284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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DATA PACKAGE

METALS

PROJECT NAME : NWIRP BETHPAGE 112G08005-WE13

TETRA TECH NUS, INC.

661 Andersen Drive

Suite 200

Pittsburgh, PA - 15220-2745

Phone No: 412-921-7090

ORDER ID : Q1069

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q1069

Project ID : NWIRP Bethpage 112G08005-WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
Q1069-01	RW7B-CARBON-20250109
Q1069-02	RW7B-CARBON-20250109

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 : APPROVED
By Nimisha Pandya, QA/QC Supervisor at 10:32 am, Jan 23, 2025

Date: 1/21/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: NWIRP Bethpage 112G08005-WE13
Project Manager: Ernie Wu
Chemtech Project # Q1069
Test Name: TCLPMetals Group1,TCLP Mercury

A. Number of Samples and Date of Receipt:
2 Solid samples were received on 01/09/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Flash Point, Ignitability, PCB, pH, SVOC-TCL BNA -20, TCLP Extraction, TCLP Mercury, TCLP Metal, TCLP VOA, TCLP ZHE Extraction and TCLPMetals Group1. This data package contains results for TCLPMetals Group1,TCLP Mercury.

C. Analytical Techniques:
The analysis of TCLPMetals Group1 was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate (NP-WS-002MSD) analysis met criteria for all samples except for Cadmium due to matrix interference.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

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

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed

above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____ APPROVED

By Nimisha Pandya, QA/QC Supervisor at 10:32 am, Jan 23, 2025

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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: Q1069 MATRIX: TCLP

METHOD: 6010D,7470A,1311

		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.			
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).

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 10:32 am, Jan 23, 2025

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1069

	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:** 01/21/2025

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LAB CHRONICLE

OrderID:	Q1069	**OrderDate:**	1/10/2025 1:20:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	NWIRP Bethpage 112G08005-WE13
Contact:	Ernie Wu	**Location:**	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1069-02	**RW7B-CARBON-20250109**	**TCLP**			**01/09/25**			**01/09/25**
			TCLP Mercury	7470A		01/14/25	01/14/25	
			TCLPMetals Group1	6010D		01/14/25	01/17/25	

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Hit Summary Sheet
SW-846

SDG No.:	Q1069	**Order ID:**	Q1069
Client:	Tetra Tech NUS, Inc.	**Project ID:**	NWIRP Bethpage 112G08005-WE13

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW7B-CARBON-20250109									
Q1069-02	RW7B-CARBON-20250109	TCLP	Barium	425	J	62.8	125	500	ug/L
Q1069-02	RW7B-CARBON-20250109	TCLP	Mercury	0.94	J	0.81	1.60	2.00	ug/L

SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	01/09/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	01/09/25
Client Sample ID:	RW7B-CARBON-20250109	SDG No.:	Q1069
Lab Sample ID:	Q1069-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	80.0	U	1	34.8	80.0	100	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050
7440-39-3	Barium	425	J	1	62.8	125	500	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050
7440-43-9	Cadmium	7.50	UN	1	0.94	7.50	30.0	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050
7440-47-3	Chromium	25.0	U	1	6.60	25.0	50.0	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050
7439-92-1	Lead	48.0	U	1	35.1	48.0	60.0	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050
7439-97-6	Mercury	0.94	J	1	0.81	1.60	2.00	ug/L	01/14/25 10:15	01/14/25 14:46	SW7470A	
7782-49-2	Selenium	80.0	U	1	58.8	80.0	100	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050
7440-22-4	Silver	25.0	U	1	5.80	25.0	50.0	ug/L	01/14/25 11:30	01/17/25 14:10	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP Mercury				

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.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV55	Mercury	3.69	4.0	92	90 - 110	CV	01/14/2025	14:00	LB134281

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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
CCV32	Mercury	4.99	5.0	100	90 - 110	CV	01/14/2025	14:07	LB134281
CCV33	Mercury	4.91	5.0	98	90 - 110	CV	01/14/2025	14:37	LB134281
CCV34	Mercury	4.69	5.0	94	90 - 110	CV	01/14/2025	15:12	LB134281
CCV35	Mercury	4.56	5.0	91	90 - 110	CV	01/14/2025	15:25	LB134281

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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	Arsenic	1030	1000	103	90 - 110	P	01/17/2025	11:21	LB134334
	Barium	487	520	94	90 - 110	P	01/17/2025	11:21	LB134334
	Cadmium	501	510	98	90 - 110	P	01/17/2025	11:21	LB134334
	Chromium	519	520	100	90 - 110	P	01/17/2025	11:21	LB134334
	Lead	999	1000	100	90 - 110	P	01/17/2025	11:21	LB134334
	Selenium	1030	1000	103	90 - 110	P	01/17/2025	11:21	LB134334
	Silver	250	250	100	90 - 110	P	01/17/2025	11:21	LB134334

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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	Arsenic	22.1	20.0	110	80 - 120	P	01/17/2025	11:26	LB134334
	Barium	84.8	100	85	80 - 120	P	01/17/2025	11:26	LB134334
	Cadmium	5.81	6.0	97	80 - 120	P	01/17/2025	11:26	LB134334
	Chromium	9.66	10.0	97	80 - 120	P	01/17/2025	11:26	LB134334
	Lead	13.0	12.0	108	80 - 120	P	01/17/2025	11:26	LB134334
	Selenium	21.1	20.0	105	80 - 120	P	01/17/2025	11:26	LB134334
	Silver	10.3	10.0	103	80 - 120	P	01/17/2025	11:26	LB134334

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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	Arsenic	4930	5000	99	90 - 110	P	01/17/2025	11:56	LB134334
	Barium	9940	10000	99	90 - 110	P	01/17/2025	11:56	LB134334
	Cadmium	2460	2500	98	90 - 110	P	01/17/2025	11:56	LB134334
	Chromium	1010	1000	101	90 - 110	P	01/17/2025	11:56	LB134334
	Lead	4950	5000	99	90 - 110	P	01/17/2025	11:56	LB134334
	Selenium	4900	5000	98	90 - 110	P	01/17/2025	11:56	LB134334
	Silver	1270	1250	101	90 - 110	P	01/17/2025	11:56	LB134334
CCV02	Arsenic	4980	5000	100	90 - 110	P	01/17/2025	12:47	LB134334
	Barium	9490	10000	95	90 - 110	P	01/17/2025	12:47	LB134334
	Cadmium	2430	2500	97	90 - 110	P	01/17/2025	12:47	LB134334
	Chromium	987	1000	99	90 - 110	P	01/17/2025	12:47	LB134334
	Lead	4860	5000	97	90 - 110	P	01/17/2025	12:47	LB134334
	Selenium	5030	5000	100	90 - 110	P	01/17/2025	12:47	LB134334
	Silver	1230	1250	99	90 - 110	P	01/17/2025	12:47	LB134334
CCV03	Arsenic	4730	5000	95	90 - 110	P	01/17/2025	13:36	LB134334
	Barium	9550	10000	96	90 - 110	P	01/17/2025	13:36	LB134334
	Cadmium	2340	2500	94	90 - 110	P	01/17/2025	13:36	LB134334
	Chromium	952	1000	95	90 - 110	P	01/17/2025	13:36	LB134334
	Lead	4700	5000	94	90 - 110	P	01/17/2025	13:36	LB134334
	Selenium	4760	5000	95	90 - 110	P	01/17/2025	13:36	LB134334
	Silver	1210	1250	96	90 - 110	P	01/17/2025	13:36	LB134334
CCV04	Arsenic	4910	5000	98	90 - 110	P	01/17/2025	14:27	LB134334
	Barium	9450	10000	94	90 - 110	P	01/17/2025	14:27	LB134334
	Cadmium	2420	2500	97	90 - 110	P	01/17/2025	14:27	LB134334
	Chromium	992	1000	99	90 - 110	P	01/17/2025	14:27	LB134334
	Lead	4840	5000	97	90 - 110	P	01/17/2025	14:27	LB134334
	Selenium	4940	5000	99	90 - 110	P	01/17/2025	14:27	LB134334
	Silver	1240	1250	99	90 - 110	P	01/17/2025	14:27	LB134334
CCV05	Arsenic	4770	5000	95	90 - 110	P	01/17/2025	15:34	LB134334
	Barium	9420	10000	94	90 - 110	P	01/17/2025	15:34	LB134334
	Cadmium	2370	2500	95	90 - 110	P	01/17/2025	15:34	LB134334
	Chromium	966	1000	97	90 - 110	P	01/17/2025	15:34	LB134334
	Lead	4750	5000	95	90 - 110	P	01/17/2025	15:34	LB134334
	Selenium	4780	5000	96	90 - 110	P	01/17/2025	15:34	LB134334

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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	Silver	1210	1250	97	90 - 110	P	01/17/2025	15:34	LB134334
CCV06	Arsenic	4820	5000	96	90 - 110	P	01/17/2025	16:16	LB134334
	Barium	9630	10000	96	90 - 110	P	01/17/2025	16:16	LB134334
	Cadmium	2390	2500	96	90 - 110	P	01/17/2025	16:16	LB134334
	Chromium	968	1000	97	90 - 110	P	01/17/2025	16:16	LB134334
	Lead	4780	5000	96	90 - 110	P	01/17/2025	16:16	LB134334
	Selenium	4850	5000	97	90 - 110	P	01/17/2025	16:16	LB134334
	Silver	1220	1250	98	90 - 110	P	01/17/2025	16:16	LB134334
CCV07	Arsenic	4830	5000	96	90 - 110	P	01/17/2025	17:11	LB134334
	Barium	9180	10000	92	90 - 110	P	01/17/2025	17:11	LB134334
	Cadmium	2390	2500	96	90 - 110	P	01/17/2025	17:11	LB134334
	Chromium	970	1000	97	90 - 110	P	01/17/2025	17:11	LB134334
	Lead	4770	5000	95	90 - 110	P	01/17/2025	17:11	LB134334
	Selenium	4860	5000	97	90 - 110	P	01/17/2025	17:11	LB134334
	Silver	1210	1250	97	90 - 110	P	01/17/2025	17:11	LB134334
CCV08	Arsenic	4910	5000	98	90 - 110	P	01/17/2025	17:52	LB134334
	Barium	9420	10000	94	90 - 110	P	01/17/2025	17:52	LB134334
	Cadmium	2410	2500	97	90 - 110	P	01/17/2025	17:52	LB134334
	Chromium	988	1000	99	90 - 110	P	01/17/2025	17:52	LB134334
	Lead	4820	5000	96	90 - 110	P	01/17/2025	17:52	LB134334
	Selenium	4950	5000	99	90 - 110	P	01/17/2025	17:52	LB134334
	Silver	1230	1250	98	90 - 110	P	01/17/2025	17:52	LB134334

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.21	0.2	105	40 - 160	CV	01/14/2025	14:14	LB134281
CRI01	Arsenic	19.2	20.0	96	40 - 160	P	01/17/2025	11:35	LB134334
	Barium	85.3	100	85	40 - 160	P	01/17/2025	11:35	LB134334
	Cadmium	5.82	6.0	97	40 - 160	P	01/17/2025	11:35	LB134334
	Chromium	9.43	10.0	94	40 - 160	P	01/17/2025	11:35	LB134334
	Lead	12.4	12.0	104	40 - 160	P	01/17/2025	11:35	LB134334
	Selenium	20.7	20.0	104	40 - 160	P	01/17/2025	11:35	LB134334
	Silver	10.00	10.0	100	40 - 160	P	01/17/2025	11:35	LB134334

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB55	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	01/14/2025	14:02	LB134281

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB32	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	01/14/2025	14:09	LB134281
CCB33	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	01/14/2025	14:39	LB134281
CCB34	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	01/14/2025	15:14	LB134281
CCB35	Mercury	0.20	+/-0.20	U	0.16	0.20	CV	01/14/2025	15:28	LB134281

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	11:30	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	11:30	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	11:30	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	11:30	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	11:30	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	11:30	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	11:30	LB134334

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	12:00	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	12:00	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	12:00	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	12:00	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	12:00	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	12:00	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	12:00	LB134334
CCB02	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	12:51	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	12:51	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	12:51	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	12:51	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	12:51	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	12:51	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	12:51	LB134334
CCB03	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	13:41	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	13:41	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	13:41	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	13:41	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	13:41	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	13:41	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	13:41	LB134334
CCB04	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	14:31	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	14:31	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	14:31	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	14:31	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	14:31	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	14:31	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	14:31	LB134334
CCB05	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	15:38	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	15:38	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	15:38	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	15:38	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	15:38	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	15:38	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	15:38	LB134334
CCB06	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	16:20	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	16:20	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	16:20	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	16:20	LB134334

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	16:20	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	16:20	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	16:20	LB134334
CCB07	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	17:16	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	17:16	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	17:16	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	17:16	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	17:16	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	17:16	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	17:16	LB134334
CCB08	Arsenic	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	17:56	LB134334
	Barium	100	+/-100	U	25.0	100	P	01/17/2025	17:56	LB134334
	Cadmium	6.00	+/-6.00	U	1.50	6.00	P	01/17/2025	17:56	LB134334
	Chromium	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	17:56	LB134334
	Lead	12.0	+/-12.0	U	9.60	12.0	P	01/17/2025	17:56	LB134334
	Selenium	20.0	+/-20.0	U	16.0	20.0	P	01/17/2025	17:56	LB134334
	Silver	10.0	+/-10.0	U	5.00	10.0	P	01/17/2025	17:56	LB134334

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Metals
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PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166026TB		**WATER**		**Batch Number:**		**PB166051**		**Prep Date:**	**01/14/2025**	
	Mercury	0.85	<2.00	J	1.60	2.00	CV	01/14/2025	15:09	LB134281

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166051BL		**WATER**		**Batch Number:**		**PB166051**		**Prep Date:**	**01/14/2025**	
	Mercury	0.20	<0.20	U	0.16	0.20	CV	01/14/2025	14:35	LB134281

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Metals
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PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166026TB		**WATER**		**Batch Number:**		**PB166049**		**Prep Date:**	**01/14/2025**	
	Arsenic	100	<100	U	80.0	100	P	01/17/2025	12:42	LB134334
	Barium	500	<500	U	125	500	P	01/17/2025	12:42	LB134334
	Cadmium	30.0	<30.0	U	7.50	30.0	P	01/17/2025	12:42	LB134334
	Chromium	50.0	<50.0	U	25.0	50.0	P	01/17/2025	12:42	LB134334
	Lead	60.0	<60.0	U	48.0	60.0	P	01/17/2025	12:42	LB134334
	Selenium	100	<100	U	80.0	100	P	01/17/2025	12:42	LB134334
	Silver	50.0	<50.0	U	25.0	50.0	P	01/17/2025	12:42	LB134334

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166049BL		**WATER**		**Batch Number:**		**PB166049**		**Prep Date:**	**01/14/2025**	
	Arsenic	100	<100	U	80.0	100	P	01/17/2025	12:34	LB134334
	Barium	500	<500	U	125	500	P	01/17/2025	12:34	LB134334
	Cadmium	30.0	<30.0	U	7.50	30.0	P	01/17/2025	12:34	LB134334
	Chromium	50.0	<50.0	U	25.0	50.0	P	01/17/2025	12:34	LB134334
	Lead	60.0	<60.0	U	48.0	60.0	P	01/17/2025	12:34	LB134334
	Selenium	100	<100	U	80.0	100	P	01/17/2025	12:34	LB134334
	Silver	50.0	<50.0	U	25.0	50.0	P	01/17/2025	12:34	LB134334

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Metals
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INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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	Arsenic	1.85			-20	20	01/17/2025	11:39	LB134334
	Barium	-1.17	6.0	20	-94	106	01/17/2025	11:39	LB134334
	Cadmium	-1.59	1.0	159	-5	7	01/17/2025	11:39	LB134334
	Chromium	55.0	52.0	106	42	62	01/17/2025	11:39	LB134334
	Lead	9.67			-12	12	01/17/2025	11:39	LB134334
	Selenium	-13.6			-20	20	01/17/2025	11:39	LB134334
	Silver	-2.42			-10	10	01/17/2025	11:39	LB134334
ICSAB01	Arsenic	110	104	106	88.4	120	01/17/2025	11:43	LB134334
	Barium	455	537	85	437	637	01/17/2025	11:43	LB134334
	Cadmium	971	972	100	826	1120	01/17/2025	11:43	LB134334
	Chromium	560	542	103	460	624	01/17/2025	11:43	LB134334
	Lead	57.5	49.0	117	37	61	01/17/2025	11:43	LB134334
	Selenium	31.7	46.0	69	26	66	01/17/2025	11:43	LB134334
	Silver	216	201	108	170	232	01/17/2025	11:43	LB134334

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q1069

contract: TETR06 **lab code:** CHEM **case no.:** Q1069 **sas no.:** Q1069

matrix: Water **sample id:** Q1036-02 **client id:** NP-WS-002MS

Percent Solids for Sample: NA **Spiked ID:** Q1036-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	87 - 113	3820		100	U	4000	96		P
Barium	ug/L	88 - 113	979		79.8	J	1000	90		P
Cadmium	ug/L	88 - 113	903		30.0	U	1000	90		P
Chromium	ug/L	90 - 113	1960		6.61	J	2000	98		P
Lead	ug/L	86 - 113	4530		60.0	U	5000	91		P
Selenium	ug/L	83 - 114	9000		100	U	10000	90		P
Silver	ug/L	84 - 115	353		50.0	U	380	93		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q1069

contract: TETR06 **lab code:** CHEM **case no.:** Q1069 **sas no.:** Q1069

matrix: Water **sample id:** Q1036-02 **client id:** NP-WS-002MSD

Percent Solids for Sample: NA **Spiked ID:** Q1036-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	87 - 113	3720		100	U	4000	93		P
Barium	ug/L	88 - 113	964		79.8	J	1000	88		P
Cadmium	ug/L	88 - 113	879		30.0	U	1000	88	N	P
Chromium	ug/L	90 - 113	1950		6.61	J	2000	97		P
Lead	ug/L	86 - 113	4420		60.0	U	5000	88		P
Selenium	ug/L	83 - 114	8780		100	U	10000	88		P
Silver	ug/L	84 - 115	350		50.0	U	380	92		P

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metals
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MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q1069

contract: TETR06 **lab code:** CHEM **case no.:** Q1069 **sas no.:** Q1069

matrix: Water **sample id:** Q1076-02 **client id:** ARS20-0006MS

Percent Solids for Sample: NA **Spiked ID:** Q1076-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	40.3		2.00	U	40.0	101		CV

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q1069

contract: TETR06 **lab code:** CHEM **case no.:** Q1069 **sas no.:** Q1069

matrix: Water **sample id:** Q1076-02 **client id:** ARS20-0006MSD

Percent Solids for Sample: NA **Spiked ID:** Q1076-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	82 - 119	40.2		2.00	U	40.0	100		CV

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Metals
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POST DIGEST SPIKE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Matrix: Water **Level:** LOW **Client ID:** NP-WS-002A

Sample ID: Q1036-02 **Spiked ID:** Q1036-02A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	88 - 113	903		30.0	U	1000	90		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Matrix: Water **Sample ID:** Q1036-02 **Client ID:** NP-WS-002DUP

Percent Solids for Sample: NA **Duplicate ID** Q1036-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	79.8	J	82.6	J	3		P
Cadmium	ug/L	20	30.0	U	30.0	U			P
Chromium	ug/L	20	6.61	J	17.6	J	91		P
Lead	ug/L	20	60.0	U	60.0	U			P
Selenium	ug/L	20	100	U	100	U			P
Silver	ug/L	20	50.0	U	50.0	U			P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Matrix: Water **Sample ID:** Q1036-02MS **Client ID:** NP-WS-002MSD

Percent Solids for Sample: NA **Duplicate ID** Q1036-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	3820		3720		3		P
Barium	ug/L	20	979		964		2		P
Cadmium	ug/L	20	903		879		3		P
Chromium	ug/L	20	1960		1950		1		P
Lead	ug/L	20	4530		4420		2		P
Selenium	ug/L	20	9000		8780		2		P
Silver	ug/L	20	353		350		1		P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Matrix: Water **Sample ID:** Q1076-02 **Client ID:** ARS20-0006DUP

Percent Solids for Sample: NA **Duplicate ID** Q1076-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	2.00	U	2.00	U			CV

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Matrix: Water **Sample ID:** Q1076-02MS **Client ID:** ARS20-0006MSD

Percent Solids for Sample: NA **Duplicate ID** Q1076-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	40.3		40.2		0		CV

"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.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166049BS							
Arsenic	ug/L	4000	3860		96	87 - 113	P
Barium	ug/L	1000	891		89	88 - 113	P
Cadmium	ug/L	1000	935		94	88 - 113	P
Chromium	ug/L	2000	2000		100	90 - 113	P
Lead	ug/L	5000	4740		95	86 - 113	P
Selenium	ug/L	10000	9430		94	83 - 114	P
Silver	ug/L	380	375		99	84 - 115	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166051BS							
Mercury	ug/L	4.0	3.65		91	82 - 119	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

NP-WS-002L

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

Lab Code: CHEM **Lb No.:** lb134334 **Lab Sample ID :** Q1036-02L **SDG No.:** Q1069

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
Arsenic	100	U	500	U			P
Barium	79.8	J	2500	U	100.0		P
Cadmium	30.0	U	150	U			P
Chromium	6.61	J	250	U	100.0		P
Lead	60.0	U	300	U			P
Selenium	100	U	500	U			P
Silver	50.0	U	250	U			P

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

ARS20-0006L

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

Lab Code: CHEM **Lb No.:** lb134281 **Lab Sample ID :** Q1076-02L **SDG No.:** Q1069

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	2.00	U	10.0	U			CV

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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
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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

Contract: TETR06 **Lab Code:** CHEM **Case No.:** Q1069 **SAS No.:** Q1069

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
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
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	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

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

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

Case No.: Q1069 **SAS No.:** Q1069

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166049**						
PB166026TB	PB166026TB	MB	WATER	01/14/2025	5.0	25.0	
PB166049BL	PB166049BL	MB	WATER	01/14/2025	5.0	25.0	
PB166049BS	PB166049BS	LCS	WATER	01/14/2025	5.0	25.0	
Q1036-02DUP	NP-WS-002DUP	DUP	WATER	01/14/2025	5.0	25.0	
Q1036-02MS	NP-WS-002MS	MS	WATER	01/14/2025	5.0	25.0	
Q1036-02MSD	NP-WS-002MSD	MSD	WATER	01/14/2025	5.0	25.0	
Q1069-02	RW7B-CARBON-20250109	SAM	WATER	01/14/2025	5.0	25.0	

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q1069

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

Case No.: Q1069 **SAS No.:** Q1069

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166051**						
PB166026TB	PB166026TB	MB	WATER	01/14/2025	3.0	30.0	
PB166051BL	PB166051BL	MB	WATER	01/14/2025	30.0	30.0	
PB166051BS	PB166051BS	LCS	WATER	01/14/2025	30.0	30.0	
Q1069-02	RW7B-CARBON-20250109	SAM	WATER	01/14/2025	3.0	30.0	
Q1076-02DUP	ARS20-0006DUP	DUP	WATER	01/14/2025	3.0	30.0	
Q1076-02MS	ARS20-0006MS	MS	WATER	01/14/2025	3.0	30.0	
Q1076-02MSD	ARS20-0006MSD	MSD	WATER	01/14/2025	3.0	30.0	

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metals
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ANALYSIS RUN LOG

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

Lab code: CHEM **Case no.:** Q1069 **Sas no.:** Q1069 **Sdg no.:** Q1069

Instrument id number: **Method:** **Run number:** LB134281

Start date: 01/14/2025 **End date:** 01/14/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1338	HG
S0.2	S0.2	1	1340	HG
S2.5	S2.5	1	1342	HG
S5	S5	1	1345	HG
S7.5	S7.5	1	1352	HG
S10	S10	1	1357	HG
ICV55	ICV55	1	1400	HG
ICB55	ICB55	1	1402	HG
CCV32	CCV32	1	1407	HG
CCB32	CCB32	1	1409	HG
CRA	CRA	1	1414	HG
PB166051BL	PB166051BL	1	1435	HG
CCV33	CCV33	1	1437	HG
CCB33	CCB33	1	1439	HG
PB166051BS	PB166051BS	1	1442	HG
Q1069-02	RW7B-CARBON-20250109	1	1446	HG
Q1076-02DUP	ARS20-0006DUP	1	1500	HG
Q1076-02MS	ARS20-0006MS	1	1502	HG
Q1076-02MSD	ARS20-0006MSD	1	1505	HG
PB166026TB	PB166026TB	1	1509	HG
CCV34	CCV34	1	1512	HG
CCB34	CCB34	1	1514	HG
Q1076-02L	ARS20-0006L	5	1521	HG
CCV35	CCV35	1	1525	HG
CCB35	CCB35	1	1528	HG

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metals
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ANALYSIS RUN LOG

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

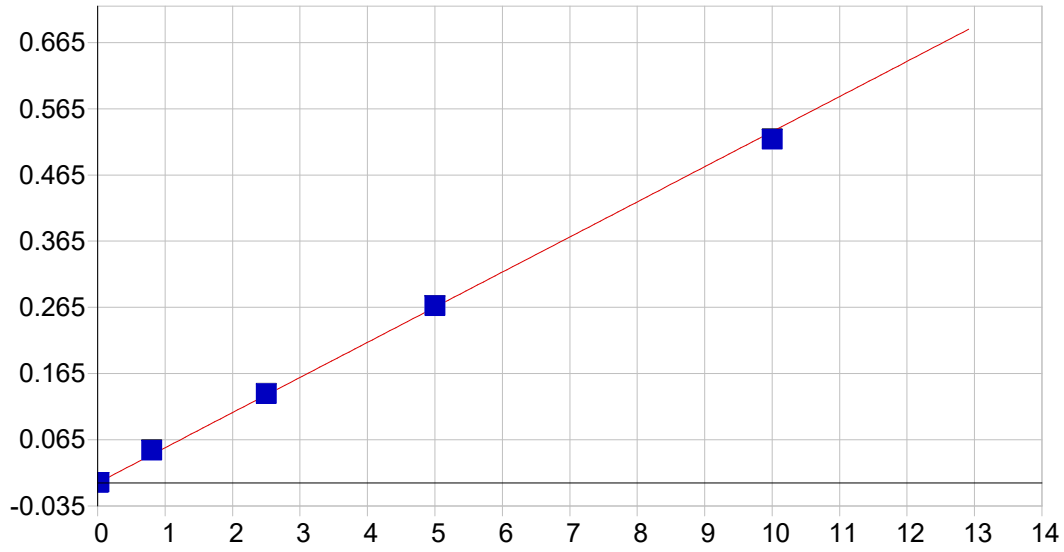
Lab code: CHEM **Case no.:** Q1069 **Sas no.:** Q1069 **Sdg no.:** Q1069

Instrument id number: **Method:** **Run number:** LB134334

Start date: 01/17/2025 **End date:** 01/17/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1051	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1055	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1059	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1104	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1108	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1112	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1121	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1126	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1130	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1135	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1139	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1143	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1156	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1200	Ag,As,Ba,Cd,Cr,Pb,Se
PB166049BL	PB166049BL	1	1234	Ag,As,Ba,Cd,Cr,Pb,Se
PB166049BS	PB166049BS	1	1238	Ag,As,Ba,Cd,Cr,Pb,Se
PB166026TB	PB166026TB	1	1242	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1247	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1251	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1336	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1341	Ag,As,Ba,Cd,Cr,Pb,Se
Q1036-02DUP	NP-WS-002DUP	1	1349	Ag,As,Ba,Cd,Cr,Pb,Se
Q1036-02L	NP-WS-002L	5	1353	Ag,As,Ba,Cd,Cr,Pb,Se
Q1036-02MS	NP-WS-002MS	1	1358	Ag,As,Ba,Cd,Cr,Pb,Se
Q1036-02MSD	NP-WS-002MSD	1	1402	Ag,As,Ba,Cd,Cr,Pb,Se
Q1036-02A	NP-WS-002A	1	1406	Cd
Q1069-02	RW7B-CARBON-20250109	1	1410	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1427	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1431	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1534	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1538	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1616	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1620	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	1711	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	1716	Ag,As,Ba,Cd,Cr,Pb,Se
CCV08	CCV08	1	1752	Ag,As,Ba,Cd,Cr,Pb,Se
CCB08	CCB08	1	1756	Ag,As,Ba,Cd,Cr,Pb,Se

METAL
RAW DATA

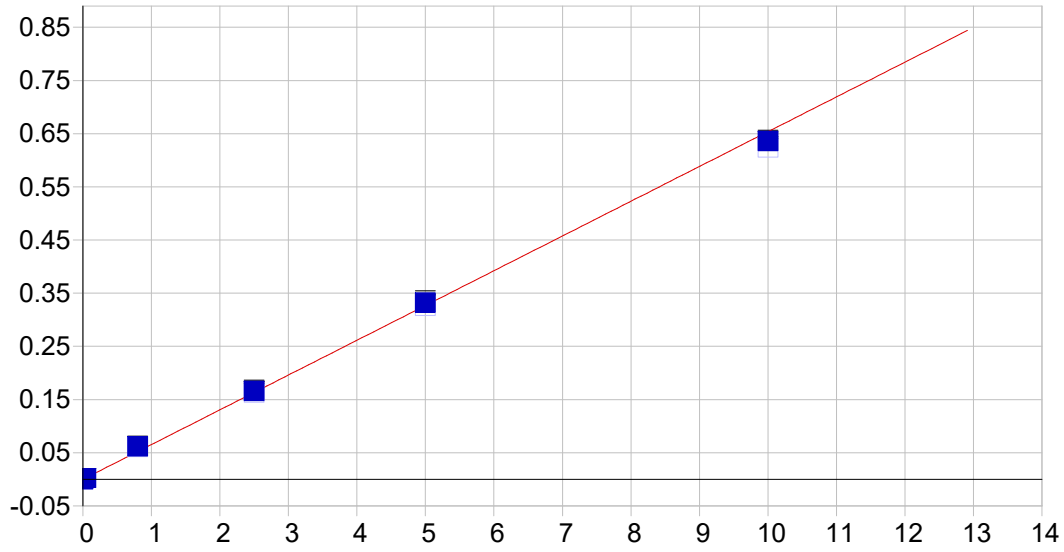


As 189.042 {479}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000050	Re-Slope:	1.000000
A1 (Gain):	0.053051	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999260	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.002757		
Predicted MQL:	0.009191		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00005	.000	1
S1	.02000	.01961	-.000	-1.96	.00098	.000	1
S3	2.5000	2.5431	.043	1.72	.13472	.001	1
S4	5.0000	5.0406	.041	.812	.26707	.000	1
S5	10.000	9.7858	-.214	-2.14	.51853	.000	1
S2	.80000	.93088	.131	16.4	.04929	.000	1

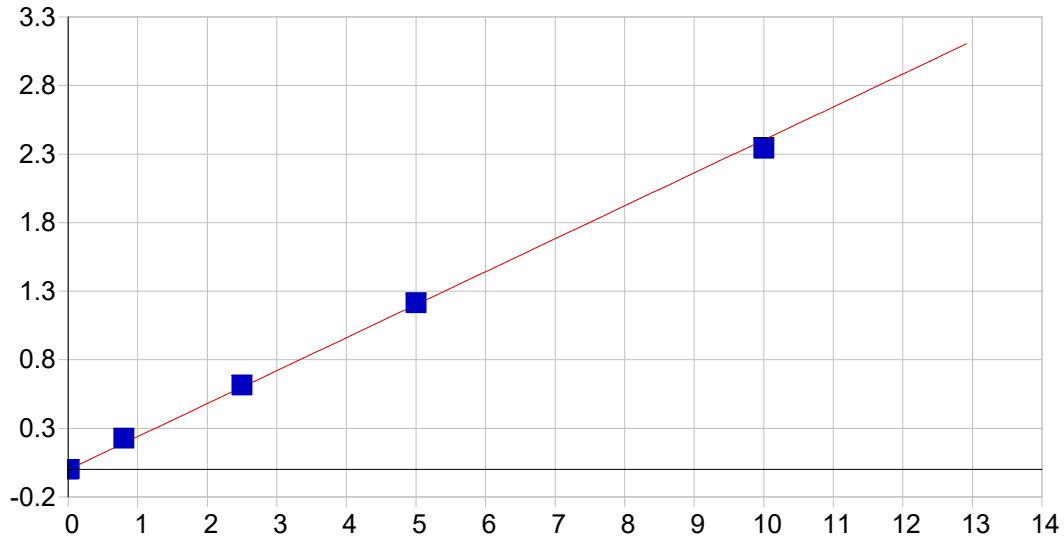


Tl 190.856 {477}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000065	Re-Slope:	1.000000
A1 (Gain):	0.065382	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998983	Status:	OK.
Std Error of Est:	0.000096		
Predicted MDL:	0.002085		
Predicted MQL:	0.006949		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00007	.000	1
S1	.04000	.03897	-.001	-2.58	.00232	.000	1
S3	2.5000	2.5432	.043	1.73	.16320	.002	1
S4	5.0000	5.0777	.078	1.55	.32590	.004	1
S5	10.000	9.7334	-.267	-2.67	.62428	.002	1
S2	.80000	.94670	.147	18.3	.06087	.001	1

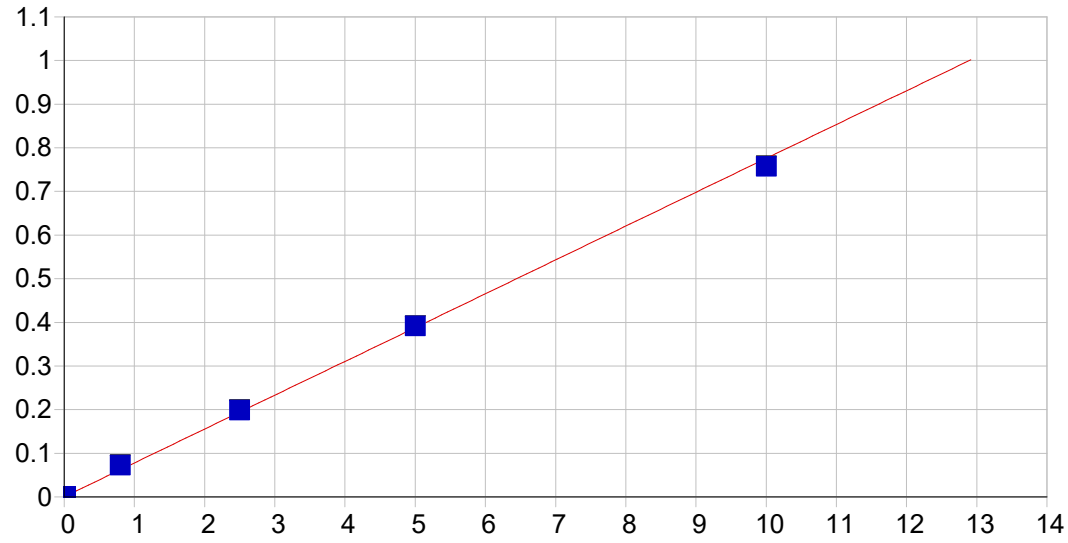


Pb 220.353 {453}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000454	Re-Slope:	1.000000
A1 (Gain):	0.240360	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999048	Status:	OK.
Std Error of Est:	0.000190		
Predicted MDL:	0.001243		
Predicted MQL:	0.004144		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00046	.000	1
S1	.01200	.01247	.000	3.93	.00249	.000	1
S3	2.5000	2.5569	.057	2.27	.61345	.001	1
S4	5.0000	5.0537	.054	1.07	1.2129	.001	1
S5	10.000	9.7437	-.256	-2.56	2.3389	.006	1
S2	.80000	.94525	.145	18.2	.22654	.000	1

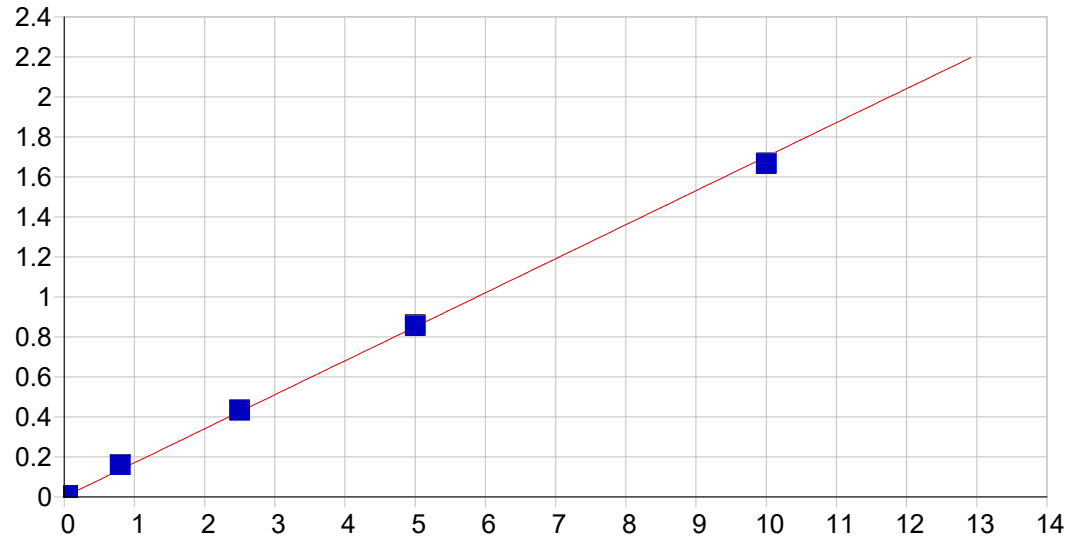


Se 196.090 {472}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000343	Re-Slope:	1.000000
A1 (Gain):	0.077538	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999168	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.002577		
Predicted MQL:	0.008591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00034	.000	1
S1	.02000	.02060	.001	3.00	.00194	.000	1
S3	2.5000	2.5559	.056	2.24	.19847	.001	1
S4	5.0000	5.0455	.045	.909	.39145	.001	1
S5	10.000	9.7620	-.238	-2.38	.75706	.001	1
S2	.80000	.93607	.136	17.0	.07291	.000	1

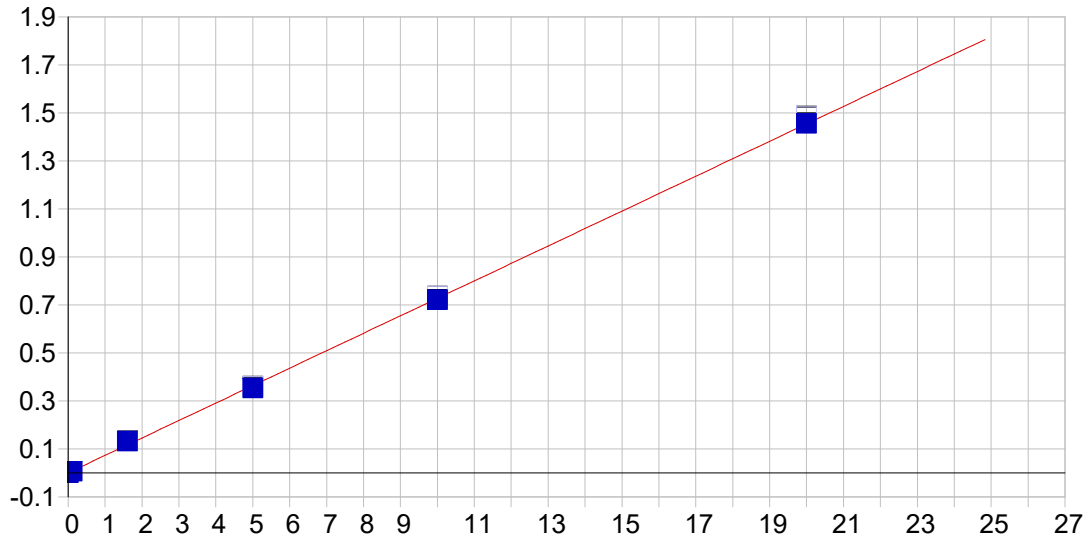


Sb 206.833 {463}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000348	Re-Slope:	1.000000
A1 (Gain):	0.170076	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999227	Status:	OK.
Std Error of Est:	0.000249		
Predicted MDL:	0.001478		
Predicted MQL:	0.004925		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00035	.000	1
S1	.05000	.04936	-.001	-1.29	.00876	.000	1
S3	2.5000	2.5370	.037	1.48	.43299	.002	1
S4	5.0000	5.0303	.030	.607	.85820	.002	1
S5	10.000	9.7957	-.204	-2.04	1.6710	.000	1
S2	.80000	.93757	.138	17.2	.16017	.000	1

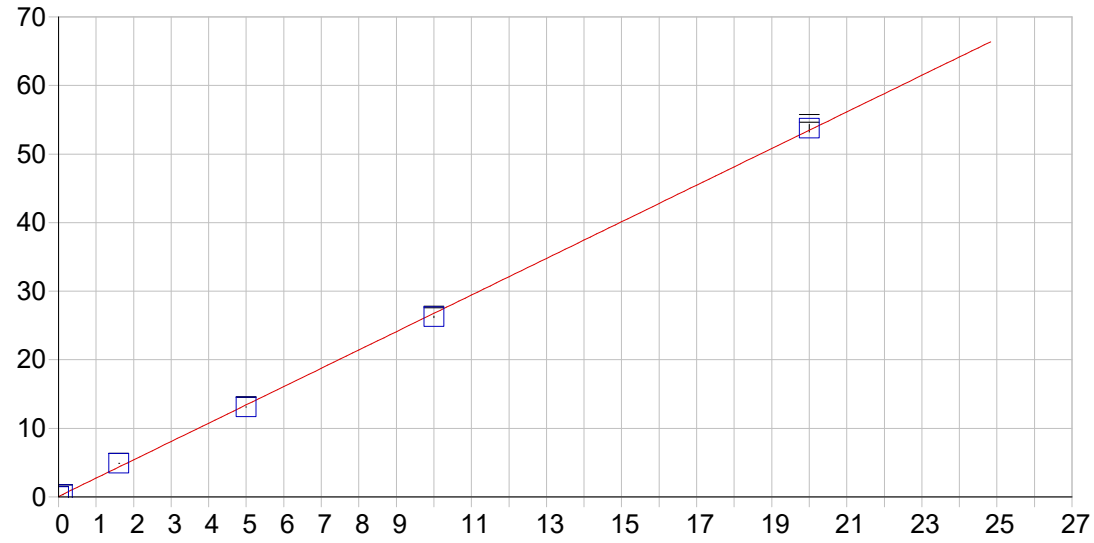


Al 396.152 { 85}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000268	Re-Slope:	1.000000
A1 (Gain):	0.072705	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999597	Status:	OK.
Std Error of Est:	0.000156		
Predicted MDL:	0.008973		
Predicted MQL:	0.029909		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00027	.000	1
S1	.10000	.09611	-.004	-3.89	.00782	.000	1
S3	5.0000	4.8548	-.145	-2.90	.36029	.001	1
S4	10.000	9.9216	-.078	-.784	.73573	.000	1
S5	20.000	20.025	.025	.123	1.4844	.002	1
S2	1.6000	1.8031	.203	12.7	.13362	.001	1

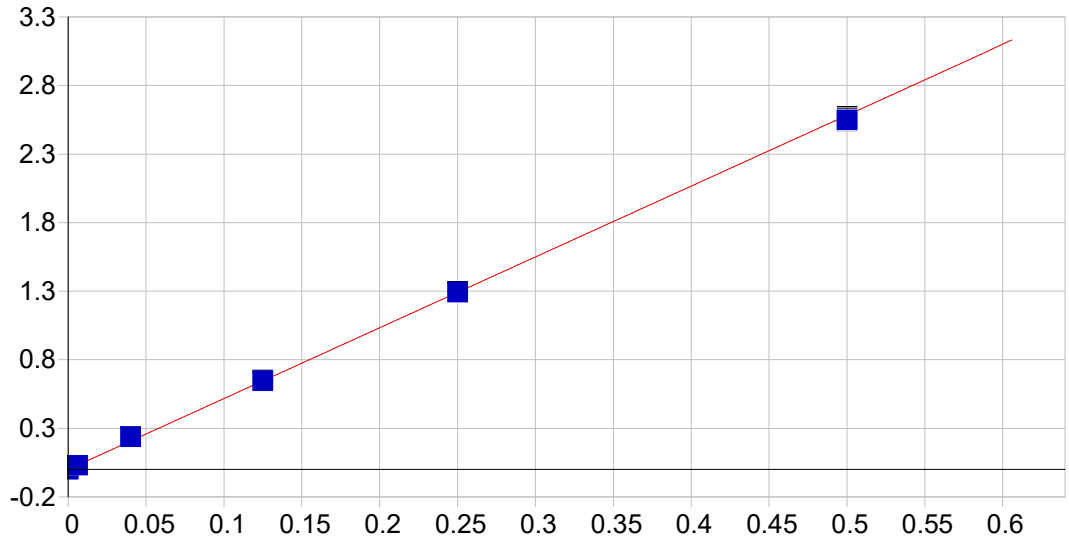


Ba 493.409 { 68}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.067053	Re-Slope:	1.000000
A1 (Gain):	2.670385	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999531	Status:	OK.
Std Error of Est:	0.006064		
Predicted MDL:	0.000785		
Predicted MQL:	0.002617		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.06705	.001	1
S1	.10000	.09107	-.009	-8.93	.31023	.003	1
S3	5.0000	4.8867	-.113	-2.27	13.117	.041	1
S4	10.000	9.8081	-.192	-1.92	26.258	.131	1
S5	20.000	20.107	.107	.535	53.761	.551	1
S2	1.6000	1.8071	.207	12.9	4.8926	.010	1

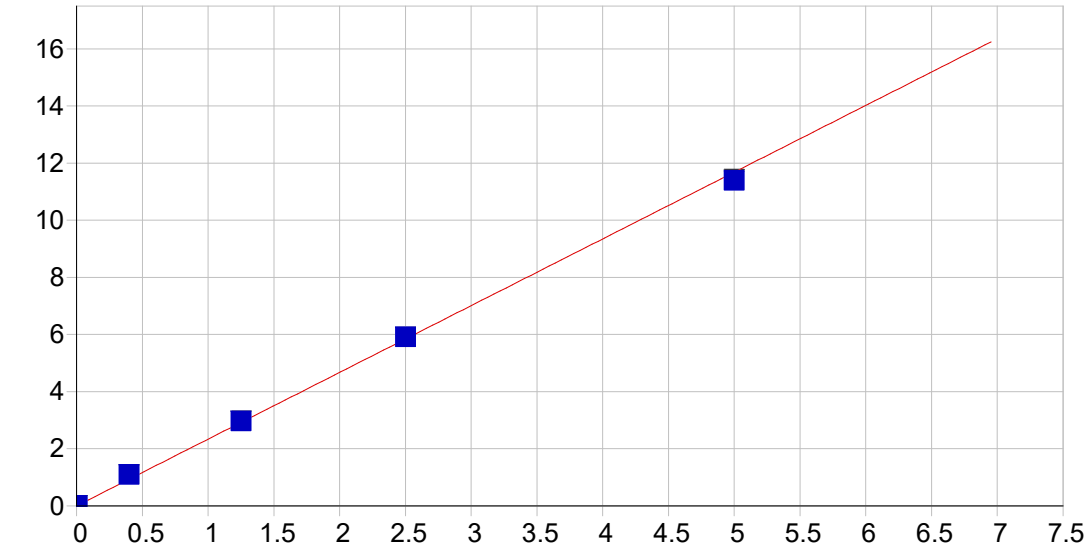


Be 234.861 {144}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000009	Re-Slope:	1.000000
A1 (Gain):	5.167041	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999436	Status:	OK.
Std Error of Est:	0.000497		
Predicted MDL:	0.000058		
Predicted MQL:	0.000193		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.00600	.00589	-.000	-1.87	.03018	.000	1
S3	.12500	.12536	.000	.289	.64485	.003	1
S4	.25000	.25048	.000	.192	1.2884	.003	1
S5	.50000	.49316	-.007	-1.37	2.5366	.026	1
S2	.04000	.04611	.006	15.3	.23732	.001	1

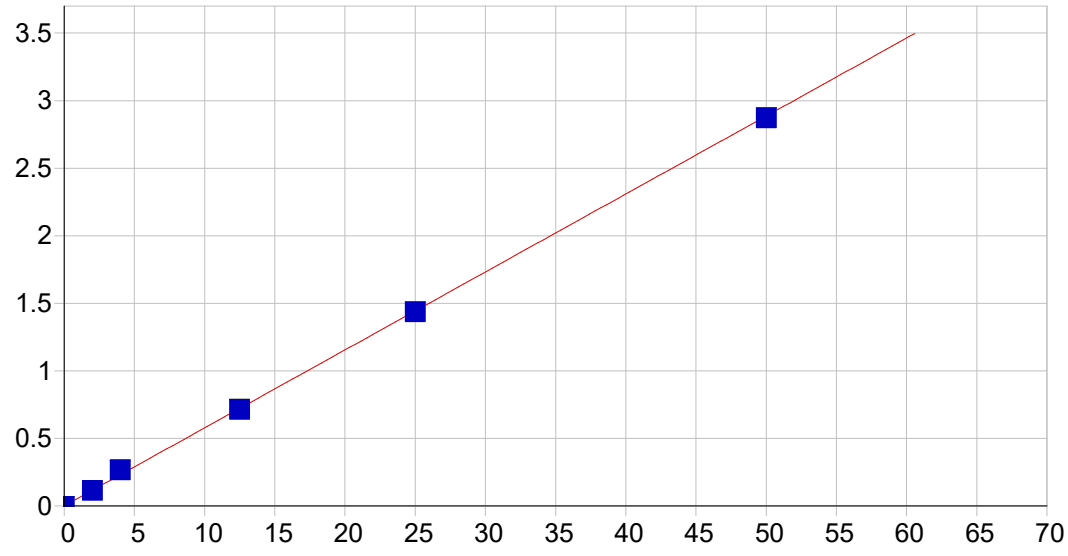


Cd 226.502 {449}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000250	Re-Slope:	1.000000
A1 (Gain):	2.337032	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999170	Status:	OK.
Std Error of Est:	0.000865		
Predicted MDL:	0.000097		
Predicted MQL:	0.000324		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00025	.000	1
S1	.00600	.00589	-.000	-1.81	.01408	.000	1
S3	1.2500	1.2724	.022	1.79	2.9763	.005	1
S4	2.5000	2.5325	.033	1.30	5.9236	.003	1
S5	5.0000	4.8776	-.122	-2.45	11.409	.027	1
S2	.40000	.46760	.068	16.9	1.0938	.003	1

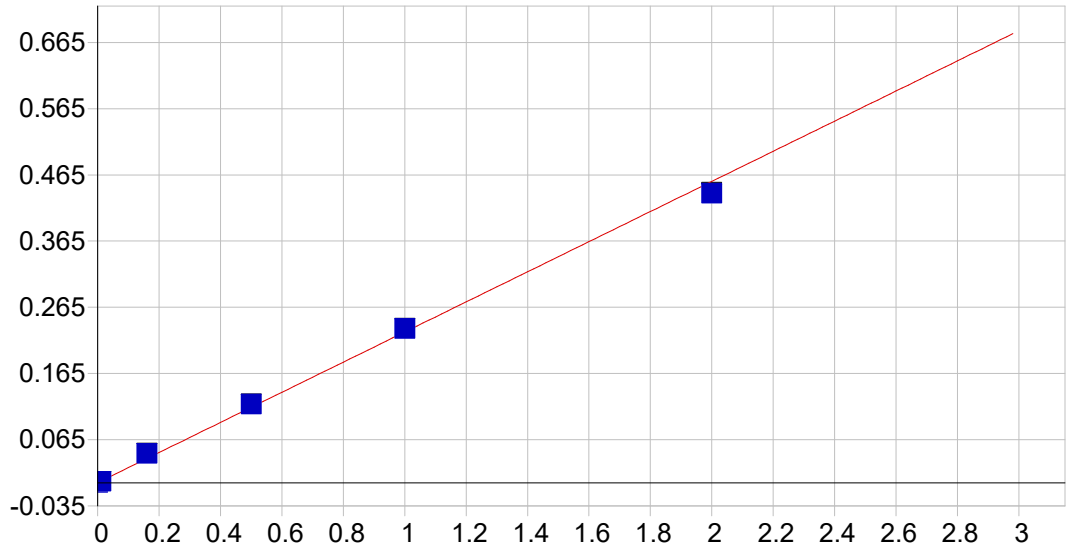


Ca 373.690 { 90}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000541	Re-Slope:	1.000000
A1 (Gain):	0.057708	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999504	Status:	OK.
Std Error of Est:	0.000962		
Predicted MDL:	0.010902		
Predicted MQL:	0.036340		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00019	-.000	.000	.00053	.000	1
S2	4.0000	4.5910	.591	14.8	.26548	.001	1
S3	12.500	12.359	-.141	-1.13	.71375	.001	1
S4	25.000	24.852	-.148	-.592	1.4347	.004	1
S5	50.000	49.758	-.242	-.485	2.8720	.005	1
S1	2.0000	1.9405	-.060	-2.98	.11252	.000	1

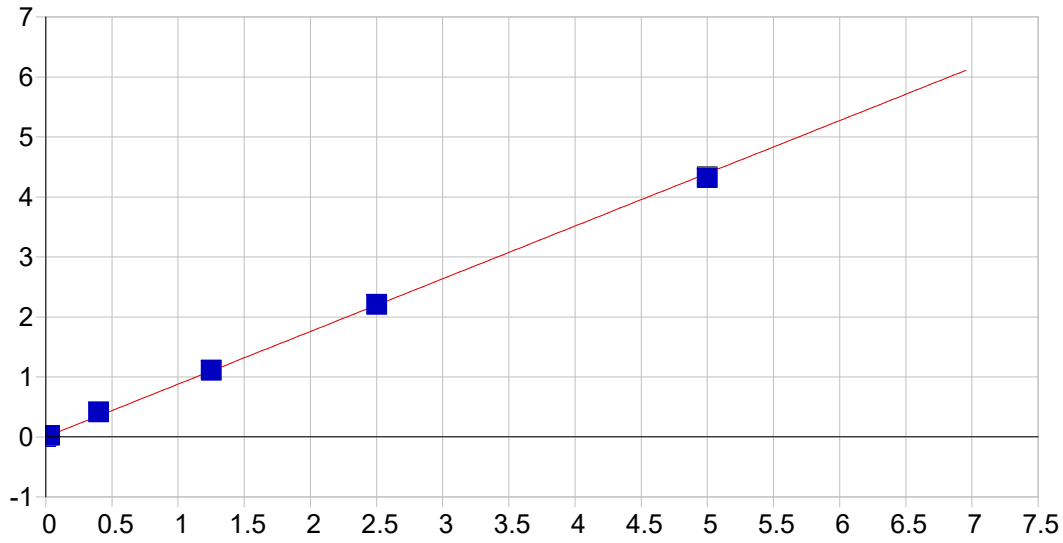


Cr 267.716 {126}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000052	Re-Slope:	1.000000
A1 (Gain):	0.227573	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998341	Status:	OK.
Std Error of Est:	0.000097		
Predicted MDL:	0.000411		
Predicted MQL:	0.001371		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00005	.000	1
S1	.01000	.00905	-.001	-9.48	.00211	.000	1
S3	.50000	.52154	.022	4.31	.11877	.000	1
S4	1.0000	1.0236	.024	2.36	.23305	.000	1
S5	2.0000	1.9211	-.079	-3.94	.43739	.001	1
S2	.16000	.19472	.035	21.7	.04438	.000	1

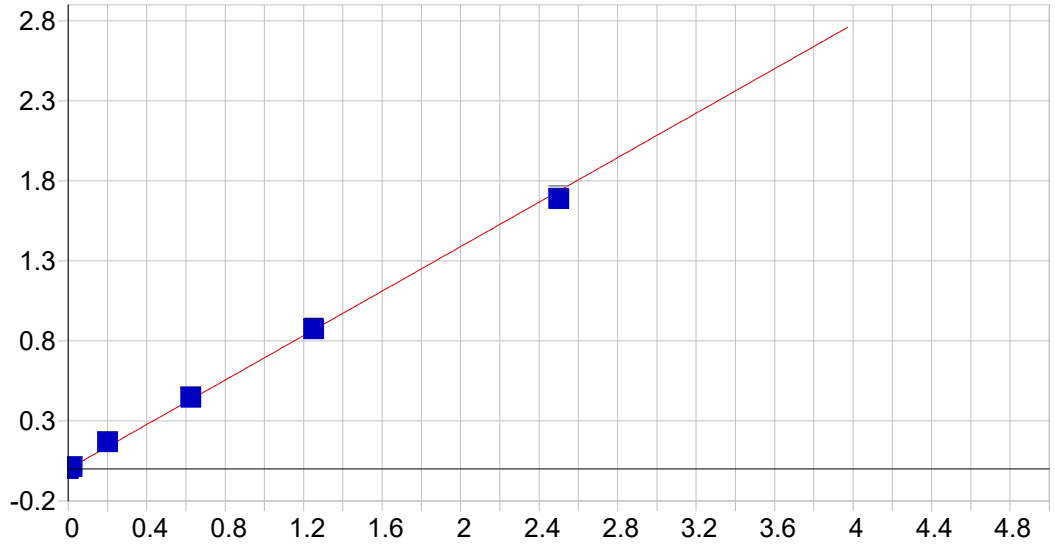


Co 228.616 {448}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000116	Re-Slope:	1.000000
A1 (Gain):	0.878625	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999286	Status:	OK.
Std Error of Est:	0.000676		
Predicted MDL:	0.000230		
Predicted MQL:	0.000766		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00011	.000	1
S1	.03000	.02910	-.001	-2.99	.02558	.000	1
S3	1.2500	1.2618	.012	.946	1.1106	.003	1
S4	2.5000	2.5081	.008	.322	2.2075	.002	1
S5	5.0000	4.9132	-.087	-1.74	4.3244	.011	1
S2	.40000	.46779	.068	16.9	.41173	.001	1

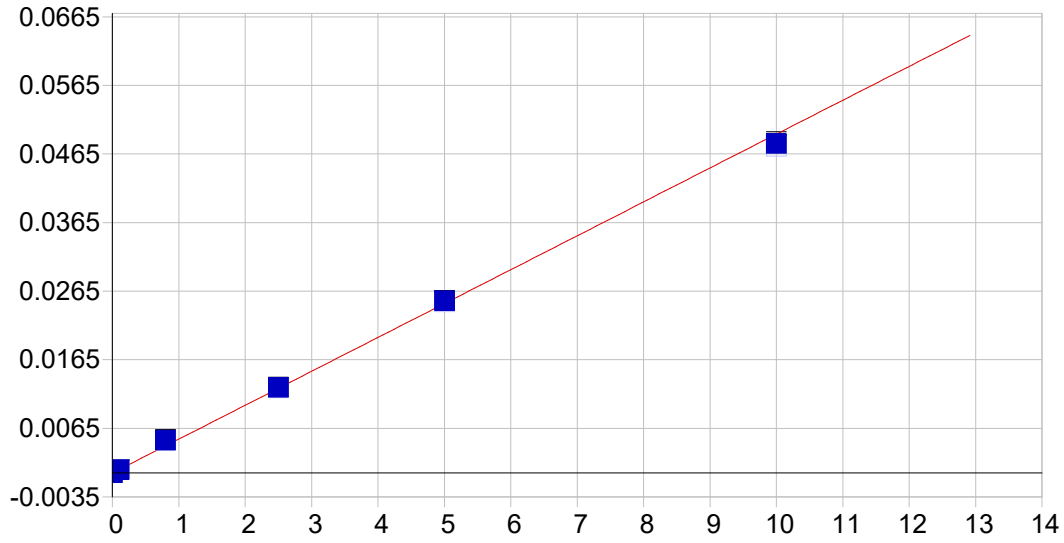


Cu 224.700 {450}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000597	Re-Slope:	1.000000
A1 (Gain):	0.694960	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998786	Status:	OK.
Std Error of Est:	0.000406		
Predicted MDL:	0.000462		
Predicted MQL:	0.001540		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00060	.000	1
S1	.02000	.02162	.002	8.10	.01460	.000	1
S3	.62500	.64332	.018	2.93	.45062	.001	1
S4	1.2500	1.2596	.010	.772	.88309	.001	1
S5	2.5000	2.4289	-.071	-2.85	1.7039	.002	1
S2	.20000	.24153	.042	20.8	.16858	.001	1

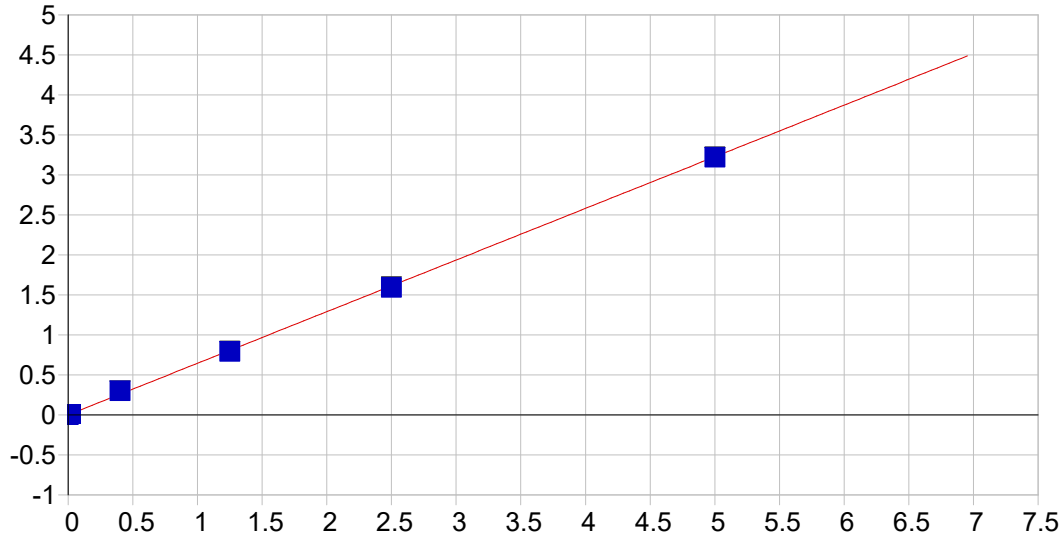


Fe 240.488 {140}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000019	Re-Slope:	1.000000
A1 (Gain):	0.004941	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998775	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.006050		
Predicted MQL:	0.020165		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	-.00002	.000	1
S1	.10000	.09778	-.002	-2.22	.00046	.000	1
S3	2.5000	2.5277	.028	1.11	.01237	.000	1
S4	5.0000	5.0841	.084	1.68	.02489	.000	1
S5	10.000	9.7232	-.277	-2.77	.04760	.000	1
S2	.80000	.96718	.167	20.9	.00473	.000	1

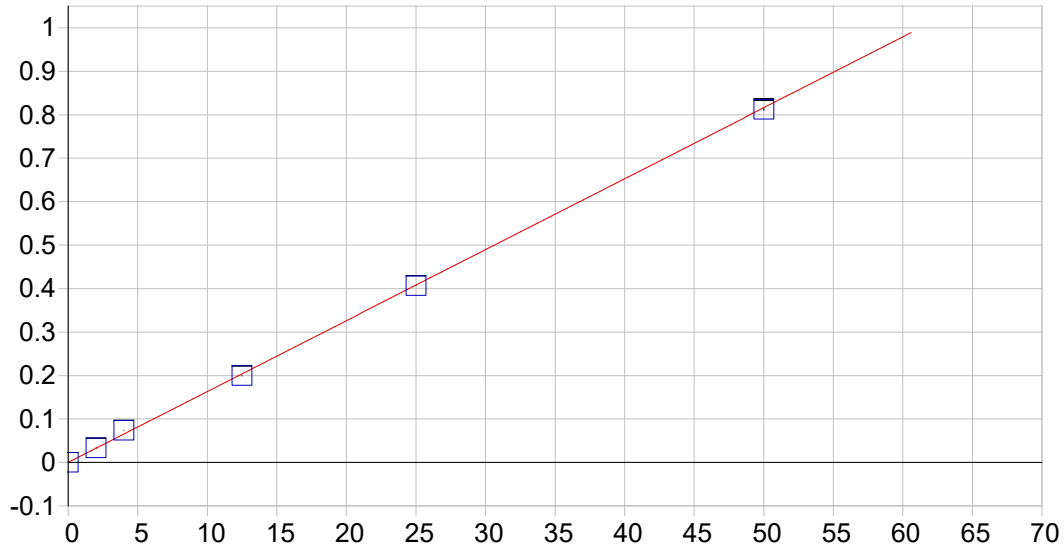


Mn 257.610 {131}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000088	Re-Slope:	1.000000
A1 (Gain):	0.645329	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999423	Status:	OK.
Std Error of Est:	0.000364		
Predicted MDL:	0.000391		
Predicted MQL:	0.001305		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00009	.000	1
S1	.02000	.01940	-.001	-3.02	.01261	.000	1
S3	1.2500	1.2290	-.021	-1.68	.79339	.003	1
S4	2.5000	2.4696	-.030	-1.22	1.5941	.006	1
S5	5.0000	4.9893	-.011	-.214	3.2205	.002	1
S2	.40000	.46272	.063	15.7	.29875	.000	1

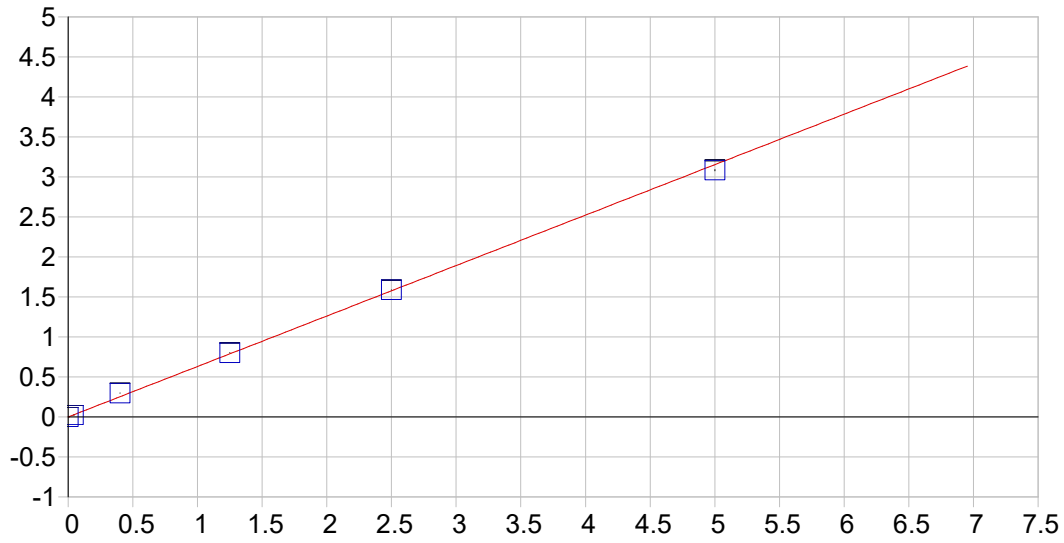


Mg 279.079 {121}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000053	Re-Slope:	1.000000
A1 (Gain):	0.016320	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999560	Status:	OK.
Std Error of Est:	0.000256		
Predicted MDL:	0.017299		
Predicted MQL:	0.057665		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00026	-.000	.000	-.00006	.000	1
S2	4.0000	4.5417	.542	13.5	.07407	.001	1
S3	12.500	12.225	-.275	-2.20	.19946	.001	1
S4	25.000	24.923	-.077	-.310	.40669	.000	1
S5	50.000	49.757	-.243	-.485	.81200	.002	1
S1	2.0000	2.0530	.053	2.65	.03345	.000	1

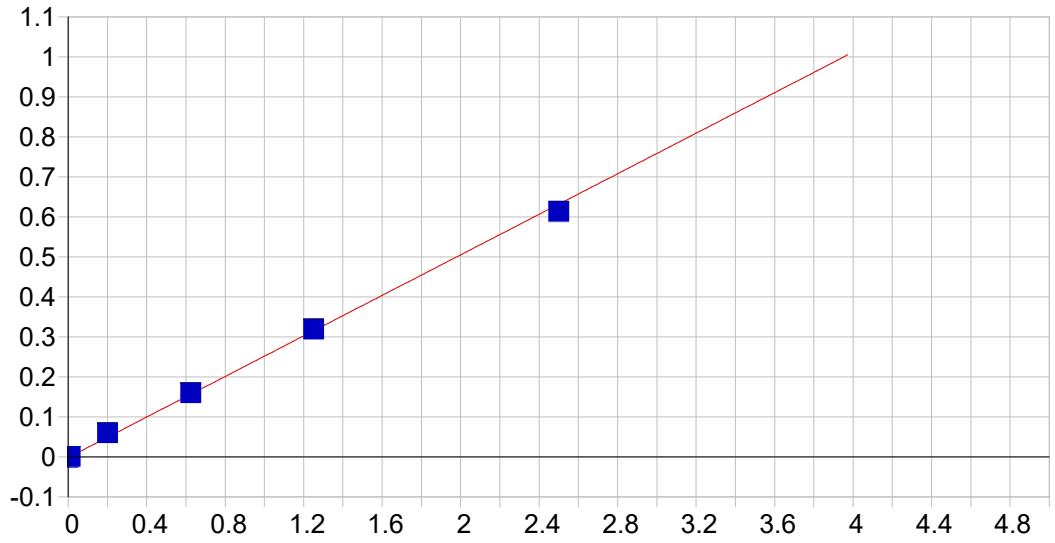


Ni 231.604 {446}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000163	Re-Slope:	1.000000
A1 (Gain):	0.630694	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999140	Status:	OK.
Std Error of Est:	0.000614		
Predicted MDL:	0.000357		
Predicted MQL:	0.001190		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00017	.000	1
S1	.04000	.03954	-.000	-1.14	.02478	.000	1
S3	1.2500	1.2710	.021	1.68	.80144	.001	1
S4	2.5000	2.5156	.016	.624	1.5864	.001	1
S5	5.0000	4.8917	-.108	-2.17	3.0850	.007	1
S2	.40000	.47218	.072	18.0	.29764	.001	1

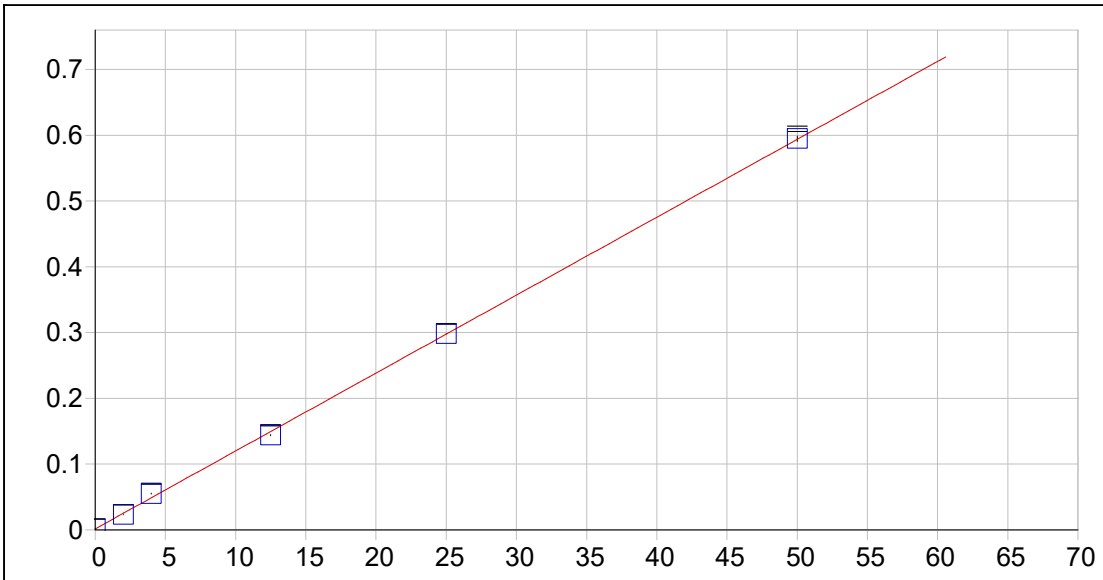


Ag 328.068 {103}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001600	Re-Slope:	1.000000
A1 (Gain):	0.253390	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998770	Status:	OK.
Std Error of Est:	0.000104		
Predicted MDL:	0.000483		
Predicted MQL:	0.001609		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00160	.000	1
S1	.01000	.00968	-.000	-3.18	.00084	.000	1
S3	.62500	.63780	.013	2.05	.15938	.000	1
S4	1.2500	1.2671	.017	1.37	.31822	.001	1
S5	2.5000	2.4287	-.071	-2.85	.61131	.000	1
S2	.20000	.24164	.042	20.8	.05943	.000	1

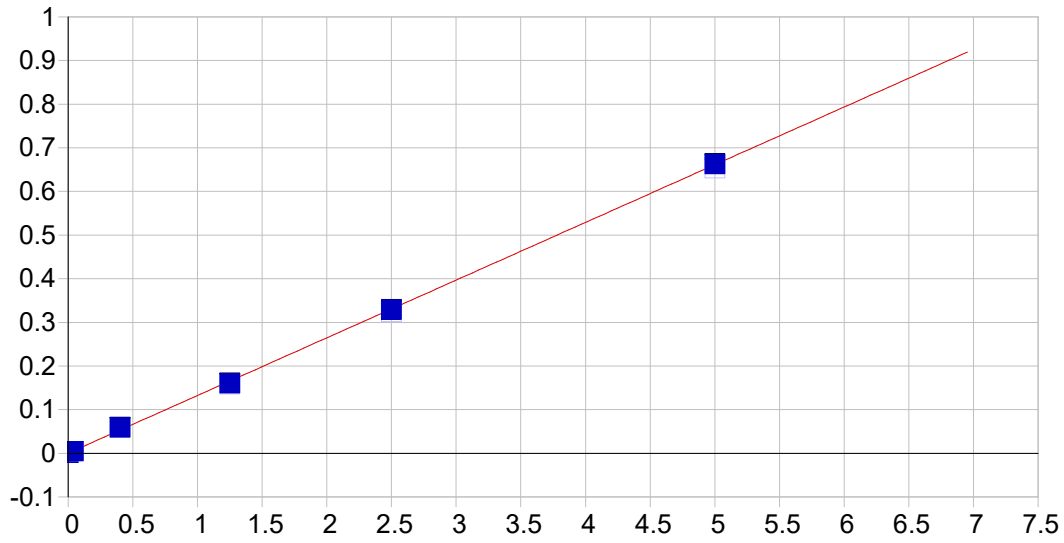


Na 589.592 { 57}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001576	Re-Slope:	1.000000
A1 (Gain):	0.011845	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999457	Status:	OK.
Std Error of Est:	0.000207		
Predicted MDL:	0.017356		
Predicted MQL:	0.057853		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00158	.000	1
S2	4.0000	4.5243	.524	13.1	.05517	.001	1
S3	12.500	12.027	-.473	-3.78	.14404	.001	1
S4	25.000	25.028	.028	.114	.29804	.000	1
S5	50.000	50.092	.092	.184	.59491	.004	1
S1	2.0000	1.8286	-.171	-8.57	.02324	.000	1

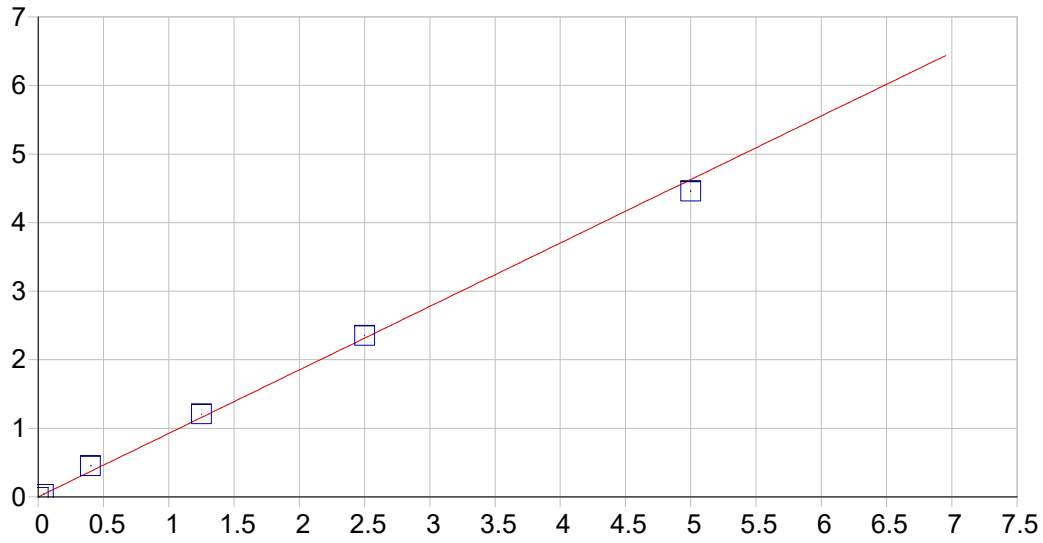


V 292.402 {115}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000209	Re-Slope:	1.000000
A1 (Gain):	0.132206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999606	Status:	OK.
Std Error of Est:	0.000086		
Predicted MDL:	0.002171		
Predicted MQL:	0.007238		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00021	.000	1
S1	.04000	.03587	-.004	-10.3	.00475	.000	1
S3	1.2500	1.2126	-.037	-2.99	.15811	.000	1
S4	2.5000	2.4860	-.014	-.559	.32406	.001	1
S5	5.0000	5.0089	.009	.179	.65278	.002	1
S2	.40000	.44648	.046	11.6	.05847	.000	1

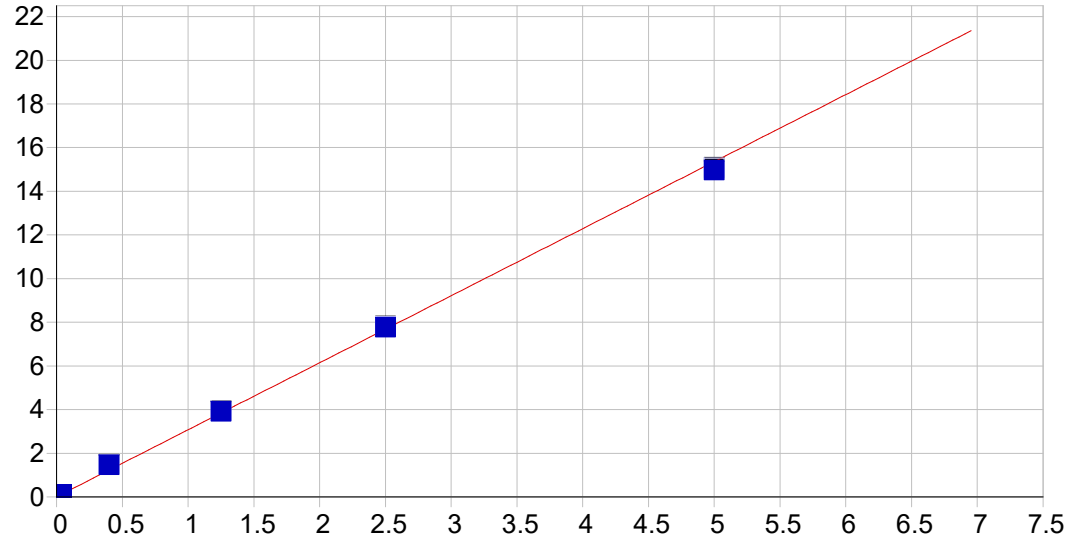


Zn 206.200 {464}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000681	Re-Slope:	1.000000
A1 (Gain):	0.925660	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998392	Status:	OK.
Std Error of Est:	0.001233		
Predicted MDL:	0.000214		
Predicted MQL:	0.000712		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00067	.000	1
S1	.04000	.04254	.003	6.34	.04006	.000	1
S3	1.2500	1.3025	.052	4.20	1.2063	.003	1
S4	2.5000	2.5419	.042	1.68	2.3536	.003	1
S5	5.0000	4.8144	-.186	-3.71	4.4572	.007	1
S2	.40000	.48869	.089	22.2	.45304	.001	1

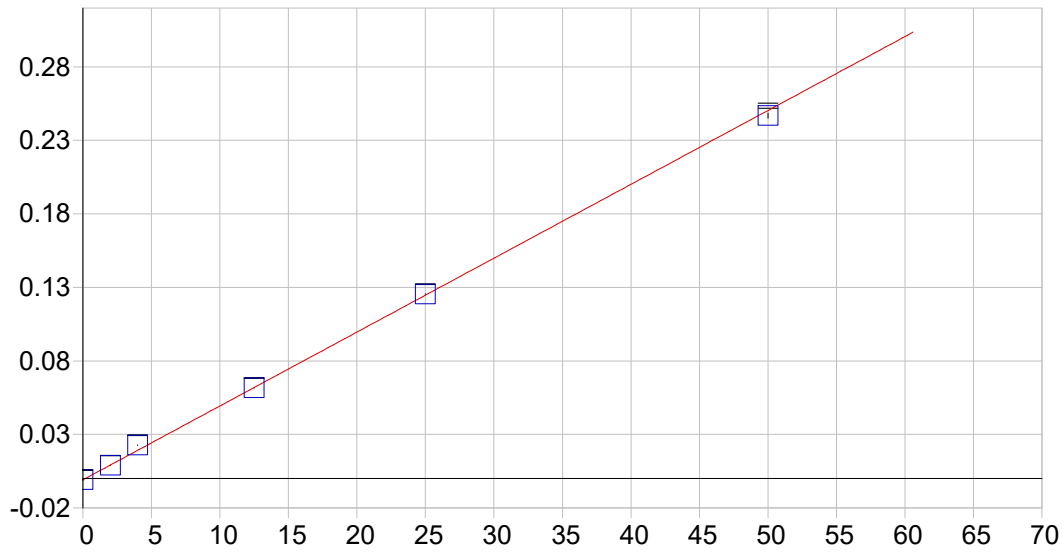


Zn 213.856 {158}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003038	Re-Slope:	1.000000
A1 (Gain):	3.070788	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998968	Status:	OK.
Std Error of Est:	0.003298		
Predicted MDL:	0.000277		
Predicted MQL:	0.000922		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00301	.001	1
S1	.04000	.04101	.001	2.52	.12982	.000	1
S3	1.2500	1.2732	.023	1.85	3.9394	.011	1
S4	2.5000	2.5276	.028	1.10	7.8181	.014	1
S5	5.0000	4.8704	-.130	-2.59	15.066	.038	1
S2	.40000	.47780	.078	19.4	1.4788	.011	1

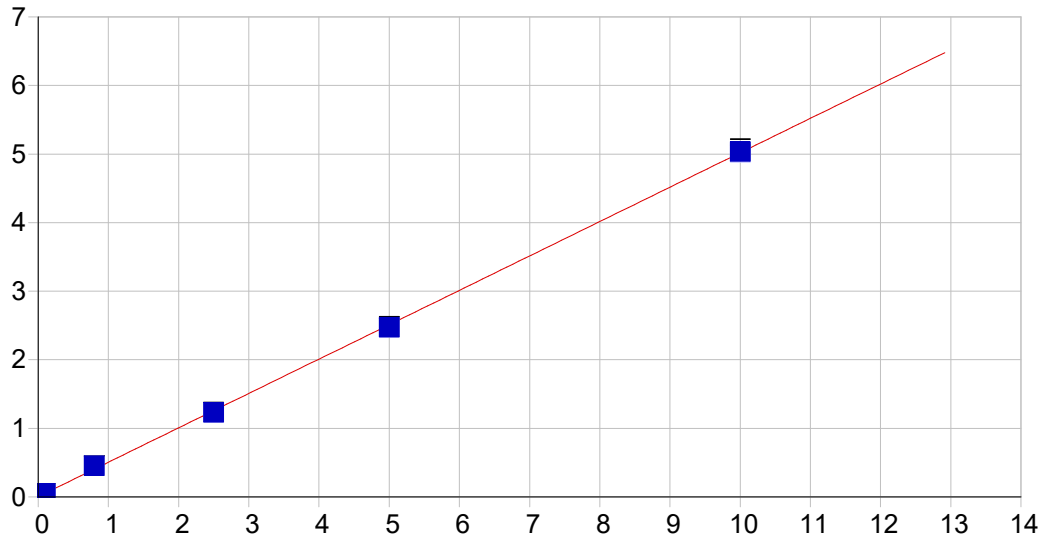


K 766.490 { 44}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000894	Re-Slope:	1.000000
A1 (Gain):	0.005025	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999295	Status:	OK.
Std Error of Est:	0.000100		
Predicted MDL:	0.047108		
Predicted MQL:	0.157026		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00026	-.000	.000	-.00090	.000	1
S2	4.0000	4.6917	.692	17.3	.02268	.000	1
S3	12.500	12.435	-.065	-.524	.06159	.000	1
S4	25.000	25.125	.125	.502	.12536	.000	1
S5	50.000	49.306	-.694	-1.39	.24686	.002	1
S1	2.0000	1.9426	-.057	-2.87	.00887	.000	1

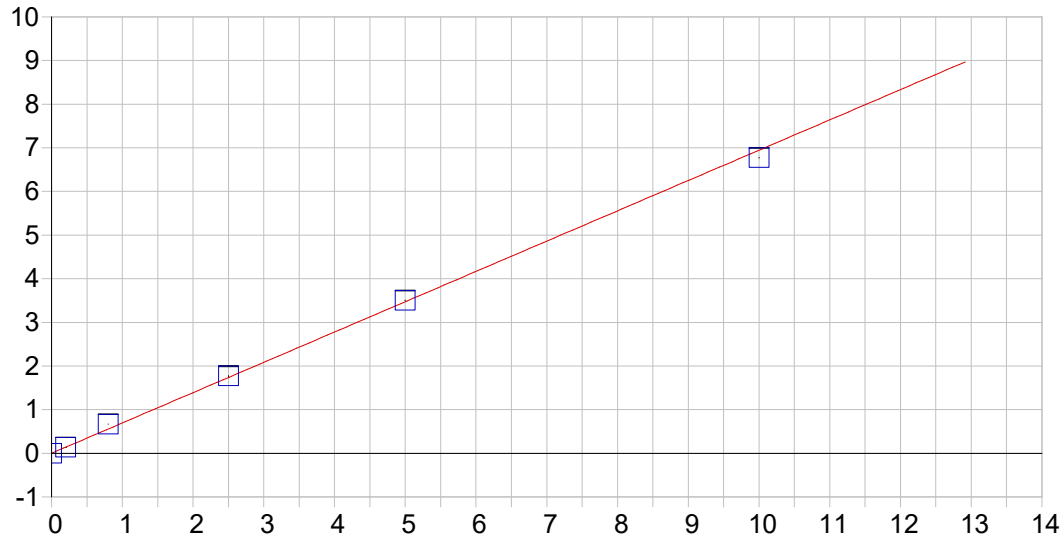


B 249.678 {135}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004127	Re-Slope:	1.000000
A1 (Gain):	0.501427	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999622	Status:	OK.
Std Error of Est:	0.000722		
Predicted MDL:	0.000737		
Predicted MQL:	0.002458		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00412	.000	1
S1	.10000	.09829	-.002	-1.71	.05320	.001	1
S3	2.5000	2.4465	-.053	-2.14	1.2284	.006	1
S4	5.0000	4.9290	-.071	-1.42	2.4707	.010	1
S5	10.000	10.030	.030	.300	5.0236	.044	1
S2	.80000	.89625	.096	12.0	.45275	.002	1

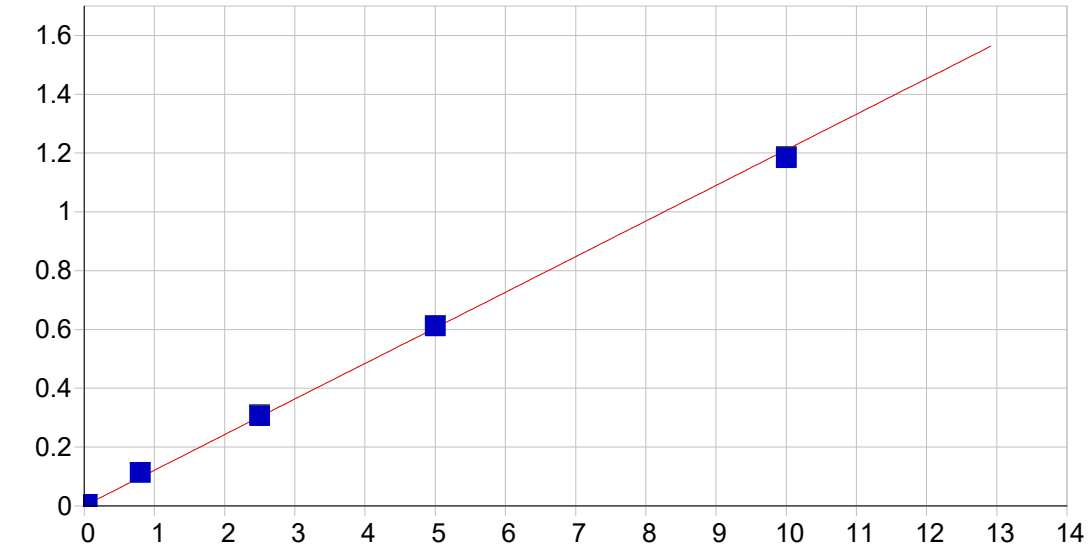


Mo 202.030 {467}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000226	Re-Slope:	1.000000
A1 (Gain):	0.694485	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998955	Status:	OK.
Std Error of Est:	0.002365		
Predicted MDL:	0.000301		
Predicted MQL:	0.001002		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	.00020	.000	1
S1	.20000	.19935	-.001	-.326	.13867	.001	1
S3	2.5000	2.5462	.046	1.85	1.7685	.008	1
S4	5.0000	5.0398	.040	.796	3.5003	.007	1
S5	10.000	9.7557	-.244	-2.44	6.7754	.006	1
S2	.80000	.95888	.159	19.9	.66615	.002	1

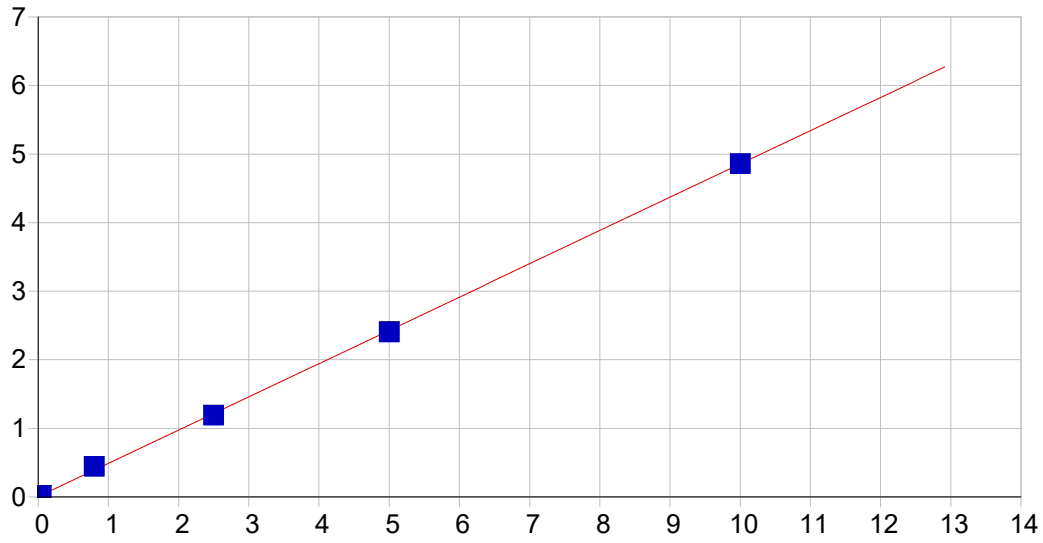


Sn 189.989 {478}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000270	Re-Slope:	1.000000
A1 (Gain):	0.121053	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999257	Status:	OK.
Std Error of Est:	0.000155		
Predicted MDL:	0.000852		
Predicted MQL:	0.002840		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00027	.000	1
S1	.04000	.03957	-.000	-1.06	.00506	.000	1
S3	2.5000	2.5373	.037	1.49	.30711	.001	1
S4	5.0000	5.0520	.052	1.04	.61121	.001	1
S5	10.000	9.7805	-.219	-2.19	1.1830	.003	1
S2	.80000	.93055	.131	16.3	.11282	.000	1

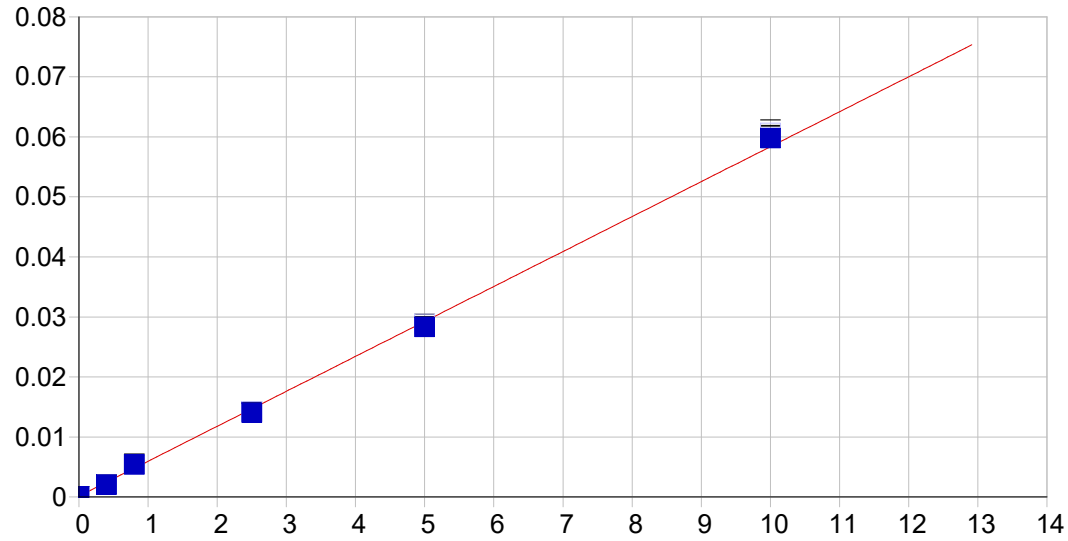


Ti 336.121 {100}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002213	Re-Slope:	1.000000
A1 (Gain):	0.485370	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999541	Status:	OK.
Std Error of Est:	0.000488		
Predicted MDL:	0.000862		
Predicted MQL:	0.002872		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00221	.000	1
S1	.04000	.03842	-.002	-3.94	.02085	.000	1
S3	2.5000	2.4444	-.056	-2.22	1.1882	.003	1
S4	5.0000	4.9422	-.058	-1.16	2.4001	.005	1
S5	10.000	10.006	.006	.059	4.8570	.005	1
S2	.80000	.90905	.109	13.6	.44330	.000	1

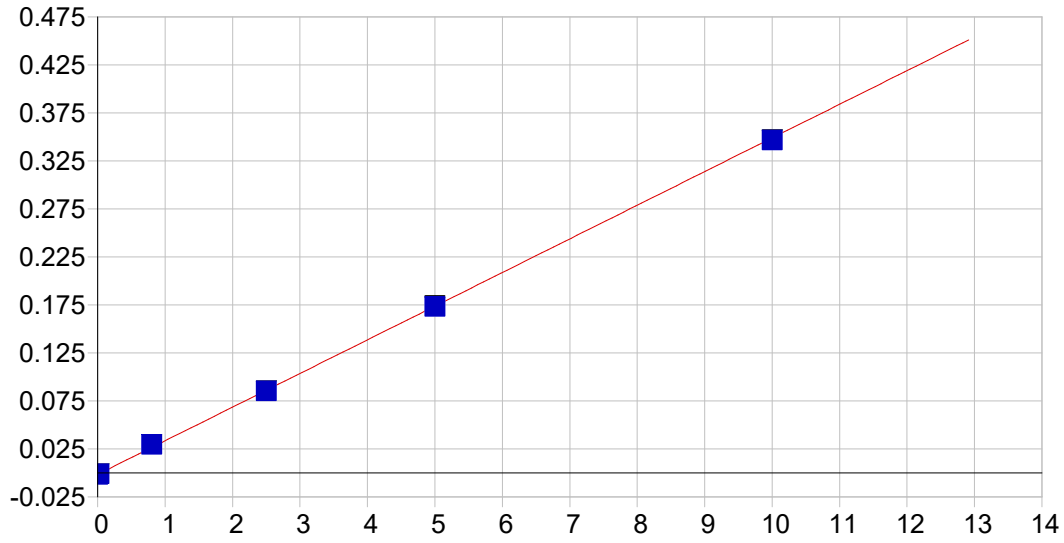


Si 288.158 {117}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000123	Re-Slope:	1.000000
A1 (Gain):	0.005825	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998848	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.009264		
Predicted MQL:	0.030880		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	.00012	.000	1
S1	.40000	.32234	-.078	-19.4	.00200	.000	1
S3	2.5000	2.3862	-.114	-4.55	.01424	.000	1
S4	5.0000	4.8447	-.155	-3.11	.02878	.000	1
S5	10.000	10.242	.242	2.42	.06065	.000	1
S2	.80000	.90376	.104	13.0	.00546	.000	1

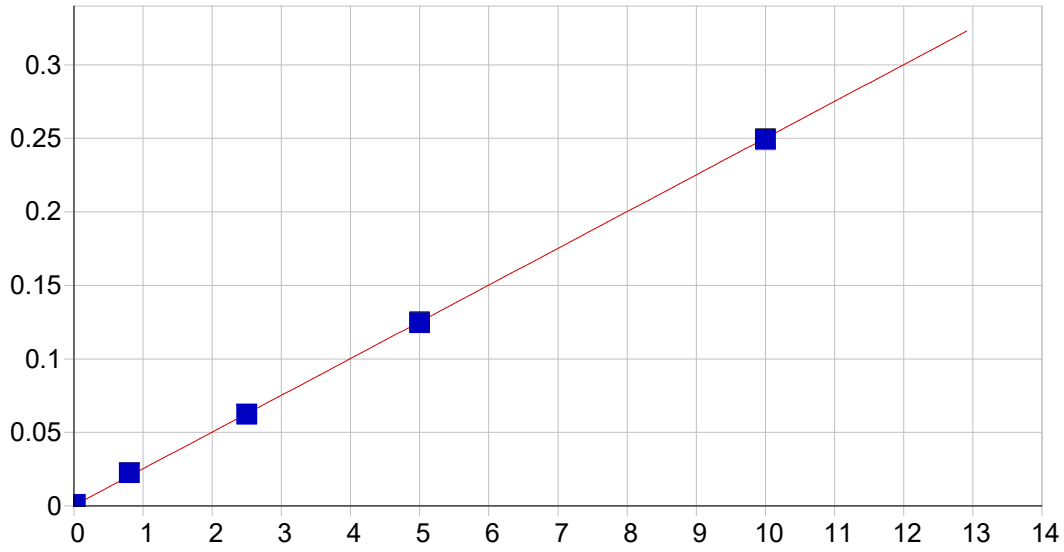


P 177.495 {490}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001602	Re-Slope:	1.000000
A1 (Gain):	0.035054	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999685	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.002714		
Predicted MQL:	0.009045		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00160	.000	1
S1	.02000	.01997	-.000	-.145	-.00090	.000	1
S3	2.5000	2.4822	-.018	-.713	.08539	.000	1
S4	5.0000	4.9881	-.012	-.239	.17322	.001	1
S5	10.000	9.9361	-.064	-.639	.34664	.001	1
S2	.80000	.89365	.094	11.7	.02972	.000	1

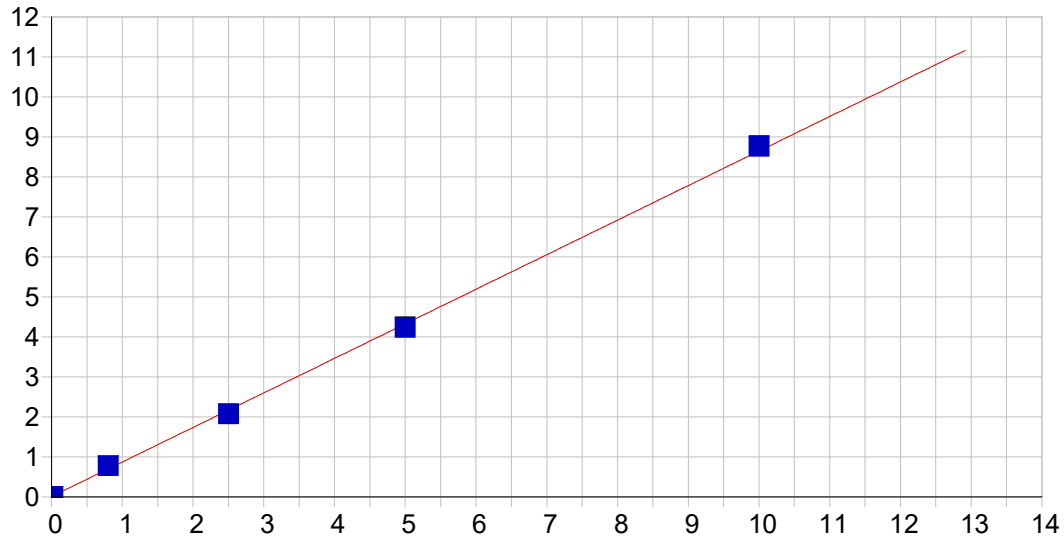


S 182.034 {485}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000289	Re-Slope:	1.000000
A1 (Gain):	0.024986	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999728	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.003721		
Predicted MQL:	0.012404		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00029	.000	1
S1	.02000	.02027	.000	1.35	.00077	.000	1
S3	2.5000	2.4777	-.022	-.893	.06203	.000	1
S4	5.0000	4.9744	-.026	-.513	.12426	.001	1
S5	10.000	9.9608	-.039	-.392	.24852	.000	1
S2	.80000	.88689	.087	10.9	.02240	.000	1

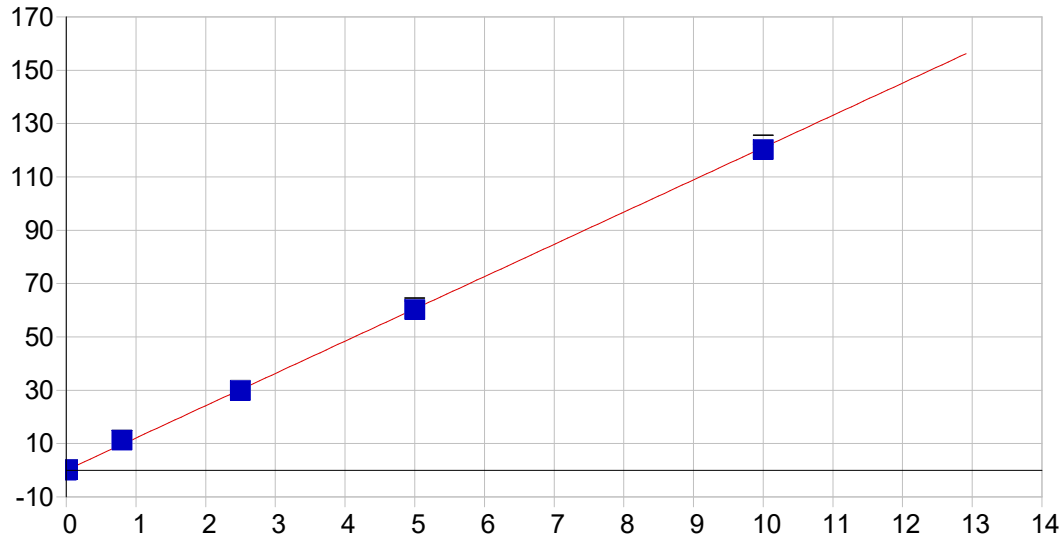


Li 670.784 { 50}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008706	Re-Slope:	1.000000
A1 (Gain):	0.863846	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999461	Status:	OK.
Std Error of Est:	0.000666		
Predicted MDL:	0.001382		
Predicted MQL:	0.004608		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00871	.000	1
S5	10.000	10.135	.135	1.35	8.7713	.012	1
S4	5.0000	4.8924	-.108	-2.15	4.2389	.012	1
S3	2.5000	2.3859	-.114	-4.56	2.0717	.004	1
S1	.02000	.01718	-.003	-14.1	.02386	.000	1
S2	.80000	.88982	.090	11.2	.77799	.001	1

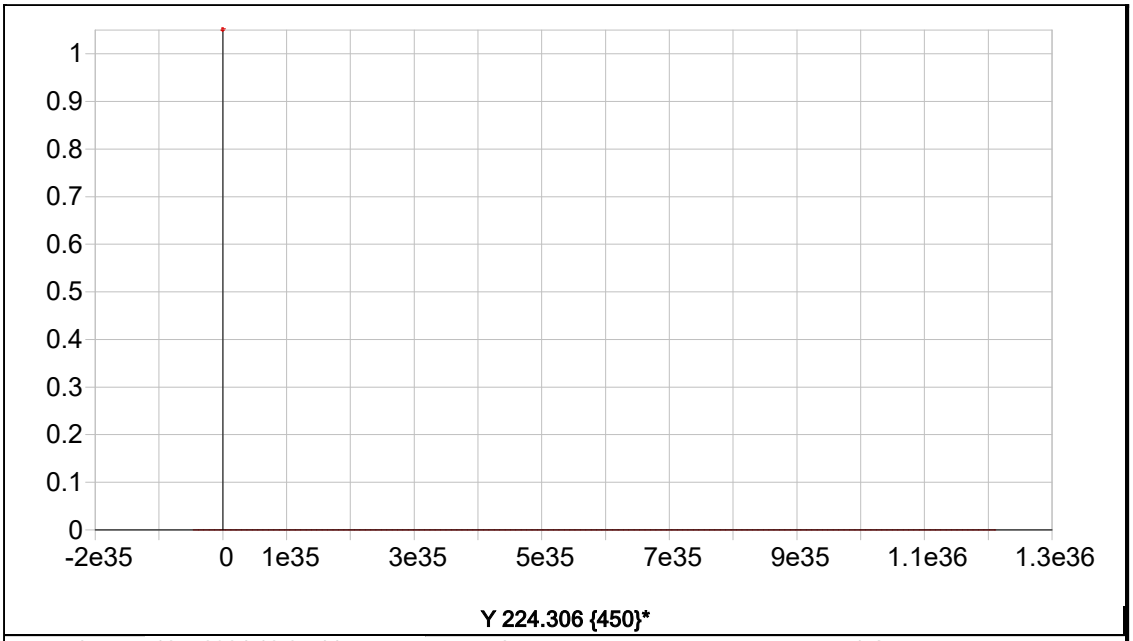


Sr 407.771 { 83}

Date of Fit:	1/17/2025 11:16:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000117	Re-Slope:	1.000000
A1 (Gain):	12.099287	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999442	Status:	OK.
Std Error of Est:	0.009482		
Predicted MDL:	0.000059		
Predicted MQL:	0.000197		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00014	.000	1
S1	.02000	.01905	-.001	-4.76	.23156	.000	1
S3	2.5000	2.4688	-.031	-1.25	29.901	.103	1
S4	5.0000	4.9750	-.025	-.501	60.254	.616	1
S5	10.000	9.9324	-.068	-.676	120.30	1.71	1
S2	.80000	.92482	.125	15.6	11.199	.026	1

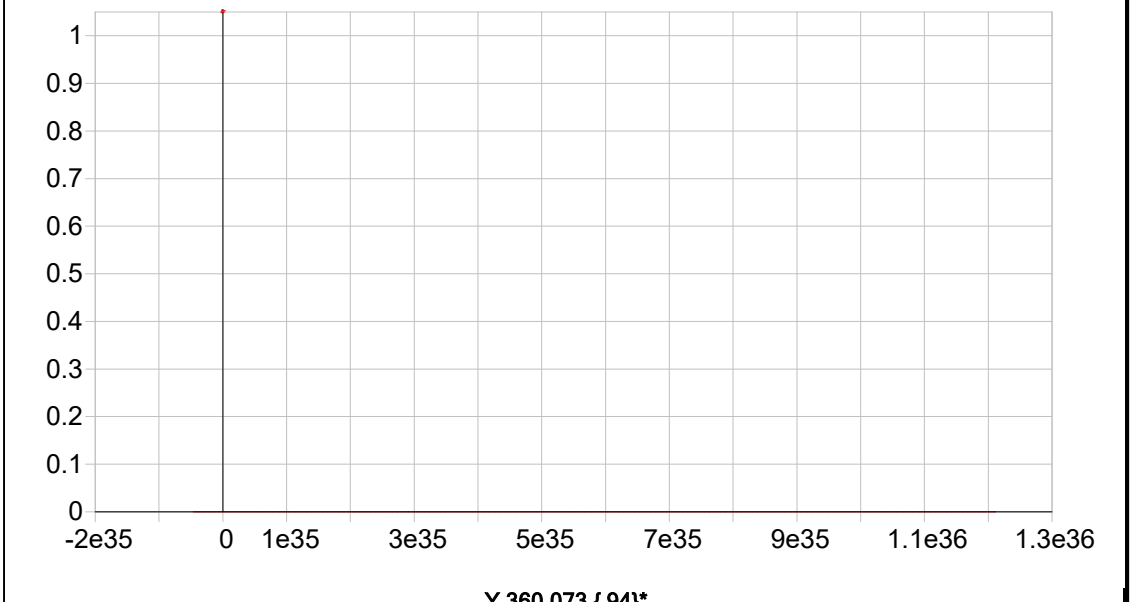


Y 224.306 {450}*

Date of Fit:	12/5/2024 12:27:44	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



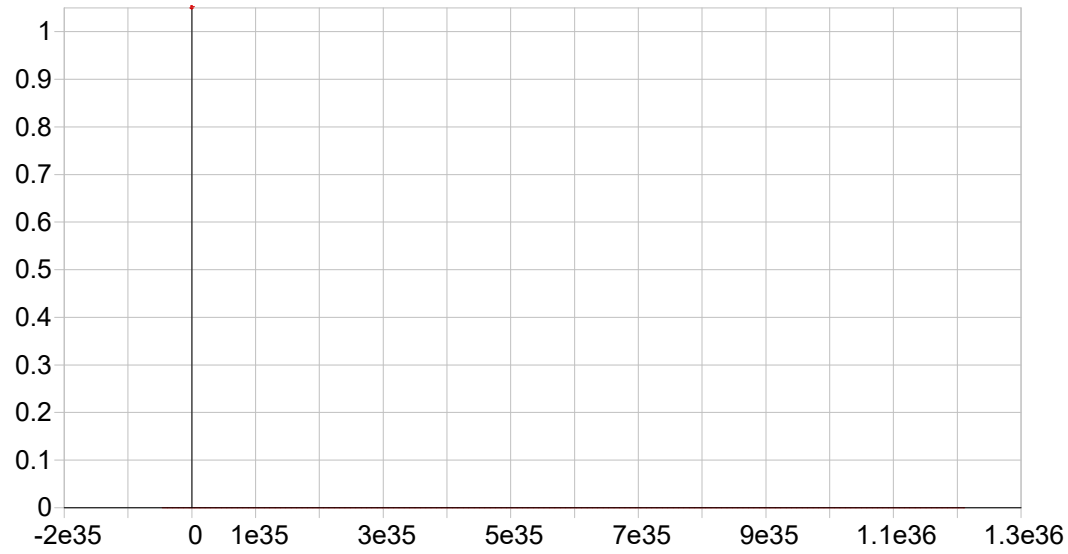
Y 360.073 { 94}*

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

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

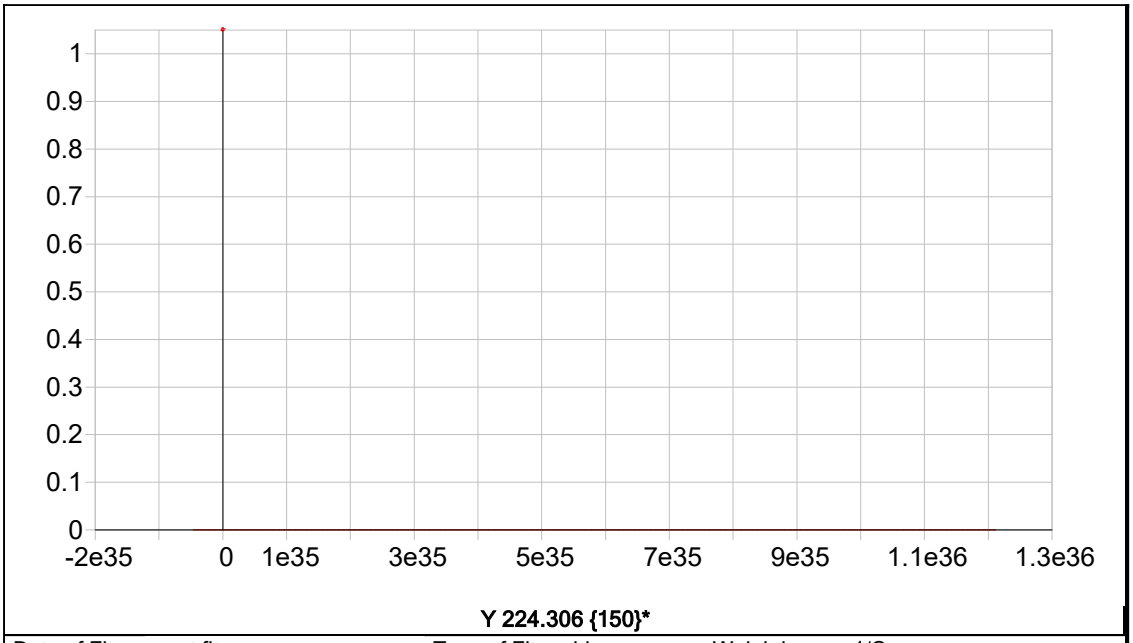
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

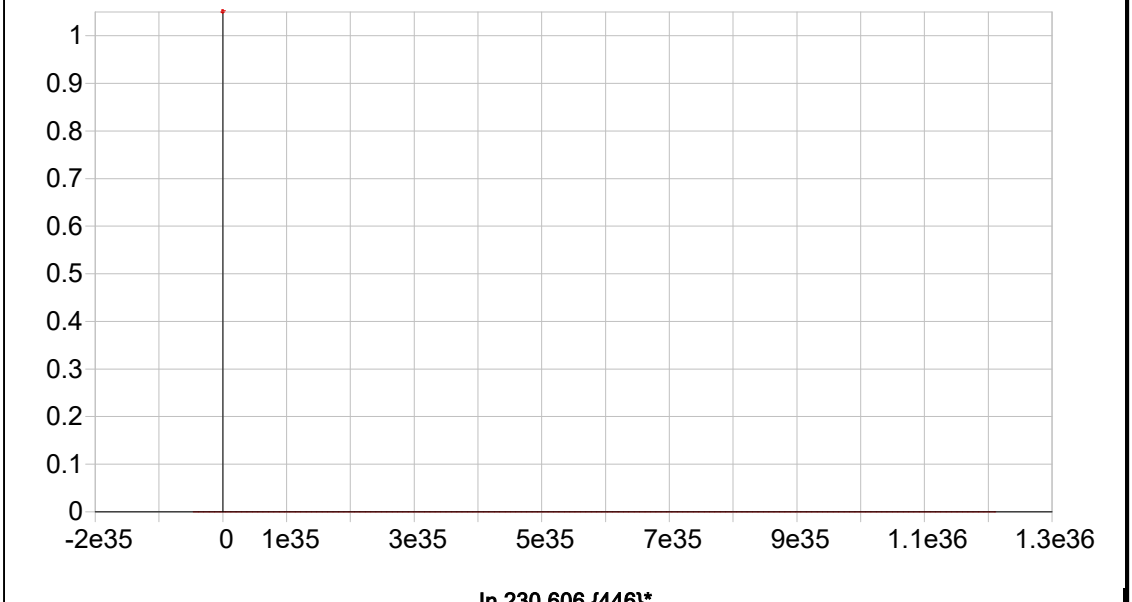
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 224.306 {150}*

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

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



ln 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

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

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S0 Acquired: 1/17/2025 10:51:07 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	-.00005	-.00007	-.00046	.00034	.00035	.00027	.06705	-.00001
Stddev	.00007	.00003	.00017	.00008	.00031	.00038	.00142	.00014
%RSD	135.41	49.844	36.876	23.685	88.547	140.74	2.1209	1072.5
#1	-.00013	-.00003	-.00030	.00025	.00030	.00067	.06598	.00005
#2	.00001	-.00007	-.00063	.00037	.00067	.00020	.06866	.00009
#3	-.00003	-.00009	-.00043	.00041	.00006	-.00007	.06651	-.00018

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	.00025	.00053	.00005	.00011	-.00060	-.00002	.00009	-.00006
Stddev	.00013	.00042	.00009	.00017	.00011	.00002	.00017	.00005
%RSD	53.630	79.862	167.92	155.30	18.130	91.551	195.51	83.042
#1	.00010	.00053	-.00005	.00031	-.00050	.00000	-.00002	-.00011
#2	.00029	.00011	.00011	-.00001	-.00072	-.00002	.00028	-.00005
#3	.00036	.00096	.00010	.00004	-.00059	-.00003	-.00000	-.00001

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	-.00017	-.00160	.00158	.00021	.00301	-.00090	.00412	.00020
Stddev	.00006	.00009	.00020	.00024	.00108	.00031	.00032	.00027
%RSD	34.660	5.5403	12.553	112.57	35.703	34.996	7.7641	133.68
#1	-.00018	-.00158	.00180	.00048	.00182	-.00103	.00444	.00048
#2	-.00010	-.00170	.00143	.00007	.00390	-.00112	.00412	.00016
#3	-.00022	-.00152	.00149	.00008	.00331	-.00054	.00380	-.00005

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00027	.00221	.00012	-.00160	.00029	.00871	-.00014
Stddev	.00010	.00032	.00001	.00002	.00004	.00019	.00017
%RSD	37.028	14.519	11.212	1.1028	14.093	2.1930	127.27
#1	.00024	.00189	.00013	-.00159	.00032	.00875	-.00018
#2	.00019	.00253	.00011	-.00162	.00030	.00850	.00005
#3	.00038	.00221	.00014	-.00159	.00024	.00887	-.00029

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S0 Acquired: 1/17/2025 10:51:07 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	3013.0	57158.	9911.7	2148.1	4457.5
Stddev	5.7	85.	15.3	4.7	8.7
%RSD	.18934	.14793	.15419	.21729	.19433
#1	3019.5	57176.	9925.5	2142.9	4465.1
#2	3010.7	57232.	9895.3	2152.0	4459.4
#3	3008.8	57066.	9914.3	2149.3	4448.1

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S1 Acquired: 1/17/2025 10:55:31 Type: Cal
Method: NON EPA-6010-200.7(v2490) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00098	.00232	.00249	.00194	.00876	.00782	.31023	.03018
Stddev	.00006	.00005	.00032	.00010	.00019	.00029	.00278	.00027
%RSD	5.7458	2.3383	12.829	4.9843	2.2175	3.7096	.89461	.90526
#1	.00092	.00227	.00264	.00198	.00865	.00749	.31156	.03050
#2	.00104	.00230	.00212	.00201	.00898	.00796	.31210	.03000
#3	.00100	.00237	.00270	.00183	.00865	.00801	.30704	.03005

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	.01408	.11252	.00211	.02558	.01460	.00046	.01261	.03345
Stddev	.00014	.00026	.00004	.00023	.00011	.00003	.00008	.00017
%RSD	1.0109	.23491	1.6704	.91717	.72292	6.0058	.60457	.51891
#1	.01422	.11283	.00213	.02531	.01454	.00045	.01266	.03329
#2	.01409	.11237	.00207	.02571	.01473	.00044	.01265	.03342
#3	.01394	.11237	.00213	.02571	.01455	.00049	.01252	.03364

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	.02478	.00084	.02324	.00475	.12982	.00887	.05320	.13867
Stddev	.00013	.00004	.00026	.00026	.00035	.00011	.00060	.00074
%RSD	.51405	4.7843	1.1138	5.4039	.26954	1.2757	1.1284	.53552
#1	.02470	.00082	.02311	.00456	.13018	.00878	.05317	.13840
#2	.02471	.00088	.02307	.00504	.12981	.00882	.05381	.13810
#3	.02492	.00081	.02353	.00465	.12948	.00900	.05262	.13951

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	.00506	.02085	.00200	-.00090	.00077	.02386	.23156
Stddev	.00007	.00014	.00004	.00008	.00007	.00032	.00034
%RSD	1.3768	.68067	2.0563	8.9165	9.6401	1.3272	.14608
#1	.00498	.02070	.00205	-.00086	.00076	.02371	.23181
#2	.00508	.02088	.00199	-.00099	.00071	.02364	.23169
#3	.00511	.02097	.00198	-.00085	.00086	.02422	.23118

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S1 Acquired: 1/17/2025 10:55:31 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	2937.5	56174.	9887.8	2093.6	4315.7
Stddev	2.5	84.	91.6	6.1	4.7
%RSD	.08606	.14999	.92641	.29099	.10965
#1	2935.3	56191.	9839.9	2095.2	4320.0
#2	2940.2	56082.	9830.2	2086.9	4316.4
#3	2936.8	56248.	9993.5	2098.8	4310.7

Sample Name: S2 Acquired: 1/17/2025 10:59:55 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	.04929	.06087	.22654	.07291	.16017	.13362	4.8926	.23732
Stddev	.00045	.00065	.00029	.00007	.00048	.00052	.0099	.00149
%RSD	.90684	1.0642	.12620	.10007	.29958	.38641	.20228	.62970
#1	.04895	.06052	.22629	.07282	.15985	.13309	4.8817	.23860
#2	.04912	.06047	.22646	.07296	.15995	.13365	4.8951	.23767
#3	.04980	.06162	.22685	.07293	.16073	.13413	4.9010	.23568

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	1.0938	.26548	.04438	.41173	.16858	.00473	.29875	.07407
Stddev	.0029	.00057	.00014	.00124	.00068	.00008	.00045	.00055
%RSD	.26082	.21372	.30769	.30115	.40385	1.6645	.15205	.74898
#1	1.0923	.26485	.04432	.41110	.16816	.00467	.29823	.07423
#2	1.0920	.26596	.04427	.41093	.16822	.00470	.29909	.07452
#3	1.0971	.26562	.04453	.41316	.16937	.00482	.29892	.07345

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	.29764	.05943	.05517	.05847	1.4788	.02268	.45275	.66615
Stddev	.00066	.00025	.00064	.00046	.0109	.00017	.00248	.00236
%RSD	.22105	.41413	1.1555	.78177	.73939	.75278	.54732	.35459
#1	.29713	.05923	.05466	.05809	1.4662	.02250	.45426	.66521
#2	.29741	.05936	.05496	.05833	1.4845	.02272	.45410	.66441
#3	.29838	.05970	.05588	.05897	1.4857	.02283	.44989	.66884

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	.11282	.44330	.00546	.02972	.02240	.77799	11.199
Stddev	.00038	.00029	.00003	.00009	.00009	.00134	.026
%RSD	.33991	.06586	.49681	.29729	.40268	.17204	.23215
#1	.11255	.44302	.00548	.02978	.02233	.77724	11.171
#2	.11265	.44327	.00543	.02962	.02237	.77720	11.204
#3	.11326	.44360	.00547	.02976	.02250	.77954	11.223

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S2 Acquired: 1/17/2025 10:59:55 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	2945.2	55673.	10265.	2033.9	4312.7
Stddev	8.8	249.	69.	8.8	12.1
%RSD	.30011	.44768	.67103	.43041	.28141
#1	2946.5	55961.	10266.	2043.4	4315.7
#2	2953.4	55517.	10196.	2032.3	4323.1
#3	2935.8	55542.	10333.	2026.1	4299.4

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S3 Acquired: 1/17/2025 11:04:05 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	.13472	.16320	.61345	.19847	.43299	.36029	13.117	.64485
Stddev	.00050	.00166	.00098	.00103	.00186	.00113	.041	.00330
%RSD	.37439	1.0192	.15929	.52057	.42946	.31276	.31083	.51188
#1	.13425	.16132	.61254	.19779	.43228	.35938	13.147	.64272
#2	.13467	.16448	.61334	.19795	.43159	.36155	13.132	.64865
#3	.13525	.16380	.61448	.19966	.43510	.35993	13.070	.64317

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	2.9763	.71375	.11877	1.1106	.45062	.01237	.79339	.19946
Stddev	.0051	.00147	.00006	.0026	.00098	.00003	.00295	.00087
%RSD	.17042	.20572	.05099	.23804	.21775	.22524	.37177	.43530
#1	2.9709	.71416	.11882	1.1081	.45003	.01239	.79575	.19956
#2	2.9770	.71498	.11880	1.1105	.45009	.01237	.79433	.20028
#3	2.9809	.71213	.11870	1.1134	.45176	.01234	.79008	.19855

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	.80144	.15938	.14404	.15811	3.9394	.06159	1.2284	1.7685
Stddev	.00103	.00028	.00099	.00030	.0105	.00016	.0057	.0084
%RSD	.12840	.17595	.68644	.18846	.26698	.26709	.46401	.47473
#1	.80085	.15940	.14517	.15827	3.9501	.06169	1.2221	1.7608
#2	.80085	.15910	.14335	.15830	3.9390	.06140	1.2333	1.7673
#3	.80263	.15966	.14359	.15777	3.9291	.06168	1.2299	1.7775

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	.30711	1.1882	.01424	.08539	.06203	2.0717	29.901
Stddev	.00147	.0031	.00003	.00027	.00017	.0043	.103
%RSD	.47935	.25789	.18095	.31658	.27700	.20678	.34527
#1	.30543	1.1911	.01427	.08512	.06201	2.0730	29.800
#2	.30773	1.1887	.01423	.08566	.06187	2.0752	30.006
#3	.30817	1.1850	.01422	.08540	.06222	2.0670	29.897

Sample Name: S3 Acquired: 1/17/2025 11:04:05 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	2860.3	54807.	9992.7	1982.0	4112.6
Stddev	5.9	204.	64.7	8.2	3.2
%RSD	.20545	.37220	.64705	.41451	.07833
#1	2864.0	54673.	10015.	1974.2	4116.3
#2	2863.3	54706.	9919.8	1981.1	4110.7
#3	2853.5	55042.	10043.	1990.6	4110.8

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S4 Acquired: 1/17/2025 11:08:17 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	.26707	.32590	1.2129	.39145	.85820	.73573	26.258	1.2884
Stddev	.00030	.00402	.0014	.00087	.00192	.00039	.131	.0032
%RSD	.11166	1.2321	.11301	.22211	.22338	.05338	.49997	.24872
#1	.26673	.32128	1.2114	.39068	.85744	.73527	26.367	1.2913
#2	.26724	.32790	1.2135	.39128	.85677	.73598	26.295	1.2850
#3	.26725	.32852	1.2139	.39239	.86038	.73593	26.113	1.2890

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	5.9236	1.4347	.23305	2.2075	.88309	.02489	1.5941	.40669
Stddev	.0034	.0037	.00044	.0017	.00093	.00001	.0062	.00050
%RSD	.05656	.25620	.19089	.07606	.10499	.05708	.38922	.12245
#1	5.9197	1.4361	.23325	2.2066	.88221	.02489	1.6011	.40716
#2	5.9251	1.4305	.23336	2.2064	.88299	.02491	1.5892	.40674
#3	5.9259	1.4375	.23254	2.2094	.88406	.02488	1.5920	.40617

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	1.5864	.31822	.29804	.32406	7.8181	.12536	2.4707	3.5003
Stddev	.0011	.00066	.00048	.00064	.0139	.00017	.0098	.0070
%RSD	.07122	.20775	.16253	.19748	.17807	.13473	.39871	.20014
#1	1.5852	.31892	.29840	.32333	7.8105	.12537	2.4816	3.4938
#2	1.5866	.31813	.29749	.32453	7.8342	.12518	2.4625	3.4993
#3	1.5874	.31761	.29822	.32431	7.8097	.12552	2.4681	3.5077

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	.61121	2.4001	.02878	.17322	.12426	4.2389	60.254
Stddev	.00111	.0053	.00001	.00082	.00060	.0116	.616
%RSD	.18230	.21992	.04873	.47141	.47916	.27334	1.0217
#1	.61012	2.4054	.02877	.17245	.12363	4.2515	59.764
#2	.61235	2.3948	.02879	.17313	.12433	4.2288	60.053
#3	.61117	2.4002	.02877	.17408	.12481	4.2363	60.945

Sample Name: S4 Acquired: 1/17/2025 11:08:17 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	2848.2	54098.	9834.4	1945.9	4041.6
Stddev	3.0	10.	25.6	5.9	2.5
%RSD	.10453	.01938	.25983	.30411	.06073
#1	2845.0	54088.	9808.3	1952.1	4038.9
#2	2848.7	54098.	9859.3	1940.3	4042.4
#3	2850.9	54109.	9835.6	1945.5	4043.6

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: S5 Acquired: 1/17/2025 11:12:31 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	.51853	.62428	2.3389	.75706	1.6710	1.4844	53.761	2.5366
Stddev	.00026	.00156	.0064	.00125	.0003	.0020	.551	.0257
%RSD	.05044	.25015	.27546	.16465	.02041	.13351	1.0256	1.0148
#1	.51827	.62312	2.3413	.75562	1.6706	1.4866	53.869	2.5618
#2	.51853	.62366	2.3316	.75779	1.6712	1.4838	54.250	2.5377
#3	.51879	.62606	2.3438	.75776	1.6711	1.4827	53.163	2.5103

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	11.409	2.8720	.43739	4.3244	1.7039	.04760	3.2205	.81200
Stddev	.027	.0048	.00144	.0108	.0015	.00025	.0022	.00227
%RSD	.23839	.16726	.33011	.24887	.08916	.51819	.06713	.27968
#1	11.417	2.8772	.43817	4.3242	1.7023	.04733	3.2212	.81460
#2	11.379	2.8709	.43827	4.3138	1.7041	.04767	3.2180	.81042
#3	11.431	2.8678	.43572	4.3353	1.7053	.04781	3.2222	.81097

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	3.0850	.61131	.59491	.65278	15.066	.24686	5.0236	6.7754
Stddev	.0074	.00019	.00420	.00205	.038	.00176	.0440	.0059
%RSD	.23870	.03100	.70615	.31352	.25200	.71117	.87665	.08772
#1	3.0851	.61110	.59129	.65406	15.093	.24518	5.0683	6.7698
#2	3.0776	.61135	.59393	.65042	15.082	.24671	5.0223	6.7748
#3	3.0923	.61147	.59952	.65387	15.022	.24868	4.9803	6.7817

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	1.1830	4.8570	.06065	.34664	.24852	8.7713	120.30
Stddev	.0027	.0052	.00050	.00052	.00042	.0123	1.71
%RSD	.22825	.10731	.81756	.14912	.17094	.13962	1.4209
#1	1.1840	4.8628	.06010	.34655	.24828	8.7776	121.11
#2	1.1799	4.8557	.06079	.34618	.24828	8.7572	118.33
#3	1.1850	4.8526	.06107	.34720	.24901	8.7791	121.45

Sample Name: S5 Acquired: 1/17/2025 11:12:31 Type: Cal
Method: NON EPA-6010-200.7(v2490) 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	2806.7	54811.	9525.1	1930.8	3926.7
Stddev	6.1	167.	82.5	4.9	9.8
%RSD	.21648	.30485	.86562	.25178	.25006
#1	2800.1	54898.	9453.9	1934.2	3916.3
#2	2808.0	54619.	9506.0	1925.3	3935.8
#3	2812.0	54917.	9615.5	1933.0	3928.0

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICV01 Acquired: 1/17/2025 11:21:49 Type: Unk
Method: NON EPA-6010-200.7(v2615) 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	1.030474	1.027582	.9988133	1.029846	.9918412	2.352533
Stddev	.002511	.009223	.0020182	.007972	.0056656	.007675
%RSD	.2436336	.8975742	.2020553	.7740718	.5712229	.3262532
#1	1.029009	1.034055	.9964830	1.023381	.9869268	2.354523
#2	1.029040	1.017021	.9999930	1.027403	.9905586	2.359017
#3	1.033373	1.031669	.9999638	1.038753	.9980381	2.344058

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4868611	.4623760	.5011382	9.280969	.5187054	.5046754
Stddev	.0007596	.0037176	.0011333	.009763	.0019897	.0009452
%RSD	.1560285	.8040223	.2261381	.1051957	.3835886	.1872836
#1	.4871920	.4587924	.5004593	9.275227	.5197638	.5036087
#2	.4859922	.4621210	.5005089	9.275438	.5164102	.5050090
#3	.4873992	.4662145	.5024465	9.292242	.5199423	.5054085

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5172935	9.621265	.4686557	5.455175	.5078646	.2503725
Stddev	.0017025	.053644	.0016031	.017567	.0014945	.0006112
%RSD	.3291099	.5575600	.3420691	.3220200	.2942763	.2441219
#1	.5161238	9.678712	.4675217	5.438557	.5061867	.2501812
#2	.5165100	9.612608	.4679556	5.473557	.5083538	.2510565
#3	.5192466	9.572476	.4704898	5.453409	.5090531	.2498799

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.49931	.4570355	.9986168	9.501129	2.375485	2.428469
Stddev	.05484	.0017324	.0031636	.049301	.018594	.009829
%RSD	.5222746	.3790541	.3168024	.5188943	.7827463	.4047384
#1	10.56135	.4589337	.9996559	9.519223	2.355331	2.426580
#2	10.47929	.4555397	.9950642	9.538827	2.379154	2.419722
#3	10.45731	.4566330	1.001130	9.445338	2.391972	2.439106

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICV01 Acquired: 1/17/2025 11:21:49 Type: Unk
Method: NON EPA-6010-200.7(v2615) 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	2.355412	F 2.207515	F 1.822904	F .0074599	F -.009294	F -.003690
Stddev	.002736	.002958	.015026	.0022696	.003215	.000711
%RSD	.1161412	.1340087	.8243035	30.42348	34.59431	19.27026
#1	2.356415	2.207791	1.833564	.0048406	-.006705	-.004329
#2	2.352316	2.204429	1.829429	.0088434	-.008284	-.003818
#3	2.357504	2.210326	1.805718	.0086957	-.012893	-.002924

Elem	Sr4077
Units	ppm
Avg	F -.008419
Stddev	.000097
%RSD	1.155923
#1	-.008531
#2	-.008363
#3	-.008362

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2904.396	57040.37	10711.00	1986.784	4261.375
Stddev	8.637	80.55	63.48	5.879	7.691
%RSD	.2973768	.1412170	.5926590	.2959223	.1804731
#1	2911.171	56947.77	10767.22	1982.033	4268.159
#2	2907.347	57094.24	10723.63	1993.359	4262.945
#3	2894.670	57079.10	10642.16	1984.960	4253.020

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: LLICV01 Acquired: 1/17/2025 11:26:15 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0221084	.0383903	.0129700	.0210525	.0512970	.0933106
Stddev	.0017907	.0012530	.0006951	.0016485	.0004083	.0032933
%RSD	8.099632	3.263905	5.359498	7.830658	.7958857	3.529360
#1	.0206666	.0370057	.0122808	.0211645	.0517662	.0911226
#2	.0215457	.0387189	.0136709	.0193507	.0510225	.0917110
#3	.0241129	.0394462	.0129583	.0226421	.0511024	.0970981

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0847658	.0054659	.0058111	1.871222	.0096570	.0292230
Stddev	.0005973	.0000797	.0000397	.002073	.0005788	.0000824
%RSD	.7046138	1.458100	.6835145	.1107949	5.993427	.2820314
#1	.0840784	.0055316	.0057965	1.871922	.0091105	.0291624
#2	.0851573	.0053772	.0058560	1.872854	.0095970	.0291898
#3	.0850618	.0054888	.0057806	1.868889	.0102634	.0293169

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219671	.1017442	.0185204	1.948133	.0391806	.0102817
Stddev	.0006334	.0022746	.0003471	.026278	.0001330	.0002850
%RSD	2.883419	2.235579	1.874085	1.348890	.3393433	2.771816
#1	.0221590	.0993218	.0186073	1.930849	.0390277	.0104254
#2	.0224823	.1038345	.0181381	1.935177	.0392690	.0104662
#3	.0212599	.1020763	.0188158	1.978373	.0392451	.0099535

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.854204	.0364747	.0422374	2.054146	.0988228	.2034533
Stddev	.014111	.0011134	.0005841	.026625	.0009622	.0006559
%RSD	.7610422	3.052624	1.382861	1.296169	.9736285	.3223902
#1	1.845096	.0352081	.0429062	2.048844	.0999271	.2032810
#2	1.847058	.0369169	.0418273	2.083023	.0983765	.2029008
#3	1.870459	.0372991	.0419788	2.030571	.0981648	.2041782

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: LLICV01 Acquired: 1/17/2025 11:26:15 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0386223	.0372224	.3544233	.0184536	.0174858	F .0149957
Stddev	.0006580	.0005732	.0062270	.0015554	.0016217	.0015475
%RSD	1.703638	1.540036	1.756929	8.428606	9.274632	10.31933
#1	.0393457	.0375126	.3502910	.0201475	.0164840	.0134232
#2	.0380593	.0375925	.3513936	.0170896	.0166165	.0165168
#3	.0384620	.0365621	.3615854	.0181236	.0193568	.0150472

Elem	Sr4077
Units	ppm
Avg	.0184737
Stddev	.0000621
%RSD	.3361583
#1	.0184952
#2	.0185222
#3	.0184037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2941.690	56319.18	10934.70	2003.134	4393.744
Stddev	3.314	102.32	33.65	6.146	5.901
%RSD	.1126549	.1816757	.3077542	.3068043	.1343119
#1	2943.922	56437.26	10898.67	2007.610	4393.871
#2	2943.266	56263.59	10940.10	2005.665	4399.581
#3	2937.882	56256.70	10965.32	1996.127	4387.780

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICB01 Acquired: 1/17/2025 11:30:47 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.001553	-.000134	.0011880	.0000348	.0011165	-.003025	-.005366
Stddev	.000574	.001078	.0004114	.0006995	.0009624	.003030	.000952
%RSD	36.96502	805.6150	34.63251	2011.885	86.19947	100.1596	17.73646
#1	-.000975	-.000587	.0012499	.0002710	.0008240	.000395	-.004397
#2	-.001560	-.000910	.0007491	.0005856	.0021913	-.005373	-.005401
#3	-.002123	.001096	.0015650	-.000752	.0003343	-.004097	-.006300

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000028	-.000126	-.014129	-.000194	-.000092	.0001449	.0000182
Stddev	.000010	.000112	.003178	.000331	.000099	.0001311	.0047811
%RSD	37.01035	89.20734	22.49232	170.9151	107.4220	90.48927	26257.13
#1	-.000027	-.000096	-.013528	.000127	-.000202	.0000068	-.003194
#2	-.000038	-.000032	-.011294	-.000534	-.000014	.0002677	.005513
#3	-.000018	-.000250	-.017564	-.000174	-.000059	.0001601	-.002265

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000171	.0057518	.0001667	.0001536	.0042882	-.000561	-.000415
Stddev	.000185	.0021543	.0001448	.0005220	.0137101	.002832	.000110
%RSD	108.0994	37.45347	86.83784	339.7481	319.7200	504.7412	26.59409
#1	-.000044	.0035343	.0002357	-.000423	.0142490	-.003810	-.000426
#2	-.000383	.0058845	.0002641	.000289	.0099639	.001383	-.000519
#3	-.000086	.0078367	.0000003	.000594	-.011348	.000744	-.000299

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0910002	-.000003	-.000135	.0001487	.0007922	.0070914	.0006480
Stddev	.0409457	.000455	.000231	.0003525	.0006483	.0070245	.0012464
%RSD	44.99511	15490.42	170.7989	237.1151	81.83642	99.05723	192.3661
#1	.0442926	.000459	.000066	-.000232	.0012585	.0102290	.0000216
#2	.1080022	-.000451	-.000388	.000463	.0010662	-.000955	.0020833
#3	.1207059	-.000017	-.000084	.000215	.0000519	.012000	-.000161

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICB01 Acquired: 1/17/2025 11:30:47 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.002668	-.003754	-.000044
Stddev	.003223	.000767	.000024
%RSD	120.8012	20.43143	54.94663
#1	.000900	-.003997	-.000017
#2	-.003534	-.004370	-.000052
#3	-.005370	-.002895	-.000062

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2957.646	56603.57	10857.15	2024.237	4431.938
Stddev	5.619	126.11	41.72	4.776	8.610
%RSD	.1899807	.2227931	.3842174	.2359555	.1942825
#1	2962.654	56482.12	10811.16	2024.401	4433.976
#2	2958.713	56733.87	10867.77	2028.929	4439.347
#3	2951.569	56594.73	10892.53	2019.381	4422.492

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CRI01 Acquired: 1/17/2025 11:35:09 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0192323	.0390411	.0124209	.0207275	.0502635	.0883553	.0853118
Stddev	.0021141	.0002919	.0001751	.0012411	.0015073	.0052165	.0008345
%RSD	10.99255	.7475622	1.410009	5.987545	2.998825	5.903987	.9781945
#1	.0196269	.0389497	.0125206	.0221100	.0511695	.0936433	.0843817
#2	.0169487	.0393678	.0122186	.0197094	.0510974	.0882093	.0855587
#3	.0211214	.0388060	.0125234	.0203631	.0485235	.0832134	.0859950

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056049	.0058241	1.876732	.0094341	.0288706	.0214167	.0976943
Stddev	.0000593	.0000793	.001899	.0001269	.0001037	.0001840	.0042088
%RSD	1.057286	1.361393	.1011699	1.345353	.3592331	.8592563	4.308134
#1	.0056732	.0057905	1.878010	.0095493	.0288477	.0212599	.1021628
#2	.0055746	.0059146	1.874551	.0092980	.0287802	.0213710	.0938053
#3	.0055670	.0057671	1.877636	.0094551	.0289838	.0216193	.0971147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189824	1.959084	.0384847	.0099957	1.805613	.0358516	.0411576
Stddev	.0000677	.027480	.0003723	.0001303	.010628	.0007070	.0001201
%RSD	.3566867	1.402702	.9673532	1.303173	.5886240	1.971920	.2918829
#1	.0189673	1.945732	.0381631	.0101439	1.795488	.0359561	.0410613
#2	.0189235	1.940831	.0383985	.0099440	1.804670	.0350982	.0411194
#3	.0190564	1.990689	.0388925	.0098992	1.816682	.0365005	.0412922

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.994140	.0935950	.2006374	.0384260	.0377954	.3336241	.0192147
Stddev	.034932	.0008188	.0006805	.0001132	.0005188	.0027142	.0011663
%RSD	1.751752	.8748056	.3391601	.2945821	1.372760	.8135623	6.070014
#1	2.034144	.0945174	.2005120	.0384391	.0379874	.3315518	.0191051
#2	1.969662	.0929541	.2000284	.0383068	.0381909	.3326241	.0181070
#3	1.978614	.0933136	.2013719	.0385321	.0372079	.3366965	.0204320

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CRI01 Acquired: 1/17/2025 11:35:09 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0178448	.0147142	.0184076
Stddev	.0011712	.0002959	.0000714
%RSD	6.563036	2.010693	.3875921
#1	.0171923	.0148087	.0184167
#2	.0191968	.0149513	.0183322
#3	.0171452	.0143827	.0184740

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2934.594	56628.53	10561.25	2034.957	4361.720
Stddev	7.252	188.05	30.57	4.169	13.839
%RSD	.2471220	.3320706	.2894077	.2048598	.3172825
#1	2934.823	56750.75	10577.16	2030.147	4356.335
#2	2941.728	56722.85	10580.57	2037.218	4377.443
#3	2927.230	56411.99	10526.01	2037.508	4351.384

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICSA01 Acquired: 1/17/2025 11:39:29 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0018548	.0101662	.0096672	-.013609	-.001383	230.4428
Stddev	.0025853	.0012860	.0013210	.003336	.001437	.0704
%RSD	139.3869	12.64977	13.66445	24.51243	103.8768	.0305460
#1	-.001114	.0087449	.0085640	-.017424	-.001928	230.3615
#2	.003067	.0105044	.0111310	-.012169	.000246	230.4818
#3	.003612	.0112492	.0093066	-.011235	-.002467	230.4850

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001168	.0012048	-.001588	214.8490	.0549995	.0010868
Stddev	.001145	.0000937	.000153	.0435	.0004505	.0001205
%RSD	98.01137	7.774321	9.631535	.0202349	.8190560	11.08559
#1	-.001882	.0011178	-.001702	214.8092	.0547705	.0009515
#2	-.001775	.0013039	-.001649	214.8424	.0555184	.0011262
#3	.000152	.0011928	-.001414	214.8954	.0547095	.0011826

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0206139	95.88055	.0032301	226.1613	.0025205	-.002424
Stddev	.0003874	.32916	.0002772	.1072	.0003979	.000291
%RSD	1.879430	.3433073	8.580711	.0473890	15.78596	11.99629
#1	.0202203	96.22583	.0029249	226.0565	.0020716	-.002261
#2	.0209948	95.84551	.0032990	226.1567	.0026600	-.002760
#3	.0206267	95.57031	.0034663	226.2707	.0028298	-.002252

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0470481	.0067076	.0031023	.1221941	.0427801	-.000237
Stddev	.0072258	.0009263	.0002836	.0131054	.0010240	.000091
%RSD	15.35829	13.80964	9.142520	10.72509	2.393596	38.36982
#1	.0430907	.0063470	.0030982	.1189367	.0435433	-.000310
#2	.0553881	.0060158	.0028207	.1366210	.0431805	-.000135
#3	.0426656	.0077600	.0033879	.1110246	.0416164	-.000267

Sample Name: ICSA01 Acquired: 1/17/2025 11:39:29 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003356	-.001014	.0215893	.0016204	-.018101	F -.036938
Stddev	.001239	.000203	.0040845	.0039764	.002492	.001002
%RSD	36.93109	20.01092	18.91915	245.3874	13.76894	2.711671
#1	-.004704	-.000965	.0242935	.0027213	-.019933	-.035797
#2	-.002266	-.000840	.0168908	.0049304	-.015263	-.037669
#3	-.003097	-.001236	.0235836	-.002790	-.019107	-.037349

Elem	Sr4077
Units	ppm
Avg	-.006220
Stddev	.000124
%RSD	1.994954
#1	-.006286
#2	-.006298
#3	-.006077

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2659.677	50789.26	10375.89	1812.370	3707.803
Stddev	4.183	62.68	41.67	2.315	7.235
%RSD	.1572613	.1234047	.4016288	.1277420	.1951157
#1	2660.644	50819.67	10404.07	1814.078	3702.237
#2	2663.291	50830.94	10395.59	1813.295	3715.981
#3	2655.095	50717.18	10328.02	1809.735	3705.192

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICSAB01 Acquired: 1/17/2025 11:43:45 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.1103366	.0973501	.0575451	.0316701	.6059007	235.6710
Stddev	.0037852	.0025394	.0005227	.0024951	.0004465	.1962
%RSD	3.430614	2.608489	.9083113	7.878272	.0736885	.0832721
#1	.1139114	.0948005	.0581283	.0345031	.6054469	235.6729
#2	.1063712	.0998791	.0571188	.0297997	.6059159	235.4739
#3	.1107273	.0973708	.0573882	.0307076	.6063395	235.8664

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4549439	.4534873	.9712811	218.4067	.5602765	.4936602
Stddev	.0003925	.0020527	.0037652	.2734	.0016640	.0018485
%RSD	.0862823	.4526492	.3876570	.1251819	.2969927	.3744547
#1	.4547522	.4552053	.9692120	218.5931	.5603143	.4927542
#2	.4546840	.4540425	.9690041	218.5341	.5619213	.4924395
#3	.4553954	.4512141	.9756271	218.0928	.5585940	.4957870

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4963375	100.5718	.4483251	229.4038	.9740552	.2160302
Stddev	.0023709	.1955	.0008397	.4149	.0040025	.0000963
%RSD	.4776755	.1943560	.1873041	.1808696	.4109161	.0445891
#1	.4947367	100.3687	.4487496	229.6389	.9736386	.2159210
#2	.4952146	100.5880	.4473579	229.6478	.9702773	.2160663
#3	.4990613	100.7587	.4488678	228.9248	.9782498	.2161033

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0735249	.4513308	1.048234	.1107885	.9411042	1.058940
Stddev	.0164304	.0022089	.003736	.0427359	.0029936	.003228
%RSD	22.34670	.4894084	.3563927	38.57429	.3180911	.3048699
#1	.0684802	.4503676	1.052423	.0729073	.9438693	1.055898
#2	.0918862	.4497671	1.045247	.1571174	.9415181	1.058595
#3	.0602084	.4538577	1.047032	.1023409	.9379253	1.062327

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICSAB01 Acquired: 1/17/2025 11:43:45 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029085	.9536635	.8949008	F .0099025	F -.024523	F -.037157
Stddev	.002413	.0009841	.0155538	.0040369	.006589	.000377
%RSD	.2344350	.1031890	1.738047	40.76674	26.86879	1.013633
#1	1.027229	.9539330	.8892607	.0068992	-.029110	-.036723
#2	1.028215	.9544847	.8829540	.0083167	-.016973	-.037358
#3	1.031812	.9525728	.9124878	.0144915	-.027487	-.037391

Elem	Sr4077
Units	ppm
Avg	F -.008191
Stddev	.000248
%RSD	3.022048
#1	-.008006
#2	-.008095
#3	-.008472

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2670.748	50523.73	10642.75	1785.118	3738.094
Stddev	6.735	92.64	34.06	2.288	10.331
%RSD	.2521623	.1833677	.3200380	.1281735	.2763729
#1	2669.889	50600.79	10619.56	1787.488	3738.141
#2	2677.871	50420.94	10626.82	1782.921	3748.402
#3	2664.485	50549.45	10681.85	1784.945	3727.740

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICSADLX20 Acquired: 1/17/2025 11:47:50 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000752	-.000555	.0012448	-.002787	-.000186	11.73751	-.005662
Stddev	.001820	.001476	.0006101	.002498	.000439	.00915	.000577
%RSD	242.1563	266.1447	49.01174	89.65434	236.1605	.0779441	10.19714
#1	-.001915	-.001284	.0007549	-.005570	-.000597	11.73818	-.005831
#2	-.001686	.001144	.0019282	-.000738	-.000238	11.72805	-.006137
#3	.001346	-.001525	.0010513	-.002052	.000277	11.74631	-.005020

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000760	-.000236	11.39843	.0022096	-.000016	.0013052	4.996810
Stddev	.0000309	.000059	.02309	.0001100	.000117	.0001396	.051763
%RSD	40.67943	24.98746	.2025692	4.977980	746.3910	10.69422	1.035911
#1	.0000463	-.000300	11.37532	.0021980	-.000142	.0014619	5.046471
#2	.0001080	-.000222	11.39848	.0021058	.000088	.0011941	4.943175
#3	.0000738	-.000185	11.42150	.0023249	.000007	.0012596	5.000783

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000149	11.65390	.0002816	.0005479	.0157268	-.001585	-.000307
Stddev	.000284	.02824	.0002878	.0000370	.0085311	.001080	.000276
%RSD	190.8592	.2423614	102.1920	6.755811	54.24589	68.14144	89.81521
#1	.000170	11.65477	.0000684	.0005457	.0086151	-.000527	-.000354
#2	-.000243	11.68169	.0006090	.0005120	.0251858	-.001542	-.000011
#3	-.000374	11.62522	.0001675	.0005860	.0133794	-.002687	-.000556

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0651774	-.000420	-.000173	-.001291	.0001879	.0038564	-.000335
Stddev	.0440167	.000679	.000159	.000692	.0003996	.0047372	.001930
%RSD	67.53363	161.6525	91.90834	53.60331	212.6765	122.8407	576.6092
#1	.0728051	.000227	-.000034	-.001940	.0006493	.0087542	.001877
#2	.1048817	-.000360	-.000346	-.000563	-.000038	-.000702	-.001675
#3	.0178454	-.001126	-.000139	-.001368	-.000048	.003517	-.001206

Sample Name: ICSADLX20 Acquired: 1/17/2025 11:47:50 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0000629	-.003416	-.000267
Stddev	.0014106	.000906	.000065
%RSD	2243.054	26.52870	24.23527
#1	.0003148	-.003933	-.000340
#2	.0013306	-.003944	-.000245
#3	-.001457	-.002369	-.000216

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2941.389	55862.67	10885.34	1971.602	4371.769
Stddev	5.004	273.73	92.25	6.368	7.494
%RSD	.1701215	.4899974	.8474355	.3229949	.1714248
#1	2935.853	55588.55	10988.40	1964.826	4365.032
#2	2942.721	56136.00	10810.50	1977.464	4370.432
#3	2945.591	55863.48	10857.12	1972.517	4379.841

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: ICSABDLX20 Acquired: 1/17/2025 11:52:09 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0066916	.0035819	.0037793	.0031615	.0293487	11.88095	.0186677
Stddev	.0006002	.0011631	.0008948	.0014208	.0009195	.02931	.0007461
%RSD	8.970069	32.47199	23.67813	44.94093	3.132894	.2466904	3.996753
#1	.0060515	.0037758	.0046624	.0021471	.0303524	11.90152	.0188146
#2	.0067816	.0023340	.0028731	.0025520	.0285471	11.89394	.0193294
#3	.0072418	.0046358	.0038023	.0047853	.0291466	11.84739	.0178591

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0240780	.0494399	11.57617	.0279990	.0244875	.0267051	4.957169
Stddev	.0000461	.0002458	.01891	.0002802	.0001810	.0003065	.022477
%RSD	.1913250	.4972650	.1633199	1.000562	.7393004	1.147886	.4534287
#1	.0240277	.0495513	11.59229	.0281686	.0243615	.0265476	4.965797
#2	.0241180	.0491581	11.55536	.0281528	.0246950	.0265093	4.974053
#3	.0240885	.0496103	11.58085	.0276757	.0244061	.0270583	4.931656

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0238969	11.86217	.0496448	.0104681	.0140885	.0233853	.0513715
Stddev	.0003419	.03976	.0001691	.0002406	.0096757	.0011105	.0006066
%RSD	1.430926	.3352103	.3406482	2.298230	68.67797	4.748693	1.180829
#1	.0241136	11.89836	.0494853	.0103937	.0047274	.0245642	.0519017
#2	.0240743	11.86854	.0498221	.0102735	.0240507	.0223590	.0507100
#3	.0235027	11.81960	.0496271	.0107371	.0134875	.0232327	.0515028

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0475084	.0465086	.0534986	.0505150	.0505235	.0465117	.0014951
Stddev	.0114621	.0003534	.0000477	.0008340	.0006007	.0020687	.0009325
%RSD	24.12640	.7597688	.0890898	1.650978	1.188935	4.447595	62.36774
#1	.0444758	.0467692	.0535361	.0497389	.0502428	.0479446	.0022533
#2	.0601819	.0466502	.0535147	.0504092	.0501146	.0474505	.0017780
#3	.0378677	.0461064	.0534449	.0513968	.0512132	.0441402	.0004540

Sample Name: ICSABDLX20 Acquired: 1/17/2025 11:52:09 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000548	-.004180	-.000203
Stddev	.001499	.000426	.000062
%RSD	273.2844	10.18145	30.59716
#1	-.001816	-.003845	-.000144
#2	.001105	-.004659	-.000268
#3	-.000934	-.004037	-.000197

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2913.265	55889.51	10627.20	1984.498	4301.128
Stddev	3.825	43.73	23.94	4.093	13.864
%RSD	.1312879	.0782381	.2252687	.2062517	.3223394
#1	2909.320	55860.84	10601.83	1982.765	4285.420
#2	2916.957	55867.86	10649.39	1989.172	4311.660
#3	2913.518	55939.84	10630.39	1981.556	4306.304

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV01 Acquired: 1/17/2025 11:56:26 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.931060	4.676425	4.945129	4.897738	5.008369	9.869653	9.944299
Stddev	.012877	.093817	.025373	.016524	.005040	.009076	.049726
%RSD	.2611455	2.006177	.5130887	.3373743	.1006339	.0919585	.5000467
#1	4.924417	4.609421	4.931498	4.892749	5.006492	9.863160	9.988193
#2	4.922861	4.636208	4.929485	4.884284	5.004537	9.880023	9.890295
#3	4.945903	4.783647	4.974404	4.916181	5.014079	9.865775	9.954408

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2419333	2.463385	24.38629	1.012630	2.469627	1.253529	5.082512
Stddev	.0009543	.008411	.05684	.001660	.007755	.000229	.033561
%RSD	.3944331	.3414382	.2330850	.1638928	.3140266	.0182650	.6603283
#1	.2426451	2.461880	24.38060	1.014501	2.468925	1.253394	5.069443
#2	.2408489	2.455828	24.44576	1.011336	2.462246	1.253399	5.120642
#3	.2423057	2.472447	24.33250	1.012053	2.477709	1.253793	5.057451

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.417002	23.98461	2.466022	1.266182	25.22996	2.443512	2.562360
Stddev	.006735	.09761	.006272	.003653	.28319	.006828	.010871
%RSD	.2786612	.4069770	.2543497	.2884768	1.122421	.2794475	.4242701
#1	2.417276	23.89071	2.466637	1.270128	25.23719	2.436904	2.574482
#2	2.423597	23.97756	2.459465	1.265499	25.50946	2.450541	2.553475
#3	2.410135	24.08555	2.471964	1.262919	24.94323	2.443089	2.559123

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.58705	4.768845	5.047026	4.899993	4.892145	4.841326	4.887771
Stddev	.22299	.014788	.014652	.025263	.016901	.035478	.030994
%RSD	.8714914	.3101058	.2902997	.5155754	.3454647	.7328114	.6341066
#1	25.63388	4.783029	5.043315	4.886342	4.887755	4.841406	4.864511
#2	25.78291	4.753519	5.034587	4.884493	4.910808	4.876763	4.875846
#3	25.34437	4.769986	5.063177	4.929145	4.877873	4.805808	4.922956

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV01 Acquired: 1/17/2025 11:56:26 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.752206	4.881753	4.984739
Stddev	.032468	.022093	.030169
%RSD	.6832147	.4525710	.6052189
#1	4.726175	4.876466	5.018959
#2	4.741855	4.906010	4.973275
#3	4.788587	4.862782	4.961983

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2885.954	54834.26	10228.04	1938.914	4157.318
Stddev	2.616	94.33	29.92	9.240	8.767
%RSD	.0906338	.1720185	.2925412	.4765551	.2108857
#1	2885.845	54758.86	10223.18	1929.764	4157.939
#2	2888.622	54803.90	10260.09	1948.242	4165.758
#3	2883.394	54940.03	10200.84	1938.735	4148.257

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB01 Acquired: 1/17/2025 12:00:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000219	-.000322	.0009252	.0009060	.0017488	.0034495	-.007702
Stddev	.001702	.002166	.0010218	.0008827	.0008457	.0047497	.000864
%RSD	777.2640	672.5857	110.4318	97.43592	48.35861	137.6942	11.22295
#1	-.002051	.001078	-.000237	.0019166	.0027250	-.002035	-.006737
#2	.000081	-.002817	.001684	.0002859	.0012831	.006243	-.007965
#3	.001313	.000773	.001328	.0005154	.0012383	.006140	-.008404

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000021	.0000008	-.007484	-.000571	-.000210	-.000003	.0087776
Stddev	.000021	.0000888	.001934	.000367	.000253	.000279	.0036878
%RSD	102.4287	11879.00	25.84090	64.16513	120.7845	9199.129	42.01347
#1	-.000020	-.000084	-.006840	-.000965	-.000458	-.000276	.0129631
#2	-.000000	.000093	-.009657	-.000509	.000049	-.000015	.0073637
#3	-.000043	-.000007	-.005954	-.000240	-.000220	.000282	.0060060

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000413	-.004453	.0000652	.0002242	-.033416	-.001408	-.000387
Stddev	.000116	.004534	.0000806	.0002831	.013797	.001440	.000151
%RSD	28.02622	101.8001	123.7377	126.2903	41.28788	102.3025	38.89204
#1	-.000520	-.004859	.0000493	.0005407	-.045268	-.000960	-.000402
#2	-.000428	.000270	.0001526	-.000005	-.018270	-.000245	-.000230
#3	-.000290	-.008770	-.000006	.000137	-.036711	-.003019	-.000530

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.012395	.0060585	.0000483	-.000343	.0006924	.0020830	.0000556
Stddev	.018898	.0004282	.0000794	.000532	.0002396	.0073132	.0027571
%RSD	152.4573	7.067424	164.4584	155.0336	34.60176	351.0945	4956.999
#1	-.002597	.0056752	.0000664	.000268	.0009601	.0097350	.0001146
#2	-.034180	.0065206	-.000039	-.000597	.0006188	-.004836	.0027828
#3	-.000410	.0059799	.000117	-.000701	.0004982	.001350	-.002731

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB01 Acquired: 1/17/2025 12:00:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.002963	-.002399	.0000364
Stddev	.000573	.000524	.0000366
%RSD	19.35086	21.85446	100.4552
#1	-.002311	-.002653	.0000598
#2	-.003188	-.001796	.0000553
#3	-.003390	-.002749	-.000006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2909.172	56797.69	10609.07	2024.997	4370.478
Stddev	9.170	89.44	29.04	9.244	10.950
%RSD	.3152179	.1574666	.2737273	.4564837	.2505401
#1	2909.189	56726.24	10640.55	2022.247	4371.361
#2	2918.334	56897.99	10583.33	2035.303	4380.959
#3	2899.993	56768.84	10603.34	2017.440	4359.113

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166054BL Acquired: 1/17/2025 12:05:00 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.002485	-.002726	.0009410	.0027543	.0004605	.0015652	-.008502
Stddev	.003677	.000353	.0008116	.0011025	.0002624	.0076944	.000758
%RSD	147.9830	12.95528	86.25452	40.02758	56.99005	491.6088	8.920495
#1	-.005223	-.002872	.0000283	.0015139	.0004817	-.005710	-.008162
#2	-.003926	-.002982	.0015817	.0031268	.0007117	.000786	-.007972
#3	.001695	-.002323	.0012129	.0036224	.0001881	.009619	-.009370

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000018	-.000151	.0125540	-.000369	-.000179	-.000051	-.000803
Stddev	.000037	.000071	.0025102	.000053	.000217	.000245	.001992
%RSD	202.7796	47.22886	19.99556	14.37708	121.0216	478.7246	248.1454
#1	.000011	-.000206	.0138809	-.000429	.000064	.000092	.000818
#2	-.000006	-.000071	.0141223	-.000351	-.000251	-.000334	-.000199
#3	-.000060	-.000177	.0096588	-.000328	-.000351	.000088	-.003027

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000121	-.014735	.0003132	.0005854	-.027101	-.002686	-.000011
Stddev	.000118	.014869	.0002754	.0003005	.006302	.000709	.000182
%RSD	97.65439	100.9120	87.92916	51.33159	23.25231	26.40067	1633.526
#1	-.000200	-.031670	.0001248	.0003889	-.033568	-.002743	.000186
#2	.000015	-.003817	.0006292	.0009314	-.026756	-.001950	-.000171
#3	-.000179	-.008718	.0001855	.0004360	-.020979	-.003364	-.000048

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009102	-.001588	.0001149	-.000477	.0007675	.0069999	-.000174
Stddev	.044121	.000836	.0001705	.000575	.0003258	.0003070	.000729
%RSD	484.7507	52.61607	148.4295	120.5015	42.44714	4.385755	418.3074
#1	-.017424	-.000628	.0002836	-.000168	.0007001	.0069592	-.000996
#2	-.048469	-.001985	.0001183	-.001141	.0004806	.0067152	.000080
#3	.038588	-.002151	-.000057	-.000123	.0011216	.0073252	.000393

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166054BL Acquired: 1/17/2025 12:05:00 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.005048	-.002068	.0000442
Stddev	.000794	.000325	.0000473
%RSD	15.72337	15.71346	107.0749
#1	-.005701	-.002241	.0000345
#2	-.005279	-.002270	.0000024
#3	-.004165	-.001693	.0000955

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2914.560	55593.42	10691.88	1957.011	4416.704
Stddev	5.005	255.60	10.64	5.195	9.790
%RSD	.1717398	.4597655	.0995097	.2654434	.2216663
#1	2919.201	55537.65	10699.08	1957.136	4422.552
#2	2915.224	55370.31	10679.66	1951.755	4422.160
#3	2909.256	55872.30	10696.90	1962.143	4405.402

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166054BS Acquired: 1/17/2025 12:09:20 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8055568	1.866302	.9703883	1.967861	.8047391	1.876402
Stddev	.0061610	.009776	.0007966	.002946	.0019285	.003592
%RSD	.7648168	.5238255	.0820868	.1497028	.2396435	.1914191
#1	.8099456	1.855236	.9702663	1.964588	.8025293	1.872988
#2	.8082113	1.869905	.9712388	1.968692	.8060820	1.880149
#3	.7985134	1.873765	.9696598	1.970301	.8056060	1.876068

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1674675	.1864893	.1933838	.9586660	.4052656	.1948713
Stddev	.0006459	.0006942	.0005844	.0128853	.0014869	.0003847
%RSD	.3856986	.3722200	.3021886	1.344088	.3668886	.1974201
#1	.1676573	.1865139	.1928562	.9734892	.4069661	.1944610
#2	.1667479	.1871708	.1940119	.9501431	.4042104	.1952239
#3	.1679972	.1857831	.1932831	.9523656	.4046202	.1949289

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3082670	2.963178	.1834210	1.782600	.4922275	.0753710
Stddev	.0000941	.019994	.0010051	.011200	.0014541	.0004625
%RSD	.0305407	.6747577	.5479538	.6283140	.2954165	.6136759
#1	.3081697	2.985914	.1841832	1.775385	.4906967	.0755518
#2	.3083577	2.948335	.1837979	1.795503	.4935904	.0757159
#3	.3082736	2.955284	.1822820	1.776912	.4923955	.0748454

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.640180	.2734236	.2091066	9.648003	.2705565	.4072262
Stddev	.017326	.0007785	.0007616	.077938	.0017785	.0005202
%RSD	.6562594	.2847223	.3642293	.8078157	.6573427	.1277366
#1	2.659418	.2742026	.2095002	9.736073	.2701328	.4066379
#2	2.625805	.2726456	.2082287	9.587934	.2725086	.4074153
#3	2.635315	.2734227	.2095910	9.620003	.2690281	.4076253

Sample Name: PB166054BS Acquired: 1/17/2025 12:09:20 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6768115	.1864636	F .7375839	5.548329	F -.013817	.1836638
Stddev	.0031362	.0012940	.0086334	.015217	.003435	.0020517
%RSD	.4633761	.6939968	1.170494	.2742547	24.85871	1.117108
#1	.6739250	.1859868	.7323555	5.531148	-.013746	.1843353
#2	.6801486	.1854755	.7328473	5.560105	-.010418	.1813605
#3	.6763608	.1879284	.7475488	5.553735	-.017287	.1852957

Elem	Sr4077
Units	ppm
Avg	.1833633
Stddev	.0006340
%RSD	.3457384
#1	.1840586
#2	.1828174
#3	.1832138

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2880.333	55205.79	10545.27	1933.217	4305.044
Stddev	5.587	234.63	24.32	9.613	10.260
%RSD	.1939677	.4250041	.2306678	.4972726	.2383168
#1	2885.507	54939.62	10522.43	1928.342	4315.186
#2	2874.409	55382.62	10542.53	1944.291	4294.671
#3	2881.083	55295.14	10570.85	1927.018	4305.274

Sample Name: PB166037BL Acquired: 1/17/2025 12:13:22 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.002017	-.002101	.0021593	.0013239	.0019543	.0010006	-.010094
Stddev	.002652	.000308	.0009163	.0023531	.0007350	.0102290	.000926
%RSD	131.4774	14.64850	42.43635	177.7440	37.60716	1022.302	9.174604
#1	.000898	-.002456	.0016358	.0017020	.0011433	.0102662	-.009025
#2	-.004288	-.001938	.0016247	-.001195	.0021433	-.009976	-.010647
#3	-.002662	-.001910	.0032173	.003465	.0025764	.002712	-.010611

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000021	-.000089	.0067291	-.000422	-.000138	-.000326	.0045944
Stddev	.000007	.000026	.0082065	.000218	.000016	.000263	.0052585
%RSD	33.07714	28.93468	121.9556	51.67125	11.62697	80.64139	114.4544
#1	-.000015	-.000098	.0129862	-.000188	-.000123	-.000625	.0106240
#2	-.000020	-.000110	-.002563	-.000458	-.000138	-.000222	.0009596
#3	-.000029	-.000060	.009764	-.000620	-.000155	-.000131	.0021995

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000345	-.007104	.0001335	.0006570	-.008059	-.002026	-.000115
Stddev	.000213	.009543	.0002853	.0003520	.019955	.000728	.000375
%RSD	61.68295	134.3363	213.5894	53.57160	247.6139	35.94541	325.5221
#1	-.000500	-.018122	-.000147	.0010622	.009125	-.001856	-.000548
#2	-.000432	-.001749	.000423	.0004812	-.029945	-.001399	.000084
#3	-.000102	-.001441	.000124	.0004275	-.003357	-.002825	.000118

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0297132	-.003690	-.000082	-.000198	.0005773	.0075547	-.000207
Stddev	.0325266	.000333	.000138	.000898	.0002473	.0022134	.002322
%RSD	109.4688	9.033306	167.1383	452.7258	42.83549	29.29794	1123.907
#1	.0672312	-.003877	.000028	-.001218	.0006847	.0092177	.002465
#2	.0124629	-.003887	-.000237	.000476	.0002945	.0050425	-.001733
#3	.0094453	-.003305	-.000038	.000147	.0007528	.0084040	-.001352

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166037BL Acquired: 1/17/2025 12:13:22 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.005294	-.003206	-.000002
Stddev	.000871	.000869	.000029
%RSD	16.44729	27.12190	1400.395
#1	-.005399	-.003919	-.000028
#2	-.004375	-.003461	-.000006
#3	-.006107	-.002237	.000029

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2917.218	56225.83	10292.89	2000.160	4382.830
Stddev	10.781	290.89	37.84	12.716	15.658
%RSD	.3695715	.5173684	.3675942	.6357557	.3572511
#1	2929.030	55990.95	10251.62	1988.077	4398.157
#2	2907.907	56135.32	10301.09	1998.976	4366.861
#3	2914.717	56551.22	10325.95	2013.427	4383.473

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166037BS Acquired: 1/17/2025 12:17:42 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7697811	1.957314	.9492838	1.884660	.7609191	1.849983
Stddev	.0034030	.014910	.0026198	.005157	.0032293	.003454
%RSD	.4420670	.7617703	.2759720	.2736368	.4243971	.1866936
#1	.7659924	1.963916	.9490527	1.882364	.7572541	1.853582
#2	.7707730	1.940242	.9467872	1.881050	.7621569	1.849672
#3	.7725779	1.967783	.9520114	1.890567	.7633465	1.846695

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1780453	.1881695	.1877339	.9590904	.3980163	.1905238
Stddev	.0018441	.0005809	.0001148	.0090881	.0017501	.0001354
%RSD	1.035726	.3086883	.0611721	.9475731	.4396990	.0710630
#1	.1796619	.1876142	.1877653	.9690081	.3962217	.1905260
#2	.1784372	.1881212	.1876066	.9511612	.3997182	.1903873
#3	.1760368	.1887729	.1878298	.9571019	.3981090	.1906581

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3008386	2.945606	.1901637	1.831524	.4785544	.0741077
Stddev	.0007993	.031107	.0003156	.017875	.0005326	.0003277
%RSD	.2656964	1.056048	.1659557	.9759553	.1112932	.4422287
#1	.2999920	2.965147	.1904570	1.810894	.4779404	.0739186
#2	.3009438	2.961937	.1902045	1.841262	.4788314	.0739183
#3	.3015802	2.909735	.1898298	1.842415	.4788914	.0744861

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.761054	.2780007	.2035445	9.504966	.2720380	.3961754
Stddev	.020377	.0004656	.0014421	.063197	.0013601	.0008894
%RSD	.7379996	.1674848	.7085110	.6648873	.4999722	.2245039
#1	2.783553	.2779981	.2022730	9.547574	.2711067	.3953385
#2	2.755769	.2775364	.2032490	9.534969	.2714086	.3960784
#3	2.743841	.2784676	.2051115	9.432356	.2735989	.3971094

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166037BS Acquired: 1/17/2025 12:17:42 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6519155	.1852080	F .7033848	5.349880	F -.013883	.1891681
Stddev	.0013574	.0002315	.0071054	.015105	.001206	.0006987
%RSD	.2082156	.1250206	1.010168	.2823340	8.690055	.3693667
#1	.6528639	.1854705	.6977202	5.344573	-.014725	.1899585
#2	.6503606	.1850327	.7113572	5.338145	-.014423	.1889129
#3	.6525219	.1851207	.7010769	5.366922	-.012501	.1886328

Elem	Sr4077
Units	ppm
Avg	.1865096
Stddev	.0007962
%RSD	.4268792
#1	.1874180
#2	.1861773
#3	.1859333

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2996.337	56625.03	10446.66	2026.900	4500.089
Stddev	4.429	210.64	55.42	10.989	4.770
%RSD	.1478096	.3719908	.5305300	.5421508	.1060007
#1	3000.260	56867.35	10495.98	2038.526	4498.287
#2	2991.534	56485.76	10457.31	2025.489	4496.483
#3	2997.217	56521.96	10386.68	2016.685	4505.498

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166047BL Acquired: 1/17/2025 12:21:42 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0000479	-.002140	.0019979	.0012539	-.000003	-.001528	-.007392
Stddev	.0012976	.001151	.0004147	.0009806	.000907	.003409	.001628
%RSD	2709.765	53.76126	20.75497	78.20124	28021.20	223.0505	22.01823
#1	-.000918	-.001266	.0015415	.0004150	-.000202	-.003388	-.009152
#2	-.000462	-.001711	.0023515	.0010148	-.000794	-.003603	-.007085
#3	.001523	-.003444	.0021007	.0023320	.000986	.002406	-.005940

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000038	-.000050	.0049342	-.000593	-.000334	.0001029	.0035093
Stddev	.000021	.000059	.0022936	.000376	.000097	.0000362	.0067020
%RSD	56.81332	116.5138	46.48416	63.32241	29.00938	35.15855	190.9797
#1	-.000039	-.000000	.0044633	-.000890	-.000446	.0000776	.0017717
#2	-.000016	-.000036	.0074267	-.000718	-.000270	.0000868	-.002153
#3	-.000059	-.000115	.0029126	-.000171	-.000287	.0001443	.010909

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000526	-.009733	.0002227	.0003616	-.009278	-.001499	-.000152
Stddev	.0002193	.003241	.0001576	.0001318	.009651	.000987	.000028
%RSD	417.1255	33.29570	70.78681	36.44125	104.0107	65.85051	18.48020
#1	-.000176	-.012146	.0003701	.0004532	-.019965	-.002366	-.000184
#2	.000071	-.011002	.0002414	.0002106	-.006671	-.001707	-.000140
#3	.000262	-.006049	.0000565	.0004210	-.001200	-.000425	-.000132

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0524933	-.004391	-.000138	.0005387	.0006743	.0005034	-.000130
Stddev	.0047801	.000720	.000168	.0003426	.0001325	.0027713	.001831
%RSD	9.106078	16.40198	122.0713	63.60024	19.65537	550.5531	1409.125
#1	.0499382	-.003715	.000051	.0007417	.0005380	.0031279	-.002017
#2	.0580080	-.004309	-.000271	.0007312	.0008028	.0007766	.001638
#3	.0495339	-.005149	-.000194	.0001431	.0006821	-.002394	-.000010

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166047BL Acquired: 1/17/2025 12:21:42 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004394	-.002983	-.000055
Stddev	.002791	.000270	.000028
%RSD	63.52530	9.056119	51.57573
#1	-.003103	-.003058	-.000022
#2	-.007596	-.002684	-.000070
#3	-.002482	-.003208	-.000072

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2942.231	56620.02	10706.45	1993.111	4479.561
Stddev	4.415	122.94	90.48	11.570	2.000
%RSD	.1500407	.2171363	.8451028	.5805109	.0446384
#1	2946.820	56502.35	10798.33	1980.142	4478.857
#2	2938.015	56747.63	10703.60	2002.374	4481.817
#3	2941.859	56610.09	10617.43	1996.818	4478.008

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166047BS Acquired: 1/17/2025 12:26:02 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8021110	1.978358	.9705027	1.964797	.7976425	1.873524
Stddev	.0072212	.039576	.0072842	.016644	.0066504	.004714
%RSD	.9002706	2.000436	.7505631	.8471247	.8337587	.2516250
#1	.7986845	1.957091	.9647481	1.960168	.7936299	1.876084
#2	.7972410	1.953962	.9680674	1.950956	.7939784	1.876406
#3	.8104076	2.024020	.9786925	1.983265	.8053191	1.868084

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1781930	.1861867	.1923780	.9581632	.4066108	.1947990
Stddev	.0005561	.0007482	.0014440	.0066238	.0003356	.0016407
%RSD	.3120568	.4018339	.7505774	.6913029	.0825425	.8422512
#1	.1787971	.1858226	.1916700	.9609528	.4069363	.1936202
#2	.1780793	.1870472	.1914248	.9506009	.4062659	.1941038
#3	.1777026	.1856903	.1940393	.9629360	.4066303	.1966728

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3091162	3.043902	.1876001	1.820405	.4897762	.0754144
Stddev	.0021898	.018285	.0017486	.012649	.0032064	.0003641
%RSD	.7084003	.6007101	.9320825	.6948608	.6546663	.4828382
#1	.3076651	3.063901	.1865517	1.828433	.4885375	.0754727
#2	.3080486	3.039764	.1896187	1.805823	.4873738	.0757459
#3	.3116351	3.028040	.1866299	1.826958	.4934171	.0750247

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.805363	.2800559	.2080568	9.968985	.2678918	.4093332
Stddev	.026090	.0015947	.0013870	.024606	.0005096	.0040427
%RSD	.9300117	.5694225	.6666437	.2468239	.1902224	.9876220
#1	2.834088	.2809223	.2082001	9.967332	.2673792	.4075994
#2	2.798863	.2782155	.2093667	9.994375	.2678978	.4064465
#3	2.783137	.2810298	.2066038	9.945247	.2683984	.4139535

Sample Name: PB166047BS Acquired: 1/17/2025 12:26:02 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6748877	.1882976	.7463504	5.464075	F -.014432	.1888924
Stddev	.0056170	.0003445	.0026533	.032681	.003155	.0009216
%RSD	.8322861	.1829585	.3554987	.5981130	21.85926	.4878926
#1	.6711510	.1882259	.7437253	5.451394	-.011454	.1878312
#2	.6721649	.1886723	.7490310	5.439634	-.014105	.1894919
#3	.6813472	.1879946	.7462948	5.501196	-.017738	.1893540

Elem	Sr4077
Units	ppm
Avg	.1865986
Stddev	.0006707
%RSD	.3594465
#1	.1867990
#2	.1871462
#3	.1858505

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2935.246	55577.51	10702.89	1969.361	4426.660
Stddev	15.948	87.07	16.19	8.681	22.024
%RSD	.5433184	.1566671	.1512357	.4408163	.4975280
#1	2941.126	55486.22	10720.22	1959.505	4436.288
#2	2947.418	55659.64	10688.16	1972.705	4442.231
#3	2917.193	55586.67	10700.29	1975.872	4401.462

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166025TB Acquired: 1/17/2025 12:30:02 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004241	-.008876	.0000794	.0045573	.0014419	.0069976
Stddev	.001999	.000537	.0000669	.0007897	.0002126	.0049543
%RSD	47.12515	6.055308	84.24117	17.32828	14.74218	70.79999
#1	-.005995	-.008255	.0001182	.0054634	.0015849	.0101136
#2	-.002065	-.009190	.0000022	.0041932	.0011976	.0012847
#3	-.004663	-.009181	.0001179	.0040154	.0015432	.0095944

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006153	-.000179	-.000177	.0040311	.0004297	-.000569
Stddev	.001459	.000053	.000069	.0067666	.0001487	.000188
%RSD	23.70717	29.73851	38.97641	167.8611	34.59953	32.95743
#1	-.007808	-.000192	-.000207	.0055990	.0005818	-.000388
#2	-.005595	-.000121	-.000098	.0098760	.0004224	-.000762
#3	-.005056	-.000225	-.000225	-.003382	.0002847	-.000557

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002760	.0076177	.0022861	.0035384	.0010766	.0004847
Stddev	.0000919	.0007998	.0001147	.0034767	.0002196	.0003567
%RSD	33.30440	10.49902	5.016633	98.25775	20.39918	73.57784
#1	.0003807	.0085185	.0022506	.0075485	.0009715	.0002097
#2	.0002085	.0069910	.0024144	.0016969	.0013290	.0003568
#3	.0002389	.0073437	.0021935	.0013697	.0009293	.0008877

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 313.7831	-.002856	.0011793	.0485694	-.005452	.0002943
Stddev	4.7465	.001334	.0001066	.0275739	.000580	.0002588
%RSD	1.512673	46.70747	9.035316	56.77219	10.63093	87.94607
#1	317.4476	-.001472	.0012246	.0797446	-.006071	.0002372
#2	315.4803	-.004133	.0010576	.0273785	-.004921	.0000688
#3	308.4212	-.002962	.0012557	.0385849	-.005365	.0005769

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166025TB Acquired: 1/17/2025 12:30:02 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0003954	.0008773	.0127756	.0068945	F .0298318	-.005722
Stddev	.0003723	.0004099	.0069073	.0013268	.0011257	.000219
%RSD	94.15911	46.72029	54.06633	19.24400	3.773420	3.825615
#1	.0002913	.0013252	.0202154	.0053821	.0291565	-.005772
#2	.0008086	.0005210	.0115452	.0078624	.0292077	-.005483
#3	.0000862	.0007856	.0065662	.0074391	.0311313	-.005912

Elem	Sr4077
Units	ppm
Avg	-.000044
Stddev	.000035
%RSD	79.58278
#1	-.000063
#2	-.000004
#3	-.000066

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2741.979	53336.26	10778.12	1865.552	3944.849
Stddev	2.198	151.91	34.17	5.264	3.712
%RSD	.0801631	.2848123	.3170301	.2821745	.0941029
#1	2742.127	53196.84	10812.50	1860.503	3943.147
#2	2744.100	53313.79	10777.71	1871.007	3942.293
#3	2739.711	53498.15	10744.16	1865.146	3949.107

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166049BL Acquired: 1/17/2025 12:34:31 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.001920	-.002040	.0012665	.0002823	.0002073	-.004188	-.006225
Stddev	.001586	.000362	.0004333	.0010451	.0010891	.002078	.001133
%RSD	82.62047	17.75869	34.21244	370.2439	525.3253	49.61592	18.19624
#1	-.000272	-.001764	.0014697	.0010118	.0014258	-.001844	-.005471
#2	-.002052	-.001905	.0007690	.0007501	-.000132	-.005804	-.007527
#3	-.003435	-.002450	.0015609	-.000915	-.000671	-.004917	-.005676

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000066	-.000063	-.001379	-.000282	-.000056	-.000124	.0009738
Stddev	.0000269	.000061	.005462	.000148	.000136	.000242	.0021020
%RSD	410.1378	96.92569	395.9228	52.34062	242.4487	194.9411	215.8509
#1	.0000338	-.000086	-.007573	-.000236	.000098	.000094	.0002817
#2	.0000059	.000006	.000687	-.000163	-.000106	-.000384	.0033347
#3	-.000020	-.000109	.002747	-.000448	-.000160	-.000083	-.000695

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000118	.0029469	-.000026	.0003935	.0314668	-.001281	-.000235
Stddev	.000092	.0066524	.000020	.0003340	.0062465	.000474	.000113
%RSD	78.23046	225.7438	75.78006	84.87216	19.85106	36.99587	47.96276
#1	-.000040	-.002896	-.000015	.0004228	.0273719	-.001546	-.000341
#2	-.000094	.010187	-.000049	.0000459	.0283720	-.001563	-.000247
#3	-.000219	.001549	-.000015	.0007119	.0386565	-.000734	-.000117

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0331190	-.005197	-.000150	.0004827	.0015963	.0056064	-.001221
Stddev	.0500554	.000268	.000253	.0005536	.0004858	.0069111	.000698
%RSD	151.1383	5.162206	169.0071	114.6756	30.43505	123.2709	57.14218
#1	-.021892	-.005388	-.000096	.0009355	.0015801	.0047955	-.001937
#2	.075983	-.004890	.000072	-.000134	.0020901	.0128872	-.001183
#3	.045266	-.005314	-.000426	.000647	.0011188	-.000863	-.000543

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166049BL Acquired: 1/17/2025 12:34:31 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004440	-.001332	.0000016
Stddev	.001911	.000405	.0000247
%RSD	43.03968	30.40821	1524.129
#1	-.002629	-.001797	-.000011
#2	-.006437	-.001060	-.000014
#3	-.004254	-.001138	.000030

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2938.698	56203.18	10674.06	2005.384	4429.130
Stddev	.973	161.13	97.30	7.864	8.316
%RSD	.0330991	.2867001	.9115128	.3921355	.1877499
#1	2939.665	56369.33	10581.62	2004.672	4419.961
#2	2938.708	56192.65	10775.57	2013.580	4431.244
#3	2937.720	56047.58	10664.99	1997.901	4436.185

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166049BS Acquired: 1/17/2025 12:38:52 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7728830	1.963513	.9484583	1.885648	.7677727	1.860525
Stddev	.0046695	.021842	.0022959	.002709	.0043990	.010423
%RSD	.6041618	1.112383	.2420639	.1436756	.5729512	.5602365
#1	.7675483	1.979390	.9505687	1.887461	.7673246	1.872560
#2	.7748725	1.938604	.9460136	1.882534	.7636150	1.854377
#3	.7762283	1.972546	.9487926	1.886949	.7723786	1.854638

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1782236	.1874241	.1870360	.9601757	.3993986	.1902154
Stddev	.0008146	.0004276	.0004451	.0079956	.0002160	.0006699
%RSD	.4570926	.2281297	.2379645	.8327193	.0540790	.3521915
#1	.1788469	.1878668	.1871422	.9664005	.3993709	.1905293
#2	.1785222	.1870134	.1865475	.9629682	.3991979	.1894461
#3	.1773018	.1873921	.1874184	.9511584	.3996271	.1906707

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3005398	3.006355	.1896019	1.813587	.4772072	.0750697
Stddev	.0009695	.015261	.0010864	.020731	.0015473	.0001081
%RSD	.3226010	.5076253	.5730044	1.143115	.3242357	.1439746
#1	.3003888	3.023538	.1907587	1.809036	.4775919	.0751938
#2	.2996546	3.001150	.1894437	1.795510	.4755039	.0750192
#3	.3015760	2.994378	.1886032	1.836216	.4785259	.0749961

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.818950	.2782877	.2046402	9.787265	.2703839	.4002776
Stddev	.014020	.0025859	.0003856	.068463	.0017270	.0011676
%RSD	.4973437	.9292136	.1884088	.6995107	.6387101	.2917082
#1	2.828204	.2812246	.2050680	9.822806	.2717691	.3998016
#2	2.802820	.2763524	.2045331	9.830648	.2684490	.3994231
#3	2.825828	.2772862	.2043196	9.708340	.2709337	.4016080

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166049BS Acquired: 1/17/2025 12:38:52 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6545570	.1882249	F .7237674	5.405538	F -.009342	.1905280
Stddev	.0018234	.0009850	.0088268	.015364	.003312	.0005121
%RSD	.2785767	.5232890	1.219560	.2842328	35.45309	.2687956
#1	.6545138	.1881753	.7238772	5.404048	-.013020	.1899670
#2	.6527556	.1872656	.7148862	5.390973	-.006594	.1906466
#3	.6564017	.1892337	.7325387	5.421593	-.008412	.1909704

Elem	Sr4077
Units	ppm
Avg	.1869833
Stddev	.0004563
%RSD	.2440118
#1	.1875102
#2	.1867195
#3	.1867203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3012.248	56138.42	10564.33	2013.916	4544.154
Stddev	2.622	158.46	39.86	12.474	7.276
%RSD	.0870349	.2822654	.3772900	.6194067	.1601172
#1	3013.988	56022.24	10520.81	2000.700	4541.861
#2	3013.523	56074.10	10573.13	2015.564	4552.300
#3	3009.232	56318.93	10599.06	2025.484	4538.301

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166026TB Acquired: 1/17/2025 12:42:52 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004717	-.006590	.0015627	.0038808	.0006965	.0071463	-.008802
Stddev	.001055	.001431	.0011129	.0035669	.0003453	.0047309	.000780
%RSD	22.36207	21.71947	71.21923	91.91117	49.57151	66.20038	8.863266
#1	-.003755	-.006826	.0016958	.0018170	.0005336	.0089768	-.009665
#2	-.004551	-.005056	.0003892	.0018260	.0010931	.0017737	-.008147
#3	-.005844	-.007889	.0026031	.0079995	.0004629	.0106884	-.008594

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000159	-.000197	-.002075	-.000143	-.000407	.0004761	.0046075
Stddev	.000014	.000038	.008763	.000204	.000174	.0001912	.0020203
%RSD	9.077077	19.50302	422.3587	143.1364	42.82976	40.15240	43.84828
#1	-.000143	-.000165	.005551	-.000066	-.000335	.0006069	.0050459
#2	-.000165	-.000239	-.011647	.000012	-.000280	.0005647	.0024040
#3	-.000169	-.000186	-.000129	-.000374	-.000605	.0002567	.0063726

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008822	-.002245	.0010546	.0001239	320.7111	-.001421	.0012559
Stddev	.0001472	.008320	.0002865	.0002066	2.7781	.001979	.0003364
%RSD	16.68888	370.6190	27.16330	166.8182	.8662357	139.2860	26.78449
#1	.0009061	-.010265	.0008875	-.000104	323.0955	.000367	.0009067
#2	.0010161	-.002815	.0013853	.000178	317.6604	-.001083	.0012833
#3	.0007245	.006346	.0008909	.000298	321.3774	-.003547	.0015778

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0304258	-.005763	.0002662	.0000299	.0006559	.0123065	.0066722
Stddev	.0172419	.000464	.0001254	.0001971	.0005696	.0095243	.0017333
%RSD	56.66853	8.053030	47.11098	660.3289	86.83964	77.39230	25.97841
#1	.0418883	-.006268	.0002082	.0002520	.0006084	.0110075	.0053084
#2	.0105971	-.005664	.0001803	-.000038	.0001115	.0034984	.0086227
#3	.0387922	-.005355	.0004101	-.000124	.0012477	.0224136	.0060854

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166026TB Acquired: 1/17/2025 12:42:52 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0091106	-.004395	-.000051
Stddev	.0024025	.000770	.000030
%RSD	26.37022	17.51738	59.65220
#1	.0067586	-.003603	-.000016
#2	.0090125	-.005141	-.000063
#3	.0115605	-.004442	-.000073

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2753.908	52466.69	10600.23	1840.671	3990.230
Stddev	3.349	143.70	61.76	12.267	8.406
%RSD	.1216257	.2738953	.5826382	.6664363	.2106531
#1	2756.260	52301.07	10570.71	1829.962	3997.775
#2	2755.391	52558.37	10671.21	1837.996	3991.744
#3	2750.073	52540.62	10558.78	1854.055	3981.170

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV02 Acquired: 1/17/2025 12:47:21 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.983624	4.961952	4.860422	5.026617	5.052976	9.634775	9.488490
Stddev	.013304	.008166	.002101	.013251	.008174	.017082	.106443
%RSD	.2669549	.1645730	.0432266	.2636243	.1617729	.1772923	1.121812
#1	4.980539	4.971142	4.862694	5.030179	5.055745	9.651912	9.568478
#2	4.998200	4.959187	4.858550	5.037723	5.059406	9.634664	9.529315
#3	4.972133	4.955527	4.860022	5.011949	5.043777	9.617749	9.367678

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2317299	2.427345	23.45315	.9867877	2.439609	1.249821	4.913047
Stddev	.0009386	.000569	.01750	.0085436	.000873	.003145	.079352
%RSD	.4050618	.0234273	.0746012	.8657982	.0357893	.2516557	1.615120
#1	.2315740	2.427849	23.45783	.9965567	2.439932	1.249813	5.004545
#2	.2327368	2.426729	23.43379	.9807122	2.438620	1.252970	4.863092
#3	.2308790	2.427457	23.46783	.9830944	2.440274	1.246679	4.871503

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.328631	22.85327	2.441387	1.233073	24.41277	2.381023	2.516711
Stddev	.007222	.03810	.002027	.009063	.29074	.005623	.018953
%RSD	.3101468	.1667062	.0830311	.7349655	1.190954	.2361662	.7530739
#1	2.336766	22.87849	2.443579	1.243529	24.74838	2.387409	2.538261
#2	2.326153	22.80944	2.439580	1.228197	24.25278	2.378849	2.509237
#3	2.322974	22.87186	2.441002	1.227492	24.23716	2.376812	2.502635

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.00981	4.671676	5.014659	4.860785	4.740632	5.162574	4.855004
Stddev	.35987	.013765	.008906	.002869	.014553	.049128	.013186
%RSD	1.438914	.2946438	.1775982	.0590188	.3069795	.9516154	.2716063
#1	25.39968	4.669229	5.011948	4.861786	4.756416	5.211808	4.868853
#2	24.69035	4.686500	5.024605	4.857550	4.737733	5.113553	4.853560
#3	24.93941	4.659299	5.007423	4.863020	4.727747	5.162362	4.842599

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV02 Acquired: 1/17/2025 12:47:21 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.869936	4.747472	4.851468
Stddev	.009272	.013065	.014000
%RSD	.1903951	.2751930	.2885683
#1	4.875048	4.761898	4.839426
#2	4.875527	4.744081	4.848150
#3	4.859233	4.736438	4.866829

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2826.418	55483.66	10439.98	1917.286	4075.247
Stddev	4.349	394.33	20.73	12.170	6.754
%RSD	.1538815	.7107138	.1985530	.6347265	.1657386
#1	2823.905	55033.97	10451.68	1903.947	4067.558
#2	2823.909	55770.36	10416.04	1920.125	4080.223
#3	2831.440	55646.67	10452.21	1927.784	4077.961

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB02 Acquired: 1/17/2025 12:51:32 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000915	-.002590	.0016010	.0005760	.0006067	.0023479	-.006578
Stddev	.002612	.001054	.0011115	.0006536	.0010272	.0067369	.001050
%RSD	285.4373	40.70509	69.42441	113.4633	169.3205	286.9397	15.96499
#1	-.002846	-.003363	.0003284	.0012717	.0017191	-.000711	-.007778
#2	.002056	-.001389	.0020933	-.000025	.0004069	.010072	-.006133
#3	-.001955	-.003018	.0023812	.000481	-.000306	-.002317	-.005824

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000006	-.000043	.0014947	-.000442	-.000057	-.000223	.0000608
Stddev	.000010	.000027	.0077463	.000519	.000161	.000494	.0034257
%RSD	158.5879	62.04336	518.2392	117.4925	281.8902	221.8929	5636.945
#1	.000005	-.000022	-.003484	.000127	.000062	.000204	-.000797
#2	-.000012	-.000073	-.002451	-.000564	.000006	-.000764	-.002855
#3	-.000011	-.000034	.010419	-.000889	-.000240	-.000108	.003834

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000073	-.009232	.0002918	.0005816	.0121342	-.001758	.0000174
Stddev	.000170	.007322	.0002015	.0002604	.0082009	.000728	.0001141
%RSD	231.6632	79.30478	69.06162	44.76678	67.58493	41.41672	654.7817
#1	.000121	-.008694	.0003257	.0007376	.0099863	-.002559	.0000563
#2	-.000190	-.016808	.0004742	.0007261	.0052210	-.001136	.0001070
#3	-.000152	-.002195	.0000755	.0002810	.0211953	-.001580	-.000111

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0478843	.0054677	.0000750	.0001727	.0008538	.0125379	-.001757
Stddev	.0122437	.0003576	.0001502	.0003857	.0003153	.0075806	.002994
%RSD	25.56940	6.541064	200.1848	223.3604	36.92602	60.46156	170.4198
#1	.0520804	.0054513	-.000059	.0002474	.0012159	.0052062	-.004605
#2	.0340942	.0058333	.000047	-.000245	.0006403	.0203450	-.002030
#3	.0574783	.0051186	.000237	.000516	.0007052	.0120624	.001365

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB02 Acquired: 1/17/2025 12:51:32 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.002196	-.001891	.0000511
Stddev	.002334	.001709	.0000161
%RSD	106.2632	90.35715	31.46506
#1	-.004712	-.000249	.0000507
#2	-.001777	-.003660	.0000673
#3	-.000101	-.001764	.0000352

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2904.401	56692.75	10713.72	2010.818	4350.503
Stddev	8.593	191.55	69.22	6.360	17.173
%RSD	.2958718	.3378714	.6460985	.3163107	.3947447
#1	2912.664	56912.88	10771.22	2003.848	4366.371
#2	2905.028	56601.36	10636.89	2012.298	4352.868
#3	2895.512	56564.01	10733.04	2016.308	4332.270

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166069BL Acquired: 1/17/2025 12:55:53 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.001556	-.001271	.0013904	-.000049	.0008870	-.002178	-.007383
Stddev	.001042	.000921	.0003795	.003347	.0008067	.002851	.000259
%RSD	67.00266	72.43673	27.29736	6822.107	90.94342	130.9046	3.506011
#1	-.002717	-.000364	.0010140	-.001534	.0000209	-.002870	-.007675
#2	-.000700	-.002205	.0013842	.003784	.0010233	-.004619	-.007185
#3	-.001250	-.001243	.0017730	-.002397	.0016168	.000955	-.007287

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000005	-.000051	.0043496	-.000262	-.000074	.0002224	-.000527
Stddev	.000053	.000059	.0008608	.000372	.000260	.0000698	.007554
%RSD	1019.438	115.5138	19.79053	142.0182	351.9432	31.36912	1433.408
#1	-.000064	.000013	.0033925	-.000058	-.000373	.0002658	-.007485
#2	.000038	-.000104	.0045957	-.000036	.000051	.0002595	-.001605
#3	.000010	-.000064	.0050605	-.000692	.000100	.0001419	.007508

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000265	-.016561	.0002487	.0004530	.0188443	-.001482	.0001517
Stddev	.000161	.006702	.0002067	.0002914	.0081684	.000690	.0000722
%RSD	60.77640	40.47128	83.14263	64.32160	43.34684	46.55342	47.61317
#1	-.000450	-.018280	.0003375	.0001273	.0279234	-.002157	.0001890
#2	-.000165	-.022236	.0000124	.0005425	.0120911	-.001510	.0001977
#3	-.000179	-.009166	.0003962	.0006890	.0165184	-.000778	.0000685

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0768144	-.001139	.0000524	-.000303	.0002570	.0113150	-.001178
Stddev	.0199441	.000273	.0000225	.000309	.0008353	.0051408	.001843
%RSD	25.96398	23.93577	42.97565	101.8611	324.9693	45.43397	156.4686
#1	.0627395	-.001105	.0000780	.000053	-.000597	.0053792	.000899
#2	.0996375	-.001427	.0000441	-.000490	.001072	.0143352	-.002619
#3	.0680661	-.000885	.0000353	-.000471	.000296	.0142306	-.001814

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166069BL Acquired: 1/17/2025 12:55:53 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004003	-.002382	-.000020
Stddev	.003999	.000473	.000040
%RSD	99.92253	19.87366	198.6477
#1	-.003926	-.002526	-.000051
#2	-.000042	-.001853	.000025
#3	-.008040	-.002766	-.000034

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2943.625	57664.61	10821.43	2052.499	4430.716
Stddev	12.236	43.16	70.93	2.152	22.465
%RSD	.4156800	.0748421	.6555007	.1048431	.5070283
#1	2930.619	57620.69	10754.12	2051.550	4405.770
#2	2954.908	57706.96	10895.50	2050.984	4449.349
#3	2945.348	57666.19	10814.68	2054.962	4437.029

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166069BS Acquired: 1/17/2025 13:00:14 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7789141	1.945287	.9520019	1.916781	.7795586	1.846074
Stddev	.0010913	.008174	.0042433	.003147	.0033510	.002958
%RSD	.1401055	.4201949	.4457259	.1642006	.4298612	.1602180
#1	.7793818	1.952587	.9496389	1.914118	.7772068	1.848096
#2	.7796936	1.946818	.9494662	1.915971	.7780735	1.847447
#3	.7776669	1.936456	.9569007	1.920255	.7833956	1.842679

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1757871	.1840812	.1887534	.9663367	.3937487	.1912055
Stddev	.0008088	.0005057	.0004928	.0045054	.0008766	.0004663
%RSD	.4601067	.2747200	.2610628	.4662293	.2226185	.2438816
#1	.1748532	.1837204	.1888620	.9646144	.3932342	.1913584
#2	.1762601	.1838639	.1882155	.9629467	.3932511	.1906819
#3	.1762480	.1846592	.1891829	.9714492	.3947608	.1915761

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3039632	2.949851	.1869189	1.766724	.4808514	.0740500
Stddev	.0017614	.005841	.0004726	.035379	.0011611	.0002331
%RSD	.5794619	.1980100	.2528544	2.002536	.2414722	.3147191
#1	.3030139	2.949278	.1864805	1.806061	.4806642	.0737958
#2	.3028800	2.955957	.1874196	1.756602	.4797953	.0742536
#3	.3059955	2.944318	.1868567	1.737509	.4820948	.0741006

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.767235	.2773973	.2036890	9.657712	.2678995	.4013297
Stddev	.021492	.0011717	.0013590	.079121	.0013569	.0009842
%RSD	.7766739	.4223961	.6671677	.8192506	.5065090	.2452451
#1	2.745299	.2787385	.2052522	9.574420	.2682667	.4004075
#2	2.788254	.2765727	.2030265	9.666847	.2663968	.4012156
#3	2.768152	.2768807	.2027885	9.731869	.2690351	.4023660

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166069BS Acquired: 1/17/2025 13:00:14 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6578456	.1858685	F .7148638	5.507713	F -.010278	.1882681
Stddev	.0010580	.0011995	.0095655	.011545	.002149	.0020944
%RSD	.1608312	.6453720	1.338083	.2096105	20.90392	1.112440
#1	.6566260	.1845186	.7041175	5.504440	-.009626	.1859485
#2	.6585169	.1868121	.7224475	5.498158	-.012677	.1900202
#3	.6583940	.1862748	.7180262	5.520541	-.008531	.1888357

Elem	Sr4077
Units	ppm
Avg	.1861456
Stddev	.0008126
%RSD	.4365581
#1	.1852072
#2	.1866154
#3	.1866141

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2958.207	57234.31	10676.11	2023.030	4454.184
Stddev	5.421	196.72	15.02	1.695	10.065
%RSD	.1832601	.3437181	.1407173	.0837924	.2259617
#1	2961.709	57428.52	10680.71	2023.169	4456.237
#2	2960.950	57035.17	10688.29	2021.269	4463.065
#3	2951.962	57239.24	10659.32	2024.650	4443.252

Sample Name: PB166084BL Acquired: 1/17/2025 13:04:13 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003393	-.000694	.0014972	.0013622	.0011089	-.000977	-.008104
Stddev	.001231	.000801	.0009197	.0015062	.0017027	.002126	.000560
%RSD	36.29574	115.3900	61.43101	110.5675	153.5471	217.6151	6.907324
#1	-.001987	.000061	.0014567	.0030614	.0026715	.001135	-.007863
#2	-.004279	-.001534	.0005984	.0008339	-.000706	-.000949	-.008744
#3	-.003912	-.000610	.0024365	.0001914	.001361	-.003118	-.007705

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000040	-.000006	.0054842	-.000300	-.000191	-.000031	.0014186
Stddev	.0000537	.000027	.0135961	.000278	.000287	.000132	.0038277
%RSD	1343.155	465.4213	247.9147	92.74038	150.5945	426.0151	269.8255
#1	-.000052	.000018	.0065216	-.000117	-.000522	-.000077	.0008725
#2	.000008	-.000034	-.008601	-.000163	-.000036	.000118	.0054900
#3	.000056	-.000001	.018532	-.000621	-.000014	-.000134	-.002107

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000361	-.016133	-.000038	.0004943	-.005661	-.000504	.0004831
Stddev	.000370	.013140	.000356	.0002622	.011548	.001346	.0001434
%RSD	102.7394	81.44682	933.2311	53.03738	203.9799	266.8508	29.67337
#1	-.000602	-.031104	-.000373	.0007811	.005155	-.001828	.0003737
#2	.000066	-.006515	.000336	.0002669	-.017822	.000863	.0004302
#3	-.000545	-.010779	-.000077	.0004351	-.004317	-.000549	.0006454

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018224	-.004265	-.000201	.0000622	.0001645	.0032688	-.000044
Stddev	.0059750	.000610	.000139	.0008324	.0003716	.0011531	.002443
%RSD	327.8637	14.30493	69.16591	1337.256	225.8733	35.27580	5538.778
#1	-.004811	-.004624	-.000360	-.000551	.0005173	.0019737	-.002482
#2	.006781	-.003560	-.000146	-.000272	.0001995	.0041839	.002404
#3	.003497	-.004610	-.000099	.001010	-.000223	.0036488	-.000054

Sample Name: PB166084BL Acquired: 1/17/2025 13:04:13 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.005683	-.002388	-.000019
Stddev	.002295	.000248	.000036
%RSD	40.37872	10.38563	187.9006
#1	-.003352	-.002511	-.000045
#2	-.005756	-.002550	-.000035
#3	-.007940	-.002103	.000022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2958.576	57219.99	10846.32	2010.379	4517.215
Stddev	25.825	143.89	103.31	8.833	44.953
%RSD	.8728940	.2514652	.9525091	.4393572	.9951476
#1	2968.975	57327.43	10774.39	2010.983	4536.637
#2	2977.581	57276.03	10799.88	2018.894	4549.190
#3	2929.172	57056.52	10964.71	2001.259	4465.816

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166084BS Acquired: 1/17/2025 13:08:34 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7908118	1.970627	.9602600	1.956825	.7843397	1.861855
Stddev	.0029038	.008881	.0011089	.004923	.0023208	.007033
%RSD	.3671992	.4506551	.1154818	.2516037	.2958884	.3777453
#1	.7888007	1.971863	.9595836	1.951451	.7867581	1.866666
#2	.7894937	1.978825	.9596565	1.961118	.7821307	1.853783
#3	.7941409	1.961193	.9615398	1.957907	.7841302	1.865115

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1737782	.1867086	.1903190	.9697120	.3988397	.1930119
Stddev	.0007340	.0001553	.0002782	.0133283	.0002879	.0002877
%RSD	.4223552	.0831726	.1461880	1.374463	.0721959	.1490480
#1	.1746013	.1866416	.1903340	.9829271	.3991122	.1928751
#2	.1731916	.1865980	.1900336	.9699358	.3988685	.1928181
#3	.1735418	.1868861	.1905895	.9562732	.3985385	.1933424

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3066638	2.967542	.1865213	1.765450	.4848763	.0750670
Stddev	.0008611	.024371	.0010095	.007310	.0005449	.0005818
%RSD	.2808004	.8212551	.5412310	.4140573	.1123873	.7751104
#1	.3075529	2.994729	.1876265	1.772039	.4844420	.0748300
#2	.3058337	2.960242	.1862895	1.766724	.4846991	.0757300
#3	.3066049	2.947656	.1856478	1.757587	.4854878	.0746411

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.738141	.2784443	.2067740	9.722058	.2710644	.4028842
Stddev	.020556	.0024176	.0009868	.070906	.0007785	.0006906
%RSD	.7507194	.8682626	.4772368	.7293301	.2871864	.1714201
#1	2.758482	.2790582	.2057604	9.799988	.2718202	.4035158
#2	2.738565	.2804957	.2077316	9.704838	.2711078	.4021468
#3	2.717377	.2757788	.2068300	9.661348	.2702651	.4029899

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: PB166084BS Acquired: 1/17/2025 13:08:34 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6570991	.1850922	F .7274793	5.444287	F -.012672	.1876504
Stddev	.0010850	.0022771	.0043516	.015562	.001538	.0021240
%RSD	.1651114	1.230239	.5981760	.2858443	12.13351	1.131891
#1	.6558583	.1874973	.7236551	5.427941	-.014447	.1897850
#2	.6575696	.1848096	.7322142	5.445995	-.011773	.1876290
#3	.6578694	.1829696	.7265687	5.458924	-.011795	.1855371

Elem	Sr4077
Units	ppm
Avg	.1870860
Stddev	.0010113
%RSD	.5405270
#1	.1882355
#2	.1866891
#3	.1863335

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2952.736	56531.57	10638.11	1995.706	4452.789
Stddev	10.371	157.68	10.76	7.670	11.600
%RSD	.3512378	.2789269	.1011016	.3843489	.2605216
#1	2950.543	56477.51	10634.18	1996.281	4456.846
#2	2964.028	56408.03	10629.87	1987.764	4461.816
#3	2943.637	56709.17	10650.28	2003.073	4439.705

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01 Acquired: 1/17/2025 13:12:34 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0517617	.0008372	.1655066	-.033745	.0029501	73.55181
Stddev	.0009126	.0014228	.0007960	.000153	.0004839	.07831
%RSD	1.763084	169.9576	.4809167	.4527900	16.40445	.1064727
#1	.0509134	.0009681	.1646514	-.033851	.0034318	73.63717
#2	.0516445	-.000647	.1656426	-.033815	.0029544	73.53497
#3	.0527273	.002190	.1662258	-.033570	.0024639	73.48329

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3345541	.0060731	-.006050	127.5227	.1504686	.0857905
Stddev	.0012130	.0000161	.000210	.3844	.0004190	.0001423
%RSD	.3625773	.2651270	3.467656	.3013980	.2784593	.1658316
#1	.3354999	.0060906	-.006207	127.6843	.1503337	.0858566
#2	.3331865	.0060697	-.006131	127.0840	.1509384	.0856272
#3	.3349760	.0060590	-.005812	127.7999	.1501337	.0858877

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2596315	220.2579	2.432278	18.63193	.0834534	.0004860
Stddev	.0006718	1.2769	.012813	.06352	.0005235	.0003675
%RSD	.2587350	.5797423	.5267894	.3409062	.6273188	75.61397
#1	.2602896	221.5050	2.432678	18.70254	.0831890	.0001645
#2	.2589469	220.3155	2.419270	18.61379	.0840564	.0008866
#3	.2596581	218.9531	2.444887	18.57945	.0831149	.0004068

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.965125	.3592369	.3632011	7.737041	.1646378	.0049807
Stddev	.034847	.0021667	.0006991	.061796	.0024008	.0003646
%RSD	.5841823	.6031381	.1924889	.7987022	1.458216	7.320619
#1	5.998621	.3583210	.3639709	7.790672	.1667670	.0053604
#2	5.967687	.3576786	.3630267	7.750986	.1651105	.0049484
#3	5.929068	.3617112	.3626056	7.669463	.1620358	.0046333

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01 Acquired: 1/17/2025 13:12:34 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0031162	1.655696	F 11.22882	3.967097	9.526374	.0355169
Stddev	.0009390	.006118	.04415	.024323	.011747	.0009681
%RSD	30.13171	.3695061	.3931498	.6131064	.1233080	2.725647
#1	.0040694	1.660607	11.20357	3.994330	9.539801	.0366140
#2	.0030870	1.648843	11.27979	3.959428	9.517991	.0351537
#3	.0021922	1.657639	11.20309	3.947533	9.521332	.0347829

Elem	Sr4077
Units	ppm
Avg	.4256454
Stddev	.0029731
%RSD	.6984866
#1	.4282410
#2	.4224017
#3	.4262934

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2949.470	57082.66	11563.13	2022.529	3981.853
Stddev	6.989	127.91	89.61	5.763	3.933
%RSD	.2369616	.2240761	.7749378	.2849579	.0987765
#1	2949.530	57177.83	11623.16	2023.933	3984.739
#2	2956.429	56937.26	11606.10	2016.194	3983.447
#3	2942.451	57132.89	11460.13	2027.461	3977.373

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01DUP Acquired: 1/17/2025 13:16:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0476596	.0023647	.1666968	-.034518	.0023561	73.79099
Stddev	.0004413	.0039113	.0004462	.003693	.0009045	.14831
%RSD	.9258731	165.4036	.2677001	10.69849	38.39059	.2009924
#1	.0476590	.0060844	.1666849	-.033234	.0030725	73.90996
#2	.0481011	.0027232	.1662566	-.031638	.0013397	73.62482
#3	.0472186	-.001714	.1671489	-.038681	.0026562	73.83818

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3321928	.0062841	-.005104	128.4450	.1514962	.0851767
Stddev	.0011365	.0001031	.000412	.1931	.0001382	.0002895
%RSD	.3421184	1.639999	8.079179	.1503249	.0911963	.3398494
#1	.3317564	.0063630	-.004795	128.5637	.1515669	.0848685
#2	.3313392	.0061675	-.005573	128.2222	.1515846	.0852188
#3	.3334829	.0063217	-.004946	128.5490	.1513370	.0854429

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2838038	220.0118	2.408300	19.17509	.0848088	-.001318
Stddev	.0013200	1.2748	.011841	.03141	.0001905	.000362
%RSD	.4651284	.5794222	.4916742	.1637908	.2246376	27.45167
#1	.2841512	218.5604	2.410595	19.19596	.0847056	-.001716
#2	.2823448	220.9501	2.395479	19.13897	.0846921	-.001229
#3	.2849154	220.5247	2.418824	19.19035	.0850286	-.001008

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.880289	.3662800	.3682635	7.733913	.1635420	.0046813
Stddev	.055878	.0010609	.0013714	.011394	.0032744	.0003411
%RSD	.9502578	.2896404	.3724043	.1473250	2.002152	7.287042
#1	5.817224	.3663587	.3674951	7.723999	.1598055	.0046982
#2	5.900016	.3651820	.3698469	7.746361	.1659107	.0050136
#3	5.923629	.3672994	.3674486	7.731380	.1649098	.0043320

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01DUP Acquired: 1/17/2025 13:16:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0039029	1.688048	F 11.55414	4.170713	9.491546	.0368571
Stddev	.0003545	.007735	.07002	.011650	.016045	.0004030
%RSD	9.082777	.4582308	.6059996	.2793401	.1690450	1.093323
#1	.0036625	1.689995	11.47789	4.162528	9.474006	.0371860
#2	.0043101	1.679525	11.61556	4.165559	9.495150	.0364076
#3	.0037362	1.694623	11.56896	4.184051	9.505483	.0369778

Elem	Sr4077
Units	ppm
Avg	.4309949
Stddev	.0023573
%RSD	.5469344
#1	.4319345
#2	.4283127
#3	.4327374

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3000.424	57344.30	11402.54	2050.012	4037.442
Stddev	7.331	143.55	56.01	9.346	4.832
%RSD	.2443408	.2503316	.4911765	.4559082	.1196686
#1	3007.077	57504.04	11351.81	2060.133	4042.189
#2	3001.631	57226.09	11462.64	2041.707	4037.605
#3	2992.565	57302.77	11393.16	2048.197	4032.530

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01LX5 Acquired: 1/17/2025 13:20:45 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0078243	-.001846	.0348144	-.006825	.0004239	15.50446	.0624678
Stddev	.0012917	.001997	.0008267	.001983	.0009896	.01865	.0004135
%RSD	16.50874	108.1344	2.374522	29.05817	233.4269	.1203059	.6619820
#1	.0090884	-.003887	.0356590	-.008464	-.000268	15.52501	.0620687
#2	.0078777	-.001756	.0340070	-.004620	.001557	15.49975	.0624404
#3	.0065067	.000103	.0347772	-.007390	-.000017	15.48861	.0628944

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013430	-.001504	27.14246	.0317529	.0167656	.0634522	45.47758
Stddev	.0000160	.000041	.06628	.0002110	.0001373	.0007206	.32647
%RSD	1.188702	2.699882	.2442034	.6646164	.8189224	1.135645	.7178614
#1	.0013265	-.001515	27.20953	.0315259	.0166670	.0631363	45.72921
#2	.0013583	-.001538	27.14085	.0317896	.0167074	.0642768	45.10868
#3	.0013442	-.001459	27.07699	.0319432	.0169224	.0629435	45.59486

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5154588	4.058458	.0173307	.0001958	1.143698	.0761075	.0746745
Stddev	.0017047	.022234	.0001374	.0005520	.006561	.0015387	.0004441
%RSD	.3307208	.5478523	.7927804	281.8718	.5736578	2.021753	.5947261
#1	.5168737	4.082582	.0174330	.0008217	1.143098	.0773499	.0743337
#2	.5159364	4.054003	.0171745	-.000222	1.137458	.0765862	.0745131
#3	.5135662	4.038788	.0173847	-.000012	1.150539	.0743863	.0751768

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.576308	.0285652	.0009072	-.001431	.3555456	2.376271	.8293997
Stddev	.026601	.0006544	.0001696	.000512	.0015691	.017190	.0037704
%RSD	1.687533	2.290775	18.69100	35.80738	.4413225	.7234141	.4545889
#1	1.578256	.0293149	.0009616	-.000987	.3573140	2.388290	.8319402
#2	1.548787	.0281090	.0007171	-.001314	.3550030	2.356581	.8250676
#3	1.601882	.0282716	.0010428	-.001991	.3543198	2.383942	.8311913

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01LX5 Acquired: 1/17/2025 13:20:45 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.890420	.0047267	.0891039
Stddev	.004871	.0007335	.0002965
%RSD	.2576888	15.51856	.3327085
#1	1.885408	.0040013	.0894312
#2	1.890717	.0054680	.0888534
#3	1.895137	.0047108	.0890272

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2964.501	56837.46	10983.77	2029.187	4322.719
Stddev	6.373	37.30	63.92	3.653	7.361
%RSD	.2149764	.0656315	.5819784	.1800400	.1702820
#1	2967.224	56880.54	11003.92	2029.129	4330.621
#2	2969.060	56815.50	10912.20	2032.870	4321.480
#3	2957.218	56816.35	11035.19	2025.564	4316.057

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01MS Acquired: 1/17/2025 13:25:02 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8031061	1.877553	1.100841	1.741269	.7463548	74.99446
Stddev	.0041530	.019598	.002313	.005643	.0026437	.04620
%RSD	.5171155	1.043785	.2100680	.3240852	.3542098	.0616007
#1	.8044081	1.897872	1.099164	1.745931	.7492375	74.98829
#2	.7984581	1.876019	1.099881	1.734995	.7440437	75.04343
#3	.8064521	1.858767	1.103479	1.742880	.7457832	74.95165

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4901226	.1699993	.1837365	127.6901	.5143432	.2771144
Stddev	.0008864	.0004888	.0002055	.2659	.0004038	.0005516
%RSD	.1808467	.2875140	.1118405	.2082184	.0784996	.1990706
#1	.4911283	.1703308	.1837061	127.9958	.5147028	.2773148
#2	.4897842	.1702290	.1835479	127.5617	.5139064	.2764906
#3	.4894552	.1694379	.1839555	127.5128	.5144204	.2775378

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5519950	218.3068	2.482755	20.21242	.5640374	.0704342
Stddev	.0007166	.7018	.007108	.02333	.0010595	.0006069
%RSD	.1298169	.3214693	.2862933	.1154334	.1878337	.8616385
#1	.5516823	218.8110	2.490356	20.22718	.5631638	.0705045
#2	.5514880	217.5053	2.476273	20.18552	.5637325	.0697953
#3	.5528148	218.6040	2.481635	20.22456	.5652158	.0710029

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.636998	.6107503	.6800158	17.60797	.3909446	.3866051
Stddev	.029182	.0027881	.0027096	.08840	.0007357	.0009830
%RSD	.3378707	.4565011	.3984665	.5020284	.1881874	.2542707
#1	8.669938	.6138140	.6804030	17.66044	.3901044	.3863870
#2	8.626675	.6083620	.6825110	17.50591	.3912558	.3857495
#3	8.614381	.6100749	.6771334	17.65757	.3914735	.3876789

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01MS Acquired: 1/17/2025 13:25:02 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6679083	1.824449	F 11.76931	9.773654	9.500886	.2168921
Stddev	.0014274	.004602	.00916	.011142	.006323	.0009351
%RSD	.2137090	.2522385	.0777901	.1140014	.0665556	.4311194
#1	.6687021	1.829556	11.76601	9.782653	9.508058	.2178225
#2	.6662605	1.823169	11.76225	9.761191	9.496114	.2169013
#3	.6687623	1.820623	11.77965	9.777117	9.498486	.2159524

Elem	Sr4077
Units	ppm
Avg	.5939841
Stddev	.0016771
%RSD	.2823488
#1	.5956904
#2	.5939240
#3	.5923378

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2939.845	56858.05	11482.16	1993.176	3972.473
Stddev	3.484	137.99	42.10	4.925	4.271
%RSD	.1185232	.2426840	.3666727	.2470804	.1075071
#1	2936.823	56715.38	11448.59	1996.069	3968.575
#2	2943.656	56867.96	11468.49	1987.490	3977.038
#3	2939.056	56990.81	11529.39	1995.970	3971.805

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01MSD Acquired: 1/17/2025 13:28:58 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8171724	1.894810	1.118011	1.782974	.7498915	75.17025
Stddev	.0016661	.032604	.004120	.004841	.0050862	.04501
%RSD	.2038886	1.720681	.3684959	.2715170	.6782578	.0598818
#1	.8152778	1.925594	1.122746	1.788401	.7555151	75.20694
#2	.8184093	1.898187	1.116044	1.779100	.7485465	75.12002
#3	.8178301	1.860650	1.115244	1.781422	.7456130	75.18380

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4880296	.1757252	.1878260	126.9142	.5209524	.2814360
Stddev	.0013817	.0010549	.0010923	.2447	.0044787	.0006269
%RSD	.2831172	.6003213	.5815609	.1928146	.8597132	.2227400
#1	.4882818	.1748374	.1889384	126.7851	.5181751	.2821361
#2	.4892679	.1768914	.1877847	127.1964	.5185631	.2812452
#3	.4865392	.1754467	.1867549	126.7610	.5261191	.2809267

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5654544	214.8750	2.486324	20.28758	.5733816	.0700997
Stddev	.0008953	1.1906	.008196	.08079	.0023003	.0006702
%RSD	.1583293	.5540679	.3296424	.3982161	.4011887	.9560179
#1	.5664830	215.3338	2.487741	20.20024	.5756254	.0706279
#2	.5648509	213.5233	2.493719	20.30288	.5710286	.0693458
#3	.5650293	215.7679	2.477512	20.35963	.5734908	.0703253

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.189967	.6181546	.5753772	17.21846	.3933371	.3882291
Stddev	.014064	.0052468	.0019539	.11802	.0006234	.0003696
%RSD	.1717274	.8487871	.3395928	.6854273	.1584913	.0951973
#1	8.199081	.6241281	.5740708	17.23719	.3934632	.3884172
#2	8.173769	.6142920	.5744374	17.09220	.3926603	.3878033
#3	8.197051	.6160437	.5776235	17.32600	.3938879	.3884667

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01MSD Acquired: 1/17/2025 13:28:58 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6782789	1.835619	F 11.99824	F 10.03575	9.722324	.2146033
Stddev	.0035833	.002139	.11428	.02146	.027192	.0012286
%RSD	.5282974	.1165072	.9524981	.2138666	.2796869	.5725069
#1	.6812841	1.837767	11.98960	10.05782	9.752730	.2132690
#2	.6792393	1.835600	11.88852	10.01495	9.713903	.2156878
#3	.6743132	1.833490	12.11660	10.03448	9.700338	.2148531

Elem	Sr4077
Units	ppm
Avg	.5965551
Stddev	.0035443
%RSD	.5941350
#1	.5976892
#2	.5993936
#3	.5925825

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2914.164	56777.61	11237.61	1990.156	3915.116
Stddev	6.037	386.49	51.24	12.837	14.790
%RSD	.2071520	.6807172	.4559608	.6450198	.3777743
#1	2907.786	56919.51	11283.59	1998.381	3898.132
#2	2919.789	57073.09	11182.37	1996.724	3922.064
#3	2914.916	56340.22	11246.86	1975.365	3925.154

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01A Acquired: 1/17/2025 13:32:53 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7764638	1.808870	1.078296	1.687949	.7237697	75.88902
Stddev	.0028407	.011156	.001958	.004070	.0006015	.25422
%RSD	.3658535	.6167387	.1815489	.2410953	.0831069	.3349887
#1	.7777962	1.818581	1.080556	1.688031	.7239191	75.80974
#2	.7783933	1.796685	1.077177	1.691977	.7242823	76.17344
#3	.7732017	1.811344	1.077155	1.683839	.7231075	75.68389

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5029189	.1673249	.1786168	128.7197	.5018639	.2740048
Stddev	.0008455	.0014558	.0002938	.6202	.0011087	.0004151
%RSD	.1681244	.8700422	.1644924	.4817893	.2209218	.1514810
#1	.5023344	.1665924	.1784563	128.6184	.5031123	.2740587
#2	.5038884	.1690015	.1789559	129.3842	.5014854	.2743903
#3	.5025340	.1663809	.1784381	128.1564	.5009940	.2735654

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5470652	221.0038	2.554312	20.59122	.5535822	.0684310
Stddev	.0011529	1.4781	.009750	.11833	.0008770	.0004509
%RSD	.2107396	.6688280	.3816974	.5746472	.1584277	.6588610
#1	.5479813	222.6716	2.554374	20.62723	.5543441	.0687936
#2	.5474437	219.8559	2.564031	20.68735	.5537791	.0679262
#3	.5457707	220.4838	2.544531	20.45907	.5526235	.0685733

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.696365	.6198790	.5836690	17.44373	.3944435	.3766997
Stddev	.064071	.0022463	.0032411	.13769	.0008372	.0005589
%RSD	.7367604	.3623843	.5553068	.7893522	.2122553	.1483730
#1	8.756732	.6192387	.5874109	17.55756	.3950749	.3768963
#2	8.629141	.6223759	.5818620	17.29068	.3947618	.3771338
#3	8.703223	.6180222	.5817342	17.48295	.3934938	.3760690

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1068-01A Acquired: 1/17/2025 13:32:53 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6560648	1.899078	F 12.03318	9.755255	9.477137	.2185184
Stddev	.0032287	.005704	.06796	.022113	.031111	.0011072
%RSD	.4921354	.3003458	.5647979	.2266775	.3282738	.5066661
#1	.6589316	1.898867	12.09762	9.729731	9.464991	.2182206
#2	.6566956	1.904884	11.96217	9.768629	9.453932	.2197440
#3	.6525672	1.893482	12.03976	9.767404	9.512489	.2175905

Elem	Sr4077
Units	ppm
Avg	.6069930
Stddev	.0019059
%RSD	.3139850
#1	.6054165
#2	.6091110
#3	.6064515

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2974.244	57970.75	11499.43	2053.055	4000.375
Stddev	6.488	273.28	98.08	13.947	4.442
%RSD	.2181402	.4714081	.8529107	.6793284	.1110352
#1	2966.943	57684.56	11540.43	2037.460	3995.597
#2	2976.437	57998.73	11387.51	2057.374	4001.149
#3	2979.351	58228.96	11570.36	2064.333	4004.379

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV03 Acquired: 1/17/2025 13:36:49 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.729766	4.789446	4.695570	4.756881	4.814555	9.518909	9.552884
Stddev	.003250	.040708	.008846	.010690	.004275	.105801	.181214
%RSD	.0687129	.8499555	.1883903	.2247207	.0887992	1.111480	1.896959
#1	4.732362	4.757729	4.685367	4.744547	4.811501	9.640314	9.737415
#2	4.726121	4.835349	4.700260	4.762624	4.812722	9.470010	9.375179
#3	4.730815	4.775258	4.701084	4.763471	4.819441	9.446401	9.546057

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2312961	2.341584	23.39321	.9518228	2.359727	1.205179	4.901956
Stddev	.0014482	.003615	.23156	.0017900	.003802	.001896	.045529
%RSD	.6261290	.1543854	.9898722	.1880609	.1611050	.1573201	.9287920
#1	.2320117	2.337429	23.66042	.9538865	2.355524	1.203709	4.953838
#2	.2296294	2.343317	23.26804	.9506899	2.360729	1.204510	4.883365
#3	.2322473	2.344006	23.25117	.9508922	2.362927	1.207319	4.868664

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.360291	22.59460	2.358534	1.205947	24.57677	2.363205	2.444621
Stddev	.021349	.23331	.003498	.002354	.24798	.025833	.003755
%RSD	.9045151	1.032580	.1482925	.1952058	1.009001	1.093133	.1535865
#1	2.384667	22.86156	2.354758	1.208660	24.78777	2.393010	2.440303
#2	2.351289	22.49244	2.361663	1.204732	24.63890	2.349349	2.446438
#3	2.344917	22.42980	2.359180	1.204448	24.30363	2.347257	2.447121

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.46772	4.662663	4.840888	4.683575	4.747008	5.142282	4.829910
Stddev	.25980	.030075	.007800	.011463	.053334	.055050	.027017
%RSD	1.061811	.6450276	.1611181	.2447525	1.123532	1.070537	.5593785
#1	24.68727	4.682116	4.832248	4.671162	4.808406	5.191372	4.799452
#2	24.53500	4.628022	4.843003	4.693762	4.720456	5.152711	4.850985
#3	24.18090	4.677851	4.847411	4.685802	4.712161	5.082764	4.839292

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV03 Acquired: 1/17/2025 13:36:49 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.645488	4.781809	4.837142
Stddev	.016447	.052588	.080836
%RSD	.3540433	1.099756	1.671156
#1	4.626804	4.841983	4.878511
#2	4.657776	4.758777	4.743994
#3	4.651885	4.744666	4.888920

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2883.143	55714.91	10278.37	1982.236	4148.112
Stddev	3.736	121.27	65.63	4.618	6.919
%RSD	.1295950	.2176684	.6384885	.2329513	.1668046
#1	2887.142	55594.44	10226.04	1978.016	4155.417
#2	2882.545	55713.31	10352.00	1987.169	4141.657
#3	2879.741	55836.97	10257.06	1981.523	4147.263

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB03 Acquired: 1/17/2025 13:41:00 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0010522	.0010388	.0012737	.0006508	.0003655	.0030901	-.008710
Stddev	.0010398	.0013613	.0005018	.0003743	.0002031	.0061753	.000291
%RSD	98.82882	131.0434	39.39705	57.50596	55.54979	199.8383	3.340578
#1	.0022176	.0006214	.0010915	.0003929	.0005963	.0101994	-.008777
#2	.0007198	.0025599	.0018412	.0010801	.0002859	.0000126	-.008961
#3	.0002192	-.000065	.0008885	.0004795	.0002144	-.000942	-.008391

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000053	-.000173	.0039348	-.000350	-.000034	-.000149	.0034172
Stddev	.000026	.000040	.0045222	.000300	.000127	.000371	.0016079
%RSD	49.04262	23.25663	114.9283	85.55835	370.2767	249.5438	47.05106
#1	-.000024	-.000195	.0089945	-.000026	.000075	-.000577	.0029203
#2	-.000075	-.000198	.0002868	-.000408	-.000005	.000083	.0052149
#3	-.000059	-.000127	.0025232	-.000617	-.000173	.000048	.0021165

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000238	-.004903	.0001956	.0006818	-.014966	-.001865	.0003514
Stddev	.000405	.009448	.0002389	.0001112	.008556	.000376	.0001484
%RSD	170.4508	192.7169	122.1490	16.30506	57.16811	20.14889	42.22548
#1	-.000289	.005988	.0000064	.0006372	-.005496	-.001437	.0003248
#2	.000191	-.009791	.0004641	.0005998	-.022137	-.002142	.0005114
#3	-.000615	-.010905	.0001163	.0008084	-.017265	-.002017	.0002182

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004357	.0044604	.0000487	-.000270	.0006595	.0173707	-.000325
Stddev	.008587	.0003779	.0001195	.000119	.0005630	.0063216	.001091
%RSD	197.0769	8.471262	245.2560	44.04621	85.37860	36.39205	335.2312
#1	.005435	.0041822	.0001083	-.000408	.0008306	.0122543	-.000169
#2	-.007900	.0048906	-.000089	-.000209	.0000307	.0244376	.000679
#3	-.010607	.0043085	.000127	-.000195	.0011171	.0154202	-.001486

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB03 Acquired: 1/17/2025 13:41:00 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004224	-.002046	.0000226
Stddev	.001633	.001721	.0000363
%RSD	38.65348	84.15044	160.2886
#1	-.003288	-.001088	.0000475
#2	-.006109	-.004033	.0000394
#3	-.003275	-.001016	-.000019

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2982.636	57252.48	10755.69	2050.134	4528.474
Stddev	7.220	40.70	55.87	5.233	1.991
%RSD	.2420821	.0710810	.5194855	.2552491	.0439623
#1	2980.036	57276.90	10693.91	2053.635	4530.595
#2	2990.796	57205.50	10770.46	2044.119	4526.646
#3	2977.076	57275.03	10802.70	2052.648	4528.180

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02 Acquired: 1/17/2025 13:45:21 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003003	-.006324	.0016675	.0024893	.0016056	-.001271	.0159570
Stddev	.000780	.002054	.0004212	.0017146	.0003246	.006624	.0010966
%RSD	25.95788	32.47530	25.25926	68.87958	20.21656	521.0070	6.871918
#1	-.002163	-.004737	.0012829	.0011815	.0019489	-.008646	.0161935
#2	-.003704	-.008643	.0016021	.0018559	.0013037	.000656	.0169161
#3	-.003142	-.005591	.0021176	.0044304	.0015643	.004176	.0147615

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000161	-.000155	8.214424	.0013227	-.000256	.0018141	.0239937
Stddev	.000045	.000020	.041650	.0001385	.000124	.0002509	.0069887
%RSD	27.88255	12.73740	.5070364	10.46986	48.61472	13.82868	29.12730
#1	-.000182	-.000134	8.176519	.0014560	-.000395	.0016804	.0177834
#2	-.000109	-.000158	8.259012	.0011796	-.000155	.0016583	.0315617
#3	-.000191	-.000174	8.207741	.0013325	-.000218	.0021035	.0226361

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0500451	2.400690	.0019383	.0007546	8.313693	-.001167	.0435666
Stddev	.0002905	.005190	.0004661	.0002813	.023499	.000643	.0001242
%RSD	.5805283	.2161837	24.04876	37.28298	.2826536	55.15775	.2851764
#1	.0503662	2.401062	.0015814	.0008767	8.313902	-.001821	.0435684
#2	.0498004	2.405684	.0024657	.0004328	8.290090	-.001143	.0434414
#3	.0499686	2.395325	.0017679	.0009543	8.337087	-.000535	.0436899

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.112859	.0224363	.0011335	-.000454	.0005364	.6458674	.0072109
Stddev	.053544	.0003504	.0002483	.000910	.0007251	.0104558	.0005146
%RSD	4.811396	1.561931	21.90683	200.4749	135.1677	1.618874	7.136484
#1	1.053722	.0226407	.0013638	.000166	.0011099	.6397991	.0066407
#2	1.158050	.0220316	.0008704	-.000029	.0007780	.6579407	.0073513
#3	1.126804	.0226364	.0011664	-.001499	-.000279	.6398625	.0076407

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02 Acquired: 1/17/2025 13:45:21 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.262062	-.006426	.0457677
Stddev	.028730	.000949	.0000685
%RSD	.6740979	14.77406	.1497500
#1	4.232964	-.006621	.0458322
#2	4.262814	-.005394	.0456957
#3	4.290410	-.007263	.0457750

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2907.675	56539.86	11101.04	1970.150	4478.564
Stddev	14.870	190.37	43.82	7.010	25.329
%RSD	.5114171	.3366948	.3947270	.3557878	.5655541
#1	2918.573	56759.10	11094.99	1977.419	4503.516
#2	2913.718	56416.45	11060.55	1963.432	4479.301
#3	2890.735	56444.02	11147.56	1969.599	4452.875

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02DUP Acquired: 1/17/2025 13:49:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004839	-.007282	.0005415	.0015365	.0022568	.0040427	.0165156
Stddev	.003493	.000479	.0003066	.0005192	.0006593	.0058826	.0005815
%RSD	72.18300	6.581939	56.62610	33.79440	29.21419	145.5120	3.520963
#1	-.008739	-.007835	.0008859	.0009964	.0028914	.0021620	.0158509
#2	-.003776	-.006990	.0002982	.0020320	.0015753	-.000670	.0167655
#3	-.002001	-.007021	.0004403	.0015810	.0023038	.010636	.0169305

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000179	-.000211	8.069601	.0035270	-.000120	.0026011	.0284685
Stddev	.000017	.000061	.016110	.0003199	.000073	.0002625	.0024075
%RSD	9.392651	28.92717	.1996413	9.071212	60.46909	10.09037	8.456516
#1	-.000179	-.000281	8.074446	.0036430	-.000200	.0025209	.0281219
#2	-.000162	-.000166	8.082732	.0031653	-.000058	.0028943	.0310305
#3	-.000195	-.000187	8.051624	.0037728	-.000102	.0023881	.0262532

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0469027	2.330656	.0040108	.0009740	7.976024	-.000984	.0427697
Stddev	.0005288	.026542	.0001541	.0002488	.094426	.000538	.0002328
%RSD	1.127347	1.138841	3.842943	25.54474	1.183867	54.64574	.5442996
#1	.0463351	2.301560	.0041842	.0006894	7.984542	-.001475	.0428653
#2	.0469916	2.336864	.0038894	.0011501	8.065901	-.000410	.0429394
#3	.0473813	2.353545	.0039589	.0010825	7.877627	-.001067	.0425043

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.090495	.0206683	.0010598	-.000438	.0002835	.6061635	.0069456
Stddev	.033638	.0005318	.0002622	.000597	.0004962	.0062264	.0020629
%RSD	3.084647	2.572911	24.74254	136.3100	174.9950	1.027186	29.70027
#1	1.128764	.0205214	.0013587	-.000184	.0007084	.6060773	.0068194
#2	1.065607	.0202255	.0009523	-.001120	-.000262	.6124326	.0049488
#3	1.077113	.0212581	.0008684	-.000010	.000404	.5999807	.0090687

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02DUP Acquired: 1/17/2025 13:49:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.173160	-.005889	.0446596
Stddev	.022065	.001613	.0003127
%RSD	.5287363	27.38159	.7001266
#1	4.197130	-.005254	.0447939
#2	4.153694	-.004691	.0448827
#3	4.168657	-.007723	.0443022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2912.880	56657.96	11029.95	1959.337	4475.203
Stddev	6.630	79.63	62.11	2.663	10.167
%RSD	.2276090	.1405485	.5631058	.1358973	.2271783
#1	2907.497	56567.36	10989.86	1959.709	4469.380
#2	2920.286	56716.86	11101.49	1956.508	4486.942
#3	2910.858	56689.66	10998.48	1961.794	4469.286

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02LX5 Acquired: 1/17/2025 13:53:58 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.002710	-.002626	.0008393	.0007090	.0005618	-.003684	-.005140
Stddev	.000702	.000598	.0006815	.0034523	.0003467	.004607	.000205
%RSD	25.89209	22.77566	81.19608	486.9104	61.71710	125.0535	3.996864
#1	-.002725	-.002127	.0016036	.0014193	.0001689	-.009001	-.005288
#2	-.003403	-.003289	.0006190	-.003043	.0006917	-.000884	-.004905
#3	-.002001	-.002463	.0002952	.003751	.0008248	-.001167	-.005226

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000040	-.000078	1.612319	.0003200	-.000132	.0005121	.0077159
Stddev	.000003	.000073	.003630	.0002638	.000161	.0003783	.0001629
%RSD	8.458475	93.62174	.2251716	82.42157	121.4976	73.87329	2.110664
#1	-.000038	-.000156	1.610257	.0003087	-.000071	.0003158	.0076383
#2	-.000044	-.000070	1.610189	.0005893	-.000315	.0002722	.0076064
#3	-.000038	-.000010	1.616511	.0000621	-.000011	.0009482	.0079031

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091100	.4686493	.0010147	.0006747	1.555827	-.001964	.0081850
Stddev	.0002201	.0090067	.0002109	.0002403	.017771	.000576	.0000930
%RSD	2.416051	1.921847	20.78039	35.61360	1.142250	29.32979	1.135755
#1	.0092788	.4582891	.0008428	.0003973	1.573314	-.002148	.0081777
#2	.0091901	.4746174	.0012500	.0008099	1.537784	-.002424	.0080959
#3	.0088611	.4730413	.0009513	.0008170	1.556383	-.001318	.0082814

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2179519	.0017659	.0001129	-.000097	.0008664	.1241527	-.000726
Stddev	.0176468	.0006051	.0001107	.000654	.0000526	.0009546	.000302
%RSD	8.096669	34.26631	97.96008	675.8289	6.073655	.7688577	41.58493
#1	.1978019	.0010677	.0001177	.000634	.0008685	.1230559	-.000503
#2	.2306525	.0020914	-.000000	-.000627	.0009179	.1247954	-.000606
#3	.2254013	.0021385	.000221	-.000296	.0008127	.1246069	-.001070

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02LX5 Acquired: 1/17/2025 13:53:58 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8738088	-.002980	.0089110
Stddev	.0028606	.000510	.0000296
%RSD	.3273750	17.10084	.3317595
#1	.8770283	-.003434	.0088778
#2	.8715591	-.003077	.0089344
#3	.8728391	-.002429	.0089208

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2996.644	57166.25	10909.11	2028.647	4532.684
Stddev	4.674	156.11	6.60	.626	2.909
%RSD	.1559596	.2730798	.0605086	.0308512	.0641675
#1	2992.076	57252.02	10904.21	2028.142	4529.349
#2	3001.416	56986.06	10916.62	2029.347	4534.012
#3	2996.441	57260.67	10906.51	2028.453	4534.692

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02MS Acquired: 1/17/2025 13:58:18 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7649551	1.826135	.9067117	1.800543	.7613901	1.816032	.1958684
Stddev	.0039565	.004899	.0010968	.011252	.0042701	.016889	.0013651
%RSD	.5172156	.2682837	.1209590	.6249193	.5608323	.9299928	.6969256
#1	.7608361	1.823333	.9054617	1.790416	.7570039	1.835289	.1974129
#2	.7653030	1.831792	.9071604	1.798557	.7616325	1.809073	.1953683
#3	.7687261	1.823279	.9075130	1.812656	.7655338	1.803735	.1948238

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1738579	.1805180	9.319525	.3921550	.1871884	.2942164	2.891753
Stddev	.0008718	.0006120	.023757	.0003601	.0005289	.0010959	.013085
%RSD	.5014745	.3390045	.2549116	.0918227	.2825383	.3724713	.4525080
#1	.1743760	.1801376	9.336273	.3924042	.1868761	.2938019	2.893398
#2	.1743464	.1801924	9.329965	.3917422	.1868900	.2933883	2.877923
#3	.1728513	.1812239	9.292336	.3923187	.1877990	.2954591	2.903938

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2265975	4.132180	.4673743	.0705577	10.65817	.2730108	.2427268
Stddev	.0006846	.024646	.0015827	.0004383	.08385	.0006575	.0014870
%RSD	.3021018	.5964409	.3386396	.6211424	.7867129	.2408366	.6126253
#1	.2268556	4.159780	.4670680	.0705452	10.72312	.2733450	.2438641
#2	.2258215	4.112372	.4659671	.0710021	10.56351	.2734340	.2432722
#3	.2271155	4.124388	.4690877	.0701258	10.68788	.2722533	.2410441

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.54418	.2630167	.4085710	.6387227	.1806388	1.303079	5.457898
Stddev	.06360	.0014873	.0018930	.0020023	.0009965	.010149	.020859
%RSD	.6032114	.5654683	.4633136	.3134782	.5516326	.7788582	.3821813
#1	10.59353	.2619861	.4067459	.6368790	.1817391	1.314477	5.440259
#2	10.47240	.2647217	.4084420	.6384365	.1803801	1.295019	5.452513
#3	10.56660	.2623423	.4105252	.6408527	.1797972	1.299741	5.480922

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02MS Acquired: 1/17/2025 13:58:18 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.488479	.1786541	.2297919
Stddev	.007726	.0021568	.0007313
%RSD	.1721290	1.207246	.3182598
#1	4.487687	.1810226	.2306358
#2	4.481179	.1781361	.2293982
#3	4.496570	.1768034	.2293419

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2831.950	56214.94	10570.56	1971.496	4281.220
Stddev	17.391	162.39	27.52	9.674	20.919
%RSD	.6141075	.2888789	.2603138	.4906936	.4886118
#1	2846.457	56039.53	10546.38	1960.325	4294.465
#2	2836.722	56360.05	10564.81	1977.034	4292.091
#3	2812.671	56245.26	10600.50	1977.128	4257.105

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02MSD Acquired: 1/17/2025 14:02:17 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7448190	1.798949	.8847559	1.756077	.7472876	1.809688	.1927985
Stddev	.0035554	.014625	.0048067	.006498	.0040684	.014930	.0008264
%RSD	.4773530	.8129649	.5432818	.3700423	.5444249	.8250206	.4286404
#1	.7409462	1.784106	.8800564	1.749766	.7502386	1.824577	.1935608
#2	.7455755	1.799397	.8845481	1.755716	.7426465	1.794716	.1919202
#3	.7479353	1.813345	.8896631	1.762748	.7489776	1.809770	.1929144

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1724365	.1758370	9.215692	.3898834	.1830688	.2878968	2.837955
Stddev	.0017121	.0007762	.013500	.0014889	.0005928	.0008642	.022038
%RSD	.9928841	.4414516	.1464910	.3818794	.3238258	.3001799	.7765373
#1	.1741467	.1750295	9.228305	.3898948	.1823975	.2877798	2.817768
#2	.1724402	.1759038	9.217318	.3883888	.1832886	.2870970	2.834632
#3	.1707225	.1765777	9.201452	.3913665	.1835204	.2888135	2.861466

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2229815	4.097034	.4556678	.0699534	10.36392	.2712114	.2408578
Stddev	.0005827	.036304	.0017999	.0002372	.10115	.0007408	.0021052
%RSD	.2613147	.8861038	.3949917	.3390829	.9759662	.2731391	.8740542
#1	.2235460	4.134718	.4536451	.0696863	10.27792	.2719339	.2416389
#2	.2223822	4.062288	.4562656	.0700345	10.33849	.2704536	.2424608
#3	.2230162	4.094096	.4570927	.0701395	10.47536	.2712467	.2384737

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.37105	.2614664	.4072539	.6214818	.1786155	1.272379	5.177238
Stddev	.12877	.0028999	.0015233	.0028351	.0005587	.017599	.023390
%RSD	1.241619	1.109076	.3740395	.4561828	.3127706	1.383133	.4517810
#1	10.24978	.2641602	.4060801	.6182420	.1786046	1.252524	5.151058
#2	10.35718	.2618419	.4067062	.6226951	.1791795	1.278560	5.184579
#3	10.50619	.2583971	.4089753	.6235084	.1780624	1.286054	5.196076

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02MSD Acquired: 1/17/2025 14:02:17 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.265944	.1771473	.2266031
Stddev	.022626	.0000704	.0006952
%RSD	.5303799	.0397383	.3067827
#1	4.244639	.1772034	.2269381
#2	4.263502	.1770683	.2270673
#3	4.289692	.1771702	.2258038

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2918.798	56749.04	10606.67	1981.026	4467.946
Stddev	4.800	335.47	79.47	8.163	12.978
%RSD	.1644548	.5911498	.7492736	.4120383	.2904649
#1	2920.942	56830.02	10515.02	1973.066	4482.093
#2	2922.151	57036.62	10648.49	1989.377	4465.155
#3	2913.299	56380.49	10656.51	1980.634	4456.591

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02A Acquired: 1/17/2025 14:06:15 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7722719	1.835478	.9044148	1.826069	.7686086	1.845013	.2001418
Stddev	.0022541	.007843	.0009750	.001951	.0027100	.011714	.0006050
%RSD	.2918729	.4273096	.1078034	.1068250	.3525895	.6348770	.3022800
#1	.7719664	1.841559	.9040068	1.824406	.7671445	1.857264	.2008403
#2	.7701861	1.838250	.9037101	1.825584	.7669455	1.843853	.1997994
#3	.7746631	1.826625	.9055275	1.828216	.7717358	1.833923	.1997856

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1691925	.1805772	9.401284	.3945778	.1870221	.2939092	2.985402
Stddev	.0005161	.0004304	.008921	.0009967	.0000710	.0010704	.012584
%RSD	.3050224	.2383593	.0948863	.2526088	.0379676	.3641900	.4215112
#1	.1688314	.1803068	9.403906	.3934832	.1870370	.2926900	2.997746
#2	.1697836	.1803512	9.408599	.3948171	.1870844	.2943433	2.985867
#3	.1689626	.1810736	9.391346	.3954331	.1869447	.2946944	2.972592

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2274985	4.199659	.4677242	.0706631	11.29621	.2783003	.2437205
Stddev	.0018014	.021189	.0005258	.0001380	.10465	.0011985	.0009737
%RSD	.7918426	.5045405	.1124190	.1952369	.9264263	.4306635	.3995120
#1	.2291775	4.203931	.4671172	.0706152	11.37103	.2789070	.2426111
#2	.2277223	4.218386	.4680141	.0705555	11.34098	.2790742	.2444335
#3	.2255956	4.176659	.4680412	.0708186	11.17662	.2769197	.2441169

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.98767	.2564142	.4123210	.6395950	.1832366	1.356588	5.339836
Stddev	.03367	.0011518	.0015790	.0005578	.0008427	.006871	.010867
%RSD	.3064773	.4491829	.3829586	.0872126	.4599026	.5065188	.2035026
#1	11.01509	.2561780	.4111847	.6399370	.1841897	1.357760	5.332179
#2	10.99784	.2576658	.4116543	.6389513	.1825899	1.349206	5.352274
#3	10.95009	.2553988	.4141241	.6398966	.1829304	1.362798	5.335056

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1036-02A Acquired: 1/17/2025 14:06:15 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.465221	.1839794	.2330958
Stddev	.001579	.0015037	.0011426
%RSD	.0353591	.8173321	.4901747
#1	4.463413	.1844552	.2342115
#2	4.465922	.1851877	.2331479
#3	4.466327	.1822954	.2319281

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2852.506	56360.60	10888.47	1947.227	4333.810
Stddev	10.637	136.31	32.90	7.965	9.007
%RSD	.3728991	.2418481	.3021626	.4090613	.2078224
#1	2857.891	56517.92	10926.00	1955.338	4336.115
#2	2859.373	56277.67	10864.62	1939.416	4341.440
#3	2840.253	56286.21	10874.78	1946.928	4323.875

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1069-02 Acquired: 1/17/2025 14:10:14 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.005939	-.004666	.0008699	.0040611	.0014386	.0119723	.0850415
Stddev	.001433	.000513	.0017341	.0006482	.0016075	.0024910	.0008016
%RSD	24.12577	10.98592	199.3369	15.96144	111.7383	20.80632	.9425784
#1	-.005314	-.005154	-.000513	.0033460	.0015434	.0096405	.0855072
#2	-.004926	-.004132	.002815	.0046102	-.000219	.0145967	.0841159
#3	-.007579	-.004713	.000307	.0042271	.002991	.0116798	.0855013

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000176	-.000172	.3768328	.0001949	.0001124	.0008462	.0180839
Stddev	.000025	.000057	.0063125	.0000590	.0003088	.0001825	.0010323
%RSD	13.90653	33.43501	1.675142	30.25405	274.7451	21.56749	5.708187
#1	-.000198	-.000110	.3820820	.0002630	-.000228	.0006796	.0185727
#2	-.000181	-.000182	.3698285	.0001631	.000373	.0008177	.0187809
#3	-.000150	-.000224	.3785879	.0001587	.000192	.0010412	.0168980

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084238	.0913722	.0009947	.0006752	279.3156	-.000840	.1246139
Stddev	.0003028	.0091732	.0002340	.0003377	.9071	.000643	.0005614
%RSD	3.593966	10.03938	23.52576	50.02325	.3247561	76.54297	.4504770
#1	.0083617	.1019520	.0009884	.0010589	279.7624	-.001435	.1239944
#2	.0081569	.0865275	.0012318	.0004230	279.9126	-.000158	.1247583
#3	.0087528	.0856371	.0007639	.0005436	278.2718	-.000926	.1250889

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2629092	.0543850	.0003134	.0037362	.0006580	.2900400	.0046041
Stddev	.0356986	.0003869	.0001087	.0007168	.0001415	.0090246	.0013705
%RSD	13.57829	.7113213	34.69565	19.18451	21.49464	3.111491	29.76554
#1	.2232011	.0540023	.0004390	.0043616	.0004975	.2819124	.0051531
#2	.2923465	.0543768	.0002482	.0029540	.0007122	.2997518	.0056150
#3	.2731801	.0547759	.0002531	.0038930	.0007644	.2884559	.0030443

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1069-02 Acquired: 1/17/2025 14:10:14 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.308413	-.004932	.0044450
Stddev	.003461	.001121	.0000168
%RSD	.2644994	22.72194	.3780024
#1	1.305291	-.004868	.0044299
#2	1.307814	-.003844	.0044421
#3	1.312134	-.006083	.0044631

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2808.710	53454.88	10744.79	1876.538	4083.636
Stddev	8.810	130.34	29.91	3.440	13.953
%RSD	.3136748	.2438407	.2783664	.1833309	.3416748
#1	2813.675	53331.19	10759.34	1873.309	4094.694
#2	2813.918	53442.45	10764.63	1880.157	4088.254
#3	2798.538	53590.99	10710.39	1876.147	4067.960

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1040-01 Acquired: 1/17/2025 14:14:42 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003908	-.005542	.0059292	.0018409	.0019458	.0074248	-.008502
Stddev	.001600	.001003	.0013845	.0008425	.0009755	.0027749	.000338
%RSD	40.94568	18.09102	23.34978	45.76447	50.13319	37.37299	3.974644
#1	-.002972	-.004412	.0058592	.0013715	.0016498	.0103879	-.008259
#2	-.005756	-.005887	.0045811	.0028136	.0011526	.0048873	-.008360
#3	-.002997	-.006326	.0073473	.0013377	.0030350	.0069993	-.008888

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000152	-.000161	5.068351	.0008137	.0045039	.0062432	.2564124
Stddev	.000024	.000041	.010950	.0003348	.0001661	.0003417	.0017824
%RSD	15.96486	25.68725	.2160483	41.14318	3.688905	5.472769	.6951271
#1	-.000143	-.000123	5.080978	.0010795	.0046957	.0059675	.2549853
#2	-.000134	-.000205	5.062604	.0004377	.0044072	.0061368	.2558416
#3	-.000180	-.000154	5.061471	.0009240	.0044087	.0066255	.2584103

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134083	2.037252	.0082458	.0006607	17.74813	-.000854	.0225746
Stddev	.0004798	.004026	.0002026	.0003219	.13224	.000178	.0001958
%RSD	3.578600	.1976040	2.456705	48.72749	.7450887	20.84201	.8672261
#1	.0128620	2.035096	.0082861	.0009466	17.74333	-.000746	.0226449
#2	.0136018	2.041896	.0080261	.0007235	17.61836	-.001060	.0227255
#3	.0137612	2.034762	.0084252	.0003120	17.88271	-.000757	.0223534

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.055441	.0014068	.0002619	-.000116	.0009314	5.189853	.0068708
Stddev	.016853	.0003454	.0001810	.000226	.0002760	.012415	.0017335
%RSD	1.596769	24.55052	69.13327	194.7909	29.63514	.2392098	25.22949
#1	1.056399	.0014891	.0003987	.000145	.0008932	5.193036	.0069890
#2	1.071794	.0010277	.0003302	-.000251	.0006765	5.176157	.0050813
#3	1.038129	.0017036	.0000566	-.000242	.0012245	5.200366	.0085422

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1040-01 Acquired: 1/17/2025 14:14:42 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7181569	-.005668	.0340022
Stddev	.0082109	.000452	.0000828
%RSD	1.143327	7.968582	.2434645
#1	.7178327	-.005587	.0339326
#2	.7101129	-.006155	.0340937
#3	.7265250	-.005263	.0339801

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2958.623	56738.27	10974.81	1997.562	4524.183
Stddev	15.551	173.47	62.41	5.407	17.542
%RSD	.5256173	.3057382	.5686450	.2706611	.3877469
#1	2956.632	56539.93	10927.07	1991.455	4525.858
#2	2975.073	56861.68	10951.92	1999.491	4540.827
#3	2944.163	56813.19	11045.43	2001.739	4505.863

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1040-03 Acquired: 1/17/2025 14:18:59 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003509	-.006096	.0013067	.0033542	.0020015	.0088764	-.008586
Stddev	.001258	.001710	.0008821	.0004138	.0004409	.0034739	.000607
%RSD	35.84472	28.04490	67.50491	12.33633	22.02643	39.13695	7.071688
#1	-.002246	-.004122	.0018250	.0029169	.0023142	.0126170	-.008437
#2	-.004762	-.007112	.0002882	.0034059	.0014973	.0082605	-.009253
#3	-.003519	-.007053	.0018070	.0037396	.0021930	.0057516	-.008067

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000198	-.000219	5.278772	.0000138	.0048571	.0011794	.0159062
Stddev	.000033	.000052	.012566	.0002495	.0001570	.0001516	.0017824
%RSD	16.83971	23.72783	.2380471	1805.457	3.232255	12.85655	11.20576
#1	-.000236	-.000255	5.271971	-.000249	.0049284	.0012773	.0157295
#2	-.000184	-.000243	5.271073	.000043	.0046771	.0012561	.0142187
#3	-.000174	-.000160	5.293273	.000247	.0049657	.0010047	.0177704

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187052	2.132873	.0068584	.0006415	18.55396	-.001018	.0079400
Stddev	.0002887	.013099	.0002661	.0003018	.28617	.000683	.0000359
%RSD	1.543299	.6141330	3.879738	47.04779	1.542387	67.14691	.4523781
#1	.0187468	2.124708	.0071449	.0008146	18.70266	-.001332	.0079257
#2	.0183980	2.125929	.0066190	.0002930	18.73516	-.001488	.0079808
#3	.0189709	2.147981	.0068114	.0008168	18.22405	-.000234	.0079134

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.105997	.0013927	.0004357	-.000124	.0003441	5.332944	.0066376
Stddev	.038317	.0003239	.0001967	.000345	.0003627	.053399	.0018071
%RSD	3.464456	23.25833	45.15253	277.5791	105.3824	1.001312	27.22563
#1	1.120555	.0014014	.0004141	-.000426	.0007599	5.348117	.0087108
#2	1.134902	.0010646	.0006424	-.000198	.0001800	5.377115	.0053958
#3	1.062535	.0017123	.0002507	.000251	.0000926	5.273600	.0058063

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1040-03 Acquired: 1/17/2025 14:18:59 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8212489	-.004579	.0360239
Stddev	.0069297	.000899	.0000773
%RSD	.8437968	19.62899	.2146317
#1	.8246636	-.004858	.0360797
#2	.8132746	-.005304	.0360564
#3	.8258085	-.003573	.0359357

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2903.766	56259.18	10794.69	1992.350	4431.457
Stddev	9.155	206.07	104.56	7.751	15.212
%RSD	.3152718	.3662893	.9686384	.3890442	.3432831
#1	2903.812	56070.19	10803.80	1988.460	4433.291
#2	2912.898	56228.47	10894.41	1987.315	4445.669
#3	2894.589	56478.89	10685.88	2001.276	4415.411

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01 Acquired: 1/17/2025 14:23:18 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.005041	-.010132	.0022183	.0035532	.0030691	17.42769
Stddev	.000933	.000851	.0008142	.0010984	.0014488	.02656
%RSD	18.49946	8.397788	36.70356	30.91378	47.20589	.1524046
#1	-.004255	-.009335	.0012972	.0022850	.0047325	17.40056
#2	-.006072	-.011028	.0025157	.0042060	.0020824	17.42886
#3	-.004797	-.010031	.0028419	.0041684	.0023925	17.45364

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008119	-.000120	-.000389	9.227319	.4710130	.0043925
Stddev	.000989	.000032	.000057	.026111	.0022951	.0003740
%RSD	12.17561	26.70005	14.59592	.2829800	.4872734	8.513217
#1	-.006992	-.000116	-.000425	9.257371	.4688042	.0044699
#2	-.008530	-.000090	-.000419	9.214407	.4708491	.0039860
#3	-.008836	-.000154	-.000324	9.210179	.4733857	.0047217

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0249400	2.359934	.0420062	2.609994	.0824360	.0002366
Stddev	.0002636	.022382	.0003041	.012761	.0006412	.0003516
%RSD	1.056800	.9484124	.7240175	.4889265	.7778418	148.6258
#1	.0248983	2.338410	.0422455	2.623263	.0826326	.0005073
#2	.0246997	2.358307	.0421091	2.597810	.0817195	.0003633
#3	.0252219	2.383085	.0416639	2.608908	.0829560	-.000161

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2404.746	-.000897	2.356550	293.3382	6.047199	.0224698
Stddev	22.798	.000828	.013408	2.4260	.067727	.0000963
%RSD	.9480552	92.29044	.5689612	.8270403	1.119981	.4286527
#1	2404.145	-.000560	2.365418	290.5797	6.116840	.0224941
#2	2382.255	-.000291	2.341125	295.1400	5.981562	.0223636
#3	2427.839	-.001841	2.363106	294.2949	6.043196	.0225516

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01 Acquired: 1/17/2025 14:23:18 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0418857	.0002595	1.196612	5.562011	F 1118.232	.0033483
Stddev	.0005965	.0005062	.013569	.023334	4.719	.0005474
%RSD	1.424071	195.0955	1.133971	.4195196	.4220394	16.34875
#1	.0421429	.0008196	1.181006	5.556660	1118.880	.0038147
#2	.0423104	.0001242	1.203205	5.541817	1113.221	.0034846
#3	.0412037	-.000165	1.205625	5.587555	1122.593	.0027456

Elem	Sr4077
Units	ppm
Avg	.0355827
Stddev	.0001357
%RSD	.3814306
#1	.0357199
#2	.0355797
#3	.0354485

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2470.038	45976.02	10042.64	1665.687	3299.431
Stddev	12.033	209.35	78.63	7.022	15.291
%RSD	.4871528	.4553451	.7829470	.4215435	.4634321
#1	2471.108	46145.32	9963.33	1667.376	3298.731
#2	2481.501	46040.79	10120.56	1671.710	3315.059
#3	2457.506	45741.93	10044.03	1657.975	3284.502

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV04 Acquired: 1/17/2025 14:27:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.905576	4.849585	4.842333	4.940653	4.999847	9.715420	9.450848
Stddev	.006599	.038359	.008443	.006010	.005517	.032566	.077379
%RSD	.1345246	.7909756	.1743622	.1216480	.1103371	.3351994	.8187538
#1	4.898849	4.805802	4.843963	4.933823	4.999496	9.752861	9.512630
#2	4.905839	4.865674	4.833194	4.943004	4.994514	9.693672	9.475858
#3	4.912039	4.877280	4.849843	4.945133	5.005531	9.699727	9.364058

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2379623	2.423193	23.64575	.9920822	2.436668	1.243974	4.940555
Stddev	.0028644	.003254	.12759	.0023586	.002361	.001373	.026620
%RSD	1.203710	.1342773	.5395943	.2377460	.0968846	.1104038	.5387983
#1	.2392795	2.424907	23.77548	.9895880	2.439202	1.245476	4.920358
#2	.2399313	2.419440	23.64136	.9942766	2.434531	1.242784	4.930586
#3	.2346763	2.425231	23.52041	.9923822	2.436271	1.243661	4.970720

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.354437	22.84350	2.435999	1.242131	24.67859	2.390250	2.519494
Stddev	.014112	.15191	.002658	.000979	.15737	.010475	.007511
%RSD	.5993758	.6650248	.1091232	.0788072	.6376900	.4382463	.2981204
#1	2.370082	22.96401	2.436907	1.241562	24.71152	2.402241	2.527946
#2	2.350563	22.89363	2.433006	1.243261	24.50736	2.385629	2.513580
#3	2.342667	22.67285	2.438085	1.241569	24.81689	2.382880	2.516957

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.12236	4.775734	4.994191	4.817095	4.773406	5.235876	4.888692
Stddev	.21125	.066630	.007869	.010078	.024646	.072731	.006226
%RSD	.8409030	1.395170	.1575696	.2092146	.5163286	1.389096	.1273645
#1	25.08634	4.823923	4.989295	4.812246	4.801414	5.196642	4.892925
#2	24.93144	4.803580	4.990011	4.810359	4.763770	5.191185	4.891609
#3	25.34931	4.699698	5.003269	4.828682	4.755032	5.319799	4.881543

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV04 Acquired: 1/17/2025 14:27:39 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.855193	4.768002	4.845645
Stddev	.006540	.023176	.072815
%RSD	.1346914	.4860813	1.502680
#1	4.853689	4.794577	4.856624
#2	4.862353	4.757451	4.912347
#3	4.849536	4.751979	4.767964

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2819.617	54273.64	10115.25	1895.182	4069.090
Stddev	9.452	86.48	118.47	5.216	14.586
%RSD	.3352392	.1593323	1.171215	.2752065	.3584623
#1	2811.787	54371.58	10039.77	1897.007	4057.894
#2	2830.117	54241.55	10054.19	1899.240	4085.585
#3	2816.945	54207.80	10251.80	1889.299	4063.791

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB04 Acquired: 1/17/2025 14:31:50 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001744	-.001537	.0012359	.0009051	.0014797	-.003242
Stddev	.002184	.001456	.0009239	.0038215	.0011908	.006673
%RSD	125.2002	94.76507	74.75380	422.2373	80.48112	205.8485
#1	-.004089	-.001965	.0003155	.0034065	.0004237	-.002171
#2	-.001373	-.002731	.0012290	.0028026	.0027704	-.010386
#3	.000230	.000086	.0021633	-.003494	.0012449	.002831

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008175	.0000038	-.000072	.0058607	-.000310	-.000120
Stddev	.000448	.0000310	.000104	.0057126	.000241	.000147
%RSD	5.481731	813.3068	145.5240	97.47202	77.67624	123.3347
#1	-.007750	.0000107	.000043	.0088405	-.000377	-.000276
#2	-.008643	.0000308	-.000096	-.000726	-.000043	-.000100
#3	-.008134	-.000030	-.000161	.009467	-.000509	.000017

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003318	.0006476	-.000210	-.010045	.0003743	.0008622
Stddev	.0001895	.0038754	.000153	.012147	.0001371	.0004270
%RSD	57.09572	598.4223	72.53994	120.9207	36.61905	49.51738
#1	.0001321	-.003827	-.000039	-.007875	.0003997	.0013427
#2	.0005090	.002940	-.000262	.000870	.0004968	.0007179
#3	.0003543	.002830	-.000330	-.023131	.0002263	.0005262

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1364989	-.000567	.0001232	.2009452	.0091967	.0000242
Stddev	.0215536	.001668	.0005360	.0480766	.0002860	.0000275
%RSD	15.79031	293.9943	435.0362	23.92522	3.110191	113.4092
#1	.1190033	.001337	.0007028	.2122890	.0094340	.0000496
#2	.1299174	-.001771	.0000213	.2423355	.0092771	.0000280
#3	.1605759	-.001269	-.000355	.1482111	.0088791	-.000005

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB04 Acquired: 1/17/2025 14:31:50 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000449	.0010224	.0149448	-.001596	F .0175437	.0019257
Stddev	.000359	.0002939	.0037355	.002002	.0010895	.0006619
%RSD	80.05189	28.74188	24.99515	125.4087	6.210223	34.37127
#1	-.000835	.0013376	.0127071	-.003150	.0185152	.0022645
#2	-.000387	.0007561	.0192571	.000663	.0163657	.0023496
#3	-.000124	.0009734	.0128701	-.002302	.0177501	.0011630

Elem	Sr4077
Units	ppm
Avg	.0000641
Stddev	.0000376
%RSD	58.62780
#1	.0000214
#2	.0000786
#3	.0000923

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2952.557	56570.79	10874.48	2007.511	4471.203
Stddev	3.012	175.72	17.96	6.501	3.656
%RSD	.1020108	.3106133	.1651488	.3238233	.0817710
#1	2949.890	56414.10	10872.73	2001.109	4470.533
#2	2951.958	56537.50	10857.47	2014.106	4467.929
#3	2955.824	56760.77	10893.26	2007.316	4475.148

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01DUP Acquired: 1/17/2025 14:36:11 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003828	-.009404	.0021729	.0048261	.0028034	17.12951
Stddev	.002316	.004112	.0024378	.0024376	.0018862	.02414
%RSD	60.50647	43.72804	112.1928	50.50820	67.28423	.1409390
#1	-.002519	-.013665	.0048957	.0020135	.0040171	17.15505
#2	-.002463	-.005458	.0014301	.0061394	.0006303	17.10707
#3	-.006503	-.009090	.0001929	.0063254	.0037627	17.12640

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007602	-.000108	-.000304	9.078516	.4625306	.0042876
Stddev	.000455	.000019	.000070	.010919	.0004184	.0001403
%RSD	5.980286	17.07505	23.01277	.1202754	.0904507	3.273246
#1	-.007895	-.000113	-.000368	9.076785	.4621084	.0042626
#2	-.007078	-.000125	-.000229	9.068565	.4625383	.0044388
#3	-.007833	-.000088	-.000315	9.090197	.4629450	.0041614

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0250685	2.293945	.0406664	2.541258	.0814003	.0007448
Stddev	.0003442	.000714	.0002131	.009868	.0004620	.0004218
%RSD	1.373157	.0311343	.5238991	.3883007	.5675758	56.63432
#1	.0253067	2.293491	.0408039	2.547115	.0809257	.0002618
#2	.0246738	2.293575	.0404210	2.529865	.0814267	.0009320
#3	.0252249	2.294768	.0407744	2.546794	.0818486	.0010406

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2298.888	-.002159	2.320903	286.6085	5.944033	.0221902
Stddev	20.972	.000646	.003427	.8259	.013874	.0000881
%RSD	.9122471	29.90487	.1476488	.2881480	.2334108	.3972180
#1	2317.358	-.001417	2.317071	286.8735	5.929930	.0222658
#2	2276.090	-.002465	2.321963	285.6826	5.957666	.0220934
#3	2303.217	-.002595	2.323674	287.2693	5.944502	.0222115

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01DUP Acquired: 1/17/2025 14:36:11 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0402621	.0008423	1.195043	5.514536	F 1107.849	.0028617
Stddev	.0002977	.0005652	.007939	.013836	2.452	.0008423
%RSD	.7393771	67.10071	.6642930	.2509042	.2213185	29.43187
#1	.0399743	.0002590	1.186325	5.507755	1106.409	.0035733
#2	.0402432	.0008804	1.196949	5.505398	1106.458	.0030801
#3	.0405688	.0013874	1.201855	5.530454	1110.680	.0019318

Elem	Sr4077
Units	ppm
Avg	.0349091
Stddev	.0001326
%RSD	.3797953
#1	.0349406
#2	.0347636
#3	.0350231

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2508.266	47068.64	10259.97	1694.307	3349.985
Stddev	1.067	106.26	8.76	1.836	5.733
%RSD	.0425196	.2257532	.0853516	.1083520	.1711351
#1	2509.251	47009.28	10255.29	1696.248	3350.783
#2	2508.414	47191.32	10270.07	1692.599	3355.277
#3	2507.133	47005.33	10254.54	1694.074	3343.894

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01LX5 Acquired: 1/17/2025 14:40:33 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000653	-.002801	.0022055	.0011662	.0019807	3.458014
Stddev	.001605	.001400	.0006001	.0017792	.0013415	.004527
%RSD	245.7607	50.00137	27.21145	152.5673	67.72725	.1309165
#1	-.000987	-.003736	.0028968	.0000965	.0035010	3.452818
#2	.001093	-.003477	.0019012	.0032200	.0014773	3.460121
#3	-.002065	-.001191	.0018184	.0001820	.0009637	3.461104

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009169	-.000092	-.000178	1.875374	.0944835	.0007372
Stddev	.000597	.000051	.000066	.001530	.0002859	.0001365
%RSD	6.515253	55.72927	36.74818	.0815595	.3026048	18.51447
#1	-.008887	-.000034	-.000104	1.875221	.0946658	.0006355
#2	-.008764	-.000130	-.000205	1.873927	.0946308	.0008923
#3	-.009855	-.000113	-.000226	1.876975	.0941540	.0006838

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055351	.4355033	.0082062	.5247667	.0168028	.0002098
Stddev	.0004337	.0042193	.0002735	.0140902	.0003775	.0001950
%RSD	7.835380	.9688238	3.332274	2.685045	2.246914	92.95086
#1	.0050362	.4358625	.0083429	.5290336	.0172291	.0000426
#2	.0057471	.4395315	.0078913	.5090362	.0166684	.0001627
#3	.0058220	.4311160	.0083843	.5362303	.0165108	.0004239

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	454.5894	-.000320	.4555332	51.75151	1.385208	.0044717
Stddev	1.5676	.000798	.0035543	.40649	.011539	.0001982
%RSD	.3448282	249.6555	.7802507	.7854577	.8330386	4.431428
#1	454.6747	-.000991	.4514371	51.65067	1.381514	.0045819
#2	456.1125	-.000532	.4578039	52.19893	1.375968	.0042429
#3	452.9809	.000563	.4573585	51.40494	1.398142	.0045903

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01LX5 Acquired: 1/17/2025 14:40:33 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0080900	.0009566	.2282697	1.082968	F 263.6209	.0099214
Stddev	.0001776	.0004674	.0017614	.004026	.1753	.0009197
%RSD	2.194964	48.86369	.7716166	.3717243	.0665128	9.269624
#1	.0079204	.0004512	.2268281	1.087441	263.7620	.0090917
#2	.0080752	.0010454	.2302329	1.079635	263.4246	.0109103
#3	.0082746	.0013734	.2277480	1.081829	263.6761	.0097622

Elem	Sr4077
Units	ppm
Avg	.0070817
Stddev	.0000236
%RSD	.3338068
#1	.0070548
#2	.0070908
#3	.0070994

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2714.148	52284.34	10466.75	1887.177	3785.990
Stddev	3.697	173.48	57.15	3.134	11.459
%RSD	.1362208	.3317997	.5460620	.1660684	.3026567
#1	2710.274	52084.21	10428.89	1887.705	3772.963
#2	2714.530	52377.00	10532.50	1883.813	3790.498
#3	2717.638	52391.82	10438.87	1890.014	3794.509

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MSD Acquired: 1/17/2025 14:58:49 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8325066	1.721150	.9187828	2.133578	.7875387	18.46597
Stddev	.0012798	.011950	.0014817	.003089	.0010047	.02094
%RSD	.1537297	.6943090	.1612677	.1447673	.1275735	.1133851
#1	.8339825	1.709554	.9170768	2.130898	.7885870	18.48818
#2	.8318322	1.733425	.9197478	2.132880	.7865842	18.44659
#3	.8317050	1.720470	.9195238	2.136956	.7874448	18.46315

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1719219	.1688329	.1925287	9.691186	.8294836	.1975497
Stddev	.0008054	.0005578	.0003545	.019980	.0020007	.0002535
%RSD	.4684445	.3304025	.1841439	.2061618	.2411987	.1283054
#1	.1726747	.1693450	.1921210	9.710592	.8286645	.1975371
#2	.1720183	.1682385	.1927648	9.670679	.8280224	.1973028
#3	.1710727	.1689151	.1927003	9.692288	.8317639	.1978093

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2912964	5.469417	.2171744	4.073576	.5648068	.0741045
Stddev	.0009687	.013064	.0007926	.031710	.0009160	.0004684
%RSD	.3325623	.2388562	.3649561	.7784299	.1621864	.6321077
#1	.2903504	5.480079	.2171890	4.094065	.5637501	.0745293
#2	.2912524	5.473328	.2163747	4.037051	.5652942	.0741822
#3	.2922864	5.454845	.2179597	4.089613	.5653760	.0736022

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2221.040	.2705968	2.442909	283.5906	5.960654	.4101862
Stddev	18.922	.0022245	.011407	.2927	.019093	.0014445
%RSD	.8519528	.8220707	.4669386	.1032138	.3203163	.3521566
#1	2231.586	.2681061	2.439528	283.5472	5.981882	.4089422
#2	2199.195	.2712983	2.455624	283.3220	5.944886	.4098459
#3	2232.340	.2723860	2.433575	283.9026	5.955193	.4117704

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MSD Acquired: 1/17/2025 14:58:49 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6996439	.1807115	1.937162	F 11.92204	F 1087.749	.1975269
Stddev	.0008699	.0010400	.009433	.02686	2.057	.0004022
%RSD	.1243286	.5755181	.4869699	.2252675	.1891143	.2036363
#1	.6989680	.1815055	1.930793	11.89464	1085.641	.1979840
#2	.7006253	.1795342	1.932693	11.94831	1089.751	.1973697
#3	.6993384	.1810949	1.947999	11.92316	1087.856	.1972270

Elem	Sr4077
Units	ppm
Avg	.2158167
Stddev	.0003234
%RSD	.1498588
#1	.2159672
#2	.2154454
#3	.2160374

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2487.717	47687.89	10297.41	1700.518	3329.281
Stddev	1.158	131.92	44.99	12.765	3.828
%RSD	.0465427	.2766278	.4368627	.7506466	.1149708
#1	2488.008	47535.65	10245.56	1695.198	3326.305
#2	2488.702	47759.42	10326.01	1691.274	3327.939
#3	2486.442	47768.58	10320.67	1715.083	3333.599

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MS Acquired: 1/17/2025 15:04:38 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8512958	1.738646	.9281871	2.199580	.8099935	18.79870
Stddev	.0045949	.016153	.0044898	.013784	.0021914	.04788
%RSD	.5397518	.9290474	.4837200	.6266559	.2705485	.2546797
#1	.8463089	1.737407	.9247666	2.188288	.8074657	18.84595
#2	.8522204	1.723148	.9265234	2.195513	.8111589	18.75022
#3	.8553580	1.755383	.9332713	2.214940	.8113561	18.79992

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1729811	.1701046	.1953720	9.830115	.8428580	.2000229
Stddev	.0005153	.0010215	.0008793	.029460	.0032254	.0011540
%RSD	.2978806	.6005320	.4500603	.2996924	.3826722	.5769475
#1	.1735742	.1708323	.1947423	9.862564	.8465707	.1993582
#2	.1726432	.1705447	.1949971	9.822732	.8412570	.1993550
#3	.1727259	.1689368	.1963766	9.805048	.8407464	.2013554

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2951395	5.518285	.2197573	4.108616	.5723136	.0750252
Stddev	.0006898	.015993	.0010878	.022843	.0009724	.0001611
%RSD	.2337201	.2898265	.4949940	.5559695	.1699030	.2147518
#1	.2949175	5.506876	.2210089	4.134243	.5716840	.0751154
#2	.2945879	5.511412	.2192224	4.090397	.5718233	.0748392
#3	.2959129	5.536566	.2190405	4.101207	.5734335	.0751211

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2228.570	.2756353	2.460392	285.7670	5.996918	.4191984
Stddev	14.331	.0031159	.003510	1.2358	.031916	.0019093
%RSD	.6430639	1.130451	.1426447	.4324453	.5322041	.4554750
#1	2225.523	.2786312	2.461952	285.6040	6.012929	.4173716
#2	2244.180	.2724118	2.456373	284.6207	6.017658	.4190429
#3	2216.008	.2758629	2.462852	287.0761	5.960166	.4211807

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MS Acquired: 1/17/2025 15:04:38 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7093222	.1834720	1.957043	F 11.91902	F 1097.350	.2018903
Stddev	.0010962	.0002975	.003478	.06414	4.334	.0013246
%RSD	.1545394	.1621536	.1777220	.5381635	.3949681	.6560837
#1	.7080854	.1833131	1.953779	11.88349	1094.785	.2033892
#2	.7097071	.1838152	1.956648	11.88051	1094.911	.2014041
#3	.7101740	.1832877	1.960701	11.99307	1102.354	.2008775

Elem	Sr4077
Units	ppm
Avg	.2183260
Stddev	.0003441
%RSD	.1576067
#1	.2183359
#2	.2179771
#3	.2186650

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2432.173	47122.49	10157.52	1656.209	3271.828
Stddev	3.816	132.05	56.98	3.729	5.810
%RSD	.1568967	.2802256	.5609936	.2251800	.1775761
#1	2432.630	46971.77	10110.18	1651.904	3274.182
#2	2435.740	47177.85	10141.61	1658.451	3276.092
#3	2428.149	47217.84	10220.76	1658.272	3265.211

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01A Acquired: 1/17/2025 15:08:46 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8456607	1.764981	.9278057	2.187975	.8072478	18.63567
Stddev	.0014393	.007943	.0018686	.015093	.0038697	.03685
%RSD	.1701966	.4500500	.2014038	.6898091	.4793711	.1977418
#1	.8469338	1.756581	.9263742	2.179102	.8028007	18.66507
#2	.8459495	1.765992	.9299196	2.179421	.8098483	18.64760
#3	.8440990	1.772370	.9271232	2.205402	.8090945	18.59433

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1690957	.1678448	.1955135	9.729887	.8462805	.2002781
Stddev	.0001193	.0005868	.0001850	.011846	.0013145	.0004850
%RSD	.0705637	.3496302	.0946147	.1217538	.1553320	.2421691
#1	.1690113	.1672827	.1956361	9.741566	.8474841	.2005534
#2	.1692322	.1684536	.1953007	9.717880	.8448778	.1997181
#3	.1690436	.1677982	.1956036	9.730216	.8464797	.2005628

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2941673	5.500278	.2157885	4.046173	.5723848	.0746544
Stddev	.0005843	.045469	.0012480	.024116	.0011651	.0002142
%RSD	.1986239	.8266754	.5783680	.5960271	.2035519	.2868504
#1	.2941540	5.538329	.2170494	4.067924	.5710774	.0747755
#2	.2935898	5.449922	.2145537	4.020239	.5733135	.0747806
#3	.2947582	5.512583	.2157625	4.050357	.5727634	.0744071

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2172.169	.2717311	2.463571	285.8759	5.883509	.4187552
Stddev	11.548	.0039430	.003658	1.4435	.013021	.0005299
%RSD	.5316360	1.451074	.1484642	.5049352	.2213168	.1265370
#1	2167.637	.2731293	2.466954	287.3323	5.872165	.4183236
#2	2163.574	.2672795	2.464069	284.4457	5.897727	.4185953
#3	2185.295	.2747844	2.459690	285.8497	5.880634	.4193466

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01A Acquired: 1/17/2025 15:08:46 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7088766	.1810706	1.980538	F 11.90574	F 1095.598	.1962006
Stddev	.0008349	.0015832	.010551	.03050	.467	.0007323
%RSD	.1177817	.8743492	.5327388	.2561654	.0425958	.3732580
#1	.7080292	.1828841	1.990302	11.89230	1095.118	.1959649
#2	.7096985	.1799644	1.969345	11.88427	1095.627	.1970218
#3	.7089020	.1803633	1.981968	11.94065	1096.050	.1956152

Elem	Sr4077
Units	ppm
Avg	.2149576
Stddev	.0005217
%RSD	.2427146
#1	.2154097
#2	.2143867
#3	.2150765

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2448.520	47059.36	10316.39	1643.394	3291.478
Stddev	.644	198.21	6.79	7.447	5.280
%RSD	.0262989	.4211932	.0658146	.4531357	.1604285
#1	2448.957	46832.03	10309.69	1636.503	3285.977
#2	2448.824	47195.99	10316.20	1642.386	3291.950
#3	2447.781	47150.06	10323.26	1651.294	3296.506

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04 Acquired: 1/17/2025 15:12:54 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.006777	-.008352	.0015835	.0032588	.0023791	.0195658	-.006724
Stddev	.000526	.002645	.0004683	.0006602	.0020964	.0096594	.001230
%RSD	7.759158	31.67270	29.57465	20.25782	88.11767	49.36866	18.29369
#1	-.007381	-.008507	.0019758	.0037523	.0009715	.0306071	-.006609
#2	-.006417	-.005632	.0017097	.0025089	.0047884	.0126776	-.005556
#3	-.006534	-.010916	.0010650	.0035153	.0013774	.0154127	-.008008

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000188	-.000213	4.423189	.0022231	.0082223	.0054045	.0373351
Stddev	.000014	.000096	.013780	.0003365	.0001079	.0001053	.0031473
%RSD	7.489868	44.91473	.3115352	15.13743	1.311986	1.947740	8.429871
#1	-.000204	-.000261	4.429141	.0021119	.0080982	.0055187	.0366125
#2	-.000176	-.000275	4.407433	.0026011	.0082752	.0053113	.0407809
#3	-.000186	-.000103	4.432992	.0019562	.0082935	.0053835	.0346120

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106879	1.986261	.0109704	.0003639	12.16949	-.000660	.0186966
Stddev	.0000821	.010888	.0004464	.0007508	.09463	.001408	.0001421
%RSD	.7684522	.5481608	4.068987	206.3515	.7775724	213.2865	.7600127
#1	.0106977	1.987635	.0108259	.0012278	12.11514	-.002131	.0186569
#2	.0106013	1.996397	.0106141	-.000131	12.11457	.000674	.0188543
#3	.0107647	1.974751	.0114711	-.000005	12.27876	-.000523	.0185785

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.149933	.0254762	.0002588	-.000616	.0029353	5.343567	.0246503
Stddev	.018275	.0006267	.0002055	.000213	.0004325	.031922	.0008788
%RSD	1.589212	2.459773	79.40578	34.67952	14.73536	.5973848	3.565097
#1	1.159860	.0260835	.0001727	-.000674	.0033446	5.336132	.0256413
#2	1.128843	.0255133	.0004933	-.000379	.0024828	5.316019	.0243438
#3	1.161094	.0248318	.0001103	-.000794	.0029785	5.378550	.0239658

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04 Acquired: 1/17/2025 15:12:54 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.5741162	-.004799	.0305145
Stddev	.0052982	.000182	.0000825
%RSD	.9228513	3.783351	.2704497
#1	.5772213	-.004778	.0305404
#2	.5679986	-.004990	.0304221
#3	.5771288	-.004629	.0305809

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2885.104	56401.91	10876.26	1966.185	4388.583
Stddev	8.311	74.18	42.71	7.570	11.999
%RSD	.2880624	.1315249	.3926495	.3850232	.2734230
#1	2875.528	56483.93	10847.13	1974.375	4375.432
#2	2890.433	56382.27	10856.37	1964.736	4398.936
#3	2889.351	56339.52	10925.28	1959.444	4391.380

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04DUP Acquired: 1/17/2025 15:17:13 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.006581	-.007630	.0014592	.0024295	.0011891	.0244255	-.007140
Stddev	.000565	.000548	.0013673	.0021331	.0005129	.0037032	.000723
%RSD	8.589081	7.179854	93.70738	87.79822	43.13783	15.16098	10.12750
#1	-.006011	-.008053	-.000042	.0021358	.0009018	.0270390	-.007209
#2	-.006592	-.007012	.002634	.0046943	.0008842	.0260497	-.007826
#3	-.007141	-.007827	.001786	.0004585	.0017813	.0201878	-.006385

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000171	-.000196	4.398019	.0023386	.0081647	.0048594	.0390873
Stddev	.000005	.000053	.017263	.0004400	.0001033	.0005649	.0022514
%RSD	3.028631	27.12021	.3925136	18.81665	1.265156	11.62509	5.759854
#1	-.000174	-.000223	4.406372	.0019228	.0080535	.0052335	.0385782
#2	-.000165	-.000229	4.378168	.0022936	.0081829	.0042096	.0415497
#3	-.000173	-.000134	4.409516	.0027994	.0082577	.0051350	.0371341

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106272	1.984479	.0112860	.0010770	11.92706	-.001725	.0178968
Stddev	.0000739	.012425	.0002120	.0002635	.05862	.000369	.0001536
%RSD	.6953618	.6261028	1.878676	24.46393	.4914760	21.38264	.8580351
#1	.0106426	1.974283	.0110419	.0009538	11.99458	-.001626	.0177702
#2	.0105468	1.998318	.0113923	.0008977	11.89742	-.001416	.0180676
#3	.0106922	1.980835	.0114239	.0013796	11.88918	-.002133	.0178526

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.044887	.0202673	.0004470	.0005187	.0036646	5.242265	.0244819
Stddev	.005706	.0001333	.0000395	.0011969	.0001807	.009974	.0048242
%RSD	.5460714	.6578693	8.829492	230.7369	4.930039	.1902658	19.70515
#1	1.050989	.0202390	.0004190	-.000635	.0038525	5.250691	.0191314
#2	1.039684	.0204126	.0004921	.001755	.0036493	5.231252	.0258146
#3	1.043986	.0201504	.0004298	.000436	.0034921	5.244853	.0284996

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04DUP Acquired: 1/17/2025 15:17:13 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.5632354	-.004492	.0304626
Stddev	.0069566	.001004	.0001154
%RSD	1.235112	22.35357	.3789602
#1	.5660027	-.005555	.0304934
#2	.5553210	-.004360	.0303349
#3	.5683826	-.003560	.0305595

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2865.012	56711.55	10818.79	1980.542	4349.359
Stddev	5.584	138.86	62.51	4.166	4.854
%RSD	.1948975	.2448484	.5777532	.2103569	.1116069
#1	2858.639	56801.62	10867.12	1984.191	4345.224
#2	2867.346	56781.41	10841.05	1981.431	4354.703
#3	2869.049	56551.64	10748.21	1976.002	4348.149

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04LX5 Acquired: 1/17/2025 15:21:31 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.001431	-.002878	.0010448	.0021466	.0013137	.0032194	-.009314
Stddev	.002121	.002803	.0011505	.0016982	.0017749	.0024168	.001086
%RSD	148.2636	97.40870	110.1236	79.11110	135.1109	75.07181	11.66058
#1	-.000735	.000036	.0023361	.0012318	-.000401	.0022732	-.008254
#2	-.003813	-.003115	.0001287	.0011020	.001199	.0059662	-.010424
#3	.000255	-.005556	.0006696	.0041061	.003143	.0014188	-.009262

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000072	-.000098	.9027702	-.000214	.0015686	.0014293	.0070284
Stddev	.000040	.000103	.0011992	.000229	.0000728	.0003621	.0011269
%RSD	55.35715	104.5400	.1328310	106.8098	4.638133	25.33375	16.03383
#1	-.000049	-.000176	.9026394	.000047	.0016283	.0010130	.0083233
#2	-.000117	-.000138	.9040294	-.000311	.0015900	.0016712	.0062698
#3	-.000048	.000018	.9016418	-.000379	.0014876	.0016037	.0064920

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018152	.3990293	.0027560	.0008067	3.380148	-.000538	.0040166
Stddev	.0000840	.0081304	.0002098	.0004067	.035434	.000724	.0001759
%RSD	4.629280	2.037552	7.611721	50.42222	1.048309	134.5781	4.379064
#1	.0017825	.3914663	.0025502	.0006318	3.342440	-.000737	.0039167
#2	.0017524	.3979936	.0029695	.0005166	3.385249	-.001142	.0042197
#3	.0019107	.4076280	.0027482	.0012716	3.412756	.000265	.0039135

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.136276	.0116324	-.000126	-.000282	.0015378	1.073251	.0015846
Stddev	.018662	.0004770	.000087	.000412	.0002475	.009053	.0020259
%RSD	1.642383	4.100607	68.50133	145.7717	16.09214	.8435413	127.8494
#1	1.145660	.0121826	-.000196	-.000625	.0013247	1.083158	.0013122
#2	1.114785	.0113795	-.000154	.000174	.0014795	1.065406	-.000291
#3	1.148384	.0113351	-.000029	-.000397	.0018092	1.071189	.003733

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04LX5 Acquired: 1/17/2025 15:21:31 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.1950765	.0102137	.0061505
Stddev	.0021434	.0007449	.0000734
%RSD	1.098740	7.292833	1.193203
#1	.1974666	.0107804	.0060685
#2	.1944378	.0104907	.0061729
#3	.1933251	.0093700	.0062100

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2946.086	56972.19	10729.65	2010.490	4465.944
Stddev	4.994	113.54	19.01	6.674	5.804
%RSD	.1695081	.1992946	.1771900	.3319790	.1299562
#1	2943.726	56887.19	10713.23	2002.813	4461.646
#2	2951.823	57101.14	10725.24	2013.742	4472.546
#3	2942.710	56928.24	10750.48	2014.916	4463.640

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01ADLX2 Acquired: 1/17/2025 15:25:50 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.4197505	.8838742	.4812626	1.043872	.4035518	9.501366
Stddev	.0035927	.0082882	.0017393	.003368	.0028200	.032026
%RSD	.8559151	.9377137	.3613977	.3226846	.6988013	.3370672
#1	.4159671	.8762579	.4795836	1.043130	.4002957	9.537814
#2	.4201686	.8826635	.4830564	1.040937	.4051518	9.488558
#3	.4231159	.8927011	.4811477	1.047550	.4052080	9.477726

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0803795	.0859874	.0996109	4.994755	.4395135	.1023396
Stddev	.0000934	.0005973	.0001825	.007417	.0020001	.0004769
%RSD	.1161669	.6946365	.1832679	.1484908	.4550731	.4660390
#1	.0804186	.0866712	.0994052	5.001406	.4376044	.1018654
#2	.0802730	.0857234	.0997538	4.986757	.4415936	.1023342
#3	.0804470	.0855676	.0996737	4.996102	.4393425	.1028193

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1547237	2.782873	.1102992	2.099625	.2937414	.0374410
Stddev	.0000523	.009308	.0001078	.008884	.0010606	.0004043
%RSD	.0338062	.3344680	.0977039	.4231352	.3610619	1.079804
#1	.1547452	2.773432	.1102526	2.105407	.2925598	.0378654
#2	.1546640	2.783144	.1104225	2.104072	.2940534	.0373972
#3	.1547618	2.792042	.1102226	2.089395	.2946110	.0370604

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1137.191	.1376817	1.240487	141.2977	3.212415	.2125505
Stddev	17.042	.0012633	.002824	.8399	.023535	.0001460
%RSD	1.498588	.9175468	.2276760	.5943884	.7326343	.0687100
#1	1129.802	.1370275	1.240697	140.4031	3.238393	.2125865
#2	1125.090	.1368797	1.243201	141.4208	3.206339	.2123899
#3	1156.680	.1391379	1.237564	142.0693	3.192514	.2126752

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01ADLX2 Acquired: 1/17/2025 15:25:50 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.3584161	.0925305	.9732813	5.838016	F 603.5487	.1060917
Stddev	.0017717	.0002106	.0079234	.020278	1.5127	.0007246
%RSD	.4943194	.2275655	.8140875	.3473414	.2506356	.6830052
#1	.3568757	.0927050	.9766550	5.822370	601.9362	.1067617
#2	.3603522	.0922966	.9642295	5.860925	604.9364	.1053227
#3	.3580203	.0925899	.9789596	5.830752	603.7737	.1061909

Elem	Sr4077
Units	ppm
Avg	.1089298
Stddev	.0001291
%RSD	.1184940
#1	.1090667
#2	.1088104
#3	.1089123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2569.399	48970.85	10505.27	1720.352	3531.644
Stddev	1.214	13.65	79.59	2.114	3.977
%RSD	.0472572	.0278811	.7576416	.1228766	.1126131
#1	2568.064	48971.12	10414.23	1720.484	3534.631
#2	2570.437	48984.36	10539.86	1722.397	3527.129
#3	2569.695	48957.06	10561.71	1718.176	3533.171

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MSDLX2 Acquired: 1/17/2025 15:30:04 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.4150612	.9029408	.4808021	1.039943	.4003945	9.222908
Stddev	.0020936	.0081731	.0032713	.005779	.0004156	.036159
%RSD	.5044054	.9051680	.6803811	.5557148	.1037962	.3920583
#1	.4165554	.9123387	.4845233	1.046238	.4005003	9.235237
#2	.4126683	.8989900	.4795033	1.038715	.3999362	9.251291
#3	.4159599	.8974937	.4783796	1.034877	.4007469	9.182197

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0772159	.0842860	.0992425	4.841927	.4267764	.1016805
Stddev	.0002132	.0002561	.0006822	.010785	.0013540	.0009859
%RSD	.2761217	.3037890	.6874467	.2227381	.3172577	.9695977
#1	.0774371	.0845628	.1000283	4.838325	.4278968	.1028043
#2	.0770118	.0842376	.0988991	4.854051	.4252719	.1009608
#3	.0771987	.0840577	.0988003	4.833403	.4271605	.1012765

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1547752	2.649537	.1078860	2.017292	.2922234	.0363348
Stddev	.0011637	.020184	.0004793	.008201	.0018310	.0000814
%RSD	.7518335	.7617902	.4442840	.4065265	.6265747	.2239247
#1	.1559340	2.661284	.1075496	2.026245	.2943365	.0364272
#2	.1536068	2.626231	.1084349	2.015486	.2911053	.0363035
#3	.1547850	2.661096	.1076737	2.010144	.2912285	.0362738

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1079.296	.1330803	1.203817	135.9344	3.160919	.2096269
Stddev	12.069	.0007634	.001408	.1554	.011791	.0011162
%RSD	1.118229	.5736259	.1169474	.1143251	.3730220	.5324439
#1	1085.896	.1336418	1.203910	135.9424	3.173913	.2109149
#2	1065.367	.1322111	1.202365	136.0857	3.157944	.2090205
#3	1086.627	.1333881	1.205176	135.7751	3.150901	.2089452

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MSDLX2 Acquired: 1/17/2025 15:30:04 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.3571929	.0893757	.9291785	5.926576	F 611.6449	.1019052
Stddev	.0032739	.0007776	.0067915	.027191	4.7473	.0007193
%RSD	.9165769	.8700874	.7309133	.4588028	.7761605	.7058242
#1	.3608559	.0891467	.9301309	5.957967	617.0951	.1014619
#2	.3561710	.0902421	.9219610	5.910301	609.4277	.1027350
#3	.3545518	.0887382	.9354434	5.911461	608.4117	.1015185

Elem	Sr4077
Units	ppm
Avg	.1062642
Stddev	.0004833
%RSD	.4548422
#1	.1062648
#2	.1067472
#3	.1057805

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2567.698	50224.29	10623.20	1776.290	3507.778
Stddev	14.101	113.15	28.35	.801	25.102
%RSD	.5491791	.2252962	.2669029	.0451051	.7156143
#1	2551.418	50123.03	10591.19	1776.739	3478.867
#2	2576.108	50346.43	10633.25	1776.765	3520.430
#3	2575.568	50203.41	10645.16	1775.365	3524.037

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV05 Acquired: 1/17/2025 15:34:18 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.767578	4.795024	4.752311	4.784221	4.859736	9.542097	9.416284
Stddev	.013042	.042404	.011513	.014862	.016015	.011575	.104084
%RSD	.2735644	.8843307	.2422544	.3106373	.3295380	.1213015	1.105365
#1	4.760086	4.749513	4.742025	4.767532	4.842266	9.555318	9.487650
#2	4.782638	4.833420	4.764747	4.796026	4.873722	9.533789	9.296853
#3	4.760010	4.802141	4.750159	4.789105	4.863221	9.537184	9.464348

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2348286	2.372278	23.36334	.9658627	2.392211	1.219359	4.740792
Stddev	.0004545	.005017	.07216	.0009619	.003747	.002192	.024062
%RSD	.1935275	.2115048	.3088510	.0995868	.1566349	.1797477	.5075562
#1	.2351509	2.372407	23.40630	.9653073	2.393247	1.217070	4.724358
#2	.2350261	2.377230	23.40369	.9669734	2.395331	1.221438	4.768410
#3	.2343088	2.367197	23.28003	.9653075	2.388055	1.219571	4.729606

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.334899	22.61458	2.390080	1.208271	23.59439	2.357841	2.428844
Stddev	.004131	.03110	.005195	.002939	.05820	.003830	.010687
%RSD	.1769182	.1375068	.2173559	.2432366	.2466529	.1624393	.4400114
#1	2.338102	22.63465	2.392217	1.204878	23.56166	2.361572	2.417432
#2	2.336359	22.63032	2.393865	1.209907	23.66158	2.353919	2.430480
#3	2.330237	22.57876	2.384157	1.210028	23.55993	2.358030	2.438618

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.32246	4.743617	4.896411	4.740248	4.717479	4.957787	4.885390
Stddev	.02493	.004324	.015466	.015612	.008969	.013746	.015286
%RSD	.1024932	.0911471	.3158629	.3293516	.1901145	.2772595	.3128887
#1	24.29731	4.748608	4.879964	4.742402	4.727472	4.944083	4.873908
#2	24.32291	4.741003	4.910661	4.754671	4.710128	4.957703	4.902741
#3	24.34716	4.741240	4.898606	4.723671	4.714836	4.971574	4.879522

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV05 Acquired: 1/17/2025 15:34:18 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.789088	4.683750	4.823431
Stddev	.013151	.005130	.031630
%RSD	.2746106	.1095224	.6557550
#1	4.775697	4.689230	4.856808
#2	4.801986	4.682958	4.819584
#3	4.789582	4.679063	4.793900

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2869.641	56086.80	10131.01	1967.488	4128.873
Stddev	5.139	138.01	30.66	8.234	12.357
%RSD	.1790912	.2460596	.3026793	.4184780	.2992892
#1	2870.071	56169.25	10102.35	1976.955	4122.117
#2	2864.300	55927.47	10127.32	1963.512	4121.367
#3	2874.552	56163.67	10163.35	1961.998	4143.135

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB05 Acquired: 1/17/2025 15:38:29 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001898	-.001185	.0008440	.0010071	.0013037	-.002819
Stddev	.002207	.001001	.0006588	.0001629	.0007018	.010954
%RSD	116.3061	84.44553	78.05691	16.16988	53.82709	388.5938
#1	-.003689	-.000342	.0006829	.0009041	.0008219	.008770
#2	-.002573	-.000922	.0002807	.0009224	.0009804	-.013003
#3	.000568	-.002291	.0015684	.0011948	.0021088	-.004225

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008511	-.000056	-.000066	.0071214	-.000532	-.000264
Stddev	.000291	.000068	.000085	.0050713	.000106	.000190
%RSD	3.420016	121.9773	129.1030	71.21281	19.83025	71.69903
#1	-.008200	-.000068	-.000164	.0041008	-.000538	-.000046
#2	-.008777	-.000117	-.000016	.0042871	-.000635	-.000363
#3	-.008555	.000018	-.000018	.0129763	-.000424	-.000384

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002991	.0017709	-.000153	-.017237	.0002330	.0004953
Stddev	.0000763	.0015833	.000331	.017221	.0001570	.0001279
%RSD	25.52586	89.40579	215.8439	99.90431	67.39157	25.82449
#1	.0002457	.0019693	-.000506	-.031583	.0000675	.0006124
#2	.0002650	.0000978	.000152	-.021990	.0003799	.0005149
#3	.0003865	.0032457	-.000106	.001861	.0002516	.0003588

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6049670	-.002150	.0001431	.8951445	.0140751	-.000109
Stddev	.0209579	.001675	.0003443	.0257569	.0000889	.000116
%RSD	3.464304	77.89097	240.5926	2.877403	.6316566	106.3271
#1	.6035359	-.000544	.0004953	.9199543	.0140615	-.000033
#2	.5847613	-.002021	-.000193	.8685349	.0139938	-.000052
#3	.6266038	-.003886	.000127	.8969444	.0141700	-.000242

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB05 Acquired: 1/17/2025 15:38:29 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001892	.0008480	.0133745	-.002385	F .0558473	.0039995
Stddev	.0006614	.0001868	.0076710	.001504	.0011437	.0004961
%RSD	349.5899	22.03314	57.35567	63.07763	2.047861	12.40376
#1	-.000454	.0010115	.0209697	-.003882	.0558672	.0045669
#2	.000867	.0006444	.0056299	-.002400	.0569810	.0037836
#3	.000155	.0008880	.0135239	-.000873	.0546939	.0036479

Elem	Sr4077
Units	ppm
Avg	.0000335
Stddev	.0000285
%RSD	84.91119
#1	.0000299
#2	.0000636
#3	.0000070

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2918.101	55692.76	10721.98	1992.899	4366.597
Stddev	4.032	652.57	3.41	27.162	5.458
%RSD	.1381596	1.171734	.0318335	1.362961	.1250033
#1	2914.183	55066.03	10718.99	1965.310	4361.237
#2	2917.883	56368.42	10725.70	2019.614	4366.405
#3	2922.238	55643.85	10721.26	1993.771	4372.149

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MSDDLX2 Acquired: 1/17/2025 15:42:49 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.4134747	.8817673	.4769618	1.036477	.3988102	9.410977
Stddev	.0035028	.0098280	.0013824	.007223	.0012051	.026706
%RSD	.8471599	1.114585	.2898276	.6968813	.3021753	.2837766
#1	.4143805	.8723105	.4780223	1.030845	.3990646	9.437809
#2	.4164356	.8810627	.4774647	1.033966	.3974983	9.410723
#3	.4096080	.8919287	.4753984	1.044621	.3998679	9.384399

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0821161	.0855018	.0986895	4.974689	.4321901	.1014752
Stddev	.0003471	.0010632	.0002566	.012260	.0018495	.0000772
%RSD	.4227405	1.243480	.2600444	.2464454	.4279436	.0760446
#1	.0825080	.0866021	.0987698	4.987282	.4340460	.1015419
#2	.0819932	.0854235	.0988964	4.973994	.4321774	.1014932
#3	.0818472	.0844800	.0984023	4.962792	.4303470	.1013907

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1545259	2.728796	.1116391	2.108200	.2914120	.0372137
Stddev	.0004747	.023958	.0002022	.027479	.0002228	.0003769
%RSD	.3072114	.8779537	.1811258	1.303417	.0764419	1.012932
#1	.1546582	2.704625	.1117802	2.133625	.2915680	.0376273
#2	.1539991	2.729230	.1117296	2.111928	.2911569	.0368895
#3	.1549205	2.752534	.1114074	2.079048	.2915113	.0371244

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1128.764	.1374126	1.213923	138.0836	3.202290	.2102471
Stddev	11.371	.0012374	.003541	1.1705	.036927	.0001461
%RSD	1.007410	.9004769	.2916629	.8477037	1.153138	.0694662
#1	1138.113	.1387772	1.210941	136.9428	3.239456	.2102190
#2	1132.073	.1370969	1.212992	138.0261	3.201806	.2101171
#3	1116.105	.1363636	1.217836	139.2817	3.165608	.2104051

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01MSDDLX2 Acquired: 1/17/2025 15:42:49 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.3551920	.0930347	.9532294	5.805769	F 603.9132	.1028492
Stddev	.0016097	.0008001	.0082453	.004860	.5002	.0007108
%RSD	.4531807	.8600444	.8649882	.0837180	.0828197	.6911190
#1	.3561276	.0937130	.9482839	5.810758	603.4371	.1030047
#2	.3561152	.0932389	.9486565	5.805502	604.4343	.1034694
#3	.3533334	.0921523	.9627479	5.801048	603.8682	.1020735

Elem	Sr4077
Units	ppm
Avg	.1091654
Stddev	.0000753
%RSD	.0689379
#1	.1092517
#2	.1091308
#3	.1091136

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2571.286	50033.24	10465.69	1766.664	3527.136
Stddev	19.354	113.22	120.13	8.959	17.481
%RSD	.7527068	.2262893	1.147865	.5071283	.4956078
#1	2576.586	49915.84	10343.70	1774.611	3532.688
#2	2587.438	50141.76	10469.51	1768.425	3541.166
#3	2549.834	50042.12	10583.87	1756.954	3507.553

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01DLX2 Acquired: 1/17/2025 15:47:01 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.004493	-.003519	.0007731	.0021441	.0011408	8.353501
Stddev	.002585	.001431	.0011062	.0011457	.0005912	.021844
%RSD	57.53200	40.66217	143.0829	53.43545	51.82519	.2614935
#1	-.002289	-.002798	.0013529	.0009064	.0007192	8.346030
#2	-.007339	-.005166	-.000502	.0023584	.0008865	8.378100
#3	-.003852	-.002592	.001469	.0031676	.0018166	8.336372

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010853	-.000122	-.000221	4.420314	.2412789	.0021458
Stddev	.000405	.000020	.000068	.010425	.0005126	.0000631
%RSD	3.732894	16.46843	30.59793	.2358319	.2124559	2.942611
#1	-.010436	-.000130	-.000270	4.417181	.2407035	.0022111
#2	-.011245	-.000137	-.000144	4.431946	.2416869	.0020851
#3	-.010876	-.000099	-.000249	4.411815	.2414464	.0021410

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129856	1.196363	.0199870	1.231540	.0409132	.0008473
Stddev	.0004464	.011412	.0003184	.013321	.0002445	.0003308
%RSD	3.437937	.9538899	1.593228	1.081667	.5976908	39.04227
#1	.0130079	1.183204	.0202846	1.246826	.0410301	.0012229
#2	.0125284	1.202334	.0200251	1.225384	.0410774	.0005996
#3	.0134204	1.203550	.0196512	1.222411	.0406322	.0007193

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1129.268	-.001214	1.115406	134.6369	3.000475	.0108762
Stddev	11.213	.001302	.004196	1.3655	.025379	.0005950
%RSD	.9929811	107.2754	.3761974	1.014229	.8458335	5.470802
#1	1116.618	-.001545	1.110616	133.0960	3.026328	.0110960
#2	1137.985	.000222	1.118429	135.1177	2.999500	.0113300
#3	1133.202	-.002318	1.117175	135.6970	2.975598	.0102026

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01DLX2 Acquired: 1/17/2025 15:47:01 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0198690	.0010650	.5800778	2.555862	F 594.5573	.0047836
Stddev	.0002527	.0008687	.0028672	.023469	4.2970	.0004398
%RSD	1.272043	81.57235	.4942846	.9182589	.7227264	9.194098
#1	.0200838	.0010865	.5830088	2.559245	596.1851	.0048604
#2	.0195905	.0001857	.5799457	2.577456	597.8026	.0043104
#3	.0199327	.0019227	.5772789	2.530884	589.6842	.0051799

Elem	Sr4077
Units	ppm
Avg	.0167335
Stddev	.0000892
%RSD	.5328165
#1	.0166461
#2	.0168243
#3	.0167302

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2598.119	49289.54	10724.93	1734.637	3569.702
Stddev	14.070	205.21	55.39	8.966	20.724
%RSD	.5415555	.4163402	.5164469	.5168699	.5805515
#1	2595.581	49511.01	10666.33	1744.989	3566.240
#2	2585.490	49251.79	10732.01	1729.354	3550.927
#3	2613.285	49105.82	10776.43	1729.568	3591.939

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01DUPDLX2 Acquired: 1/17/2025 15:51:22 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003283	-.006212	.0017808	.0020065	.0028815	8.428311
Stddev	.000901	.001608	.0006057	.0018231	.0004116	.022701
%RSD	27.44415	25.88473	34.01522	90.85792	14.28562	.2693428
#1	-.002443	-.007428	.0023918	-.000088	.0024409	8.419112
#2	-.003171	-.006820	.0011804	.002874	.0029474	8.411653
#3	-.004235	-.004389	.0017702	.003233	.0032562	8.454168

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009989	-.000080	-.000214	4.450345	.2443003	.0020651
Stddev	.000422	.000023	.000119	.018522	.0009762	.0002231
%RSD	4.224124	28.90829	55.89278	.4161912	.3995772	10.80424
#1	-.009729	-.000054	-.000329	4.429336	.2449291	.0019665
#2	-.010475	-.000099	-.000221	4.464319	.2431758	.0019082
#3	-.009761	-.000086	-.000091	4.457380	.2447961	.0023205

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126354	1.186981	.0200705	1.241286	.0407473	.0005075
Stddev	.0006319	.006585	.0001720	.003702	.0003372	.0003412
%RSD	5.000797	.5548089	.8567604	.2982548	.8274479	67.23786
#1	.0129858	1.192760	.0200277	1.244625	.0411355	.0001853
#2	.0119060	1.188372	.0199240	1.241929	.0405793	.0004722
#3	.0130144	1.179812	.0202598	1.237305	.0405272	.0008649

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1137.110	-.000170	1.117655	135.0224	3.017029	.0109112
Stddev	5.796	.000566	.003876	.3195	.016991	.0002836
%RSD	.5097525	331.7703	.3467680	.2365934	.5631541	2.599077
#1	1140.011	-.000564	1.113209	135.1982	2.997442	.0111743
#2	1140.884	.000478	1.120318	135.2152	3.025848	.0109484
#3	1130.436	-.000424	1.119439	134.6536	3.027796	.0106108

Sample Name: Q1048-01DUPDLX2 Acquired: 1/17/2025 15:51:22 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0199620	.0008473	.5802223	2.526454	F 577.0016	.0057282
Stddev	.0011118	.0007540	.0036863	.005723	1.5066	.0008418
%RSD	5.569777	88.97799	.6353268	.2265090	.2611125	14.69529
#1	.0212442	.0005536	.5815504	2.522664	577.4915	.0059213
#2	.0192646	.0017040	.5760560	2.523661	575.3111	.0064565
#3	.0193772	.0002845	.5830606	2.533037	578.2024	.0048066

Elem	Sr4077
Units	ppm
Avg	.0167650
Stddev	.0001457
%RSD	.8693951
#1	.0166960
#2	.0169324
#3	.0166664

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2663.097	49194.15	10678.66	1740.661	3664.212
Stddev	7.696	94.03	29.62	5.963	10.403
%RSD	.2890032	.1911495	.2774093	.3425488	.2838949
#1	2655.135	49101.42	10712.85	1740.462	3652.450
#2	2663.658	49191.60	10660.87	1734.801	3667.982
#3	2670.497	49289.43	10662.24	1746.721	3672.204

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01LDLX10 Acquired: 1/17/2025 15:55:43 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000938	-.001470	.0016761	.0008257	.0010162	1.727514
Stddev	.000123	.001540	.0005148	.0015310	.0011976	.014777
%RSD	13.16271	104.7260	30.71166	185.4286	117.8493	.8554192
#1	-.000818	-.002902	.0015855	.0021844	.0014982	1.740128
#2	-.001065	.000158	.0012127	-.000833	-.000347	1.731159
#3	-.000930	-.001666	.0022301	.001126	.001898	1.711255

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008932	-.000045	-.000166	.9362467	.0491907	.0002280
Stddev	.000406	.000054	.000083	.0148323	.0002761	.0001538
%RSD	4.548729	118.1588	49.99181	1.584235	.5613259	67.45121
#1	-.008885	-.000044	-.000259	.9354404	.0492232	.0000568
#2	-.009360	.000008	-.000142	.9218340	.0488998	.0002727
#3	-.008552	-.000100	-.000098	.9514658	.0494492	.0003545

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033202	.2245737	.0039129	.2659776	.0084524	.0009483
Stddev	.0003244	.0048616	.0001689	.0122676	.0001477	.0001851
%RSD	9.771340	2.164823	4.316148	4.612269	1.747367	19.51624
#1	.0034262	.2277493	.0039542	.2644157	.0086216	.0010225
#2	.0029561	.2269948	.0037272	.2789513	.0083865	.0007376
#3	.0035784	.2189769	.0040574	.2545657	.0083492	.0010848

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	212.0908	-.000239	.2198173	24.74085	.6949449	.0021796
Stddev	2.0391	.001250	.0003924	.15194	.0047613	.0000675
%RSD	.9614083	523.1515	.1784976	.6141080	.6851312	3.094952
#1	213.5027	-.001576	.2202493	24.75298	.6931391	.0022530
#2	213.0167	.000901	.2194830	24.88636	.6913506	.0021204
#3	209.7531	-.000041	.2197196	24.58322	.7003449	.0021652

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1048-01LDLX10 Acquired: 1/17/2025 15:55:43 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0040591	.0005778	.1183272	.5157419	F 128.0934	.0050469
Stddev	.0001115	.0002591	.0039522	.0022769	.6801	.0007115
%RSD	2.745666	44.83964	3.340091	.4414836	.5309789	14.09756
#1	.0039963	.0003078	.1215537	.5165926	128.8780	.0042938
#2	.0041878	.0008243	.1195092	.5174711	127.6697	.0051391
#3	.0039933	.0006011	.1139189	.5131622	127.7327	.0057078

Elem	Sr4077
Units	ppm
Avg	.0034043
Stddev	.0000081
%RSD	.2378881
#1	.0034108
#2	.0033952
#3	.0034070

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2790.070	55311.35	10729.56	1944.804	3972.394
Stddev	7.688	209.46	34.96	7.975	14.312
%RSD	.2755474	.3786897	.3258003	.4100416	.3602981
#1	2782.354	55218.86	10746.16	1940.026	3956.110
#2	2790.126	55164.05	10753.12	1940.376	3978.094
#3	2797.730	55551.13	10689.40	1954.010	3982.978

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04MS Acquired: 1/17/2025 16:00:08 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7234657	1.737744	.8707797	1.700736	.7325022	1.804681	.1716201
Stddev	.0035671	.017403	.0021462	.007058	.0025494	.007516	.0007092
%RSD	.4930552	1.001447	.2464638	.4149740	.3480437	.4164495	.4132234
#1	.7213452	1.737894	.8727635	1.694480	.7299411	1.796633	.1715275
#2	.7214679	1.755070	.8685016	1.699341	.7325258	1.805893	.1723711
#3	.7275840	1.720266	.8710739	1.708387	.7350398	1.811517	.1709618

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1689106	.1736339	5.186470	.3878714	.1886469	.2853027	2.880550
Stddev	.0005978	.0001254	.011655	.0004895	.0004194	.0012360	.008653
%RSD	.3538969	.0722264	.2247266	.1261878	.2223473	.4332077	.3004076
#1	.1689811	.1734908	5.195522	.3881137	.1881898	.2845533	2.870804
#2	.1694700	.1737245	5.190570	.3873080	.1887366	.2846255	2.887332
#3	.1682807	.1736864	5.173319	.3881923	.1890142	.2867292	2.883515

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1939016	3.615185	.4596453	.0587042	14.35058	.2699953	.2099699
Stddev	.0009855	.030139	.0007958	.0005846	.05423	.0029432	.0009839
%RSD	.5082663	.8336827	.1731288	.9958717	.3778663	1.090089	.4685868
#1	.1935147	3.617764	.4587506	.0593789	14.38550	.2694340	.2099177
#2	.1950219	3.643951	.4602741	.0583470	14.37814	.2731787	.2109789
#3	.1931682	3.583839	.4599111	.0583868	14.28811	.2673732	.2090132

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.45267	.2505567	.4045258	.6190849	.1823279	5.719696	5.061832
Stddev	.08212	.0007759	.0014282	.0004813	.0005798	.007596	.015839
%RSD	.7856207	.3096761	.3530585	.0777461	.3179986	.1327981	.3129037
#1	10.47130	.2508552	.4034991	.6195706	.1818176	5.717614	5.048753
#2	10.52387	.2511391	.4039215	.6190760	.1829584	5.728116	5.079442
#3	10.36283	.2496759	.4061569	.6186081	.1822075	5.713359	5.057300

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04MS Acquired: 1/17/2025 16:00:08 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.5186682	.1810995	.2122812
Stddev	.0023283	.0021351	.0006732
%RSD	.4488971	1.178971	.3171061
#1	.5205721	.1793041	.2125119
#2	.5193601	.1834604	.2128087
#3	.5160724	.1805340	.2115230

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2942.531	56802.11	10646.95	1984.317	4480.734
Stddev	3.035	114.87	33.48	5.629	6.922
%RSD	.1031519	.2022249	.3144445	.2836740	.1544733
#1	2940.264	56923.86	10664.65	1989.805	4474.746
#2	2945.979	56695.65	10608.33	1978.556	4479.144
#3	2941.349	56786.81	10667.86	1984.590	4488.313

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04MSD Acquired: 1/17/2025 16:04:08 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7569198	1.776166	.8958799	1.792968	.7599554	1.805265	.1702659
Stddev	.0018242	.013338	.0016430	.007475	.0007633	.003009	.0004596
%RSD	.2410053	.7509160	.1833969	.4169094	.1004406	.1666779	.2699309
#1	.7552748	1.766868	.8958924	1.793355	.7597361	1.803257	.1703815
#2	.7566029	1.791447	.8942306	1.785308	.7593257	1.803813	.1697596
#3	.7588817	1.770182	.8975166	1.800243	.7608043	1.808725	.1706567

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1688219	.1795654	5.163149	.3907351	.1938295	.2937252	2.881476
Stddev	.0011296	.0003666	.023159	.0009016	.0006107	.0004322	.025946
%RSD	.6690932	.2041786	.4485360	.2307396	.3150795	.1471267	.9004425
#1	.1699541	.1791500	5.181402	.3900039	.1931969	.2932329	2.855238
#2	.1676949	.1797022	5.137098	.3917425	.1938758	.2940421	2.907119
#3	.1688166	.1798439	5.170947	.3904590	.1944157	.2939005	2.882072

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1909282	3.597014	.4730569	.0591149	14.14237	.2704682	.2130315
Stddev	.0006811	.010561	.0014283	.0001599	.11930	.0019864	.0009985
%RSD	.3567136	.2936159	.3019382	.2704282	.8435742	.7344117	.4687246
#1	.1901611	3.600890	.4725155	.0589312	14.04189	.2722946	.2137098
#2	.1914616	3.585062	.4719784	.0591908	14.27422	.2707567	.2134997
#3	.1911621	3.605090	.4746768	.0592227	14.11099	.2683534	.2118849

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.36334	.2473724	.4094555	.6387544	.1817467	5.767512	5.290388
Stddev	.01419	.0015151	.0007662	.0021466	.0012400	.043610	.012919
%RSD	.1369305	.6124902	.1871322	.3360531	.6822744	.7561310	.2442053
#1	10.35190	.2490382	.4089596	.6385886	.1809012	5.720044	5.275604
#2	10.37922	.2460763	.4090689	.6366956	.1831701	5.805804	5.296052
#3	10.35890	.2470028	.4103380	.6409791	.1811687	5.776686	5.299508

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04MSD Acquired: 1/17/2025 16:04:08 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.5400400	.1787685	.2103057
Stddev	.0005217	.0016690	.0003728
%RSD	.0966018	.9336338	.1772773
#1	.5394897	.1805455	.2105510
#2	.5401029	.1772340	.2104894
#3	.5405274	.1785261	.2098767

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2844.049	56570.04	10703.23	1967.084	4290.916
Stddev	1.169	107.80	63.76	1.574	1.490
%RSD	.0411126	.1905528	.5957019	.0800363	.0347170
#1	2844.552	56646.39	10634.32	1966.268	4292.589
#2	2842.713	56446.73	10760.12	1966.084	4289.733
#3	2844.883	56616.99	10715.24	1968.898	4290.426

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04A Acquired: 1/17/2025 16:08:07 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7540177	1.794898	.8990607	1.792883	.7606394	1.841635	.1738811
Stddev	.0010465	.008866	.0026916	.001957	.0032128	.002702	.0010621
%RSD	.1387939	.4939745	.2993804	.1091771	.4223798	.1467187	.6108361
#1	.7539310	1.804644	.9005460	1.794877	.7583134	1.844524	.1750918
#2	.7530172	1.792742	.8959537	1.790964	.7592996	1.839171	.1734451
#3	.7551049	1.787309	.9006824	1.792809	.7643053	1.841210	.1731063

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1691966	.1802148	5.255161	.3964203	.1944020	.2936559	2.977173
Stddev	.0008332	.0002336	.020185	.0025321	.0003582	.0009610	.019504
%RSD	.4924451	.1296139	.3840922	.6387333	.1842563	.3272389	.6551031
#1	.1693193	.1802742	5.277682	.3983919	.1943663	.2926692	2.990422
#2	.1699616	.1799573	5.249097	.3935648	.1940630	.2937098	2.954777
#3	.1683088	.1804129	5.238703	.3973043	.1947767	.2945888	2.986319

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1948910	3.673220	.4738781	.0602330	14.78477	.2755746	.2153631
Stddev	.0008050	.028673	.0004076	.0003814	.09131	.0010376	.0002764
%RSD	.4130706	.7805996	.0860060	.6332902	.6176196	.3765170	.1283366
#1	.1955084	3.703956	.4743395	.0606528	14.85096	.2746062	.2151881
#2	.1939805	3.647192	.4735671	.0599076	14.68059	.2754479	.2156817
#3	.1951841	3.668512	.4737277	.0601385	14.82274	.2766697	.2152194

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.67705	.2459656	.4113068	.6412297	.1855421	5.979752	5.247924
Stddev	.12257	.0011932	.0011361	.0005041	.0005143	.034426	.006236
%RSD	1.147987	.4850888	.2762136	.0786145	.2772008	.5757164	.1188257
#1	10.73335	.2456083	.4120463	.6412451	.1850575	5.974286	5.248320
#2	10.53645	.2472966	.4099987	.6407180	.1860817	5.948386	5.241500
#3	10.76136	.2449920	.4118754	.6417259	.1854871	6.016585	5.253953

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1081-04A Acquired: 1/17/2025 16:08:07 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.5363716	.1826747	.2144242
Stddev	.0027139	.0005879	.0002289
%RSD	.5059790	.3218480	.1067341
#1	.5393742	.1822366	.2146881
#2	.5356473	.1833429	.2143041
#3	.5340933	.1824446	.2142803

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2857.892	55859.63	10733.40	1940.681	4314.192
Stddev	3.472	295.88	19.37	8.895	4.884
%RSD	.1214915	.5296893	.1804577	.4583579	.1132008
#1	2858.163	55930.28	10751.64	1941.109	4312.955
#2	2861.220	56113.80	10713.07	1949.355	4319.575
#3	2854.292	55534.82	10735.47	1931.580	4310.046

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01 Acquired: 1/17/2025 16:12:06 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.1100104	-.009432	2.163780	-.038418	.0048464	111.3058	.6380233
Stddev	.0012164	.003685	.005047	.002313	.0019897	.2442	.0033282
%RSD	1.105702	39.07246	.2332496	6.021441	41.05581	.2193755	.5216364
#1	.1086129	-.005353	2.158293	-.041088	.0027795	111.5455	.6418663
#2	.1108307	-.010420	2.164825	-.037039	.0050110	111.0574	.6360857
#3	.1105877	-.012522	2.168223	-.037125	.0067487	111.3146	.6361180

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080034	.0041299	46.93861	.2878709	.1395663	.5833922	241.0239
Stddev	.0000127	.0002611	.05585	.0004722	.0004277	.0015525	.6469
%RSD	.1586519	6.322372	.1189808	.1640410	.3064251	.2661136	.2683826
#1	.0080170	.0042225	47.00083	.2878677	.1392625	.5830787	241.0298
#2	.0079919	.0038351	46.89282	.2883446	.1393811	.5820205	241.6678
#3	.0080012	.0043321	46.92219	.2874002	.1400554	.5850776	240.3741

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.282380	40.06708	.2914452	.0006830	3.198820	.4339443	1.857896
Stddev	.010940	.12136	.0008259	.0002700	.001744	.0003750	.005457
%RSD	.2554715	.3029044	.2833902	39.53555	.0545258	.0864290	.2937277
#1	4.292008	39.94728	.2905430	.0004105	3.200636	.4340230	1.864145
#2	4.270483	40.06402	.2921640	.0009505	3.198668	.4335361	1.855479
#3	4.284647	40.18995	.2916287	.0006879	3.197158	.4342737	1.854065

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.068738	.1323125	.0052860	.0443256	3.584059	4.097595	8.969990
Stddev	.033395	.0011842	.0003445	.0014231	.012263	.020040	.026985
%RSD	.4138764	.8950033	6.516500	3.210605	.3421669	.4890640	.3008365
#1	8.104937	.1323841	.0050900	.0454580	3.598213	4.098926	8.944084
#2	8.062145	.1334592	.0050842	.0447907	3.576610	4.116937	8.967948
#3	8.039131	.1310941	.0056837	.0427281	3.577353	4.076923	8.997938

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01 Acquired: 1/17/2025 16:12:06 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.316162	.0957830	-.057295
Stddev	.015764	.0002095	.000925
%RSD	.3652286	.2186669	1.615182
#1	4.303363	.0956896	-.056630
#2	4.311353	.0956366	-.058352
#3	4.333770	.0960230	-.056902

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3222.780	63162.64	12666.29	2234.613	3952.632
Stddev	5.375	63.10	44.81	3.974	6.692
%RSD	.1667884	.0999067	.3537859	.1778602	.1692934
#1	3222.347	63235.48	12658.74	2230.527	3959.318
#2	3228.358	63127.62	12714.39	2234.846	3952.644
#3	3217.634	63124.80	12625.72	2238.465	3945.935

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV06 Acquired: 1/17/2025 16:16:11 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.824222	4.808674	4.784785	4.848527	4.893459	9.567177	9.627009
Stddev	.006339	.025299	.006786	.011914	.013921	.004309	.028253
%RSD	.1314010	.5261070	.1418144	.2457285	.2844842	.0450393	.2934760
#1	4.828234	4.784992	4.781988	4.856155	4.899378	9.571562	9.594435
#2	4.816914	4.805703	4.779845	4.834798	4.877556	9.567020	9.644859
#3	4.827518	4.835327	4.792522	4.854627	4.903442	9.562948	9.641732

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2334953	2.394757	23.48727	.9677605	2.406450	1.227604	4.936513
Stddev	.0014267	.002357	.09630	.0001755	.003256	.002701	.025429
%RSD	.6110298	.0984349	.4100189	.0181358	.1353201	.2200106	.5151293
#1	.2318497	2.392946	23.54639	.9678198	2.404735	1.229663	4.965865
#2	.2342511	2.393902	23.37614	.9678987	2.404409	1.224546	4.921143
#3	.2343852	2.397422	23.53926	.9675630	2.410206	1.228604	4.922530

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.358489	22.76317	2.408441	1.220748	24.57795	2.368322	2.457805
Stddev	.008903	.06197	.002902	.001654	.13590	.005937	.006852
%RSD	.3774742	.2722413	.1205058	.1354924	.5529452	.2506798	.2787699
#1	2.357169	22.70268	2.406693	1.222507	24.70362	2.369634	2.464635
#2	2.350321	22.76031	2.406838	1.220514	24.43372	2.361839	2.457847
#3	2.367978	22.82653	2.411791	1.219223	24.59652	2.373493	2.450932

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.87400	4.689898	4.893502	4.773966	4.754574	5.159312	4.968577
Stddev	.16441	.026428	.011071	.010614	.012347	.013974	.016185
%RSD	.6609702	.5635179	.2262315	.2223369	.2596807	.2708534	.3257392
#1	25.05118	4.659553	4.895867	4.763510	4.754140	5.175369	4.954960
#2	24.72638	4.702274	4.881440	4.773656	4.742450	5.152662	4.964300
#3	24.84443	4.707867	4.903199	4.784732	4.767132	5.149905	4.986470

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV06 Acquired: 1/17/2025 16:16:11 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.811108	4.748961	4.876094
Stddev	.001157	.009520	.031412
%RSD	.0240415	.2004738	.6442010
#1	4.812034	4.748739	4.879518
#2	4.809812	4.739553	4.843111
#3	4.811479	4.758590	4.905654

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2825.089	54926.14	10212.18	1950.465	4051.127
Stddev	4.527	38.57	59.20	1.506	9.635
%RSD	.1602403	.0702139	.5796944	.0772261	.2378451
#1	2828.550	54916.57	10278.54	1950.324	4061.589
#2	2826.750	54968.59	10193.20	1949.034	4049.174
#3	2819.966	54893.27	10164.79	1952.036	4042.617

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB06 Acquired: 1/17/2025 16:20:22 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006063	-.001001	.0006663	.0001352	.0009920	-.001410
Stddev	.0008931	.000818	.0005110	.0009675	.0007785	.005646
%RSD	147.3093	81.70630	76.70386	715.7725	78.47565	400.4272
#1	.0015387	-.000456	.0011458	.0007370	.0004612	.001554
#2	.0005218	-.000606	.0007243	-.000981	.0018858	.002136
#3	-.000242	-.001942	.0001287	.000649	.0006292	-.007920

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008767	-.000004	-.000068	.0178115	-.000309	-.000059
Stddev	.000892	.000069	.000065	.0081322	.000578	.000177
%RSD	10.17771	1715.365	96.52141	45.65708	187.0220	297.1156
#1	-.008265	-.000048	-.000032	.0131500	-.000036	.000144
#2	-.008239	-.000040	-.000027	.0272017	-.000973	-.000156
#3	-.009797	.000076	-.000143	.0130828	.000081	-.000167

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000209	.0057581	-.000202	-.004596	.0003485	.0009266
Stddev	.000081	.0032466	.000106	.015807	.0000867	.0001760
%RSD	38.63105	56.38201	52.53681	343.9249	24.86978	18.98989
#1	-.000295	.0094694	-.000213	-.003680	.0004473	.0010183
#2	-.000200	.0034441	-.000091	.010733	.0002852	.0010377
#3	-.000134	.0043610	-.000302	-.020841	.0003131	.0007237

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3046275	-.000851	.0005400	.5120159	.0082083	.0001047
Stddev	.0238033	.000972	.0002288	.0512509	.0006232	.0001831
%RSD	7.813914	114.1614	42.37103	10.00963	7.592270	174.9565
#1	.3004785	-.000237	.0007790	.4642469	.0086378	.0002875
#2	.2831714	-.000345	.0003231	.5056473	.0084936	-.000079
#3	.3302326	-.001972	.0005178	.5661534	.0074935	.000105

Sample Name: CCB06 Acquired: 1/17/2025 16:20:22 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001551	.0005641	.0117535	-.002415	F .0263201	.0017986
Stddev	.0007524	.0002590	.0056253	.001484	.0013813	.0008113
%RSD	485.1832	45.90856	47.86036	61.42251	5.247934	45.10656
#1	-.000371	.0007974	.0106951	-.000702	.0274822	.0017529
#2	.001017	.0002855	.0067326	-.003268	.0266851	.0026317
#3	-.000181	.0006094	.0178328	-.003276	.0247930	.0010111

Elem	Sr4077
Units	ppm
Avg	.0000284
Stddev	.0000311
%RSD	109.6052
#1	.0000466
#2	-.000008
#3	.000046

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2962.497	56621.92	10549.76	2030.642	4485.778
Stddev	5.568	154.45	16.42	2.214	9.152
%RSD	.1879345	.2727761	.1556200	.1090268	.2040337
#1	2963.321	56462.82	10546.93	2028.758	4485.163
#2	2967.606	56771.26	10534.94	2033.080	4495.222
#3	2956.563	56631.67	10567.41	2030.087	4476.948

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01DUP Acquired: 1/17/2025 16:24:43 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.1126404	-.007285	2.159874	-.038030	.0035827	112.2127	.6386645
Stddev	.0053569	.004507	.013446	.001314	.0015348	.2139	.0010024
%RSD	4.755720	61.87379	.6225308	3.454235	42.83858	.1906262	.1569484
#1	.1074266	-.002862	2.151350	-.036573	.0044428	112.0795	.6379686
#2	.1123649	-.007119	2.152897	-.038392	.0044945	112.4594	.6398134
#3	.1181297	-.011872	2.175374	-.039124	.0018107	112.0992	.6382115

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077851	.0037867	46.95838	.2882705	.1391749	.5832686	242.6037
Stddev	.0000257	.0000306	.11418	.0010906	.0009348	.0023325	.2782
%RSD	.3305091	.8073873	.2431446	.3783179	.6716794	.3998942	.1146807
#1	.0077555	.0037586	46.85735	.2893968	.1384842	.5808198	242.3940
#2	.0078024	.0037821	47.08225	.2872196	.1388020	.5835220	242.4977
#3	.0077974	.0038193	46.93552	.2881950	.1402386	.5854640	242.9193

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.277048	40.40547	.2917421	.0022665	3.220403	.4358995	1.852064
Stddev	.006704	.12408	.0007382	.0003553	.016257	.0010784	.006671
%RSD	.1567439	.3070771	.2530352	15.67833	.5048233	.2474054	.3601739
#1	4.274491	40.27241	.2909505	.0018575	3.203420	.4346543	1.857785
#2	4.284655	40.51800	.2918641	.0024427	3.235822	.4365071	1.844737
#3	4.272000	40.42600	.2924118	.0024993	3.221967	.4365371	1.853670

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.161792	.1323078	.0050596	.0443972	3.612466	4.439370	8.926180
Stddev	.018688	.0018590	.0003316	.0015956	.007908	.028560	.046759
%RSD	.2289705	1.405089	6.553155	3.593924	.2189046	.6433326	.5238377
#1	8.142625	.1313065	.0046783	.0425879	3.609769	4.406507	8.916746
#2	8.162789	.1311640	.0052206	.0456030	3.621369	4.458182	8.884857
#3	8.179961	.1344529	.0052800	.0450008	3.606259	4.453422	8.976936

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01DUP Acquired: 1/17/2025 16:24:43 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.316726	.0958629	-.058896
Stddev	.026244	.0005702	.000724
%RSD	.6079649	.5948364	1.228650
#1	4.288194	.0958014	-.058880
#2	4.322152	.0964613	-.058181
#3	4.339834	.0953259	-.059628

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3179.543	63338.40	12808.35	2188.350	3918.676
Stddev	6.102	97.06	30.72	8.095	12.701
%RSD	.1919069	.1532353	.2398402	.3699000	.3241259
#1	3183.782	63229.18	12789.91	2181.987	3926.241
#2	3182.298	63414.75	12791.33	2197.461	3925.775
#3	3172.550	63371.28	12843.81	2185.603	3904.012

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01LX5 Acquired: 1/17/2025 16:28:47 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0204245	-.001408	.4520120	-.006626	.0008538	25.71771	.1360931
Stddev	.0021017	.001581	.0011719	.001194	.0005382	.05658	.0006791
%RSD	10.29032	112.2412	.2592711	18.02704	63.03069	.2200033	.4989773
#1	.0220089	.000416	.4507793	-.006223	.0002507	25.72271	.1361394
#2	.0180402	-.002274	.4521449	-.005685	.0012850	25.77162	.1367479
#3	.0212243	-.002366	.4531118	-.007970	.0010258	25.65880	.1353921

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018859	-.000680	11.07223	.0680959	.0282510	.1398295	55.52086
Stddev	.0000414	.000109	.03110	.0006475	.0000958	.0005771	.51550
%RSD	2.196878	16.08243	.2808572	.9508898	.3391569	.4126850	.9284828
#1	.0018675	-.000793	11.05681	.0688330	.0281900	.1391786	56.07695
#2	.0018569	-.000574	11.10802	.0676189	.0282016	.1400316	55.05893
#3	.0019334	-.000673	11.05186	.0678357	.0283615	.1402784	55.42670

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9983142	9.402522	.0605703	.0009146	.8682546	.0996091	.4367447
Stddev	.0023390	.064119	.0001933	.0002913	.0113488	.0002198	.0006395
%RSD	.2342970	.6819340	.3191643	31.84639	1.307077	.2206536	.1464256
#1	.9982087	9.369494	.0604465	.0005792	.8576894	.0996828	.4362408
#2	1.000704	9.476422	.0607930	.0010605	.8802511	.0997826	.4365291
#3	.996030	9.361651	.0604713	.0011041	.8668234	.0993620	.4374641

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.078947	.0303686	.0010920	.0073381	.8518841	1.224268	1.817992
Stddev	.027001	.0011473	.0002943	.0005736	.0027136	.021822	.007412
%RSD	1.298780	3.777779	26.95028	7.816940	.3185370	1.782419	.4077052
#1	2.065221	.0315447	.0009696	.0079262	.8511756	1.247235	1.821080
#2	2.061566	.0292526	.0014277	.0067802	.8548816	1.203808	1.809536
#3	2.110053	.0303083	.0008786	.0073080	.8495950	1.221761	1.823361

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01LX5 Acquired: 1/17/2025 16:28:47 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8857341	.0207225	-.013510
Stddev	.0062901	.0005165	.000550
%RSD	.7101521	2.492300	4.069944
#1	.8926382	.0201876	-.014011
#2	.8842351	.0207615	-.012922
#3	.8803289	.0212183	-.013597

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2969.272	57234.89	11327.80	2022.993	4220.494
Stddev	3.504	299.68	65.64	6.732	2.517
%RSD	.1180176	.5235997	.5794209	.3327724	.0596283
#1	2967.648	56889.51	11374.40	2015.228	4222.602
#2	2973.294	57426.14	11252.74	2027.196	4221.172
#3	2966.876	57389.02	11356.27	2026.554	4217.708

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01MS Acquired: 1/17/2025 16:32:58 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7603688	1.731060	2.898504	1.466273	.2938717	121.1104
Stddev	.0024214	.002961	.007776	.002309	.0002974	.2465
%RSD	.3184477	.1710656	.2682720	.1574545	.1011916	.2035640
#1	.7588250	1.733606	2.897045	1.468833	.2938304	120.9200
#2	.7591218	1.731764	2.891561	1.465641	.2941876	121.3889
#3	.7631595	1.727810	2.906906	1.464347	.2935972	121.0224

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8924478	.1531130	.1819696	38.41806	.5988171	.3180264
Stddev	.0038414	.0010562	.0006519	.07250	.0022086	.0016099
%RSD	.4304357	.6898229	.3582586	.1887004	.3688334	.5062138
#1	.8883422	.1536261	.1819676	38.40036	.5989438	.3167673
#2	.8959547	.1538147	.1813187	38.49776	.5965478	.3174716
#3	.8930467	.1518983	.1826225	38.35605	.6009596	.3198404

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8948536	250.9003	4.468700	37.08282	.6944908	.0633242
Stddev	.0020816	1.9767	.009659	.09687	.0028897	.0007596
%RSD	.2326234	.7878565	.2161429	.2612276	.4160944	1.199521
#1	.8925561	249.1433	4.458566	36.97350	.6921660	.0624983
#2	.8953903	250.5171	4.477800	37.15797	.6935804	.0639928
#3	.8966143	253.0406	4.469733	37.11700	.6977262	.0634816

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.945185	.6655839	2.176526	16.23205	.3004503	.3377035
Stddev	.057423	.0020848	.002370	.11924	.0023094	.0016011
%RSD	.9658701	.3132266	.1088917	.7345819	.7686434	.4741247
#1	5.886181	.6639936	2.178887	16.11213	.3004331	.3361437
#2	5.948490	.6679441	2.176544	16.23344	.2981495	.3376237
#3	6.000884	.6648139	2.174147	16.35059	.3027682	.3393430

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01MS Acquired: 1/17/2025 16:32:58 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6225673	3.261130	3.009244	F 13.41602	4.184865	.2709739
Stddev	.0022019	.011972	.033408	.05380	.024964	.0017268
%RSD	.3536741	.3671265	1.110163	.4010064	.5965347	.6372557
#1	.6208579	3.249544	2.973154	13.35771	4.170462	.2690192
#2	.6217920	3.273455	3.015489	13.42662	4.170442	.2716104
#3	.6250519	3.260389	3.039087	13.46373	4.213691	.2722922

Elem	Sr4077
Units	ppm
Avg	.0626098
Stddev	.0014810
%RSD	2.365394
#1	.0632352
#2	.0636754
#3	.0609187

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3247.534	63067.34	12581.71	2212.588	4027.363
Stddev	10.140	132.70	77.48	2.133	14.924
%RSD	.3122318	.2104031	.6158487	.0963986	.3705684
#1	3252.519	63203.71	12563.74	2214.443	4036.743
#2	3254.215	63059.68	12514.80	2213.063	4035.192
#3	3235.866	62938.65	12666.61	2210.257	4010.153

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01MSD Acquired: 1/17/2025 16:36:54 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7643312	1.751052	2.931317	1.480266	.2924878	119.7640
Stddev	.0037283	.018095	.011993	.004528	.0012201	.3151
%RSD	.4877847	1.033382	.4091195	.3058602	.4171572	.2630849
#1	.7643872	1.731719	2.924985	1.481475	.2916025	119.4186
#2	.7605752	1.767583	2.923817	1.475257	.2919814	119.8378
#3	.7680311	1.753854	2.945148	1.484066	.2938796	120.0357

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8760185	.1550287	.1858452	37.49479	.5905724	.3208258
Stddev	.0063313	.0009949	.0010522	.17222	.0022649	.0010878
%RSD	.7227406	.6417736	.5661446	.4593090	.3835009	.3390633
#1	.8687187	.1540646	.1847746	37.30158	.5908143	.3197337
#2	.8793227	.1560519	.1858830	37.63215	.5881963	.3208343
#3	.8800143	.1549696	.1868779	37.55064	.5927066	.3219093

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9142252	238.5707	4.410202	36.74030	.7001862	.0609991
Stddev	.0019186	1.2527	.027891	.05909	.0024930	.0004925
%RSD	.2098580	.5250796	.6324255	.1608315	.3560509	.8073513
#1	.9121670	238.2950	4.378603	36.67315	.6976050	.0608133
#2	.9159641	237.4789	4.431392	36.78437	.7003730	.0606266
#3	.9145444	239.9383	4.420612	36.76337	.7025805	.0615575

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.503991	.6563261	2.118374	15.45384	.2866398	.3411357
Stddev	.037238	.0047902	.004975	.09747	.0025625	.0011345
%RSD	.6765646	.7298541	.2348681	.6307064	.8939689	.3325704
#1	5.479125	.6508228	2.123282	15.44221	.2888219	.3399142
#2	5.486044	.6585965	2.118505	15.36271	.2838181	.3413363
#3	5.546803	.6595589	2.113334	15.55661	.2872792	.3421565

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01MSD Acquired: 1/17/2025 16:36:54 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6291434	3.268452	3.300387	F 13.73433	4.232440	.2643049
Stddev	.0039889	.015435	.038886	.07266	.021708	.0020093
%RSD	.6340265	.4722542	1.178215	.5290032	.5128968	.7602227
#1	.6253992	3.250639	3.305278	13.65395	4.216868	.2620555
#2	.6286923	3.277884	3.259288	13.75375	4.223216	.2659220
#3	.6333387	3.276833	3.336596	13.79531	4.257237	.2649372

Elem	Sr4077
Units	ppm
Avg	.0707978
Stddev	.0015459
%RSD	2.183519
#1	.0693679
#2	.0724381
#3	.0705872

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3210.700	64388.39	12358.02	2246.011	3969.833
Stddev	8.161	219.00	70.69	3.524	14.568
%RSD	.2541783	.3401164	.5720038	.1569016	.3669707
#1	3219.181	64304.69	12428.94	2241.948	3983.858
#2	3210.019	64636.89	12287.57	2248.237	3970.865
#3	3202.902	64223.58	12357.56	2247.848	3954.776

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01A Acquired: 1/17/2025 16:40:51 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7543364	1.738284	2.903681	1.459751	.2829166	120.3450
Stddev	.0037364	.016529	.011358	.005246	.0009053	.3526
%RSD	.4953229	.9508631	.3911466	.3593774	.3200016	.2930274
#1	.7503229	1.720061	2.902461	1.453833	.2820981	120.1965
#2	.7549721	1.752309	2.892983	1.463830	.2838890	120.0910
#3	.7577142	1.742481	2.915600	1.461591	.2827626	120.7476

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8709215	.1549134	.1837456	37.33339	.5959476	.3187725
Stddev	.0050740	.0005443	.0004763	.18588	.0020155	.0007911
%RSD	.5825994	.3513283	.2591884	.4978973	.3381990	.2481640
#1	.8663659	.1543246	.1832068	37.23611	.5944147	.3181495
#2	.8700087	.1550174	.1839194	37.21633	.5951975	.3185055
#3	.8763899	.1553981	.1841105	37.54772	.5982306	.3196625

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9037113	240.5563	4.370399	36.68066	.6942328	.0610523
Stddev	.0045296	1.0070	.022817	.06569	.0024600	.0002958
%RSD	.5012280	.4186319	.5220858	.1790770	.3543464	.4844938
#1	.8997087	240.1049	4.350997	36.75091	.6919613	.0607431
#2	.9027967	239.8540	4.364663	36.62076	.6938915	.0610815
#3	.9086284	241.7101	4.395537	36.67032	.6968456	.0613325

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.534285	.6524594	2.132495	15.59151	.2949194	.3383381
Stddev	.017182	.0022369	.009820	.08463	.0012044	.0014107
%RSD	.3104605	.3428456	.4604903	.5428127	.4083817	.4169405
#1	5.520005	.6533493	2.129207	15.56790	.2952960	.3368236
#2	5.529497	.6499145	2.124741	15.52118	.2935717	.3385759
#3	5.553353	.6541144	2.143537	15.68544	.2958905	.3396147

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1093-01A Acquired: 1/17/2025 16:40:51 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6239957	3.459065	4.946068	F 13.56139	4.166597	.2638612
Stddev	.0043703	.011617	.040129	.06814	.021786	.0007512
%RSD	.7003758	.3358546	.8113262	.5024390	.5228812	.2847128
#1	.6209857	3.448325	4.938727	13.49254	4.144535	.2631681
#2	.6219930	3.457474	4.910117	13.56283	4.167159	.2637559
#3	.6290085	3.471396	4.989361	13.62880	4.188096	.2646595

Elem	Sr4077
Units	ppm
Avg	.0669514
Stddev	.0006424
%RSD	.9595485
#1	.0662166
#2	.0672310
#3	.0674067

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3255.657	63708.49	12415.73	2238.359	4031.941
Stddev	7.841	159.85	45.69	11.483	10.803
%RSD	.2408461	.2509112	.3679722	.5130222	.2679339
#1	3262.518	63742.23	12456.41	2242.318	4041.412
#2	3257.342	63848.78	12424.49	2247.339	4034.236
#3	3247.110	63534.47	12366.30	2225.420	4020.175

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1094-01 Acquired: 1/17/2025 16:44:48 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0592459	-.000472	.3363504	-.039968	.0026230	80.25212	.3854516
Stddev	.0035138	.001254	.0017624	.001693	.0009323	.20763	.0012677
%RSD	5.930904	265.7555	.5239800	4.235948	35.54227	.2587271	.3288958
#1	.0594655	-.001852	.3345285	-.041546	.0015722	80.09036	.3847272
#2	.0626447	-.000161	.3380467	-.038180	.0033508	80.17974	.3847121
#3	.0556274	.000597	.3364759	-.040177	.0029461	80.48625	.3869154

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064687	.0024270	493.8432	.1551408	.0939092	.3479976	204.5627
Stddev	.0000767	.0001849	2.2370	.0006138	.0001118	.0004756	.2482
%RSD	1.185318	7.616587	.4529719	.3956190	.1190732	.1366747	.1213548
#1	.0064696	.0025245	496.1265	.1547668	.0940332	.3485432	204.3831
#2	.0065450	.0022138	493.7474	.1558491	.0938161	.3476705	204.4590
#3	.0063917	.0025427	491.6556	.1548064	.0938782	.3477791	204.8460

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.931255	238.3830	.1699320	-.000187	10.59727	.2508443	.8025372
Stddev	.008234	.5435	.0005531	.000183	.06744	.0018770	.0016266
%RSD	.2094494	.2279789	.3254621	98.24687	.6363474	.7482598	.2026807
#1	3.935707	238.2234	.1703556	-.000298	10.57121	.2494950	.8033439
#2	3.921753	238.9883	.1693063	.000025	10.54675	.2500501	.8036028
#3	3.936304	237.9371	.1701342	-.000286	10.67384	.2529878	.8006649

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.94868	.1118351	.0033003	.0141499	2.401571	3.461170	7.116645
Stddev	.10003	.0017987	.0003012	.0011798	.007458	.023993	.026415
%RSD	.8371980	1.608335	9.127185	8.337891	.3105302	.6932034	.3711691
#1	11.87287	.1108165	.0035865	.0131589	2.400267	3.441603	7.121553
#2	11.91111	.1107769	.0029860	.0154549	2.394851	3.453968	7.088120
#3	12.06206	.1139119	.0033285	.0138358	2.409595	3.487939	7.140261

Sample Name: Q1094-01 Acquired: 1/17/2025 16:44:48 Type: Unk
Method: NON EPA-6010-200.7(v2490) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.063052	.0633785	.4350947
Stddev	.018991	.0000957	.0016908
%RSD	.3132333	.1509575	.3885964
#1	6.054703	.0634860	.4354532
#2	6.049665	.0633027	.4332535
#3	6.084788	.0633469	.4365775

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2924.143	57706.34	11888.23	1988.819	3545.541
Stddev	5.451	151.14	50.83	5.966	8.436
%RSD	.1864079	.2619143	.4275286	.2999688	.2379258
#1	2926.240	57773.49	11859.94	1994.186	3547.409
#2	2928.235	57533.26	11857.84	1982.396	3552.885
#3	2917.955	57812.26	11946.90	1989.876	3536.327

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1098-01 Acquired: 1/17/2025 16:49:01 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0755290	-.020744	1.046816	-.057307	.0191075	185.5072	.7864220
Stddev	.0016038	.004558	.003443	.003029	.0012537	.3706	.0017492
%RSD	2.123364	21.97160	.3288923	5.286021	6.561091	.1997529	.2224231
#1	.0736773	-.018993	1.049257	-.060333	.0189169	185.9014	.7881054
#2	.0764385	-.017321	1.042878	-.054275	.0204456	185.4541	.7846138
#3	.0764713	-.025917	1.048313	-.057314	.0179601	185.1661	.7865468

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084902	.0024416	93.38018	.6757826	.2244907	1.398556	333.4396
Stddev	.0000264	.0003160	.10219	.0028556	.0004262	.004483	.5560
%RSD	.3107492	12.94350	.1094324	.4225642	.1898736	.3205146	.1667520
#1	.0084636	.0027558	93.49559	.6765912	.2249517	1.397490	333.8246
#2	.0084906	.0021238	93.34377	.6781466	.2241110	1.394703	333.6922
#3	.0085163	.0024451	93.30119	.6726098	.2244094	1.403476	332.8022

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.497962	103.9330	.4614985	.0000109	15.90891	.7049463	2.601243
Stddev	.005618	.2479	.0007386	.0006497	.01722	.0034679	.004821
%RSD	.1248996	.2384790	.1600443	5981.063	.1082635	.4919317	.1853287
#1	4.498646	104.1782	.4617523	.0000147	15.92843	.7089453	2.606113
#2	4.492033	103.9383	.4606664	.0006586	15.90242	.7031261	2.596473
#3	4.503206	103.6826	.4620767	-.000641	15.89587	.7027676	2.601143

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.71522	.5254609	.0052730	.0315466	6.071164	4.469682	7.970681
Stddev	.09969	.0011126	.0002488	.0013371	.014030	.009797	.044194
%RSD	.5963997	.2117354	4.718013	4.238510	.2310954	.2191856	.5544530
#1	16.80825	.5256393	.0053623	.0307356	6.087335	4.479047	8.002675
#2	16.72743	.5264736	.0054647	.0330899	6.062230	4.470495	7.920255
#3	16.60999	.5242699	.0049918	.0308144	6.063926	4.459504	7.989114

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1098-01 Acquired: 1/17/2025 16:49:01 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	3.368326	.1775084	.3234762
Stddev	.019879	.0013271	.0011069
%RSD	.5901792	.7476429	.3421790
#1	3.386150	.1764147	.3240980
#2	3.346887	.1771257	.3221982
#3	3.371941	.1789849	.3241323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3040.023	58145.78	12003.36	2024.365	3863.240
Stddev	1.452	255.15	34.17	5.330	7.001
%RSD	.0477774	.4388155	.2846399	.2632932	.1812235
#1	3038.642	57994.50	11972.44	2019.526	3855.187
#2	3041.538	58002.47	11997.60	2023.491	3866.655
#3	3039.889	58440.37	12040.04	2030.078	3867.879

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1099-01 Acquired: 1/17/2025 16:53:03 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0363427	-.012684	.3271375	-.041116	-.000282	124.7330	.6484439
Stddev	.0006247	.002370	.0020407	.002188	.002880	.2266	.0003307
%RSD	1.719044	18.68568	.6237949	5.320985	1021.392	.1816904	.0510039
#1	.0357867	-.009948	.3253894	-.039045	-.003036	124.5565	.6481209
#2	.0362228	-.014102	.3266431	-.043404	.002709	124.9885	.6487818
#3	.0370188	-.014002	.3293799	-.040899	-.000519	124.6539	.6484289

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077421	-.000706	92.00630	.1756203	.1356294	.4886694	260.9639
Stddev	.0000942	.000066	.06675	.0005570	.0001503	.0005404	.9974
%RSD	1.216731	9.379217	.0725514	.3171617	.1107863	.1105867	.3822175
#1	.0078027	-.000638	91.96735	.1754035	.1355729	.4880951	260.6033
#2	.0077901	-.000771	92.08338	.1762530	.1355155	.4887454	260.1969
#3	.0076336	-.000709	91.96817	.1752042	.1357997	.4891678	262.0915

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.857900	54.48577	.1910842	-.000150	12.74053	.5267053	.6129111
Stddev	.006927	.14015	.0001022	.000734	.06902	.0013627	.0017828
%RSD	.1795584	.2572267	.0534594	488.5334	.5417430	.2587274	.2908748
#1	3.864799	54.32748	.1909735	.000495	12.71581	.5274008	.6114509
#2	3.857955	54.59407	.1911748	.000003	12.68728	.5275799	.6123846
#3	3.850945	54.53576	.1911043	-.000948	12.81851	.5251351	.6148979

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.440026	1.470730	.0040648	.0042243	4.132352	4.673906	7.332327
Stddev	.012726	.002881	.0002743	.0009025	.003242	.041685	.024183
%RSD	.1348099	.1958965	6.747111	21.36444	.0784467	.8918706	.3298092
#1	9.430337	1.474013	.0043435	.0032611	4.134683	4.634764	7.308853
#2	9.454438	1.468623	.0037952	.0050504	4.133724	4.669217	7.330966
#3	9.435301	1.469553	.0040556	.0043613	4.128650	4.717738	7.357160

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1099-01 Acquired: 1/17/2025 16:53:03 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.720786	.0807645	.0095076
Stddev	.005219	.0004142	.0010208
%RSD	.1105542	.5128795	10.73657
#1	4.714976	.0805101	.0099775
#2	4.722307	.0805410	.0102088
#3	4.725076	.0812425	.0083365

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3250.918	62387.83	12546.84	2213.515	3933.758
Stddev	3.746	151.58	29.02	3.582	6.833
%RSD	.1152310	.2429710	.2313186	.1618143	.1737086
#1	3254.195	62507.36	12531.33	2215.798	3938.168
#2	3251.726	62438.81	12528.86	2209.387	3937.220
#3	3246.834	62217.33	12580.32	2215.360	3925.887

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01 Acquired: 1/17/2025 16:57:06 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000015	-.001637	.0011633	-.000847	.0004797	-.011786
Stddev	.003708	.001114	.0011451	.001781	.0007317	.002007
%RSD	24252.07	68.06756	98.44018	210.2205	152.5265	17.02661
#1	.004267	-.002923	.0021146	-.001914	-.000089	-.012427
#2	-.002180	-.000984	.0014828	.001209	.001305	-.009537
#3	-.002132	-.001003	-.000108	-.001837	.000224	-.013394

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0783482	.0000277	-.000065	87.94869	.0027527	-.000196
Stddev	.0012129	.0000402	.000026	.49756	.0005166	.000115
%RSD	1.548106	145.0579	39.48389	.5657333	18.76788	58.75036
#1	.0769651	-.000019	-.000046	87.37637	.0027907	-.000144
#2	.0788491	.000047	-.000095	88.27844	.0032492	-.000328
#3	.0792304	.000055	-.000055	88.19127	.0022181	-.000116

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013119	.0517776	.0038490	15.24354	.0189900	.0007361
Stddev	.0001908	.0058084	.0001449	.12343	.0002234	.0002385
%RSD	14.54084	11.21797	3.764127	.8097475	1.176562	32.39285
#1	.0012773	.0581349	.0037126	15.10138	.0192363	.0010072
#2	.0011408	.0504498	.0040011	15.32342	.0189333	.0005590
#3	.0015176	.0467480	.0038332	15.30583	.0188004	.0006422

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	150.3800	.0059354	.0341673	14.43641	.2772774	.0090843
Stddev	.3801	.0019613	.0004019	.07939	.0014943	.0000087
%RSD	.2527331	33.04350	1.176350	.5499236	.5389262	.0957500
#1	150.1397	.0080074	.0343163	14.35552	.2759111	.0090935
#2	150.1821	.0041077	.0344735	14.43950	.2788732	.0090833
#3	150.8182	.0056912	.0337122	14.51421	.2770477	.0090762

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01 Acquired: 1/17/2025 16:57:06 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003871	-.001046	F 10.44744	.1082527	F 23.04120	-.008677
Stddev	.000406	.000591	.02675	.0024218	.14617	.000940
%RSD	10.47611	56.53498	.2560362	2.237214	.6343770	10.83765
#1	-.003539	-.000375	10.42624	.1078414	23.16358	-.009353
#2	-.003752	-.001491	10.43858	.1108539	23.08067	-.007603
#3	-.004323	-.001271	10.47749	.1060628	22.87935	-.009075

Elem	Sr4077
Units	ppm
Avg	.8693308
Stddev	.0047669
%RSD	.5483405
#1	.8638992
#2	.8712741
#3	.8728191

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2847.014	54713.26	10748.59	1952.532	4077.498
Stddev	15.355	38.23	42.06	1.645	21.304
%RSD	.5393511	.0698741	.3912614	.0842318	.5224694
#1	2836.614	54728.43	10795.20	1954.430	4064.623
#2	2839.777	54741.59	10713.48	1951.522	4065.784
#3	2864.650	54669.78	10737.09	1951.644	4102.089

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01DUP Acquired: 1/17/2025 17:01:21 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.0007583	-.001862	.0016443	.0005727	-.000075	-.024087
Stddev	.0022559	.001582	.0011196	.0012370	.000529	.010040
%RSD	297.5068	84.97237	68.08798	215.9806	706.0047	41.68433
#1	.0033058	-.003681	.0005668	.0015318	.000531	-.014346
#2	-.000987	-.000813	.0015643	-.000823	-.000444	-.023512
#3	-.000044	-.001091	.0028017	.001010	-.000312	-.034402

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0789661	.0000059	.0000023	88.42069	.0031468	-.000256
Stddev	.0013629	.0000504	.0000738	.98774	.0002512	.000108
%RSD	1.725949	851.2207	3153.738	1.117092	7.982817	42.25039
#1	.0783939	.0000450	.0000645	88.21059	.0034285	-.000243
#2	.0779825	.0000237	-.000079	87.55491	.0030661	-.000370
#3	.0805218	-.000051	.000022	89.49658	.0029459	-.000155

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012989	.0245731	.0039085	15.36737	.0196033	.0006069
Stddev	.0004945	.0028621	.0001389	.17214	.0000743	.0002491
%RSD	38.07086	11.64726	3.554387	1.120145	.3787907	41.04919
#1	.0010159	.0274908	.0040492	15.30057	.0196021	.0005437
#2	.0018699	.0217700	.0039050	15.23865	.0196781	.0003954
#3	.0010109	.0244585	.0037714	15.56289	.0195296	.0008815

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	150.6404	.0064181	.0341320	14.40628	.2805755	.0092557
Stddev	.5318	.0021022	.0004954	.02517	.0058067	.0002739
%RSD	.3530259	32.75414	1.451553	.1747036	2.069552	2.959209
#1	150.6606	.0047126	.0337669	14.40410	.2823222	.0090927
#2	151.1618	.0087667	.0346960	14.43246	.2740960	.0091025
#3	150.0987	.0057749	.0339330	14.38227	.2853084	.0095719

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01DUP Acquired: 1/17/2025 17:01:21 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.003954	-.001867	F 10.42637	.1101665	F 23.52413	-.008371
Stddev	.000620	.000303	.04795	.0013613	.11333	.000889
%RSD	15.67192	16.21208	.4598675	1.235699	.4817714	10.61731
#1	-.003254	-.002118	10.38702	.1098924	23.40256	-.007714
#2	-.004177	-.001531	10.47977	.1089631	23.54296	-.009382
#3	-.004432	-.001951	10.41230	.1116440	23.62686	-.008017

Elem	Sr4077
Units	ppm
Avg	.8774160
Stddev	.0091863
%RSD	1.046967
#1	.8761375
#2	.8689359
#3	.8871745

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2799.530	54202.42	10568.49	1938.634	4001.991
Stddev	16.440	73.20	165.97	8.693	18.546
%RSD	.5872509	.1350452	1.570380	.4483916	.4634312
#1	2812.572	54274.25	10579.62	1948.612	4019.696
#2	2804.954	54205.10	10728.61	1932.695	4003.572
#3	2781.063	54127.92	10397.24	1934.596	3982.704

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV07 Acquired: 1/17/2025 17:11:51 Type: Unk
Method: NON EPA-6010-200.7(v2616) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.826676	4.670342	4.766832	4.864093	4.906502	9.521428	9.181532
Stddev	.011723	.048513	.007591	.018980	.009135	.028117	.095087
%RSD	.2428710	1.038746	.1592394	.3902044	.1861761	.2953005	1.035629
#1	4.816886	4.706734	4.767419	4.873286	4.909121	9.552619	9.141737
#2	4.823474	4.615265	4.758965	4.842268	4.896344	9.498028	9.112808
#3	4.839666	4.689028	4.774113	4.876727	4.914042	9.513637	9.290051

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2326825	2.388616	23.07114	.9703148	2.394659	1.223787	4.772683
Stddev	.0014160	.004244	.02646	.0009511	.006358	.002799	.028192
%RSD	.6085520	.1776696	.1146672	.0980206	.2654912	.2287394	.5906871
#1	.2324532	2.386980	23.08368	.9692431	2.393179	1.224349	4.786891
#2	.2313951	2.385434	23.04075	.9710587	2.389172	1.220749	4.790943
#3	.2341991	2.393434	23.08899	.9706425	2.401626	1.226262	4.740214

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.283864	27.18386	2.397703	1.207695	23.24662	2.339444	2.450755
Stddev	.005464	.08567	.004878	.000248	.05636	.003663	.002428
%RSD	.2392281	.3151494	.2034310	.0205533	.2424577	.1565796	.0990850
#1	2.286749	27.24156	2.395689	1.207820	23.25917	2.340748	2.453313
#2	2.277563	27.08542	2.394154	1.207409	23.29565	2.335308	2.450472
#3	2.287280	27.22459	2.403265	1.207856	23.18504	2.342277	2.448481

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.11398	4.639826	4.876800	4.736529	4.633661	5.144155	4.941051
Stddev	.06013	.027471	.010874	.014472	.010585	.012640	.005147
%RSD	.2493702	.5920624	.2229777	.3055302	.2284413	.2457090	.1041609
#1	24.16143	4.644231	4.878909	4.740216	4.643479	5.139476	4.939581
#2	24.13415	4.610420	4.865026	4.720570	4.622448	5.158467	4.936800
#3	24.04635	4.664829	4.886465	4.748800	4.635057	5.134522	4.946773

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV07 Acquired: 1/17/2025 17:11:51 Type: Unk
Method: NON EPA-6010-200.7(v2616) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.751973	4.606976	4.782755
Stddev	.017540	.017280	.019842
%RSD	.3691116	.3750879	.4148600
#1	4.752217	4.616035	4.770509
#2	4.734312	4.587049	4.772109
#3	4.769390	4.617842	4.805648

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2805.907	54782.08	10169.42	1910.958	4034.517
Stddev	3.510	98.41	45.44	6.749	5.009
%RSD	.1251074	.1796309	.4468265	.3531617	.1241634
#1	2807.643	54871.63	10178.54	1911.346	4036.859
#2	2808.210	54676.73	10209.61	1904.023	4037.927
#3	2801.866	54797.89	10120.11	1917.504	4028.766

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB07 Acquired: 1/17/2025 17:16:01 Type: Unk
Method: NON EPA-6010-200.7(v2616) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003170	-.000558	.0020894	.0026971	.0015172	.0035924
Stddev	.000362	.000536	.0016946	.0004587	.0013378	.0071687
%RSD	11.40405	95.97668	81.10506	17.00562	88.17854	199.5508
#1	-.002765	-.001129	.0030884	.0021869	.0026681	.0030429
#2	-.003284	-.000066	.0001328	.0028293	.0000494	.0110201
#3	-.003461	-.000479	.0030471	.0030751	.0018340	-.003286

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006989	-.000000	.0000573	.0018000	-.000457	.0000072
Stddev	.000638	.000033	.0001260	.0011489	.000255	.0001495
%RSD	9.123222	14524.34	219.8641	63.82943	55.86516	2086.999
#1	-.006457	.000019	.0001664	.0028826	-.000487	.0001085
#2	-.006815	.000019	-.000081	.0005946	-.000696	-.000165
#3	-.007696	-.000039	.000086	.0019227	-.000188	.000078

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001594	.0006942	.0000607	-.019054	.0002061	.0007669
Stddev	.0003928	.0047539	.0003878	.004928	.0001777	.0002412
%RSD	246.4883	684.7835	638.8238	25.86119	86.22858	31.44437
#1	.0001173	.0021821	.0002652	-.022386	.0001546	.0008100
#2	.0005715	-.004626	-.000387	-.013394	.0000598	.0005072
#3	-.000211	.004526	.000303	-.021383	.0004039	.0009837

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1746857	-.001739	.0000620	.2815815	.0068769	.0003997
Stddev	.0058844	.000704	.0001926	.0667486	.0002360	.0002015
%RSD	3.368579	40.48311	310.5505	23.70491	3.431605	50.40913
#1	.1678977	-.001017	.0001587	.2424567	.0066452	.0005855
#2	.1783426	-.001775	-.000160	.3586531	.0071170	.0004280
#3	.1778168	-.002423	.000187	.2436345	.0068684	.0001856

Sample Name: CCB07 Acquired: 1/17/2025 17:16:01 Type: Unk
Method: NON EPA-6010-200.7(v2616) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001109	.0005878	.0112143	-.003735	F .0100039	.0006488
Stddev	.0007533	.0009794	.0022153	.001341	.0006925	.0007209
%RSD	679.1425	166.6104	19.75454	35.89992	6.922339	111.1269
#1	-.000617	.0016696	.0136135	-.002602	.0104110	-.000176
#2	.000062	-.000239	.0092463	-.005215	.0103965	.000962
#3	.000888	.000332	.0107831	-.003389	.0092043	.001160

Elem	Sr4077
Units	ppm
Avg	.0002141
Stddev	.0000233
%RSD	10.87417
#1	.0002171
#2	.0002357
#3	.0001894

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2922.195	55821.09	10466.59	1994.615	4394.567
Stddev	2.989	205.63	26.23	4.552	5.055
%RSD	.1022987	.3683711	.2506467	.2281957	.1150388
#1	2920.744	55640.48	10436.65	1992.734	4389.755
#2	2920.209	56044.88	10477.55	1999.806	4399.835
#3	2925.633	55777.91	10485.57	1991.305	4394.111

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01LX5 Acquired: 1/17/2025 17:22:00 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	-.000397	-.001628	.0011730	.0016933	.0010133	-.016736	.0061958
Stddev	.001972	.001282	.0011415	.0009320	.0012893	.001038	.0007867
%RSD	496.8277	78.74273	97.31478	55.03902	127.2353	6.204655	12.69677
#1	.001875	-.001496	.0023623	.0009079	.0002868	-.016012	.0054982
#2	-.001668	-.002971	.0000863	.0014489	.0025019	-.016270	.0060407
#3	-.001397	-.000417	.0010703	.0027232	.0002512	-.017926	.0070484

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000200	-.000073	17.41456	-.000056	-.000086	.0003861	.0024594
Stddev	.0000469	.000064	.07813	.000362	.000186	.0004096	.0034854
%RSD	233.7972	87.26422	.4486290	648.8116	216.6340	106.0862	141.7152
#1	-.000032	-.000126	17.34321	-.000316	.000122	.0008589	.0014557
#2	.000058	-.000090	17.40243	.000358	-.000234	.0001415	.0063366
#3	.000034	-.000002	17.49804	-.000209	-.000145	.0001578	-.000414

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005851	2.974173	.0037503	.0010204	25.23995	-.000067	.0069542
Stddev	.0002299	.020845	.0002923	.0001068	.15708	.001229	.0001690
%RSD	39.28857	.7008667	7.793099	10.46472	.6223593	1846.127	2.429567
#1	.0008434	2.952113	.0034435	.0009472	25.41552	.000171	.0067592
#2	.0004031	2.976866	.0037818	.0009711	25.19162	-.001397	.0070580
#3	.0005087	2.993541	.0040254	.0011430	25.11271	.001026	.0070454

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.759628	.0613881	.0018305	-.001816	-.000432	1.900021	.0159298
Stddev	.032902	.0008017	.0001271	.000420	.000291	.006095	.0013593
%RSD	1.192266	1.306007	6.945648	23.13579	67.23094	.3208104	8.533179
#1	2.791839	.0605457	.0019446	-.001340	-.000663	1.904625	.0151027
#2	2.726076	.0614766	.0018536	-.001972	-.000106	1.893108	.0151882
#3	2.760970	.0621418	.0016934	-.002135	-.000528	1.902329	.0174987

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01LX5 Acquired: 1/17/2025 17:22:00 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	4.486236	-.002775	.1669045
Stddev	.015856	.000355	.0002937
%RSD	.3534382	12.78973	.1759910
#1	4.475364	-.002466	.1666346
#2	4.478914	-.003162	.1672173
#3	4.504430	-.002696	.1668614

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2852.274	54741.68	10115.71	1964.036	4210.369
Stddev	2.907	105.67	87.05	6.725	5.066
%RSD	.1019146	.1930334	.8605140	.3423840	.1203234
#1	2854.575	54749.75	10201.97	1961.138	4214.745
#2	2853.239	54843.08	10117.28	1971.724	4211.543
#3	2849.007	54632.21	10027.89	1959.246	4204.819

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01MS Acquired: 1/17/2025 17:26:17 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8224124	1.891570	.9473769	1.983305	.7981968	1.795954
Stddev	.0011036	.026717	.0006628	.009498	.0038898	.008807
%RSD	.1341858	1.412441	.0699571	.4789099	.4873249	.4903954
#1	.8217882	1.861568	.9466631	1.973181	.7963835	1.796253
#2	.8217624	1.900348	.9479727	1.984712	.7955447	1.787001
#3	.8236866	1.912794	.9474950	1.992021	.8026622	1.804608

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2541648	.1819780	.1907372	91.42056	.3859787	.1913107
Stddev	.0020997	.0008987	.0002650	.29419	.0005291	.0002902
%RSD	.8260987	.4938685	.1389134	.3217944	.1370787	.1516940
#1	.2550424	.1810254	.1906111	91.39570	.3859918	.1911389
#2	.2556833	.1828108	.1905588	91.72638	.3854432	.1911474
#3	.2517688	.1820979	.1910416	91.13959	.3865012	.1916458

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2921090	2.921554	.1801210	17.25278	.4976680	.0728305
Stddev	.0010672	.020674	.0017000	.04399	.0004060	.0004083
%RSD	.3653425	.7076540	.9438153	.2549985	.0815772	.5606688
#1	.2912981	2.944175	.1813215	17.25459	.4977511	.0727395
#2	.2917109	2.903635	.1808656	17.29584	.4972269	.0724753
#3	.2933180	2.916853	.1781757	17.20790	.4980260	.0732766

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.0683	.2795905	.2394065	24.44946	.5426122	.4065177
Stddev	.9918	.0016826	.0009064	.16562	.0042371	.0011548
%RSD	.6479684	.6018250	.3786192	.6773864	.7808662	.2840585
#1	154.1430	.2779087	.2384670	24.64066	.5377290	.4052442
#2	152.8735	.2812740	.2394769	24.35700	.5447931	.4068124
#3	152.1883	.2795889	.2402758	24.35071	.5453147	.4074966

Sample Name: Q1097-01MS Acquired: 1/17/2025 17:26:17 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6724853	.1790919	F 11.32616	6.258076	F 24.26328	.1777713
Stddev	.0006658	.0010133	.02324	.023674	.11526	.0006562
%RSD	.0990114	.5657769	.2051500	.3783007	.4750392	.3691055
#1	.6719505	.1787488	11.34419	6.232714	24.14015	.1779158
#2	.6722742	.1802321	11.29994	6.261921	24.28110	.1783431
#3	.6732310	.1782947	11.33436	6.279592	24.36859	.1770549

Elem	Sr4077
Units	ppm
Avg	1.072360
Stddev	.005506
%RSD	.5134291
#1	1.074541
#2	1.076440
#3	1.066097

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2748.603	54125.52	10445.24	1908.305	3924.166
Stddev	7.377	94.58	41.45	3.550	6.975
%RSD	.2683813	.1747419	.3968567	.1860441	.1777463
#1	2755.220	54122.06	10485.13	1905.283	3928.604
#2	2749.940	54221.79	10402.38	1912.215	3927.767
#3	2740.649	54032.72	10448.21	1907.417	3916.126

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01MSD Acquired: 1/17/2025 17:30:13 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.8094623	1.867255	.9352036	1.951913	.7884820	1.791776
Stddev	.0061803	.010707	.0010291	.000935	.0026022	.003544
%RSD	.7635051	.5733916	.1100445	.0479161	.3300283	.1977714
#1	.8027638	1.877682	.9363472	1.951506	.7887699	1.789400
#2	.8106800	1.856289	.9349119	1.951251	.7909283	1.790079
#3	.8149430	1.867795	.9343519	1.952983	.7857478	1.795849

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2520953	.1796935	.1886670	90.69399	.3868865	.1891715
Stddev	.0002878	.0007748	.0002549	.03247	.0002146	.0003690
%RSD	.1141753	.4311899	.1350959	.0358045	.0554584	.1950415
#1	.2518402	.1792678	.1889449	90.65667	.3868393	.1893085
#2	.2524073	.1805879	.1884441	90.71577	.3871207	.1887536
#3	.2520384	.1792249	.1886121	90.70954	.3866995	.1894524

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2884497	2.979219	.1778706	17.05802	.4928382	.0734275
Stddev	.0005420	.037419	.0002288	.10084	.0012868	.0003637
%RSD	.1878895	1.255995	.1286576	.5911421	.2611055	.4952893
#1	.2879987	3.009461	.1781115	16.94465	.4936910	.0734555
#2	.2890509	2.937373	.1778442	17.13769	.4913580	.0737764
#3	.2882996	2.990823	.1776561	17.09172	.4934656	.0730506

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	156.1819	.2771365	.2419356	24.98857	.5359712	.4043479
Stddev	1.0777	.0010087	.0013633	.16558	.0021104	.0006869
%RSD	.6900163	.3639781	.5634995	.6626096	.3937428	.1698736
#1	157.0120	.2773708	.2431652	25.10671	.5340781	.4035550
#2	154.9640	.2780074	.2404695	24.79932	.5382466	.4047583
#3	156.5696	.2760313	.2421722	25.05969	.5355890	.4047306

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01MSD Acquired: 1/17/2025 17:30:13 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6645795	.1774348	F 11.59373	6.102822	F 23.74200	.1759820
Stddev	.0025955	.0002459	.04504	.006036	.01055	.0004726
%RSD	.3905491	.1385746	.3885123	.0989123	.0444461	.2685393
#1	.6675702	.1772123	11.64294	6.105480	23.74163	.1755662
#2	.6632531	.1773933	11.55454	6.095913	23.73163	.1758840
#3	.6629152	.1776988	11.58372	6.107073	23.75273	.1764960

Elem	Sr4077
Units	ppm
Avg	1.066914
Stddev	.001520
%RSD	.1424853
#1	1.068314
#2	1.065297
#3	1.067131

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2778.691	53214.33	10593.97	1879.204	3974.310
Stddev	2.609	54.95	40.69	4.847	1.077
%RSD	.0938964	.1032551	.3841237	.2579227	.0270938
#1	2780.629	53196.66	10631.46	1873.627	3975.246
#2	2775.725	53275.94	10550.69	1882.392	3973.133
#3	2779.720	53170.39	10599.74	1881.594	3974.550

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01A Acquired: 1/17/2025 17:34:09 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.7984541	1.862827	.9323882	1.932494	.7815364	1.785827
Stddev	.0028845	.009697	.0063442	.011089	.0040749	.004684
%RSD	.3612577	.5205526	.6804289	.5738291	.5213930	.2623025
#1	.8004902	1.873220	.9388247	1.944837	.7862218	1.791233
#2	.7997188	1.861242	.9321995	1.929273	.7788203	1.783295
#3	.7951533	1.854021	.9261404	1.923372	.7795670	1.782954

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2540009	.1821857	.1880749	90.86403	.3857394	.1891967
Stddev	.0017047	.0008889	.0010766	.52144	.0014197	.0006897
%RSD	.6711253	.4878915	.5724300	.5738695	.3680351	.3645344
#1	.2558331	.1832118	.1891249	91.45314	.3841555	.1897873
#2	.2524618	.1816902	.1881264	90.46172	.3868973	.1893641
#3	.2537079	.1816550	.1869735	90.67723	.3861654	.1884388

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2880646	2.968077	.1791192	17.02296	.4914736	.0730877
Stddev	.0013258	.032311	.0022612	.02658	.0017681	.0006126
%RSD	.4602257	1.088606	1.262390	.1561494	.3597591	.8382340
#1	.2890315	2.960670	.1816765	17.05279	.4932973	.0725612
#2	.2886090	2.940114	.1773841	17.01434	.4913566	.0729418
#3	.2865534	3.003449	.1782971	17.00177	.4897669	.0737601

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.1833	.2761012	.2424057	24.69296	.5438102	.4032399
Stddev	.4342	.0041197	.0015657	.01180	.0037782	.0012444
%RSD	.2816264	1.492111	.6458819	.0478042	.6947584	.3085899
#1	154.3566	.2774016	.2406634	24.70441	.5476586	.4040736
#2	153.6892	.2794138	.2436948	24.69362	.5401064	.4038365
#3	154.5042	.2714881	.2428589	24.68083	.5436655	.4018096

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: Q1097-01A Acquired: 1/17/2025 17:34:09 Type: Unk
Method: NON EPA-6010-200.7(v2490) 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	.6624029	.1776505	F 11.32675	6.128622	F 23.61680	.1746667
Stddev	.0015452	.0018165	.07233	.019611	.07217	.0004355
%RSD	.2332728	1.022539	.6385345	.3199919	.3055805	.2493311
#1	.6635156	.1797169	11.24335	6.131200	23.69986	.1751430
#2	.6606386	.1763053	11.36466	6.146817	23.56936	.1742888
#3	.6630544	.1769293	11.37223	6.107850	23.58120	.1745684

Elem	Sr4077
Units	ppm
Avg	1.074471
Stddev	.006847
%RSD	.6372583
#1	1.081978
#2	1.068570
#3	1.072864

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2796.019	53471.65	10461.56	1906.236	3995.054
Stddev	3.889	149.69	51.21	10.966	6.817
%RSD	.1390976	.2799383	.4895248	.5752726	.1706308
#1	2793.413	53642.05	10402.43	1915.929	3990.709
#2	2794.155	53361.36	10491.31	1894.334	3991.542
#3	2800.490	53411.53	10490.94	1908.447	4002.911

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: LR1 Acquired: 1/17/2025 17:37:48 Type: Unk
Method: NON EPA-6010-200.7(v2617) 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	.0303187	.1182279	.0519270	-.125742	-.000131	1979.879	-.009145
Stddev	.0102697	.0075451	.0009029	.012312	.003993	24.658	.001889
%RSD	33.87262	6.381802	1.738791	9.791416	3044.043	1.245418	20.65181
#1	.0405612	.1198205	.0529259	-.114086	.004469	1955.232	-.011207
#2	.0303731	.1100136	.0516862	-.124521	-.002163	1979.858	-.008728
#3	.0200219	.1248495	.0511689	-.138619	-.002699	2004.548	-.007499

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087206	-.023273	1793.259	-.001271	.0247868	.1248801	1054.308
Stddev	.0002498	.001560	8.557	.001079	.0002669	.0129794	11.762
%RSD	2.864120	6.703193	.4771519	84.86342	1.076572	10.39349	1.115619
#1	.0086600	-.024400	1783.762	-.000404	.0245786	.1250931	1057.909
#2	.0085067	-.023927	1800.367	-.000930	.0250876	.1117955	1063.848
#3	.0089951	-.021492	1795.649	-.002479	.0246942	.1377517	1041.166

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.085948	1892.670	.0087548	.0096712	2018.585	.0497315	.0543156
Stddev	.000660	5.685	.0008058	.0018710	10.008	.0012682	.0028404
%RSD	.7676905	.3003898	9.204039	19.34599	.4957840	2.550087	5.229385
#1	-.085723	1886.731	.0096184	.0108037	2007.353	.0482906	.0539967
#2	-.085431	1898.063	.0080230	.0106984	2026.553	.0502257	.0516481
#3	-.086691	1893.217	.0086230	.0075117	2021.851	.0506782	.0573019

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1250.343	.6161408	-.007187	.0123557	-.038609	.1539838	.0674909
Stddev	6.739	.0198244	.000858	.0036776	.000610	.0248917	.0098091
%RSD	.5389666	3.217510	11.93592	29.76404	1.579408	16.16517	14.53399
#1	1244.523	.6255237	-.006704	.0132667	-.038824	.1575854	.0575007
#2	1257.726	.6295320	-.006680	.0154922	-.039082	.1768785	.0771084
#3	1248.782	.5933669	-.008177	.0083083	-.037921	.1274874	.0678637

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: LR1 Acquired: 1/17/2025 17:37:48 Type: Unk
Method: NON EPA-6010-200.7(v2617) 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	-.241873	-.288417	-1.04314
Stddev	.003428	.002591	.01178
%RSD	1.417115	.8983048	1.128844
#1	-.245322	-.286752	-1.04672
#2	-.241830	-.291402	-1.05271
#3	-.238467	-.287096	-1.02999

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2039.130	39841.55	9028.133	1393.446	2604.335
Stddev	3.733	151.06	50.020	2.740	10.010
%RSD	.1830565	.3791433	.5540479	.1966004	.3843650
#1	2039.488	39901.56	9084.375	1394.113	2612.696
#2	2035.232	39669.71	9011.400	1390.434	2593.243
#3	2042.672	39953.39	8988.625	1395.790	2607.067

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: LR2 Acquired: 1/17/2025 17:42:45 Type: Unk
Method: NON EPA-6010-200.7(v2617) 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	.0071417	-.013568	F 34.81479	.0072164	-.003868	.0448544
Stddev	.0023653	.002084	.06735	.0048593	.003332	.0085854
%RSD	33.11892	15.36151	.1934448	67.33646	86.12073	19.14068
#1	.0082972	-.011169	34.80225	.0020317	-.007354	.0498260
#2	.0044208	-.014601	34.75460	.0116667	-.000716	.0497964
#3	.0087072	-.014934	34.88753	.0079508	-.003535	.0349408

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	100.7833	-.002872	-.005665	.1856256	.0126713	-.020451
Stddev	.6112	.000047	.000024	.0172712	.0001131	.000222
%RSD	.6064390	1.624009	.4316283	9.304314	.8922773	1.085086
#1	100.5633	-.002869	-.005637	.1989043	.0125512	-.020386
#2	100.3125	-.002919	-.005679	.1918724	.0126873	-.020268
#3	101.4740	-.002826	-.005680	.1661002	.0127756	-.020698

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	266.3015	-.003020	44.64484	-.108792	48.63126	.0038197
Stddev	1.4931	.004089	.31255	.004677	.07313	.0003135
%RSD	.5606907	135.4171	.7000886	4.299383	.1503681	8.208246
#1	267.4128	.000638	45.00410	-.108975	48.63661	.0036955
#2	264.6043	-.007434	44.49495	-.113376	48.55560	.0035872
#3	266.8874	-.002263	44.43546	-.104026	48.70156	.0041763

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4008555	-.013839	33.48652	.4056273	-.003298	-.008246
Stddev	.0143200	.001122	.24699	.0134630	.000345	.000116
%RSD	3.572354	8.110579	.7375750	3.319051	10.45663	1.405871
#1	.4135793	-.014990	33.26540	.4181845	-.003152	-.008158
#2	.4036390	-.013780	33.75307	.4072851	-.003692	-.008378
#3	.3853480	-.012748	33.44110	.3914121	-.003051	-.008204

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: LR2 Acquired: 1/17/2025 17:42:45 Type: Unk
Method: NON EPA-6010-200.7(v2617) 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	-.004104	-.037222	.0014913	2.121722	-.042669	-.000041
Stddev	.000911	.000803	.0081853	.007043	.003183	.000582
%RSD	22.20548	2.157577	548.8829	.3319507	7.460505	1405.092
#1	-.003070	-.037319	-.002723	2.123126	-.045607	.000243
#2	-.004789	-.036375	-.003728	2.127958	-.039287	-.000711
#3	-.004454	-.037972	.010925	2.114083	-.043114	.000344

Elem	Sr4077
Units	ppm
Avg	.0014036
Stddev	.0000478
%RSD	3.406273
#1	.0014172
#2	.0013505
#3	.0014432

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2646.961	56045.84	10683.72	1924.310	4302.798
Stddev	4.546	51.73	102.75	12.757	7.408
%RSD	.1717358	.0923014	.9617061	.6629186	.1721609
#1	2651.072	56105.56	10570.78	1939.023	4302.121
#2	2647.732	56014.83	10708.72	1917.577	4310.521
#3	2642.079	56017.12	10771.66	1916.331	4295.751

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV08 Acquired: 1/17/2025 17:52:13 Type: Unk
Method: NON EPA-6010-200.7(v2618) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.906484	4.790032	4.817519	4.953368	4.988803	9.658923	9.417559
Stddev	.023862	.067153	.019701	.029057	.022034	.015736	.083779
%RSD	.4863447	1.401928	.4089494	.5866141	.4416627	.1629194	.8896043
#1	4.932251	4.829374	4.840147	4.980055	5.011370	9.668109	9.450519
#2	4.902055	4.828230	4.808235	4.957636	4.987695	9.667908	9.322313
#3	4.885147	4.712494	4.804175	4.922413	4.967344	9.640753	9.479846

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2323514	2.413990	23.42272	.9875508	2.422312	1.238224	4.959493
Stddev	.0007638	.008939	.08116	.0013048	.008303	.006033	.008759
%RSD	.3287432	.3703027	.3465121	.1321281	.3427551	.4871904	.1766037
#1	.2323425	2.423915	23.46666	.9864058	2.431615	1.245141	4.959891
#2	.2315920	2.411480	23.32906	.9889714	2.419665	1.235477	4.950542
#3	.2331196	2.406573	23.47243	.9872751	2.415655	1.234054	4.968046

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.319697	27.30963	2.423452	1.231331	24.53075	2.364141	2.485047
Stddev	.012444	.13883	.009347	.001280	.09828	.009664	.007456
%RSD	.5364650	.5083507	.3856824	.1039594	.4006343	.4087889	.3000529
#1	2.322681	27.45243	2.434118	1.230459	24.43813	2.373432	2.484395
#2	2.306032	27.17515	2.419547	1.232801	24.52029	2.354142	2.477939
#3	2.330377	27.30131	2.416691	1.230734	24.63384	2.364849	2.492809

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.12174	4.634267	4.948139	4.796429	4.730772	5.291263	4.959599
Stddev	.03955	.013941	.022320	.019935	.015417	.015771	.005023
%RSD	.1574452	.3008236	.4510733	.4156154	.3258948	.2980501	.1012698
#1	25.09673	4.632182	4.971753	4.816507	4.735673	5.273054	4.962938
#2	25.10116	4.621485	4.945275	4.796138	4.713500	5.300528	4.962036
#3	25.16734	4.649132	4.927390	4.776641	4.743143	5.300208	4.953823

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCV08 Acquired: 1/17/2025 17:52:13 Type: Unk
Method: NON EPA-6010-200.7(v2618) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.843573	4.704144	4.791264
Stddev	.022348	.011654	.064458
%RSD	.4614049	.2477303	1.345319
#1	4.869377	4.699482	4.806865
#2	4.830407	4.695543	4.720438
#3	4.830935	4.717407	4.846490

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2812.898	54299.16	10313.37	1894.947	4047.375
Stddev	12.839	43.46	31.05	8.163	17.480
%RSD	.4564480	.0800354	.3011124	.4307596	.4318852
#1	2801.249	54348.51	10309.76	1887.909	4033.416
#2	2810.781	54266.61	10346.06	1903.895	4041.728
#3	2826.665	54282.35	10284.27	1893.036	4066.980

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB08 Acquired: 1/17/2025 17:56:24 Type: Unk
Method: NON EPA-6010-200.7(v2618) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001618	-.001226	.0011827	.0017489	.0006789	.0029750	-.008591
Stddev	.000998	.001867	.0000678	.0012934	.0007616	.0027271	.000278
%RSD	61.69371	152.2189	5.736047	73.95399	112.1715	91.66727	3.240529
#1	-.001103	-.003344	.0011769	.0004724	.0002859	.0046674	-.008912
#2	-.000982	.000181	.0011179	.0030585	.0015567	-.000171	-.008447
#3	-.002768	-.000516	.0012532	.0017159	.0001942	.004428	-.008415

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000085	-.000058	.0043022	-.000053	-.000080	.0001833	.0014976
Stddev	.000059	.000107	.0021484	.000146	.000089	.0000182	.0067366
%RSD	68.72195	184.3873	49.93667	277.0509	111.2311	9.905107	449.8360
#1	-.000030	-.000165	.0063744	.000038	-.000001	.0001641	-.006181
#2	-.000080	-.000059	.0044473	.000025	-.000063	.0002002	.004258
#3	-.000147	.000050	.0020850	-.000221	-.000176	.0001856	.006416

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001143	-.005592	.0002833	.0011283	.2400740	-.001809	.0005034
Stddev	.0002877	.009524	.0001243	.0003206	.0124613	.001671	.0001410
%RSD	251.6400	170.3072	43.87260	28.41413	5.190599	92.41575	28.00412
#1	.0002591	-.001926	.0001959	.0007598	.2375048	.000118	.0003887
#2	.0003010	-.016405	.0004256	.0013431	.2290975	-.002864	.0004606
#3	-.000217	.001554	.0002284	.0012821	.2536196	-.002680	.0006607

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2116331	.0011640	.0000602	-.001187	.0007249	.0097791	-.005410
Stddev	.0425317	.0005767	.0002834	.000243	.0011485	.0100232	.001150
%RSD	20.09691	49.54097	471.0359	20.47989	158.4330	102.4959	21.26271
#1	.1921851	.0017714	.0002930	-.001253	-.000585	.0170491	-.005487
#2	.2604119	.0006239	.0001429	-.001390	.001199	.0139431	-.004222
#3	.1823023	.0010968	-.000255	-.000918	.001560	-.001655	-.006519

Reviewed By:jaswal
On:1/20/2025 10:09:42 PM
Inst Id :P4
LB :LB134334

Sample Name: CCB08 Acquired: 1/17/2025 17:56:24 Type: Unk
Method: NON EPA-6010-200.7(v2618) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0058488	-.000118	.0000037
Stddev	.0027647	.000225	.0000230
%RSD	47.27001	190.7401	617.8837
#1	.0084476	-.000376	.0000054
#2	.0061552	-.000009	-.000020
#3	.0029437	.000032	.000026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2911.660	57260.23	10610.86	2031.947	4363.936
Stddev	5.160	209.68	48.30	7.111	2.647
%RSD	.1772257	.3661877	.4551724	.3499510	.0606566
#1	2905.797	57218.72	10583.12	2029.592	4361.005
#2	2913.669	57487.56	10582.84	2039.936	4364.652
#3	2915.514	57074.41	10666.63	2026.312	4366.151

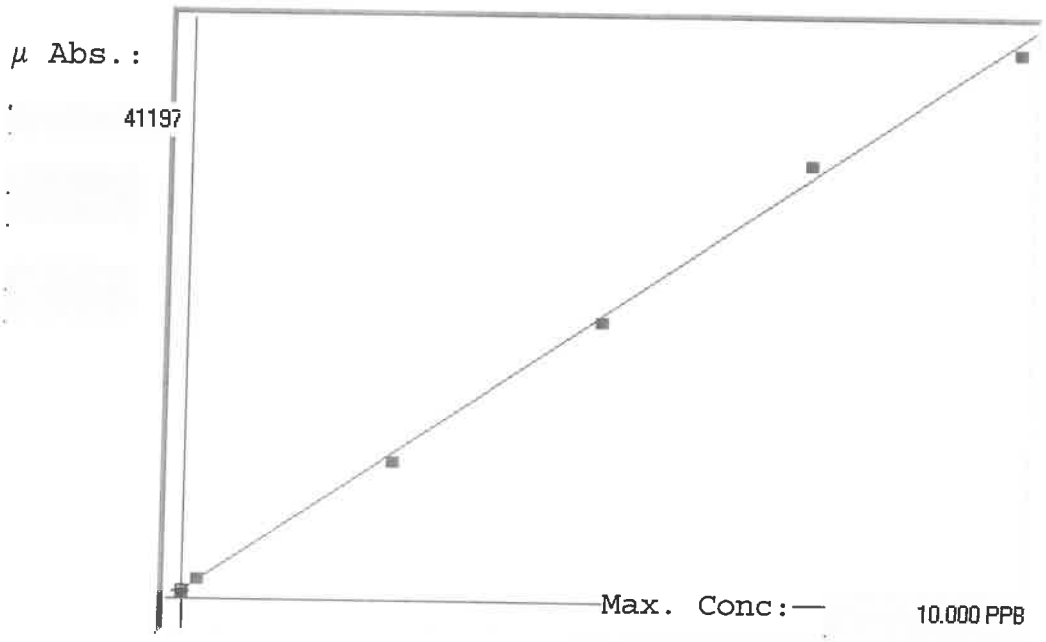
Reviewed By:jaswal
On:1/17/2025 7:42:33 PM
Inst Id :CV1
LB :LB134281

LB134281

7470A

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.4141e-004

C= -1.3931e-001

Rho= 0.9990659

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%(D)
0.0	0.000	0.014	0.014	634	0.000	634	0				1
0.2	0.200	0.240	0.040	1571	0.0 %	1571					20
2.5	2.500	2.379	-0.121	10432	0.0 %	10432					-5
5.0	5.000	4.951	-0.049	21086	0.0 %	21086					-1
7.5	7.500	7.810	0.310	32929	0.0 %	32929					4
10.0	10.000	9.806	-0.194	41197	0.0 %	41197					-2

Reviewed By:jaswal
On:1/17/2025 7:42:33 PM
Inst Id :CV1
LB :LB134281

LB134281 INTRUMENT ID : CV1

Method:7470A **Operator : Mohan** **Date Of Analysis : 14 january 2025 13:31:00**

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0		634	-		0	7470A	PPB	1/14/2025 13:38	Std
0.2		1571	-		0.2	7470A	PPB	1/14/2025 13:40	Std
2.5		10432	-		2.5	7470A	PPB	1/14/2025 13:42	Std
5		21086	-		5	7470A	PPB	1/14/2025 13:45	Std
7.5		32929	-		7.5	7470A	PPB	1/14/2025 13:52	Std
10		41197	-		10	7470A	PPB	1/14/2025 13:57	Std
ICV55	ICV55	15842	3.6851	-		7470A	PPB	1/14/2025 14:00	SMPL
ICB55	ICB55	412	-0.0399	-		7470A	PPB	1/14/2025 14:02	SMPL
CCV32	CCV32	21245	4.9895	-		7470A	PPB	1/14/2025 14:07	SMPL
CCB32	CCB32	494	-0.0201	-		7470A	PPB	1/14/2025 14:09	SMPL
CRA	CRA	1448	0.2103	-		7470A	PPB	1/14/2025 14:14	SMPL
HighStd	HighStd	40086	9.5379	-		7470A	PPB	1/14/2025 14:16	SMPL
ChkStd	ChkStd	29320	6.9388	-		7470A	PPB	1/14/2025 14:19	SMPL
PB166050BL	PBW	658	0.0195	-		7470A	PPB	1/14/2025 14:21	SMPL
PB166050BS	LCSW	16009	3.7254	-		7470A	PPB	1/14/2025 14:23	SMPL
Q1036-02	NP-WS-002	912	0.0809	-		7470A	PPB	1/14/2025 14:26	SMPL
Q1036-02DUP	NP-WS-002DUP	848	0.0654	-		7470A	PPB	1/14/2025 14:28	SMPL
Q1036-02MS	NP-WS-002MS	16513	3.8471	-		7470A	PPB	1/14/2025 14:30	SMPL
Q1036-02MSD	NP-WS-002MSD	15749	3.6627	-		7470A	PPB	1/14/2025 14:32	SMPL
PB166051BL	PBW	857	0.0676	-		7470A	PPB	1/14/2025 14:35	SMPL
CCV33	CCV33	20915	4.9098	-		7470A	PPB	1/14/2025 14:37	SMPL
CCB33	CCB33	371	-0.0497	-		7470A	PPB	1/14/2025 14:39	SMPL
PB166051BS	LCSW	15676	3.645	-		7470A	PPB	1/14/2025 14:42	SMPL
Q1065-01	MOO-25-0002	-234	-0.1958	-		7470A	PPB	1/14/2025 14:44	SMPL
Q1069-02	RW7B-CARBON-20250109	965	0.0936	-		7470A	PPB	1/14/2025 14:46	SMPL
Q1074-02	HACKENSACK-DGA	523	-0.0131	-		7470A	PPB	1/14/2025 14:48	SMPL
Q1076-02	ARS20-0006	745	0.0405	-		7470A	PPB	1/14/2025 14:58	SMPL
Q1076-02DUP	ARS20-0006DUP	778	0.0485	-		7470A	PPB	1/14/2025 15:00	SMPL
Q1076-02MS	ARS20-0006MS	17256	4.0265	-		7470A	PPB	1/14/2025 15:02	SMPL
Q1076-02MSD	ARS20-0006MSD	17222	4.0183	-		7470A	PPB	1/14/2025 15:05	SMPL
PB166025TB	PB166025TB	737	0.0386	-		7470A	PPB	1/14/2025 15:07	SMPL
PB166026TB	PB166026TB	931	0.0854	-		7470A	PPB	1/14/2025 15:09	SMPL
CCV34	CCV34	20017	4.693	-		7470A	PPB	1/14/2025 15:12	SMPL
CCB34	CCB34	441	-0.0328	-		7470A	PPB	1/14/2025 15:14	SMPL
Q1036-02LX5		322	-0.0616	-		7470A	PPB	1/14/2025 15:16	SMPL
Q1036-02A		14699	3.4092	-		7470A	PPB	1/14/2025 15:18	SMPL
Q1076-02LX5		69	-0.1227	-		7470A	PPB	1/14/2025 15:21	SMPL
Q1076-02A		16853	3.9292	-		7470A	PPB	1/14/2025 15:23	SMPL
CCV35	CCV35	19447	4.5554	-		7470A	PPB	1/14/2025 15:25	SMPL
CCB35	CCB35	340	-0.0572	-		7470A	PPB	1/14/2025 15:28	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166049

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: 01/14/2025 **Time :** 11:30 **Temp :** 96 °C

End Digest Date: 01/14/2025 **Time :** 14:40 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. # 1

Dig Technician Signature: SI25

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
01/14/25 15:40	SI25 met digestion	SJ1 metals 100
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166049

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB166025TB	PB166025TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	1
PB166026TB	PB166026TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	2
PB166049BL	PBW049	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	3
PB166049BS	LCS049	<2	5	25	Colorless	Colorless	Clear	Clear	M6000,M6009	4
Q1036-02MS	NP-WS-002MS	<2	5	25	Colorless	Colorless	Clear	Clear	M6000,M6009	7
Q1036-02MSD	NP-WS-002MSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6000,M6009	8
Q1036-02DUP	NP-WS-002DUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	6
Q1036-02	NP-WS-002	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	5
Q1065-01	MOO-25-0002	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	9
Q1069-02	RW7B-CARBON-20250109	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	10
Q1074-02	HACKENSACK-DGA	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	11
Q1076-02	ARS20-0006	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	12

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166026

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Pr Pe
PB166026TB	LEB026	05	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-
Q1065-01	MOO-25-0002	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-
Q1069-02	RW7B-CARBON-20250109	02	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q1074-02	HACKENSACK-DGA	03	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q1076-02	ARS20-0006	04	100.03	2000	N/A	N/A	N/A	5.8	1.5	T-1

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166025

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep P
PB166025TB	LEB025	N/A	N/A	N/A	N/A	N/A	N/A	4.94	1.0	N/
Q1036-02	NP-WS-002	N/A	N/A	N/A	N/A	N/A	N/A	7.0	1.5	N/A

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166051

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 : M6069

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 01/14/2025 **Time :** 10:15 **Temp :** 94 °C

End Digest Date: 01/14/2025 **Time :** 12:15 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: M

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP84030
CCV	30mL	MP84032
CRA	30mL	MP84034
Blank Spike	0.48mL	MP84022
Matrix Spike	0.48mL	MP84022

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	MP84023
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP84025
2.5 ppb	S2.5	30mL	MP84026
5.0 ppb	S5.0	30mL	MP84027
7.5 ppb	S7.5	30mL	MP84028
10.0 ppb	S10.0	30mL	MP84029
ICV	ICV	30mL	MP84030
ICB	ICB	30mL	MP84031
CCV	CCV	30mL	MP84032
CCB	CCB	30mL	MP84033
CRI	CRI	30mL	MP84034
CHK STD	CHK STD	30mL	MP84035

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
1/14/25 @ 12:45	MB - Dig. Lab	Metal Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166051

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB166026TB	PB166026TB	3	30	<2	B	3-8
PB166051BL	PBW051	30	30	<2	N/A	9
PB166051BS	LCS051	30	30	<2	MP84022	10
Q1065-01	MOO-25-0002	3	30	<2	N/A	11
Q1069-02	RW7B-CARBON-20250109	3	30	<2	N/A	12
Q1074-02	HACKENSACK-DGA	3	30	<2	N/A	13
Q1076-02	ARS20-0006	3	30	<2	N/A	14
Q1076-02DUP	ARS20-0006DUP	3	30	<2	N/A	15
Q1076-02MS	ARS20-0006MS	3	30	<2	MP84022	16
Q1076-02MSD	ARS20-0006MSD	3	30	<2	MP84022	17

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166026

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1

TCLP Filter ID : 115525

Start Prep Date : 01/13/2025 **Time :** 15:30

End Prep Date : 01/14/2025 **Time :** 08:25

Combination Ratio : 20

ZHE Cleaning Batch : N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : IR

Standared Name	MLS USED	STD REF. # FROM LOG
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

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP110801
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	N/A	W1931,W1934,W2350,W2755
pH Strips	N/A	W1937,W1938,W1939,W1940,W1941,W1942
1 Liter Amber	N/A	90424-08
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP83498

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. Tumbler T-1 checked,30 rpm. q1076-02 is used for MS-MSD. Particle size reduction is not required.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01-14-25 10:00	JP TCLP Room	Shipping.
	Preparation Group	Analysis Group

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 # LB134281

Review By	Mohan	Review On	1/16/2025 8:18:40 AM
Supervise By	jaswal	Supervise On	1/17/2025 7:42:33 PM

STD. NAME	STD REF.#
ICAL Standard	MP84023,MP84025,MP84026,MP84027,MP84028,MP84029
ICV Standard	MP84030
CCV Standard	MP84032
ICSA Standard	
CRI Standard	MP84034
LCS Standard	
Chk Standard	MP84031,MP84033,MP84035,MP84037

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/14/25 13:38		Mohan	OK
2	S0.2	S0.2	CAL2	01/14/25 13:40		Mohan	OK
3	S2.5	S2.5	CAL3	01/14/25 13:42		Mohan	OK
4	S5	S5	CAL4	01/14/25 13:45		Mohan	OK
5	S7.5	S7.5	CAL5	01/14/25 13:52		Mohan	OK
6	S10	S10	CAL6	01/14/25 13:57		Mohan	OK
7	ICV55	ICV55	ICV	01/14/25 14:00		Mohan	OK
8	ICB55	ICB55	ICB	01/14/25 14:02		Mohan	OK
9	CCV32	CCV32	CCV	01/14/25 14:07		Mohan	OK
10	CCB32	CCB32	CCB	01/14/25 14:09		Mohan	OK
11	CRA	CRA	CRDL	01/14/25 14:14		Mohan	OK
12	HighStd	HighStd	HIGH STD	01/14/25 14:16		Mohan	OK
13	ChkStd	ChkStd	SAM	01/14/25 14:19		Mohan	OK
14	PB166050BL	PB166050BL	MB	01/14/25 14:21		Mohan	OK
15	PB166050BS	PB166050BS	LCS	01/14/25 14:23		Mohan	OK
16	Q1036-02	NP-WS-002	SAM	01/14/25 14:26		Mohan	OK
17	Q1036-02DUP	NP-WS-002DUP	DUP	01/14/25 14:28		Mohan	OK
18	Q1036-02MS	NP-WS-002MS	MS	01/14/25 14:30		Mohan	OK

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Fax : 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134281

Review By	Mohan	Review On	1/16/2025 8:18:40 AM
Supervise By	jaswal	Supervise On	1/17/2025 7:42:33 PM

STD. NAME	STD REF.#
ICAL Standard	MP84023,MP84025,MP84026,MP84027,MP84028,MP84029
ICV Standard	MP84030
CCV Standard	MP84032
ICSA Standard	
CRI Standard	MP84034
LCS Standard	
Chk Standard	MP84031,MP84033,MP84035,MP84037

19	Q1036-02MSD	NP-WS-002MSD	MSD	01/14/25 14:32		Mohan	OK
20	PB166051BL	PB166051BL	MB	01/14/25 14:35		Mohan	OK
21	CCV33	CCV33	CCV	01/14/25 14:37		Mohan	OK
22	CCB33	CCB33	CCB	01/14/25 14:39		Mohan	OK
23	PB166051BS	PB166051BS	LCS	01/14/25 14:42		Mohan	OK
24	Q1065-01	MOO-25-0002	SAM	01/14/25 14:44		Mohan	OK
25	Q1069-02	RW7B-CARBON-2025	SAM	01/14/25 14:46		Mohan	OK
26	Q1074-02	HACKENSACK-DGA	SAM	01/14/25 14:48		Mohan	OK
27	Q1076-02	ARS20-0006	SAM	01/14/25 14:58		Mohan	OK
28	Q1076-02DUP	ARS20-0006DUP	DUP	01/14/25 15:00		Mohan	OK
29	Q1076-02MS	ARS20-0006MS	MS	01/14/25 15:02		Mohan	OK
30	Q1076-02MSD	ARS20-0006MSD	MSD	01/14/25 15:05		Mohan	OK
31	PB166025TB	PB166025TB	MB	01/14/25 15:07		Mohan	OK
32	PB166026TB	PB166026TB	MB	01/14/25 15:09		Mohan	OK
33	CCV34	CCV34	CCV	01/14/25 15:12		Mohan	OK
34	CCB34	CCB34	CCB	01/14/25 15:14		Mohan	OK
35	Q1036-02L	NP-WS-002L	SD	01/14/25 15:16		Mohan	OK
36	Q1036-02A	NP-WS-002A	PS	01/14/25 15:18		Mohan	OK
37	Q1076-02L	ARS20-0006L	SD	01/14/25 15:21		Mohan	OK
38	Q1076-02A	ARS20-0006A	PS	01/14/25 15:23		Mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134281

Review By	Mohan	Review On	1/16/2025 8:18:40 AM
Supervise By	jaswal	Supervise On	1/17/2025 7:42:33 PM

STD. NAME	STD REF.#
ICAL Standard	MP84023,MP84025,MP84026,MP84027,MP84028,MP84029
ICV Standard	MP84030
CCV Standard	MP84032
ICSA Standard	
CRI Standard	MP84034
LCS Standard	
Chk Standard	MP84031,MP84033,MP84035,MP84037

39	CCV35	CCV35	CCV	01/14/25 15:25		Mohan	OK
40	CCB35	CCB35	CCB	01/14/25 15:28		Mohan	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134334

Review By	kareem	Review On	1/20/2025 4:25:29 PM
Supervise By	jaswal	Supervise On	1/20/2025 10:09:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/17/25 10:51		Kareem	OK
2	S1	S1	CAL2	01/17/25 10:55		Kareem	OK
3	S2	S2	CAL3	01/17/25 10:59		Kareem	OK
4	S3	S3	CAL4	01/17/25 11:04		Kareem	OK
5	S4	S4	CAL5	01/17/25 11:08		Kareem	OK
6	S5	S5	CAL6	01/17/25 11:12		Kareem	OK
7	ICV01	ICV01	ICV	01/17/25 11:21	ICV01 Fail for Al,Ba,Be,Ca,MgMn,V	Kareem	OK
8	LLICV01	LLICV01	LLICV	01/17/25 11:26		Kareem	OK
9	ICB01	ICB01	ICB	01/17/25 11:30		Kareem	OK
10	CRI01	CRI01	CRDL	01/17/25 11:35		Kareem	OK
11	ICSA01	ICSA01	ICSA	01/17/25 11:39		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	01/17/25 11:43		Kareem	OK
13	ICSADL	ICSADL	ICSA	01/17/25 11:47		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	01/17/25 11:52		Kareem	OK
15	CCV01	CCV01	CCV	01/17/25 11:56		Kareem	OK
16	CCB01	CCB01	CCB	01/17/25 12:00		Kareem	OK
17	PB166054BL	PB166054BL	MB	01/17/25 12:05		Kareem	OK

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Fax : 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134334

Review By	kareem	Review On	1/20/2025 4:25:29 PM
Supervise By	jaswal	Supervise On	1/20/2025 10:09:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

18	PB166054BS	PB166054BS	LCS	01/17/25 12:09	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
19	PB166037BL	PB166037BL	MB	01/17/25 12:13		Kareem	OK
20	PB166037BS	PB166037BS	LCS	01/17/25 12:17	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
21	PB166047BL	PB166047BL	MB	01/17/25 12:21		Kareem	OK
22	PB166047BS	PB166047BS	LCS	01/17/25 12:26	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
23	PB166025TB	PB166025TB	MB	01/17/25 12:30		Kareem	OK
24	PB166049BL	PB166049BL	MB	01/17/25 12:34		Kareem	OK
25	PB166049BS	PB166049BS	LCS	01/17/25 12:38	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
26	PB166026TB	PB166026TB	MB	01/17/25 12:42		Kareem	OK
27	CCV02	CCV02	CCV	01/17/25 12:47		Kareem	OK
28	CCB02	CCB02	CCB	01/17/25 12:51		Kareem	OK
29	PB166069BL	PB166069BL	MB	01/17/25 12:55		Kareem	OK
30	PB166069BS	PB166069BS	LCS	01/17/25 13:00	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
31	PB166084BL	PB166084BL	MB	01/17/25 13:04		Kareem	OK
32	PB166084BS	PB166084BS	LCS	01/17/25 13:08	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK

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Fax : 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134334

Review By	kareem	Review On	1/20/2025 4:25:29 PM
Supervise By	jaswal	Supervise On	1/20/2025 10:09:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

33	Q1068-01	TR-06-1-10-2025	SAM	01/17/25 13:12		Kareem	OK
34	Q1068-01DUP	TR-06-1-10-2025DUP	DUP	01/17/25 13:16		Kareem	OK
35	Q1068-01L	TR-06-1-10-2025L	SD	01/17/25 13:20		Kareem	OK
36	Q1068-01MS	TR-06-1-10-2025MS	MS	01/17/25 13:25	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
37	Q1068-01MSD	TR-06-1-10-2025MSD	MSD	01/17/25 13:28	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
38	Q1068-01A	TR-06-1-10-2025A	PS	01/17/25 13:32	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
39	CCV03	CCV03	CCV	01/17/25 13:36		Kareem	OK
40	CCB03	CCB03	CCB	01/17/25 13:41		Kareem	OK
41	Q1036-02	NP-WS-002	SAM	01/17/25 13:45		Kareem	OK
42	Q1036-02DUP	NP-WS-002DUP	DUP	01/17/25 13:49		Kareem	OK
43	Q1036-02L	NP-WS-002L	SD	01/17/25 13:53		Kareem	OK
44	Q1036-02MS	NP-WS-002MS	MS	01/17/25 13:58	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
45	Q1036-02MSD	NP-WS-002MSD	MSD	01/17/25 14:02	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
46	Q1036-02A	NP-WS-002A	PS	01/17/25 14:06	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
47	Q1069-02	RW7B-CARBON-2025	SAM	01/17/25 14:10		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134334

Review By	kareem	Review On	1/20/2025 4:25:29 PM
Supervise By	jaswal	Supervise On	1/20/2025 10:09:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

48	Q1040-01	RW5-SP100-2025010	SAM	01/17/25 14:14		Kareem	OK
49	Q1040-03	RW5-SP303-2025010	SAM	01/17/25 14:18		Kareem	OK
50	Q1048-01	WATER TREATMENT	SAM	01/17/25 14:23	Na high	Kareem	Dilution
51	CCV04	CCV04	CCV	01/17/25 14:27		Kareem	OK
52	CCB04	CCB04	CCB	01/17/25 14:31		Kareem	OK
53	Q1048-01DUP	WATER TREATMENT	DUP	01/17/25 14:36	Na high	Kareem	Dilution
54	Q1048-01L	WATER TREATMENT	SD	01/17/25 14:40		Kareem	OK
55	Q1048-01MSD	WATER TREATMENT	MSD	01/17/25 14:58	Na high	Kareem	Dilution
56	Q1048-01MS	WATER TREATMENT	MS	01/17/25 15:04	Na high	Kareem	Dilution
57	Q1048-01A	WATER TREATMENT	PS	01/17/25 15:08	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
58	Q1081-04	RW7-SP303-2025011	SAM	01/17/25 15:12		Kareem	OK
59	Q1081-04DUP	RW7-SP303-2025011	DUP	01/17/25 15:17		Kareem	OK
60	Q1081-04L	RW7-SP303-2025011	SD	01/17/25 15:21		Kareem	OK
61	Q1048-01ADL	WATER TREATMENT	PS	01/17/25 15:25	NOT REQUIRED	Kareem	Not Ok
62	Q1048-01MSDL	WATER TREATMENT	MS	01/17/25 15:30	2x For Na	Kareem	Confirms
63	CCV05	CCV05	CCV	01/17/25 15:34		Kareem	OK
64	CCB05	CCB05	CCB	01/17/25 15:38		Kareem	OK
65	Q1048-01MSDDL	WATER TREATMENT	MSD	01/17/25 15:42	2x For Na	Kareem	Confirms
66	Q1048-01DL	WATER TREATMENT	SAM	01/17/25 15:47	2x For Na	Kareem	Confirms

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134334

Review By	kareem	Review On	1/20/2025 4:25:29 PM
Supervise By	jaswal	Supervise On	1/20/2025 10:09:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

67	Q1048-01DUPDL	WATER TREATMENT	DUP	01/17/25 15:51	2x For Na	Kareem	Confirms
68	Q1048-01LDL	WATER TREATMENT	SD	01/17/25 15:55	NOT REQUIRED	Kareem	Not Ok
69	Q1081-04MS	RW7-SP303-2025011	MS	01/17/25 16:00	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
70	Q1081-04MSD	RW7-SP303-2025011	MSD	01/17/25 16:04	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
71	Q1081-04A	RW7-SP303-2025011	PS	01/17/25 16:08	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
72	Q1093-01	RT-3407	SAM	01/17/25 16:12		Kareem	OK
73	CCV06	CCV06	CCV	01/17/25 16:16		Kareem	OK
74	CCB06	CCB06	CCB	01/17/25 16:20		Kareem	OK
75	Q1093-01DUP	RT-3407DUP	DUP	01/17/25 16:24		Kareem	OK
76	Q1093-01L	RT-3407L	SD	01/17/25 16:28		Kareem	OK
77	Q1093-01MS	RT-3407MS	MS	01/17/25 16:32	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
78	Q1093-01MSD	RT-3407MSD	MSD	01/17/25 16:36	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
79	Q1093-01A	RT-3407A	PS	01/17/25 16:40	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
80	Q1094-01	72-11938	SAM	01/17/25 16:44		Kareem	OK
81	Q1098-01	OILY-STONE-COMP	SAM	01/17/25 16:49		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134334

Review By	kareem	Review On	1/20/2025 4:25:29 PM
Supervise By	jaswal	Supervise On	1/20/2025 10:09:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP83935,MP83936,MP83937,MP83938,MP83939,MP83941
ICV Standard	MP83942
CCV Standard	MP83945
ICSA Standard	MP83943,MP83944
CRI Standard	MP83941
LCS Standard	
Chk Standard	MP83948,MP83949

82	Q1099-01	OR-02-01152025	SAM	01/17/25 16:53		Kareem	OK
83	Q1097-01	402	SAM	01/17/25 16:57		Kareem	OK
84	Q1097-01DUP	402DUP	DUP	01/17/25 17:01		Kareem	OK
85	CCV07	CCV07	CCV	01/17/25 17:11		Kareem	OK
86	CCB07	CCB07	CCB	01/17/25 17:16		Kareem	OK
87	Q1097-01L	402L	SD	01/17/25 17:22		Kareem	OK
88	Q1097-01MS	402MS	MS	01/17/25 17:26	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
89	Q1097-01MSD	402MSD	MSD	01/17/25 17:30	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
90	Q1097-01A	402A	PS	01/17/25 17:34	0.1 ML OF M6010 AND M6001 WERE ADDED TO 10ML OF THE SAMPLE	Kareem	OK
91	LR1	LR1	HIGH STD	01/17/25 17:37		Kareem	OK
92	LR2	LR2	HIGH STD	01/17/25 17:42		Kareem	OK
93	CCV08	CCV08	CCV	01/17/25 17:52		Kareem	OK
94	CCB08	CCB08	CCB	01/17/25 17:56		Kareem	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166026

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1

TCLP Filter ID : 115525

Start Prep Date : 01/13/2025 **Time :** 15:30

End Prep Date : 01/14/2025 **Time :** 08:25

Combination Ratio : 20

ZHE Cleaning Batch : N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : IR

Standared Name	MLS USED	STD REF. # FROM LOG
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

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP110801
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	N/A	W1931,W1934,W2350,W2755
pH Strips	N/A	W1937,W1938,W1939,W1940,W1941,W1942
1 Liter Amber	N/A	90424-08
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP83498

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. Tumbler T-1 checked,30 rpm. q1076-02 is used for MS-MSD. Particle size reduction is not required.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01-14-25 10:00	JP TCLP Room	SLOG. & EXT
	Preparation Group	Analysis Group Met Dig

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166026

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB166026TB	LEB026	05	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-1
Q1065-01	MOO-25-0002	01	100.02	2000	N/A	N/A	N/A	3.5	1.0	T-1
Q1069-02	RW7B-CARBON-20250109	02	100.01	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q1074-02	HACKENSACK-DGA	03	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q1076-02	ARS20-0006	04	100.03	2000	N/A	N/A	N/A	5.8	1.5	T-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB166026TB	LEB026	N/A	N/A	N/A	N/A	N/A	N/A
Q1065-01	MOO-25-0002	N/A	N/A	N/A	N/A	100	N/A
Q1069-02	RW7B-CARBON-20250109	N/A	N/A	N/A	N/A	100	N/A
Q1074-02	HACKENSACK-DGA	N/A	N/A	N/A	N/A	100	N/A
Q1076-02	ARS20-0006	N/A	N/A	N/A	N/A	100	N/A

Alliance TECHNICAL GROUP

TCLP Fluid Determination

PB166026

Hot Block ID : WC S-1 /WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB166026TB	LEB026	N/A	N/A	N/A	N/A	#1	4.94
Q1065-01	MOO-25-0002	5.01	96.5	6.2	2.0	#1	4.94
Q1069-02	RW7B-CARBON-20250109	5.02	96.5	5.6	1.5	#1	4.94
Q1074-02	HACKENSACK-DGA	5.01	96.5	9.1	4.0	#1	4.94
Q1076-02	ARS20-0006	5.02	96.5	7.6	3.0	#1	4.94

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Prep Standard - Chemical Standard Summary

Order ID : Q1069

Test : TCLP Mercury,TCLPMetals Group1

Prepbatch ID : PB166049,PB166051,

Sequence ID/Qc Batch ID: LB134281,LB134334,LB134334,LB134334,

Standard ID :
MP83498,MP83500,MP83935,MP83936,MP83937,MP83938,MP83939,MP83940,MP83941,MP83942,MP83943,MP83944,MP83945,MP83948,MP83949,MP84022,MP84023,MP84025,MP84026,MP84027,MP84028,MP84029,MP84030,MP84031,MP84032,MP84033,MP84034,MP84035,MP84037,

Chemical ID :
M5062,M5130,M5192,M5218,M5223,M5288,M5295,M5296,M5390,M5393,M5429,M5466,M5467,M5496,M5497,M5515,M5532,M5658,M5697,M5698,M5747,M5748,M5768,M5798,M5799,M5800,M5801,M5802,M5806,M5814,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M5882,M5959,M5962,M5970,M5978,M5982,M5985,M6000,M6009,M6021,M6023,M6028,M6030,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	01/16/2025	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	01/24/2025	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)	MP83935	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

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)	MP83936	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

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	MP83937	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 50.00000ml of MP83500 + 50.00000ml of MP83936 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP83938	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 25.00000ml of MP83936 + 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	MP83939	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 16.00000ml of MP83936 + 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	MP83940	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 0.00200ml of M5982 + 0.00400ml of M5978 + 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M5818 + 0.05000ml of M5496 + 0.05000ml of M5515 + 0.05000ml of M5658 + 0.05000ml of M6030 + 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 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M5819 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.25000ml of M5467 + 0.25000ml of M5802 + 0.50000ml of M5390 + 0.50000ml of M5814 + 1.00000ml of M5192 + 1.00000ml of M5288 + 1.00000ml of M5497 + 1.00000ml of M5768 + 1.00000ml of M5806 + 2.00000ml of M5816 + 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	MP83941	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 2.00000ml of MP83940 + 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	MP83942	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.02500ml of M5982 + 0.10000ml of M5466 + 0.25000ml of M5218 + 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	MP83943	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

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	MP83944	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

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	MP83945	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 50.00000ml of MP83500 + 50.00000ml of MP83936 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP83948	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 = 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	MP83949	01/07/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/09/2025

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.	MP84022	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

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	MP84023	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

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	MP84025	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84022 = 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	MP84026	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84022 = 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	MP84027	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84022 = 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	MP84028	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84022 = 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	MP84029	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84022 = 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	MP84030	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M5532 + 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)	MP84031	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

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)	MP84032	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84022 = 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)	MP84033	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

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)	MP84034	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84022 = 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)	MP84035	01/14/2025	01/15/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP84022 = 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	MP84037	01/14/2025	01/15/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 01/16/2025

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	01/31/2025	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	01/31/2025	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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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 #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	02/28/2025	01/02/2025 / jaswal	03/30/2023 / mohan	M5532

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

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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.	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

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

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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.	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

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

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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.	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

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

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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	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

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

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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.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	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

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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.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

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 #
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.
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Certified Reference Material CRM

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R 8/15/24

CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

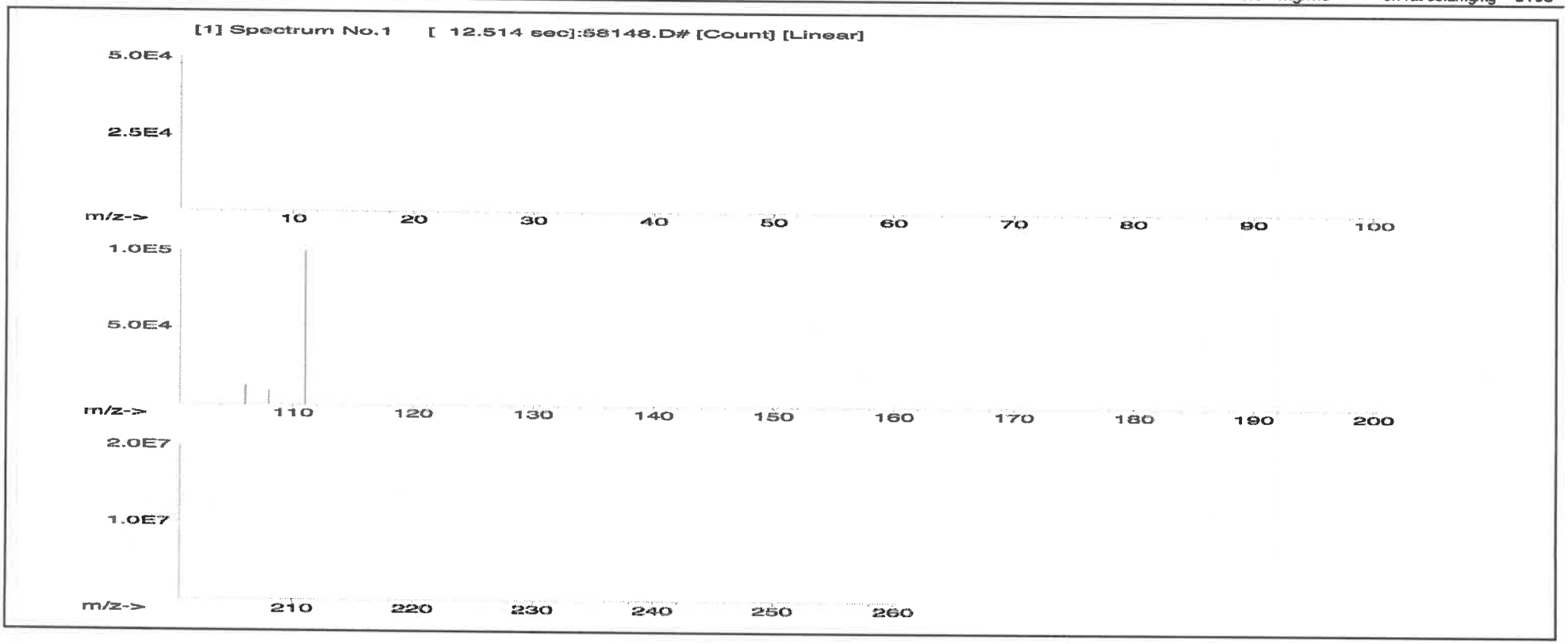
Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.100	Flask Uncertainty	

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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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-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

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$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

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$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

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k = coverage factor = 2

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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

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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"

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

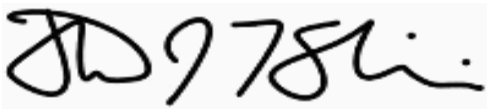
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

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k = coverage factor = 2

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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

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u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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- 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

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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 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

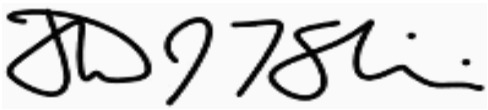
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES

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Certificate of Analysis

RD:05/14/2024

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Christiansburg, VA 24073 USA
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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

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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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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.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/4}$$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5192 R: 06/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)

Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Volume shown below was diluted to (mL): 3000.41 0.058 Flask Uncertainty

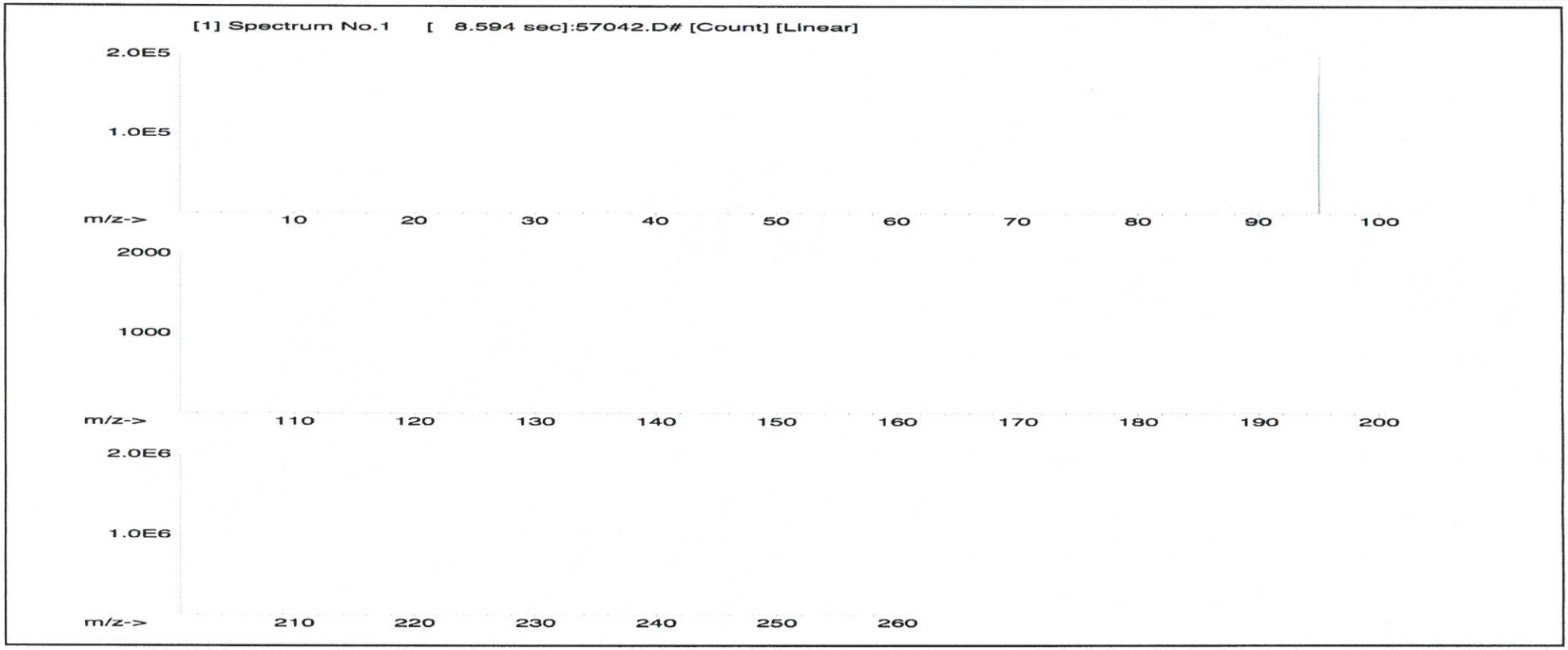
Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide	0.5%	15.0 (mL)

Ammonium hydroxide

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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).

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

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.

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M5288 R: 07/21/2022

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CERTIFIED WEIGHT REPORT:

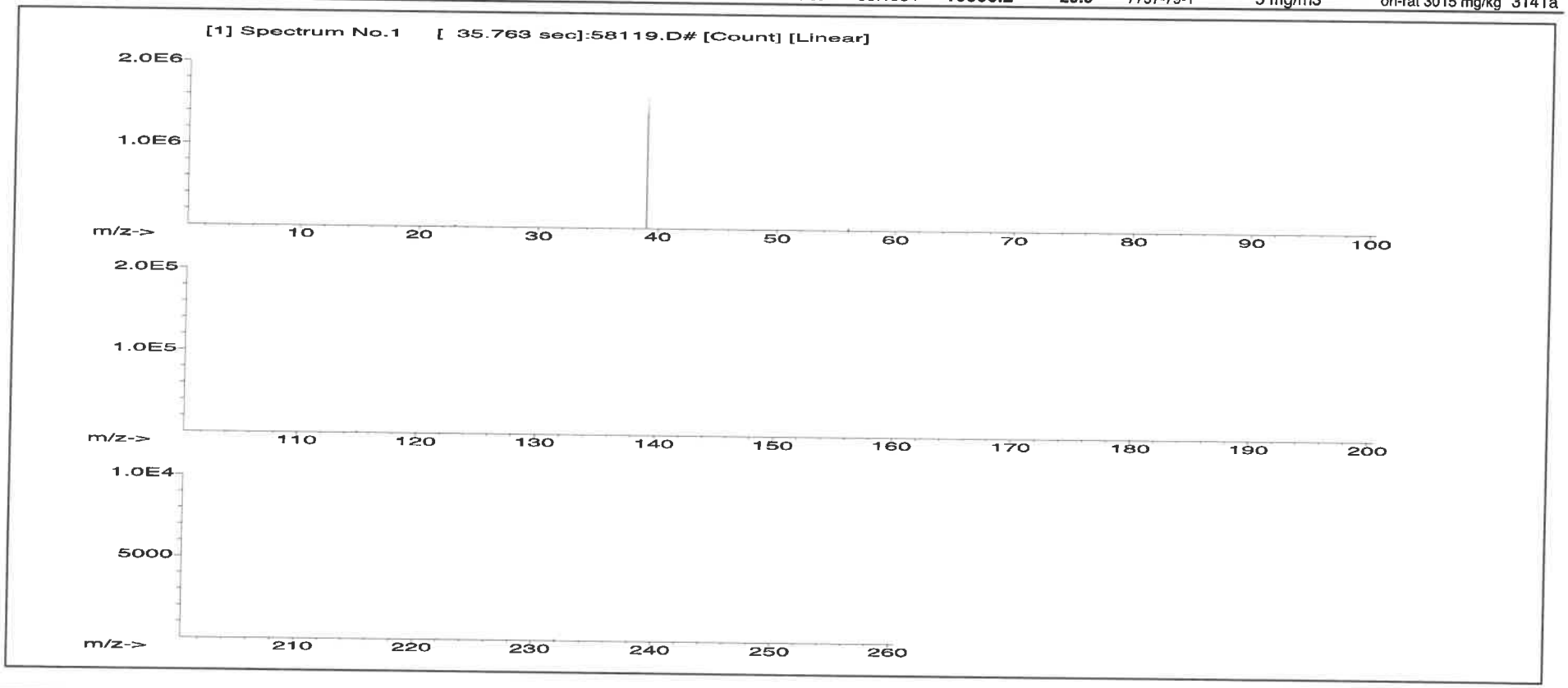
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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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	<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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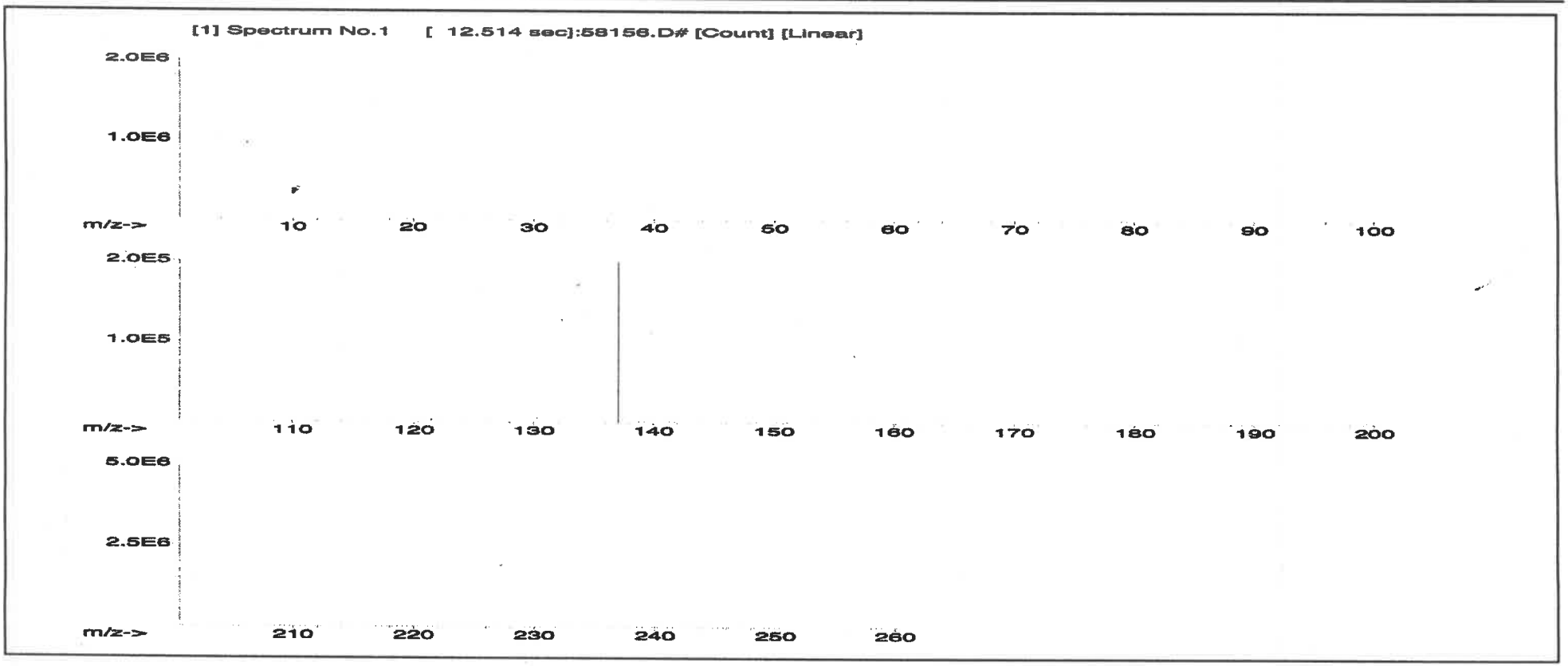
CERTIFIED WEIGHT REPORT:

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



21869-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.
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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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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

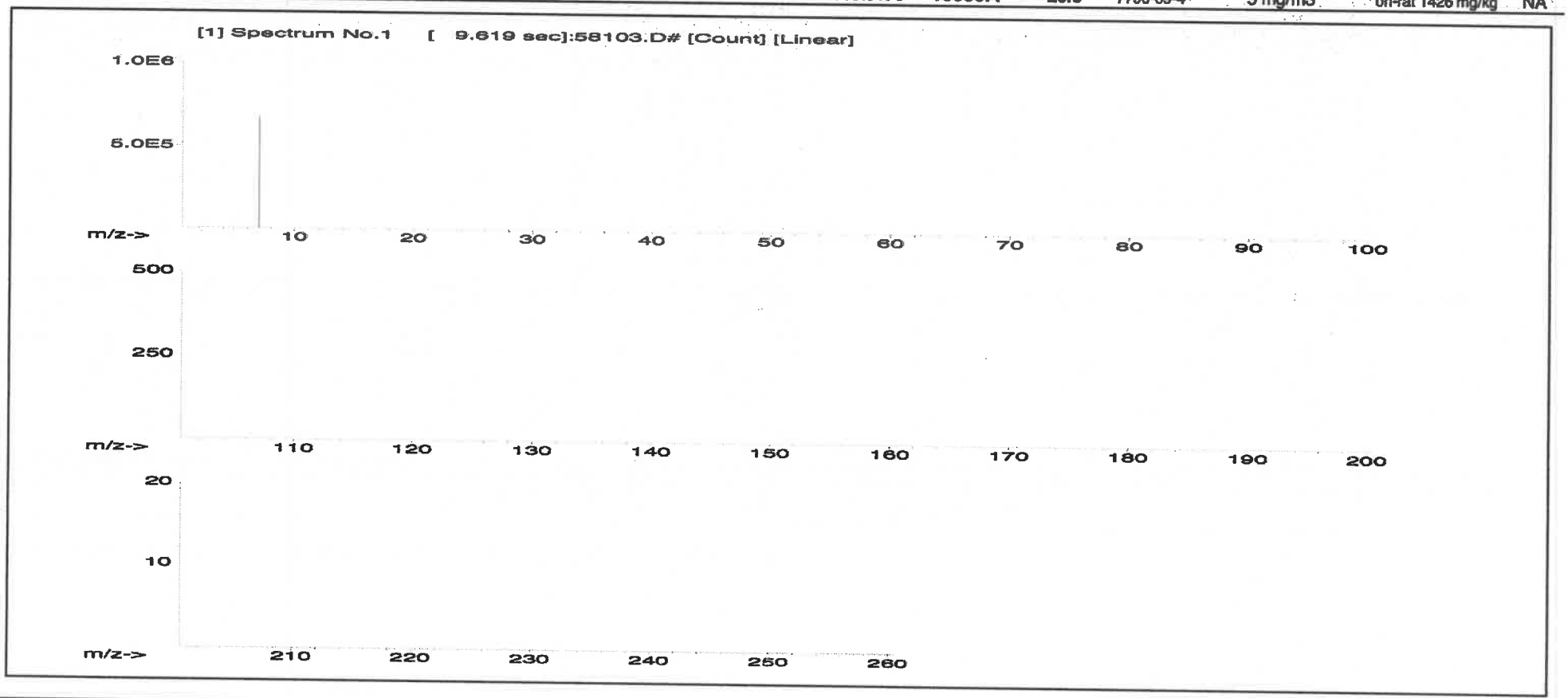
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	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



QUALITY-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M 5466
R: 03/01/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 061322
Description: Cerium (Ce)

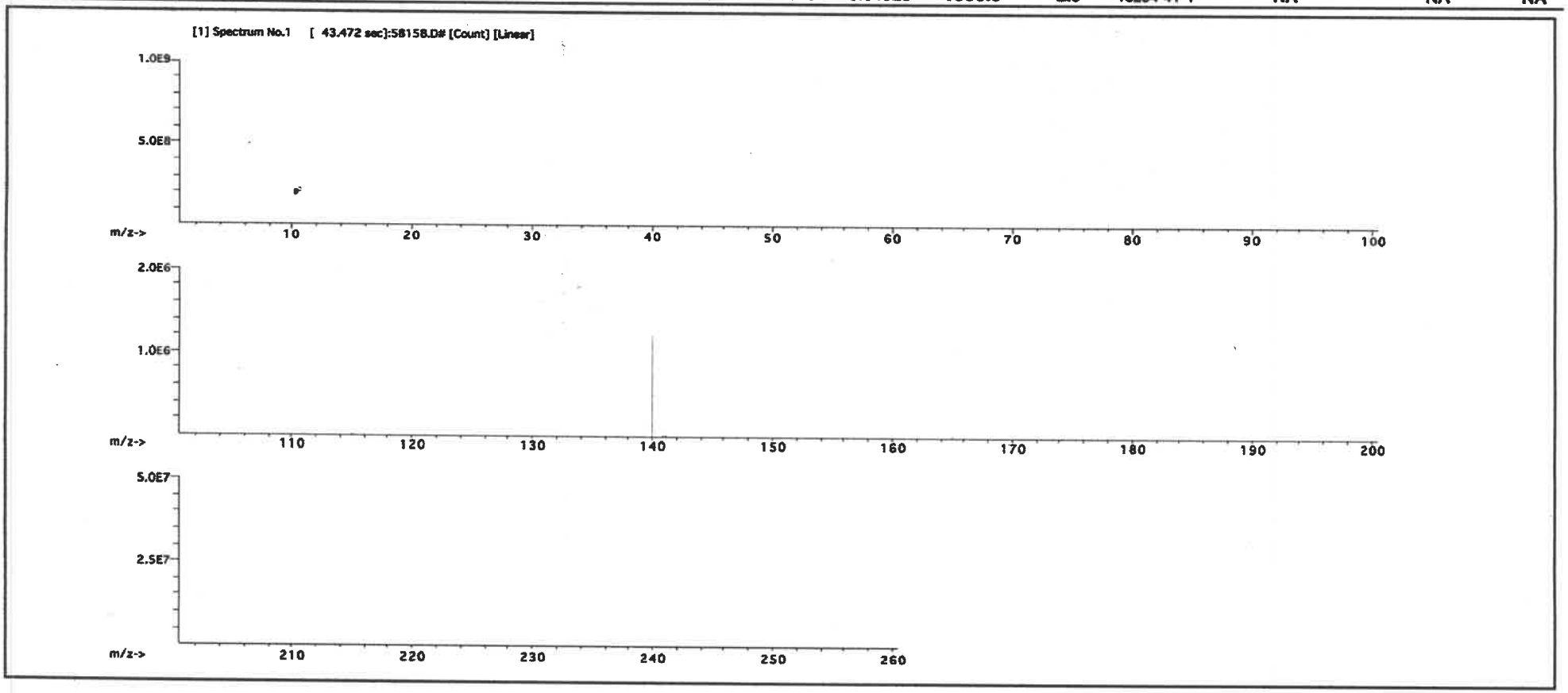
Expiration Date: 061325
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #			
Solvent:	20510011	Nitric Acid		
2%	20.0 (mL)	Nitric Acid		

5E-05 Balance Uncertainty
0.058 Flask 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:

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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M5467 R: 03/01/23 (LA)

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

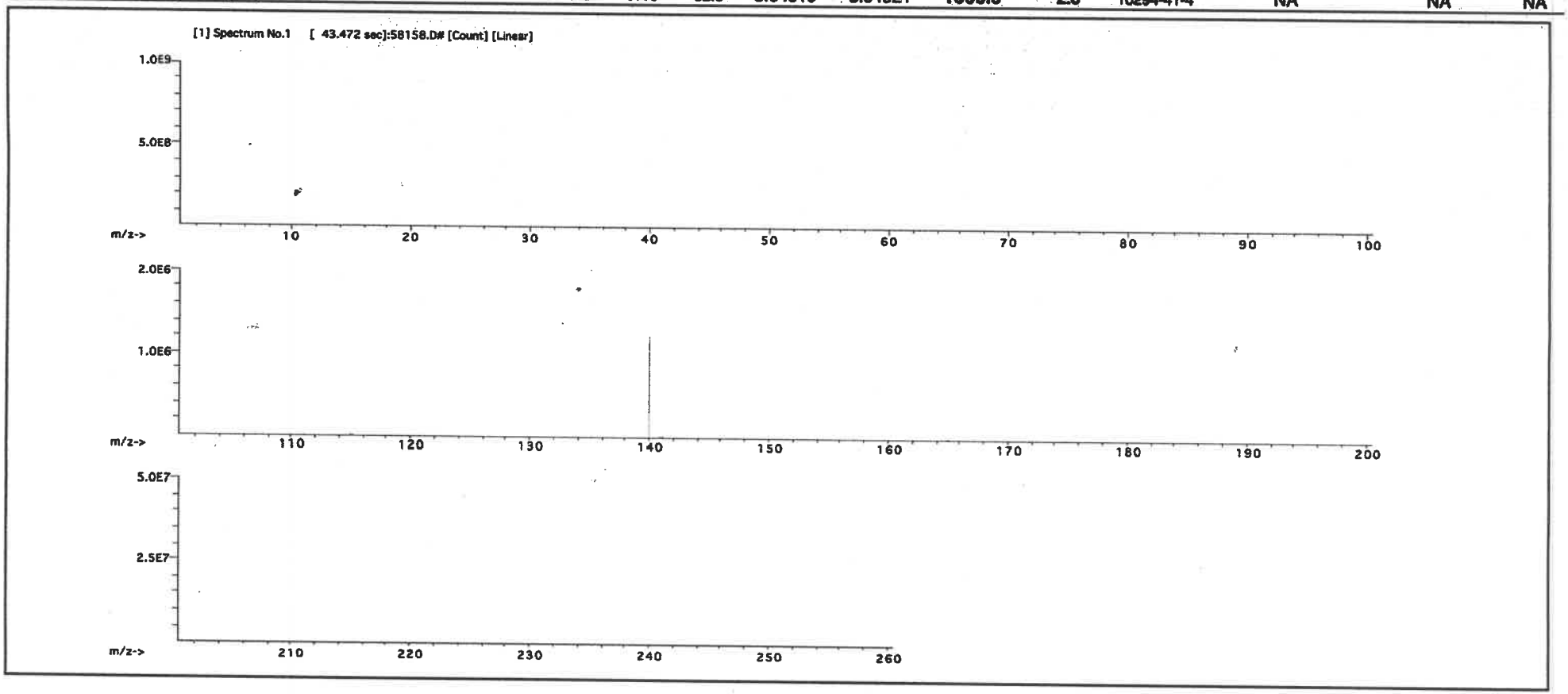
Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1000.12 5E-05 Balance Uncertainty 0.058 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

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



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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:

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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M5497 - M5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

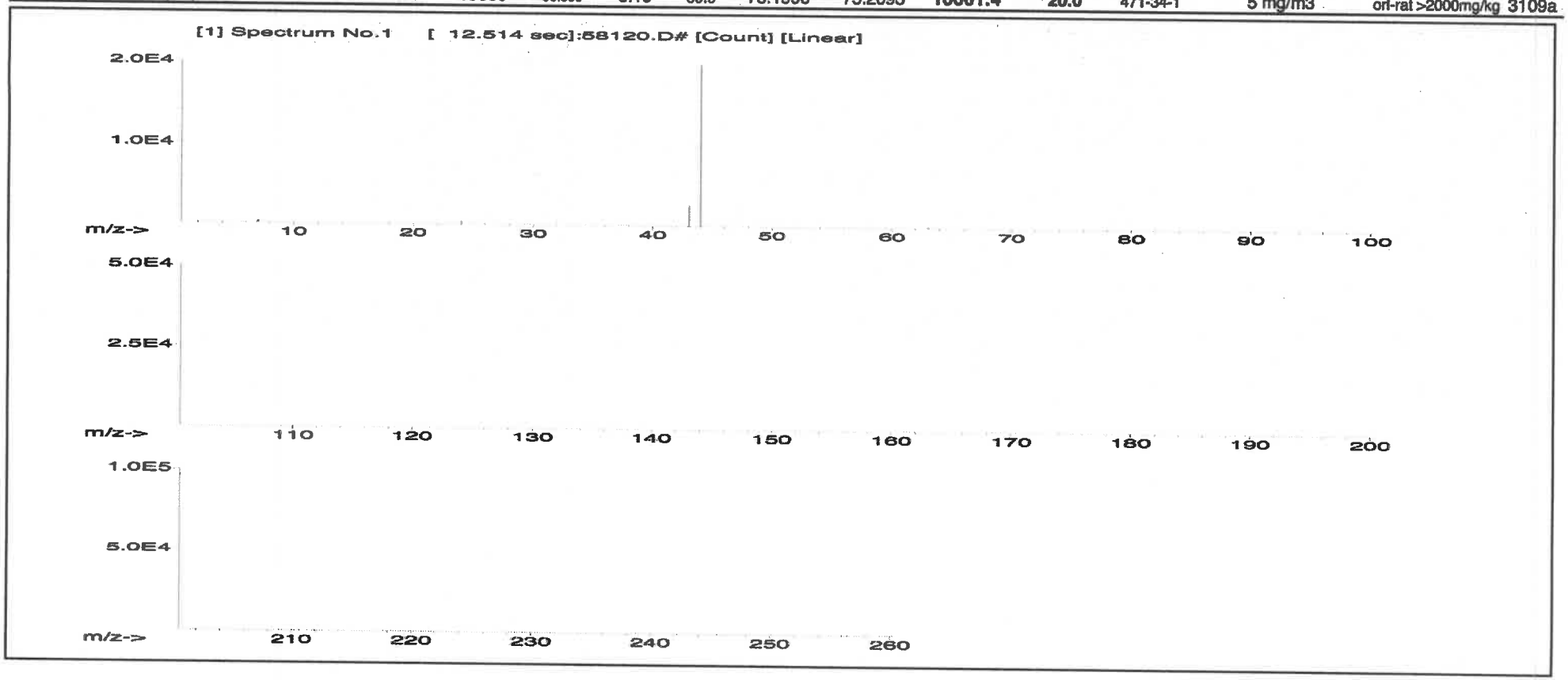
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
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.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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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M5514 , M5515 R: 03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

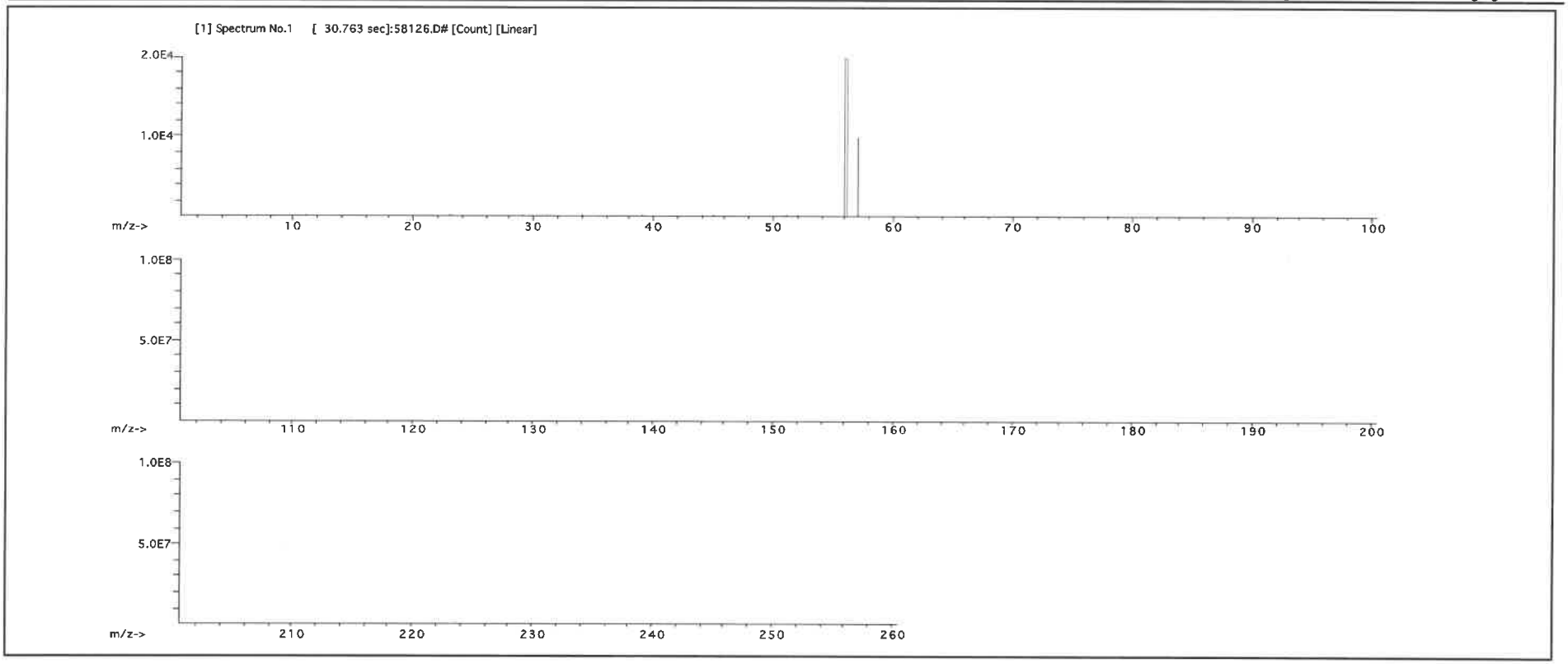
Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

	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



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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	<0.10	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.

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QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

MSS28-37
MB

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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M5658 R ! 8/25/23

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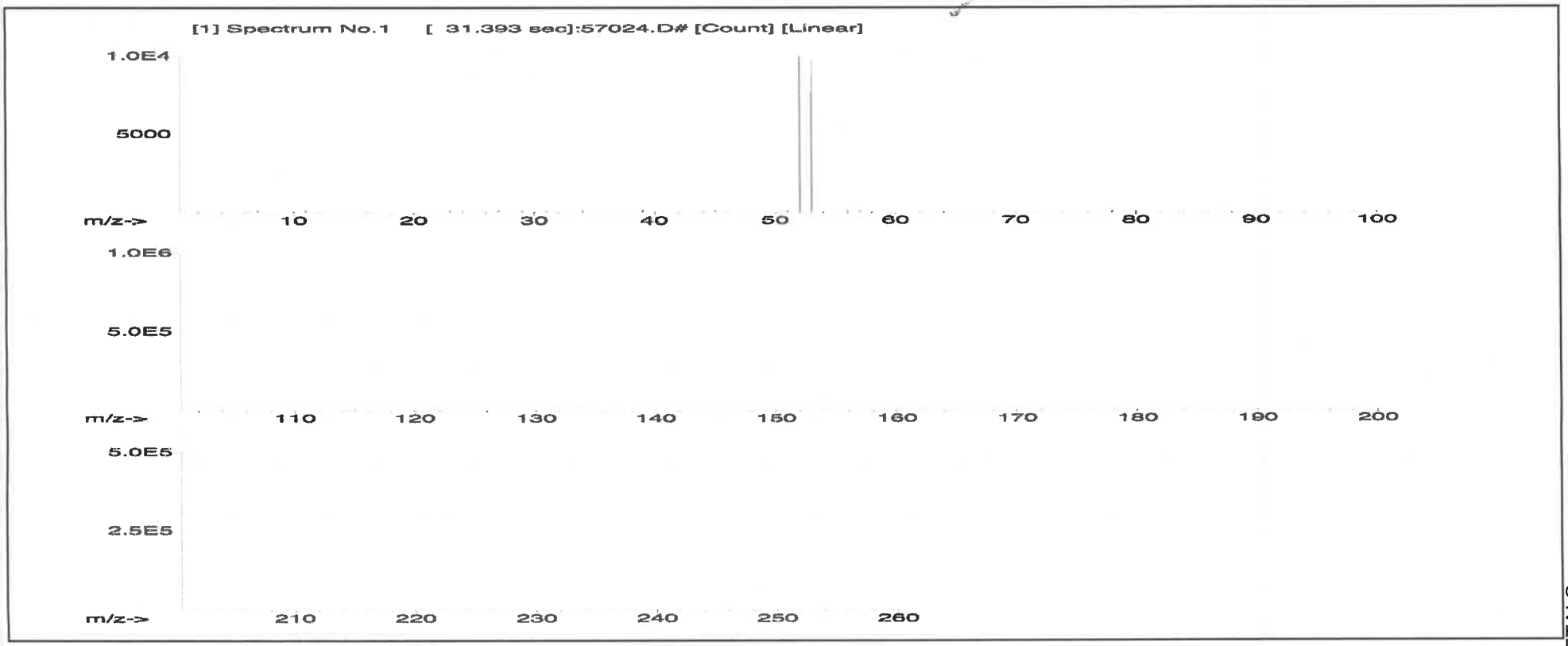
CERTIFIED WEIGHT REPORT:

		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.

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Certified Reference Material CRM

M5697 R: 10/27/23

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AR-1539 Certificate Number
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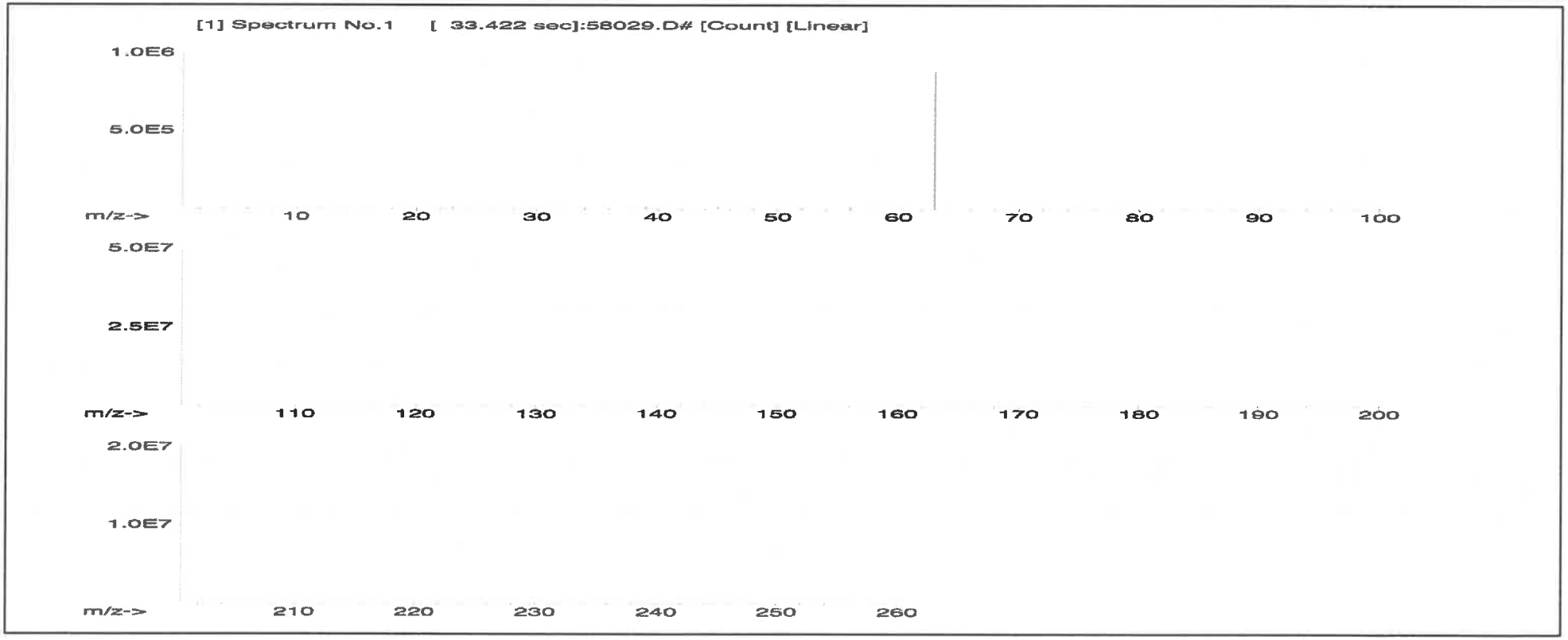
CERTIFIED WEIGHT REPORT:

		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:

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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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M5648 R: 10/27/23

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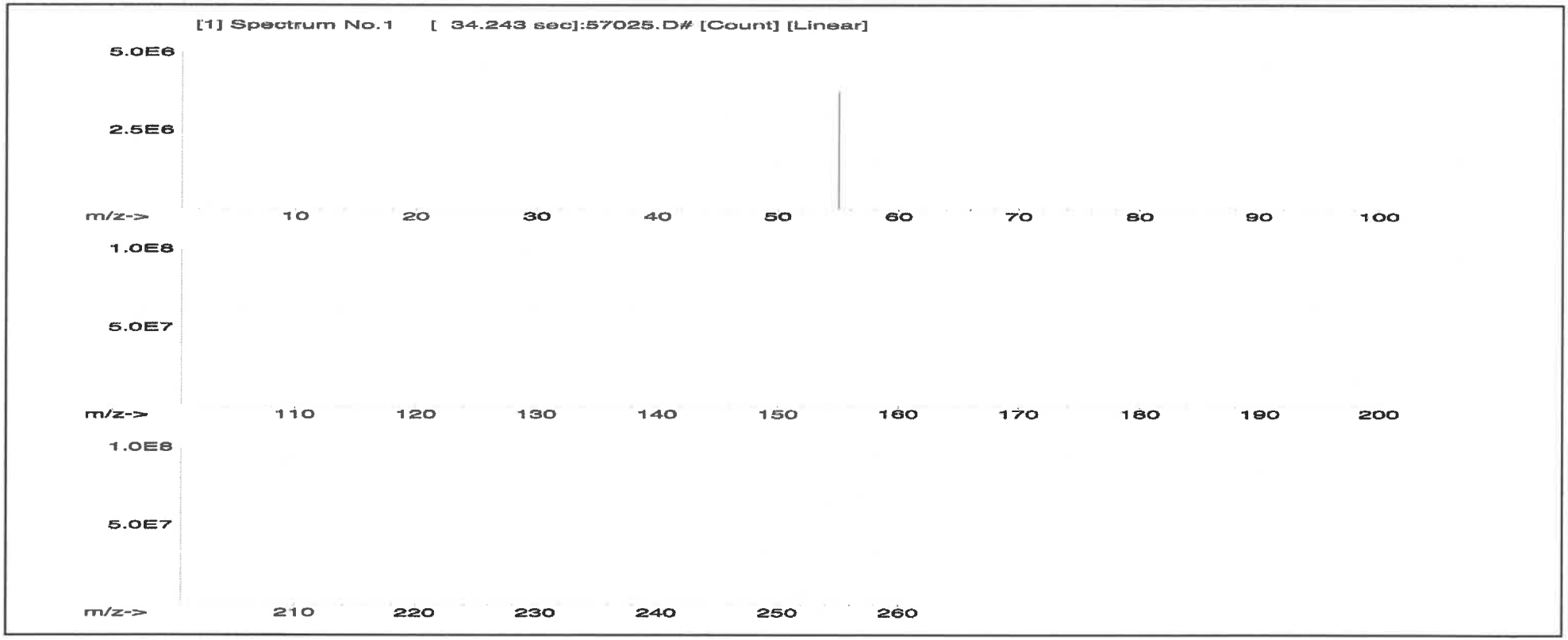
CERTIFIED WEIGHT REPORT:

		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).
* 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 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

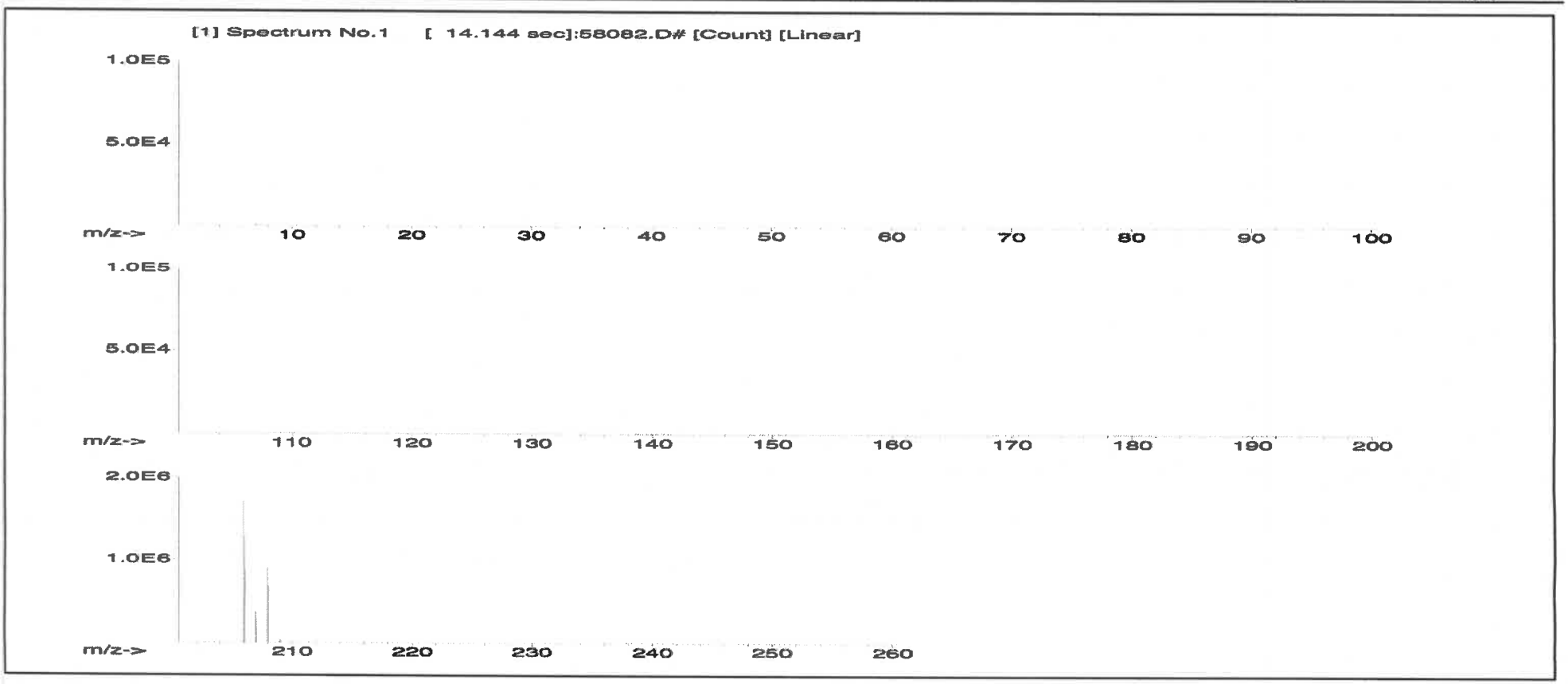
Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 12/20/23 M5748

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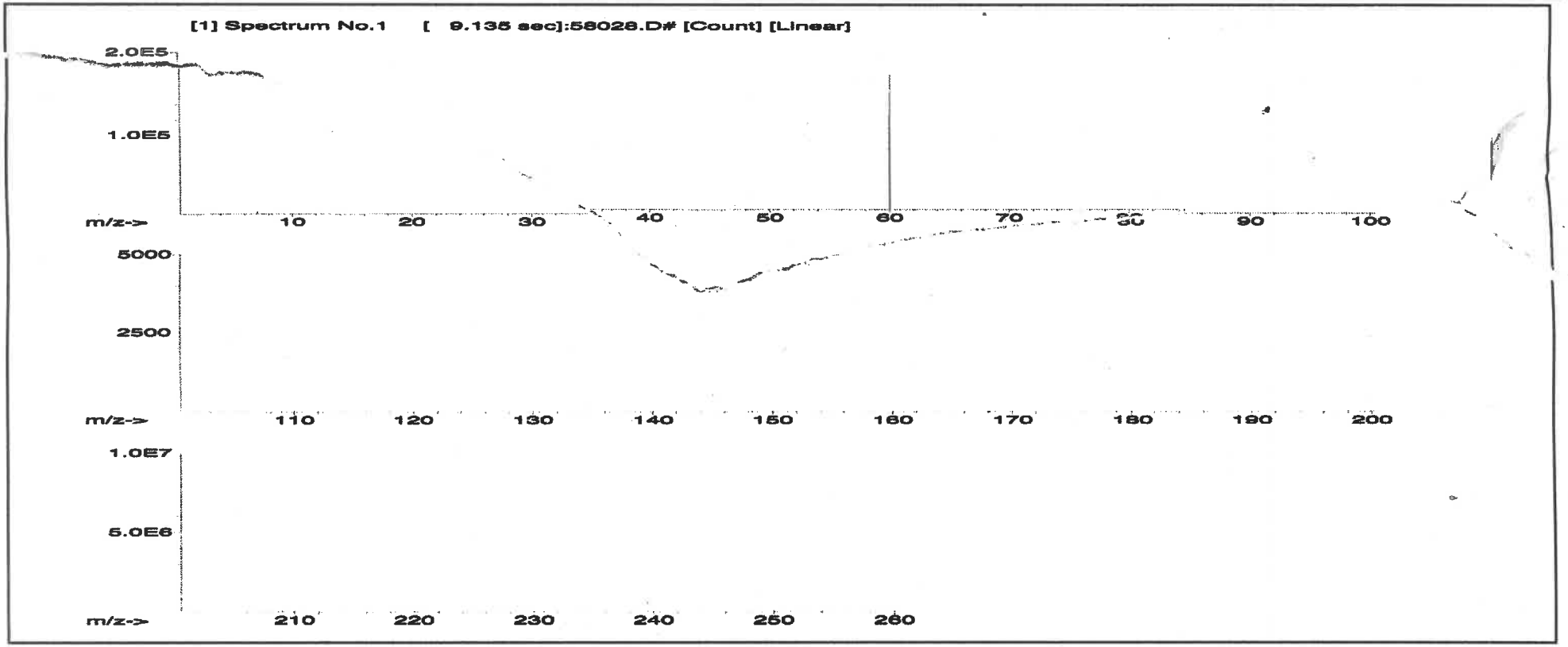
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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M5768 M5769 (BP) R:1/3/24

Certified Reference Material CRM

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AR-1539 Certificate Number
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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

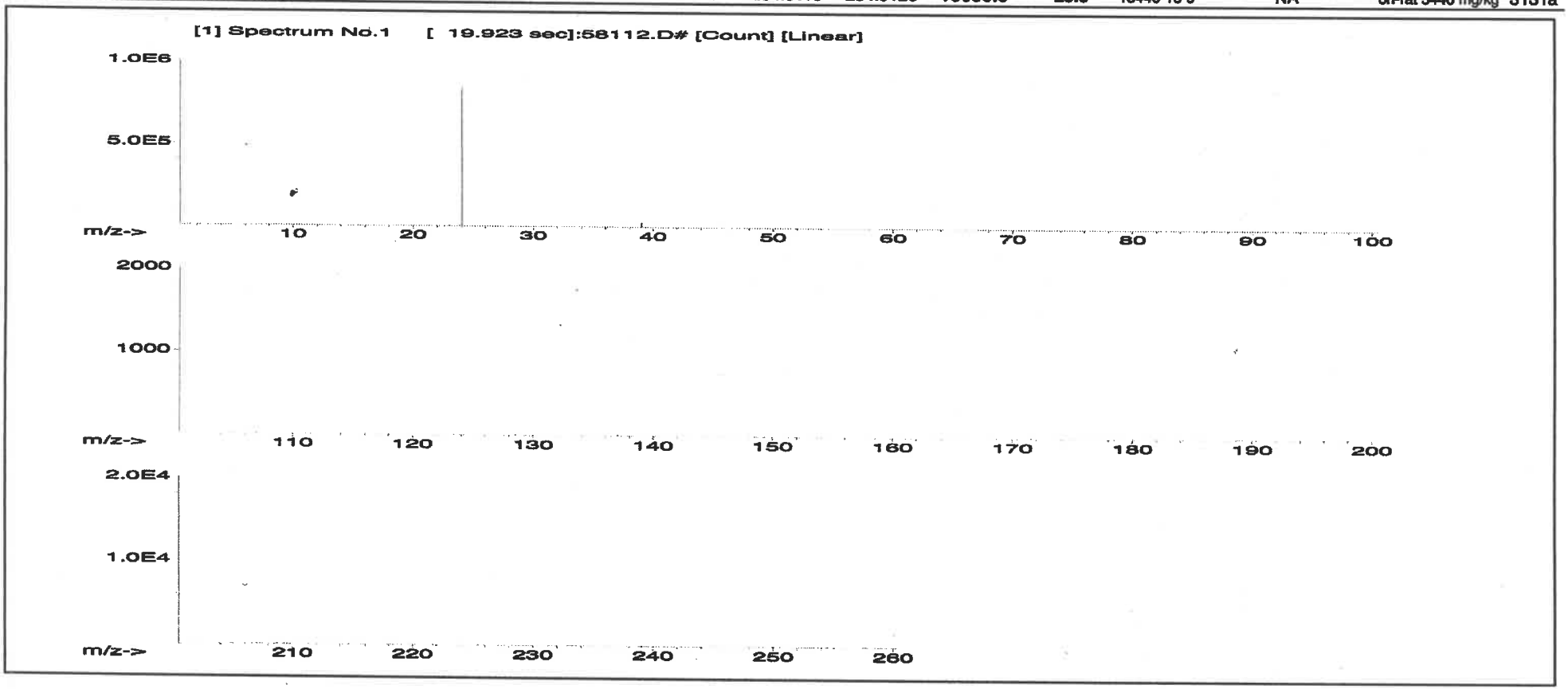
		Lot #		
Solvent:	24002546	Nitric Acid		
	2%	40.0 (mL)	Nitric Acid	

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	orl-rat 5440 mg/kg	3131a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 02/09/24 M5798

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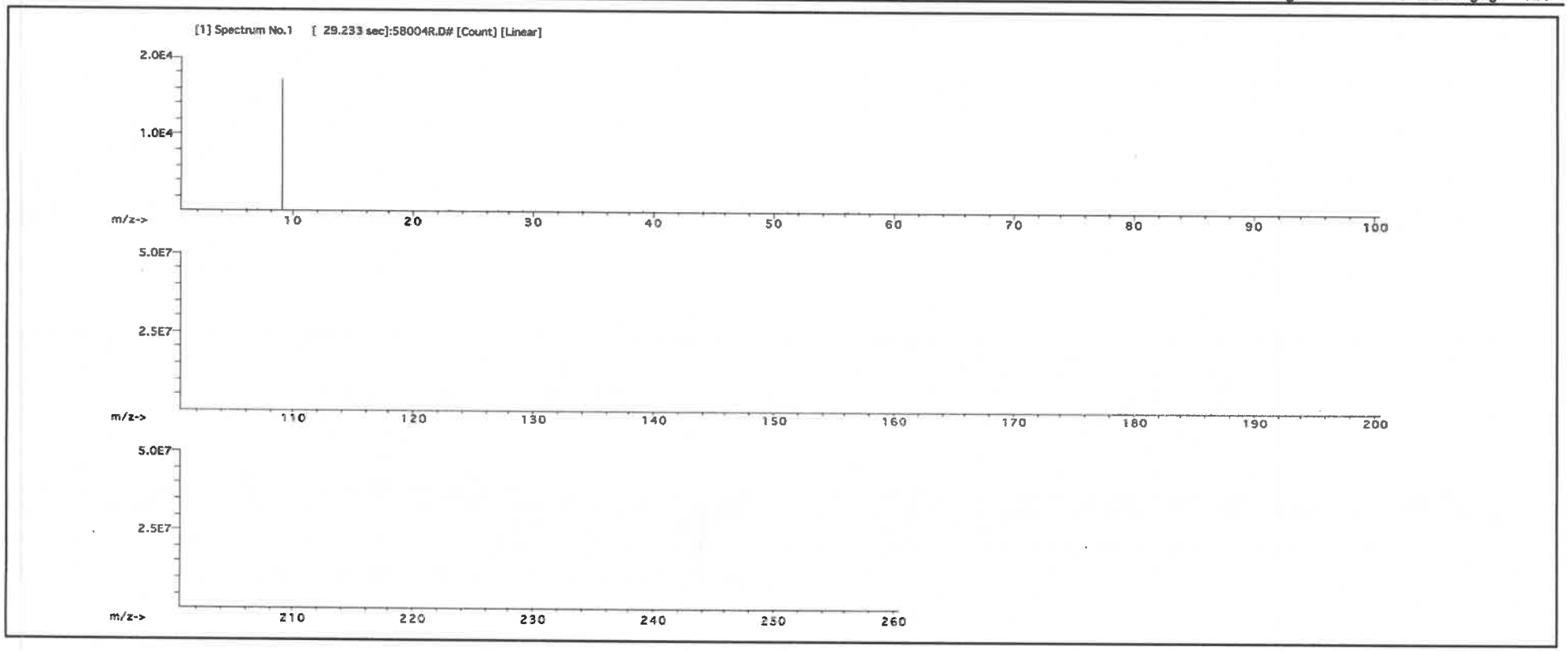
CERTIFIED WEIGHT REPORT:

		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



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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	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

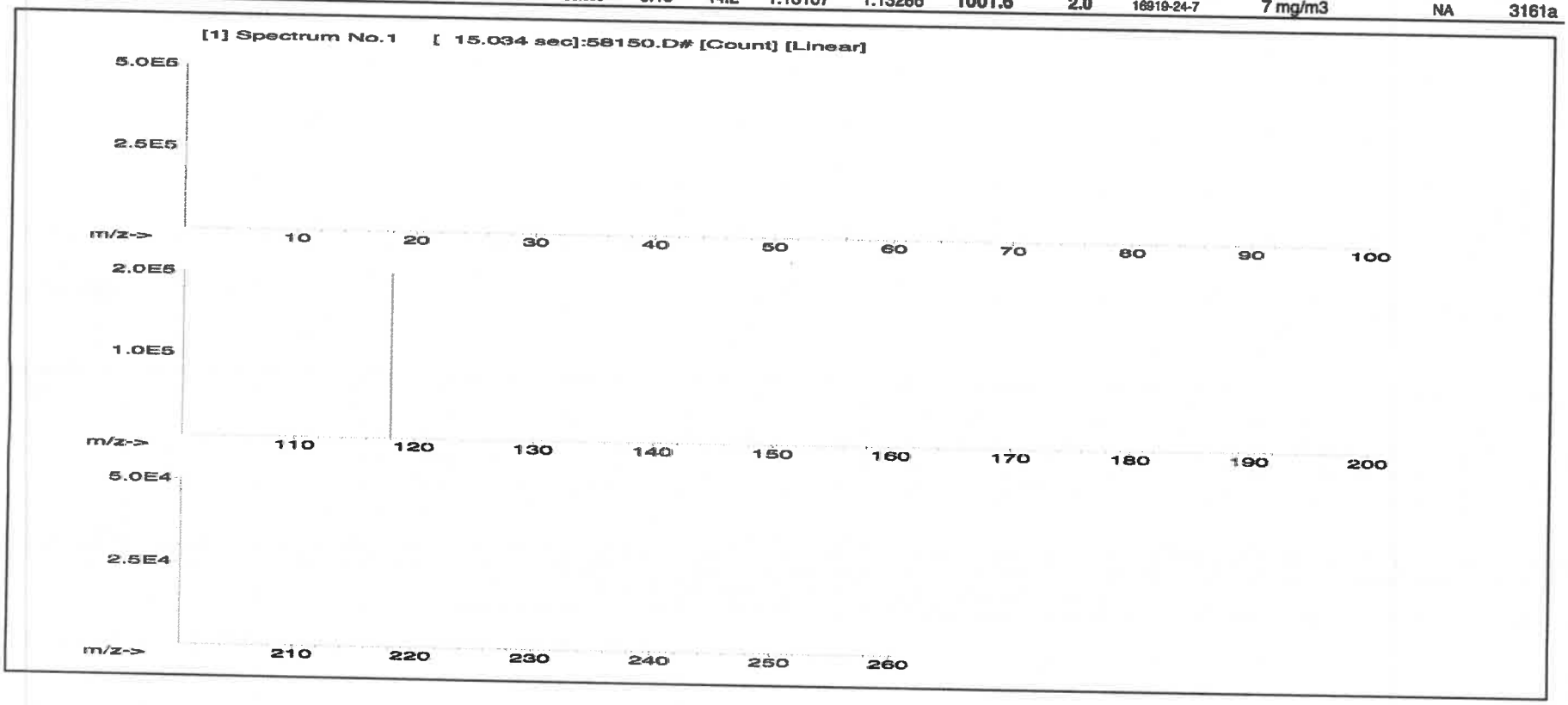
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* 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 IM5800 BH

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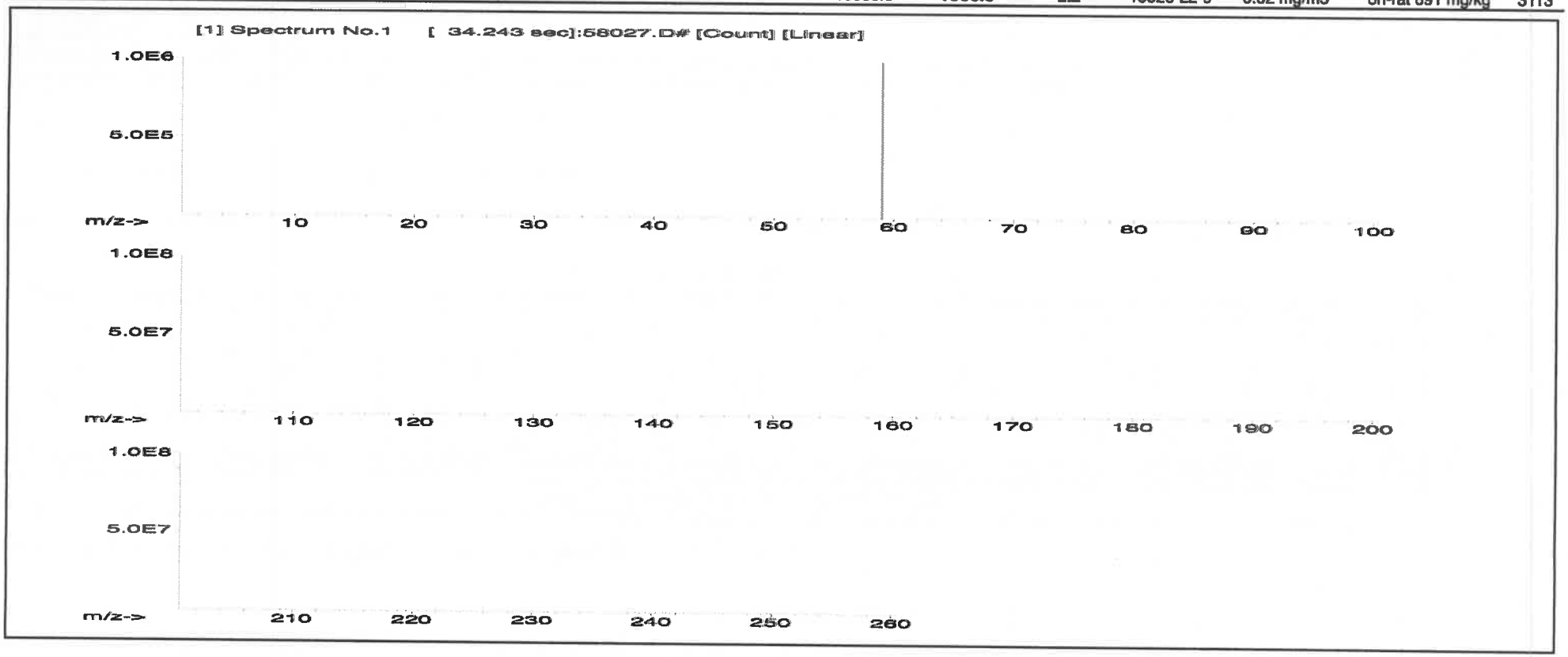
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	2.2	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 02/09/24 M5801 BH

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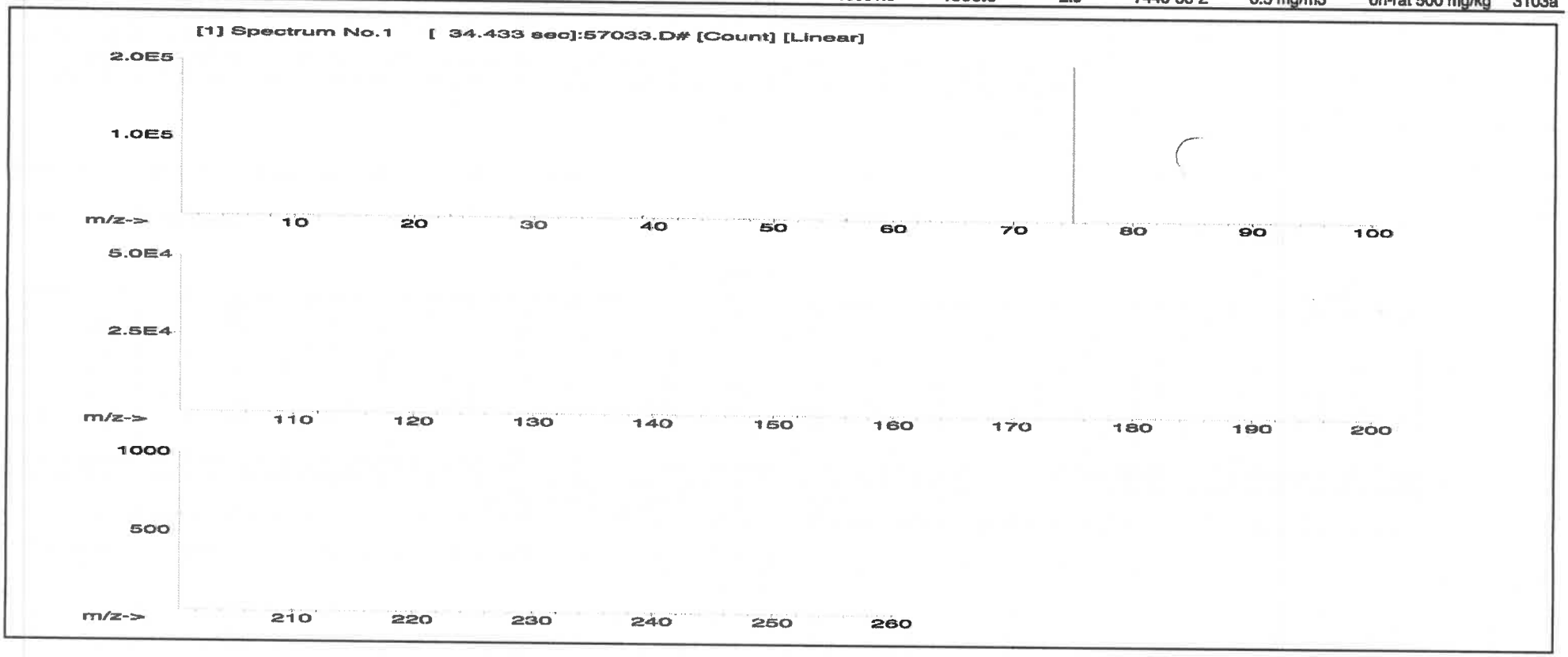
CERTIFIED **WEIGHT** REPORT:

		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.

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A: 02/09/24 M.5814

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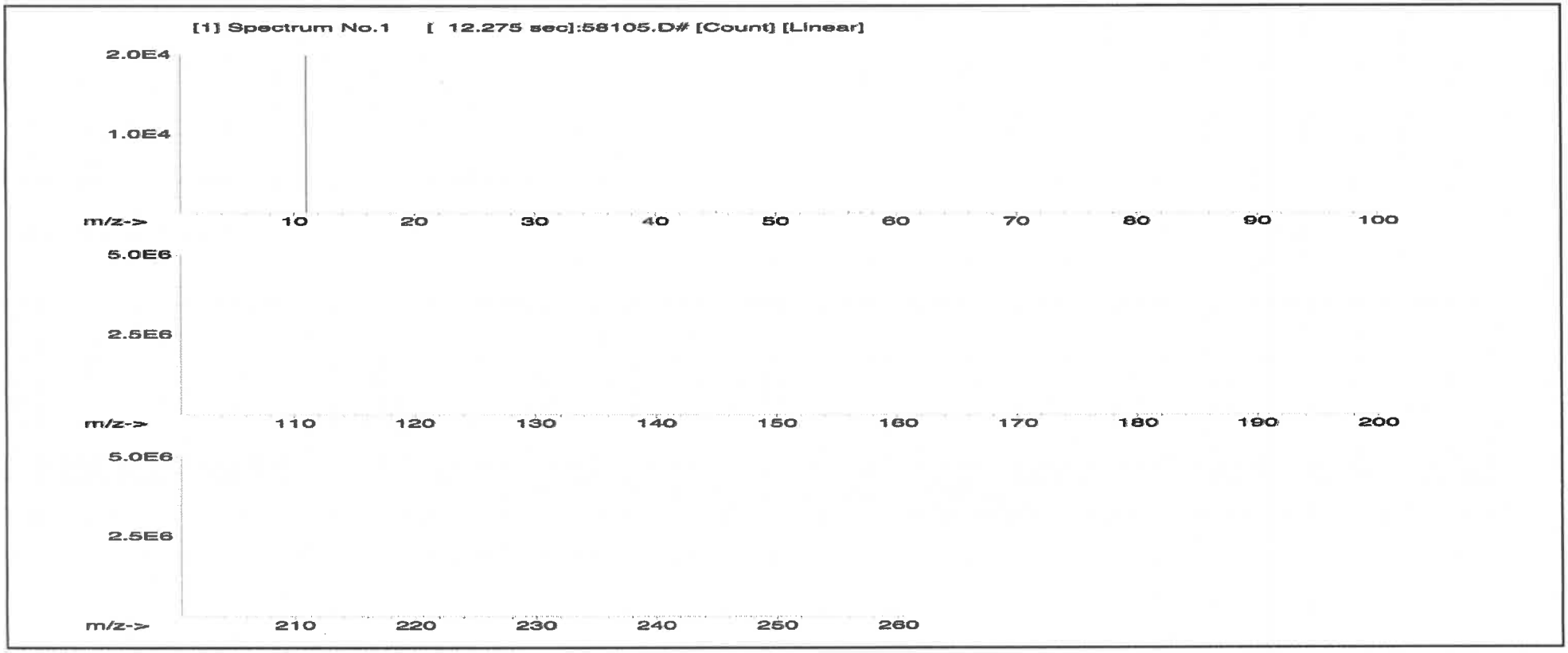
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Lot #**		
Lot Number:	**071123**	**Solvent:**	MKBQ8597V	Ammonium hydroxide	
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan 071123
Reviewed By:	Pedro L. Rentas 071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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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:

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R1 02/09/24. M58165

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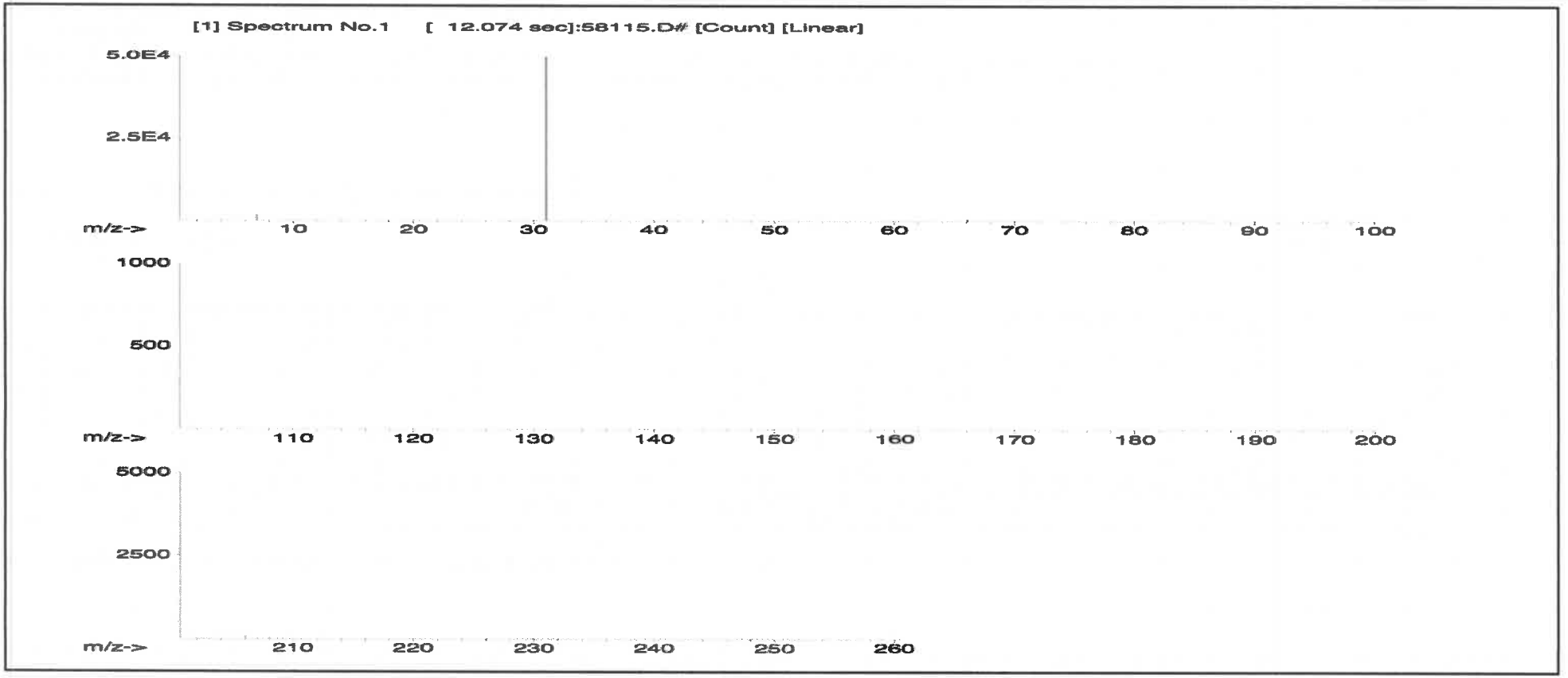
CERTIFIED WEIGHT REPORT:

Part Number:	**57115**			**Lot #**	
Lot Number:	**041723**		**Solvent:**	21110221	Nitric Acid
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:

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Certified Reference Material CRM

R: 02/09/24 M5816

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CERTIFIED WEIGHT REPORT:

Part Number: 57016
Lot Number: 122923
Description: Sulfur (S)

Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

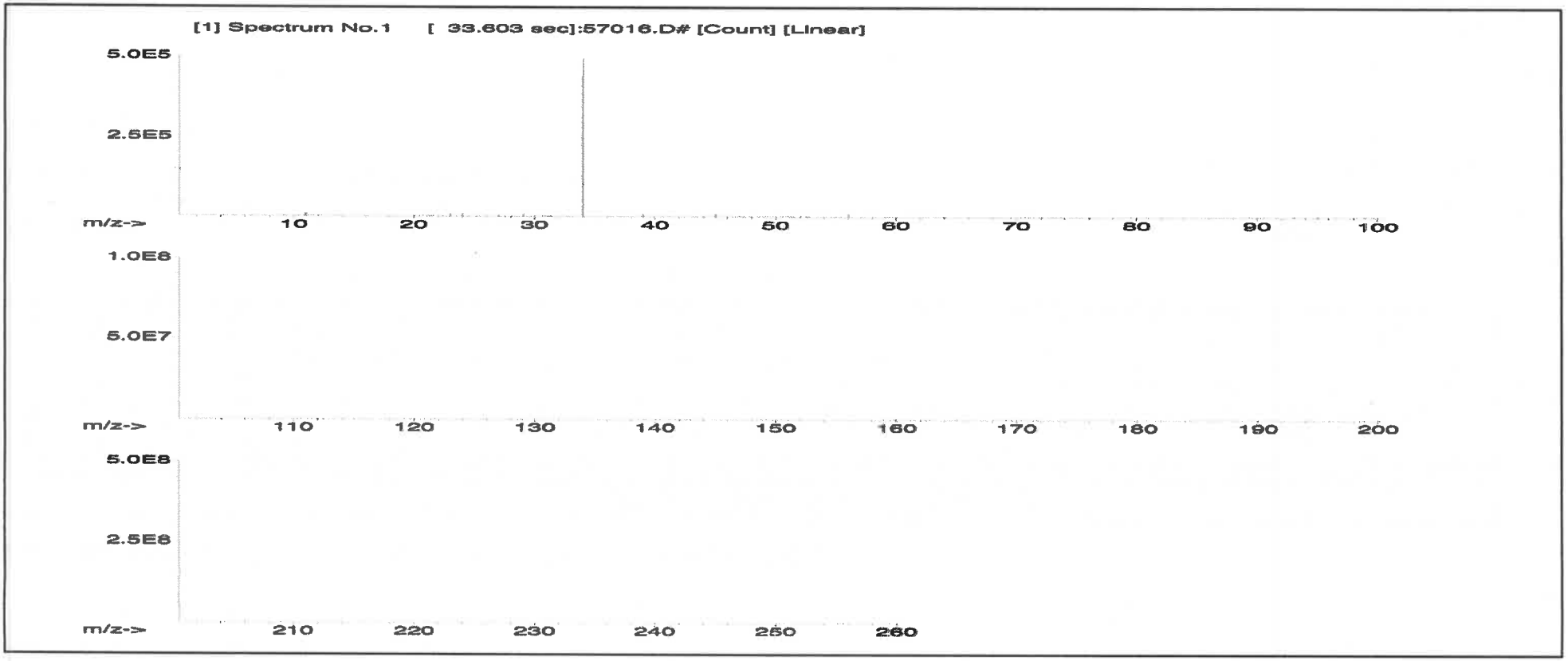
Weight shown below was diluted to (mL): 4000.0 ± 0.06 Flask Uncertainty

	Lot #	
Solvent:	122923	ASTM Type 1 Water

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M5817

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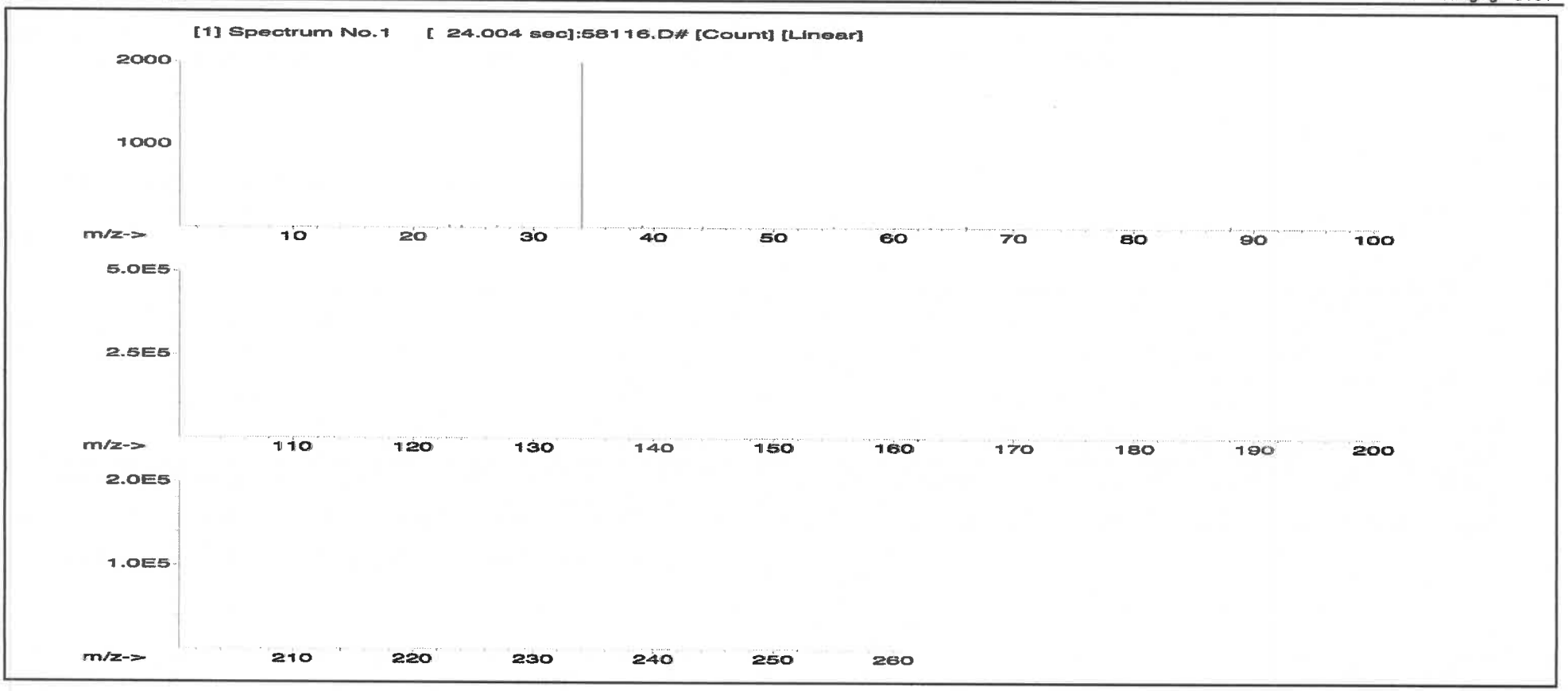
CERTIFIED WEIGHT REPORT:

Part Number:	**57116**			
Lot Number:	**071123**		**Solvent:**	071123 ASTM Type 1 Water
Description:	**Sulfur (S)**			
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		

Lot #

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	ori-rat 4250mg/kg	3181



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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	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M.5818
Lot #

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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

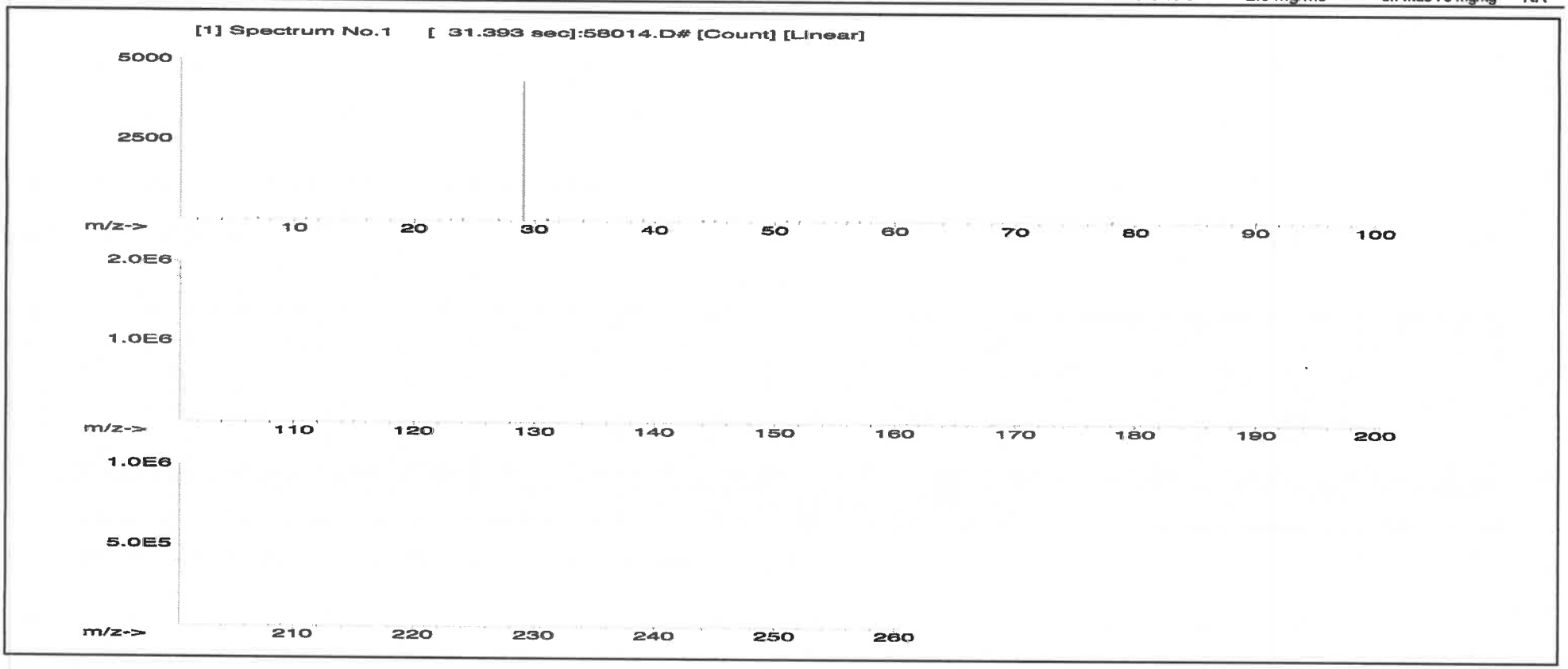
Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Certified Reference Material CRM

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

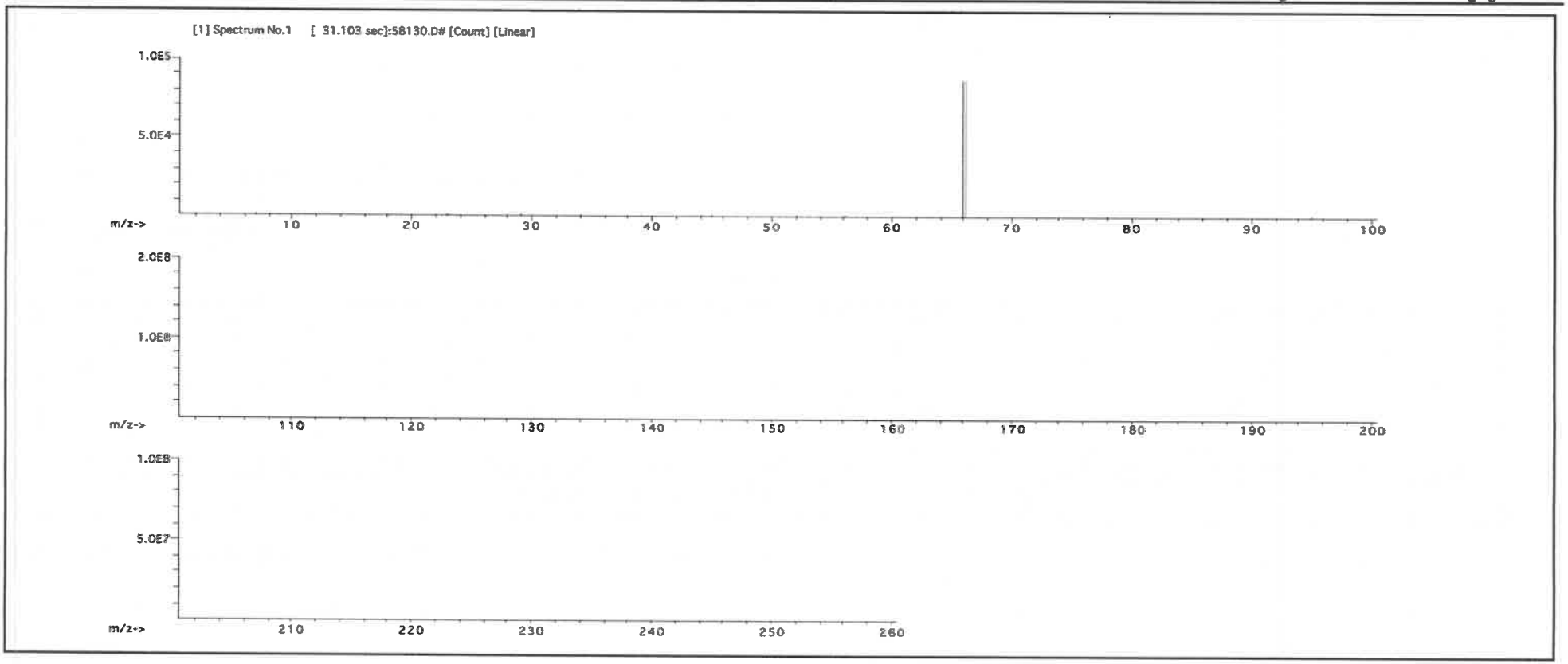
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M5820

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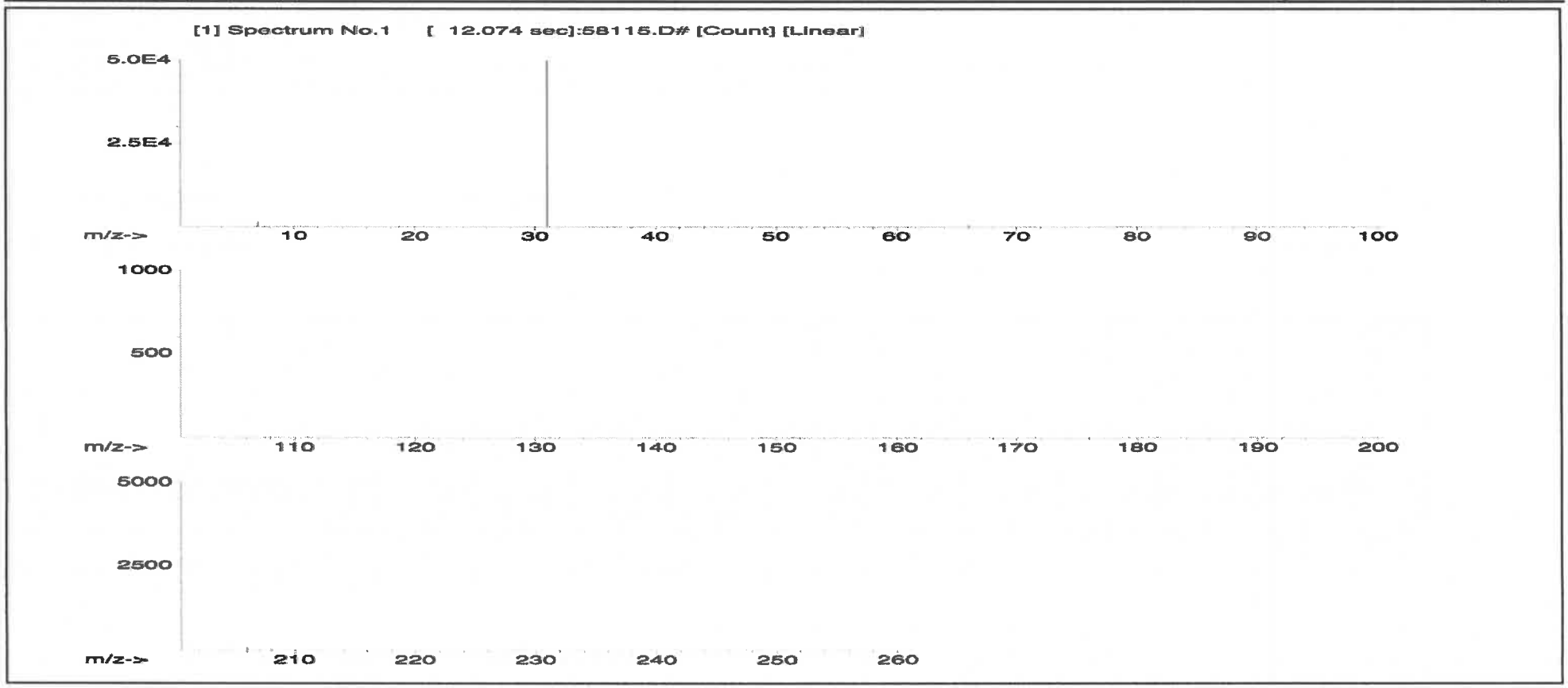
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

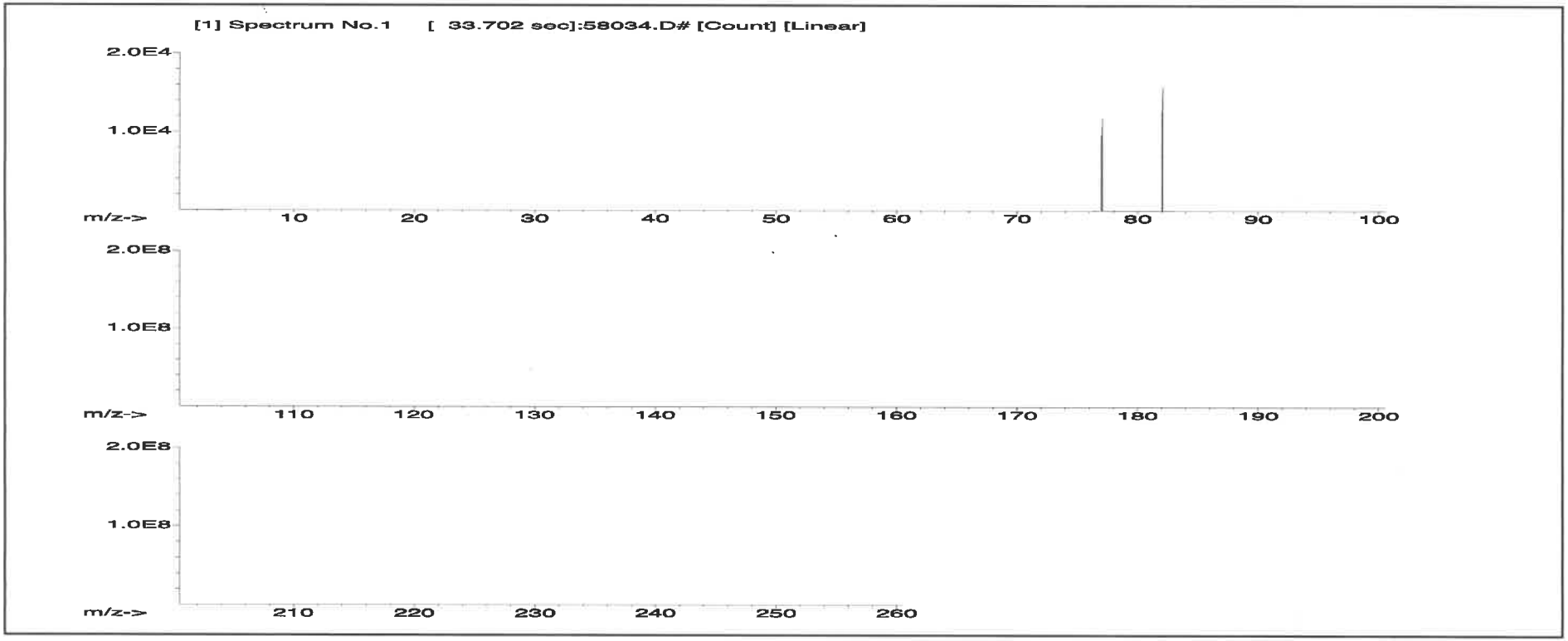
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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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	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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

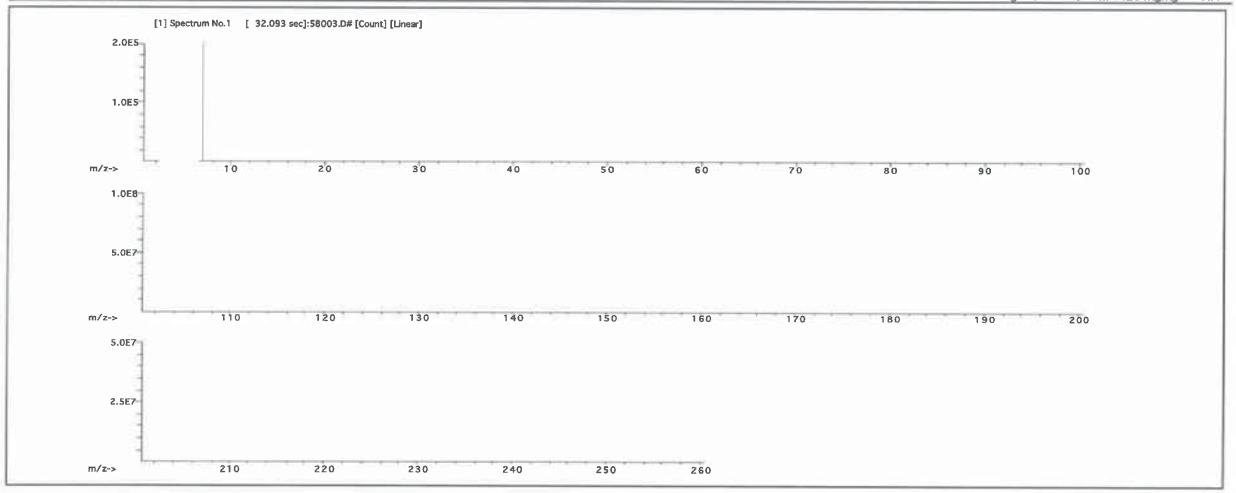
		Lot #	Solvent:	
Part Number:	**57003**	24002546	Nitric Acid	
Lot Number:	**062124**			
Description:	**Lithium (Li)**			
		2.0%	5.0 (mL)	Nitric Acid
Expiration Date:	062127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016	Flask Uncertainty	

Giovanni Esposito

Formulated By: Giovanni Esposito 062124

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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

MS978, MS979

INORGANIC VENTURES

Refine your results. Redefine your industry.

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, $X_{CRM/RM}$, 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)

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=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.5798; 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 Kozlkowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

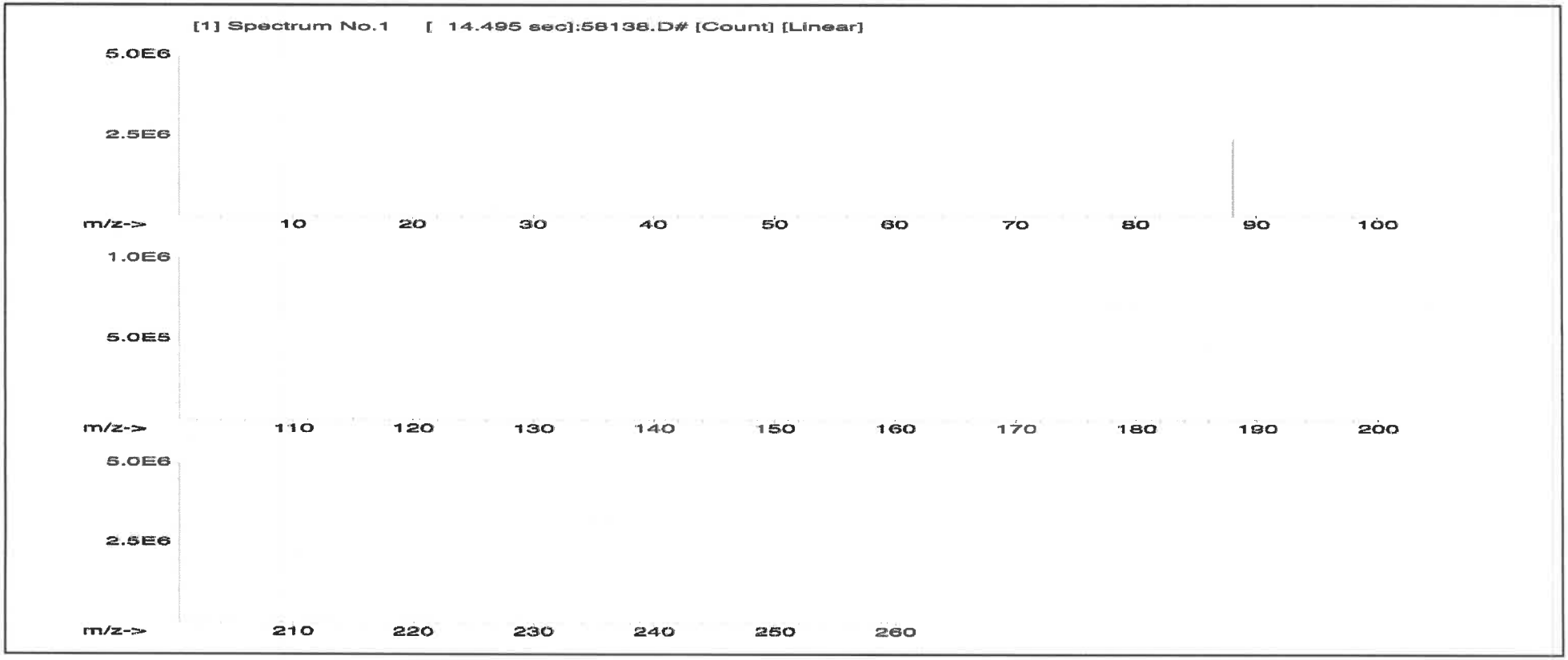
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

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



Q1069-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 3 ppm	1
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	<= 0.005 %	< 0.005
ACS – Extractable Organic Substances	<= 5 ppm	1
ACS – Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities – Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

James Ethier
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

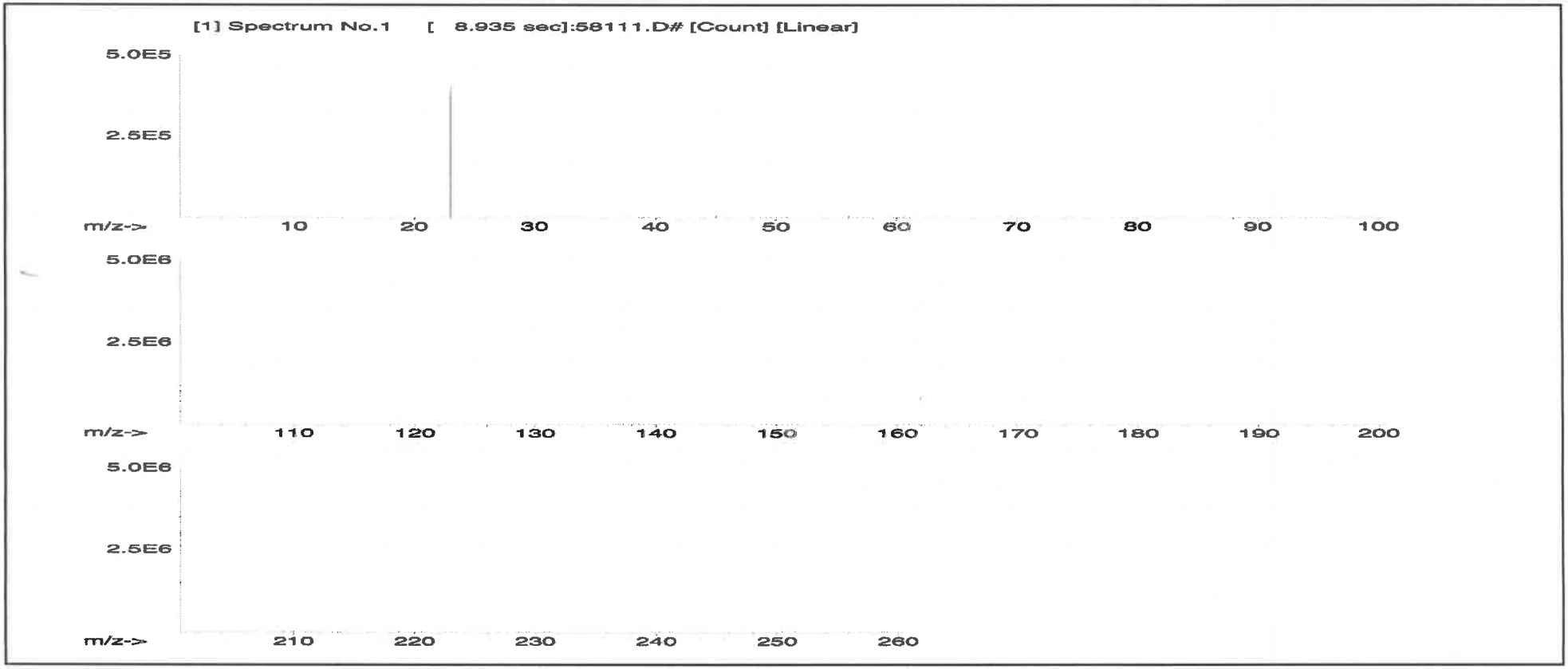
Weight shown below was diluted to (mL): 3000.4 | 0.06 Flask Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid
	5E-05	Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 122223

Reviewed By: Pedro L. Rentas 122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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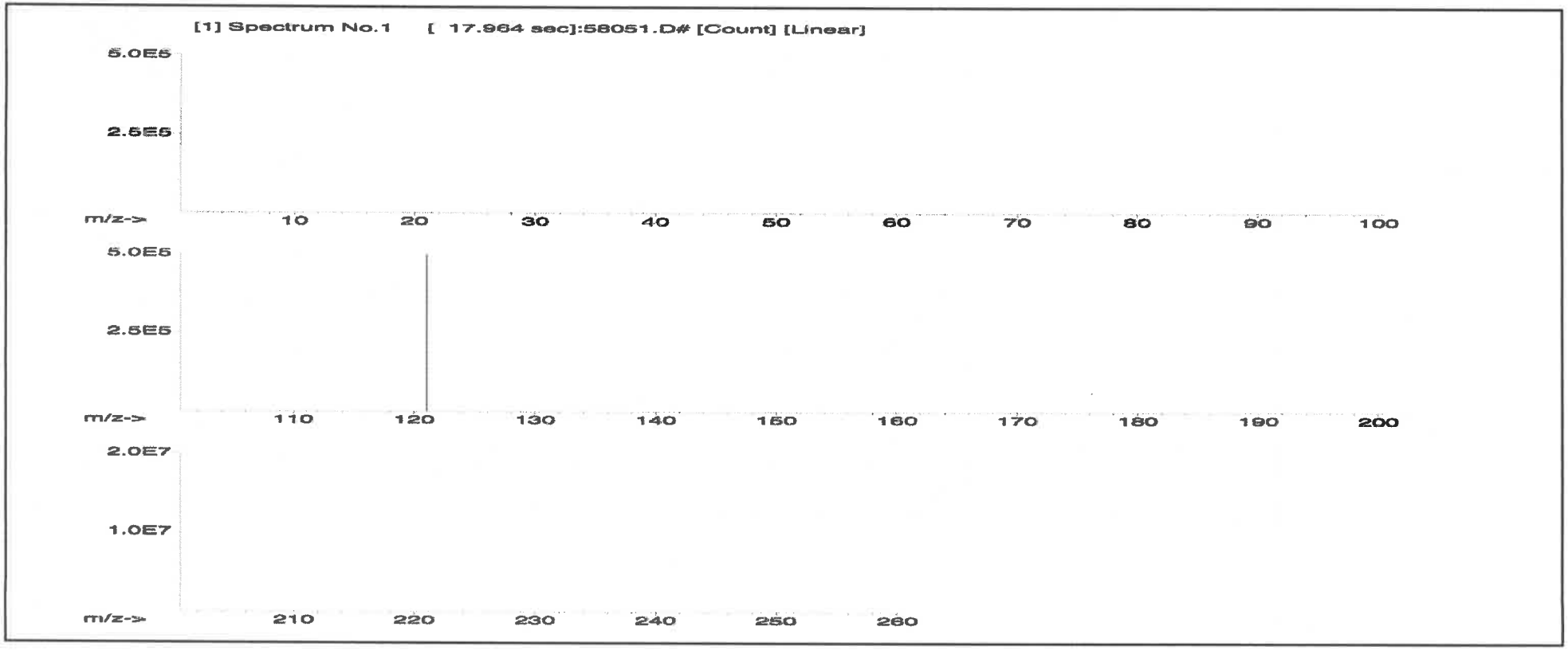
R: 01/03/24 M5802, M5803

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Certified Reference Material CRM

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

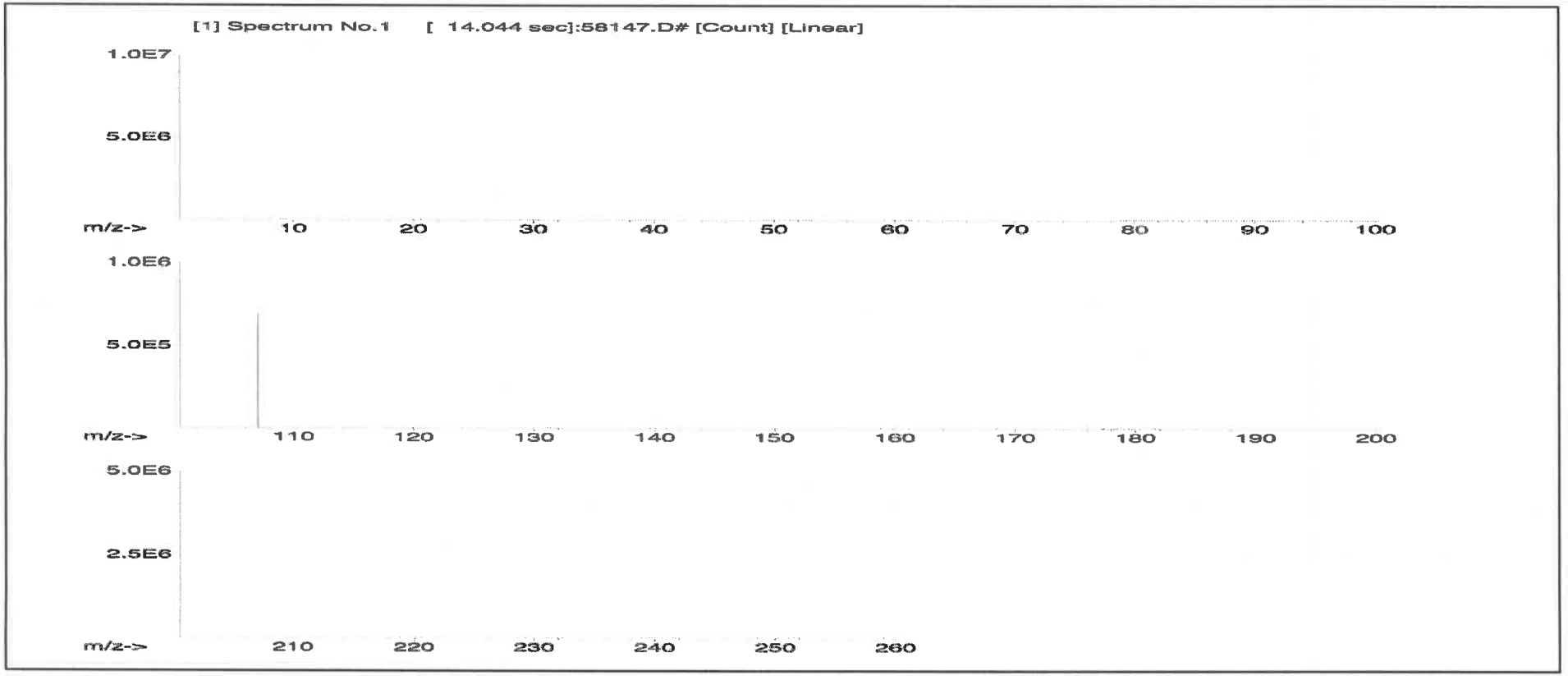
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

		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.

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M6023

R ! 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

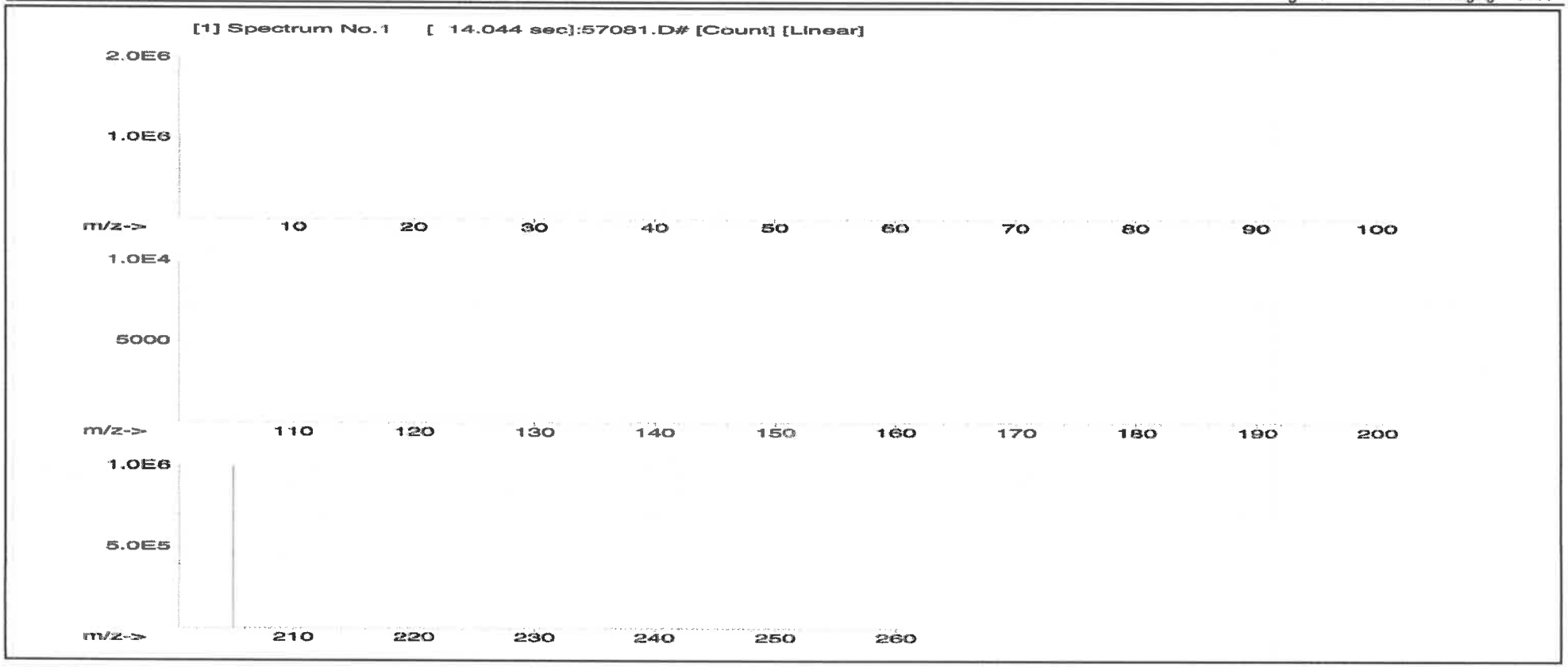
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

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:

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Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

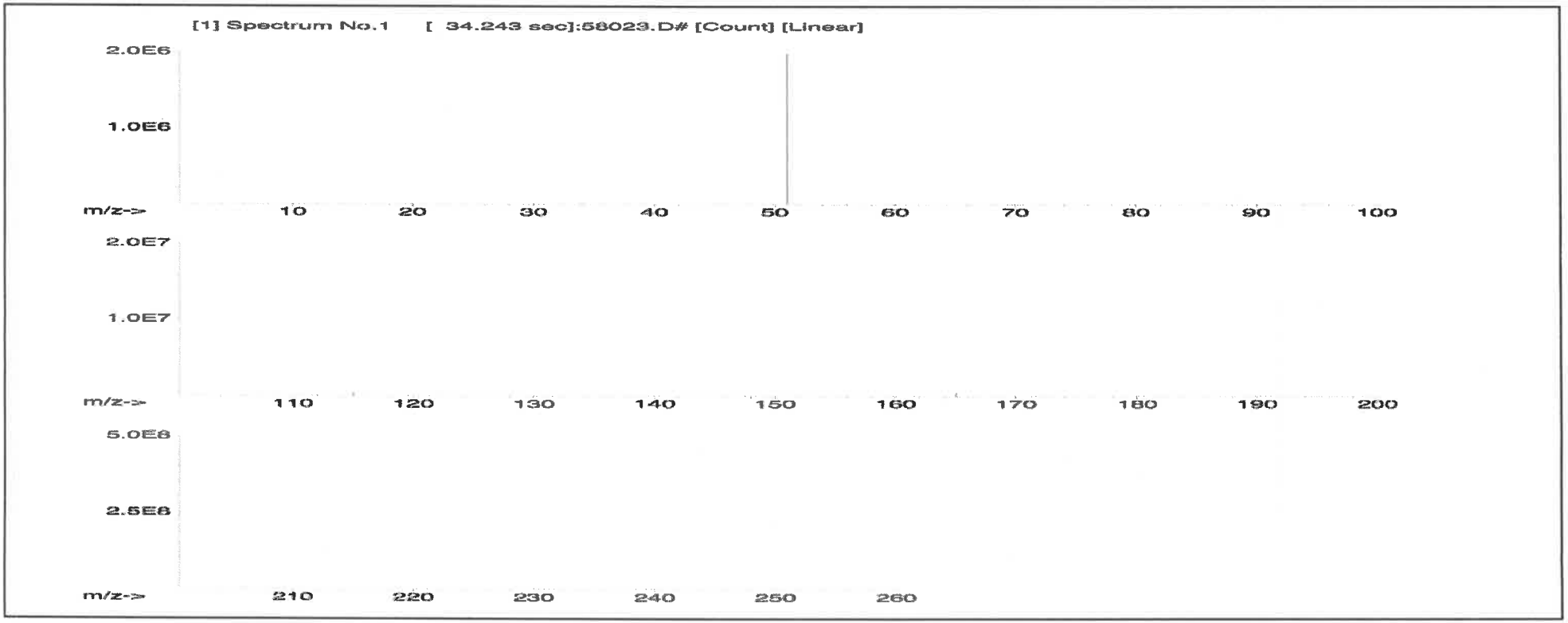
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

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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: Q1069

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: Carbon 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:_____10_____ DAYS*
HARD COPY:_____10_____DAYS*
EDD_____10_____DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ❑ RESEULTS ONLY
- ❑ RESULTS + QC
- ❑ New Jersey REDUCED
- ❑ New Jersey CLP
- ❑ USEPA CLP
- ❑ New York State ASP "B"
- ❑ New York State ASP "A"
- ❑ Other_____
- ❑ EDD Format_____

ANALYSIS

1	2	3	4	5	6	7	8	9
TCL SVOC (total)	Flash point	TCLP VOC	TCLP Metals (RCRA 8)	PCB	pH			

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	RW7B-Carbon-20250109	Granular Activated Carbon		X	1/9/25	14:00	6	1	1	1	1	1	1				<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	1/9/25 1530	1. 1-9-25 1530
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.	1-9-25 1615	3.

Conditions of bottles or coolers at receipt: ❑ Compliant ❑ Non Compliant ❑ Cooler Temp 2.5°C
❑ Ice in Cooler?:_____
MeOH extraction requires an additional 4oz. Jar for percent solid
Comments: 5 Day TAT - CTO-WE13 RW7B Carbon Sampling

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