007618	21.64402	.000846	.0301645

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.113555	.0097399	.0007051	-.002909	.0008887	6.265061	.0031329
Stddev	.009582	.0003240	.0000798	.000510	.0004962	.028953	.0021028
%RSD	.8604910	3.327032	11.31839	17.54446	55.83991	.4621359	67.12182
#1	1.123620	.0101028	.0006313	-.002350	.0013960	6.233179	.0007596
#2	1.112503	.0094794	.0006940	-.003349	.0008659	6.272284	.0038749
#3	1.104542	.0096374	.0007898	-.003028	.0004042	6.289718	.0047640

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-01 Acquired: 11/18/2024 16:08:17 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6492320	.0011988	.0421910
Stddev	.0032704	.0007877	.0000961
%RSD	.5037308	65.71041	.2277735
#1	.6524118	.0014425	.0422990
#2	.6458780	.0018359	.0421592
#3	.6494062	.0003180	.0421148

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2573.167	58627.49	12885.31	1818.858	4380.949
Stddev	11.665	61.36	102.41	6.804	9.773
%RSD	.4533276	.1046668	.7947452	.3740744	.2230748
#1	2571.895	58582.85	12768.18	1811.510	4382.718
#2	2585.416	58602.15	12929.84	1824.940	4389.716
#3	2562.190	58697.46	12957.92	1820.123	4370.412

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03 Acquired: 11/18/2024 16:12:34 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.005378	-.010289	.0000776	.0018727	.0005790	.0252589	.0064320
Stddev	.001291	.000725	.0009572	.0010539	.0011917	.0024461	.0001064
%RSD	24.00319	7.050848	1233.404	56.27759	205.8278	9.684261	1.653602
#1	-.004129	-.010894	.0008885	.0008387	-.000795	.0243367	.0063890
#2	-.005298	-.009485	-.000978	.0018339	.001199	.0234079	.0063540
#3	-.006707	-.010489	.000323	.0029455	.001333	.0280321	.0065532

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000085	-.000072	9.438613	.0086631	.0032372	.0028064	.0929548
Stddev	.000033	.000059	.047110	.0004316	.0001113	.0002398	.0030743
%RSD	38.64062	80.94240	.4991183	4.982409	3.439509	8.545825	3.307255
#1	-.000091	-.000005	9.437039	.0081903	.0033022	.0025553	.0934445
#2	-.000050	-.000114	9.392310	.0090361	.0031087	.0030331	.0957549
#3	-.000115	-.000098	9.486490	.0087628	.0033008	.0028309	.0896651

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0724851	3.561907	.0047646	.0004748	21.45385	-.000130	.0181023
Stddev	.0003617	.032590	.0001820	.0002991	.07486	.000563	.0001881
%RSD	.4989475	.9149598	3.819105	62.99418	.3489545	433.8320	1.039058
#1	.0723161	3.576478	.0045980	.0008082	21.53621	-.000579	.0181560
#2	.0722388	3.524574	.0047371	.0003864	21.43540	-.000313	.0178932
#3	.0729003	3.584670	.0049588	.0002299	21.38994	.000502	.0182577

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.584460	.0281677	.0010869	-.003068	.0009704	6.251615	.1210474
Stddev	.022260	.0000814	.0000513	.000426	.0003255	.008788	.0029125
%RSD	1.404926	.2890409	4.717829	13.87716	33.54202	.1405782	2.406051
#1	1.606189	.0282616	.0010418	-.002820	.0012087	6.242093	.1177826
#2	1.585486	.0281179	.0010764	-.002824	.0005995	6.259415	.1219809
#3	1.561704	.0281235	.0011427	-.003559	.0011029	6.253338	.1233786

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03 Acquired: 11/18/2024 16:12:34 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0093006	.0009620	.0777648
Stddev	.0021702	.0012222	.0004349
%RSD	23.33443	127.0567	.5592444
#1	.0073594	-.000414	.0780495
#2	.0088987	.001377	.0772642
#3	.0116438	.001922	.0779808

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2604.973	59997.44	12990.53	1822.751	4410.547
Stddev	5.830	41.70	70.06	8.297	.933
%RSD	.2238200	.0695062	.5393271	.4551985	.0211565
#1	2599.254	59994.35	12969.76	1823.566	4409.597
#2	2604.755	60040.60	13068.63	1830.610	4411.462
#3	2610.909	59957.37	12933.21	1814.076	4410.581

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03DUP Acquired: 11/18/2024 16:16:52 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.005146	-.009834	.0002356	.0024166	-.000737	.0307922	.0068945
Stddev	.000461	.000631	.0006490	.0012448	.000151	.0023871	.0002114
%RSD	8.952131	6.411835	275.4697	51.51185	20.46359	7.752137	3.066898
#1	-.005152	-.009177	.0009184	.0024271	-.000564	.0281540	.0066804
#2	-.005604	-.010434	.0001615	.0036561	-.000809	.0314202	.0068999
#3	-.004683	-.009891	-.000373	.0011665	-.000839	.0328025	.0071032

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000103	-.000202	9.479816	.0088373	.0034028	.0030493	.0890245
Stddev	.000022	.000133	.015104	.0002556	.0000425	.0000825	.0026042
%RSD	21.49662	65.91824	.1593304	2.892570	1.248933	2.704683	2.925202
#1	-.000105	-.000321	9.462729	.0085446	.0033816	.0029550	.0919300
#2	-.000123	-.000226	9.485335	.0090168	.0033749	.0031078	.0869008
#3	-.000079	-.000058	9.491385	.0089505	.0034517	.0030851	.0882428

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0732037	3.571066	.0047657	.0005406	21.88010	.0002880	.0185859
Stddev	.0001481	.011593	.0000920	.0000740	.06890	.0003136	.0002427
%RSD	.2022750	.3246398	1.931242	13.68929	.3149170	108.8850	1.306088
#1	.0730329	3.562471	.0047483	.0005798	21.95004	.0006500	.0187859
#2	.0732968	3.566475	.0046837	.0004553	21.87799	.0001148	.0186561
#3	.0732813	3.584251	.0048652	.0005868	21.81228	.0000992	.0183158

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.614118	.0277993	.0009719	-.003145	.0009369	6.290571	.1234338
Stddev	.019891	.0002410	.0002277	.000135	.0001027	.003935	.0010395
%RSD	1.232334	.8668197	23.42342	4.278282	10.96388	.0625594	.8421754
#1	1.618952	.0276770	.0007362	-.003145	.0008304	6.287863	.1245946
#2	1.592255	.0280769	.0011906	-.003280	.0009452	6.295085	.1231179
#3	1.631147	.0276441	.0009889	-.003011	.0010353	6.288764	.1225889

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03DUP Acquired: 11/18/2024 16:16:52 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0057726	.0011868	.0780771
Stddev	.0016437	.0009459	.0001953
%RSD	28.47372	79.70429	.2501926
#1	.0075556	.0022789	.0782911
#2	.0054445	.0006246	.0779085
#3	.0043177	.0006569	.0780317

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2641.274	59227.59	12930.78	1858.893	4452.615
Stddev	8.101	142.46	8.36	8.156	11.008
%RSD	.3066994	.2405285	.0646182	.4387748	.2472189
#1	2635.293	59073.36	12924.76	1851.359	4443.972
#2	2650.493	59255.19	12940.32	1857.765	4465.008
#3	2638.035	59354.24	12927.26	1867.555	4448.866

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03MSD Acquired: 11/18/2024 16:21:10 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.8030657	2.098592	.9405203	2.022206	.8270079	2.134655	.2042145
Stddev	.0023657	.032120	.0013285	.004884	.0038416	.009800	.0004843
%RSD	.2945822	1.530541	.1412548	.2415030	.4645162	.4590800	.2371759
#1	.8053641	2.062213	.9419566	2.022193	.8313201	2.123343	.2036609
#2	.8031951	2.110528	.9402690	2.027096	.8257526	2.140562	.2044226
#3	.8006380	2.123036	.9393354	2.017329	.8239510	2.140060	.2045600

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1974776	.1940021	10.22062	.4342523	.2015628	.3132167	3.136420
Stddev	.0003941	.0002395	.01808	.0010703	.0003356	.0013212	.009775
%RSD	.1995565	.1234701	.1769191	.2464640	.1664872	.4218244	.3116481
#1	.1976062	.1942737	10.22384	.4351890	.2019382	.3142359	3.127745
#2	.1970352	.1938212	10.20115	.4344821	.2014581	.3136902	3.147011
#3	.1977913	.1939112	10.23688	.4330858	.2012920	.3117240	3.134504

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2721462	5.492263	.4938452	.0639199	23.92535	.3141061	.2316953
Stddev	.0010266	.020524	.0007210	.0004937	.06516	.0019740	.0012873
%RSD	.3772290	.3736841	.1460015	.7723344	.2723446	.6284581	.5556091
#1	.2715425	5.501279	.4941018	.0644664	23.89054	.3119474	.2305231
#2	.2715647	5.468775	.4944028	.0637871	24.00052	.3158193	.2314898
#3	.2733316	5.506736	.4930310	.0635063	23.88499	.3145516	.2330730

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.62252	.2966937	.4639525	.6801138	.2046214	6.844022	5.739383
Stddev	.03217	.0005845	.0009784	.0021343	.0004198	.033604	.026146
%RSD	.2768220	.1969972	.2108783	.3138157	.2051480	.4909935	.4555604
#1	11.59521	.2961099	.4650790	.6815860	.2041366	6.846331	5.711156
#2	11.65799	.2966924	.4633149	.6810894	.2048637	6.876412	5.744220
#3	11.61437	.2972788	.4634637	.6776660	.2048637	6.809323	5.762773

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03MSD Acquired: 11/18/2024 16:21:10 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.009949	.1772518	.2812945
Stddev	.002163	.0016791	.0010146
%RSD	21.74478	.9472676	.3606814
#1	-.012207	.1756579	.2802137
#2	-.009746	.1770928	.2814434
#3	-.007894	.1790046	.2822264

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2658.812	59632.74	12777.59	1867.955	4418.753
Stddev	12.572	121.94	21.92	.415	14.276
%RSD	.4728269	.2044914	.1715413	.0222210	.3230712
#1	2644.769	59547.25	12781.20	1868.386	4403.827
#2	2662.651	59578.59	12797.48	1867.923	4420.157
#3	2669.017	59772.38	12754.09	1867.557	4432.275

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV04 Acquired: 11/18/2024 16:25:08 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.018046	5.310605	4.911358	5.210470	5.144886	10.02853
Stddev	.007825	.043448	.006578	.017684	.018463	.02310
%RSD	.1559470	.8181293	.1339415	.3393954	.3588531	.2303322
#1	5.013854	5.263579	4.904704	5.201811	5.129321	10.05401
#2	5.013208	5.318984	4.911511	5.198784	5.140052	10.02262
#3	5.027074	5.349254	4.917858	5.230815	5.165285	10.00896

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.443838	.2411631	2.458955	24.03850	1.028280	2.452763
Stddev	.028271	.0014944	.002259	.04505	.001195	.003516
%RSD	.2993590	.6196649	.0918669	.1874032	.1162093	.1433556
#1	9.464094	.2428883	2.456444	24.07503	1.029223	2.448712
#2	9.411540	.2402717	2.459599	23.98816	1.028682	2.455030
#3	9.455881	.2403292	2.460821	24.05230	1.026936	2.454547

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.268459	4.884688	2.310293	24.35241	2.452875	1.257697
Stddev	.002287	.012865	.003126	.07978	.001752	.001020
%RSD	.1802781	.2633765	.1352961	.3275892	.0714191	.0811342
#1	1.268216	4.870299	2.311632	24.38947	2.450870	1.257988
#2	1.266303	4.888685	2.306721	24.26085	2.453644	1.258541
#3	1.270857	4.895080	2.312527	24.40692	2.454110	1.256563

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.01132	2.462793	2.568777	24.93664	4.725204	5.271430
Stddev	.11359	.003016	.008199	.11572	.017691	.013734
%RSD	.4730690	.1224752	.3191759	.4640400	.3743924	.2605277
#1	23.90007	2.462542	2.576212	24.81021	4.745610	5.260666
#2	24.12711	2.459910	2.570136	25.03729	4.715816	5.266727
#3	24.00679	2.465927	2.559984	24.96242	4.714186	5.286897

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV04 Acquired: 11/18/2024 16:25:08 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.862528	4.756701	5.357971	4.977107	4.779645	F 4.407167
Stddev	.014554	.010062	.035458	.002203	.003191	.017955
%RSD	.2992991	.2115410	.6617856	.0442676	.0667719	.4074033
#1	4.846584	4.768103	5.317429	4.974566	4.775970	4.400078
#2	4.875098	4.752935	5.383197	4.978486	4.781249	4.427584
#3	4.865903	4.749064	5.373287	4.978269	4.781717	4.393839

Elem	Sr4077
Units	ppm
Avg	4.819786
Stddev	.038863
%RSD	.8063226
#1	4.843833
#2	4.840575
#3	4.774951

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2585.771	57299.45	12653.02	1819.114	4079.983
Stddev	7.961	71.21	49.61	1.790	7.323
%RSD	.3078936	.1242798	.3920712	.0983764	.1794749
#1	2590.957	57358.17	12595.76	1821.070	4086.807
#2	2589.752	57220.24	12680.33	1817.558	4080.895
#3	2576.605	57319.93	12682.97	1818.714	4072.247

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB04 Acquired: 11/18/2024 16:29:19 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001565	-.001975	-.000136	-.000126	-.000499	-.001903
Stddev	.001159	.001129	.000217	.001105	.000804	.003500
%RSD	74.05396	57.16815	158.8496	879.3905	161.2848	183.9171
#1	-.001545	-.003265	-.000384	-.001401	-.000731	-.001857
#2	-.000416	-.001495	.000019	.000466	.000396	-.005426
#3	-.002734	-.001166	-.000044	.000558	-.001161	.001574

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004453	.0000538	-.000066	-.003370	-.000099	-.000033
Stddev	.000254	.0000366	.000073	.002430	.000154	.000170
%RSD	5.714798	68.02567	111.4766	72.11770	155.6980	515.9407
#1	-.004185	.0000613	-.000123	-.006157	.000079	.000069
#2	-.004691	.0000861	.000017	-.001687	-.000183	.000061
#3	-.004483	.0000140	-.000091	-.002267	-.000194	-.000229

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000135	.0003356	.0001310	.0039442	-.000059	.0006942
Stddev	.000122	.0026081	.0002703	.0026093	.000182	.0003786
%RSD	90.30571	777.1407	206.3324	66.15574	307.8768	54.54070
#1	-.000272	-.002558	.0004016	.0067277	.000135	.0003001
#2	-.000039	.002505	-.000139	.0035510	-.000088	.0010551
#3	-.000094	.001060	.000131	.0015537	-.000224	.0007275

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.297247	-.000427	-.000752	-.066368	.0050027	.0003023
Stddev	.017152	.001083	.000059	.013419	.0004415	.0000590
%RSD	5.770376	253.5986	7.898212	20.21917	8.824313	19.50357
#1	-.316873	-.000091	-.000707	-.079880	.0050937	.0003466
#2	-.289738	-.001638	-.000729	-.066180	.0045228	.0003249
#3	-.285129	.000448	-.000819	-.053044	.0053915	.0002354

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB04 Acquired: 11/18/2024 16:29:19 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089179	.0004061	.0102189	-.003552	F -.010730	-.003279
Stddev	.0005008	.0001772	.0040330	.001888	.001923	.000540
%RSD	5.616258	43.62485	39.46641	53.16988	17.92024	16.46376
#1	.0094836	.0003911	.0086090	-.005702	-.008541	-.002957
#2	.0087396	.0005904	.0072395	-.002792	-.011499	-.002977
#3	.0085307	.0002370	.0148083	-.002162	-.012149	-.003902

Elem	Sr4077
Units	ppm
Avg	-.000068
Stddev	.000010
%RSD	14.57558
#1	-.000058
#2	-.000077
#3	-.000068

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2701.649	59554.49	12891.49	1881.014	4653.329
Stddev	12.462	292.39	39.41	18.027	10.142
%RSD	.4612731	.4909683	.3057252	.9583601	.2179557
#1	2700.896	59513.84	12856.37	1874.226	4656.597
#2	2714.471	59865.08	12884.00	1901.450	4661.434
#3	2689.581	59284.54	12934.12	1867.368	4641.955

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4848-01DLX10 Acquired: 11/18/2024 16:33:40 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0594609	-.002980	.3891866	-.005928	-.008905	12.85993	.1549057
Stddev	.0007423	.000982	.0014239	.000584	.000606	.12045	.0007299
%RSD	1.248345	32.94551	.3658605	9.854330	6.808234	.9366506	.4712187
#1	.0601590	-.002070	.3876200	-.005801	-.008527	12.99754	.1556923
#2	.0586812	-.004021	.3895374	-.005417	-.009604	12.77363	.1542502
#3	.0595426	-.002850	.3904022	-.006565	-.008584	12.80862	.1547747

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012465	.0021989	12.60155	1.250745	.0175059	.2328344	31.96335
Stddev	.0000829	.0000154	.07000	.006587	.0002253	.0009957	.09844
%RSD	6.649358	.6992953	.5554501	.5266098	1.287096	.4276586	.3079677
#1	.0011515	.0022166	12.66088	1.251260	.0175543	.2333549	31.84979
#2	.0013039	.0021910	12.52435	1.257058	.0177031	.2316863	32.01580
#3	.0012842	.0021890	12.61942	1.243915	.0172604	.2334620	32.02445

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4399699	6.155424	.0727924	.0025691	.0759165	.0785055	.4422292
Stddev	.0018511	.034037	.0003808	.0002238	.0099393	.0006467	.0020456
%RSD	.4207418	.5529535	.5231858	8.712415	13.09240	.8237058	.4625713
#1	.4415317	6.193957	.0726442	.0028264	.0733916	.0790792	.4422892
#2	.4379252	6.129458	.0725078	.0024196	.0674833	.0786327	.4442442
#3	.4404529	6.142856	.0732250	.0024612	.0868748	.0778047	.4401543

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.307401	.0257017	.0009488	.0958298	.3634134	2.487784	.6849546
Stddev	.008966	.0002067	.0001644	.0005853	.0024366	.007207	.0058653
%RSD	.6857886	.8041149	17.32580	.6108140	.6704627	.2896869	.8563107
#1	1.317203	.0257503	.0007909	.0953057	.3661368	2.479835	.6782046
#2	1.305383	.0254751	.0009365	.0957222	.3614401	2.493892	.6878495
#3	1.299615	.0258798	.0011190	.0964615	.3626634	2.489624	.6888096

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4848-01DLX10 Acquired: 11/18/2024 16:33:40 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	9.288438	.0181307	.0116086
Stddev	.044366	.0008235	.0004688
%RSD	.4776500	4.542067	4.038470
#1	9.247490	.0171839	.0121047
#2	9.282252	.0185274	.0111729
#3	9.335573	.0186808	.0115481

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2682.055	59605.20	13137.56	1877.895	4376.286
Stddev	9.338	294.84	128.65	10.558	13.220
%RSD	.3481833	.4946609	.9792822	.5622382	.3020823
#1	2676.968	59356.92	12989.11	1872.006	4379.128
#2	2692.832	59527.59	13216.56	1871.595	4387.854
#3	2676.364	59931.08	13207.01	1890.085	4361.876

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03A Acquired: 11/18/2024 16:37:50 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.8046663	2.030765	.9407610	2.018748	.8323757	2.140656	.2065844
Stddev	.0069112	.003983	.0019999	.003586	.0008761	.003191	.0005416
%RSD	.8588852	.1961213	.2125792	.1776474	.1052486	.1490584	.2621749
#1	.8028962	2.035363	.9386039	2.015804	.8317127	2.143448	.2061282
#2	.7988125	2.028407	.9411254	2.017698	.8320454	2.137178	.2064421
#3	.8122904	2.028523	.9425535	2.022742	.8333688	2.141342	.2071830

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1989001	.1937922	10.31410	.4347173	.2015954	.3136679	3.167118
Stddev	.0003954	.0003699	.02221	.0020549	.0005443	.0007003	.016554
%RSD	.1987915	.1908837	.2153121	.4726960	.2699897	.2232675	.5226750
#1	.1984441	.1939116	10.31253	.4348655	.2019971	.3136370	3.151260
#2	.1991080	.1933774	10.29272	.4325923	.2009759	.3129835	3.165803
#3	.1991482	.1940877	10.33705	.4366941	.2018131	.3143831	3.184290

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2735014	5.515407	.4941190	.0645273	24.07027	.3166382	.2315882
Stddev	.0009891	.022664	.0013154	.0003573	.13880	.0017564	.0004731
%RSD	.3616497	.4109125	.2662004	.5536992	.5766478	.5546966	.2042698
#1	.2723888	5.495650	.4941742	.0646096	23.93084	.3146990	.2310808
#2	.2742813	5.510424	.4927769	.0648362	24.07153	.3170932	.2316667
#3	.2738340	5.540147	.4954058	.0641360	24.20843	.3181222	.2320171

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.76666	.3008563	.4641212	.6767820	.2059398	6.913688	5.679092
Stddev	.05998	.0009454	.0000319	.0021614	.0002822	.029379	.004175
%RSD	.5097202	.3142509	.0068675	.3193659	.1370163	.4249347	.0735131
#1	11.74910	.3008065	.4640914	.6765402	.2059408	6.911201	5.683438
#2	11.71743	.3018257	.4641173	.6747516	.2056571	6.885631	5.675112
#3	11.83346	.2999367	.4641548	.6790541	.2062215	6.944231	5.678727

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03A Acquired: 11/18/2024 16:37:50 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.007771	.1793863	.2841144
Stddev	.002572	.0014542	.0004231
%RSD	33.09372	.8106560	.1489192
#1	-.004950	.1786581	.2836314
#2	-.009986	.1784400	.2842922
#3	-.008378	.1810607	.2844195

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2640.882	59150.01	12703.76	1871.499	4398.336
Stddev	4.683	167.33	18.43	8.082	8.519
%RSD	.1773357	.2828964	.1451094	.4318332	.1936821
#1	2637.848	59055.79	12682.53	1862.201	4390.007
#2	2638.521	59343.21	12715.77	1876.833	4397.967
#3	2646.275	59051.02	12712.97	1875.464	4407.033

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03LX5 Acquired: 11/18/2024 16:41:47 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.003040	-.003801	.0002142	.0008940	-.000292	.0051529	-.001718
Stddev	.001813	.000887	.0002527	.0009183	.000467	.0040773	.000175
%RSD	59.63231	23.33088	118.0120	102.7152	159.9229	79.12708	10.20988
#1	-.004964	-.004736	.0003332	.0018431	.000243	.0089149	-.001767
#2	-.001364	-.003696	-.000076	.0008291	-.000504	.0057234	-.001863
#3	-.002793	-.002972	.000385	.0000099	-.000615	.0008203	-.001523

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000435	-.000080	1.909332	.0017062	.0006914	.0002089	.0172427
Stddev	.0000369	.000025	.016523	.0001970	.0000660	.0002723	.0035701
%RSD	84.86493	30.53903	.8653583	11.54486	9.545656	130.3890	20.70472
#1	.0000616	-.000053	1.909621	.0018804	.0006413	.0000048	.0179376
#2	.0000010	-.000088	1.892668	.0014924	.0007661	.0001037	.0204141
#3	.0000679	-.000100	1.925709	.0017459	.0006667	.0005181	.0133762

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149054	.7257665	.0009004	.0006100	3.806904	.0008391	.0040344
Stddev	.0001298	.0096111	.0001071	.0002836	.026765	.0002268	.0002800
%RSD	.8707649	1.324275	11.89273	46.50113	.7030683	27.02443	6.940113
#1	.0147722	.7156449	.0008772	.0008364	3.833838	.0007730	.0037111
#2	.0150315	.7347693	.0010172	.0002918	3.780311	.0006528	.0041955
#3	.0149124	.7268852	.0008068	.0007017	3.806563	.0010916	.0041966

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2141936	.0076706	.0002762	.0068292	.0001235	1.219027	.0209489
Stddev	.0149967	.0005129	.0001404	.0002041	.0000632	.010487	.0010160
%RSD	7.001449	6.686570	50.83738	2.988197	51.19221	.8602538	4.850008
#1	.2063778	.0071182	.0002321	.0070595	.0000532	1.230912	.0220940
#2	.2047192	.0081317	.0004334	.0066710	.0001416	1.211076	.0201555
#3	.2314837	.0077619	.0001631	.0067570	.0001757	1.215094	.0205970

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03LX5 Acquired: 11/18/2024 16:41:47 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.008350	.0001013	.0157807
Stddev	.000257	.0007113	.0000400
%RSD	3.079753	702.4714	.2531330
#1	-.008634	.0009197	.0158188
#2	-.008134	-.000248	.0157392
#3	-.008282	-.000368	.0157841

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2724.210	61437.06	12879.47	1933.621	4581.594
Stddev	5.231	91.60	47.51	15.369	9.096
%RSD	.1920230	.1491000	.3689022	.7948537	.1985432
#1	2723.753	61362.38	12921.88	1920.222	4572.671
#2	2729.655	61539.27	12828.12	1950.399	4590.855
#3	2719.223	61409.53	12888.40	1930.242	4581.256

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03MS Acquired: 11/18/2024 16:46:07 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.8059455	2.063581	.9499290	2.026458	.8328065	2.147574	.2056661
Stddev	.0036126	.022775	.0036462	.008468	.0019033	.009087	.0003583
%RSD	.4482397	1.103687	.3838357	.4178907	.2285414	.4231452	.1742209
#1	.8032442	2.086311	.9519321	2.019890	.8333972	2.157212	.2056705
#2	.8045433	2.063670	.9457204	2.023469	.8306779	2.139162	.2053056
#3	.8100489	2.040761	.9521344	2.036016	.8343445	2.146349	.2060221

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1992344	.1960037	10.33624	.4354888	.2028406	.3155172	3.129236
Stddev	.0007979	.0005271	.03683	.0013805	.0001417	.0011062	.012587
%RSD	.4004894	.2689360	.3563501	.3169881	.0698724	.3506031	.4022374
#1	.1999250	.1959922	10.37542	.4359401	.2027435	.3153793	3.122739
#2	.1994172	.1954824	10.33096	.4339392	.2027749	.3144864	3.121225
#3	.1983609	.1965364	10.30233	.4365871	.2030032	.3166858	3.143744

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2737688	5.545262	.4987060	.0638197	23.64609	.3171102	.2308346
Stddev	.0006344	.035256	.0011604	.0001926	.05585	.0018468	.0005745
%RSD	.2317308	.6357816	.2326792	.3018377	.2362113	.5823813	.2488650
#1	.2744829	5.582118	.4990850	.0640141	23.61544	.3174472	.2304414
#2	.2735533	5.511860	.4974036	.0638160	23.61228	.3151181	.2305685
#3	.2732702	5.541809	.4996296	.0636289	23.71056	.3187653	.2314938

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.55127	.2991562	.4648624	.6808816	.2062253	6.822039	5.815420
Stddev	.03387	.0010859	.0017530	.0025968	.0002699	.008099	.018505
%RSD	.2932078	.3629919	.3771001	.3813956	.1308816	.1187216	.3182135
#1	11.54245	.2999887	.4647303	.6780275	.2059136	6.812687	5.824715
#2	11.52268	.2979279	.4631792	.6815121	.2063834	6.826661	5.794109
#3	11.58868	.2995519	.4666777	.6831051	.2063788	6.826768	5.827435

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4868-03MS Acquired: 11/18/2024 16:46:07 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.008702	.1773008	.2823893
Stddev	.002049	.0010219	.0004500
%RSD	23.54055	.5763729	.1593466
#1	-.009102	.1766631	.2828756
#2	-.010522	.1767598	.2819878
#3	-.006483	.1784795	.2823045

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2639.294	59995.38	12736.16	1887.028	4374.465
Stddev	4.435	85.41	53.80	9.889	5.211
%RSD	.1680508	.1423587	.4224581	.5240543	.1191152
#1	2641.639	59899.89	12683.40	1885.101	4378.702
#2	2642.065	60021.79	12734.13	1878.244	4376.046
#3	2634.178	60064.47	12790.95	1897.739	4368.647

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: LR1 Acquired: 11/18/2024 16:51:55 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0247088	-.014642	-.013765	-.322584	-.018665	1836.312	.0127969
Stddev	.0051772	.018082	.007124	.009871	.004855	10.339	.0004504
%RSD	20.95266	123.4982	51.75403	3.060112	26.00821	.5630044	3.519327
#1	.0227353	.002009	-.006548	-.311362	-.015024	1847.359	.0129931
#2	.0208087	-.033877	-.013955	-.326466	-.016796	1834.709	.0131159
#3	.0305825	-.012057	-.020793	-.329924	-.024177	1826.869	.0122817

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102774	.1320511	1960.156	-.000362	.0453140	-.206435	1007.026
Stddev	.0001924	.0007504	11.365	.000523	.0006519	.002120	4.020
%RSD	1.872289	.5682911	.5798212	144.6260	1.438645	1.026943	.3991858
#1	.0104996	.1312011	1973.235	-.000854	.0457134	-.205616	1003.656
#2	.0101659	.1326220	1952.678	-.000417	.0456670	-.204847	1005.947
#3	.0101668	.1323302	1954.554	.000187	.0445617	-.208842	1011.475

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.111618	1760.612	.0112801	-.031636	2155.740	.0784542	.2070538
Stddev	.000172	6.054	.0003423	.000957	6.666	.0023152	.0018097
%RSD	.1537232	.3438427	3.034650	3.025575	.3092237	2.951055	.8740059
#1	-.111770	1762.721	.0108855	-.032590	2162.096	.0811270	.2049988
#2	-.111432	1765.328	.0114577	-.031641	2148.802	.0770714	.2084092
#3	-.111651	1753.785	.0114972	-.030676	2156.322	.0771641	.2077534

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1290.621	.4059913	-.013221	.0145038	-.036300	.1523263	.0821798
Stddev	3.126	.0095418	.001491	.0027453	.000773	.0123382	.0042051
%RSD	.2421787	2.350240	11.27943	18.92819	2.129656	8.099849	5.116983
#1	1289.329	.3960191	-.011840	.0126943	-.036079	.1407285	.0854400
#2	1288.348	.4069200	-.014802	.0131545	-.035661	.1509594	.0836662
#3	1294.185	.4150347	-.013020	.0176627	-.037159	.1652911	.0774334

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: LR1 Acquired: 11/18/2024 16:51:55 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.204243	.4653279	-.994608
Stddev	.006043	.0032017	.004025
%RSD	2.958705	.6880588	.4046926
#1	-.197279	.4618693	-.991184
#2	-.208098	.4659259	-.993597
#3	-.207353	.4681885	-.999042

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1543.729	36668.41	9864.440	1079.528	2144.771
Stddev	7.399	119.93	32.157	10.327	7.301
%RSD	.4793198	.3270711	.3259914	.9566332	.3403996
#1	1551.846	36800.34	9827.563	1091.452	2153.123
#2	1541.978	36638.88	9886.642	1073.480	2141.581
#3	1537.362	36566.00	9879.113	1073.652	2139.607

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: LR2 Acquired: 11/18/2024 16:56:50 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0090609	-.030493	233.9200	.0119158	.0004142	.0536092	^F *****
Stddev	.0009703	.002849	1.5011	.0019031	.0029695	.0186340	-----
%RSD	10.70889	9.343454	.6417119	15.97137	716.8444	34.75902	-----
#1	.0087651	-.031179	232.7266	.0132611	-.002992	.0732478	^ -----
#2	.0082729	-.032937	233.4281	.0097383	.001776	.0514037	^ -----
#3	.0101447	-.027364	235.6053	.0127479	.002458	.0361761	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003032	-.005995	.3857013	.0120151	-.017727	238.7371	-.014581
Stddev	.000046	.000200	.0294256	.0002421	.000285	1.5670	.007857
%RSD	1.505307	3.344061	7.629112	2.015148	1.608352	.6563730	53.88312
#1	-.003080	-.005763	.4193458	.0119427	-.017398	239.0023	-.007266
#2	-.002990	-.006117	.3729895	.0122851	-.017879	237.0545	-.013590
#3	-.003025	-.006104	.3647684	.0118174	-.017904	240.1546	-.022886

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.27693	-.004362	45.96874	.0030058	.1449524	-.017220	37.59083
Stddev	.34305	.013434	.29000	.0001347	.0309245	.000142	.39447
%RSD	.8310946	308.0219	.6308596	4.481929	21.33426	.8236086	1.049372
#1	41.67120	.003687	45.74676	.0029561	.1791535	-.017138	37.17031
#2	41.04669	.003099	45.86259	.0029031	.1367424	-.017383	37.95268
#3	41.11290	-.019871	46.29685	.0031584	.1189614	-.017137	37.64950

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1831667	.0004903	-.007030	-.003002	-.041785	.0034583	3.381546
Stddev	.0273059	.0002870	.000235	.000593	.000200	.0045930	.042699
%RSD	14.90770	58.53297	3.336442	19.76682	.4774563	132.8120	1.262706
#1	.2067380	.0006658	-.006768	-.003684	-.041609	.0005095	3.340645
#2	.1895168	.0006460	-.007103	-.002603	-.042002	.0087502	3.378153
#3	.1532452	.0001591	-.007219	-.002718	-.041743	.0011150	3.425840

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: LR2 Acquired: 11/18/2024 16:56:50 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.013863	-.002735	.0021080
Stddev	.001934	.001902	.0000284
%RSD	13.95164	69.53292	1.348089
#1	-.014408	-.002107	.0021397
#2	-.015466	-.004871	.0020848
#3	-.011715	-.001227	.0020995

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2217.308	57322.80	12682.79	1710.380	4160.742
Stddev	7.793	19.39	113.82	5.460	12.962
%RSD	.3514433	.0338251	.8974501	.3192339	.3115224
#1	2211.179	57300.72	12562.22	1704.175	4163.135
#2	2226.078	57337.07	12697.76	1714.450	4172.340
#3	2214.668	57330.61	12788.39	1712.515	4146.750

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV05 Acquired: 11/18/2024 17:01:57 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	5.122459	5.143702	4.997976	5.039886	5.265527	10.21749	9.723387
Stddev	.009443	.087515	.005748	.016010	.010570	.01091	.060487
%RSD	.1843441	1.701402	.1150143	.3176624	.2007354	.1067332	.6220812
#1	5.124028	5.219373	5.002899	5.052462	5.264712	10.20510	9.790626
#2	5.131019	5.047864	4.991659	5.045331	5.276480	10.22174	9.706135
#3	5.112329	5.163868	4.999370	5.021863	5.255388	10.22563	9.673399

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2457217	2.499379	24.42565	1.042982	2.499444	1.297343	4.966941
Stddev	.0010521	.004026	.10461	.002482	.004238	.000730	.014576
%RSD	.4281723	.1610720	.4282993	.2380008	.1695398	.0562453	.2934509
#1	.2451144	2.502276	24.36005	1.040281	2.503055	1.296955	4.950111
#2	.2451142	2.494782	24.37060	1.043502	2.494779	1.298185	4.975381
#3	.2469366	2.501080	24.54630	1.045164	2.500499	1.296890	4.975332

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.368923	24.67374	2.497391	1.278405	25.16288	2.506637	2.547591
Stddev	.001963	.17380	.003719	.001888	.15896	.003456	.012255
%RSD	.0828560	.7044120	.1489296	.1477121	.6317151	.1378677	.4810499
#1	2.367463	24.57419	2.501159	1.276387	25.22741	2.502686	2.535645
#2	2.371154	24.57260	2.493722	1.278700	25.27943	2.508126	2.546994
#3	2.368151	24.87443	2.497292	1.280129	24.98180	2.509098	2.560134

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.63735	4.839446	5.321192	4.944142	4.864290	5.340160	5.057619
Stddev	.07629	.015523	.011217	.017603	.004574	.032502	.033571
%RSD	.2975716	.3207597	.2107901	.3560332	.0940358	.6086341	.6637626
#1	25.60880	4.827882	5.331484	4.958145	4.862408	5.303096	5.094362
#2	25.72379	4.833367	5.322855	4.924381	4.869505	5.353586	5.028549
#3	25.57945	4.857089	5.309237	4.949899	4.860956	5.363798	5.049946

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV05 Acquired: 11/18/2024 17:01:57 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.862241	4.563764	4.980327
Stddev	.013878	.040301	.010056
%RSD	.2854235	.8830590	.2019091
#1	4.870347	4.587875	4.970620
#2	4.846216	4.586178	4.990699
#3	4.870159	4.517239	4.979661

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2537.496	56476.73	12408.39	1782.813	4008.135
Stddev	8.725	85.38	27.69	3.708	7.563
%RSD	.3438482	.1511829	.2231323	.2079655	.1886903
#1	2534.183	56399.62	12376.43	1779.600	4001.694
#2	2530.912	56462.07	12424.62	1781.968	4006.248
#3	2547.392	56568.49	12424.14	1786.870	4016.463

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB05 Acquired: 11/18/2024 17:06:08 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000683	-.002391	-.000141	-.001511	.0010520	.0047522
Stddev	.001284	.000869	.000714	.000479	.0004282	.0033224
%RSD	188.0218	36.34270	505.7497	31.66322	40.70646	69.91252
#1	-.000210	-.001975	-.000222	-.000960	.0005795	.0027544
#2	-.002136	-.003390	.000609	-.001761	.0011619	.0029147
#3	.000297	-.001809	-.000811	-.001814	.0014145	.0085874

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003896	.0000542	-.000051	-.002251	.0001652	-.000041
Stddev	.000323	.0000125	.000029	.005654	.0001305	.000136
%RSD	8.297898	23.05588	55.83994	251.1391	78.99492	332.4700
#1	-.004263	.0000398	-.000051	-.005951	.0002958	.000116
#2	-.003654	.0000602	-.000080	-.005061	.0000348	-.000122
#3	-.003771	.0000626	-.000023	.004257	.0001649	-.000117

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003213	.0002143	.0000451	.0133109	-.000103	.0006089
Stddev	.0004317	.0010524	.0001296	.0055862	.000107	.0001028
%RSD	134.3735	491.0476	287.6127	41.96715	104.6295	16.87835
#1	.0007294	.0010907	-.000096	.0075149	.000006	.0004939
#2	.0003653	.0005051	.000159	.0137574	-.000208	.0006409
#3	-.000131	-.000953	.000073	.0186605	-.000106	.0006918

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.118384	-.001620	-.000821	.0120950	.0047165	-.000192
Stddev	.013673	.000393	.000422	.0265067	.0002748	.000325
%RSD	11.54928	24.27724	51.35795	219.1551	5.826396	169.1485
#1	-.133021	-.001205	-.000877	-.012925	.0049598	.000168
#2	-.116191	-.001667	-.000374	.039873	.0044184	-.000281
#3	-.105941	-.001988	-.001212	.009336	.0047712	-.000464

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB05 Acquired: 11/18/2024 17:06:08 Type: Unk
Method: NON EPA-6010-200.7(v2474) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103243	.0002287	.0084384	-.004147	F -.011168	-.000458
Stddev	.0007600	.0002159	.0024949	.000814	.001379	.000303
%RSD	7.361326	94.42534	29.56631	19.63638	12.34920	66.28488
#1	.0110264	.0004650	.0093464	-.004243	-.011835	-.000718
#2	.0095173	.0000418	.0056166	-.003289	-.009582	-.000125
#3	.0104293	.0001791	.0103521	-.004910	-.012088	-.000530

Elem	Sr4077
Units	ppm
Avg	-.000043
Stddev	.000015
%RSD	34.03999
#1	-.000057
#2	-.000046
#3	-.000027

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2699.574	61300.78	12611.49	1921.393	4640.169
Stddev	4.436	188.21	40.31	8.969	6.571
%RSD	.1643295	.3070246	.3196676	.4668188	.1416173
#1	2698.968	61088.15	12567.07	1911.096	4637.193
#2	2704.282	61445.98	12645.76	1927.508	4647.702
#3	2695.472	61368.22	12621.63	1925.574	4635.612

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01 Acquired: 11/18/2024 17:27:13 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.004763	-.006774	-.000106	-.002261	-.001128	.0039132	.0096592
Stddev	.000914	.002133	.000401	.002193	.000836	.0054155	.0004938
%RSD	19.18398	31.49427	378.2113	96.97965	74.14765	138.3900	5.112212
#1	-.004099	-.008816	.000129	-.000243	-.000728	.0040385	.0097864
#2	-.004385	-.004560	-.000569	-.001946	-.002089	.0092649	.0100770
#3	-.005806	-.006947	.000122	-.004595	-.000567	-.001564	.0091143

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000051	-.000097	18.30716	.0047378	.0004636	.0008280	.0886311
Stddev	.000027	.000041	.05557	.0005260	.0001377	.0006215	.0059332
%RSD	52.98222	42.44805	.3035426	11.10283	29.70162	75.05327	6.694273
#1	-.000024	-.000080	18.24400	.0052342	.0003881	.0004322	.0949384
#2	-.000078	-.000145	18.32893	.0041865	.0003802	.0015443	.0877940
#3	-.000053	-.000068	18.34855	.0047928	.0006225	.0005076	.0831609

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3995746	6.694103	.0290697	.0004148	40.19694	-.000260	.0168720
Stddev	.0004893	.021164	.0001945	.0000993	.26413	.000515	.0002576
%RSD	.1224530	.3161617	.6691282	23.92623	.6570779	198.3454	1.526482
#1	.4000941	6.669665	.0288886	.0004626	40.34058	-.000122	.0165815
#2	.3995074	6.706187	.0290454	.0004811	39.89212	-.000830	.0169619
#3	.3991224	6.706456	.0292753	.0003007	40.35811	.000172	.0170725

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.743318	.0473856	.0003226	.0265099	-.000255	1.630099	.5980728
Stddev	.033569	.0005005	.0000671	.0017180	.000474	.007545	.0017982
%RSD	1.925564	1.056171	20.79215	6.480512	185.9207	.4628296	.3006586
#1	1.722507	.0479545	.0003991	.0256571	.000217	1.621696	.5965133
#2	1.725403	.0470131	.0002741	.0253852	-.000251	1.636290	.5976655
#3	1.782043	.0471891	.0002944	.0284875	-.000730	1.632311	.6000397

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01 Acquired: 11/18/2024 17:27:13 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	6.756930	.0040635	.0851515
Stddev	.015538	.0011933	.0001903
%RSD	.2299609	29.36586	.2234490
#1	6.753463	.0030593	.0852424
#2	6.743417	.0053827	.0849328
#3	6.773909	.0037486	.0852792

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2558.135	58472.58	12739.33	1827.530	4267.284
Stddev	4.615	201.28	22.59	5.360	9.913
%RSD	.1804210	.3442276	.1773290	.2933190	.2323077
#1	2554.142	58356.76	12736.30	1821.802	4261.864
#2	2563.188	58704.99	12718.41	1832.426	4278.725
#3	2557.075	58355.97	12763.29	1828.361	4261.262

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01DUP Acquired: 11/18/2024 17:31:30 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.004175	-.006796	.0003730	-.001819	-.001191	-.000682	.0084123
Stddev	.002670	.002400	.0008392	.000604	.001035	.002698	.0003332
%RSD	63.94009	35.30570	224.9976	33.22566	86.93785	395.3596	3.960612
#1	-.004991	-.006466	-.000582	-.001416	-.002220	-.000730	.0085517
#2	-.006342	-.009344	.000995	-.001526	-.000150	.002039	.0086531
#3	-.001193	-.004579	.000706	-.002513	-.001202	-.003357	.0080320

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000105	-.000079	18.10514	.0048023	.0004930	.0007877	.0915826
Stddev	.000041	.000058	.01963	.0003856	.0000552	.0002543	.0018183
%RSD	38.93802	73.35712	.1084249	8.029968	11.19740	32.28358	1.985444
#1	-.000089	-.000145	18.12780	.0050564	.0004406	.0004966	.0902228
#2	-.000152	-.000057	18.09433	.0043586	.0005506	.0009005	.0936479
#3	-.000075	-.000035	18.09330	.0049918	.0004877	.0009662	.0908769

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3943006	6.629758	.0288316	.0005641	40.85811	.0000012	.0175687
Stddev	.0004234	.016013	.0004295	.0003268	.11087	.0007450	.0001812
%RSD	.1073865	.2415330	1.489503	57.93745	.2713565	60534.07	1.031266
#1	.3944550	6.621329	.0290532	.0009131	40.93169	.0000056	.0176037
#2	.3938216	6.619720	.0283367	.0002654	40.73059	.0007441	.0177297
#3	.3946250	6.648225	.0291050	.0005137	40.91204	-.000746	.0173725

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.812980	.0458314	.0005914	.0261581	.0003915	1.684265	.5952874
Stddev	.007023	.0002862	.0000778	.0005445	.0002825	.008315	.0032381
%RSD	.3873599	.6245601	13.15677	2.081629	72.17462	.4936718	.5439484
#1	1.820020	.0460938	.0005882	.0255294	.0001632	1.680739	.5934984
#2	1.805975	.0458743	.0005152	.0264809	.0007074	1.678294	.5990253
#3	1.812946	.0455261	.0006707	.0264640	.0003037	1.693761	.5933386

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01DUP Acquired: 11/18/2024 17:31:30 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	6.739735	.0032128	.0845996
Stddev	.019156	.0011157	.0002375
%RSD	.2842313	34.72791	.2806872
#1	6.751446	.0023139	.0848664
#2	6.750131	.0044615	.0845209
#3	6.717628	.0028629	.0844114

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2546.331	57169.80	12851.95	1776.310	4255.060
Stddev	2.071	175.81	33.54	9.450	4.915
%RSD	.0813464	.3075216	.2609466	.5319993	.1155088
#1	2545.741	57084.90	12830.14	1773.476	4251.334
#2	2544.619	57371.95	12835.14	1786.853	4260.630
#3	2548.634	57052.56	12890.56	1768.602	4253.216

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01LX5 Acquired: 11/18/2024 17:35:47 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.002804	-.002601	.0001624	-.001270	-.001993	.0008299	-.002876
Stddev	.001062	.002705	.0008433	.001967	.001870	.0002835	.000320
%RSD	37.88507	103.9888	519.3760	154.9037	93.83377	34.15698	11.14011
#1	-.003610	-.001299	-.000268	-.000499	-.000409	.0006404	-.003246
#2	-.001600	-.000794	-.000379	.000195	-.001514	.0011558	-.002692
#3	-.003203	-.005711	.001134	-.003505	-.004057	.0006934	-.002690

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000368	-.000030	3.791488	.0004747	.0001177	-.000046	.0166497
Stddev	.0000400	.000069	.011941	.0002035	.0000525	.000242	.0003780
%RSD	108.6064	231.3150	.3149306	42.85943	44.57237	522.9457	2.270011
#1	.0000002	-.000085	3.785883	.0002438	.0001166	-.000002	.0170362
#2	.0000308	-.000051	3.783382	.0006279	.0001708	.000171	.0162809
#3	.0000795	.000047	3.805200	.0005525	.0000658	-.000308	.0166320

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0823390	1.406609	.0058595	.0009813	7.550131	-.000437	.0028093
Stddev	.0006226	.023952	.0000238	.0001621	.021224	.000579	.0001845
%RSD	.7560841	1.702826	.4062391	16.51640	.2811092	132.5002	6.566387
#1	.0822101	1.385965	.0058335	.0010836	7.571030	-.000054	.0026694
#2	.0817910	1.400991	.0058803	.0010659	7.550767	-.000154	.0027401
#3	.0830159	1.432871	.0058646	.0007944	7.528596	-.001102	.0030183

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3041413	.0102022	-.000610	.0131077	.0000196	.3349534	.1189773
Stddev	.0032543	.0004804	.000156	.0006981	.0002827	.0041630	.0004936
%RSD	1.069988	4.708792	25.61580	5.325652	1440.670	1.242870	.4149057
#1	.3004430	.0101142	-.000435	.0137721	-.000248	.3396982	.1194214
#2	.3054141	.0107206	-.000662	.0123803	.000315	.3319131	.1190647
#3	.3065669	.0097719	-.000735	.0131706	-.000008	.3332490	.1184458

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01LX5 Acquired: 11/18/2024 17:35:47 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	1.373391	-.001026	.0176965
Stddev	.001726	.001281	.0001047
%RSD	.1256515	124.8327	.5914741
#1	1.371761	-.001400	.0178169
#2	1.375199	.000400	.0176268
#3	1.373215	-.002078	.0176459

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2602.121	58893.27	12670.31	1827.678	4396.155
Stddev	8.887	96.36	10.13	7.617	9.374
%RSD	.3415357	.1636104	.0799856	.4167446	.2132219
#1	2592.349	59003.27	12661.63	1836.293	4386.263
#2	2609.720	58823.81	12681.45	1821.837	4404.905
#3	2604.295	58852.74	12667.86	1824.905	4397.299

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01MS Acquired: 11/18/2024 17:40:06 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.7922527	1.891272	.9142530	1.879143	.8061862	2.006904	.2010213
Stddev	.0030678	.018016	.0046324	.004449	.0010980	.012229	.0009711
%RSD	.3872281	.9525718	.5066818	.2367787	.1361958	.6093568	.4830861
#1	.7892376	1.870849	.9095588	1.874795	.8051552	2.009918	.2007952
#2	.7921498	1.898061	.9143791	1.878946	.8060628	2.017345	.2020855
#3	.7953707	1.904908	.9188210	1.883688	.8073407	1.993450	.2001831

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1915198	.1877390	19.36836	.4151398	.1921244	.3013534	3.012177
Stddev	.0017869	.0007348	.14476	.0025701	.0004758	.0018498	.019824
%RSD	.9329994	.3913681	.7473966	.6191003	.2476662	.6138237	.6581385
#1	.1924285	.1868940	19.36447	.4180699	.1915861	.2992569	2.997991
#2	.1926697	.1880953	19.51502	.4132665	.1922979	.3020477	3.003712
#3	.1894612	.1882276	19.22558	.4140831	.1924891	.3027556	3.034829

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5920285	8.650011	.5044601	.0710806	42.62805	.3041061	.2271175
Stddev	.0036190	.058792	.0019892	.0004433	.26468	.0026468	.0003630
%RSD	.6112905	.6796773	.3943189	.6235970	.6209133	.8703545	.1598143
#1	.5920124	8.640076	.5021859	.0713076	42.68179	.3062758	.2272213
#2	.5956555	8.713138	.5053188	.0713644	42.34062	.3048852	.2274173
#3	.5884176	8.596819	.5058758	.0705698	42.86174	.3011571	.2267140

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.62446	.3105070	.4385103	.6798161	.1947288	2.395296	6.119713
Stddev	.05552	.0021538	.0020483	.0053842	.0003922	.019305	.025785
%RSD	.4775781	.6936290	.4670936	.7920093	.2014140	.8059494	.4213502
#1	11.66358	.3111042	.4363146	.6737359	.1942793	2.409736	6.092180
#2	11.56092	.3122992	.4388472	.6817327	.1949057	2.373369	6.123665
#3	11.64888	.3081177	.4403693	.6839799	.1950014	2.402782	6.143294

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01MS Acquired: 11/18/2024 17:40:06 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	6.625945	.1763129	.2857199
Stddev	.034620	.0018959	.0013223
%RSD	.5224922	1.075304	.4628116
#1	6.586479	.1781999	.2863613
#2	6.640167	.1763306	.2865991
#3	6.651189	.1744082	.2841991

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2561.057	58112.37	12457.08	1811.431	4231.374
Stddev	4.163	156.51	93.61	.382	4.229
%RSD	.1625472	.2693258	.7514857	.0211005	.0999484
#1	2564.950	57987.98	12446.78	1811.004	4235.250
#2	2561.551	58288.11	12369.04	1811.740	4232.008
#3	2556.669	58061.03	12555.42	1811.548	4226.863

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01MSD Acquired: 11/18/2024 17:44:03 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.7825789	1.918960	.9043905	1.857901	.8038679	1.978924	.1981699
Stddev	.0058220	.035376	.0051290	.008688	.0032663	.006626	.0003322
%RSD	.7439506	1.843495	.5671266	.4676303	.4063286	.3348194	.1676480
#1	.7769863	1.900039	.8984737	1.851100	.8028372	1.978621	.1977880
#2	.7886060	1.959773	.9071255	1.867688	.8075253	1.985697	.1983292
#3	.7821446	1.897069	.9075725	1.854914	.8012413	1.972456	.1983925

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1907266	.1857200	19.22327	.4124190	.1900887	.2976577	3.016157
Stddev	.0004724	.0006417	.04386	.0033994	.0005867	.0007182	.027255
%RSD	.2476805	.3454908	.2281651	.8242675	.3086253	.2412987	.9036211
#1	.1911104	.1849793	19.17854	.4095393	.1894203	.2968386	2.987033
#2	.1901990	.1861076	19.22506	.4115488	.1905185	.2979545	3.020394
#3	.1908703	.1860731	19.26620	.4161690	.1903273	.2981800	3.041046

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5871793	8.581756	.4983059	.0710364	42.65344	.2998536	.2268210
Stddev	.0003584	.028821	.0016765	.0002794	.26560	.0008224	.0012178
%RSD	.0610326	.3358349	.3364310	.3933385	.6226927	.2742843	.5369077
#1	.5868134	8.598207	.4963969	.0709665	42.35780	.2998498	.2254190
#2	.5871951	8.548478	.4995385	.0707987	42.73060	.3006779	.2276156
#3	.5875296	8.598584	.4989823	.0713442	42.87192	.2990330	.2274286

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.58104	.3086700	.4382568	.6803437	.1942495	2.404250	6.150218
Stddev	.06077	.0004560	.0014674	.0027637	.0007721	.025256	.051134
%RSD	.5247193	.1477319	.3348331	.4062185	.3975036	1.050462	.8314194
#1	11.53149	.3090638	.4371725	.6773621	.1934603	2.375679	6.096977
#2	11.56279	.3081704	.4399266	.6828197	.1942850	2.413476	6.198946
#3	11.64884	.3087759	.4376715	.6808492	.1950034	2.423596	6.154731

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01MSD Acquired: 11/18/2024 17:44:03 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	6.617733	.1731158	.2818683
Stddev	.024258	.0007561	.0005938
%RSD	.3665634	.4367787	.2106558
#1	6.598690	.1724171	.2822447
#2	6.645045	.1739186	.2821764
#3	6.609465	.1730117	.2811838

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2592.943	58000.25	12575.63	1836.542	4278.583
Stddev	5.702	241.22	38.34	7.532	9.249
%RSD	.2198866	.4158993	.3048513	.4101182	.2161692
#1	2597.748	58158.39	12531.69	1842.483	4285.538
#2	2586.643	58119.77	12602.28	1839.073	4268.087
#3	2594.438	57722.61	12592.91	1828.071	4282.125

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01A Acquired: 11/18/2024 17:48:02 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.8005491	1.961275	.9212416	1.912959	.8243457	2.004299	.1997777
Stddev	.0061708	.026827	.0025167	.008431	.0024556	.013156	.0010937
%RSD	.7708176	1.367830	.2731864	.4407330	.2978893	.6564091	.5474541
#1	.8043034	1.954904	.9228911	1.920426	.8253719	2.017036	.2010243
#2	.7934272	1.938207	.9183449	1.903816	.8215435	2.005103	.1989794
#3	.8039167	1.990713	.9224889	1.914636	.8261219	1.990760	.1993293

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1942956	.1899535	19.34635	.4212153	.1944969	.3049886	3.045422
Stddev	.0015227	.0006310	.09648	.0006397	.0003256	.0017621	.018794
%RSD	.7836959	.3321793	.4986966	.1518761	.1674064	.5777661	.6171099
#1	.1960092	.1906075	19.44480	.4206232	.1947968	.3070176	3.031456
#2	.1937796	.1893484	19.34228	.4218939	.1941506	.3041058	3.066790
#3	.1930979	.1899046	19.25197	.4211289	.1945434	.3038423	3.038021

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5913191	8.666655	.5094603	.0718863	42.44699	.3041374	.2294725
Stddev	.0038516	.060248	.0018194	.0002984	.11730	.0008745	.0012099
%RSD	.6513515	.6951720	.3571181	.4151152	.2763361	.2875317	.5272334
#1	.5955285	8.728118	.5110784	.0716394	42.34243	.3035430	.2282262
#2	.5904573	8.664146	.5074909	.0722179	42.57383	.3051415	.2306423
#3	.5879714	8.607700	.5098117	.0718017	42.42472	.3037276	.2295489

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.62778	.3119288	.4501038	.6966634	.1970217	2.419296	6.264516
Stddev	.03360	.0027166	.0025631	.0016159	.0012365	.023832	.033406
%RSD	.2889844	.8709172	.5694562	.2319545	.6276033	.9850978	.5332532
#1	11.60452	.3149535	.4522314	.6978870	.1984332	2.396984	6.285994
#2	11.66630	.3111367	.4472582	.6948316	.1961293	2.444402	6.226028
#3	11.61251	.3096963	.4508218	.6972716	.1965028	2.416501	6.281525

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4861-01A Acquired: 11/18/2024 17:48:02 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	6.697543	.1729601	.2839035
Stddev	.035752	.0027184	.0017250
%RSD	.5338013	1.571676	.6075991
#1	6.717957	.1757300	.2858842
#2	6.656262	.1728540	.2830956
#3	6.718411	.1702964	.2827308

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2554.140	57868.36	12510.52	1816.535	4222.933
Stddev	11.879	272.57	76.99	13.063	15.229
%RSD	.4650973	.4710213	.6154346	.7191285	.3606145
#1	2542.448	58072.75	12425.54	1828.936	4207.135
#2	2566.198	57558.89	12530.40	1802.897	4237.520
#3	2553.772	57973.45	12575.63	1817.772	4224.145

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4871-01 Acquired: 11/18/2024 17:51:58 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.004201	-.006161	.0005981	-.002414	-.001283	.0011015	.0232553
Stddev	.000955	.001103	.0010616	.004512	.000835	.0046831	.0005673
%RSD	22.74326	17.89711	177.4813	186.9052	65.10814	425.1519	2.439476
#1	-.004326	-.006277	.0000193	-.005874	-.000565	.0000962	.0237689
#2	-.003189	-.005005	.0018234	.002689	-.001085	.0062056	.0233508
#3	-.005087	-.007202	-.000048	-.004056	-.002200	-.002997	.0226463

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000063	-.000136	16.88098	.0012287	-.000303	.0003245	.0135681
Stddev	.000040	.000048	.01838	.0002500	.000095	.0000595	.0019577
%RSD	63.44519	35.31883	.1088596	20.34616	31.22639	18.33094	14.42860
#1	-.000064	-.000093	16.86383	.0012235	-.000331	.0003252	.0123363
#2	-.000102	-.000188	16.87873	.0014812	-.000198	.0003836	.0158255
#3	-.000022	-.000127	16.90038	.0009813	-.000381	.0002647	.0125425

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2668520	7.450639	.0089092	.0007729	34.84822	-.000351	.0147560
Stddev	.0003249	.024229	.0004715	.0000887	.18800	.000250	.0002043
%RSD	.1217631	.3251896	5.291830	11.47300	.5394717	71.16011	1.384623
#1	.2672259	7.453318	.0085357	.0008753	34.65756	-.000443	.0147650
#2	.2666918	7.425182	.0094389	.0007217	35.03344	-.000541	.0149558
#3	.2666383	7.473416	.0087529	.0007217	34.85366	-.000068	.0145474

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.507185	.0342043	-.000440	-.003989	.0002699	.6373051	.0154982
Stddev	.022368	.0002850	.000297	.000726	.0000277	.0064818	.0013788
%RSD	1.484093	.8331742	67.57376	18.18974	10.25423	1.017059	8.896634
#1	1.507894	.0341420	-.000098	-.004787	.0002407	.6303502	.0162692
#2	1.484471	.0345153	-.000633	-.003811	.0002957	.6383878	.0139063
#3	1.529190	.0339557	-.000588	-.003368	.0002734	.6431774	.0163190

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4871-01 Acquired: 11/18/2024 17:51:58 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	5.891061	.0026198	.0667312
Stddev	.003802	.0004008	.0001913
%RSD	.0645443	15.29660	.2867367
#1	5.890805	.0027949	.0668580
#2	5.894984	.0021613	.0668245
#3	5.887393	.0029033	.0665111

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2537.929	58396.31	12818.77	1799.653	4237.406
Stddev	8.797	177.68	41.41	19.602	11.513
%RSD	.3466211	.3042728	.3230242	1.089214	.2716988
#1	2530.317	58598.82	12771.94	1822.162	4225.719
#2	2547.560	58266.51	12833.82	1790.465	4248.737
#3	2535.910	58323.61	12850.55	1786.333	4237.761

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4848-02 Acquired: 11/18/2024 17:56:15 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.005714	-.008443	.0024877	.0005273	-.000326	.6429515	.1614141
Stddev	.000701	.002751	.0014809	.0031339	.000838	.0091039	.0003171
%RSD	12.26357	32.58798	59.52912	594.3280	257.1361	1.415957	.1964282
#1	-.005203	-.006843	.0009568	-.000976	-.000706	.6368509	.1611977
#2	-.006513	-.006866	.0025933	-.001572	-.000907	.6385877	.1612666
#3	-.005427	-.011620	.0039130	.004130	.000635	.6534158	.1617781

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000218	-.000030	89.37555	.0740360	.0147442	.0053076	7.582221
Stddev	.0000493	.000068	.52579	.0003514	.0000551	.0002154	.027225
%RSD	226.2187	225.7777	.5882887	.4746755	.3736602	4.058357	.3590680
#1	.0000572	.000049	88.77625	.0743040	.0147124	.0052992	7.574972
#2	.0000428	-.000072	89.59101	.0741659	.0147124	.0055270	7.612338
#3	-.000035	-.000067	89.75938	.0736381	.0148078	.0050965	7.559354

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8863425	9.765964	.0582698	.0005091	293.0417	.0029098	.0409235
Stddev	.0041189	.060923	.0005428	.0000798	4.3415	.0004593	.0002511
%RSD	.4647026	.6238288	.9314529	15.66797	1.481535	15.78504	.6135804
#1	.8815865	9.700403	.0588674	.0005282	294.2705	.0029413	.0411995
#2	.8887034	9.776659	.0578074	.0005776	296.6363	.0024355	.0408623
#3	.8887375	9.820832	.0581348	.0004215	288.2182	.0033524	.0407086

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.005854	.0180785	-.000707	-.005786	.0199465	1.939844	.0425603
Stddev	.003810	.0003048	.000131	.000798	.0007126	.000965	.0019046
%RSD	.3788298	1.686011	18.51551	13.79209	3.572405	.0497231	4.474964
#1	1.004705	.0177266	-.000701	-.006571	.0206949	1.940008	.0403979
#2	1.002750	.0182521	-.000579	-.005811	.0192761	1.938808	.0432947
#3	1.010106	.0182569	-.000841	-.004976	.0198685	1.940716	.0439884

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4848-02 Acquired: 11/18/2024 17:56:15 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	1.680716	.0171193	.1757409
Stddev	.007527	.0003364	.0001921
%RSD	.4478159	1.965005	.1092938
#1	1.687845	.0173709	.1759449
#2	1.672847	.0167372	.1755636
#3	1.681456	.0172498	.1757141

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2323.214	51998.24	12333.25	1626.177	3685.047
Stddev	2.644	116.82	27.52	4.131	2.526
%RSD	.1137981	.2246609	.2231179	.2540174	.0685439
#1	2322.499	51884.20	12350.86	1625.314	3684.317
#2	2321.002	51992.85	12347.34	1622.546	3682.966
#3	2326.142	52117.65	12301.54	1630.672	3687.857

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4869-01 Acquired: 11/18/2024 18:00:40 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0354044	-.018978	.3329843	.0070203	-.002596	108.4177
Stddev	.0008384	.000424	.0004184	.0054865	.000690	.3738
%RSD	2.368036	2.235160	.1256401	78.15174	26.59026	.3447716
#1	.0354277	-.019318	.3327944	.0016470	-.003360	108.8296
#2	.0362309	-.019114	.3334639	.0126133	-.002016	108.3234
#3	.0345546	-.018503	.3326945	.0068005	-.002413	108.1000

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5714667	.0073335	.0261875	74.73112	.2302799	.1540271
Stddev	.0008818	.0000572	.0005443	.21201	.0018616	.0008867
%RSD	.1543010	.7796824	2.078519	.2836926	.8084239	.5756870
#1	.5714322	.0073990	.0266890	74.61844	.2286300	.1539118
#2	.5723652	.0072942	.0262647	74.59926	.2322982	.1549658
#3	.5706027	.0073071	.0256087	74.97568	.2299115	.1532036

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3671431	206.5182	3.964359	38.39175	.2280427	.0006597
Stddev	.0026350	2.5257	.012873	.15014	.0010267	.0003611
%RSD	.7177122	1.222975	.3247081	.3910696	.4502412	54.73438
#1	.3699690	203.6027	3.950314	38.26217	.2283077	.0003104
#2	.3667070	207.9148	3.967167	38.35681	.2289110	.0006372
#3	.3647534	208.0371	3.975596	38.55628	.2269095	.0010316

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.973012	.3043145	.5999476	14.34946	.1322439	.0093200
Stddev	.100523	.0006626	.0040998	.14184	.0042195	.0003168
%RSD	1.120286	.2177440	.6833507	.9884612	3.190694	3.398879
#1	8.865920	.3041662	.5953825	14.21299	.1274312	.0089582
#2	9.065331	.3050387	.6033156	14.49612	.1353080	.0095478
#3	8.987785	.3037386	.6011444	14.33928	.1339926	.0094538

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4869-01 Acquired: 11/18/2024 18:00:40 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0021114	4.419855	F 17.57962	F 11.31247	F 14.04779	.1002114
Stddev	.0012294	.003167	.16717	.06128	.07449	.0012958
%RSD	58.23005	.0716463	.9509119	.5416690	.5302811	1.293061
#1	.0034694	4.423451	17.39716	11.34650	14.06666	.1016039
#2	.0017906	4.418628	17.72541	11.34919	14.11104	.0999894
#3	.0010741	4.417485	17.61629	11.24174	13.96568	.0990409

Elem	Sr4077
Units	ppm
Avg	.0355880
Stddev	.0026933
%RSD	7.568067
#1	.0386442
#2	.0345584
#3	.0335613

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3371.723	76728.54	17366.71	2401.016	3703.701
Stddev	16.125	346.18	78.89	16.194	18.727
%RSD	.4782338	.4511794	.4542697	.6744553	.5056425
#1	3359.636	77116.13	17280.11	2417.988	3690.690
#2	3365.501	76450.05	17434.48	2385.733	3695.247
#3	3390.031	76619.44	17385.54	2399.327	3725.164

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV06 Acquired: 11/18/2024 18:04:44 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	5.076606	5.172836	4.983722	4.980787	5.200919	10.11626	9.548860
Stddev	.007135	.078674	.012012	.016589	.015903	.02556	.055595
%RSD	.1405388	1.520899	.2410310	.3330639	.3057733	.2526551	.5822142
#1	5.084824	5.242784	4.971326	4.999234	5.219177	10.09319	9.512078
#2	5.072994	5.188062	4.984531	4.976033	5.193484	10.11185	9.612815
#3	5.072000	5.087663	4.995309	4.967093	5.190095	10.14374	9.521688

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2450294	2.493242	24.35660	1.035507	2.490698	1.281293	4.963194
Stddev	.0009772	.005661	.06816	.001803	.004956	.002286	.027437
%RSD	.3988223	.2270560	.2798238	.1741578	.1989860	.1784382	.5527998
#1	.2460717	2.487374	24.28881	1.036005	2.485869	1.283708	4.931654
#2	.2448826	2.493683	24.42511	1.037009	2.490454	1.281008	4.981549
#3	.2441338	2.498671	24.35588	1.033507	2.495772	1.279163	4.976379

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.359626	24.58354	2.485935	1.268404	24.73692	2.492276	2.574904
Stddev	.001531	.16992	.005826	.001110	.04451	.001322	.005742
%RSD	.0648969	.6912032	.2343645	.0875007	.1799256	.0530288	.2230011
#1	2.358631	24.44394	2.480094	1.268891	24.69422	2.491261	2.569577
#2	2.358858	24.77274	2.485964	1.269188	24.73349	2.493770	2.574150
#3	2.361389	24.53394	2.491746	1.267135	24.78304	2.491795	2.580987

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.26855	4.807068	5.276277	4.938267	4.828967	5.292668	5.093590
Stddev	.12440	.021964	.014910	.009032	.005197	.058644	.008191
%RSD	.4923124	.4569182	.2825872	.1828942	.1076152	1.108033	.1608091
#1	25.12499	4.830687	5.293210	4.928188	4.823854	5.225078	5.087754
#2	25.33605	4.787256	5.270505	4.940986	4.828803	5.330047	5.090063
#3	25.34461	4.803261	5.265116	4.945627	4.834243	5.322879	5.102954

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV06 Acquired: 11/18/2024 18:04:44 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	4.851368	4.537511	4.903350
Stddev	.002020	.011739	.040757
%RSD	.0416316	.2587149	.8311982
#1	4.852361	4.539518	4.859224
#2	4.849044	4.524898	4.939583
#3	4.852699	4.548118	4.911244

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2565.858	56828.38	12456.68	1812.420	4036.697
Stddev	8.717	156.57	35.25	8.283	4.033
%RSD	.3397120	.2755197	.2830066	.4569962	.0999179
#1	2555.971	56880.48	12421.22	1821.945	4032.491
#2	2569.166	56652.40	12457.12	1806.904	4037.067
#3	2572.436	56952.26	12491.72	1808.413	4040.532

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB06 Acquired: 11/18/2024 18:08:56 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.001852	-.000621	.0008875	-.002426	.0001900	-.004496	-.003708
Stddev	.001055	.001460	.0009150	.002720	.0013239	.002849	.000195
%RSD	56.94756	235.1250	103.0949	112.1154	696.7110	63.37632	5.246284
#1	-.000636	.000716	.0019265	-.005562	-.000473	-.002970	-.003932
#2	-.002402	-.000401	.0002016	-.001023	-.000671	-.007783	-.003581
#3	-.002519	-.002178	.0005345	-.000695	.001714	-.002734	-.003611

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000360	.0000126	-.006901	.0002714	-.000099	-.000326	-.000037
Stddev	.0000075	.0000193	.010027	.0001584	.000093	.000038	.000950
%RSD	20.74064	153.1381	145.3130	58.34027	93.95999	11.80175	2533.613
#1	.0000333	.0000121	.004451	.0002481	-.000181	-.000365	.000901
#2	.0000445	.0000322	-.010599	.0001261	-.000119	-.000288	-.000999
#3	.0000303	-.000006	-.014554	.0004402	.000002	-.000325	-.000014

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000048	.0109133	-.000143	.0004119	-.260556	-.000005	-.001040
Stddev	.000106	.0009407	.000136	.0001296	.013240	.000505	.000223
%RSD	221.7584	8.619832	95.23449	31.45971	5.081376	10249.18	21.47989
#1	.000026	.0106559	-.000029	.0002640	-.275197	-.000565	-.001288
#2	-.000170	.0119560	-.000106	.0005055	-.257046	.000132	-.000856
#3	-.000000	.0101281	-.000293	.0004662	-.249425	.000418	-.000975

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.046700	.0052271	-.000236	.0096151	.0007329	.0134830	-.004359
Stddev	.026515	.0008470	.000056	.0010707	.0002906	.0053408	.002707
%RSD	56.77760	16.20479	23.57390	11.13567	39.65216	39.61147	62.11339
#1	-.072527	.0047814	-.000214	.0084229	.0005870	.0073248	-.004661
#2	-.048026	.0062039	-.000300	.0099277	.0005441	.0168487	-.006903
#3	-.019547	.0046960	-.000195	.0104947	.0010676	.0162755	-.001513

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB06 Acquired: 11/18/2024 18:08:56 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.008909	-.002048	-.000022
Stddev	.001580	.000707	.000009
%RSD	17.73207	34.50800	39.12585
#1	-.010065	-.002864	-.000013
#2	-.009553	-.001629	-.000030
#3	-.007109	-.001651	-.000022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2687.525	59124.80	12587.63	1877.763	4595.644
Stddev	1.675	64.72	6.54	5.372	4.265
%RSD	.0623230	.1094622	.0519653	.2860687	.0928066
#1	2685.919	59189.58	12592.43	1882.825	4598.519
#2	2689.261	59124.68	12580.18	1878.338	4597.669
#3	2687.393	59060.14	12590.28	1872.128	4590.743

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4887-01 Acquired: 11/18/2024 18:13:17 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0641816	-.003386	.1638956	.0115475	-.004060	113.0823
Stddev	.0022960	.003773	.0004509	.0031599	.000909	.4137
%RSD	3.577310	111.4307	.2751145	27.36435	22.37555	.3658786
#1	.0657974	-.002454	.1634875	.0108587	-.003506	113.5170
#2	.0651940	-.000166	.1638197	.0087889	-.005109	112.6933
#3	.0615535	-.007538	.1643797	.0149950	-.003566	113.0365

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.056816	.0110212	.0222849	29.29451	.2514293	.1679078
Stddev	.009381	.0000851	.0001608	.04023	.0034858	.0013073
%RSD	.4560744	.7722982	.7217141	.1373317	1.386382	.7786033
#1	2.066709	.0110145	.0221071	29.33298	.2475814	.1664001
#2	2.048049	.0111094	.0223273	29.29785	.2523305	.1687277
#3	2.055691	.0109396	.0224203	29.25272	.2543760	.1685955

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3563223	245.9253	10.74887	55.76207	.3296642	.0008157
Stddev	.0014730	2.9330	.01370	.03687	.0002717	.0001076
%RSD	.4133760	1.192627	.1274254	.0661237	.0824049	13.19155
#1	.3570359	242.6221	10.76419	55.75619	.3293744	.0006951
#2	.3573025	246.9299	10.74463	55.80153	.3299130	.0008504
#3	.3546284	248.2240	10.73780	55.72849	.3297052	.0009017

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.30093	.4261371	.6800058	19.75256	.1697714	.0072917
Stddev	.10536	.0023007	.0063328	.21775	.0035403	.0002050
%RSD	1.022845	.5398959	.9312895	1.102397	2.085349	2.811257
#1	10.18837	.4277296	.6758448	19.51944	.1656838	.0074237
#2	10.31720	.4234993	.6768786	19.78751	.1717661	.0073959
#3	10.39720	.4271824	.6872939	19.95071	.1718644	.0070555

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4887-01 Acquired: 11/18/2024 18:13:17 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.001811	3.439250	F 23.28518	7.751424	.8632518	.2211685
Stddev	.000407	.010922	.27038	.044769	.0033772	.0017939
%RSD	22.46198	.3175639	1.161183	.5775595	.3912159	.8110949
#1	-.002037	3.451187	22.98135	7.700842	.8608497	.2223936
#2	-.002055	3.429757	23.37490	7.767473	.8617926	.2191095
#3	-.001342	3.436806	23.49931	7.785956	.8671133	.2220025

Elem	Sr4077
Units	ppm
Avg	-.125685
Stddev	.003396
%RSD	2.701649
#1	-.121796
#2	-.127194
#3	-.128064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3022.166	68041.41	15541.78	2121.778	3751.581
Stddev	7.968	460.09	98.90	15.251	13.093
%RSD	.2636355	.6761962	.6363333	.7187764	.3489911
#1	3031.360	68491.81	15428.20	2123.207	3766.594
#2	3017.273	68060.22	15608.88	2136.265	3742.528
#3	3017.865	67572.20	15588.26	2105.864	3745.622

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4887-05 Acquired: 11/18/2024 18:17:22 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0672567	-.004041	.3351503	.0075437	.0012128	137.5322
Stddev	.0012040	.001514	.0021767	.0047741	.0014573	.8393
%RSD	1.790172	37.46326	.6494581	63.28639	120.1592	.6102863
#1	.0678285	-.002998	.3359799	.0095219	.0008604	136.6680
#2	.0658734	-.005778	.3367902	.0110108	-.000036	138.3443
#3	.0680684	-.003348	.3326808	.0020984	.002814	137.5843

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.079487	.0135093	.0327880	254.9886	.2946456	.1922888
Stddev	.009830	.0000179	.0002901	2.9522	.0016656	.0002128
%RSD	.4726913	.1322648	.8846407	1.157776	.5652790	.1106764
#1	2.073957	.0135283	.0331113	252.1118	.2963705	.1925271
#2	2.090836	.0135067	.0325505	254.8432	.2945196	.1922217
#3	2.073668	.0134929	.0327023	258.0108	.2930466	.1921176

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3274066	287.1226	12.86414	77.55973	.4158054	.0002484
Stddev	.0033399	2.1294	.09676	.65741	.0003317	.0004720
%RSD	1.020119	.7416411	.7522014	.8476126	.0797714	189.9661
#1	.3299075	285.7122	12.75759	76.80605	.4154226	-.000296
#2	.3236136	289.5721	12.94654	78.01504	.4160070	.000534
#3	.3286986	286.0835	12.88831	77.85810	.4159867	.000508

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.763365	.4067651	1.020006	35.53639	.2306722	.0037376
Stddev	.092832	.0039673	.013175	.22609	.0026052	.0003235
%RSD	1.059322	.9753238	1.291623	.6362096	1.129386	8.654554
#1	8.774303	.4023284	1.029211	35.55300	.2287297	.0033653
#2	8.850243	.4099716	1.025894	35.75371	.2336327	.0039503
#3	8.665548	.4079951	1.004915	35.30245	.2296542	.0038971

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4887-05 Acquired: 11/18/2024 18:17:22 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0067688	4.842809	F 27.94608	F 11.46246	3.178190	.3222831
Stddev	.0010418	.030446	.19273	.01622	.010563	.0037635
%RSD	15.39112	.6286882	.6896315	.1414830	.3323729	1.167747
#1	.0057987	4.810383	27.78044	11.45619	3.186296	.3200687
#2	.0078699	4.870786	28.15761	11.45032	3.166243	.3266285
#3	.0066379	4.847259	27.90020	11.48088	3.182030	.3201521

Elem	Sr4077
Units	ppm
Avg	.2596344
Stddev	.0009713
%RSD	.3740940
#1	.2588065
#2	.2607036
#3	.2593930

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2903.464	66260.95	15360.78	2021.973	3461.590
Stddev	11.780	486.36	60.10	26.591	10.102
%RSD	.4057386	.7340107	.3912870	1.315096	.2918206
#1	2889.862	66132.59	15402.53	2014.344	3450.116
#2	2910.344	65851.64	15291.89	2000.030	3465.510
#3	2910.187	66798.61	15387.92	2051.544	3469.144

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-01 Acquired: 11/18/2024 18:21:35 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0759334	-.012175	.5592002	.0036191	-.001324	118.5817
Stddev	.0027685	.004424	.0045086	.0035700	.001739	.9091
%RSD	3.646024	36.33774	.8062644	98.64498	131.3691	.7666826
#1	.0758585	-.015494	.5642800	.0040780	.000216	119.6311
#2	.0732031	-.007152	.5576473	-.000158	-.000977	118.0800
#3	.0787386	-.013879	.5556733	.006937	-.003210	118.0339

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5801581	.0085344	.0151131	152.8570	.2399838	.0767193
Stddev	.0053643	.0000723	.0003222	.5564	.0018648	.0003084
%RSD	.9246215	.8467910	2.131621	.3640085	.7770708	.4020470
#1	.5854101	.0086005	.0154808	153.4932	.2384324	.0770726
#2	.5803761	.0085455	.0148803	152.6161	.2420528	.0765820
#3	.5746882	.0084573	.0149781	152.4615	.2394662	.0765034

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2867203	151.5918	4.951834	52.89320	.1709231	.0011807
Stddev	.0034698	.2315	.019887	.10578	.0013065	.0001554
%RSD	1.210162	.1526919	.4016034	.1999901	.7643621	13.16093
#1	.2906643	151.3521	4.969690	53.01507	.1722836	.0012135
#2	.2853587	151.8141	4.955411	52.82513	.1708074	.0010115
#3	.2841378	151.6093	4.930402	52.83940	.1696784	.0013170

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.269897	.2717230	1.210490	13.51432	.1047040	.0035318
Stddev	.006182	.0028518	.001236	.04805	.0008313	.0005177
%RSD	.1890496	1.049535	.1021070	.3555226	.7939259	14.65742
#1	3.275632	.2749078	1.210818	13.53317	.1043857	.0033894
#2	3.270711	.2708553	1.211529	13.55009	.1056474	.0041057
#3	3.263349	.2694057	1.209124	13.45971	.1040789	.0031002

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-01 Acquired: 11/18/2024 18:21:35 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0133352	3.521887	F 27.75574	7.307139	5.992788	.1209657
Stddev	.0014324	.023102	.07603	.056694	.049588	.0019621
%RSD	10.74177	.6559599	.2739406	.7758692	.8274586	1.622063
#1	.0148436	3.547307	27.83275	7.364884	6.033573	.1209261
#2	.0131686	3.516183	27.75375	7.304975	6.007200	.1229474
#3	.0119933	3.502171	27.68072	7.251558	5.937590	.1190237

Elem	Sr4077
Units	ppm
Avg	.5289495
Stddev	.0059974
%RSD	1.133836
#1	.5351519
#2	.5285161
#3	.5231806

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2880.681	64683.06	14378.84	2027.220	3807.643
Stddev	24.789	179.29	94.78	3.317	32.329
%RSD	.8605178	.2771886	.6591717	.1636465	.8490561
#1	2852.995	64515.63	14276.49	2024.256	3773.362
#2	2888.233	64661.31	14396.46	2026.601	3811.984
#3	2900.816	64872.23	14463.58	2030.804	3837.582

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-03 Acquired: 11/18/2024 18:25:40 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0466105	-.016694	1.123548	.0087790	-.001021	126.9033
Stddev	.0011317	.003541	.006891	.0036526	.001042	.4860
%RSD	2.428035	21.21075	.6133598	41.60621	102.0639	.3829694
#1	.0478802	-.014533	1.131418	.0101957	-.000831	126.6385
#2	.0457079	-.014768	1.118597	.0046302	-.002145	127.4642
#3	.0462434	-.020780	1.120628	.0115109	-.000087	126.6073

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5264421	.0083606	.0177279	36.84317	.2268388	.0995379
Stddev	.0012617	.0001096	.0004001	.18806	.0008201	.0007166
%RSD	.2396617	1.311446	2.256812	.5104379	.3615477	.7199272
#1	.5259184	.0083601	.0181893	36.72354	.2262045	.1003142
#2	.5278813	.0084705	.0175175	37.05994	.2265470	.0989018
#3	.5255267	.0082512	.0174769	36.74603	.2277649	.0993976

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4003765	219.9956	4.332766	28.88671	.1799513	.0021763
Stddev	.0034043	.9576	.022955	.26974	.0005788	.0004792
%RSD	.8502800	.4352931	.5297954	.9337815	.3216273	22.01978
#1	.4042862	219.0090	4.318327	28.65008	.1805981	.0017916
#2	.3987754	220.0564	4.359235	29.18042	.1797739	.0020242
#3	.3980679	220.9213	4.320735	28.82964	.1794821	.0027131

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.755771	.3962652	1.472027	5.833107	.1154817	.0044953
Stddev	.009736	.0014173	.010412	.000636	.0015927	.0002416
%RSD	.3532942	.3576651	.7073029	.0109085	1.379143	5.373989
#1	2.745783	.3947014	1.482981	5.832501	.1151278	.0043830
#2	2.756299	.3974651	1.470843	5.833770	.1140958	.0047726
#3	2.765233	.3966290	1.462258	5.833050	.1172216	.0043303

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-03 Acquired: 11/18/2024 18:25:40 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0115263	4.648870	F 19.91260	8.259532	1.363309	.0945579
Stddev	.0005872	.020149	.09602	.086471	.010701	.0014328
%RSD	5.094375	.4334077	.4822306	1.046919	.7848969	1.515277
#1	.0118533	4.640049	19.80176	8.350817	1.375217	.0961295
#2	.0108485	4.671924	19.97060	8.248923	1.360213	.0942200
#3	.0118773	4.634636	19.96545	8.178854	1.354499	.0933243

Elem	Sr4077
Units	ppm
Avg	-.055397
Stddev	.001363
%RSD	2.460631
#1	-.054330
#2	-.054928
#3	-.056933

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2935.447	65299.37	14302.99	2080.626	3986.244
Stddev	14.948	191.84	93.28	18.969	25.880
%RSD	.5092296	.2937818	.6521470	.9116907	.6492398
#1	2919.046	65079.19	14271.91	2059.771	3956.956
#2	2948.306	65388.46	14229.23	2085.256	4006.029
#3	2938.990	65430.47	14407.84	2096.852	3995.748

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05 Acquired: 11/18/2024 18:29:46 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0576617	-.007826	1.182111	.0084692	-.002233	119.8645
Stddev	.0023747	.002004	.027539	.0022528	.001010	.1947
%RSD	4.118375	25.61089	2.329650	26.59990	45.23009	.1624025
#1	.0557025	-.005858	1.213749	.0102369	-.003398	119.6781
#2	.0569799	-.009864	1.169069	.0059326	-.001610	120.0664
#3	.0603028	-.007755	1.163517	.0092382	-.001691	119.8489

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8063784	.0096625	.0141901	21.84791	.1963562	.0837400
Stddev	.0026917	.0000166	.0007289	.02171	.0017178	.0018035
%RSD	.3338057	.1719089	5.136679	.0993853	.8748597	2.153749
#1	.8085137	.0096731	.0150314	21.82283	.1975217	.0858218
#2	.8072668	.0096710	.0137464	21.86054	.1971634	.0827491
#3	.8033548	.0096434	.0137926	21.86035	.1943834	.0826492

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3653268	145.7568	3.493695	28.21220	.1809900	.0024012
Stddev	.0097401	1.2174	.009564	.05924	.0034881	.0001008
%RSD	2.666147	.8352054	.2737624	.2099695	1.927211	4.199731
#1	.3765261	146.9434	3.503208	28.18927	.1849919	.0025145
#2	.3606233	145.8163	3.493797	28.16785	.1793832	.0023215
#3	.3588310	144.5108	3.484080	28.27947	.1785950	.0023675

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.241890	.2734615	1.319865	10.80397	.0968630	.0037371
Stddev	.022912	.0002724	.016620	.11186	.0010943	.0001452
%RSD	.7067504	.0996270	1.259198	1.035374	1.129726	3.886380
#1	3.259087	.2734073	1.335498	10.91972	.0980636	.0038665
#2	3.250704	.2732202	1.321688	10.79574	.0966038	.0035800
#3	3.215880	.2737570	1.302409	10.69645	.0959215	.0037648

Sample Name: P4889-05 Acquired: 11/18/2024 18:29:46 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.1096305	3.006183	F 27.30681	7.966136	2.039247	.1052792
Stddev	.0017128	.003782	.17049	.209407	.049353	.0013895
%RSD	1.562333	.1258215	.6243468	2.628709	2.420181	1.319802
#1	.1116053	3.004298	27.49044	8.202280	2.095870	.1066952
#2	.1087378	3.010538	27.27643	7.893101	2.016515	.1039179
#3	.1085486	3.003714	27.15355	7.803028	2.005356	.1052244

Elem	Sr4077
Units	ppm
Avg	-.030422
Stddev	.000815
%RSD	2.680306
#1	-.031259
#2	-.030376
#3	-.029630

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3045.752	66034.16	14677.26	2094.594	4137.887
Stddev	68.155	690.80	50.20	26.837	105.009
%RSD	2.237719	1.046128	.3419989	1.281248	2.537749
#1	2967.939	65368.70	14622.25	2068.607	4018.271
#2	3074.461	65986.01	14688.94	2092.968	4180.491
#3	3094.856	66747.78	14720.59	2122.207	4214.898

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05DUP Acquired: 11/18/2024 18:33:52 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0589029	-.010665	1.228801	.0080073	-.000916	120.7843
Stddev	.0010394	.003108	.004488	.0022213	.000392	.5993
%RSD	1.764643	29.14019	.3652657	27.74070	42.81111	.4961485
#1	.0580080	-.009357	1.232579	.0063618	-.000567	120.4792
#2	.0586576	-.008425	1.229983	.0105339	-.001340	121.4747
#3	.0600430	-.014212	1.223839	.0071261	-.000840	120.3990

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8070671	.0096301	.0153161	21.26752	.2011104	.0871253
Stddev	.0039404	.0000770	.0002384	.07971	.0005999	.0001556
%RSD	.4882345	.7993221	1.556542	.3748051	.2982924	.1786361
#1	.8063821	.0096212	.0154419	21.24216	.2015491	.0872734
#2	.8113050	.0097111	.0154653	21.35682	.2013554	.0869631
#3	.8035141	.0095580	.0150412	21.20357	.2004268	.0871393

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3801980	148.0126	3.493731	28.23645	.1871400	.0021413
Stddev	.0014893	.4300	.018830	.11746	.0009416	.0003475
%RSD	.3917140	.2905414	.5389762	.4159909	.5031517	16.22760
#1	.3813998	148.3029	3.489429	28.15522	.1880011	.0021815
#2	.3806624	147.5185	3.514340	28.37113	.1872844	.0017754
#3	.3785319	148.2163	3.477424	28.18301	.1861346	.0024669

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.220256	.2742484	1.302965	11.07749	.0976783	.0036305
Stddev	.017806	.0015382	.012735	.02066	.0011409	.0001412
%RSD	.5529420	.5608953	.9773502	.1864600	1.167997	3.888038
#1	3.229918	.2744278	1.316446	11.08991	.0986164	.0035301
#2	3.199708	.2756891	1.301311	11.05365	.0964083	.0037919
#3	3.231143	.2726284	1.291139	11.08891	.0980102	.0035695

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05DUP Acquired: 11/18/2024 18:33:52 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.1137368	3.019975	F 28.33962	8.187683	2.093738	.1056225
Stddev	.0012877	.019299	.11051	.036145	.016089	.0011698
%RSD	1.132132	.6390301	.3899566	.4414558	.7684443	1.107549
#1	.1136172	3.015714	28.37982	8.215652	2.102724	.1042847
#2	.1150802	3.041048	28.21464	8.200528	2.103327	.1064532
#3	.1125132	3.003163	28.42441	8.146870	2.075163	.1061296

Elem	Sr4077
Units	ppm
Avg	-.032725
Stddev	.001138
%RSD	3.477841
#1	-.033258
#2	-.031418
#3	-.033499

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2945.951	65098.96	14686.98	2040.783	3985.564
Stddev	9.803	338.32	131.72	22.397	15.778
%RSD	.3327516	.5197083	.8968284	1.097490	.3958898
#1	2934.632	64740.44	14651.32	2017.376	3967.517
#2	2951.609	65143.83	14576.77	2042.962	3992.422
#3	2951.612	65412.61	14832.86	2062.011	3996.752

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05LX5 Acquired: 11/18/2024 18:37:58 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0096178	-.003486	.2692060	-.002700	-.001771	28.06116	.1844483
Stddev	.0012278	.000487	.0008376	.003061	.000540	.08092	.0009716
%RSD	12.76644	13.95509	.3111331	113.3920	30.46761	.2883821	.5267774
#1	.0088802	-.002927	.2684296	-.003130	-.002393	28.13150	.1835880
#2	.0089379	-.003809	.2700937	-.005524	-.001502	27.97272	.1842546
#3	.0110352	-.003723	.2690949	.000554	-.001419	28.07926	.1855021

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024104	.0021916	5.112195	.0475294	.0182226	.0956117	34.62144
Stddev	.0000715	.0000862	.013229	.0001717	.0001192	.0006458	.13853
%RSD	2.968136	3.932270	.2587693	.3612808	.6539679	.6754406	.4001142
#1	.0023736	.0022769	5.098710	.0476578	.0182616	.0961045	34.48952
#2	.0024929	.0021933	5.112721	.0475961	.0183175	.0958500	34.60905
#3	.0023648	.0021046	5.125152	.0473344	.0180889	.0948806	34.76574

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8440392	6.708892	.0393795	.0009460	.4944539	.0661816	.3086736
Stddev	.0033954	.042774	.0002354	.0001211	.0202054	.0007889	.0013942
%RSD	.4022799	.6375650	.5977779	12.80403	4.086412	1.192097	.4516807
#1	.8422060	6.694821	.0391249	.0010847	.4810807	.0662697	.3075754
#2	.8419544	6.674927	.0395893	.0008611	.4845836	.0653524	.3102422
#3	.8479572	6.756929	.0394242	.0008922	.5176973	.0669229	.3082032

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.453985	.0222295	.0004820	.0312177	.7198951	6.435811	1.696289
Stddev	.005199	.0000732	.0003587	.0001632	.0024288	.022729	.003112
%RSD	.2118400	.3294588	74.41836	.5227647	.3373855	.3531696	.1834314
#1	2.458574	.0222220	.0005599	.0310299	.7209236	6.418141	1.698587
#2	2.455041	.0221604	.0000907	.0312977	.7171213	6.427838	1.692748
#3	2.448339	.0223063	.0007953	.0313254	.7216405	6.461452	1.697531

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05LX5 Acquired: 11/18/2024 18:37:58 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.4203834	.0229321	-.007257
Stddev	.0032786	.0014816	.000167
%RSD	.7799013	6.460926	2.301941
#1	.4172951	.0219536	-.007064
#2	.4238238	.0222059	-.007366
#3	.4200312	.0246367	-.007339

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2713.252	59879.06	13039.94	1891.424	4283.071
Stddev	6.643	134.28	38.95	11.072	7.260
%RSD	.2448415	.2242461	.2986678	.5853946	.1695043
#1	2705.592	59761.96	12995.26	1878.640	4275.424
#2	2717.432	59849.60	13066.71	1897.680	4283.918
#3	2716.731	60025.62	13057.86	1897.953	4289.870

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05MS Acquired: 11/18/2024 18:42:11 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6822424	1.691770	2.122601	1.443418	.4119631	141.5419
Stddev	.0059198	.029314	.023973	.007561	.0044671	.7939
%RSD	.8677002	1.732762	1.129425	.5238387	1.084356	.5608650
#1	.6889476	1.658010	2.148905	1.451556	.4159197	141.8189
#2	.6777388	1.706520	2.116920	1.442087	.4128509	142.1601
#3	.6800408	1.710779	2.101979	1.436610	.4071187	140.6466

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.019048	.1683552	.1944488	24.87028	.5532178	.2785353
Stddev	.007980	.0007209	.0020770	.08755	.0017228	.0032094
%RSD	.7830859	.4281751	1.068170	.3520289	.3114086	1.152245
#1	1.021258	.1680328	.1966162	24.81138	.5517452	.2819839
#2	1.025690	.1691810	.1942545	24.97089	.5551123	.2779859
#3	1.010196	.1678518	.1924758	24.82858	.5527958	.2756360

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5766277	167.1045	4.101734	33.84617	.6485740	.0633259
Stddev	.0067133	.1735	.014973	.08423	.0071830	.0003069
%RSD	1.164238	.1038025	.3650360	.2488663	1.107510	.4846972
#1	.5837692	167.2931	4.101301	33.80637	.6565454	.0633662
#2	.5756681	166.9518	4.116918	33.94293	.6465729	.0630008
#3	.5704459	167.0685	4.086982	33.78921	.6426037	.0636107

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.835843	.5439643	1.613652	20.00975	.3097794	.3207969
Stddev	.031033	.0010616	.003441	.06827	.0006684	.0025723
%RSD	.5317666	.1951509	.2132420	.3411643	.2157695	.8018374
#1	5.863395	.5439073	1.611264	20.03477	.3091963	.3230238
#2	5.841909	.5450531	1.612097	20.06197	.3096330	.3213856
#3	5.802225	.5429323	1.617596	19.93250	.3105089	.3179814

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05MS Acquired: 11/18/2024 18:42:11 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6803295	3.222758	F 26.13575	F 13.73781	2.170175	.2701985
Stddev	.0034328	.016600	.06128	.08169	.012474	.0030424
%RSD	.5045821	.5150910	.2344623	.5946457	.5748057	1.125994
#1	.6838064	3.223663	26.16937	13.81232	2.180703	.2694968
#2	.6802395	3.238887	26.17286	13.75065	2.173424	.2735305
#3	.6769425	3.205724	26.06502	13.65045	2.156397	.2675683

Elem	Sr4077
Units	ppm
Avg	.1279356
Stddev	.0022145
%RSD	1.730913
#1	.1286511
#2	.1297038
#3	.1254519

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3074.215	66972.41	14514.87	2137.420	4113.611
Stddev	32.030	227.77	39.89	4.351	45.903
%RSD	1.041897	.3400920	.2748342	.2035862	1.115877
#1	3041.615	66716.17	14489.74	2137.570	4064.454
#2	3075.389	67151.84	14494.00	2141.695	4121.020
#3	3105.642	67049.23	14560.87	2132.996	4155.358

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05MSD Acquired: 11/18/2024 18:46:09 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6799064	1.732724	2.130764	1.443127	.4135615	141.0537
Stddev	.0033924	.038417	.014611	.005908	.0055049	1.2490
%RSD	.4989481	2.217126	.6857036	.4093784	1.331087	.8854828
#1	.6791809	1.729728	2.121332	1.441103	.4090596	141.7509
#2	.6836029	1.772551	2.147594	1.449781	.4196988	139.6117
#3	.6769355	1.695893	2.123366	1.438498	.4119263	141.7984

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.026407	.1692784	.1947577	24.42378	.5591706	.2787753
Stddev	.008648	.0008958	.0014942	.23244	.0044770	.0018334
%RSD	.8425995	.5292013	.7671999	.9517038	.8006559	.6576554
#1	1.035020	.1699866	.1936915	24.50386	.5613198	.2774659
#2	1.017723	.1682713	.1964656	24.16189	.5621679	.2808706
#3	1.026478	.1695772	.1941162	24.60560	.5540243	.2779894

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5785975	167.2511	4.102199	33.83923	.6504648	.0634064
Stddev	.0042647	.7304	.032172	.36145	.0036067	.0004864
%RSD	.7370699	.4367319	.7842664	1.068146	.5544863	.7671574
#1	.5758743	167.6785	4.126386	33.96577	.6475798	.0637600
#2	.5835123	167.6671	4.065686	33.43152	.6545085	.0636076
#3	.5764058	166.4077	4.114524	34.12039	.6493062	.0628517

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.796689	.5449461	1.592058	20.01184	.3127919	.3263804
Stddev	.054151	.0051173	.013268	.15510	.0018559	.0020645
%RSD	.9341739	.9390372	.8334149	.7750219	.5933310	.6325550
#1	5.819901	.5449675	1.604759	20.08134	.3149109	.3252564
#2	5.835364	.5398182	1.593127	20.12002	.3120097	.3287631
#3	5.734801	.5500526	1.578287	19.83415	.3114552	.3251218

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05MSD Acquired: 11/18/2024 18:46:09 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6832653	3.239005	F 26.59593	F 13.85741	2.135043	.2716641
Stddev	.0051828	.026858	.11727	.11618	.023077	.0025032
%RSD	.7585395	.8292168	.4409424	.8383966	1.080889	.9214228
#1	.6807395	3.257656	26.55374	13.80545	2.124501	.2742662
#2	.6892268	3.208221	26.72847	13.99050	2.161509	.2714531
#3	.6798295	3.251138	26.50560	13.77628	2.119119	.2692732

Elem	Sr4077
Units	ppm
Avg	.1281549
Stddev	.0025991
%RSD	2.028065
#1	.1299241
#2	.1251709
#3	.1293697

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3082.807	67088.90	14509.63	2142.301	4123.073
Stddev	20.895	446.84	132.29	13.799	29.065
%RSD	.6777986	.6660396	.9117377	.6441428	.7049317
#1	3093.903	66763.43	14395.07	2128.191	4140.696
#2	3058.705	66904.91	14654.42	2142.943	4089.526
#3	3095.815	67598.36	14479.40	2155.768	4138.996

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: P4889-05A Acquired: 11/18/2024 18:50:07 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6468537	1.611206	1.994261	1.373905	.3927105	139.2828
Stddev	.0070332	.039215	.032079	.018969	.0062978	1.5908
%RSD	1.087296	2.433865	1.608549	1.380662	1.603672	1.142138
#1	.6536294	1.645625	2.026882	1.387637	.3992063	139.9935
#2	.6395885	1.568516	1.962753	1.352261	.3866314	140.3943
#3	.6473432	1.619477	1.993149	1.381817	.3922939	137.4605

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.007732	.1647153	.1818575	23.90672	.5359646	.2610856
Stddev	.014177	.0014908	.0031400	.21764	.0055225	.0044927
%RSD	1.406833	.9050603	1.726634	.9103617	1.030393	1.720775
#1	1.014117	.1654493	.1847483	23.92112	.5423415	.2654496
#2	1.017593	.1656967	.1785168	24.11680	.5327789	.2564744
#3	.991485	.1629998	.1823074	23.68224	.5327735	.2613329

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5429742	161.8616	4.003172	33.21621	.6080471	.0609361
Stddev	.0098771	1.2049	.046938	.27127	.0097692	.0005260
%RSD	1.819068	.7443793	1.172509	.8166868	1.606643	.8631360
#1	.5522532	163.1330	4.017558	33.27522	.6175844	.0615366
#2	.5325918	161.7152	4.041232	33.45312	.5980615	.0607144
#3	.5440776	160.7367	3.950725	32.92029	.6084954	.0605573

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.595750	.5361777	1.527043	19.56448	.3020622	.3097571
Stddev	.073645	.0027311	.017118	.20711	.0021333	.0044884
%RSD	1.316079	.5093668	1.121010	1.058619	.7062439	1.449009
#1	5.667991	.5386895	1.545504	19.76834	.3037914	.3138364
#2	5.598480	.5365730	1.523933	19.57083	.3027169	.3049488
#3	5.520778	.5332704	1.511693	19.35426	.2996783	.3104861

Sample Name: P4889-05A Acquired: 11/18/2024 18:50:07 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.6382410	3.196804	F 26.54783	F 12.84521	1.991448	.2621830
Stddev	.0101580	.037282	.18254	.20375	.039717	.0067685
%RSD	1.591564	1.166242	.6876032	1.586168	1.994375	2.581588
#1	.6486838	3.208860	26.75603	13.04778	2.026893	.2662658
#2	.6283941	3.226566	26.47223	12.64031	1.948523	.2659133
#3	.6376450	3.154985	26.41523	12.84755	1.998927	.2543701

Elem	Sr4077
Units	ppm
Avg	.1285405
Stddev	.0030285
%RSD	2.356059
#1	.1292018
#2	.1311837
#3	.1252360

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3221.499	69133.97	14827.53	2195.534	4360.128
Stddev	44.249	717.65	167.19	27.282	68.870
%RSD	1.373549	1.038059	1.127585	1.242610	1.579534
#1	3175.103	68342.61	14729.77	2165.881	4287.627
#2	3263.232	69316.71	14732.23	2201.151	4424.675
#3	3226.163	69742.58	15020.58	2219.570	4368.081

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV07 Acquired: 11/18/2024 18:54:05 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	5.290031	5.373231	5.137221	5.262241	5.441337	10.46614
Stddev	.022244	.087912	.005554	.023233	.022364	.01268
%RSD	.4204842	1.636114	.1081212	.4414967	.4109970	.1211123
#1	5.269813	5.271719	5.141469	5.244336	5.425490	10.47680
#2	5.286421	5.423811	5.139259	5.253892	5.431603	10.46951
#3	5.313859	5.424165	5.130935	5.288494	5.466918	10.45212

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.676996	.2506119	2.573219	25.00117	1.071799	2.567010
Stddev	.090040	.0014418	.003488	.08184	.002263	.001744
%RSD	.9304548	.5753229	.1355679	.3273638	.2111236	.0679285
#1	9.603848	.2510594	2.577239	24.90771	1.069662	2.569018
#2	9.777556	.2517769	2.571001	25.03577	1.074170	2.565879
#3	9.649584	.2489993	2.571415	25.06003	1.071566	2.566134

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.327710	5.048537	2.406066	25.29244	2.564159	1.300254
Stddev	.001264	.035437	.007494	.14059	.004210	.000004
%RSD	.0952193	.7019356	.3114683	.5558578	.1641997	.0002881
#1	1.328003	5.010160	2.397417	25.13011	2.568890	1.300253
#2	1.326325	5.055431	2.410628	25.37523	2.560823	1.300259
#3	1.328802	5.080022	2.410153	25.37199	2.562765	1.300251

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.35381	2.565181	2.651159	25.78686	4.909669	5.496290
Stddev	.11541	.013591	.010750	.15606	.017485	.013414
%RSD	.4739092	.5298458	.4054982	.6051904	.3561364	.2440627
#1	24.24317	2.550095	2.656211	25.68063	4.923916	5.482836
#2	24.34481	2.576470	2.638813	25.71392	4.914936	5.496370
#3	24.47347	2.568978	2.658452	25.96604	4.890156	5.509664

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCV07 Acquired: 11/18/2024 18:54:05 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	5.073325	4.946162	F 5.568848	5.203795	5.011667	4.564383
Stddev	.007813	.010370	.050105	.019675	.017888	.014085
%RSD	.1539984	.2096493	.8997416	.3780907	.3569229	.3085748
#1	5.081445	4.934615	5.520117	5.182166	4.991668	4.550335
#2	5.072669	4.954679	5.566204	5.208589	5.026139	4.578504
#3	5.065861	4.949192	5.620222	5.220630	5.017196	4.564311

Elem	Sr4077
Units	ppm
Avg	5.000273
Stddev	.032891
%RSD	.6577934
#1	4.964788
#2	5.029740
#3	5.006291

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2488.294	56098.76	12297.73	1749.896	3935.185
Stddev	7.629	51.85	48.46	7.811	7.593
%RSD	.3066015	.0924262	.3940955	.4463755	.1929471
#1	2492.979	56116.16	12258.07	1753.121	3937.860
#2	2492.413	56139.67	12283.35	1755.579	3941.079
#3	2479.491	56040.45	12351.75	1740.989	3926.617

Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB07 Acquired: 11/18/2024 18:58:16 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	-.002408	-.000330	.0003082	-.003023	-.000398	-.000042
Stddev	.001140	.002068	.0013558	.001709	.001028	.003229
%RSD	47.33401	627.1193	439.8925	56.53926	258.5808	7719.297
#1	-.002483	-.002694	-.000794	-.002652	-.000338	-.003192
#2	-.003509	.001145	.001822	-.004887	.000600	-.000195
#3	-.001233	.000559	-.000103	-.001530	-.001454	.003261

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004693	.0000926	-.000037	-.004326	-.000010	-.000023
Stddev	.000283	.0000316	.000013	.003415	.000078	.000065
%RSD	6.036277	34.14991	36.22317	78.93878	771.4352	275.1062
#1	-.005009	.0000679	-.000046	-.001494	.000035	.000044
#2	-.004461	.0001282	-.000022	-.008119	-.000100	-.000085
#3	-.004611	.0000815	-.000044	-.003366	.000035	-.000029

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000293	-.000127	.0001777	.0036675	-.000263	.0008752
Stddev	.000263	.002371	.0001871	.0037417	.000137	.0002712
%RSD	89.77229	1873.051	105.3090	102.0243	52.15706	30.99009
#1	-.000588	-.001694	.0003742	-.000431	-.000260	.0009488
#2	-.000081	-.001287	.0001572	.006900	-.000127	.0011021
#3	-.000211	.002601	.0000017	.004533	-.000402	.0005748

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.300666	.0004354	-.000756	-.049337	.0050996	-.000116
Stddev	.009378	.0006987	.000159	.024304	.0004804	.000136
%RSD	3.119207	160.4546	21.01214	49.26261	9.419777	117.2861
#1	-.306465	-.000024	-.000784	-.068406	.0053816	-.000229
#2	-.289846	.001239	-.000899	-.057633	.0053722	.000035
#3	-.305687	.000091	-.000585	-.021970	.0045449	-.000153

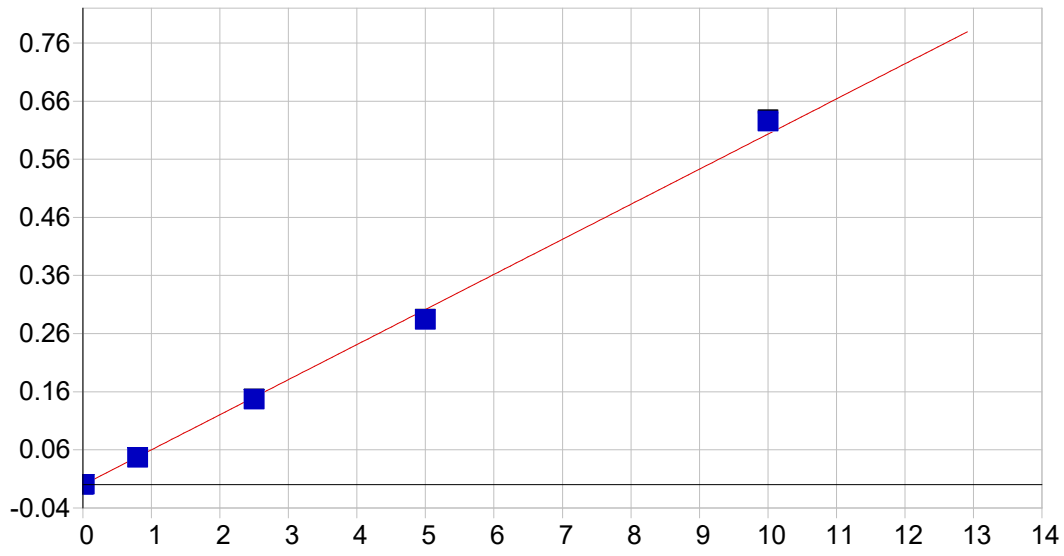
Reviewed By:jaswal
On:11/19/2024
10:28:07 PM
Inst Id :P4
LB :LB133502

Sample Name: CCB07 Acquired: 11/18/2024 18:58:16 Type: Unk
Method: NON EPA-6010-200.7(v2474) 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	.0095901	.0008287	.0120921	-.004778	F -.011994	-.003510
Stddev	.0007171	.0000666	.0012394	.001102	.003721	.000841
%RSD	7.477191	8.041626	10.24992	23.07411	31.02107	23.95473
#1	.0100804	.0009023	.0128036	-.005966	-.014423	-.002592
#2	.0099227	.0007725	.0106609	-.004581	-.013849	-.004243
#3	.0087671	.0008113	.0128117	-.003788	-.007711	-.003693

Elem	Sr4077
Units	ppm
Avg	-.000016
Stddev	.000023
%RSD	148.3639
#1	-.000041
#2	.000004
#3	-.000010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2691.990	60273.69	12497.07	1887.353	4596.672
Stddev	15.570	98.75	70.11	4.356	17.991
%RSD	.5783960	.1638370	.5610227	.2307813	.3913829
#1	2674.142	60162.65	12419.49	1891.325	4576.193
#2	2699.040	60306.74	12515.79	1888.037	4603.893
#3	2702.789	60351.68	12555.91	1882.695	4609.930

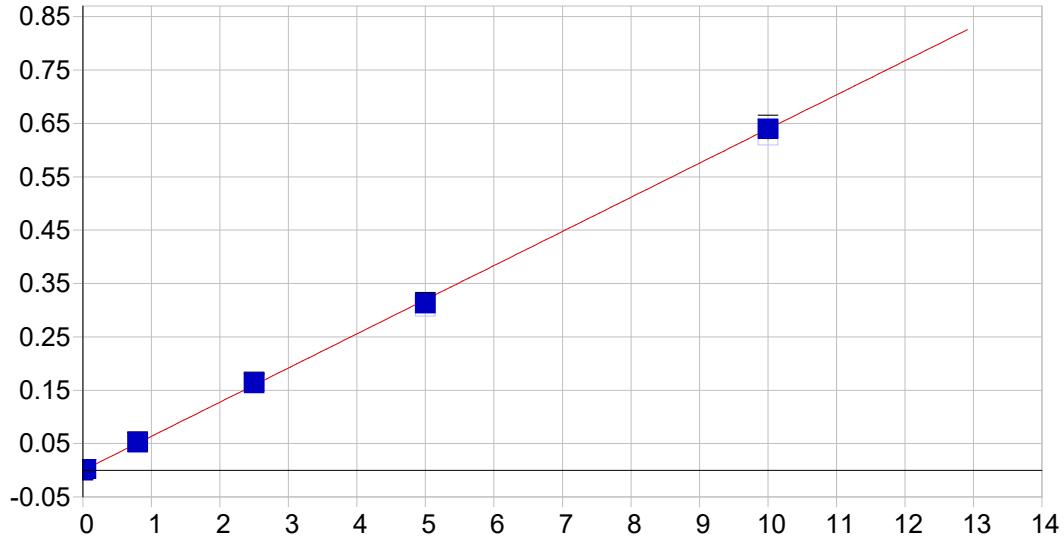


As 189.042 {479}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000212	Re-Slope:	1.000000
A1 (Gain):	0.060363	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999145	Status:	OK.
Std Error of Est:	0.000058		
Predicted MDL:	0.002459		
Predicted MQL:	0.008196		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00021	.000	1
S1	.02000	.01979	-.000	-1.03	.00098	.000	1
S3	2.5000	2.4388	-.061	-2.45	.14684	.000	1
S4	5.0000	4.7172	-.283	-5.66	.28421	.000	1
S5	10.000	10.365	.365	3.65	.62478	.002	1
S2	.80000	.77970	-.020	-2.54	.04680	.000	1

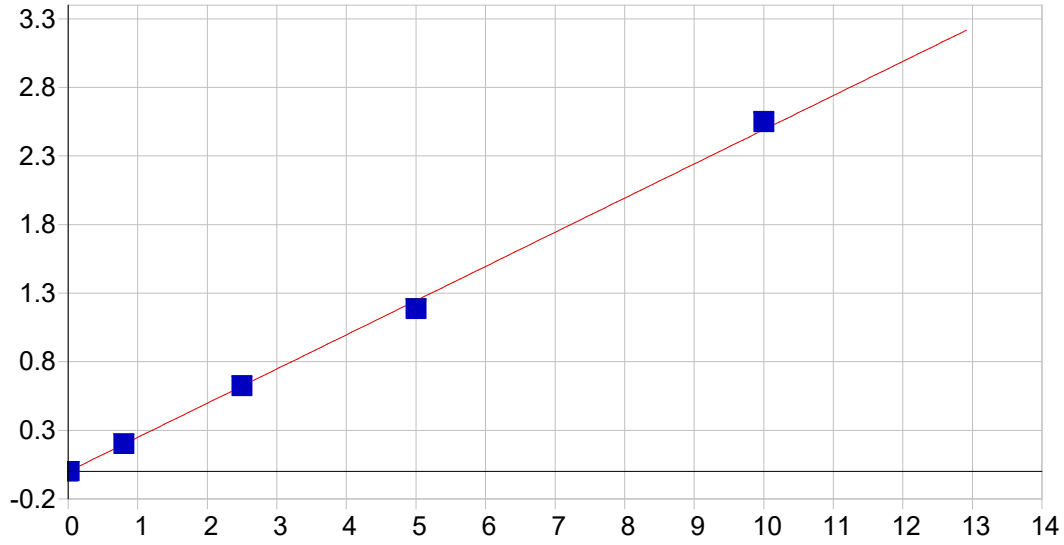


Tl 190.856 {477}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000349	Re-Slope:	1.000000
A1 (Gain):	0.063980	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999852	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.001932		
Predicted MQL:	0.006439		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00035	.000	1
S1	.04000	.03991	-.000	-.220	.00204	.000	1
S3	2.5000	2.5745	.075	2.98	.16142	.001	1
S4	5.0000	4.8965	-.103	-2.07	.30704	.002	1
S5	10.000	10.002	.002	.025	.62783	.007	1
S2	.80000	.82650	.027	3.31	.05159	.001	1

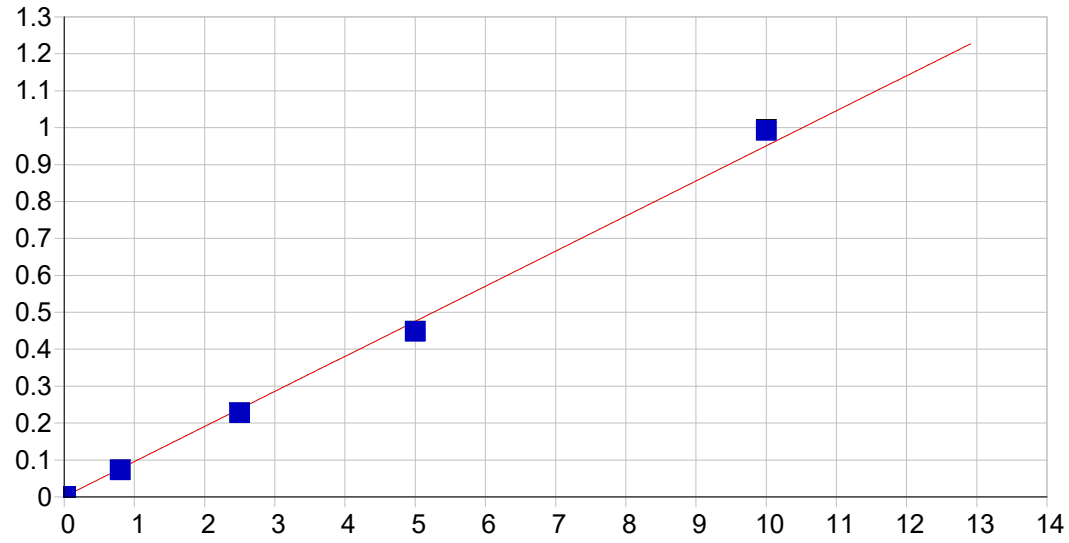


Pb 220.353 {453}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000340	Re-Slope:	1.000000
A1 (Gain):	0.249176	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999536	Status:	OK.
Std Error of Est:	0.000138		
Predicted MDL:	0.001066		
Predicted MQL:	0.003552		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00034	.000	1
S1	.01200	.01143	-.001	-4.72	.00245	.000	1
S3	2.5000	2.5019	.002	.074	.62238	.000	1
S4	5.0000	4.7605	-.240	-4.79	1.1845	.003	1
S5	10.000	10.233	.233	2.33	2.5466	.005	1
S2	.80000	.80565	.006	.706	.20019	.001	1

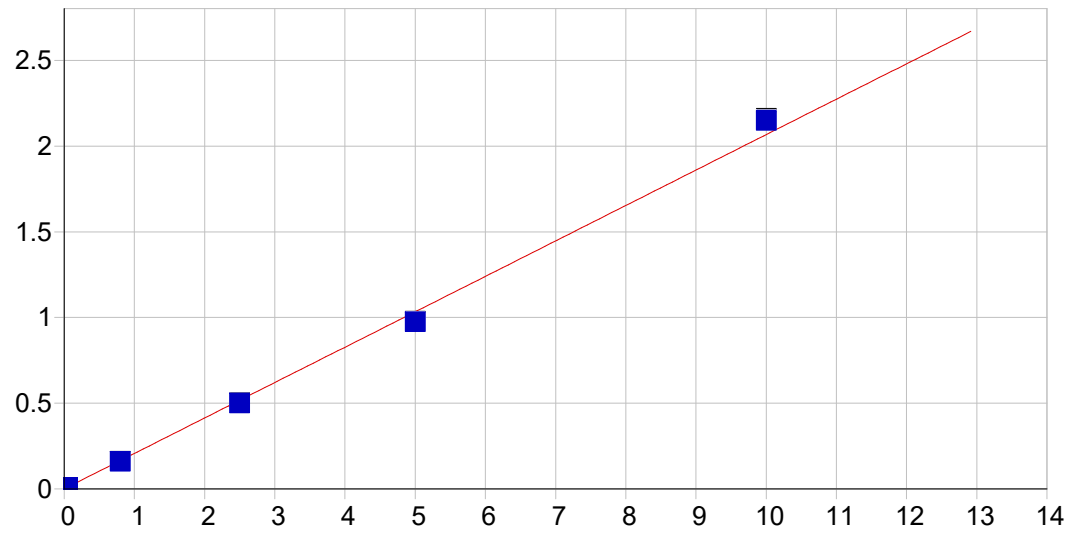


Se 196.090 {472}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000465	Re-Slope:	1.000000
A1 (Gain):	0.095018	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998854	Status:	OK.
Std Error of Est:	0.000107		
Predicted MDL:	0.002097		
Predicted MQL:	0.006990		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00047	.000	1
S1	.02000	.01946	-.001	-2.71	.00231	.000	1
S3	2.5000	2.3953	-.105	-4.19	.22800	.000	1
S4	5.0000	4.7116	-.288	-5.77	.44803	.000	1
S5	10.000	10.435	.435	4.35	.99171	.003	1
S2	.80000	.75890	-.041	-5.14	.07256	.000	1

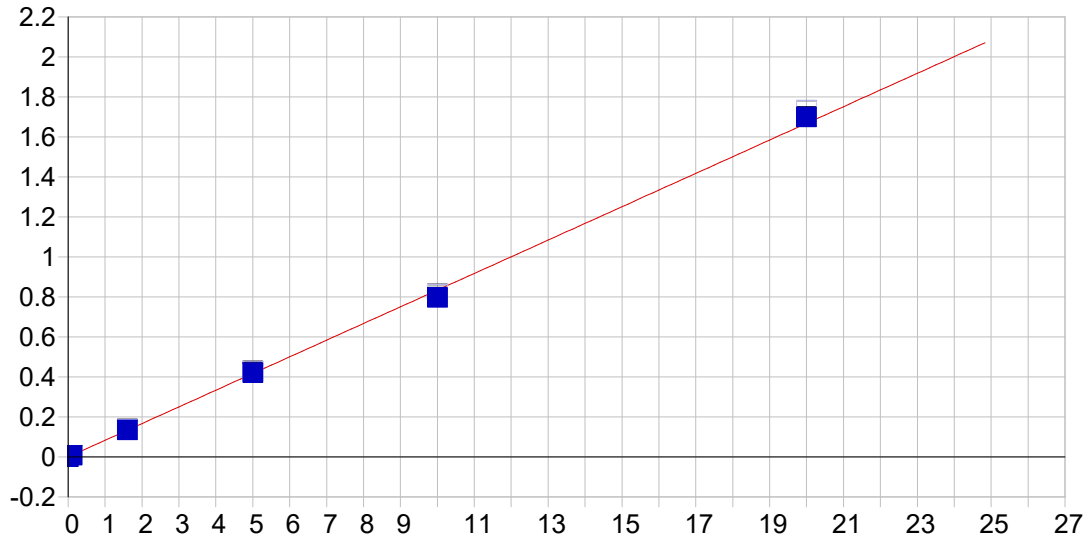


Sb 206.833 {463}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000273	Re-Slope:	1.000000
A1 (Gain):	0.206652	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999033	Status:	OK.
Std Error of Est:	0.000338		
Predicted MDL:	0.001178		
Predicted MQL:	0.003928		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00027	.000	1
S1	.05000	.04907	-.001	-1.86	.01044	.000	1
S3	2.5000	2.4214	-.079	-3.14	.50207	.001	1
S4	5.0000	4.7115	-.288	-5.77	.97673	.002	1
S5	10.000	10.396	.396	3.96	2.1541	.008	1
S2	.80000	.77243	-.028	-3.45	.16035	.000	1

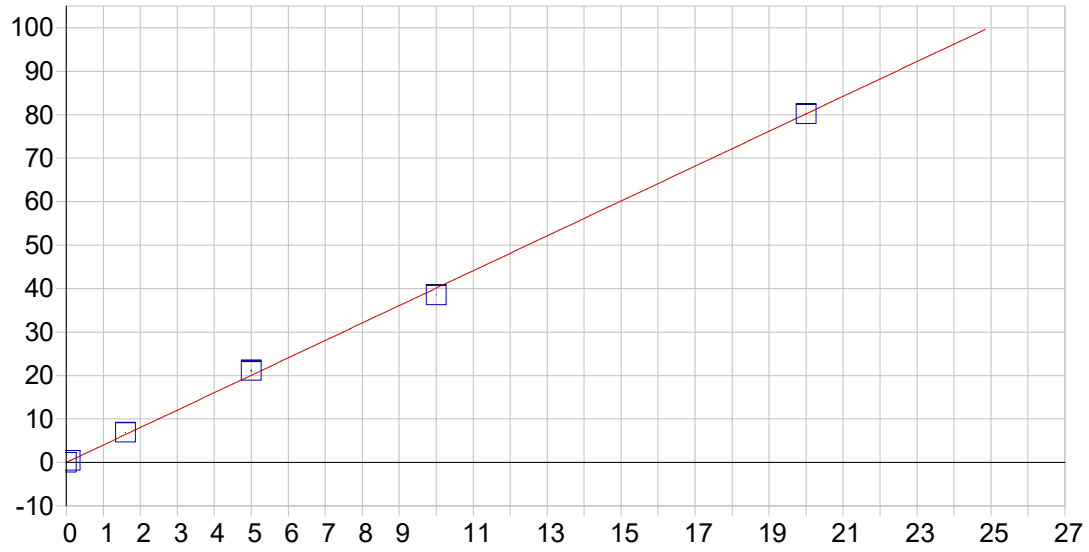


Al 396.152 { 85}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.083387	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999632	Status:	OK.
Std Error of Est:	0.000171		
Predicted MDL:	0.005678		
Predicted MQL:	0.018926		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.001	1
S1	.10000	.10256	.003	2.56	.00921	.001	1
S3	5.0000	5.0395	.039	.789	.42833	.000	1
S4	10.000	9.5523	-.448	-4.48	.81273	.002	1
S5	20.000	20.385	.385	1.93	1.7322	.001	1
S2	1.6000	1.6201	.020	1.26	.13770	.001	1

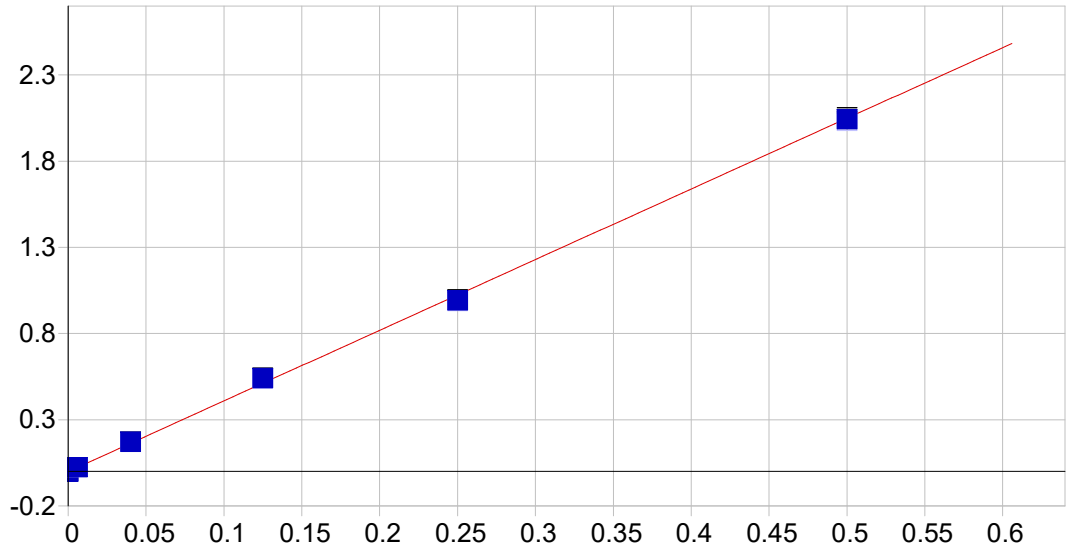


Ba 493.409 { 68}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002641	Re-Slope:	1.000000
A1 (Gain):	4.010623	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999449	Status:	OK.
Std Error of Est:	0.009876		
Predicted MDL:	0.000394		
Predicted MQL:	0.001313		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	-.00273	.002	1
S1	.10000	.11354	.014	13.5	.45274	.002	1
S3	5.0000	5.2641	.264	5.28	21.110	.190	1
S4	10.000	9.6115	-.388	-3.88	38.545	.064	1
S5	20.000	19.987	-.013	-.065	80.158	.078	1
S2	1.6000	1.7238	.124	7.74	6.9108	.015	1

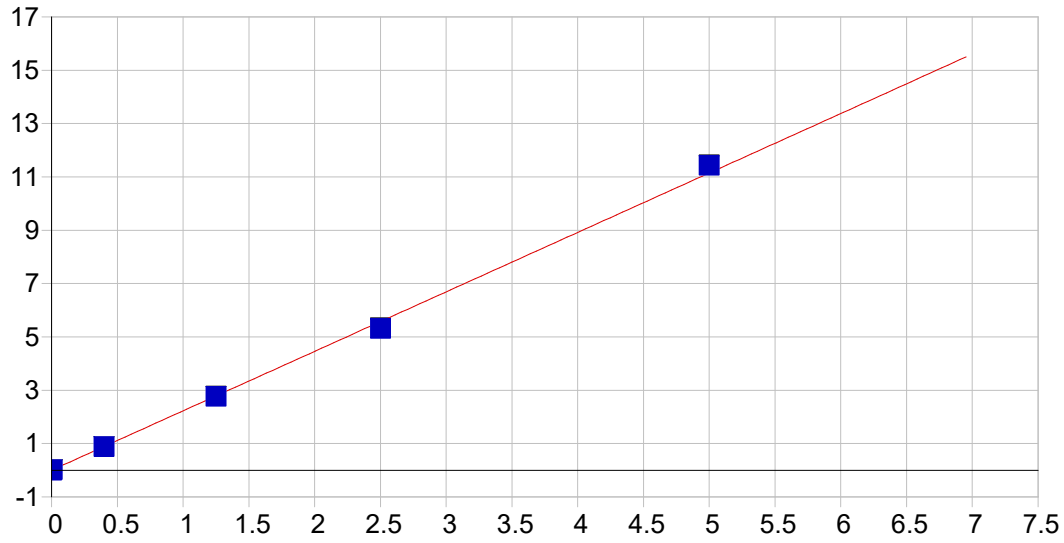


Be 234.861 {144}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000794	Re-Slope:	1.000000
A1 (Gain):	4.099106	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999585	Status:	OK.
Std Error of Est:	0.000338		
Predicted MDL:	0.000058		
Predicted MQL:	0.000195		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00080	.000	1
S1	.00600	.00607	.000	1.20	.02391	.000	1
S3	.12500	.13221	.007	5.76	.53884	.002	1
S4	.25000	.24223	-.008	-3.11	.98753	.005	1
S5	.50000	.49855	-.001	-.290	2.0336	.011	1
S2	.04000	.04195	.002	4.87	.17042	.002	1

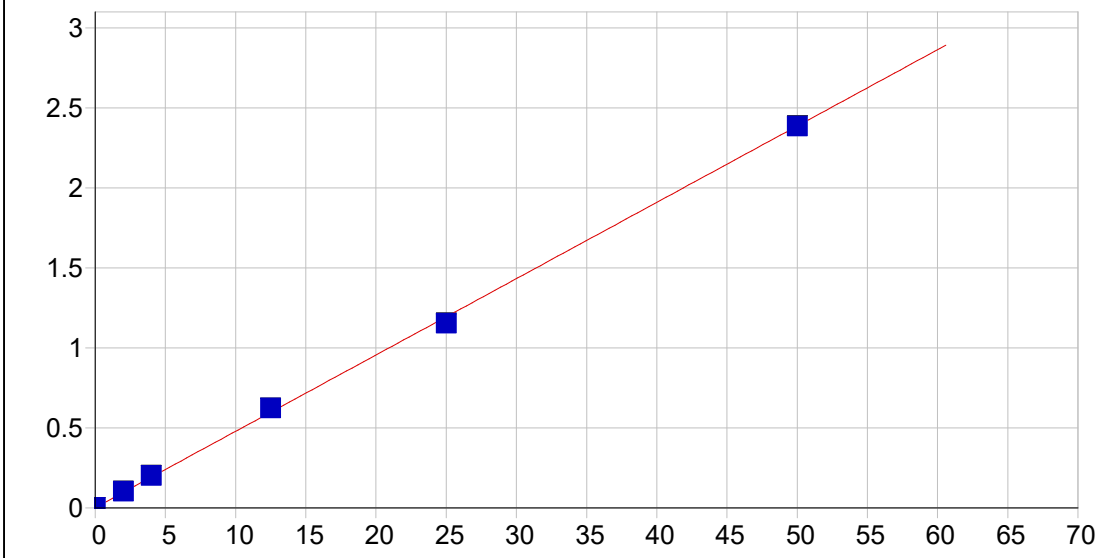


Cd 226.502 {449}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000087	Re-Slope:	1.000000
A1 (Gain):	2.229502	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999513	Status:	OK.
Std Error of Est:	0.000632		
Predicted MDL:	0.000092		
Predicted MQL:	0.000306		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00009	.000	1
S1	.00600	.00745	.001	24.2	.01658	.000	1
S3	1.2500	1.2424	-.008	-.610	2.7719	.002	1
S4	2.5000	2.3842	-.116	-4.63	5.3198	.018	1
S5	5.0000	5.1254	.125	2.51	11.435	.014	1
S2	.40000	.39650	-.004	-.876	.88458	.003	1

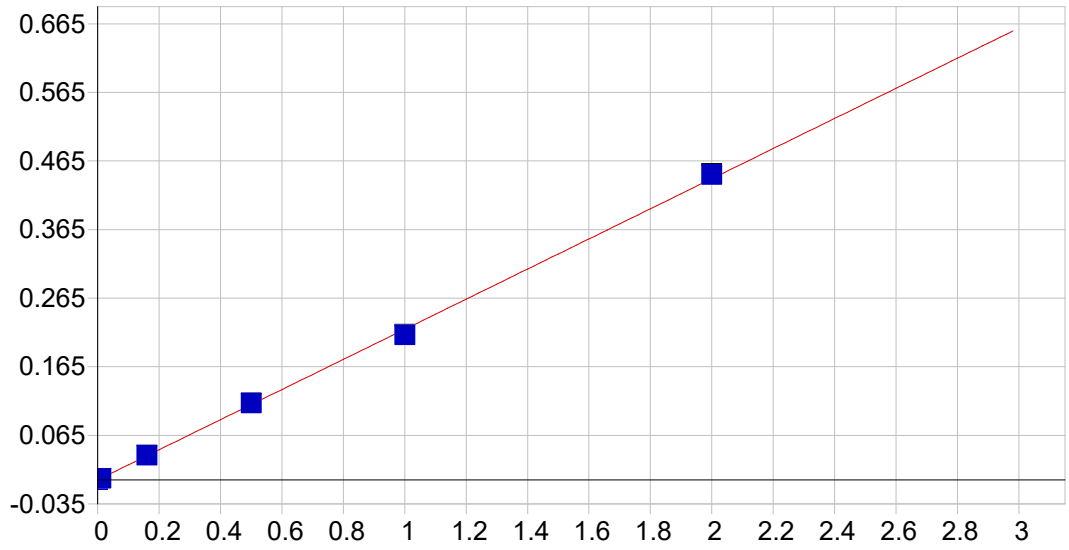


Ca 373.690 { 90}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001882	Re-Slope:	1.000000
A1 (Gain):	0.047697	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999609	Status:	OK.
Std Error of Est:	0.000705		
Predicted MDL:	0.009289		
Predicted MQL:	0.030963		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00026	-.000	.000	.00187	.000	1
S2	4.0000	4.2103	.210	5.26	.20270	.001	1
S3	12.500	13.027	.527	4.21	.62322	.001	1
S4	25.000	24.139	-.861	-3.44	1.1532	.003	1
S5	50.000	49.982	-.018	-.036	2.3859	.004	1
S1	2.0000	2.1420	.142	7.10	.10405	.001	1

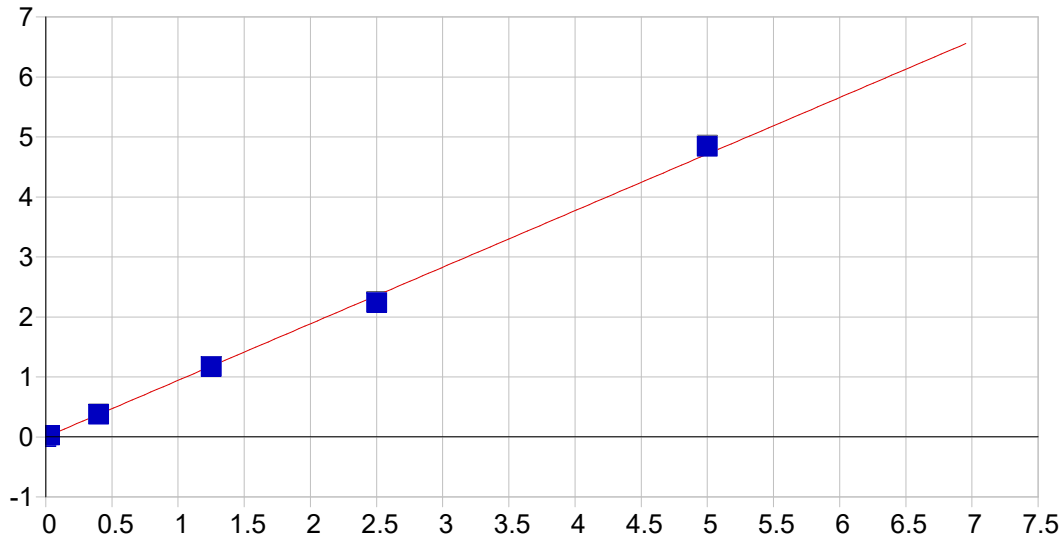


Cr 267.716 {126}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000023	Re-Slope:	1.000000
A1 (Gain):	0.219597	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999731	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.000357		
Predicted MQL:	0.001190		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00002	.000	1
S1	.01000	.00984	-.000	-1.65	.00214	.000	1
S3	.50000	.50931	.009	1.86	.11185	.000	1
S4	1.0000	.96228	-.038	-3.77	.21136	.001	1
S5	2.0000	2.0259	.026	1.30	.44500	.002	1
S2	.16000	.16264	.003	1.65	.03570	.000	1

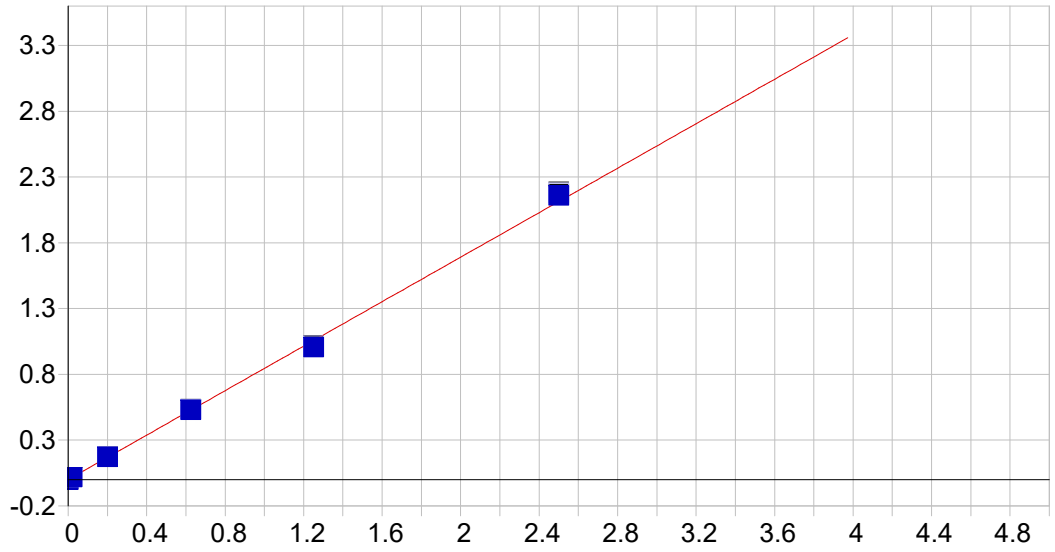


Co 228.616 {448}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000069	Re-Slope:	1.000000
A1 (Gain):	0.942715	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999454	Status:	OK.
Std Error of Est:	0.000634		
Predicted MDL:	0.000195		
Predicted MQL:	0.000651		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00007	.000	1
S1	.03000	.03043	.000	1.44	.02850	.000	1
S3	1.2500	1.2404	-.010	-.770	1.1712	.001	1
S4	2.5000	2.3745	-.125	-5.02	2.2424	.007	1
S5	5.0000	5.1357	.136	2.71	4.8494	.011	1
S2	.40000	.39897	-.001	-.258	.37668	.001	1

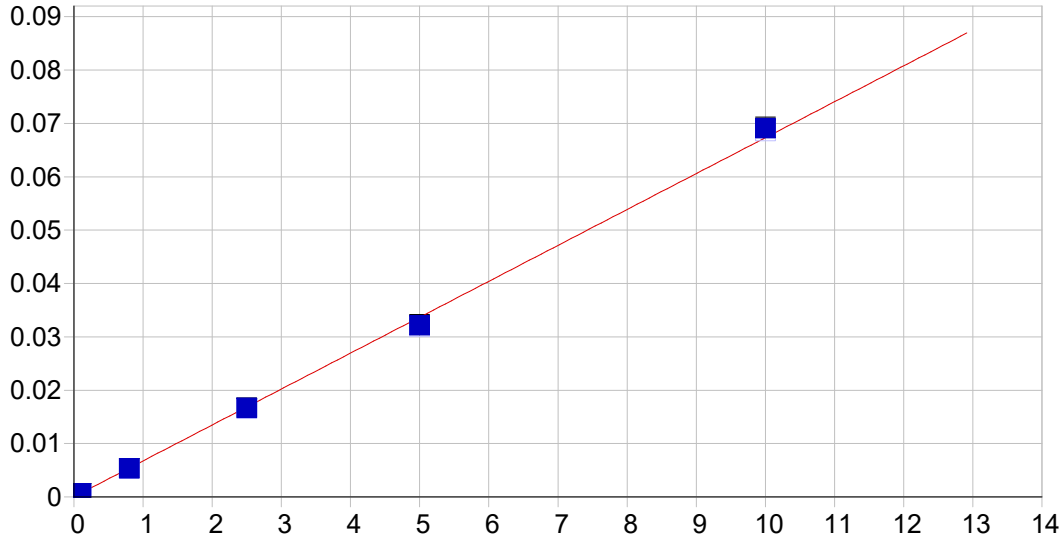


Cu 224.700 {450}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000024	Re-Slope:	1.000000
A1 (Gain):	0.845495	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999551	Status:	OK.
Std Error of Est:	0.000300		
Predicted MDL:	0.000379		
Predicted MQL:	0.001262		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.02000	.02167	.002	8.36	.01852	.000	1
S3	.62500	.62528	.000	.045	.53369	.001	1
S4	1.2500	1.1905	-.060	-4.76	1.0166	.002	1
S5	2.5000	2.5536	.054	2.15	2.1792	.009	1
S2	.20000	.20393	.004	1.97	.17401	.001	1

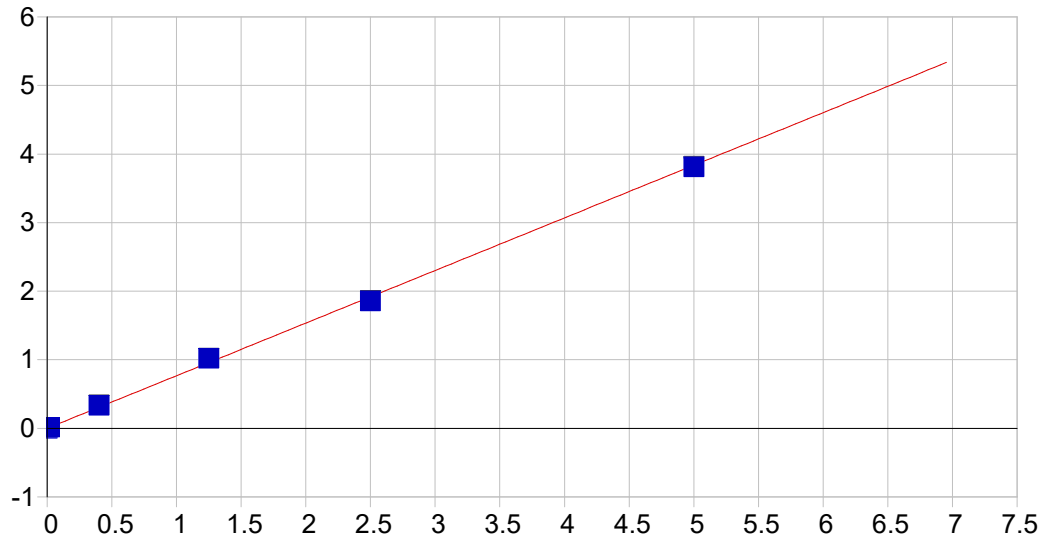


Fe 240.488 {140}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000024	Re-Slope:	1.000000
A1 (Gain):	0.006730	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999508	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.003913		
Predicted MQL:	0.013042		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00002	.000	1
S1	.10000	.09750	-.002	-2.50	.00067	.000	1
S3	2.5000	2.4723	-.028	-1.11	.01652	.000	1
S4	5.0000	4.7732	-.227	-4.54	.03186	.000	1
S5	10.000	10.266	.266	2.66	.06854	.000	1
S2	.80000	.79132	-.009	-1.09	.00530	.000	1

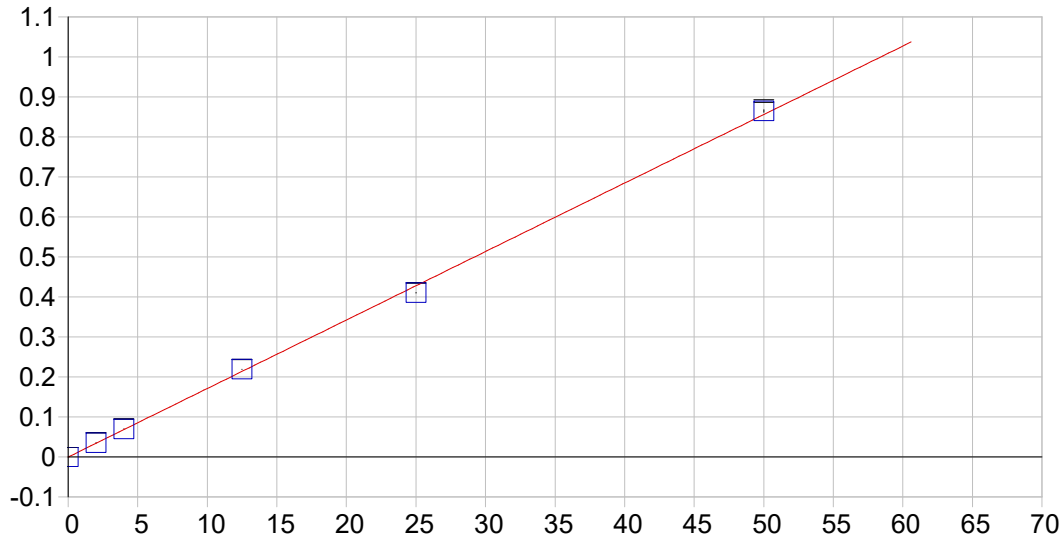


Mn 257.610 {131}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000113	Re-Slope:	1.000000
A1 (Gain):	0.767255	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999373	Status:	OK.
Std Error of Est:	0.000451		
Predicted MDL:	0.000263		
Predicted MQL:	0.000878		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00011	.000	1
S1	.02000	.02261	.003	13.0	.01747	.000	1
S3	1.2500	1.3273	.077	6.18	1.0187	.003	1
S4	2.5000	2.4179	-.082	-3.28	1.8557	.008	1
S5	5.0000	4.9650	-.035	-.700	3.8103	.012	1
S2	.40000	.43715	.037	9.29	.33558	.001	1

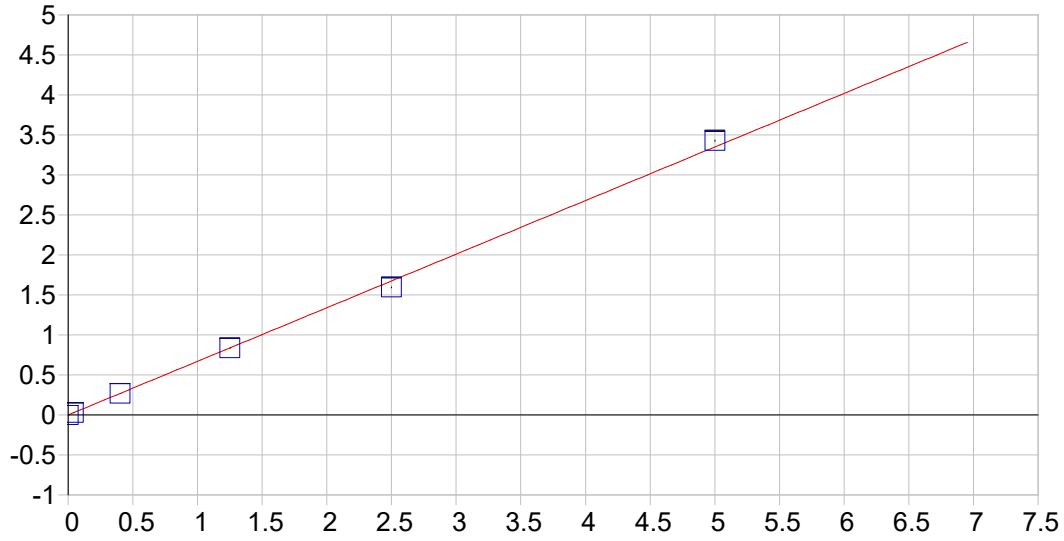


Mg 279.079 {121}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000205	Re-Slope:	1.000000
A1 (Gain):	0.017122	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999673	Status:	OK.
Std Error of Est:	0.000232		
Predicted MDL:	0.012023		
Predicted MQL:	0.040076		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	-.00021	.000	1
S2	4.0000	4.0945	.095	2.36	.06990	.000	1
S3	12.500	12.799	.299	2.39	.21894	.001	1
S4	25.000	23.977	-1.02	-4.09	.41033	.001	1
S5	50.000	50.538	.538	1.08	.86509	.003	1
S1	2.0000	2.0908	.091	4.54	.03559	.000	1

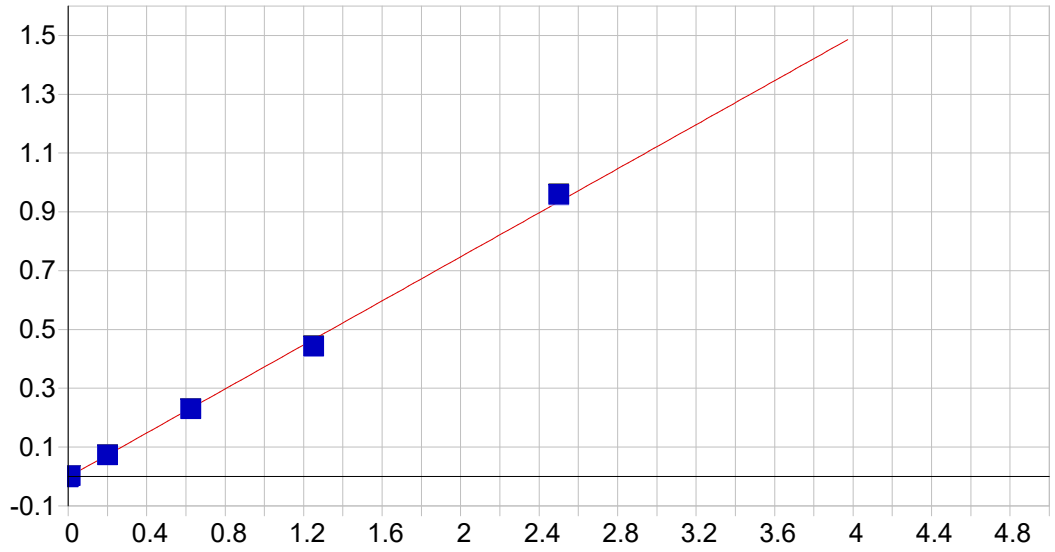


Ni 231.604 {446}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000217	Re-Slope:	1.000000
A1 (Gain):	0.669843	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999533	Status:	OK.
Std Error of Est:	0.000481		
Predicted MDL:	0.000309		
Predicted MQL:	0.001031		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00022	.000	1
S1	.04000	.03978	-.000	-.543	.02643	.000	1
S3	1.2500	1.2473	-.003	-.218	.83526	.001	1
S4	2.5000	2.3809	-.119	-4.77	1.5946	.005	1
S5	5.0000	5.1204	.120	2.41	3.4296	.008	1
S2	.40000	.40171	.002	.428	.26887	.000	1

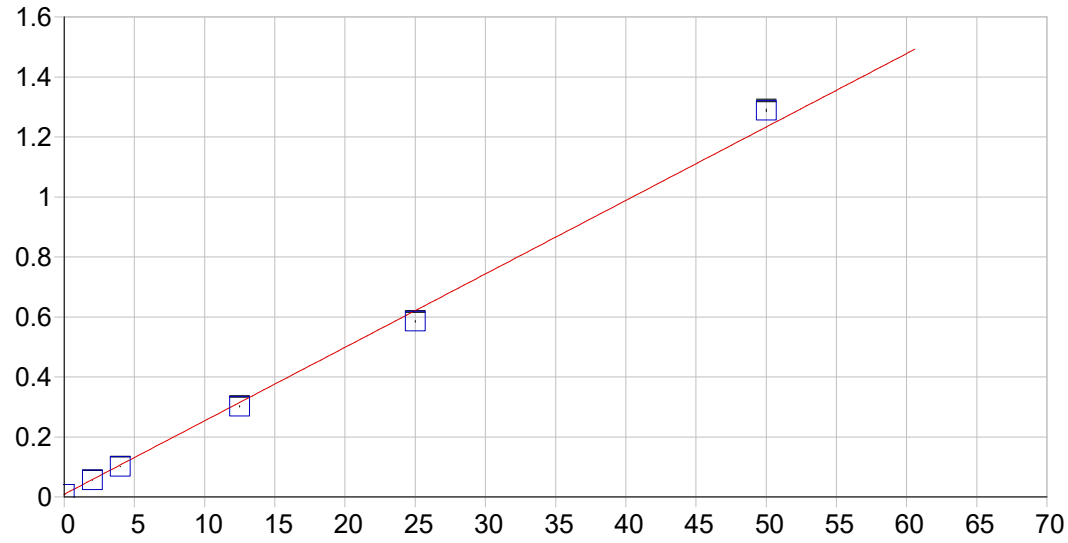


Ag 328.068 {103}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001674	Re-Slope:	1.000000
A1 (Gain):	0.374418	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999464	Status:	OK.
Std Error of Est:	0.000101		
Predicted MDL:	0.000300		
Predicted MQL:	0.000999		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00167	.000	1
S1	.01000	.01005	.000	.465	.00206	.000	1
S3	.62500	.61956	-.005	-.871	.22937	.001	1
S4	1.2500	1.1884	-.062	-4.93	.44142	.001	1
S5	2.5000	2.5669	.067	2.68	.95572	.001	1
S2	.20000	.20008	.000	.039	.07294	.000	1

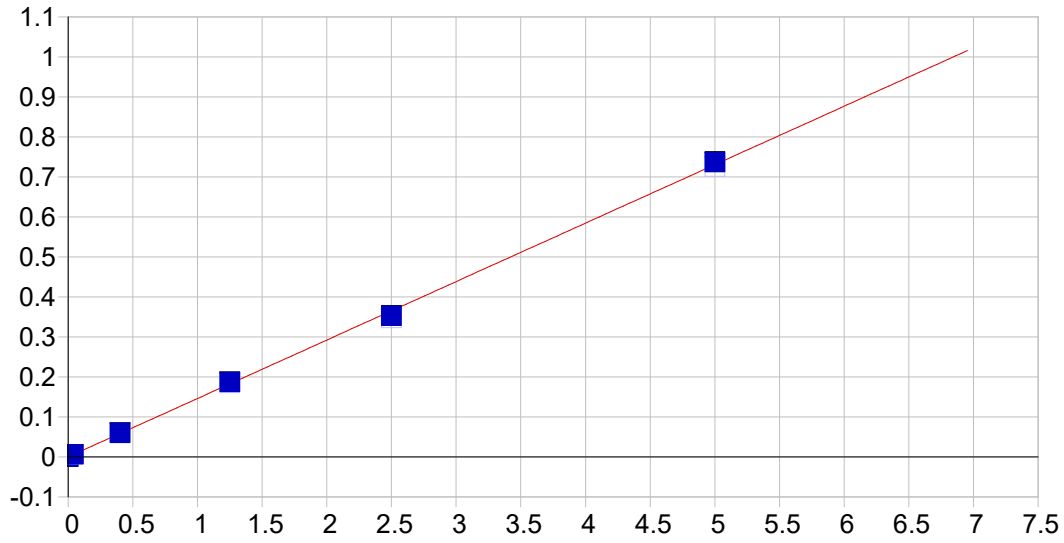


Na 589.592 { 57}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.009058	Re-Slope:	1.000000
A1 (Gain):	0.024477	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998782	Status:	OK.
Std Error of Est:	0.000640		
Predicted MDL:	0.007352		
Predicted MQL:	0.024507		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00030	.000	.000	.00906	.000	1
S2	4.0000	3.7674	-.233	-5.82	.10127	.001	1
S3	12.500	11.964	-.536	-4.29	.30190	.002	1
S4	25.000	23.548	-1.45	-5.81	.58544	.003	1
S5	50.000	52.289	2.29	4.58	1.2889	.004	1
S1	2.0000	1.9312	-.069	-3.44	.05633	.000	1

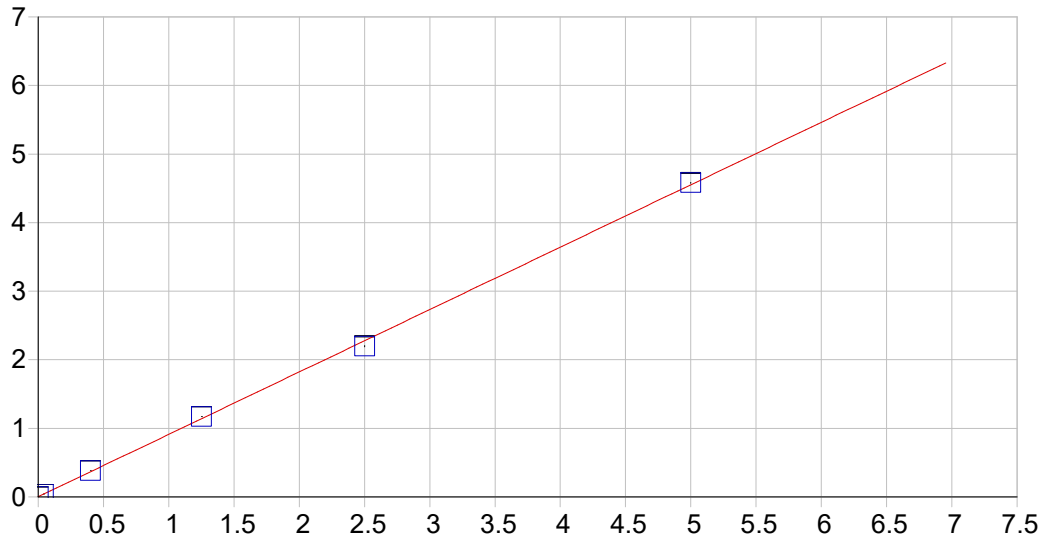


V 292.402 {115}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000053	Re-Slope:	1.000000
A1 (Gain):	0.146124	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999730	Status:	OK.
Std Error of Est:	0.000079		
Predicted MDL:	0.001458		
Predicted MQL:	0.004860		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00005	.000	1
S1	.04000	.04316	.003	7.91	.00604	.000	1
S3	1.2500	1.2816	.032	2.52	.18455	.000	1
S4	2.5000	2.4126	-.087	-3.50	.34716	.001	1
S5	5.0000	5.0402	.040	.803	.72578	.002	1
S2	.40000	.41257	.013	3.14	.05938	.000	1

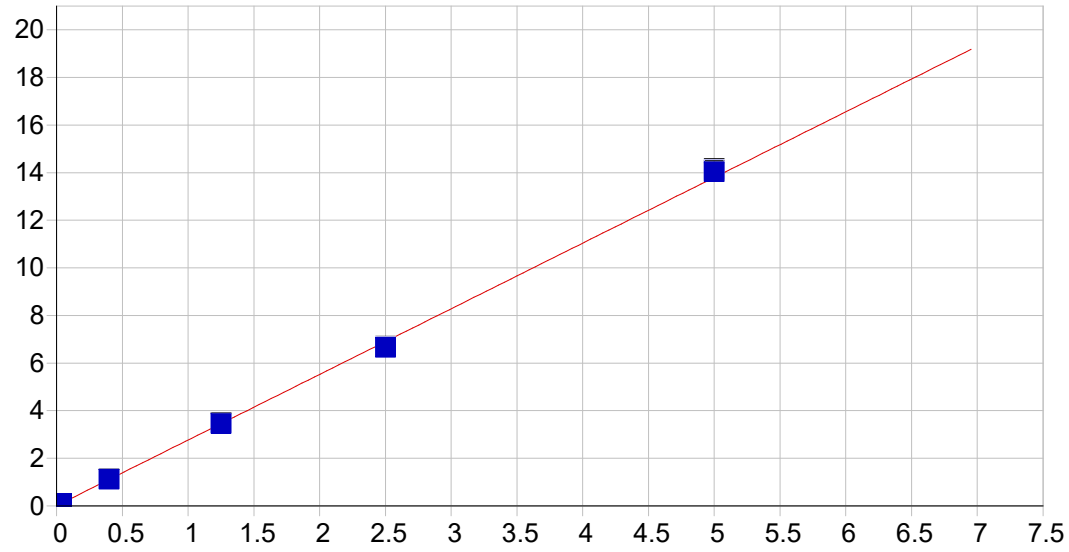


Zn 206.200 {464}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002349	Re-Slope:	1.000000
A1 (Gain):	0.909926	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999719	Status:	OK.
Std Error of Est:	0.000507		
Predicted MDL:	0.000216		
Predicted MQL:	0.000719		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00235	.000	1
S1	.04000	.04236	.002	5.91	.04090	.000	1
S3	1.2500	1.2846	.035	2.77	1.1712	.002	1
S4	2.5000	2.4129	-.087	-3.48	2.1979	.009	1
S5	5.0000	5.0318	.032	.635	4.5809	.007	1
S2	.40000	.41837	.018	4.59	.38303	.000	1

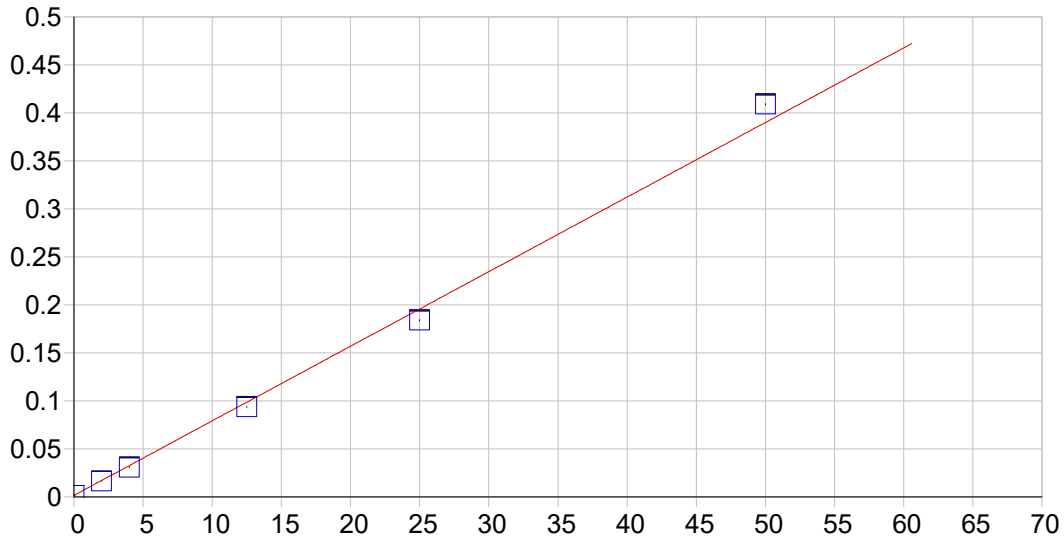


Zn 213.856 {158}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.009050	Re-Slope:	1.000000
A1 (Gain):	2.757880	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999735	Status:	OK.
Std Error of Est:	0.001500		
Predicted MDL:	0.000276		
Predicted MQL:	0.000920		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00905	.001	1
S1	.04000	.04090	.001	2.26	.12263	.001	1
S3	1.2500	1.2519	.002	.151	3.4856	.004	1
S4	2.5000	2.4081	-.092	-3.68	6.6983	.014	1
S5	5.0000	5.0874	.087	1.75	14.135	.038	1
S2	.40000	.40169	.002	.423	1.1245	.005	1

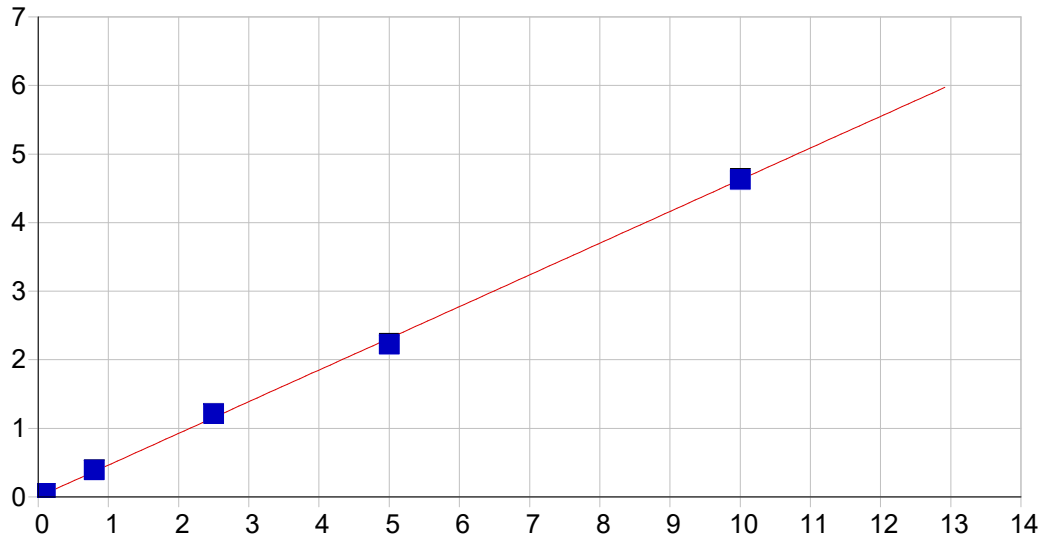


K 766.490 { 44}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001547	Re-Slope:	1.000000
A1 (Gain):	0.007769	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998612	Status:	OK.
Std Error of Est:	0.000217		
Predicted MDL:	0.023971		
Predicted MQL:	0.079903		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00032	.000	.000	.00155	.000	1
S2	4.0000	3.7633	-.237	-5.92	.03078	.000	1
S3	12.500	11.877	-.623	-4.98	.09382	.000	1
S4	25.000	23.487	-1.51	-6.05	.18402	.001	1
S5	50.000	52.451	2.45	4.90	.40905	.001	1
S1	2.0000	1.9205	-.079	-3.97	.01647	.000	1

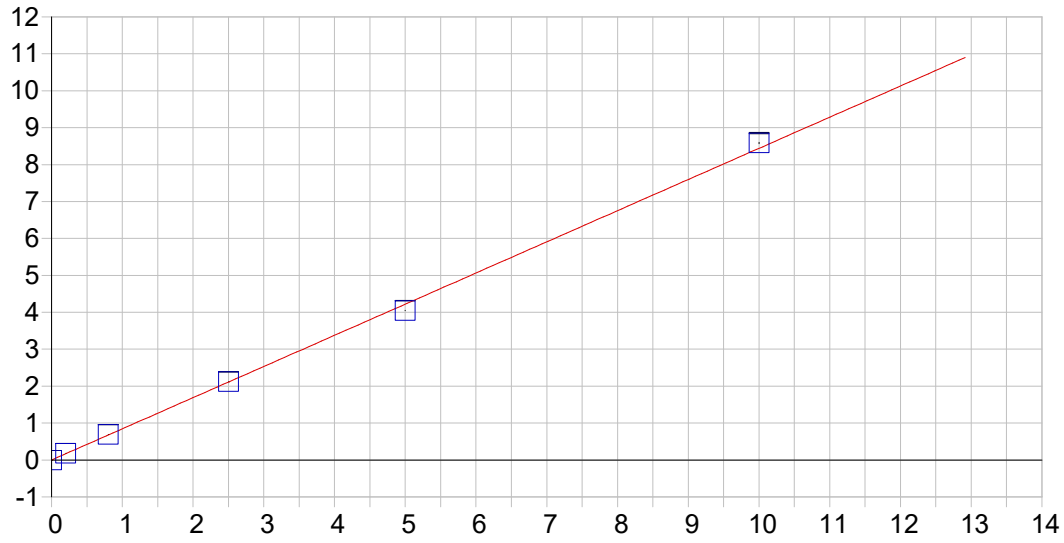


B 249.678 {135}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001031	Re-Slope:	1.000000
A1 (Gain):	0.462369	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999545	Status:	OK.
Std Error of Est:	0.000731		
Predicted MDL:	0.000639		
Predicted MQL:	0.002129		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00102	.000	1
S1	.10000	.11137	.011	11.4	.05233	.000	1
S3	2.5000	2.6246	.125	4.98	1.2123	.006	1
S4	5.0000	4.8148	-.185	-3.70	2.2227	.014	1
S5	10.000	10.006	.006	.063	4.6186	.018	1
S2	.80000	.84299	.043	5.37	.39008	.004	1

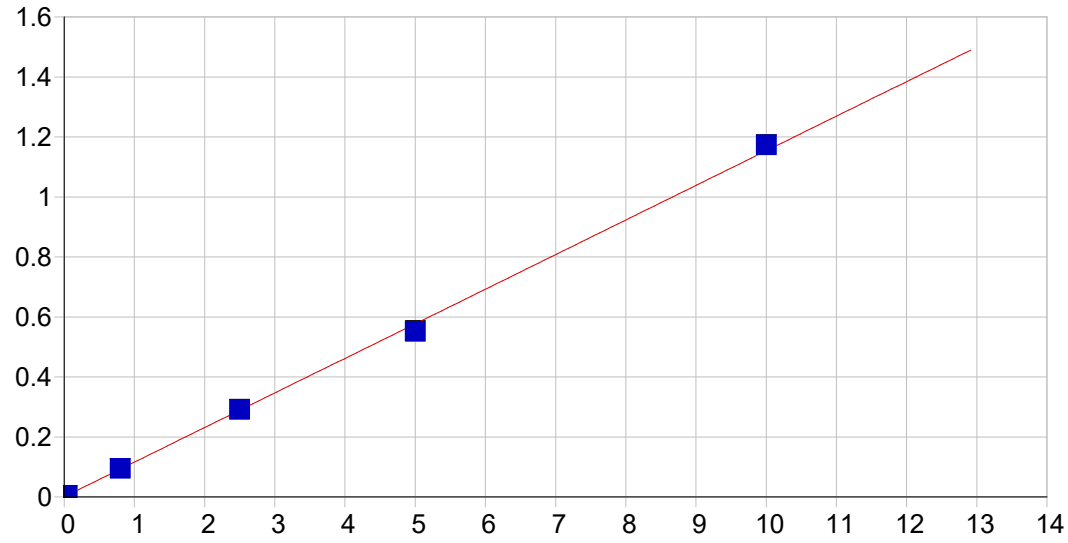


Mo 202.030 {467}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000124	Re-Slope:	1.000000
A1 (Gain):	0.844011	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999663	Status:	OK.
Std Error of Est:	0.001632		
Predicted MDL:	0.000244		
Predicted MQL:	0.000813		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00012	.000	1
S1	.20000	.21016	.010	5.08	.17750	.000	1
S3	2.5000	2.5109	.011	.435	2.1193	.002	1
S4	5.0000	4.7919	-.208	-4.16	4.0445	.004	1
S5	10.000	10.171	.171	1.71	8.5843	.019	1
S2	.80000	.81643	.016	2.05	.68920	.002	1

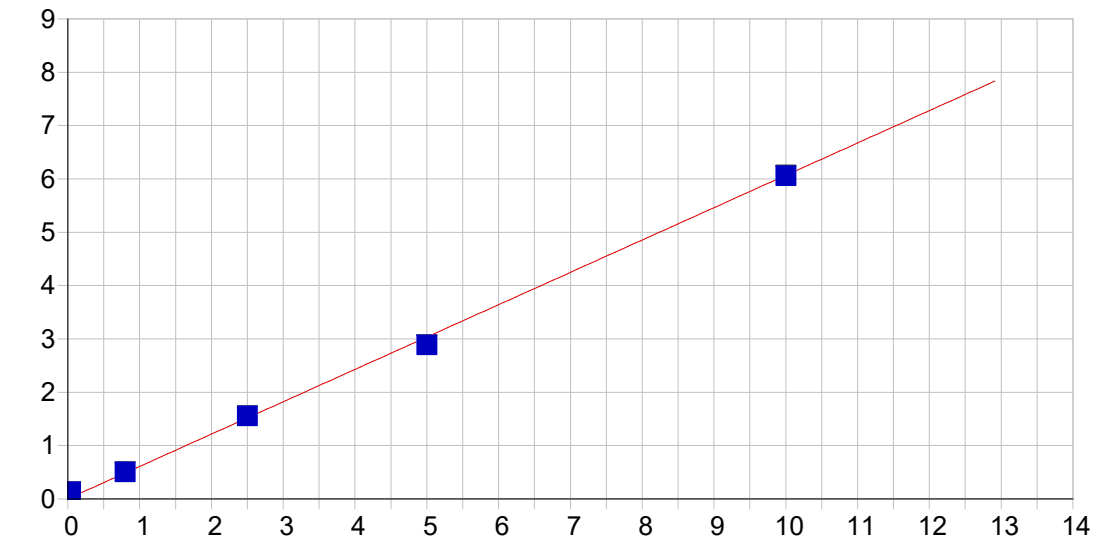


Sn 189.989 {478}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000571	Re-Slope:	1.000000
A1 (Gain):	0.115306	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999555	Status:	OK.
Std Error of Est:	0.000114		
Predicted MDL:	0.000806		
Predicted MQL:	0.002686		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00057	.000	1
S1	.04000	.05083	.011	27.1	.00643	.000	1
S3	2.5000	2.5242	.024	.967	.29133	.000	1
S4	5.0000	4.7777	-.222	-4.45	.55087	.002	1
S5	10.000	10.172	.172	1.72	1.1723	.001	1
S2	.80000	.81527	.015	1.91	.09448	.000	1

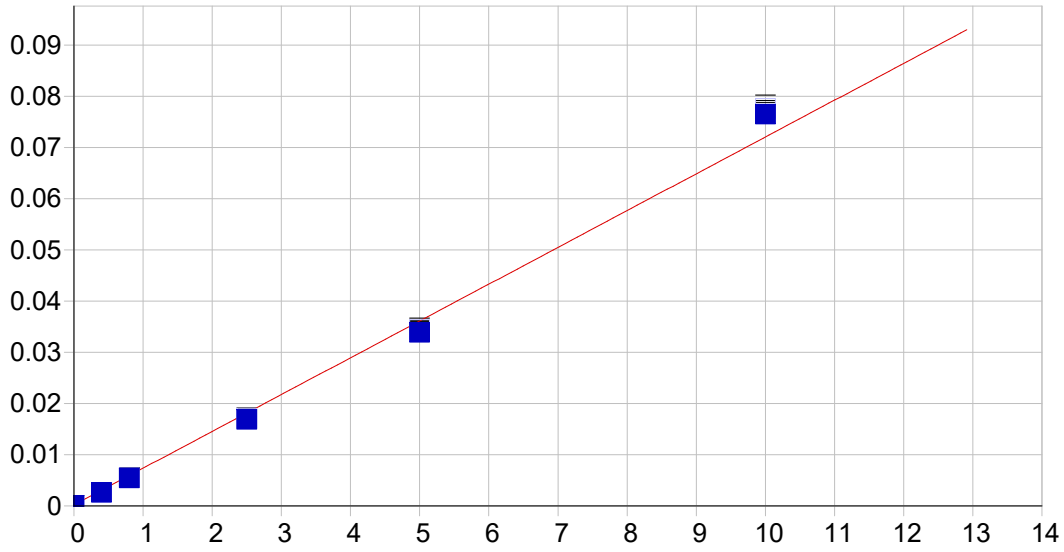


Ti 336.121 {100}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001929	Re-Slope:	1.000000
A1 (Gain):	0.606553	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.980178	Status:	OK.
Std Error of Est:	0.004063		
Predicted MDL:	0.000524		
Predicted MQL:	0.001747		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00017	-.000	.000	.00182	.000	1
S1	.04000	.21130	.171	428.	.13008	.000	1
S3	2.5000	2.5572	.057	2.29	1.5525	.004	1
S4	5.0000	4.7558	-.244	-4.88	2.8855	.007	1
S5	10.000	9.9860	-.014	-.140	6.0568	.011	1
S2	.80000	.82968	.030	3.71	.50500	.001	1

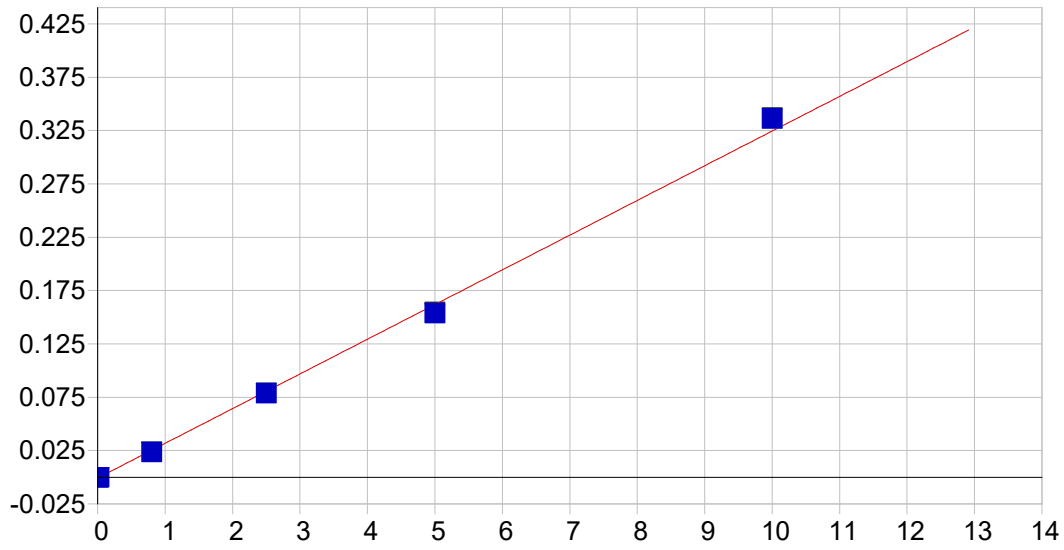


Si 288.158 {117}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000186	Re-Slope:	1.000000
A1 (Gain):	0.007184	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997749	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.006057		
Predicted MQL:	0.020188		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00013	.000	.000	.00019	.000	1
S1	.40000	.33724	-.063	-15.7	.00261	.000	1
S3	2.5000	2.3217	-.178	-7.13	.01714	.000	1
S4	5.0000	4.6894	-.311	-6.21	.03442	.000	1
S5	10.000	10.622	.622	6.22	.07758	.001	1
S2	.80000	.72885	-.071	-8.89	.00551	.000	1

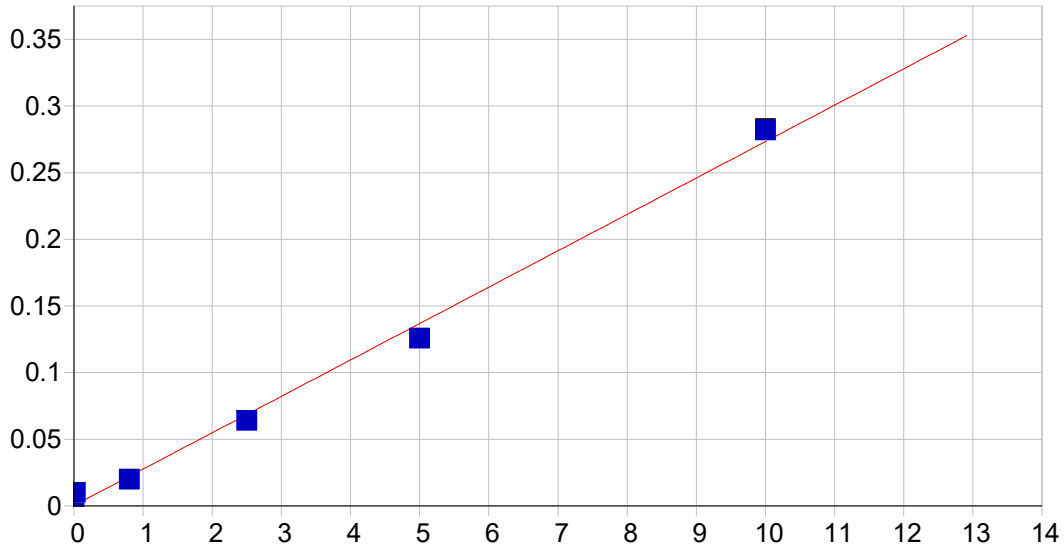


P 177.495 {490}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000735	Re-Slope:	1.000000
A1 (Gain):	0.032523	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999162	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.002567		
Predicted MQL:	0.008555		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00074	.000	1
S1	.02000	.01750	-.003	-12.5	-.00017	.000	1
S3	2.5000	2.4408	-.059	-2.37	.07864	.000	1
S4	5.0000	4.7518	-.248	-4.96	.15379	.001	1
S5	10.000	10.363	.363	3.63	.33625	.001	1
S2	.80000	.74684	-.053	-6.64	.02355	.000	1

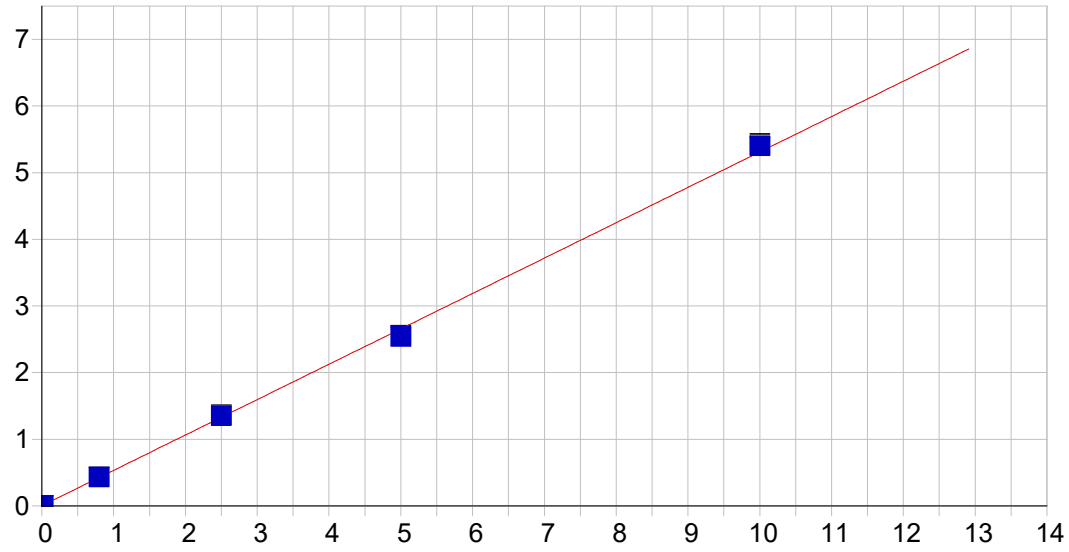


S 182.034 {485}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000302	Re-Slope:	1.000000
A1 (Gain):	0.027299	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.871793	Status:	OK.
Std Error of Est:	0.000358		
Predicted MDL:	0.003176		
Predicted MQL:	0.010587		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00033	-.000	.000	.00029	.000	1
S1	.02000	.35724	.337	1690.	.01003	.000	1
S3	2.5000	2.3358	-.164	-6.57	.06389	.000	1
S4	5.0000	4.5953	-.405	-8.09	.12540	.000	1
S5	10.000	10.324	.324	3.24	.28143	.001	1
S2	.80000	.72120	-.079	-9.85	.01993	.000	1

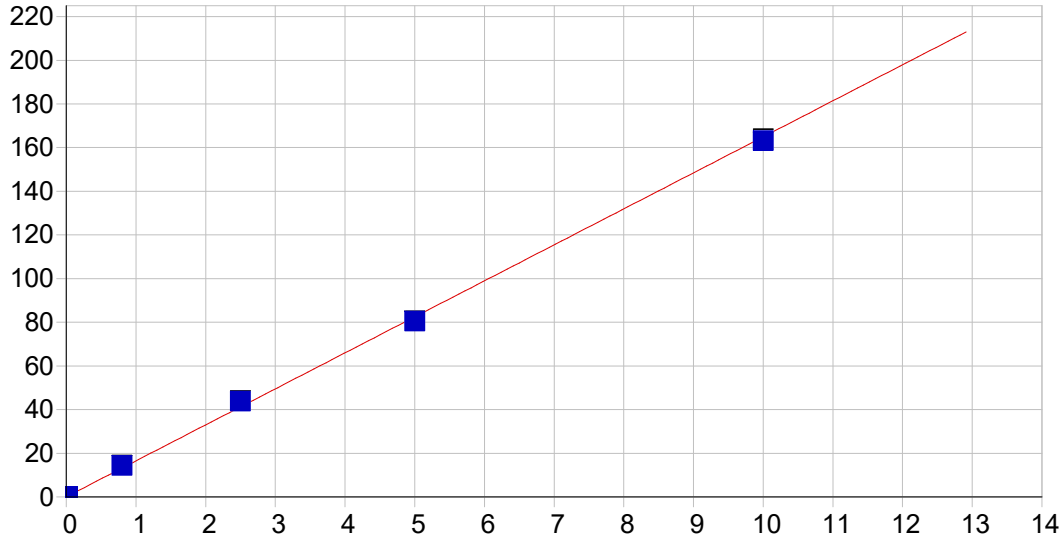


Li 670.784 { 50}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002408	Re-Slope:	1.000000
A1 (Gain):	0.530849	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999641	Status:	OK.
Std Error of Est:	0.000334		
Predicted MDL:	0.001758		
Predicted MQL:	0.005861		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00241	.000	1
S5	10.000	10.171	.171	1.71	5.4067	.028	1
S4	5.0000	4.7829	-.217	-4.34	2.5438	.016	1
S3	2.5000	2.5417	.042	1.67	1.3529	.012	1
S1	.02000	.01873	-.001	-6.37	.01254	.001	1
S2	.80000	.80525	.005	.656	.43026	.002	1

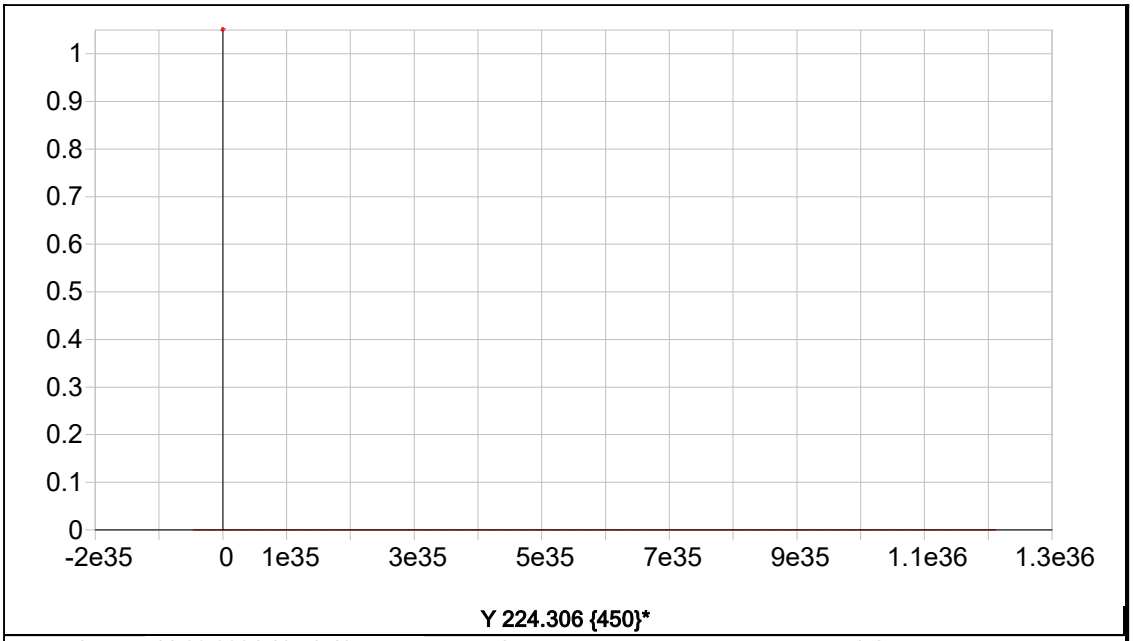


Sr 407.771 { 83}

Date of Fit:	11/20/2024 12:58:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001885	Re-Slope:	1.000000
A1 (Gain):	16.493481	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999438	Status:	OK.
Std Error of Est:	0.012978		
Predicted MDL:	0.000033		
Predicted MQL:	0.000109		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00181	.000	1
S1	.02000	.02205	.002	10.2	.36720	.001	1
S3	2.5000	2.6539	.154	6.16	43.815	.308	1
S4	5.0000	4.8811	-.119	-2.38	80.591	.189	1
S5	10.000	9.8886	-.111	-1.11	163.26	.695	1
S2	.80000	.87433	.074	9.29	14.436	.028	1

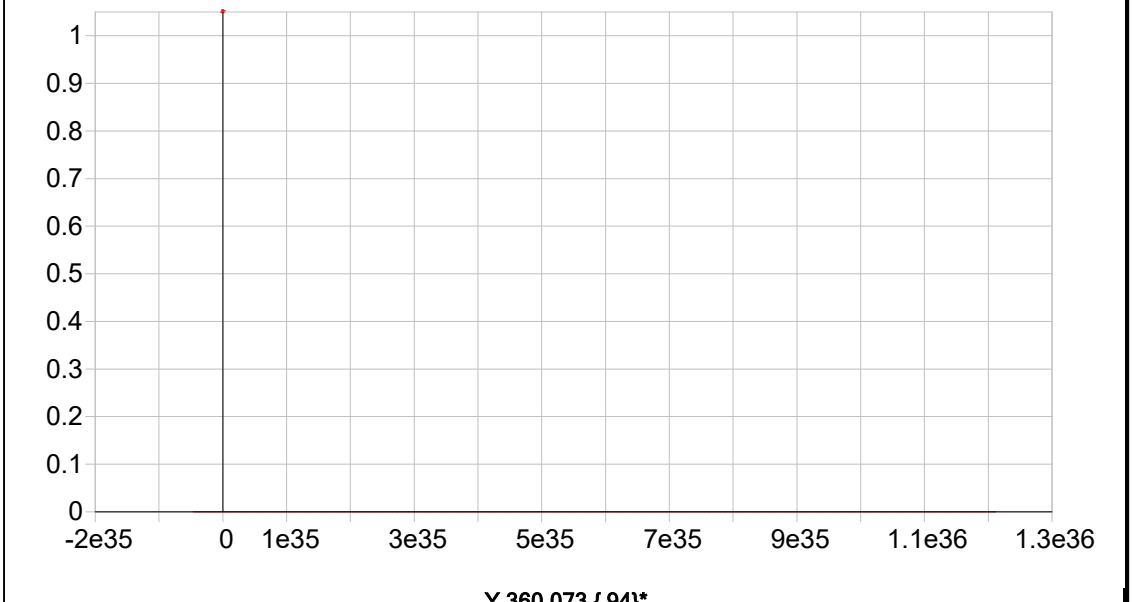


Y 224.306 {450}*

Date of Fit:	11/20/2024 12:58:49	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}*

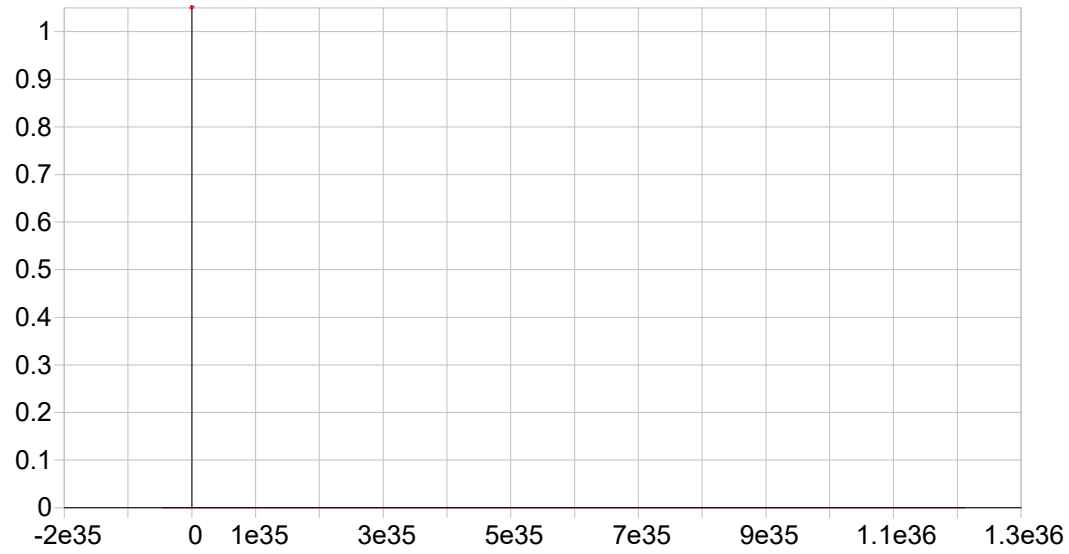
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

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					

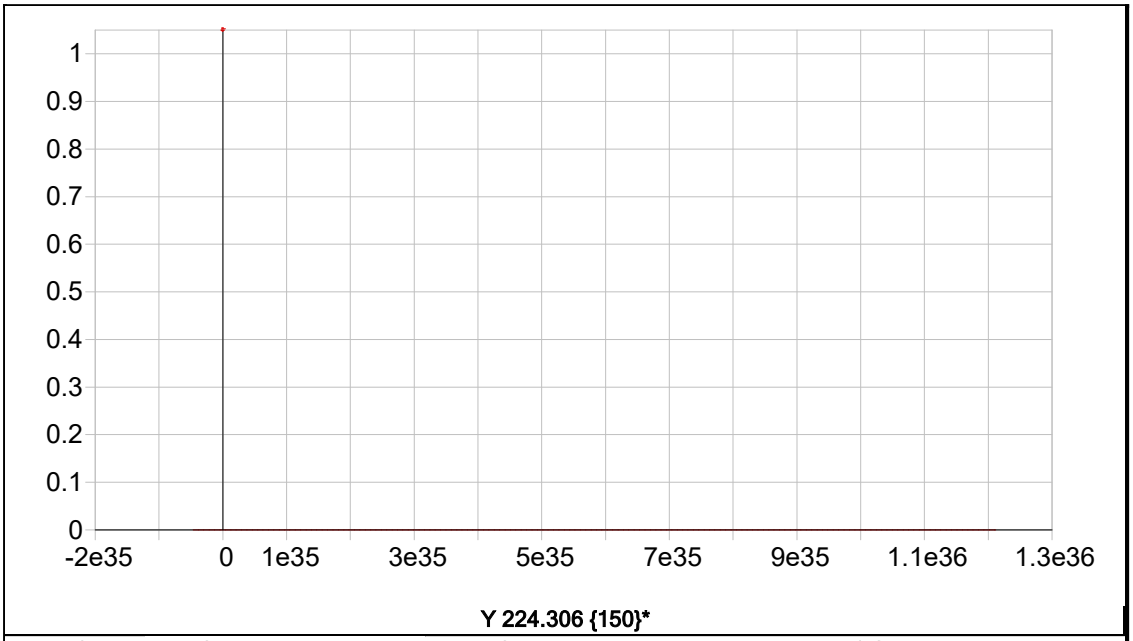
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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

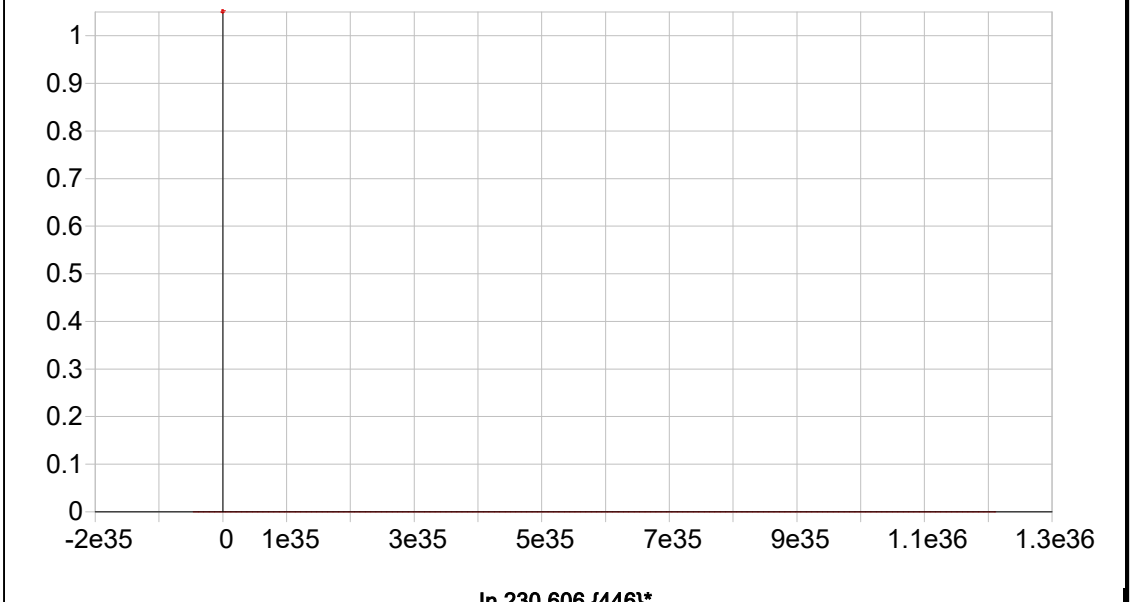


Y 224.306 {150}*

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



In 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:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S0 Acquired: 11/20/2024 12:17:58 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	-.00021	-.00035	-.00034	.00047	.00027	.00001	-.00273	-.00080
Stddev	.00015	.00001	.00016	.00004	.00011	.00050	.00192	.00022
%RSD	72.007	2.2714	47.808	9.2163	39.973	3868.2	70.384	27.675
#1	-.00031	-.00036	-.00051	.00046	.00035	.00011	-.00184	-.00054
#2	-.00004	-.00035	-.00033	.00042	.00032	.00046	-.00142	-.00091
#3	-.00029	-.00034	-.00018	.00051	.00015	-.00053	-.00494	-.00093

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	-.00009	.00187	-.00002	-.00007	-.00002	.00002	.00011	-.00021
Stddev	.00008	.00033	.00002	.00009	.00047	.00001	.00014	.00026
%RSD	91.023	17.720	82.540	126.73	1884.9	33.855	127.56	123.43
#1	-.00007	.00156	-.00001	-.00013	.00049	.00001	-.00005	-.00032
#2	-.00002	.00183	-.00004	-.00010	-.00044	.00003	.00021	-.00039
#3	-.00018	.00222	-.00001	.00003	-.00013	.00003	.00017	.00009

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	-.00022	-.00167	.00906	-.00005	.00905	.00155	.00102	.00012
Stddev	.00006	.00008	.00018	.00013	.00064	.00003	.00011	.00021
%RSD	25.758	4.8101	2.0282	249.80	7.1262	2.2147	10.740	183.32
#1	-.00015	-.00158	.00899	-.00002	.00842	.00158	.00106	-.00011
#2	-.00026	-.00171	.00927	.00006	.00971	.00151	.00090	.00031
#3	-.00024	-.00173	.00893	-.00020	.00902	.00156	.00111	.00015

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	.00057	.00182	.00019	-.00074	.00029	.00241	.00181
Stddev	.00007	.00048	.00001	.00004	.00006	.00048	.00027
%RSD	11.575	26.483	6.8786	4.8808	19.879	20.112	15.039
#1	.00050	.00143	.00020	-.00077	.00026	.00199	.00154
#2	.00063	.00168	.00017	-.00070	.00036	.00230	.00208
#3	.00058	.00236	.00019	-.00074	.00026	.00294	.00182

Sample Name: S0 Acquired: 11/20/2024 12:17:58 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	2653.2	57897.	11366.	2057.8	4366.3
Stddev	3.6	92.	48.	7.6	4.7
%RSD	.13613	.15887	.41875	.36748	.10700
#1	2649.0	57795.	11324.	2059.3	4363.1
#2	2655.4	57922.	11418.	2049.7	4364.2
#3	2655.2	57974.	11356.	2064.6	4371.7

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S1 Acquired: 11/20/2024 12:22:23 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	.00098	.00204	.00245	.00231	.01044	.00921	.45274	.02391
Stddev	.00013	.00011	.00007	.00009	.00008	.00060	.00215	.00006
%RSD	13.295	5.3257	2.9476	3.7859	.72558	6.5415	.47429	.23979
#1	.00083	.00202	.00250	.00235	.01035	.00946	.45035	.02397
#2	.00106	.00195	.00248	.00238	.01050	.00853	.45335	.02391
#3	.00104	.00216	.00237	.00222	.01045	.00965	.45451	.02386

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	.01658	.10405	.00214	.02850	.01852	.00067	.01747	.03559
Stddev	.00016	.00062	.00002	.00005	.00005	.00001	.00029	.00019
%RSD	.95027	.59912	.82277	.17683	.26642	1.5942	1.6489	.54634
#1	.01675	.10337	.00212	.02856	.01848	.00067	.01747	.03569
#2	.01657	.10460	.00214	.02846	.01850	.00066	.01718	.03572
#3	.01643	.10418	.00215	.02848	.01857	.00068	.01775	.03537

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	.02643	.00206	.05633	.00604	.12263	.01647	.05233	.17750
Stddev	.00007	.00003	.00039	.00024	.00086	.00012	.00015	.00012
%RSD	.28239	1.2449	.70035	4.0369	.69934	.71089	.28848	.06491
#1	.02637	.00204	.05597	.00589	.12353	.01648	.05239	.17747
#2	.02651	.00209	.05627	.00632	.12255	.01635	.05216	.17740
#3	.02641	.00206	.05675	.00590	.12182	.01658	.05244	.17763

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	.00643	.13008	.00261	-.00017	.01003	.01254	.36720
Stddev	.00011	.00032	.00002	.00009	.00006	.00089	.00060
%RSD	1.7880	.24432	.60473	52.761	.56486	7.0935	.16243
#1	.00650	.12979	.00263	-.00006	.00997	.01311	.36663
#2	.00629	.13002	.00262	-.00022	.01004	.01300	.36717
#3	.00648	.13042	.00260	-.00021	.01008	.01151	.36782

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S1 Acquired: 11/20/2024 12:22:23 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	2608.2	57081.	11250.	1966.3	4232.5
Stddev	3.4	157.	41.	15.6	1.8
%RSD	.12888	.27589	.36396	.79141	.04216
#1	2606.9	56942.	11224.	1948.5	4234.5
#2	2605.6	57048.	11230.	1973.5	4231.7
#3	2612.0	57252.	11297.	1977.0	4231.2

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S2 Acquired: 11/20/2024 12:26:46 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	.04680	.05159	.20019	.07256	.16035	.13770	6.9108	.17042
Stddev	.00025	.00057	.00067	.00017	.00039	.00075	.0145	.00174
%RSD	.52624	1.1017	.33505	.22971	.24168	.54286	.20983	1.0227
#1	.04705	.05216	.20069	.07242	.16076	.13849	6.9262	.17131
#2	.04656	.05102	.20045	.07251	.16030	.13700	6.8974	.17154
#3	.04679	.05158	.19943	.07274	.15999	.13760	6.9088	.16841

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	.88458	.20270	.03570	.37668	.17401	.00530	.33558	.06990
Stddev	.00265	.00075	.00013	.00096	.00063	.00001	.00142	.00036
%RSD	.29957	.37028	.35711	.25603	.36019	.25844	.42433	.51658
#1	.88672	.20341	.03562	.37775	.17471	.00530	.33644	.07014
#2	.88541	.20278	.03563	.37643	.17351	.00529	.33637	.07007
#3	.88161	.20192	.03585	.37587	.17381	.00532	.33394	.06948

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	.26887	.07294	.10127	.05938	1.1245	.03078	.39008	.68920
Stddev	.00041	.00013	.00086	.00021	.0052	.00040	.00363	.00162
%RSD	.15360	.17371	.85221	.34959	.46341	1.3092	.93049	.23504
#1	.26925	.07301	.10122	.05944	1.1187	.03046	.39298	.69099
#2	.26891	.07280	.10044	.05955	1.1287	.03066	.39125	.68783
#3	.26843	.07302	.10216	.05915	1.1263	.03124	.38601	.68879

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	.09448	.50500	.00551	.02355	.01993	.43026	14.436
Stddev	.00026	.00126	.00005	.00012	.00004	.00215	.028
%RSD	.27578	.24857	.93880	.52006	.22126	.49870	.19663
#1	.09478	.50575	.00547	.02347	.01989	.43207	14.465
#2	.09436	.50569	.00549	.02349	.01998	.42789	14.408
#3	.09430	.50355	.00557	.02369	.01993	.43081	14.434

Sample Name: S2 Acquired: 11/20/2024 12:26:46 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	2598.3	57406.	11307.	1968.5	4145.7
Stddev	11.6	68.	108.	1.6	18.9
%RSD	.44750	.11915	.95452	.08135	.45562
#1	2586.3	57396.	11236.	1970.3	4124.3
#2	2609.5	57479.	11253.	1967.7	4160.1
#3	2599.2	57344.	11431.	1967.4	4152.7

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S3 Acquired: 11/20/2024 12:30:56 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	.14684	.16142	.62238	.22800	.50207	.42833	21.110	.53884
Stddev	.00046	.00069	.00038	.00010	.00064	.00028	.190	.00198
%RSD	.31661	.42974	.06042	.04533	.12776	.06519	.89779	.36785
#1	.14670	.16156	.62249	.22799	.50207	.42815	21.185	.54106
#2	.14646	.16204	.62196	.22791	.50143	.42865	21.250	.53726
#3	.14736	.16067	.62268	.22811	.50271	.42819	20.894	.53819

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	2.7719	.62322	.11185	1.1712	.53369	.01652	1.0187	.21894
Stddev	.0023	.00134	.00027	.0013	.00069	.00003	.0033	.00062
%RSD	.08340	.21555	.24227	.11303	.12876	.18203	.32298	.28465
#1	2.7743	.62336	.11167	1.1726	.53325	.01649	1.0221	.21960
#2	2.7697	.62449	.11217	1.1700	.53333	.01654	1.0184	.21836
#3	2.7717	.62182	.11172	1.1711	.53448	.01653	1.0156	.21886

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	.83526	.22937	.30190	.18455	3.4856	.09382	1.2123	2.1193
Stddev	.00091	.00059	.00235	.00038	.0043	.00049	.0057	.0024
%RSD	.10871	.25690	.77761	.20761	.12270	.52033	.47239	.11325
#1	.83522	.22922	.30311	.18438	3.4855	.09393	1.2189	2.1189
#2	.83437	.23002	.30340	.18499	3.4899	.09425	1.2087	2.1172
#3	.83618	.22887	.29920	.18428	3.4813	.09329	1.2093	2.1219

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	.29133	1.5525	.01714	.07864	.06389	1.3529	43.815
Stddev	.00033	.0040	.00004	.00017	.00002	.0125	.308
%RSD	.11254	.25865	.21862	.21106	.03785	.92085	.70374
#1	.29167	1.5542	.01717	.07855	.06386	1.3637	44.154
#2	.29130	1.5554	.01714	.07853	.06390	1.3557	43.740
#3	.29101	1.5479	.01710	.07883	.06391	1.3393	43.551

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S3 Acquired: 11/20/2024 12:30:56 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	2549.9	56475.	11302.	1922.2	3994.1
Stddev	1.7	147.	46.	4.2	2.2
%RSD	.06523	.26040	.40678	.21928	.05502
#1	2551.8	56432.	11253.	1922.1	3993.5
#2	2549.0	56355.	11308.	1917.9	3992.3
#3	2548.8	56639.	11345.	1926.4	3996.6

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S4 Acquired: 11/20/2024 12:35:12 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	.28421	.30704	1.1845	.44803	.97673	.81273	38.545	.98753
Stddev	.00016	.00174	.0032	.00043	.00173	.00162	.064	.00498
%RSD	.05462	.56649	.26591	.09688	.17754	.19947	.16478	.50394
#1	.28403	.30514	1.1862	.44802	.97763	.81433	38.473	.99327
#2	.28427	.30856	1.1864	.44761	.97473	.81278	38.572	.98444
#3	.28432	.30742	1.1809	.44848	.97784	.81109	38.592	.98487

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	5.3198	1.1532	.21136	2.2424	1.0166	.03186	1.8557	.41033
Stddev	.0182	.0032	.00083	.0072	.0021	.00016	.0078	.00079
%RSD	.34250	.27320	.39239	.31876	.20503	.48816	.42323	.19320
#1	5.3246	1.1543	.21147	2.2473	1.0186	.03175	1.8599	.40986
#2	5.3352	1.1497	.21047	2.2457	1.0145	.03179	1.8466	.40988
#3	5.2997	1.1557	.21212	2.2342	1.0166	.03204	1.8605	.41124

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	1.5946	.44142	.58544	.34716	6.6983	.18402	2.2227	4.0445
Stddev	.0052	.00142	.00282	.00105	.0142	.00079	.0143	.0045
%RSD	.32442	.32245	.48126	.30269	.21169	.42813	.64523	.11092
#1	1.5969	.44196	.58609	.34833	6.6995	.18330	2.2393	4.0493
#2	1.5982	.43980	.58236	.34686	6.6835	.18391	2.2144	4.0404
#3	1.5887	.44249	.58789	.34630	6.7118	.18486	2.2145	4.0438

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	.55087	2.8855	.03442	.15379	.12540	2.5438	80.591
Stddev	.00226	.0070	.00036	.00079	.00009	.0160	.189
%RSD	.41055	.24368	1.0322	.51695	.07331	.63112	.23461
#1	.55144	2.8924	.03403	.15331	.12532	2.5601	80.788
#2	.55280	2.8783	.03449	.15470	.12550	2.5280	80.575
#3	.54838	2.8858	.03472	.15334	.12536	2.5432	80.411

Sample Name: S4 Acquired: 11/20/2024 12:35:12 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	2479.7	55640.	11785.	1835.7	3848.0
Stddev	12.6	45.	53.	8.3	16.9
%RSD	.50966	.08098	.45032	.45371	.43911
#1	2466.9	55611.	11727.	1844.1	3828.8
#2	2492.2	55692.	11797.	1835.6	3860.8
#3	2480.2	55617.	11830.	1827.4	3854.3

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S5 Acquired: 11/20/2024 12:39:25 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	.62478	.62783	2.5466	.99171	2.1541	1.7322	80.158	2.0336
Stddev	.00224	.00749	.0046	.00270	.0077	.0006	.078	.0115
%RSD	.35891	1.1929	.18040	.27199	.35903	.03500	.09782	.56285
#1	.62307	.62892	2.5476	.98920	2.1499	1.7329	80.068	2.0445
#2	.62394	.63470	2.5416	.99137	2.1494	1.7321	80.213	2.0348
#3	.62732	.61985	2.5507	.99456	2.1631	1.7317	80.193	2.0217

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	11.435	2.3859	.44500	4.8494	2.1792	.06854	3.8103	.86509
Stddev	.014	.0039	.00154	.0109	.0085	.00020	.0116	.00314
%RSD	.12471	.16117	.34661	.22481	.39142	.28616	.30340	.36330
#1	11.442	2.3887	.44677	4.8487	2.1737	.06850	3.8236	.86768
#2	11.419	2.3815	.44425	4.8389	2.1749	.06837	3.8027	.86159
#3	11.446	2.3874	.44397	4.8607	2.1890	.06875	3.8047	.86599

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	3.4296	.95572	1.2889	.72578	14.135	.40905	4.6186	8.5843
Stddev	.0082	.00117	.0043	.00185	.038	.00058	.0179	.0185
%RSD	.23956	.12277	.33518	.25503	.27059	.14253	.38682	.21576
#1	3.4296	.95698	1.2936	.72738	14.179	.40924	4.6388	8.5721
#2	3.4214	.95550	1.2881	.72375	14.121	.40839	4.6124	8.5752
#3	3.4378	.95467	1.2851	.72622	14.106	.40951	4.6047	8.6056

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	1.1723	6.0568	.07758	.33625	.28143	5.4067	163.26
Stddev	.0008	.0113	.00073	.00054	.00095	.0276	.69
%RSD	.06621	.18654	.94358	.15957	.33658	.50953	.42545
#1	1.1718	6.0694	.07685	.33574	.28136	5.4344	163.94
#2	1.1732	6.0534	.07756	.33621	.28241	5.4064	162.56
#3	1.1718	6.0476	.07831	.33681	.28052	5.3793	163.29

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: S5 Acquired: 11/20/2024 12:39:25 Type: Cal
Method: NON EPA-6010-200.7(v2475) 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	2288.0	52533.	11668.	1683.2	3498.1
Stddev	9.1	149.	47.	9.1	9.1
%RSD	.39573	.28433	.40572	.53911	.25963
#1	2290.8	52438.	11615.	1678.7	3498.4
#2	2295.2	52705.	11705.	1693.7	3506.9
#3	2277.8	52455.	11684.	1677.2	3488.8

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICV01 Acquired: 11/20/2024 12:50:00 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	1.038914	1.091436	1.047053	1.070360	1.024430	2.679763
Stddev	.004020	.018551	.002264	.006112	.001010	.009579
%RSD	.3869372	1.699695	.2162175	.5709808	.0986262	.3574484
#1	1.036469	1.070437	1.047804	1.063306	1.024489	2.680269
#2	1.043553	1.098272	1.048846	1.074069	1.025409	2.669941
#3	1.036719	1.105599	1.044510	1.073705	1.023391	2.689078

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5350568	.5282930	.5290839	10.47281	.5483723	.5324730
Stddev	.0019378	.0015474	.0015816	.04438	.0013281	.0016890
%RSD	.3621748	.2929107	.2989271	.4238083	.2421943	.3172071
#1	.5361255	.5276085	.5289811	10.44950	.5496801	.5326908
#2	.5328199	.5272059	.5307144	10.44494	.5484120	.5340425
#3	.5362250	.5300647	.5275563	10.52399	.5470247	.5306856

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5462367	10.41211	.5402278	6.197106	.5353904	.2668494
Stddev	.0005784	.02808	.0021901	.030780	.0013289	.0013235
%RSD	.1058839	.2696831	.4054003	.4966854	.2482083	.4959705
#1	.5460414	10.43665	.5397044	6.178264	.5355861	.2682180
#2	.5468875	10.41820	.5383468	6.180429	.5366106	.2667541
#3	.5457813	10.38149	.5426321	6.232626	.5339745	.2655762

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.884451	.5234148	1.089457	10.26702	2.462336	2.583510
Stddev	.085105	.0018013	.005214	.05651	.007807	.004630
%RSD	.8609948	.3441384	.4786324	.5504070	.3170427	.1792166
#1	9.982273	.5223681	1.093638	10.32245	2.456523	2.578564
#2	9.843663	.5223816	1.091118	10.26914	2.459276	2.587740
#3	9.827418	.5254947	1.083614	10.20949	2.471209	2.584225

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICV01 Acquired: 11/20/2024 12:50:00 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	2.479633	2.515691	F 1.999491	F -.000842	F -.006559	F -.001633
Stddev	.008182	.006323	.007738	.001940	.000509	.000707
%RSD	.3299593	.2513347	.3870166	230.4203	7.762936	43.26542
#1	2.470686	2.513463	2.008421	-.002651	-.007138	-.001537
#2	2.486735	2.510784	1.995287	.001206	-.006184	-.000980
#3	2.481478	2.522826	1.994765	-.001081	-.006354	-.002383

Elem	Sr4077
Units	ppm
Avg	F -.009141
Stddev	.000029
%RSD	.3120043
#1	-.009139
#2	-.009170
#3	-.009113

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2450.813	54131.68	11699.90	1759.156	3940.124
Stddev	3.786	181.93	46.26	4.285	9.007
%RSD	.1544992	.3360848	.3953691	.2435662	.2285890
#1	2448.042	53928.40	11720.41	1754.617	3935.617
#2	2449.271	54187.43	11732.35	1759.720	3934.261
#3	2455.128	54279.21	11646.93	1763.131	3950.495

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: LLICV01 Acquired: 11/20/2024 12:59:46 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0175995	.0368786	.0115331	.0160428	.0480302	.1008799
Stddev	.0004812	.0012184	.0008888	.0009104	.0010602	.0037089
%RSD	2.733989	3.303682	7.706326	5.675059	2.207401	3.676554
#1	.0181202	.0360354	.0119485	.0160525	.0483830	.1022936
#2	.0171712	.0363249	.0121381	.0169484	.0488690	.0966720
#3	.0175072	.0382754	.0105127	.0151276	.0468386	.1036741

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0950143	.0054122	.0068551	1.937139	.0100289	.0283206
Stddev	.0001777	.0000293	.0000776	.006318	.0003486	.0002725
%RSD	.1869779	.5409762	1.132254	.3261272	3.476320	.9620564
#1	.0949032	.0053988	.0068766	1.930862	.0098413	.0286192
#2	.0949205	.0053921	.0069198	1.937059	.0104311	.0282569
#3	.0952192	.0054458	.0067691	1.943496	.0098142	.0280856

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210040	.0915959	.0193079	1.910236	.0372864	.0101355
Stddev	.0000679	.0040168	.0003274	.004842	.0001273	.0002885
%RSD	.3231268	4.385374	1.695512	.2534855	.3415125	2.846183
#1	.0210814	.0962257	.0189299	1.905456	.0374248	.0103764
#2	.0209759	.0895234	.0194999	1.910115	.0371741	.0102143
#3	.0209547	.0890386	.0194940	1.915138	.0372603	.0098158

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.616922	.0385337	.0412937	1.792529	.1031676	.2070117
Stddev	.005526	.0004834	.0000545	.014486	.0005849	.0003699
%RSD	.3417629	1.254479	.1318800	.8081492	.5669623	.1786768
#1	1.610575	.0388771	.0412390	1.782601	.1037873	.2066197
#2	1.619523	.0379809	.0413479	1.809152	.1030903	.2070608
#3	1.620667	.0387432	.0412940	1.785834	.1026251	.2073545

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: LLICV01 Acquired: 11/20/2024 12:59:46 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0460208	F .1915382	.3403715	.0190532	F .3312166	F .0140397
Stddev	.0007379	.0012219	.0056585	.0014356	.0022964	.0008704
%RSD	1.603444	.6379210	1.662449	7.534472	.6933304	6.199853
#1	.0465975	.1929490	.3400268	.0196360	.3314608	.0140681
#2	.0462757	.1908193	.3348932	.0201058	.3333812	.0131553
#3	.0451893	.1908464	.3461944	.0174179	.3288078	.0148955

Elem	Sr4077
Units	ppm
Avg	.0196776
Stddev	.0000389
%RSD	.1974900
#1	.0197225
#2	.0196548
#3	.0196556

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2567.986	58663.28	12555.80	1842.286	4311.641
Stddev	2.520	149.06	22.66	10.216	5.215
%RSD	.0981211	.2540960	.1804708	.5545262	.1209463
#1	2566.649	58545.70	12536.86	1831.651	4305.935
#2	2570.892	58613.21	12549.64	1843.183	4316.159
#3	2566.417	58830.93	12580.91	1852.024	4312.828

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICB01 Acquired: 11/20/2024 13:09:15 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0000841	-.000143	.0003195	-.000957	-.001049	.0028779	-.002809
Stddev	.0019447	.001181	.0005552	.000332	.001190	.0032941	.000285
%RSD	2312.835	827.0317	173.7609	34.72943	113.4547	114.4600	10.14446
#1	.0013366	-.000664	.0004876	-.000765	-.001108	-.000563	-.002732
#2	-.002156	-.000974	-.000300	-.001340	.000170	.003195	-.003125
#3	.001072	.001209	.000771	-.000765	-.002207	.006002	-.002571

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000297	-.000022	.0048638	.0002728	.0000163	-.000345	-.006230
Stddev	.0000308	.000031	.0075191	.0001020	.0000237	.000013	.004480
%RSD	103.6083	146.0063	154.5928	37.37491	145.0550	3.900277	71.91635
#1	-.000005	-.000009	.0134636	.0001632	-.000010	-.000333	-.002945
#2	.000041	.000002	-.000470	.0003649	.000036	-.000360	-.004411
#3	.000054	-.000057	.001598	.0002902	.000023	-.000342	-.011333

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000148	.0051573	-.000288	.0005122	-.168172	.0008025	-.000170
Stddev	.0000775	.0064999	.000216	.0000633	.009327	.0006469	.000104
%RSD	523.5724	126.0341	74.95230	12.34972	5.545855	80.60587	61.42202
#1	-.000072	.0089999	-.000322	.0004867	-.176617	.0014046	-.000064
#2	.000037	.0088194	-.000057	.0004657	-.169738	.0008842	-.000172
#3	.000078	-.002347	-.000485	.0005842	-.158162	.0001187	-.000273

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.106045	.0023133	-.000033	-.003830	-.000129	.0034578	-.001918
Stddev	.018637	.0004920	.000058	.000325	.000101	.0008614	.001747
%RSD	17.57447	21.26603	174.5650	8.489718	78.69682	24.91249	91.09073
#1	-.120931	.0017473	.000014	-.003524	-.000227	.0037738	-.001749
#2	-.085143	.0026384	-.000098	-.004172	-.000134	.0041166	-.003744
#3	-.112060	.0025542	-.000016	-.003795	-.000025	.0024830	-.000262

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICB01 Acquired: 11/20/2024 13:09:15 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002069	-.002493	-.000113
Stddev	.001038	.001181	.000029
%RSD	50.17619	47.36400	25.54498
#1	-.002570	-.001131	-.000140
#2	-.002761	-.003229	-.000082
#3	-.000875	-.003120	-.000116

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2476.628	56159.21	11830.79	1766.878	4212.653
Stddev	9.323	28.47	20.23	7.102	11.728
%RSD	.3764303	.0506876	.1709912	.4019282	.2783936
#1	2468.722	56126.45	11818.74	1759.361	4202.001
#2	2474.254	56177.86	11819.48	1767.799	4210.737
#3	2486.909	56173.32	11854.14	1773.474	4225.221

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CRI01 Acquired: 11/20/2024 13:13:37 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0212192	.0379571	.0124414	.0158199	.0505008	.1116316
Stddev	.0024754	.0001542	.0005921	.0018954	.0010440	.0032599
%RSD	11.66585	.4061784	4.759497	11.98122	2.067188	2.920232
#1	.0185059	.0377881	.0119466	.0144555	.0495228	.1142584
#2	.0233543	.0379931	.0130975	.0179842	.0503794	.1126530
#3	.0217975	.0380901	.0122800	.0150201	.0516001	.1079832

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0996951	.0058304	.0073187	2.059309	.0104608	.0297610
Stddev	.0002437	.0000327	.0000611	.008139	.0001459	.0003398
%RSD	.2444977	.5607191	.8348363	.3952137	1.394712	1.141836
#1	.0999250	.0058293	.0073053	2.050008	.0106179	.0295095
#2	.0997207	.0057983	.0072654	2.062794	.0103295	.0296260
#3	.0994396	.0058637	.0073854	2.065125	.0104349	.0301476

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0225547	.0987809	.0205267	2.037229	.0393516	.0110022
Stddev	.0001095	.0045104	.0002636	.015696	.0001801	.0001648
%RSD	.4856014	4.566052	1.284393	.7704807	.4576796	1.497997
#1	.0224883	.1038451	.0202481	2.040654	.0393451	.0108761
#2	.0224946	.0951956	.0205595	2.020103	.0395348	.0109419
#3	.0226811	.0973021	.0207723	2.050930	.0391748	.0111887

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.699509	.0411102	.0440898	1.899880	.1050887	.2179579
Stddev	.025703	.0014318	.0002610	.004227	.0012792	.0003237
%RSD	1.512354	3.482741	.5920836	.2224904	1.217231	.1485098
#1	1.669882	.0395119	.0438803	1.904737	.1065586	.2182565
#2	1.712808	.0422754	.0443822	1.897872	.1044797	.2176139
#3	1.715838	.0415434	.0440067	1.897032	.1042279	.2180033

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CRI01 Acquired: 11/20/2024 13:13:37 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0487185	F .2016267	.3639424	.0174801	F .3502778	F .0129536
Stddev	.0012481	.0005482	.0028251	.0029229	.0040714	.0009355
%RSD	2.561922	.2719066	.7762478	16.72106	1.162350	7.221825
#1	.0476592	.2022294	.3653952	.0202724	.3474121	.0120805
#2	.0484018	.2011576	.3657455	.0144422	.3484829	.0128395
#3	.0500944	.2014932	.3606866	.0177257	.3549382	.0139410

Elem	Sr4077
Units	ppm
Avg	.0206490
Stddev	.0000720
%RSD	.3484755
#1	.0205796
#2	.0206444
#3	.0207232

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2460.725	55358.67	11891.76	1748.598	4118.800
Stddev	2.595	163.66	29.34	3.814	1.612
%RSD	.1054719	.2956406	.2467024	.2181006	.0391306
#1	2459.459	55547.65	11858.54	1752.364	4118.167
#2	2463.711	55264.27	11914.11	1744.738	4120.632
#3	2459.005	55264.09	11902.64	1748.691	4117.601

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICSA01 Acquired: 11/20/2024 13:17:55 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0054888	-.001134	.0074866	-.018820	-.004030	268.1132
Stddev	.0022586	.002051	.0007645	.001680	.002186	.8124
%RSD	41.14880	180.8955	10.21198	8.924487	54.24958	.3030196
#1	.0044727	-.003447	.0074627	-.020391	-.006522	267.1800
#2	.0080770	.000460	.0082628	-.019018	-.003138	268.4965
#3	.0039168	-.000414	.0067343	-.017050	-.002431	268.6631

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013160	.0014436	.0066839	244.0701	.0588155	.0023501
Stddev	.0001024	.0000734	.0000547	.8112	.0005702	.0001347
%RSD	7.784059	5.084640	.8178864	.3323743	.9694149	5.731555
#1	.0012102	.0015281	.0066912	243.5504	.0587647	.0023274
#2	.0013230	.0014064	.0067346	243.6550	.0594094	.0024948
#3	.0014147	.0013962	.0066260	245.0049	.0582724	.0022283

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155761	101.2115	.0031726	269.4840	.0029524	-.001098
Stddev	.0004941	.3578	.0002030	.8101	.0002953	.000326
%RSD	3.172398	.3535114	6.397359	.3006123	10.00070	29.69164
#1	.0150842	100.7988	.0030637	268.8557	.0028618	-.001342
#2	.0155718	101.4004	.0030474	269.1978	.0032823	-.001224
#3	.0160724	101.4351	.0034068	270.3983	.0027130	-.000728

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.074857	.0086431	.0059354	-.005149	.0535742	-.000451
Stddev	.010164	.0011013	.0001566	.010081	.0004270	.000156
%RSD	13.57802	12.74158	2.638737	195.7904	.7970497	34.68132
#1	-.086481	.0073835	.0061159	.001876	.0531783	-.000342
#2	-.067644	.0094239	.0058354	-.016699	.0535177	-.000381
#3	-.070445	.0091219	.0058550	-.000624	.0540267	-.000630

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICSA01 Acquired: 11/20/2024 13:17:55 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.007614	-.001483	.0185646	.0044949	-.010898	F .0349928
Stddev	.000713	.000204	.0004806	.0020356	.004600	.0009566
%RSD	9.371208	13.75801	2.588667	45.28636	42.21034	2.733701
#1	-.007099	-.001282	.0184837	.0068363	-.012807	.0353648
#2	-.008428	-.001478	.0190806	.0035027	-.014237	.0357075
#3	-.007314	-.001690	.0181297	.0031457	-.005651	.0339061

Elem	Sr4077
Units	ppm
Avg	.0016684
Stddev	.0003446
%RSD	20.65339
#1	.0020144
#2	.0013252
#3	.0016657

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2111.126	48458.45	11534.48	1508.969	3179.564
Stddev	1.160	109.01	26.12	4.760	2.995
%RSD	.0549522	.2249583	.2264888	.3154360	.0942084
#1	2111.700	48530.83	11513.71	1509.544	3182.792
#2	2111.888	48333.07	11563.81	1503.948	3176.874
#3	2109.791	48511.45	11525.91	1513.415	3179.024

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICSAB01 Acquired: 11/20/2024 13:28:51 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.1183586	.0902195	.0578314	.0302455	.6444435	267.9667
Stddev	.0034159	.0022428	.0023410	.0020147	.0038917	.5208
%RSD	2.886071	2.485899	4.048015	6.661143	.6038899	.1943437
#1	.1175428	.0927375	.0600695	.0292258	.6416990	267.3831
#2	.1154245	.0884362	.0580252	.0325662	.6427342	268.3841
#3	.1221086	.0894848	.0553995	.0289444	.6488974	268.1331

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5165706	.5142100	1.047630	243.5967	.5825707	.5265628
Stddev	.0002565	.0013828	.002016	.2619	.0018655	.0008963
%RSD	.0496549	.2689088	.1924788	.1075044	.3202172	.1702166
#1	.5163685	.5145354	1.049167	243.8975	.5837732	.5268143
#2	.5168591	.5126935	1.048377	243.4730	.5835172	.5273065
#3	.5164840	.5154010	1.045347	243.4196	.5804217	.5255677

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5199265	99.99780	.4967106	267.2038	1.037584	.2061107
Stddev	.0008884	.23346	.0011645	.3364	.001329	.0002327
%RSD	.1708677	.2334625	.2344445	.1259007	.1280626	.1129135
#1	.5199763	100.0227	.4977376	267.3685	1.038819	.2062332
#2	.5190142	100.2178	.4954454	267.4261	1.037755	.2062566
#3	.5207889	99.7529	.4969489	266.8168	1.036178	.2058423

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.045328	.5102009	.9157120	-.040657	.9500968	1.006630
Stddev	.019290	.0002101	.0014883	.012567	.0024621	.001182
%RSD	42.55758	.0411862	.1625245	30.91070	.2591385	.1174482
#1	-.064525	.5104330	.9156563	-.039484	.9527519	1.006287
#2	-.045512	.5100235	.9142524	-.053770	.9478891	1.005658
#3	-.025946	.5101462	.9172274	-.028717	.9496494	1.007946

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: ICSAB01 Acquired: 11/20/2024 13:28:51 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.9653051	.9458311	F .8450408	F .0030356	F -.013201	F .0331572
Stddev	.0014979	.0012362	.0033488	.0009251	.006729	.0009887
%RSD	.1551729	.1307025	.3962841	30.47496	50.96978	2.981911
#1	.9669562	.9457913	.8459646	.0036971	-.017073	.0336354
#2	.9640335	.9446152	.8478306	.0034311	-.017100	.0320202
#3	.9649256	.9470867	.8413270	.0019785	-.005432	.0338158

Elem	Sr4077
Units	ppm
Avg	F .0042850
Stddev	.0003639
%RSD	8.492461
#1	.0041742
#2	.0039893
#3	.0046914

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2115.019	48424.94	11357.54	1507.186	3185.544
Stddev	6.204	187.10	32.40	8.340	8.586
%RSD	.2933322	.3863676	.2853145	.5533555	.2695353
#1	2111.576	48274.21	11320.20	1497.616	3177.540
#2	2122.181	48366.26	11374.15	1511.034	3194.613
#3	2111.301	48634.34	11378.28	1512.907	3184.478

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCV01 Acquired: 11/20/2024 13:35:39 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	4.941962	4.949542	4.921285	5.029468	5.020483	10.02329	9.533580
Stddev	.015721	.043207	.008404	.012304	.009937	.02055	.075178
%RSD	.3181144	.8729518	.1707726	.2446415	.1979300	.2050386	.7885642
#1	4.959344	4.999431	4.926219	5.042034	5.027164	10.02620	9.580941
#2	4.937805	4.924189	4.926056	5.028927	5.025220	10.04223	9.572902
#3	4.928738	4.925007	4.911582	5.017443	5.009063	10.00143	9.446895

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2405210	2.443790	24.15847	1.022191	2.461866	1.267221	4.930885
Stddev	.0008231	.001582	.03942	.003231	.003953	.003112	.009663
%RSD	.3422280	.0647307	.1631900	.3160934	.1605885	.2455785	.1959740
#1	.2410244	2.445045	24.11729	1.018945	2.465545	1.269459	4.920555
#2	.2395712	2.444312	24.19586	1.025406	2.462366	1.268538	4.932397
#3	.2409677	2.442013	24.16227	1.022223	2.457686	1.263667	4.939703

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.355735	24.25811	2.464249	1.251204	24.66365	2.461749	2.569012
Stddev	.007125	.04761	.003209	.001721	.02659	.009365	.015493
%RSD	.3024349	.1962440	.1302130	.1375098	.1077964	.3804065	.6030806
#1	2.360991	24.22423	2.466135	1.249253	24.65277	2.462536	2.581348
#2	2.347626	24.31253	2.466067	1.251854	24.64424	2.470695	2.551623
#3	2.358587	24.23755	2.460544	1.252505	24.69395	2.452015	2.574065

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.40515	4.727887	5.105326	4.862395	4.801944	5.095721	4.957760
Stddev	.08666	.021393	.011029	.009064	.003521	.043276	.025708
%RSD	.3410998	.4524816	.2160377	.1864059	.0733180	.8492666	.5185348
#1	25.32499	4.751398	5.117285	4.872858	4.805353	5.045830	4.984547
#2	25.49710	4.709568	5.103140	4.857374	4.798321	5.118218	4.955445
#3	25.39336	4.722696	5.095553	4.856953	4.802157	5.123114	4.933288

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCV01 Acquired: 11/20/2024 13:35:39 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	4.738433	4.611546	4.915831
Stddev	.019361	.022273	.020283
%RSD	.4085900	.4829772	.4126152
#1	4.759912	4.632193	4.939156
#2	4.733066	4.587943	4.902331
#3	4.722323	4.614503	4.906006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2282.574	51452.70	11667.46	1612.442	3607.454
Stddev	7.700	143.97	53.44	7.417	10.894
%RSD	.3373283	.2798112	.4580647	.4600069	.3019772
#1	2276.781	51387.36	11606.52	1603.908	3599.921
#2	2279.631	51352.98	11689.51	1616.084	3602.495
#3	2291.312	51617.75	11706.35	1617.334	3619.944

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCB01 Acquired: 11/20/2024 13:46:22 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0010450	-.000820	.0004535	.0000749	-.001424	-.002190	-.003544
Stddev	.0018346	.001681	.0003805	.0019270	.000663	.004461	.000478
%RSD	175.5560	204.9725	83.89999	2572.790	46.55262	203.6947	13.48439
#1	.0006843	-.001561	.0000698	-.000013	-.001932	-.004826	-.004073
#2	.0030331	.001104	.0008307	.002044	-.000674	.002961	-.003418
#3	-.000582	-.002003	.0004599	-.001807	-.001664	-.004704	-.003142

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000492	-.000064	-.010884	.0001195	.0000800	-.000141	-.002508
Stddev	.0000302	.000053	.003967	.0000286	.0001834	.000159	.003622
%RSD	61.34966	83.69846	36.44946	23.93666	229.3075	112.9783	144.4128
#1	.0000576	-.000117	-.006314	.0000877	-.000131	-.000167	-.002914
#2	.0000742	-.000011	-.013440	.0001431	.000199	.000030	-.005910
#3	.0000157	-.000063	-.012897	.0001277	.000172	-.000286	.001300

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000136	.0084755	-.000182	.0007553	-.180817	.0009218	-.000689
Stddev	.0002035	.0029377	.000093	.0001943	.009388	.0005744	.000207
%RSD	1495.297	34.66087	50.92758	25.72500	5.191872	62.31475	29.98318
#1	-.000139	.0082940	-.000288	.0005390	-.190213	.0002596	-.000458
#2	.000245	.0114996	-.000121	.0008120	-.180801	.0012859	-.000752
#3	-.000065	.0056327	-.000135	.0009149	-.171437	.0012198	-.000856

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.115811	.0036898	.0000839	-.003266	-.000401	-.002398	-.000839
Stddev	.020989	.0002725	.0001226	.000431	.000108	.001039	.000841
%RSD	18.12350	7.386637	145.9870	13.20585	26.85171	43.33160	100.2370
#1	-.139929	.0035206	.0000196	-.003629	-.000381	-.002849	.000007
#2	-.105819	.0040042	.0000070	-.003381	-.000517	-.001209	-.000849
#3	-.101685	.0035445	.0002253	-.002789	-.000305	-.003135	-.001676

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCB01 Acquired: 11/20/2024 13:46:22 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.004815	-.004003	-.000101
Stddev	.001045	.001855	.000020
%RSD	21.71069	46.34269	20.24971
#1	-.005734	-.002928	-.000104
#2	-.003678	-.002935	-.000079
#3	-.005034	-.006144	-.000119

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2677.279	61090.67	13160.41	1892.965	4581.225
Stddev	6.377	104.75	11.74	3.367	7.462
%RSD	.2381982	.1714744	.0891732	.1778930	.1628726
#1	2670.504	61010.17	13149.22	1889.083	4572.609
#2	2683.165	61052.72	13172.62	1894.703	4585.497
#3	2678.170	61209.11	13159.39	1895.108	4585.568

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4890-06 Acquired: 11/20/2024 13:50:41 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.005718	-.003103	.0109715	.0128326	.0277551	.2235500	.1459003
Stddev	.001289	.000877	.0012457	.0026754	.0003608	.0007624	.0005711
%RSD	22.53921	28.25828	11.35429	20.84838	1.299972	.3410395	.3914198
#1	-.007201	-.003346	.0096493	.0119639	.0274078	.2227843	.1454715
#2	-.004871	-.003832	.0121232	.0158344	.0281281	.2243091	.1456809
#3	-.005082	-.002130	.0111419	.0106996	.0277295	.2235566	.1465485

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000145	.0023812	22.12123	.0044833	.0011062	.0137528	.0958619
Stddev	.000044	.0000420	.00600	.0002003	.0000403	.0002185	.0040585
%RSD	30.13993	1.763101	.0271081	4.467385	3.642366	1.588894	4.233680
#1	-.000172	.0023657	22.11454	.0044312	.0010676	.0138609	.0914002
#2	-.000094	.0023493	22.12612	.0043142	.0011480	.0138961	.0968514
#3	-.000168	.0024288	22.12302	.0047045	.0011030	.0135013	.0993341

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2508390	1.128343	.0064606	.0003564	237.0780	.0003489	3.626365
Stddev	.0014052	.007274	.0003596	.0001323	.4728	.0014190	.013549
%RSD	.5601865	.6446497	5.565865	37.13098	.1994341	406.7350	.3736384
#1	.2492193	1.129655	.0062281	.0002133	236.6878	.0007414	3.640177
#2	.2515656	1.134872	.0062790	.0004744	237.6038	.0015303	3.625823
#3	.2517322	1.120503	.0068748	.0003814	236.9423	-.001225	3.613094

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.05232	.2158508	.4219926	.0012223	.0000134	.7052557	.6179104
Stddev	.18611	.0005123	.0006200	.0008665	.0003430	.0026965	.0048440
%RSD	.3645459	.2373222	.1469271	70.89110	2557.462	.3823491	.7839345
#1	51.09514	.2155516	.4226543	.0011449	-.000380	.7081209	.6141662
#2	50.84853	.2164423	.4214250	.0003971	.000171	.7027675	.6233811
#3	51.21329	.2155586	.4218987	.0021249	.000249	.7048786	.6161838

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4890-06 Acquired: 11/20/2024 13:50:41 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	1.851910	.0370035	.0868623
Stddev	.005142	.0008750	.0004269
%RSD	.2776834	2.364726	.4914512
#1	1.851657	.0369086	.0864646
#2	1.846899	.0361797	.0868089
#3	1.857174	.0379221	.0873133

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2217.789	50320.83	12019.29	1559.883	3613.892
Stddev	10.918	108.78	24.00	3.784	4.404
%RSD	.4923127	.2161683	.1996511	.2425694	.1218621
#1	2206.568	50198.41	12045.90	1555.842	3608.847
#2	2218.422	50406.37	11999.30	1560.465	3616.966
#3	2228.378	50357.72	12012.65	1563.342	3615.863

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4892-03 Acquired: 11/20/2024 13:55:04 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.006844	-.009200	.0005363	.0034090	.0008625	.0212513	.0909770
Stddev	.001565	.000575	.0008017	.0014657	.0000688	.0018836	.0004333
%RSD	22.87112	6.254146	149.4882	42.99492	7.971337	8.863261	.4763197
#1	-.007406	-.009737	.0006234	.0050731	.0009315	.0214935	.0904930
#2	-.008051	-.009269	-.000305	.0028447	.0008621	.0192584	.0911090
#3	-.005076	-.008593	.001291	.0023094	.0007940	.0230021	.0913290

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000064	.0000893	46.74845	.0026954	.0012374	.0053168	2.096443
Stddev	.000015	.0001045	.18159	.0001729	.0001555	.0001960	.008899
%RSD	23.60456	117.0968	.3884373	6.414540	12.56330	3.685615	.4244941
#1	-.000058	.0000089	46.54166	.0026016	.0010584	.0052270	2.102850
#2	-.000081	.0002075	46.82175	.0025896	.0013388	.0055416	2.086282
#3	-.000053	.0000515	46.88193	.0028949	.0013150	.0051819	2.100196

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.200537	7.709953	.0020362	.0003052	301.8213	.0007919	.0282085
Stddev	.004814	.039744	.0002439	.0002087	1.5559	.0002760	.0006110
%RSD	.4010190	.5154904	11.97691	68.38291	.5155050	34.84813	2.165859
#1	1.194983	7.665526	.0017589	.0005136	300.0395	.0008216	.0288119
#2	1.203108	7.722206	.0022174	.0003059	302.5132	.0005023	.0275902
#3	1.203520	7.742128	.0021322	.0000962	302.9113	.0010518	.0282234

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.778366	.0143492	.0006859	-.004515	-.000080	.5297248	.0039361
Stddev	.008966	.0015397	.0001255	.000747	.000512	.0029336	.0031185
%RSD	.5041877	10.73008	18.29737	16.54079	639.4221	.5537934	79.22950
#1	1.788691	.0161251	.0005757	-.005344	-.000499	.5273070	.0053209
#2	1.772542	.0135322	.0008224	-.003894	-.000232	.5329884	.0003650
#3	1.773866	.0133902	.0006594	-.004307	.000491	.5288792	.0061224

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4892-03 Acquired: 11/20/2024 13:55:04 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.2255135	.0053267	.0733743
Stddev	.0067997	.0011383	.0003390
%RSD	3.015191	21.37039	.4620118
#1	.2332923	.0066153	.0730862
#2	.2207007	.0049066	.0737478
#3	.2225474	.0044581	.0732887

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2238.733	51307.08	12124.01	1592.927	3512.563
Stddev	3.908	125.60	42.68	4.073	5.680
%RSD	.1745690	.2447945	.3519894	.2557234	.1617073
#1	2242.229	51192.36	12173.29	1589.831	3506.045
#2	2234.514	51287.60	12099.26	1597.541	3515.190
#3	2239.458	51441.28	12099.49	1591.407	3516.454

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4893-04 Acquired: 11/20/2024 13:59:29 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002782	-.007304	.0002462	.0022961	-.000398	.0172514	.3798162
Stddev	.002373	.000558	.0005516	.0004962	.000887	.0081734	.0015849
%RSD	85.28498	7.636070	224.0508	21.61121	222.8419	47.37800	.4172857
#1	-.001738	-.007877	.0008740	.0017267	-.000971	.0266757	.3786066
#2	-.001111	-.007272	-.000161	.0026363	.000624	.0129767	.3792315
#3	-.005498	-.006763	.000026	.0025253	-.000846	.0121018	.3816103

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000038	.0001694	46.54392	.0009009	.0033730	.0107000	.0172040
Stddev	.000044	.0000158	.17954	.0001653	.0001746	.0002267	.0013123
%RSD	113.5896	9.329795	.3857412	18.34500	5.175219	2.118832	7.627786
#1	-.000011	.0001871	46.63220	.0009881	.0035484	.0109244	.0163614
#2	-.000016	.0001643	46.33733	.0010043	.0033714	.0104710	.0165347
#3	-.000089	.0001567	46.66222	.0007103	.0031993	.0107046	.0187160

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.182109	2.781677	.0060501	.0003164	269.4275	.0002124	.0480175
Stddev	.009361	.029015	.0001329	.0001747	.9675	.0002971	.0004572
%RSD	.4289874	1.043067	2.195851	55.23567	.3590765	139.8537	.9522546
#1	2.178393	2.772557	.0059102	.0002173	268.3119	-.000129	.0477669
#2	2.175177	2.758319	.0060655	.0002137	270.0353	.000409	.0485453
#3	2.192758	2.814157	.0061745	.0005181	269.9354	.000358	.0477404

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5101707	.0218379	.0006988	-.004953	-.000538	.6259003	.0105358
Stddev	.0011183	.0003133	.0001605	.000277	.000282	.0026051	.0024084
%RSD	.2192009	1.434529	22.96432	5.586858	52.49959	.4162210	22.85898
#1	.5112373	.0221733	.0007116	-.005014	-.000775	.6237311	.0109928
#2	.5102678	.0215529	.0005324	-.004651	-.000225	.6287898	.0126830
#3	.5090071	.0217875	.0008525	-.005194	-.000613	.6251800	.0079317

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4893-04 Acquired: 11/20/2024 13:59:29 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.3054611	.0071670	.0683135
Stddev	.0011228	.0011747	.0003193
%RSD	.3675637	16.39075	.4673573
#1	.3051033	.0077359	.0681105
#2	.3045608	.0079490	.0681486
#3	.3067192	.0058162	.0686815

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2377.012	54417.99	13002.77	1668.779	3764.631
Stddev	17.820	44.37	47.83	5.952	24.899
%RSD	.7496870	.0815344	.3678336	.3566803	.6613999
#1	2357.507	54446.29	12971.35	1673.484	3736.244
#2	2381.091	54366.86	13057.82	1662.088	3774.878
#3	2392.440	54440.83	12979.16	1670.766	3782.773

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4893-08 Acquired: 11/20/2024 14:03:56 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002326	-.009239	-.000228	.0006808	-.000708	-.025990	.6030477
Stddev	.001645	.001066	.000804	.0008621	.000817	.008479	.0007603
%RSD	70.72986	11.53755	353.2177	126.6245	115.3810	32.62452	.1260738
#1	-.000658	-.008015	.000593	.0002311	-.000453	-.020726	.6039168
#2	-.003947	-.009961	-.001014	.0001366	-.001621	-.021473	.6027202
#3	-.002374	-.009741	-.000262	.0016748	-.000049	-.035771	.6025059

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000227	.0002424	140.5029	.0007829	.0005730	.0032272	.0180316
Stddev	.000017	.0000376	.5275	.0002997	.0000977	.0003626	.0031052
%RSD	7.431610	15.49148	.3754217	38.28643	17.05381	11.23443	17.22119
#1	-.000208	.0002169	140.7736	.0005146	.0005674	.0028329	.0158307
#2	-.000240	.0002248	139.8951	.0007277	.0004782	.0033024	.0215835
#3	-.000233	.0002855	140.8402	.0011064	.0006734	.0035462	.0166806

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.282124	2.160817	.0008409	.0005084	337.2260	.0003106	.0431897
Stddev	.009527	.024861	.0001133	.0000908	1.7862	.0003687	.0031484
%RSD	.4174786	1.150540	13.47200	17.85880	.5296782	118.7157	7.289657
#1	2.288879	2.182975	.0009377	.0005703	335.3459	-.000064	.0409457
#2	2.271226	2.133932	.0008687	.0005507	337.4314	.000322	.0467887
#3	2.286266	2.165543	.0007163	.0004042	338.9006	.000674	.0418346

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9353131	.0143289	.0010740	-.006479	-.002702	.6061882	.0041338
Stddev	.0233221	.0031897	.0002563	.000189	.000439	.0111188	.0007084
%RSD	2.493509	22.26056	23.86155	2.916243	16.23480	1.834220	17.13791
#1	.9171466	.0126800	.0007956	-.006514	-.002915	.6021887	.0044621
#2	.9271799	.0180056	.0013001	-.006275	-.002198	.5976225	.0033207
#3	.9616128	.0123012	.0011263	-.006648	-.002994	.6187536	.0046184

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4893-08 Acquired: 11/20/2024 14:03:56 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7148630	.0215457	.1677712
Stddev	.0095769	.0010432	.0004332
%RSD	1.339679	4.842045	.2582381
#1	.7085488	.0203422	.1682713
#2	.7101579	.0221023	.1675108
#3	.7258823	.0221927	.1675314

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2222.360	51549.94	12591.71	1569.217	3481.408
Stddev	5.456	200.82	65.53	10.767	15.988
%RSD	.2455086	.3895579	.5204024	.6861213	.4592481
#1	2225.501	51781.58	12523.54	1580.647	3491.843
#2	2225.520	51443.32	12654.23	1559.266	3489.380
#3	2216.060	51424.92	12597.37	1567.739	3463.001

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-04 Acquired: 11/20/2024 14:08:22 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002525	-.007108	.0005166	.0036968	-.000428	.0100213	.3935062
Stddev	.002260	.001096	.0007512	.0013865	.000318	.0025835	.0021938
%RSD	89.50754	15.41358	145.4192	37.50475	74.32303	25.77990	.5575086
#1	-.004880	-.008372	-.000063	.0052518	-.000650	.0074563	.3959135
#2	-.000373	-.006504	.000247	.0032491	-.000571	.0126229	.3929855
#3	-.002323	-.006446	.001365	.0025895	-.000064	.0099847	.3916195

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000058	.0001862	48.05544	.0006396	.0033322	.0103104	.0184913
Stddev	.000055	.0000553	.15615	.0001396	.0000960	.0004947	.0016997
%RSD	94.76161	29.71641	.3249375	21.82387	2.879683	4.797582	9.191966
#1	-.000022	.0001663	48.22607	.0007721	.0034204	.0107719	.0172937
#2	-.000121	.0001436	47.91966	.0006527	.0032300	.0097882	.0204367
#3	-.000031	.0002488	48.02059	.0004939	.0033462	.0103711	.0177436

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.262128	2.857117	.0054833	.0001279	275.3633	.0010420	.0495183
Stddev	.012043	.007968	.0001825	.0001290	.3910	.0008028	.0007591
%RSD	.5323550	.2788741	3.328207	100.8536	.1420048	77.03949	1.533021
#1	2.275860	2.865797	.0056323	.0001654	275.6825	.0019448	.0500086
#2	2.253369	2.855420	.0052797	.0002340	275.4802	.0004084	.0499025
#3	2.257154	2.850135	.0055377	-.000016	274.9271	.0007728	.0486439

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5165445	.0220435	.0004035	-.005276	-.000815	.6192466	.0092761
Stddev	.0061537	.0005179	.0001085	.000503	.000349	.0037884	.0004573
%RSD	1.191317	2.349270	26.88801	9.540055	42.88553	.6117716	4.929815
#1	.5098076	.0220940	.0002816	-.004758	-.001155	.6163329	.0094083
#2	.5179566	.0215023	.0004394	-.005306	-.000457	.6235291	.0096528
#3	.5218694	.0225343	.0004894	-.005763	-.000833	.6178778	.0087673

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-04 Acquired: 11/20/2024 14:08:22 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.2811757	.0075426	.0708567
Stddev	.0031106	.0002861	.0003282
%RSD	1.106294	3.793117	.4631896
#1	.2835097	.0076793	.0712255
#2	.2776443	.0077347	.0707478
#3	.2823730	.0072138	.0705968

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2459.837	53845.18	12627.42	1659.140	3868.854
Stddev	37.620	332.72	56.42	13.948	54.595
%RSD	1.529377	.6179129	.4468096	.8407001	1.411136
#1	2418.516	53491.13	12562.85	1643.104	3809.341
#2	2468.892	53893.01	12652.20	1665.851	3880.605
#3	2492.103	54151.38	12667.21	1668.464	3916.617

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08 Acquired: 11/20/2024 14:12:49 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002423	-.006248	-.000235	.0026664	.0002801	-.018541	.5599654
Stddev	.001623	.002661	.000366	.0022143	.0005665	.008991	.0011107
%RSD	66.96158	42.58144	156.0530	83.04160	202.2677	48.49157	.1983545
#1	-.000579	-.008107	-.000594	.0014356	.0005782	-.027956	.5600013
#2	-.003633	-.003200	-.000250	.0013411	.0006352	-.017623	.5610577
#3	-.003058	-.007437	.000139	.0052226	-.000373	-.010044	.5588371

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000221	.0003019	132.1364	.0005374	.0005010	.0027103	.0158939
Stddev	.000023	.0000146	.7889	.0002235	.0001732	.0002691	.0004870
%RSD	10.55414	4.832715	.5970647	41.58907	34.57181	9.930342	3.064014
#1	-.000202	.0003062	132.3248	.0003377	.0006942	.0029048	.0154006
#2	-.000247	.0003139	132.8141	.0004958	.0003595	.0028230	.0159068
#3	-.000213	.0002856	131.2703	.0007788	.0004495	.0024031	.0163743

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.158133	2.028074	.0010809	.0003845	303.7002	.0006536	.0381649
Stddev	.008620	.019559	.0001525	.0001577	3.1028	.0008990	.0001872
%RSD	.3994289	.9644270	14.10892	41.01875	1.021651	137.5497	.4905684
#1	2.158159	2.037537	.0009094	.0004626	306.9226	.0005704	.0381308
#2	2.166741	2.041103	.0011320	.0004880	303.4450	.0015914	.0383668
#3	2.149500	2.005583	.0012013	.0002030	300.7329	-.000201	.0379971

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8121857	.0112875	.0009563	-.006375	-.002429	.5316702	.0048866
Stddev	.0318835	.0003516	.0003046	.001388	.000398	.0010552	.0022355
%RSD	3.925648	3.114528	31.84906	21.76314	16.36344	.1984666	45.74754
#1	.8413039	.0111902	.0008769	-.004781	-.002588	.5309812	.0074119
#2	.7781161	.0116774	.0006992	-.007039	-.001977	.5311444	.0031608
#3	.8171370	.0109948	.0012927	-.007307	-.002723	.5328850	.0040871

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08 Acquired: 11/20/2024 14:12:49 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7235237	.0187169	.1554356
Stddev	.0052487	.0008861	.0004027
%RSD	.7254322	4.734212	.2590916
#1	.7236245	.0180261	.1554280
#2	.7287212	.0184086	.1558421
#3	.7182253	.0197159	.1550367

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2409.637	55014.15	12928.80	1701.789	3757.978
Stddev	10.359	277.56	82.44	8.593	11.497
%RSD	.4298966	.5045162	.6376726	.5049508	.3059309
#1	2399.264	54713.05	12889.80	1693.349	3745.582
#2	2419.982	55069.64	12873.10	1701.491	3768.291
#3	2409.666	55259.78	13023.51	1710.528	3760.060

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08DUP Acquired: 11/20/2024 14:17:15 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002520	-.008164	-.000124	.0015823	.0012547	-.025781	.5607111
Stddev	.003954	.000680	.000578	.0022098	.0015104	.007830	.0018261
%RSD	156.8887	8.327301	465.8207	139.6612	120.3844	30.37087	.3256675
#1	.000418	-.007387	-.000264	.0017153	.0014546	-.033830	.5600424
#2	-.007016	-.008649	-.000620	-.000691	-.000346	-.018191	.5627773
#3	-.000963	-.008457	.000511	.003723	.002655	-.025322	.5593137

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000236	.0002735	131.2363	.0006168	.0004265	.0029831	.0209370
Stddev	.000036	.0000629	.1880	.0002833	.0002141	.0001393	.0026721
%RSD	15.24940	23.00161	.1432411	45.92245	50.20621	4.669146	12.76271
#1	-.000237	.0002586	131.1903	.0005496	.0004762	.0028707	.0224550
#2	-.000199	.0002193	131.0756	.0003732	.0001919	.0031389	.0178516
#3	-.000271	.0003425	131.4430	.0009276	.0006114	.0029397	.0225043

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.143336	2.024925	.0010804	.0001907	308.3822	.0003531	.0385613
Stddev	.004401	.027305	.0001158	.0002464	2.1588	.0009448	.0001455
%RSD	.2053435	1.348464	10.71951	129.1883	.7000330	267.5856	.3773834
#1	2.138254	2.008109	.0011917	.0004658	310.2705	-.000523	.0385571
#2	2.145935	2.010236	.0010890	.0001162	308.8474	.001354	.0387089
#3	2.145819	2.056431	.0009605	-.000010	306.0288	.000228	.0384179

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8509439	.0110292	.0008711	-.006060	-.001984	.5531488	.0026590
Stddev	.0259195	.0002627	.0001066	.000633	.000128	.0049137	.0024919
%RSD	3.045976	2.382110	12.23672	10.44280	6.465938	.8883216	93.71377
#1	.8633419	.0111757	.0009768	-.006442	-.002129	.5513783	.0054991
#2	.8211538	.0111860	.0008729	-.005330	-.001887	.5587024	.0016391
#3	.8683360	.0107259	.0007636	-.006408	-.001935	.5493657	.0008389

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08DUP Acquired: 11/20/2024 14:17:15 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7214375	.0186664	.1556429
Stddev	.0047612	.0008341	.0002992
%RSD	.6599613	4.468585	.1922119
#1	.7265561	.0195973	.1557237
#2	.7206158	.0184149	.1558934
#3	.7171406	.0179869	.1553116

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2377.478	53772.58	13014.70	1665.181	3722.081
Stddev	12.777	78.13	41.97	3.208	23.079
%RSD	.5374363	.1452927	.3225084	.1926706	.6200622
#1	2363.117	53732.94	12966.25	1665.929	3698.078
#2	2381.729	53722.22	13037.74	1667.949	3724.057
#3	2387.588	53862.58	13040.11	1661.665	3744.109

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08LX5 Acquired: 11/20/2024 14:21:42 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.001702	-.001062	-.000324	-.000695	-.000878	-.013159	.1124661
Stddev	.000633	.001185	.000373	.001152	.000702	.002620	.0003102
%RSD	37.20507	111.5434	115.0648	165.7632	79.93049	19.91318	.2758103
#1	-.001705	-.002164	.000106	.000384	-.001298	-.014950	.1125072
#2	-.002333	.000192	-.000560	-.001909	-.000068	-.010151	.1121374
#3	-.001067	-.001215	-.000519	-.000561	-.001268	-.014375	.1127537

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000015	-.000014	27.17054	-.000003	.0000752	.0006377	-.001660
Stddev	.0000243	.000058	.17939	.000426	.0000753	.0002369	.000816
%RSD	1673.106	403.0895	.6602218	16582.60	100.1592	37.14937	49.12943
#1	-.000023	-.000077	26.96350	-.000402	.0001363	.0005563	-.001741
#2	.000001	.000037	27.27966	.000445	.0000983	.0004522	-.000807
#3	.000026	-.000004	27.26845	-.000052	-.000009	.0009046	-.002432

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4533403	.4244445	.0002202	.0007157	61.00687	.0006353	.0079202
Stddev	.0016337	.0083147	.0001659	.0002744	.23433	.0003565	.0002851
%RSD	.3603611	1.958973	75.34569	38.33873	.3841042	56.11129	3.599845
#1	.4520069	.4285579	.0002228	.0008882	61.14379	.0002594	.0077344
#2	.4528514	.4299008	.0000530	.0008597	60.73630	.0009685	.0077777
#3	.4551626	.4148748	.0003848	.0003993	61.14053	.0006779	.0082484

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2363952	.0023837	.0002951	-.005085	-.000332	.1125642	-.000973
Stddev	.0178374	.0003033	.0002072	.000277	.000403	.0030793	.000640
%RSD	7.545589	12.72576	70.21271	5.452917	121.5296	2.735571	65.79773
#1	.2335823	.0020624	.0001335	-.004842	-.000050	.1114276	-.001675
#2	.2201314	.0024234	.0005287	-.005387	-.000152	.1160503	-.000823
#3	.2554720	.0026652	.0002230	-.005026	-.000793	.1102149	-.000421

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08LX5 Acquired: 11/20/2024 14:21:42 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.1454517	.0019950	.0323116
Stddev	.0010575	.0007447	.0001076
%RSD	.7270615	37.33052	.3331211
#1	.1442549	.0026572	.0322472
#2	.1462602	.0021390	.0322518
#3	.1458399	.0011888	.0324359

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2476.661	56520.64	13116.50	1740.854	4019.822
Stddev	5.960	60.33	40.87	3.473	2.132
%RSD	.2406498	.1067361	.3115595	.1994857	.0530354
#1	2471.166	56575.98	13156.30	1744.863	4020.106
#2	2475.820	56529.61	13074.65	1738.907	4017.562
#3	2482.997	56456.33	13118.55	1738.792	4021.797

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08MS Acquired: 11/20/2024 14:26:00 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7375721	1.630766	.8332838	1.861638	.7411984	1.829658	.6646447
Stddev	.0004472	.010363	.0008383	.006837	.0031779	.005468	.0042210
%RSD	.0606260	.6354376	.1006029	.3672546	.4287500	.2988310	.6350809
#1	.7380353	1.633140	.8331708	1.857963	.7409117	1.834640	.6660405
#2	.7375380	1.619423	.8341728	1.857425	.7381737	1.823808	.6679911
#3	.7371429	1.639736	.8325077	1.869527	.7445100	1.830526	.6599026

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1722821	.1752065	115.9299	.3689648	.1764084	.2668711	2.743382
Stddev	.0007177	.0003016	.5255	.0005964	.0005874	.0007805	.008829
%RSD	.4165639	.1721545	.4532924	.1616305	.3329768	.2924688	.3218438
#1	.1727287	.1751253	116.2091	.3689809	.1760910	.2671470	2.738549
#2	.1726634	.1749537	116.2569	.3683606	.1760480	.2659901	2.738024
#3	.1714543	.1755403	115.3237	.3695529	.1770862	.2674763	2.753573

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.047255	3.450527	.4377751	.0706485	262.9742	.2731761	.2285756
Stddev	.009794	.024424	.0004720	.0003715	2.1026	.0025774	.0000380
%RSD	.4784129	.7078233	.1078062	.5258226	.7995380	.9434797	.0166431
#1	2.050560	3.478654	.4374460	.0710362	264.6029	.2754608	.2285319
#2	2.054970	3.438235	.4375635	.0702957	263.7192	.2736853	.2285941
#3	2.036236	3.434691	.4383158	.0706136	260.6006	.2703821	.2286009

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.51146	.2412190	.3923853	.5980186	.1750187	1.211903	5.625503
Stddev	.02401	.0017681	.0005615	.0005929	.0018039	.004818	.019637
%RSD	.2284050	.7329684	.1431068	.0991426	1.030661	.3975263	.3490691
#1	10.51518	.2431979	.3919638	.5977225	.1753312	1.206429	5.611750
#2	10.53339	.2406641	.3921694	.5987012	.1766458	1.215498	5.616766
#3	10.48581	.2397949	.3930227	.5976320	.1730790	1.213781	5.647992

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08MS Acquired: 11/20/2024 14:26:00 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.5319596	.1768365	.3149211
Stddev	.0026730	.0013016	.0017258
%RSD	.5024830	.7360742	.5480160
#1	.5347354	.1762724	.3159320
#2	.5317406	.1783251	.3159030
#3	.5294029	.1759121	.3129284

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2282.470	52489.77	12263.26	1601.477	3611.096
Stddev	.438	97.61	90.12	5.765	4.938
%RSD	.0192032	.1859558	.7348430	.3599758	.1367399
#1	2282.102	52377.25	12203.00	1600.590	3612.390
#2	2282.955	52540.45	12219.93	1596.206	3615.257
#3	2282.353	52551.61	12366.86	1607.633	3605.640

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08MSD Acquired: 11/20/2024 14:30:10 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7250656	1.617973	.8214404	1.825237	.7254958	1.808275	.6647471
Stddev	.0013754	.017084	.0035515	.002509	.0034540	.008794	.0014677
%RSD	.1896984	1.055865	.4323481	.1374676	.4760830	.4862932	.2207847
#1	.7234945	1.612415	.8252999	1.826950	.7293953	1.815122	.6664372
#2	.7256503	1.604360	.8207113	1.826403	.7228212	1.798358	.6637940
#3	.7260522	1.637143	.8183101	1.822357	.7242710	1.811344	.6640101

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1713589	.1729762	115.2984	.3603155	.1741660	.2625814	2.670229
Stddev	.0013362	.0005286	.5978	.0015243	.0005071	.0010402	.010735
%RSD	.7797495	.3056144	.5184823	.4230455	.2911550	.3961412	.4020338
#1	.1722997	.1733726	115.8072	.3601302	.1747270	.2635651	2.680424
#2	.1719476	.1731799	115.4480	.3619240	.1740309	.2626864	2.659025
#3	.1698295	.1723760	114.6400	.3588923	.1737402	.2614927	2.671239

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.042787	3.435747	.4319833	.0687176	257.9832	.2718516	.2236793
Stddev	.010195	.009033	.0014016	.0004432	2.1666	.0007461	.0007914
%RSD	.4990734	.2629151	.3244622	.6449853	.8398194	.2744358	.3537914
#1	2.051202	3.444168	.4335552	.0691073	260.1014	.2726183	.2244230
#2	2.045710	3.426206	.4315311	.0688099	255.7713	.2718083	.2228476
#3	2.031450	3.436866	.4308636	.0682354	258.0769	.2711281	.2237673

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23817	.2399987	.3843791	.5935607	.1745858	1.175558	5.608703
Stddev	.04521	.0015507	.0010634	.0006798	.0010898	.001443	.011191
%RSD	.4415858	.6461353	.2766403	.1145268	.6241957	.1227681	.1995300
#1	10.24579	.2416903	.3856061	.5942247	.1754260	1.176330	5.618984
#2	10.18963	.2396614	.3838041	.5928662	.1749769	1.173893	5.596783
#3	10.27908	.2386444	.3837270	.5935910	.1733545	1.176451	5.610344

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08MSD Acquired: 11/20/2024 14:30:10 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.5249000	.1751302	.3141483
Stddev	.0025126	.0004276	.0008243
%RSD	.4786849	.2441459	.2623794
#1	.5267414	.1747514	.3150871
#2	.5220376	.1755939	.3138145
#3	.5259210	.1750454	.3135432

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2334.787	53921.46	12318.41	1651.622	3673.927
Stddev	8.802	69.27	70.25	5.741	16.208
%RSD	.3769951	.1284588	.5702802	.3476182	.4411524
#1	2328.477	53846.12	12255.24	1650.714	3662.426
#2	2331.042	53982.38	12305.92	1657.763	3666.891
#3	2344.843	53935.88	12394.07	1646.388	3692.463

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCV02 Acquired: 11/20/2024 14:50:26 Type: Unk
Method: NON EPA-6010-200.7(v2475) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.462188	4.920866	5.121001	4.624746	5.462859	9.024199
Stddev	.029015	.136727	.025063	.035807	.030277	.060509
%RSD	.5312027	2.778509	.4894173	.7742392	.5542330	.6705209
#1	5.472920	4.978008	5.132134	4.646581	5.483291	9.086424
#2	5.484310	5.019752	5.138568	4.644234	5.477211	9.020605
#3	5.429336	4.764838	5.092300	4.583422	5.428075	8.965566

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.553610	.2603509	2.607174	26.97732	.9049403	2.540256
Stddev	.123687	.0015766	.011069	.14270	.0038217	.010014
%RSD	1.294665	.6055770	.4245650	.5289775	.4223103	.3942159
#1	9.600659	.2614530	2.614839	27.12015	.9090343	2.545443
#2	9.646868	.2610548	2.612199	26.97709	.9043198	2.546613
#3	9.413302	.2585450	2.594483	26.83474	.9014669	2.528712

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.299315	5.121259	2.698120	23.81629	2.460903	1.290756
Stddev	.004891	.008334	.018506	.12327	.009085	.005071
%RSD	.3764237	.1627418	.6858911	.5175888	.3691584	.3928627
#1	1.302192	5.124113	2.716372	23.95460	2.466600	1.294629
#2	1.302085	5.111873	2.698619	23.77627	2.465683	1.292623
#3	1.293668	5.127792	2.679370	23.71800	2.450426	1.285016

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.72985	2.560410	2.277047	27.26887	4.947910	F 4.316860
Stddev	.23051	.013862	.018386	.08776	.032953	.024878
%RSD	.8623830	.5414095	.8074455	.3218312	.6659890	.5763088
#1	26.98323	2.576417	2.279933	27.35944	4.975348	4.332559
#2	26.67374	2.552382	2.293819	27.26296	4.957021	4.329845
#3	26.53256	2.552431	2.257388	27.18422	4.911360	4.288176

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCV02 Acquired: 11/20/2024 14:50:26 Type: Unk
Method: NON EPA-6010-200.7(v2475) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 4.359915	F 4.312892	F 4.465020	F 4.475721	F 4.171360	F 4.092528
Stddev	.025745	.025463	.012611	.023108	.029720	.045851
%RSD	.5904883	.5903954	.2824303	.5163010	.7124715	1.120353
#1	4.371276	4.337177	4.454784	4.470695	4.189583	4.139979
#2	4.378026	4.315103	4.461168	4.500929	4.187432	4.089138
#3	4.330445	4.286395	4.479107	4.455540	4.137065	4.048466

Elem	Sr4077
Units	ppm
Avg	F 4.417554
Stddev	.027896
%RSD	.6314808
#1	4.440471
#2	4.425698
#3	4.386492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2610.702	58577.47	12883.18	1826.264	4137.633
Stddev	9.052	267.63	104.72	16.430	11.060
%RSD	.3467215	.4568891	.8128790	.8996254	.2673112
#1	2601.998	58296.75	12781.08	1812.101	4127.035
#2	2610.041	58605.91	12878.10	1822.415	4136.761
#3	2620.066	58829.75	12990.35	1844.277	4149.104

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCB02 Acquired: 11/20/2024 15:00:31 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0000236	.0010947	.0000675	.0000246	.0000282	-.000919	-.003359
Stddev	.0011559	.0009165	.0003883	.0003221	.0009020	.003876	.000443
%RSD	4899.658	83.72421	575.1371	1310.443	3202.607	421.6720	13.19126
#1	.0011375	.0003561	.0002862	.0002979	.0009344	-.004711	-.003866
#2	-.001170	.0021204	.0002972	.0001064	-.000870	-.001082	-.003160
#3	.000103	.0008075	-.000381	-.000331	.000020	.003036	-.003050

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000005	-.000074	-.001426	.0004174	.0000365	-.000281	-.006320
Stddev	.0000291	.000093	.004205	.0001325	.0001518	.000548	.002804
%RSD	6078.024	126.2243	294.8807	31.74696	415.7644	194.9415	44.36377
#1	-.000033	-.000029	-.003243	.0004643	-.000136	-.000232	-.005669
#2	.000018	-.000180	.003382	.0002678	.000098	-.000852	-.009392
#3	.000017	-.000011	-.004418	.0005200	.000148	.000241	-.003899

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001117	.0032462	-.000283	.0006814	-.166795	.0007675	-.000582
Stddev	.0002121	.0024336	.000342	.0001881	.013955	.0011463	.000097
%RSD	189.8420	74.96789	120.8348	27.60159	8.366810	149.3569	16.62386
#1	.0002271	.0022929	.000082	.0007411	-.177396	.0020224	-.000665
#2	.0002412	.0014336	-.000597	.0008325	-.172004	-.000224	-.000476
#3	-.000133	.0060121	-.000335	.0004708	-.150984	.000504	-.000607

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.087801	.0047697	.0000689	-.003753	-.000010	-.001235	-.003478
Stddev	.021197	.0003440	.0001465	.000183	.000199	.002576	.000930
%RSD	24.14259	7.212633	212.6983	4.878564	1946.579	208.6883	26.72837
#1	-.104917	.0043729	.0001665	-.003961	-.000197	-.004042	-.004448
#2	-.064090	.0049843	.0001398	-.003685	.000198	.001020	-.002595
#3	-.094395	.0049518	-.000100	-.003614	-.000032	-.000681	-.003392

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCB02 Acquired: 11/20/2024 15:00:31 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.004917	-.003340	-.000096
Stddev	.001157	.000495	.000023
%RSD	23.53810	14.82502	23.62701
#1	-.003851	-.003301	-.000105
#2	-.006148	-.002866	-.000112
#3	-.004752	-.003854	-.000070

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2719.460	61655.95	13321.62	1926.796	4685.336
Stddev	4.165	107.37	43.95	.388	5.395
%RSD	.1531627	.1741414	.3298883	.0201395	.1151409
#1	2714.683	61752.89	13276.79	1927.050	4679.373
#2	2721.365	61540.55	13364.63	1926.989	4686.760
#3	2722.333	61674.42	13323.45	1926.349	4689.877

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08A Acquired: 11/20/2024 15:04:50 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.6807599	1.419873	.7767439	1.722366	.6917810	1.731445	.6299300
Stddev	.0039742	.007467	.0015805	.006748	.0024976	.003337	.0005696
%RSD	.5837850	.5259226	.2034709	.3918092	.3610336	.1927260	.0904186
#1	.6852723	1.416793	.7770452	1.730008	.6943172	1.727846	.6303257
#2	.6792268	1.414439	.7781520	1.717229	.6917020	1.732055	.6292772
#3	.6777807	1.428388	.7750345	1.719859	.6893239	1.734436	.6301871

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1635923	.1636085	110.4647	.3499475	.1652148	.2486518	2.602348
Stddev	.0007922	.0002914	.1508	.0023363	.0003762	.0010427	.005104
%RSD	.4842593	.1780996	.1365469	.6676190	.2277232	.4193242	.1961119
#1	.1644948	.1639255	110.3059	.3523433	.1653181	.2498545	2.598033
#2	.1630116	.1635478	110.4822	.3498238	.1655286	.2480991	2.607981
#3	.1632706	.1633523	110.6060	.3476756	.1647977	.2480019	2.601029

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.946337	3.300029	.4089768	.0668684	248.1685	.2594349	.2149455
Stddev	.002528	.010364	.0002857	.0004353	1.6867	.0009498	.0004656
%RSD	.1299049	.3140580	.0698508	.6510283	.6796756	.3661108	.2166222
#1	1.943418	3.295266	.4092765	.0673198	249.5975	.2605314	.2153805
#2	1.947840	3.292902	.4089462	.0668344	248.6001	.2588662	.2150017
#3	1.947754	3.311918	.4087076	.0664511	246.3079	.2589071	.2144544

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.00960	.2312870	.3650570	.5538894	.1665763	1.160128	5.263289
Stddev	.03481	.0004581	.0011100	.0033846	.0006321	.004704	.009676
%RSD	.3477893	.1980580	.3040534	.6110690	.3794605	.4055041	.1838373
#1	10.02645	.2314887	.3663363	.5577348	.1660421	1.158453	5.271558
#2	10.03279	.2316096	.3644845	.5525710	.1664128	1.165441	5.252648
#3	9.96957	.2307627	.3643501	.5513623	.1672741	1.156490	5.265661

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: P4910-08A Acquired: 11/20/2024 15:04:50 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.4902512	.1665394	.2988572
Stddev	.0026342	.0019298	.0002369
%RSD	.5373196	1.158781	.0792589
#1	.4873213	.1686425	.2988826
#2	.4910085	.1648500	.2986086
#3	.4924239	.1661255	.2990803

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2431.775	54857.37	12833.84	1689.980	3844.002
Stddev	13.707	194.19	26.65	9.984	15.230
%RSD	.5636571	.3539911	.2076864	.5908028	.3961936
#1	2416.170	54704.49	12815.13	1689.525	3826.439
#2	2437.286	54791.76	12864.36	1680.232	3852.003
#3	2441.868	55075.87	12822.03	1700.185	3853.563

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB164986TB Acquired: 11/20/2024 15:09:01 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.003339	-.007503	.0006224	.0042419	-.000494	.0072267
Stddev	.001073	.002239	.0004004	.0005614	.000854	.0077399
%RSD	32.12908	29.84209	64.32896	13.23420	172.6575	107.1005
#1	-.003869	-.005238	.0001838	.0048497	-.000482	-.001681
#2	-.004044	-.007554	.0009684	.0037427	-.001354	.011055
#3	-.002105	-.009715	.0007150	.0041334	.000353	.012307

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003606	-.000065	-.000193	.0247615	.0010678	-.000254
Stddev	.000324	.000025	.000041	.0054738	.0001452	.000123
%RSD	8.974597	38.42338	21.38017	22.10617	13.59708	48.42745
#1	-.003348	-.000040	-.000237	.0261054	.0012163	-.000163
#2	-.003501	-.000090	-.000156	.0294382	.0009262	-.000394
#3	-.003969	-.000065	-.000185	.0187409	.0010610	-.000206

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002269	.0010392	.0009413	.0024487	.0001348	.0004310
Stddev	.0001808	.0016762	.0001490	.0074305	.0002909	.0001313
%RSD	79.66915	161.2992	15.82729	303.4497	215.8031	30.45700
#1	.0003545	.0027597	.0009512	-.003747	.0004215	.0005825
#2	.0003063	.0009468	.0010851	.010687	-.000160	.0003571
#3	.0000200	-.000589	.0007876	.000406	.000143	.0003533

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 311.7608	-.000687	.0026939	-.113826	.0018688	.0005541
Stddev	.8695	.000633	.0003007	.014360	.0002991	.0000902
%RSD	.2788965	92.04831	11.16201	12.61588	16.00569	16.27734
#1	312.2293	-.000037	.0023499	-.114403	.0016132	.0006561
#2	310.7575	-.000724	.0028253	-.127888	.0017954	.0005213
#3	312.2955	-.001301	.0029065	-.099185	.0021977	.0004849

Sample Name: PB164986TB Acquired: 11/20/2024 15:09:01 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002649	.0000389	.0039922	.0038513	F .0105887	-.002408
Stddev	.000319	.0003628	.0044458	.0022457	.0011400	.000915
%RSD	12.02607	932.8059	111.3600	58.30834	10.76591	37.98079
#1	-.002375	-.000261	-.001089	.0044589	.0100037	-.001973
#2	-.002573	.000442	.005897	.0057307	.0098601	-.003459
#3	-.002998	-.000064	.007168	.0013644	.0119025	-.001792

Elem	Sr4077
Units	ppm
Avg	-.000098
Stddev	.000005
%RSD	5.206240
#1	-.000103
#2	-.000095
#3	-.000094

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2398.679	53261.71	12830.69	1696.011	3797.842
Stddev	9.854	167.95	151.32	5.335	20.579
%RSD	.4108038	.3153237	1.179385	.3145585	.5418663
#1	2390.877	53454.30	12993.93	1702.024	3777.385
#2	2395.408	53185.09	12803.05	1694.163	3797.598
#3	2409.753	53145.74	12695.09	1691.845	3818.541

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165060TB Acquired: 11/20/2024 15:41:24 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002428	-.005455	-.000428	.0018821	-.000147	.0022420
Stddev	.003094	.001414	.001072	.0019320	.000334	.0005121
%RSD	127.4567	25.91920	250.2437	102.6472	226.6991	22.84331
#1	.000398	-.005066	-.001260	.0000090	.000107	.0021025
#2	-.005734	-.004275	-.000806	.0038680	-.000023	.0028095
#3	-.001947	-.007022	.000781	.0017695	-.000526	.0018141

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003991	-.000064	-.000149	.0276563	.0006178	-.000169
Stddev	.000277	.000021	.000039	.0055834	.0002202	.000054
%RSD	6.945634	32.35441	26.44880	20.18856	35.63685	31.84931
#1	-.004306	-.000071	-.000111	.0212760	.0005216	-.000206
#2	-.003785	-.000041	-.000190	.0300442	.0004621	-.000107
#3	-.003881	-.000081	-.000145	.0316486	.0008697	-.000193

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001787	.0011813	.0008136	.0017284	.0002028	.0003847
Stddev	.0001839	.0028117	.0001370	.0150482	.0001327	.0002923
%RSD	102.9183	238.0197	16.83453	870.6578	65.41674	75.99076
#1	.0003323	.0020165	.0008180	.0159578	.0001437	.0001769
#2	.0002290	-.001953	.0006745	-.014023	.0003548	.0007190
#3	-.000025	.003481	.0009484	.003250	.0001100	.0002583

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 297.0675	-.000099	.0021669	-.146685	-.000593	.0001862
Stddev	1.6656	.000682	.0001541	.020558	.000443	.0003032
%RSD	.5606819	686.8339	7.112296	14.01529	74.63117	162.8701
#1	297.4245	-.000733	.0021011	-.169300	-.001094	.0001239
#2	298.5257	-.000187	.0023430	-.141631	-.000253	.0005157
#3	295.2524	.000622	.0020566	-.129125	-.000433	-.000081

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165060TB Acquired: 11/20/2024 15:41:24 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.002574	-.000116	.0000719	.0025019	F .0104665	-.002466
Stddev	.000635	.000341	.0028481	.0007203	.0032641	.000542
%RSD	24.65423	293.7104	3962.555	28.79121	31.18628	21.97829
#1	-.003278	.000146	-.002905	.0016794	.0100930	-.002715
#2	-.002400	-.000501	.000350	.0030202	.0074052	-.002838
#3	-.002045	.000007	.002771	.0028062	.0139013	-.001844

Elem	Sr4077
Units	ppm
Avg	-.000120
Stddev	.000043
%RSD	36.37730
#1	-.000095
#2	-.000093
#3	-.000170

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2538.480	56426.56	13227.98	1778.052	4024.513
Stddev	36.607	294.03	14.37	7.952	48.072
%RSD	1.442082	.5210801	.1086350	.4472417	1.194492
#1	2559.369	56175.72	13228.82	1769.420	4049.517
#2	2559.859	56353.84	13213.20	1779.657	4054.929
#3	2496.211	56750.12	13241.91	1785.079	3969.091

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165118BL Acquired: 11/20/2024 15:45:52 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0012654	.0000188	.0007198	-.001844	-.000499	.0114532	-.003131
Stddev	.0013388	.0007971	.0001824	.000312	.000384	.0057268	.000586
%RSD	105.8000	4245.812	25.33609	16.93235	76.96929	50.00214	18.70467
#1	.0012842	.0009386	.0009273	-.001786	-.000093	.0050379	-.003366
#2	.0025946	-.000415	.0006468	-.001565	-.000547	.0160499	-.003563
#3	-.000083	-.000467	.0005852	-.002182	-.000856	.0132717	-.002465

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000358	-.000049	.0021110	-.000041	.0001524	-.000357	-.003364
Stddev	.0000218	.000042	.0047584	.000332	.0001389	.000242	.001325
%RSD	61.10882	84.82560	225.4107	810.6495	91.11853	67.76465	39.37961
#1	.0000574	-.000001	-.001059	.000220	-.000007	-.000595	-.004814
#2	.0000362	-.000075	.007583	.000072	.000214	-.000112	-.002218
#3	.0000137	-.000071	-.000190	-.000415	.000250	-.000364	-.003059

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002004	-.001006	-.000300	.0003691	-.015652	.0008399	-.000645
Stddev	.0001358	.005249	.000121	.0000884	.019508	.0012287	.000086
%RSD	67.73839	521.7792	40.40837	23.96267	124.6340	146.2861	13.30016
#1	.0003324	-.003048	-.000319	.0004682	-.035720	-.000213	-.000607
#2	.0002078	.004957	-.000411	.0003406	-.014480	.000543	-.000584
#3	.0000611	-.004928	-.000171	.0002984	.003243	.002190	-.000743

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009299	-.000092	.0001526	-.003251	-.000008	-.002755	-.002311
Stddev	.012239	.000243	.0001885	.000196	.000376	.001947	.001606
%RSD	131.6219	263.7465	123.5391	6.023422	4706.974	70.67900	69.51268
#1	-.020724	-.000347	.0003274	-.003353	-.000047	-.000814	-.003330
#2	-.010790	.000138	-.000047	-.003025	-.000363	-.004708	-.000459
#3	.003618	-.000068	.000178	-.003374	.000386	-.002742	-.003143

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165118BL Acquired: 11/20/2024 15:45:52 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.001111	-.003015	-.000112
Stddev	.001244	.001199	.000024
%RSD	111.9851	39.78097	21.27853
#1	-.001284	-.004174	-.000085
#2	.000211	-.001779	-.000119
#3	-.002260	-.003091	-.000130

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2754.681	61463.21	13271.46	1941.277	4724.535
Stddev	2.347	58.60	13.47	7.499	3.608
%RSD	.0852099	.0953381	.1014890	.3863109	.0763580
#1	2752.129	61399.01	13255.98	1932.770	4726.171
#2	2756.747	61476.81	13280.53	1946.932	4727.034
#3	2755.168	61513.82	13277.86	1944.129	4720.399

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165118BSRE Acquired: 11/20/2024 15:50:13 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.6932710	1.836408	.8771356	1.780502	.6973804	1.824040
Stddev	.0008747	.010135	.0027567	.005224	.0000599	.010111
%RSD	.1261773	.5519118	.3142871	.2934014	.0085833	.5543323
#1	.6934766	1.828271	.8743426	1.783773	.6974178	1.812406
#2	.6940247	1.847761	.8772097	1.783257	.6974120	1.829013
#3	.6923118	1.833193	.8798546	1.774478	.6973114	1.830703

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1725066	.1842959	.1740340	.9069133	.3663370	.1751600
Stddev	.0000966	.0005592	.0004573	.0141449	.0004015	.0004328
%RSD	.0559816	.3034152	.2627937	1.559669	.1095978	.2471042
#1	.1724169	.1838114	.1737473	.8912161	.3666709	.1748984
#2	.1724942	.1841685	.1737933	.9108535	.3658915	.1749220
#3	.1726089	.1849078	.1745615	.9186702	.3664486	.1756596

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2801959	2.564475	.1778703	1.782821	.4399374	.0681901
Stddev	.0003692	.014806	.0003913	.015458	.0014881	.0000650
%RSD	.1317499	.5773416	.2199645	.8670731	.3382544	.0953220
#1	.2806222	2.547415	.1778605	1.782250	.4385685	.0681468
#2	.2799773	2.572038	.1774841	1.767656	.4397222	.0681587
#3	.2799884	2.573972	.1782664	1.798557	.4415213	.0682649

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.325902	.2713835	.1873791	8.465834	.2710271	.3701688
Stddev	.012484	.0019945	.0005757	.048096	.0008023	.0003374
%RSD	.5367412	.7349272	.3072661	.5681199	.2960419	.0911575
#1	2.316799	.2703394	.1878130	8.451177	.2704379	.3705547
#2	2.340133	.2701278	.1867260	8.519554	.2719409	.3699292
#3	2.320773	.2736832	.1875985	8.426772	.2707025	.3700225

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165118BSRE Acquired: 11/20/2024 15:50:13 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.5997896	.1754995	F .6501340	5.121942	F -.012595	F .1557835
Stddev	.0026284	.0005686	.0110090	.006393	.000588	.0011297
%RSD	.4382223	.3240166	1.693336	.1248164	4.670763	.7251586
#1	.5970751	.1751887	.6475406	5.115337	-.011958	.1569763
#2	.5999712	.1751541	.6406533	5.122390	-.012710	.1547299
#3	.6023225	.1761558	.6622081	5.128100	-.013118	.1556443

Elem	Sr4077
Units	ppm
Avg	.1802015
Stddev	.0003906
%RSD	.2167760
#1	.1804291
#2	.1804249
#3	.1797504

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2747.593	61961.57	12965.18	1967.839	4551.661
Stddev	10.429	76.40	17.33	6.365	11.143
%RSD	.3795838	.1232966	.1336351	.3234461	.2448123
#1	2735.850	61961.11	12976.72	1960.504	4539.283
#2	2751.152	61885.40	12973.57	1971.094	4560.891
#3	2755.777	62038.19	12945.26	1971.917	4554.810

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: LR1 Acquired: 11/20/2024 15:59:18 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0327690	-.018017	.0352090	-.307106	-.013418	2019.614	.0132088
Stddev	.0061372	.015953	.0051479	.004784	.005172	24.763	.0001453
%RSD	18.72870	88.54447	14.62108	1.557633	38.54213	1.226149	1.099817
#1	.0370632	-.033640	.0322060	-.301775	-.008379	1992.804	.0133715
#2	.0355041	-.018658	.0411532	-.311024	-.013164	2024.410	.0130922
#3	.0257398	-.001753	.0322677	-.308519	-.018713	2041.629	.0131626

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097074	.1507874	1786.305	.0000455	.0415201	-.005028	906.8026
Stddev	.0000380	.0034792	7.129	.0002672	.0010395	.007263	.5705
%RSD	.3911209	2.307325	.3990827	587.5977	2.503568	144.4684	.0629188
#1	.0096810	.1487069	1783.329	.0003537	.0415259	-.006344	906.8969
#2	.0097509	.1548039	1794.440	-.000121	.0425566	.002804	907.3201
#3	.0096904	.1488514	1781.147	-.000096	.0404777	-.011543	906.1907

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.093373	1703.073	.0152203	-.038301	1939.641	.0788530	.1652212
Stddev	.000314	2.808	.0015076	.000200	14.848	.0011811	.0005497
%RSD	.3358757	.1648861	9.904957	.5226483	.7654986	1.497869	.3326921
#1	-.093146	1701.835	.0157282	-.038238	1948.580	.0783364	.1653263
#2	-.093730	1706.287	.0135244	-.038140	1947.841	.0780182	.1657107
#3	-.093242	1701.097	.0164083	-.038525	1922.501	.0802044	.1646266

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1332.697	.4155418	-.012223	.0053756	-.032248	.1249307	.0677126
Stddev	10.002	.0033505	.000986	.0066456	.000411	.0066380	.0126490
%RSD	.7505382	.8063088	8.071046	123.6264	1.273507	5.313372	18.68042
#1	1329.195	.4166459	-.011682	-.001816	-.032297	.1320441	.0568222
#2	1343.980	.4182010	-.011624	.011290	-.032631	.1189015	.0647289
#3	1324.917	.4117786	-.013361	.006652	-.031814	.1238466	.0815867

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: LR1 Acquired: 11/20/2024 15:59:18 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.165510	.3821766	-.895465
Stddev	.013377	.0069188	.000605
%RSD	8.082370	1.810355	.0675491
#1	-.151019	.3747492	-.895602
#2	-.168123	.3833419	-.895989
#3	-.177388	.3884387	-.894803

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1564.417	37905.45	10150.04	1120.558	2175.772
Stddev	13.628	51.55	52.69	8.963	21.658
%RSD	.8711109	.1359950	.5191017	.7998533	.9954330
#1	1572.037	37962.05	10207.29	1127.942	2186.270
#2	1548.683	37861.19	10139.24	1110.586	2150.865
#3	1572.530	37893.09	10103.58	1123.146	2190.180

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: LR2 Acquired: 11/20/2024 16:04:14 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.0073613	-.040600	228.4345	.0024765	.0006445	.0457342	^F *****
Stddev	.0043892	.002172	3.2234	.0040841	.0009628	.0010527	-----
%RSD	59.62565	5.350729	1.411096	164.9119	149.3755	2.301691	-----
#1	.0122772	-.038826	225.8596	.0034708	.0016820	.0446391	^ -----
#2	.0059716	-.043023	227.3942	-.002013	.0004718	.0458250	^ -----
#3	.0038352	-.039951	232.0495	.005972	-.000220	.0467386	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002716	-.004885	.2940052	.0094593	-.011789	235.6198	.0095102
Stddev	.000027	.000194	.0106672	.0001219	.000324	3.2313	.0004109
%RSD	.9958027	3.971720	3.628221	1.288339	2.750998	1.371413	4.320179
#1	-.002688	-.004814	.3002342	.0094362	-.012076	234.6824	.0099842
#2	-.002741	-.004737	.3000932	.0093507	-.011437	232.9608	.0092553
#3	-.002720	-.005105	.2816881	.0095911	-.011853	239.2162	.0092912

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.20478	-.007382	47.73005	.0003037	.2985570	-.014614	36.14126
Stddev	.73943	.009060	.63439	.0000612	.0051155	.000874	.01404
%RSD	1.600335	122.7241	1.329111	20.16177	1.713423	5.979215	.0388388
#1	46.87986	-.016495	47.23310	.0002796	.3044218	-.013802	36.13993
#2	46.31996	.001624	47.51244	.0002582	.2950153	-.015539	36.12793
#3	45.41451	-.007276	48.44460	.0003733	.2962337	-.014501	36.15591

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2304740	-.000360	-.005264	-.002654	-.033919	-.008156	.0663067
Stddev	.0144050	.000405	.000377	.001177	.000422	.003025	.0027346
%RSD	6.250165	112.3638	7.152984	44.33751	1.243784	37.08890	4.124229
#1	.2410550	.000002	-.004941	-.003362	-.034003	-.007035	.0636375
#2	.2362982	-.000797	-.005174	-.001296	-.034292	-.005852	.0661803
#3	.2140688	-.000286	-.005677	-.003305	-.033461	-.011582	.0691024

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: LR2 Acquired: 11/20/2024 16:04:14 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.049812	-.003719	.0016833
Stddev	.007205	.000606	.0000225
%RSD	14.46520	16.29961	1.337365
#1	-.053300	-.003328	.0016969
#2	-.054609	-.004418	.0016957
#3	-.041526	-.003412	.0016573

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2494.902	63922.78	14071.16	1907.954	4608.341
Stddev	27.818	41.95	175.22	7.779	49.310
%RSD	1.115003	.0656304	1.245209	.4077307	1.070011
#1	2511.015	63959.63	14018.60	1909.405	4643.103
#2	2510.912	63931.60	13928.25	1914.905	4630.014
#3	2462.781	63877.12	14266.64	1899.551	4551.907

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165118BS Acquired: 11/20/2024 16:17:25 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7168706	1.865695	.9090268	1.839281	.7206885	1.898031
Stddev	.0026027	.051561	.0006602	.006722	.0037110	.007413
%RSD	.3630609	2.763640	.0726224	.3654759	.5149271	.3905865
#1	.7153111	1.815079	.9082744	1.835903	.7225059	1.889653
#2	.7154255	1.863854	.9092969	1.834917	.7164191	1.903739
#3	.7198752	1.918152	.9095090	1.847022	.7231406	1.900702

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1758637	.1931283	.1808230	.9432460	.3822719	.1817508
Stddev	.0009890	.0005969	.0002425	.0107325	.0010625	.0002057
%RSD	.5623625	.3090925	.1340905	1.137825	.2779360	.1131507
#1	.1750898	.1929920	.1810196	.9441075	.3814415	.1818936
#2	.1769779	.1937817	.1808973	.9321088	.3819050	.1815151
#3	.1755235	.1926113	.1805521	.9535219	.3834692	.1818436

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2905521	2.650894	.1858006	1.851484	.4569955	.0700008
Stddev	.0004786	.013487	.0010428	.014271	.0008415	.0001124
%RSD	.1647284	.5087698	.5612686	.7707848	.1841383	.1605410
#1	.2910168	2.646334	.1845992	1.865053	.4578789	.0699201
#2	.2905789	2.640278	.1864718	1.836602	.4569043	.0701291
#3	.2900607	2.666070	.1863308	1.852796	.4562033	.0699530

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.548647	.2829934	.1911716	8.706401	.2839485	.3826314
Stddev	.022867	.0002229	.0011757	.034768	.0005119	.0004208
%RSD	.8972290	.0787510	.6150081	.3993384	.1802691	.1099679
#1	2.525592	.2828543	.1911898	8.689306	.2837393	.3828694
#2	2.549026	.2828754	.1899869	8.683490	.2845318	.3821456
#3	2.571322	.2832504	.1923381	8.746407	.2835744	.3828793

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165118BS Acquired: 11/20/2024 16:17:25 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.6200205	.1823702	F .6731637	5.250308	F -.013908	F .1584886
Stddev	.0028072	.0009066	.0040455	.011995	.001487	.0018048
%RSD	.4527562	.4971337	.6009698	.2284657	10.69028	1.138764
#1	.6169641	.1816064	.6769114	5.244400	-.014852	.1565123
#2	.6206138	.1821322	.6737047	5.242414	-.014677	.1600495
#3	.6224836	.1833721	.6688749	5.264112	-.012194	.1589039

Elem	Sr4077
Units	ppm
Avg	.1849811
Stddev	.0002586
%RSD	.1397985
#1	.1846948
#2	.1851977
#3	.1850509

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2662.009	60245.00	12401.18	1894.598	4410.885
Stddev	11.733	37.25	36.57	1.086	14.532
%RSD	.4407705	.0618339	.2949209	.0573208	.3294604
#1	2648.575	60220.99	12385.97	1894.332	4394.537
#2	2667.207	60226.10	12374.68	1893.669	4415.784
#3	2670.246	60287.91	12442.91	1895.792	4422.335

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165011BL Acquired: 11/20/2024 16:39:59 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.000943	-.001293	.0003042	-.000634	-.000819	.0014511	-.003128
Stddev	.001863	.000320	.0004165	.001236	.000406	.0007412	.000125
%RSD	197.5868	24.75281	136.9247	194.9545	49.53826	51.07960	3.997962
#1	-.002648	-.001650	.0004292	.000792	-.001266	.0018991	-.002999
#2	.001046	-.001031	.0006439	-.001392	-.000718	.0018586	-.003249
#3	-.001227	-.001198	-.000161	-.001302	-.000474	.0005955	-.003137

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000364	-.000033	-.007558	.0001874	-.000034	-.000007	-.005935
Stddev	.0000275	.000034	.003370	.0000991	.000156	.000508	.002879
%RSD	75.72357	103.3613	44.59029	52.90936	458.8380	7193.179	48.51416
#1	.0000673	-.000027	-.009741	.0002797	.000142	-.000350	-.003411
#2	.0000145	-.000069	-.009256	.0000826	-.000156	.000577	-.009071
#3	.0000274	-.000002	-.003677	.0001999	-.000088	-.000248	-.005322

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000557	.0043113	-.000295	.0004982	-.011500	.0004599	-.000355
Stddev	.0001734	.0054180	.000233	.0000354	.020562	.0008793	.000365
%RSD	311.1169	125.6686	78.88100	7.103563	178.8008	191.1856	102.8004
#1	.0002282	.0083643	-.000122	.0005390	-.033735	-.000426	-.000708
#2	.0000576	-.001842	-.000560	.0004795	-.007594	.000474	.000020
#3	-.000119	.006412	-.000203	.0004761	.006829	.001332	-.000376

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.037028	.0007800	-.000059	-.003595	.0000391	.0027532	-.003357
Stddev	.020044	.0004541	.000128	.000763	.0002893	.0039673	.001033
%RSD	54.13026	58.21823	218.2325	21.21664	739.9006	144.0976	30.78531
#1	-.049226	.0004606	-.000201	-.003777	-.000238	.0067500	-.004530
#2	-.013896	.0012999	.000050	-.002758	.000339	-.001184	-.002955
#3	-.047964	.0005795	-.000025	-.004250	.000016	.002694	-.002584

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165011BL Acquired: 11/20/2024 16:39:59 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.003398	-.003967	-.000132
Stddev	.000872	.001520	.000025
%RSD	25.66721	38.30865	18.96093
#1	-.002414	-.003479	-.000112
#2	-.004074	-.002751	-.000160
#3	-.003707	-.005670	-.000125

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2586.553	59365.02	12253.03	1859.906	4408.452
Stddev	3.038	100.87	97.39	11.387	2.946
%RSD	.1174709	.1699231	.7947835	.6122595	.0668235
#1	2589.198	59248.55	12142.47	1846.838	4410.314
#2	2583.235	59421.58	12290.56	1867.705	4409.986
#3	2587.227	59424.92	12326.07	1865.175	4405.055

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165011BS Acquired: 11/20/2024 16:44:20 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.7432921	1.930067	.9358732	1.923368	.7505947	1.956314
Stddev	.0010665	.018104	.0018818	.004041	.0017195	.004594
%RSD	.1434834	.9380128	.2010690	.2101053	.2290901	.2348362
#1	.7423995	1.914105	.9352362	1.918786	.7487118	1.954188
#2	.7444731	1.949739	.9343926	1.926422	.7520819	1.953168
#3	.7430036	1.926357	.9379907	1.924897	.7509903	1.961586

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1811764	.1965654	.1852520	.9675591	.3980134	.1873457
Stddev	.0002092	.0007834	.0003276	.0063267	.0003601	.0001758
%RSD	.1154978	.3985406	.1768324	.6538854	.0904679	.0938294
#1	.1812797	.1970637	.1856231	.9613356	.3976637	.1874989
#2	.1813138	.1969699	.1850032	.9739842	.3983830	.1873844
#3	.1809355	.1956624	.1851297	.9673574	.3979934	.1871538

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3001005	2.798772	.1890168	1.908451	.4699602	.0733636
Stddev	.0000636	.011136	.0004983	.015338	.0010463	.0004664
%RSD	.0211759	.3978767	.2636148	.8036772	.2226468	.6357040
#1	.3000273	2.791562	.1885582	1.893300	.4707472	.0735690
#2	.3001416	2.793156	.1889453	1.908082	.4687728	.0736921
#3	.3001327	2.811597	.1895470	1.923969	.4703607	.0728298

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.633304	.2894487	.2019814	9.256705	.2866645	.3981494
Stddev	.009634	.0007114	.0008599	.028334	.0008228	.0006859
%RSD	.3658474	.2457702	.4257539	.3060893	.2870153	.1722742
#1	2.637007	.2886638	.2028975	9.275908	.2869105	.3973621
#2	2.622368	.2900510	.2011916	9.224163	.2873361	.3986180
#3	2.640536	.2896313	.2018552	9.270042	.2857467	.3984680

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: PB165011BS Acquired: 11/20/2024 16:44:20 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	.6396751	.1866159	F .7171936	5.455343	F -.010922	.1630182
Stddev	.0024067	.0005394	.0083431	.009106	.003929	.0019087
%RSD	.3762437	.2890279	1.163300	.1669163	35.96933	1.170863
#1	.6422395	.1862265	.7155418	5.463357	-.012038	.1651226
#2	.6393205	.1872315	.7097999	5.457231	-.006556	.1625332
#3	.6374654	.1863896	.7262391	5.445441	-.014172	.1613988

Elem	Sr4077
Units	ppm
Avg	.1909778
Stddev	.0003418
%RSD	.1789778
#1	.1911416
#2	.1912069
#3	.1905849

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2541.437	56624.80	12112.80	1776.302	4230.920
Stddev	2.785	72.76	27.68	6.526	7.558
%RSD	.1095861	.1284989	.2285039	.3674135	.1786344
#1	2538.277	56599.86	12099.85	1773.901	4222.402
#2	2543.533	56706.76	12093.96	1783.689	4233.532
#3	2542.502	56567.79	12144.57	1771.316	4236.825

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCV03 Acquired: 11/20/2024 16:48:19 Type: Unk
Method: NON EPA-6010-200.7(v2475) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.614964	4.606499	4.635036	4.724531	4.675889	9.543753
Stddev	.024879	.038546	.034292	.030019	.033083	.034412
%RSD	.5390892	.8367745	.7398388	.6353919	.7075289	.3605684
#1	4.643564	4.641945	4.673851	4.758267	4.713905	9.583308
#2	4.598323	4.565463	4.622408	4.714558	4.653625	9.520695
#3	4.603004	4.612089	4.608849	4.700767	4.660137	9.527258

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.036772	.2365598	2.297519	23.16738	.9711124	2.296746
Stddev	.069602	.0013242	.015316	.10188	.0009930	.017697
%RSD	.7702092	.5597602	.6666334	.4397532	.1022562	.7705210
#1	9.115864	.2375629	2.314593	23.28389	.9718073	2.316895
#2	9.009586	.2350589	2.292977	23.09503	.9715547	2.289621
#3	8.984865	.2370577	2.284988	23.12321	.9699750	2.283722

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.180608	4.612681	2.250392	23.37841	2.302826	1.201361
Stddev	.008363	.004595	.010508	.06051	.016533	.003206
%RSD	.7083898	.0996107	.4669333	.2588464	.7179480	.2668922
#1	1.189961	4.617705	2.260232	23.43493	2.321541	1.204741
#2	1.178011	4.611649	2.239324	23.38573	2.296729	1.200980
#3	1.173851	4.608691	2.251618	23.31457	2.290207	1.198362

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.83819	2.351456	2.427706	23.69594	4.672393	4.740202
Stddev	.07485	.005696	.011295	.05026	.023420	.036009
%RSD	.3277492	.2422536	.4652572	.2121090	.5012525	.7596411
#1	22.92449	2.357538	2.427862	23.73801	4.697374	4.781393
#2	22.79090	2.350583	2.438922	23.64028	4.650931	4.724513
#3	22.79919	2.346246	2.416334	23.70952	4.668874	4.714700

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCV03 Acquired: 11/20/2024 16:48:19 Type: Unk
Method: NON EPA-6010-200.7(v2475) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.551923	4.579183	4.778357	4.678438	F 4.479535	F 4.316952
Stddev	.035214	.015979	.022598	.030482	.022701	.033186
%RSD	.7736090	.3489407	.4729341	.6515528	.5067777	.7687294
#1	4.590699	4.593471	4.752608	4.711669	4.504154	4.340284
#2	4.543137	4.561929	4.794896	4.651775	4.475021	4.278961
#3	4.521934	4.582149	4.787568	4.671868	4.459430	4.331610

Elem	Sr4077
Units	ppm
Avg	4.653834
Stddev	.034605
%RSD	.7435790
#1	4.690058
#2	4.650328
#3	4.621115

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2543.424	55579.96	12303.25	1747.917	4012.691
Stddev	20.563	271.99	78.49	19.075	31.293
%RSD	.8084599	.4893647	.6379982	1.091287	.7798627
#1	2520.057	55308.11	12212.66	1743.939	3977.225
#2	2551.460	55579.68	12351.13	1731.144	4024.432
#3	2558.756	55852.09	12345.95	1768.666	4036.415

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCB03 Acquired: 11/20/2024 16:52:29 Type: Unk
Method: NON EPA-6010-200.7(v2475) 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	-.000259	.0018540	.0005280	-.000855	-.000192	-.001922	-.002729
Stddev	.001058	.0004839	.0007666	.003027	.000634	.000950	.000400
%RSD	408.0071	26.09808	145.1735	353.9199	329.2995	49.44501	14.65198
#1	.000905	.0017069	.0003353	.001074	-.000917	-.000833	-.003187
#2	-.000521	.0023944	-.000124	-.004344	.000259	-.002348	-.002449
#3	-.001162	.0014608	.001373	.000704	.000080	-.002586	-.002551

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000410	-.000017	.0064585	.0000399	.0000670	-.000088	-.003697
Stddev	.0000390	.000026	.0017888	.0002544	.0000406	.000159	.001954
%RSD	95.13931	152.5337	27.69653	636.9443	60.49523	180.5181	52.86918
#1	.0000777	.000002	.0066564	-.000098	.0000463	-.000060	-.003344
#2	.0000453	-.000047	.0081401	-.000116	.0000411	.000055	-.005803
#3	.0000000	-.000006	.0045790	.000333	.0001138	-.000259	-.001943

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000596	-.004979	-.000008	.0003924	-.039251	.0001143	-.000246
Stddev	.0000650	.013316	.000244	.0002929	.018508	.0006215	.000210
%RSD	108.9026	267.4354	2992.793	74.63907	47.15310	544.0149	85.18163
#1	.0000089	-.009477	.000204	.0004015	-.058898	-.000535	-.000328
#2	.0001328	.010004	.000047	.0000951	-.036710	.000175	-.000403
#3	.0000372	-.015464	-.000275	.0006807	-.022145	.000703	-.000008

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.021153	.0055960	.0001218	-.003394	.0000909	.0022122	-.002455
Stddev	.018502	.0006128	.0001378	.000506	.0002293	.0027471	.002613
%RSD	87.46731	10.95142	113.1237	14.91807	252.1877	124.1803	106.4676
#1	-.042475	.0058712	.0001953	-.003054	.0003442	.0033759	-.000515
#2	-.011643	.0048938	.0002073	-.003153	-.000102	-.000925	-.001422
#3	-.009340	.0060231	-.000037	-.003976	.000031	.004186	-.005426

Reviewed By:mohan
On:11/21/2024
10:28:00 PM
Inst Id :P4
LB :LB133540

Sample Name: CCB03 Acquired: 11/20/2024 16:52:29 Type: Unk
Method: NON EPA-6010-200.7(v2475) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

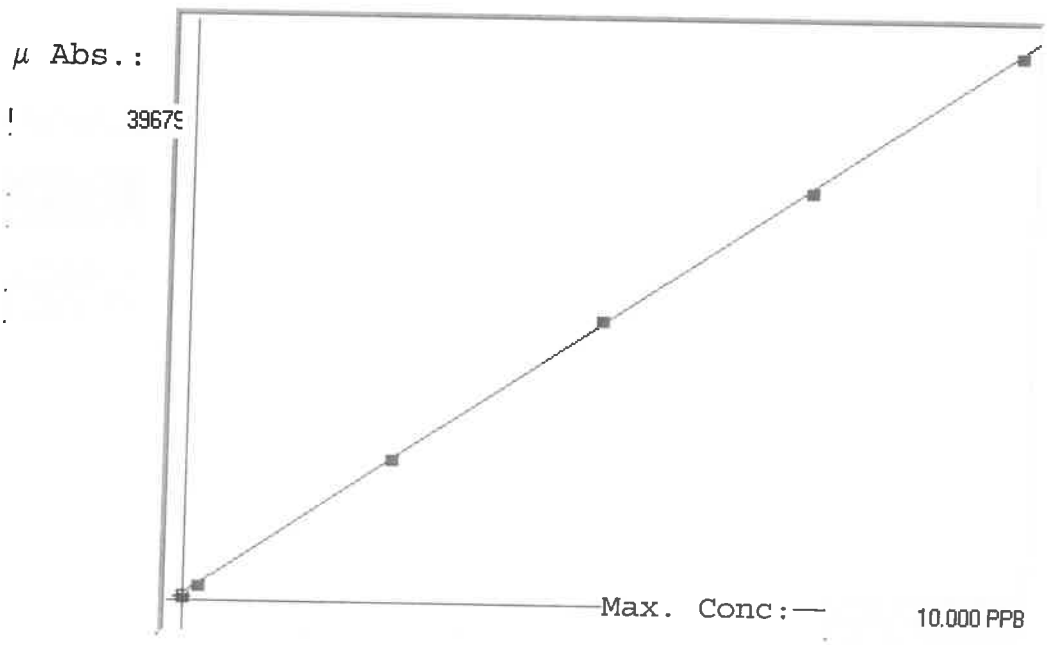
Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002494	-.004067	-.000027
Stddev	.000762	.000953	.000017
%RSD	30.57681	23.44083	62.82787
#1	-.003314	-.004147	-.000047
#2	-.001806	-.003076	-.000017
#3	-.002361	-.004978	-.000017

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2686.232	59598.55	12560.32	1897.402	4583.664
Stddev	4.749	148.21	57.83	4.265	10.060
%RSD	.1767963	.2486766	.4604083	.2247883	.2194721
#1	2682.277	59768.01	12515.43	1897.716	4575.165
#2	2691.499	59493.17	12625.57	1892.988	4594.771
#3	2684.919	59534.46	12539.96	1901.501	4581.056

Reviewed By:mohan
On:11/18/2024 9:25:39 PM
Inst Id :CV1
LB :LB133490

LB133490

7470A INSTRUMENT ID: CV1



Linear

A= 0.0000e+000

B= 2.5397e-004

C= -1.1763e-001

Rho= 0.9999141

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	-0.042	-0.042	298	0.000	298	0				
0.2	0.200	0.191	-0.009	1216	0.0 %	1216					
2.5	2.500	2.508	0.008	10338	0.0 %	10338					
5.0	5.000	5.101	0.101	20548	0.0 %	20548					
7.5	7.500	7.482	-0.018	29924	0.0 %	29924					
10.0	10.000	9.960	-0.040	39679	0.0 %	39679					

Reviewed By:mohan
On:11/18/2024 9:25:39 PM
Inst Id :CV1
LB :LB133490

LB133490 NSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 18 Nov 2024 12:50:35

Sample ID	Extended ID	µ Abs	Conc	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1		298	-	0.0000	7470A	PPB	18 Nov 2024 13:23:28	S	Std
0.2 - 1		1216	-	0.2000	7470A	PPB	18 Nov 2024 13:25:44	S	Std
2.5 - 1		10338	-	2.5000	7470A	PPB	18 Nov 2024 13:28:01	S	Std
5.0 - 1		20548	-	5.0000	7470A	PPB	18 Nov 2024 13:30:17	S	Std
7.5 - 1		29924	-	7.5000	7470A	PPB	18 Nov 2024 13:32:33	S	Std
10.0 - 1		39679	-	10.0000	7470A	PPB	18 Nov 2024 13:43:15	S	Std
ICV89 - 1	ICV89	15193	3.7409		7470A	PPB	18 Nov 2024 13:46:07	U	SMPL
ICB89 - 1	ICB89	91	-0.0945		7470A	PPB	18 Nov 2024 13:48:22	U	SMPL
CCV01 - 1	CCV01	19919	4.9412		7470A	PPB	18 Nov 2024 13:53:37	U	SMPL
CCB01 - 1	CCB01	135	-0.0833		7470A	PPB	18 Nov 2024 13:58:36	U	SMPL
CRA - 1	CRA	1138	0.1714		7470A	PPB	18 Nov 2024 14:00:51	U	SMPL
HighStd - 1	HighStd	38800	9.7364		7470A	PPB	18 Nov 2024 14:03:06	U	SMPL
ChkStd - 1	ChkStd	26923	6.7200		7470A	PPB	18 Nov 2024 14:05:21	U	SMPL
PB165041BL - 1	PBW	585	0.0309		7470A	PPB	18 Nov 2024 14:07:39	U	SMPL
PB165041BS - 1	LCSW	17477	4.3210		7470A	PPB	18 Nov 2024 14:12:49	U	SMPL
P4821-04 - 1	BP-F-24	531	0.0172		7470A	PPB	18 Nov 2024 14:15:06	U	SMPL
P4821-08 - 1	BP-F-2	455	-0.0021		7470A	PPB	18 Nov 2024 14:17:25	U	SMPL
P4823-04 - 1	MH-4	440	-0.0059		7470A	PPB	18 Nov 2024 14:19:43	U	SMPL
P4833-04 - 1	MH-731	652	0.0480		7470A	PPB	18 Nov 2024 14:21:59	U	SMPL
P4833-08 - 1	TP-2	696	0.0591		7470A	PPB	18 Nov 2024 14:24:14	U	SMPL
CCV02 - 1	CCV02	19977	4.9559		7470A	PPB	18 Nov 2024 14:26:30	U	SMPL
CCB02 - 1	CCB02	70	-0.0998		7470A	PPB	18 Nov 2024 14:28:48	U	SMPL
P4833-08DUP - 1	TP-2DUP	657	0.0492		7470A	PPB	18 Nov 2024 14:31:07	U	SMPL
P4833-08MS - 1	TP-2MS	16649	4.1107		7470A	PPB	18 Nov 2024 14:33:22	U	SMPL
P4833-08MSD - 1	TP-2MSD	15995	3.9446		7470A	PPB	18 Nov 2024 14:38:15	U	SMPL
PB165066BL - 1	PBW	546	0.0210		7470A	PPB	18 Nov 2024 14:43:20	U	SMPL
PB165066BS - 1	LCSW	13940	3.4227		7470A	PPB	18 Nov 2024 14:45:35	U	SMPL
P4867-02 - 1	TT-070-IDWGW-20241113	11	-0.1148		7470A	PPB	18 Nov 2024 14:47:51	U	SMPL
P4867-03 - 1	TT-071-IDWGW-20241113	741	0.0706		7470A	PPB	18 Nov 2024 14:50:08	U	SMPL
P4867-04 - 1	TT-072-IDWGW-20241113	89	-0.0950		7470A	PPB	18 Nov 2024 14:52:27	U	SMPL
P4867-04DUP - 1	TT-072-IDWGW-20241113DUP	163	-0.0762		7470A	PPB	18 Nov 2024 14:54:45	U	SMPL
P4867-04MS - 1	TT-072-IDWGW-20241113MS	17552	4.3401		7470A	PPB	18 Nov 2024 14:57:01	U	SMPL
CCV03 - 1	CCV03	20602	5.1147		7470A	PPB	18 Nov 2024 14:59:16	U	SMPL
CCB03 - 1	CCB03	339	-0.0315		7470A	PPB	18 Nov 2024 15:01:33	U	SMPL
P4867-04MSD - 1	TT-072-IDWGW-20241113MSD	16166	3.9881		7470A	PPB	18 Nov 2024 15:03:50	U	SMPL
P4868-01 - 1	RW5-SP100-20241114	-36	-0.1268		7470A	PPB	18 Nov 2024 15:06:05	U	SMPL
P4868-03 - 1	RW5-SP303-20241114	90	-0.0948		7470A	PPB	18 Nov 2024 15:08:23	U	SMPL
PB164944TB - 1	PB164944TB	678	0.0546		7470A	PPB	18 Nov 2024 15:10:38	U	SMPL
P4833-08LX5 - 1		32	-0.1095		7470A	PPB	18 Nov 2024 15:12:54	U	SMPL
P4833-08A - 1		15896	3.9195		7470A	PPB	18 Nov 2024 15:15:10	U	SMPL
P4867-04LX5 - 1		-131	-0.1509		7470A	PPB	18 Nov 2024 15:17:26	U	SMPL
P4867-04A - 1		16978	4.1943		7470A	PPB	18 Nov 2024 15:19:44	U	SMPL
CCV04 - 1	CCV04	20196	5.0116		7470A	PPB	18 Nov 2024 15:22:01	U	SMPL
CCB04 - 1	CCB04	815	0.0894		7470A	PPB	18 Nov 2024 15:24:19	U	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB165011

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: 11/15/2024 **Time :** 13:00 **Temp :** 95 °C

End Digest Date: 11/15/2024 **Time :** 16:10 **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	M6120
1:1 HCL	5.00	MP83105
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 : 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/15/24 16:20	jgp / Met dig	[illegible] Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB165011

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
P4867-02	TT-070-IDWGW-20241113	<2	50	25	Brown	Light Brown	Clear	Clear	N/A	1
P4867-03	TT-071-IDWGW-20241113	<2	50	25	Black	Light Brown	Clear	Clear	N/A	2
P4867-04	TT-072-IDWGW-20241113	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	3
P4868-01	RW5-SP100-20241114	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	4
P4868-03	RW5-SP303-20241114	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	5
P4868-03MS	RW5-SP303-20241114MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	7
P4868-03MSD	RW5-SP303-20241114MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6000,M6009	8
P4868-03DUP	RW5-SP303-20241114DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	6
PB165011BL	PBW011	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	9
PB165011BS	LCS011	<2	50	25	Colorless	Colorless	Clear	Clear	M6000, M6009	10

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165011 **WorkList ID :** 185481 **Department :** Digestion **Date :** 11-15-2024 12:17:50

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4867-02	TT-070-IDWGW-20241113	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	6010D
P4867-03	TT-071-IDWGW-20241113	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	6010D
P4867-04	TT-072-IDWGW-20241113	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	6010D
P4868-01	RW5-SP100-20241114	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	L41	11/14/2024	6010D
P4868-03	RW5-SP303-20241114	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	L41	11/14/2024	6010D

Date/Time 11/15/24 1230

Raw Sample Received by: Jgp (Met dig)

Raw Sample Relinquished by: [signature]

Date/Time 11/15/24 13:30.

Raw Sample Received by: CP SM

Raw Sample Relinquished by: Jgp (Met dig)

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB165066

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: 11/18/2024 **Time :** ~~13:05~~ 08:00 **Temp :** 94 °C

End Digest Date: 11/18/2024 **Time :** ~~15:05~~ 10:05 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature:

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP83287
CCV	30mL	MP83289
CRA	30mL	MP83291
Blank Spike	0.48mL	MP83280
Matrix Spike	0.48mL	MP83280

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.5mL	MP83207
KMnO4 (5%)	4.5mL	MP83208
K2S2O8 (5%)	2.5mL	MP83209
Hydroxylamine HCL (12%)	2.0mL	MP83210
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	MP83281
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP83282
2.5 ppb	S2.5	30mL	MP83283
5.0 ppb	S5.0	30mL	MP83284
7.5 ppb	S7.5	30mL	MP83285
10.0 ppb	S10.0	30mL	MP83286
ICV	ICV	30mL	MP83287
ICB	ICB	30mL	MP83288
CCV	CCV	30mL	MP83200
CCB	CCB	30mL	MP83201
CRI	CRI	30mL	MP83202
CHK STD	CHK STD	30mL	MP83203

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/18/24 @ ~~15:40~~ 11:40	MB - Dig Lab	MB - Metals Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB165066

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
P4867-02	TT-070-IDWGW-20241113	30	30	<2	N/A	3-19
P4867-03	TT-071-IDWGW-20241113	30	30	<2	N/A	20
P4867-04	TT-072-IDWGW-20241113	30	30	<2	N/A	21
P4867-04DUP	TT-072-IDWGW-20241113DUP	30	30	<2	N/A	22
P4867-04MS	TT-072-IDWGW-20241113MS	30	30	<2	MP83280	23
P4867-04MSD	TT-072-IDWGW-20241113MSD	30	30	<2	MP83280	24
P4868-01	RW5-SP100-20241114	30	30	<2	N/A	25
P4868-03	RW5-SP303-20241114	30	30	<2	N/A	26
PB165066BL	PBW066	30	30	<2	N/A	27
PB165066BS	LCS066	30	30	<2	MP83280	28

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 111824_7470 **WorkList ID :** 185516 **Department :** Digestion **Date :** 11-18-2024 09:32:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4867-02	TT-070-IDWGW-20241113	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	7470A
P4867-03	TT-071-IDWGW-20241113	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	7470A
P4867-04	TT-072-IDWGW-20241113	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	7470A
P4868-01	RW5-SP100-20241114	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	L41	11/13/2024	7470A
P4868-03	RW5-SP303-20241114	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	L41	11/14/2024	7470A
~~P4843-01~~	~~SW-WTS-01~~	~~Water~~	~~Mercury~~	1:1 HNO3 to pH < 2	ENTA05	L23	11/13/2024	7470A

Date/Time 11/18/24 @ ~~07:40~~ 12:00 07:40

Raw Sample Received by: MB- DCG-LMS

Raw Sample Relinquished by: MB- DCG-LMS

Date/Time 11/18/24 @ 15:30

Raw Sample Received by: MB- DCG-LMS

Raw Sample Relinquished by: MB-DCG-LMS

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 # LB133490

Review By	jaswal	Review On	11/18/2024 9:24:18 PM
Supervise By	mohan	Supervise On	11/18/2024 9:25:39 PM

STD. NAME	STD REF.#
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286
ICV Standard	MP83287
CCV Standard	MP83289
ICSA Standard	
CRI Standard	MP83291
LCS Standard	
Chk Standard	MP83288,MP83290,MP83292,MP83294

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/18/24 13:23		Mohan	OK
2	S0.2	S0.2	CAL2	11/18/24 13:25		Mohan	OK
3	S2.5	S2.5	CAL3	11/18/24 13:28		Mohan	OK
4	S5	S5	CAL4	11/18/24 13:30		Mohan	OK
5	S7.5	S7.5	CAL5	11/18/24 13:32		Mohan	OK
6	S10	S10	CAL6	11/18/24 13:43		Mohan	OK
7	ICV89	ICV89	ICV	11/18/24 13:46		Mohan	OK
8	ICB89	ICB89	ICB	11/18/24 13:48		Mohan	OK
9	CCV01	CCV01	CCV	11/18/24 13:53		Mohan	OK
10	CCB01	CCB01	CCB	11/18/24 13:58		Mohan	OK
11	CRA	CRA	CRDL	11/18/24 14:00		Mohan	OK
12	HighStd	HighStd	HIGH STD	11/18/24 14:03		Mohan	OK
13	ChkStd	ChkStd	SAM	11/18/24 14:05		Mohan	OK
14	PB165041BL	PB165041BL	MB	11/18/24 14:07		Mohan	OK
15	PB165041BS	PB165041BS	LCS	11/18/24 14:12		Mohan	OK
16	P4821-04	BP-F-24	SAM	11/18/24 14:15		Mohan	OK
17	P4821-08	BP-F-2	SAM	11/18/24 14:17		Mohan	OK
18	P4823-04	MH-4	SAM	11/18/24 14:19		Mohan	OK

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 # LB133490

Review By	jaswal	Review On	11/18/2024 9:24:18 PM
Supervise By	mohan	Supervise On	11/18/2024 9:25:39 PM

STD. NAME	STD REF.#
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286
ICV Standard	MP83287
CCV Standard	MP83289
ICSA Standard	
CRI Standard	MP83291
LCS Standard	
Chk Standard	MP83288,MP83290,MP83292,MP83294

19	P4833-04	MH-731	SAM	11/18/24 14:21		Mohan	OK
20	P4833-08	TP-2	SAM	11/18/24 14:24		Mohan	OK
21	CCV02	CCV02	CCV	11/18/24 14:26		Mohan	OK
22	CCB02	CCB02	CCB	11/18/24 14:28		Mohan	OK
23	P4833-08DUP	TP-2DUP	DUP	11/18/24 14:31		Mohan	OK
24	P4833-08MS	TP-2MS	MS	11/18/24 14:33		Mohan	OK
25	P4833-08MSD	TP-2MSD	MSD	11/18/24 14:38		Mohan	OK
26	PB165066BL	PB165066BL	MB	11/18/24 14:43		Mohan	OK
27	PB165066BS	PB165066BS	LCS	11/18/24 14:45		Mohan	OK
28	P4867-02	TT-070-IDWGW-2024	SAM	11/18/24 14:47		Mohan	OK
29	P4867-03	TT-071-IDWGW-2024	SAM	11/18/24 14:50		Mohan	OK
30	P4867-04	TT-072-IDWGW-2024	SAM	11/18/24 14:52		Mohan	OK
31	P4867-04DUP	TT-072-IDWGW-2024	DUP	11/18/24 14:54		Mohan	OK
32	P4867-04MS	TT-072-IDWGW-2024	MS	11/18/24 14:57		Mohan	OK
33	CCV03	CCV03	CCV	11/18/24 14:59		Mohan	OK
34	CCB03	CCB03	CCB	11/18/24 15:01		Mohan	OK
35	P4867-04MSD	TT-072-IDWGW-2024	MSD	11/18/24 15:03		Mohan	OK
36	P4868-01	RW5-SP100-2024111	SAM	11/18/24 15:06		Mohan	OK
37	P4868-03	RW5-SP303-2024111	SAM	11/18/24 15:08		Mohan	OK
38	PB164944TB	PB164944TB	MB	11/18/24 15:10		Mohan	OK

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 # LB133490

Review By	jaswal	Review On	11/18/2024 9:24:18 PM
Supervise By	mohan	Supervise On	11/18/2024 9:25:39 PM

STD. NAME	STD REF.#
ICAL Standard	MP83281,MP83282,MP83283,MP83284,MP83285,MP83286
ICV Standard	MP83287
CCV Standard	MP83289
ICSA Standard	
CRI Standard	MP83291
LCS Standard	
Chk Standard	MP83288,MP83290,MP83292,MP83294

39	P4833-08L	TP-2L	SD	11/18/24 15:12		Mohan	OK
40	P4833-08A	TP-2A	PS	11/18/24 15:15		Mohan	OK
41	P4867-04L	TT-072-IDWGW-2024	SD	11/18/24 15:17		Mohan	OK
42	P4867-04A	TT-072-IDWGW-2024	PS	11/18/24 15:19		Mohan	OK
43	CCV04	CCV04	CCV	11/18/24 15:22		Mohan	OK
44	CCB04	CCB04	CCB	11/18/24 15:24		Mohan	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133502

Review By	kareem	Review On	11/19/2024 9:23:02 AM
Supervise By	jaswal	Supervise On	11/19/2024 10:28:07 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/18/24 12:31		Kareem	OK
2	S1	S1	CAL2	11/18/24 12:36		Kareem	OK
3	S2	S2	CAL3	11/18/24 12:40		Kareem	OK
4	S3	S3	CAL4	11/18/24 12:44		Kareem	OK
5	S4	S4	CAL5	11/18/24 12:49		Kareem	OK
6	S5	S5	CAL6	11/18/24 12:53		Kareem	OK
7	ICV01	ICV01	ICV	11/18/24 12:57		Kareem	OK
8	LLICV01	LLICV01	LLICV	11/18/24 13:11		Kareem	OK
9	ICB01	ICB01	ICB	11/18/24 13:15		Kareem	OK
10	CRI01	CRI01	CRDL	11/18/24 13:20		Kareem	OK
11	ICSA01	ICSA01	ICSA	11/18/24 13:30		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	11/18/24 13:42		Kareem	OK
13	CCV01	CCV01	CCV	11/18/24 13:52		Kareem	OK
14	CCB01	CCB01	CCB	11/18/24 14:02		Kareem	OK
15	P4857-01	ETGI-328	SAM	11/18/24 14:06		Kareem	OK
16	P4857-03	VNJ-226	SAM	11/18/24 14:10		Kareem	OK
17	P4859-01	NB-08-111424	SAM	11/18/24 14:14		Kareem	OK
18	P4867-02	TT-070-IDWGW-2024	SAM	11/18/24 14:18		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133502

Review By	kareem	Review On	11/19/2024 9:23:02 AM
Supervise By	jaswal	Supervise On	11/19/2024 10:28:07 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

19	P4867-03	TT-071-IDWGW-2024	SAM	11/18/24 14:23		Kareem	OK
20	P4867-04	TT-072-IDWGW-2024	SAM	11/18/24 14:27		Kareem	OK
21	CCV02	CCV02	CCV	11/18/24 14:31		Kareem	OK
22	CCB02	CCB02	CCB	11/18/24 14:35		Kareem	OK
23	PB165011BL	PB165011BL	MB	11/18/24 14:40	Not Use	Kareem	Not Ok
24	PB165011BS	PB165011BS	LCS	11/18/24 14:45	Not Use	Kareem	Not Ok
25	PB165003BL	PB165003BL	MB	11/18/24 14:49		Kareem	OK
26	PB165003BS	PB165003BS	LCS	11/18/24 14:53	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
27	P4848-01	TP-1	SAM	11/18/24 15:10	Cr high	Kareem	Dilution
28	P4849-01	RR-1	SAM	11/18/24 15:14		Kareem	OK
29	P4850-01	OR-03-11142024	SAM	11/18/24 15:18		Kareem	OK
30	P4851-01	OK-02-11142024	SAM	11/18/24 15:22		Kareem	OK
31	P4852-01	COMP-1	SAM	11/18/24 15:26		Kareem	OK
32	P4852-02	COMP-2	SAM	11/18/24 15:31		Kareem	OK
33	CCV03	CCV03	CCV	11/18/24 15:35		Kareem	OK
34	CCB03	CCB03	CCB	11/18/24 15:39		Kareem	OK
35	P4852-03	COMP-3	SAM	11/18/24 15:43		Kareem	OK
36	P4859-01DUP	NB-08-111424DUP	DUP	11/18/24 15:48		Kareem	OK
37	P4859-01L	NB-08-111424L	SD	11/18/24 15:52		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133502

Review By	kareem	Review On	11/19/2024 9:23:02 AM
Supervise By	jaswal	Supervise On	11/19/2024 10:28:07 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

38	P4859-01MS	NB-08-111424MS	MS	11/18/24 15:56	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
39	P4859-01MSD	NB-08-111424MSD	MSD	11/18/24 16:00	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
40	P4859-01A	NB-08-111424A	PS	11/18/24 16:04	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
41	P4868-01	RW5-SP100-2024111	SAM	11/18/24 16:08		Kareem	OK
42	P4868-03	RW5-SP303-2024111	SAM	11/18/24 16:12		Kareem	OK
43	P4868-03DUP	RW5-SP303-2024111	DUP	11/18/24 16:16		Kareem	OK
44	P4868-03MSD	RW5-SP303-2024111	MSD	11/18/24 16:21	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
45	CCV04	CCV04	CCV	11/18/24 16:25		Kareem	OK
46	CCB04	CCB04	CCB	11/18/24 16:29		Kareem	OK
47	P4848-01DL	TP-1DL	SAM	11/18/24 16:33	10x for Cr	Kareem	Confirms
48	P4868-03A	RW5-SP303-2024111	PS	11/18/24 16:37	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
49	P4868-03L	RW5-SP303-2024111	SD	11/18/24 16:41		Kareem	OK
50	P4868-03MS	RW5-SP303-2024111	MS	11/18/24 16:46	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
51	LR1	LR1	HIGH STD	11/18/24 16:51		Kareem	OK
52	LR2	LR2	HIGH STD	11/18/24 16:56		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133502

Review By	kareem	Review On	11/19/2024 9:23:02 AM
Supervise By	jaswal	Supervise On	11/19/2024 10:28:07 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

53	CCV05	CCV05	CCV	11/18/24 17:01		Kareem	OK
54	CCB05	CCB05	CCB	11/18/24 17:06		Kareem	OK
55	P4861-01	WC-11-A-202411	SAM	11/18/24 17:27		Kareem	OK
56	P4861-01DUP	WC-11-A-202411DUP	DUP	11/18/24 17:31		Kareem	OK
57	P4861-01L	WC-11-A-202411L	SD	11/18/24 17:35		Kareem	OK
58	P4861-01MS	WC-11-A-202411MS	MS	11/18/24 17:40	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
59	P4861-01MSD	WC-11-A-202411MSD	MSD	11/18/24 17:44	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
60	P4861-01A	WC-11-A-202411A	PS	11/18/24 17:48	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
61	P4871-01	WC-10-A-202411	SAM	11/18/24 17:51		Kareem	OK
62	P4848-02	TP-1	SAM	11/18/24 17:56		Kareem	OK
63	P4869-01	EO-02-11152024	SAM	11/18/24 18:00		Kareem	OK
64	CCV06	CCV06	CCV	11/18/24 18:04		Kareem	OK
65	CCB06	CCB06	CCB	11/18/24 18:08		Kareem	OK
66	P4887-01	MH-739	SAM	11/18/24 18:13		Kareem	OK
67	P4887-05	MH-760	SAM	11/18/24 18:17		Kareem	OK
68	P4889-01	VNJ-228	SAM	11/18/24 18:21		Kareem	OK
69	P4889-03	72-11978	SAM	11/18/24 18:25		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133502

Review By	kareem	Review On	11/19/2024 9:23:02 AM
Supervise By	jaswal	Supervise On	11/19/2024 10:28:07 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

70	P4889-05	72-11930	SAM	11/18/24 18:29		Kareem	OK
71	P4889-05DUP	72-11930DUP	DUP	11/18/24 18:33		Kareem	OK
72	P4889-05L	72-11930L	SD	11/18/24 18:37		Kareem	OK
73	P4889-05MS	72-11930MS	MS	11/18/24 18:42	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
74	P4889-05MSD	72-11930MSD	MSD	11/18/24 18:46	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
75	P4889-05A	72-11930A	PS	11/18/24 18:50	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
76	CCV07	CCV07	CCV	11/18/24 18:54		Kareem	OK
77	CCB07	CCB07	CCB	11/18/24 18:58		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133540

Review By	kareem	Review On	11/21/2024 7:09:26 PM
Supervise By	mohan	Supervise On	11/21/2024 10:28:00 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/20/24 12:17		Kareem	OK
2	S1	S1	CAL2	11/20/24 12:22		Kareem	OK
3	S2	S2	CAL3	11/20/24 12:26		Kareem	OK
4	S3	S3	CAL4	11/20/24 12:30		Kareem	OK
5	S4	S4	CAL5	11/20/24 12:35		Kareem	OK
6	S5	S5	CAL6	11/20/24 12:39		Kareem	OK
7	ICV01	ICV01	ICV	11/20/24 12:50		Kareem	OK
8	LLICV01	LLICV01	LLICV	11/20/24 12:59		Kareem	OK
9	ICB01	ICB01	ICB	11/20/24 13:09		Kareem	OK
10	CRI01	CRI01	CRDL	11/20/24 13:13		Kareem	OK
11	ICSA01	ICSA01	ICSA	11/20/24 13:17		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	11/20/24 13:28		Kareem	OK
13	CCV01	CCV01	CCV	11/20/24 13:35		Kareem	OK
14	CCB01	CCB01	CCB	11/20/24 13:46		Kareem	OK
15	P4890-06	D3721	SAM	11/20/24 13:50		Kareem	OK
16	P4892-03	WB-310-BOT	SAM	11/20/24 13:55		Kareem	OK
17	P4893-04	MH-763	SAM	11/20/24 13:59		Kareem	OK
18	P4893-08	MH-762	SAM	11/20/24 14:03		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133540

Review By	kareem	Review On	11/21/2024 7:09:26 PM
Supervise By	mohan	Supervise On	11/21/2024 10:28:00 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

19	P4910-04	MH-COTTAGE	SAM	11/20/24 14:08		Kareem	OK
20	P4910-08	MH-759	SAM	11/20/24 14:12		Kareem	OK
21	P4910-08DUP	MH-759DUP	DUP	11/20/24 14:17		Kareem	OK
22	P4910-08L	MH-759L	SD	11/20/24 14:21		Kareem	OK
23	P4910-08MS	MH-759MS	MS	11/20/24 14:26	0.1ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
24	P4910-08MSD	MH-759MSD	MSD	11/20/24 14:30	0.1ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
25	CCV02	CCV02	CCV	11/20/24 14:50		Kareem	OK
26	CCB02	CCB02	CCB	11/20/24 15:00		Kareem	OK
27	P4910-08A	MH-759A	PS	11/20/24 15:04	0.1ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
28	PB164986TB	PB164986TB	MB	11/20/24 15:09		Kareem	OK
29	PB165060TB	PB165060TB	MB	11/20/24 15:41		Kareem	OK
30	PB165118BL	PB165118BL	MB	11/20/24 15:45		Kareem	OK
31	PB165118BSRE	PB165118BSRE	LCS	11/20/24 15:50	NOT USE	Kareem	Not Ok
32	LR1	LR1	HIGH STD	11/20/24 15:59		Kareem	OK
33	LR2	LR2	HIGH STD	11/20/24 16:04		Kareem	OK
34	PB165118BS	PB165118BS	LCS	11/20/24 16:17	0.1ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133540

Review By	kareem	Review On	11/21/2024 7:09:26 PM
Supervise By	mohan	Supervise On	11/21/2024 10:28:00 PM

STD. NAME	STD REF.#
ICAL Standard	MP83078,MP83079,MP73080,MP83081,MP83082,MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086,MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091,MP83092

35	PB165011BL	PB165011BL	MB	11/20/24 16:39		Kareem	OK
36	PB165011BS	PB165011BS	LCS	11/20/24 16:44		Kareem	OK
37	CCV03	CCV03	CCV	11/20/24 16:48		Kareem	OK
38	CCB03	CCB03	CCB	11/20/24 16:52		Kareem	OK

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

Prep Standard - Chemical Standard Summary

Order ID : P4868

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB165011,PB165066,

Sequence ID/Qc Batch ID: LB133490,LB133502,LB133540,

Standard ID :
MP73080,MP83078,MP83079,MP83081,MP83082,MP83083,MP83084,MP83085,MP83086,MP83087,MP83088,MP83091,MP83092,MP83105,MP83280,MP83281,MP83282,MP83283,MP83284,MP83285,MP83286,MP83287,MP83288,MP83289,MP83290,MP83291,MP83292,MP83294,

Chemical ID :
M5062,M5130,M5192,M5218,M5223,M5288,M5295,M5296,M5390,M5394,M5404,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,M5970,M5978,M5982,M5984,M5985,M6000,M6009,M6021,M6023,M6028,M6030,M6033,M6111,M6117,M6120,M6121,W2606,W3112,

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP73080	12/27/2022	01/08/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 12/28/2022

FROM 200.00000ml of M5404 + 9800.00000ml of W2606 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83078	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 125.00000ml of M6111 + 2350.00000ml of W3112 + 25.00000ml of M6117 = Final Quantity: 2500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP83079	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

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 MP83078 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP83081	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 25.00000ml of MP83079 + 75.00000ml of MP83078 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP83082	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 16.00000ml of MP83079 + 184.00000ml of MP83078 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP83083	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 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 MP83078 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP83084	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 2.00000ml of MP83083 + 98.00000ml of MP83078 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP83085	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.25000ml of M5218 + 0.25000ml of M5982 + 10.00000ml of M5295 + 89.77500ml of MP83078 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83086	11/06/2024	11/19/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 25.00000ml of M5130 + 225.00000ml of MP83078 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP83087	11/06/2024	11/19/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5296 + 0.10000ml of M5970 + 1.00000ml of M5982 + 10.00000ml of M5130 + 10.00000ml of M5223 + 79.50000ml of MP83078 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP83088	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 50.00000ml of MP83078 + 50.00000ml of MP83079 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP83091	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6117 = Final Quantity: 2000.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
513	RINSE SOLN	MP83092	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 200.00000ml of M6117 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP83105	11/07/2024	12/06/2024	Janvi Patel	None	None	Sarabjit Jaswal 11/07/2024

FROM 1000.00000ml of M6111 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

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

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.	MP83280	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 1.00000ml of M6120 + 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	MP83281	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP83282	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 247.30000ml of W3112 + 0.20000ml of MP83280 = 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	MP83283	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 245.00000ml of W3112 + 2.50000ml of MP83280 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP83284	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 242.50000ml of W3112 + 5.00000ml of MP83280 = 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	MP83285	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 240.00000ml of W3112 + 7.50000ml of MP83280 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP83286	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 237.50000ml of W3112 + 10.00000ml of MP83280 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP83287	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M5953 + 2.50000ml of M6120 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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

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)	MP83288	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 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)	MP83289	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6120 + 10.00000ml of MP83280 = Final Quantity: 500.000 ml

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

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)	MP83290	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6120 = 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)	MP83291	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 247.30000ml of W3112 + 0.20000ml of MP83280 = Final Quantity: 250.000 ml

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

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)	MP83292	11/18/2024	11/19/2024	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 11/18/2024

FROM 2.50000ml of M6120 + 240.50000ml of W3112 + 7.00000ml of MP83280 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP83294	11/18/2024	11/19/2024	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 11/18/2024

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 ml

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

CHEMICAL RECEIPT LOG BOOK

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 / jaswal	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 / jaswal	04/20/2021 / bin	M5223

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

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

CHEMICAL RECEIPT LOG BOOK

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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	22C0462001	06/12/2023	12/20/2022 / Al-Terek	02/11/2022 / Al-Terek	M5404

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

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

CHEMICAL RECEIPT LOG BOOK

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 #
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

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

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

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	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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

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

CHEMICAL RECEIPT LOG BOOK

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-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22F0762009	05/09/2027	11/04/2024 / Eman	09/29/2024 / Janvi	M6111

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	05/06/2025	11/06/2024 / Janvi	09/29/2024 / Eman	M6117

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)	23I0662003	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6120

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)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

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 Number: 070124
Description: Cadmium (Cd)

Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

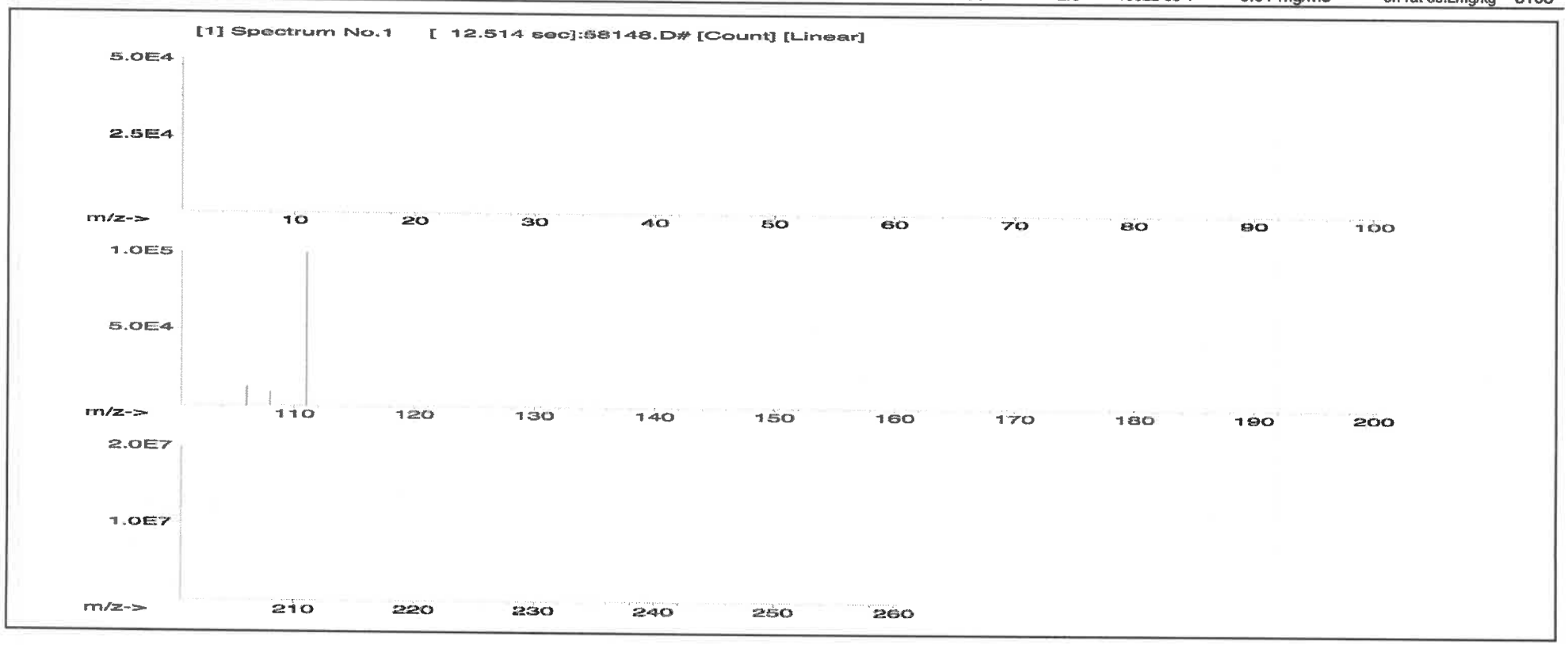
Weight shown below was diluted to (mL): 2000.07 ± 0.100 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	± 5E-05 Balance 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



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 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

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-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

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

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



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:	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

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

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

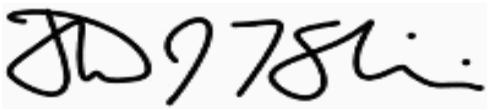
- Sealed TCT Bag Open Date: _____

- 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



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:	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"

- 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

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

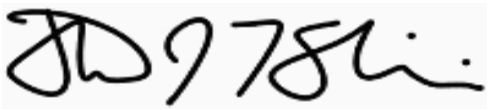
- Sealed TCT Bag Open Date: _____

- 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



INORGANIC VENTURES

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

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:	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

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

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 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

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

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



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

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.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/4}$$

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

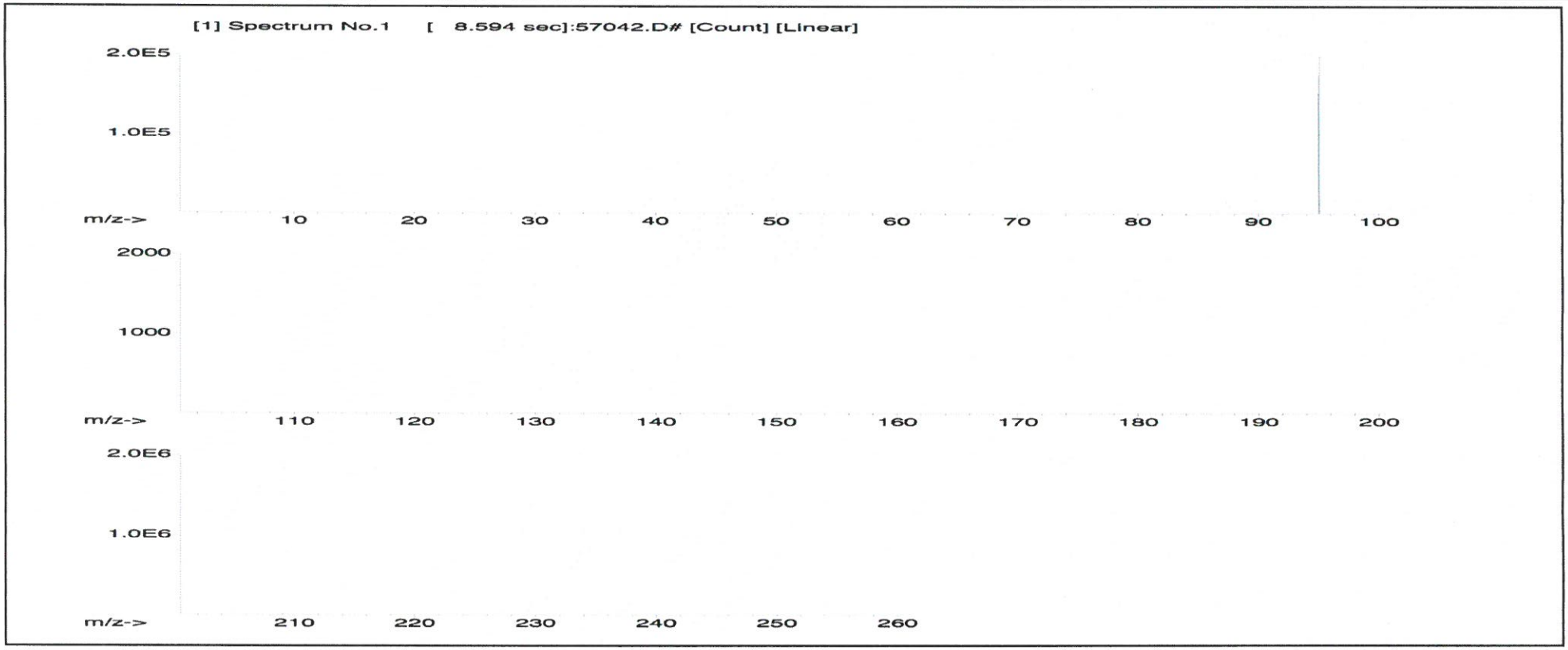
CERTIFIED WEIGHT REPORT:

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



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	<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:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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

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

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.

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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

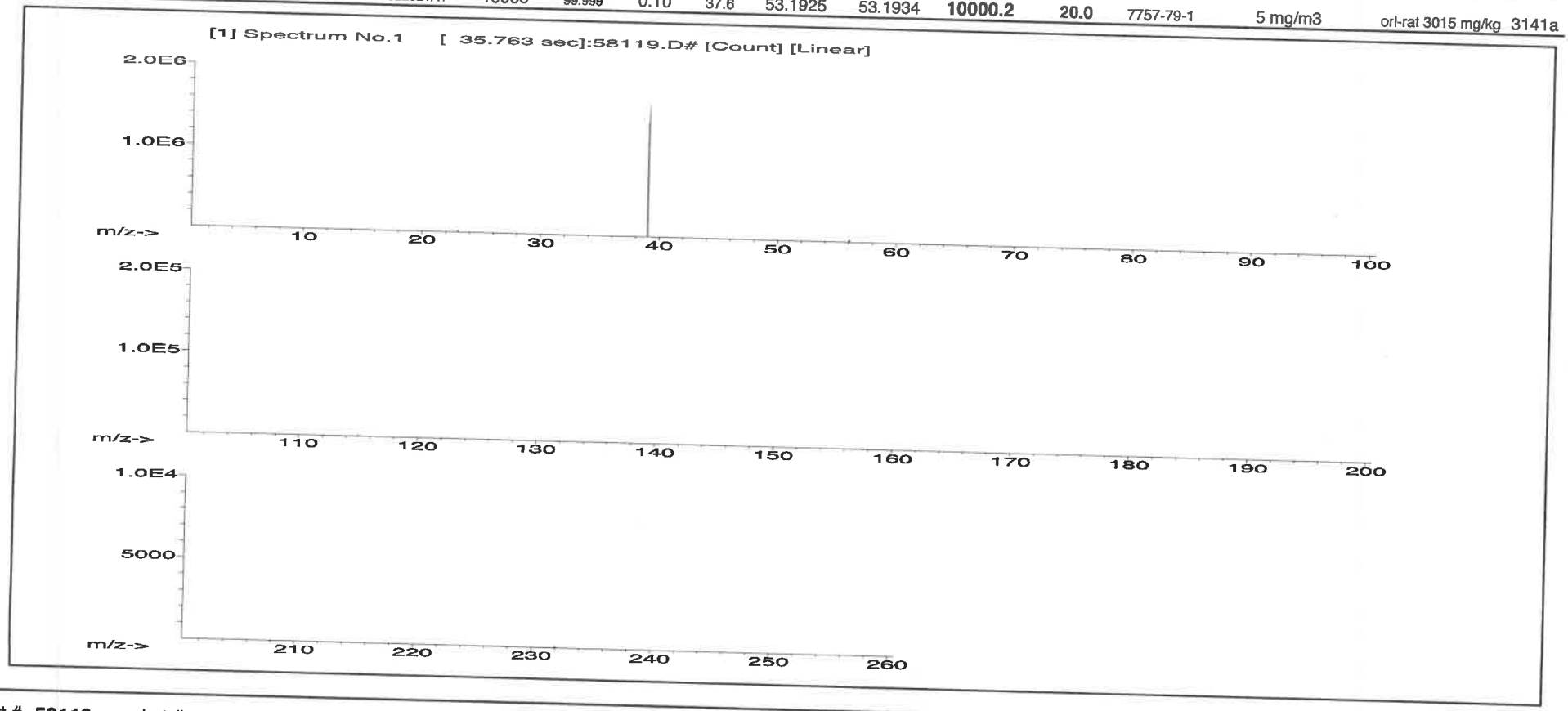
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

R: 09/08/22 (BA)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

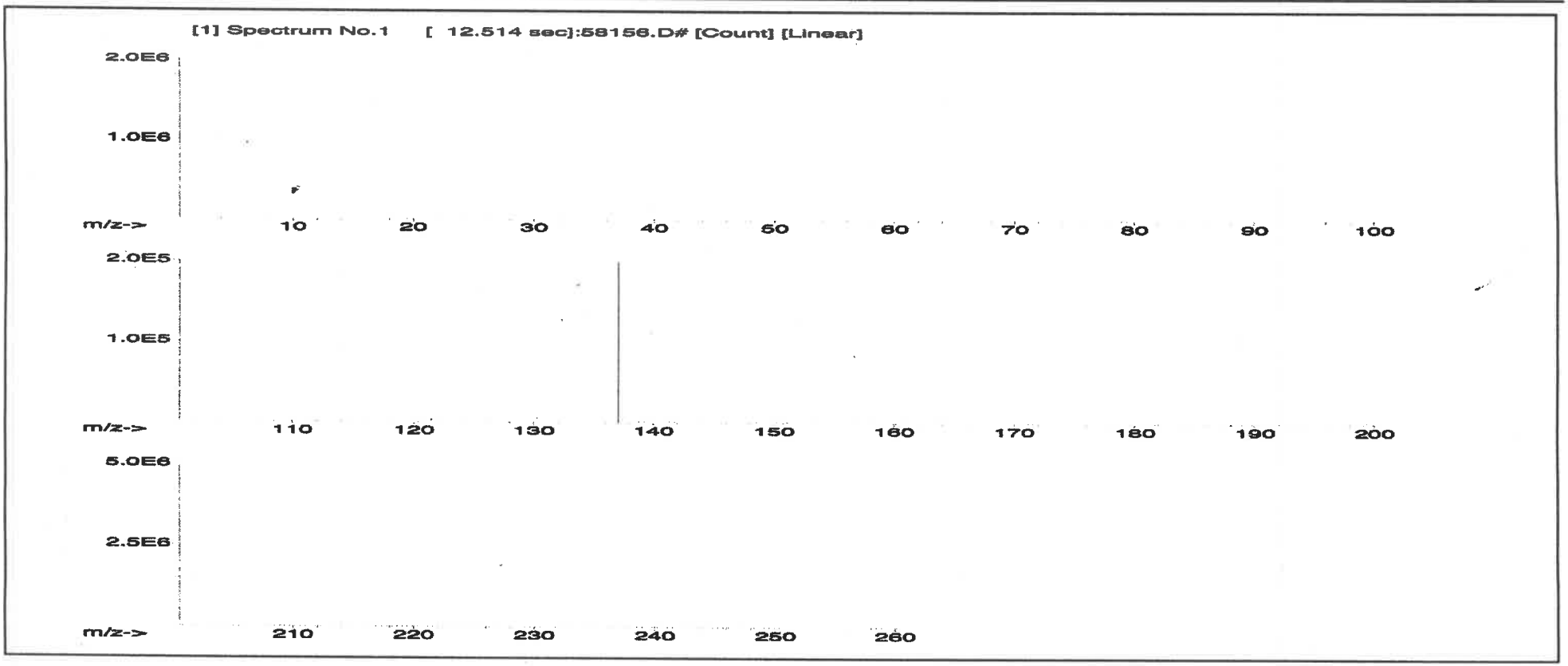
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**072122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	072125				
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		

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



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).

Nitric Acid
CMOS

M5402 M5403 M5404
M5405 M5406 M5407

Material No.: 9606-03
Batch No.: 22C0462001
Manufactured Date: 2022-02-11
Retest Date: 2027-02-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.4 %
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	1.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	1.7 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 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Nitric Acid
CMOS

Material No.: 9606-03
Batch No.: 22C0462001

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	7 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	2 par/ml

>>> Continued on page 3 >>>

Nitric Acid
CMOS

Material No.: 9606-03
Batch No.: 22C0462001

Test	Specification	Result

For Microelectronic Use
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5429 R1 01/26/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

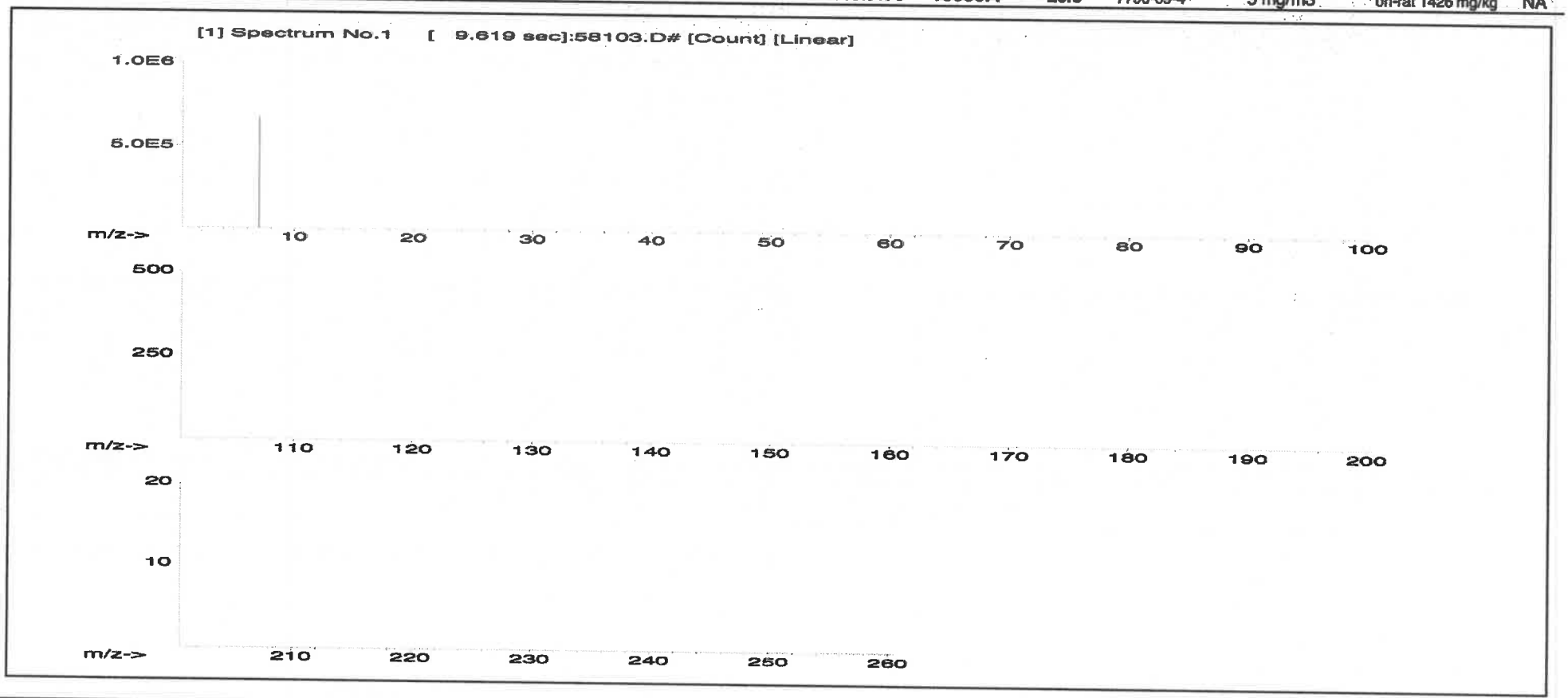
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	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



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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

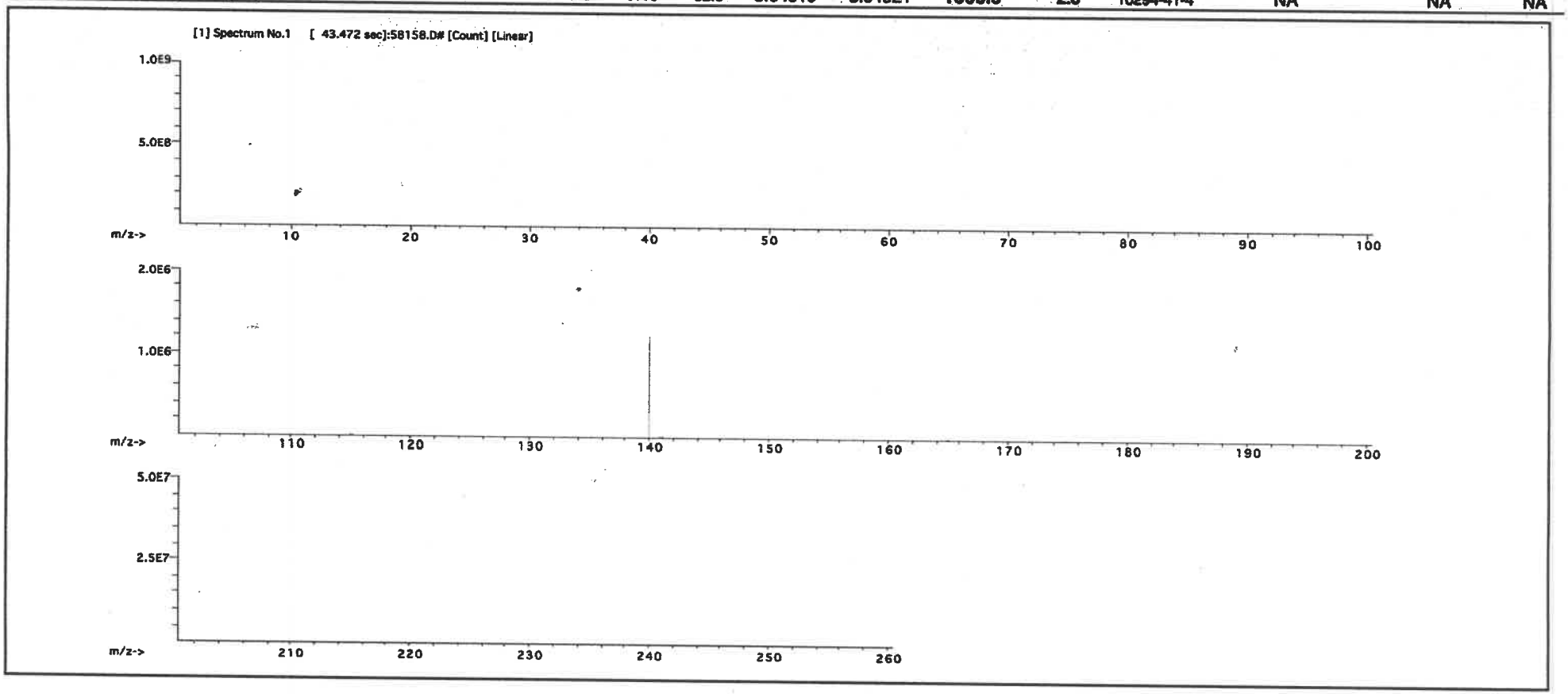
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



4486-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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

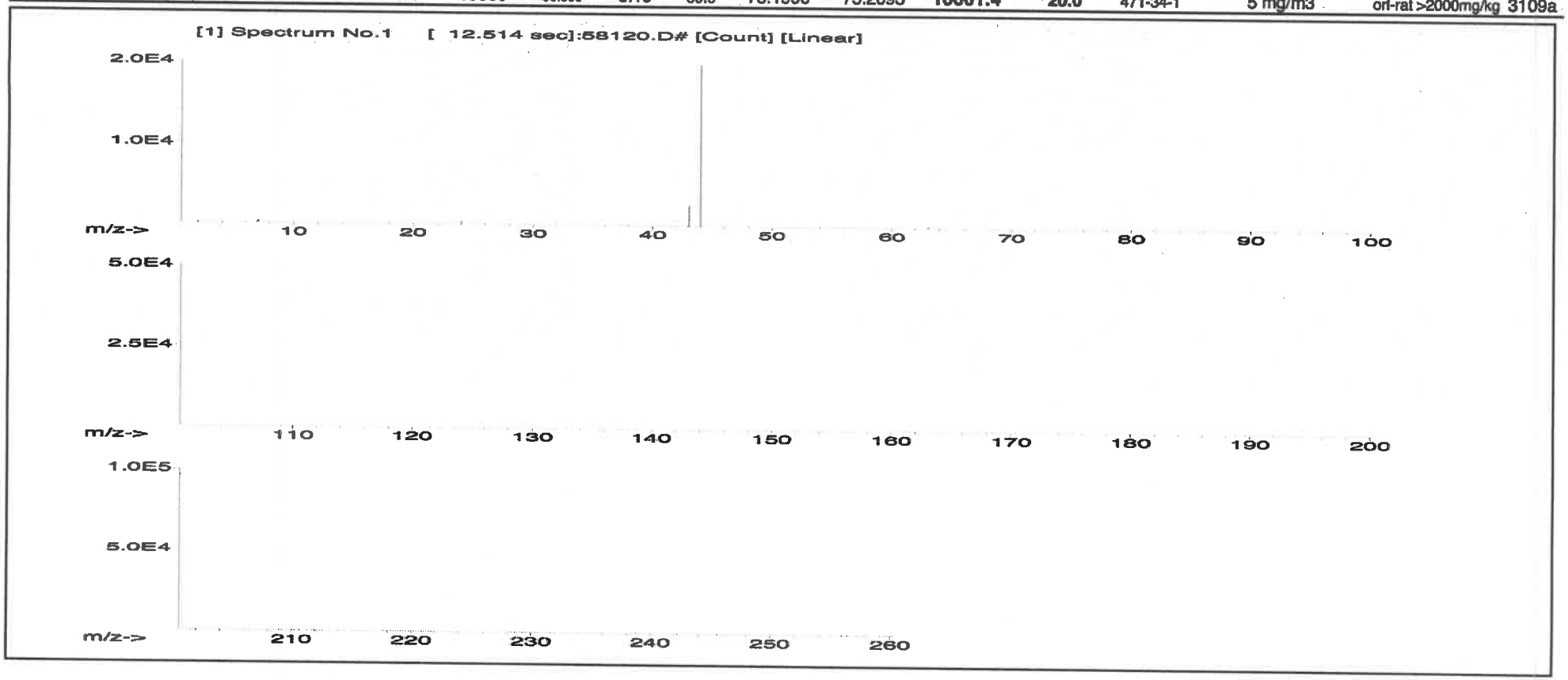
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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
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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

MS514 - MS515 R: 03/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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 ± 0.12 Flask Uncertainty

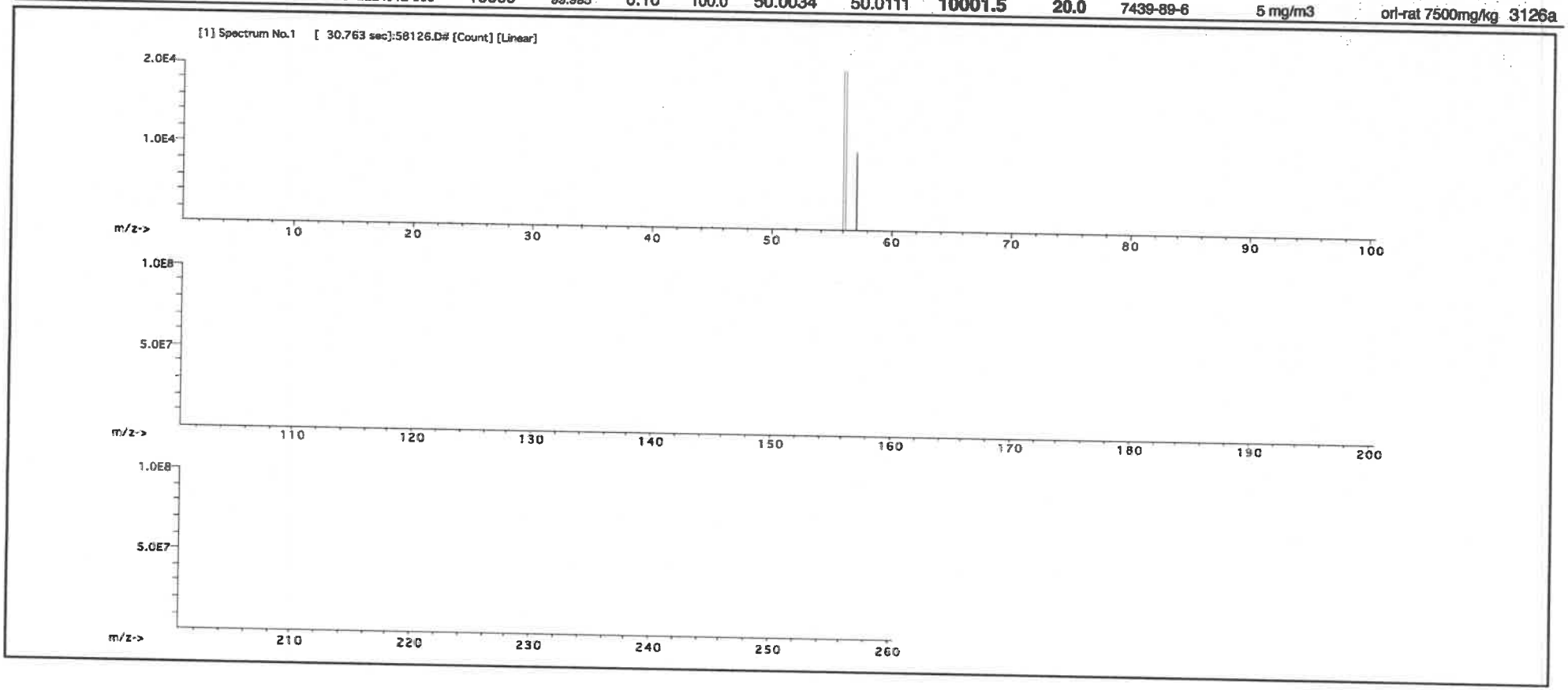
	Lot #		
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	

5E-05 Balance 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



PASS 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	<0.10	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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5658 R ! 8/25/23

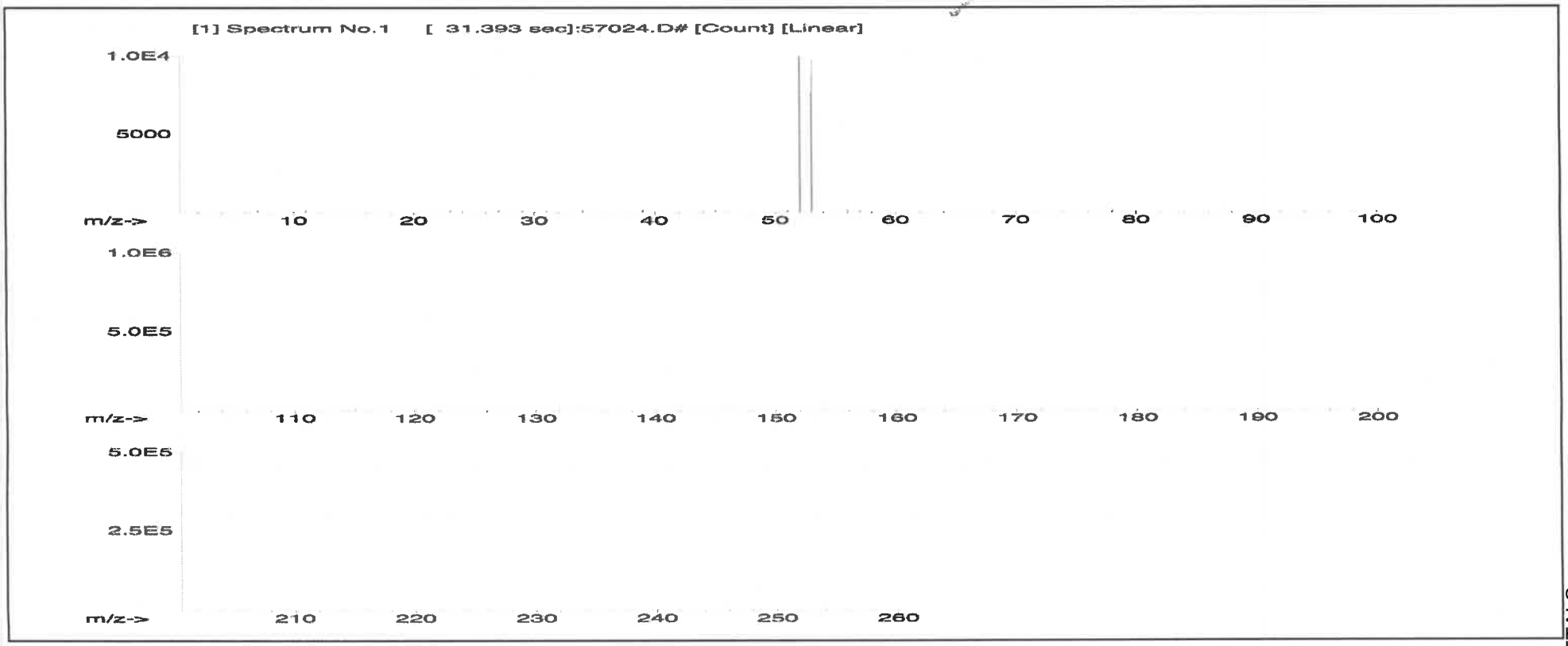
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5697 R: 10/27/23

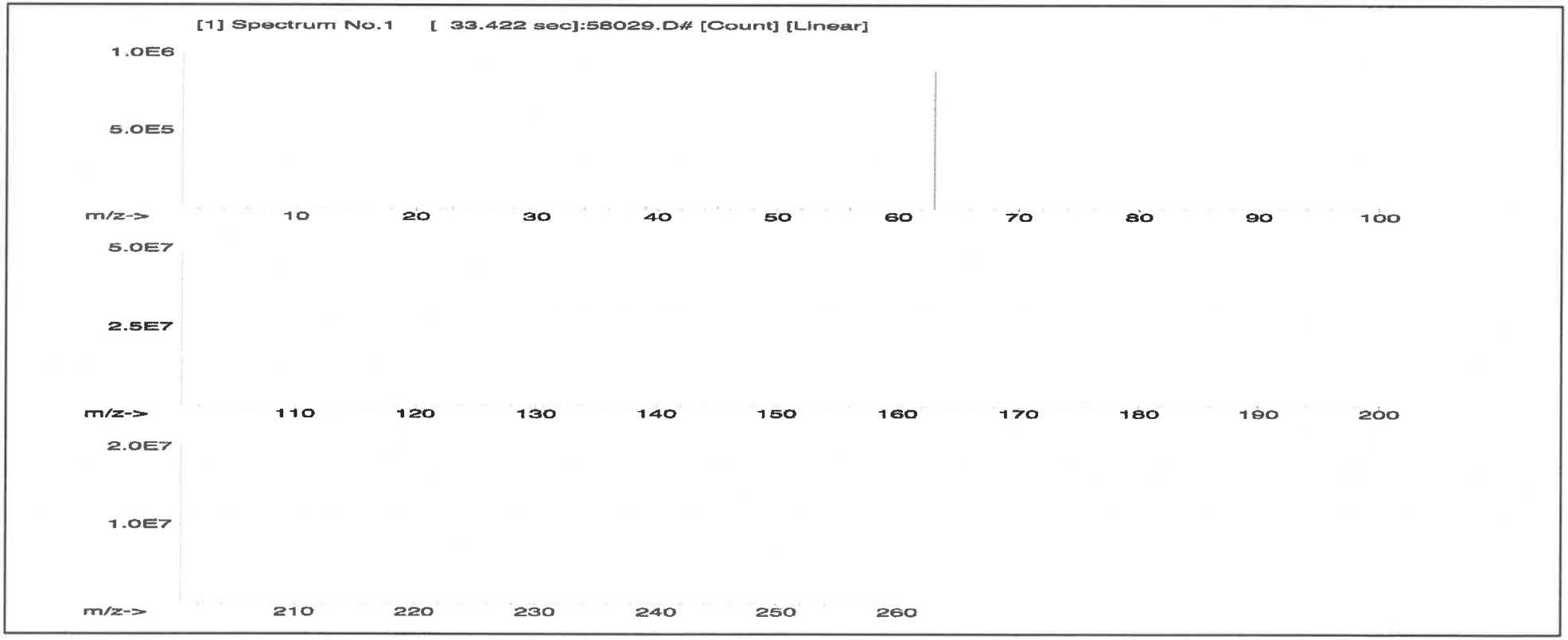
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**58029**	24002546	Nitric Acid
Lot Number:	**102523**		
Description:	**Copper (Cu)**		
		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. 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



Absolute Standards, Inc.
304-368-1131
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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5648 R: 10/27/23

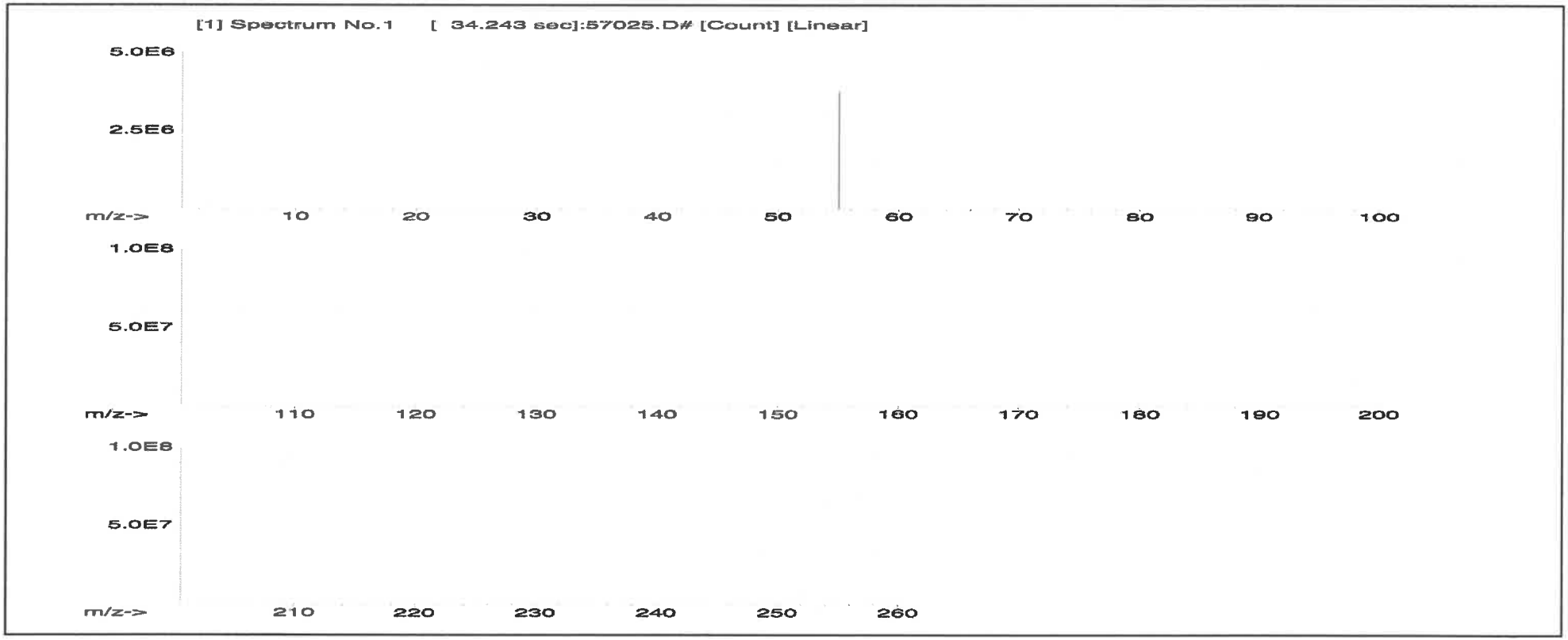
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
308-368-1131
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 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.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the 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).

art # **58025** Lot # **102623**

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 12/20/23 M5747

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

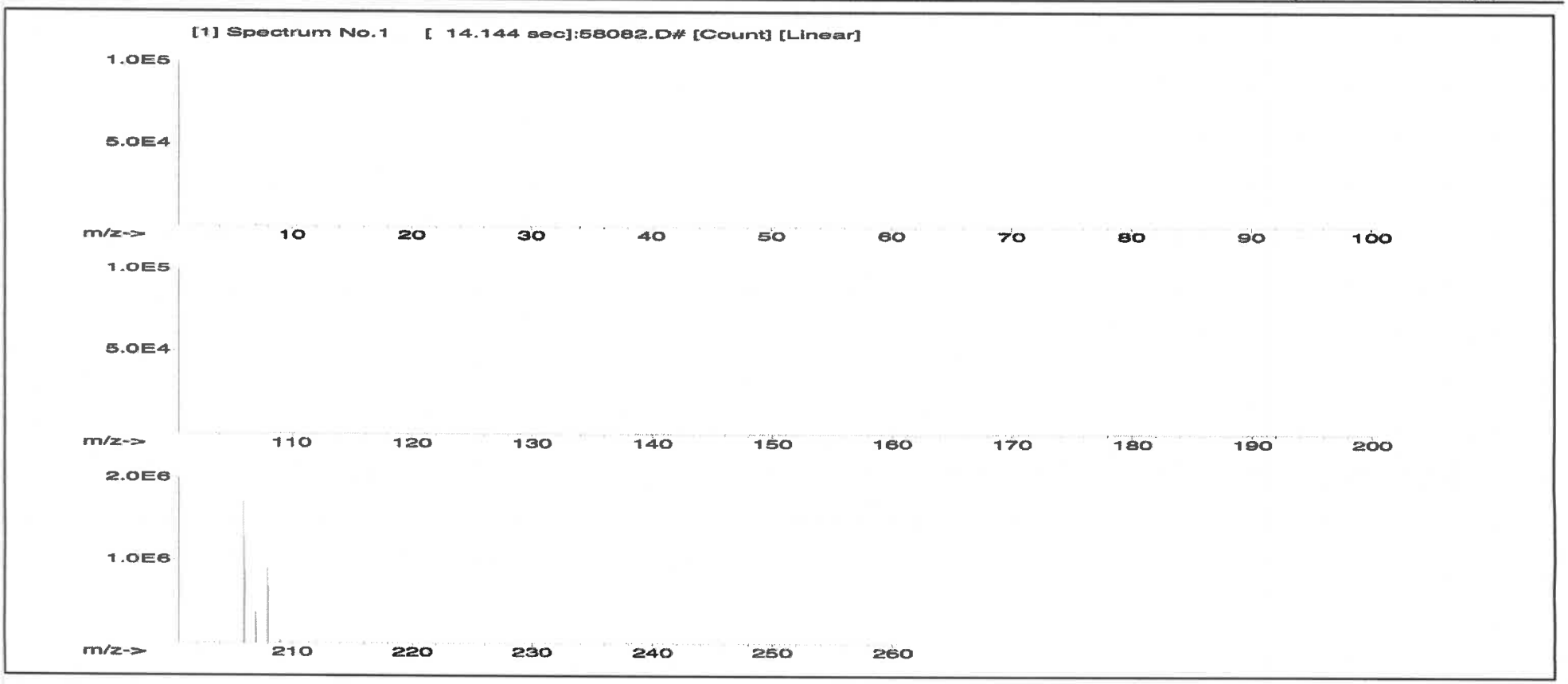
Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 12/20/23 M5748

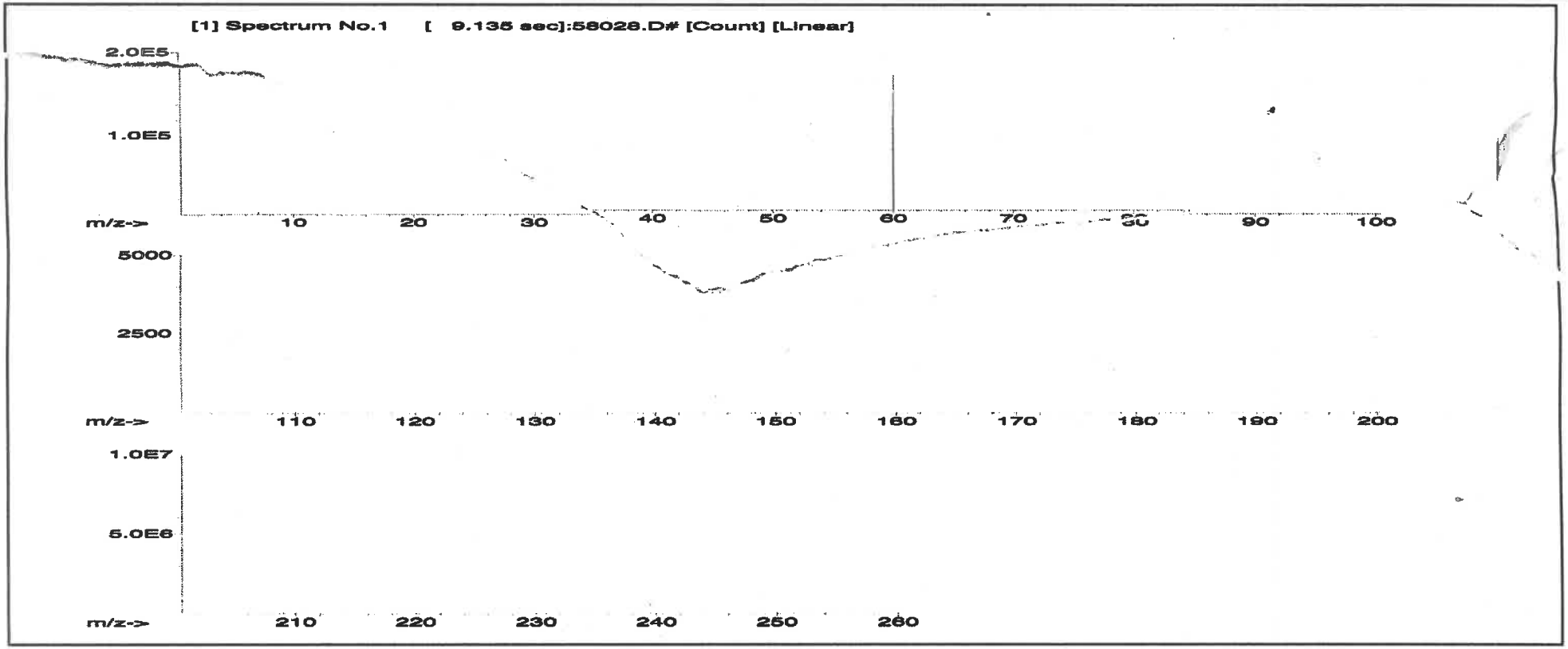
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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	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.

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5768 M5769 BP R:1/3/24

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 ± 0.058 Flask Uncertainty

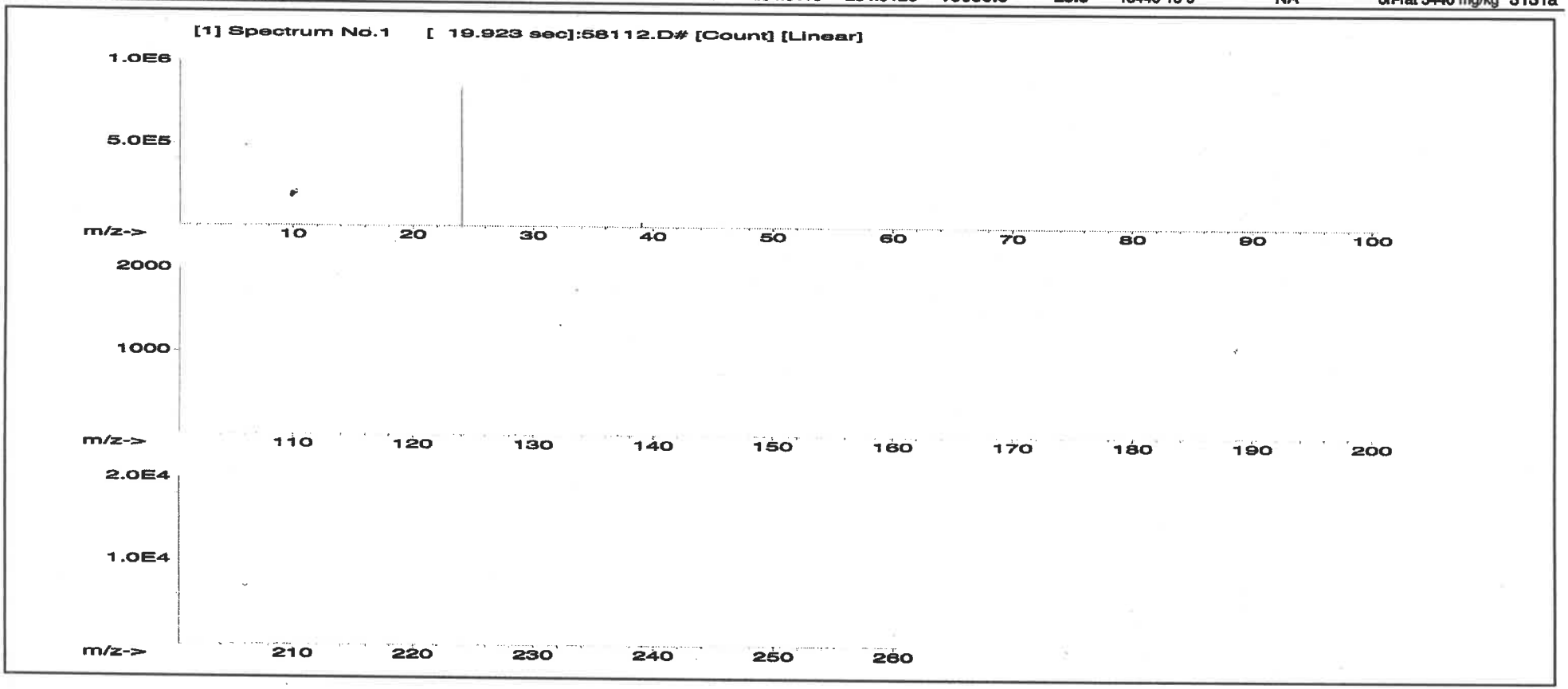
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

M5768, M5769 BP R: 1/3/24

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	ori-rat 5440 mg/kg	3131a



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 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.

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5798

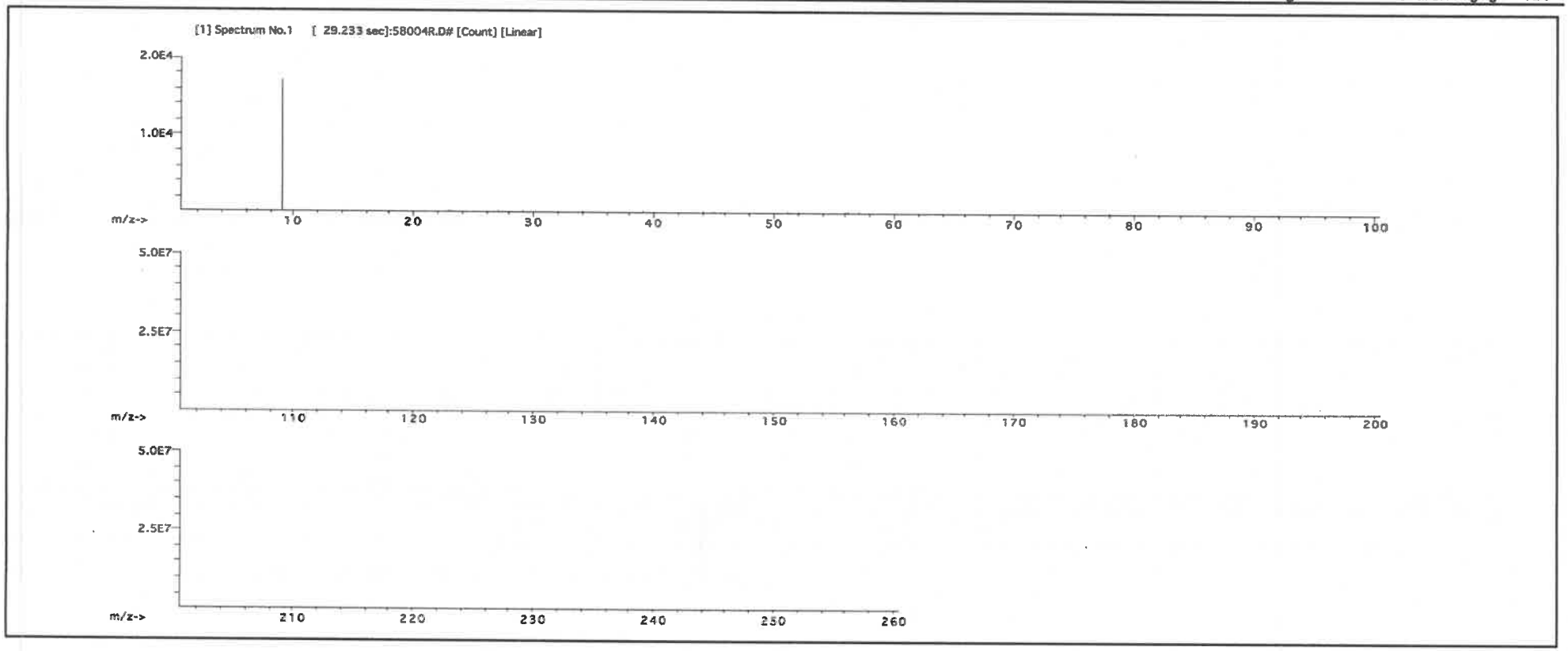
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



74868-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.

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R? 02/09/24 IV15799 BA

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

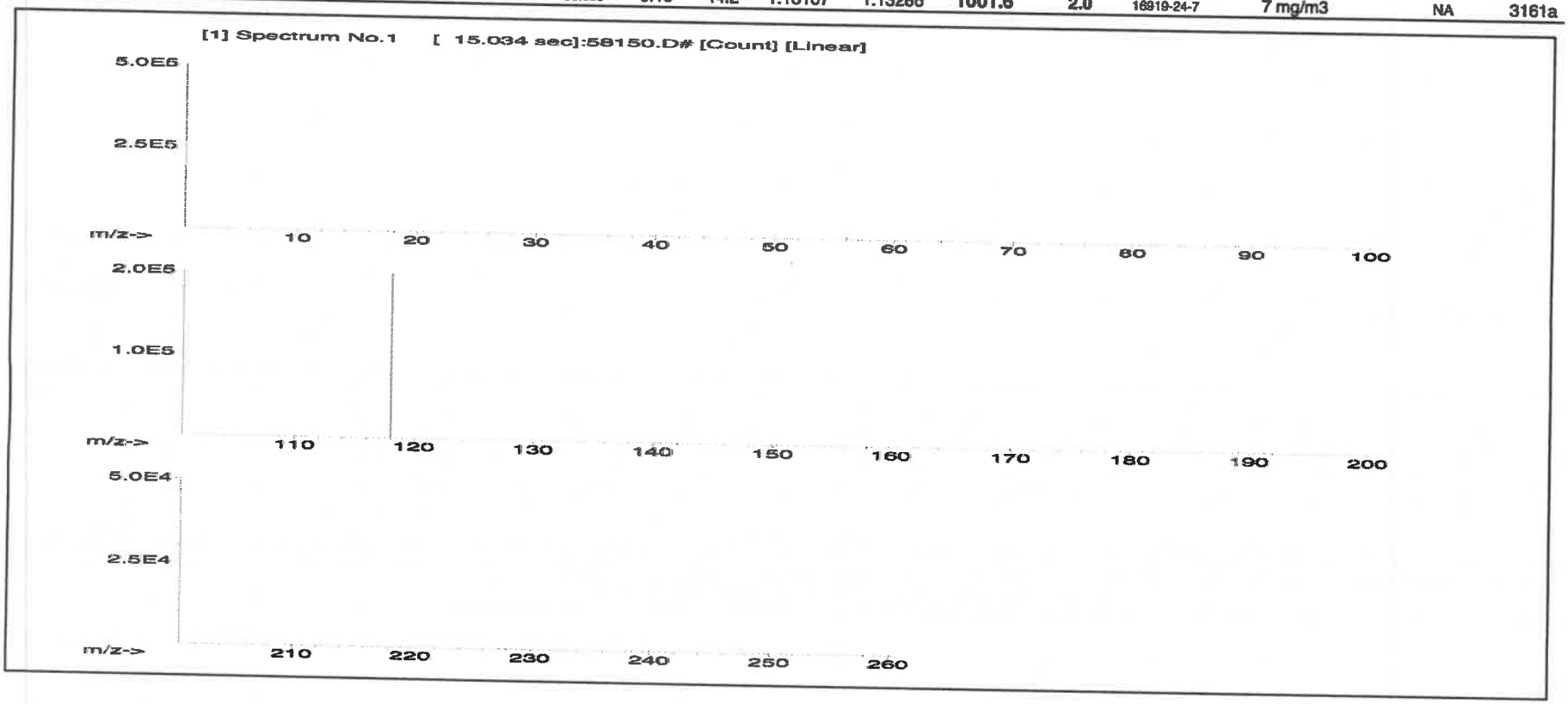
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	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



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 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:

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5800 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

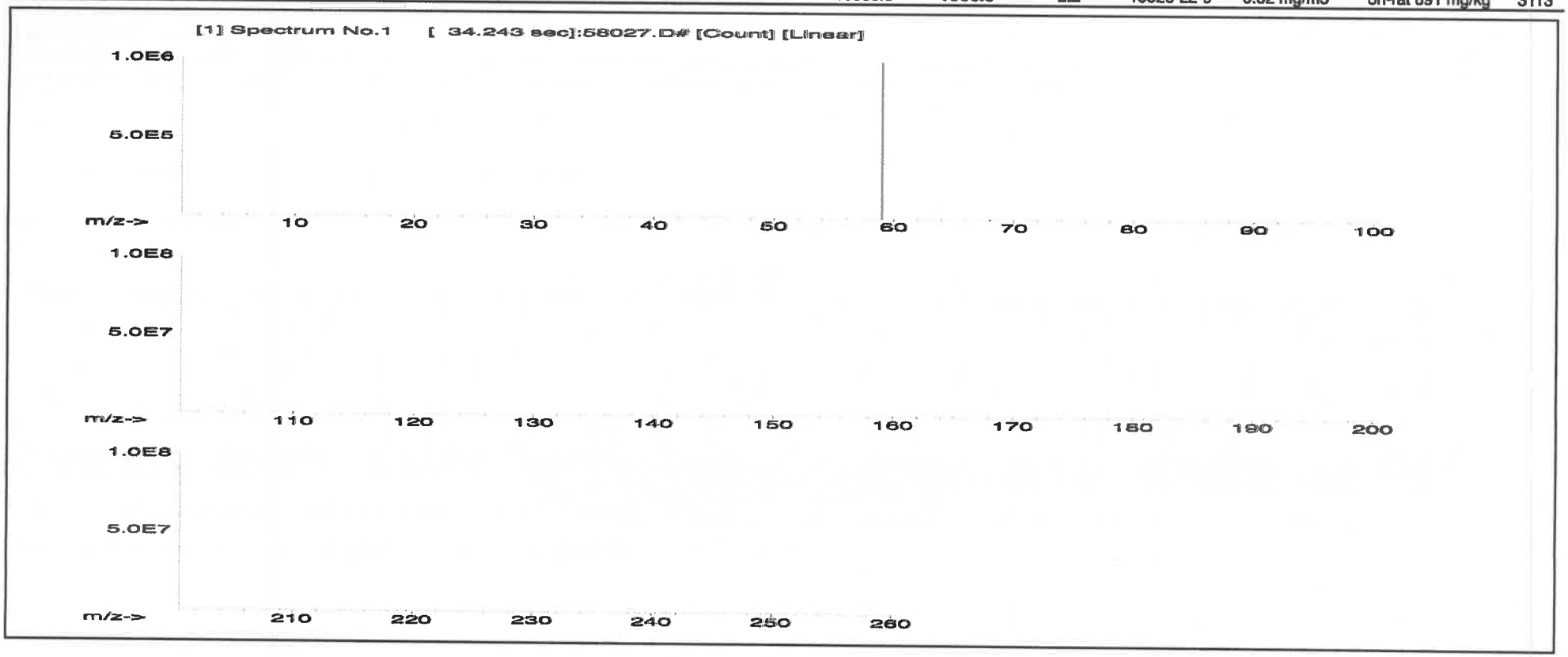
CERTIFIED WEIGHT REPORT:

		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



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	<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.

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5801 BH

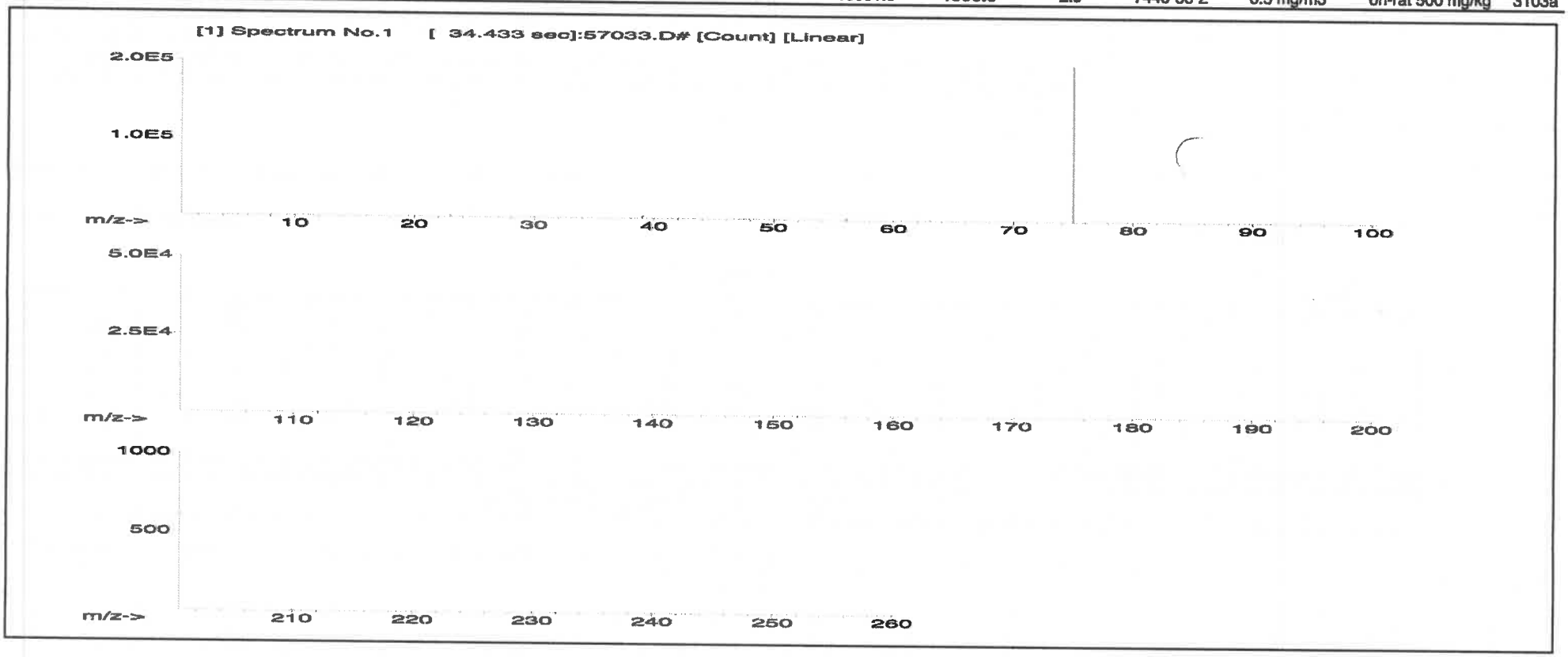
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

A: 02/09/24 M.5814

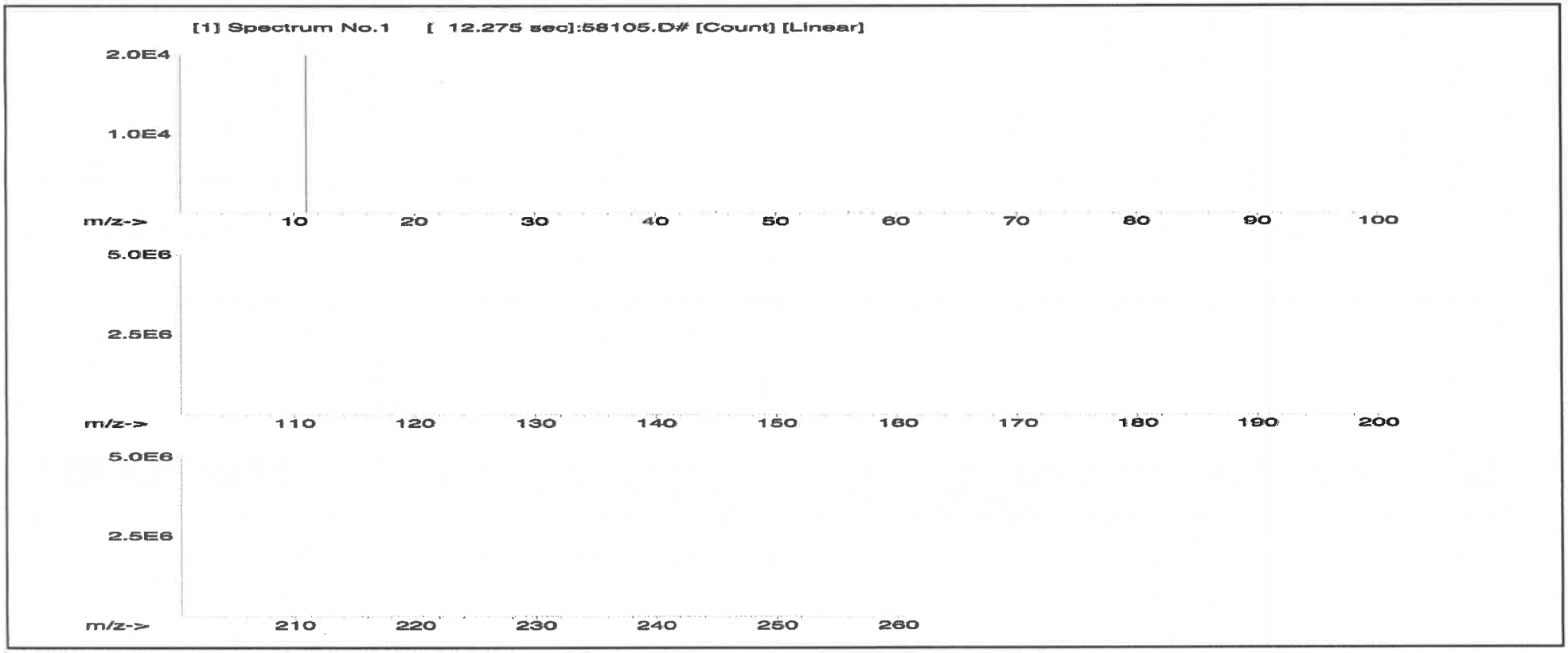
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Lot #**		
Lot Number:	**071123**	**Solvent:**	MKBQ8597V	Ammonium hydroxide	
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
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):	1999.48	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.	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



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	<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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R1 02/09/24. M58165

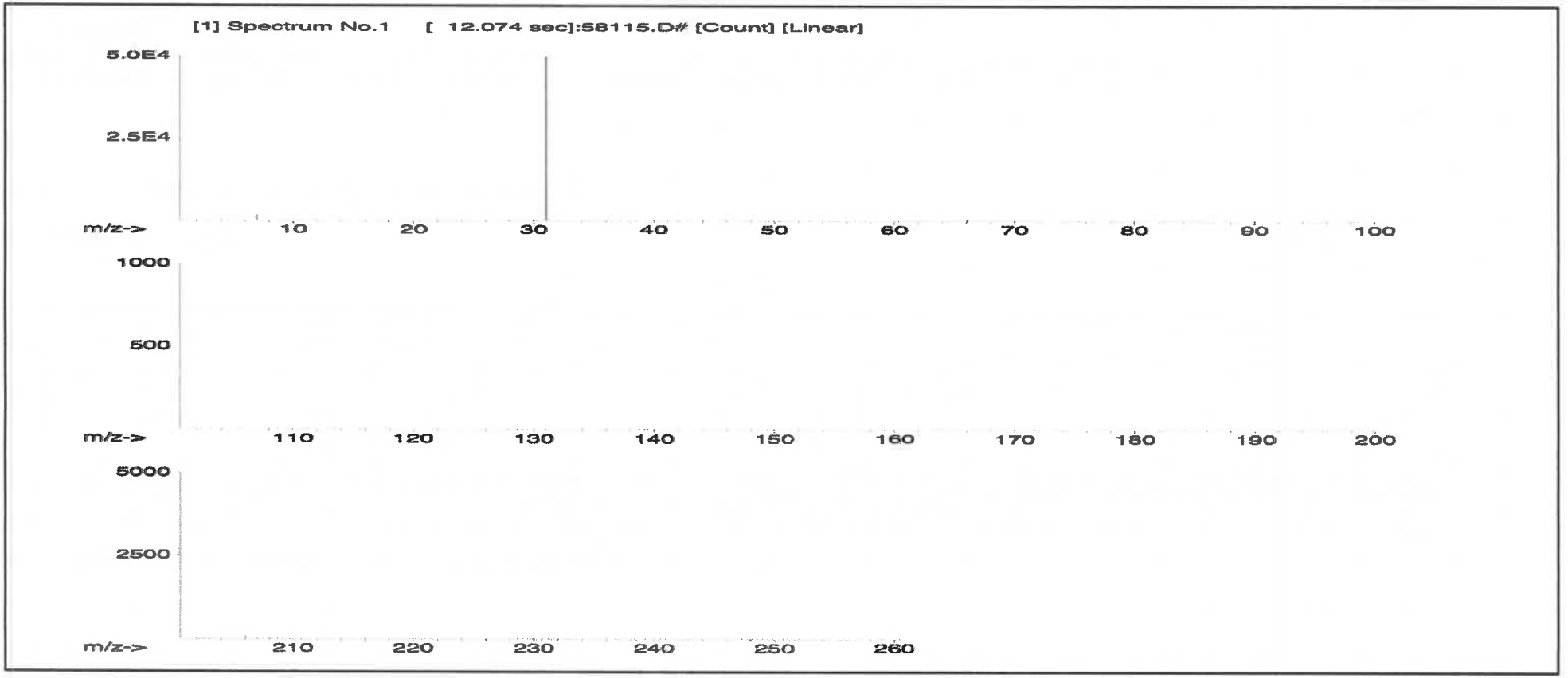
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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	<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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5816

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57016
Lot Number: 122923
Description: Sulfur (S)

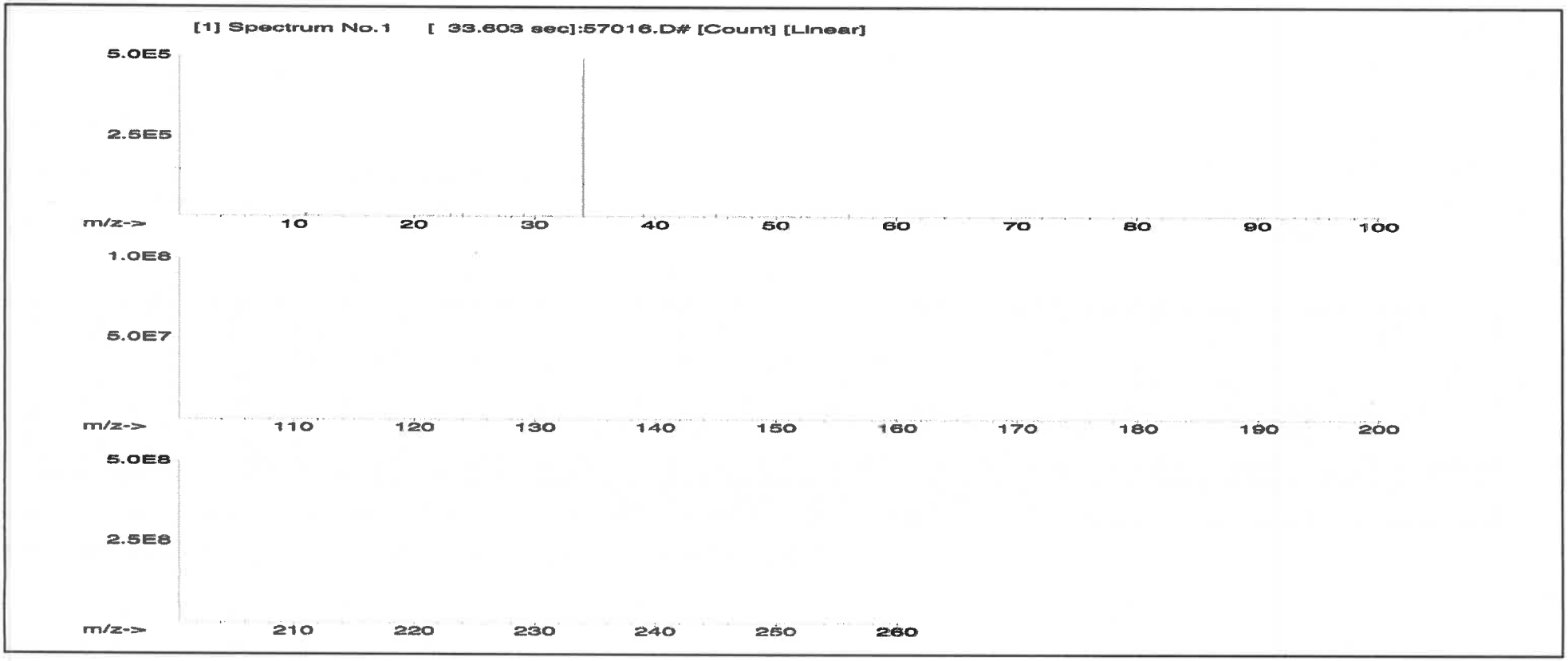
Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 4000.0

Lot #		
Solvent:	122923	ASTM Type 1 Water
	5E-05	Balance Uncertainty
	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



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 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:

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5817

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

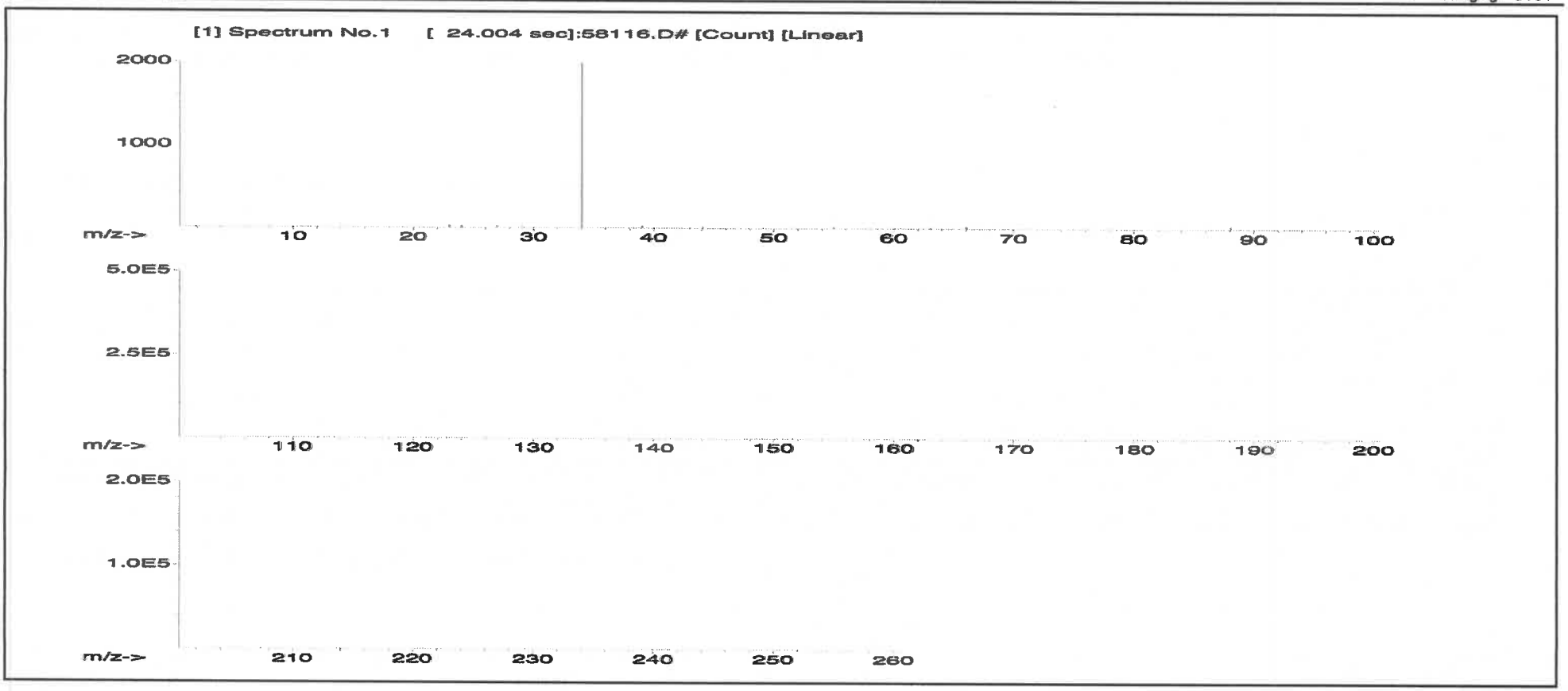
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Lot #
Solvent: 071123 ASTM Type 1 Water

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



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 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:

* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M.5818

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

2% 40.0 (mL) Nitric Acid

5E-05 Balance Uncertainty

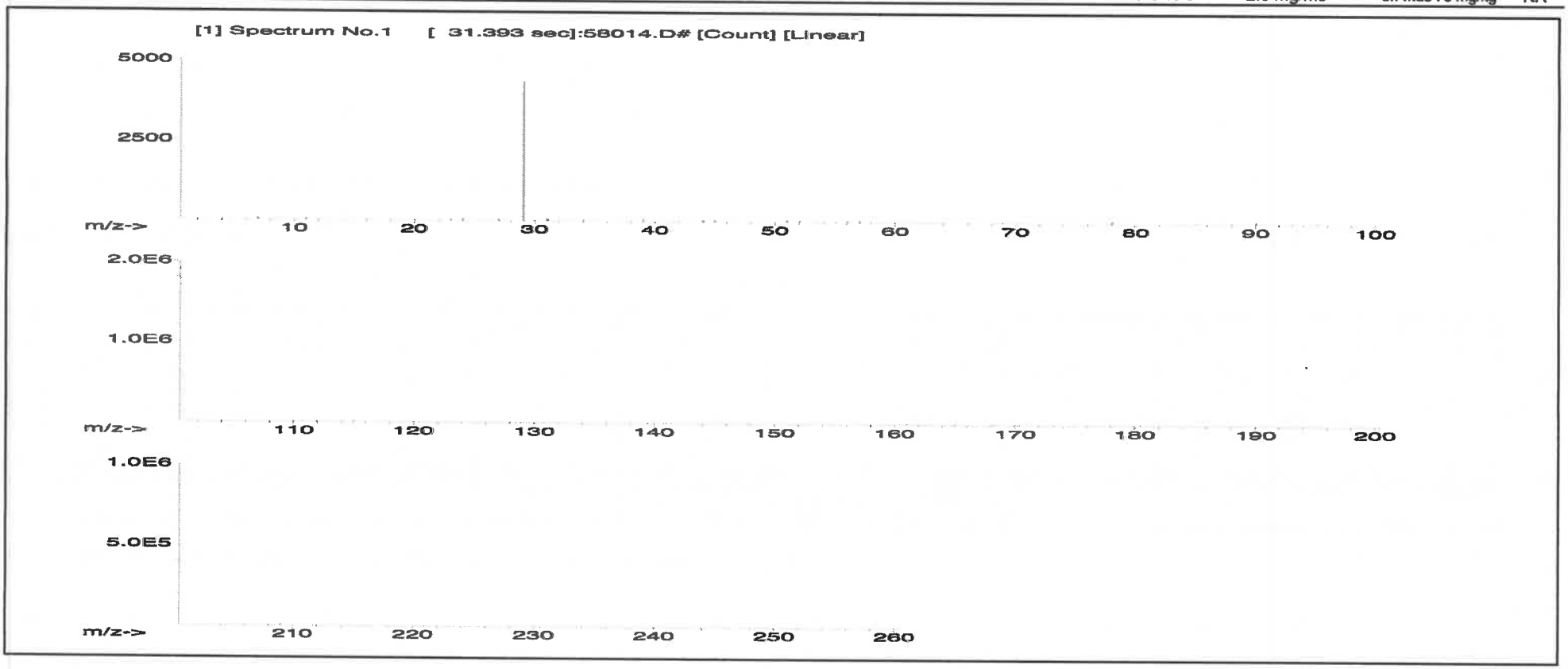
Aleah O'Brady

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



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 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:

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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5819

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

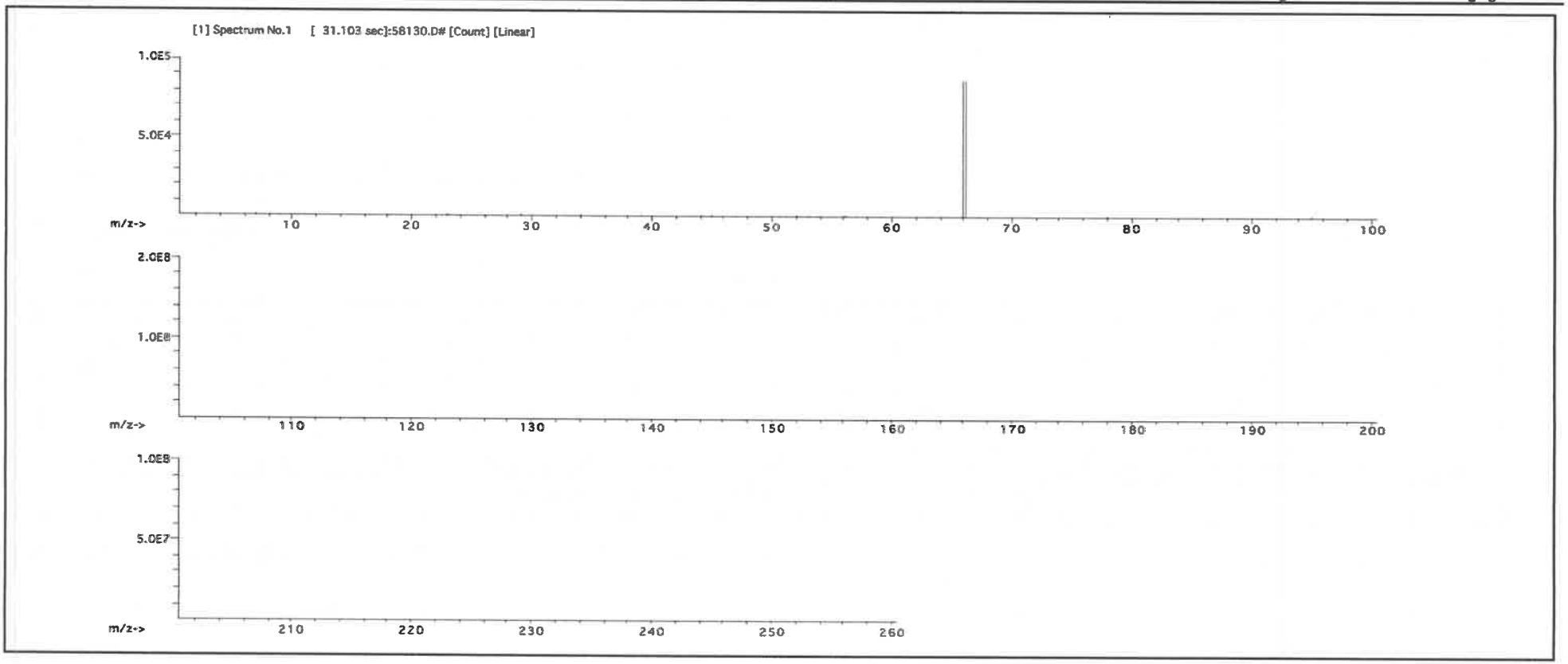
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance 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



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 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5820

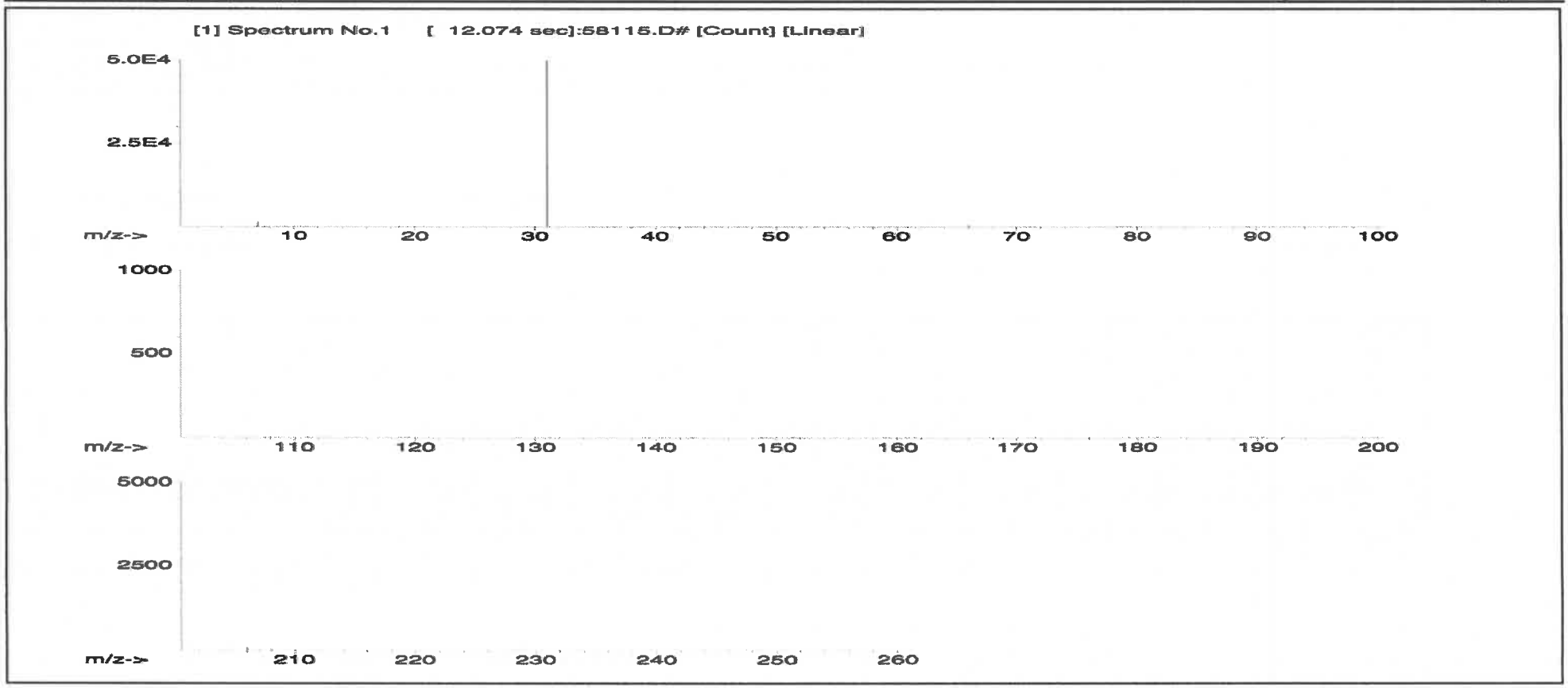
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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 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.
* 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).

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 MB MSS53 MB 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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

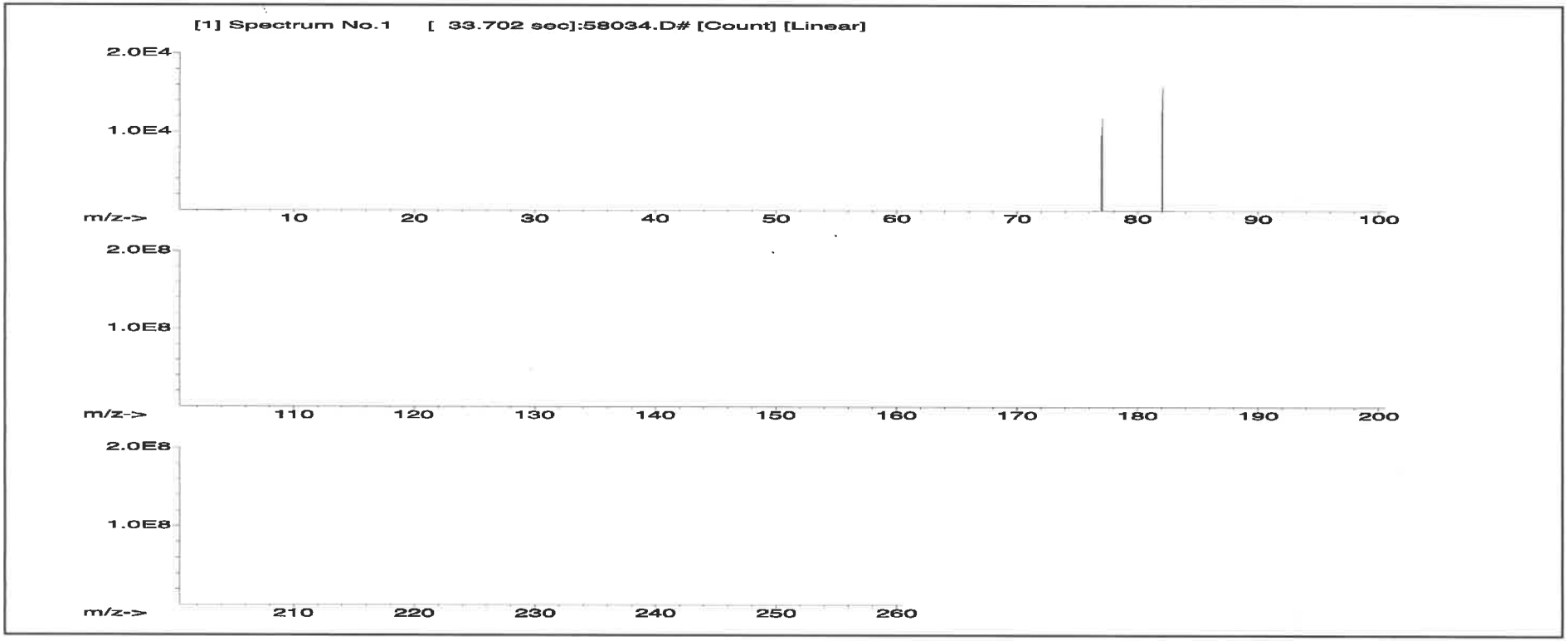
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

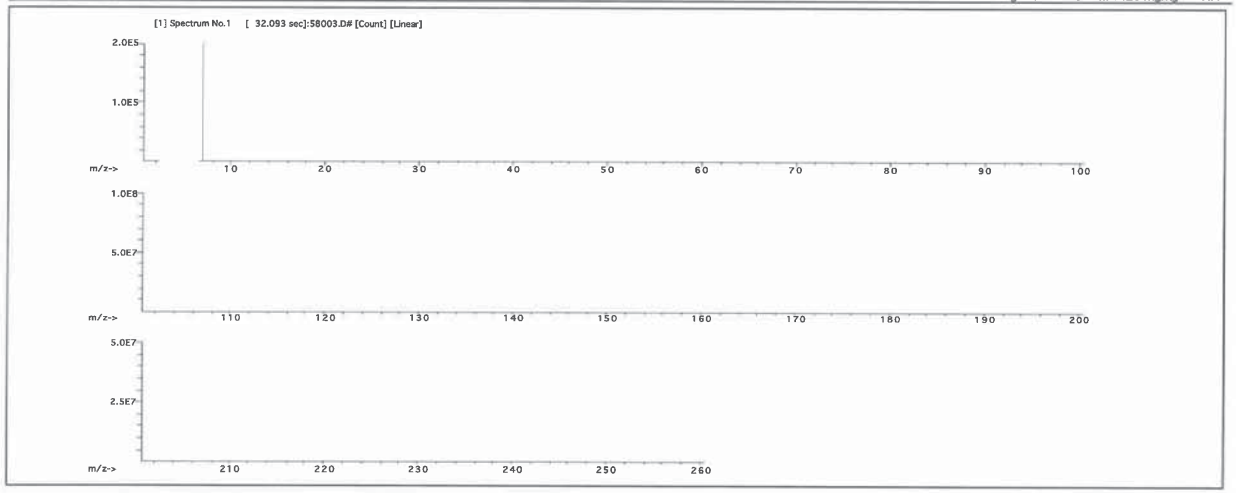
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

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



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 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).

MS978, MS979

Certificate of Analysis

INORGANIC VENTURES™

Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

R: 2/22/24

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 865.01 — ACCREDITED Reference Material Producer Certificate 865.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGT11
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:

$$X_{CRM/RM} = \Sigma(w_i)\,(X_i)$$

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 ($\pm$) = $u_{CRM/RM} = k\,(u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

$u_{Char} = [\Sigma((w_i)^2\,(u_{Char\ i})^2)]^{½}$ 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

k = coverage factor = 2

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:

$$X_{CRM/RM} = (\Sigma x_a)\,(u_{Char\ a})$$

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)

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

45982 R: 6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

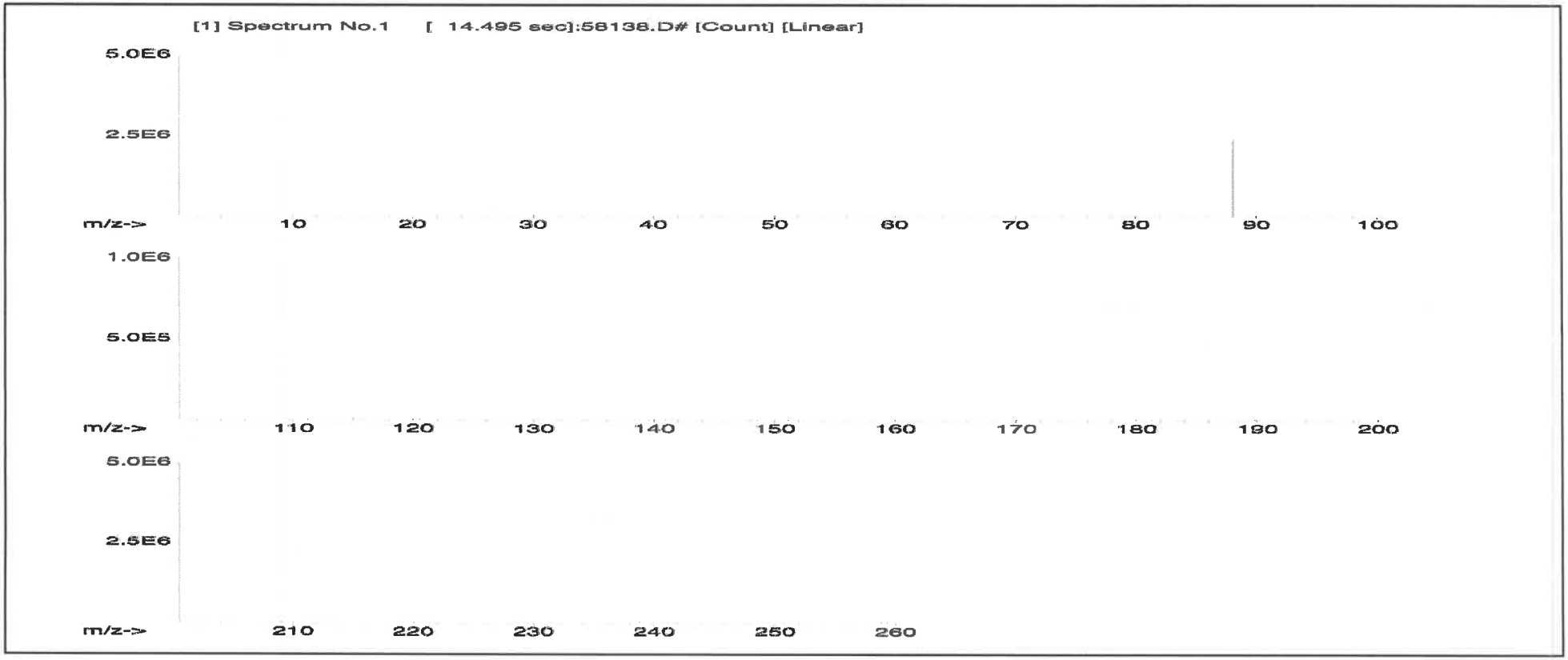
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
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).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

MS984
R:6/14/24

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:	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



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

MS985
R: 6/14/24

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:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 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	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

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 - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

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.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

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 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, 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 21, 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

- February 21, 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

R: 01/03/24 M6033

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Solvent:**	Lot # 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		

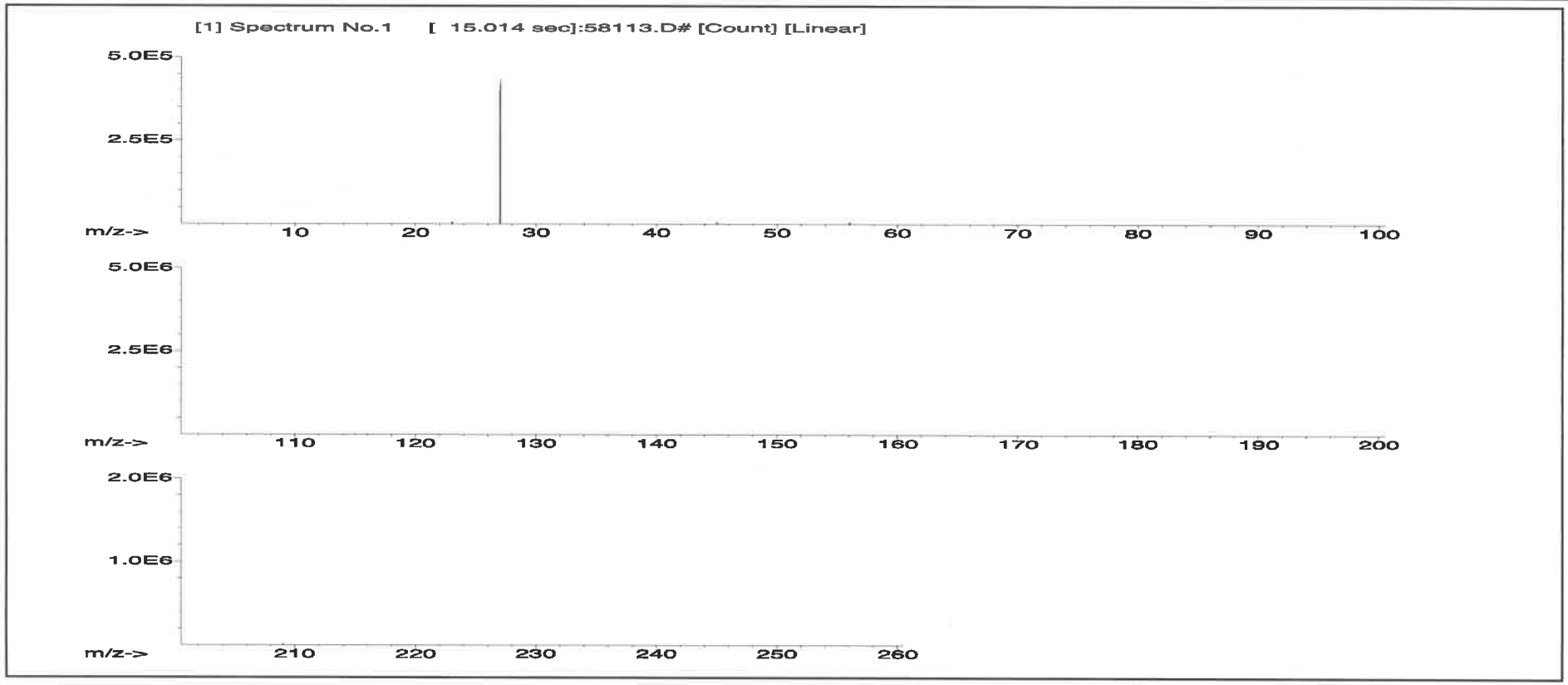
Giovanni Esposito

Formulated By:	Giovanni Esposito	011623

Pedro Rentas

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



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6109
M6110
M6111

Received date 9/29/24 Met dig.

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009
Manufactured Date: 2022-05-10
Retest Date: 2027-05-09
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	1.190
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	0.8 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	14.9 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 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	6 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.: 22F0762009

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	0.8 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	1.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	0.7 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	< 0.8 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	0.8 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.: 22F0762009

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

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

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%
CMOS

avantor™ | J.T.Baker®

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

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R ->10/13/24
Metal g

M 6120

Material No.: 9606-03
Batch No.: 2310662003
Manufactured Date: 2023-08-21
Retest Date: 2028-08-19
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.5 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	10
Residue after Ignition	≤ 2 ppm	< 2 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.08 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.10 ppm
Sulfate (SO_4)	≤ 0.2 ppm	0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 40.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 5.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 50 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 50.0 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	30.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 20 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 20 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 40.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 20 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 20.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 2310662003

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 50.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 50 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 50 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 150.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 30.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 10.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	60 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	10 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 2310662003

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

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
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	<= 0.005 %	< 0.005
ACS – Extractable Organic Substances	<= 5 ppm	1
ACS – Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities – Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 1.0 ppb	< 0.2

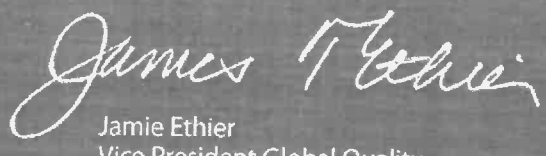
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

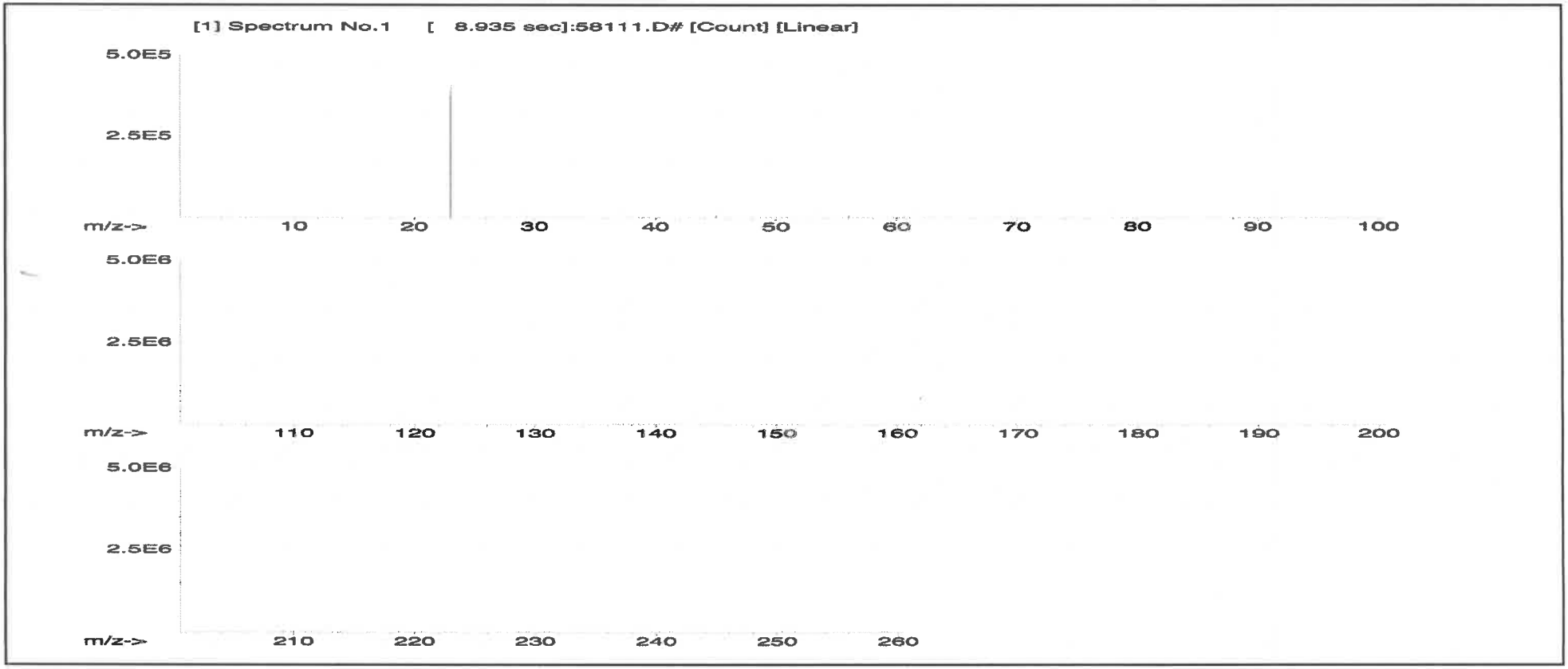
Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.06	Flask 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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

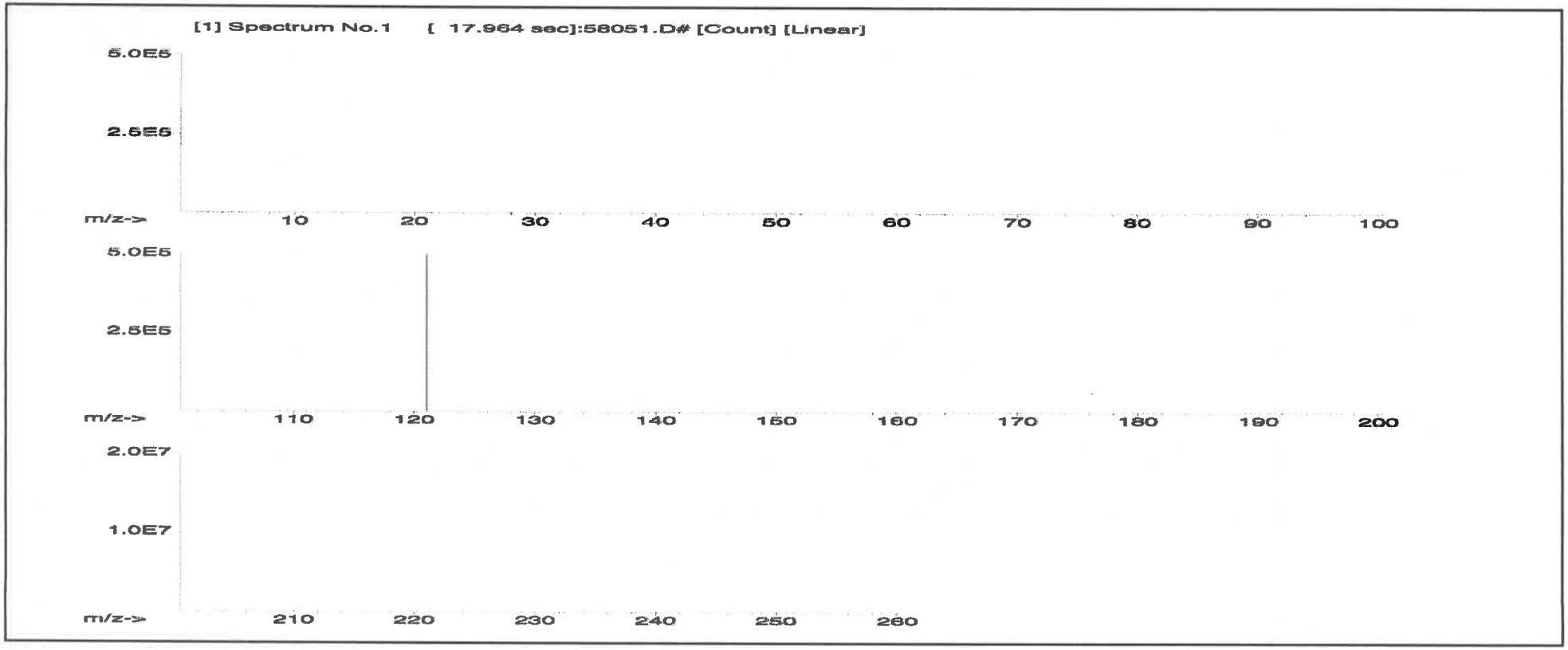
R: 01/03/24 M5802, M5803

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



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 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:

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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

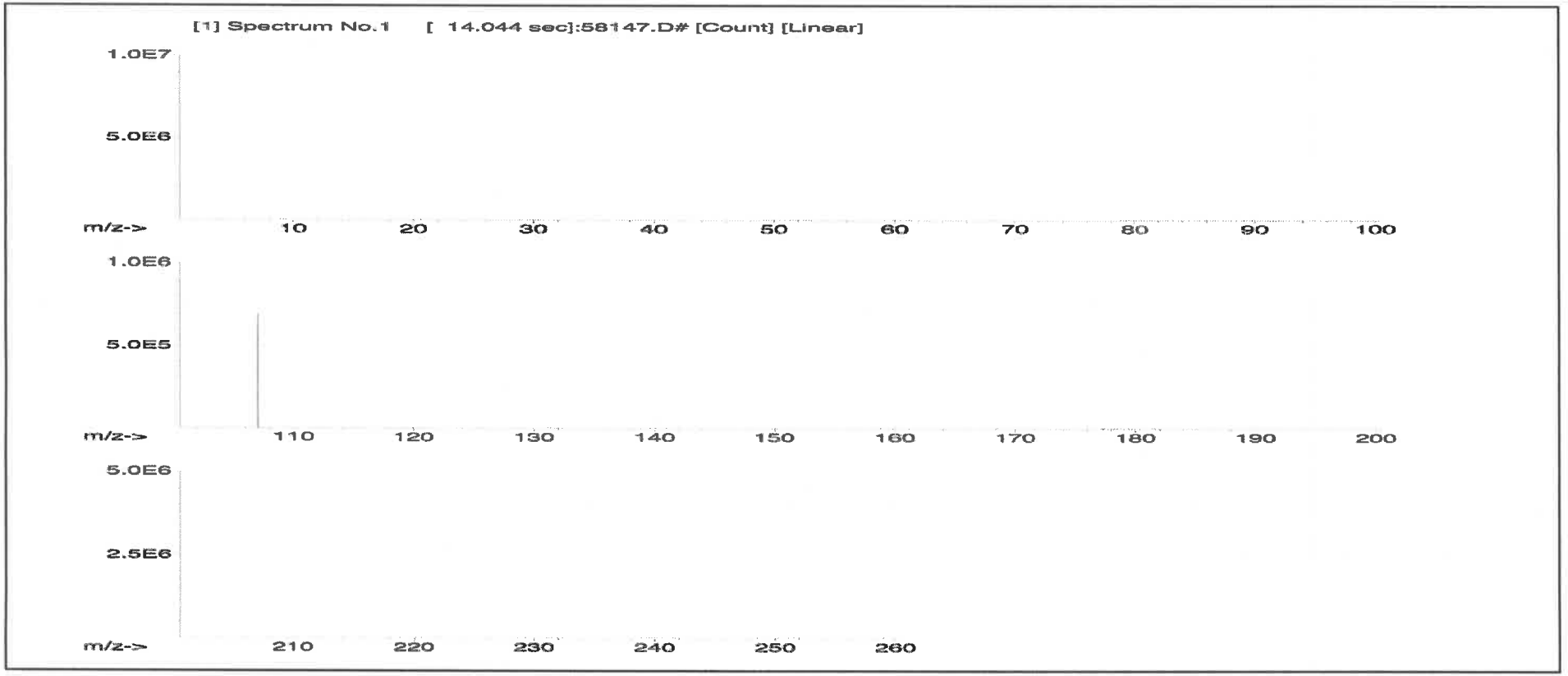
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

B ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (Tl)

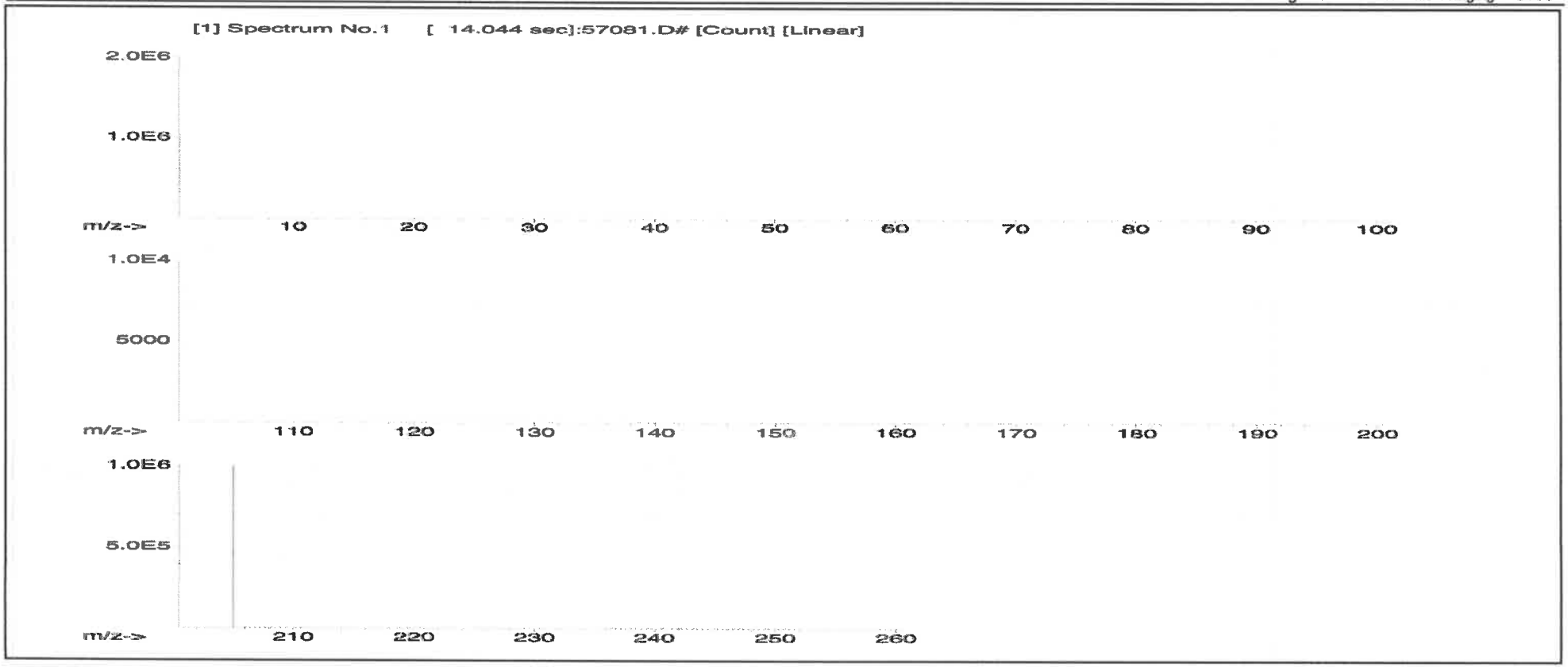
Expiration Date: 062727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	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



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 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.
* 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	24002546	Nitric Acid	
Lot Number:	**062424**			
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	

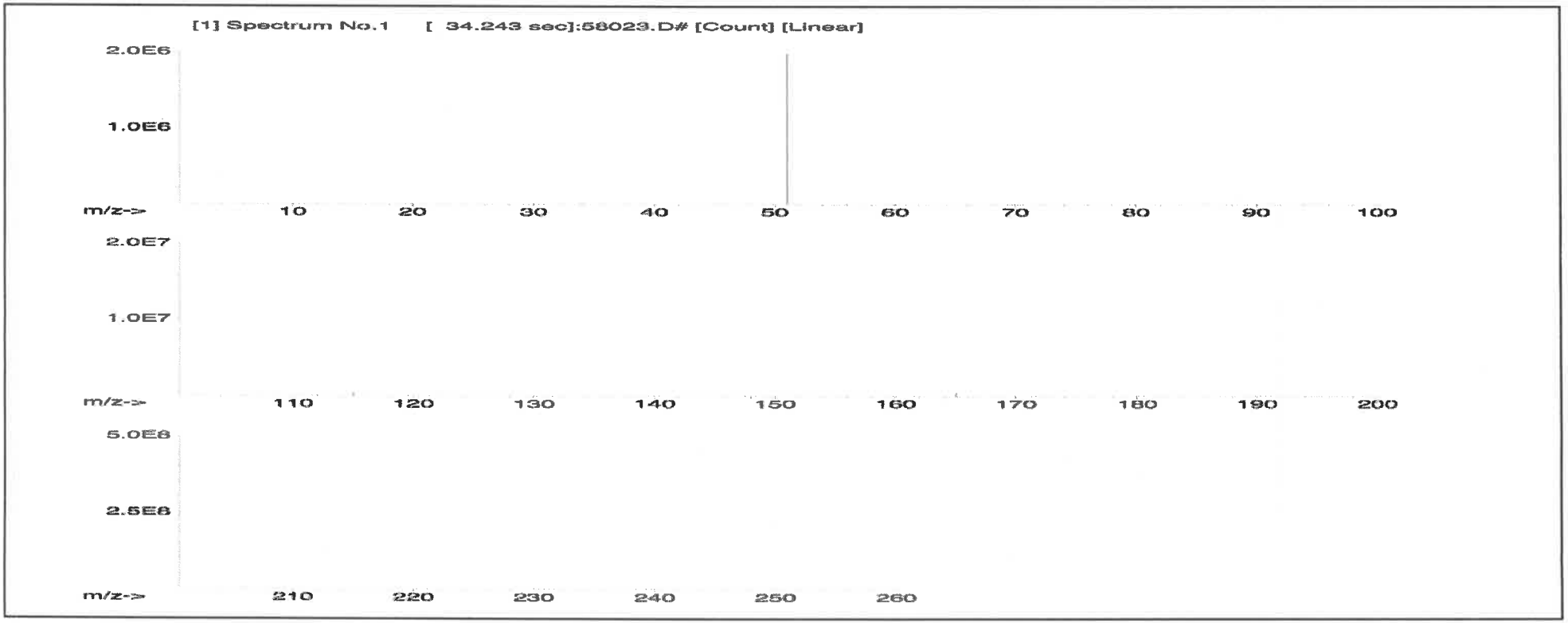
Aleah O'Brady

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



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 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:

* 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).

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: P4868

COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: Tetra Tech	PROJECT NAME: NWIRP Bethpage	BILL TO: PO#
ADDRESS: 4433 Corporation Ln, Suite 300	PROJECT #: 112G08005-WE13 LOCATION: RW5B	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: 5 day 1,4-D, 10-day others DAYS*
HARD COPY: 5 day 1,4-D, 10-day others DAYS*
EDD 5 day 1,4-D, 10-day others DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESEULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other
- ☐ EDD Format

ANALYSIS

1	2	3	4	5	6	7	8	9
1,4-Dioxane SW846 8270 SIM	TAL Metals SW846 6010D/7471A	TCL SVOC 8270 SIM						

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
									B								<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	RW5-SP100-20241114	GW		x	11/14/24	12:45	3	x	x	x							
2.	RW5-SP201-20241114	GW		x	11/14/24	12:47	1	x									
3.	RW5-SP303-20241114	GW		x	11/14/24	12:53	3	x	x	x							
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	11/14/24 1538	1. 1533 11-14-24
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.	1830 11-14-24	3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 2.4°
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?:
Comments:

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

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

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