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 : P5375

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

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Cover Page

Order ID : P5375

Project ID : CTO WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
P5375-01	TT-RW10A-IDWGW-20241219

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: 1/2/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: CTO WE13
Project Manager : Ernie Wu
Chemtech Project # P5375
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
1 Water sample was received on 12/20/2024.

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

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

D. QA/ QC Samples:

The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (TT-RW10A-IDWGW-20241219MS) analysis met criteria for all samples except for Barium, Beryllium, Cadmium, Chromium, Iron, Magnesium, Manganese and Nickel due to Chemical Interference during Digestion Process.
The Matrix Spike Duplicate (TT-RW10A-IDWGW-20241219MSD) analysis met criteria for all samples except for Barium, Beryllium, Cadmium, Chromium, Iron, Magnesium, Manganese and Nickel due to Chemical Interference during Digestion Process.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

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

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

Signature_____

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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

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 20012: NEW YORK LAB ID#: 11376

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: P5375 MATRIX: Water

METHOD: 6010D,7470A

		NA	NO	YES
1.	Calibration Summary met criteria.			✓
2.	ICP Interference Check Sample Results Summary Submitted.			✓
3.	Serial Dilution Summary (if applicable) Submitted.			✓
4.	Laboratory Control Sample Summary (if applicable) Submitted.			✓
5.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Matrix Spike (TT-RW10A-IDWGW-20241219MS) analysis met criteria for all samples except for Barium, Beryllium, Cadmium, Chromium, Iron, Magnesium, Manganese and Nickel due to Chemical Interference during Digestion Process. The Matrix Spike Duplicate (TT-RW10A-IDWGW-20241219MSD) analysis met criteria for all samples except for Barium, Beryllium, Cadmium, Chromium, Iron, Magnesium, Manganese and Nickel due to Chemical Interference during Digestion Process.			
7.	Sample Duplicate Analysis Met QC Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			
9.	Analysis Holding Time Met			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			

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

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P5375

	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:** 01/02/2025

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LAB CHRONICLE

OrderID:	P5375	**OrderDate:**	12/20/2024 3:08:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	CTO WE13
Contact:	Ernie Wu	**Location:**	N21

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5375-01	**TT-RW10A-IDWGW-20241219**	**Water**			**12/19/24**			**12/20/24**
			Mercury	7470A		12/26/24	12/26/24	
			Metals ICP-TAL	6010D		12/23/24	12/26/24	

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Hit Summary Sheet
SW-846

SDG No.: P5375 **Order ID:** P5375

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

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : TT-RW10A-IDWGW-20241219									
P5375-01	TT-RW10A-IDWGW-20241219	Water	Aluminum	1470		28.3	40.0	50.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Barium	14.4	J	6.28	12.5	50.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Cadmium	0.13	J	0.094	0.75	3.00	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Calcium	7580		33.0	250	1000	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Chromium	27.3		0.66	2.50	5.00	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Cobalt	19.7		0.50	3.75	15.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Copper	39.5		7.07	8.00	10.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Iron	2450		18.5	40.0	50.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Magnesium	3480		39.4	250	1000	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Manganese	109		1.46	2.50	10.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Nickel	37.5		0.85	5.00	20.0	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Potassium	2940		685	800	1000	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Silver	1.87	J	0.58	2.50	5.00	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Sodium	50300		237	500	1000	ug/L
P5375-01	TT-RW10A-IDWGW-20241219	Water	Zinc	79.1		1.75	5.00	20.0	ug/L

SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	12/19/24
Project:	CTO WE13	Date Received:	12/20/24
Client Sample ID:	TT-RW10A-IDWGW-20241219	SDG No.:	P5375
Lab Sample ID:	P5375-01	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	1470		1	28.3	40.0	50.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-36-0	Antimony	6.25	U	1	2.06	6.25	25.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-38-2	Arsenic	8.00	U	1	3.48	8.00	10.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-39-3	Barium	14.4	JN	1	6.28	12.5	50.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-41-7	Beryllium	0.75	UN	1	0.13	0.75	3.00	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-43-9	Cadmium	0.13	JN	1	0.094	0.75	3.00	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-70-2	Calcium	7580		1	33.0	250	1000	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-47-3	Chromium	27.3	N	1	0.66	2.50	5.00	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-48-4	Cobalt	19.7		1	0.50	3.75	15.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-50-8	Copper	39.5		1	7.07	8.00	10.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7439-89-6	Iron	2450	N	1	18.5	40.0	50.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7439-92-1	Lead	4.80	U	1	3.51	4.80	6.00	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7439-95-4	Magnesium	3480	N	1	39.4	250	1000	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7439-96-5	Manganese	109	N	1	1.46	2.50	10.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7439-97-6	Mercury	0.16	U	1	0.081	0.16	0.20	ug/L	12/26/24 07:20	12/26/24 11:21	SW7470A	
7440-02-0	Nickel	37.5	N	1	0.85	5.00	20.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-09-7	Potassium	2940		1	685	800	1000	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7782-49-2	Selenium	8.00	U	1	5.88	8.00	10.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-22-4	Silver	1.87	J	1	0.58	2.50	5.00	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-23-5	Sodium	50300		1	237	500	1000	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-28-0	Thallium	10.0	U	1	2.32	10.0	20.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-62-2	Vanadium	10.0	U	1	3.06	10.0	20.0	ug/L	12/23/24 16:05	12/26/24 14:46	SW6010	SW3010
7440-66-6	Zinc	79.1		1	1.75	5.00	20.0	ug/L	12/23/24 16:05	12/26/24 14:46	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

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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
ICV30	Mercury	3.81	4.0	95	90 - 110	CV	12/26/2024	10:52	LB134084

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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
CCV64	Mercury	4.95	5.0	99	90 - 110	CV	12/26/2024	10:57	LB134084
CCV65	Mercury	4.94	5.0	99	90 - 110	CV	12/26/2024	11:33	LB134084
CCV66	Mercury	4.88	5.0	98	90 - 110	CV	12/26/2024	11:45	LB134084

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	2390	2500	95	90 - 110	P	12/26/2024	10:01	LB134090
	Antimony	1010	1000	101	90 - 110	P	12/26/2024	10:01	LB134090
	Arsenic	1020	1000	102	90 - 110	P	12/26/2024	10:01	LB134090
	Barium	473	520	91	90 - 110	P	12/26/2024	10:01	LB134090
	Beryllium	472	510	92	90 - 110	P	12/26/2024	10:01	LB134090
	Cadmium	493	510	97	90 - 110	P	12/26/2024	10:01	LB134090
	Calcium	9230	10000	92	90 - 110	P	12/26/2024	10:01	LB134090
	Chromium	525	520	101	90 - 110	P	12/26/2024	10:01	LB134090
	Cobalt	502	520	96	90 - 110	P	12/26/2024	10:01	LB134090
	Copper	520	510	102	90 - 110	P	12/26/2024	10:01	LB134090
	Iron	9880	10000	99	90 - 110	P	12/26/2024	10:01	LB134090
	Lead	995	1000	100	90 - 110	P	12/26/2024	10:01	LB134090
	Magnesium	5450	6000	91	90 - 110	P	12/26/2024	10:01	LB134090
	Manganese	478	520	92	90 - 110	P	12/26/2024	10:01	LB134090
	Nickel	505	530	95	90 - 110	P	12/26/2024	10:01	LB134090
	Potassium	9830	9900	99	90 - 110	P	12/26/2024	10:01	LB134090
	Selenium	1030	1000	103	90 - 110	P	12/26/2024	10:01	LB134090
	Silver	256	250	102	90 - 110	P	12/26/2024	10:01	LB134090
	Sodium	9950	10000	100	90 - 110	P	12/26/2024	10:01	LB134090
	Thallium	1020	1000	102	90 - 110	P	12/26/2024	10:01	LB134090
	Vanadium	474	500	95	90 - 110	P	12/26/2024	10:01	LB134090
	Zinc	1010	1000	101	90 - 110	P	12/26/2024	10:01	LB134090

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	96.1	100	96	80 - 120	P	12/26/2024	10:05	LB134090
	Antimony	49.3	50.0	99	80 - 120	P	12/26/2024	10:05	LB134090
	Arsenic	21.1	20.0	106	80 - 120	P	12/26/2024	10:05	LB134090
	Barium	87.3	100	87	80 - 120	P	12/26/2024	10:05	LB134090
	Beryllium	5.80	6.0	97	80 - 120	P	12/26/2024	10:05	LB134090
	Cadmium	5.76	6.0	96	80 - 120	P	12/26/2024	10:05	LB134090
	Calcium	1940	2000	97	80 - 120	P	12/26/2024	10:05	LB134090
	Chromium	9.84	10.0	98	80 - 120	P	12/26/2024	10:05	LB134090
	Cobalt	29.2	30.0	97	80 - 120	P	12/26/2024	10:05	LB134090
	Copper	21.5	20.0	108	80 - 120	P	12/26/2024	10:05	LB134090
	Iron	100	100	100	80 - 120	P	12/26/2024	10:05	LB134090
	Lead	11.5	12.0	96	80 - 120	P	12/26/2024	10:05	LB134090
	Magnesium	1980	2000	99	80 - 120	P	12/26/2024	10:05	LB134090
	Manganese	19.6	20.0	98	80 - 120	P	12/26/2024	10:05	LB134090
	Nickel	39.2	40.0	98	80 - 120	P	12/26/2024	10:05	LB134090
	Potassium	2020	2000	101	80 - 120	P	12/26/2024	10:05	LB134090
	Selenium	19.0	20.0	95	80 - 120	P	12/26/2024	10:05	LB134090
	Silver	11.5	10.0	115	80 - 120	P	12/26/2024	10:05	LB134090
	Sodium	1950	2000	98	80 - 120	P	12/26/2024	10:05	LB134090
	Thallium	41.1	40.0	103	80 - 120	P	12/26/2024	10:05	LB134090
	Vanadium	37.3	40.0	93	80 - 120	P	12/26/2024	10:05	LB134090
	Zinc	42.6	40.0	107	80 - 120	P	12/26/2024	10:05	LB134090

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	9410	10000	94	90 - 110	P	12/26/2024	10:32	LB134090
	Antimony	5270	5000	105	90 - 110	P	12/26/2024	10:32	LB134090
	Arsenic	5070	5000	101	90 - 110	P	12/26/2024	10:32	LB134090
	Barium	9200	10000	92	90 - 110	P	12/26/2024	10:32	LB134090
	Beryllium	255	250	102	90 - 110	P	12/26/2024	10:32	LB134090
	Cadmium	2250	2500	90	90 - 110	P	12/26/2024	10:32	LB134090
	Calcium	27300	25000	109	90 - 110	P	12/26/2024	10:32	LB134090
	Chromium	944	1000	94	90 - 110	P	12/26/2024	10:32	LB134090
	Cobalt	2330	2500	93	90 - 110	P	12/26/2024	10:32	LB134090
	Copper	1250	1250	100	90 - 110	P	12/26/2024	10:32	LB134090
	Iron	4750	5000	95	90 - 110	P	12/26/2024	10:32	LB134090
	Lead	4690	5000	94	90 - 110	P	12/26/2024	10:32	LB134090
	Magnesium	24100	25000	96	90 - 110	P	12/26/2024	10:32	LB134090
	Manganese	2280	2500	91	90 - 110	P	12/26/2024	10:32	LB134090
	Nickel	2320	2500	93	90 - 110	P	12/26/2024	10:32	LB134090
	Potassium	25300	25000	101	90 - 110	P	12/26/2024	10:32	LB134090
	Selenium	5250	5000	105	90 - 110	P	12/26/2024	10:32	LB134090
	Silver	1210	1250	97	90 - 110	P	12/26/2024	10:32	LB134090
	Sodium	26300	25000	105	90 - 110	P	12/26/2024	10:32	LB134090
	Thallium	5030	5000	101	90 - 110	P	12/26/2024	10:32	LB134090
	Vanadium	2280	2500	91	90 - 110	P	12/26/2024	10:32	LB134090
	Zinc	2450	2500	98	90 - 110	P	12/26/2024	10:32	LB134090
CCV02	Aluminum	9800	10000	98	90 - 110	P	12/26/2024	11:24	LB134090
	Antimony	5490	5000	110	90 - 110	P	12/26/2024	11:24	LB134090
	Arsenic	5190	5000	104	90 - 110	P	12/26/2024	11:24	LB134090
	Barium	9350	10000	94	90 - 110	P	12/26/2024	11:24	LB134090
	Beryllium	250	250	100	90 - 110	P	12/26/2024	11:24	LB134090
	Cadmium	2410	2500	96	90 - 110	P	12/26/2024	11:24	LB134090
	Calcium	27200	25000	109	90 - 110	P	12/26/2024	11:24	LB134090
	Chromium	959	1000	96	90 - 110	P	12/26/2024	11:24	LB134090
	Cobalt	2350	2500	94	90 - 110	P	12/26/2024	11:24	LB134090
	Copper	1280	1250	102	90 - 110	P	12/26/2024	11:24	LB134090
	Iron	4780	5000	96	90 - 110	P	12/26/2024	11:24	LB134090
	Lead	4710	5000	94	90 - 110	P	12/26/2024	11:24	LB134090

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	24400	25000	98	90 - 110	P	12/26/2024	11:24	LB134090
	Manganese	2420	2500	97	90 - 110	P	12/26/2024	11:24	LB134090
	Nickel	2340	2500	94	90 - 110	P	12/26/2024	11:24	LB134090
	Potassium	26200	25000	105	90 - 110	P	12/26/2024	11:24	LB134090
	Selenium	5400	5000	108	90 - 110	P	12/26/2024	11:24	LB134090
	Silver	1230	1250	99	90 - 110	P	12/26/2024	11:24	LB134090
	Sodium	27400	25000	110	90 - 110	P	12/26/2024	11:24	LB134090
	Thallium	5080	5000	102	90 - 110	P	12/26/2024	11:24	LB134090
	Vanadium	2340	2500	94	90 - 110	P	12/26/2024	11:24	LB134090
	Zinc	2520	2500	101	90 - 110	P	12/26/2024	11:24	LB134090
CCV03	Aluminum	9690	10000	97	90 - 110	P	12/26/2024	12:10	LB134090
	Antimony	5440	5000	109	90 - 110	P	12/26/2024	12:10	LB134090
	Arsenic	5090	5000	102	90 - 110	P	12/26/2024	12:10	LB134090
	Barium	9180	10000	92	90 - 110	P	12/26/2024	12:10	LB134090
	Beryllium	246	250	98	90 - 110	P	12/26/2024	12:10	LB134090
	Cadmium	2540	2500	102	90 - 110	P	12/26/2024	12:10	LB134090
	Calcium	27200	25000	109	90 - 110	P	12/26/2024	12:10	LB134090
	Chromium	952	1000	95	90 - 110	P	12/26/2024	12:10	LB134090
	Cobalt	2280	2500	91	90 - 110	P	12/26/2024	12:10	LB134090
	Copper	1250	1250	100	90 - 110	P	12/26/2024	12:10	LB134090
	Iron	4730	5000	95	90 - 110	P	12/26/2024	12:10	LB134090
	Lead	4620	5000	92	90 - 110	P	12/26/2024	12:10	LB134090
	Magnesium	23900	25000	96	90 - 110	P	12/26/2024	12:10	LB134090
	Manganese	2430	2500	97	90 - 110	P	12/26/2024	12:10	LB134090
	Nickel	2260	2500	91	90 - 110	P	12/26/2024	12:10	LB134090
	Potassium	26700	25000	107	90 - 110	P	12/26/2024	12:10	LB134090
	Selenium	5340	5000	107	90 - 110	P	12/26/2024	12:10	LB134090
	Silver	1240	1250	99	90 - 110	P	12/26/2024	12:10	LB134090
	Sodium	23000	25000	92	90 - 110	P	12/26/2024	12:10	LB134090
	Thallium	5080	5000	102	90 - 110	P	12/26/2024	12:10	LB134090
	Vanadium	2300	2500	92	90 - 110	P	12/26/2024	12:10	LB134090
	Zinc	2480	2500	99	90 - 110	P	12/26/2024	12:10	LB134090
CCV04	Aluminum	9580	10000	96	90 - 110	P	12/26/2024	13:02	LB134090
	Antimony	5410	5000	108	90 - 110	P	12/26/2024	13:02	LB134090

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	5060	5000	101	90 - 110	P	12/26/2024	13:02	LB134090
	Barium	9110	10000	91	90 - 110	P	12/26/2024	13:02	LB134090
	Beryllium	241	250	96	90 - 110	P	12/26/2024	13:02	LB134090
	Cadmium	2340	2500	94	90 - 110	P	12/26/2024	13:02	LB134090
	Calcium	26400	25000	106	90 - 110	P	12/26/2024	13:02	LB134090
	Chromium	948	1000	95	90 - 110	P	12/26/2024	13:02	LB134090
	Cobalt	2280	2500	91	90 - 110	P	12/26/2024	13:02	LB134090
	Copper	1250	1250	100	90 - 110	P	12/26/2024	13:02	LB134090
	Iron	4660	5000	93	90 - 110	P	12/26/2024	13:02	LB134090
	Lead	4610	5000	92	90 - 110	P	12/26/2024	13:02	LB134090
	Magnesium	23400	25000	94	90 - 110	P	12/26/2024	13:02	LB134090
	Manganese	2630	2500	105	90 - 110	P	12/26/2024	13:02	LB134090
	Nickel	2270	2500	91	90 - 110	P	12/26/2024	13:02	LB134090
	Potassium	26300	25000	105	90 - 110	P	12/26/2024	13:02	LB134090
	Selenium	5280	5000	106	90 - 110	P	12/26/2024	13:02	LB134090
	Silver	1220	1250	98	90 - 110	P	12/26/2024	13:02	LB134090
	Sodium	22900	25000	92	90 - 110	P	12/26/2024	13:02	LB134090
	Thallium	5060	5000	101	90 - 110	P	12/26/2024	13:02	LB134090
	Vanadium	2280	2500	91	90 - 110	P	12/26/2024	13:02	LB134090
	Zinc	2490	2500	100	90 - 110	P	12/26/2024	13:02	LB134090
CCV05	Aluminum	9780	10000	98	90 - 110	P	12/26/2024	14:37	LB134090
	Antimony	5040	5000	101	90 - 110	P	12/26/2024	14:37	LB134090
	Arsenic	5180	5000	104	90 - 110	P	12/26/2024	14:37	LB134090
	Barium	9300	10000	93	90 - 110	P	12/26/2024	14:37	LB134090
	Beryllium	236	250	94	90 - 110	P	12/26/2024	14:37	LB134090
	Cadmium	2330	2500	93	90 - 110	P	12/26/2024	14:37	LB134090
	Calcium	26200	25000	105	90 - 110	P	12/26/2024	14:37	LB134090
	Chromium	931	1000	93	90 - 110	P	12/26/2024	14:37	LB134090
	Cobalt	2290	2500	91	90 - 110	P	12/26/2024	14:37	LB134090
	Copper	1270	1250	102	90 - 110	P	12/26/2024	14:37	LB134090
	Iron	4710	5000	94	90 - 110	P	12/26/2024	14:37	LB134090
	Lead	4600	5000	92	90 - 110	P	12/26/2024	14:37	LB134090
	Magnesium	27100	25000	109	90 - 110	P	12/26/2024	14:37	LB134090
	Manganese	2630	2500	105	90 - 110	P	12/26/2024	14:37	LB134090

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	2270	2500	91	90 - 110	P	12/26/2024	14:37	LB134090
	Potassium	27100	25000	108	90 - 110	P	12/26/2024	14:37	LB134090
	Selenium	5430	5000	109	90 - 110	P	12/26/2024	14:37	LB134090
	Silver	1230	1250	98	90 - 110	P	12/26/2024	14:37	LB134090
	Sodium	26200	25000	105	90 - 110	P	12/26/2024	14:37	LB134090
	Thallium	5000	5000	100	90 - 110	P	12/26/2024	14:37	LB134090
	Vanadium	2310	2500	92	90 - 110	P	12/26/2024	14:37	LB134090
	Zinc	2500	2500	100	90 - 110	P	12/26/2024	14:37	LB134090
CCV06	Aluminum	9690	10000	97	90 - 110	P	12/26/2024	15:24	LB134090
	Antimony	4520	5000	90	90 - 110	P	12/26/2024	15:24	LB134090
	Arsenic	5320	5000	106	90 - 110	P	12/26/2024	15:24	LB134090
	Barium	9100	10000	91	90 - 110	P	12/26/2024	15:24	LB134090
	Beryllium	270	250	108	90 - 110	P	12/26/2024	15:24	LB134090
	Cadmium	2310	2500	92	90 - 110	P	12/26/2024	15:24	LB134090
	Calcium	26700	25000	107	90 - 110	P	12/26/2024	15:24	LB134090
	Chromium	925	1000	92	90 - 110	P	12/26/2024	15:24	LB134090
	Cobalt	2270	2500	91	90 - 110	P	12/26/2024	15:24	LB134090
	Copper	1280	1250	103	90 - 110	P	12/26/2024	15:24	LB134090
	Iron	4630	5000	93	90 - 110	P	12/26/2024	15:24	LB134090
	Lead	4580	5000	92	90 - 110	P	12/26/2024	15:24	LB134090
	Magnesium	23000	25000	92	90 - 110	P	12/26/2024	15:24	LB134090
	Manganese	2510	2500	100	90 - 110	P	12/26/2024	15:24	LB134090
	Nickel	2250	2500	90	90 - 110	P	12/26/2024	15:24	LB134090
	Potassium	27200	25000	109	90 - 110	P	12/26/2024	15:24	LB134090
	Selenium	4570	5000	91	90 - 110	P	12/26/2024	15:24	LB134090
	Silver	1220	1250	98	90 - 110	P	12/26/2024	15:24	LB134090
	Sodium	24000	25000	96	90 - 110	P	12/26/2024	15:24	LB134090
	Thallium	5150	5000	103	90 - 110	P	12/26/2024	15:24	LB134090
	Vanadium	2260	2500	90	90 - 110	P	12/26/2024	15:24	LB134090
	Zinc	2500	2500	100	90 - 110	P	12/26/2024	15:24	LB134090

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2490	2500	99	90 - 110	P	12/27/2024	13:54	LB134113
	Antimony	1030	1000	103	90 - 110	P	12/27/2024	13:54	LB134113
	Arsenic	1070	1000	107	90 - 110	P	12/27/2024	13:54	LB134113
	Barium	543	520	104	90 - 110	P	12/27/2024	13:54	LB134113
	Beryllium	525	510	103	90 - 110	P	12/27/2024	13:54	LB134113
	Cadmium	510	510	100	90 - 110	P	12/27/2024	13:54	LB134113
	Calcium	9630	10000	96	90 - 110	P	12/27/2024	13:54	LB134113
	Chromium	543	520	104	90 - 110	P	12/27/2024	13:54	LB134113
	Cobalt	519	520	100	90 - 110	P	12/27/2024	13:54	LB134113
	Copper	499	510	98	90 - 110	P	12/27/2024	13:54	LB134113
	Iron	10200	10000	102	90 - 110	P	12/27/2024	13:54	LB134113
	Lead	1020	1000	102	90 - 110	P	12/27/2024	13:54	LB134113
	Magnesium	5710	6000	95	90 - 110	P	12/27/2024	13:54	LB134113
	Manganese	498	520	96	90 - 110	P	12/27/2024	13:54	LB134113
	Nickel	520	530	98	90 - 110	P	12/27/2024	13:54	LB134113
	Potassium	10200	9900	103	90 - 110	P	12/27/2024	13:54	LB134113
	Selenium	1010	1000	101	90 - 110	P	12/27/2024	13:54	LB134113
	Silver	262	250	105	90 - 110	P	12/27/2024	13:54	LB134113
	Sodium	10000	10000	100	90 - 110	P	12/27/2024	13:54	LB134113
	Thallium	1080	1000	108	90 - 110	P	12/27/2024	13:54	LB134113
	Vanadium	478	500	96	90 - 110	P	12/27/2024	13:54	LB134113
	Zinc	1010	1000	102	90 - 110	P	12/27/2024	13:54	LB134113

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	100	100	100	80 - 120	P	12/27/2024	14:08	LB134113
	Antimony	51.2	50.0	102	80 - 120	P	12/27/2024	14:08	LB134113
	Arsenic	21.7	20.0	108	80 - 120	P	12/27/2024	14:08	LB134113
	Barium	88.3	100	88	80 - 120	P	12/27/2024	14:08	LB134113
	Beryllium	5.61	6.0	93	80 - 120	P	12/27/2024	14:08	LB134113
	Cadmium	5.74	6.0	96	80 - 120	P	12/27/2024	14:08	LB134113
	Calcium	1910	2000	96	80 - 120	P	12/27/2024	14:08	LB134113
	Chromium	9.56	10.0	96	80 - 120	P	12/27/2024	14:08	LB134113
	Cobalt	29.2	30.0	98	80 - 120	P	12/27/2024	14:08	LB134113
	Copper	22.5	20.0	112	80 - 120	P	12/27/2024	14:08	LB134113
	Iron	95.4	100	95	80 - 120	P	12/27/2024	14:08	LB134113
	Lead	12.0	12.0	100	80 - 120	P	12/27/2024	14:08	LB134113
	Magnesium	1990	2000	100	80 - 120	P	12/27/2024	14:08	LB134113
	Manganese	19.0	20.0	95	80 - 120	P	12/27/2024	14:08	LB134113
	Nickel	38.9	40.0	97	80 - 120	P	12/27/2024	14:08	LB134113
	Potassium	2010	2000	101	80 - 120	P	12/27/2024	14:08	LB134113
	Selenium	19.6	20.0	98	80 - 120	P	12/27/2024	14:08	LB134113
	Silver	11.2	10.0	112	80 - 120	P	12/27/2024	14:08	LB134113
	Sodium	1920	2000	96	80 - 120	P	12/27/2024	14:08	LB134113
	Thallium	42.0	40.0	105	80 - 120	P	12/27/2024	14:08	LB134113
	Vanadium	37.9	40.0	95	80 - 120	P	12/27/2024	14:08	LB134113
	Zinc	45.1	40.0	113	80 - 120	P	12/27/2024	14:08	LB134113

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/27/2024	15:34	LB134113
	Antimony	5330	5000	107	90 - 110	P	12/27/2024	15:34	LB134113
	Arsenic	5330	5000	107	90 - 110	P	12/27/2024	15:34	LB134113
	Barium	9890	10000	99	90 - 110	P	12/27/2024	15:34	LB134113
	Beryllium	240	250	96	90 - 110	P	12/27/2024	15:34	LB134113
	Cadmium	2540	2500	101	90 - 110	P	12/27/2024	15:34	LB134113
	Calcium	24100	25000	96	90 - 110	P	12/27/2024	15:34	LB134113
	Chromium	1030	1000	103	90 - 110	P	12/27/2024	15:34	LB134113
	Cobalt	2540	2500	102	90 - 110	P	12/27/2024	15:34	LB134113
	Copper	1270	1250	102	90 - 110	P	12/27/2024	15:34	LB134113
	Iron	5030	5000	101	90 - 110	P	12/27/2024	15:34	LB134113
	Lead	5080	5000	102	90 - 110	P	12/27/2024	15:34	LB134113
	Magnesium	23800	25000	95	90 - 110	P	12/27/2024	15:34	LB134113
	Manganese	2360	2500	94	90 - 110	P	12/27/2024	15:34	LB134113
	Nickel	2540	2500	102	90 - 110	P	12/27/2024	15:34	LB134113
	Potassium	26200	25000	105	90 - 110	P	12/27/2024	15:34	LB134113
	Selenium	5370	5000	107	90 - 110	P	12/27/2024	15:34	LB134113
	Silver	1290	1250	103	90 - 110	P	12/27/2024	15:34	LB134113
	Sodium	26100	25000	104	90 - 110	P	12/27/2024	15:34	LB134113
	Thallium	5330	5000	107	90 - 110	P	12/27/2024	15:34	LB134113
	Vanadium	2460	2500	98	90 - 110	P	12/27/2024	15:34	LB134113
	Zinc	2600	2500	104	90 - 110	P	12/27/2024	15:34	LB134113
CCV02	Aluminum	10100	10000	101	90 - 110	P	12/27/2024	16:32	LB134113
	Antimony	5340	5000	107	90 - 110	P	12/27/2024	16:32	LB134113
	Arsenic	5370	5000	107	90 - 110	P	12/27/2024	16:32	LB134113
	Barium	9760	10000	98	90 - 110	P	12/27/2024	16:32	LB134113
	Beryllium	240	250	96	90 - 110	P	12/27/2024	16:32	LB134113
	Cadmium	2540	2500	102	90 - 110	P	12/27/2024	16:32	LB134113
	Calcium	24100	25000	96	90 - 110	P	12/27/2024	16:32	LB134113
	Chromium	1040	1000	104	90 - 110	P	12/27/2024	16:32	LB134113
	Cobalt	2540	2500	101	90 - 110	P	12/27/2024	16:32	LB134113
	Copper	1330	1250	106	90 - 110	P	12/27/2024	16:32	LB134113
	Iron	5070	5000	101	90 - 110	P	12/27/2024	16:32	LB134113
	Lead	5070	5000	101	90 - 110	P	12/27/2024	16:32	LB134113

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	24100	25000	96	90 - 110	P	12/27/2024	16:32	LB134113
	Manganese	2340	2500	94	90 - 110	P	12/27/2024	16:32	LB134113
	Nickel	2540	2500	102	90 - 110	P	12/27/2024	16:32	LB134113
	Potassium	26100	25000	104	90 - 110	P	12/27/2024	16:32	LB134113
	Selenium	5410	5000	108	90 - 110	P	12/27/2024	16:32	LB134113
	Silver	1290	1250	104	90 - 110	P	12/27/2024	16:32	LB134113
	Sodium	25400	25000	102	90 - 110	P	12/27/2024	16:32	LB134113
	Thallium	5300	5000	106	90 - 110	P	12/27/2024	16:32	LB134113
	Vanadium	2470	2500	99	90 - 110	P	12/27/2024	16:32	LB134113
	Zinc	2600	2500	104	90 - 110	P	12/27/2024	16:32	LB134113
CCV03	Aluminum	10700	10000	107	90 - 110	P	12/27/2024	16:59	LB134113
	Antimony	5300	5000	106	90 - 110	P	12/27/2024	16:59	LB134113
	Arsenic	5270	5000	105	90 - 110	P	12/27/2024	16:59	LB134113
	Barium	9780	10000	98	90 - 110	P	12/27/2024	16:59	LB134113
	Beryllium	248	250	99	90 - 110	P	12/27/2024	16:59	LB134113
	Cadmium	2550	2500	102	90 - 110	P	12/27/2024	16:59	LB134113
	Calcium	25000	25000	100	90 - 110	P	12/27/2024	16:59	LB134113
	Chromium	1060	1000	106	90 - 110	P	12/27/2024	16:59	LB134113
	Cobalt	2560	2500	102	90 - 110	P	12/27/2024	16:59	LB134113
	Copper	1320	1250	106	90 - 110	P	12/27/2024	16:59	LB134113
	Iron	5330	5000	107	90 - 110	P	12/27/2024	16:59	LB134113
	Lead	5110	5000	102	90 - 110	P	12/27/2024	16:59	LB134113
	Magnesium	25200	25000	101	90 - 110	P	12/27/2024	16:59	LB134113
	Manganese	2390	2500	96	90 - 110	P	12/27/2024	16:59	LB134113
	Nickel	2550	2500	102	90 - 110	P	12/27/2024	16:59	LB134113
	Potassium	26100	25000	104	90 - 110	P	12/27/2024	16:59	LB134113
	Selenium	5290	5000	106	90 - 110	P	12/27/2024	16:59	LB134113
	Silver	1310	1250	105	90 - 110	P	12/27/2024	16:59	LB134113
	Sodium	24900	25000	100	90 - 110	P	12/27/2024	16:59	LB134113
	Thallium	5130	5000	103	90 - 110	P	12/27/2024	16:59	LB134113
	Vanadium	2520	2500	101	90 - 110	P	12/27/2024	16:59	LB134113
	Zinc	2590	2500	104	90 - 110	P	12/27/2024	16:59	LB134113

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	96.1	100	96	40 - 160	P	12/26/2024	10:14	LB134090
	Antimony	48.9	50.0	98	40 - 160	P	12/26/2024	10:14	LB134090
	Arsenic	21.0	20.0	105	40 - 160	P	12/26/2024	10:14	LB134090
	Barium	84.6	100	85	40 - 160	P	12/26/2024	10:14	LB134090
	Beryllium	5.71	6.0	95	40 - 160	P	12/26/2024	10:14	LB134090
	Cadmium	5.69	6.0	95	40 - 160	P	12/26/2024	10:14	LB134090
	Calcium	1930	2000	97	40 - 160	P	12/26/2024	10:14	LB134090
	Chromium	9.83	10.0	98	40 - 160	P	12/26/2024	10:14	LB134090
	Cobalt	29.0	30.0	97	40 - 160	P	12/26/2024	10:14	LB134090
	Copper	21.7	20.0	108	40 - 160	P	12/26/2024	10:14	LB134090
	Iron	94.5	100	94	40 - 160	P	12/26/2024	10:14	LB134090
	Lead	11.2	12.0	94	40 - 160	P	12/26/2024	10:14	LB134090
	Magnesium	1970	2000	98	40 - 160	P	12/26/2024	10:14	LB134090
	Manganese	19.3	20.0	97	40 - 160	P	12/26/2024	10:14	LB134090
	Nickel	38.6	40.0	97	40 - 160	P	12/26/2024	10:14	LB134090
	Potassium	1990	2000	99	40 - 160	P	12/26/2024	10:14	LB134090
	Selenium	20.1	20.0	101	40 - 160	P	12/26/2024	10:14	LB134090
	Silver	12.1	10.0	121	40 - 160	P	12/26/2024	10:14	LB134090
	Sodium	1940	2000	97	40 - 160	P	12/26/2024	10:14	LB134090
	Thallium	39.3	40.0	98	40 - 160	P	12/26/2024	10:14	LB134090
	Vanadium	36.0	40.0	90	40 - 160	P	12/26/2024	10:14	LB134090
	Zinc	43.0	40.0	108	40 - 160	P	12/26/2024	10:14	LB134090
CRA	Mercury	0.23	0.2	114	40 - 160	CV	12/26/2024	11:07	LB134084
CRI01	Aluminum	102	100	102	40 - 160	P	12/27/2024	15:03	LB134113
	Antimony	52.5	50.0	105	40 - 160	P	12/27/2024	15:03	LB134113
	Arsenic	21.2	20.0	106	40 - 160	P	12/27/2024	15:03	LB134113
	Barium	88.2	100	88	40 - 160	P	12/27/2024	15:03	LB134113
	Beryllium	5.58	6.0	93	40 - 160	P	12/27/2024	15:03	LB134113
	Cadmium	5.78	6.0	96	40 - 160	P	12/27/2024	15:03	LB134113
	Calcium	1910	2000	95	40 - 160	P	12/27/2024	15:03	LB134113
	Chromium	9.47	10.0	95	40 - 160	P	12/27/2024	15:03	LB134113
	Cobalt	29.4	30.0	98	40 - 160	P	12/27/2024	15:03	LB134113
	Copper	22.9	20.0	114	40 - 160	P	12/27/2024	15:03	LB134113
	Iron	92.5	100	92	40 - 160	P	12/27/2024	15:03	LB134113
	Lead	11.6	12.0	96	40 - 160	P	12/27/2024	15:03	LB134113

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	1990	2000	99	40 - 160	P	12/27/2024	15:03	LB134113
	Manganese	19.0	20.0	95	40 - 160	P	12/27/2024	15:03	LB134113
	Nickel	39.0	40.0	97	40 - 160	P	12/27/2024	15:03	LB134113
	Potassium	2050	2000	103	40 - 160	P	12/27/2024	15:03	LB134113
	Selenium	20.8	20.0	104	40 - 160	P	12/27/2024	15:03	LB134113
	Silver	10.8	10.0	108	40 - 160	P	12/27/2024	15:03	LB134113
	Sodium	1940	2000	97	40 - 160	P	12/27/2024	15:03	LB134113
	Thallium	41.4	40.0	104	40 - 160	P	12/27/2024	15:03	LB134113
	Vanadium	38.1	40.0	95	40 - 160	P	12/27/2024	15:03	LB134113
	Zinc	43.8	40.0	110	40 - 160	P	12/27/2024	15:03	LB134113

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB30	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/26/2024	10:55	LB134084

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB64	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/26/2024	10:59	LB134084
CCB65	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/26/2024	11:35	LB134084
CCB66	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	12/26/2024	11:47	LB134084

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/26/2024	10:10	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	10:10	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	10:10	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	10:10	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	10:10	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	10:10	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	10:10	LB134090
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/26/2024	10:10	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	10:10	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	10:10	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	10:10	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	10:10	LB134090
	Magnesium	2000	+/-2000	U	500	2000	P	12/26/2024	10:10	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	10:10	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	10:10	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	10:10	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	10:10	LB134090
	Silver	1.63	+/-10.0	J	5.00	10.0	P	12/26/2024	10:10	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	10:10	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	10:10	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	10:10	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	10:10	LB134090

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/26/2024	10:38	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	10:38	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	10:38	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	10:38	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	10:38	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	10:38	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	10:38	LB134090
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/26/2024	10:38	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	10:38	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	10:38	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	10:38	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	10:38	LB134090
	Magnesium	2000	+/-2000	U	500	2000	P	12/26/2024	10:38	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	10:38	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	10:38	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	10:38	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	10:38	LB134090
	Silver	2.84	+/-10.0	J	5.00	10.0	P	12/26/2024	10:38	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	10:38	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	10:38	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	10:38	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	10:38	LB134090
CCB02	Aluminum	100	+/-100	U	80.0	100	P	12/26/2024	11:30	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	11:30	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	11:30	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	11:30	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	11:30	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	11:30	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	11:30	LB134090
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/26/2024	11:30	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	11:30	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	11:30	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	11:30	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	11:30	LB134090
	Magnesium	2000	+/-2000	U	500	2000	P	12/26/2024	11:30	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	11:30	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	11:30	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	11:30	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	11:30	LB134090

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	2.72	+/-10.0	J	5.00	10.0	P	12/26/2024	11:30	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	11:30	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	11:30	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	11:30	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	11:30	LB134090
CCB03	Aluminum	100	+/-100	U	80.0	100	P	12/26/2024	12:15	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	12:15	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	12:15	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	12:15	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	12:15	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	12:15	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	12:15	LB134090
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/26/2024	12:15	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	12:15	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	12:15	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	12:15	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	12:15	LB134090
	Magnesium	2000	+/-2000	U	500	2000	P	12/26/2024	12:15	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	12:15	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	12:15	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	12:15	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	12:15	LB134090
	Silver	3.24	+/-10.0	J	5.00	10.0	P	12/26/2024	12:15	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	12:15	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	12:15	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	12:15	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	12:15	LB134090
CCB04	Aluminum	100	+/-100	U	80.0	100	P	12/26/2024	13:06	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	13:06	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	13:06	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	13:06	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	13:06	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	13:06	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	13:06	LB134090
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/26/2024	13:06	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	13:06	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	13:06	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	13:06	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	13:06	LB134090

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/26/2024	13:06	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	13:06	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	13:06	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	13:06	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	13:06	LB134090
	Silver	3.27	+/-10.0	J	5.00	10.0	P	12/26/2024	13:06	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	13:06	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	13:06	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	13:06	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	13:06	LB134090
CCB05	Aluminum	100	+/-100	U	80.0	100	P	12/26/2024	14:41	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	14:41	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	14:41	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	14:41	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	14:41	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	14:41	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	14:41	LB134090
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/26/2024	14:41	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	14:41	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	14:41	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	14:41	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	14:41	LB134090
	Magnesium	2000	+/-2000	U	500	2000	P	12/26/2024	14:41	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	14:41	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	14:41	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	14:41	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	14:41	LB134090
	Silver	4.21	+/-10.0	J	5.00	10.0	P	12/26/2024	14:41	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	14:41	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	14:41	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	14:41	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	14:41	LB134090
CCB06	Aluminum	100	+/-100	U	80.0	100	P	12/26/2024	15:30	LB134090
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/26/2024	15:30	LB134090
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	15:30	LB134090
	Barium	100	+/-100	U	25.0	100	P	12/26/2024	15:30	LB134090
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	15:30	LB134090
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/26/2024	15:30	LB134090
	Calcium	2000	+/-2000	U	500	2000	P	12/26/2024	15:30	LB134090

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/26/2024	15:30	LB134090
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/26/2024	15:30	LB134090
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	15:30	LB134090
	Iron	100	+/-100	U	80.0	100	P	12/26/2024	15:30	LB134090
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/26/2024	15:30	LB134090
	Magnesium	2000	+/-2000	U	500	2000	P	12/26/2024	15:30	LB134090
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/26/2024	15:30	LB134090
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	15:30	LB134090
	Potassium	2000	+/-2000	U	1600	2000	P	12/26/2024	15:30	LB134090
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/26/2024	15:30	LB134090
	Silver	4.11	+/-10.0	J	5.00	10.0	P	12/26/2024	15:30	LB134090
	Sodium	2000	+/-2000	U	1000	2000	P	12/26/2024	15:30	LB134090
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	15:30	LB134090
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/26/2024	15:30	LB134090
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/26/2024	15:30	LB134090

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/27/2024	14:59	LB134113
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/27/2024	14:59	LB134113
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	14:59	LB134113
	Barium	100	+/-100	U	25.0	100	P	12/27/2024	14:59	LB134113
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	14:59	LB134113
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	14:59	LB134113
	Calcium	2000	+/-2000	U	500	2000	P	12/27/2024	14:59	LB134113
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	14:59	LB134113
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/27/2024	14:59	LB134113
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	14:59	LB134113
	Iron	100	+/-100	U	80.0	100	P	12/27/2024	14:59	LB134113
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/27/2024	14:59	LB134113
	Magnesium	2000	+/-2000	U	500	2000	P	12/27/2024	14:59	LB134113
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/27/2024	14:59	LB134113
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	14:59	LB134113
	Potassium	2000	+/-2000	U	1600	2000	P	12/27/2024	14:59	LB134113
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	14:59	LB134113
	Silver	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	14:59	LB134113
	Sodium	2000	+/-2000	U	1000	2000	P	12/27/2024	14:59	LB134113
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	14:59	LB134113
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	14:59	LB134113
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	14:59	LB134113

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/27/2024	15:40	LB134113
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/27/2024	15:40	LB134113
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	15:40	LB134113
	Barium	100	+/-100	U	25.0	100	P	12/27/2024	15:40	LB134113
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	15:40	LB134113
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	15:40	LB134113
	Calcium	2000	+/-2000	U	500	2000	P	12/27/2024	15:40	LB134113
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	15:40	LB134113
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/27/2024	15:40	LB134113
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	15:40	LB134113
	Iron	100	+/-100	U	80.0	100	P	12/27/2024	15:40	LB134113
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/27/2024	15:40	LB134113
	Magnesium	2000	+/-2000	U	500	2000	P	12/27/2024	15:40	LB134113
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/27/2024	15:40	LB134113
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	15:40	LB134113
	Potassium	2000	+/-2000	U	1600	2000	P	12/27/2024	15:40	LB134113
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	15:40	LB134113
	Silver	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	15:40	LB134113
	Sodium	2000	+/-2000	U	1000	2000	P	12/27/2024	15:40	LB134113
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	15:40	LB134113
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	15:40	LB134113
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	15:40	LB134113
CCB02	Aluminum	100	+/-100	U	80.0	100	P	12/27/2024	16:37	LB134113
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/27/2024	16:37	LB134113
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	16:37	LB134113
	Barium	100	+/-100	U	25.0	100	P	12/27/2024	16:37	LB134113
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	16:37	LB134113
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	16:37	LB134113
	Calcium	2000	+/-2000	U	500	2000	P	12/27/2024	16:37	LB134113
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	16:37	LB134113
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/27/2024	16:37	LB134113
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	16:37	LB134113
	Iron	100	+/-100	U	80.0	100	P	12/27/2024	16:37	LB134113
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/27/2024	16:37	LB134113
	Magnesium	2000	+/-2000	U	500	2000	P	12/27/2024	16:37	LB134113
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/27/2024	16:37	LB134113
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	16:37	LB134113
	Potassium	2000	+/-2000	U	1600	2000	P	12/27/2024	16:37	LB134113
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	16:37	LB134113

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	12/27/2024	16:37	LB134113
	Sodium	2000	+/-2000	U	1000	2000	P	12/27/2024	16:37	LB134113
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	16:37	LB134113
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	16:37	LB134113
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	16:37	LB134113
CCB03	Aluminum	100	+/-100	U	80.0	100	P	12/27/2024	17:17	LB134113
	Antimony	50.0	+/-50.0	U	12.5	50.0	P	12/27/2024	17:17	LB134113
	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	17:17	LB134113
	Barium	100	+/-100	U	25.0	100	P	12/27/2024	17:17	LB134113
	Beryllium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	17:17	LB134113
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	12/27/2024	17:17	LB134113
	Calcium	2000	+/-2000	U	500	2000	P	12/27/2024	17:17	LB134113
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	17:17	LB134113
	Cobalt	30.0	+/-30.0	U	7.50	30.0	P	12/27/2024	17:17	LB134113
	Copper	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	17:17	LB134113
	Iron	100	+/-100	U	80.0	100	P	12/27/2024	17:17	LB134113
	Lead	12.0	+/-12.0	U	9.60	12.0	P	12/27/2024	17:17	LB134113
	Magnesium	2000	+/-2000	U	500	2000	P	12/27/2024	17:17	LB134113
	Manganese	20.0	+/-20.0	U	5.00	20.0	P	12/27/2024	17:17	LB134113
	Nickel	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	17:17	LB134113
	Potassium	2000	+/-2000	U	1600	2000	P	12/27/2024	17:17	LB134113
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	12/27/2024	17:17	LB134113
	Silver	10.0	+/-10.0	U	5.00	10.0	P	12/27/2024	17:17	LB134113
	Sodium	2000	+/-2000	U	1000	2000	P	12/27/2024	17:17	LB134113
	Thallium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	17:17	LB134113
	Vanadium	40.0	+/-40.0	U	20.0	40.0	P	12/27/2024	17:17	LB134113
	Zinc	40.0	+/-40.0	U	10.0	40.0	P	12/27/2024	17:17	LB134113

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PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB165856BL		**WATER**		**Batch Number:**		**PB165856**		**Prep Date:**	**12/26/2024**	
	Mercury	0.20	<0.20	U	0.16	0.20	CV	12/26/2024	11:14	LB134084

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PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB165832BL		**WATER**		**Batch Number:**		**PB165832**		**Prep Date:**	**12/23/2024**	
	Aluminum	50.0	<50.0	U	40.0	50.0	P	12/27/2024	16:20	LB134113
	Antimony	25.0	<25.0	U	6.25	25.0	P	12/27/2024	16:20	LB134113
	Arsenic	10.0	<10.0	U	8.00	10.0	P	12/27/2024	16:20	LB134113
	Barium	50.0	<50.0	U	12.5	50.0	P	12/27/2024	16:20	LB134113
	Beryllium	3.00	<3.00	U	0.75	3.00	P	12/27/2024	16:20	LB134113
	Cadmium	3.00	<3.00	U	0.75	3.00	P	12/27/2024	16:20	LB134113
	Calcium	1000	<1000	U	250	1000	P	12/27/2024	16:20	LB134113
	Chromium	5.00	<5.00	U	2.50	5.00	P	12/27/2024	16:20	LB134113
	Cobalt	15.0	<15.0	U	3.75	15.0	P	12/27/2024	16:20	LB134113
	Copper	10.0	<10.0	U	8.00	10.0	P	12/27/2024	16:20	LB134113
	Iron	50.0	<50.0	U	40.0	50.0	P	12/27/2024	16:20	LB134113
	Lead	6.00	<6.00	U	4.80	6.00	P	12/27/2024	16:20	LB134113
	Magnesium	1000	<1000	U	250	1000	P	12/27/2024	16:20	LB134113
	Manganese	10.0	<10.0	U	2.50	10.0	P	12/27/2024	16:20	LB134113
	Nickel	20.0	<20.0	U	5.00	20.0	P	12/27/2024	16:20	LB134113
	Potassium	1000	<1000	U	800	1000	P	12/27/2024	16:20	LB134113
	Selenium	10.0	<10.0	U	8.00	10.0	P	12/27/2024	16:20	LB134113
	Silver	5.00	<5.00	U	2.50	5.00	P	12/27/2024	16:20	LB134113
	Sodium	1000	<1000	U	500	1000	P	12/27/2024	16:20	LB134113
	Thallium	20.0	<20.0	U	10.0	20.0	P	12/27/2024	16:20	LB134113
	Vanadium	20.0	<20.0	U	10.0	20.0	P	12/27/2024	16:20	LB134113
	Zinc	20.0	<20.0	U	5.00	20.0	P	12/27/2024	16:20	LB134113

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	241000	255000	94	216000	294000	12/26/2024	10:18	LB134090
	Antimony	-3.07			-50	50	12/26/2024	10:18	LB134090
	Arsenic	3.44			-20	20	12/26/2024	10:18	LB134090
	Barium	-0.67	6.0	11	-94	106	12/26/2024	10:18	LB134090
	Beryllium	1.37			-6	6	12/26/2024	10:18	LB134090
	Cadmium	2.60	1.0	260	-5	7	12/26/2024	10:18	LB134090
	Calcium	225000	245000	92	208000	282000	12/26/2024	10:18	LB134090
	Chromium	57.4	52.0	110	42	62	12/26/2024	10:18	LB134090
	Cobalt	1.85			-30	30	12/26/2024	10:18	LB134090
	Copper	21.7	2.0	1085	-18	22	12/26/2024	10:18	LB134090
	Iron	99000	101000	98	85600	116500	12/26/2024	10:18	LB134090
	Lead	7.00			-12	12	12/26/2024	10:18	LB134090
	Magnesium	236000	255000	92	216000	294000	12/26/2024	10:18	LB134090
	Manganese	3.73	7.0	53	-13	27	12/26/2024	10:18	LB134090
	Nickel	3.05	2.0	152	-38	42	12/26/2024	10:18	LB134090
	Potassium	173			0	0	12/26/2024	10:18	LB134090
	Selenium	-14.9			-20	20	12/26/2024	10:18	LB134090
	Silver	-1.78			-10	10	12/26/2024	10:18	LB134090
	Sodium	53.6			0	0	12/26/2024	10:18	LB134090
	Thallium	13.4			-40	40	12/26/2024	10:18	LB134090
	Vanadium	7.29			-40	40	12/26/2024	10:18	LB134090
	Zinc	3.67			-40	40	12/26/2024	10:18	LB134090
ICSAB01	Aluminum	240000	247000	97	209000	285000	12/26/2024	10:23	LB134090
	Antimony	646	618	104	525	711	12/26/2024	10:23	LB134090
	Arsenic	112	104	108	88.4	120	12/26/2024	10:23	LB134090
	Barium	463	537	86	437	637	12/26/2024	10:23	LB134090
	Beryllium	471	495	95	420	570	12/26/2024	10:23	LB134090
	Cadmium	957	972	98	826	1120	12/26/2024	10:23	LB134090
	Calcium	220000	235000	94	199000	271000	12/26/2024	10:23	LB134090
	Chromium	567	542	105	460	624	12/26/2024	10:23	LB134090
	Cobalt	496	476	104	404	548	12/26/2024	10:23	LB134090
	Copper	505	511	99	434	588	12/26/2024	10:23	LB134090
	Iron	98200	99300	99	84400	114500	12/26/2024	10:23	LB134090
	Lead	54.7	49.0	112	37	61	12/26/2024	10:23	LB134090
	Magnesium	230000	248000	93	210000	286000	12/26/2024	10:23	LB134090
	Manganese	459	507	90	430	584	12/26/2024	10:23	LB134090
	Nickel	972	954	102	810	1100	12/26/2024	10:23	LB134090
	Potassium	137			0	0	12/26/2024	10:23	LB134090
	Selenium	33.3	46.0	72	26	66	12/26/2024	10:23	LB134090
	Silver	185	201	92	170	232	12/26/2024	10:23	LB134090
	Sodium	53.7			0	0	12/26/2024	10:23	LB134090
	Thallium	97.8	108	91	68	148	12/26/2024	10:23	LB134090

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INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	470	491	96	417	565	12/26/2024	10:23	LB134090
	Zinc	1080	952	113	809	1095	12/26/2024	10:23	LB134090
ICSA01	Aluminum	241000	255000	94	216000	294000	12/27/2024	15:16	LB134113
	Antimony	-2.30			-50	50	12/27/2024	15:16	LB134113
	Arsenic	-1.28			-20	20	12/27/2024	15:16	LB134113
	Barium	-0.72	6.0	12	-94	106	12/27/2024	15:16	LB134113
	Beryllium	1.21			-6	6	12/27/2024	15:16	LB134113
	Cadmium	2.31	1.0	231	-5	7	12/27/2024	15:16	LB134113
	Calcium	220000	245000	90	208000	282000	12/27/2024	15:16	LB134113
	Chromium	55.9	52.0	108	42	62	12/27/2024	15:16	LB134113
	Cobalt	1.79			-30	30	12/27/2024	15:16	LB134113
	Copper	5.99	2.0	300	-18	22	12/27/2024	15:16	LB134113
	Iron	100000	101000	99	85600	116500	12/27/2024	15:16	LB134113
	Lead	6.43			-12	12	12/27/2024	15:16	LB134113
	Magnesium	238000	255000	93	216000	294000	12/27/2024	15:16	LB134113
	Manganese	5.06	7.0	72	-13	27	12/27/2024	15:16	LB134113
	Nickel	2.36	2.0	118	-38	42	12/27/2024	15:16	LB134113
	Potassium	143			0	0	12/27/2024	15:16	LB134113
	Selenium	-13.8			-20	20	12/27/2024	15:16	LB134113
	Silver	-1.81			-10	10	12/27/2024	15:16	LB134113
	Sodium	69.9			0	0	12/27/2024	15:16	LB134113
	Thallium	10.4			-40	40	12/27/2024	15:16	LB134113
	Vanadium	4.89			-40	40	12/27/2024	15:16	LB134113
	Zinc	-10.6			-40	40	12/27/2024	15:16	LB134113
ICSAB01	Aluminum	246000	247000	100	209000	285000	12/27/2024	15:20	LB134113
	Antimony	691	618	112	525	711	12/27/2024	15:20	LB134113
	Arsenic	102	104	98	88.4	120	12/27/2024	15:20	LB134113
	Barium	515	537	96	437	637	12/27/2024	15:20	LB134113
	Beryllium	494	495	100	420	570	12/27/2024	15:20	LB134113
	Cadmium	1080	972	111	826	1120	12/27/2024	15:20	LB134113
	Calcium	224000	235000	95	199000	271000	12/27/2024	15:20	LB134113
	Chromium	615	542	114	460	624	12/27/2024	15:20	LB134113
	Cobalt	547	476	115	404	548	12/27/2024	15:20	LB134113
	Copper	543	511	106	434	588	12/27/2024	15:20	LB134113
	Iron	103000	99300	104	84400	114500	12/27/2024	15:20	LB134113
	Lead	60.0	49.0	122	37	61	12/27/2024	15:20	LB134113
	Magnesium	243000	248000	98	210000	286000	12/27/2024	15:20	LB134113
	Manganese	492	507	97	430	584	12/27/2024	15:20	LB134113
	Nickel	1070	954	112	810	1100	12/27/2024	15:20	LB134113
	Potassium	126			0	0	12/27/2024	15:20	LB134113
	Selenium	39.9	46.0	87	26	66	12/27/2024	15:20	LB134113
	Silver	194	201	96	170	232	12/27/2024	15:20	LB134113

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INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

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	78.3			0	0	12/27/2024	15:20	LB134113
	Thallium	112	108	104	68	148	12/27/2024	15:20	LB134113
	Vanadium	505	491	103	417	565	12/27/2024	15:20	LB134113
	Zinc	905	952	95	809	1095	12/27/2024	15:20	LB134113

METAL QC DATA

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MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P5375

contract: TETR06 **lab code:** CHEM **case no.:** P5375 **sas no.:** P5375

matrix: Water **sample id:** P5375-01 **client id:** TT-RW10A-IDWGW-20241219MS

Percent Solids for Sample: NA **Spiked ID:** P5375-01MS **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	2490		1470		1000	101		P
Antimony	ug/L	88 - 113	426		25.0	U	400	106		P
Arsenic	ug/L	87 - 113	422		10.0	U	400	106		P
Barium	ug/L	88 - 113	133		14.4	J	100	119	N	P
Beryllium	ug/L	89 - 112	77.7		3.00	U	100	78	N	P
Cadmium	ug/L	88 - 113	81.5		0.13	J	100	81	N	P
Calcium	ug/L	87 - 113	7800		7580		500	43		P
Chromium	ug/L	90 - 113	188		27.3		200	80	N	P
Cobalt	ug/L	89 - 114	110		19.7		100	90		P
Copper	ug/L	86 - 114	187		39.5		150	99		P
Iron	ug/L	87 - 115	3700		2450		1500	83	N	P
Lead	ug/L	86 - 113	432		6.00	U	500	86		P
Magnesium	ug/L	85 - 113	4280		3480		1000	80	N	P
Manganese	ug/L	90 - 114	188		109		100	79	N	P
Mercury	ug/L	82 - 119	3.77		0.20	U	4.0	94		CV
Nickel	ug/L	88 - 113	250		37.5		250	85	N	P
Potassium	ug/L	86 - 114	8490		2940		5000	111		P
Selenium	ug/L	83 - 114	1020		10.0	U	1000	102		P
Silver	ug/L	84 - 115	36.6		1.87	J	37.5	93		P
Sodium	ug/L	87 - 115	52300		50300		1500	130		P
Thallium	ug/L	85 - 114	950		20.0	U	1000	95		P
Vanadium	ug/L	90 - 111	136		20.0	U	150	91		P
Zinc	ug/L	87 - 115	179		79.1		100	100		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** P5375

contract: TETR06 **lab code:** CHEM **case no.:** P5375 **sas no.:** P5375

matrix: Water **sample id:** P5375-01 **client id:** TT-RW10A-IDWGW-20241219MSD

Percent Solids for Sample: NA **Spiked ID:** P5375-01MSD **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	2480		1470		1000	101		P
Antimony	ug/L	88 - 113	429		25.0	U	400	107		P
Arsenic	ug/L	87 - 113	424		10.0	U	400	106		P
Barium	ug/L	88 - 113	131		14.4	J	100	117	N	P
Beryllium	ug/L	89 - 112	76.9		3.00	U	100	77	N	P
Cadmium	ug/L	88 - 113	81.5		0.13	J	100	81	N	P
Calcium	ug/L	87 - 113	7710		7580		500	26		P
Chromium	ug/L	90 - 113	188		27.3		200	80	N	P
Cobalt	ug/L	89 - 114	110		19.7		100	90		P
Copper	ug/L	86 - 114	188		39.5		150	99		P
Iron	ug/L	87 - 115	3700		2450		1500	83	N	P
Lead	ug/L	86 - 113	432		6.00	U	500	86		P
Magnesium	ug/L	85 - 113	4250		3480		1000	76	N	P
Manganese	ug/L	90 - 114	187		109		100	78	N	P
Mercury	ug/L	82 - 119	3.79		0.20	U	4.0	95		CV
Nickel	ug/L	88 - 113	250		37.5		250	85	N	P
Potassium	ug/L	86 - 114	8440		2940		5000	110		P
Selenium	ug/L	83 - 114	1030		10.0	U	1000	103		P
Silver	ug/L	84 - 115	36.3		1.87	J	37.5	92		P
Sodium	ug/L	87 - 115	52500		50300		1500	143		P
Thallium	ug/L	85 - 114	928		20.0	U	1000	93		P
Vanadium	ug/L	90 - 111	135		20.0	U	150	90		P
Zinc	ug/L	87 - 115	179		79.1		100	100		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Matrix: Water **Level:** LOW **Client ID:** TT-RW10A-IDWGW-20241219A

Sample ID: P5375-01 **Spiked ID:** P5375-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Barium	ug/L	88 - 113	131		14.4	J	100	116		P
Beryllium	ug/L	89 - 112	77.2		3.00	U	100	77		P
Cadmium	ug/L	88 - 113	81.5		0.13	J	100	81		P
Chromium	ug/L	90 - 113	188		27.3		200	80		P
Iron	ug/L	87 - 115	3690		2450		1500	83		P
Magnesium	ug/L	85 - 113	4250		3480		1000	77		P
Manganese	ug/L	90 - 114	187		109		100	77		P
Nickel	ug/L	88 - 113	250		37.5		250	85		P

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Matrix: Water **Sample ID:** P5375-01 **Client ID:** TT-RW10A-IDWGW-20241219DUP

Percent Solids for Sample: NA **Duplicate ID** P5375-01DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	1470		1530		4		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	14.4	J	14.5	J	1		P
Beryllium	ug/L	20	3.00	U	3.00	U			P
Cadmium	ug/L	20	0.13	J	0.097	J	31		P
Calcium	ug/L	20	7580		7550		0		P
Chromium	ug/L	20	27.3		27.2		0		P
Cobalt	ug/L	20	19.7		19.7		0		P
Copper	ug/L	20	39.5		39.7		1		P
Iron	ug/L	20	2450		2440		0		P
Lead	ug/L	20	6.00	U	6.00	U			P
Magnesium	ug/L	20	3480		3450		1		P
Manganese	ug/L	20	109		109		0		P
Mercury	ug/L	20	0.20	U	0.11	J	200.0		CV
Nickel	ug/L	20	37.5		37.7		1		P
Potassium	ug/L	20	2940		3010		2		P
Selenium	ug/L	20	10.0	U	10.0	U			P
Silver	ug/L	20	1.87	J	1.86	J	1		P
Sodium	ug/L	20	50300		51700		3		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	79.1		78.8		0		P

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

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Matrix: Water **Sample ID:** P5375-01MS **Client ID:** TT-RW10A-IDWGW-20241219MSD

Percent Solids for Sample: NA **Duplicate ID** P5375-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	2490		2480		0		P
Antimony	ug/L	20	426		429		1		P
Arsenic	ug/L	20	422		424		0		P
Barium	ug/L	20	133		131		2		P
Beryllium	ug/L	20	77.7		76.9		1		P
Cadmium	ug/L	20	81.5		81.5		0		P
Calcium	ug/L	20	7800		7710		1		P
Chromium	ug/L	20	188		188		0		P
Cobalt	ug/L	20	110		110		0		P
Copper	ug/L	20	187		188		1		P
Iron	ug/L	20	3700		3700		0		P
Lead	ug/L	20	432		432		0		P
Magnesium	ug/L	20	4280		4250		1		P
Manganese	ug/L	20	188		187		1		P
Mercury	ug/L	20	3.77		3.79		1		CV
Nickel	ug/L	20	250		250		0		P
Potassium	ug/L	20	8490		8440		1		P
Selenium	ug/L	20	1020		1030		1		P
Silver	ug/L	20	36.6		36.3		1		P
Sodium	ug/L	20	52300		52500		0		P
Thallium	ug/L	20	950		928		2		P
Vanadium	ug/L	20	136		135		1		P
Zinc	ug/L	20	179		179		0		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165832BS							
Aluminum	ug/L	1000	939		94	86 - 115	P
Antimony	ug/L	400	406		102	88 - 113	P
Arsenic	ug/L	400	414		104	87 - 113	P
Barium	ug/L	100	89.1		89	88 - 113	P
Beryllium	ug/L	100	91.8		92	89 - 112	P
Cadmium	ug/L	100	95.6		96	88 - 113	P
Calcium	ug/L	500	478	J	96	87 - 113	P
Chromium	ug/L	200	202		101	90 - 113	P
Cobalt	ug/L	100	98.0		98	89 - 114	P
Copper	ug/L	150	160		107	86 - 114	P
Iron	ug/L	1500	1460		97	87 - 115	P
Lead	ug/L	500	487		97	86 - 113	P
Magnesium	ug/L	1000	905	J	90	85 - 113	P
Manganese	ug/L	100	91.0		91	90 - 114	P
Nickel	ug/L	250	245		98	88 - 113	P
Potassium	ug/L	5000	4860		97	86 - 114	P
Selenium	ug/L	1000	1020		102	83 - 114	P
Silver	ug/L	37.5	38.4		102	84 - 115	P
Sodium	ug/L	1500	1420		95	87 - 115	P
Thallium	ug/L	1000	1020		102	85 - 114	P
Vanadium	ug/L	150	140		93	90 - 111	P
Zinc	ug/L	100	94.8		95	87 - 115	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165856BS							
Mercury	ug/L	4.0	3.78		94	82 - 119	CV

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ICP SERIAL DILUTIONS

SAMPLE NO.

TT-RW10A-IDWGW-20241219L

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

Lab Code: CHEM **Lb No.:** lb134090 **Lab Sample ID :** P5375-01L **SDG No.:** P5375

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	1470		1530		4		P
Antimony	25.0	U	125	U			P
Arsenic	10.0	U	50.0	U			P
Barium	14.4	J	250	U	100.0		P
Beryllium	3.00	U	15.0	U			P
Cadmium	0.13	J	15.0	U	100.0		P
Calcium	7580		7800		3		P
Chromium	27.3		27.5		1		P
Cobalt	19.7		20.3	J	3		P
Copper	39.5		42.6	J	8		P
Iron	2450		2440		0		P
Lead	6.00	U	30.0	U			P
Magnesium	3480		3570	J	3		P
Manganese	109		112		2		P
Mercury	0.20	U	0.59	J	100.0		CV
Nickel	37.5		38.7	J	3		P
Potassium	2940		5000	U	100.0		P
Selenium	10.0	U	50.0	U			P
Silver	1.87	J	9.74	J	422		P
Sodium	50300		51300		2		P
Thallium	20.0	U	100	U			P
Vanadium	20.0	U	100	U			P
Zinc	79.1		77.9	J	1		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

Contract: TETR06 **Lab Code:** CHEM **Case No.:** P5375 **SAS No.:** P5375

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

METAL PREPARATION & ANALYICAL SUMMARY

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SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

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

Case No.: P5375 **SAS No.:** P5375

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165832**						
P5375-01	TT-RW10A-IDWGW-20241219	SAM	WATER	12/23/2024	50.0	25.0	
P5375-01DUP	TT-RW10A-IDWGW-20241219DUP	DUP	WATER	12/23/2024	50.0	25.0	
P5375-01MS	TT-RW10A-IDWGW-20241219MS	MS	WATER	12/23/2024	50.0	25.0	
P5375-01MSD	TT-RW10A-IDWGW-20241219MSD	MSD	WATER	12/23/2024	50.0	25.0	
PB165832BL	PB165832BL	MB	WATER	12/23/2024	50.0	25.0	
PB165832BS	PB165832BS	LCS	WATER	12/23/2024	50.0	25.0	

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SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** P5375

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

Case No.: P5375 **SAS No.:** P5375

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165856**						
P5375-01	TT-RW10A-IDWGW-20241219	SAM	WATER	12/26/2024	30.0	30.0	
P5375-01DUP	TT-RW10A-IDWGW-20241219DUP	DUP	WATER	12/26/2024	30.0	30.0	
P5375-01MS	TT-RW10A-IDWGW-20241219MS	MS	WATER	12/26/2024	30.0	30.0	
P5375-01MSD	TT-RW10A-IDWGW-20241219MSD	MSD	WATER	12/26/2024	30.0	30.0	
PB165856BL	PB165856BL	MB	WATER	12/26/2024	30.0	30.0	
PB165856BS	PB165856BS	LCS	WATER	12/26/2024	30.0	30.0	

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ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** P5375 **Sas no.:** P5375 **Sdg no.:** P5375

Instrument id number: **Method:** **Run number:** LB134084

Start date: 12/26/2024 **End date:** 12/26/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1038	HG
S0.2	S0.2	1	1040	HG
S2.5	S2.5	1	1043	HG
S5	S5	1	1045	HG
S7.5	S7.5	1	1047	HG
S10	S10	1	1049	HG
ICV30	ICV30	1	1052	HG
ICB30	ICB30	1	1055	HG
CCV64	CCV64	1	1057	HG
CCB64	CCB64	1	1059	HG
CRA	CRA	1	1107	HG
PB165856BL	PB165856BL	1	1114	HG
PB165856BS	PB165856BS	1	1119	HG
P5375-01	TT-RW10A-IDWGW-20241219	1	1121	HG
P5375-01DUP	TT-RW10A-IDWGW-20241219	1	1123	HG
P5375-01MS	TT-RW10A-IDWGW-20241219	1	1128	HG
P5375-01MSD	TT-RW10A-IDWGW-20241219	1	1131	HG
CCV65	CCV65	1	1133	HG
CCB65	CCB65	1	1135	HG
P5375-01L	TT-RW10A-IDWGW-20241219	5	1137	HG
CCV66	CCV66	1	1145	HG
CCB66	CCB66	1	1147	HG

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ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** P5375 **Sas no.:** P5375 **Sdg no.:** P5375

Instrument id number: **Method:** **Run number:** LB134090

Start date: 12/26/2024 **End date:** 12/26/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0936	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	0940	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	0944	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	0948	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	0953	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	0957	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	1001	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	1005	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	1010	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	1014	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	1018	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	1023	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	1032	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	1038	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	1124	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	1130	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	1210	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	1215	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	1302	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	1306	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	1437	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	1441	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5375-01	TT-RW10A-IDWGW-20241219	1	1446	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5375-01DUP	TT-RW10A-IDWGW-20241219	1	1450	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5375-01L	TT-RW10A-IDWGW-20241219	5	1454	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5375-01MS	TT-RW10A-IDWGW-20241219	1	1458	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5375-01MSD	TT-RW10A-IDWGW-20241219	1	1502	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P5375-01A	TT-RW10A-IDWGW-20241219	1	1506	Ba,Be,Cd,Cr,Fe,Mg,Mn,Ni
CCV06	CCV06	1	1524	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	1530	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

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ANALYSIS RUN LOG

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

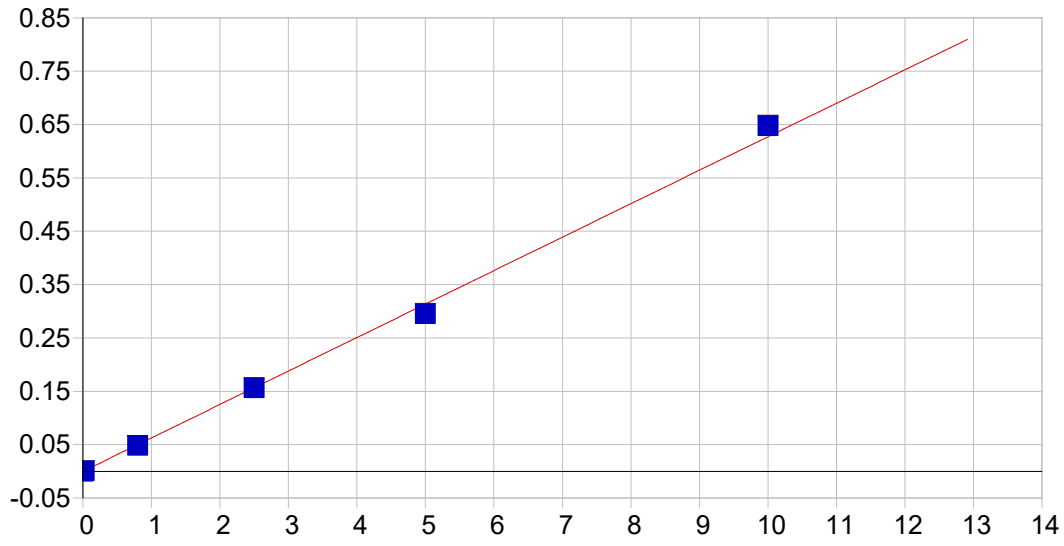
Lab code: CHEM **Case no.:** P5375 **Sas no.:** P5375 **Sdg no.:** P5375

Instrument id number: **Method:** **Run number:** LB134113

Start date: 12/27/2024 **End date:** 12/27/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1242	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	1247	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	1251	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	1255	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	1259	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	1304	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	1354	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	1408	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	1459	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	1503	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	1516	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	1520	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	1534	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	1540	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165832BL	PB165832BL	1	1620	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB165832BS	PB165832BS	1	1624	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	1632	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	1637	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	1659	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	1717	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

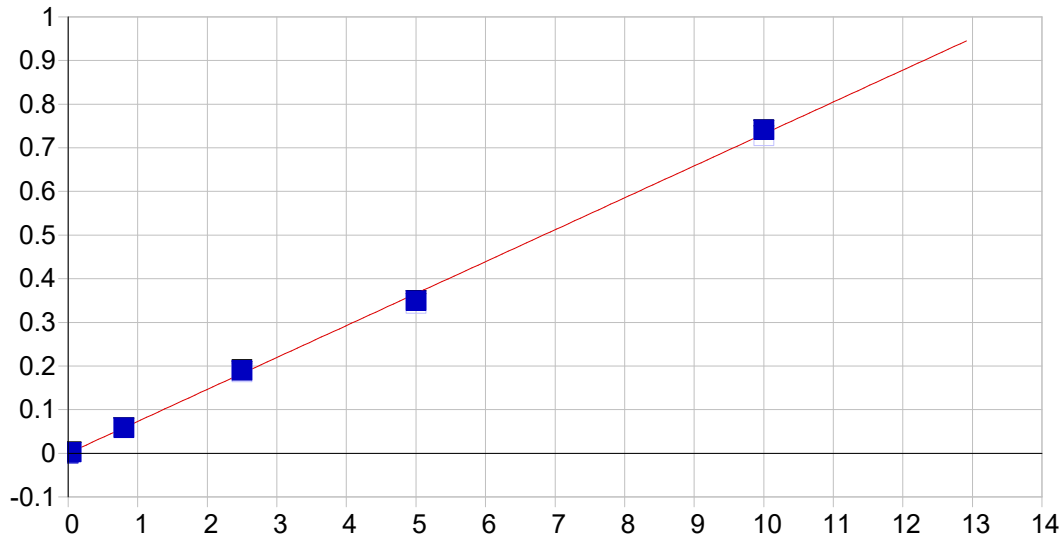


As 189.042 {479}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000099	Re-Slope:	1.000000
A1 (Gain):	0.062724	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999229	Status:	OK.
Std Error of Est:	0.000058		
Predicted MDL:	0.002114		
Predicted MQL:	0.007046		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00010	.000	1
S1	.02000	.02127	.001	6.35	.00123	.000	1
S3	2.5000	2.4905	-.009	-.378	.15595	.000	1
S4	5.0000	4.7131	-.287	-5.74	.29519	.001	1
S5	10.000	10.325	.325	3.25	.64683	.001	1
S2	.80000	.77028	-.030	-3.72	.04816	.000	1

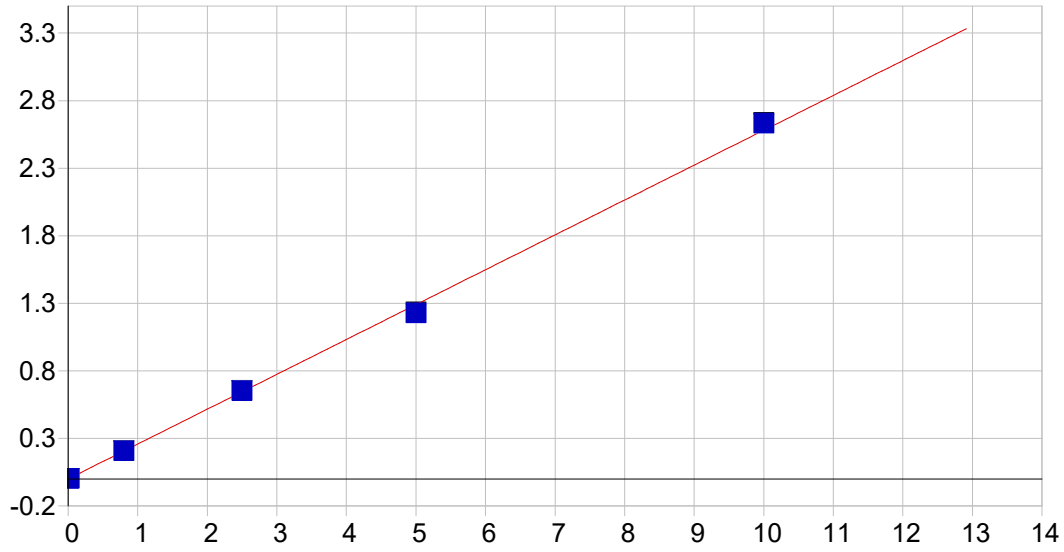


Tl 190.856 {477}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000060	Re-Slope:	1.000000
A1 (Gain):	0.073183	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999589	Status:	OK.
Std Error of Est:	0.000068		
Predicted MDL:	0.001653		
Predicted MQL:	0.005509		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00006	.000	1
S1	.04000	.04188	.002	4.69	.00282	.000	1
S3	2.5000	2.5899	.090	3.60	.18611	.002	1
S4	5.0000	4.7806	-.219	-4.39	.34306	.000	1
S5	10.000	10.126	.126	1.26	.72749	.001	1
S2	.80000	.80196	.002	.245	.05755	.001	1

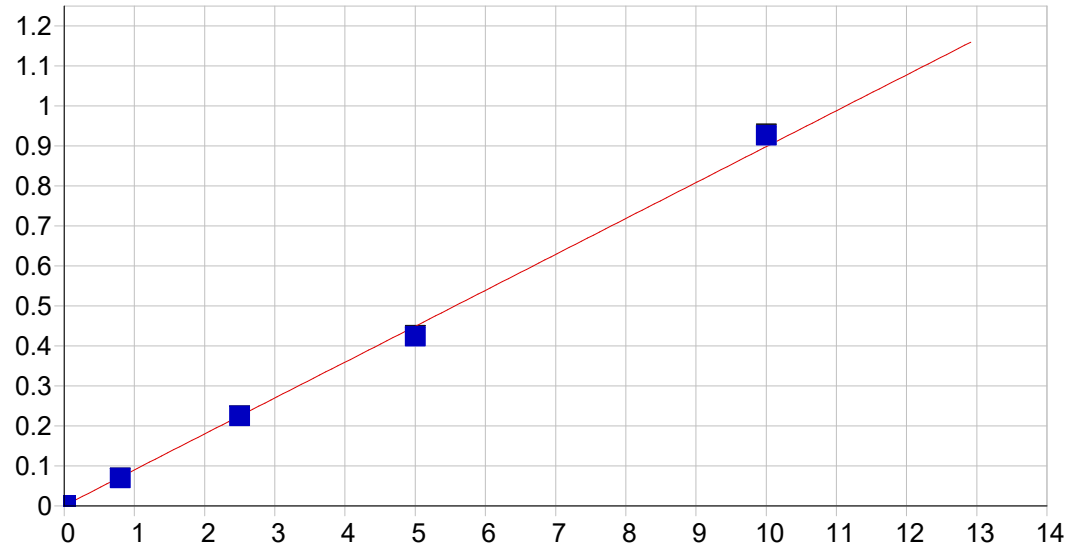


Pb 220.353 {453}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000202	Re-Slope:	1.000000
A1 (Gain):	0.258062	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999552	Status:	OK.
Std Error of Est:	0.000140		
Predicted MDL:	0.001023		
Predicted MQL:	0.003411		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00020	.000	1
S1	.01200	.01146	-.001	-4.49	.00269	.000	1
S3	2.5000	2.5324	.032	1.30	.65260	.001	1
S4	5.0000	4.7582	-.242	-4.84	1.2263	.007	1
S5	10.000	10.205	.205	2.05	2.6305	.004	1
S2	.80000	.80506	.005	.632	.20733	.001	1

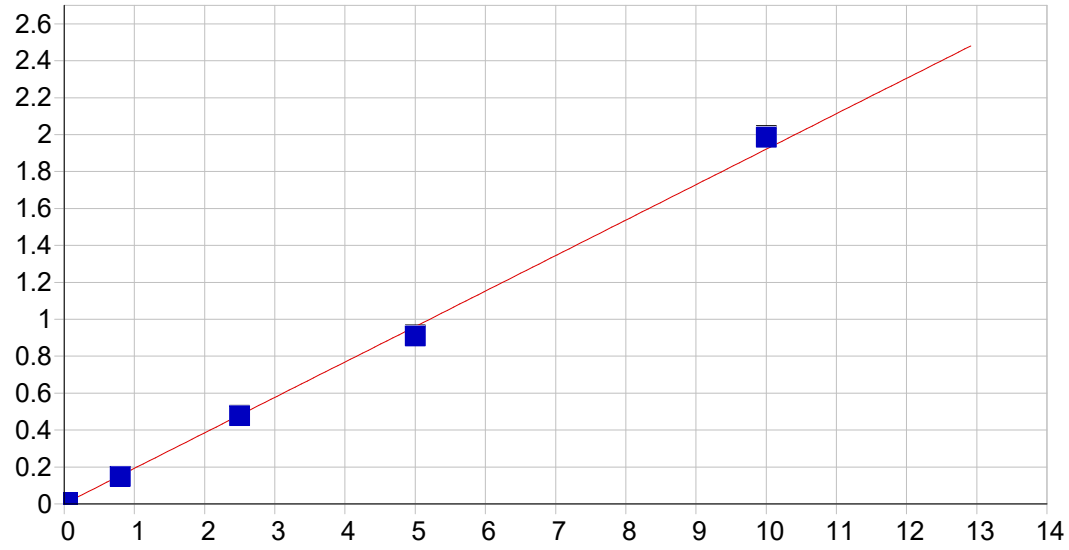


Se 196.090 {472}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000391	Re-Slope:	1.000000
A1 (Gain):	0.089785	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999261	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.002002		
Predicted MQL:	0.006674		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00039	.000	1
S1	.02000	.01993	-.000	-.370	.00218	.000	1
S3	2.5000	2.4988	-.001	-.046	.22469	.001	1
S4	5.0000	4.7187	-.281	-5.63	.42394	.003	1
S5	10.000	10.315	.315	3.15	.92631	.003	1
S2	.80000	.76725	-.033	-4.09	.06926	.000	1

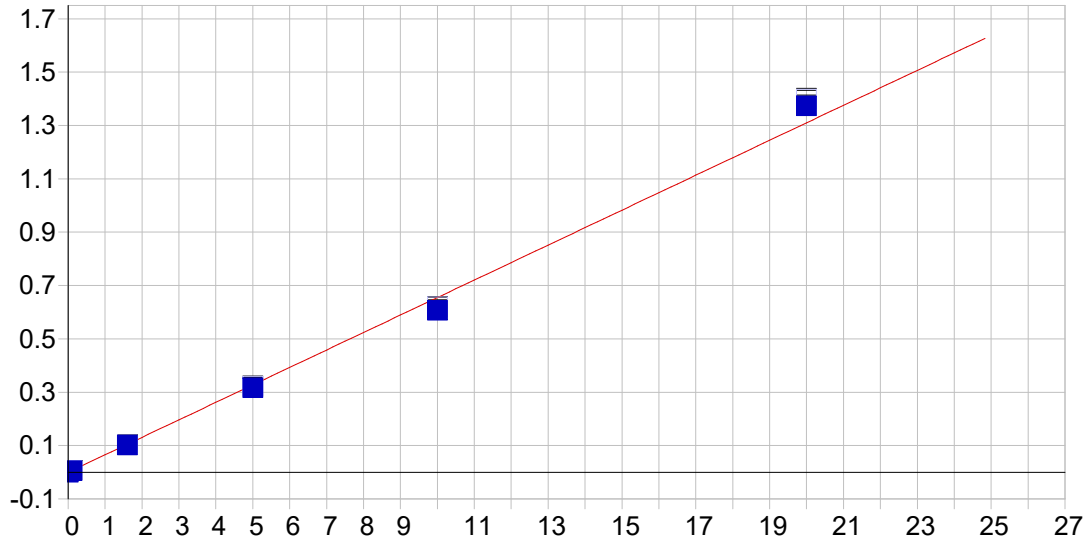


Sb 206.833 {463}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000510	Re-Slope:	1.000000
A1 (Gain):	0.192028	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999261	Status:	OK.
Std Error of Est:	0.000275		
Predicted MDL:	0.001159		
Predicted MQL:	0.003863		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00051	.000	1
S1	.05000	.04673	-.003	-6.53	.00950	.000	1
S3	2.5000	2.4784	-.022	-.864	.47774	.001	1
S4	5.0000	4.7285	-.271	-5.43	.91112	.005	1
S5	10.000	10.329	.329	3.29	1.9892	.005	1
S2	.80000	.76749	-.033	-4.06	.14831	.000	1

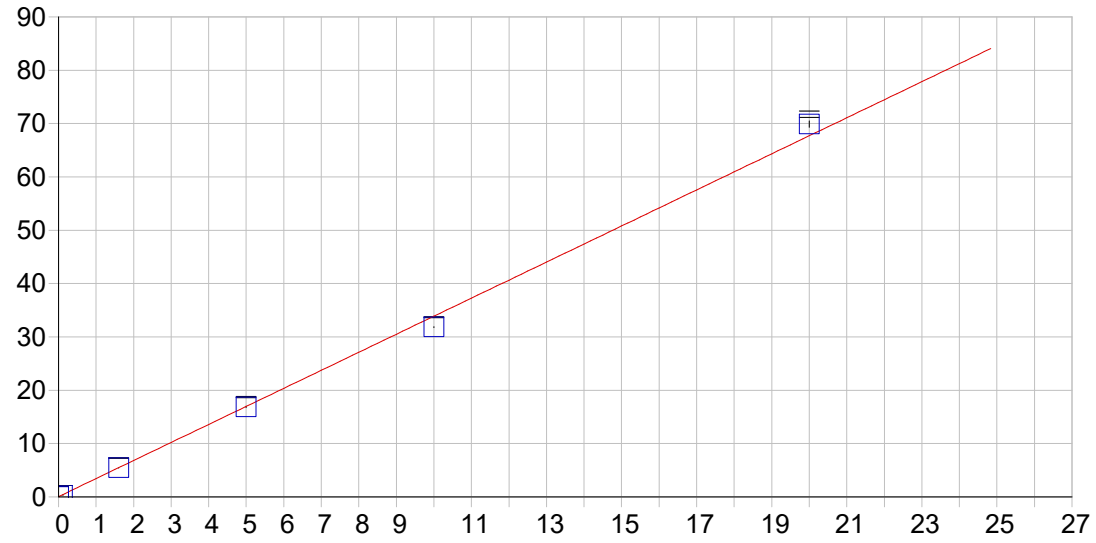


Al 396.152 { 85}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000182	Re-Slope:	1.000000
A1 (Gain):	0.065514	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998591	Status:	OK.
Std Error of Est:	0.000263		
Predicted MDL:	0.008104		
Predicted MQL:	0.027015		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00018	.001	1
S1	.10000	.09657	-.003	-3.43	.00665	.000	1
S3	5.0000	4.8282	-.172	-3.44	.32249	.001	1
S4	10.000	9.2669	-.733	-7.33	.61965	.002	1
S5	20.000	20.961	.961	4.81	1.3985	.003	1
S2	1.6000	1.5472	-.053	-3.30	.10321	.000	1

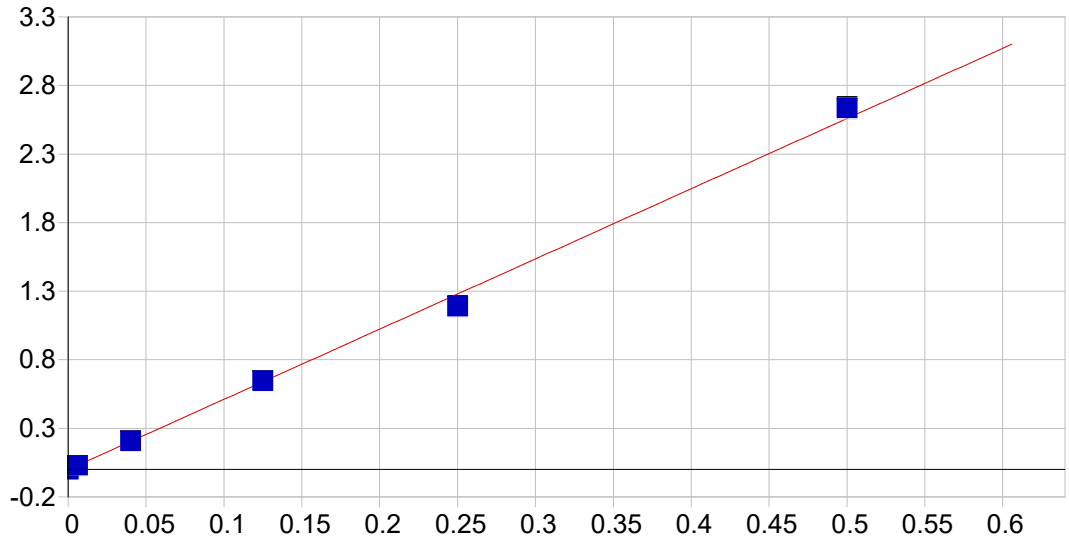


Ba 493.409 { 68}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.058910	Re-Slope:	1.000000
A1 (Gain):	3.382571	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999208	Status:	OK.
Std Error of Est:	0.009987		
Predicted MDL:	0.000526		
Predicted MQL:	0.001754		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.05894	.001	1
S1	.10000	.09630	-.004	-3.70	.38466	.001	1
S3	5.0000	4.9686	-.031	-.627	16.866	.141	1
S4	10.000	9.3949	-.605	-6.05	31.838	.076	1
S5	20.000	20.651	.651	3.25	69.911	.606	1
S2	1.6000	1.5896	-.010	-.653	5.4357	.018	1

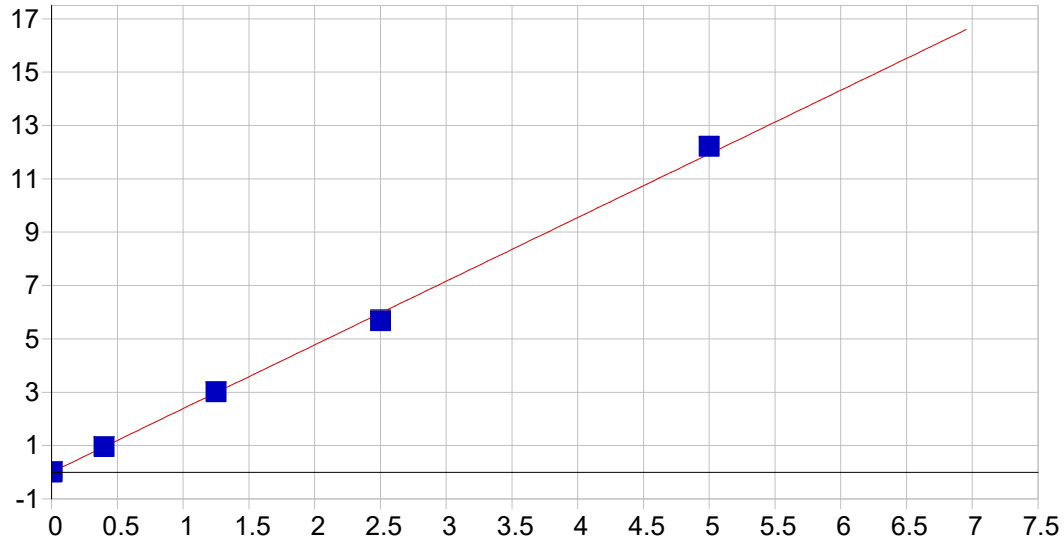


Be 234.861 {144}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000493	Re-Slope:	1.000000
A1 (Gain):	5.119101	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999056	Status:	OK.
Std Error of Est:	0.000637		
Predicted MDL:	0.000055		
Predicted MQL:	0.000184		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00049	.000	1
S1	.00600	.00600	.000	.067	.03001	.000	1
S3	.12500	.12650	.001	1.20	.64419	.001	1
S4	.25000	.23250	-.018	-7.00	1.1840	.005	1
S5	.50000	.51536	.015	3.07	2.6262	.008	1
S2	.04000	.04064	.001	1.61	.20664	.001	1

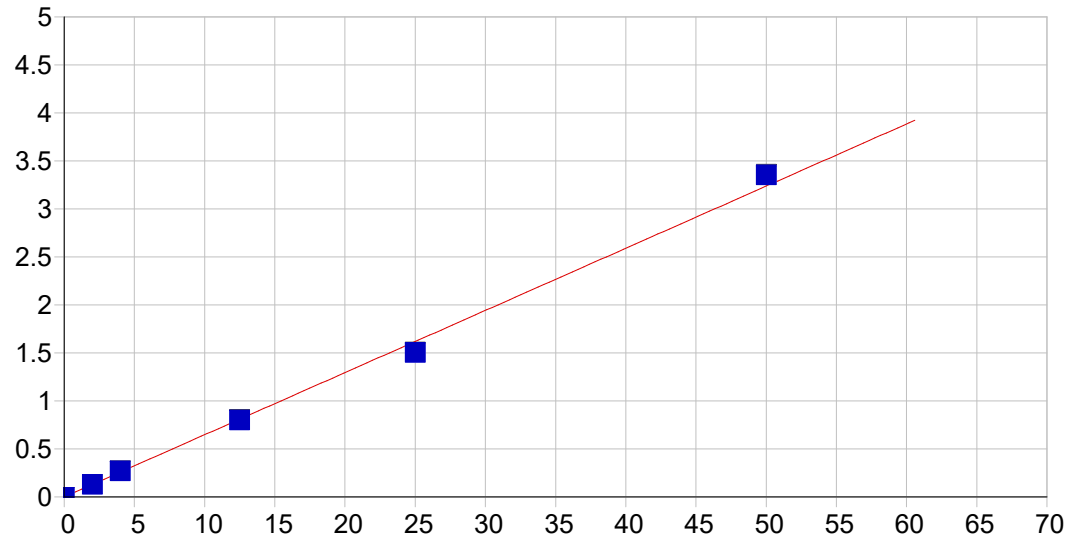


Cd 226.502 {449}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000053	Re-Slope:	1.000000
A1 (Gain):	2.386892	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999512	Status:	OK.
Std Error of Est:	0.000677		
Predicted MDL:	0.000085		
Predicted MQL:	0.000282		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00005	.000	1
S1	.00600	.00595	-.000	-.809	.01432	.000	1
S3	1.2500	1.2609	.011	.875	3.0121	.008	1
S4	2.5000	2.3752	-.125	-4.99	5.6739	.037	1
S5	5.0000	5.1144	.114	2.29	12.217	.009	1
S2	.40000	.39955	-.000	-.113	.95447	.001	1

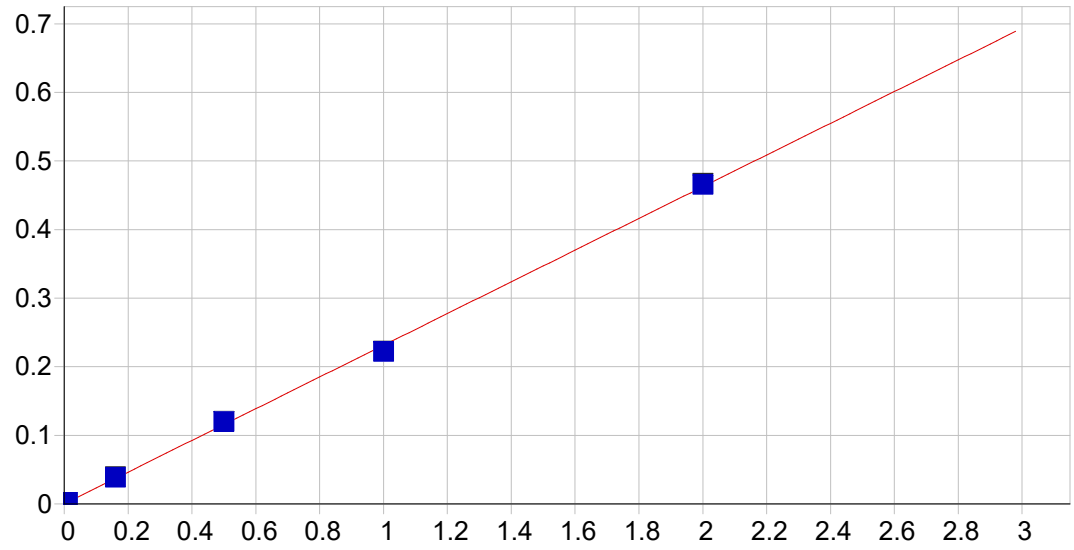


Ca 373.690 { 90}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000345	Re-Slope:	1.000000
A1 (Gain):	0.064741	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998945	Status:	OK.
Std Error of Est:	0.001574		
Predicted MDL:	0.008405		
Predicted MQL:	0.028016		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	.00035	.000	1
S2	4.0000	4.1427	.143	3.57	.26855	.001	1
S3	12.500	12.359	-.141	-1.13	.80048	.002	1
S4	25.000	23.221	-1.78	-7.12	1.5037	.002	1
S5	50.000	51.789	1.79	3.58	3.3532	.008	1
S1	2.0000	1.9886	-.011	-.568	.12909	.000	1

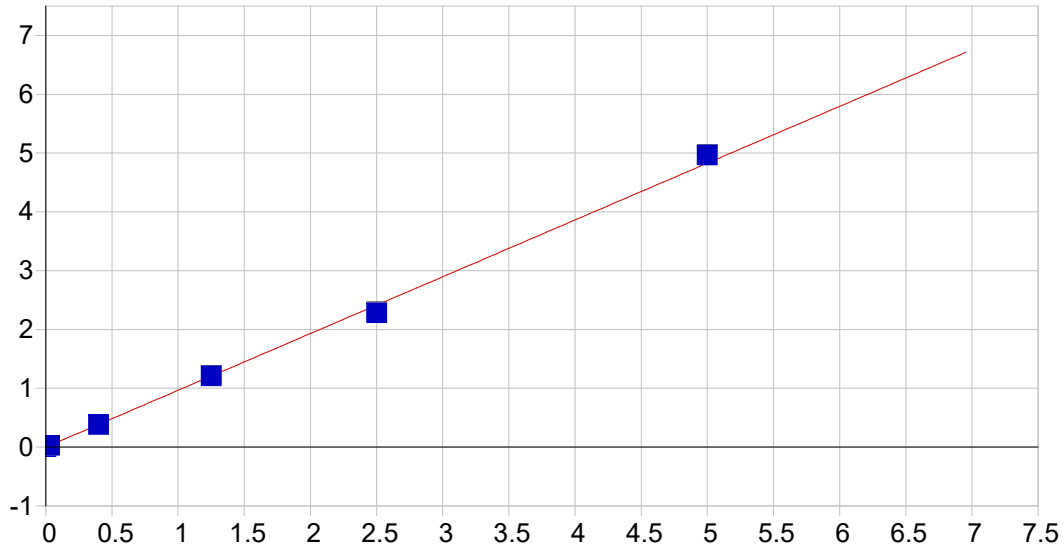


Cr 267.716 {126}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000130	Re-Slope:	1.000000
A1 (Gain):	0.231169	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999624	Status:	OK.
Std Error of Est:	0.000047		
Predicted MDL:	0.000359		
Predicted MQL:	0.001196		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00013	.000	1
S1	.01000	.00980	-.000	-2.03	.00240	.000	1
S3	.50000	.51842	.018	3.68	.12001	.000	1
S4	1.0000	.95986	-.040	-4.01	.22209	.000	1
S5	2.0000	2.0143	.014	.714	.46590	.001	1
S2	.16000	.16764	.008	4.78	.03889	.000	1

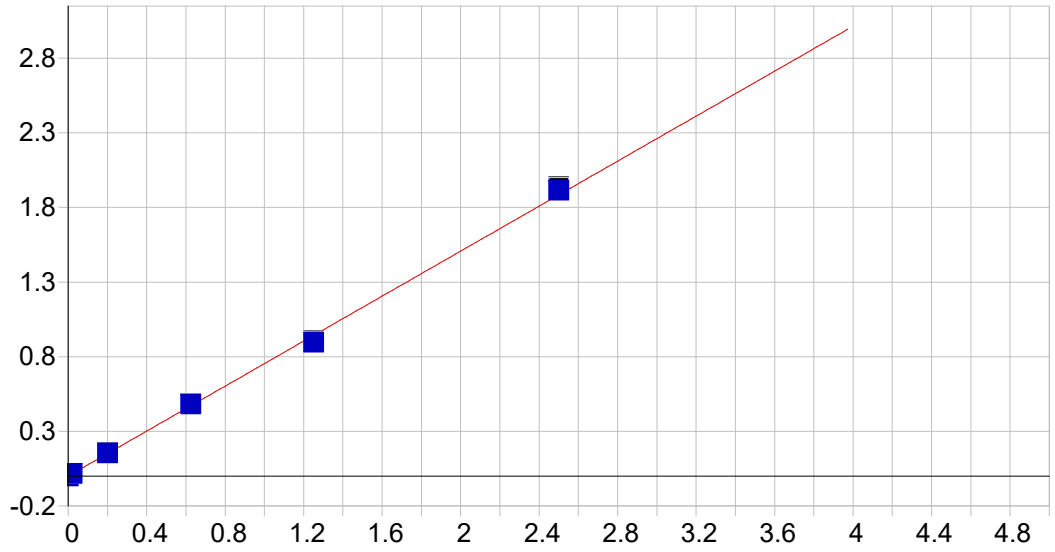


Co 228.616 {448}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000022	Re-Slope:	1.000000
A1 (Gain):	0.965704	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999390	Status:	OK.
Std Error of Est:	0.000687		
Predicted MDL:	0.000188		
Predicted MQL:	0.000626		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00002	.000	1
S1	.03000	.02959	-.000	-1.36	.02843	.000	1
S3	1.2500	1.2512	.001	.093	1.2103	.002	1
S4	2.5000	2.3642	-.136	-5.43	2.2872	.011	1
S5	5.0000	5.1384	.138	2.77	4.9703	.003	1
S2	.40000	.39672	-.003	-.819	.38375	.000	1

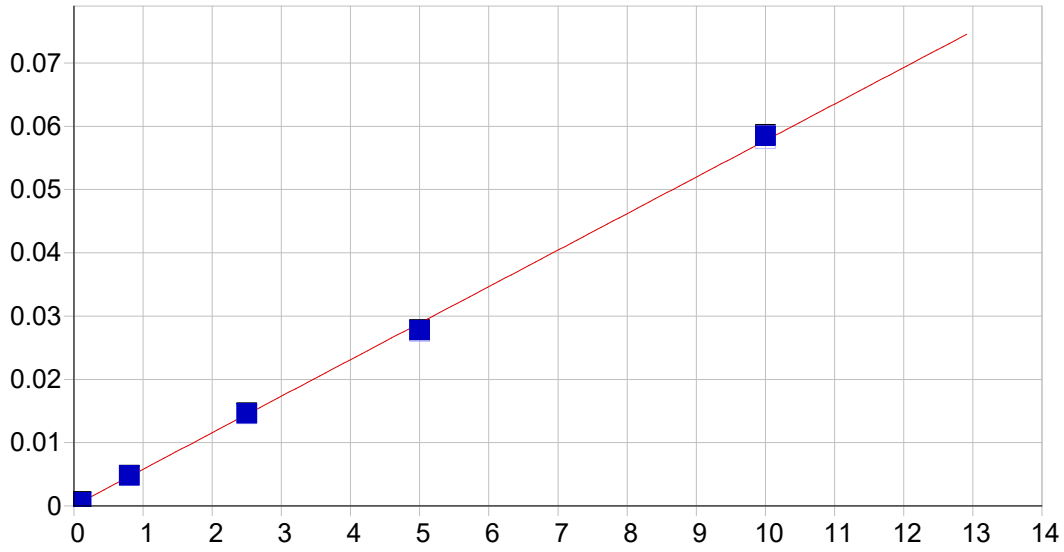


Cu 224.700 {450}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000197	Re-Slope:	1.000000
A1 (Gain):	0.753881	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999543	Status:	OK.
Std Error of Est:	0.000270		
Predicted MDL:	0.000383		
Predicted MQL:	0.001275		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00020	.000	1
S1	.02000	.02136	.001	6.80	.01610	.000	1
S3	.62500	.63927	.014	2.28	.48627	.001	1
S4	1.2500	1.1883	-.062	-4.94	.90467	.002	1
S5	2.5000	2.5403	.040	1.61	1.9330	.006	1
S2	.20000	.20575	.006	2.87	.15636	.000	1

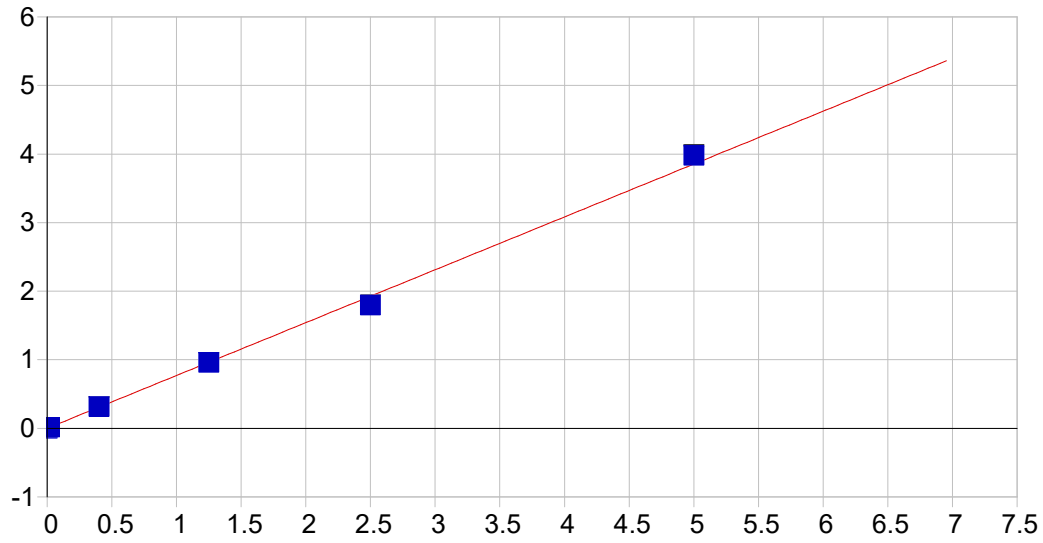


Fe 240.488 {140}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000028	Re-Slope:	1.000000
A1 (Gain):	0.005771	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999696	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.004377		
Predicted MQL:	0.014590		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.10000	.09962	-.000	-.378	.00060	.000	1
S3	2.5000	2.5309	.031	1.23	.01451	.000	1
S4	5.0000	4.8042	-.196	-3.92	.02751	.000	1
S5	10.000	10.136	.136	1.36	.05803	.000	1
S2	.80000	.82951	.030	3.69	.00478	.000	1

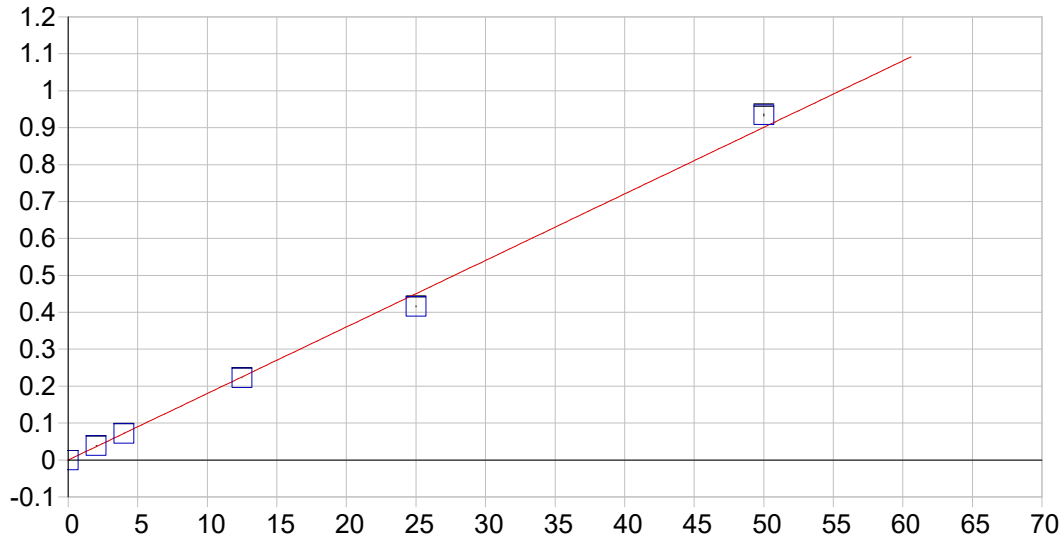


Mn 257.610 {131}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000017	Re-Slope:	1.000000
A1 (Gain):	0.770782	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999077	Status:	OK.
Std Error of Est:	0.000549		
Predicted MDL:	0.000297		
Predicted MQL:	0.000991		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.02000	.02075	.001	3.77	.01599	.000	1
S3	1.2500	1.2436	-.006	-.515	.95869	.002	1
S4	2.5000	2.3322	-.168	-6.71	1.7980	.001	1
S5	5.0000	5.1654	.165	3.31	3.9822	.009	1
S2	.40000	.40802	.008	2.01	.31454	.001	1

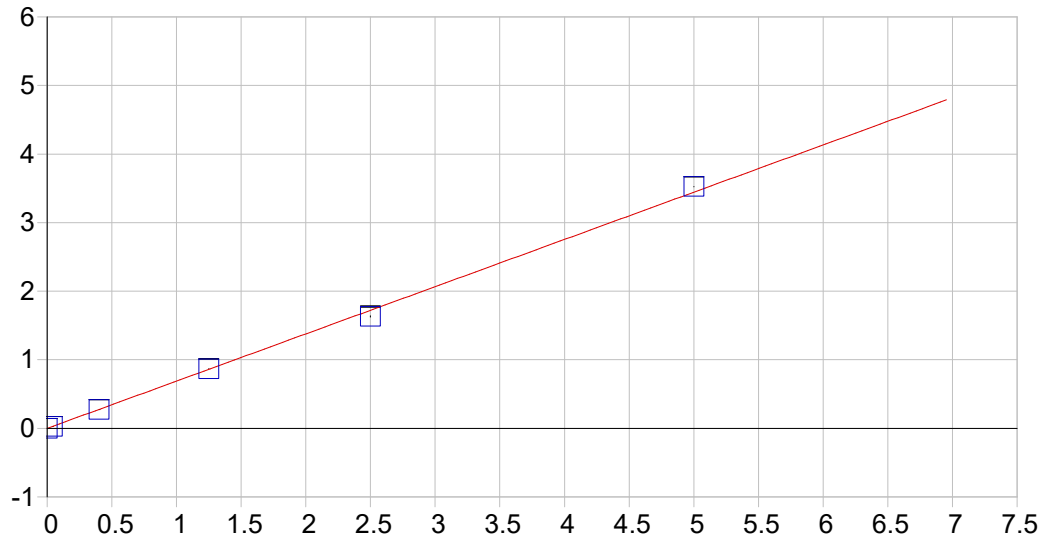


Mg 279.079 {121}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000147	Re-Slope:	1.000000
A1 (Gain):	0.018020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998763	Status:	OK.
Std Error of Est:	0.000475		
Predicted MDL:	0.013480		
Predicted MQL:	0.044934		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00007	-.000	.000	-.00015	.000	1
S2	4.0000	4.0056	.006	.141	.07203	.000	1
S3	12.500	12.365	-.135	-1.08	.22267	.001	1
S4	25.000	23.089	-1.91	-7.65	.41591	.001	1
S5	50.000	51.875	1.87	3.75	.93462	.003	1
S1	2.0000	2.1657	.166	8.29	.03888	.000	1

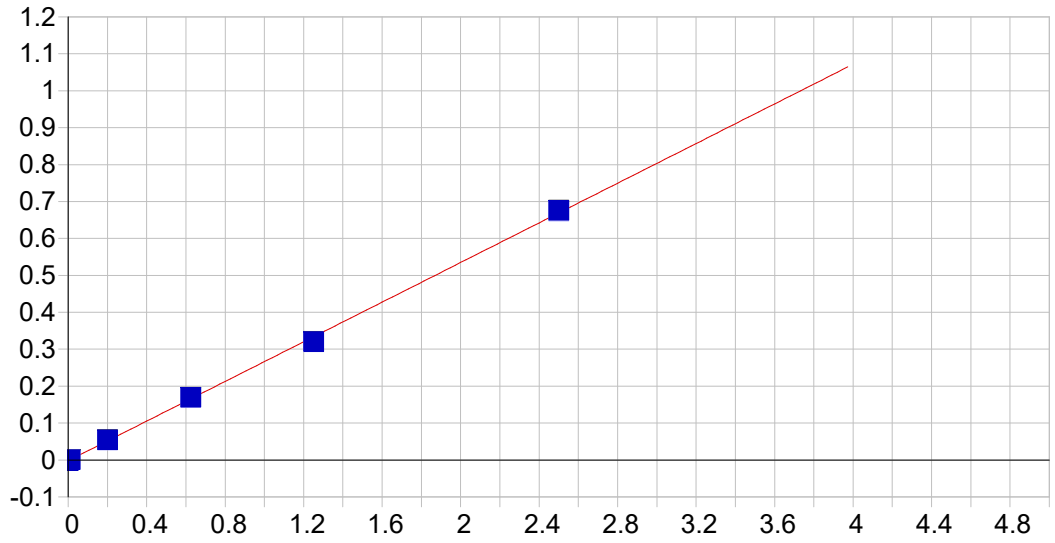


Ni 231.604 {446}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000358	Re-Slope:	1.000000
A1 (Gain):	0.688811	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999472	Status:	OK.
Std Error of Est:	0.000525		
Predicted MDL:	0.000294		
Predicted MQL:	0.000981		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00036	.000	1
S1	.04000	.03958	-.000	-1.05	.02691	.000	1
S3	1.2500	1.2614	.011	.908	.86848	.001	1
S4	2.5000	2.3697	-.130	-5.21	1.6319	.009	1
S5	5.0000	5.1184	.118	2.37	3.5253	.002	1
S2	.40000	.40100	.001	.249	.27585	.000	1

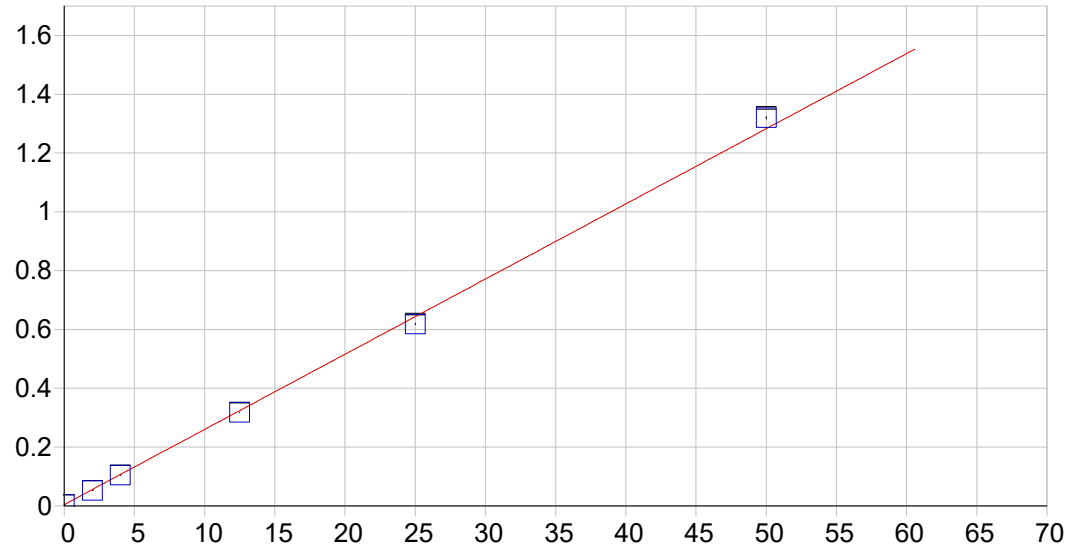


Ag 328.068 {103}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002067	Re-Slope:	1.000000
A1 (Gain):	0.268459	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999689	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	0.000410		
Predicted MQL:	0.001368		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00207	.000	1
S1	.01000	.01057	.001	5.74	.00075	.000	1
S3	.62500	.63975	.015	2.36	.16901	.000	1
S4	1.2500	1.2018	-.048	-3.86	.31922	.000	1
S5	2.5000	2.5246	.025	.982	.67301	.000	1
S2	.20000	.20837	.008	4.18	.05366	.000	1

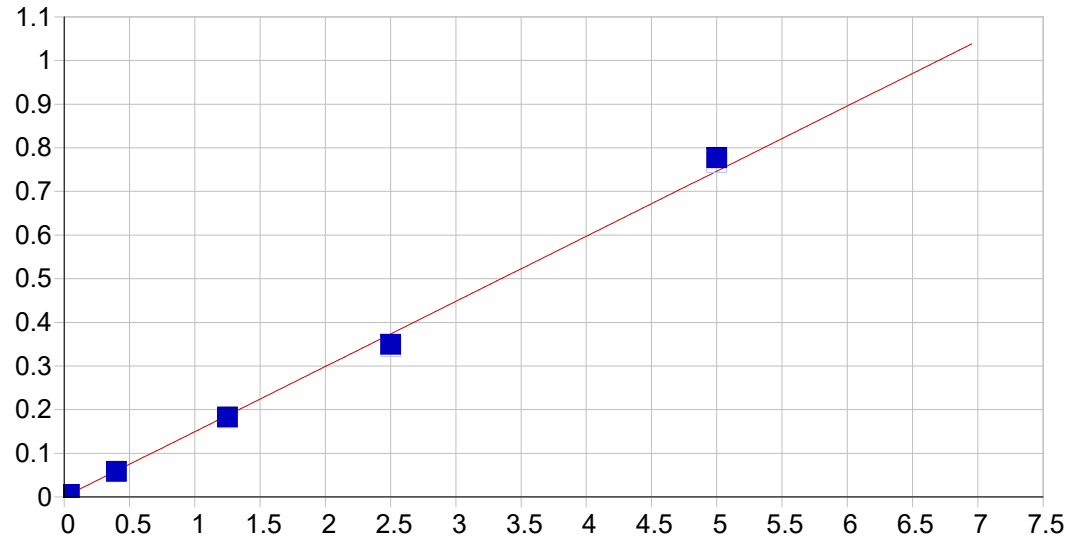


Na 589.592 { 57}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004618	Re-Slope:	1.000000
A1 (Gain):	0.025563	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999479	Status:	OK.
Std Error of Est:	0.000437		
Predicted MDL:	0.006741		
Predicted MQL:	0.022469		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00024	.000	.000	.00462	.000	1
S2	4.0000	3.9166	-.083	-2.08	.10474	.000	1
S3	12.500	12.257	-.243	-1.94	.31795	.001	1
S4	25.000	24.018	-.982	-3.93	.61859	.003	1
S5	50.000	51.452	1.45	2.90	1.3199	.004	1
S1	2.0000	1.8570	-.143	-7.15	.05209	.000	1

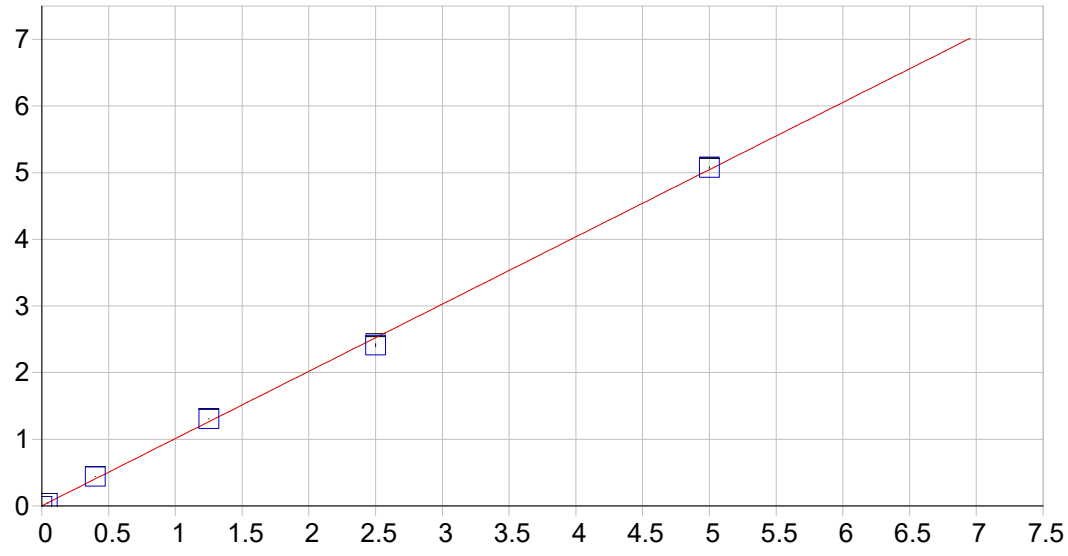


V 292.402 {115}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000222	Re-Slope:	1.000000
A1 (Gain):	0.149257	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998903	Status:	OK.
Std Error of Est:	0.000162		
Predicted MDL:	0.001670		
Predicted MQL:	0.005568		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00022	.000	1
S1	.04000	.03796	-.002	-5.10	.00566	.000	1
S3	1.2500	1.2231	-.027	-2.15	.18005	.000	1
S4	2.5000	2.3393	-.161	-6.43	.34393	.001	1
S5	5.0000	5.2023	.202	4.05	.76582	.001	1
S2	.40000	.38732	-.013	-3.17	.05716	.000	1

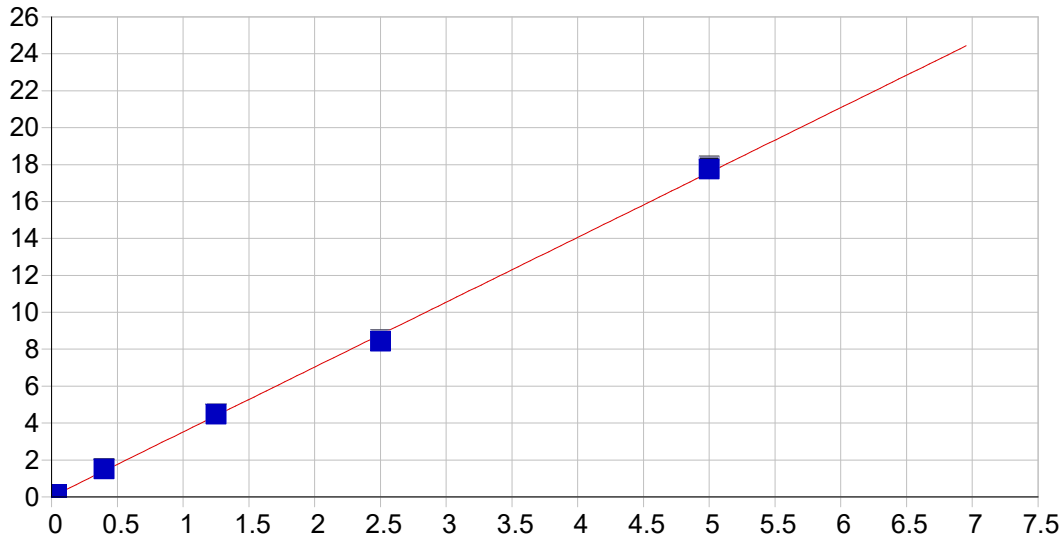


Zn 206.200 {464}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001355	Re-Slope:	1.000000
A1 (Gain):	1.008902	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999473	Status:	OK.
Std Error of Est:	0.000769		
Predicted MDL:	0.000176		
Predicted MQL:	0.000587		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00135	.000	1
S1	.04000	.04268	.003	6.70	.04442	.000	1
S3	1.2500	1.2923	.042	3.39	1.3052	.004	1
S4	2.5000	2.3897	-.110	-4.41	2.4124	.020	1
S5	5.0000	5.0304	.030	.608	5.0765	.009	1
S2	.40000	.43485	.035	8.71	.44008	.001	1

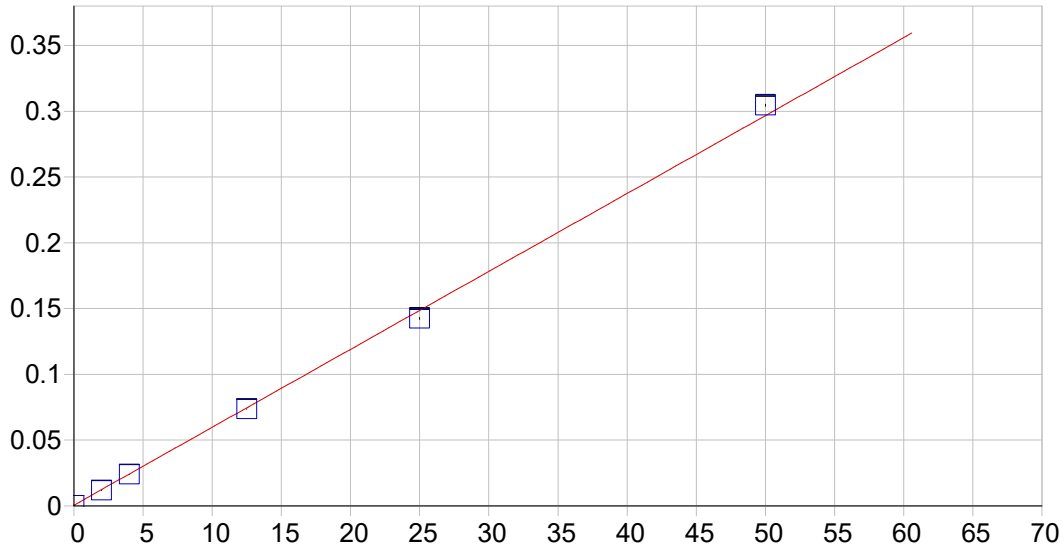


Zn 213.856 {158}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005264	Re-Slope:	1.000000
A1 (Gain):	3.513348	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999629	Status:	OK.
Std Error of Est:	0.002261		
Predicted MDL:	0.000216		
Predicted MQL:	0.000721		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00525	.001	1
S1	.04000	.04085	.001	2.13	.14978	.001	1
S3	1.2500	1.2733	.023	1.86	4.5093	.002	1
S4	2.5000	2.3975	-.102	-4.10	8.4897	.026	1
S5	5.0000	5.0522	.052	1.04	17.877	.037	1
S2	.40000	.42617	.026	6.54	1.5123	.004	1

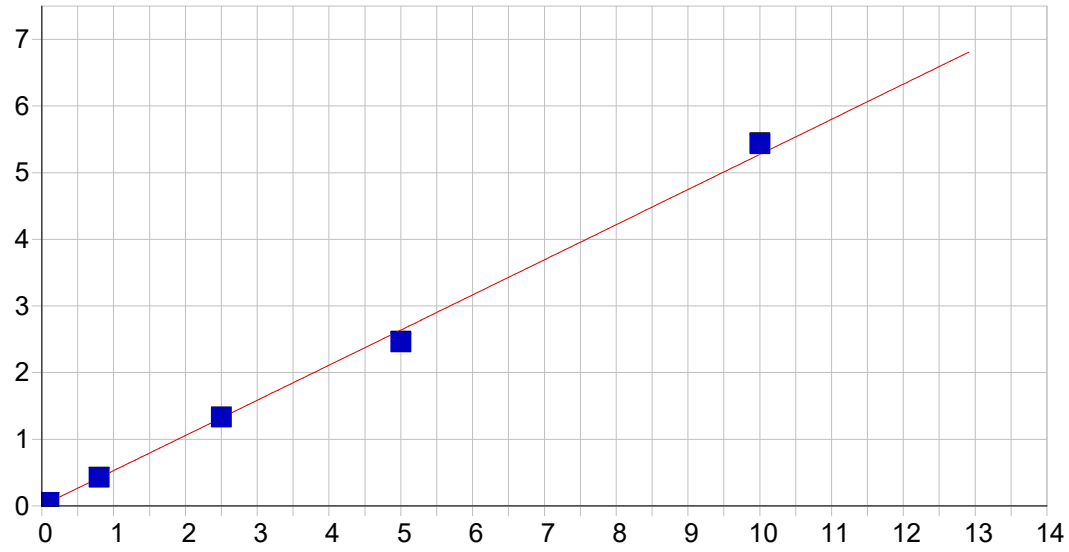


K 766.490 { 44}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000571	Re-Slope:	1.000000
A1 (Gain):	0.005923	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999553	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.031948		
Predicted MQL:	0.106494		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00017	.000	.000	.00057	.000	1
S2	4.0000	3.9508	-.049	-1.23	.02397	.000	1
S3	12.500	12.350	-.150	-1.20	.07372	.000	1
S4	25.000	23.968	-1.03	-4.13	.14253	.001	1
S5	50.000	51.319	1.32	2.64	.30454	.001	1
S1	2.0000	1.9129	-.087	-4.36	.01190	.000	1

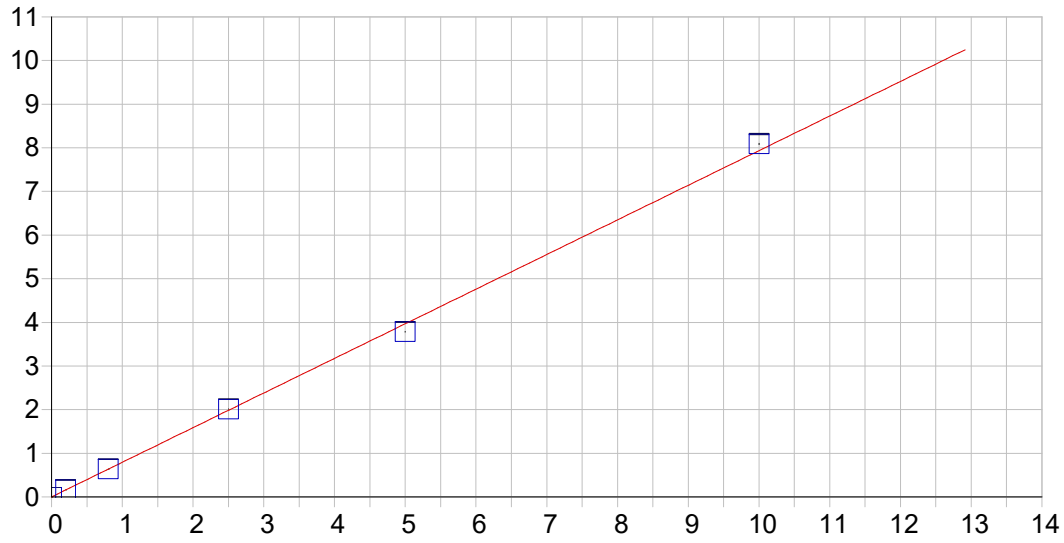


B 249.678 {135}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002850	Re-Slope:	1.000000
A1 (Gain):	0.527139	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999097	Status:	OK.
Std Error of Est:	0.001174		
Predicted MDL:	0.000668		
Predicted MQL:	0.002225		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00285	.000	1
S1	.10000	.10314	.003	3.14	.05700	.000	1
S3	2.5000	2.5183	.018	.731	1.3278	.004	1
S4	5.0000	4.6595	-.340	-6.81	2.4539	.013	1
S5	10.000	10.310	.310	3.10	5.4274	.010	1
S2	.80000	.80892	.009	1.11	.42844	.001	1

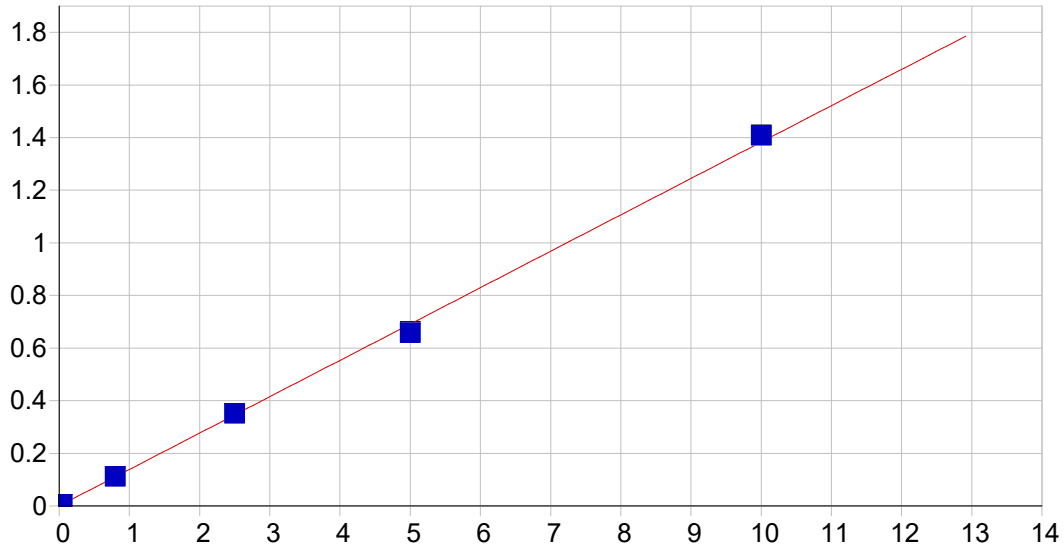


Mo 202.030 {467}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000516	Re-Slope:	1.000000
A1 (Gain):	0.793453	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999600	Status:	OK.
Std Error of Est:	0.001671		
Predicted MDL:	0.000234		
Predicted MQL:	0.000781		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00052	.000	1
S1	.20000	.19904	-.001	-.478	.15845	.000	1
S3	2.5000	2.5335	.033	1.34	2.0107	.004	1
S4	5.0000	4.7697	-.230	-4.61	3.7850	.007	1
S5	10.000	10.193	.193	1.93	8.0881	.017	1
S2	.80000	.80499	.005	.624	.63924	.001	1

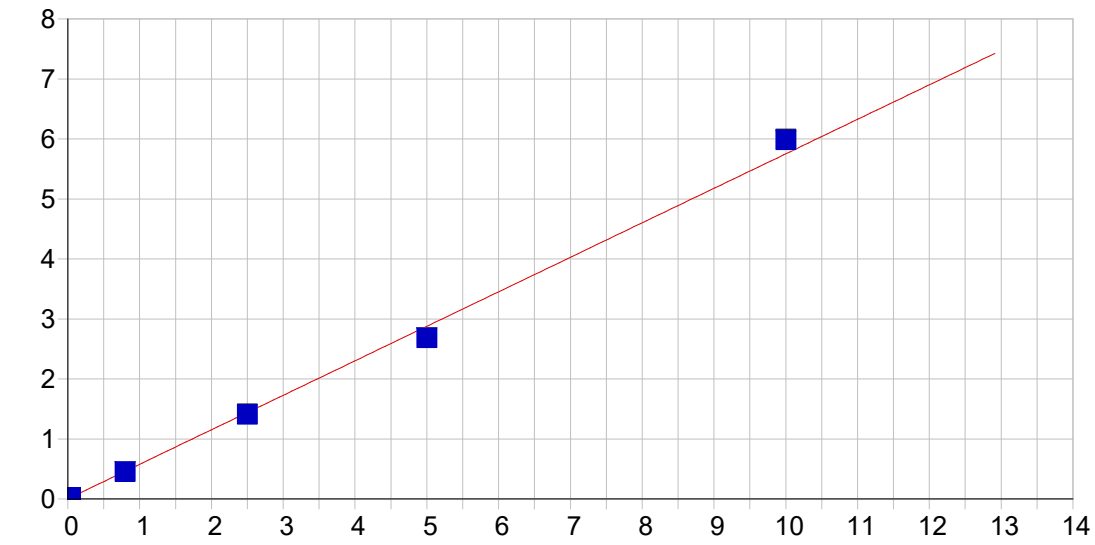


Sn 189.989 {478}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000182	Re-Slope:	1.000000
A1 (Gain):	0.138267	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999565	Status:	OK.
Std Error of Est:	0.000135		
Predicted MDL:	0.000668		
Predicted MQL:	0.002225		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00018	.000	1
S1	.04000	.04054	.001	1.35	.00578	.000	1
S3	2.5000	2.5413	.041	1.65	.35121	.000	1
S4	5.0000	4.7597	-.240	-4.81	.65759	.004	1
S5	10.000	10.190	.190	1.90	1.4077	.001	1
S2	.80000	.80844	.008	1.06	.11185	.000	1

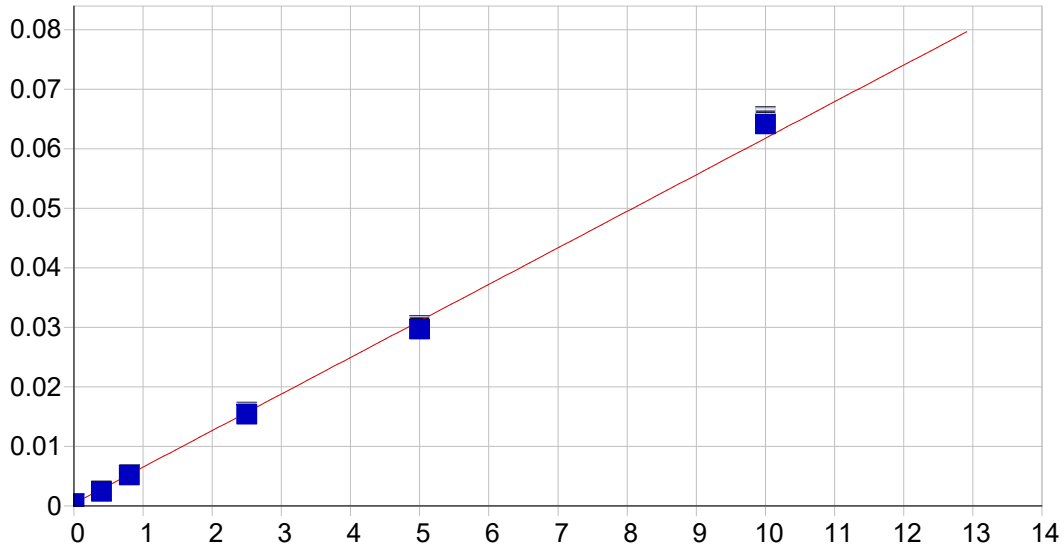


Ti 336.121 {100}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001934	Re-Slope:	1.000000
A1 (Gain):	0.574954	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998914	Status:	OK.
Std Error of Est:	0.000889		
Predicted MDL:	0.000642		
Predicted MQL:	0.002141		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00194	.000	1
S1	.04000	.03904	-.001	-2.40	.02436	.000	1
S3	2.5000	2.4452	-.055	-2.19	1.4073	.004	1
S4	5.0000	4.6670	-.333	-6.66	2.6842	.001	1
S5	10.000	10.403	.403	4.03	5.9810	.014	1
S2	.80000	.78601	-.014	-1.75	.45369	.001	1

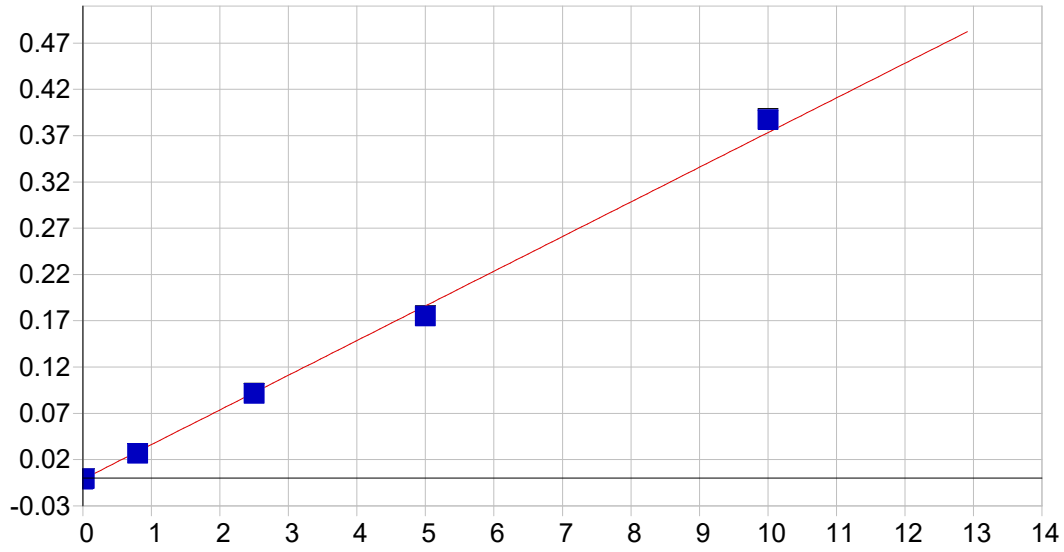


Si 288.158 {117}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000381	Re-Slope:	1.000000
A1 (Gain):	0.006140	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998960	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.007250		
Predicted MQL:	0.024167		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00009	.000	.000	.00038	.000	1
S1	.40000	.32838	-.072	-17.9	.00240	.000	1
S3	2.5000	2.4388	-.061	-2.45	.01559	.000	1
S4	5.0000	4.7700	-.230	-4.60	.03013	.000	1
S5	10.000	10.382	.382	3.82	.06506	.000	1
S2	.80000	.77947	-.021	-2.57	.00524	.000	1

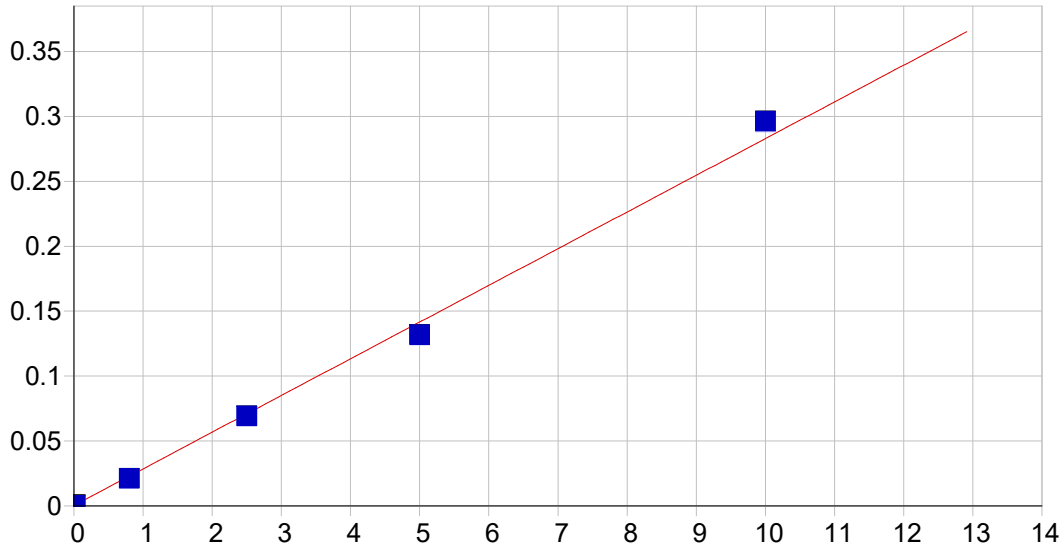


P 177.495 {490}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001203	Re-Slope:	1.000000
A1 (Gain):	0.037452	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999034	Status:	OK.
Std Error of Est:	0.000039		
Predicted MDL:	0.002217		
Predicted MQL:	0.007391		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00120	.000	1
S1	.02000	.01783	-.002	-10.8	-.00053	.000	1
S3	2.5000	2.4754	-.025	-.986	.09149	.000	1
S4	5.0000	4.7036	-.296	-5.93	.17493	.001	1
S5	10.000	10.375	.375	3.75	.38730	.001	1
S2	.80000	.74828	-.052	-6.46	.02682	.000	1

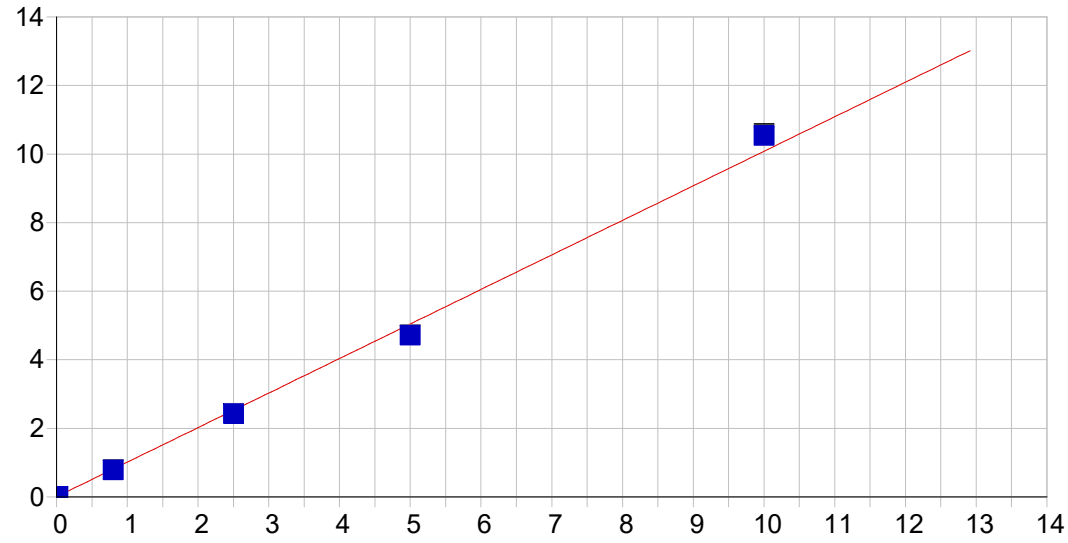


S 182.034 {485}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000291	Re-Slope:	1.000000
A1 (Gain):	0.028262	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998565	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.002954		
Predicted MQL:	0.009848		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00029	.000	1
S1	.02000	.01894	-.001	-5.30	.00080	.000	1
S3	2.5000	2.4373	-.063	-2.51	.06899	.000	1
S4	5.0000	4.6538	-.346	-6.92	.13145	.000	1
S5	10.000	10.471	.471	4.71	.29549	.000	1
S2	.80000	.73899	-.061	-7.63	.02112	.000	1

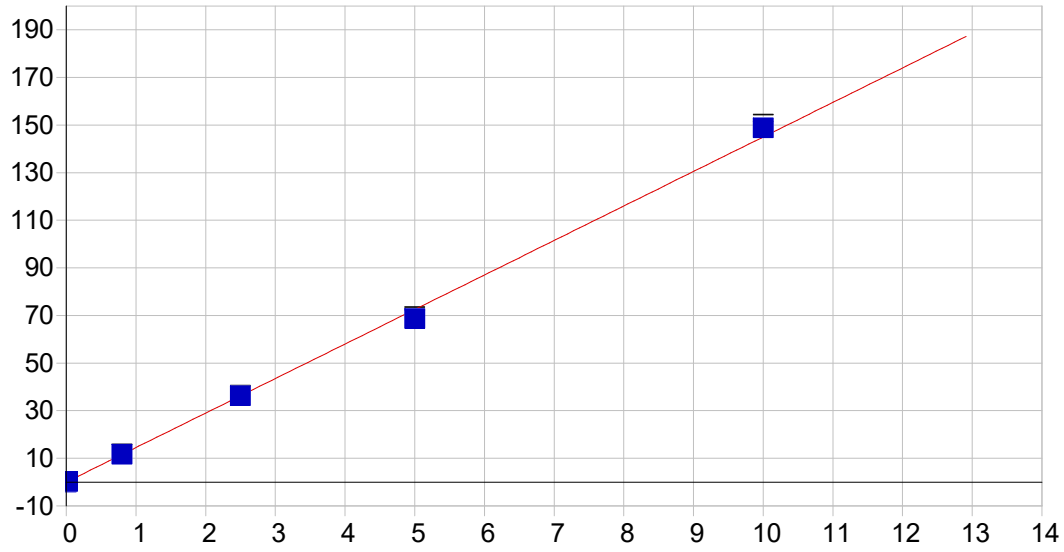


Li 670.784 { 50}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006506	Re-Slope:	1.000000
A1 (Gain):	1.007394	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998715	Status:	OK.
Std Error of Est:	0.001199		
Predicted MDL:	0.001013		
Predicted MQL:	0.003376		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00651	.001	1
S5	10.000	10.455	.455	4.55	10.548	.042	1
S4	5.0000	4.6732	-.327	-6.54	4.7188	.006	1
S3	2.5000	2.4016	-.098	-3.94	2.4281	.004	1
S1	.02000	.01713	-.003	-14.4	.02413	.000	1
S2	.80000	.77311	-.027	-3.36	.78605	.002	1

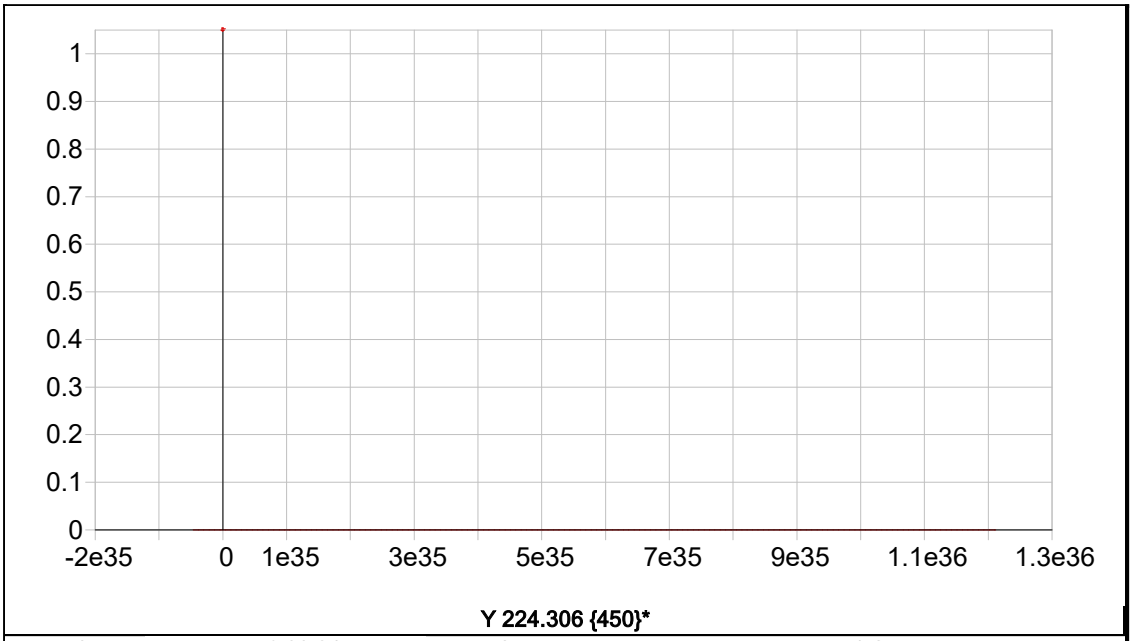


Sr 407.771 { 83}

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000431	Re-Slope:	1.000000
A1 (Gain):	14.501372	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999446	Status:	OK.
Std Error of Est:	0.011322		
Predicted MDL:	0.000043		
Predicted MQL:	0.000144		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00042	.000	1
S1	.02000	.01957	-.000	-2.16	.28478	.003	1
S3	2.5000	2.4998	-.000	-.008	36.286	.169	1
S4	5.0000	4.7380	-.262	-5.24	68.779	.655	1
S5	10.000	10.256	.256	2.56	148.87	1.47	1
S2	.80000	.80704	.007	.880	11.714	.043	1

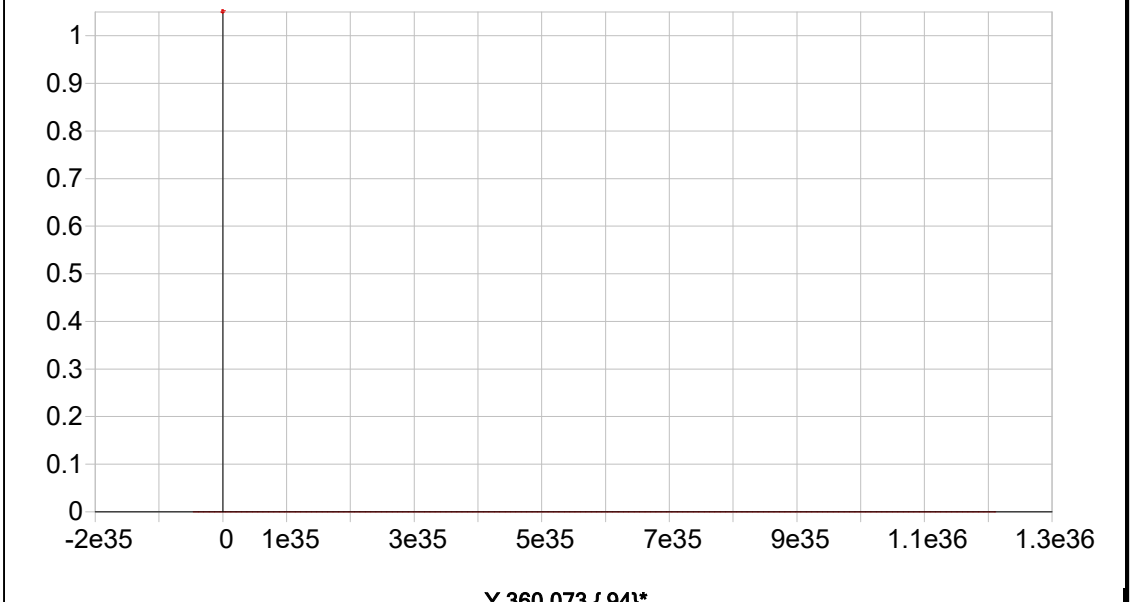


Y 224.306 {450}*

Date of Fit:	12/26/2024 0:38:24	Type of Fit:	Linear	Weighting:	1/Conc

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

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



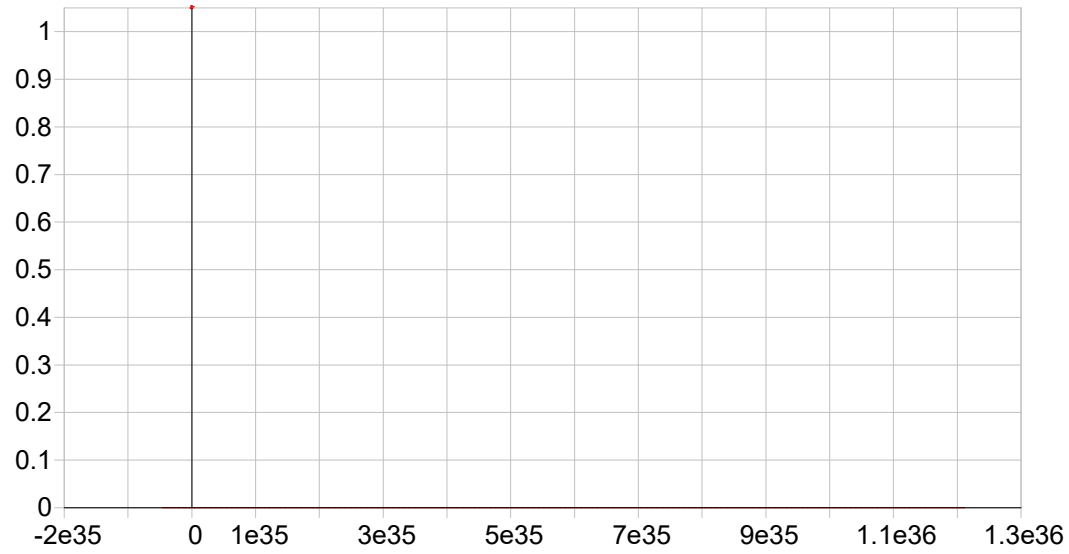
Y 360.073 { 94}*

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

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

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

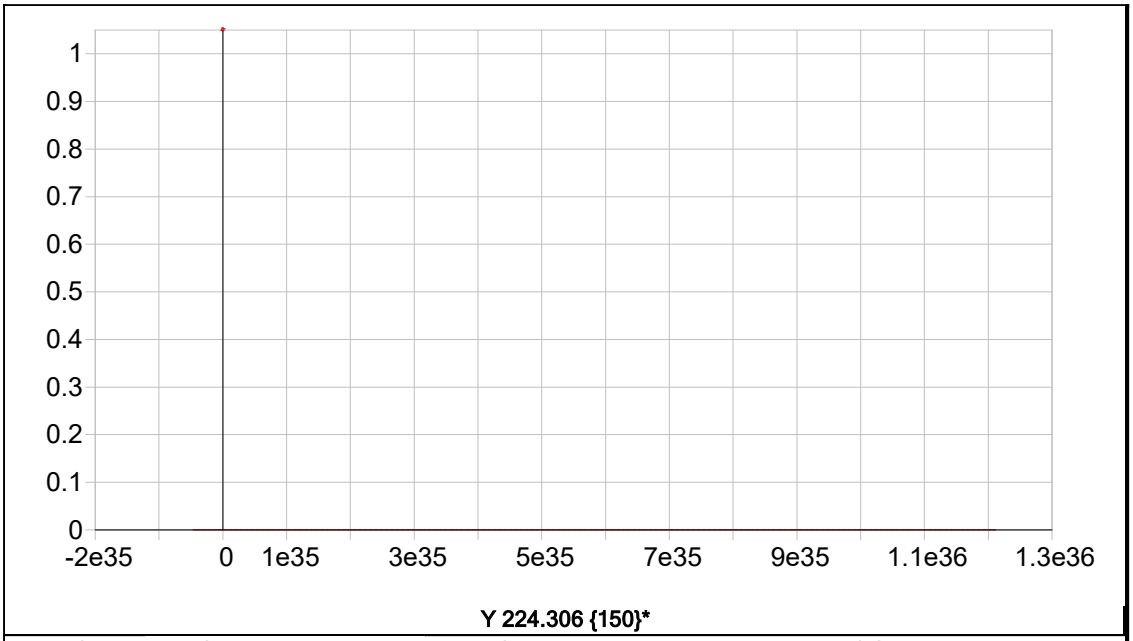
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

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

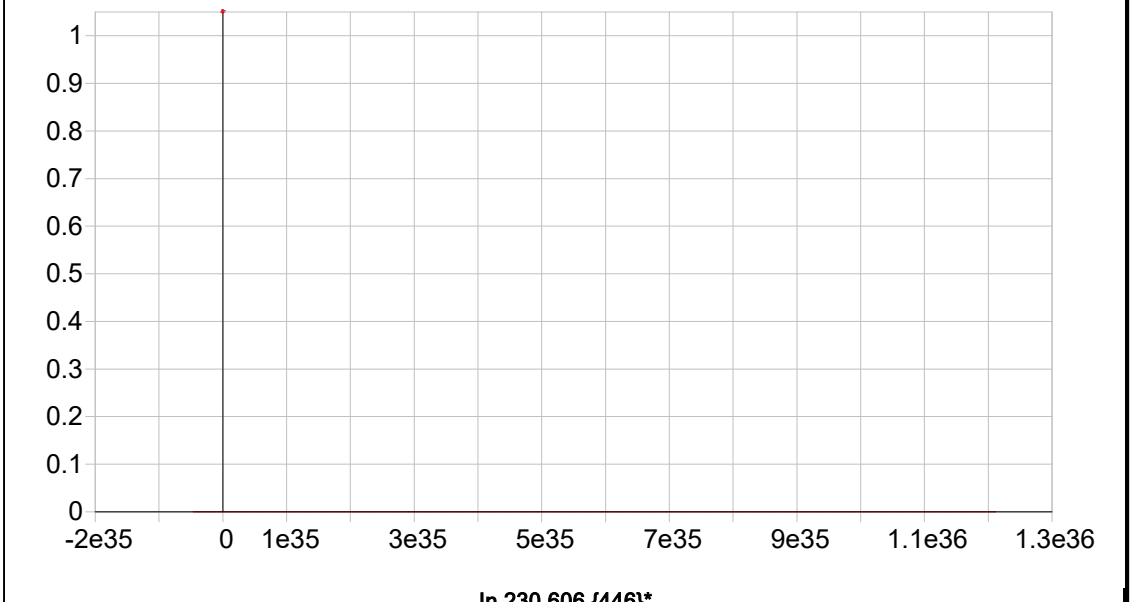


Y 224.306 {150}*

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

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

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



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:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S0 Acquired: 12/26/2024 9:36:10 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**-.00010**	**-.00006**	**-.00020**	**.00039**	**.00051**	**-.00018**	**.05894**	**-.00049**
Stddev	.00014	.00005	.00018	.00013	.00003	.00054	.00132	.00021
%RSD	139.99	90.017	88.022	32.647	6.3064	298.36	2.2474	42.190
#1	-.00003	.00000	-.00005	.00054	.00049	-.00019	.05873	-.00066
#2	-.00026	-.00010	-.00015	.00033	.00050	-.00072	.05773	-.00026
#3	-.00000	-.00009	-.00040	.00031	.00055	.00036	.06035	-.00056

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	**.00005**	**.00035**	**.00013**	**-.00002**	**-.00020**	**.00003**	**-.00002**	**-.00015**
Stddev	.00012	.00015	.00005	.00004	.00008	.00001	.00007	.00009
%RSD	227.25	44.317	38.659	214.62	42.418	52.825	384.15	60.685
#1	-.00009	.00026	.00007	.00001	-.00027	.00004	-.00009	-.00024
#2	.00012	.00052	.00017	-.00007	-.00011	.00004	.00004	-.00014
#3	.00012	.00025	.00014	-.00001	-.00022	.00001	-.00000	-.00006

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	**-.00036**	**-.00207**	**.00462**	**.00022**	**.00525**	**.00057**	**.00285**	**.00052**
Stddev	.00006	.00004	.00020	.00003	.00063	.00022	.00015	.00008
%RSD	15.558	1.7199	4.3284	12.342	12.012	38.129	5.1439	16.212
#1	-.00030	-.00209	.00443	.00025	.00572	.00032	.00269	.00044
#2	-.00037	-.00209	.00461	.00022	.00550	.00071	.00289	.00060
#3	-.00041	-.00203	.00483	.00019	.00454	.00069	.00297	.00051

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	**.00018**	**.00194**	**.00038**	**-.00120**	**.00029**	**.00651**	**-.00042**
Stddev	.00002	.00008	.00004	.00003	.00005	.00051	.00045
%RSD	10.447	4.2930	9.9043	2.6753	17.056	7.8714	106.87
#1	.00016	.00188	.00036	-.00119	.00034	.00673	-.00032
#2	.00020	.00190	.00043	-.00118	.00024	.00592	-.00003
#3	.00018	.00203	.00036	-.00124	.00029	.00687	-.00091

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S0 Acquired: 12/26/2024 9:36:10 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3373.5	66637.	11179.	2497.5	5035.4
Stddev	3.1	101.	39.	3.4	8.8
%RSD	.09261	.15163	.35186	.13514	.17385
#1	3372.6	66527.	11134.	2501.3	5037.9
#2	3376.9	66727.	11207.	2496.2	5042.7
#3	3370.9	66655.	11196.	2495.0	5025.7

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S1 Acquired: 12/26/2024 9:40:33 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**.00123**	**.00282**	**.00269**	**.00218**	**.00950**	**.00665**	**.38466**	**.03001**
Stddev	.00005	.00005	.00019	.00013	.00015	.00031	.00109	.00030
%RSD	4.2960	1.6443	6.9706	5.8738	1.5334	4.6600	.28290	1.0057
#1	.00117	.00286	.00256	.00219	.00934	.00632	.38568	.02978
#2	.00126	.00277	.00262	.00230	.00956	.00671	.38351	.03035
#3	.00126	.00281	.00291	.00205	.00961	.00693	.38478	.02990

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	**.01432**	**.12909**	**.00240**	**.02843**	**.01610**	**.00060**	**.01599**	**.03888**
Stddev	.00015	.00020	.00004	.00012	.00017	.00004	.00016	.00021
%RSD	1.0135	.15651	1.4920	.43025	1.0747	6.9663	1.0303	.53664
#1	.01442	.12927	.00240	.02857	.01593	.00064	.01610	.03885
#2	.01439	.12913	.00236	.02841	.01609	.00055	.01580	.03910
#3	.01415	.12887	.00243	.02832	.01628	.00060	.01606	.03869

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	**.02691**	**.00075**	**.05209**	**.00566**	**.14978**	**.01190**	**.05700**	**.15845**
Stddev	.00009	.00007	.00004	.00023	.00116	.00012	.00017	.00015
%RSD	.33308	8.6433	.06738	4.0782	.77381	1.0446	.29230	.09660
#1	.02700	.00080	.05205	.00592	.14890	.01196	.05680	.15827
#2	.02682	.00068	.05211	.00546	.15109	.01176	.05710	.15851
#3	.02690	.00078	.05211	.00561	.14934	.01198	.05708	.15856

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	**.00578**	**.02436**	**.00240**	**-.00053**	**.00080**	**.02413**	**.28478**
Stddev	.00008	.00023	.00007	.00002	.00005	.00006	.00281
%RSD	1.4067	.94640	2.7361	4.5330	6.5998	.25384	.98550
#1	.00584	.02456	.00237	-.00054	.00081	.02405	.28801
#2	.00581	.02411	.00248	-.00051	.00074	.02417	.28333
#3	.00569	.02442	.00236	-.00055	.00085	.02415	.28300

Sample Name: S1 Acquired: 12/26/2024 9:40:33 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3331.6	66438.	11547.	2455.5	4945.8
Stddev	4.3	183.	37.	6.9	3.3
%RSD	.12841	.27492	.32370	.28133	.06695
#1	3330.5	66249.	11512.	2462.9	4945.0
#2	3336.3	66450.	11543.	2454.5	4949.4
#3	3328.0	66614.	11586.	2449.2	4942.9

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S2 Acquired: 12/26/2024 9:44:53 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**.04816**	**.05755**	**.20733**	**.06926**	**.14831**	**.10321**	**5.4357**	**.20664**
Stddev	.00018	.00062	.00081	.00012	.00029	.00037	.0183	.00091
%RSD	.37770	1.0728	.39018	.16722	.19868	.35775	.33721	.43951
#1	.04836	.05686	.20823	.06935	.14865	.10342	5.4503	.20769
#2	.04813	.05804	.20709	.06929	.14815	.10279	5.4416	.20617
#3	.04799	.05776	.20666	.06913	.14812	.10343	5.4151	.20608

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	**.95447**	**.26855**	**.03889**	**.38375**	**.15636**	**.00478**	**.31454**	**.07203**
Stddev	.00119	.00058	.00008	.00026	.00013	.00004	.00119	.00016
%RSD	.12495	.21618	.19508	.06840	.08615	.77491	.37976	.21706
#1	.95550	.26830	.03893	.38353	.15632	.00474	.31449	.07190
#2	.95316	.26921	.03895	.38404	.15625	.00478	.31576	.07221
#3	.95475	.26813	.03881	.38368	.15651	.00481	.31337	.07200

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	**.27585**	**.05366**	**.10474**	**.05716**	**1.5123**	**.02397**	**.42844**	**.63924**
Stddev	.00005	.00015	.00004	.00028	.0045	.00021	.00096	.00145
%RSD	.01761	.28608	.03886	.48972	.29666	.89346	.22438	.22695
#1	.27580	.05380	.10470	.05685	1.5170	.02373	.42890	.64080
#2	.27585	.05368	.10475	.05739	1.5081	.02412	.42909	.63794
#3	.27590	.05350	.10478	.05725	1.5119	.02407	.42733	.63898

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	**.11185**	**.45369**	**.00524**	**.02682**	**.02112**	**.78605**	**11.714**
Stddev	.00016	.00071	.00001	.00002	.00010	.00207	.043
%RSD	.14117	.15563	.22427	.06551	.49107	.26396	.36852
#1	.11202	.45292	.00525	.02680	.02102	.78635	11.738
#2	.11181	.45431	.00523	.02683	.02123	.78797	11.740
#3	.11171	.45383	.00524	.02682	.02111	.78385	11.665

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S2 Acquired: 12/26/2024 9:44:53 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**3291.7**	**65424.**	**11642.**	**2368.3**	**4851.2**
Stddev	7.6	144.	32.	15.5	1.7
%RSD	.23038	.21985	.27891	.65531	.03595
#1	3282.9	65268.	11608.	2350.4	4849.6
#2	3295.5	65550.	11646.	2377.8	4851.1
#3	3296.6	65454.	11673.	2376.7	4853.0

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S3 Acquired: 12/26/2024 9:48:59 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**.15595**	**.18611**	**.65260**	**.22469**	**.47774**	**.32249**	**16.866**	**.64419**
Stddev	.00047	.00223	.00137	.00067	.00148	.00083	.141	.00116
%RSD	.30125	1.2001	.21005	.29619	.31006	.25842	.83889	.18008
#1	.15563	.18364	.65414	.22397	.47658	.32209	16.957	.64490
#2	.15649	.18798	.65151	.22529	.47941	.32345	16.937	.64482
#3	.15572	.18671	.65215	.22481	.47722	.32193	16.703	.64285

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	**3.0121**	**.80048**	**.12001**	**1.2103**	**.48627**	**.01451**	**.95869**	**.22267**
Stddev	.0079	.00222	.00027	.0018	.00086	.00008	.00248	.00068
%RSD	.26287	.27727	.22554	.14545	.17749	.55586	.25907	.30590
#1	3.0212	.80062	.11991	1.2122	.48621	.01442	.95834	.22286
#2	3.0078	.80263	.11980	1.2098	.48716	.01453	.96134	.22323
#3	3.0073	.79820	.12031	1.2088	.48543	.01458	.95641	.22191

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	**.86848**	**.16901**	**.31795**	**.18005**	**4.5093**	**.07372**	**1.3278**	**2.0107**
Stddev	.00081	.00013	.00085	.00012	.0018	.00036	.0043	.0043
%RSD	.09360	.07736	.26600	.06676	.03923	.48786	.32366	.21123
#1	.86935	.16887	.31725	.18019	4.5099	.07335	1.3317	2.0071
#2	.86774	.16911	.31770	.18001	4.5107	.07374	1.3283	2.0154
#3	.86834	.16906	.31889	.17996	4.5073	.07407	1.3232	2.0097

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	**.35121**	**1.4073**	**.01559**	**.09149**	**.06899**	**2.4281**	**36.286**
Stddev	.00022	.0037	.00015	.00024	.00010	.0039	.169
%RSD	.06216	.25922	.96969	.25792	.14373	.15839	.46516
#1	.35133	1.4075	.01541	.09128	.06888	2.4278	36.095
#2	.35134	1.4108	.01568	.09175	.06904	2.4321	36.413
#3	.35096	1.4035	.01567	.09144	.06906	2.4244	36.352

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S3 Acquired: 12/26/2024 9:48:59 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**3124.8**	**63867.**	**11505.**	**2273.3**	**4531.4**
Stddev	6.4	143.	50.	7.5	4.5
%RSD	.20567	.22395	.43444	.33184	.09831
#1	3129.2	64030.	11486.	2282.0	4535.2
#2	3117.4	63762.	11468.	2269.4	4526.5
#3	3127.8	63809.	11562.	2268.5	4532.5

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S4 Acquired: 12/26/2024 9:53:14 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**.29519**	**.34306**	**1.2263**	**.42394**	**.91112**	**.61965**	**31.838**	**1.1840**
Stddev	.00082	.00040	.0070	.00250	.00467	.00159	.076	.0046
%RSD	.27863	.11729	.57189	.59074	.51259	.25639	.23838	.38641
#1	.29567	.34260	1.2219	.42570	.91434	.61823	31.784	1.1878
#2	.29566	.34324	1.2226	.42505	.91326	.61934	31.925	1.1789
#3	.29424	.34335	1.2344	.42107	.90577	.62137	31.804	1.1852

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	**5.6739**	**1.5037**	**.22209**	**2.2872**	**.90467**	**.02751**	**1.7980**	**.41591**
Stddev	.0365	.0020	.00048	.0106	.00191	.00010	.0012	.00136
%RSD	.64378	.13512	.21421	.46196	.21168	.38055	.06719	.32746
#1	5.6509	1.5039	.22163	2.2808	.90572	.02753	1.7980	.41458
#2	5.6549	1.5015	.22206	2.2813	.90584	.02760	1.7968	.41583
#3	5.7161	1.5056	.22258	2.2993	.90246	.02739	1.7992	.41730

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	**1.6319**	**.31922**	**.61859**	**.34393**	**8.4897**	**.14253**	**2.4539**	**3.7850**
Stddev	.0088	.00042	.00309	.00056	.0264	.00071	.0129	.0075
%RSD	.53961	.13304	.49954	.16208	.31074	.49486	.52466	.19760
#1	1.6271	.31948	.61644	.34329	8.4926	.14195	2.4622	3.7900
#2	1.6265	.31873	.62213	.34421	8.5145	.14332	2.4391	3.7886
#3	1.6421	.31946	.61720	.34430	8.4620	.14234	2.4605	3.7764

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	**.65759**	**2.6842**	**.03013**	**.17493**	**.13145**	**4.7188**	**68.779**
Stddev	.00395	.0012	.00015	.00076	.00017	.0061	.655
%RSD	.60034	.04637	.50613	.43590	.12758	.12982	.95236
#1	.65586	2.6852	.02996	.17421	.13143	4.7220	68.499
#2	.65480	2.6846	.03023	.17573	.13129	4.7227	68.310
#3	.66211	2.6828	.03021	.17485	.13163	4.7117	69.527

Sample Name: S4 Acquired: 12/26/2024 9:53:14 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3102.8	63533.	11643.	2177.1	4451.0
Stddev	26.4	174.	29.	11.2	20.0
%RSD	.85146	.27357	.24918	.51227	.44914
#1	3083.0	63602.	11610.	2170.7	4432.6
#2	3092.7	63336.	11665.	2170.7	4448.0
#3	3132.8	63662.	11654.	2190.0	4472.3

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: S5 Acquired: 12/26/2024 9:57:28 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	**.64683**	**.72749**	**2.6305**	**.92631**	**1.9892**	**1.3985**	**69.911**	**2.6262**
Stddev	.00125	.00050	.0037	.00336	.0054	.0034	.606	.0081
%RSD	.19361	.06937	.14105	.36268	.27082	.24444	.86687	.30715
#1	.64539	.72707	2.6347	.92285	1.9830	1.3963	69.213	2.6263
#2	.64745	.72805	2.6286	.92654	1.9913	1.3968	70.307	2.6342
#3	.64766	.72735	2.6281	.92955	1.9932	1.4024	70.213	2.6181

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	**12.217**	**3.3532**	**.46590**	**4.9703**	**1.9330**	**.05803**	**3.9822**	**.93462**
Stddev	.009	.0083	.00137	.0028	.0058	.00020	.0091	.00293
%RSD	.07048	.24624	.29506	.05705	.30177	.34597	.22933	.31318
#1	12.226	3.3472	.46618	4.9711	1.9273	.05826	3.9927	.93169
#2	12.209	3.3626	.46712	4.9671	1.9328	.05790	3.9768	.93755
#3	12.215	3.3498	.46441	4.9726	1.9390	.05793	3.9770	.93463

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	**3.5253**	**.67301**	**1.3199**	**.76582**	**17.877**	**.30454**	**5.4274**	**8.0881**
Stddev	.0016	.00049	.0043	.00103	.037	.00066	.0103	.0170
%RSD	.04583	.07221	.32820	.13403	.20831	.21587	.18921	.21023
#1	3.5267	.67333	1.3233	.76616	17.893	.30505	5.4298	8.0704
#2	3.5235	.67325	1.3150	.76467	17.835	.30380	5.4363	8.0894
#3	3.5256	.67245	1.3213	.76663	17.904	.30476	5.4162	8.1044

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	**1.4077**	**5.9810**	**.06506**	**.38730**	**.29549**	**10.548**	**148.87**
Stddev	.0008	.0141	.00035	.00090	.00024	.042	1.47
%RSD	.05341	.23566	.53756	.23362	.08082	.39901	.98473
#1	1.4081	5.9971	.06470	.38745	.29562	10.593	147.50
#2	1.4068	5.9712	.06507	.38633	.29521	10.510	148.69
#3	1.4082	5.9745	.06540	.38812	.29563	10.540	150.41

Sample Name: S5 Acquired: 12/26/2024 9:57:28 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	2925.6	61905.	10814.	2081.7	4116.4
Stddev	4.6	112.	33.	9.1	2.2
%RSD	.15831	.18030	.30633	.43595	.05293
#1	2930.9	62026.	10834.	2091.9	4116.8
#2	2922.9	61805.	10776.	2074.6	4114.0
#3	2922.9	61884.	10832.	2078.6	4118.3

Sample Name: ICV01 Acquired: 12/26/2024 10:01:40 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**1.024261**	**1.019582**	**.9945289**	**1.029484**	**1.008196**	**2.385676**
Stddev	.005048	.008919	.0015017	.005242	.000965	.021214
%RSD	.4927972	.8747580	.1509994	.5091841	.0956978	.8892111
#1	1.028942	1.029407	.9945385	1.035534	1.008863	2.410093
#2	1.024930	1.017344	.9930224	1.026284	1.008636	2.375159
#3	1.018913	1.011995	.9960258	1.026634	1.007090	2.371775

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4733021**	**.4716574**	**.4934583**	**9.233099**	**.5251240**	**.5017491**
Stddev	.0087931	.0019941	.0004388	.068581	.0021026	.0009079
%RSD	1.857825	.4227807	.0889208	.7427717	.4003994	.1809460
#1	.4834424	.4736712	.4939321	9.309761	.5231911	.5024669
#2	.4686802	.4696836	.4930659	9.177578	.5273628	.5007285
#3	.4677838	.4716174	.4933769	9.211957	.5248180	.5020519

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5195922**	**9.883093**	**.4782943**	**5.449033**	**.5046207**	**.2560883**
Stddev	.0009598	.044590	.0062263	.030355	.0004819	.0014836
%RSD	.1847240	.4511796	1.301777	.5570738	.0954901	.5793222
#1	.5206750	9.836574	.4848647	5.478108	.5049650	.2544007
#2	.5188463	9.887241	.4724813	5.451450	.5040700	.2571868
#3	.5192551	9.925466	.4775369	5.417542	.5048271	.2566774

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.950311**	**.4737064**	**1.009998**	**9.833740**	F **.0166680**	F **.0001781**
Stddev	.055930	.0042434	.004235	.047394	.0007477	.0002314
%RSD	.5620956	.8957894	.4193200	.4819579	4.485646	129.9382
#1	9.929855	.4786058	1.007304	9.815716	.0174408	.0003754
#2	10.01359	.4713143	1.007810	9.887503	.0166149	-.000077
#3	9.90749	.4711990	1.014879	9.798002	.0159483	.000236

Sample Name: ICV01 Acquired: 12/26/2024 10:01:40 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	F -.000779	F .0059520	F .0217079	F .0050288	F .0000566	F .0002013
Stddev	.000184	.0026835	.0033048	.0010095	.0025191	.0023796
%RSD	23.67740	45.08626	15.22374	20.07388	4450.915	1182.120
#1	-.000632	.0087933	.0253930	.0045684	.0007197	.0029337
#2	-.000986	.0056019	.0190073	.0043316	.0021778	-.000914
#3	-.000719	.0034606	.0207233	.0061864	-.002728	-.001416

Elem	Sr4077
Units	ppm
Avg	F -.002277
Stddev	.002687
%RSD	118.0180
#1	.000622
#2	-.002768
#3	-.004685

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3135.414	64666.44	12466.02	2215.222	4670.547
Stddev	9.051	353.02	64.86	5.340	10.364
%RSD	.2886626	.5459072	.5202803	.2410559	.2218916
#1	3125.738	65029.50	12398.10	2221.191	4658.581
#2	3136.833	64324.40	12527.31	2213.577	4676.572
#3	3143.672	64645.41	12472.66	2210.899	4676.489

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: LLICV01 Acquired: 12/26/2024 10:05:44 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**.0211228**	**.0410931**	**.0115281**	**.0189685**	**.0493297**	**.0960542**
Stddev	.0016308	.0020595	.0004414	.0007445	.0004628	.0012577
%RSD	7.720676	5.011897	3.828987	3.924973	.9381971	1.309383
#1	.0209246	.0401326	.0117578	.0181108	.0488468	.0967660
#2	.0196001	.0396893	.0118072	.0193467	.0497693	.0967945
#3	.0228436	.0434574	.0110192	.0194479	.0493731	.0946020

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0872678**	**.0057974**	**.0057638**	**1.938249**	**.0098360**	**.0292244**
Stddev	.0004797	.0000259	.0000732	.004790	.0002802	.0001088
%RSD	.5496655	.4474088	1.269638	.2471552	2.848330	.3723388
#1	.0876853	.0058074	.0057937	1.941989	.0100542	.0293335
#2	.0867438	.0057679	.0056804	1.932850	.0095200	.0291159
#3	.0873743	.0058168	.0058173	1.939910	.0099337	.0292238

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0215460**	**.1003000**	**.0196485**	**1.980193**	**.0392085**	**.0115313**
Stddev	.0003278	.0053431	.0001350	.013016	.0000805	.0002564
%RSD	1.521334	5.327158	.6872749	.6573106	.2052997	2.223126
#1	.0212446	.0948920	.0197999	1.968703	.0392487	.0114869
#2	.0218950	.1055759	.0195405	1.977546	.0391158	.0118069
#3	.0214986	.1004322	.0196051	1.994328	.0392609	.0113000

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.952064**	**.0373265**	**.0426403**	**2.020431**	**.1023448**	**.2054856**
Stddev	.003606	.0003018	.0000766	.028244	.0005863	.0009094
%RSD	.1847380	.8086181	.1796947	1.397941	.5728498	.4425823
#1	1.953495	.0375431	.0425721	2.052937	.1024727	.2051263
#2	1.954736	.0369817	.0426257	2.001883	.1017051	.2048107
#3	1.947962	.0374547	.0427232	2.006473	.1028566	.2065198

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: LLICV01 Acquired: 12/26/2024 10:05:44 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0386941	.0375228	.3512696	F .0144832	.0162628	F .0138466
Stddev	.0004255	.0003863	.0062028	.0017094	.0014535	.0010409
%RSD	1.099623	1.029570	1.765831	11.80243	8.937718	7.517716
#1	.0384011	.0377820	.3502934	.0157340	.0147186	.0127463
#2	.0384990	.0370788	.3456127	.0125355	.0164656	.0148157
#3	.0391821	.0377075	.3579026	.0151802	.0176043	.0139777

Elem	Sr4077
Units	ppm
Avg	.0192468
Stddev	.0000118
%RSD	.0611684
#1	.0192564
#2	.0192337
#3	.0192505

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3216.150	66046.08	12313.35	2257.701	4923.789
Stddev	3.297	222.76	45.57	25.539	3.674
%RSD	.1025199	.3372870	.3700970	1.131190	.0746137
#1	3219.957	65905.78	12298.16	2240.214	4922.386
#2	3214.181	66302.95	12364.58	2287.009	4921.023
#3	3214.313	65929.52	12277.31	2245.881	4927.957

Sample Name: ICB01 Acquired: 12/26/2024 10:10:03 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**.0010482**	**-.000343**	**.0003657**	**-.000159**	**-.000680**	**.0048854**	**-.005462**
Stddev	.0010196	.001064	.0005044	.000932	.000003	.0044698	.000150
%RSD	97.27322	310.1177	137.9319	585.4577	.4504468	91.49392	2.747562
#1	.0021485	-.001490	.0008704	-.001102	-.000676	.0002428	-.005290
#2	.0001353	.000612	-.000138	.000760	-.000682	.0052537	-.005532
#3	.0008607	-.000151	.000365	-.000135	-.000680	.0091596	-.005565

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000627**	**-.000028**	**.0171232**	**-.000024**	**.0000385**	**-.000318**	**.0004526**
Stddev	.0000203	.000009	.0036537	.000164	.0000325	.000176	.0036117
%RSD	32.32560	34.18003	21.33767	673.7352	84.41801	55.41817	798.0437
#1	.0000458	-.000035	.0173807	-.000104	.0000040	-.000130	-.003000
#2	.0000852	-.000017	.0133476	-.000133	.0000430	-.000347	.000153
#3	.0000571	-.000031	.0206414	.000165	.0000685	-.000479	.004205

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000008**	**-.003768**	**.0002558**	**.0016255**	**-.026005**	**-.000830**	**-.000421**
Stddev	.000109	.014591	.0004284	.0000973	.008436	.001070	.000347
%RSD	1426.936	387.1957	167.4525	5.983768	32.43900	128.8083	82.29353
#1	-.000132	.001983	-.000222	.0015160	-.033451	-.001797	-.000069
#2	.000074	.007071	.000606	.0017019	-.027719	-.001013	-.000432
#3	.000035	-.020358	.000383	.0016586	-.016843	.000319	-.000762

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0441720**	**.0033770**	**-.000204**	**.0003080**	**-.000087**	**.0059111**	**-.003997**
Stddev	.0350589	.0002634	.000175	.0002474	.000754	.0054674	.000869
%RSD	79.36917	7.801018	85.39584	80.33029	871.2342	92.49438	21.75172
#1	.0038279	.0031676	-.000403	.0003443	-.000820	.0053604	-.003004
#2	.0672419	.0036728	-.000135	.0005352	.000687	.0116330	-.004623
#3	.0614462	.0032907	-.000075	.0000444	-.000126	.0007399	-.004363

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: ICB01 Acquired: 12/26/2024 10:10:03 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**-.003036**	**-.004960**	**.0000008**
Stddev	.003094	.000426	.0000544
%RSD	101.9190	8.596901	6671.012
#1	-.001129	-.005408	.0000623
#2	-.001373	-.004914	-.000041
#3	-.006606	-.004559	-.000019

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3247.784**	**66486.00**	**12358.46**	**2266.796**	**5056.312**
Stddev	4.166	73.42	53.74	9.288	4.112
%RSD	.1282576	.1104276	.4348521	.4097407	.0813305
#1	3247.376	66419.68	12413.40	2259.246	5054.632
#2	3252.138	66473.42	12355.95	2277.168	5060.998
#3	3243.837	66564.89	12306.01	2263.975	5053.306

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CRI01 Acquired: 12/26/2024 10:14:25 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**.0209856**	**.0393151**	**.0112207**	**.0201486**	**.0488993**	**.0961423**
Stddev	.0004294	.0009989	.0005778	.0003138	.0007799	.0037608
%RSD	2.046121	2.540806	5.149085	1.557243	1.594994	3.911712
#1	.0208382	.0396741	.0105702	.0197869	.0483308	.0937741
#2	.0214693	.0400849	.0116741	.0203470	.0485787	.0941741
#3	.0206494	.0381863	.0114178	.0203118	.0497885	.1004788

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0845612**	**.0057110**	**.0056865**	**1.931584**	**.0098278**	**.0289924**
Stddev	.0004267	.0000266	.0000869	.006047	.0003033	.0001067
%RSD	.5046048	.4655290	1.528058	.3130805	3.086257	.3678909
#1	.0843558	.0056831	.0056347	1.938518	.0095303	.0288699
#2	.0842759	.0057360	.0057868	1.928830	.0101366	.0290426
#3	.0850517	.0057140	.0056380	1.927404	.0098163	.0290647

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0216778**	**.0945137**	**.0193347**	**1.965940**	**.0386343**	**.0121139**
Stddev	.0001503	.0029645	.0001695	.019082	.0000472	.0002437
%RSD	.6931572	3.136576	.8764951	.9706199	.1220301	2.011434
#1	.0215353	.0927790	.0192911	1.949675	.0386113	.0123607
#2	.0216634	.0979367	.0195217	1.961201	.0386031	.0118735
#3	.0218348	.0928253	.0191913	1.986945	.0386885	.0121074

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.937906**	**.0359747**	**.0430130**	**1.986216**	**.0999184**	**.2056914**
Stddev	.004049	.0016989	.0004807	.046415	.0006446	.0003197
%RSD	.2089242	4.722337	1.117478	2.336875	.6450927	.1554372
#1	1.933598	.0377928	.0429170	1.967873	.0995439	.2058627
#2	1.938488	.0357036	.0425876	1.951775	.0995486	.2053225
#3	1.941633	.0344278	.0435345	2.039000	.1006627	.2058889

Sample Name: CRI01 Acquired: 12/26/2024 10:14:25 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0381502	.0373042	.3457501	F .0121799	.0178840	F .0132536
Stddev	.0005282	.0003876	.0011456	.0011912	.0014689	.0001892
%RSD	1.384495	1.039105	.3313423	9.780026	8.213204	1.427458
#1	.0375947	.0377324	.3470198	.0115685	.0166555	.0133956
#2	.0386460	.0369772	.3454366	.0135527	.0174854	.0133264
#3	.0382098	.0372030	.3447939	.0114186	.0195109	.0130389

Elem	Sr4077
Units	ppm
Avg	.0189161
Stddev	.0000273
%RSD	.1441085
#1	.0188918
#2	.0189109
#3	.0189455

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3229.130	65871.61	12317.37	2213.950	4974.678
Stddev	3.244	14.90	24.22	6.917	5.076
%RSD	.1004554	.0226228	.1966311	.3124457	.1020318
#1	3225.608	65888.74	12326.61	2211.144	4969.101
#2	3231.995	65864.54	12335.62	2208.878	4975.906
#3	3229.786	65861.57	12289.90	2221.830	4979.027

Sample Name: ICSA01 Acquired: 12/26/2024 10:18:42 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**.0034390**	**.0133851**	**.0069979**	**-.014873**	**-.003065**	**240.8971**
Stddev	.0025564	.0042893	.0010637	.004092	.002842	1.8838
%RSD	74.33310	32.04552	15.20002	27.51333	92.71738	.7819891
#1	.0032649	.0087156	.0071780	-.019513	-.005928	239.0541
#2	.0060780	.0171500	.0058556	-.011782	-.003022	240.8179
#3	.0009742	.0142898	.0079600	-.013323	-.000245	242.8192

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000673**	**.0013679**	**.0025967**	**225.1941**	**.0573808**	**.0018529**
Stddev	.000253	.0000527	.0001099	.3914	.0003364	.0000250
%RSD	37.61322	3.851238	4.230658	.1737932	.5862486	1.351662
#1	-.000878	.0014181	.0027180	224.8496	.0577382	.0018814
#2	-.000752	.0013725	.0025684	225.1129	.0570703	.0018428
#3	-.000390	.0013131	.0025038	225.6196	.0573340	.0018345

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0217194**	**99.04542**	**.0037329**	**235.9174**	**.0030548**	**-.001782**
Stddev	.0009247	.32628	.0002851	.4172	.0002717	.000606
%RSD	4.257465	.3294222	7.637746	.1768560	8.895518	34.01135
#1	.0208119	98.99157	.0037491	235.7394	.0027473	-.002479
#2	.0226603	98.74942	.0040096	235.6188	.0032627	-.001379
#3	.0216861	99.39527	.0034401	236.3942	.0031543	-.001489

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0535871**	**.0072947**	**.0036741**	**.1731386**	**.0541886**	**.0000115**
Stddev	.0162968	.0004254	.0002143	.0583360	.0003548	.0006066
%RSD	30.41174	5.831070	5.831992	33.69325	.6547139	5287.862
#1	.0368313	.0069285	.0036298	.1059943	.0542049	-.000286
#2	.0545478	.0077613	.0039071	.2113823	.0545350	.000709
#3	.0693823	.0071944	.0034854	.2020393	.0538260	-.000389

Sample Name: ICSA01 Acquired: 12/26/2024 10:18:42 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000771	-.001152	.0071469	-.001856	-.016119	F -.041863
Stddev	.000240	.000246	.0045025	.003541	.001920	.000600
%RSD	31.19134	21.38022	62.99876	190.8141	11.90912	1.432617
#1	-.000924	-.000908	.0122099	-.004321	-.013950	-.042398
#2	-.000895	-.001147	.0035923	.002202	-.016805	-.041215
#3	-.000494	-.001400	.0056385	-.003448	-.017601	-.041977

Elem	Sr4077
Units	ppm
Avg	-.003951
Stddev	.000180
%RSD	4.556507
#1	-.004057
#2	-.003743
#3	-.004053

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2809.829	57431.17	11759.79	1939.467	3903.682
Stddev	5.143	109.52	29.91	2.043	8.707
%RSD	.1830495	.1906998	.2543118	.1053193	.2230351
#1	2814.966	57369.29	11787.25	1941.766	3912.765
#2	2809.843	57557.63	11764.21	1938.774	3902.873
#3	2804.679	57366.60	11727.92	1937.862	3895.409

Sample Name: ICSAB01 Acquired: 12/26/2024 10:23:05 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**.1119839**	**.0977552**	**.0546760**	**.0333190**	**.6458522**	**240.1448**
Stddev	.0045698	.0021207	.0011621	.0004368	.0058564	1.1565
%RSD	4.080763	2.169376	2.125434	1.311076	.9067644	.4815882
#1	.1075750	.0982334	.0537893	.0330190	.6417487	241.4751
#2	.1166992	.0954362	.0559916	.0338201	.6432491	239.5808
#3	.1116774	.0995959	.0542472	.0331178	.6525588	239.3785

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4625098**	**.4710810**	**.9572590**	**220.0435**	**.5670137**	**.4961836**
Stddev	.0010803	.0039194	.0052337	.8233	.0017209	.0013573
%RSD	.2335636	.8320009	.5467415	.3741748	.3035078	.2735401
#1	.4631967	.4753253	.9623253	220.8193	.5681887	.4976288
#2	.4630680	.4703196	.9575792	220.1314	.5678140	.4959861
#3	.4612646	.4675982	.9518726	219.1797	.5650383	.4949359

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5052043**	**98.15155**	**.4590965**	**230.4363**	**.9717586**	**.1845791**
Stddev	.0009497	.27308	.0011023	.7531	.0031676	.0003134
%RSD	.1879822	.2782222	.2400986	.3268035	.3259696	.1697701
#1	.5043186	97.84898	.4598299	230.9471	.9751659	.1845461
#2	.5050872	98.37972	.4596307	230.7904	.9712071	.1849077
#3	.5062072	98.22595	.4578289	229.5715	.9689030	.1842836

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0536892**	**.4696015**	**1.077574**	**.1368807**	F **.0525235**	F **-.000068**
Stddev	.0109621	.0039105	.004539	.0276744	.0001873	.000143
%RSD	20.41764	.8327248	.4211964	20.21788	.3565349	209.8597
#1	.0447839	.4738227	1.072333	.1168365	.0523213	-.000057
#2	.0503515	.4688795	1.080197	.1253496	.0526909	.000069
#3	.0659321	.4661024	1.080192	.1684561	.0525584	-.000216

Sample Name: ICSAB01 Acquired: 12/26/2024 10:23:05 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	F -.000991	F -.001409	F -.001988	F .0093002	F -.014957	F -.041198
Stddev	.001974	.000481	.012315	.0014926	.002032	.000684
%RSD	199.1555	34.16298	619.3832	16.04902	13.58654	1.661289
#1	.001286	-.001778	-.006509	.0097305	-.016186	-.040767
#2	-.002040	-.000865	.011948	.0105303	-.016074	-.040840
#3	-.002218	-.001586	-.011404	.0076397	-.012611	-.041987

Elem	Sr4077
Units	ppm
Avg	F -.003524
Stddev	.000507
%RSD	14.40124
#1	-.002965
#2	-.003956
#3	-.003650

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2718.176	56811.87	11741.20	1876.178	3870.590
Stddev	17.639	61.36	65.93	10.462	6.071
%RSD	.6489276	.1080121	.5615049	.5576118	.1568423
#1	2736.874	56846.96	11678.75	1888.031	3876.956
#2	2715.821	56741.01	11734.74	1868.232	3869.947
#3	2701.833	56847.63	11810.13	1872.271	3864.866

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCV01 Acquired: 12/26/2024 10:32:47 Type: Unk
Method: NON EPA-6010-200.7(v2552) 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	**5.071013**	**5.030178**	**4.691375**	**5.251308**	**5.267287**	**9.413371**	**9.204945**
Stddev	.009528	.037973	.003648	.016600	.009879	.015328	.044377
%RSD	.1878917	.7549057	.0777523	.3161139	.1875608	.1628271	.4820962
#1	5.065705	4.991703	4.688529	5.240576	5.256305	9.396144	9.208452
#2	5.065322	5.031201	4.690109	5.242920	5.270100	9.418471	9.158918
#3	5.082013	5.067628	4.695487	5.270429	5.275454	9.425498	9.247463

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2546721**	**2.253276**	**27.30221**	**.9436093**	**2.328299**	**1.246040**	**4.754749**
Stddev	.0005535	.003331	.03829	.0014916	.003706	.002062	.004498
%RSD	.2173311	.1478486	.1402377	.1580725	.1591548	.1655030	.0946054
#1	.2551094	2.249978	27.26392	.9436270	2.324821	1.244929	4.753838
#2	.2548572	2.253209	27.34049	.9450919	2.327879	1.244772	4.759633
#3	.2540498	2.256640	27.30222	.9421089	2.332197	1.248420	4.750776

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.279422**	**24.07335**	**2.324117**	**1.212896**	**26.27153**	**2.284155**	**2.447481**
Stddev	.001634	.04879	.002765	.001770	.04479	.000605	.001963
%RSD	.0716764	.2026530	.1189900	.1459700	.1704910	.0265063	.0802105
#1	2.277787	24.01896	2.321413	1.214315	26.23275	2.284681	2.446848
#2	2.279425	24.11326	2.323999	1.213461	26.32055	2.283493	2.449683
#3	2.281055	24.08781	2.326941	1.210912	26.26129	2.284291	2.445912

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.32095**	**5.260462**	**5.006897**	**4.633019**	**4.555098**	**5.046635**	**4.729706**
Stddev	.09630	.008930	.011806	.007280	.004578	.025995	.013819
%RSD	.3803129	.1697636	.2358039	.1571385	.1005043	.5150882	.2921662
#1	25.22343	5.270764	4.997015	4.624978	4.553013	5.017371	4.714348
#2	25.41598	5.254911	5.003704	4.634917	4.560348	5.055482	4.741133
#3	25.32345	5.255711	5.019971	4.639163	4.551934	5.067051	4.733637

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCV01 Acquired: 12/26/2024 10:32:47 Type: Unk
Method: NON EPA-6010-200.7(v2552) 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	**4.763038**	**4.758351**	**4.716554**
Stddev	.019261	.005580	.040815
%RSD	.4043944	.1172668	.8653498
#1	4.752665	4.755425	4.671108
#2	4.751186	4.764785	4.728468
#3	4.785263	4.754842	4.750086

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2846.502**	**62155.59**	**12280.61**	**1989.187**	**4270.772**
Stddev	2.897	94.47	16.52	3.512	5.373
%RSD	.1017833	.1519843	.1345475	.1765697	.1258098
#1	2849.620	62212.15	12267.00	1992.813	4276.942
#2	2845.992	62046.53	12275.83	1985.801	4267.124
#3	2843.893	62208.08	12298.99	1988.947	4268.249

Sample Name: CCB01 Acquired: 12/26/2024 10:38:19 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**-.001095**	**-.001837**	**-.000348**	**.0003701**	**-.001218**	**.0095414**	**-.004213**
Stddev	.001394	.001545	.000237	.0015519	.000422	.0050873	.001203
%RSD	127.3081	84.13791	68.12234	419.3184	34.64026	53.31792	28.54643
#1	.000330	-.001016	-.000347	.0020363	-.000917	.0040092	-.003014
#2	-.002456	-.003619	-.000586	-.001034	-.001036	.0105969	-.004206
#3	-.001160	-.000875	-.000112	.000108	-.001700	.0140182	-.005420

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000733**	**-.000023**	**.0310043**	**.0002078**	**.0000428**	**-.000455**	**.0024322**
Stddev	.0000117	.000035	.0024505	.0003473	.0001275	.000405	.0013552
%RSD	15.95231	151.2186	7.903847	167.1138	297.8278	88.99089	55.71979
#1	.0000824	.000017	.0334152	.0005391	.0001038	-.000036	.0037221
#2	.0000601	-.000041	.0285160	.0002379	.0001283	-.000844	.0010199
#3	.0000774	-.000046	.0310817	-.000154	-.000104	-.000484	.0025547

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019521**	**.0108221**	**.0000194**	**.0028431**	**-.025089**	**.0007013**	**.0004958**
Stddev	.0003961	.0065007	.0000829	.0001009	.003345	.0008754	.0003236
%RSD	20.29006	60.06923	427.4304	3.547300	13.33470	124.8133	65.27121
#1	.0023240	.0132355	.0001134	.0028317	-.027443	.0015122	.0008681
#2	.0019968	.0157710	-.000012	.0029491	-.021259	.0008186	.0003380
#3	.0015356	.0034598	-.000043	.0027484	-.026564	-.000227	.0002814

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0675683**	**.0066057**	**.0000264**	**.0002520**	**.0041998**	**.0127588**	**-.004667**
Stddev	.0360356	.0010735	.0001491	.0004543	.0003604	.0012562	.000825
%RSD	53.33205	16.25044	563.9488	180.3143	8.581945	9.845872	17.68811
#1	.0420053	.0076236	.0001414	.0005941	.0046154	.0135946	-.005620
#2	.0519163	.0067093	.0000801	.0004253	.0040106	.0113142	-.004169
#3	.1087833	.0054842	-.000142	-.000264	.0039733	.0133677	-.004212

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB01 Acquired: 12/26/2024 10:38:19 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**-.002412**	**-.001770**	**.0036918**
Stddev	.006474	.000301	.0008287
%RSD	268.3950	17.00578	22.44781
#1	-.001388	-.001511	.0045141
#2	-.009337	-.002100	.0037046
#3	.003489	-.001698	.0028568

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3043.751**	**64929.70**	**12950.02**	**2089.522**	**4914.041**
Stddev	12.980	96.65	22.24	4.947	21.422
%RSD	.4264527	.1488584	.1717208	.2367670	.4359286
#1	3028.854	64893.98	12956.09	2086.016	4892.191
#2	3049.770	65039.13	12925.37	2087.368	4914.923
#3	3052.629	64856.00	12968.58	2095.181	4935.008

Sample Name: P5383-01 Acquired: 12/26/2024 10:42:37 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.0169289**	**-.039610**	**.1175843**	**-.060806**	**-.003933**	**96.75434**
Stddev	.0012648	.004169	.0008861	.002885	.001339	.13065
%RSD	7.471381	10.52602	.7535825	4.744626	34.03740	.1350376
#1	.0160018	-.044389	.1167465	-.059691	-.003164	96.77170
#2	.0164151	-.036716	.1174947	-.058644	-.003156	96.61588
#3	.0183697	-.037723	.1185119	-.064081	-.005479	96.87545

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5302583**	**.0061461**	**.0230885**	**50.21564**	**.3314682**	**.2065631**
Stddev	.0016197	.0001211	.0003379	.02222	.0000937	.0005494
%RSD	.3054518	1.970310	1.463680	.0442472	.0282605	.2659743
#1	.5320511	.0060414	.0230093	50.19663	.3313629	.2061776
#2	.5289005	.0062787	.0227971	50.24007	.3314995	.2071922
#3	.5298234	.0061182	.0234589	50.21021	.3315422	.2063195

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8455831**	**278.3707**	**1.992860**	**79.22812**	**.4189058**	**-.005209**
Stddev	.0017330	.6827	.002948	.04731	.0004784	.000231
%RSD	.2049438	.2452575	.1479239	.0597112	.1142022	4.426455
#1	.8438141	278.8776	1.993001	79.24705	.4185403	-.005145
#2	.8472776	278.6400	1.989844	79.26303	.4187297	-.005018
#3	.8456577	277.5943	1.995735	79.17428	.4194472	-.005465

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.892906**	**.4247067**	**.3754146**	**41.83249**	**.1634941**	**.0180050**
Stddev	.013446	.0012844	.0010690	.14124	.0017352	.0003415
%RSD	.3453869	.3024252	.2847609	.3376233	1.061305	1.896601
#1	3.893544	.4241234	.3743761	41.99310	.1651552	.0176969
#2	3.879153	.4238174	.3765118	41.72766	.1636337	.0183722
#3	3.906021	.4261793	.3753559	41.77671	.1616933	.0179461

Sample Name: P5383-01 Acquired: 12/26/2024 10:42:37 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	-.005631	9.952946	8.957864	9.697561	F 41.05480	.1750601
Stddev	.000899	.015988	.010975	.018559	.02644	.0013977
%RSD	15.97249	.1606384	.1225151	.1913820	.0644010	.7984220
#1	-.006473	9.966105	8.965762	9.715166	41.05155	.1754487
#2	-.004683	9.935152	8.945332	9.699340	41.08271	.1735092
#3	-.005736	9.957581	8.962497	9.678176	41.03013	.1762224

Elem	Sr4077
Units	ppm
Avg	-.195308
Stddev	.000682
%RSD	.3490066
#1	-.195569
#2	-.195821
#3	-.194534

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3512.661	76490.35	16372.61	2409.344	4031.881
Stddev	6.924	101.57	16.32	1.858	8.418
%RSD	.1971117	.1327941	.0996851	.0771023	.2087822
#1	3518.897	76373.08	16354.58	2410.741	4032.759
#2	3513.875	76547.51	16386.38	2407.236	4039.826
#3	3505.210	76550.47	16376.87	2410.055	4023.059

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5383-01DUP Acquired: 12/26/2024 10:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.0159442**	**-.036172**	**.1164146**	**-.058404**	**-.004157**	**94.18387**
Stddev	.0027536	.001610	.0008689	.000826	.001173	.11422
%RSD	17.27038	4.450850	.7464274	1.414367	28.20982	.1212717
#1	.0163898	-.037086	.1154944	-.059052	-.002849	94.07156
#2	.0129949	-.037116	.1172211	-.057474	-.004509	94.29991
#3	.0184477	-.034313	.1165284	-.058687	-.005113	94.18014

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4943117**	**.0061126**	**.0225656**	**49.51531**	**.3175499**	**.2044455**
Stddev	.0011407	.0000520	.0003466	.15273	.0009978	.0004845
%RSD	.2307706	.8502467	1.535772	.3084439	.3142075	.2369624
#1	.4938215	.0061319	.0223062	49.67836	.3186404	.2042905
#2	.4956156	.0061522	.0229592	49.49196	.3166827	.2040576
#3	.4934980	.0060537	.0224314	49.37560	.3173265	.2049885

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8539232**	**273.1480**	**1.963987**	**77.18594**	**.4173103**	**-.005266**
Stddev	.0015424	1.3072	.004151	.28980	.0007656	.000307
%RSD	.1806213	.4785773	.2113702	.3754553	.1834593	5.831324
#1	.8522939	274.6124	1.967897	77.51947	.4165827	-.005229
#2	.8541151	272.0987	1.964434	76.99567	.4172393	-.005590
#3	.8553607	272.7330	1.959631	77.04269	.4181090	-.004979

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.752107**	**.4073674**	**.3696351**	**40.06869**	**.1588650**	**.0181554**
Stddev	.007691	.0002790	.0016727	.03509	.0013725	.0004526
%RSD	.2049887	.0684998	.4525214	.0875837	.8639367	2.492698
#1	3.746097	.4070473	.3677656	40.09521	.1603528	.0186764
#2	3.760775	.4075595	.3701498	40.08198	.1576482	.0179304
#3	3.749449	.4074954	.3709900	40.02890	.1585940	.0178595

Sample Name: P5383-01DUP Acquired: 12/26/2024 10:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	-.005953	9.263104	6.728331	9.527206	F 41.19854	.1699098
Stddev	.001535	.024190	.019790	.011369	.05497	.0008277
%RSD	25.77702	.2611402	.2941282	.1193364	.1334300	.4871432
#1	-.005886	9.258156	6.750521	9.530882	41.16369	.1694407
#2	-.007520	9.289385	6.712510	9.536282	41.26191	.1708655
#3	-.004453	9.241771	6.721962	9.514453	41.17002	.1694231

Elem	Sr4077
Units	ppm
Avg	-.191923
Stddev	.001555
%RSD	.8103317
#1	-.193635
#2	-.190597
#3	-.191536

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3469.370	76118.99	16263.02	2417.350	4011.569
Stddev	3.775	216.53	31.12	7.707	4.867
%RSD	.1088178	.2844623	.1913498	.3188090	.1213223
#1	3469.000	75944.90	16236.17	2417.353	4013.362
#2	3473.317	76361.45	16297.12	2425.055	4015.284
#3	3465.794	76050.62	16255.76	2409.641	4006.059

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5383-01LX5 Acquired: 12/26/2024 10:51:01 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.0030662**	**-.003703**	**.0261334**	**-.013732**	**-.002224**	**24.34153**	**.1135756**
Stddev	.0010040	.000988	.0007261	.000651	.000599	.04048	.0011855
%RSD	32.74417	26.68671	2.778451	4.739299	26.93757	.1663151	1.043827
#1	.0042237	-.003336	.0269698	-.014468	-.002644	24.33179	.1122160
#2	.0024307	-.004823	.0257650	-.013495	-.001538	24.38600	.1143935
#3	.0025443	-.002951	.0256653	-.013232	-.002490	24.30681	.1141173

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017419**	**.0013427**	**13.64045**	**.0814152**	**.0424826**	**.2271618**	**73.15813**
Stddev	.0000103	.0003413	.06701	.0001337	.0008785	.0056709	.46032
%RSD	.5940428	25.41615	.4912351	.1641942	2.067953	2.496404	.6292102
#1	.0017301	.0017191	13.60879	.0813028	.0434058	.2326668	72.66067
#2	.0017466	.0012556	13.71742	.0815630	.0423850	.2274801	73.56900
#3	.0017491	.0010535	13.59513	.0813797	.0416569	.2213384	73.24472

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5455907**	**20.03532**	**.0900213**	**.0007423**	**.9109930**	**.1049151**	**.0967903**
Stddev	.0042280	.04654	.0020054	.0002217	.0131465	.0012662	.0004270
%RSD	.7749421	.2323007	2.227734	29.87030	1.443092	1.206847	.4411615
#1	.5414852	20.02111	.0921448	.0005055	.8960070	.1061982	.0963005
#2	.5499314	20.08731	.0897595	.0007763	.9163896	.1048805	.0970845
#3	.5453554	19.99754	.0881596	.0009451	.9205824	.1036666	.0969859

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.736994**	**.0419239**	**.0044981**	**-.001569**	**2.291258**	**1.276500**	**1.925743**
Stddev	.020775	.0006910	.0002824	.001095	.007772	.009277	.035229
%RSD	.2133623	1.648276	6.279152	69.78183	.3392112	.7267365	1.829396
#1	9.715150	.0411385	.0047819	-.001780	2.283759	1.272031	1.962080
#2	9.739331	.0421948	.0044952	-.000384	2.299277	1.287165	1.923413
#3	9.756502	.0424384	.0042171	-.002544	2.290737	1.270302	1.891737

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5383-01LX5 Acquired: 12/26/2024 10:51:01 Type: Unk
Method: NON EPA-6010-200.7(v2553) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	8.563685	.0391043	-.050715
Stddev	.166957	.0006855	.000335
%RSD	1.949590	1.753048	.6611967
#1	8.731380	.0383879	-.050357
#2	8.562199	.0391710	-.051021
#3	8.397477	.0397540	-.050767

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3115.311	66969.63	13880.52	2127.644	4533.457
Stddev	.214	116.01	13.94	4.483	6.732
%RSD	.0068808	.1732294	.1004557	.2106998	.1484982
#1	3115.388	67092.34	13894.77	2132.751	4526.686
#2	3115.069	66954.80	13866.90	2124.355	4533.538
#3	3115.476	66861.74	13879.90	2125.827	4540.149

Sample Name: P5383-01MS Acquired: 12/26/2024 10:55:10 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.6687051**	**1.811444**	**.9862307**	**1.521472**	**.6618266**	**92.26074**
Stddev	.0015253	.020613	.0010906	.004571	.0002246	.03451
%RSD	.2281033	1.137935	.1105836	.3004496	.0339294	.0374044
#1	.6701687	1.814706	.9858429	1.519530	.6620752	92.22342
#2	.6671247	1.789394	.9874622	1.518192	.6616386	92.29148
#3	.6688218	1.830230	.9853870	1.526693	.6617661	92.26733

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5986165**	**.1325227**	**.1928227**	**49.32661**	**.5836181**	**.3763361**
Stddev	.0015305	.0003605	.0006321	.08831	.0013579	.0005447
%RSD	.2556695	.2719897	.3278181	.1790220	.2326738	.1447505
#1	.5984813	.1324942	.1934072	49.22487	.5851598	.3759801
#2	.5971581	.1328965	.1921519	49.37161	.5825996	.3760649
#3	.6002101	.1321773	.1929089	49.38336	.5830949	.3769632

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.058935**	**263.3138**	**2.058404**	**74.59490**	**.8477602**	**.0549278**
Stddev	.002101	1.0188	.007852	.15832	.0011687	.0001297
%RSD	.1983698	.3869312	.3814551	.2122353	.1378519	.2360494
#1	1.059590	262.8390	2.052729	74.41211	.8490810	.0548298
#2	1.056585	262.6190	2.055119	74.68394	.8473391	.0548789
#3	1.060630	264.4834	2.067365	74.68865	.8468604	.0550749

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.452106**	**.5936630**	**.5150385**	**45.64793**	**.3246227**	**.3443274**
Stddev	.010755	.0018691	.0027747	.12262	.0015287	.0004547
%RSD	.1666835	.3148440	.5387400	.2686307	.4709187	.1320579
#1	6.463631	.5917260	.5133522	45.73717	.3249882	.3442601
#2	6.442338	.5938070	.5135224	45.50811	.3229444	.3439101
#3	6.450349	.5954559	.5182410	45.69853	.3259355	.3448120

Sample Name: P5383-01MS Acquired: 12/26/2024 10:55:10 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	.6210833	8.478151	5.120002	F 14.15999	F 39.36676	.3234243
Stddev	.0014954	.014467	.019985	.04132	.09812	.0017703
%RSD	.2407657	.1706435	.3903232	.2918233	.2492508	.5473649
#1	.6194021	8.474303	5.129494	14.12336	39.32909	.3231412
#2	.6215830	8.465997	5.133471	14.20479	39.29305	.3218126
#3	.6222648	8.494154	5.097040	14.15182	39.47813	.3253191

Elem	Sr4077
Units	ppm
Avg	-.031701
Stddev	.000490
%RSD	1.546844
#1	-.031168
#2	-.031803
#3	-.032132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3429.231	75601.12	16048.81	2345.065	4052.687
Stddev	8.353	46.51	16.21	13.983	10.182
%RSD	.2435799	.0615154	.1010294	.5962571	.2512338
#1	3433.690	75600.78	16065.63	2348.885	4059.506
#2	3434.409	75647.80	16033.27	2356.740	4057.571
#3	3419.595	75554.79	16047.54	2329.569	4040.983

Sample Name: P5383-01MSD Acquired: 12/26/2024 10:59:06 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	.6707831	1.800111	.9812566	1.528800	.6643291	92.77535
Stddev	.0042912	.012590	.0043580	.006566	.0009123	.02808
%RSD	.6397337	.6994171	.4441211	.4294658	.1373222	.0302640
#1	.6660870	1.794872	.9787111	1.521703	.6633611	92.75577
#2	.6717619	1.814475	.9787701	1.530039	.6644535	92.76275
#3	.6745004	1.790986	.9862886	1.534658	.6651728	92.80752

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6027301	.1318695	.1911347	49.33606	.5813107	.3768574
Stddev	.0026902	.0005446	.0008092	.11842	.0004650	.0013742
%RSD	.4463390	.4130077	.4233424	.2400302	.0799946	.3646360
#1	.6026714	.1316387	.1905850	49.28491	.5813117	.3768072
#2	.6054493	.1324915	.1907552	49.47145	.5817752	.3755090
#3	.6000698	.1314782	.1920638	49.25180	.5808451	.3782559

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.059343	266.2659	2.069974	75.15375	.8454225	.0550073
Stddev	.005475	.3961	.010359	.16042	.0028602	.0001390
%RSD	.5167976	.1487739	.5004633	.2134539	.3383143	.2527364
#1	1.055155	266.2511	2.067913	74.99336	.8441821	.0550265
#2	1.057335	266.6692	2.081209	75.31420	.8433920	.0548597
#3	1.065538	265.8774	2.060800	75.15371	.8486935	.0551357

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.409521	.5952316	.5120344	46.16485	.3247603	.3424318
Stddev	.007839	.0019521	.0007705	.07958	.0013408	.0009222
%RSD	.1222981	.3279518	.1504854	.1723816	.4128644	.2693057
#1	6.416813	.5954215	.5121777	46.15692	.3232570	.3413783
#2	6.401231	.5970818	.5127233	46.24809	.3258326	.3428244
#3	6.410520	.5931916	.5112023	46.08953	.3251913	.3430928

Sample Name: P5383-01MSD Acquired: 12/26/2024 10:59:06 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	.6167873	8.638794	5.605811	F 14.23679	F 39.67452	.3250627
Stddev	.0031935	.021783	.013044	.03123	.08445	.0017056
%RSD	.5177662	.2521523	.2326936	.2193351	.2128675	.5247019
#1	.6152595	8.634978	5.606509	14.20127	39.57831	.3248607
#2	.6146447	8.662233	5.592432	14.24919	39.70886	.3268604
#3	.6204578	8.619171	5.618493	14.25992	39.73640	.3234671

Elem	Sr4077
Units	ppm
Avg	-.037587
Stddev	.000609
%RSD	1.619556
#1	-.037428
#2	-.037074
#3	-.038260

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3401.757	75825.61	16051.11	2366.077	4024.502
Stddev	12.382	73.53	35.22	.744	9.160
%RSD	.3639843	.0969699	.2194338	.0314524	.2276172
#1	3412.012	75750.68	16052.18	2365.232	4028.345
#2	3405.258	75897.65	16015.36	2366.367	4031.116
#3	3388.002	75828.50	16085.78	2366.633	4014.046

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5383-01A Acquired: 12/26/2024 11:03:01 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.6640171**	**1.800523**	**.9726558**	**1.512305**	**.6615716**	**92.95480**
Stddev	.0012237	.006218	.0023279	.008064	.0031511	.18908
%RSD	.1842851	.3453625	.2393304	.5332522	.4763067	.2034083
#1	.6634690	1.807205	.9699704	1.502994	.6582853	92.93704
#2	.6631634	1.799458	.9738962	1.517030	.6645674	92.77523
#3	.6654191	1.794906	.9741007	1.516892	.6618620	93.15213

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6107529**	**.1297014**	**.1909197**	**49.13466**	**.5818383**	**.3738905**
Stddev	.0028083	.0001468	.0003972	.02849	.0018291	.0012792
%RSD	.4598168	.1131835	.2080653	.0579753	.3143594	.3421246
#1	.6119709	.1298329	.1904615	49.16595	.5832185	.3724319
#2	.6075412	.1295430	.1911676	49.12783	.5797638	.3744182
#3	.6127466	.1297283	.1911299	49.11022	.5825327	.3748215

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.043790**	**266.1742**	**2.050853**	**74.78243**	**.8374194**	**.0553957**
Stddev	.003195	.7051	.004537	.23390	.0019822	.0004330
%RSD	.3060529	.2648848	.2212165	.3127732	.2367015	.7815699
#1	1.040284	266.5098	2.053908	74.68557	.8354255	.0551136
#2	1.044547	265.3641	2.045640	75.04921	.8374430	.0551793
#3	1.046537	266.6488	2.053011	74.61253	.8393897	.0558942

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.509554**	**.5952817**	**.5169936**	**47.02026**	**.3230723**	**.3435173**
Stddev	.024840	.0020849	.0027901	.19039	.0019455	.0007449
%RSD	.3815897	.3502445	.5396825	.4049048	.6021786	.2168607
#1	6.506093	.5948896	.5191417	47.09845	.3252382	.3426591
#2	6.486627	.5934206	.5179988	46.80323	.3214731	.3439976
#3	6.535943	.5975348	.5138401	47.15911	.3225057	.3438951

Sample Name: P5383-01A Acquired: 12/26/2024 11:03:01 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	.6097579	8.722221	5.914635	F 13.97142	F 38.74215	.3263309
Stddev	.0016906	.015361	.006281	.01924	.05875	.0020999
%RSD	.2772622	.1761158	.1061963	.1376746	.1516530	.6434769
#1	.6082891	8.729306	5.920957	13.95228	38.69033	.3268542
#2	.6093786	8.704596	5.914552	13.99075	38.73013	.3240189
#3	.6116060	8.732761	5.908395	13.97124	38.80598	.3281197

Elem	Sr4077
Units	ppm
Avg	-.036193
Stddev	.000098
%RSD	.2703988
#1	-.036237
#2	-.036262
#3	-.036081

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3440.167	75948.27	16286.86	2327.908	4076.271
Stddev	8.244	22.54	10.93	10.631	8.249
%RSD	.2396278	.0296809	.0670894	.4566606	.2023699
#1	3449.617	75925.37	16282.96	2320.111	4084.395
#2	3436.437	75949.01	16278.42	2323.595	4076.515
#3	3434.449	75970.43	16299.20	2340.017	4067.902

Sample Name: PB165833BS Acquired: 12/26/2024 11:11:21 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.8264673**	**2.046664**	**.9275257**	**2.089399**	**.8454535**	**1.850219**
Stddev	.0043703	.003720	.0016140	.006325	.0008170	.014688
%RSD	.5287866	.1817463	.1740109	.3027362	.0966322	.7938769
#1	.8219990	2.050159	.9257908	2.087817	.8463725	1.835440
#2	.8266704	2.042755	.9278036	2.084015	.8448095	1.850403
#3	.8307324	2.047077	.9289827	2.096366	.8451786	1.864815

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1628665**	**.1673966**	**.1728956**	**.8942551**	**.3812026**	**.1843112**
Stddev	.0002814	.0006305	.0004265	.0098863	.0005057	.0002696
%RSD	.1728114	.3766589	.2466808	1.105536	.1326527	.1462568
#1	.1626528	.1667287	.1730192	.8848833	.3808233	.1844543
#2	.1627612	.1674797	.1724210	.8932959	.3817767	.1840002
#3	.1631854	.1679815	.1732467	.9045861	.3810079	.1844790

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3127464**	**2.862675**	**.1726172**	**1.839362**	**.4606682**	**.0759040**
Stddev	.0004839	.012418	.0006167	.015203	.0011042	.0003497
%RSD	.1547292	.4337870	.3572739	.8265306	.2396942	.4607051
#1	.3122939	2.858559	.1720452	1.829125	.4607311	.0761329
#2	.3126888	2.876628	.1732705	1.832130	.4595339	.0755015
#3	.3132566	2.852837	.1725358	1.856830	.4617396	.0760777

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.171396**	**.2651807**	**.2027569**	**10.07837**	**.2527257**	**.4140438**
Stddev	.008155	.0029921	.0006819	.05306	.0005573	.0010538
%RSD	.2571384	1.128305	.3363210	.5264471	.2205271	.2545057
#1	3.170672	.2632249	.2019808	10.09446	.2521147	.4128608
#2	3.179888	.2636922	.2032598	10.12153	.2528560	.4143888
#3	3.163627	.2686251	.2030302	10.01913	.2532063	.4148818

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: PB165833BS Acquired: 12/26/2024 11:11:21 Type: Unk
Method: NON EPA-6010-200.7(v2553) 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	**.6290935**	**.1777787**	**.7530756**	**5.288658**	F **-.007210**	**.1892458**
Stddev	.0017686	.0006495	.0063440	.017496	.001228	.0007519
%RSD	.2811412	.3653274	.8424165	.3308288	17.02885	.3972920
#1	.6306019	.1777822	.7476699	5.273534	-.007487	.1900134
#2	.6271470	.1771275	.7600599	5.284618	-.008276	.1892134
#3	.6295318	.1784264	.7514970	5.307820	-.005867	.1885107

Elem	Sr4077
Units	ppm
Avg	**.1840769**
Stddev	.0000867
%RSD	.0470888
#1	.1840915
#2	.1841553
#3	.1839838

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2932.584**	**64252.10**	**13096.92**	**2030.281**	**4678.791**
Stddev	.873	198.26	23.43	8.739	3.767
%RSD	.0297779	.3085641	.1789096	.4304212	.0805022
#1	2932.250	64204.68	13120.76	2037.890	4674.852
#2	2931.928	64081.84	13096.08	2020.737	4682.358
#3	2933.575	64469.76	13073.92	2032.217	4679.162

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCV02 Acquired: 12/26/2024 11:24:08 Type: Unk
Method: NON EPA-6010-200.7(v2554) 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	**5.194287**	**5.083265**	**4.707734**	**5.398141**	**5.485852**	**9.801465**	**9.350232**
Stddev	.005716	.019659	.002384	.017715	.012777	.018942	.062054
%RSD	.1100364	.3867339	.0506373	.3281706	.2329099	.1932564	.6636599
#1	5.200050	5.081052	4.709357	5.407074	5.477475	9.779714	9.278676
#2	5.188620	5.064807	4.704997	5.377738	5.479523	9.814335	9.382786
#3	5.194192	5.103937	4.708848	5.409612	5.500558	9.810345	9.389236

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2504431**	**2.411063**	**27.19547**	**.9593718**	**2.348514**	**1.281435**	**4.777526**
Stddev	.0005514	.000834	.02657	.0007390	.001160	.001302	.014472
%RSD	.2201866	.0345797	.0977017	.0770252	.0493731	.1016320	.3029210
#1	.2506467	2.410449	27.20821	.9586178	2.347310	1.280456	4.790138
#2	.2508638	2.410728	27.21327	.9594026	2.349623	1.282913	4.761726
#3	.2498188	2.412012	27.16493	.9600948	2.348608	1.280935	4.780714

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.423466**	**24.37303**	**2.339449**	**1.234332**	**27.39825**	**2.343176**	**2.520534**
Stddev	.003165	.03348	.000468	.000893	.07493	.003369	.011284
%RSD	.1305863	.1373720	.0200136	.0723095	.2734710	.1437988	.4476872
#1	2.426922	24.33699	2.339320	1.234871	27.48477	2.346972	2.533316
#2	2.422765	24.40316	2.339059	1.234824	27.35467	2.342014	2.511950
#3	2.420710	24.37894	2.339968	1.233302	27.35532	2.340541	2.516337

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.21488**	**4.773742**	**5.213450**	**4.600992**	**4.657207**	**5.199024**	**4.710104**
Stddev	.07395	.007239	.007031	.005235	.003605	.021614	.009190
%RSD	.2820743	.1516345	.1348551	.1137835	.0774130	.4157244	.1951151
#1	26.29648	4.766933	5.205566	4.597533	4.656179	5.175862	4.716408
#2	26.15231	4.781345	5.215714	4.598428	4.661214	5.202555	4.714344
#3	26.19585	4.772948	5.219069	4.607015	4.654227	5.218654	4.699559

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCV02 Acquired: 12/26/2024 11:24:08 Type: Unk
Method: NON EPA-6010-200.7(v2554) 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	**4.717806**	**4.962616**	**4.840807**
Stddev	.011377	.009370	.028766
%RSD	.2411582	.1888215	.5942474
#1	4.729039	4.973003	4.829967
#2	4.718091	4.960044	4.819035
#3	4.706289	4.954799	4.873418

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2808.369**	**61619.68**	**12282.89**	**1919.465**	**4288.576**
Stddev	3.155	81.90	22.67	7.729	4.183
%RSD	.1123260	.1329151	.1845946	.4026887	.0975329
#1	2808.216	61537.01	12276.00	1911.831	4287.532
#2	2805.294	61700.79	12264.47	1927.286	4285.013
#3	2811.597	61621.24	12308.21	1919.277	4293.181

Sample Name: CCB02 Acquired: 12/26/2024 11:30:15 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**-.001270**	**-.000706**	**-.000324**	**.0000326**	**-.001489**	**.0008188**	**-.015114**
Stddev	.001871	.002404	.000804	.0014491	.000103	.0033822	.000954
%RSD	147.3577	340.5349	248.0834	4443.932	6.938892	413.0511	6.312397
#1	-.001968	-.003459	.000323	-.000541	-.001567	-.001696	-.016031
#2	.000850	.000364	-.000071	-.001042	-.001528	-.000512	-.015184
#3	-.002692	.000977	-.001224	.001681	-.001372	.004664	-.014127

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000250**	**-.000067**	**.0138751**	**-.000016**	**.0000545**	**-.000320**	**-.006344**
Stddev	.0000392	.000074	.0036200	.000153	.0001542	.000412	.002303
%RSD	157.0157	110.3375	26.09012	982.9026	282.7799	128.9070	36.29848
#1	.0000370	-.000139	.0096950	-.000030	-.000071	.000124	-.008861
#2	-.000019	.000008	.0159689	.000144	.000008	-.000690	-.004343
#3	.000057	-.000070	.0159613	-.000161	.000226	-.000394	-.005828

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000084**	**.0029391**	**-.000008**	**.0027193**	**-.030452**	**-.000914**	**-.000672**
Stddev	.000074	.0018726	.000031	.0003061	.009137	.000711	.000218
%RSD	88.95757	63.71103	396.6661	11.25665	30.00347	77.84977	32.40658
#1	-.000071	.0035772	-.000029	.0028806	-.040917	-.001733	-.000510
#2	-.000164	.0044093	.000027	.0029110	-.026384	-.000553	-.000586
#3	-.000016	.0008310	-.000022	.0023663	-.024057	-.000455	-.000919

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0845073**	**.0033300**	**.0000229**	**.0000432**	**.0003798**	**-.011598**	**-.004503**
Stddev	.0235573	.0000972	.0000378	.0003837	.0001420	.004460	.000245
%RSD	27.87602	2.919531	165.1808	888.5309	37.39447	38.45531	5.434822
#1	.0585592	.0032194	.0000508	.0004638	.0002699	-.014296	-.004397
#2	.1045502	.0033690	.0000379	-.000288	.0005402	-.006450	-.004783
#3	.0904124	.0034017	-.000020	-.000047	.0003294	-.014048	-.004329

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB02 Acquired: 12/26/2024 11:30:15 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	**-.004095**	**-.006067**	**.0000031**
Stddev	.000845	.000220	.0000115
%RSD	20.63522	3.620232	369.7857
#1	-.003201	-.005827	-.000010
#2	-.004881	-.006119	.000013
#3	-.004203	-.006257	.000006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2999.469**	**64584.84**	**13452.51**	**1993.536**	**4968.179**
Stddev	4.127	263.52	21.53	6.480	5.974
%RSD	.1375747	.4080138	.1600462	.3250568	.1202460
#1	3000.972	64817.67	13476.72	1999.586	4972.938
#2	3002.634	64298.77	13445.28	1986.698	4970.123
#3	2994.802	64638.07	13435.52	1994.325	4961.475

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: LR1 Acquired: 12/26/2024 11:34:35 Type: Unk
Method: NON EPA-6010-200.7(v2555) 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	**.0292373**	**.1156176**	**.0555938**	**-.263898**	**-.003337**	**2102.110**	**-.000837**
Stddev	.0067343	.0088289	.0015191	.003380	.003168	2.072	.001071
%RSD	23.03340	7.636294	2.732463	1.280791	94.94074	.0985824	127.9390
#1	.0224826	.1096182	.0543362	-.265357	-.002158	2103.630	.000277
#2	.0292782	.1257556	.0572815	-.260034	-.000927	2102.952	-.000929
#3	.0359510	.1114790	.0551636	-.266303	-.006925	2099.750	-.001860

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088052**	**.0922810**	**1720.583**	**-.001775**	**.0364735**	**.1899928**	**1018.589**
Stddev	.0002051	.0015606	10.168	.000504	.0004903	.0041802	4.889
%RSD	2.328999	1.691163	.5909484	28.39309	1.344304	2.200217	.4800123
#1	.0086368	.0936786	1730.743	-.001196	.0363453	.1911285	1021.205
#2	.0087452	.0925674	1720.597	-.002010	.0370151	.1934878	1012.949
#3	.0090336	.0905970	1710.408	-.002118	.0360600	.1853620	1021.614

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.083627**	**1944.879**	**.0175268**	**-.043894**	**1963.642**	**.0566583**	**.3666534**
Stddev	.000322	12.785	.0010868	.000589	9.459	.0007708	.0045093
%RSD	.3846788	.6573421	6.200829	1.341678	.4817181	1.360400	1.229842
#1	-.083784	1959.266	.0169577	-.044572	1969.765	.0575435	.3615322
#2	-.083256	1934.822	.0168428	-.043605	1952.748	.0561352	.3683996
#3	-.083839	1940.548	.0187800	-.043506	1968.415	.0562963	.3700284

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1333.505**	**.4401631**	**-.010124**	**.0207670**	**-.037266**	**.1303009**	**.1026778**
Stddev	9.479	.0088231	.000645	.0046267	.000544	.0080620	.0066824
%RSD	.7108511	2.004507	6.368053	22.27920	1.458545	6.187229	6.508082
#1	1341.302	.4477679	-.010692	.0169990	-.036740	.1376978	.0999765
#2	1336.259	.4304894	-.010257	.0259309	-.037233	.1217075	.0977689
#3	1322.953	.4422321	-.009423	.0193710	-.037825	.1314974	.1102879

Sample Name: LR1 Acquired: 12/26/2024 11:34:35 Type: Unk
Method: NON EPA-6010-200.7(v2555) 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	**-.233047**	**-.281726**	**-1.00804**
Stddev	.012500	.002459	.00489
%RSD	5.363620	.8727205	.4848594
#1	-.240828	-.284450	-1.01069
#2	-.218628	-.281056	-1.00240
#3	-.239684	-.279672	-1.01103

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1761.869**	**39495.88**	**10145.84**	**1191.462**	**2389.702**
Stddev	6.241	51.15	8.57	3.731	7.486
%RSD	.3542121	.1294985	.0844240	.3131264	.3132721
#1	1754.716	39452.70	10153.98	1195.729	2381.442
#2	1764.691	39552.36	10146.65	1189.837	2391.625
#3	1766.201	39482.58	10136.90	1188.819	2396.039

Sample Name: LR2 Acquired: 12/26/2024 11:39:31 Type: Unk
Method: NON EPA-6010-200.7(v2555) 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	**.0113415**	**-.033942**	**244.8104**	**.0096380**	**-.008128**	**.0509539**	^F *****
Stddev	.0026263	.003610	.4888	.0033435	.000527	.0053149	-----
%RSD	23.15696	10.63567	.1996474	34.69064	6.485656	10.43085	-----
#1	.0112044	-.037506	244.2514	.0131601	-.008549	.0564921	^ -----
#2	.0087864	-.030288	245.1574	.0065077	-.008297	.0504751	^ -----
#3	.0140337	-.034031	245.0224	.0092462	-.007537	.0458947	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002089**	**-.005703**	**.2362875**	**.0121806**	**-.020786**	**239.4536**	**-.020370**
Stddev	.000002	.000198	.0055902	.0002059	.000428	1.8322	.006277
%RSD	.1026965	3.476374	2.365866	1.690243	2.059081	.7651536	30.81576
#1	-.002090	-.005723	.2414328	.0122308	-.020474	239.8301	-.017204
#2	-.002086	-.005890	.2370906	.0123568	-.021274	237.4624	-.016307
#3	-.002089	-.005495	.2303391	.0119543	-.020610	241.0683	-.027600

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.43189**	**-.070530**	**54.33815**	**.0082948**	**.4880479**	**-.015322**	**38.42281**
Stddev	.20096	.016202	.26343	.0003400	.0067600	.001022	.30623
%RSD	.4327964	22.97252	.4848016	4.099123	1.385107	6.671275	.7970042
#1	46.62435	-.052583	54.33314	.0084876	.4933730	-.014316	38.59866
#2	46.22340	-.074924	54.60405	.0084947	.4903280	-.016359	38.06921
#3	46.44792	-.084081	54.07726	.0079022	.4804427	-.015292	38.60056

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3970136**	**-.001381**	**-.006760**	**-.003398**	**-.040076**	**-.025091**	**2.159173**
Stddev	.0112842	.000040	.000223	.000487	.000283	.002238	.013956
%RSD	2.842273	2.869153	3.304526	14.32755	.7057980	8.919273	.6463784
#1	.4088582	-.001341	-.006703	-.003943	-.039778	-.027065	2.150276
#2	.3957937	-.001382	-.006572	-.003245	-.040340	-.025547	2.175258
#3	.3863889	-.001420	-.007007	-.003006	-.040110	-.022660	2.151985

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: LR2 Acquired: 12/26/2024 11:39:31 Type: Unk
Method: NON EPA-6010-200.7(v2555) 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	-.038670	-.003173	.0019811
Stddev	.004561	.000663	.0000362
%RSD	11.79544	20.88267	1.827890
#1	-.036905	-.003871	.0019836
#2	-.035255	-.003093	.0020161
#3	-.043850	-.002553	.0019438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2462.012	62358.41	13963.13	1767.766	4497.573
Stddev	18.168	199.24	71.49	4.923	11.820
%RSD	.7379134	.3195048	.5119664	.2784946	.2628037
#1	2464.908	62136.52	13881.50	1765.681	4500.536
#2	2478.557	62521.98	13993.32	1773.389	4507.630
#3	2442.570	62416.73	14014.57	1764.229	4484.554

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCV03 Acquired: 12/26/2024 12:10:55 Type: Unk
Method: NON EPA-6010-200.7(v2556) 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	**5.089839**	**5.080735**	**4.617793**	**5.335407**	**5.443543**	**9.690563**
Stddev	.008836	.020709	.013600	.013422	.009259	.024810
%RSD	.1735978	.4075977	.2945166	.2515678	.1700924	.2560232
#1	5.079916	5.090698	4.633282	5.320852	5.433214	9.718127
#2	5.092747	5.094579	4.607803	5.338073	5.446316	9.683541
#3	5.096855	5.056927	4.612295	5.347296	5.451099	9.670020

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.181502**	**.2456965**	**2.541954**	**27.20362**	**.9524532**	**2.277698**
Stddev	.076557	.0008804	.007227	.10628	.0010808	.007230
%RSD	.8338178	.3583098	.2843244	.3906904	.1134777	.3174474
#1	9.143755	.2459510	2.550050	27.27171	.9525632	2.286007
#2	9.269602	.2464216	2.539664	27.25801	.9534748	2.272836
#3	9.131149	.2447169	2.536150	27.08116	.9513215	2.274251

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.250150**	**4.728969**	**2.429526**	**23.86603**	**2.264953**	**1.237702**
Stddev	.001313	.008146	.007693	.01794	.008724	.000622
%RSD	.1050529	.1722588	.3166404	.0751563	.3851775	.0502677
#1	1.251651	4.729478	2.437253	23.88674	2.275021	1.237418
#2	1.249212	4.720581	2.429457	23.85543	2.260220	1.238415
#3	1.249586	4.736849	2.421868	23.85591	2.259618	1.237272

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.99088**	**2.297775**	**2.479751**	**26.66281**	F **4.411329**	**5.113348**
Stddev	.09965	.008469	.010361	.17057	.019026	.003925
%RSD	.4334530	.3685560	.4178050	.6397183	.4313071	.0767690
#1	23.09007	2.303104	2.468041	26.74658	4.422148	5.108941
#2	22.89077	2.302212	2.487726	26.46656	4.422479	5.116471
#3	22.99181	2.288010	2.483487	26.77530	4.389360	5.114632

Sample Name: CCV03 Acquired: 12/26/2024 12:10:55 Type: Unk
Method: NON EPA-6010-200.7(v2556) 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	F 4.459454	4.573501	5.144689	4.702955	4.599682	4.955968
Stddev	.009454	.012002	.025043	.019683	.022058	.024003
%RSD	.2119951	.2624153	.4867811	.4185227	.4795551	.4843225
#1	4.468807	4.586276	5.124333	4.724265	4.610392	4.982990
#2	4.459653	4.571767	5.137079	4.699144	4.614340	4.937119
#3	4.449903	4.562462	5.172654	4.685456	4.574314	4.947794

Elem	Sr4077
Units	ppm
Avg	4.734520
Stddev	.047010
%RSD	.9929174
#1	4.737405
#2	4.780021
#3	4.686134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2760.325	59437.63	12035.10	1850.680	4271.582
Stddev	1.670	129.32	73.16	9.862	8.572
%RSD	.0604941	.2175743	.6078701	.5328804	.2006770
#1	2762.213	59339.39	11998.13	1855.019	4261.813
#2	2759.723	59389.35	11987.80	1839.392	4277.848
#3	2759.040	59584.14	12119.36	1857.628	4275.083

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB03 Acquired: 12/26/2024 12:15:07 Type: Unk
Method: NON EPA-6010-200.7(v2556) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000385**	**-.001063**	**.0004924**	**-.000026**	**-.000813**	**.0080944**	**-.008870**
Stddev	.000886	.000883	.0005242	.001719	.000678	.0060686	.001076
%RSD	230.1298	83.12294	106.4502	6580.536	83.34683	74.97358	12.12767
#1	.000595	-.001925	.0008864	-.001619	-.000330	.0148627	-.007629
#2	-.000619	-.000160	-.000103	.001796	-.001588	.0062821	-.009450
#3	-.001131	-.001104	.000693	-.000256	-.000522	.0031383	-.009531

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000760**	**.0000920**	**.0338886**	**-.000143**	**.0000948**	**.0000321**	**-.000692**
Stddev	.0000312	.0001119	.0046863	.000362	.0001084	.0003841	.002866
%RSD	40.99890	121.5900	13.82845	253.7893	114.3153	1195.948	414.3153
#1	.0001048	.0002209	.0354699	.000235	.0001360	.0003070	.002194
#2	.0000804	.0000360	.0375796	-.000487	.0001765	.0001961	-.000730
#3	.0000429	.0000192	.0286162	-.000175	-.000028	-.000407	-.003538

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015609**	**.0109937**	**-.000004**	**.0032440**	**.0724219**	**-.000690**	**-.000003**
Stddev	.0003734	.0029340	.000253	.0005493	.0164234	.000343	.000373
%RSD	23.92068	26.68766	6758.601	16.93246	22.67736	49.70480	13031.58
#1	.0019913	.0139678	-.000010	.0034977	.0581459	-.000649	.000274
#2	.0013680	.0109117	-.000254	.0036206	.0687492	-.000369	.000145
#3	.0013235	.0081016	.000252	.0026137	.0903708	-.001052	-.000427

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1805917**	**.0023727**	**.0002062**	**.0003750**	**.0028904**	**-.014154**	**-.005211**
Stddev	.0331180	.0010204	.0002469	.0002883	.0003821	.004376	.000761
%RSD	18.33861	43.00779	119.7685	76.89029	13.21948	30.91947	14.59644
#1	.1872927	.0035014	.0001788	.0005293	.0033061	-.009101	-.005598
#2	.1446356	.0021010	.0004656	.0000423	.0028106	-.016612	-.004335
#3	.2098467	.0015155	-.000026	.0005533	.0025546	-.016748	-.005701

Sample Name: CCB03 Acquired: 12/26/2024 12:15:07 Type: Unk
Method: NON EPA-6010-200.7(v2556) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.003269**	**-.001549**	**.0027225**
Stddev	.000696	.000278	.0005928
%RSD	21.30149	17.95933	21.77284
#1	-.003375	-.001324	.0033359
#2	-.002525	-.001462	.0026789
#3	-.003906	-.001860	.0021528

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2966.737**	**63268.92**	**13025.23**	**2006.088**	**4876.392**
Stddev	5.703	55.50	38.24	11.722	8.221
%RSD	.1922420	.0877216	.2935538	.5843027	.1685944
#1	2973.111	63214.00	12983.79	1993.704	4885.668
#2	2964.984	63267.78	13032.76	2007.550	4870.008
#3	2962.115	63324.98	13059.14	2017.010	4873.499

Sample Name: CCV04 Acquired: 12/26/2024 13:02:16 Type: Unk
Method: NON EPA-6010-200.7(v2557) 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	**5.060476**	**5.063031**	**4.609782**	**5.276404**	**5.405873**	**9.576115**
Stddev	.020183	.053313	.004656	.032909	.028881	.000716
%RSD	.3988280	1.052993	.1010075	.6236960	.5342472	.0074786
#1	5.039159	5.001471	4.614220	5.243440	5.373045	9.575289
#2	5.062976	5.094006	4.604935	5.276515	5.417206	9.576500
#3	5.079292	5.093617	4.610191	5.309257	5.427368	9.576557

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.111682**	**.2406240**	**2.340943**	**26.38694**	**.9477223**	**2.283401**
Stddev	.071966	.0012648	.006733	.03048	.0012183	.004308
%RSD	.7898266	.5256243	.2876062	.1155224	.1285512	.1886637
#1	9.106566	.2419426	2.348050	26.40631	.9488426	2.287481
#2	9.042410	.2405085	2.334661	26.40270	.9478989	2.278896
#3	9.186070	.2394209	2.340116	26.35180	.9464253	2.283826

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.247977**	**4.662364**	**2.633827**	**23.39237**	**2.267481**	**1.220645**
Stddev	.004702	.019308	.002415	.01717	.003977	.003664
%RSD	.3767732	.4141172	.0917075	.0734136	.1753763	.3001533
#1	1.243822	4.657511	2.634851	23.40488	2.272015	1.218435
#2	1.247028	4.645945	2.631069	23.39943	2.264585	1.218627
#3	1.253082	4.683635	2.635562	23.37279	2.265843	1.224875

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.88552**	**2.280490**	**2.488796**	**26.27454**	F **4.333229**	**5.116525**
Stddev	.11443	.000849	.005517	.20331	.017116	.020440
%RSD	.5000113	.0372359	.2216578	.7738035	.3949962	.3994849
#1	22.77236	2.281331	2.483041	26.09461	4.351428	5.094109
#2	22.88303	2.280508	2.489310	26.23392	4.330805	5.121335
#3	23.00118	2.279633	2.494038	26.49510	4.317454	5.134130

Sample Name: CCV04 Acquired: 12/26/2024 13:02:16 Type: Unk
Method: NON EPA-6010-200.7(v2557) 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	F **4.450451**	**4.512002**	**5.073275**	**4.615303**	**4.566441**	**4.889773**
Stddev	.004406	.004153	.055921	.007336	.007650	.011416
%RSD	.0989993	.0920379	1.102260	.1589587	.1675302	.2334716
#1	4.447521	4.507236	5.012675	4.609319	4.560976	4.880386
#2	4.448315	4.513935	5.084264	4.613101	4.563164	4.886452
#3	4.455518	4.514837	5.122885	4.623488	4.575184	4.902482

Elem	Sr4077
Units	ppm
Avg	**4.701142**
Stddev	.018849
%RSD	.4009471
#1	4.719924
#2	4.682227
#3	4.701274

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2727.788**	**59232.58**	**12002.60**	**1825.322**	**4208.171**
Stddev	11.760	87.94	56.29	6.643	4.802
%RSD	.4311015	.1484591	.4689451	.3639604	.1141232
#1	2741.367	59331.65	11956.73	1832.980	4213.327
#2	2720.951	59202.31	11985.66	1821.882	4203.825
#3	2721.047	59163.78	12065.41	1821.105	4207.360

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB04 Acquired: 12/26/2024 13:06:25 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002749**	**.0004468**	**-.000177**	**.0001982**	**-.001364**	**.0006241**	**-.013676**
Stddev	.001091	.0009449	.001052	.0010557	.000861	.0015819	.000457
%RSD	39.67561	211.4879	595.6531	532.6745	63.07571	253.4555	3.344006
#1	-.001499	-.000596	-.001121	.0005747	-.002183	.0024424	-.013235
#2	-.003507	.001247	.000957	.0010141	-.000467	-.000135	-.013646
#3	-.003242	.000690	-.000366	-.000994	-.001444	-.000435	-.014148

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000103**	**-.000052**	**.0147479**	**.0000305**	**-.000046**	**-.000070**	**-.001569**
Stddev	.0000575	.000081	.0016063	.0000427	.000100	.000328	.001512
%RSD	559.7022	156.9267	10.89186	140.0093	217.5711	465.3390	96.34907
#1	-.000011	-.000104	.0153137	-.000015	-.000045	.000047	-.001122
#2	.000075	-.000093	.0159947	.000038	.000054	.000182	-.000332
#3	-.000033	.000042	.0129352	.000069	-.000147	-.000440	-.003254

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006960**	**.0178756**	**-.000023**	**.0032712**	**-.012123**	**-.000956**	**-.000440**
Stddev	.0003060	.0066372	.000154	.0000779	.009237	.000480	.000146
%RSD	43.96391	37.13008	663.6673	2.381211	76.20026	50.22287	33.10274
#1	.0010400	.0242696	.000099	.0033461	-.022500	-.000961	-.000272
#2	.0004541	.0110194	.000028	.0031906	-.004797	-.001434	-.000523
#3	.0005939	.0183376	-.000197	.0032769	-.009071	-.000474	-.000525

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0898039**	**.0014892**	**.0000595**	**.0000199**	**.0011493**	**-.017602**	**-.007480**
Stddev	.0179795	.0003808	.0000307	.0001792	.0001768	.010645	.001153
%RSD	20.02085	25.57047	51.62946	899.3274	15.38744	60.47395	15.41052
#1	.0750700	.0017843	.0000872	-.000108	.0013396	-.012240	-.007879
#2	.1098376	.0016239	.0000264	.000225	.0011184	-.010705	-.006181
#3	.0845041	.0010593	.0000649	-.000057	.0009900	-.029861	-.008380

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB04 Acquired: 12/26/2024 13:06:25 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.001915**	**-.004053**	**.0009399**
Stddev	.001027	.000185	.0004479
%RSD	53.65554	4.565118	47.65077
#1	-.001192	-.004138	.0014324
#2	-.003091	-.004181	.0008301
#3	-.001462	-.003841	.0005571

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2860.554**	**62612.37**	**13050.98**	**1963.713**	**4713.418**
Stddev	.665	97.70	19.91	3.303	2.174
%RSD	.0232554	.1560321	.1525771	.1682074	.0461172
#1	2860.595	62624.92	13039.30	1962.173	4715.653
#2	2861.198	62509.00	13073.97	1961.460	4713.291
#3	2859.870	62703.18	13039.67	1967.505	4711.311

Sample Name: CCV05 Acquired: 12/26/2024 14:37:04 Type: Unk
Method: NON EPA-6010-200.7(v2558) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.184655**	**5.002651**	**4.596701**	**5.428186**	**5.042440**	**9.782898**
Stddev	.003963	.045635	.008164	.015003	.022457	.039371
%RSD	.0764291	.9122153	.1776048	.2763830	.4453599	.4024473
#1	5.181013	4.994767	4.597623	5.418539	5.033109	9.764826
#2	5.184076	4.961472	4.588115	5.420548	5.026153	9.755807
#3	5.188875	5.051714	4.604365	5.445471	5.068058	9.828060

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.304947**	**.2357459**	**2.329298**	**26.19622**	**.9313429**	**2.285222**
Stddev	.028008	.0005154	.001137	.12561	.0029027	.002907
%RSD	.3010000	.2186479	.0487940	.4794868	.3116626	.1272120
#1	9.326909	.2363233	2.329773	26.14159	.9340825	2.286621
#2	9.273407	.2353321	2.328001	26.10718	.9283009	2.281880
#3	9.314525	.2355822	2.330120	26.33990	.9316454	2.287164

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.270937**	**4.708197**	**2.627322**	**27.14545**	**2.267172**	**1.227017**
Stddev	.001995	.031630	.015556	.10813	.003236	.003230
%RSD	.1569900	.6717994	.5920860	.3983323	.1427317	.2632716
#1	1.270209	4.725566	2.623737	27.11509	2.267930	1.230744
#2	1.269407	4.671688	2.613872	27.05574	2.263624	1.225010
#3	1.273194	4.727335	2.644358	27.26551	2.269962	1.225299

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.21838**	**2.308104**	**2.504569**	**27.09111**	F **4.389379**	**5.171205**
Stddev	.10438	.004895	.007664	.15309	.005092	.010020
%RSD	.3981245	.2120985	.3060048	.5650949	.1160172	.1937723
#1	26.23714	2.307670	2.512155	27.07439	4.392167	5.169337
#2	26.10589	2.303441	2.504722	26.94707	4.392468	5.162249
#3	26.31211	2.313203	2.496829	27.25188	4.383501	5.182027

Sample Name: CCV05 Acquired: 12/26/2024 14:37:04 Type: Unk
Method: NON EPA-6010-200.7(v2558) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 4.394829	4.610632	5.123484	4.700308	4.653148	5.133619
Stddev	.009444	.022418	.038809	.016563	.010566	.028291
%RSD	.2148811	.4862227	.7574735	.3523785	.2270622	.5510896
#1	4.398932	4.605182	5.111321	4.718596	4.659315	5.114289
#2	4.384028	4.591442	5.092214	4.686317	4.640948	5.120477
#3	4.401527	4.635273	5.166918	4.696012	4.659180	5.166090

Elem	Sr4077
Units	ppm
Avg	4.863666
Stddev	.014356
%RSD	.2951705
#1	4.880238
#2	4.855029
#3	4.855732

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2642.919	59069.28	11911.34	1798.077	4118.261
Stddev	2.705	187.45	17.98	9.730	4.737
%RSD	.1023616	.3173383	.1509873	.5411562	.1150282
#1	2640.279	58891.73	11899.52	1790.292	4113.630
#2	2645.685	59265.27	11932.04	1808.986	4123.097
#3	2642.793	59050.85	11902.47	1794.955	4118.055

Sample Name: CCB05 Acquired: 12/26/2024 14:41:48 Type: Unk
Method: NON EPA-6010-200.7(v2559) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000912**	**-.000903**	**-.000715**	**-.000323**	**-.001365**	**-.004172**	**-.016157**
Stddev	.000308	.001392	.000952	.000874	.001563	.002815	.000308
%RSD	33.80435	154.1821	133.0890	271.0877	114.5179	67.47483	1.907322
#1	-.001256	-.000742	-.001404	-.000704	-.003145	-.005472	-.016498
#2	-.000660	.000402	.000371	-.000942	-.000734	-.000942	-.015898
#3	-.000820	-.002369	-.001114	.000678	-.000216	-.006102	-.016074

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000443**	**-.000086**	**.0070808**	**-.000217**	**.0000663**	**-.000203**	**-.003365**
Stddev	.0000242	.000070	.0021735	.000043	.0000224	.000359	.002117
%RSD	54.47514	81.84856	30.69567	19.92277	33.83048	177.1002	62.92097
#1	.0000576	-.000057	.0045920	-.000255	.0000660	-.000599	-.001682
#2	.0000589	-.000035	.0086056	-.000227	.0000888	-.000108	-.005742
#3	.0000165	-.000166	.0080448	-.000170	.0000440	.000099	-.002671

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000140**	**-.000220**	**-.000055**	**.0042109**	**-.005751**	**-.001401**	**-.000772**
Stddev	.000197	.005011	.000135	.0003814	.010680	.000794	.000149
%RSD	140.9279	2277.642	244.3416	9.056552	185.7109	56.67069	19.24115
#1	-.000113	-.000669	.000079	.0039366	-.018052	-.002127	-.000944
#2	-.000349	-.004991	-.000054	.0040498	-.000352	-.000553	-.000680
#3	.000042	.005000	-.000191	.0046464	.001152	-.001523	-.000693

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0898981**	**.0003438**	**.0000347**	**.0001125**	**.0001274**	**-.020371**	**-.007588**
Stddev	.0100355	.0003124	.0001140	.0003546	.0002760	.003105	.000659
%RSD	11.16315	90.87399	328.6418	315.1476	216.7276	15.24349	8.679669
#1	.0794343	.0004897	.0000596	-.000265	.0001755	-.022580	-.007193
#2	.0994419	-.000015	-.000090	.000165	.0003761	-.016821	-.007223
#3	.0908181	.000557	.000134	.000438	-.000170	-.021713	-.008348

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB05 Acquired: 12/26/2024 14:41:48 Type: Unk
Method: NON EPA-6010-200.7(v2559) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.003793**	**-.004974**	**.0000158**
Stddev	.003149	.000419	.0000055
%RSD	83.03028	8.416540	34.81369
#1	-.007428	-.004829	.0000221
#2	-.002065	-.005446	.0000132
#3	-.001886	-.004648	.0000121

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2843.299**	**63036.16**	**13057.44**	**1934.352**	**4797.892**
Stddev	17.392	139.68	33.74	6.250	20.612
%RSD	.6116726	.2215855	.2583882	.3230800	.4296093
#1	2863.328	62981.19	13021.06	1940.771	4821.222
#2	2834.546	62932.33	13063.56	1928.286	4790.308
#3	2832.023	63194.96	13087.70	1934.000	4782.146

Sample Name: P5375-01 Acquired: 12/26/2024 14:46:09 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**-.001943**	**-.008386**	**.0033191**	**.0024160**	**-.001806**	**2.947356**
Stddev	.002682	.001391	.0006915	.0014923	.000487	.014099
%RSD	138.0003	16.59044	20.83569	61.76790	26.97583	.4783731
#1	-.005033	-.009736	.0027661	.0032789	-.002366	2.931076
#2	-.000585	-.006957	.0030966	.0032762	-.001568	2.955383
#3	-.000213	-.008466	.0040945	.0006928	-.001483	2.955610

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0288222**	**.0002479**	**.0002644**	**15.15836**	**.0546724**	**.0393734**
Stddev	.0001337	.0000050	.0000066	.03971	.0004999	.0001198
%RSD	.4639033	2.004027	2.517110	.2619766	.9142738	.3043124
#1	.0289527	.0002491	.0002567	15.12886	.0547042	.0393940
#2	.0286855	.0002522	.0002675	15.20351	.0541574	.0392446
#3	.0288285	.0002425	.0002689	15.14271	.0551556	.0394816

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0790604**	**4.903159**	**.2184436**	**6.968512**	**.0749975**	**.0037359**
Stddev	.0004651	.019743	.0007403	.007093	.0002257	.0002224
%RSD	.5882464	.4026610	.3389129	.1017833	.3008797	5.953506
#1	.0788629	4.881499	.2177426	6.961136	.0751533	.0037710
#2	.0787267	4.920147	.2192178	6.975283	.0751005	.0034981
#3	.0795917	4.907830	.2183706	6.969116	.0747388	.0039387

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**100.6350**	**.0028940**	**.1581040**	**5.888603**	**.1090012**	**.0010109**
Stddev	1.1215	.0007072	.0011216	.037596	.0000657	.0003062
%RSD	1.114453	24.43497	.7094056	.6384523	.0603097	30.29433
#1	99.4793	.0033478	.1568097	5.845226	.1089263	.0012053
#2	100.7067	.0032550	.1587916	5.911807	.1090283	.0006579
#3	101.7189	.0020792	.1587107	5.908776	.1090491	.0011694

Sample Name: P5375-01 Acquired: 12/26/2024 14:46:09 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.0006754	.0659080	8.544718	.0052150	F 15.59057	-.005914
Stddev	.0004000	.0025496	.065316	.0009551	.06238	.000136
%RSD	59.22751	3.868394	.7644051	18.31384	.4000939	2.306183
#1	.0003379	.0645971	8.471165	.0053361	15.60342	-.005927
#2	.0005710	.0642807	8.595940	.0061038	15.52277	-.006043
#3	.0011172	.0688464	8.567050	.0042052	15.64552	-.005771

Elem	Sr4077
Units	ppm
Avg	.0881579
Stddev	.0001974
%RSD	.2239153
#1	.0879729
#2	.0881349
#3	.0883657

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2706.164	59908.03	12967.68	1822.412	4353.871
Stddev	4.465	198.23	29.12	14.933	4.351
%RSD	.1649996	.3308876	.2245554	.8194252	.0999392
#1	2705.113	60107.05	12942.73	1839.603	4351.528
#2	2711.061	59710.60	12960.62	1812.642	4358.891
#3	2702.318	59906.43	12999.67	1814.993	4351.193

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5375-01DUP Acquired: 12/26/2024 14:50:21 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**-.001570**	**-.008574**	**.0031682**	**.0028293**	**-.000421**	**3.060880**
Stddev	.001501	.001388	.0009782	.0018514	.000712	.021809
%RSD	95.61620	16.18363	30.87619	65.43787	169.2628	.7125200
#1	.000095	-.006974	.0037124	.0049671	-.001242	3.085694
#2	-.001986	-.009295	.0037534	.0017438	.000017	3.044753
#3	-.002820	-.009453	.0020389	.0017770	-.000036	3.052193

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0289345**	**.0002380**	**.0001949**	**15.09408**	**.0543026**	**.0393870**
Stddev	.0006662	.0000328	.0000280	.09588	.0001096	.0002084
%RSD	2.302312	13.80168	14.36681	.6352123	.2018939	.5291602
#1	.0296615	.0002752	.0001990	15.17471	.0542255	.0394801
#2	.0287886	.0002128	.0002206	15.11946	.0544281	.0391482
#3	.0283534	.0002261	.0001651	14.98806	.0542541	.0395326

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0793614**	**4.887087**	**.2172941**	**6.891146**	**.0753915**	**.0037250**
Stddev	.0003214	.009519	.0009104	.049990	.0001352	.0000546
%RSD	.4050062	.1947779	.4189817	.7254196	.1793346	1.464610
#1	.0791051	4.878272	.2178837	6.928065	.0755404	.0037761
#2	.0792571	4.897181	.2177530	6.911114	.0752764	.0037315
#3	.0797220	4.885808	.2162455	6.834258	.0753578	.0036675

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**103.4441**	**.0038066**	**.1576941**	**6.012392**	**.1074662**	**.0009707**
Stddev	.9981	.0008170	.0012451	.050166	.0012684	.0001679
%RSD	.9648988	21.46148	.7895762	.8343764	1.180272	17.29862
#1	102.6046	.0033745	.1562894	5.988634	.1085690	.0008155
#2	103.1799	.0047489	.1581308	5.978518	.1077495	.0011489
#3	104.5477	.0032965	.1586620	6.070023	.1060801	.0009478

Sample Name: P5375-01DUP Acquired: 12/26/2024 14:50:21 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.0007687	.0774805	8.667768	.0064165	F 15.79518	-.005885
Stddev	.0002338	.0106511	.063835	.0026087	.02266	.000385
%RSD	30.40853	13.74678	.7364671	40.65536	.1434594	6.543112
#1	.0010383	.0754600	8.634516	.0070098	15.78641	-.005827
#2	.0006450	.0889971	8.627423	.0086775	15.77821	-.006296
#3	.0006228	.0679844	8.741365	.0035624	15.82091	-.005533

Elem	Sr4077
Units	ppm
Avg	.0896584
Stddev	.0002500
%RSD	.2787975
#1	.0898278
#2	.0897761
#3	.0893713

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2679.369	60188.92	13114.94	1815.239	4317.941
Stddev	8.607	208.00	75.24	18.621	5.087
%RSD	.3212405	.3455745	.5737325	1.025811	.1178197
#1	2689.146	60424.96	13070.00	1834.743	4322.342
#2	2672.935	60109.30	13073.03	1813.326	4312.371
#3	2676.027	60032.49	13201.81	1797.649	4319.109

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5375-01LX5 Acquired: 12/26/2024 14:54:33 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**-.001461**	**-.002504**	**.0007272**	**.0011122**	**-.001385**	**.6125214**	**-.007190**
Stddev	.000575	.000598	.0004829	.0007171	.000466	.0105478	.000348
%RSD	39.35402	23.88968	66.41108	64.47329	33.64253	1.722034	4.837066
#1	-.001532	-.002467	.0009218	.0017209	-.000925	.6031340	-.006878
#2	-.001997	-.001924	.0001773	.0003217	-.001373	.6239355	-.007129
#3	-.000854	-.003119	.0010825	.0012941	-.001857	.6104945	-.007565

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000456**	**-.000063**	**3.119477**	**.0110055**	**.0081321**	**.0170364**	**.9757653**
Stddev	.0000271	.000119	.007185	.0000664	.0000609	.0002215	.0029537
%RSD	59.52147	189.0297	.2303116	.6030401	.7483907	1.300465	.3027072
#1	.0000403	-.000199	3.127765	.0109362	.0080774	.0167995	.9739816
#2	.0000215	.000021	3.115634	.0110120	.0081977	.0172384	.9741396
#3	.0000750	-.000011	3.115031	.0110684	.0081214	.0170713	.9791747

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0447222**	**1.429647**	**.0154695**	**.0038967**	**20.50483**	**-.001268**	**.0311740**
Stddev	.0002617	.006611	.0001587	.0002714	.03898	.000392	.0002320
%RSD	.5851017	.4624232	1.025623	6.966091	.1901034	30.87224	.7442029
#1	.0449011	1.428350	.0155240	.0039622	20.46153	-.000966	.0313047
#2	.0444219	1.423781	.0152908	.0035984	20.51581	-.001128	.0309061
#3	.0448435	1.436810	.0155937	.0041293	20.53714	-.001711	.0313111

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.239539**	**.0226163**	**.0000923**	**.0005493**	**.0148839**	**1.688991**	**-.005081**
Stddev	.019715	.0003568	.0000184	.0004988	.0059583	.017966	.002153
%RSD	1.590517	1.577499	19.95908	90.80826	40.03204	1.063734	42.36951
#1	1.227237	.0228498	.0000890	.0003255	.0110688	1.668575	-.004151
#2	1.229102	.0227934	.0000758	.0002016	.0217499	1.696009	-.007542
#3	1.262278	.0222056	.0001122	.0011209	.0118331	1.702389	-.003549

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5375-01LX5 Acquired: 12/26/2024 14:54:33 Type: Unk
Method: NON EPA-6010-200.7(v2559) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.244836	-.005181	.0184262
Stddev	.009671	.000702	.0000589
%RSD	.2980309	13.55339	.3197614
#1	3.250755	-.005991	.0183617
#2	3.233676	-.004785	.0184396
#3	3.250076	-.004765	.0184772

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2773.893	61595.70	13030.31	1876.348	4576.446
Stddev	2.670	54.51	30.10	9.444	5.568
%RSD	.0962582	.0884949	.2309624	.5033105	.1216613
#1	2774.147	61533.68	12996.76	1865.905	4572.757
#2	2771.105	61617.43	13054.93	1884.289	4573.731
#3	2776.427	61636.00	13039.25	1878.850	4582.851

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5375-01MS Acquired: 12/26/2024 14:58:51 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.8431332	1.900723	.8644030	2.042201	.8526894	4.973797
Stddev	.0023472	.021064	.0046227	.010169	.0011909	.024524
%RSD	.2783912	1.108201	.5347806	.4979648	.1396660	.4930678
#1	.8428421	1.886421	.8693918	2.038464	.8520830	4.971246
#2	.8409452	1.890837	.8602647	2.034429	.8519239	4.950649
#3	.8456124	1.924912	.8635524	2.053710	.8540615	4.999498

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2669300	.1553141	.1629239	15.59233	.3763771	.2193878
Stddev	.0012211	.0001963	.0002488	.03981	.0011881	.0002784
%RSD	.4574703	.1263762	.1526884	.2553145	.3156612	.1269055
#1	.2657381	.1554734	.1632112	15.56150	.3776943	.2191642
#2	.2681784	.1553742	.1627797	15.63727	.3760505	.2192996
#3	.2668734	.1550948	.1627809	15.57821	.3753865	.2196997

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3747684	7.401521	.3758644	8.561622	.4996117	.0732510
Stddev	.0005505	.035855	.0015390	.047000	.0004665	.0006658
%RSD	.1468869	.4844208	.4094665	.5489556	.0933667	.9089308
#1	.3743344	7.372042	.3744102	8.527791	.4997332	.0740170
#2	.3745832	7.441435	.3774762	8.615287	.4990965	.0728111
#3	.3753876	7.391084	.3757068	8.541788	.5000053	.0729248

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	104.5406	.2718266	.3586410	16.98504	.3228036	.4275514
Stddev	.6889	.0014726	.0008169	.09729	.0013624	.0003759
%RSD	.6589758	.5417306	.2277807	.5727929	.4220408	.0879258
#1	103.8203	.2714382	.3589741	16.89785	.3243712	.4274825
#2	104.6083	.2734545	.3577101	16.96727	.3221341	.4272147
#3	105.1931	.2705872	.3592386	17.08998	.3219055	.4279570

Sample Name: P5375-01MS Acquired: 12/26/2024 14:58:51 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.5885426	.2495157	9.331522	5.242317	F 15.77218	.1992982
Stddev	.0003980	.0104023	.057854	.038033	.05671	.0023746
%RSD	.0676261	4.169012	.6199894	.7254941	.3595719	1.191494
#1	.5881535	.2610894	9.288184	5.221175	15.75118	.1966085
#2	.5889489	.2409457	9.309163	5.219552	15.72896	.2001817
#3	.5885254	.2465120	9.397220	5.286224	15.83640	.2011045

Elem	Sr4077
Units	ppm
Avg	.2758224
Stddev	.0006879
%RSD	.2494107
#1	.2750955
#2	.2764632
#3	.2759085

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2636.503	59708.54	12794.91	1799.102	4209.629
Stddev	6.125	56.98	31.30	6.778	9.229
%RSD	.2323056	.0954350	.2446177	.3767429	.2192459
#1	2635.564	59676.06	12771.79	1796.237	4207.398
#2	2643.043	59675.23	12782.41	1794.227	4219.769
#3	2630.902	59774.34	12830.53	1806.842	4201.720

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5375-01MSD Acquired: 12/26/2024 15:02:47 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**.8481650**	**1.855618**	**.8636000**	**2.060865**	**.8583998**	**4.965743**
Stddev	.0028167	.033209	.0032869	.007512	.0017211	.011607
%RSD	.3320901	1.789650	.3805986	.3645016	.2004993	.2337381
#1	.8452542	1.891771	.8649250	2.069536	.8602672	4.973698
#2	.8483639	1.848611	.8660176	2.056346	.8568773	4.971107
#3	.8508770	1.826471	.8598575	2.056711	.8580547	4.952424

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2629194**	**.1538993**	**.1630234**	**15.41475**	**.3765985**	**.2190734**
Stddev	.0017538	.0010956	.0006256	.04020	.0005003	.0008042
%RSD	.6670299	.7118883	.3837779	.2608048	.1328338	.3670895
#1	.2639952	.1546404	.1634734	15.46115	.3761231	.2191134
#2	.2638673	.1544166	.1632878	15.39287	.3765521	.2198569
#3	.2608957	.1526408	.1623090	15.39024	.3771203	.2182500

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3760671**	**7.391793**	**.3734563**	**8.493983**	**.4997222**	**.0726983**
Stddev	.0009994	.037473	.0015336	.006168	.0014634	.0007130
%RSD	.2657443	.5069539	.4106383	.0726200	.2928405	.9807341
#1	.3768521	7.368651	.3742873	8.490376	.5010238	.0726192
#2	.3764073	7.371700	.3743950	8.490467	.5000047	.0734476
#3	.3749421	7.435027	.3716866	8.501105	.4981382	.0720282

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**104.9201**	**.2700404**	**.3579706**	**16.87168**	**.3206595**	**.4291097**
Stddev	.8630	.0016911	.0032743	.08433	.0023656	.0009631
%RSD	.8225579	.6262280	.9146945	.4998344	.7377272	.2244473
#1	104.0083	.2697777	.3563701	16.77577	.3226209	.4301631
#2	105.0277	.2718474	.3558044	16.90511	.3213251	.4288917
#3	105.7242	.2684960	.3617374	16.93418	.3180324	.4282742

Sample Name: P5375-01MSD Acquired: 12/26/2024 15:02:47 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.5875750	.2516978	9.330119	5.228129	F 15.75068	.1980018
Stddev	.0023832	.0050956	.069021	.037640	.09369	.0020946
%RSD	.4056023	2.024495	.7397632	.7199553	.5948363	1.057890
#1	.5895361	.2554671	9.250438	5.257200	15.85221	.1970890
#2	.5882664	.2459004	9.368506	5.241575	15.73226	.2003980
#3	.5849225	.2537259	9.371413	5.185612	15.66756	.1965185

Elem	Sr4077
Units	ppm
Avg	.2728308
Stddev	.0009491
%RSD	.3478739
#1	.2735982
#2	.2731248
#3	.2717695

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2622.827	59791.74	12896.19	1795.462	4197.883
Stddev	6.019	311.14	48.87	18.063	14.311
%RSD	.2294800	.5203676	.3789450	1.006060	.3408981
#1	2616.097	60064.82	12852.71	1807.297	4183.058
#2	2624.688	59857.38	12886.78	1804.418	4198.975
#3	2627.695	59453.02	12949.08	1774.670	4211.617

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: P5375-01A Acquired: 12/26/2024 15:06:43 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**.8533361**	**1.854443**	**.8635451**	**2.068378**	**.8609066**	**4.985379**
Stddev	.0017576	.006714	.0028889	.003046	.0007611	.027268
%RSD	.2059638	.3620484	.3345457	.1472794	.0884033	.5469595
#1	.8517600	1.856026	.8668505	2.068137	.8606181	5.001935
#2	.8552314	1.847079	.8615029	2.071538	.8603319	5.000295
#3	.8530169	1.860224	.8622819	2.065460	.8617697	4.953907

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2612982**	**.1544143**	**.1630131**	**15.37364**	**.3750135**	**.2188413**
Stddev	.0009658	.0000511	.0003770	.06025	.0010204	.0004336
%RSD	.3696248	.0330821	.2312748	.3918987	.2720976	.1981274
#1	.2622112	.1544688	.1631334	15.43632	.3755746	.2188701
#2	.2613964	.1543675	.1625906	15.36845	.3738356	.2183940
#3	.2602870	.1544065	.1633153	15.31615	.3756301	.2192597

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3768170**	**7.388380**	**.3732995**	**8.505522**	**.4991717**	**.0731148**
Stddev	.0001765	.011475	.0014725	.033171	.0012500	.0009667
%RSD	.0468387	.1553047	.3944525	.3899991	.2504139	1.322160
#1	.3767353	7.401460	.3746461	8.487342	.4989920	.0741456
#2	.3766962	7.383667	.3735251	8.543809	.4980213	.0722284
#3	.3770196	7.380012	.3717272	8.485416	.5005018	.0729706

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**104.4576**	**.2706406**	**.3578309**	**16.79836**	**.3222753**	**.4290214**
Stddev	.3114	.0009730	.0010360	.05853	.0003803	.0004942
%RSD	.2981072	.3595242	.2895307	.3484272	.1180177	.1151901
#1	104.1991	.2697977	.3589522	16.83112	.3222821	.4287878
#2	104.8033	.2704186	.3576313	16.83317	.3226522	.4286873
#3	104.3704	.2717054	.3569092	16.73078	.3218916	.4295891

Sample Name: P5375-01A Acquired: 12/26/2024 15:06:43 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.5880532	.2435247	9.393097	5.208208	F 15.77109	.1981299
Stddev	.0019976	.0032962	.018632	.019354	.01488	.0009772
%RSD	.3396953	1.353543	.1983625	.3716145	.0943618	.4931985
#1	.5876042	.2399922	9.414530	5.209837	15.76789	.1981244
#2	.5863183	.2465183	9.380753	5.188090	15.75806	.1991098
#3	.5902371	.2440634	9.384009	5.226696	15.78731	.1971555

Elem	Sr4077
Units	ppm
Avg	.2714033
Stddev	.0006577
%RSD	.2423328
#1	.2719581
#2	.2715750
#3	.2706768

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2620.139	59730.19	12860.30	1792.553	4196.079
Stddev	8.237	98.51	33.66	10.176	5.049
%RSD	.3143607	.1649287	.2617516	.5676884	.1203371
#1	2625.756	59616.91	12828.56	1781.018	4201.262
#2	2610.684	59795.78	12856.75	1796.381	4191.175
#3	2623.978	59777.88	12895.60	1800.259	4195.799

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: PB165832BL Acquired: 12/26/2024 15:10:41 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**-.001982**	**-.001631**	**-.000461**	**-.000246**	**-.001461**	**.0092665**	**-.015932**
Stddev	.002261	.001336	.000418	.001573	.000532	.0031112	.000379
%RSD	114.0323	81.88545	90.59860	638.3592	36.39838	33.57532	2.376251
#1	.000411	-.000114	-.000643	.001529	-.001031	.0101971	-.016121
#2	-.002277	-.002151	-.000758	-.001467	-.002056	.0118061	-.015496
#3	-.004081	-.002629	.000017	-.000801	-.001297	.0057961	-.016178

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000395**	**-.000069**	**.0147921**	**.0004952**	**.0000009**	**-.000390**	**.0013970**
Stddev	.0000128	.000021	.0073351	.0001562	.0000614	.000145	.0024892
%RSD	32.42716	30.62042	49.58756	31.53586	6720.116	37.18408	178.1778
#1	.0000451	-.000089	.0228935	.0006710	.0000209	-.000552	.0014283
#2	.0000486	-.000071	.0086017	.0003727	-.000068	-.000346	.0038705
#3	.0000249	-.000047	.0128811	.0004419	.000050	-.000272	-.001108

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001170**	**-.004148**	**-.000068**	**.0043399**	**.0609732**	**-.001571**	**-.000419**
Stddev	.0000524	.003291	.000121	.0002370	.0082347	.000239	.000099
%RSD	44.75192	79.34103	179.1135	5.459815	13.50552	15.20846	23.69370
#1	.0000599	-.000574	-.000049	.0044634	.0535088	-.001310	-.000384
#2	.0001285	-.004817	-.000197	.0044896	.0596041	-.001778	-.000531
#3	.0001627	-.007054	.000043	.0040668	.0698066	-.001625	-.000341

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0660973**	**-.002390**	**-.000287**	**-.000428**	**.0003729**	**-.016275**	**-.007305**
Stddev	.0199165	.000206	.000039	.000489	.0003400	.005696	.001621
%RSD	30.13215	8.609996	13.62470	114.2361	91.19355	34.99721	22.18335
#1	.0450516	-.002612	-.000327	-.000419	.0000024	-.021760	-.009040
#2	.0846499	-.002206	-.000282	.000056	.0006708	-.010389	-.007046
#3	.0685905	-.002350	-.000250	-.000922	.0004454	-.016677	-.005830

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: PB165832BL Acquired: 12/26/2024 15:10:41 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	.0004383	-.004578	.0000683
Stddev	.0031499	.000487	.0000287
%RSD	718.6728	10.63233	42.00443
#1	.0034789	-.005038	.0000951
#2	.0006466	-.004069	.0000718
#3	-.002811	-.004627	.0000381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2823.843	62991.03	13245.93	1886.067	4765.255
Stddev	3.414	84.14	37.14	6.755	10.664
%RSD	.1209154	.1335814	.2803518	.3581371	.2237842
#1	2827.744	63087.90	13258.35	1893.771	4777.399
#2	2821.394	62949.16	13204.18	1883.268	4760.950
#3	2822.393	62936.04	13275.26	1881.161	4757.417

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: PB165833BL Acquired: 12/26/2024 15:15:01 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**-.001439**	**-.001766**	**-.000085**	**.0026734**	**-.001298**	**.0021512**	**-.015964**
Stddev	.001598	.000713	.000670	.0024244	.000991	.0015128	.000285
%RSD	111.0416	40.36112	790.3521	90.68654	76.35010	70.32093	1.786841
#1	.000073	-.002495	.000608	.0014349	-.001998	.0034542	-.015869
#2	-.001279	-.001731	-.000729	.0054669	-.001731	.0025074	-.016285
#3	-.003110	-.001071	-.000134	.0011184	-.000164	.0004922	-.015739

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000114**	**-.000107**	**.0094178**	**-.000057**	**.0000914**	**-.000093**	**-.004729**
Stddev	.0000315	.000058	.0015774	.000079	.0001398	.000343	.002429
%RSD	275.7912	54.25413	16.74939	137.6257	152.8857	367.2214	51.36019
#1	-.000024	-.000047	.0107647	-.000104	.0002419	-.000419	-.004248
#2	.000021	-.000162	.0076824	.000034	.0000668	-.000126	-.002577
#3	.000037	-.000112	.0098063	-.000101	-.000034	.000265	-.007363

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000552**	**-.000736**	**-.000066**	**.0040620**	**.0235926**	**-.001352**	**-.000771**
Stddev	.0001170	.011652	.000069	.0002636	.0196706	.000814	.000317
%RSD	211.9927	1583.743	104.7941	6.490357	83.37589	60.24697	41.08034
#1	-.000038	.002201	-.000056	.0038747	.0016028	-.002114	-.001096
#2	.000017	-.013575	-.000140	.0043635	.0296614	-.000494	-.000753
#3	.000186	.009167	-.000002	.0039477	.0395137	-.001446	-.000463

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0658699**	**-.003084**	**-.000007**	**.0002260**	**.0004387**	**-.023036**	**-.006549**
Stddev	.0238289	.000473	.000133	.0004953	.0004593	.007216	.001527
%RSD	36.17568	15.34567	2005.001	219.1623	104.6972	31.32517	23.31391
#1	.0402848	-.002724	-.000120	-.000328	.0004287	-.025374	-.007143
#2	.0698952	-.002907	-.000039	.000625	.0009028	-.014941	-.004815
#3	.0874298	-.003620	.000139	.000382	-.000016	-.028793	-.007690

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: PB165833BL Acquired: 12/26/2024 15:15:01 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	-.001325	-.004984	-.000034
Stddev	.004000	.000295	.000020
%RSD	301.8523	5.911642	57.64192
#1	.002176	-.005323	-.000050
#2	-.000467	-.004835	-.000012
#3	-.005684	-.004793	-.000041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2822.662	63016.01	13117.94	1924.407	4751.986
Stddev	2.833	65.52	42.82	5.685	12.296
%RSD	.1003586	.1039794	.3264495	.2953897	.2587529
#1	2820.814	62951.78	13072.30	1919.440	4748.332
#2	2821.248	63013.49	13124.28	1930.607	4741.931
#3	2825.923	63082.75	13157.24	1923.176	4765.695

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: PB165832BS Acquired: 12/26/2024 15:19:22 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**.8440871**	**2.038379**	**.9133566**	**2.152338**	**.8761638**	**1.901789**
Stddev	.0017727	.025429	.0003489	.003084	.0009863	.006942
%RSD	.2100094	1.247530	.0382019	.1432687	.1125704	.3650078
#1	.8443104	2.042682	.9137431	2.150713	.8754512	1.900613
#2	.8457376	2.011073	.9132617	2.150408	.8772894	1.909244
#3	.8422134	2.061383	.9130649	2.155895	.8757507	1.895511

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2201240**	**.1672632**	**.1642983**	**.8885982**	**.3794772**	**.1814702**
Stddev	.0005471	.0010516	.0001673	.0093625	.0011733	.0004776
%RSD	.2485231	.6287238	.1018237	1.053628	.3091774	.2631753
#1	.2201678	.1665623	.1644199	.8896000	.3781880	.1813399
#2	.2206479	.1684724	.1643676	.8974195	.3797615	.1810713
#3	.2195564	.1667550	.1641075	.8787751	.3804822	.1819995

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3161418**	**2.785636**	**.1698132**	**1.809407**	**.4513337**	**.0769770**
Stddev	.0004104	.007649	.0004388	.019222	.0011427	.0002557
%RSD	.1298187	.2745745	.2584122	1.062311	.2531829	.3322289
#1	.3157895	2.789124	.1702379	1.822633	.4521465	.0769805
#2	.3165924	2.776866	.1693615	1.818231	.4500271	.0767195
#3	.3160434	2.790920	.1698403	1.787358	.4518275	.0772309

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.416748**	**.2670636**	**.2052360**	**10.42525**	**.2505943**	**.4233935**
Stddev	.018693	.0014017	.0010993	.04562	.0011061	.0005138
%RSD	.5471059	.5248548	.5356380	.4376347	.4413827	.1213455
#1	3.405322	.2659003	.2065033	10.41591	.2507519	.4232636
#2	3.406603	.2666706	.2045405	10.38502	.2516131	.4229571
#3	3.438321	.2686198	.2046640	10.47482	.2494178	.4239597

Sample Name: PB165832BS Acquired: 12/26/2024 15:19:22 Type: Unk
Method: NON EPA-6010-200.7(v2559) 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	**.6043931**	**.1752523**	**.7497585**	**5.114966**	F **-.011595**	**.2009634**
Stddev	.0007478	.0004108	.0172553	.021724	.002044	.0017153
%RSD	.1237279	.2344323	2.301451	.4247204	17.62429	.8535180
#1	.6043935	.1748079	.7473506	5.132477	-.013510	.1989861
#2	.6036451	.1756183	.7338335	5.090655	-.009443	.2020505
#3	.6051407	.1753307	.7680913	5.121765	-.011832	.2018538

Elem	Sr4077
Units	ppm
Avg	**.1848552**
Stddev	.0002131
%RSD	.1152773
#1	.1850979
#2	.1847689
#3	.1846988

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2788.563**	**62171.32**	**12765.11**	**1903.294**	**4591.396**
Stddev	1.729	177.47	31.81	12.341	5.943
%RSD	.0620007	.2854454	.2491857	.6484094	.1294451
#1	2790.554	62154.10	12752.02	1893.742	4585.923
#2	2787.699	62356.77	12741.93	1917.229	4597.718
#3	2787.437	62003.09	12801.37	1898.912	4590.546

Sample Name: CCV06 Acquired: 12/26/2024 15:24:24 Type: Unk
Method: NON EPA-6010-200.7(v2560) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.317104**	**5.145736**	**4.576199**	**4.567336**	**4.522735**	**9.690010**
Stddev	.008446	.037802	.010771	.009543	.003001	.019213
%RSD	.1588444	.7346369	.2353739	.2089304	.0663495	.1982740
#1	5.307583	5.152736	4.588289	4.563264	4.522347	9.673234
#2	5.323692	5.179549	4.572684	4.578239	4.519947	9.685826
#3	5.320037	5.104923	4.567625	4.560505	4.525911	9.710970

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.096637**	**.2696811**	**2.310783**	**26.74724**	**.9246878**	**2.267743**
Stddev	.071559	.0018261	.007988	.02924	.0013029	.006569
%RSD	.7866545	.6771199	.3456639	.1093363	.1409003	.2896685
#1	9.020478	.2711312	2.318828	26.77799	.9232598	2.274682
#2	9.162475	.2702817	2.310665	26.71977	.9258119	2.266926
#3	9.106959	.2676304	2.302854	26.74398	.9249916	2.261621

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.283791**	**4.632622**	**2.508858**	**22.98938**	**2.251686**	**1.220516**
Stddev	.001445	.022433	.002528	.06943	.006144	.001501
%RSD	.1125485	.4842402	.1007710	.3020142	.2728746	.1229396
#1	1.285459	4.618645	2.510209	23.06349	2.258724	1.222157
#2	1.282972	4.620723	2.505941	22.97883	2.248944	1.219213
#3	1.282941	4.658498	2.510424	22.92583	2.247390	1.220179

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.98003**	**2.263109**	**2.498460**	**27.22309**	F **4.253650**	**5.235714**
Stddev	.16942	.003195	.002525	.20021	.026550	.003534
%RSD	.7065122	.1411585	.1010698	.7354382	.6241757	.0674944
#1	23.79343	2.260364	2.496539	27.01098	4.280429	5.232362
#2	24.02247	2.266615	2.497520	27.24950	4.253187	5.239406
#3	24.12420	2.262347	2.501320	27.40877	4.227334	5.235374

Sample Name: CCV06 Acquired: 12/26/2024 15:24:24 Type: Unk
Method: NON EPA-6010-200.7(v2560) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 4.411320	F 4.468832	5.168067	4.669171	4.698829	5.090764
Stddev	.006561	.010449	.041667	.013835	.025091	.028086
%RSD	.1487315	.2338128	.8062344	.2963051	.5339933	.5517102
#1	4.418495	4.458557	5.127801	4.679194	4.713624	5.058827
#2	4.409840	4.468491	5.165394	4.674933	4.713004	5.111618
#3	4.405626	4.479446	5.211006	4.653386	4.669858	5.101846

Elem	Sr4077
Units	ppm
Avg	4.704249
Stddev	.023347
%RSD	.4962896
#1	4.677291
#2	4.717551
#3	4.717904

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2608.146	59009.35	12241.88	1780.564	4103.734
Stddev	2.416	206.31	55.25	11.581	7.314
%RSD	.0926407	.3496147	.4513431	.6504036	.1782373
#1	2609.136	59064.20	12178.08	1787.465	4095.358
#2	2609.911	59182.70	12272.92	1787.033	4106.981
#3	2605.393	58781.17	12274.62	1767.194	4108.863

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB06 Acquired: 12/26/2024 15:30:33 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002097**	**-.000487**	**.0001758**	**.0020030**	**-.001631**	**.0016407**	**-.018744**
Stddev	.000679	.001977	.0010342	.0009689	.000381	.0034429	.000500
%RSD	32.36709	406.3498	588.4225	48.37259	23.33037	209.8495	2.667575
#1	-.001610	.000550	-.000376	.0029343	-.001307	-.002102	-.018607
#2	-.002873	-.002766	-.000465	.0020742	-.002050	.002352	-.018326
#3	-.001809	.000756	.001369	.0010004	-.001537	.004672	-.019298

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000197**	**-.000067**	**.0107459**	**-.000298**	**-.000035**	**.0000301**	**-.005545**
Stddev	.0000286	.000046	.0011414	.000113	.000059	.0004219	.002962
%RSD	145.2879	68.79014	10.62158	37.90268	167.6099	1400.891	53.41333
#1	-.000005	-.000119	.0107473	-.000169	-.000041	-.000455	-.008333
#2	.000013	-.000032	.0096038	-.000380	.000026	.000310	-.005865
#3	.000051	-.000050	.0118866	-.000345	-.000091	.000236	-.002436

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000769**	**.0061484**	**.0000050**	**.0041072**	**-.022445**	**-.002130**	**-.000574**
Stddev	.0001326	.0066654	.0002537	.0000525	.016728	.001210	.000099
%RSD	172.4123	108.4078	5096.576	1.279188	74.53158	56.81907	17.27321
#1	-.000011	.0005194	.0002671	.0040806	-.040438	-.001121	-.000688
#2	.000012	.0135085	-.000239	.0041677	-.019533	-.001797	-.000531
#3	.000229	.0044173	-.000013	.0040732	-.007363	-.003472	-.000504

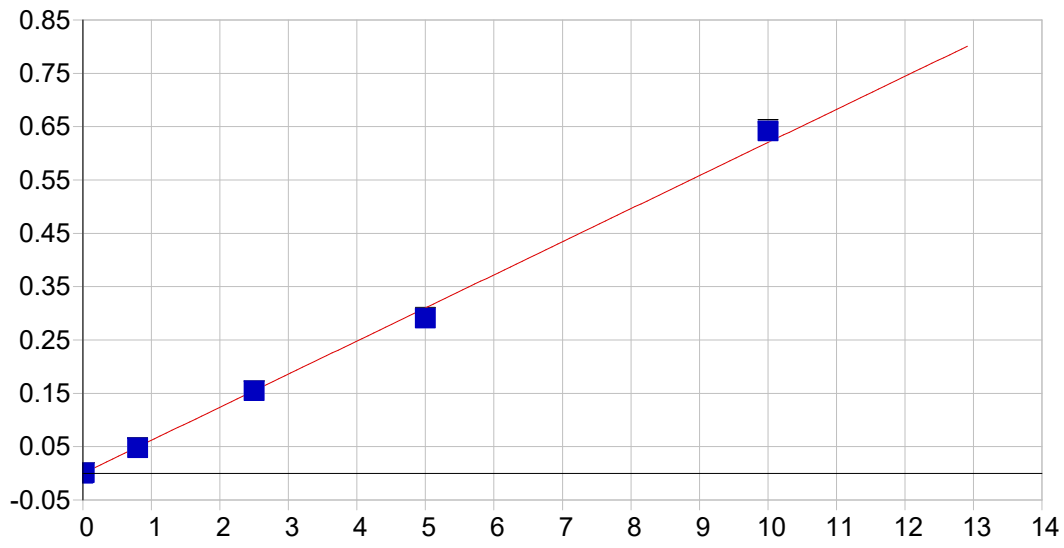
Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0514129**	**-.000261**	**.0000699**	**.0003939**	**.0004475**	**-.024174**	**-.005726**
Stddev	.0204835	.000421	.0001984	.0002086	.0005355	.007020	.000789
%RSD	39.84112	161.3825	284.0413	52.97078	119.6709	29.03844	13.78653
#1	.0281555	-.000425	.0000811	.0002064	.0001533	-.024507	-.004845
#2	.0667688	.000218	.0002624	.0006186	.0001236	-.031021	-.006370
#3	.0593145	-.000576	-.000134	.0003565	.0010656	-.016994	-.005963

Reviewed By:Ketan
On:1/1/2025 11:26:04 PM
Inst Id :P4
LB :LB134090

Sample Name: CCB06 Acquired: 12/26/2024 15:30:33 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.003904**	**-.005189**	**.0002081**
Stddev	.002807	.000110	.0000403
%RSD	71.90848	2.111037	19.39099
#1	-.004358	-.005314	.0002386
#2	-.006457	-.005145	.0002233
#3	-.000897	-.005108	.0001623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2785.916**	**62214.03**	**13296.80**	**1864.429**	**4747.247**
Stddev	5.987	138.63	61.26	4.378	5.902
%RSD	.2149028	.2228307	.4606933	.2348048	.1243327
#1	2792.463	62206.18	13315.16	1859.984	4753.901
#2	2780.721	62079.49	13346.78	1864.567	4742.644
#3	2784.563	62356.42	13228.46	1868.736	4745.196

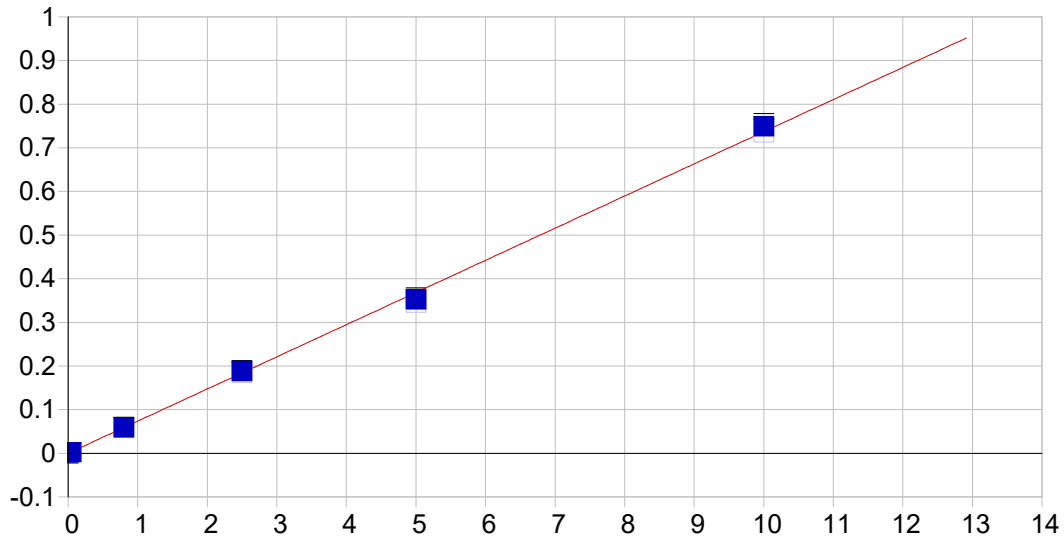


As 189.042 {479}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000102	Re-Slope:	1.000000
A1 (Gain):	0.062036	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999122	Status:	OK.
Std Error of Est:	0.000061		
Predicted MDL:	0.002107		
Predicted MQL:	0.007022		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00010	.000	1
S1	.02000	.02028	.000	1.39	.00115	.000	1
S3	2.5000	2.4917	-.008	-.332	.15431	.001	1
S4	5.0000	4.6938	-.306	-6.12	.29075	.001	1
S5	10.000	10.347	.347	3.47	.64110	.003	1
S2	.80000	.76746	-.033	-4.07	.04745	.000	1

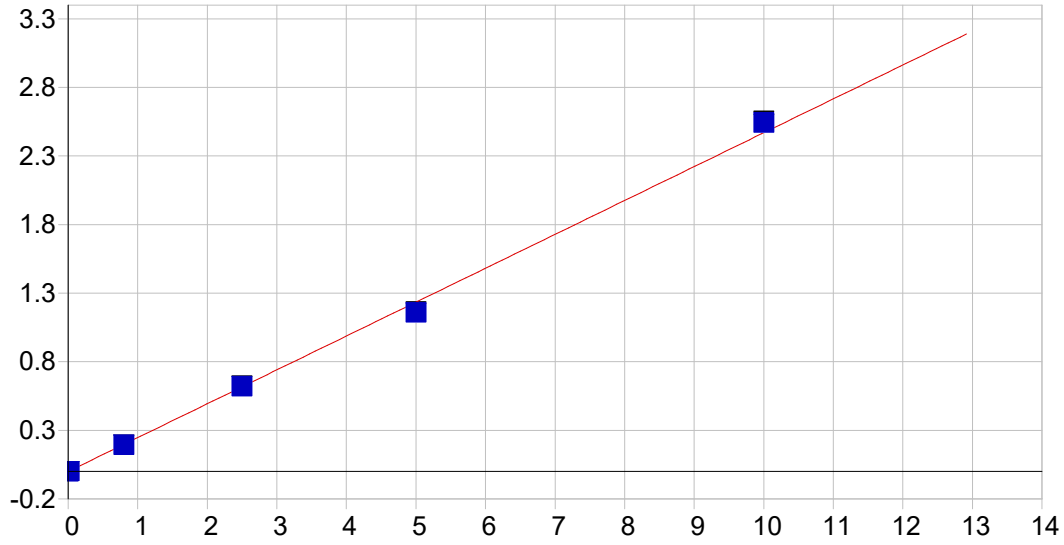


Tl 190.856 {477}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000031	Re-Slope:	1.000000
A1 (Gain):	0.073694	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999620	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.001548		
Predicted MQL:	0.005160		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00003	.000	1
S1	.04000	.03921	-.001	-1.96	.00267	.000	1
S3	2.5000	2.5498	.050	1.99	.18448	.002	1
S4	5.0000	4.7803	-.220	-4.39	.34546	.004	1
S5	10.000	10.166	.166	1.66	.73559	.007	1
S2	.80000	.80441	.004	.552	.05816	.000	1

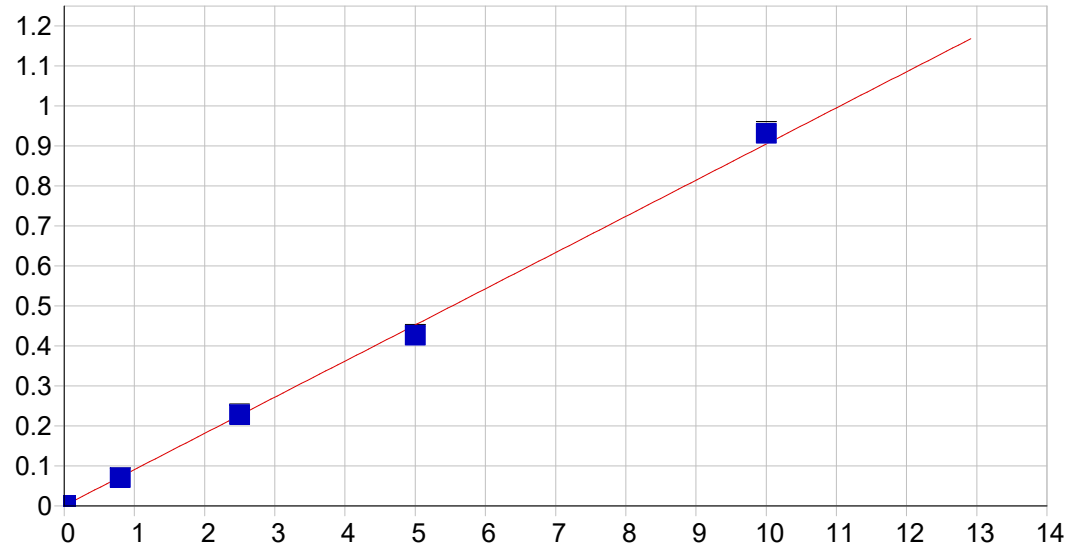


Pb 220.353 {453}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000214	Re-Slope:	1.000000
A1 (Gain):	0.246981	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999226	Status:	OK.
Std Error of Est:	0.000176		
Predicted MDL:	0.000987		
Predicted MQL:	0.003289		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00021	.000	1
S1	.01200	.01169	-.000	-2.61	.00261	.000	1
S3	2.5000	2.5209	.021	.836	.62172	.002	1
S4	5.0000	4.6941	-.306	-6.12	1.1578	.005	1
S5	10.000	10.301	.301	3.01	2.5413	.012	1
S2	.80000	.78389	-.016	-2.01	.19318	.001	1

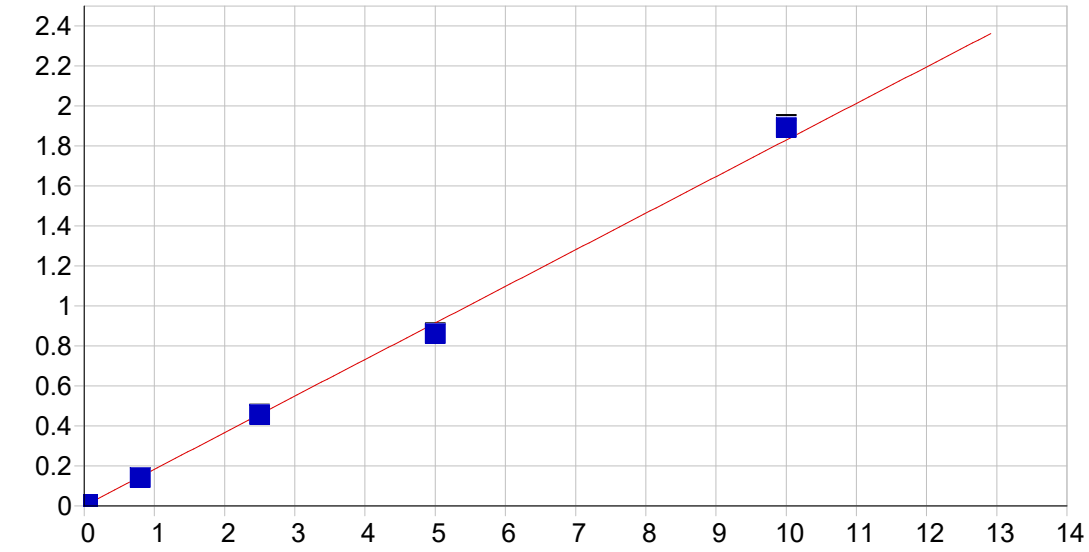


Se 196.090 {472}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000426	Re-Slope:	1.000000
A1 (Gain):	0.090440	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999285	Status:	OK.
Std Error of Est:	0.000080		
Predicted MDL:	0.001945		
Predicted MQL:	0.006482		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00043	.000	1
S1	.02000	.01949	-.001	-2.57	.00219	.000	1
S3	2.5000	2.5168	.017	.673	.22799	.002	1
S4	5.0000	4.7154	-.285	-5.69	.42676	.002	1
S5	10.000	10.297	.297	2.97	.93148	.004	1
S2	.80000	.77090	-.029	-3.64	.07013	.000	1

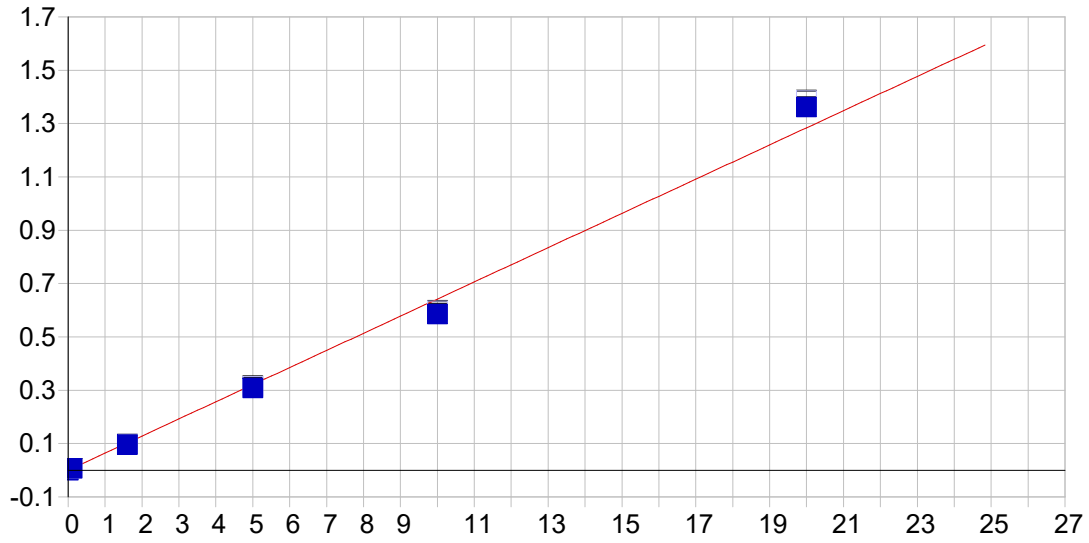


Sb 206.833 {463}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000258	Re-Slope:	1.000000
A1 (Gain):	0.182955	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999184	Status:	OK.
Std Error of Est:	0.000275		
Predicted MDL:	0.001165		
Predicted MQL:	0.003882		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00026	.000	1
S1	.05000	.04693	-.003	-6.14	.00886	.000	1
S3	2.5000	2.4928	-.007	-.287	.45758	.001	1
S4	5.0000	4.7029	-.297	-5.94	.86316	.003	1
S5	10.000	10.336	.336	3.36	1.8962	.012	1
S2	.80000	.77167	-.028	-3.54	.14184	.000	1

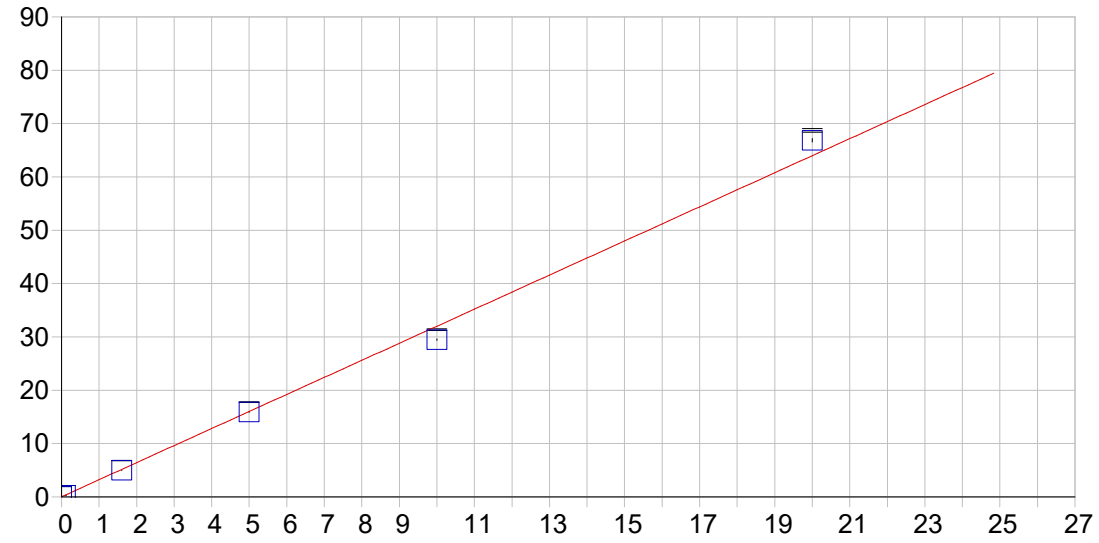


Al 396.152 { 85}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000151	Re-Slope:	1.000000
A1 (Gain):	0.064217	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997825	Status:	OK.
Std Error of Est:	0.000321		
Predicted MDL:	0.007004		
Predicted MQL:	0.023348		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00015	.000	1
S1	.10000	.09970	-.000	-.301	.00675	.000	1
S3	5.0000	4.8009	-.199	-3.98	.31438	.002	1
S4	10.000	9.1122	-.888	-8.88	.59746	.003	1
S5	20.000	21.199	1.20	6.00	1.3861	.002	1
S2	1.6000	1.4881	-.112	-6.99	.09740	.000	1

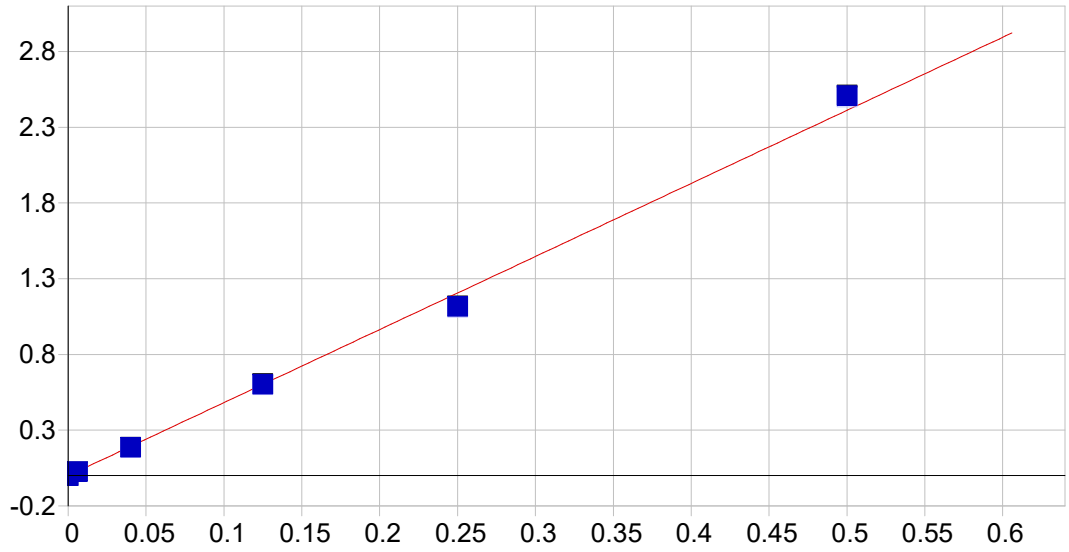


Ba 493.409 { 68}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.033016	Re-Slope:	1.000000
A1 (Gain):	3.197189	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998546	Status:	OK.
Std Error of Est:	0.012799		
Predicted MDL:	0.000512		
Predicted MQL:	0.001708		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.03307	.002	1
S1	.10000	.09154	-.008	-8.46	.32568	.002	1
S3	5.0000	4.9609	-.039	-.782	15.894	.070	1
S4	10.000	9.2068	-.793	-7.93	29.469	.157	1
S5	20.000	20.902	.902	4.51	66.861	.350	1
S2	1.6000	1.5387	-.061	-3.83	4.9527	.029	1

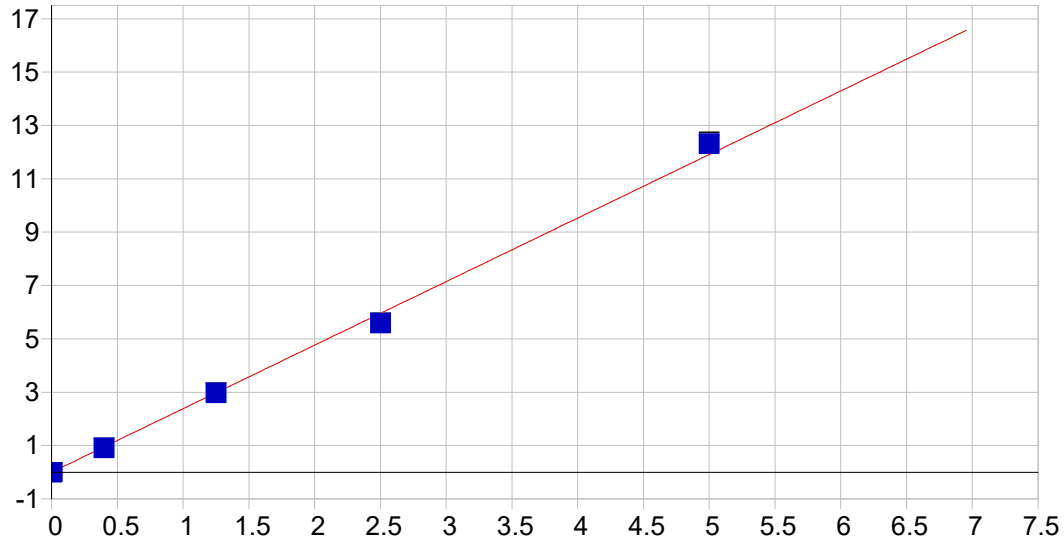


Be 234.861 {144}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000389	Re-Slope:	1.000000
A1 (Gain):	4.823930	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998766	Status:	OK.
Std Error of Est:	0.000687		
Predicted MDL:	0.000051		
Predicted MQL:	0.000169		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00038	.000	1
S1	.00600	.00568	-.000	-5.30	.02681	.000	1
S3	.12500	.12490	-.000	-.077	.59943	.004	1
S4	.25000	.23149	-.019	-7.40	1.1109	.004	1
S5	.50000	.52029	.020	4.06	2.4986	.004	1
S2	.04000	.03863	-.001	-3.42	.18510	.000	1

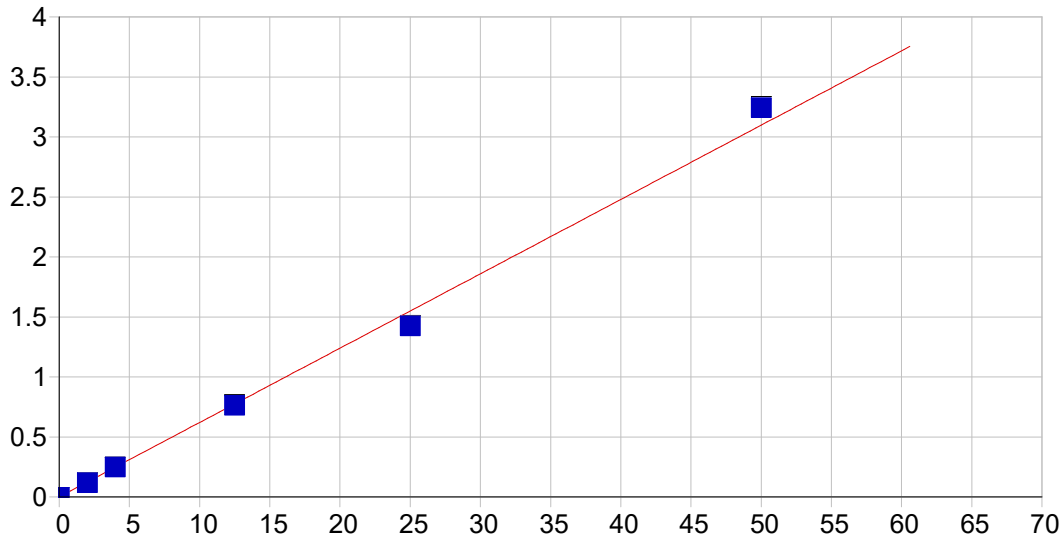


Cd 226.502 {449}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000066	Re-Slope:	1.000000
A1 (Gain):	2.382511	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999128	Status:	OK.
Std Error of Est:	0.000904		
Predicted MDL:	0.000078		
Predicted MQL:	0.000261		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00007	.000	1
S1	.00600	.00567	-.000	-5.47	.01364	.000	1
S3	1.2500	1.2478	-.002	-.176	2.9753	.008	1
S4	2.5000	2.3470	-.153	-6.12	5.5964	.018	1
S5	5.0000	5.1722	.172	3.44	12.332	.049	1
S2	.40000	.38332	-.017	-4.17	.91407	.003	1

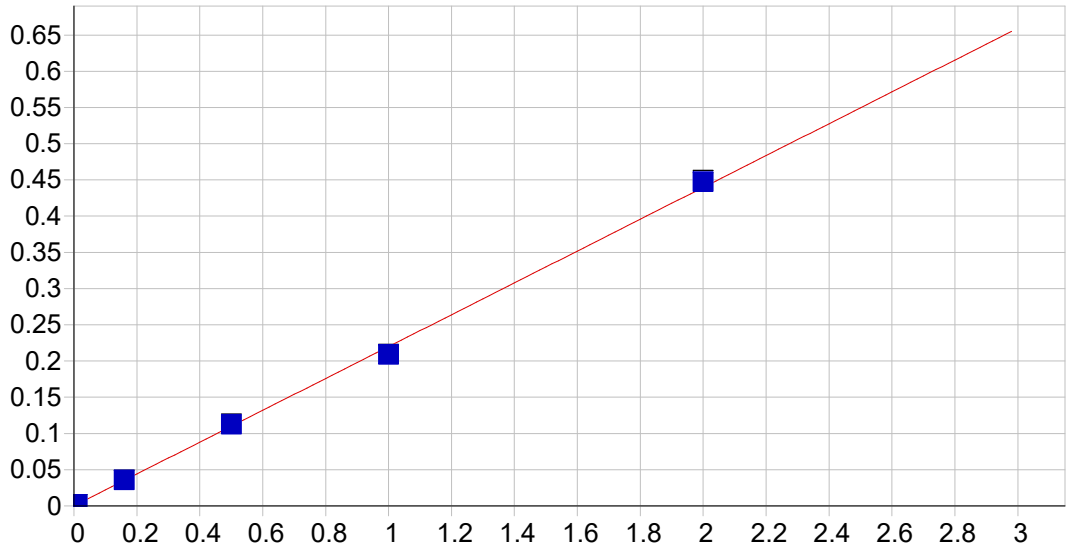


Ca 373.690 { 90}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000812	Re-Slope:	1.000000
A1 (Gain):	0.061939	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998488	Status:	OK.
Std Error of Est:	0.001804		
Predicted MDL:	0.007408		
Predicted MQL:	0.024694		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00022	.000	.000	.00083	.000	1
S2	4.0000	3.9773	-.023	-.566	.24717	.001	1
S3	12.500	12.306	-.194	-1.55	.76302	.006	1
S4	25.000	22.978	-2.02	-8.09	1.4240	.006	1
S5	50.000	52.349	2.35	4.70	3.2433	.009	1
S1	2.0000	1.8903	-.110	-5.49	.11789	.000	1

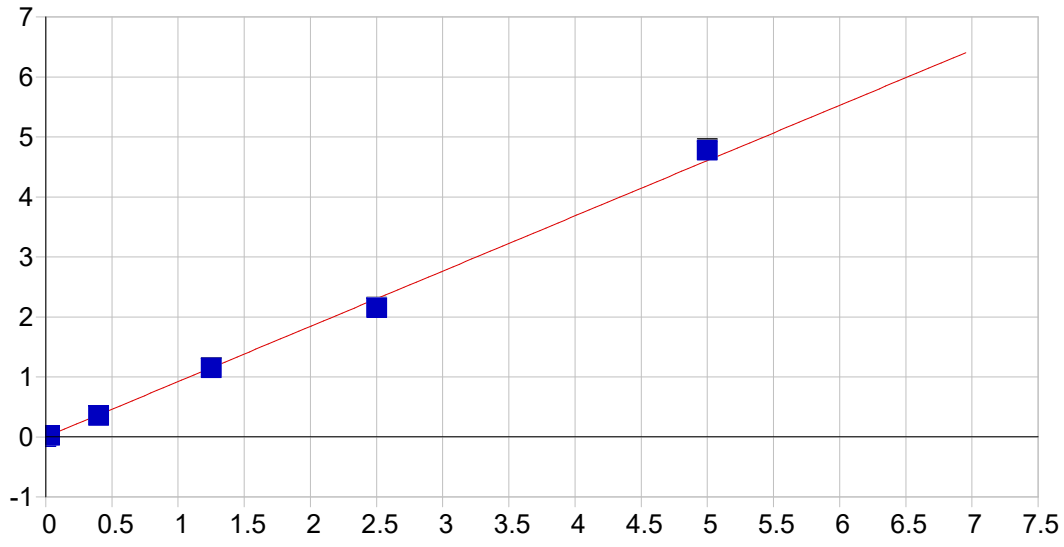


Cr 267.716 {126}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000109	Re-Slope:	1.000000
A1 (Gain):	0.219784	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999538	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	0.000349		
Predicted MQL:	0.001162		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00011	.000	1
S1	.01000	.00919	-.001	-8.14	.00213	.000	1
S3	.50000	.51140	.011	2.28	.11254	.001	1
S4	1.0000	.95117	-.049	-4.88	.20923	.000	1
S5	2.0000	2.0365	.036	1.82	.44783	.002	1
S2	.16000	.16177	.002	1.10	.03567	.000	1

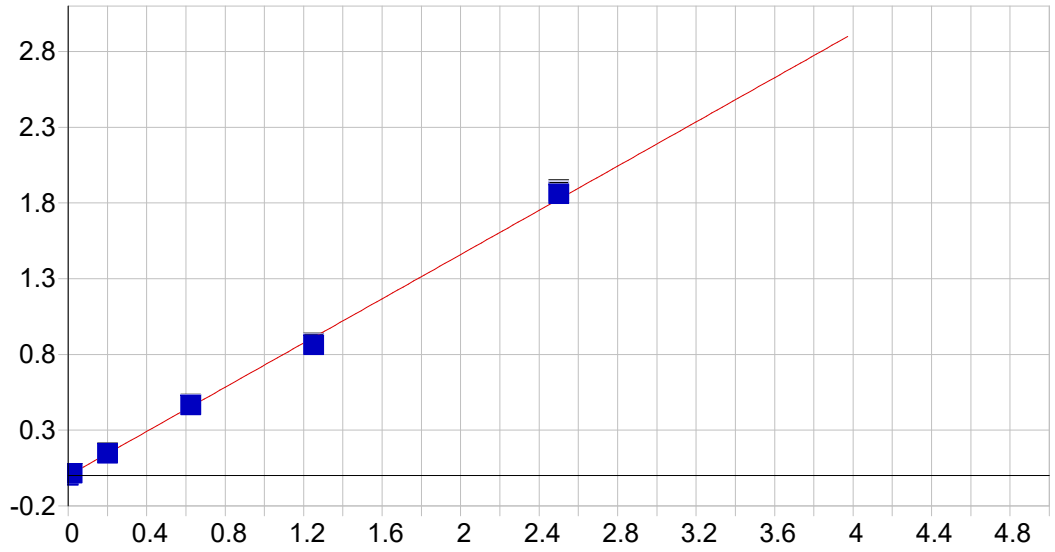


Co 228.616 {448}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000014	Re-Slope:	1.000000
A1 (Gain):	0.921050	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999025	Status:	OK.
Std Error of Est:	0.000828		
Predicted MDL:	0.000182		
Predicted MQL:	0.000606		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00001	.000	1
S1	.03000	.02865	-.001	-4.51	.02625	.000	1
S3	1.2500	1.2453	-.005	-.378	1.1489	.004	1
S4	2.5000	2.3378	-.162	-6.49	2.1572	.006	1
S5	5.0000	5.1840	.184	3.68	4.7825	.023	1
S2	.40000	.38425	-.016	-3.94	.35452	.001	1

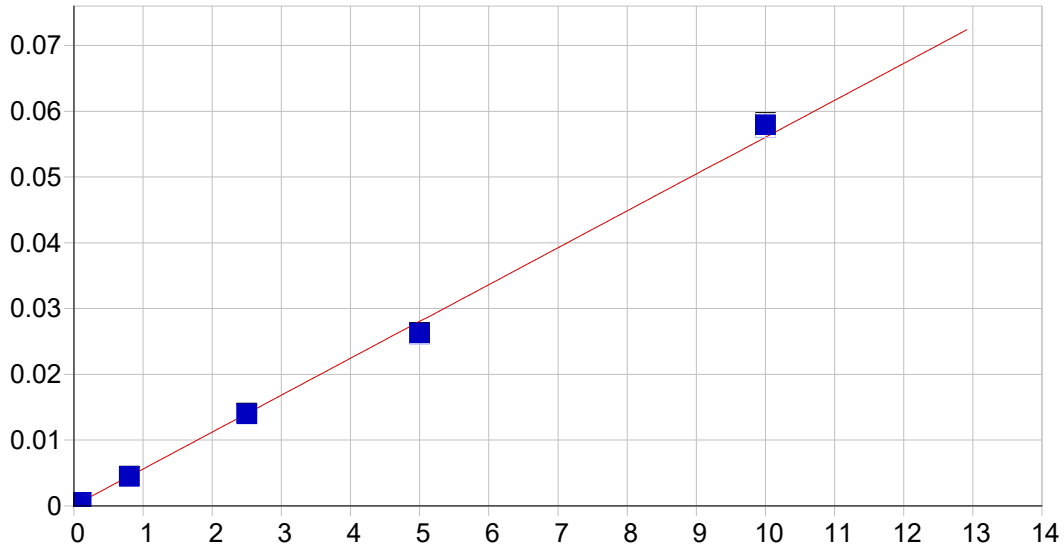


Cu 224.700 {450}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000342	Re-Slope:	1.000000
A1 (Gain):	0.729870	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999462	Status:	OK.
Std Error of Est:	0.000284		
Predicted MDL:	0.000380		
Predicted MQL:	0.001268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00034	.000	1
S1	.02000	.02138	.001	6.91	.01545	.000	1
S3	.62500	.63921	.014	2.27	.47055	.001	1
S4	1.2500	1.1827	-.067	-5.38	.87160	.003	1
S5	2.5000	2.5496	.050	1.98	1.8779	.010	1
S2	.20000	.20208	.002	1.04	.14854	.001	1

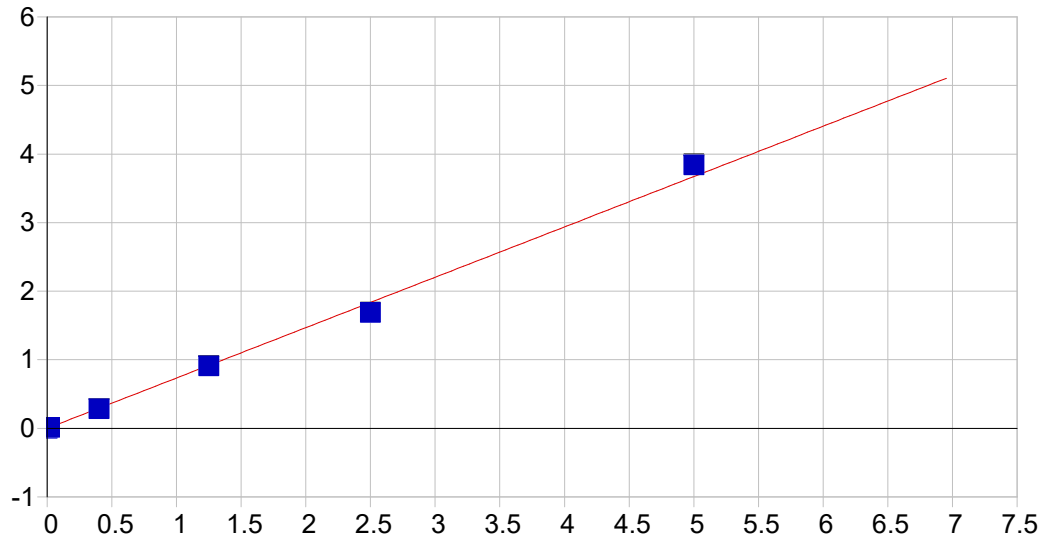


Fe 240.488 {140}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000035	Re-Slope:	1.000000
A1 (Gain):	0.005603	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999097	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.004106		
Predicted MQL:	0.013686		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00003	.000	1
S1	.10000	.08672	-.013	-13.3	.00051	.000	1
S3	2.5000	2.4991	-.001	-.036	.01392	.000	1
S4	5.0000	4.6867	-.313	-6.27	.02605	.000	1
S5	10.000	10.335	.335	3.35	.05746	.000	1
S2	.80000	.79243	-.008	-.946	.00444	.000	1

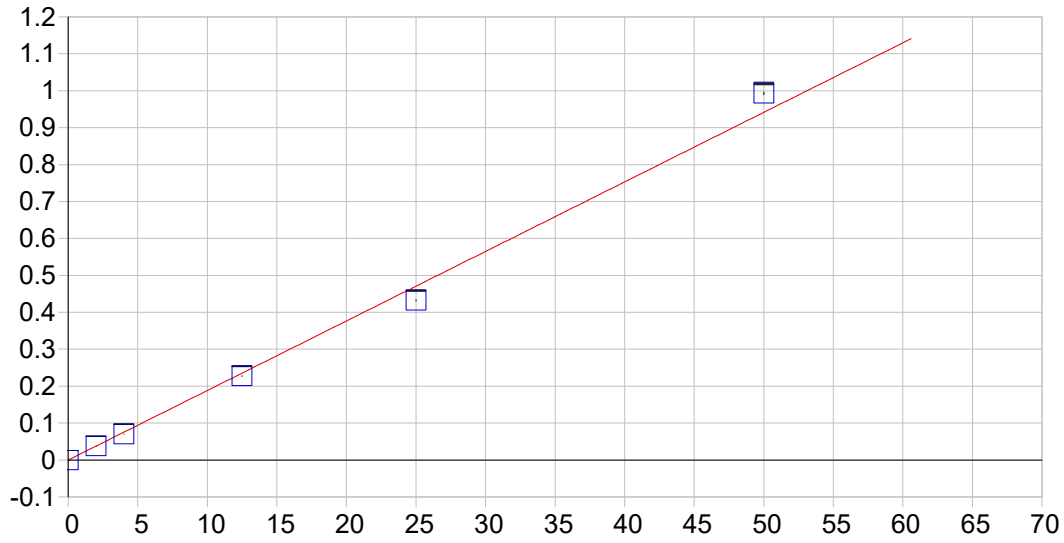


Mn 257.610 {131}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000003	Re-Slope:	1.000000
A1 (Gain):	0.734315	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998479	Status:	OK.
Std Error of Est:	0.000672		
Predicted MDL:	0.000261		
Predicted MQL:	0.000870		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00000	.000	1
S1	.02000	.01956	-.000	-2.20	.01437	.000	1
S3	1.2500	1.2368	-.013	-1.06	.90835	.006	1
S4	2.5000	2.2964	-.204	-8.14	1.6866	.006	1
S5	5.0000	5.2316	.232	4.63	3.8424	.012	1
S2	.40000	.38568	-.014	-3.58	.28326	.001	1

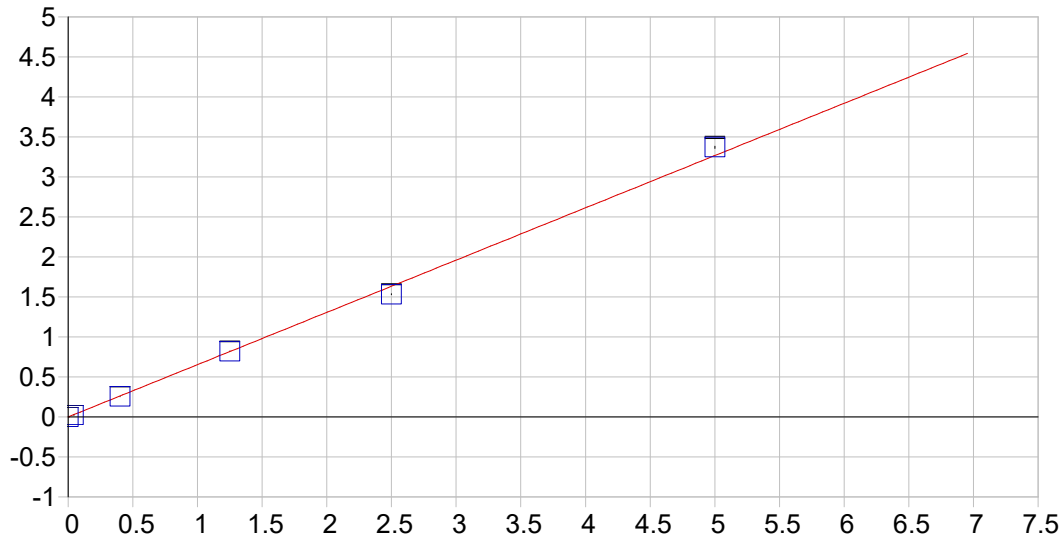


Mg 279.079 {121}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000137	Re-Slope:	1.000000
A1 (Gain):	0.018831	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998144	Status:	OK.
Std Error of Est:	0.000608		
Predicted MDL:	0.011002		
Predicted MQL:	0.036674		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00026	.000	.000	-.00013	.000	1
S2	4.0000	3.7313	-.269	-6.72	.07013	.000	1
S3	12.500	12.071	-.429	-3.43	.22717	.001	1
S4	25.000	22.965	-2.04	-8.14	.43230	.002	1
S5	50.000	52.733	2.73	5.47	.99286	.003	1
S1	2.0000	2.0001	.000	.003	.03753	.000	1

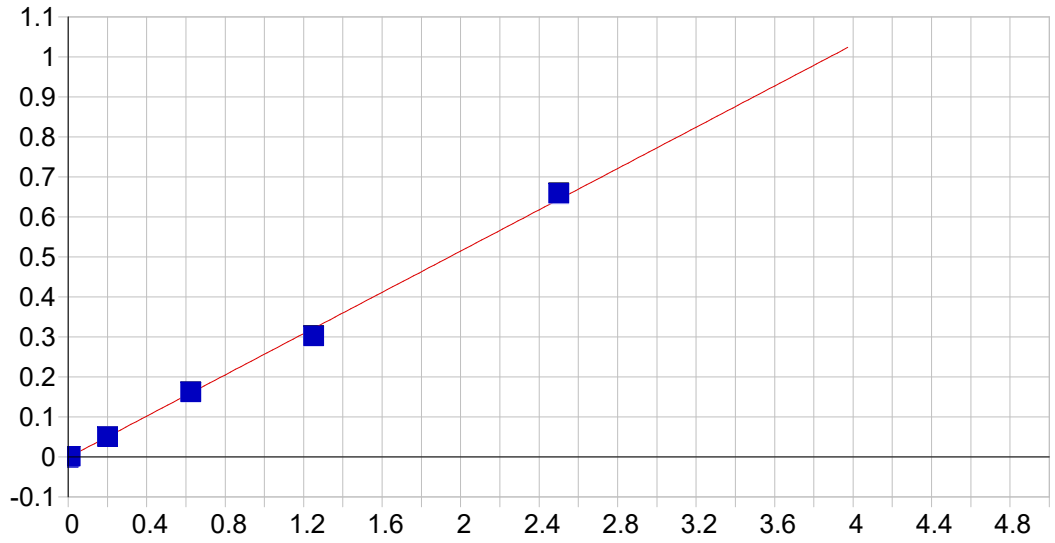


Ni 231.604 {446}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000029	Re-Slope:	1.000000
A1 (Gain):	0.653317	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999191	Status:	OK.
Std Error of Est:	0.000617		
Predicted MDL:	0.000287		
Predicted MQL:	0.000955		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.04000	.03826	-.002	-4.35	.02502	.000	1
S3	1.2500	1.2554	.005	.431	.82020	.002	1
S4	2.5000	2.3470	-.153	-6.12	1.5333	.005	1
S5	5.0000	5.1601	.160	3.20	3.3712	.014	1
S2	.40000	.38929	-.011	-2.68	.25436	.001	1

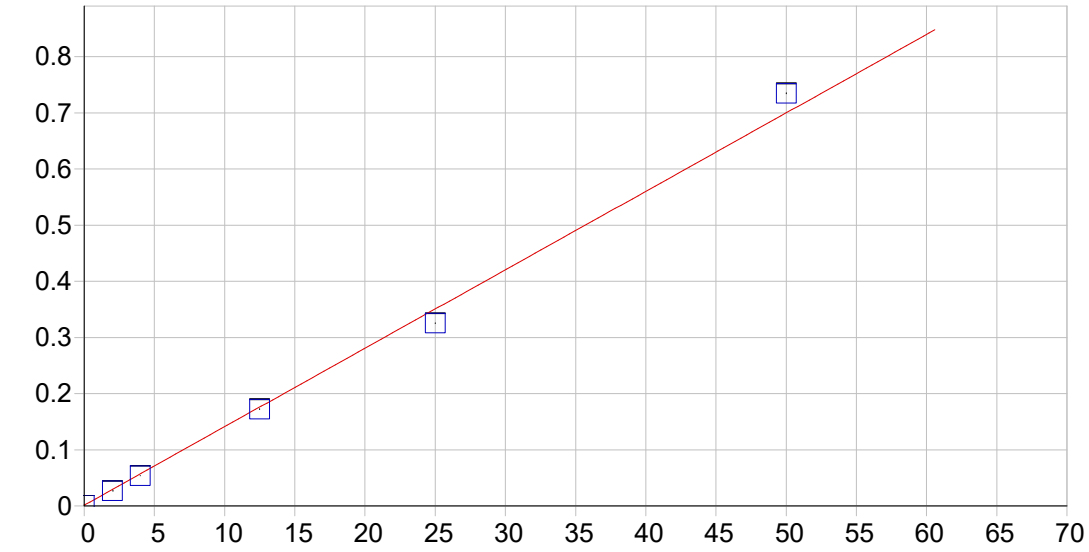


Ag 328.068 {103}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001245	Re-Slope:	1.000000
A1 (Gain):	0.257934	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999366	Status:	OK.
Std Error of Est:	0.000076		
Predicted MDL:	0.000382		
Predicted MQL:	0.001272		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00125	.000	1
S1	.01000	.00999	-.000	-.077	.00131	.000	1
S3	.62500	.63345	.008	1.35	.16150	.000	1
S4	1.2500	1.1783	-.072	-5.74	.30140	.000	1
S5	2.5000	2.5618	.062	2.47	.65698	.001	1
S2	.20000	.20145	.001	.723	.05051	.000	1

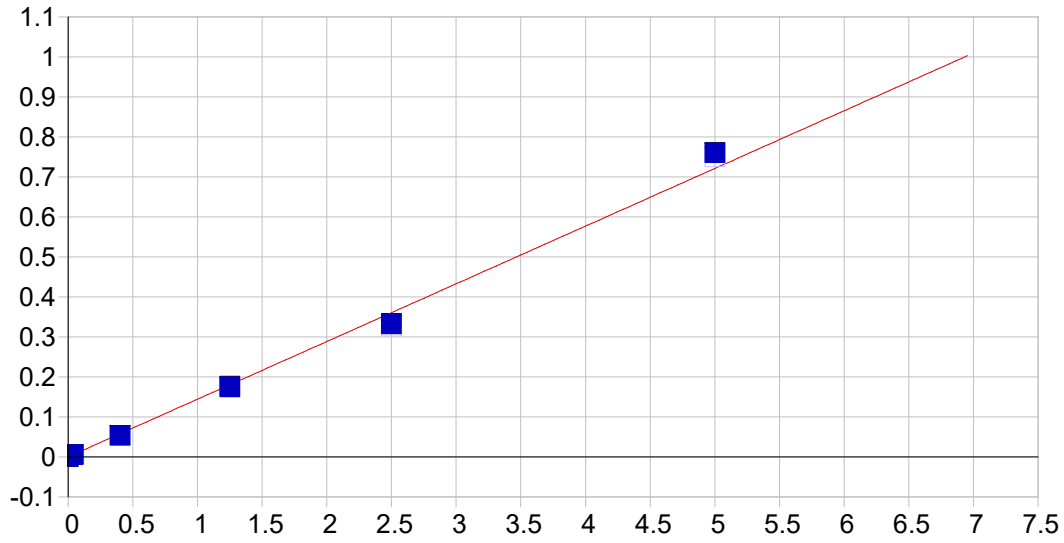


Na 589.592 { 57}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001427	Re-Slope:	1.000000
A1 (Gain):	0.013969	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998433	Status:	OK.
Std Error of Est:	0.000414		
Predicted MDL:	0.010874		
Predicted MQL:	0.036246		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00039	.000	.000	.00143	.000	1
S2	4.0000	3.7475	-.253	-6.31	.05377	.000	1
S3	12.500	12.230	-.270	-2.16	.17227	.001	1
S4	25.000	23.197	-1.80	-7.21	.32546	.000	1
S5	50.000	52.505	2.50	5.01	.73486	.001	1
S1	2.0000	1.8207	-.179	-8.96	.02686	.000	1

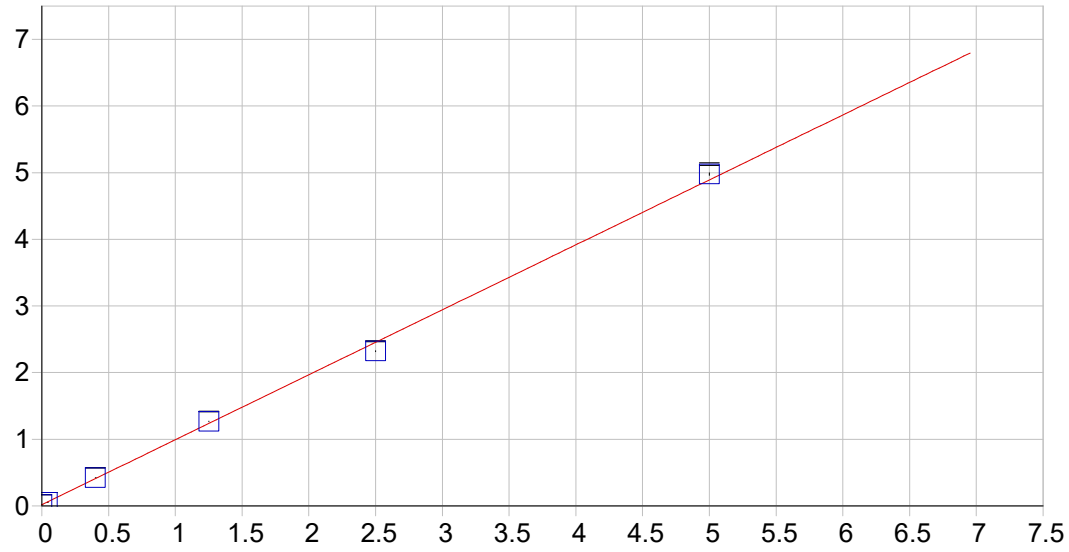


V 292.402 {115}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000082	Re-Slope:	1.000000
A1 (Gain):	0.144215	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998117	Status:	OK.
Std Error of Est:	0.000205		
Predicted MDL:	0.001466		
Predicted MQL:	0.004887		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00008	.000	1
S1	.04000	.03597	-.004	-10.1	.00505	.000	1
S3	1.2500	1.2132	-.037	-2.95	.17241	.002	1
S4	2.5000	2.3010	-.199	-7.96	.32667	.002	1
S5	5.0000	5.2680	.268	5.36	.74930	.001	1
S2	.40000	.37169	-.028	-7.08	.05284	.000	1

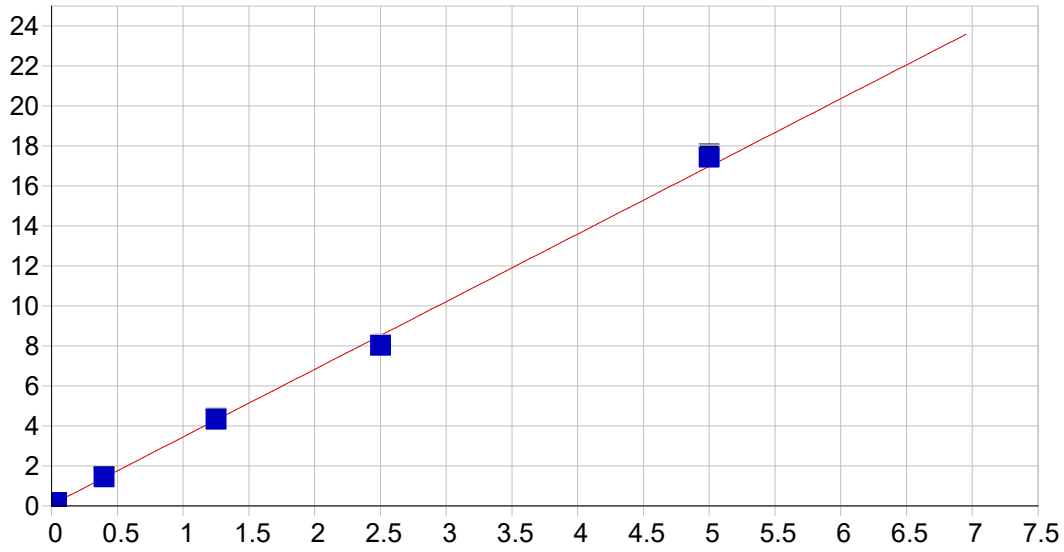


Zn 206.200 {464}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.018376	Re-Slope:	1.000000
A1 (Gain):	0.974718	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999416	Status:	OK.
Std Error of Est:	0.000782		
Predicted MDL:	0.000178		
Predicted MQL:	0.000593		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01838	.000	1
S1	.04000	.03707	-.003	-7.32	.05451	.000	1
S3	1.2500	1.2822	.032	2.58	1.2682	.003	1
S4	2.5000	2.3637	-.136	-5.45	2.3223	.008	1
S5	5.0000	5.0915	.091	1.83	4.9811	.020	1
S2	.40000	.41552	.016	3.88	.42340	.001	1

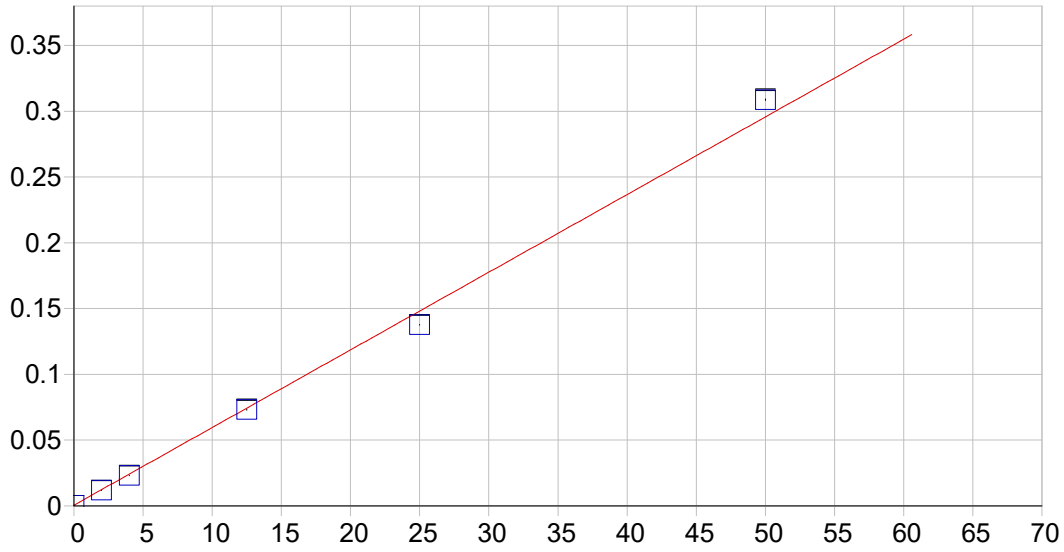


Zn 213.856 {158}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.062750	Re-Slope:	1.000000
A1 (Gain):	3.384115	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999315	Status:	OK.
Std Error of Est:	0.002962		
Predicted MDL:	0.000222		
Predicted MQL:	0.000739		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.06276	.000	1
S1	.04000	.03713	-.003	-7.16	.18937	.001	1
S3	1.2500	1.2605	.011	.842	4.3579	.026	1
S4	2.5000	2.3517	-.148	-5.93	8.0801	.009	1
S5	5.0000	5.1339	.134	2.68	17.554	.059	1
S2	.40000	.40668	.007	1.67	1.4484	.004	1

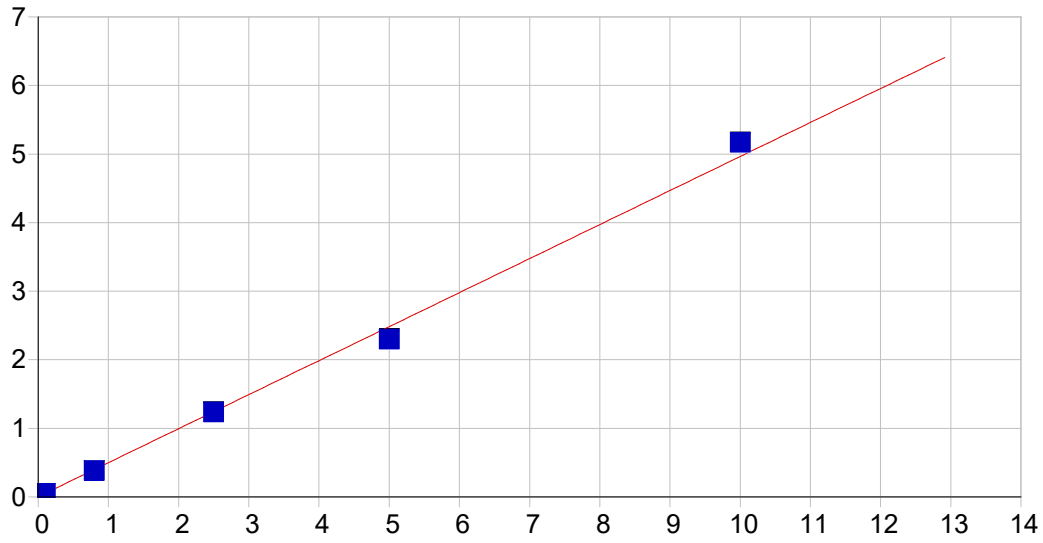


K 766.490 { 44}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000561	Re-Slope:	1.000000
A1 (Gain):	0.005903	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998725	Status:	OK.
Std Error of Est:	0.000158		
Predicted MDL:	0.029071		
Predicted MQL:	0.096904		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00026	.000	.000	.00056	.000	1
S2	4.0000	3.8260	-.174	-4.35	.02315	.000	1
S3	12.500	12.317	-.183	-1.47	.07327	.000	1
S4	25.000	23.226	-1.77	-7.10	.13767	.000	1
S5	50.000	52.221	2.22	4.44	.30884	.001	1
S1	2.0000	1.9107	-.089	-4.46	.01184	.000	1

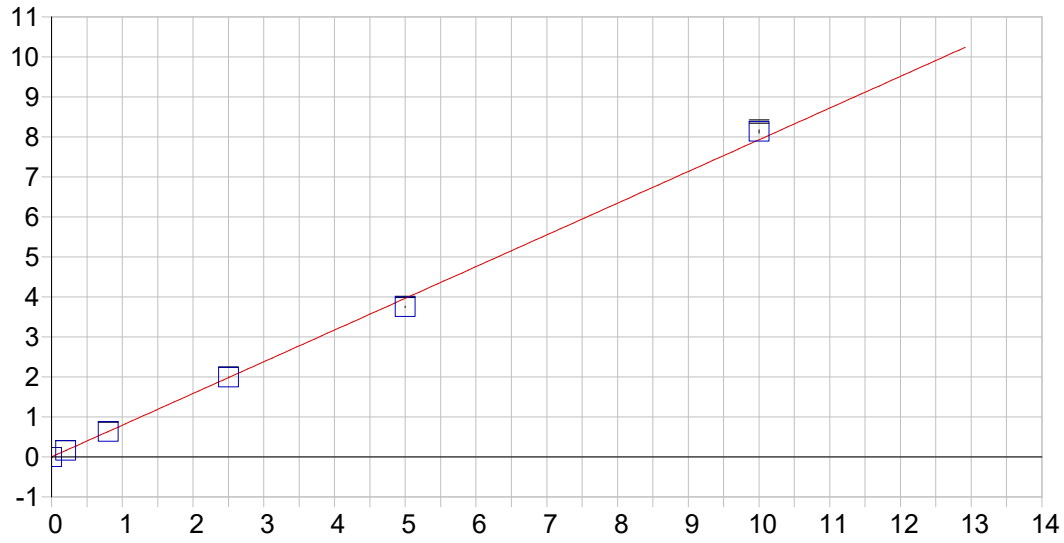


B 249.678 {135}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002776	Re-Slope:	1.000000
A1 (Gain):	0.496086	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998719	Status:	OK.
Std Error of Est:	0.001317		
Predicted MDL:	0.000603		
Predicted MQL:	0.002010		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00278	.000	1
S1	.10000	.09629	-.004	-3.71	.05033	.000	1
S3	2.5000	2.4904	-.010	-.383	1.2358	.007	1
S4	5.0000	4.6275	-.373	-7.45	2.2935	.011	1
S5	10.000	10.420	.420	4.20	5.1623	.002	1
S2	.80000	.76590	-.034	-4.26	.38195	.001	1

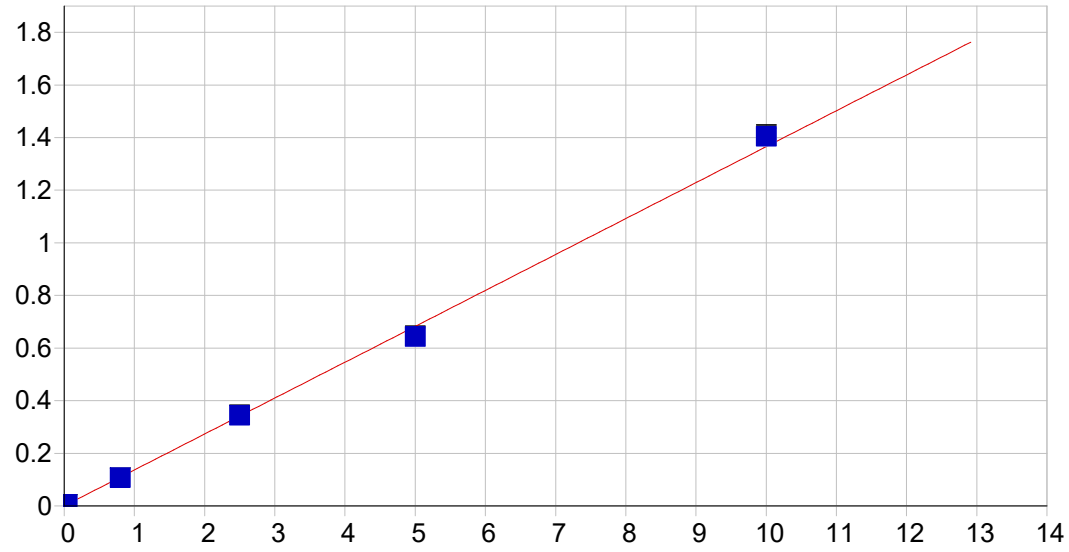


Mo 202.030 {467}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000080	Re-Slope:	1.000000
A1 (Gain):	0.792812	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999415	Status:	OK.
Std Error of Est:	0.002020		
Predicted MDL:	0.000231		
Predicted MQL:	0.000771		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00009	.000	1
S1	.20000	.19676	-.003	-1.62	.15607	.000	1
S3	2.5000	2.5169	.017	.675	1.9955	.007	1
S4	5.0000	4.7296	-.270	-5.41	3.7498	.016	1
S5	10.000	10.262	.262	2.62	8.1356	.040	1
S2	.80000	.79512	-.005	-.611	.63046	.003	1

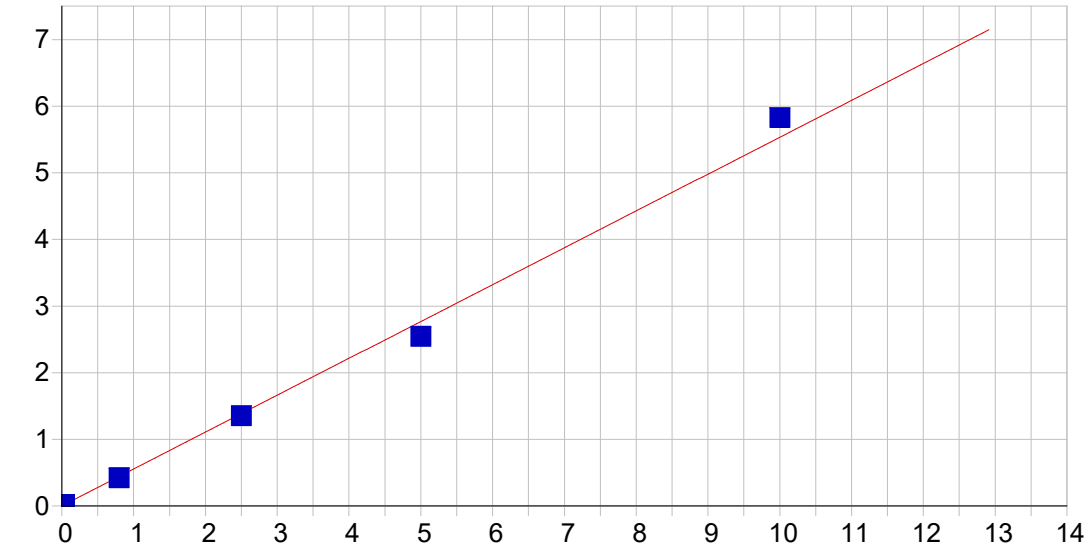


Sn 189.989 {478}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000124	Re-Slope:	1.000000
A1 (Gain):	0.136514	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999291	Status:	OK.
Std Error of Est:	0.000170		
Predicted MDL:	0.000638		
Predicted MQL:	0.002125		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00012	.000	1
S1	.04000	.03843	-.002	-3.93	.00536	.000	1
S3	2.5000	2.5207	.021	.826	.34388	.001	1
S4	5.0000	4.7095	-.291	-5.81	.64233	.003	1
S5	10.000	10.290	.290	2.90	1.4035	.006	1
S2	.80000	.78131	-.019	-2.34	.10667	.001	1

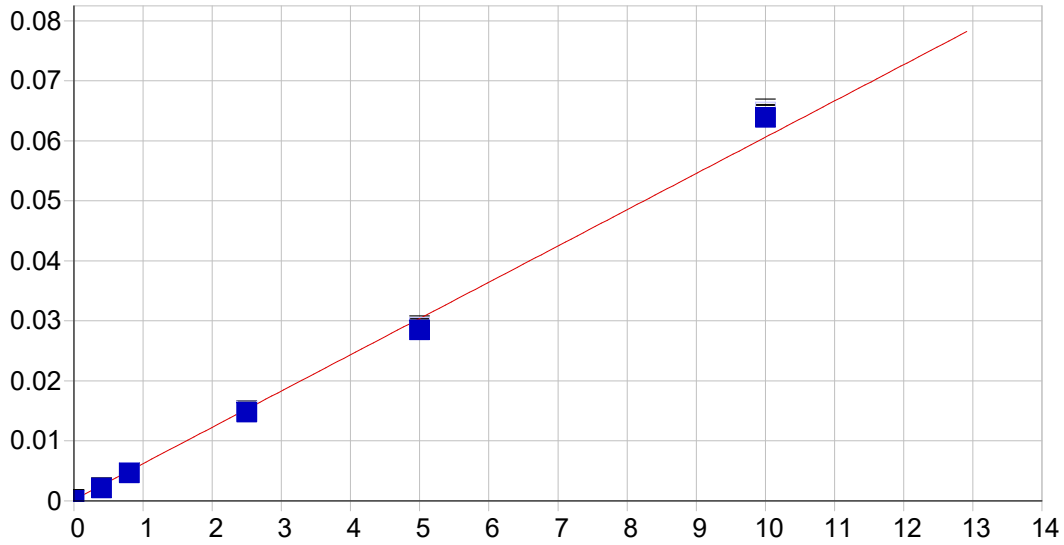


Ti 336.121 {100}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001887	Re-Slope:	1.000000
A1 (Gain):	0.553349	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998171	Status:	OK.
Std Error of Est:	0.001111		
Predicted MDL:	0.000560		
Predicted MQL:	0.001868		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00189	.000	1
S1	.04000	.03630	-.004	-9.25	.02196	.000	1
S3	2.5000	2.4335	-.067	-2.66	1.3480	.008	1
S4	5.0000	4.5858	-.414	-8.28	2.5385	.007	1
S5	10.000	10.530	.530	5.30	5.8269	.006	1
S2	.80000	.75392	-.046	-5.76	.41891	.001	1

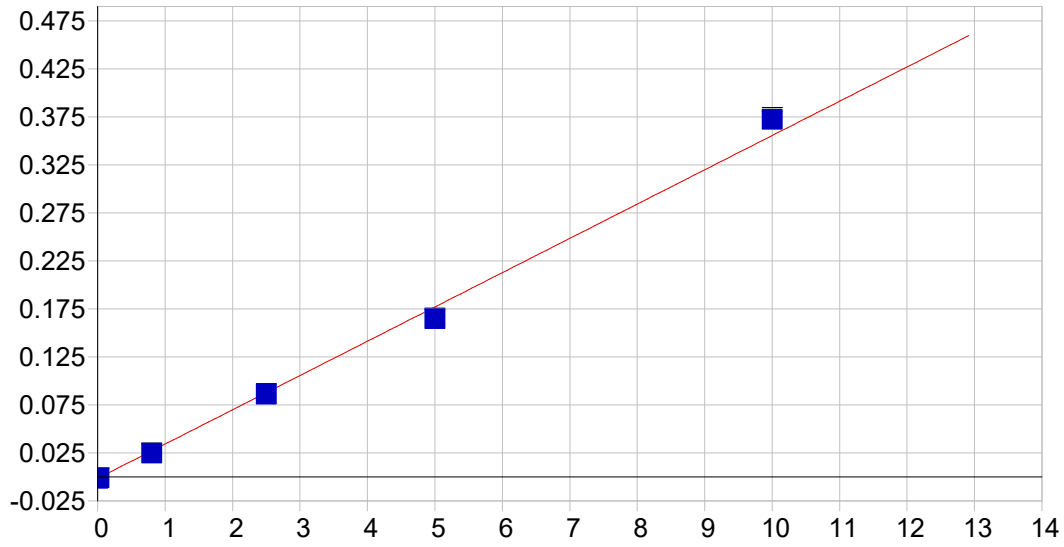


Si 288.158 {117}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000184	Re-Slope:	1.000000
A1 (Gain):	0.006042	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998125	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.006692		
Predicted MQL:	0.022308		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00013	.000	.000	.00018	.000	1
S1	.40000	.32232	-.078	-19.4	.00214	.000	1
S3	2.5000	2.4111	-.089	-3.56	.01498	.000	1
S4	5.0000	4.6820	-.318	-6.36	.02893	.000	1
S5	10.000	10.543	.543	5.43	.06480	.001	1
S2	.80000	.74078	-.059	-7.40	.00473	.000	1

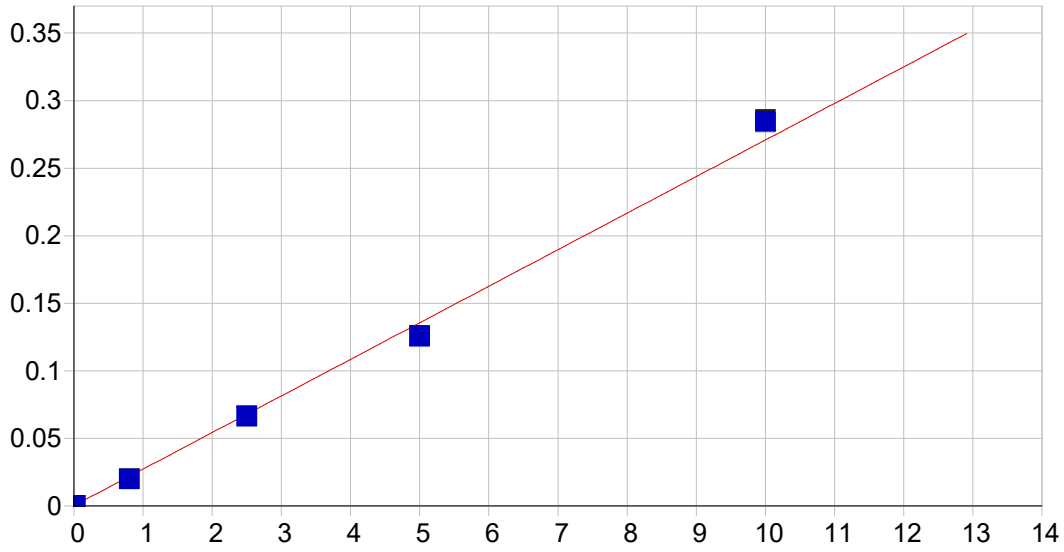


P 177.495 {490}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001511	Re-Slope:	1.000000
A1 (Gain):	0.035713	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998558	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.002258		
Predicted MQL:	0.007526		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00151	.000	1
S1	.02000	.01707	-.003	-14.7	-.00090	.000	1
S3	2.5000	2.4546	-.045	-1.82	.08614	.000	1
S4	5.0000	4.6499	-.350	-7.00	.16452	.001	1
S5	10.000	10.465	.465	4.65	.37217	.002	1
S2	.80000	.73337	-.067	-8.33	.02468	.000	1

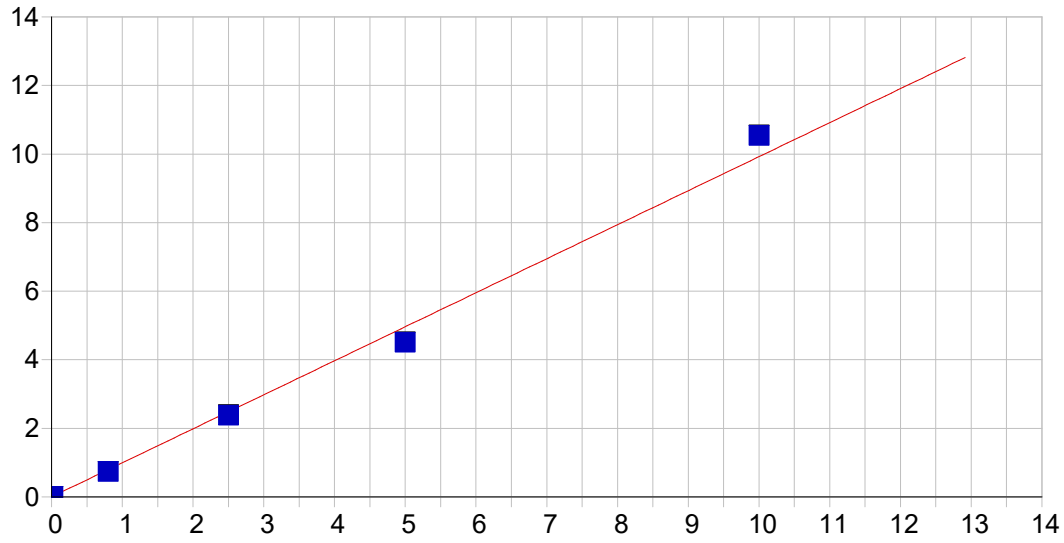


S 182.034 {485}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000204	Re-Slope:	1.000000
A1 (Gain):	0.027065	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998330	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.002910		
Predicted MQL:	0.009698		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00020	.000	1
S1	.02000	.01761	-.002	-12.0	.00066	.000	1
S3	2.5000	2.4439	-.056	-2.24	.06617	.000	1
S4	5.0000	4.6271	-.373	-7.46	.12508	.001	1
S5	10.000	10.503	.503	5.03	.28376	.001	1
S2	.80000	.72851	-.071	-8.94	.01986	.000	1

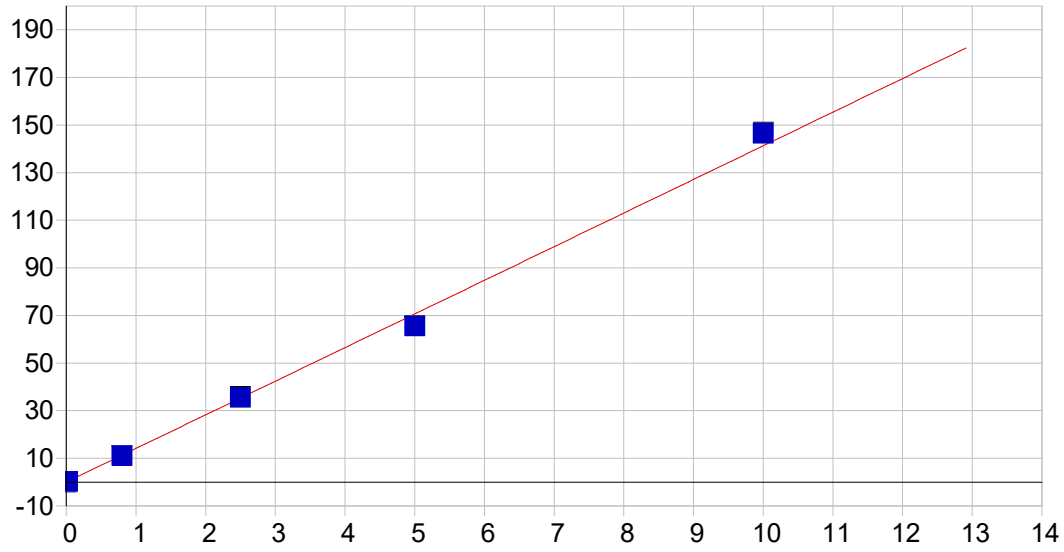


Li 670.784 { 50}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001648	Re-Slope:	1.000000
A1 (Gain):	0.992186	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997570	Status:	OK.
Std Error of Est:	0.001625		
Predicted MDL:	0.000877		
Predicted MQL:	0.002925		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00165	.000	1
S5	10.000	10.622	.622	6.22	10.550	.005	1
S4	5.0000	4.5418	-.458	-9.16	4.5124	.007	1
S3	2.5000	2.3962	-.104	-4.15	2.3814	.014	1
S1	.02000	.01696	-.003	-15.2	.01883	.001	1
S2	.80000	.74290	-.057	-7.14	.73946	.003	1

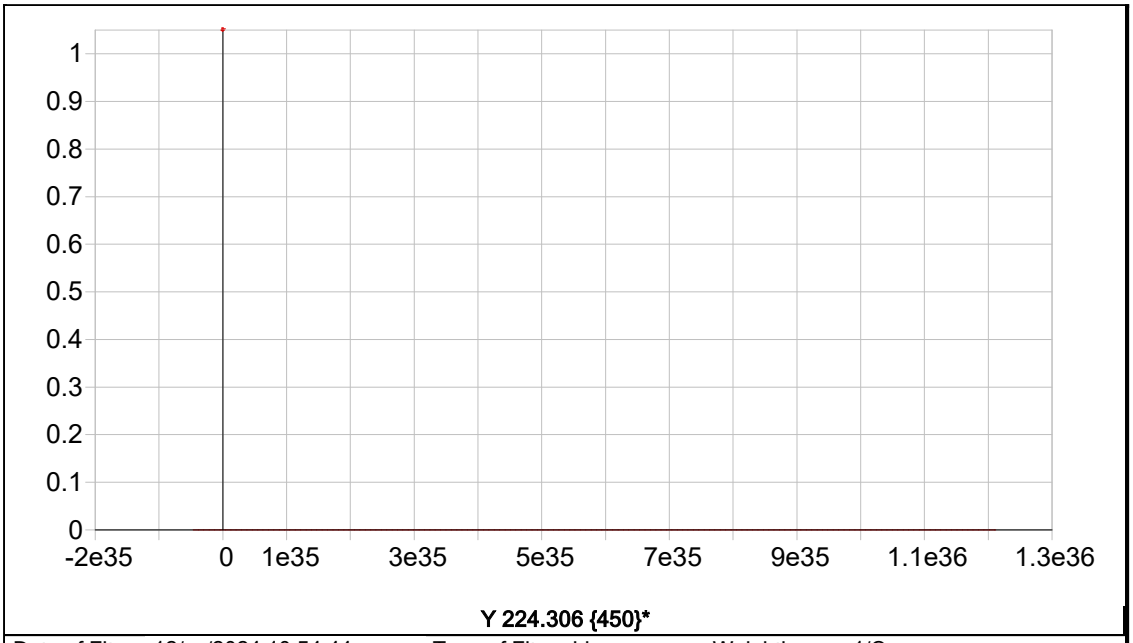


Sr 407.771 { 83}

Date of Fit:	12/27/2024 13:08:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001603	Re-Slope:	1.000000
A1 (Gain):	14.128732	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998905	Status:	OK.
Std Error of Est:	0.015519		
Predicted MDL:	0.000037		
Predicted MQL:	0.000124		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00157	.000	1
S1	.02000	.01881	-.001	-5.94	.26559	.001	1
S3	2.5000	2.5147	.015	.587	35.563	.388	1
S4	5.0000	4.6369	-.363	-7.26	65.583	.283	1
S5	10.000	10.366	.366	3.66	146.60	.432	1
S2	.80000	.78362	-.016	-2.05	11.081	.065	1

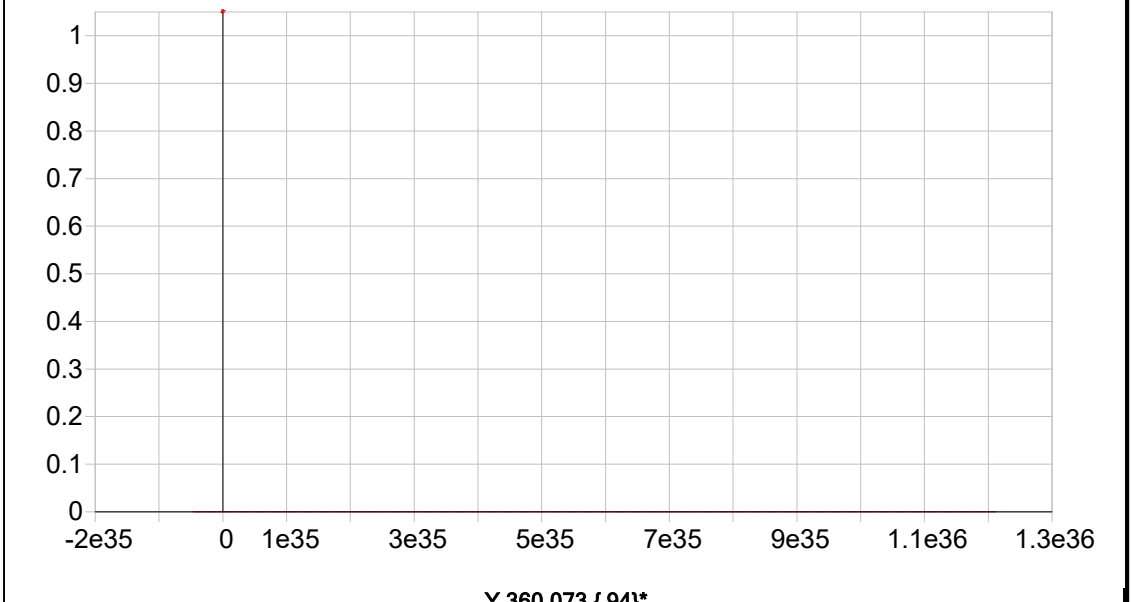


Y 224.306 {450}*

Date of Fit:	12/27/2024 10:54:44	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}*

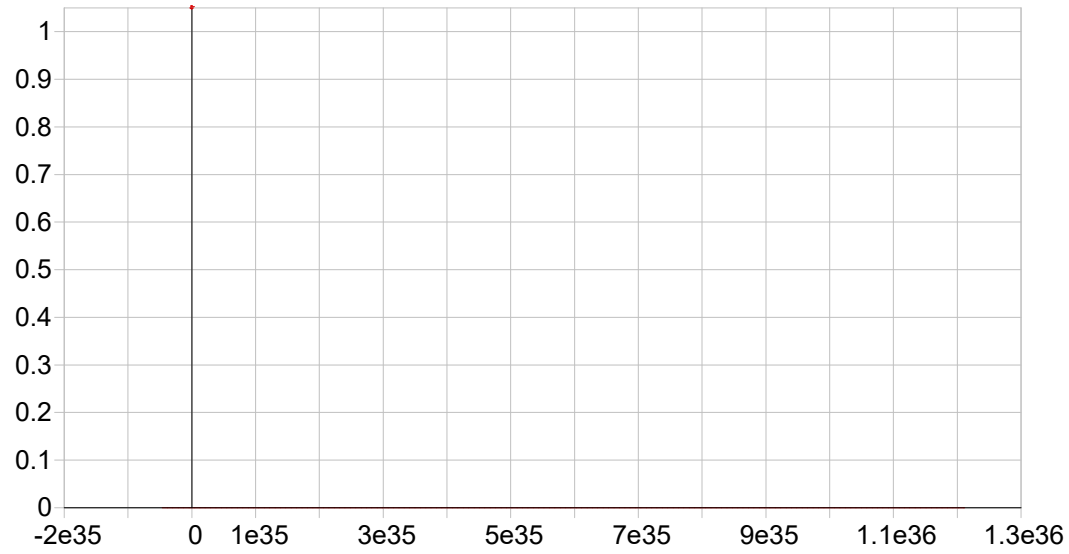
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

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					

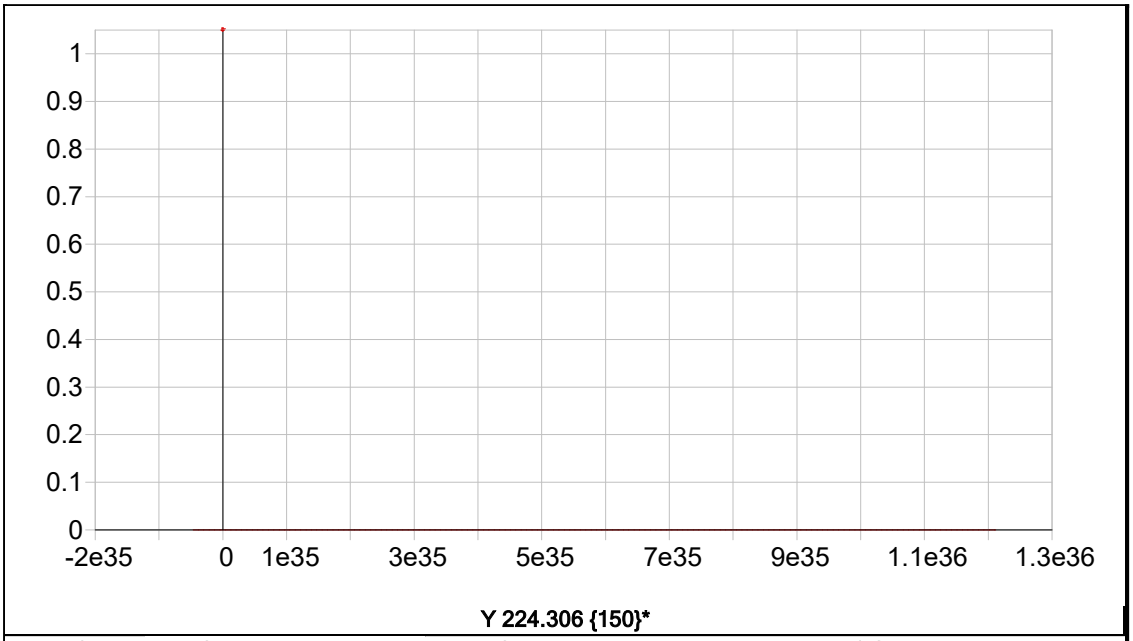
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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				

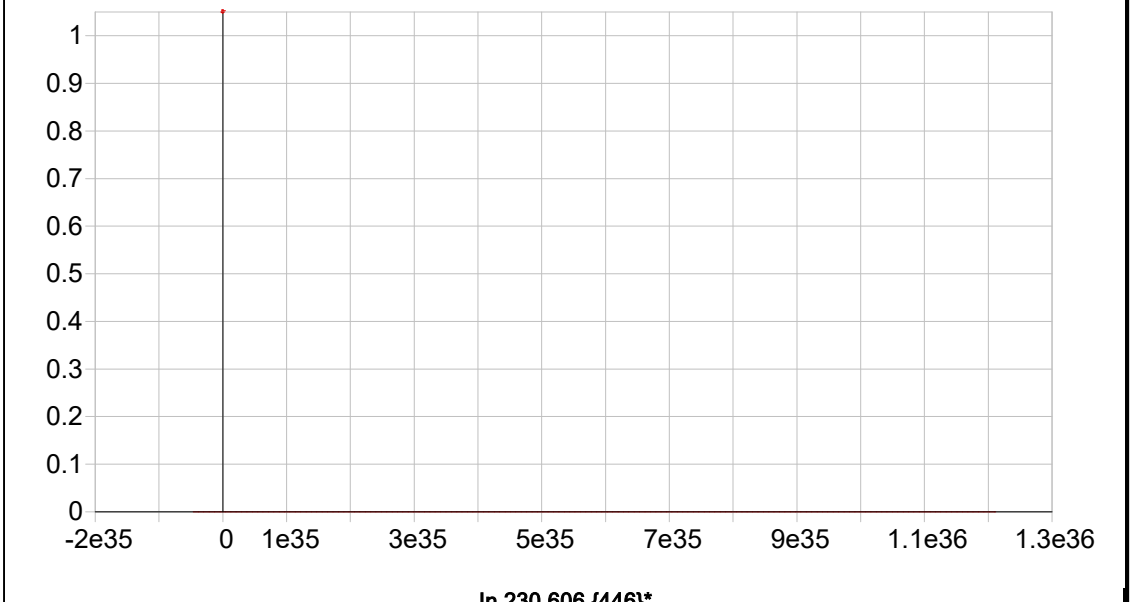
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S0 Acquired: 12/27/2024 12:42:52 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	-.00010	-.00003	-.00021	.00043	.00026	-.00015	.03307	-.00038
Stddev	.00007	.00010	.00009	.00017	.00020	.00024	.00219	.00016
%RSD	72.821	327.94	42.156	40.552	78.416	161.99	6.6182	41.635
#1	-.00019	.00005	-.00018	.00039	.00049	.00013	.03441	-.00022
#2	-.00006	.00000	-.00032	.00061	.00019	-.00032	.03054	-.00054
#3	-.00006	-.00015	-.00015	.00027	.00010	-.00026	.03425	-.00039

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	.00007	.00083	.00011	-.00001	-.00034	.00003	-.00000	-.00013
Stddev	.00007	.00019	.00002	.00012	.00019	.00002	.00005	.00016
%RSD	100.00	23.336	18.491	1105.9	55.116	45.942	3097.6	121.23
#1	-.00001	.00061	.00013	.00008	-.00028	.00002	-.00005	-.00031
#2	.00012	.00097	.00009	.00004	-.00019	.00005	.00001	-.00001
#3	.00009	.00091	.00010	-.00015	-.00056	.00003	.00004	-.00008

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	.00003	-.00125	.00143	.00008	.06276	.00056	.00278	.00009
Stddev	.00015	.00007	.00016	.00027	.00031	.00005	.00038	.00012
%RSD	483.94	5.5904	11.419	328.76	.48767	8.4644	13.709	139.02
#1	-.00004	-.00116	.00125	-.00019	.06286	.00056	.00260	-.00002
#2	-.00007	-.00129	.00150	.00036	.06242	.00052	.00322	.00006
#3	.00020	-.00128	.00155	.00007	.06300	.00061	.00252	.00022

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	.00012	.00189	.00018	-.00151	.00020	.00165	-.00157
Stddev	.00007	.00011	.00003	.00005	.00005	.00038	.00021
%RSD	52.876	5.6491	16.783	3.0054	23.859	22.739	13.559
#1	.00016	.00180	.00021	-.00146	.00024	.00127	-.00181
#2	.00016	.00187	.00020	-.00155	.00022	.00168	-.00149
#3	.00005	.00201	.00015	-.00153	.00015	.00202	-.00141

Sample Name: S0 Acquired: 12/27/2024 12:42:52 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3334.4	69349.	12602.	2386.5	5206.4
Stddev	6.6	166.	31.	8.4	9.1
%RSD	.19736	.23923	.24727	.35076	.17425
#1	3327.2	69231.	12578.	2382.9	5197.5
#2	3340.1	69276.	12591.	2380.6	5215.7
#3	3335.9	69538.	12638.	2396.1	5206.0

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S1 Acquired: 12/27/2024 12:47:18 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	.00115	.00267	.00261	.00219	.00886	.00675	.32568	.02681
Stddev	.00001	.00005	.00009	.00015	.00013	.00032	.00247	.00014
%RSD	.77488	1.9627	3.5490	6.7951	1.5054	4.7110	.75759	.52743
#1	.00115	.00269	.00269	.00220	.00871	.00706	.32826	.02675
#2	.00114	.00261	.00251	.00203	.00896	.00676	.32335	.02670
#3	.00116	.00271	.00264	.00233	.00892	.00643	.32543	.02697

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	.01364	.11789	.00213	.02625	.01545	.00051	.01437	.03753
Stddev	.00003	.00007	.00006	.00017	.00018	.00002	.00017	.00024
%RSD	.19312	.06251	2.9435	.62910	1.1509	2.9369	1.2030	.64304
#1	.01367	.11790	.00214	.02643	.01525	.00053	.01453	.03772
#2	.01361	.11782	.00206	.02610	.01560	.00051	.01437	.03726
#3	.01364	.11796	.00219	.02624	.01550	.00050	.01419	.03760

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	.02502	.00131	.02686	.00505	.18937	.01184	.05033	.15607
Stddev	.00004	.00007	.00016	.00007	.00073	.00017	.00008	.00007
%RSD	.17261	5.5924	.58040	1.3979	.38528	1.4429	.15379	.04367
#1	.02499	.00134	.02669	.00510	.18852	.01201	.05035	.15606
#2	.02501	.00137	.02700	.00497	.18980	.01167	.05025	.15601
#3	.02507	.00123	.02689	.00508	.18978	.01185	.05040	.15614

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	.00536	.02196	.00214	-.00090	.00066	.01883	.26559
Stddev	.00003	.00026	.00004	.00003	.00003	.00059	.00112
%RSD	.64681	1.2052	2.0268	3.7467	5.1600	3.1176	.42156
#1	.00540	.02194	.00209	-.00091	.00062	.01839	.26643
#2	.00537	.02170	.00217	-.00093	.00068	.01861	.26432
#3	.00533	.02223	.00214	-.00086	.00067	.01950	.26603

Sample Name: S1 Acquired: 12/27/2024 12:47:18 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3290.6	68973.	12740.	2373.6	5079.6
Stddev	3.5	213.	42.	5.9	12.8
%RSD	.10784	.30920	.33165	.24965	.25208
#1	3293.2	69057.	12701.	2374.3	5090.3
#2	3292.2	68731.	12785.	2367.4	5083.0
#3	3286.6	69132.	12733.	2379.2	5065.4

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S2 Acquired: 12/27/2024 12:51:38 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	.04745	.05816	.19318	.07013	.14184	.09740	4.9527	.18510
Stddev	.00010	.00034	.00134	.00029	.00050	.00035	.0287	.00021
%RSD	.20403	.58721	.69582	.40787	.35121	.36315	.57873	.11573
#1	.04752	.05828	.19257	.07006	.14205	.09706	4.9851	.18521
#2	.04734	.05778	.19224	.06988	.14127	.09739	4.9423	.18524
#3	.04750	.05843	.19472	.07044	.14219	.09777	4.9306	.18486

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	.91407	.24717	.03567	.35452	.14854	.00444	.28326	.07013
Stddev	.00277	.00063	.00016	.00091	.00063	.00005	.00131	.00029
%RSD	.30342	.25292	.44297	.25693	.42157	1.2076	.46313	.41281
#1	.91427	.24727	.03575	.35445	.14851	.00449	.28463	.06986
#2	.91120	.24649	.03549	.35364	.14793	.00438	.28202	.07008
#3	.91674	.24773	.03578	.35546	.14918	.00444	.28314	.07044

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	.25436	.05051	.05377	.05284	1.4484	.02315	.38195	.63046
Stddev	.00082	.00020	.00047	.00023	.0039	.00022	.00092	.00304
%RSD	.32049	.40253	.87899	.44001	.26713	.96392	.23981	.48285
#1	.25400	.05074	.05429	.05284	1.4452	.02340	.38168	.63009
#2	.25378	.05042	.05366	.05261	1.4527	.02308	.38120	.62761
#3	.25529	.05037	.05337	.05308	1.4474	.02296	.38297	.63367

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	.10667	.41891	.00473	.02468	.01986	.73946	11.081
Stddev	.00052	.00144	.00001	.00014	.00004	.00251	.065
%RSD	.48928	.34423	.28695	.56493	.18737	.33977	.59101
#1	.10655	.42054	.00474	.02457	.01987	.74220	11.157
#2	.10622	.41841	.00472	.02462	.01982	.73891	11.046
#3	.10724	.41778	.00474	.02483	.01990	.73727	11.041

Sample Name: S2 Acquired: 12/27/2024 12:51:38 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3351.7	69314.	12858.	2362.3	5109.9
Stddev	11.9	239.	2.	4.0	13.9
%RSD	.35504	.34484	.01726	.17006	.27255
#1	3343.6	69040.	12859.	2357.7	5101.6
#2	3365.4	69421.	12858.	2365.3	5126.0
#3	3346.2	69481.	12855.	2363.8	5102.1

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S3 Acquired: 12/27/2024 12:55:42 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	.15431	.18448	.62172	.22799	.45758	.31438	15.894	.59943
Stddev	.00051	.00206	.00177	.00154	.00146	.00177	.070	.00410
%RSD	.32937	1.1168	.28458	.67600	.31960	.56395	.43942	.68451
#1	.15398	.18393	.62100	.22777	.45758	.31641	15.958	.60377
#2	.15404	.18275	.62044	.22657	.45612	.31353	15.820	.59892
#3	.15489	.18676	.62374	.22963	.45904	.31318	15.904	.59561

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	2.9753	.76302	.11254	1.1489	.47055	.01392	.90835	.22717
Stddev	.0079	.00562	.00067	.0038	.00129	.00007	.00566	.00094
%RSD	.26658	.73715	.59448	.33153	.27471	.51171	.62364	.41160
#1	2.9717	.76929	.11311	1.1472	.47064	.01391	.91425	.22786
#2	2.9697	.76135	.11180	1.1462	.46921	.01385	.90785	.22753
#3	2.9844	.75842	.11270	1.1533	.47179	.01399	.90296	.22610

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	.82020	.16150	.17227	.17241	4.3579	.07327	1.2358	1.9955
Stddev	.00233	.00043	.00090	.00167	.0262	.00048	.0075	.0069
%RSD	.28357	.26785	.52174	.96795	.60054	.66033	.60681	.34728
#1	.81884	.16198	.17329	.17423	4.3611	.07362	1.2436	1.9950
#2	.81887	.16114	.17161	.17204	4.3303	.07272	1.2353	1.9888
#3	.82288	.16139	.17191	.17095	4.3824	.07347	1.2286	2.0027

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	.34388	1.3480	.01498	.08614	.06617	2.3814	35.563
Stddev	.00138	.0084	.00006	.00045	.00030	.0139	.388
%RSD	.40195	.62084	.42877	.51663	.44648	.58202	1.0904
#1	.34322	1.3573	.01498	.08609	.06604	2.3967	35.876
#2	.34295	1.3454	.01492	.08572	.06597	2.3778	35.129
#3	.34547	1.3412	.01505	.08660	.06651	2.3696	35.683

Sample Name: S3 Acquired: 12/27/2024 12:55:42 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3155.6	66149.	12244.	2258.8	4676.9
Stddev	8.4	272.	74.	14.7	13.8
%RSD	.26773	.41072	.60809	.64888	.29437
#1	3156.0	65860.	12160.	2256.7	4681.0
#2	3163.9	66399.	12268.	2274.3	4688.2
#3	3147.0	66188.	12303.	2245.2	4661.6

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S4 Acquired: 12/27/2024 12:59:56 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	.29075	.34546	1.1578	.42676	.86316	.59746	29.469	1.1109
Stddev	.00144	.00392	.0048	.00208	.00267	.00269	.157	.0036
%RSD	.49548	1.1339	.41239	.48688	.30891	.45058	.53265	.32084
#1	.28999	.34487	1.1580	.42528	.86067	.59473	29.500	1.1094
#2	.28984	.34188	1.1529	.42588	.86283	.59753	29.299	1.1084
#3	.29241	.34964	1.1624	.42914	.86597	.60012	29.608	1.1150

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	5.5964	1.4240	.20923	2.1572	.87160	.02605	1.6866	.43230
Stddev	.0180	.0061	.00022	.0063	.00322	.00010	.0063	.00189
%RSD	.32165	.42541	.10350	.28951	.37000	.36702	.37269	.43627
#1	5.5974	1.4183	.20937	2.1551	.86923	.02601	1.6850	.43053
#2	5.5780	1.4234	.20898	2.1522	.87029	.02599	1.6813	.43210
#3	5.6140	1.4304	.20934	2.1642	.87527	.02616	1.6936	.43428

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	1.5333	.30140	.32546	.32667	8.0801	.13767	2.2935	3.7498
Stddev	.0050	.00023	.00037	.00182	.0091	.00033	.0108	.0160
%RSD	.32739	.07771	.11383	.55808	.11211	.23936	.47137	.42645
#1	1.5327	.30141	.32585	.32459	8.0720	.13741	2.2855	3.7385
#2	1.5287	.30116	.32541	.32744	8.0785	.13804	2.2893	3.7428
#3	1.5387	.30162	.32511	.32798	8.0899	.13756	2.3058	3.7681

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	.64233	2.5385	.02893	.16452	.12508	4.5124	65.583
Stddev	.00318	.0065	.00024	.00070	.00068	.0067	.283
%RSD	.49547	.25617	.82699	.42558	.54495	.14881	.43156
#1	.64252	2.5330	.02870	.16434	.12501	4.5084	65.335
#2	.63906	2.5367	.02891	.16393	.12444	4.5088	65.521
#3	.64542	2.5457	.02918	.16530	.12580	4.5202	65.891

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S4 Acquired: 12/27/2024 12:59:56 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	3075.2	64489.	11994.	2152.7	4513.7
Stddev	6.9	5.	24.	.8	6.0
%RSD	.22553	.00716	.20116	.03488	.13249
#1	3082.5	64488.	11999.	2153.3	4515.5
#2	3074.3	64495.	12014.	2153.0	4518.7
#3	3068.7	64486.	11967.	2151.9	4507.1

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: S5 Acquired: 12/27/2024 13:04:10 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	.64110	.73559	2.5413	.93148	1.8962	1.3861	66.861	2.4986
Stddev	.00304	.00700	.0125	.00450	.0115	.0015	.350	.0038
%RSD	.47481	.95153	.49164	.48280	.60676	.10836	.52296	.15158
#1	.64010	.74164	2.5413	.93075	1.8929	1.3860	66.679	2.4951
#2	.63868	.72792	2.5289	.92739	1.8867	1.3847	67.264	2.4982
#3	.64452	.73720	2.5539	.93630	1.9090	1.3877	66.639	2.5026

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	12.332	3.2433	.44783	4.7825	1.8779	.05746	3.8424	.99286
Stddev	.049	.0089	.00174	.0226	.0096	.00034	.0116	.00330
%RSD	.39527	.27462	.38781	.47198	.50955	.59027	.30241	.33244
#1	12.330	3.2332	.44667	4.7817	1.8755	.05712	3.8316	.98911
#2	12.285	3.2503	.44699	4.7603	1.8698	.05780	3.8547	.99531
#3	12.382	3.2463	.44982	4.8055	1.8885	.05746	3.8408	.99417

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	3.3712	.65698	.73486	.74930	17.554	.30884	5.1623	8.1356
Stddev	.0135	.00056	.00072	.00109	.059	.00067	.0015	.0396
%RSD	.40059	.08505	.09750	.14498	.33398	.21586	.02987	.48714
#1	3.3700	.65712	.73421	.74957	17.499	.30811	5.1638	8.1241
#2	3.3584	.65636	.73563	.75022	17.616	.30899	5.1607	8.1030
#3	3.3853	.65745	.73474	.74810	17.547	.30941	5.1623	8.1797

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	1.4035	5.8269	.06480	.37217	.28376	10.550	146.60
Stddev	.0059	.0058	.00054	.00206	.00150	.005	.43
%RSD	.41664	.10030	.83666	.55270	.52702	.04710	.29485
#1	1.4037	5.8204	.06420	.37274	.28424	10.555	146.49
#2	1.3975	5.8317	.06492	.36989	.28208	10.548	146.23
#3	1.4092	5.8285	.06527	.37388	.28496	10.546	147.07

Sample Name: S5 Acquired: 12/27/2024 13:04:10 Type: Cal
Method: NON EPA-6010-200.7(v2484) 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	2938.5	62367.	11194.	2018.0	4214.2
Stddev	12.0	124.	9.	11.5	15.0
%RSD	.40745	.19899	.08068	.56833	.35482
#1	2942.6	62503.	11205.	2029.4	4214.2
#2	2947.8	62337.	11188.	2006.5	4229.2
#3	2925.0	62260.	11191.	2018.0	4199.3

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICV01 Acquired: 12/27/2024 13:54:58 Type: Unk
Method: NON EPA-6010-200.7(v2563) 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	1.067272	1.076554	1.022464	1.011239	1.033481	2.485487
Stddev	.006365	.007989	.007776	.004613	.004621	.013652
%RSD	.5964029	.7420665	.7605270	.4561614	.4471634	.5492494
#1	1.071088	1.085680	1.031363	1.016140	1.038533	2.495938
#2	1.070803	1.073155	1.019049	1.006982	1.032443	2.470041
#3	1.059924	1.070827	1.016979	1.010595	1.029467	2.490481

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5428356	.5254140	.5096743	9.634525	.5429217	.5192085
Stddev	.0048829	.0039309	.0022099	.047987	.0032614	.0027532
%RSD	.8995204	.7481537	.4335953	.4980715	.6007164	.5302727
#1	.5482592	.5299073	.5122139	9.687140	.5426593	.5223527
#2	.5387891	.5226109	.5086202	9.593168	.5463064	.5180439
#3	.5414585	.5237238	.5081887	9.623269	.5397994	.5172290

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4994007	10.20096	.4977596	5.708432	.5201571	.2620112
Stddev	.0021787	.02900	.0018903	.015339	.0023039	.0008442
%RSD	.4362676	.2842385	.3797600	.2687045	.4429209	.3222198
#1	.5018201	10.18240	.4990544	5.691473	.5227781	.2626224
#2	.4987880	10.23438	.4955904	5.721336	.5192408	.2623634
#3	.4975939	10.18611	.4986340	5.712487	.5184523	.2610479

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.01149	.4778062	1.014773	10.17811	2.283537	2.599379
Stddev	.02105	.0014945	.005043	.04144	.016591	.009445
%RSD	.2102267	.3127731	.4969939	.4071932	.7265682	.3633474
#1	10.03543	.4773942	1.015773	10.20949	2.302102	2.609210
#2	9.99589	.4765609	1.019242	10.19372	2.270159	2.598552
#3	10.00315	.4794634	1.009305	10.13113	2.278349	2.590374

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICV01 Acquired: 12/27/2024 13:54:58 Type: Unk
Method: NON EPA-6010-200.7(v2563) 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	2.482752	2.361862	F 2.068197	F .0030807	F -.007121	F -.002153
Stddev	.011941	.008560	.002600	.0014073	.001856	.000618
%RSD	.4809726	.3624385	.1257148	45.68290	26.07015	28.69034
#1	2.496489	2.371194	2.065531	.0019985	-.004979	-.001668
#2	2.474844	2.354374	2.068333	.0046717	-.008124	-.001943
#3	2.476924	2.360018	2.070726	.0025719	-.008259	-.002848

Elem	Sr4077
Units	ppm
Avg	F -.008968
Stddev	.000055
%RSD	.6149656
#1	-.008917
#2	-.009026
#3	-.008961

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2988.230	63174.79	12567.72	2022.225	4626.461
Stddev	13.311	203.04	64.75	12.807	24.733
%RSD	.4454606	.3213892	.5152096	.6333183	.5346041
#1	2973.156	63200.94	12494.00	2027.797	4597.908
#2	2993.162	62959.95	12615.38	2007.576	4640.198
#3	2998.371	63363.49	12593.78	2031.302	4641.277

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: LLICV01 Acquired: 12/27/2024 14:08:58 Type: Unk
Method: NON EPA-6010-200.7(v2564) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0216850	.0419900	.0119851	.0195809	.0512492	.1000370	.0883452
Stddev	.0035234	.0001800	.0005028	.0010685	.0006680	.0068869	.0000882
%RSD	16.24796	.4286175	4.195471	5.456902	1.303373	6.884394	.0998423
#1	.0201048	.0417829	.0114937	.0201777	.0517406	.0930855	.0884447
#2	.0192283	.0420788	.0119631	.0202176	.0504886	.1068575	.0882768
#3	.0257219	.0421083	.0124986	.0183473	.0515184	.1001680	.0883139

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056051	.0057397	1.909276	.0095578	.0292370	.0225074	.0953916
Stddev	.0000788	.0000534	.006085	.0003105	.0001567	.0002519	.0026135
%RSD	1.405707	.9296264	.3187088	3.248895	.5360695	1.119369	2.739776
#1	.0056476	.0057331	1.902810	.0093234	.0291801	.0226363	.0943610
#2	.0056536	.0057961	1.910128	.0094400	.0291166	.0222171	.0983632
#3	.0055142	.0056900	1.914890	.0099100	.0294142	.0226689	.0934504

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189506	1.990791	.0389049	.0112186	1.921654	.0378804	.0450686
Stddev	.0002570	.009578	.0001300	.0000852	.016833	.0011347	.0007434
%RSD	1.356174	.4811149	.3340930	.7592815	.8759431	2.995522	1.649420
#1	.0186849	1.981186	.0389112	.0111758	1.905731	.0391757	.0443335
#2	.0189690	1.990844	.0387719	.0113167	1.939268	.0370617	.0458200
#3	.0191980	2.000342	.0390316	.0111633	1.919961	.0374039	.0450522

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.014063	.0931659	.2113916	.0390808	.0373942	.3582161	.0161360
Stddev	.004789	.0003073	.0007656	.0002515	.0003618	.0035751	.0011296
%RSD	.2377699	.3298025	.3621838	.6435549	.9674970	.9980403	7.000547
#1	2.012113	.0931557	.2105869	.0391582	.0376780	.3564931	.0148317
#2	2.010557	.0934781	.2114771	.0387997	.0375178	.3623264	.0167993
#3	2.019520	.0928638	.2121109	.0392846	.0369868	.3558286	.0167771

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: LLICV01 Acquired: 12/27/2024 14:08:58 Type: Unk
Method: NON EPA-6010-200.7(v2564) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0191424	.0176566	.0192912
Stddev	.0015830	.0002785	.0000133
%RSD	8.269709	1.577155	.0691759
#1	.0174386	.0178098	.0193056
#2	.0194209	.0178249	.0192886
#3	.0205676	.0173352	.0192793

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3028.035	64427.10	12669.34	2038.709	4848.460
Stddev	.917	242.75	22.59	13.999	7.700
%RSD	.0302796	.3767858	.1783054	.6866366	.1588191
#1	3029.076	64568.05	12643.80	2051.481	4846.609
#2	3027.683	64146.79	12686.72	2023.743	4856.917
#3	3027.346	64566.45	12677.49	2040.904	4841.853

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICB01 Acquired: 12/27/2024 14:59:33 Type: Unk
Method: NON EPA-6010-200.7(v2565) 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	-.000817	-.000997	.0002597	-.001056	-.001203	-.000384	-.007667
Stddev	.000927	.001211	.0007327	.001239	.000777	.005286	.000531
%RSD	113.4124	121.3976	282.0945	117.3167	64.58397	1376.036	6.920097
#1	-.001601	-.000238	-.000221	-.000657	-.001112	.003243	-.007885
#2	.000206	-.002394	.001103	-.000066	-.002021	-.006450	-.008053
#3	-.001056	-.000360	-.000103	-.002446	-.000475	.002055	-.007062

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000373	-.000013	.0070301	-.000524	.0000393	-.000009	-.004675
Stddev	.0000171	.000056	.0073242	.000225	.0001482	.000205	.007210
%RSD	45.91640	416.3041	104.1827	42.85767	377.0761	2190.303	154.2199
#1	.0000464	.000043	.0127452	-.000654	-.000110	-.000243	.002921
#2	.0000176	-.000070	.0095715	-.000265	.000186	.000138	-.011424
#3	.0000481	-.000013	-.001226	-.000653	.000042	.000077	-.005522

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000534	-.003706	-.000066	.0007257	-.076698	-.001024	-.017676
Stddev	.0002297	.009670	.000107	.0001977	.017928	.000150	.000060
%RSD	429.9261	260.9216	162.0578	27.24644	23.37433	14.64514	.3402023
#1	-.000165	.007449	-.000175	.0008183	-.086429	-.001102	-.017743
#2	.000033	-.008854	.000040	.0008601	-.087655	-.000851	-.017660
#3	.000293	-.009713	-.000064	.0004987	-.056009	-.001120	-.017626

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007807	-.003555	-.000191	.0001326	.0005663	.0061126	-.004321
Stddev	.026984	.000371	.000110	.0001220	.0000887	.0102847	.000758
%RSD	345.6348	10.43757	57.61498	92.04724	15.66381	168.2546	17.54594
#1	-.038179	-.003786	-.000267	.0000731	.0004787	.0179668	-.004707
#2	.001352	-.003752	-.000065	.0000517	.0006560	-.000433	-.003447
#3	.013405	-.003127	-.000242	.0002729	.0005641	.000803	-.004808

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICB01 Acquired: 12/27/2024 14:59:33 Type: Unk
Method: NON EPA-6010-200.7(v2565) 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	-.001951	-.002898	.0000427
Stddev	.002485	.001595	.0000095
%RSD	127.3333	55.04225	22.23582
#1	-.004808	-.002864	.0000322
#2	-.000753	-.004509	.0000450
#3	-.000293	-.001320	.0000508

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2900.571	63004.50	14051.94	1980.627	4711.173
Stddev	15.676	26.49	2267.27	5.858	19.100
%RSD	.5404313	.0420399	16.13496	.2957882	.4054186
#1	2882.820	62992.10	16664.64	1974.197	4689.121
#2	2906.384	63034.91	12890.00	1985.662	4721.896
#3	2912.510	62986.49	12601.17	1982.022	4722.502

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CRI01 Acquired: 12/27/2024 15:03:52 Type: Unk
Method: NON EPA-6010-200.7(v2565) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211569	.0413862	.0115689	.0208027	.0524727	.1022050	.0881658
Stddev	.0009468	.0011887	.0007726	.0013903	.0010631	.0055468	.0010627
%RSD	4.474987	2.872265	6.678481	6.683443	2.026037	5.427123	1.205348
#1	.0220179	.0403879	.0112955	.0196898	.0533402	.1048548	.0873713
#2	.0213098	.0410695	.0109701	.0203570	.0512868	.0958302	.0877532
#3	.0201430	.0427012	.0124410	.0223612	.0527912	.1059299	.0893730

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055787	.0057771	1.908260	.0094696	.0293633	.0228866	.0925339
Stddev	.0000444	.0000811	.009197	.0000788	.0000789	.0002569	.0005637
%RSD	.7966017	1.404052	.4819524	.8323249	.2686896	1.122669	.6092056
#1	.0055306	.0057365	1.910433	.0093818	.0292767	.0225966	.0926061
#2	.0055873	.0057242	1.916177	.0095341	.0294311	.0229774	.0919375
#3	.0056182	.0058705	1.898172	.0094930	.0293820	.0230859	.0930580

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189985	1.988606	.0389731	.0108025	1.939164	.0380559	.0437810
Stddev	.0000881	.007385	.0004431	.0001693	.013666	.0006163	.0000350
%RSD	.4635138	.3713425	1.137004	1.566910	.7047532	1.619405	.0798955
#1	.0190971	1.992853	.0384892	.0108778	1.926430	.0387668	.0438129
#2	.0189707	1.992886	.0393591	.0106086	1.953603	.0377278	.0437436
#3	.0189276	1.980079	.0390710	.0109210	1.937459	.0376731	.0437866

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.053644	.0914440	.2134263	.0394323	.0371989	.3582438	.0176450
Stddev	.006204	.0001585	.0004056	.0002368	.0004904	.0022904	.0004524
%RSD	.3021209	.1733510	.1900481	.6004139	1.318257	.6393349	2.563924
#1	2.047760	.0912610	.2130005	.0391632	.0377144	.3579118	.0173424
#2	2.053048	.0915366	.2134704	.0395254	.0367383	.3606820	.0174274
#3	2.060125	.0915345	.2138081	.0396085	.0371440	.3561375	.0181650

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CRI01 Acquired: 12/27/2024 15:03:52 Type: Unk
Method: NON EPA-6010-200.7(v2565) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0189250	.0181185	.0194678
Stddev	.0005642	.0002112	.0000560
%RSD	2.981502	1.165672	.2876619
#1	.0192870	.0182811	.0194054
#2	.0192130	.0178797	.0194846
#3	.0182748	.0181946	.0195135

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2995.516	64621.32	12724.00	2050.306	4813.863
Stddev	1.067	107.33	29.30	10.788	6.584
%RSD	.0356046	.1660938	.2302782	.5261843	.1367794
#1	2996.102	64512.42	12722.83	2046.260	4819.360
#2	2996.161	64624.53	12753.86	2042.125	4815.664
#3	2994.285	64727.01	12695.30	2062.532	4806.566

Sample Name: ICSA01 Acquired: 12/27/2024 15:16:03 Type: Unk
Method: NON EPA-6010-200.7(v2566) 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	-.001281	.0103760	.0064279	-.013779	-.002297	241.0060
Stddev	.004756	.0026726	.0002233	.003158	.000844	.8365
%RSD	371.1261	25.75769	3.474312	22.91954	36.74918	.3470744
#1	-.003337	.0109247	.0061793	-.015428	-.001663	240.7030
#2	-.004663	.0127316	.0064927	-.010138	-.001972	241.9518
#3	.004156	.0074716	.0066116	-.015771	-.003255	240.3633

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000719	.0012051	.0023132	220.1272	.0559212	.0017944
Stddev	.000408	.0000442	.0001135	.1296	.0003395	.0000833
%RSD	56.71792	3.671151	4.906007	.0588888	.6071928	4.643808
#1	-.000272	.0011890	.0024222	219.9882	.0559254	.0018900
#2	-.001072	.0012552	.0023218	220.2447	.0562586	.0017562
#3	-.000813	.0011713	.0021957	220.1488	.0555796	.0017370

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059949	100.2424	.0050620	238.3203	.0023555	-.001805
Stddev	.0005035	.4573	.0002548	.2770	.0004205	.000296
%RSD	8.399563	.4561755	5.033235	.1162311	17.84976	16.40397
#1	.0064680	99.7492	.0049108	238.1391	.0019131	-.002143
#2	.0054656	100.3255	.0049190	238.6392	.0027498	-.001592
#3	.0060511	100.6524	.0053561	238.1827	.0024037	-.001680

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0698811	.0048871	-.010640	.1430545	.0297409	.0009184
Stddev	.0055228	.0018666	.000135	.0168865	.0007603	.0000700
%RSD	7.903110	38.19354	1.269329	11.80427	2.556345	7.625263
#1	.0642554	.0058091	-.010585	.1252168	.0288729	.0009878
#2	.0752948	.0061133	-.010541	.1587938	.0302887	.0008477
#3	.0700931	.0027390	-.010794	.1451530	.0300611	.0009196

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICSA01 Acquired: 12/27/2024 15:16:03 Type: Unk
Method: NON EPA-6010-200.7(v2566) 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	-.001703	-.001589	.0152401	-.002082	-.014845	F -.036659
Stddev	.000821	.000102	.0058494	.001314	.005353	.000420
%RSD	48.19166	6.411109	38.38183	63.12460	36.06286	1.146071
#1	-.001178	-.001473	.0157740	-.001004	-.020963	-.036686
#2	-.002648	-.001664	.0208043	-.003546	-.011019	-.036226
#3	-.001282	-.001629	.0091420	-.001697	-.012553	-.037065

Elem	Sr4077
Units	ppm
Avg	-.005371
Stddev	.000461
%RSD	8.573457
#1	-.004891
#2	-.005810
#3	-.005413

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2601.474	55940.85	12149.84	1794.033	3762.809
Stddev	5.694	133.42	34.57	1.834	7.480
%RSD	.2188613	.2385036	.2845029	.1022455	.1987788
#1	2603.656	56071.04	12117.90	1794.449	3768.919
#2	2605.754	55804.42	12145.09	1795.623	3765.039
#3	2595.012	55947.09	12186.54	1792.026	3754.467

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICSAB01 Acquired: 12/27/2024 15:20:24 Type: Unk
Method: NON EPA-6010-200.7(v2566) 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	.1021905	.1115035	.0599591	.0399494	.6906404	245.9949
Stddev	.0046067	.0018690	.0026279	.0021058	.0016607	.7915
%RSD	4.507987	1.676197	4.382771	5.271249	.2404610	.3217486
#1	.1000329	.1095355	.0603618	.0409946	.6887370	245.7539
#2	.0990585	.1117205	.0623624	.0413282	.6913906	245.3519
#3	.1074800	.1132546	.0571532	.0375255	.6917938	246.8789

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5148947	.4944958	1.075949	224.1931	.6148892	.5473375
Stddev	.0026415	.0015109	.003791	.6028	.0027680	.0019631
%RSD	.5130238	.3055417	.3523768	.2688865	.4501681	.3586592
#1	.5167704	.4949792	1.071753	224.1985	.6150711	.5453765
#2	.5118738	.4928024	1.076964	223.5875	.6175618	.5473332
#3	.5160398	.4957058	1.079129	224.7931	.6120347	.5493027

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5426317	103.3888	.4920234	242.7250	1.070441	.1943830
Stddev	.0021438	.2921	.0027305	.3982	.002806	.0003601
%RSD	.3950767	.2825085	.5549468	.1640620	.2620993	.1852535
#1	.5403699	103.6866	.4923973	242.3727	1.067312	.1939765
#2	.5428912	103.1027	.4891253	242.6451	1.072732	.1946619
#3	.5446339	103.3772	.4945477	243.1571	1.071280	.1945107

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0783388	.5048613	.9053197	.1259181	.8777118	1.036807
Stddev	.0042691	.0009570	.0017702	.0133099	.0021137	.002956
%RSD	5.449480	.1895667	.1955340	10.57028	.2408156	.2850851
#1	.0735808	.5053694	.9066457	.1179837	.8770520	1.033570
#2	.0796019	.5037574	.9060039	.1184863	.8760066	1.037487
#3	.0818338	.5054572	.9033095	.1412843	.8800766	1.039363

Sample Name: ICSAB01 Acquired: 12/27/2024 15:20:24 Type: Unk
Method: NON EPA-6010-200.7(v2566) 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	.9816984	.9138224	.9174479	F .0090802	F -.012810	F -.037638
Stddev	.0024723	.0018389	.0071265	.0023971	.003114	.000800
%RSD	.2518353	.2012286	.7767753	26.39864	24.30847	2.126589
#1	.9789206	.9149135	.9174170	.0072478	-.012263	-.037465
#2	.9836574	.9116993	.9245898	.0117930	-.016161	-.038510
#3	.9825171	.9148544	.9103369	.0082000	-.010006	-.036938

Elem	Sr4077
Units	ppm
Avg	F -.006444
Stddev	.000196
%RSD	3.038605
#1	-.006397
#2	-.006659
#3	-.006275

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2614.256	55328.34	12152.29	1733.609	3787.140
Stddev	6.592	93.21	26.42	7.823	9.730
%RSD	.2521417	.1684610	.2173949	.4512514	.2569282
#1	2618.010	55286.31	12145.97	1726.626	3796.257
#2	2618.113	55263.56	12181.29	1732.139	3788.267
#3	2606.645	55435.17	12129.60	1742.063	3776.895

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICSADLX20 Acquired: 12/27/2024 15:25:53 Type: Unk
Method: NON EPA-6010-200.7(v2567) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005507	-.000420	.0007321	-.002143	-.000223	11.85541	-.004894
Stddev	.0008916	.001348	.0007043	.002784	.000447	.01985	.000641
%RSD	161.8919	320.8698	96.20184	129.9325	200.4352	.1674609	13.09280
#1	.0010496	-.000624	.0004712	-.001263	-.000670	11.83458	-.004944
#2	.0010811	-.001654	.0015296	.000095	-.000223	11.85754	-.005508
#3	-.000479	.001018	.0001955	-.005260	.000224	11.87412	-.004230

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001966	.0000345	11.27775	.0026199	.0000591	.0047202	4.917670
Stddev	.0000120	.0000646	.00375	.0001828	.0003250	.0002714	.031319
%RSD	6.120675	187.1952	.0332381	6.977696	550.1999	5.748878	.6368739
#1	.0001952	.0001056	11.28011	.0028085	.0001480	.0044914	4.884889
#2	.0001853	.0000188	11.27972	.0024435	.0003303	.0050200	4.920836
#3	.0002092	-.000021	11.27343	.0026077	-.000301	.0046491	4.947287

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004967	11.58413	-.000160	.0004375	.0068049	.0000011	-.017187
Stddev	.0002155	.04685	.000240	.0002577	.0211624	.0010467	.000021
%RSD	43.38750	.4044609	149.9474	58.89402	310.9864	97827.99	.1235880
#1	.0006979	11.56608	.000103	.0005633	-.017610	.0008245	-.017209
#2	.0002693	11.54899	-.000366	.0006081	.019899	.0003556	-.017184
#3	.0005230	11.63733	-.000217	.0001411	.018126	-.001177	-.017167

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0199357	-.000586	.0000044	-.000650	.0001874	-.002742	-.002627
Stddev	.0158177	.000605	.0000830	.000350	.0001869	.002860	.002166
%RSD	79.34360	103.3477	1885.640	53.79429	99.74850	104.3211	82.45292
#1	.0016763	-.000942	-.000063	-.000250	.0003630	-.001091	-.004850
#2	.0286827	.000113	-.000021	-.000900	-.000009	-.001090	-.000523
#3	.0294480	-.000928	.000097	-.000800	.000208	-.006045	-.002507

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICSADLX20 Acquired: 12/27/2024 15:25:53 Type: Unk
Method: NON EPA-6010-200.7(v2567) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0006414	-.003333	-.000099
Stddev	.0006173	.000647	.000054
%RSD	96.24197	19.42266	54.85271
#1	.0013065	-.003140	-.000054
#2	.0000868	-.004055	-.000083
#3	.0005309	-.002804	-.000159

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2969.737	62679.16	12630.41	1977.672	4664.343
Stddev	7.399	108.63	23.84	7.185	7.878
%RSD	.2491454	.1733096	.1887406	.3633001	.1689023
#1	2965.919	62801.37	12606.28	1985.968	4662.058
#2	2978.265	62642.53	12631.02	1973.519	4673.111
#3	2965.027	62593.58	12653.94	1973.529	4657.860

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICSABDLX20 Acquired: 12/27/2024 15:30:07 Type: Unk
Method: NON EPA-6010-200.7(v2567) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057333	.0051056	.0037516	.0018140	.0338141	12.12664	.0210219
Stddev	.0011514	.0005114	.0003922	.0018626	.0007781	.06359	.0002039
%RSD	20.08238	10.01735	10.45303	102.6825	2.301212	.5243566	.9698925
#1	.0044861	.0054025	.0036930	.0029428	.0344380	12.13713	.0210325
#2	.0059582	.0053992	.0033921	.0028350	.0329422	12.18434	.0208128
#3	.0067557	.0045150	.0041698	-.000336	.0340621	12.05847	.0212202

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0259554	.0539597	11.56763	.0309358	.0270862	.0309217	5.010931
Stddev	.0001373	.0001591	.04698	.0003918	.0000731	.0004172	.009609
%RSD	.5289967	.2949313	.4061271	1.266474	.2699211	1.349138	.1917685
#1	.0260707	.0538354	11.59677	.0313864	.0270783	.0308198	5.011100
#2	.0259920	.0539048	11.59270	.0307453	.0270174	.0313804	5.020455
#3	.0258036	.0541391	11.51344	.0306756	.0271630	.0305649	5.001239

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0256810	11.88472	.0542665	.0119126	.0068267	.0254633	.0406778
Stddev	.0001775	.07253	.0001840	.0003210	.0100422	.0005764	.0005856
%RSD	.6913363	.6102597	.3390943	2.694173	147.1009	2.263654	1.439688
#1	.0258540	11.91355	.0540575	.0118082	-.004544	.0257960	.0413530
#2	.0254992	11.93840	.0543384	.0122728	.014482	.0247977	.0403077
#3	.0256896	11.80221	.0544038	.0116569	.010542	.0257960	.0403728

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170420	-.002206	.0000439	-.000325	.0005330	-.002074	-.001694
Stddev	.0277770	.000472	.0000893	.000473	.0003297	.002613	.000909
%RSD	162.9908	21.42238	203.5764	145.5143	61.85413	125.9667	53.68266
#1	-.015031	-.002358	.0001412	-.000740	.0006635	.000718	-.000906
#2	.033283	-.001676	-.000034	-.000426	.0007775	-.004460	-.001488
#3	.032874	-.002583	.000024	.000190	.0001580	-.002480	-.002689

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: ICSABDLX20 Acquired: 12/27/2024 15:30:07 Type: Unk
Method: NON EPA-6010-200.7(v2567) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0016913	-.004125	-.000078
Stddev	.0010067	.000276	.000011
%RSD	59.52468	6.679746	14.11846
#1	.0007785	-.004093	-.000065
#2	.0015242	-.004415	-.000086
#3	.0027711	-.003867	-.000082

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2941.847	63178.92	12672.70	2022.229	4591.626
Stddev	2.591	197.78	70.62	7.899	1.570
%RSD	.0880775	.3130524	.5572520	.3906077	.0342017
#1	2944.817	62956.05	12615.56	2013.195	4591.359
#2	2940.045	63247.20	12650.88	2027.833	4593.313
#3	2940.681	63333.53	12751.65	2025.660	4590.206

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCV01 Acquired: 12/27/2024 15:34:22 Type: Unk
Method: NON EPA-6010-200.7(v2567) 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	5.327805	5.331723	5.076089	5.369748	5.330427	10.02332	9.892622
Stddev	.008915	.029445	.005851	.006547	.011808	.02615	.021969
%RSD	.1673214	.5522662	.1152617	.1219182	.2215298	.2608519	.2220708
#1	5.322014	5.325155	5.070959	5.362870	5.326019	10.05350	9.876033
#2	5.323330	5.363898	5.074847	5.370473	5.321457	10.00867	9.884297
#3	5.338070	5.306117	5.082461	5.375903	5.343806	10.00778	9.917536

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2399408	2.535012	24.09244	1.032189	2.540507	1.269768	5.028827
Stddev	.0005756	.004953	.03953	.001399	.004597	.002340	.022329
%RSD	.2399013	.1953828	.1640895	.1355559	.1809539	.1843098	.4440259
#1	.2405634	2.529305	24.09380	1.030822	2.535545	1.269833	5.005062
#2	.2394280	2.537534	24.05225	1.032127	2.541353	1.267397	5.032046
#3	.2398309	2.538196	24.13128	1.033619	2.544622	1.272076	5.049371

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.356405	23.84266	2.541168	1.291131	26.09600	2.459773	2.600347
Stddev	.003715	.03293	.003279	.001581	.06448	.006232	.005354
%RSD	.1576522	.1381218	.1290460	.1224496	.2471058	.2533466	.2059026
#1	2.353570	23.83246	2.537397	1.291379	26.02443	2.464798	2.595988
#2	2.355035	23.81604	2.543357	1.289441	26.14957	2.452800	2.598729
#3	2.360611	23.87949	2.542748	1.292574	26.11401	2.461720	2.606323

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.23595	4.781529	4.884931	5.129379	4.876176	5.205622	5.128008
Stddev	.12639	.019306	.011742	.004993	.009209	.016543	.022818
%RSD	.4817343	.4037549	.2403760	.0973330	.1888469	.3177972	.4449694
#1	26.09113	4.801398	4.874395	5.123648	4.884508	5.189302	5.101692
#2	26.32397	4.762840	4.882808	5.131701	4.866289	5.205183	5.140037
#3	26.29276	4.780350	4.897590	5.132788	4.877731	5.222380	5.142295

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCV01 Acquired: 12/27/2024 15:34:22 Type: Unk
Method: NON EPA-6010-200.7(v2567) 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	5.115593	4.972599	5.009441
Stddev	.010397	.003520	.053560
%RSD	.2032355	.0707897	1.069189
#1	5.105601	4.976661	5.057211
#2	5.114826	4.970431	5.019572
#3	5.126352	4.970706	4.951538

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2796.705	60428.55	11848.40	1914.489	4185.814
Stddev	4.719	76.41	23.32	9.832	1.649
%RSD	.1687495	.1264505	.1967785	.5135618	.0393833
#1	2795.069	60488.74	11821.62	1924.496	4184.924
#2	2802.024	60342.58	11859.40	1904.841	4187.716
#3	2793.020	60454.33	11864.17	1914.130	4184.801

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCB01 Acquired: 12/27/2024 15:40:38 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0019907	.0000267	.0005808	-.001631	.0007629	-.002141	-.003446
Stddev	.0007985	.0004951	.0007903	.001291	.0006306	.004682	.000896
%RSD	40.11226	1853.104	136.0810	79.15789	82.66676	218.6516	25.98448
#1	.0023792	-.000535	-.000328	-.000144	.0004640	-.001863	-.004476
#2	.0010723	.000398	.000958	-.002278	.0003372	.002396	-.003011
#3	.0025207	.000218	.001111	-.002471	.0014874	-.006956	-.002852

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001201	.0001471	.0042847	-.000286	.0001200	-.000099	-.006825
Stddev	.0000573	.0000595	.0022029	.000087	.0001641	.000307	.004445
%RSD	47.75011	40.42465	51.41340	30.61742	136.8134	308.9919	65.12821
#1	.0001089	.0001643	.0062205	-.000185	.0001780	-.000394	-.008014
#2	.0001822	.0001960	.0018877	-.000328	-.000065	-.000124	-.010554
#3	.0000692	.0000809	.0047459	-.000344	.000247	.000220	-.001906

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003053	.0041051	-.000196	.0007867	.0112489	.0001361	-.017516
Stddev	.0002167	.0040191	.000271	.0005038	.0109628	.0011358	.000191
%RSD	70.98570	97.90428	138.1927	64.03837	97.45671	834.2934	1.088922
#1	.0001299	.0030684	-.000241	.0002486	-.001341	.0003371	-.017561
#2	.0002383	.0007060	-.000442	.0008644	.018683	.0011580	-.017307
#3	.0005475	.0085410	.000095	.0012471	.016406	-.001087	-.017680

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013165	.0040603	.0003911	.0005860	.0005805	-.003455	-.002409
Stddev	.0065141	.0003900	.0000606	.0002456	.0002864	.001381	.001218
%RSD	494.7974	9.605899	15.48056	41.91138	49.34547	39.95807	50.57597
#1	.0053875	.0038984	.0004428	.0006754	.0009022	-.004191	-.003013
#2	.0047586	.0045052	.0004061	.0007744	.0004861	-.004312	-.003208
#3	-.006197	.0037773	.0003245	.0003082	.0003531	-.001862	-.001007

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCB01 Acquired: 12/27/2024 15:40:38 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0005694	-.001373	.0005166
Stddev	.0026202	.000423	.0002204
%RSD	460.1374	30.79072	42.67028
#1	.0019579	-.001634	.0003094
#2	-.002453	-.001600	.0004922
#3	.002203	-.000885	.0007482

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3074.897	64742.10	12637.98	2065.053	4958.311
Stddev	14.222	17.13	17.28	4.886	16.374
%RSD	.4625113	.0264649	.1367202	.2365877	.3302236
#1	3059.606	64746.91	12635.64	2063.415	4939.643
#2	3087.728	64756.31	12621.99	2061.196	4970.241
#3	3077.357	64723.07	12656.31	2070.547	4965.048

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02 Acquired: 12/27/2024 15:44:58 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000868	-.001804	.0050637	.0011156	-.000624	.7740124
Stddev	.000536	.000587	.0005179	.0029490	.000476	.0157217
%RSD	61.75994	32.51017	10.22688	264.3463	76.30979	2.031188
#1	-.000249	-.001153	.0056536	.0036924	-.000936	.7650095
#2	-.001187	-.002291	.0046840	.0017551	-.000859	.7648618
#3	-.001168	-.001969	.0048536	-.002101	-.000076	.7921660

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0235475	.0001301	.0005324	17.72971	.0290322	.0048641
Stddev	.0002538	.0000126	.0001099	.05174	.0003135	.0001683
%RSD	1.077775	9.661696	20.64717	.2918396	1.079798	3.459552
#1	.0237347	.0001311	.0004115	17.71008	.0290185	.0050069
#2	.0232586	.0001421	.0005595	17.78840	.0293523	.0049067
#3	.0236491	.0001170	.0006263	17.69066	.0287258	.0046786

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.123278	.6541899	.1219092	8.560727	.0484121	.1572508
Stddev	.002006	.0028837	.0004324	.054262	.0002107	.0004016
%RSD	.1785747	.4408049	.3546516	.6338480	.4352016	.2553905
#1	1.122219	.6559378	.1214442	8.588462	.0485370	.1571971
#2	1.122024	.6508615	.1222990	8.595516	.0481688	.1576765
#3	1.125592	.6557704	.1219843	8.498203	.0485305	.1568787

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	280.1362	.0022946	.1403144	10.87451	.4646459	.0010434
Stddev	.1328	.0006280	.0002920	.02542	.0009088	.0001460
%RSD	.0473981	27.36908	.2081259	.2337751	.1955955	13.99479
#1	280.0189	.0029726	.1402476	10.87583	.4640516	.0008823
#2	280.1093	.0021787	.1406341	10.89925	.4656921	.0011669
#3	280.2804	.0017327	.1400616	10.84845	.4641939	.0010811

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02 Acquired: 12/27/2024 15:44:58 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0023079	.0178558	4.343800	6.082011	F 20.37128	-.002454
Stddev	.0001519	.0005950	.003860	.017276	.09142	.000500
%RSD	6.581467	3.332017	.0888635	.2840550	.4487683	20.39253
#1	.0022948	.0171865	4.348078	6.062553	20.31620	-.002232
#2	.0021630	.0183246	4.342744	6.087934	20.32083	-.002103
#3	.0024659	.0180563	4.340578	6.095547	20.47681	-.003027

Elem	Sr4077
Units	ppm
Avg	.0920513
Stddev	.0002067
%RSD	.2245072
#1	.0919505
#2	.0922890
#3	.0919144

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2825.612	60057.75	12693.41	1964.145	4182.449
Stddev	2.300	59.79	37.84	10.794	4.469
%RSD	.0813822	.0995484	.2981144	.5495774	.1068632
#1	2826.855	60064.52	12706.60	1966.072	4185.602
#2	2827.023	59994.87	12650.74	1952.517	4184.412
#3	2822.959	60113.86	12722.89	1973.846	4177.334

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02DUP Acquired: 12/27/2024 15:49:16 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.001136	-.002420	.0047794	.0020937	-.000440	.6947150
Stddev	.001811	.002098	.0017004	.0019326	.001079	.0177806
%RSD	159.4435	86.70120	35.57815	92.30543	245.0849	2.559409
#1	.000931	-.002972	.0028412	.0000482	-.001198	.6743008
#2	-.002447	-.004188	.0060206	.0038890	.000795	.7030260
#3	-.001892	-.000101	.0054763	.0023439	-.000919	.7068182

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0222949	.0001360	.0005139	17.55164	.0285629	.0048467
Stddev	.0001264	.0000201	.0001003	.06035	.0003475	.0002166
%RSD	.5670423	14.81197	19.52554	.3438582	1.216516	4.468797
#1	.0222034	.0001486	.0005280	17.48526	.0281633	.0047148
#2	.0222420	.0001467	.0006064	17.60320	.0287312	.0047287
#3	.0224391	.0001128	.0004072	17.56647	.0287941	.0050967

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.130369	.6576453	.1202235	8.513346	.0485507	.1590115
Stddev	.004237	.0068862	.0007488	.017346	.0002588	.0007171
%RSD	.3748740	1.047105	.6228136	.2037475	.5330785	.4509808
#1	1.131401	.6504846	.1194253	8.507701	.0487344	.1583683
#2	1.125710	.6642196	.1209104	8.532811	.0486630	.1588815
#3	1.133994	.6582318	.1203350	8.499526	.0482547	.1597847

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	282.2958	.0030016	.1427009	11.04963	.4614347	.0008928
Stddev	.2805	.0015471	.0003370	.08458	.0008588	.0002455
%RSD	.0993656	51.54305	.2361529	.7654669	.1861133	27.49672
#1	282.0553	.0041067	.1424343	10.96362	.4616172	.0010808
#2	282.6039	.0036646	.1425888	11.05256	.4621875	.0009825
#3	282.2281	.0012335	.1430797	11.13271	.4604993	.0006151

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02DUP Acquired: 12/27/2024 15:49:16 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0021357	.0174585	4.425880	6.011207	F 20.28373	-.001701
Stddev	.0007049	.0026616	.036593	.033800	.07430	.000553
%RSD	33.00368	15.24506	.8267973	.5622893	.3663228	32.54128
#1	.0017416	.0188033	4.388774	6.047993	20.36635	-.001966
#2	.0017160	.0191793	4.426931	5.981519	20.22238	-.002071
#3	.0029494	.0143929	4.461937	6.004110	20.26245	-.001065

Elem	Sr4077
Units	ppm
Avg	.0910496
Stddev	.0006989
%RSD	.7675630
#1	.0902559
#2	.0913199
#3	.0915729

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2784.613	59242.26	12711.37	1896.696	4150.144
Stddev	8.849	177.92	19.70	7.318	4.687
%RSD	.3177868	.3003178	.1549591	.3858375	.1129343
#1	2786.155	59391.19	12712.45	1901.599	4150.502
#2	2792.591	59290.35	12691.16	1900.204	4154.643
#3	2775.095	59045.25	12730.51	1888.284	4145.289

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02LX5 Acquired: 12/27/2024 15:53:34 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000818	-.002157	.0010199	-.000541	-.001386	.1876733	.0002658
Stddev	.001508	.001126	.0005218	.000809	.000712	.0097846	.0006159
%RSD	184.4130	52.22371	51.16877	149.5771	51.36051	5.213628	231.7423
#1	-.001069	-.003443	.0004345	-.000801	-.002206	.1926076	.0001229
#2	-.002184	-.001681	.0014365	.000366	-.001018	.1940082	-.000266
#3	.000800	-.001347	.0011886	-.001188	-.000933	.1764040	.000941

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000934	.0001237	3.573944	.0052884	.0012518	.2317967	.1226310
Stddev	.0000268	.0000342	.009404	.0001103	.0003791	.0007718	.0034093
%RSD	28.65808	27.68137	.2631331	2.084766	30.28295	.3329616	2.780169
#1	.0001243	.0000973	3.568586	.0053998	.0009681	.2309056	.1257402
#2	.0000770	.0001114	3.568443	.0052861	.0016824	.2322311	.1231677
#3	.0000790	.0001624	3.584803	.0051793	.0011051	.2322534	.1189851

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242045	1.712280	.0093142	.0307702	53.65250	.0005254	.0142510
Stddev	.0002477	.007877	.0002921	.0001669	.22080	.0006009	.0001839
%RSD	1.023567	.4600323	3.135679	.5423880	.4115340	114.3826	1.290068
#1	.0242060	1.710177	.0094164	.0305993	53.86191	.0009335	.0141897
#2	.0244515	1.705668	.0089848	.0307786	53.67374	-.000165	.0144577
#3	.0239560	1.720995	.0095415	.0309328	53.42185	.000807	.0141056

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.088944	.0941876	.0002320	.0005910	.0034165	.8353498	1.116616
Stddev	.019086	.0005739	.0001936	.0005468	.0001932	.0054595	.002461
%RSD	.9136629	.6092861	83.43229	92.51700	5.656000	.6535532	.2204243
#1	2.110965	.0937608	.0000108	.0002065	.0033727	.8292763	1.118368
#2	2.077159	.0939620	.0003701	.0003496	.0036279	.8369235	1.113802
#3	2.078710	.0948400	.0003152	.0012170	.0032489	.8398495	1.117677

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02LX5 Acquired: 12/27/2024 15:53:34 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.781543	-.000044	.0188243
Stddev	.014791	.000942	.0000487
%RSD	.3911299	2146.880	.2588624
#1	3.781290	-.000446	.0188783
#2	3.766881	-.000718	.0187837
#3	3.796459	.001032	.0188108

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2929.696	62107.06	12787.50	1963.394	4521.389
Stddev	4.613	46.32	36.70	1.077	6.493
%RSD	.1574596	.0745878	.2870011	.0548485	.1436017
#1	2924.634	62055.56	12745.84	1962.153	4514.182
#2	2930.793	62145.31	12801.62	1963.940	4523.202
#3	2933.662	62120.33	12815.05	1964.088	4526.782

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02MS Acquired: 12/27/2024 15:57:50 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.9897019	2.211555	1.090513	2.368747	.9270013	2.944111
Stddev	.0031391	.013250	.003716	.007524	.0037544	.018196
%RSD	.3171734	.5991473	.3407704	.3176229	.4050027	.6180539
#1	.9876706	2.225948	1.090163	2.376819	.9272139	2.925505
#2	.9881176	2.208853	1.086985	2.361930	.9231451	2.944959
#3	.9933173	2.199864	1.094392	2.367493	.9306448	2.961868

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2276677	.2012423	.2197235	20.00660	.4902474	.2298677
Stddev	.0012874	.0006095	.0004225	.08730	.0015168	.0002159
%RSD	.5654498	.3028529	.1922930	.4363443	.3094015	.0939042
#1	.2269566	.2012145	.2198839	19.94404	.4901785	.2298733
#2	.2268927	.2006473	.2192443	19.96943	.4887662	.2296491
#3	.2291537	.2018652	.2200424	20.10633	.4917976	.2300807

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.539573	4.158110	.3292164	11.13885	.6115148	.2553728
Stddev	.003282	.014632	.0017152	.06514	.0007951	.0002680
%RSD	.2132051	.3518810	.5209820	.5848138	.1300270	.1049312
#1	1.541238	4.141642	.3290528	11.09968	.6112104	.2550638
#2	1.535792	4.163076	.3275888	11.10282	.6109168	.2555409
#3	1.541689	4.169612	.3310074	11.21405	.6124171	.2555138

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	304.6454	.3175889	.3961948	24.31636	.7765298	.4655093
Stddev	3.8012	.0008596	.0007761	.05038	.0006299	.0009131
%RSD	1.247751	.2706560	.1958894	.2071704	.0811103	.1961596
#1	300.2890	.3173904	.3969500	24.25926	.7770511	.4663091
#2	307.2884	.3168460	.3962352	24.33531	.7758300	.4645144
#3	306.3587	.3185304	.3953994	24.35451	.7767083	.4657043

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02MS Acquired: 12/27/2024 15:57:50 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.7203838	.2148313	5.734941	F 13.24477	F 21.69639	.2196303
Stddev	.0027201	.0019462	.035471	.02849	.05771	.0006983
%RSD	.3775899	.9059269	.6185095	.2151008	.2659865	.3179273
#1	.7211519	.2134059	5.694554	13.27703	21.75143	.2189195
#2	.7173622	.2140393	5.749232	13.23420	21.63634	.2196560
#3	.7226372	.2170486	5.761038	13.22307	21.70139	.2203154

Elem	Sr4077
Units	ppm
Avg	.3082906
Stddev	.0006854
%RSD	.2223085
#1	.3081440
#2	.3076903
#3	.3090373

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2745.452	58843.15	12568.37	1867.490	4087.458
Stddev	6.909	111.87	41.31	6.643	6.595
%RSD	.2516694	.1901186	.3287002	.3557306	.1613548
#1	2743.862	58953.94	12587.84	1872.939	4088.343
#2	2753.018	58845.28	12596.34	1869.441	4093.566
#3	2739.476	58730.23	12520.92	1860.090	4080.465

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02MSD Acquired: 12/27/2024 16:01:55 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	1.017065	2.269891	1.115992	2.432789	.9556032	2.945280
Stddev	.005873	.017491	.003113	.007030	.0055607	.033546
%RSD	.5774835	.7705562	.2789236	.2889601	.5819009	1.138973
#1	1.014595	2.286209	1.112756	2.427136	.9492839	2.940467
#2	1.012830	2.272037	1.116255	2.430571	.9577773	2.980972
#3	1.023770	2.251426	1.118965	2.440661	.9597483	2.914400

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2358478	.2050806	.2242326	20.41134	.4999690	.2352882
Stddev	.0006783	.0009392	.0003414	.04563	.0020444	.0002274
%RSD	.2875786	.4579881	.1522476	.2235356	.4089002	.0966422
#1	.2361895	.2058101	.2239640	20.43465	.5009353	.2352261
#2	.2362873	.2054110	.2241170	20.44061	.5013510	.2350984
#3	.2350667	.2040209	.2246168	20.35877	.4976205	.2355402

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.571693	4.259286	.3386837	11.38261	.6248997	.2617733
Stddev	.004890	.020200	.0002336	.06520	.0019662	.0006243
%RSD	.3111044	.4742628	.0689632	.5728406	.3146428	.2384931
#1	1.568459	4.275053	.3389532	11.34890	.6231102	.2618401
#2	1.569303	4.236516	.3385391	11.45776	.6245844	.2611183
#3	1.577318	4.266288	.3385588	11.34115	.6270045	.2623616

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	315.8170	.3266899	.4043503	25.18886	.7931758	.4784225
Stddev	1.9702	.0011321	.0007029	.15710	.0056194	.0015536
%RSD	.6238422	.3465242	.1738431	.6236815	.7084655	.3247352
#1	313.7258	.3263399	.4045778	25.12749	.7979604	.4789271
#2	317.6384	.3257741	.4035618	25.07172	.7945792	.4766793
#3	316.0867	.3279556	.4049113	25.36738	.7869877	.4796610

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02MSD Acquired: 12/27/2024 16:01:55 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.7328361	.2219584	5.881353	F 13.48721	F 22.12762	.2292566
Stddev	.0029235	.0005890	.021164	.01871	.06903	.0010378
%RSD	.3989264	.2653810	.3598444	.1387274	.3119660	.4526831
#1	.7308380	.2226283	5.857146	13.49701	22.08713	.2281144
#2	.7314788	.2217254	5.896356	13.49898	22.08840	.2301417
#3	.7361915	.2215215	5.890558	13.46563	22.20733	.2295138

Elem	Sr4077
Units	ppm
Avg	.3190129
Stddev	.0004554
%RSD	.1427578
#1	.3184882
#2	.3193054
#3	.3192451

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2680.049	57532.05	12328.29	1823.164	3991.728
Stddev	9.112	44.50	50.67	7.525	10.891
%RSD	.3399810	.0773527	.4110107	.4127212	.2728379
#1	2686.176	57533.48	12299.08	1824.970	4000.763
#2	2684.393	57575.82	12298.98	1829.621	3994.786
#3	2669.578	57486.85	12386.80	1814.900	3979.635

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02A Acquired: 12/27/2024 16:06:00 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	1.023306	2.261170	1.120696	2.446328	.9658526	3.154548
Stddev	.004927	.009183	.002264	.007550	.0058127	.031063
%RSD	.4814859	.4061225	.2019946	.3086120	.6018175	.9847013
#1	1.028982	2.258986	1.122226	2.451600	.9702680	3.127365
#2	1.020138	2.253275	1.118095	2.437679	.9592671	3.147875
#3	1.020797	2.271248	1.121765	2.449705	.9680226	3.188406

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2398892	.2092329	.2261564	21.05830	.5086319	.2372057
Stddev	.0016012	.0005035	.0001440	.10765	.0028436	.0004981
%RSD	.6674934	.2406423	.0636746	.5111948	.5590668	.2100051
#1	.2392036	.2089688	.2262979	20.97590	.5107364	.2370765
#2	.2387448	.2089164	.2260100	21.01891	.5097623	.2367848
#3	.2417190	.2098135	.2261612	21.18010	.5053969	.2377557

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.589463	4.364440	.3465617	11.62260	.6326433	.2652976
Stddev	.005464	.017658	.0034232	.05948	.0008392	.0015498
%RSD	.3437638	.4045940	.9877681	.5117448	.1326501	.5841816
#1	1.595027	4.376942	.3441211	11.56384	.6325215	.2661697
#2	1.584104	4.372139	.3450892	11.62119	.6318717	.2662149
#3	1.589260	4.344240	.3504748	11.68277	.6335368	.2635083

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	322.1495	.3333779	.4314066	25.67838	.8087847	.4780045
Stddev	4.1714	.0026945	.0010352	.09512	.0033176	.0017764
%RSD	1.294866	.8082537	.2399693	.3704424	.4101996	.3716351
#1	326.7830	.3322155	.4323272	25.78218	.8079812	.4798179
#2	320.9722	.3314597	.4316067	25.65759	.8059426	.4762675
#3	318.6932	.3364585	.4302859	25.59538	.8124303	.4779281

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: P5297-02A Acquired: 12/27/2024 16:06:00 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.7389625	.2254615	6.016712	F 13.53887	F 22.19818	.2323036
Stddev	.0007288	.0018370	.032667	.06468	.07620	.0012720
%RSD	.0986237	.8147543	.5429453	.4777379	.3432632	.5475754
#1	.7397153	.2236688	6.036674	13.60207	22.24164	.2319932
#2	.7382604	.2253759	6.034449	13.47280	22.11020	.2312155
#3	.7389118	.2273397	5.979013	13.54175	22.24271	.2337022

Elem	Sr4077
Units	ppm
Avg	.3243397
Stddev	.0022886
%RSD	.7056094
#1	.3230052
#2	.3230317
#3	.3269823

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2658.692	56644.40	12114.61	1786.157	3968.072
Stddev	8.805	241.31	54.94	4.100	8.765
%RSD	.3311945	.4260108	.4534638	.2295506	.2208946
#1	2651.699	56425.60	12148.97	1781.579	3965.421
#2	2668.581	56604.39	12143.62	1787.400	3977.856
#3	2655.795	56903.22	12051.25	1789.491	3960.938

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165878BL Acquired: 12/27/2024 16:10:05 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000014	-.000526	.0008594	-.000749	-.000090	.0124814
Stddev	.002153	.001092	.0004147	.001690	.000730	.0025498
%RSD	15832.67	207.5157	48.25638	225.7100	814.1415	20.42856
#1	-.002299	-.001647	.0013379	-.000615	.000474	.0125517
#2	.000281	-.000469	.0006052	.000870	.000172	.0098973
#3	.001977	.000536	.0006350	-.002502	-.000915	.0149954

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006075	.0000457	-.000001	.0043140	-.000179	.0000737
Stddev	.000107	.0000273	.000026	.0065572	.000225	.0001312
%RSD	1.768916	59.74182	2566.117	152.0005	125.7873	178.1212
#1	-.006082	.0000144	-.000030	.0118832	-.000387	-.000066
#2	-.006179	.0000586	.000010	.0003632	.000060	.000093
#3	-.005965	.0000642	.000018	.0006955	-.000209	.000194

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003343	-.006158	-.000024	-.000215	.0000961	.0006377
Stddev	.0002049	.003240	.000139	.005883	.0000358	.0001980
%RSD	61.30275	52.62048	572.1989	2732.339	37.22663	31.04862
#1	.0001426	-.003009	.000070	.003561	.0000860	.0007068
#2	.0005504	-.009483	-.000184	-.006993	.0000664	.0007918
#3	.0003100	-.005983	.000041	.002787	.0001358	.0004144

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2233671	-.000203	-.015783	.1215414	-.000191	-.000056
Stddev	.0582048	.001085	.000144	.0109770	.000333	.000130
%RSD	26.05791	535.5666	.9145682	9.031525	174.7444	233.4363
#1	.2894048	.000820	-.015618	.1116425	-.000493	-.000192
#2	.2011681	-.000087	-.015845	.1333468	-.000246	.000067
#3	.1795285	-.001341	-.015886	.1196349	.000167	-.000042

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165878BL Acquired: 12/27/2024 16:10:05 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000124	.0003952	.0017284	.0013580	F .0143562	.0018195
Stddev	.000403	.0002764	.0023423	.0024280	.0053255	.0003118
%RSD	325.7681	69.93355	135.5161	178.7983	37.09579	17.13860
#1	.000338	.0002409	.0038399	.0040312	.0195240	.0021478
#2	-.000411	.0002304	.0021365	.0007533	.0146587	.0015273
#3	-.000298	.0007143	-.000791	-.000711	.0088858	.0017834

Elem	Sr4077
Units	ppm
Avg	.0001973
Stddev	.0000607
%RSD	30.75090
#1	.0002536
#2	.0002051
#3	.0001330

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3062.442	65501.22	12955.44	2028.763	5027.901
Stddev	4.594	153.35	33.57	3.723	.886
%RSD	.1499955	.2341244	.2590804	.1835069	.0176217
#1	3061.388	65328.13	12919.65	2024.605	5027.066
#2	3058.468	65620.11	12960.46	2029.897	5028.830
#3	3067.471	65555.43	12986.22	2031.787	5027.807

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165832BL Acquired: 12/27/2024 16:20:12 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000599	-.002808	.0003794	.0000981	-.000594	.0036370	-.005726
Stddev	.001111	.001822	.0009036	.0009195	.001265	.0020917	.000305
%RSD	185.4297	64.89986	238.1948	937.3588	213.0545	57.51280	5.319090
#1	-.001816	-.004232	.0001016	-.000223	.000627	.0012486	-.005872
#2	.000362	-.000754	.0013893	-.000617	-.000509	.0045196	-.005930
#3	-.000343	-.003439	-.000353	.001135	-.001900	.0051427	-.005376

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000918	-.000041	-.002044	-.000293	-.000032	-.000316	-.006891
Stddev	.0000326	.000033	.003689	.000192	.000125	.000374	.000434
%RSD	35.54428	78.91154	180.5235	65.45748	389.0909	118.5874	6.299342
#1	.0000748	-.000025	-.001500	-.000139	.000111	-.000142	-.007392
#2	.0000711	-.000079	.001344	-.000507	-.000088	-.000060	-.006665
#3	.0001294	-.000021	-.005974	-.000232	-.000121	-.000745	-.006618

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000029	-.000661	-.000228	.0006363	.0640991	.0001372	-.017581
Stddev	.000174	.004300	.000253	.0001924	.0111871	.0003917	.000240
%RSD	591.7396	650.5496	111.2600	30.23814	17.45277	285.4316	1.362593
#1	.000013	-.004617	-.000431	.0008567	.0518274	-.000255	-.017582
#2	.000120	-.001281	-.000308	.0005501	.0667415	.000529	-.017820
#3	-.000220	.003915	.000056	.0005021	.0737285	.000138	-.017341

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0803790	-.002041	-.000104	.0000564	.0008717	.0035364	-.000864
Stddev	.0020320	.000193	.000190	.0006180	.0000915	.0038765	.001935
%RSD	2.528068	9.452640	182.4068	1095.512	10.49950	109.6173	224.1205
#1	.0824458	-.002153	.000036	.0007570	.0009705	.0066770	.001249
#2	.0783836	-.002151	-.000321	-.000411	.0008549	-.000796	-.002552
#3	.0803077	-.001818	-.000027	-.000177	.0007898	.004728	-.001287

Sample Name: PB165832BL Acquired: 12/27/2024 16:20:12 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0017353	-.000693	.0000436
Stddev	.0017050	.000161	.0000221
%RSD	98.25859	23.27555	50.58449
#1	.0032306	-.000792	.0000298
#2	-.000121	-.000780	.0000320
#3	.002097	-.000507	.0000690

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2966.348	63928.86	12700.59	2022.820	4798.186
Stddev	6.469	85.55	15.56	9.970	4.827
%RSD	.2180874	.1338224	.1225060	.4928980	.1006052
#1	2972.879	63865.76	12684.24	2018.084	4803.701
#2	2966.223	63894.59	12715.22	2016.100	4796.130
#3	2959.943	64026.23	12702.31	2034.276	4794.727

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165832BS Acquired: 12/27/2024 16:24:33 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.8282200	2.043623	.9748126	2.030135	.8114100	1.877601
Stddev	.0032783	.027036	.0056192	.003161	.0026098	.000850
%RSD	.3958197	1.322932	.5764402	.1557232	.3216359	.0452855
#1	.8257295	2.074828	.9712305	2.033778	.8088261	1.878495
#2	.8269964	2.027218	.9719184	2.028519	.8113589	1.876803
#3	.8319340	2.028824	.9812890	2.028109	.8140449	1.877504

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1782670	.1835731	.1911044	.9560433	.4035832	.1959996
Stddev	.0006764	.0008344	.0002428	.0053308	.0002836	.0003855
%RSD	.3794529	.4545302	.1270292	.5575896	.0702795	.1966585
#1	.1785185	.1844116	.1908972	.9600682	.4032581	.1956635
#2	.1775009	.1827429	.1910445	.9499975	.4037803	.1959150
#3	.1787817	.1835646	.1913715	.9580641	.4037112	.1964203

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3190181	2.919669	.1819852	1.809410	.4892988	.0767358
Stddev	.0008540	.023197	.0010878	.015037	.0007390	.0005553
%RSD	.2677112	.7945012	.5977579	.8310318	.1510262	.7236240
#1	.3181256	2.893381	.1824376	1.818274	.4884875	.0763058
#2	.3191011	2.928363	.1807442	1.817907	.4894755	.0765390
#3	.3198276	2.937263	.1827738	1.792048	.4899335	.0773627

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.842734	.2796982	.1896269	9.715535	.2691180	.4184669
Stddev	.019032	.0011038	.0007337	.015277	.0012793	.0002856
%RSD	.6695006	.3946298	.3869098	.1572384	.4753828	.0682506
#1	2.820758	.2784677	.1900408	9.708639	.2703494	.4183321
#2	2.853636	.2806010	.1887798	9.704923	.2677956	.4182736
#3	2.853809	.2800259	.1900601	9.733044	.2692090	.4187949

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165832BS Acquired: 12/27/2024 16:24:33 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.6786458	.1834365	.7504388	5.486658	F -.010330	.1926508
Stddev	.0008925	.0007385	.0044506	.005543	.003422	.0004113
%RSD	.1315093	.4025768	.5930625	.1010220	33.12939	.2134735
#1	.6788638	.1825878	.7528195	5.484962	-.014266	.1930182
#2	.6794092	.1837888	.7453042	5.482161	-.008660	.1922065
#3	.6776646	.1839328	.7531926	5.492851	-.008063	.1927275

Elem	Sr4077
Units	ppm
Avg	.1879342
Stddev	.0006531
%RSD	.3475388
#1	.1877970
#2	.1873605
#3	.1886450

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2941.613	63719.94	12488.02	2003.505	4663.356
Stddev	6.062	98.23	58.68	9.812	6.432
%RSD	.2060713	.1541626	.4699258	.4897204	.1379306
#1	2947.376	63670.99	12420.56	1997.213	4668.952
#2	2942.171	63655.79	12516.17	1998.490	4664.786
#3	2935.291	63833.03	12527.33	2014.810	4656.329

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165878BS Acquired: 12/27/2024 16:28:56 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.8013841	2.011179	.9446441	1.980628	.7874335	1.847831
Stddev	.0022575	.008026	.0016235	.003567	.0006643	.001042
%RSD	.2816947	.3990547	.1718624	.1800900	.0843635	.0563781
#1	.8018959	2.019639	.9448784	1.980645	.7881973	1.846629
#2	.7989146	2.003673	.9429162	1.977052	.7871125	1.848459
#3	.8033417	2.010227	.9461377	1.984186	.7869906	1.848406

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1751941	.1807458	.1849847	.9429641	.3975345	.1896017
Stddev	.0008348	.0011547	.0001146	.0039132	.0010736	.0000591
%RSD	.4764874	.6388635	.0619351	.4149922	.2700616	.0311692
#1	.1747203	.1810510	.1848613	.9384612	.3963166	.1896625
#2	.1747041	.1794692	.1850050	.9448892	.3983439	.1895444
#3	.1761580	.1817173	.1850877	.9455418	.3979430	.1895982

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3086731	2.877728	.1793358	1.775148	.4737124	.0758893
Stddev	.0003302	.025289	.0009966	.008724	.0000715	.0003784
%RSD	.1069683	.8787822	.5557388	.4914526	.0151025	.4986425
#1	.3090415	2.853463	.1783213	1.765102	.4736417	.0755756
#2	.3084039	2.903929	.1793726	1.780810	.4737107	.0763095
#3	.3085737	2.875791	.1803135	1.779533	.4737847	.0757827

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.793400	.2745798	.1878011	9.580172	.2653192	.4069471
Stddev	.022020	.0010300	.0005703	.089336	.0025663	.0005783
%RSD	.7883012	.3751216	.3036968	.9325088	.9672417	.1420965
#1	2.771128	.2734050	.1884485	9.506555	.2656464	.4064385
#2	2.815160	.2750063	.1875817	9.679561	.2626050	.4068268
#3	2.793912	.2753280	.1873730	9.554399	.2677062	.4075761

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: PB165878BS Acquired: 12/27/2024 16:28:56 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.6570802	.1798745	F .7436998	5.299908	F -.013374	.1895495
Stddev	.0012446	.0005910	.0129735	.003748	.001945	.0010450
%RSD	.1894178	.3285553	1.744450	.0707252	14.54517	.5513229
#1	.6561521	.1801395	.7288249	5.301679	-.011526	.1883588
#2	.6565940	.1791974	.7495999	5.295602	-.015404	.1903143
#3	.6584946	.1802867	.7526747	5.302442	-.013191	.1899754

Elem	Sr4077
Units	ppm
Avg	.1850051
Stddev	.0007037
%RSD	.3803880
#1	.1844508
#2	.1847677
#3	.1857969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3031.104	64614.88	12663.13	2038.660	4816.447
Stddev	1.044	145.83	64.32	8.705	4.055
%RSD	.0344395	.2256968	.5079284	.4269728	.0841944
#1	3029.978	64578.14	12606.67	2033.809	4812.739
#2	3031.295	64490.93	12733.15	2033.462	4815.823
#3	3032.040	64775.57	12649.57	2048.709	4820.778

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCV02 Acquired: 12/27/2024 16:32:57 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	5.370432	5.296354	5.070630	5.414222	5.342625	10.09282	9.760366
Stddev	.003460	.042022	.010698	.007342	.005170	.00762	.034514
%RSD	.0644339	.7934132	.2109872	.1356113	.0967780	.0755255	.3536156
#1	5.371821	5.343532	5.063964	5.422699	5.343259	10.09354	9.769266
#2	5.372982	5.282588	5.064956	5.410068	5.347450	10.08486	9.789558
#3	5.366493	5.262942	5.082970	5.409897	5.337167	10.10005	9.722273

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2400755	2.536960	24.08631	1.039172	2.535819	1.326798	5.065869
Stddev	.0011794	.003859	.04731	.001150	.002779	.001222	.018578
%RSD	.4912525	.1521147	.1964188	.1106318	.1096085	.0920991	.3667215
#1	.2414155	2.537104	24.13465	1.040284	2.536381	1.326407	5.076591
#2	.2396157	2.533030	24.08417	1.039244	2.532802	1.328167	5.076599
#3	.2391953	2.540745	24.04011	1.037988	2.538275	1.325819	5.044418

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.344232	24.07734	2.537167	1.293468	25.44713	2.467402	2.602805
Stddev	.013452	.03968	.002986	.001315	.12211	.005891	.010791
%RSD	.5738367	.1647905	.1176977	.1016277	.4798466	.2387424	.4145769
#1	2.359689	24.09587	2.535586	1.294949	25.54554	2.474183	2.594646
#2	2.337831	24.03179	2.535304	1.293013	25.48536	2.463551	2.615040
#3	2.335176	24.10437	2.540611	1.292441	25.31048	2.464472	2.598730

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.07718	4.761688	5.314857	5.145210	4.847423	5.316864	5.127571
Stddev	.06555	.015687	.003126	.003868	.016467	.027772	.019904
%RSD	.2513712	.3294414	.0588197	.0751765	.3396990	.5223292	.3881771
#1	26.01475	4.778993	5.316984	5.145501	4.865297	5.285553	5.147732
#2	26.14546	4.757671	5.316320	5.141204	4.844103	5.338519	5.107934
#3	26.07133	4.748401	5.311268	5.148923	4.832870	5.326519	5.127047

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCV02 Acquired: 12/27/2024 16:32:57 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	5.123300	4.921425	4.958496
Stddev	.007299	.018427	.022223
%RSD	.1424722	.3744249	.4481782
#1	5.131670	4.938988	4.934504
#2	5.118257	4.923046	4.978375
#3	5.119974	4.902241	4.962610

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2775.258	59874.68	11821.42	1883.721	4160.964
Stddev	4.352	61.25	48.87	9.542	1.382
%RSD	.1568262	.1023002	.4133893	.5065333	.0332160
#1	2775.375	59870.02	11766.56	1889.733	4160.931
#2	2770.849	59815.90	11837.38	1872.719	4159.599
#3	2779.551	59938.14	11860.31	1888.710	4162.362

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCB02 Acquired: 12/27/2024 16:37:07 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	.0003773	-.001184	-.000188	.0004998	-.000007	.0023059	-.002690
Stddev	.0018247	.001100	.000734	.0013874	.000900	.0052400	.000408
%RSD	483.6086	92.92576	390.7029	277.6218	12270.52	227.2386	15.18680
#1	.0024795	-.000089	.000516	-.001102	-.000754	.0083375	-.003161
#2	-.000551	-.002289	-.000131	.001273	-.000260	-.001125	-.002439
#3	-.000797	-.001174	-.000949	.001328	.000992	-.000294	-.002469

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001139	.0001169	.0103100	-.000263	.0001594	-.000428	-.007718
Stddev	.0000193	.0000477	.0058144	.000177	.0002150	.000176	.006569
%RSD	16.96189	40.84706	56.39536	67.15711	134.9249	41.13984	85.11574
#1	.0001362	.0001203	.0058303	-.000279	.0001521	-.000449	-.002256
#2	.0001043	.0001628	.0168807	-.000431	-.000052	-.000594	-.015007
#3	.0001013	.0000675	.0082190	-.000079	.000378	-.000243	-.005890

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003780	.0012044	-.000059	.0007633	.0340157	-.000470	-.017538
Stddev	.0001891	.0105395	.000082	.0003414	.0087667	.001134	.000281
%RSD	50.02770	875.0643	139.3116	44.72498	25.77237	241.1458	1.604964
#1	.0005478	.0133689	-.000018	.0009675	.0252429	.000485	-.017213
#2	.0004121	-.004563	-.000006	.0009533	.0340281	-.000172	-.017709
#3	.0001742	-.005192	-.000153	.0003692	.0427761	-.001723	-.017692

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0667164	.0063413	.0004189	.0006578	.0011799	-.001103	-.002931
Stddev	.0166636	.0007021	.0002488	.0003226	.0002357	.003129	.001899
%RSD	24.97669	11.07202	59.37766	49.03686	19.97520	283.6231	64.76751
#1	.0534694	.0070528	.0006948	.0010264	.0014038	-.001353	-.000903
#2	.0612544	.0056490	.0003502	.0004274	.0012019	-.004100	-.003224
#3	.0854255	.0063222	.0002117	.0005196	.0009340	.002144	-.004667

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCB02 Acquired: 12/27/2024 16:37:07 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.001545	-.000435	.0009891
Stddev	.001295	.000044	.0000424
%RSD	83.83647	10.03129	4.291313
#1	-.001720	-.000463	.0010335
#2	-.000171	-.000457	.0009846
#3	-.002744	-.000384	.0009490

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3085.001	64667.49	12702.32	2053.184	4976.091
Stddev	14.117	63.74	25.14	2.309	17.622
%RSD	.4575869	.0985649	.1979165	.1124489	.3541252
#1	3069.071	64737.28	12677.20	2054.603	4955.770
#2	3089.974	64652.83	12702.27	2050.520	4985.342
#3	3095.958	64612.36	12727.48	2054.429	4987.160

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: LR2 Acquired: 12/27/2024 16:47:42 Type: Unk
Method: NON EPA-6010-200.7(v2568) 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	.0124688	-.030501	225.8590	.0106634	-.001595	1.798883	^F *****
Stddev	.0036938	.002956	.6944	.0011503	.000818	.365884	-----
%RSD	29.62395	9.691012	.3074306	10.78762	51.26961	20.33949	-----
#1	.0090051	-.029952	225.5891	.0103684	-.002538	2.158746	^ -----
#2	.0163561	-.033693	225.3402	.0096893	-.001083	1.810641	^ -----
#3	.0120452	-.027858	226.6478	.0119325	-.001164	1.427262	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002234	-.005915	1.865285	.0149524	-.029164	257.4655	.8510892
Stddev	.000055	.000056	.347376	.0001925	.000066	.6748	.1878179
%RSD	2.458907	.9409817	18.62321	1.287666	.2250145	.2620954	22.06794
#1	-.002170	-.005968	2.206803	.0147810	-.029238	257.8611	1.038584
#2	-.002265	-.005857	1.876718	.0149155	-.029138	256.6863	.851735
#3	-.002266	-.005920	1.512334	.0151608	-.029115	257.8490	.662949

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.43330	1.605552	53.69639	.0023650	1.776878	-.014252	32.88792
Stddev	.34635	.355764	.13767	.0004256	.327305	.000903	.10314
%RSD	.7794774	22.15839	.2563803	17.99452	18.42025	6.333643	.3136048
#1	44.09818	1.956779	53.68088	.0028026	2.101026	-.014209	32.87918
#2	44.78988	1.614458	53.56713	.0019526	1.783103	-.013373	32.78943
#3	44.41183	1.245418	53.84115	.0023398	1.446504	-.015176	32.99515

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.165895	-.001005	-.006849	-.003854	-.037496	-.013601	1.718561
Stddev	.201135	.000399	.000564	.000992	.000418	.003115	.024325
%RSD	17.25153	39.67492	8.228877	25.73763	1.113914	22.90170	1.415403
#1	1.374976	-.001459	-.006769	-.004836	-.037031	-.016987	1.692236
#2	1.148927	-.000710	-.007449	-.003872	-.037615	-.012959	1.740204
#3	.973781	-.000847	-.006331	-.002853	-.037841	-.010857	1.723244

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: LR2 Acquired: 12/27/2024 16:47:42 Type: Unk
Method: NON EPA-6010-200.7(v2568) 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	-.033312	-.001913	.0009671
Stddev	.002172	.000509	.0001791
%RSD	6.519775	26.59865	18.51536
#1	-.035811	-.002496	.0007893
#2	-.031876	-.001692	.0009647
#3	-.032250	-.001553	.0011474

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2606.132	61908.40	12547.25	1885.538	4444.256
Stddev	3.412	61.42	32.59	12.896	7.015
%RSD	.1309073	.0992088	.2597599	.6839215	.1578340
#1	2606.224	61845.89	12563.40	1888.832	4448.126
#2	2609.497	61968.67	12509.73	1896.468	4448.484
#3	2602.676	61910.63	12568.61	1871.315	4436.159

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: LR1 Acquired: 12/27/2024 16:52:12 Type: Unk
Method: NON EPA-6010-200.7(v2568) 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	.0208200	.1096113	.0630738	-.217033	-.008150	2168.648	.0319830
Stddev	.0053730	.0052206	.0083267	.005289	.004922	4.797	.0107336
%RSD	25.80688	4.762864	13.20155	2.437170	60.38684	.2212124	33.56041
#1	.0173581	.1092011	.0638137	-.222926	-.010724	2166.721	.0388620
#2	.0180922	.1046079	.0710059	-.215476	-.002475	2174.109	.0374721
#3	.0270097	.1150250	.0544018	-.212697	-.011252	2165.114	.0196149

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091485	.0738675	1813.950	-.003922	.0369573	.4893298	1063.161
Stddev	.0000979	.0004738	17.544	.000299	.0005920	.0056122	8.090
%RSD	1.069581	.6413443	.9671911	7.633008	1.601785	1.146908	.7609028
#1	.0091274	.0735924	1829.198	-.003733	.0362763	.4852520	1071.170
#2	.0092552	.0735956	1817.877	-.004267	.0373490	.4870069	1063.320
#3	.0090629	.0744145	1794.775	-.003766	.0372466	.4957305	1054.993

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.083208	1941.464	.0154361	-.077601	2178.244	.0477819	.2052194
Stddev	.003842	17.815	.0015723	.001417	14.398	.0018924	.0038641
%RSD	4.616991	.9176006	10.18595	1.826431	.6610037	3.960386	1.882907
#1	-.081808	1953.351	.0148995	-.077160	2184.793	.0471482	.2085970
#2	-.080262	1950.060	.0142023	-.076457	2188.203	.0499098	.2010057
#3	-.087553	1920.981	.0172065	-.079187	2161.735	.0462877	.2060557

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1471.718	.2893071	-.005442	.0211962	-.039524	.1526791	.1057556
Stddev	14.225	.0050887	.000735	.0009091	.000311	.0006366	.0061256
%RSD	.9665853	1.758934	13.50254	4.289172	.7863319	.4169478	5.792205
#1	1485.440	.2950949	-.006171	.0222310	-.039825	.1519493	.1124531
#2	1472.678	.2855354	-.004701	.0205260	-.039542	.1531202	.1004371
#3	1457.037	.2872909	-.005453	.0208316	-.039204	.1529678	.1043766

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: LR1 Acquired: 12/27/2024 16:52:12 Type: Unk
Method: NON EPA-6010-200.7(v2568) 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	-.240684	-.291583	-1.05248
Stddev	.004417	.002944	.00813
%RSD	1.835318	1.009819	.7723631
#1	-.237859	-.294104	-1.06054
#2	-.245774	-.292298	-1.05263
#3	-.238418	-.288347	-1.04429

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1762.965	38443.04	9752.462	1165.182	2386.230
Stddev	.877	89.01	27.680	3.014	1.268
%RSD	.0497471	.2315489	.2838208	.2586332	.0531319
#1	1763.565	38349.68	9743.812	1163.137	2387.481
#2	1761.958	38452.51	9730.140	1168.643	2384.946
#3	1763.372	38526.95	9783.433	1163.766	2386.265

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCV03 Acquired: 12/27/2024 16:59:00 Type: Unk
Method: NON EPA-6010-200.7(v2569) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.269145	5.132090	5.108875	5.287095	5.297054	10.67180	9.782339
Stddev	.003264	.061987	.006164	.009965	.011373	.03399	.033861
%RSD	.0619390	1.207835	.1206469	.1884816	.2146948	.3184857	.3461451
#1	5.265615	5.080754	5.115990	5.277565	5.298655	10.63358	9.798486
#2	5.269768	5.114563	5.105154	5.286275	5.307541	10.69863	9.805104
#3	5.272053	5.200954	5.105482	5.297445	5.284966	10.68319	9.743426

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2484787	2.549619	25.00465	1.064986	2.555679	1.319174	5.333114
Stddev	.0008623	.001593	.09824	.004207	.001177	.001602	.026703
%RSD	.3470251	.0624682	.3928912	.3950322	.0460618	.1214028	.5007069
#1	.2487391	2.551118	24.89360	1.061274	2.556830	1.320183	5.313839
#2	.2491808	2.547947	25.08022	1.069556	2.555730	1.320013	5.321909
#3	.2475162	2.549792	25.04013	1.064126	2.554477	1.317328	5.363594

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.388236	25.20945	2.554398	1.310870	24.94529	2.515260	2.586349
Stddev	.006915	.12288	.002534	.001247	.01147	.013160	.004176
%RSD	.2895380	.4874385	.0991949	.0951450	.0459818	.5231900	.1614669
#1	2.380263	25.09051	2.556904	1.310653	24.95743	2.502122	2.586337
#2	2.392589	25.33592	2.554453	1.312212	24.94379	2.528441	2.590531
#3	2.391858	25.20192	2.551838	1.309745	24.93464	2.515218	2.582179

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.06926	4.906181	5.320762	5.135911	4.904085	5.334256	5.140172
Stddev	.11377	.014318	.001620	.000487	.019651	.030112	.004882
%RSD	.4363986	.2918433	.0304475	.0094779	.4007100	.5645015	.0949801
#1	25.93890	4.902058	5.320000	5.136238	4.883301	5.299507	5.139214
#2	26.14849	4.922108	5.322622	5.135352	4.922363	5.352678	5.135840
#3	26.12038	4.894376	5.319663	5.136144	4.906590	5.350582	5.145462

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCV03 Acquired: 12/27/2024 16:59:00 Type: Unk
Method: NON EPA-6010-200.7(v2569) 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	5.015048	4.896181	4.973617
Stddev	.004282	.014930	.019754
%RSD	.0853829	.3049348	.3971702
#1	5.010261	4.879203	4.951554
#2	5.016370	4.907262	4.989661
#3	5.018513	4.902077	4.979635

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2854.201	60093.27	11633.57	1891.571	4269.192
Stddev	6.565	98.03	26.82	7.873	5.653
%RSD	.2300116	.1631262	.2305306	.4162362	.1324036
#1	2851.678	60174.67	11637.60	1900.175	4266.725
#2	2849.271	59984.45	11604.97	1884.725	4265.192
#3	2861.653	60120.69	11658.15	1889.814	4275.659

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCB03 Acquired: 12/27/2024 17:17:00 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.000544	-.001248	.0005153	-.000551	-.000849	.0096828	-.005463
Stddev	.000857	.001597	.0006463	.000458	.001025	.0072484	.000172
%RSD	157.4428	127.9523	125.4191	83.18237	120.7102	74.85823	3.154154
#1	.000158	-.002940	.0006745	-.000243	-.001900	.0068588	-.005529
#2	-.001499	.000234	.0010672	-.001077	-.000797	.0179181	-.005267
#3	-.000291	-.001039	-.000196	-.000332	.000149	.0042715	-.005592

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000199	-.000021	.0083777	-.000665	.0000418	.0002821	-.002176
Stddev	.0000070	.000055	.0051564	.000161	.0000504	.0001279	.000500
%RSD	34.89743	262.3824	61.54903	24.20796	120.4064	45.32847	22.99106
#1	.0000209	.000016	.0078298	-.000524	.0000094	.0002817	-.002426
#2	.0000125	-.000084	.0137861	-.000841	.0000162	.0001544	-.001600
#3	.0000263	.000006	.0035171	-.000631	.0000999	.0004102	-.002503

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000047	.0105282	-.000112	.0004384	.1812361	-.001433	-.017684
Stddev	.000247	.0071435	.000136	.0003795	.0177087	.000749	.000224
%RSD	521.8881	67.85143	121.8747	86.57366	9.771068	52.25777	1.266145
#1	.000117	.0149875	-.000153	.0000612	.1615289	-.001074	-.017453
#2	-.000331	.0022889	.000040	.0008202	.1863655	-.002294	-.017698
#3	.000073	.0143081	-.000223	.0004337	.1958139	-.000931	-.017900

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1373794	-.001044	-.000049	.0000645	-.000004	-.001267	-.001270
Stddev	.0101370	.000086	.000175	.0003793	.000336	.001612	.001749
%RSD	7.378819	8.280224	357.3263	588.3202	8002.855	127.2095	137.7238
#1	.1261200	-.001038	-.000046	-.000022	-.000387	-.002581	-.002039
#2	.1457799	-.000961	-.000226	.000480	.000132	.000532	.000732
#3	.1402385	-.001134	.000125	-.000264	.000243	-.001753	-.002503

Reviewed By:mohan
On:12/31/2024
11:27:41 PM
Inst Id :P4
LB :LB134113

Sample Name: CCB03 Acquired: 12/27/2024 17:17:00 Type: Unk
Method: NON EPA-6010-200.7(v2484) 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	-.001026	-.000306	.0000761
Stddev	.001191	.000948	.0000090
%RSD	116.0742	309.8279	11.89481
#1	-.001147	-.000733	.0000854
#2	-.002152	.000780	.0000673
#3	.000221	-.000965	.0000755

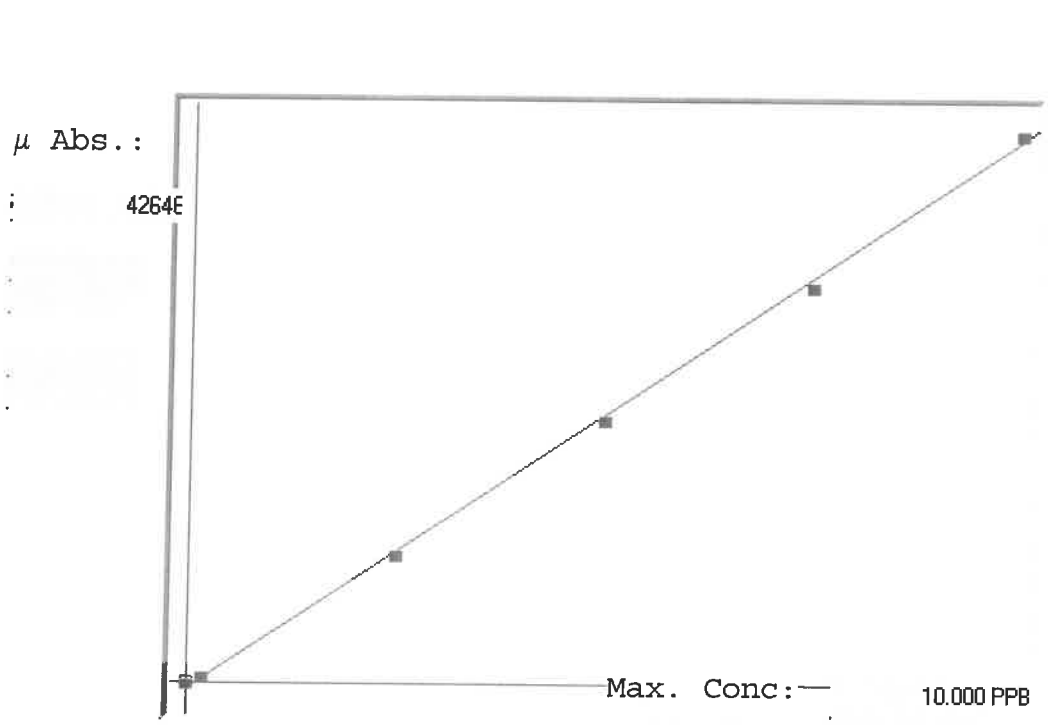
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3055.610	64536.19	12354.08	2053.900	4979.086
Stddev	7.113	94.27	27.65	10.843	9.073
%RSD	.2328012	.1460747	.2238160	.5279240	.1822226
#1	3047.410	64469.10	12338.04	2050.135	4968.641
#2	3060.126	64495.50	12338.20	2045.441	4983.594
#3	3059.293	64643.98	12386.01	2066.123	4985.022

Reviewed By:jaswal
On:12/26/2024
10:12:15 PM
Inst Id :CV1
LB :LB134084

LB134084

7470A

INSTRUMENT ID: CV2



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0	0.000	0.077	0.077	-145	0.000	-145	0			
0.2	0.200	0.216	0.016	447	0.0 %	447				
2.5	2.500	2.466	-0.034	10028	0.0 %	10028				
5.0	5.000	4.936	-0.064	20541	0.0 %	20541				
7.5	7.500	7.377	-0.123	30936	0.0 %	30936				
10.0	10.000	10.128	0.128	42646	0.0 %	42646				

0/0 D
8
-1
-1
-2
1

Reviewed By:jaswal
On:12/26/2024
10:12:15 PM
Inst Id :CV1
LB :LB134084

LB134084 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 26 Dec 2024 10:28:06

Sample ID	Extended ID	µ Abs	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1		-145	-	0.00000	7470A	PPB	26 Dec 2024 10:38:25	S	Std
0.2 - 1		447	-	0.20000	7470A	PPB	26 Dec 2024 10:40:43	S	Std
2.5 - 1		10028	-	2.50000	7470A	PPB	26 Dec 2024 10:43:00	S	Std
5.0 - 1		20541	-	5.00000	7470A	PPB	26 Dec 2024 10:45:17	S	Std
7.5 - 1		30936	-	7.50000	7470A	PPB	26 Dec 2024 10:47:35	S	Std
10.0 - 1		42646	-	10.00000	7470A	PPB	26 Dec 2024 10:49:53	S	Std
ICV30 - 1	ICV30	15768	3.8146		7470A	PPB	26 Dec 2024 10:52:50	U	SMPL
ICB30 - 1	ICB30	-216	0.0601		7470A	PPB	26 Dec 2024 10:55:05	U	SMPL
CCV64 - 1	CCV64	20615	4.9531		7470A	PPB	26 Dec 2024 10:57:21	U	SMPL
CCB64 - 1	CCB64	-213	0.0608		7470A	PPB	26 Dec 2024 10:59:36	U	SMPL
CRA - 1	CRA	503	0.2290		7470A	PPB	26 Dec 2024 11:07:40	U	SMPL
HighStd - 1	HighStd	42378	10.0650		7470A	PPB	26 Dec 2024 11:09:55	U	SMPL
ChkStd - 1	ChkStd	28294	6.7568		7470A	PPB	26 Dec 2024 11:12:10	U	SMPL
PB165856BL - 1	PBW	-309	0.0383		7470A	PPB	26 Dec 2024 11:14:28	U	SMPL
PB165856BS - 1	LCSW	15636	3.7836		7470A	PPB	26 Dec 2024 11:19:22	U	SMPL
P5375-01 - 1	TT-RW10A-IDWGW-20241219	-172	0.0705		7470A	PPB	26 Dec 2024 11:21:38	U	SMPL
P5375-01DUP - 1	TT-RW10A-IDWGW-20241219DUP	-24	0.1052		7470A	PPB	26 Dec 2024 11:23:57	U	SMPL
P5375-01MS - 1	TT-RW10A-IDWGW-20241219MS	15593	3.7735		7470A	PPB	26 Dec 2024 11:28:52	U	SMPL
P5375-01MSD - 1	TT-RW10A-IDWGW-20241219MSD	15677	3.7932		7470A	PPB	26 Dec 2024 11:31:09	U	SMPL
CCV65 - 1	CCV65	20571	4.9428		7470A	PPB	26 Dec 2024 11:33:25	U	SMPL
CCB65 - 1	CCB65	-242	0.0540		7470A	PPB	26 Dec 2024 11:35:42	U	SMPL
P5375-01LX5 - 1		29	0.1177		7470A	PPB	26 Dec 2024 11:37:59	U	SMPL
P5375-01A - 1		15653	3.7876		7470A	PPB	26 Dec 2024 11:42:54	U	SMPL
CCV66 - 1	CCV66	20284	4.8753		7470A	PPB	26 Dec 2024 11:45:10	U	SMPL
CCB66 - 1	CCB66	-239	0.0547		7470A	PPB	26 Dec 2024 11:47:26	U	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB165832

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 BLOC K #1 2. N/A

Start Digest Date: 12/23/2024 **Time :** 16:05 **Temp :** 96 °C

End Digest Date: 12/23/2024 **Time :** 20:10 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. # 1

Dig Technician Signature: SLS.

Supervisor Signature:

Temp : 1. 96°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	MP83498
1:1 HCL	5.00	M6126
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: 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/23/24 21:10	SLS. met digestion	[illegible]
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB165832

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
P5375-01	TT-RW10A-IDWGW-202412-19	<2	50	25	White	Colorless	Cloudy	Clear	N/A	1
P5375-01MS	TT-RW10A-IDWGW-202412-19MS	<2	50	25	White	Colorless	Cloudy	Clear	M6000,M6009	3
P5375-01MSD	TT-RW10A-IDWGW-202412-19MSD	<2	50	25	White	Colorless	Cloudy	Clear	M6000,M6009	4
P5375-01DUP	TT-RW10A-IDWGW-202412-19DUP	<2	50	25	White	Colorless	Cloudy	Clear	N/A	2
PB165832BL	PBW832	<2	50	25	White	Colorless	Cloudy	Clear	N/A	5
PB165832BS	LCS832	<2	50	25	White	Colorless	Cloudy	Clear	M6000,M6009	6

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165832 **WorkList ID :** 186581 **Department :** Digestion **Date :** 12-23-2024 15:06:38

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5375-01	TT-RW10A-IDWGW-20241219	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	TETR06	N21	12/19/2024	6010D

Date/Time 12/23/24 15:35
Raw Sample Received by: SLD. metdigestion
Raw Sample Relinquished by: CP SM

Date/Time 12/23/24 16:35
Raw Sample Received by: CP SM
Raw Sample Relinquished by: SLD. metdigestion

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB165856

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: 12/26/2024 **Time :** 07:20 **Temp :** 93 °C

End Digest Date: 12/26/2024 **Time :** 09:20 **Temp :** 94 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: 12

Temp : 1. 93°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP83772
CCV	30mL	MP83774
CRA	30mL	MP83776
Blank Spike	0.48mL	MP83765
Matrix Spike	0.48mL	MP83765

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.5mL	MP83691
KMnO4 (5%)	4.5mL	MP83692
K2S2O8 (5%)	2.5mL	MP83693
Hydroxylamine HCL (12%)	2.0mL	MP83694
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	MP83766
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP83767
2.5 ppb	S2.5	30mL	MP83768
5.0 ppb	S5.0	30mL	MP83769
7.5 ppb	S7.5	30mL	MP83770
10.0 ppb	S10.0	30mL	MP83771
ICV	ICV	30mL	MP83772
ICB	ICB	30mL	MP83773
CCV	CCV	30mL	MP83774
CCB	CCB	30mL	MP83775
CRI	CRI	30mL	MP83776
CHK STD	CHK STD	30mL	MP83777

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/26/24 @ 10:15	MB - Dig. Lab	MB - Digestion Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB165856

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
P5375-01	TT-RW10A-IDWGW-20241219	30	30	<2	N/A	3-1
P5375-01DUP	TT-RW10A-IDWGW-20241219DUP	30	30	<2	N/A	2
P5375-01MS	TT-RW10A-IDWGW-20241219MS	30	30	<2	MP83765	3
P5375-01MSD	TT-RW10A-IDWGW-20241219MSD	30	30	<2	MP83765	4
PB165856BL	PBW856	30	30	<2	N/A	5
PB165856BS	LCS856	30	30	<2	MP83765	6

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 122624_7470 **WorkList ID :** 186586 **Department :** Digestion **Date :** 12-25-2024 07:43:18

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5375-01	TT-RW10A-IDWGW-20241219	Water	Mercury	1:1 HNO3 to pH < 2	TETR06	N21	12/19/2024	7470A

Date/Time 12/26/24 @ 7:05

Raw Sample Received by: MB - DTG - Lab

Raw Sample Relinquished by: MB - DTG - Lab

Date/Time 12/26/24 @ 7:30

Raw Sample Received by: MB - DTG - Lab

Raw Sample Relinquished by: MB - DTG - Lab

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 # LB134084

Review By	Mohan	Review On	12/26/2024 4:54:37 PM
Supervise By	jaswal	Supervise On	12/26/2024 10:12:15 PM

STD. NAME	STD REF.#
ICAL Standard	MP83766,MP83767,MP83768,MP83769,MP83770,MP83771
ICV Standard	MP83772
CCV Standard	MP83774
ICSA Standard	
CRI Standard	MP83776
LCS Standard	
Chk Standard	MP83773,MP83775,MP83777,MP83779

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/26/24 10:38		Mohan	OK
2	S0.2	S0.2	CAL2	12/26/24 10:40		Mohan	OK
3	S2.5	S2.5	CAL3	12/26/24 10:43		Mohan	OK
4	S5	S5	CAL4	12/26/24 10:45		Mohan	OK
5	S7.5	S7.5	CAL5	12/26/24 10:47		Mohan	OK
6	S10	S10	CAL6	12/26/24 10:49		Mohan	OK
7	ICV30	ICV30	ICV	12/26/24 10:52		Mohan	OK
8	ICB30	ICB30	ICB	12/26/24 10:55		Mohan	OK
9	CCV64	CCV64	CCV	12/26/24 10:57		Mohan	OK
10	CCB64	CCB64	CCB	12/26/24 10:59		Mohan	OK
11	CRA	CRA	CRDL	12/26/24 11:07		Mohan	OK
12	HighStd	HighStd	HIGH STD	12/26/24 11:09		Mohan	OK
13	ChkStd	ChkStd	SAM	12/26/24 11:12		Mohan	OK
14	PB165856BL	PB165856BL	MB	12/26/24 11:14		Mohan	OK
15	PB165856BS	PB165856BS	LCS	12/26/24 11:19		Mohan	OK
16	P5375-01	TT-RW10A-IDWGW-2	SAM	12/26/24 11:21		Mohan	OK
17	P5375-01DUP	TT-RW10A-IDWGW-2	DUP	12/26/24 11:23		Mohan	OK
18	P5375-01MS	TT-RW10A-IDWGW-2	MS	12/26/24 11:28		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 # LB134084

Review By	Mohan	Review On	12/26/2024 4:54:37 PM
Supervise By	jaswal	Supervise On	12/26/2024 10:12:15 PM

STD. NAME	STD REF.#
ICAL Standard	MP83766,MP83767,MP83768,MP83769,MP83770,MP83771
ICV Standard	MP83772
CCV Standard	MP83774
ICSA Standard	
CRI Standard	MP83776
LCS Standard	
Chk Standard	MP83773,MP83775,MP83777,MP83779

19	P5375-01MSD	TT-RW10A-IDWGW-2	MSD	12/26/24 11:31		Mohan	OK
20	CCV65	CCV65	CCV	12/26/24 11:33		Mohan	OK
21	CCB65	CCB65	CCB	12/26/24 11:35		Mohan	OK
22	P5375-01L	TT-RW10A-IDWGW-2	SD	12/26/24 11:37		Mohan	OK
23	P5375-01A	TT-RW10A-IDWGW-2	PS	12/26/24 11:42		Mohan	OK
24	CCV66	CCV66	CCV	12/26/24 11:45		Mohan	OK
25	CCB66	CCB66	CCB	12/26/24 11:47		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 # LB134090

Review By	kareem	Review On	12/27/2024 4:21:41 PM
Supervise By	mohan	Supervise On	1/1/2025 11:26:04 PM

STD. NAME	STD REF.#
ICAL Standard	MP83552,MP83553,MP83554,MP83555,MP83556,MP83558
ICV Standard	MP83559
CCV Standard	MP83562
ICSA Standard	MP83560,MP83561
CRI Standard	MP83558
LCS Standard	
Chk Standard	MP83565,MP83566

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/26/24 09:36		Kareem	OK
2	S1	S1	CAL2	12/26/24 09:40		Kareem	OK
3	S2	S2	CAL3	12/26/24 09:44		Kareem	OK
4	S3	S3	CAL4	12/26/24 09:48		Kareem	OK
5	S4	S4	CAL5	12/26/24 09:53		Kareem	OK
6	S5	S5	CAL6	12/26/24 09:57		Kareem	OK
7	ICV01	ICV01	ICV	12/26/24 10:01		Kareem	OK
8	LLICV01	LLICV01	LLICV	12/26/24 10:05		Kareem	OK
9	ICB01	ICB01	ICB	12/26/24 10:10		Kareem	OK
10	CRI01	CRI01	CRDL	12/26/24 10:14		Kareem	OK
11	ICSA01	ICSA01	ICSA	12/26/24 10:18		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	12/26/24 10:23		Kareem	OK
13	CCV01	CCV01	CCV	12/26/24 10:32		Kareem	OK
14	CCB01	CCB01	CCB	12/26/24 10:38		Kareem	OK
15	P5383-01	OK-02-12232024	SAM	12/26/24 10:42		Kareem	OK
16	P5383-01DUP	OK-02-12232024DUP	DUP	12/26/24 10:46		Kareem	OK
17	P5383-01L	OK-02-12232024L	SD	12/26/24 10:51		Kareem	OK
18	P5383-01MS	OK-02-12232024MS	MS	12/26/24 10:55	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF 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 # LB134090

Review By	kareem	Review On	12/27/2024 4:21:41 PM
Supervise By	mohan	Supervise On	1/1/2025 11:26:04 PM

STD. NAME	STD REF.#
ICAL Standard	MP83552,MP83553,MP83554,MP83555,MP83556,MP83558
ICV Standard	MP83559
CCV Standard	MP83562
ICSA Standard	MP83560,MP83561
CRI Standard	MP83558
LCS Standard	
Chk Standard	MP83565,MP83566

19	P5383-01MSD	OK-02-12232024MSD	MSD	12/26/24 10:59	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
20	P5383-01A	OK-02-12232024A	PS	12/26/24 11:03	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
21	PB165833BS	PB165833BS	LCS	12/26/24 11:11	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
22	CCV02	CCV02	CCV	12/26/24 11:24		Kareem	OK
23	CCB02	CCB02	CCB	12/26/24 11:30		Kareem	OK
24	LR1	LR1	HIGH STD	12/26/24 11:34		Kareem	OK
25	LR2	LR2	HIGH STD	12/26/24 11:39		Kareem	OK
26	CCV03	CCV03	CCV	12/26/24 12:10		Kareem	OK
27	CCB03	CCB03	CCB	12/26/24 12:15		Kareem	OK
28	CCV04	CCV04	CCV	12/26/24 13:02		Kareem	OK
29	CCB04	CCB04	CCB	12/26/24 13:06		Kareem	OK
30	CCV05	CCV05	CCV	12/26/24 14:37		Kareem	OK
31	CCB05	CCB05	CCB	12/26/24 14:41		Kareem	OK
32	P5375-01	TT-RW10A-IDWGW-2	SAM	12/26/24 14:46		Kareem	OK
33	P5375-01DUP	TT-RW10A-IDWGW-2	DUP	12/26/24 14:50		Kareem	OK
34	P5375-01L	TT-RW10A-IDWGW-2	SD	12/26/24 14:54		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134090

Review By	kareem	Review On	12/27/2024 4:21:41 PM
Supervise By	mohan	Supervise On	1/1/2025 11:26:04 PM

STD. NAME	STD REF.#
ICAL Standard	MP83552,MP83553,MP83554,MP83555,MP83556,MP83558
ICV Standard	MP83559
CCV Standard	MP83562
ICSA Standard	MP83560,MP83561
CRI Standard	MP83558
LCS Standard	
Chk Standard	MP83565,MP83566

35	P5375-01MS	TT-RW10A-IDWGW-2	MS	12/26/24 14:58	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
36	P5375-01MSD	TT-RW10A-IDWGW-2	MSD	12/26/24 15:02	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
37	P5375-01A	TT-RW10A-IDWGW-2	PS	12/26/24 15:06	0.1ML OFM6010 AND M6001 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
38	PB165832BL	PB165832BL	MB	12/26/24 15:10	NOT USE	Kareem	Not Ok
39	PB165833BL	PB165833BL	MB	12/26/24 15:15		Kareem	OK
40	PB165832BS	PB165832BS	LCS	12/26/24 15:19	NOT USE	Kareem	Not Ok
41	CCV06	CCV06	CCV	12/26/24 15:24		Kareem	OK
42	CCB06	CCB06	CCB	12/26/24 15:30		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134113

Review By	kareem	Review On	12/31/2024 7:27:40 PM
Supervise By	mohan	Supervise On	12/31/2024 11:27:41 PM

STD. NAME	STD REF.#
ICAL Standard	MP83552,MP83553,MP83554,MP83555,MP83556,MP83558
ICV Standard	MP83559
CCV Standard	MP83562
ICSA Standard	MP83560,MP83561
CRI Standard	MP83558
LCS Standard	
Chk Standard	MP83565,MP83566

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/27/24 12:42		Kareem	OK
2	S1	S1	CAL2	12/27/24 12:47		Kareem	OK
3	S2	S2	CAL3	12/27/24 12:51		Kareem	OK
4	S3	S3	CAL4	12/27/24 12:55		Kareem	OK
5	S4	S4	CAL5	12/27/24 12:59		Kareem	OK
6	S5	S5	CAL6	12/27/24 13:04		Kareem	OK
7	ICV01	ICV01	ICV	12/27/24 13:54	ICV fail for As,Tl (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	12/27/24 14:08		Kareem	OK
9	ICB01	ICB01	ICB	12/27/24 14:59		Kareem	OK
10	CRI01	CRI01	CRDL	12/27/24 15:03		Kareem	OK
11	ICSA01	ICSA01	ICSA	12/27/24 15:16		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	12/27/24 15:20		Kareem	OK
13	ICSADL	ICSADL	ICSA	12/27/24 15:25		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	12/27/24 15:30		Kareem	OK
15	CCV01	CCV01	CCV	12/27/24 15:34		Kareem	OK
16	CCB01	CCB01	CCB	12/27/24 15:40		Kareem	OK
17	P5297-02	SEPT-23	SAM	12/27/24 15:44		Kareem	OK
18	P5297-02DUP	SEPT-23DUP	DUP	12/27/24 15:49		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134113

Review By	kareem	Review On	12/31/2024 7:27:40 PM
Supervise By	mohan	Supervise On	12/31/2024 11:27:41 PM

STD. NAME	STD REF.#
ICAL Standard	MP83552,MP83553,MP83554,MP83555,MP83556,MP83558
ICV Standard	MP83559
CCV Standard	MP83562
ICSA Standard	MP83560,MP83561
CRI Standard	MP83558
LCS Standard	
Chk Standard	MP83565,MP83566

19	P5297-02L	SEPT-23L	SD	12/27/24 15:53		Kareem	OK
20	P5297-02MS	SEPT-23MS	MS	12/27/24 15:57	0.1ML OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
21	P5297-02MSD	SEPT-23MSD	MSD	12/27/24 16:01	0.1ML OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
22	P5297-02A	SEPT-23A	PS	12/27/24 16:06	0.1ML OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
23	PB165878BL	PB165878BL	MB	12/27/24 16:10		Kareem	OK
24	PB165832BL	PB165832BL	MB	12/27/24 16:20		Kareem	OK
25	PB165832BS	PB165832BS	LCS	12/27/24 16:24	0.1ML OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
26	PB165878BS	PB165878BS	LCS	12/27/24 16:28	0.1ML OF M6010 AND M6001 WERE ADDED TO 10 ML OF THE SAMPLE	Kareem	OK
27	CCV02	CCV02	CCV	12/27/24 16:32		Kareem	OK
28	CCB02	CCB02	CCB	12/27/24 16:37		Kareem	OK
29	LR2	LR2	HIGH STD	12/27/24 16:47		Kareem	OK
30	LR1	LR1	HIGH STD	12/27/24 16:52		Kareem	OK
31	CCV03	CCV03	CCV	12/27/24 16:59		Kareem	OK
32	CCB03	CCB03	CCB	12/27/24 17:17		Kareem	OK

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Prep Standard - Chemical Standard Summary

Order ID : P5375

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB165832,PB165856,

Sequence ID/Qc Batch ID: LB134084,LB134090,LB134113,

Standard ID :
MP83498,MP83500,MP83552,MP83553,MP83554,MP83555,MP83556,MP83557,MP83558,MP83559,MP83560,MP83561,MP83562,MP83565,MP83566,MP83765,MP83766,MP83767,MP83768,MP83769,MP83770,MP83771,MP83772,MP83773,MP83774,MP83775,MP83776,MP83777,MP83779,

Chemical ID :
M5062,M5130,M5192,M5218,M5223,M5288,M5295,M5296,M5390,M5393,M5429,M5466,M5467,M5497,M5515,M5658,M5697,M5698,M5747,M5748,M5768,M5798,M5799,M5800,M5801,M5802,M5806,M5814,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M5882,M5953,M5959,M5962,M5970,M5978,M5982,M5985,M6000,M6009,M6021,M6023,M6028,M6030,M6033,M6121,M6126,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP83498	12/09/2024	01/03/2025	Janvi Patel	None	None	Sarabjit Jaswal 12/09/2024

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
514	CAL BLK (S0/ICB/CCB)	MP83552	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP83553	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 5.00000ml of M5296 + 5.00000ml of M5393 + 5.00000ml of M5467 + 5.00000ml of M5802 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M5982 + 455.00000ml of MP83500 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP83554	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 50.00000ml of MP83500 + 50.00000ml of MP83553 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP83555	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 25.00000ml of MP83553 + 75.00000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP83556	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 16.00000ml of MP83553 + 184.00000ml of MP83500 = 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	MP83557	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 0.00600ml of M5816 + 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 M5978 + 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 M5497 + 1.00000ml of M5768 + 1.00000ml of M5806 + 2.00000ml of M5818 + 77.68000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP83558	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 2.00000ml of MP83557 + 98.00000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP83559	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5466 + 0.25000ml of M5218 + 0.25000ml of M5982 + 10.00000ml of M5295 + 89.77500ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83560	12/06/2024	12/28/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 25.00000ml of M5130 + 225.00000ml of MP83500 = 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	MP83561	12/06/2024	12/28/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5296 + 0.10000ml of M5970 + 0.10000ml of M5982 + 10.00000ml of M5130 + 10.00000ml of M5223 + 79.50000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP83562	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 50.00000ml of MP83500 + 50.00000ml of MP83553 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP83565	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP83566	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/11/2024

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP83765	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP83766	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP83767	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP83765 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP83768	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP83765 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP83769	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP83765 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP83770	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP83765 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP83771	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP83765 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP83772	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M5953 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP83773	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP83774	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP83765 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP83775	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP83776	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP83765 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP83777	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP83765 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP83779	12/26/2024	12/27/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 12/27/2024

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	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	12/28/2024	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	12/28/2024	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

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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	04/20/2021 / 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	10/12/2022 / bin	09/19/2022 / bin	M5393

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	061322	06/13/2025	03/06/2023 / bin	03/01/2023 / bin	M5466

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	03/18/2023 / bin	03/17/2023 / bin	M5497

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

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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	01/08/2024 / bin	01/03/2024 / bin	M5768

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

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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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	01/01/2025	07/01/2024 / mohan	03/30/2023 / mohan	M5953

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	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	08/05/2024 / Jaswal	M6028

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

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 8/15/24

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

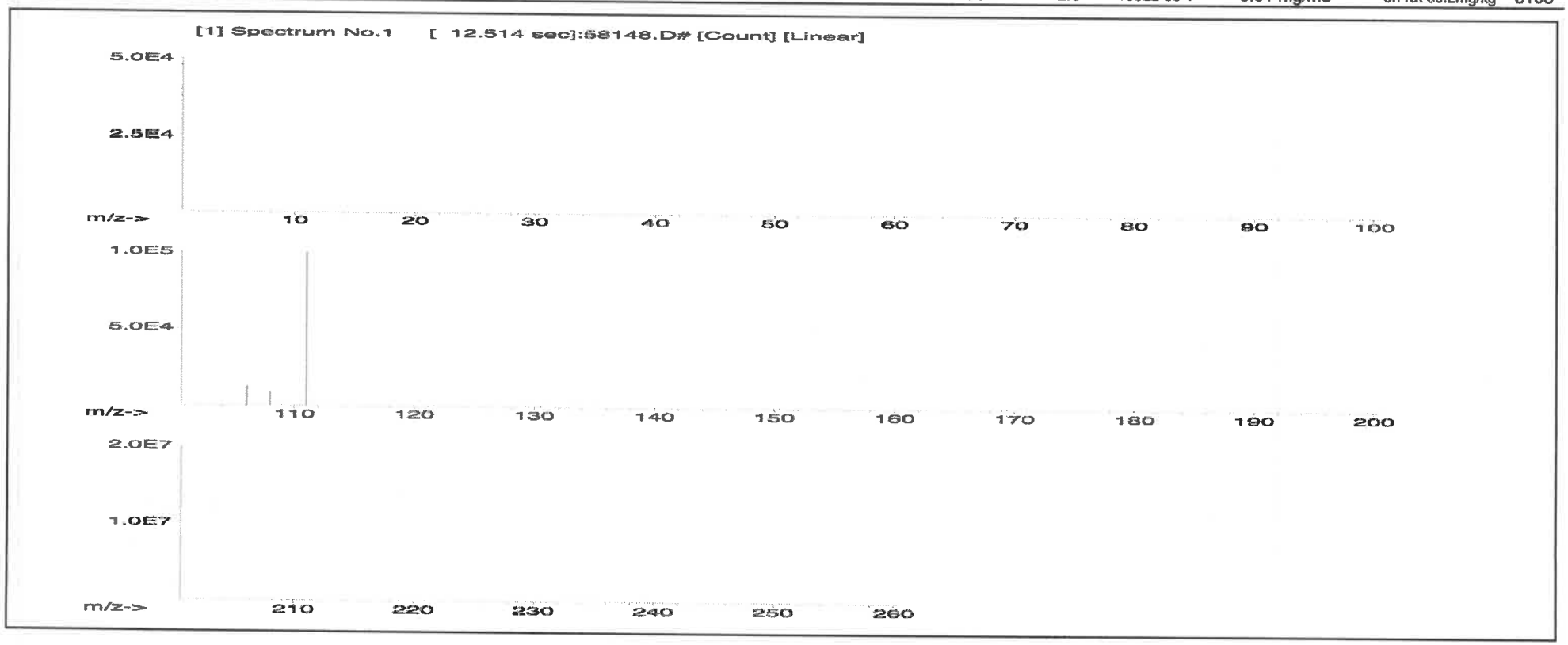
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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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



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

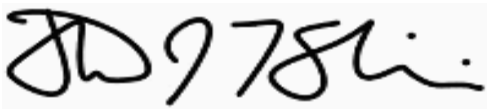
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

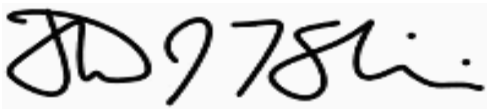
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	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



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Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

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

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5192 R: 06/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

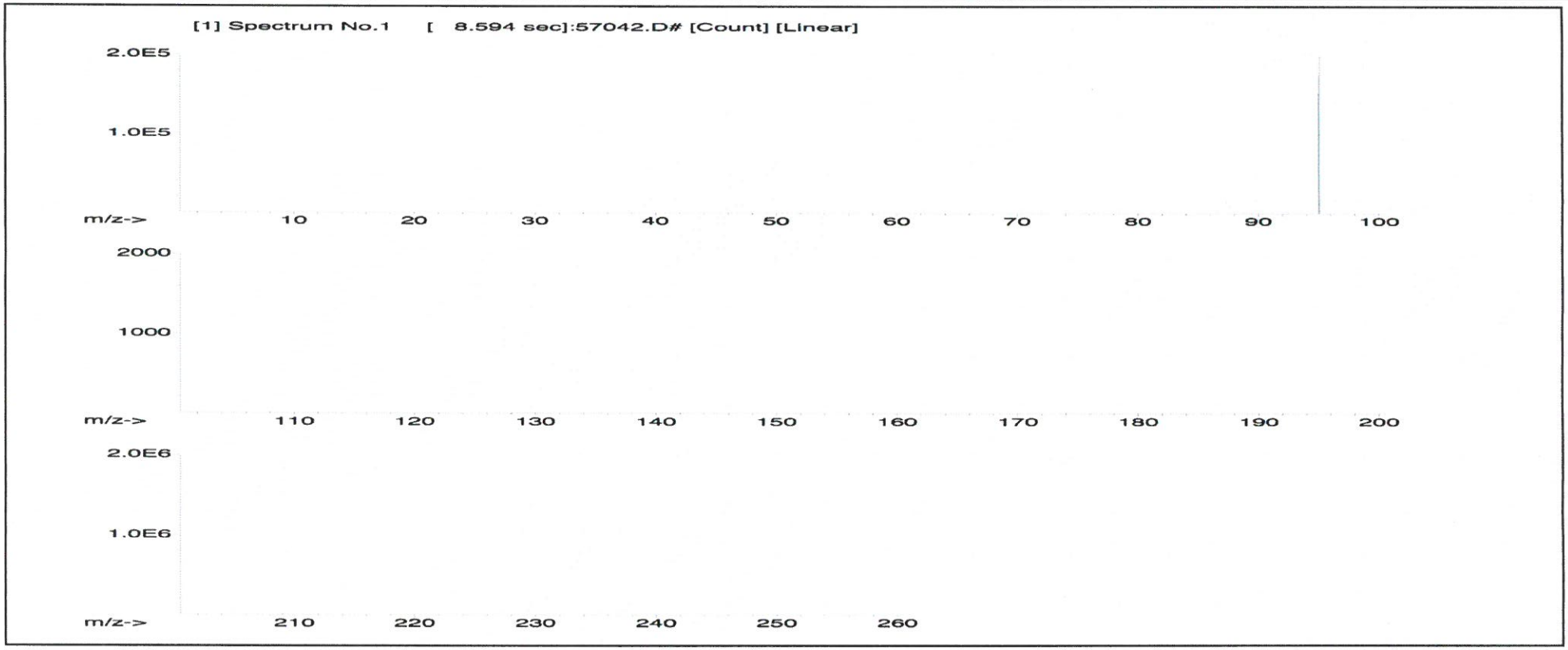
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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Certified Reference Material CRM

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

M5288 R: 07/21/2022

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

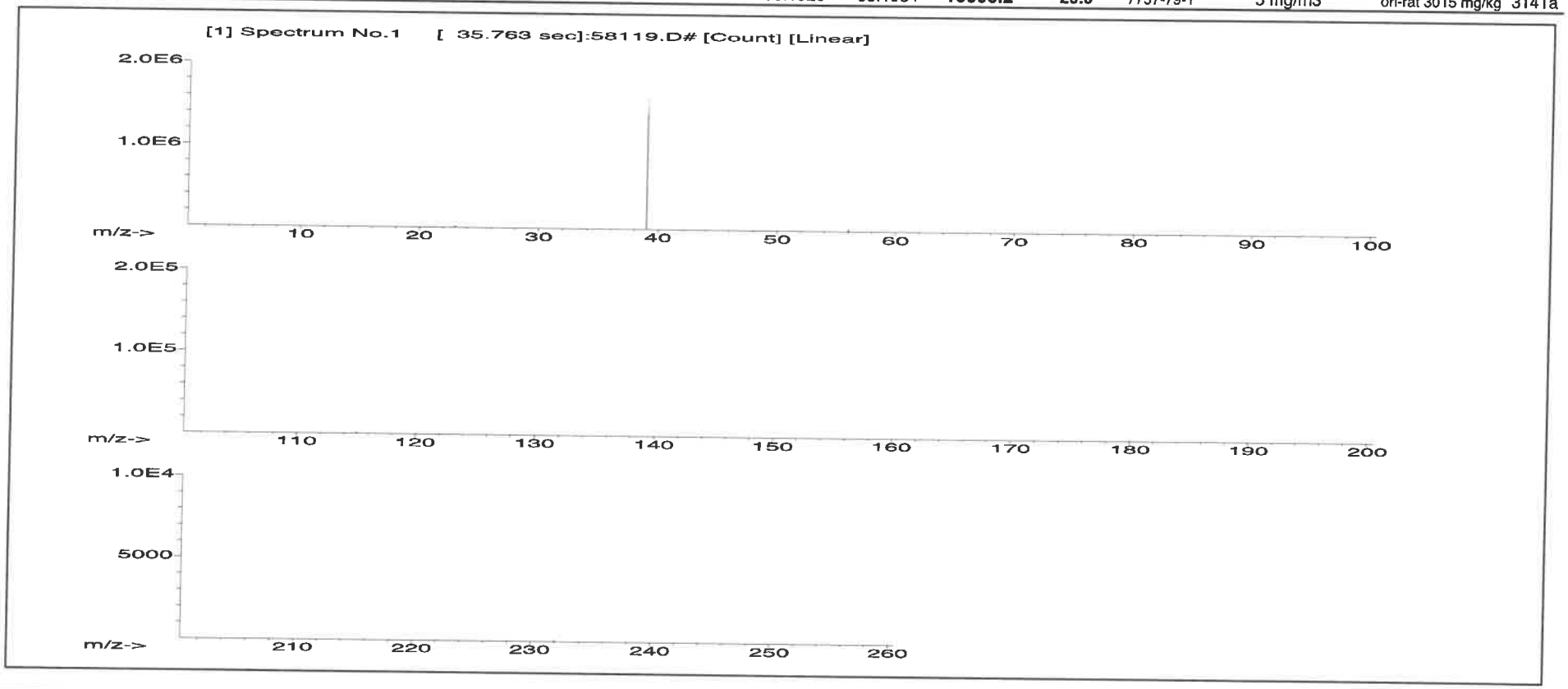
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	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



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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	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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R: 09/08/22 (BA)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

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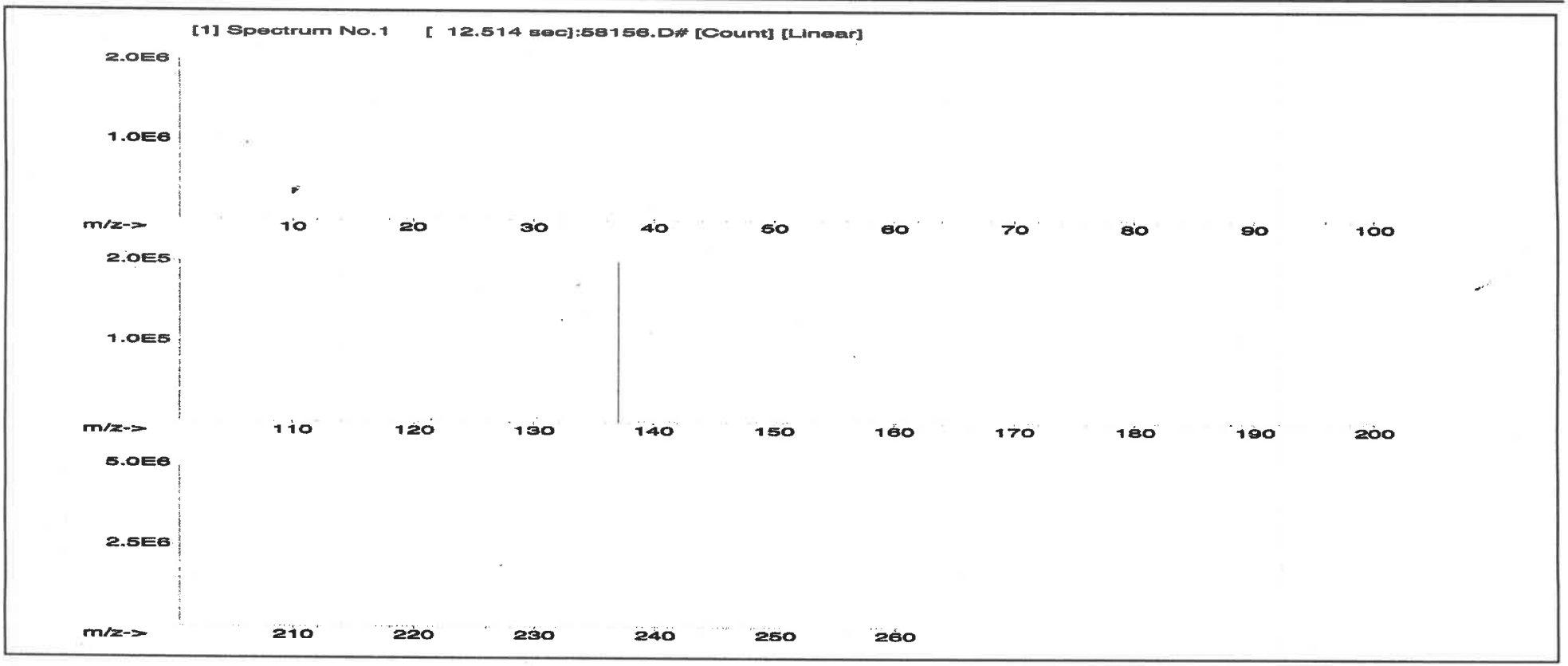
CERTIFIED WEIGHT REPORT:

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



ICP-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

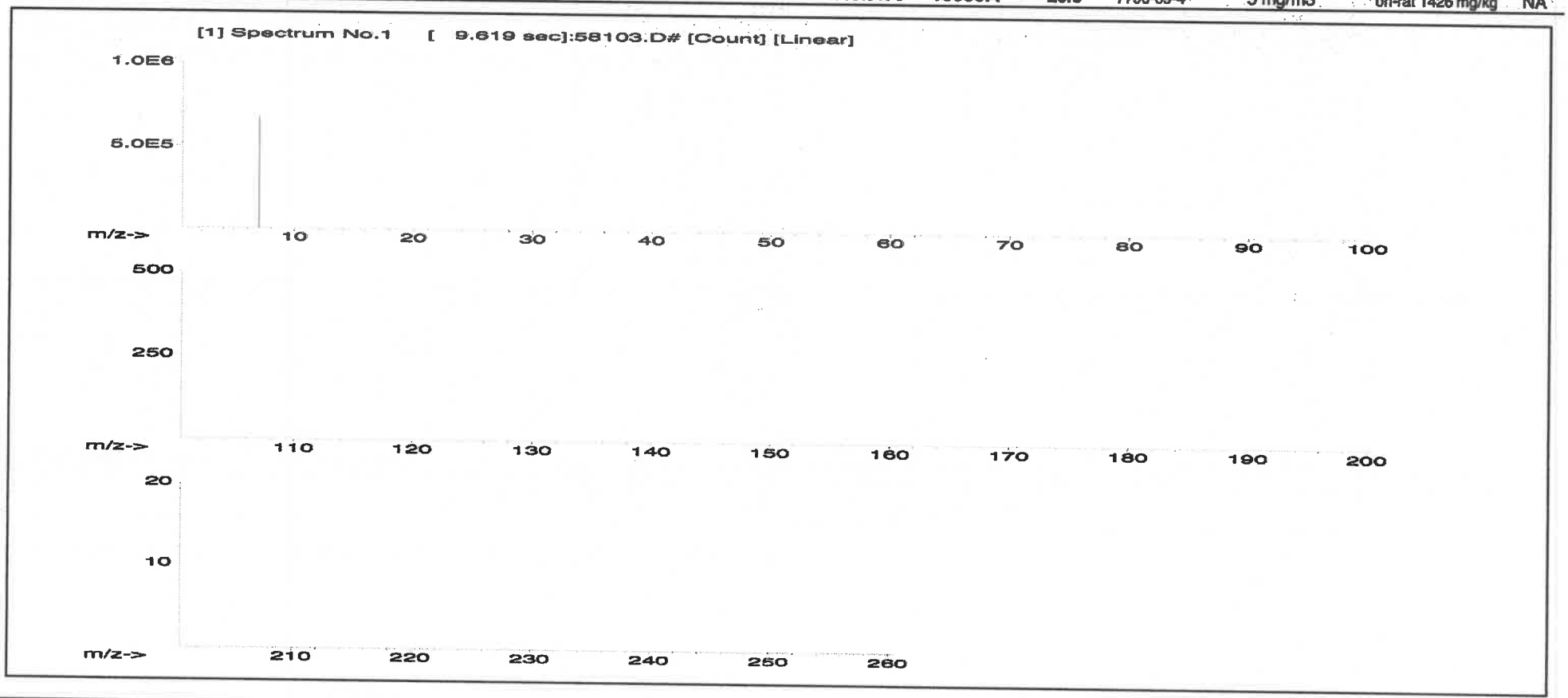
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



SDS-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M 5466

Certified Reference Material CRM

R: 03/01/23 BH

ANAB ISO 17034 Accredited
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https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 061322
Description: Cerium (Ce)

Expiration Date: 061325
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

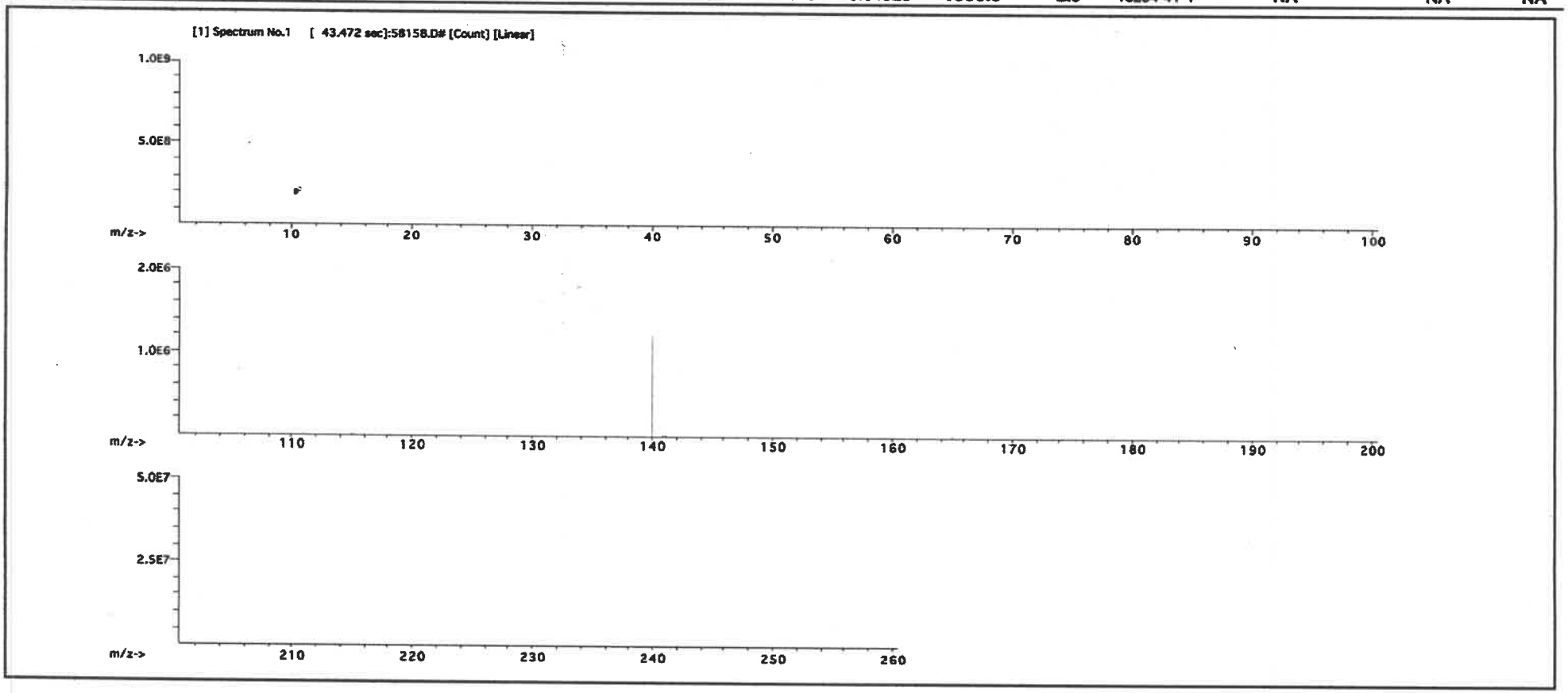
Weight shown below was diluted to (mL): 1000.12 ± 0.058 Flask Uncertainty

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	061322
Reviewed By:	Pedro L. Rentas	061322

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	3.04923	1000.0	2.0	10294-41-4	NA	NA	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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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 Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

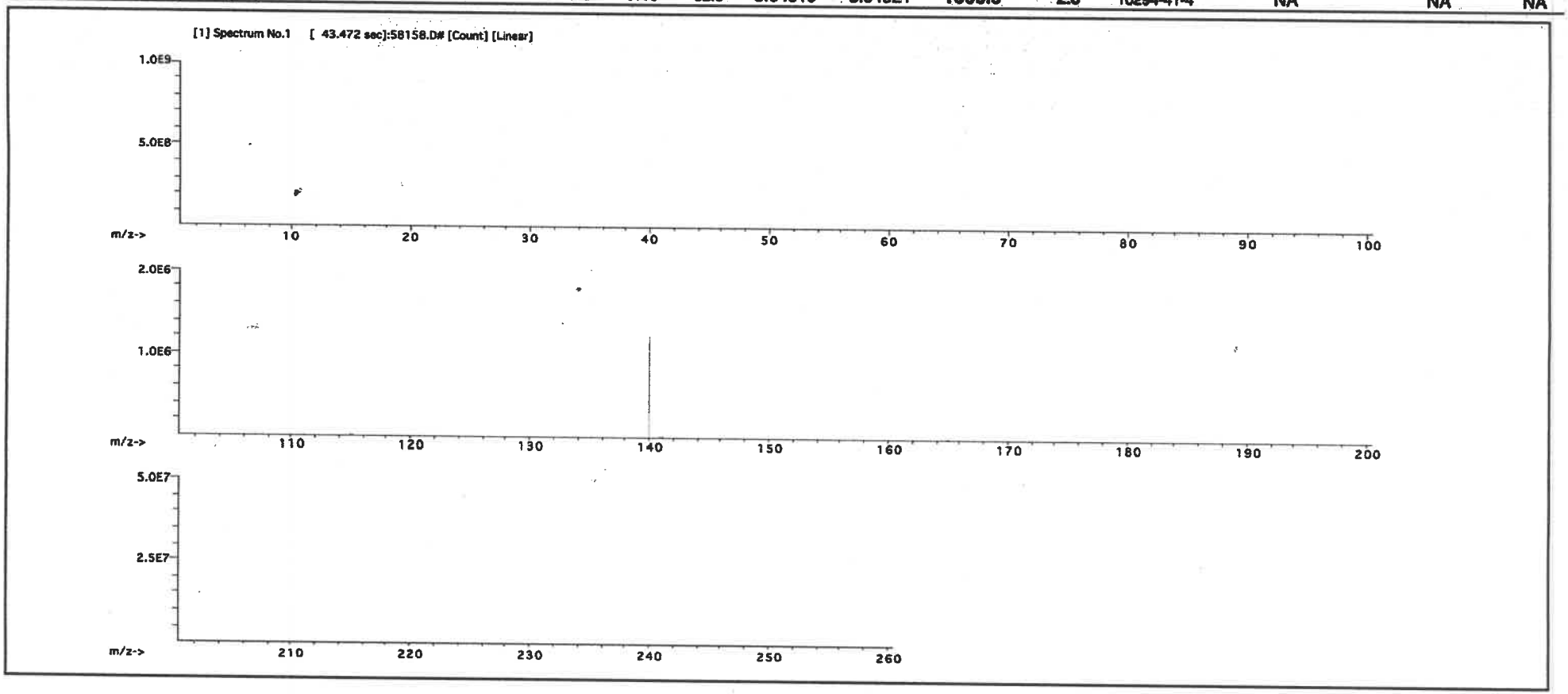
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance 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



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.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 (BH)

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

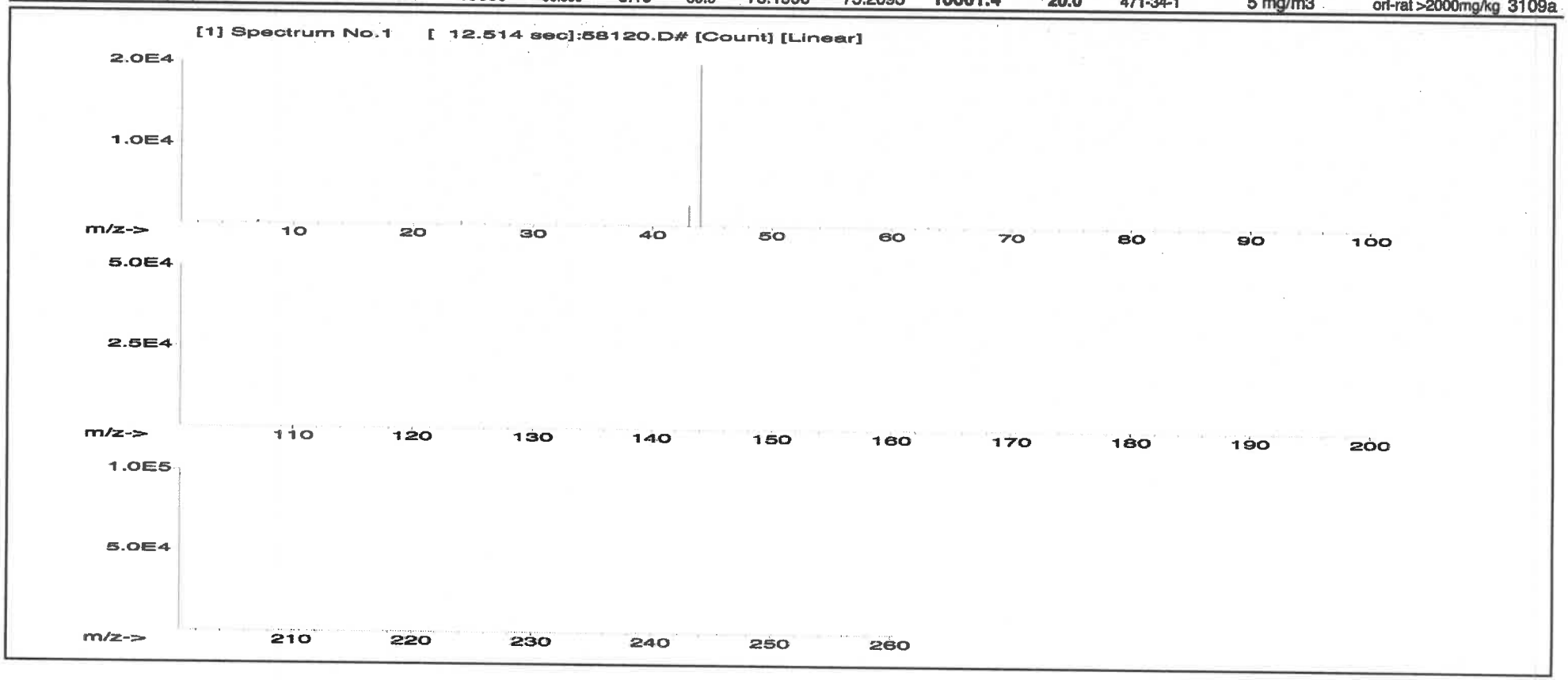
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 031523

Pedro Rentas
Reviewed By: Pedro L. Rentas 031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5514 , M5515 R: 03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

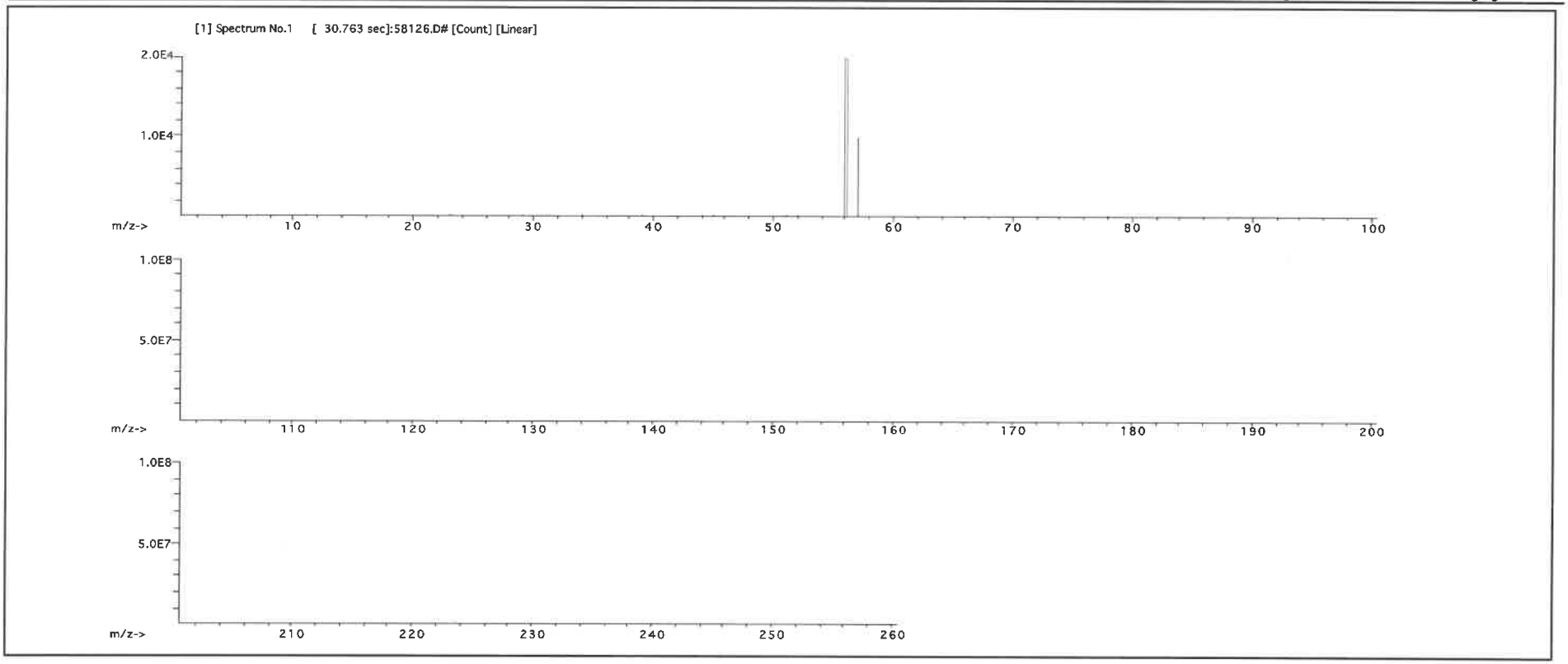
Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

	Lot #		
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.12	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2224912-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



P-335 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.
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M5658 R ! 8/25/23

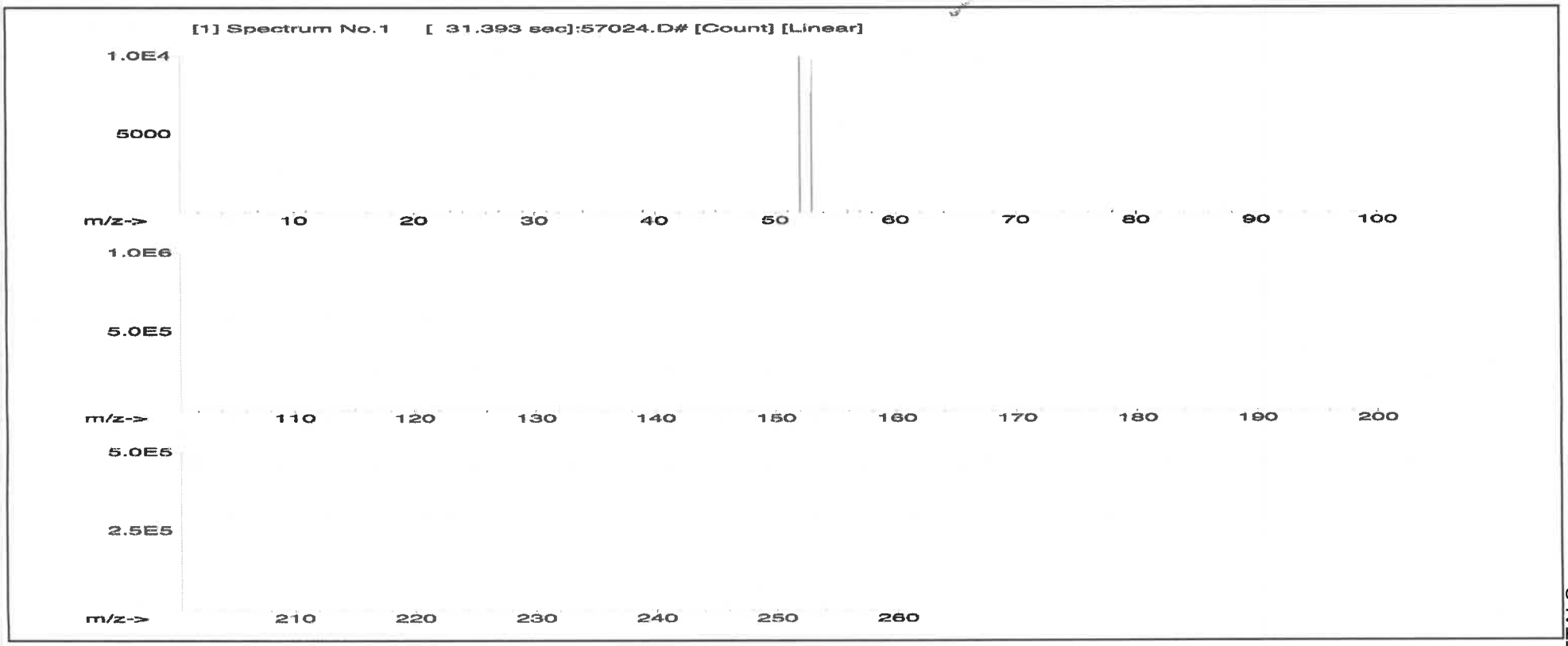
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5697 R: 10/27/23

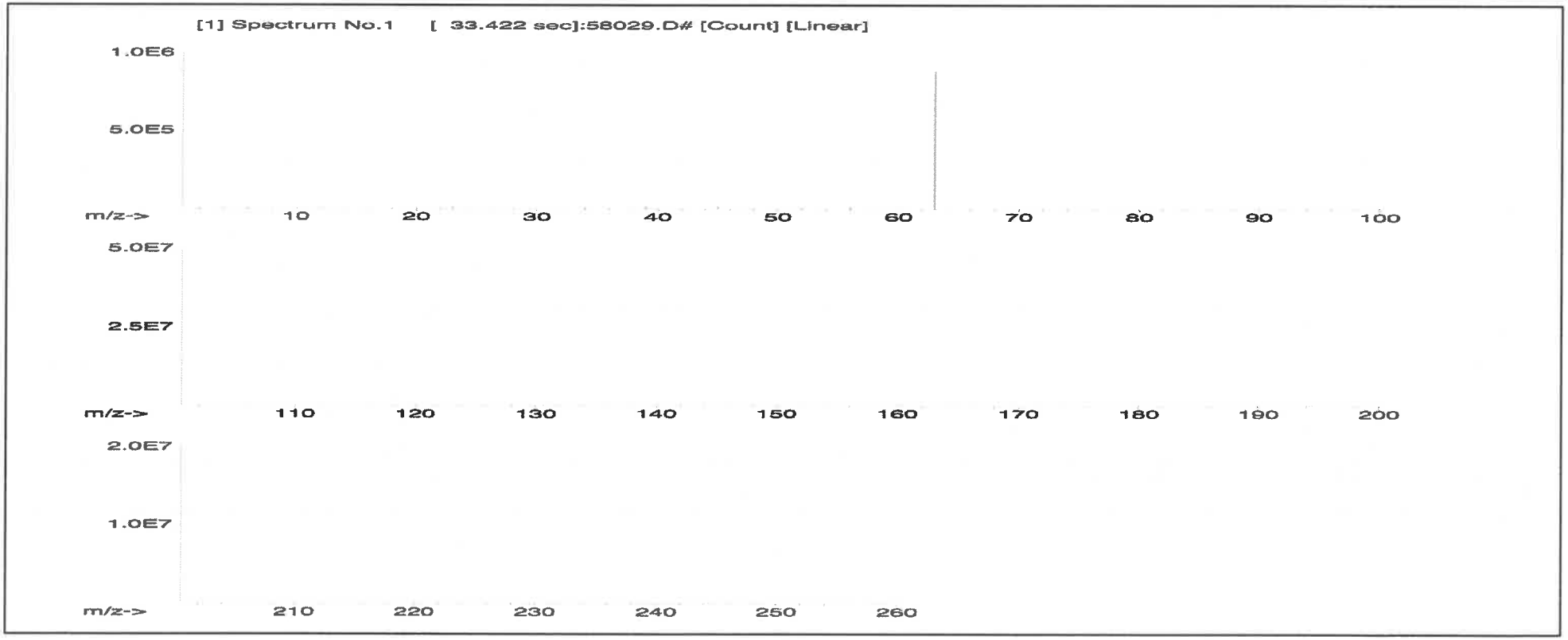
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**58029**	24002546	Nitric Acid
Lot Number:	**102523**		
Description:	**Copper (Cu)**		
		2.0%	40.0 (mL) Nitric Acid
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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5648 R: 10/27/23

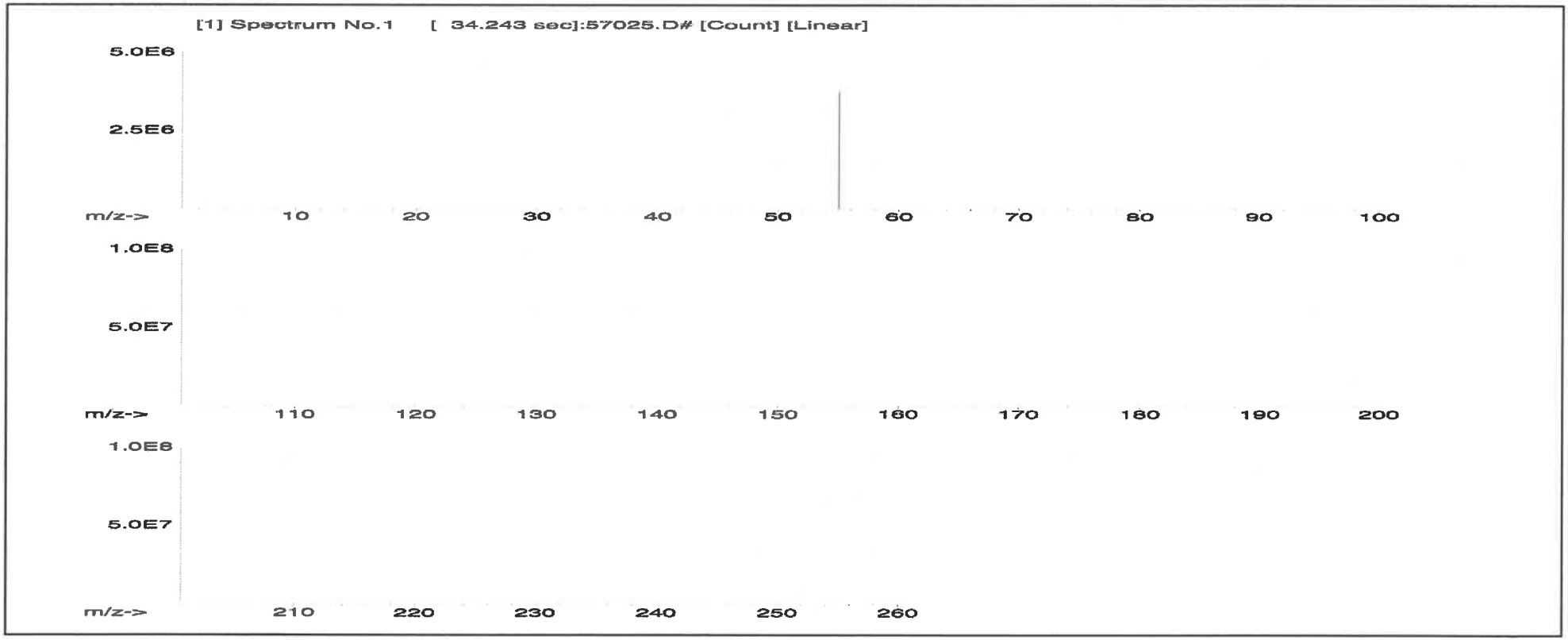
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* 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).
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R: 12/20/23 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

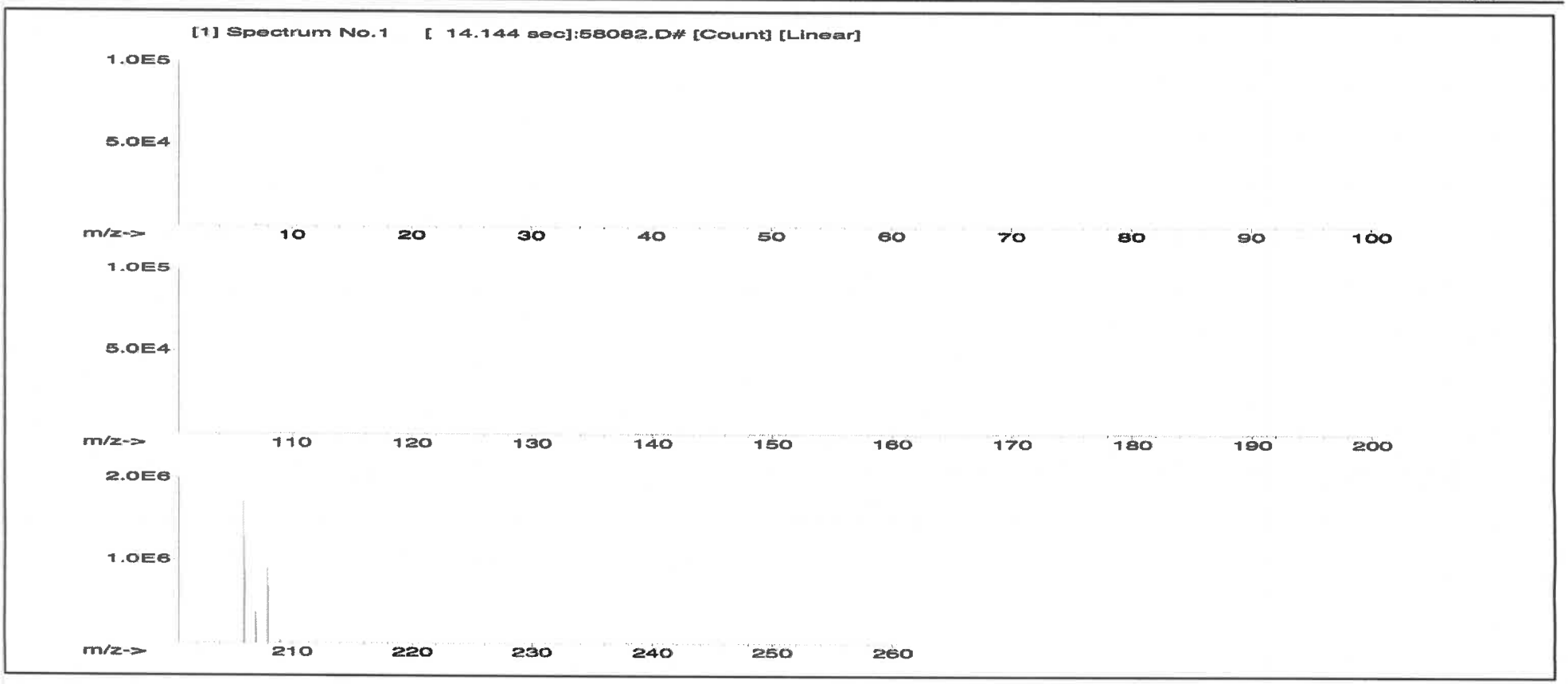
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 12/20/23 M5748

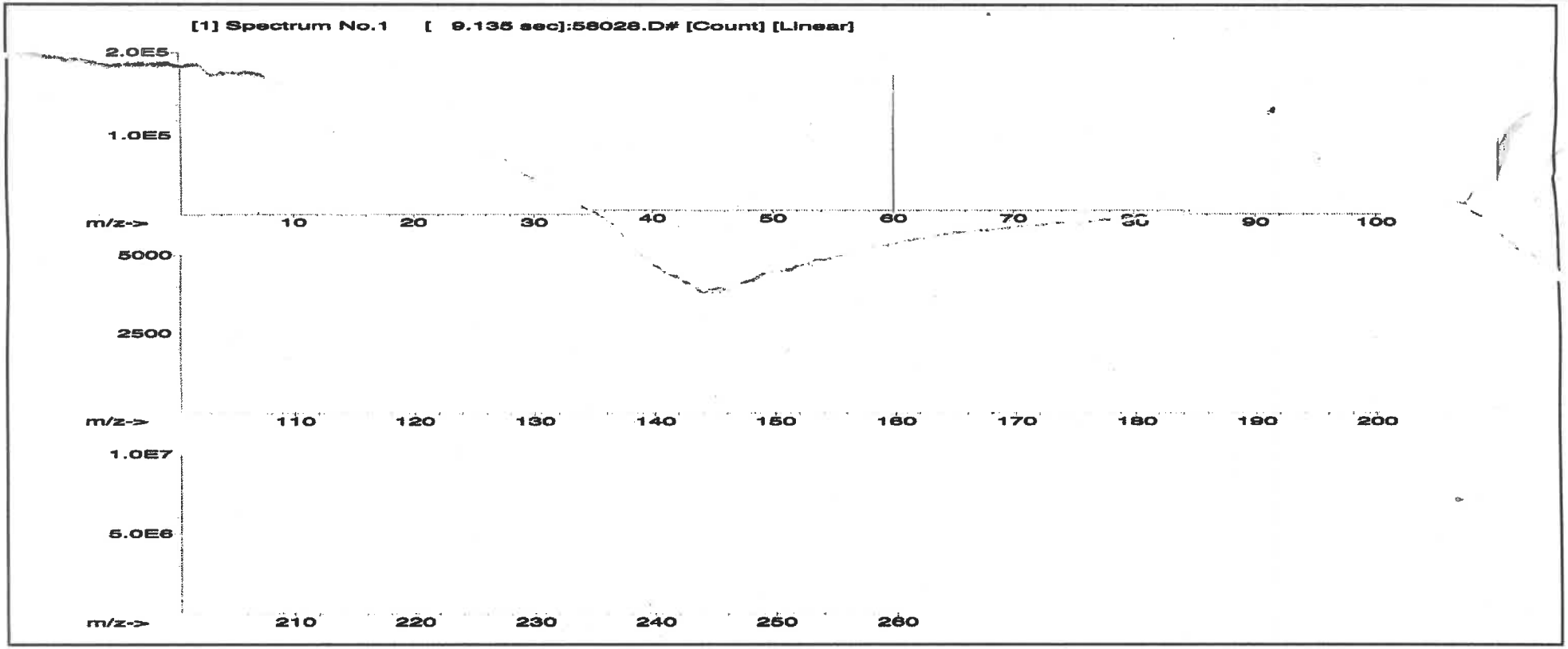
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5768 M5769 BP R:1/3/24

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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

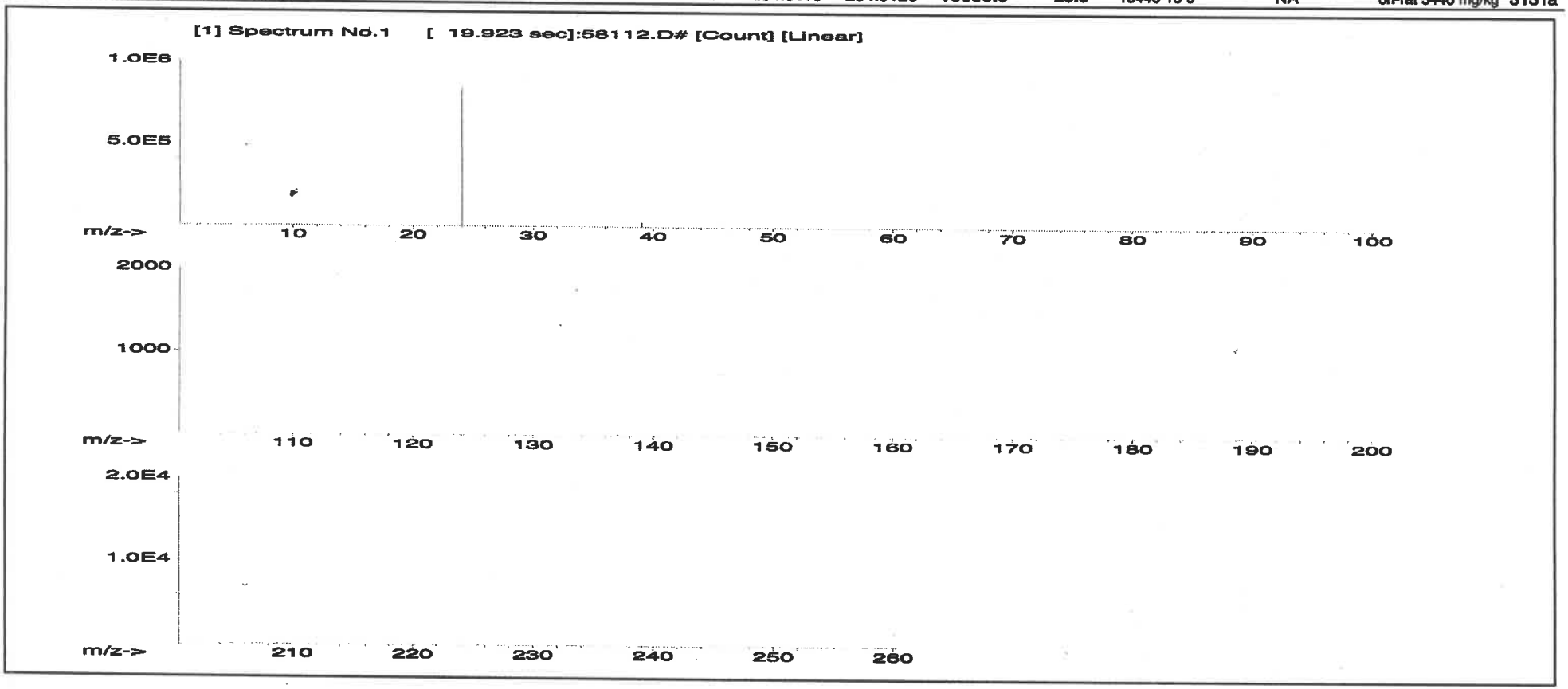
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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R: 02/09/24 M5798

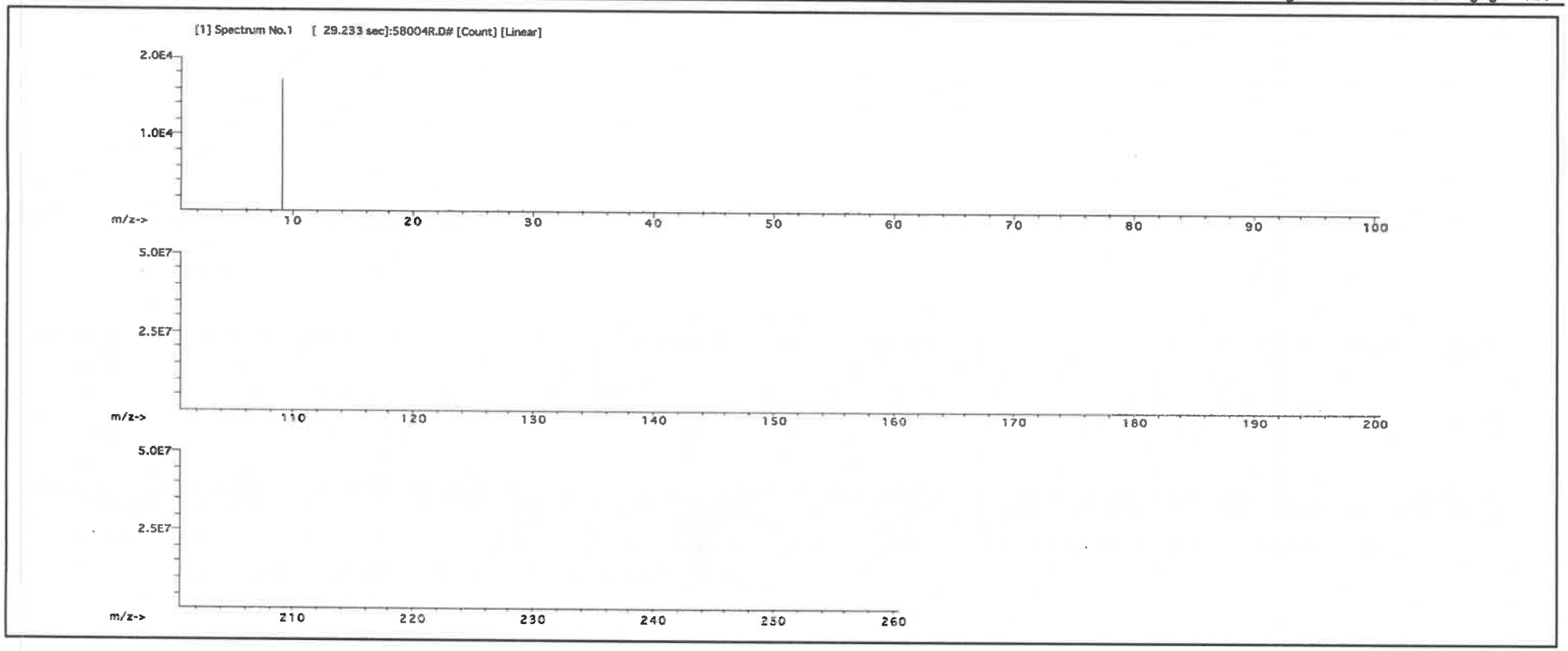
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

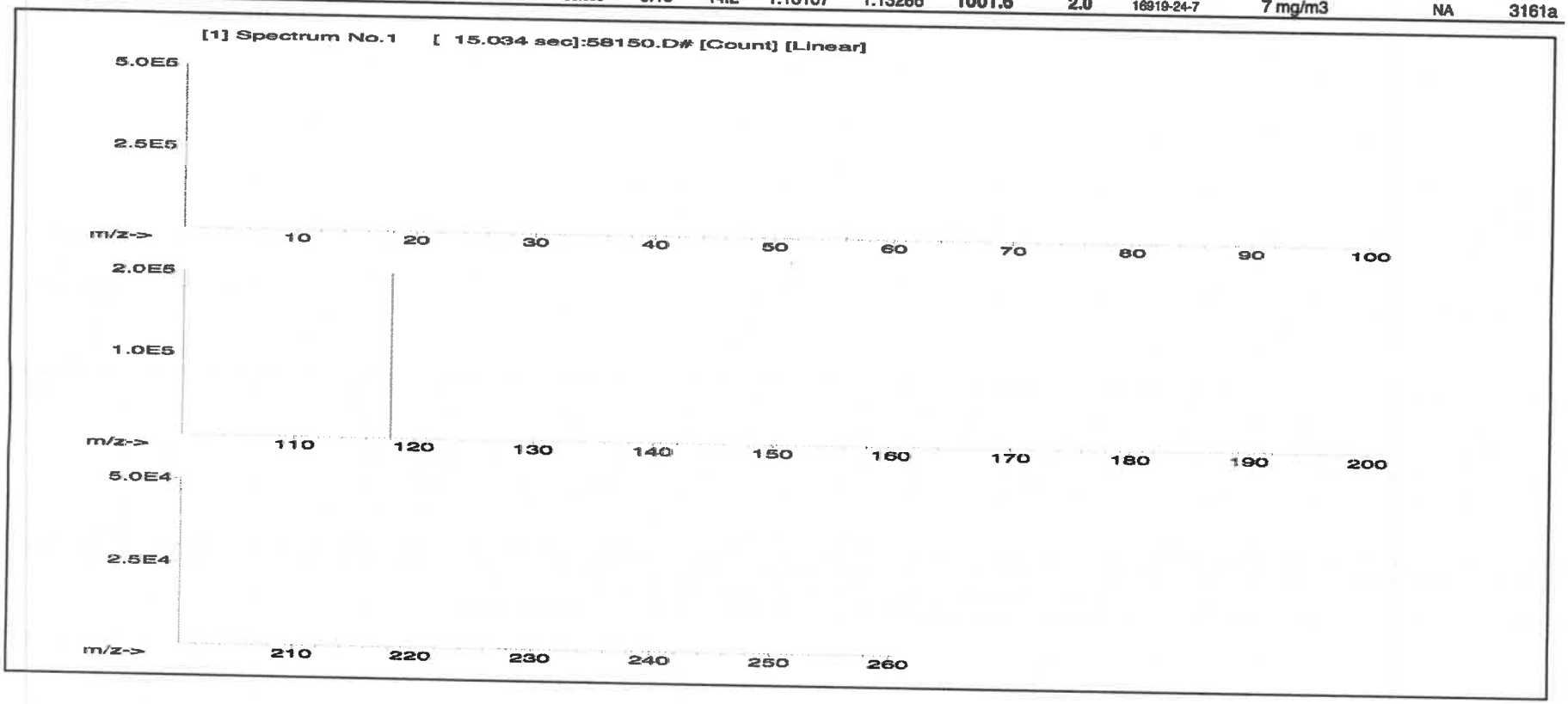
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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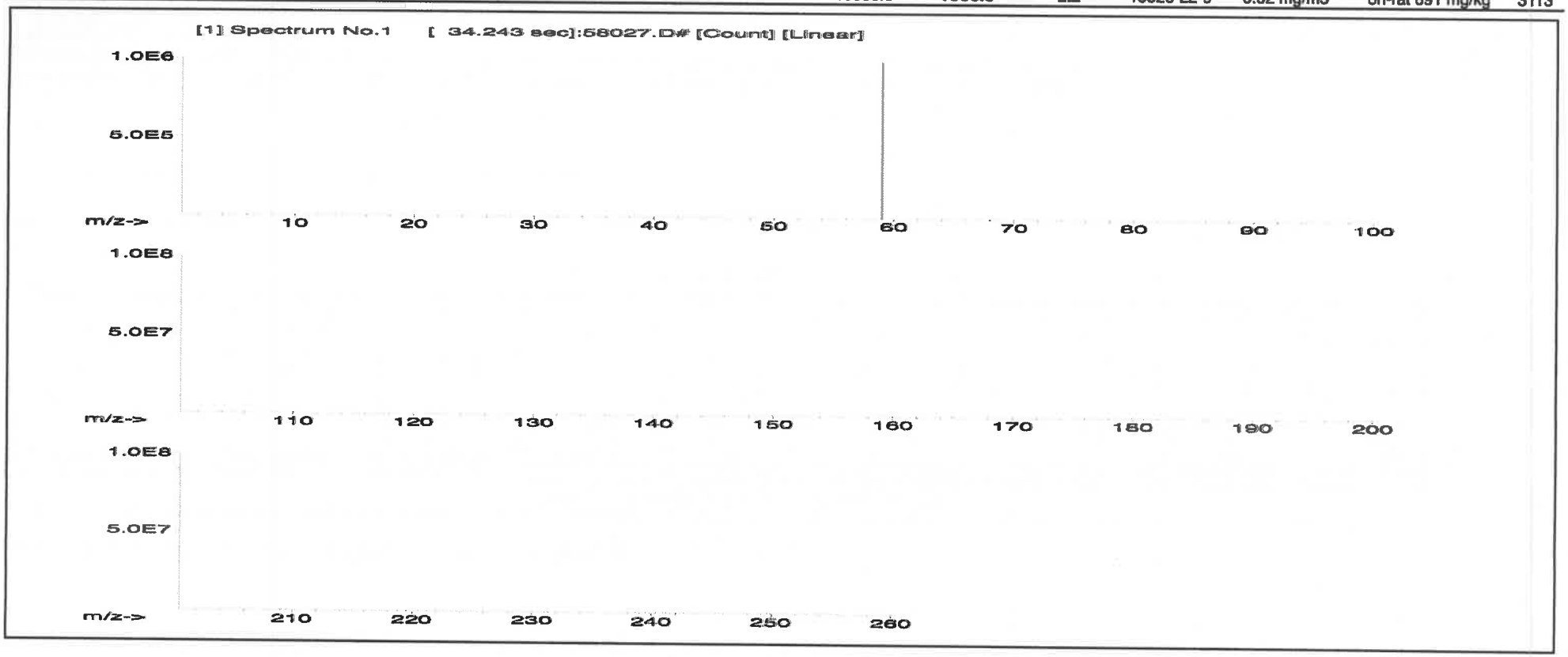
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5801 BH

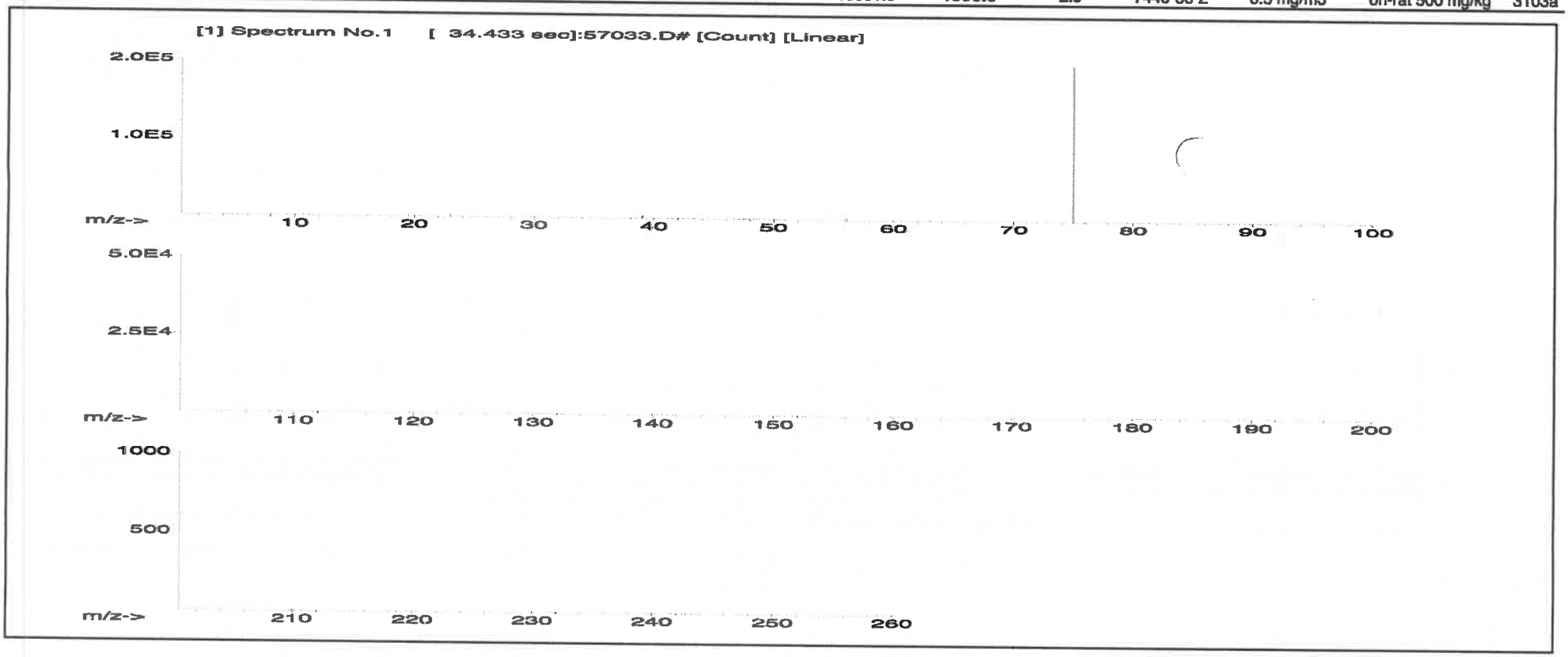
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
Description:	**Arsenic (As)**				
		2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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A: 02/09/24 M.5814

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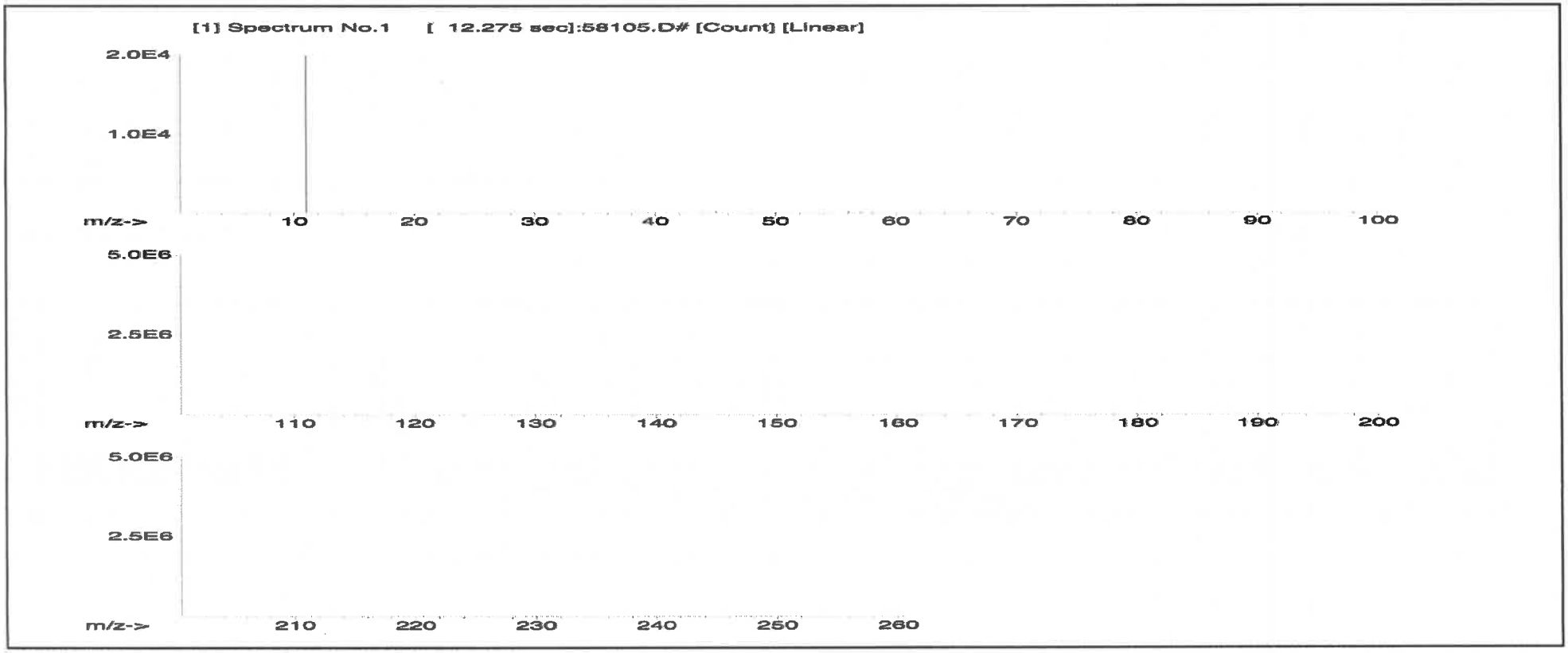
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
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		

Lot #

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R1 02/09/24. M5815

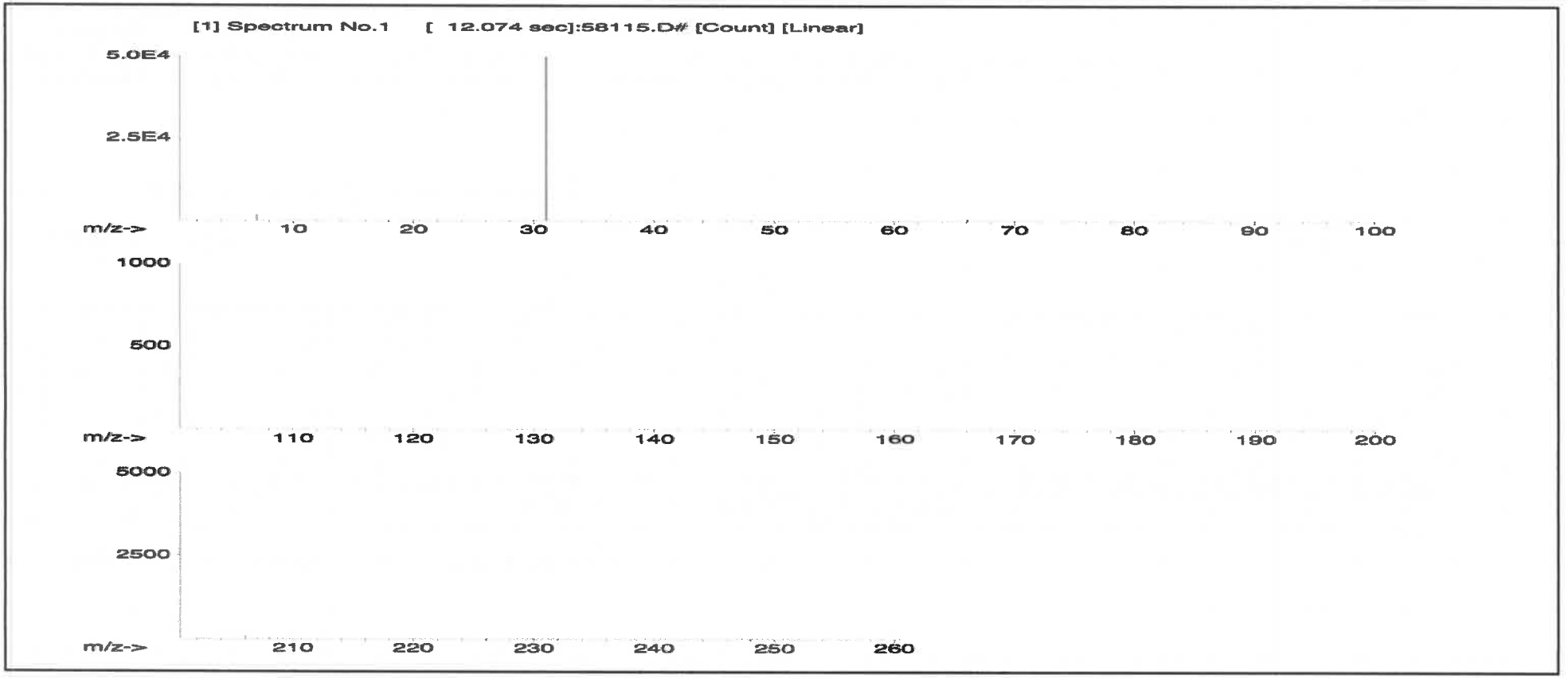
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CERTIFIED WEIGHT REPORT:

Part Number:	**57115**		**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**				
Description:	**Phosphorous (P)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5816

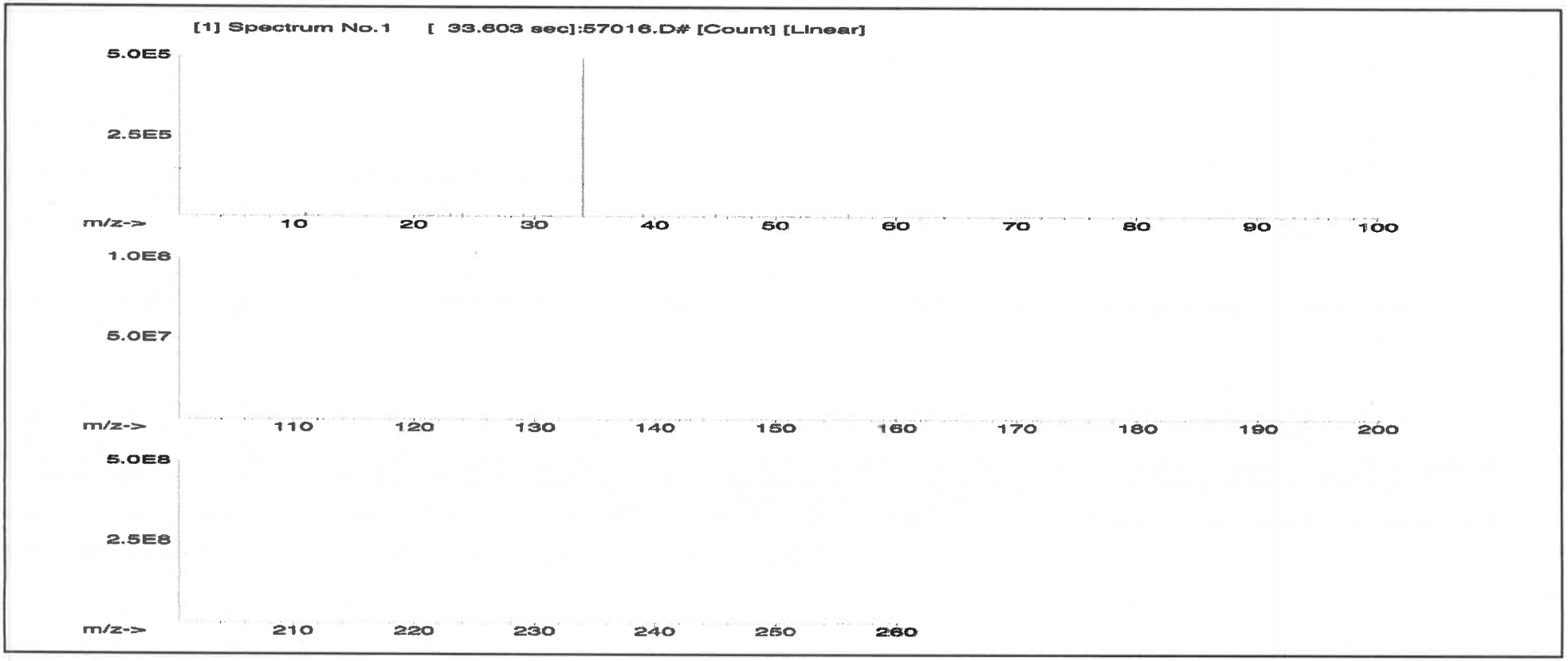
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CERTIFIED WEIGHT REPORT:

Part Number:	**57016**		**Solvent:**	**Lot #** 122923 ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5817

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CERTIFIED WEIGHT REPORT:

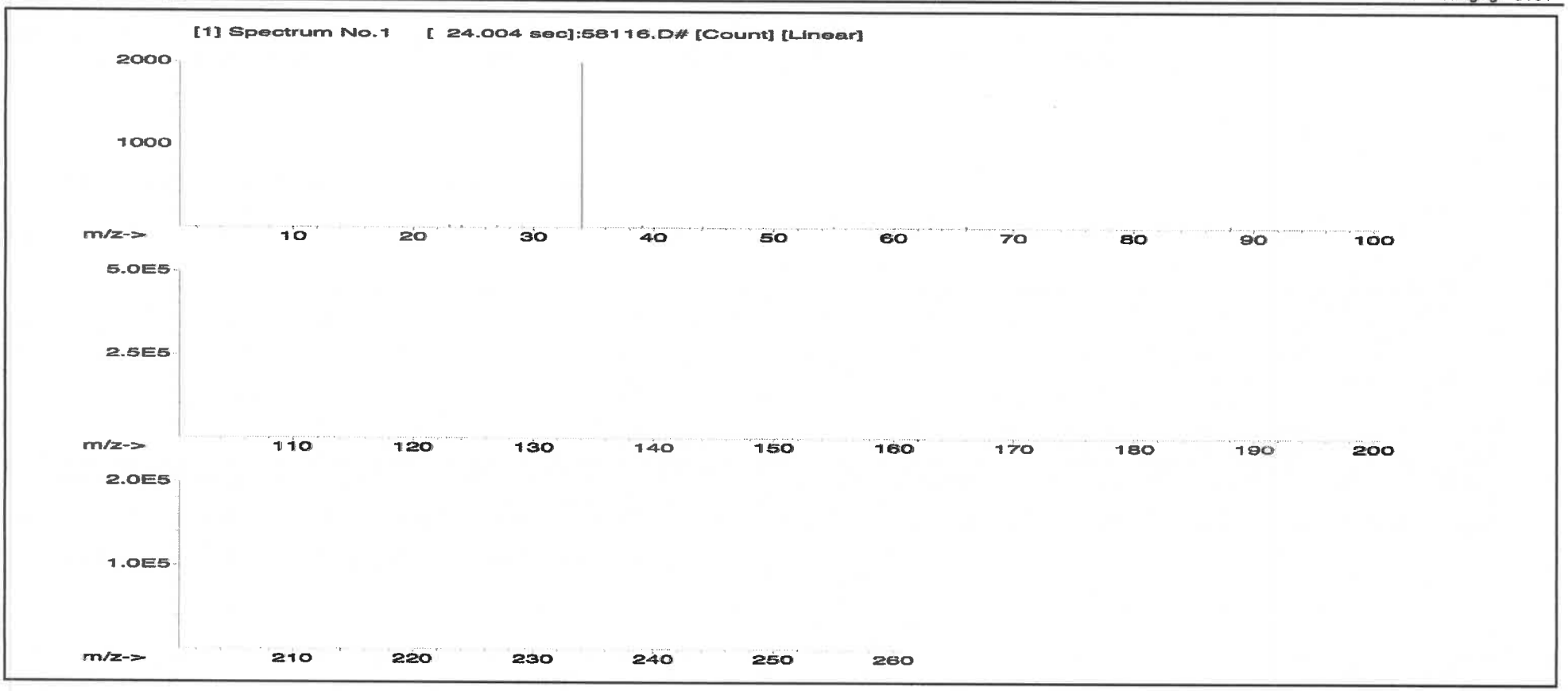
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M.5818
Lot #

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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

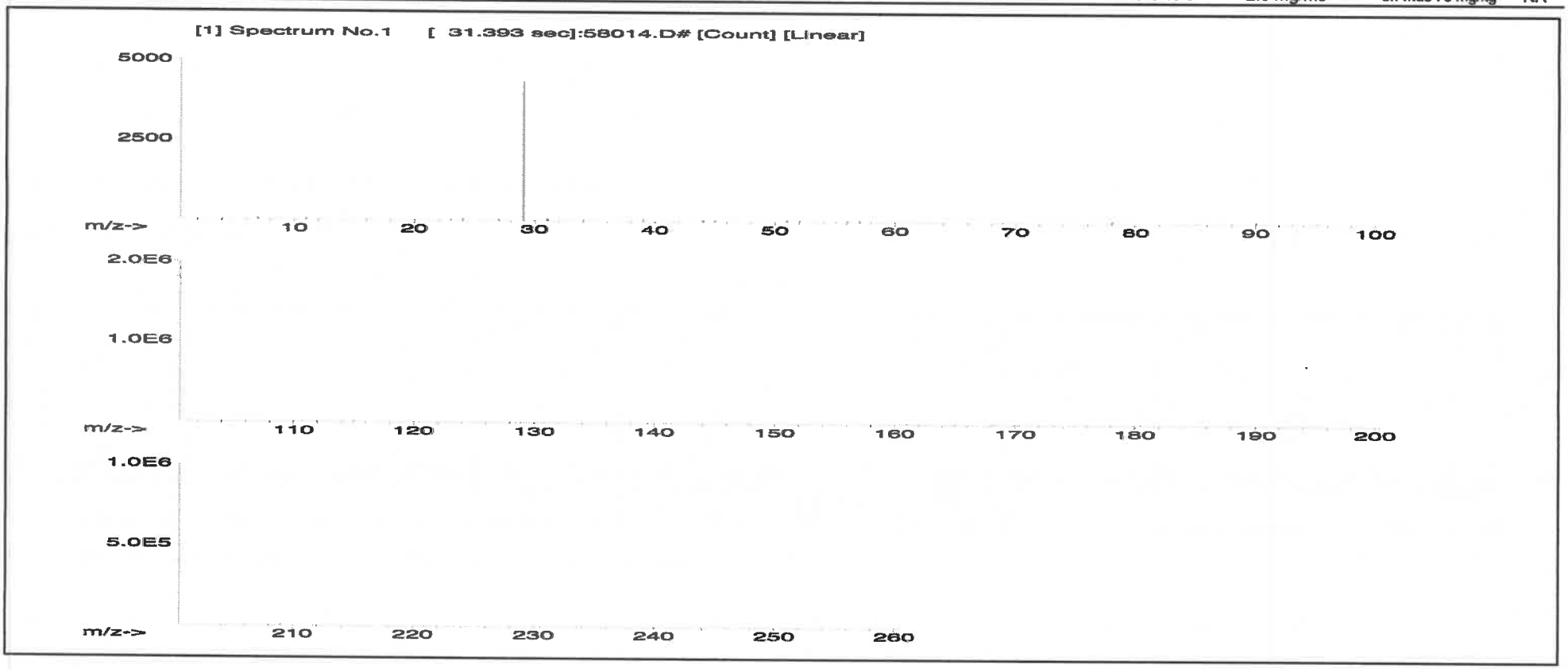
Solvent: 24002546 Nitric Acid
2% 40.0 (mL) Nitric Acid

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

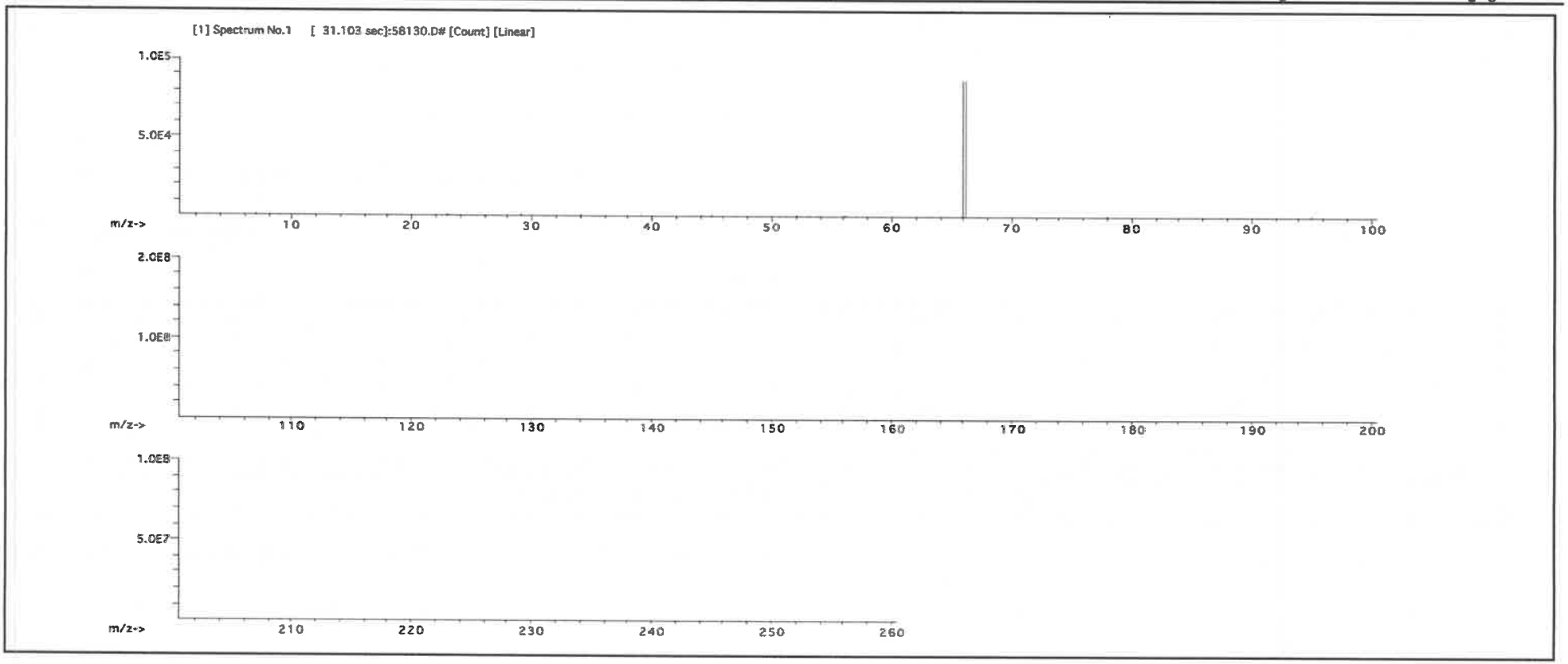
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 ± 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).

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R: 02/09/24 M5820

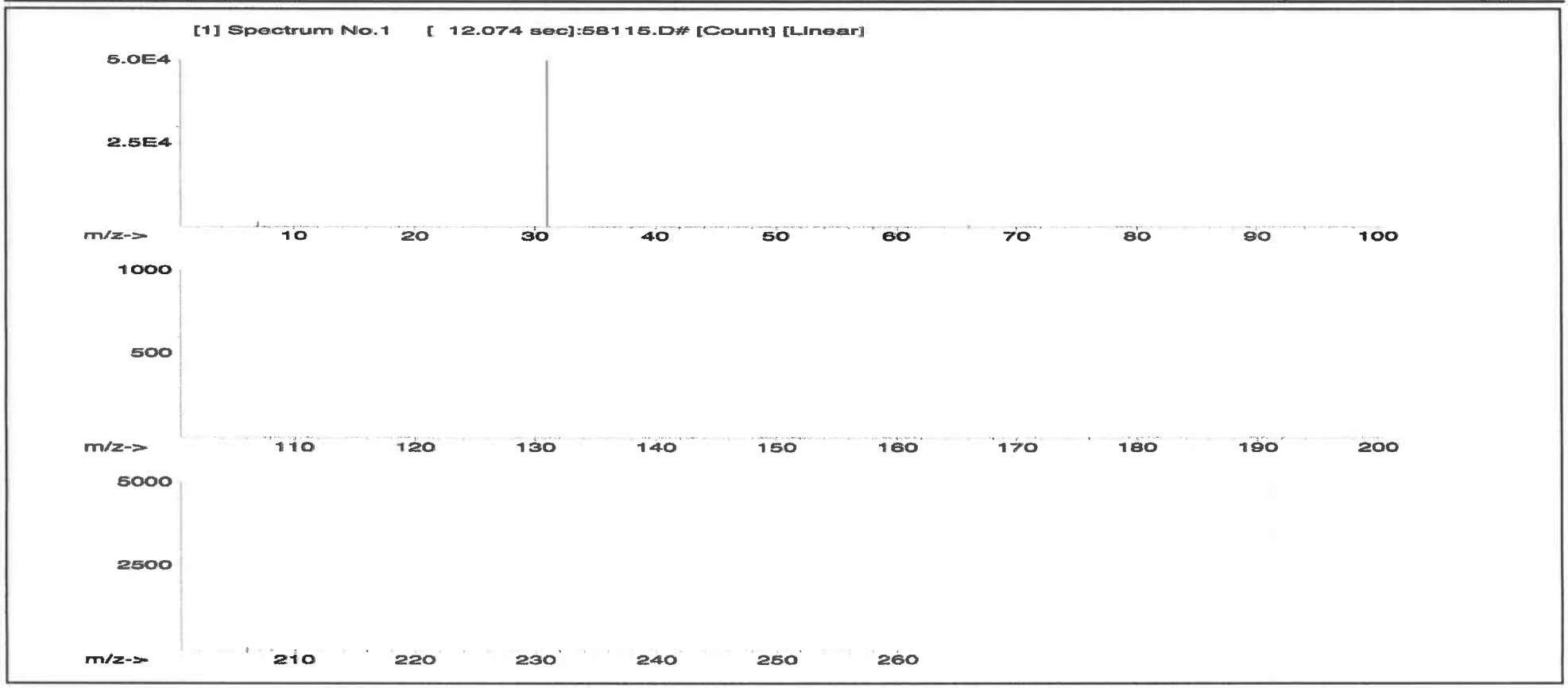
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry 091123
Reviewed By:	Pedro L. Rentas 091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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.

MTS28-32 MB MTS53 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

INORGANIC VENTURES™
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Certificate of Analysis

M5959 R: 6/14/24.

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:	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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

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

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

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



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M5962 R! 06/14/24.

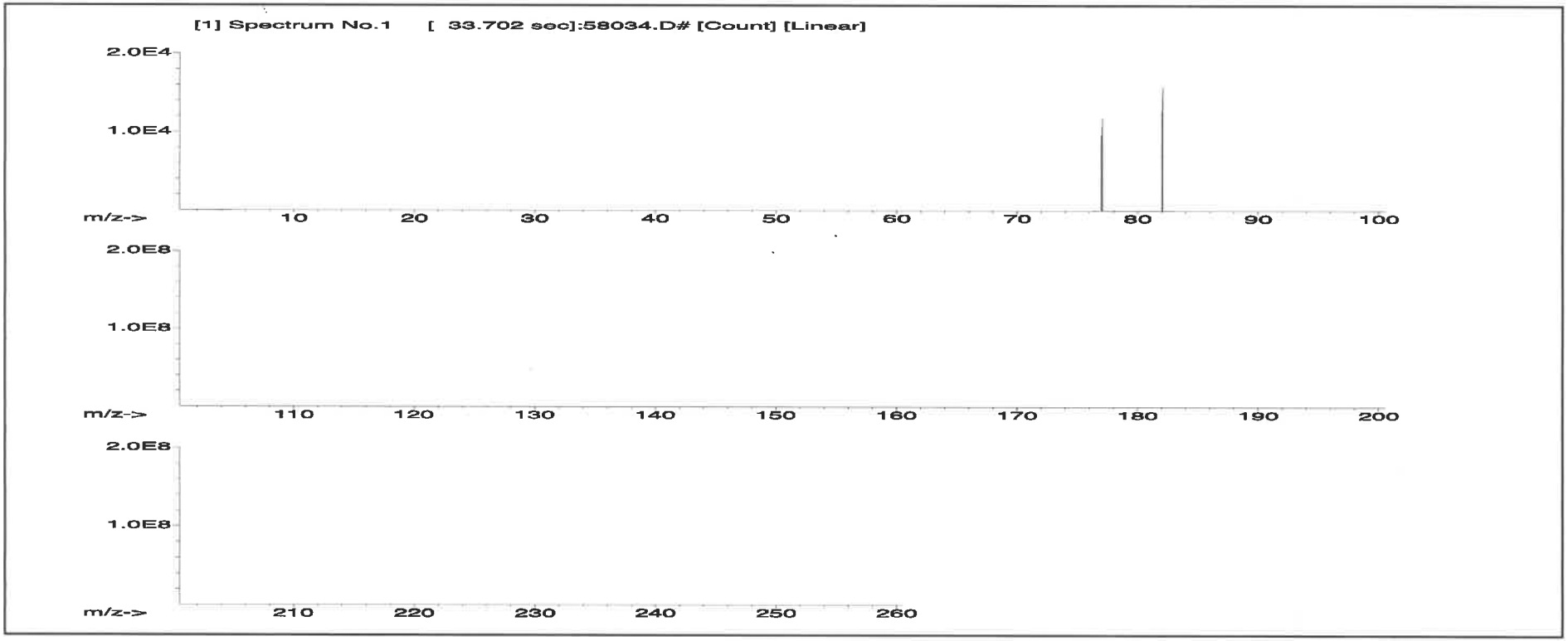
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AR-1539 Certificate Number
https://Absolutestandards.com

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.
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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).

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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

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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

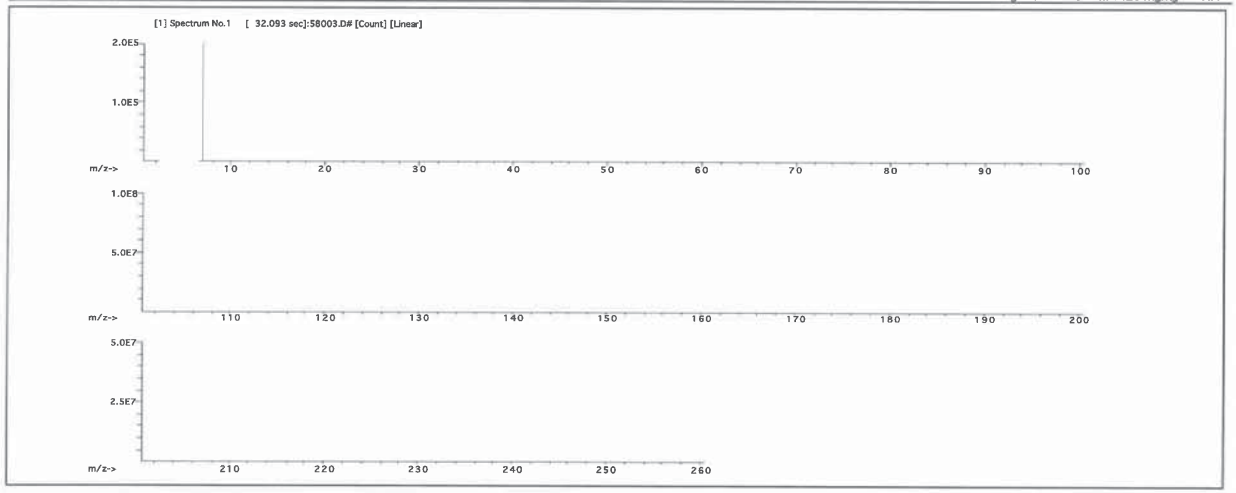
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

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



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Certified Reference Material CRM

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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

MS978, MS979

Certificate of Analysis

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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, $X_{CRM/MM}$, 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 ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char} + u^2_{Lab} + u^2_{lts} + u^2_{Es})^{1/2}$

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_{Lab} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{Es} = 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 ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char\ a} + u^2_{Lab} + u^2_{lts} + u^2_{Es})^{1/2}$

k = coverage factor = 2

$u_{Char\ a}$ = the errors from characterization

u_{Lab} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{Es} = 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 for months in 1% 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=Z (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
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https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

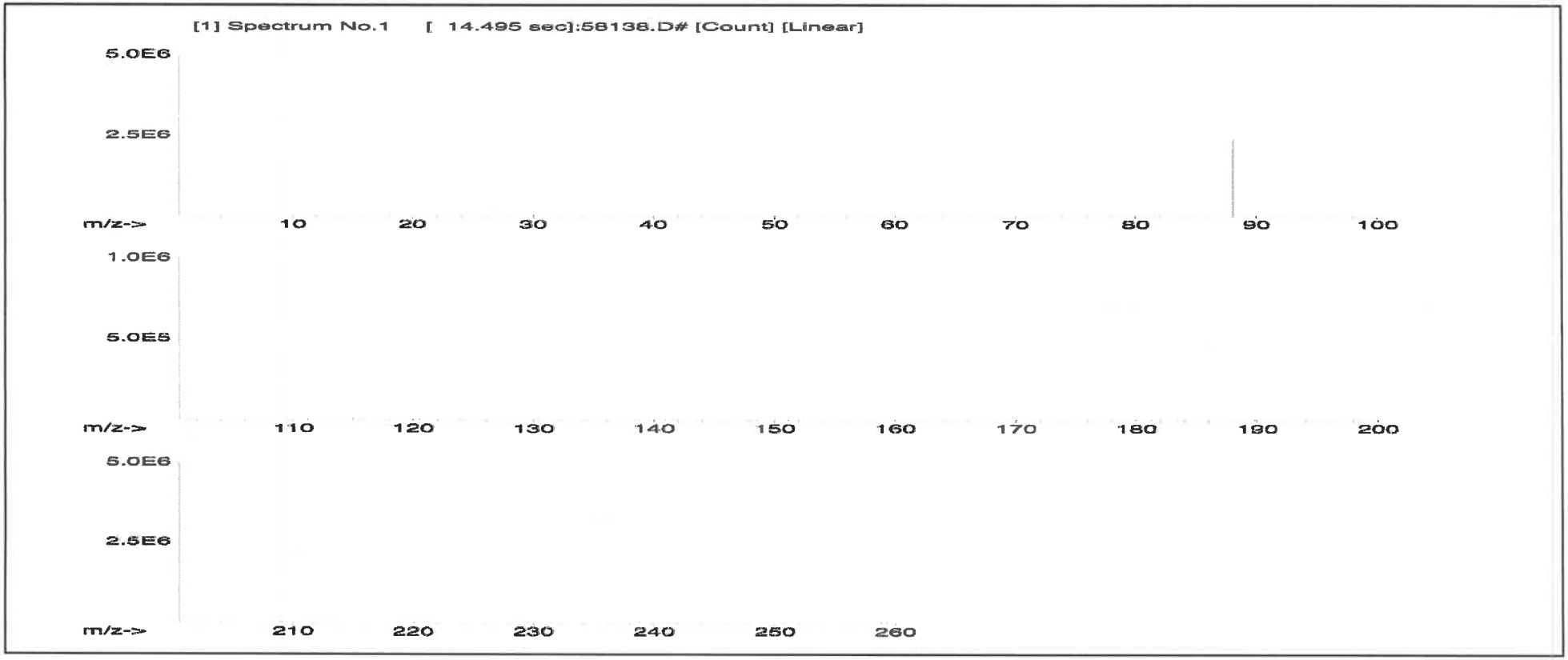
Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	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).

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1.0 ACCREDITATION / REGISTRATION

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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**			**Lot #**	
Lot Number:	**011623**		**Solvent:**	20510011	Nitric Acid
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		

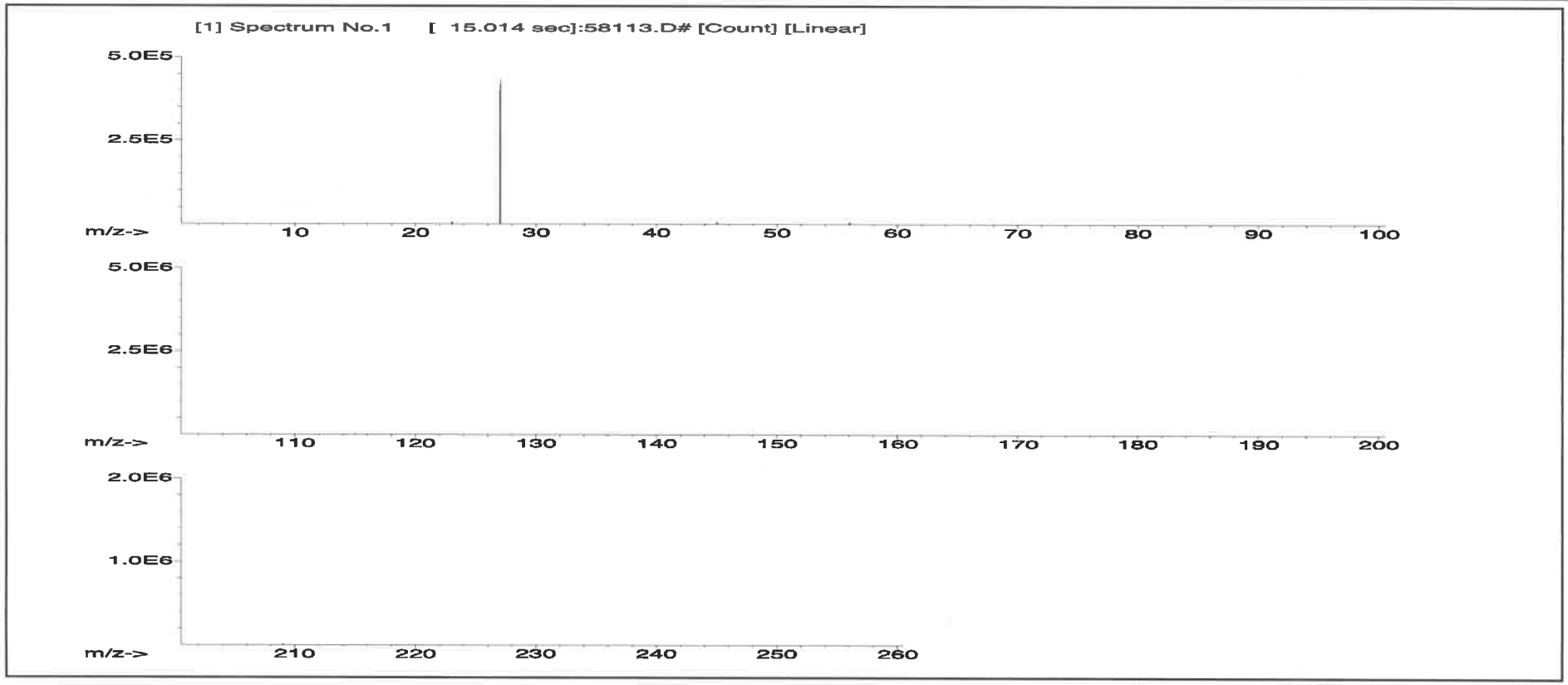
Giovanni Esposito

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

avantor™ | J.T.Baker®

R → 16/13/24
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

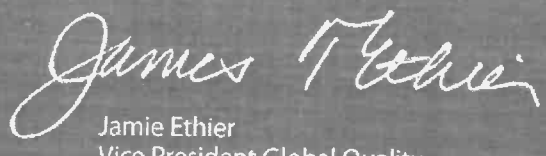
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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:

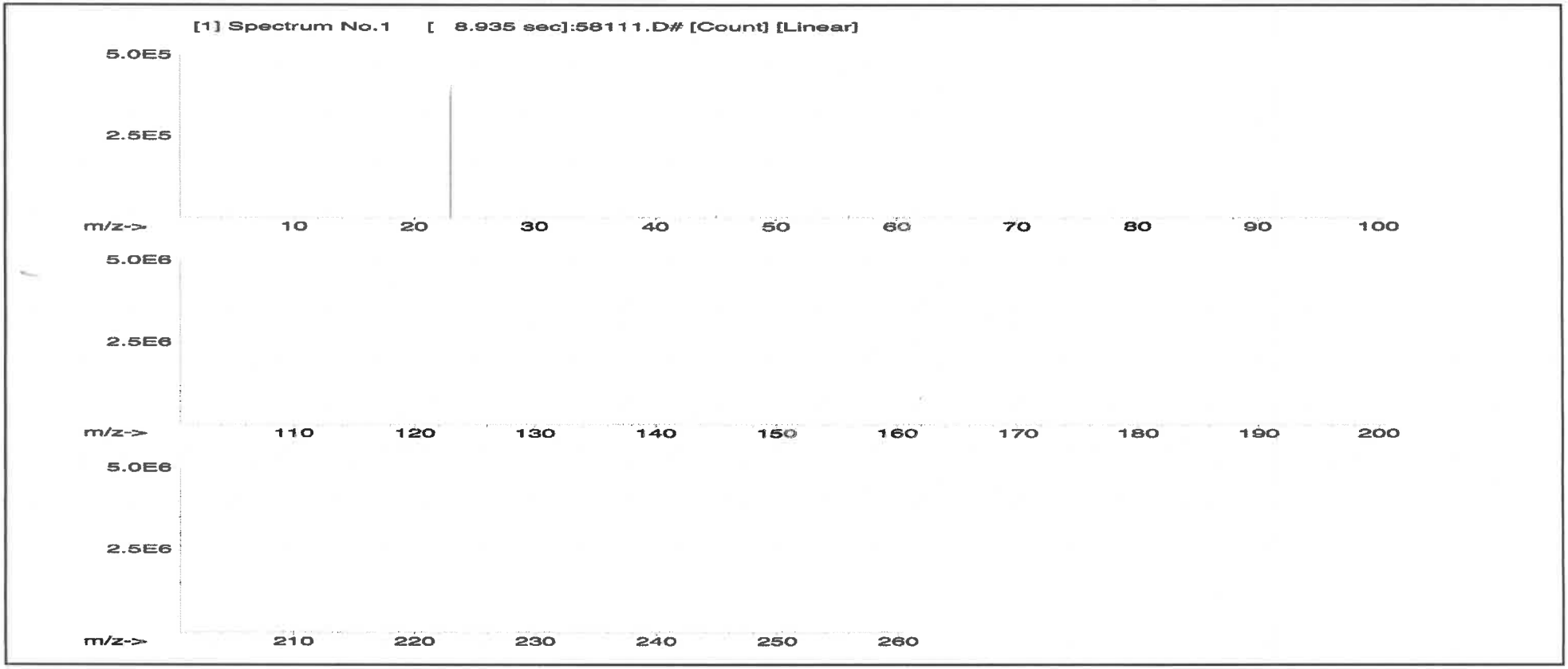
Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

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
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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Certified Reference Material CRM

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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 01/03/24 M5802, M5803

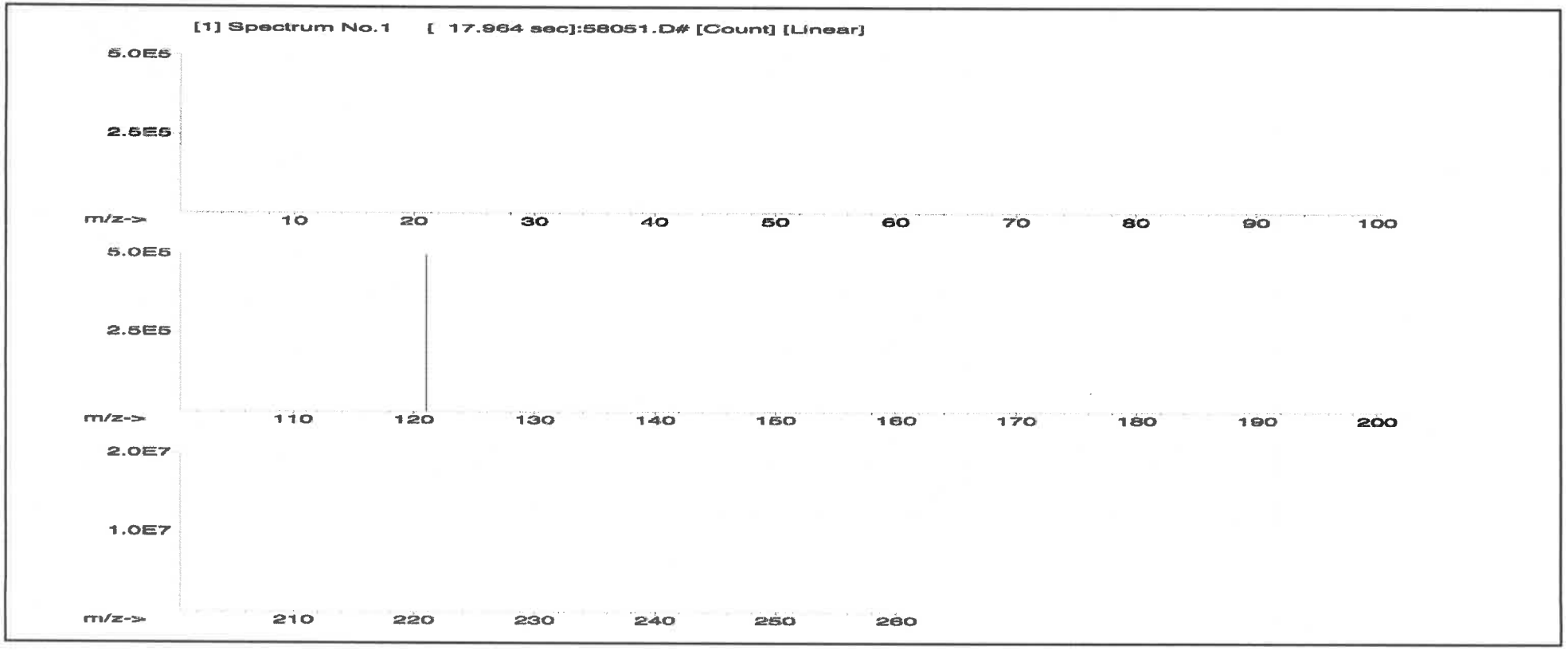
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**120523**				
Description:	**Antimony (Sb)**				
		2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	120526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6030

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

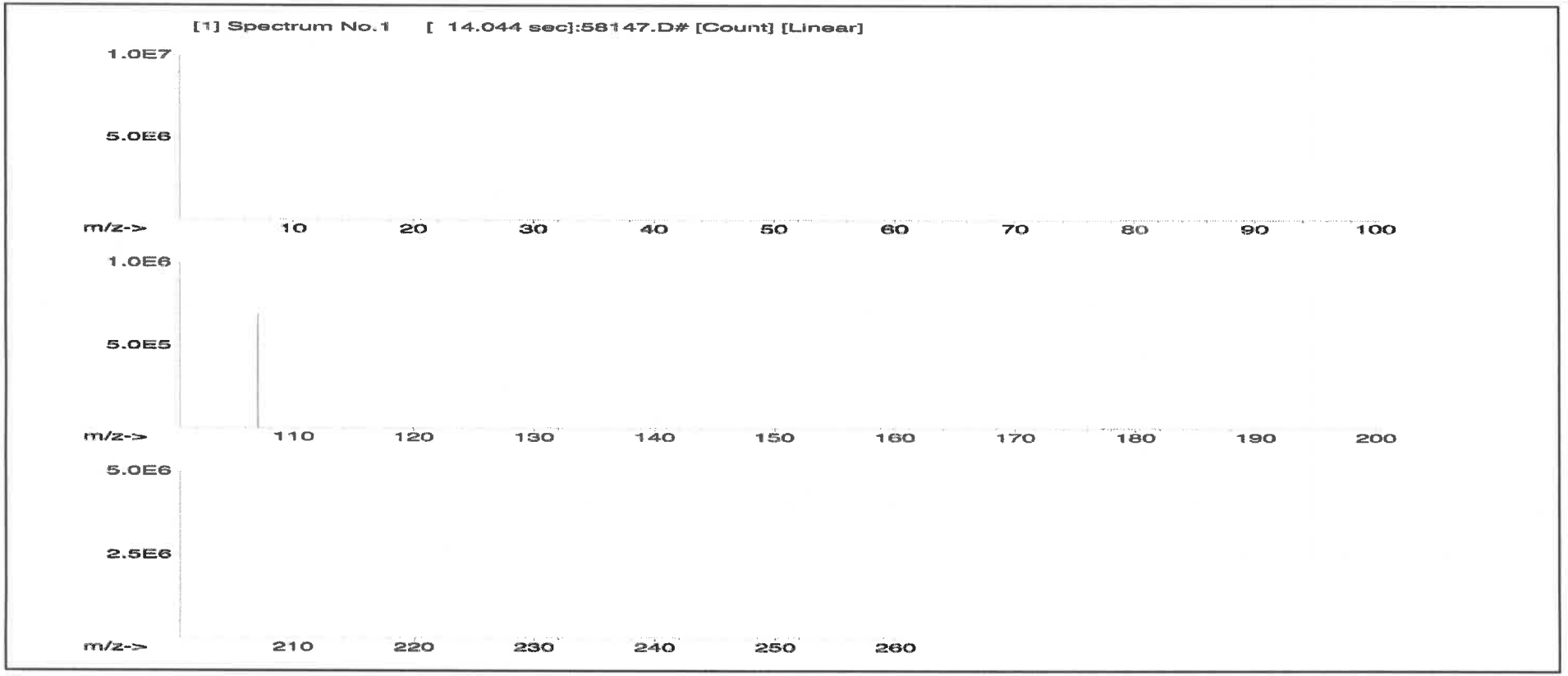
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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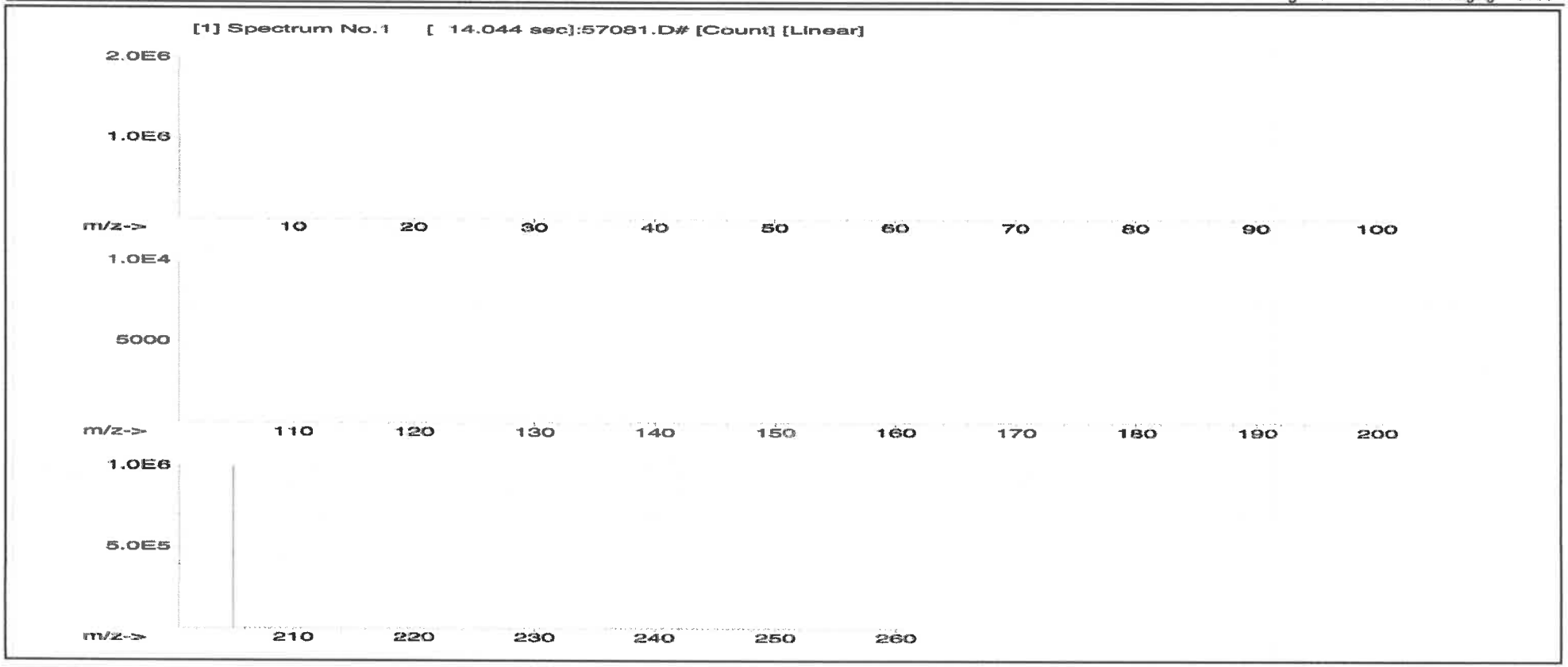
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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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	

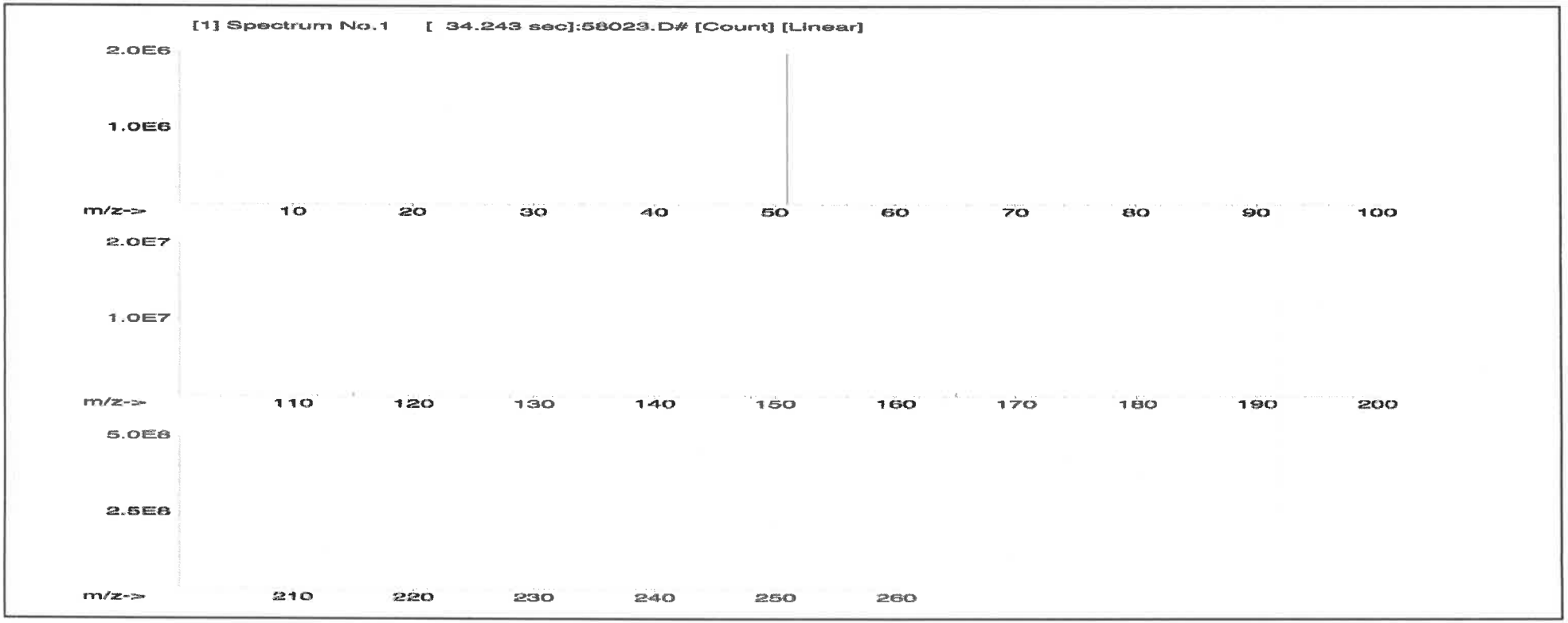
Aleah O'Brady

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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SHIPPING DOCUMENTS

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CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: P5375

COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: Tetra Tech	PROJECT NAME: NWIRP Bethpage	BILL TO: SEE CONTRACT PO#
ADDRESS: 4433 Corporation Ln, Suite 300	PROJECT #: 112G08005-WE13 LOCATION: GW IDW	ADDRESS:
CITY: Virginia Beach STATE: VA ZIP: 23462	PROJECT MANAGER: Dave Brayack	CITY: STATE: ZIP:
ATTENTION: Ernie Wu	E-MAIL: david.brayack@tetratech.com	ATTENTION: PHONE:
PHONE: 757-466-4901 FAX: 757-461-4148	PHONE: 757-466-4909 FAX: 757-461-4148	

DATA TURNAROUND INFORMATION

FAX:_____24hr_____ DAYS*
HARD COPY:_____24hr_____DAYS*
EDD_____24hr_____DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ EDD Format_____
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other_____

ANALYSIS

	Total Metals								
	1	2	3	4	5	6	7	8	9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES B	1	2	3	4	5	6	7	8	9	COMMENTS
1.	TT-RW10A-IDWGW-20241219	AQ		X	12/19/24	11:30	1	1										
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	12/19/24 1420	1. 12.20.2024 1450
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.	12-20-2024 1810	

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 2.9°c
MeOH extraction requires an additional 4oz. Jar for percent solid ☒ Ice in Cooler?: Yes
Comments:
24hr TAT - CTO-WE13 Drilling GW IDW Sampling - RW10A

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488